CITY OF PITTSBURG
AGENDA

AUGUST 19, 2024

CITY HALL COUNCIL CHAMBER
65 CIVIC AVENUE, PITTSBURG, CA

SPECIAL MEETING
COMMISSION INTERVIEWS
5:30 P.M.

REGULAR MEETING
7:00 P.M.

CITY COUNCIL
HOUSING AUTHORITY
PITTSBURG ARTS AND COMMUNITY FOUNDATION
PITTSBURG POWER COMPANY
SOUTHWEST PITTSBURG GEOLOGIC HAZARD ABATEMENT DISTRICT II
SUCCESSOR AGENCY

PRESIDING

Juan Antonio Banales, Mayor/Chair
Jelani Killings, Vice- Mayor/Chair
Dionne Adams, Council Member/Board Member
Angelica Lopez, Council Member/Board Member
Shanelle Scales-Preston, Council Member/Board Member

FOR HOUSING AUTHORITY:
S.L. Floyd, Housing Authority Member
Annie Hill Herring, Housing Authority Member

Pittsburg City Council regular meetings are held the first and third Mondays of each month at 7:00 p.m. The Housing Authority meets in conjunction with the City Council on the third Monday of each month. The Pittsburg City Council meets regularly in the Council Chamber at 65 Civic Avenue, unless otherwise noted above. The City Council also sits as the Board of Directors of several other City agencies. The stipends for all agency members conform to state statutes governing compensation amounts. All other Agencies meet on an as needed basis and will be listed above if applicable. Copies of the open session agenda packets, which are distributed to the City Council, are on file in the office of the City Clerk, 65 Civic Avenue, Pittsburg, California, and are available for public inspection, beginning 72 hours in advance, during normal business hours (8:00 a.m. – 5:00 p.m., Monday through Friday, except from noon to 1:00 p.m. and City holidays). The agenda and reports are also located on the City's website at www.pittsburgca.gov. Additionally, if any reports or documents, which are public records, are distributed to the City Council less than 72 hours before the meeting, those reports and documents will also be available for public inspection in the City Clerk's Office and on the day of the meeting in the Council Chamber at the public counter area below the dais.

5:30 PM - SPECIAL MEETING FOR COMMISSION INTERVIEWS

1. Measure M and Enhanced Infrastructure Facilities District Interviews

AUDIENCE REMARKS

The Audience Remarks period is for the public to comment on any items scheduled to be heard during the Closed Session portion of the meeting, if applicable.

7:00 PM - CONVENE IN OPEN SESSION FOR REGULAR MEETING

CALL TO ORDER

ROLL CALL

PLEDGE OF ALLEGIANCE

PRESENTATIONS

2. Contra Costa Community College - State of the District

3. Draft 2024/25 through 2028/29 Five-Year Capital Improvement Program

CITY MANAGER REPORTS/REMARKS

The City Manager may make brief announcements or informal comments at this time and brief the Council on items of interest. (No Action Required)

PUBLIC COMMENTS

Members of the audience who wish to address the City Council or Agency Boards on issues that are not scheduled for the agenda and on any items listed as part of the Consent Calendar should complete a Speaker's Card available at the dais. Please read the card carefully in order to fill out the card properly. Submit the completed card to the City Clerk before the item is called, preferably before the meeting begins. Individuals will be given three minutes to address the Council unless additional time is allowed as provided for spokespersons. Prior to speaking, each member of the public shall state their name and business and City of residence in a clear and audible tone of voice. (No Action Required)

COMMITTEE REPORTS

Council Members may make a report on their committee assignments at this time. (see attached list of adhoc committees and other public agencies in which Council members participate). (No Action Required)

HOUSING AUTHORITY

COMBINED HOUSING AUTHORITY AND CITY COUNCIL CONSENT CALENDAR

4. Minutes of June 17, 2024

5. Adoption of a Housing Authority Resolution Approving the Section 8 Management Assessment Program Certification for Fiscal Year End June 30, 2024

   As required compliance with the U.S. Department of Housing and Urban Development (HUD), the Housing Authority of the City of Pittsburg (Housing Authority) has prepared the Section 8 Management Assessment Program

(SEMAP) Certification for submission for fiscal year end June 30, 2024.

6. Adoption of a City Council Resolution Authorizing the City Manager to Negotiate and Execute an Agreement with Associated Right of Way Services Inc. for Project Management and Property Acquisition Services and a Housing Authority Resolution Authorizing the Use of Housing Successor Agency Funds

   The City and Associated Right of Way Services Inc. (ARWS) are proposing to enter into an agreement (Agreement) whereby ARWS would assist the City with project management and strategic property acquisition services.

HOUSING AUTHORITY MEMBER REMARKS

ADJOURNMENT OF THE HOUSING AUTHORITY

CITY COUNCIL MEETING

CONSIDERATION

7. Adoption of a City Council Resolution Authorizing the City Manager to Negotiate and Execute Software Service Agreements with 1) Tyler Technologies, Inc. for a New Citywide Enterprise Resource Planning (ERP) System; and 2) NEOGOV for Supplemental Human Resources Cloud-Based Services

   The proposed item would authorize the negotiation, execution and implementation of a new Enterprise Resource Planning (ERP) System through Tyler Technologies, Inc. to be utilized Citywide. This ERP System will replace existing Financial, Human Resources (HR), Payroll (PR) and Utility Billing (UB) systems. The new ERP system will be utilized by all departments and divisions of the City. The proposal includes supplemental modules for Human Resources to be provided by NEOGOV for integrated, cloud-based recruitment, development and talent management as well as contingency expenses for the implementation process.

CONFLICT OF INTEREST STATEMENT

City Council/Agency Members may make any conflict of interest declarations pertaining to Consent Calendar items at this time.

COMBINED CITY COUNCIL, PITTSBURG ARTS AND COMMUNITY FOUNDATION, PITTSBURG POWER COMPANY, SOUTHWEST PITTSBURG GHAD II AND SUCCESSOR AGENCY CONSENT CALENDAR

8. Minutes of August 5, 2024

9. Adoption of a City Council Resolution Accepting Plans and Specifications and Authorize Award of Project 2038 – Citywide Roadway Improvements

   Project 2038 - Citywide Roadway Improvements (the “Project”) installs and upgrades traffic advisory signs with new fluorescent sheeting, moves existing signs to locations compliant with the Manual on Uniform Traffic Control Devices

(MUTCD), and replaces damaged poles. Project improvements also include modifications to edge-line and centerline striping along arterial roads throughout the City. If adopted, this resolution will accept the Project plans and specifications and award a construction contract to Pavement Coatings Co.

10. Adoption of a City Council Resolution Adopting the Local Road Safety Plan

    For Project 2022-Local Road Safety Plan (LRSP) (the “Project”), staff recommend the adoption of the LRSP to promote safety improvements within the City. The plan is the result of the evaluation of existing intersections and roadway segments. If adopted, this resolution will incorporate the improvements within the LRSP to future projects throughout the City.

11. Adoption of a City Council Resolution Authorizing the Execution of a Funding Agreement Between the City of Pittsburg and Contra Costa Transportation Authority

    As part of Project 2243 – Countywide Smart Signals (the Project), the City of Pittsburg (City) and Contra Costa Transportation Authority (CCTA) have developed a Funding Agreement regarding the design and construction of upgrades to a total of thirty (30) traffic signal intersections within the City. If adopted, this resolution with authorize the execution of this Funding Agreement as part of the Project.

12. Adoption of a City Council Resolution Allocating Additional Funds, Accepting the Plans and Specifications, and Awarding Project 5704-Central Harbor Park and Boat Launch Facilities

    Project 5704-Central Harbor Park and Boat Launch Facilities (Project) will improve the infrastructure at the Boat Launch Ramp, Central Harbor Park, and nearby parking lots as part of a greater effort to revitalize the waterfront. If approved, this Resolution will allocate additional funding, accept the contract plans and specifications, and award a construction contract with NTK Construction, Inc.

13. Adoption of a City Council Resolution to Renew and Execute and Agreement with The 100 Companies LLC for the East Bay 100

    On May 6, 2019, the City Council approved a five year agreement with The 100 Companies LLC for a digital media platform that came to be called 'The East Bay 100'. This platform provide the City with an opportunity to create and share content as it pertains to the economic development news and events in Pittsburg and the greater region. Throughout the lifetime of the contract, the City has utilized this resource to share content to a targeted regional database of Contra Costa and Alameda County business professionals, and has seen a steady growth in engagement of the newsletter content. Staff believes that this can continue to be a valuable resource to outreach and promote our City and surrounding region to a greater audience. Staff is seeking approval to renew the City's agreement, by resolution, with The 100 Companies LLC for an additional five years to continue exclusive partnership in the publishing of The East Bay 100 newsletter.

14. Adoption of a City Council Resolution Authorizing the Applications for Various Funding Opportunities and Acceptance of Awarded Funds

    In 2024 the Environmental Services Division is pursuing a variety of sustainable community funding opportunities ranging from zero emission fuels projects to climate resiliency projects. As required by each granting organization, adoption of this Resolution would authorize staff to apply for and receive any funds awarded for grant applications submitted in 2024.

15. Adoption of a City Council Resolution to Approve a Lease Agreement by and between the City of Pittsburg and Taco & Company, LLC

    The City proposes to enter into a Lease Agreement (Agreement) with Taco & Company, LLC for the operation of a counter service restaurant at 1005 Center Drive ("Premises").

16. Adoption of a City Council Resolution Authorizing the Execution of a Consulting Services Agreement with Chambers Group Inc. for contract Planning Services related to the Blue Planet Global Innovation Center Project

    The proposed item would authorize the City Manager to execute a Consulting Services Agreement with Chambers Group Inc. in an amount not to exceed One Hundred and Sixteen Thousand, Seven Hundred and Eighty-Seven dollars and Eighty-Five cents ($116,787.85) for CEQA Consultant Fees and would allocate Seventy-Five Thousand, Three Hundred and Forty-Seven dollars ($75,347) for the consultant budget for contract planning services related to the Blue Planet Global Innovation Center Project located at 895 E 3rd Street.

17. Adoption of a Pittsburg Power Company Resolution Approving the Fiscal Year 2024-2025 Consultant Agreement with Open Opportunities Incorporated

    Pittsburg Power Company (PPC) is seeking approval for the fiscal year (FY) 2024-2025 consultant agreement (Agreement) with Open Opportunities Incorporated (OOI) in the amount of $415,000 for the case management and day to day program supervision of the Future Build Program.

COUNCIL REQUEST FOR FUTURE AGENDA ITEMS

Council Members may request items to be considered for future agendas. An item will only be brought forward with a majority vote and will appear on a future agenda with staff recommendations for further Council consideration.

COUNCIL MEMBER REMARKS

Council Members may make brief announcements or informal comments at this time. (No Action Required)

ADJOURNMENT TO SEPTEMBER 16, 2024

NOTICE TO PUBLIC

GENERAL INFORMATION

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SPEAKER'S CARD

Members of the audience who wish to address the City Council on issues that are not scheduled for the agenda and on any items listed as part of the agenda should complete a Speaker's Card available at the dais. Please read the card carefully in order to fill out the card properly. Submit the completed card to the City Clerk before the item is called, preferably before the meeting begins. Individuals will be given up to three minutes to address the Council unless additional time is allowed as provided for spokespersons. Speakers are not permitted to yield their time to another speaker. Prior to speaking, each member of the public shall state their name and business and City of residence in a clear and audible tone of voice. Pursuant to the Brown Act, no action may be taken by the City Council on items not already scheduled on the agenda; however, the City Council may refer your comments/concerns to staff or request that the item be placed on a future agenda.

PUBLIC HEARINGS

Persons who wish to speak on Public Hearings listed on the agenda will be heard when the Public Hearing is opened, except on Public Hearing items previously heard and closed to public comment. After the public has commented, the item is closed to public comment and brought to the Council/Agency level for discussion and action. Further comment from the audience will not be received unless requested by the Council/Agency.

There is a 90-day limit for the filing of a challenge in the Superior Court to certain City administrative decisions and orders which require a hearing by law, the receipt of evidence, and the exercise of discretion. The 90-day limit begins on the date the decision is final (Code of Civil Procedure Section 1094.6). Further, if you challenge an action taken by the City Council in court, you may be limited, by California law, including but not limited to Government Code Section 65009, to raising only those issues you or someone else raised in the public hearing, or in written correspondence delivered to the City Council prior to or at the public hearing. The City Council may be requested to reconsider a decision if the request is made prior to the next City Council meeting, regardless of whether it is a regular or special meeting.

NOTICE TO THE DISABLED AND VISUALLY OR HEARING IMPAIRED

In compliance with the Americans with Disabilities Act, the City of Pittsburg will provide special assistance for disabled residents. Upon request, an agenda for any meeting shall be made available in appropriate alternative formats. The Council Chamber is equipped with sound amplifier units for use by the hearing impaired. The units operate in conjunction with the Chamber's sound system. You may request the sound amplifier from the City Clerk for personal use during Council meetings. If you need special assistance to participate in this meeting, or are requesting a specially formatted agenda, please contact the City Clerk at (925) 252-4850. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting or provide the requested agenda format. (28 CFR 35.102-35.104 ADA Title II)

DISRUPTIVE CONDUCT

The Council requests that you observe the order and decorum of our Council Chamber by turning off or setting to vibrate all cellular telephones and electronic devices, and that you refrain from making personal, impertinent, or slanderous remarks. Boisterous and disruptive behavior while the Council is in session, and the display of signs in a manner which violates the rights of others or prevents others from watching or fully participating in the Council meeting, is a violation of our Municipal Code and any person who engages in such conduct can be ordered to leave the Council Chamber by the Mayor.

LIVE MEDIA BROADCASTING ADVISEMENT

City Council meetings are webcast live on the City's website at www.pittsburgca.gov on the Agendas and Live Meetings page. Past meetings and approved minutes are also archived on that webpage. Watch the live meeting via the City's webcast (www.pittsburgca.gov - Agendas and Live Meetings), on Comcast Channel 24 Delta TV, AT&T U-Verse Channel 99 Delta TV. Contact the City Clerk's office at (925) 252-4850 for more information

City Council Agency/Liaison/Subcommittee Assignments as of June 17, 2024

OUTSIDE AGENCY BOARDS	COUNCIL MEMBER(S)	TYPE	MEETS	TIME	STAFF
ABAG	Dionne Adams / Jelani Killings Alternate	Standing	Annual		G. Evans
Delta Diablo*	Juan Banales / Shanelle Scales-Preston Alternate	Standing	2nd Wednesday	4:30 PM	J. Samuelson
East Co. Co. County Habitat Conservancy	Angelica Lopez / Juan Banales Alternate	Standing	4th Monday Bi-Monthly	2:00 PM	J. Davis
East County Water Management	Juan Banales / Jelani Killings Alternate	Standing	Annual		J. Samuelson
MCE Clean Energy Board	Shanelle Scales-Preston / Angelica Lopez Alternate	Standing	Quarterly	7:00 PM	D. Buchanan
TRANSPLAN / ECCRFFA	Shanelle Scales-Preston / Juan Banales Alternate	Standing	2nd Thursday	6:30 PM	J. Samuelson
Tri-Delta Transit (2 reps)**	Shanelle Scales-Preston & Dionne Adams / Jelani Killings Alternate	Standing	4th Wednesday	4:00 PM	J. Samuelson

LIAISON TO	COUNCIL MEMBER(S)	TYPE	MEETS	TIME	STAFF
East Bay League of California Cities	Shanelle Scales-Preston / Jelani Killings Alternate	Standing	3rd Thursday		G. Evans
Los Medanos Health Advisory Committee	Shanelle Scales-Preston & Jelani Killings	Ad Hoc	As needed		M. Aliotti
Mayor's Conference	Juan Banales / Jelani Killings Alternate	Standing	1st Thursday	6:30 PM	G. Evans
Pittsburg Police Activities League (PAL)	Shanelle Scales-Preston & Angelica Lopez / Dionne Adams Alternate	Standing	Monthly		S. Albanese
School Districts Committee (2x2)	Jelani Killings & Angelica Lopez / Dionne Adams Alternate	Standing	Quarterly		M. Aliotti

SUBCOMMITTEES	COUNCIL MEMBER(S)	TYPE	MEETS	TIME	STAFF
Budget Sustainability	Juan Banales & Jelani Killings	Ad Hoc	As needed		G. Evans
Community and Economic Development	Jelani Killings & Dionne Adams / Juan Banales Alternate	Standing	2nd Wednesday	5:00 PM	J. Davis
Facilities Rental and Usage	Jelani Killings & Dionne Adams	Ad Hoc	As needed		G. Evans
Finance Management	Juan Banales & Jelani Killings / Shanelle Scales-Preston Alternate	Standing	3rd Friday	4:00 PM	P. Rodrigues
Government Performance	Juan Banales & Jelani Killings	Ad Hoc	4th Friday	4:00 PM	J. Brizel
Green Empowerment Zone	Dionne Adams/ Jelani Killings Alternate	Standing	3rd Friday Bi-monthly	9:30 AM	J. Davis
Infrastructure and Transportation	Shanelle Scales-Preston & Dionne Adams / Juan Banales Alternate	Standing	4th Thursday	5:30 PM	J. Samuelson
Life Enrichment	Dionne Adams & Angelica Lopez / Shanelle Scales-Preston Alternate	Standing	3rd Wednesday	5:30 PM	K. Simonton
Pittsburg Arts and Community Foundation	Shanelle Scales-Preston & Jelani Killings	Standing	As needed		K. Simonton
Public Safety	Shanelle Scales-Preston & Angelica Lopez / Jelani Killings Alternate	Standing	1st Wednesday	5:30 PM	S. Albanese
Tobacco, Cannabis, Alcohol Policy Review	Shanelle Scales-Preston & Jelani Killings	Ad Hoc	As needed		G. Evans

*Stipend of $170 per month
**Stipend of $100 per month

CITY OF PITTSBURG
APPLICATION FOR CITIZEN PARTICIPATION MEASURE M OVERSIGHT COMMITTEE

Name of Commission: Measure M

Name: Roland Fernandez

Address: _____

Telephone: Residential: _____ Business: _____

Email address: _____

Professional or Technical Experience: _____

Why are you interested in serving on this commission? happens to be a required sub committee like everything about Measure M

Other Community Activities or Organizations in which you participate: Alchohal and All Other Drugs

RETURN TO:
City Clerk's Office
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

ARE YOU AVAILABLE FOR:
Evening Meetings Yes X No ____
Daytime Meetings Yes X No ____

_____
SIGNATURE

Roland Fernandez
PLEASE PRINT NAME

August 6, 2024
Date

CITY OF PITTSBURG
APPLICATION FOR CITIZEN PARTICIPATION MEASURE M OVERSIGHT COMMITTEE

Name of Commission: Community Advisory Committee

Name: Dennisha A Marsh

Address. _____

Telephone: Residential: _____ Business: _____

Email address: _____

Professional or Technical Experience: Fiscal Manger for Cisco Systems
Reconsiliation Manager for Wells Fargo & US Banks

Why are you interested in serving on this commission? I am a community advocate and love to support the people in my community

Other Community Activities or Organizations in which you participate: School District, Contra Costa County and PAAACT

RETURN TO:
City Clerk's Office
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

ARE YOU AVAILABLE FOR:
Evening Meetings Yes XX No _____

Daytime Meetings Yes _____ No _____

_____
SIGNATURE

Dennisha Marsh
PLEASE PRINT NAME

08-07-2024
Date

CITY CLERK
AUG 09 2024

CITY OF PITTSBURG
APPLICATION FOR CITIZEN PARTICIPATION MEASURE M OVERSIGHT COMMITTEE

Name of Commission: Measure M Oversight Committee

Name: Aparicio, Michael-Joseph.

Address: _____

Telephone: Residential: _____ Business: _____

Email address: _____

Professional or Technical Experience: I have been many things in my life thus far, whether those have been good or bad it is for God to decide, until then I will through service by example.

Why are you interested in serving on this commission? A few people asked me to put my name forward. Being a man of service I could not refuse being called by my neighbors. It is my great honour to serve.

Other Community Activities or Organizations in which you participate: Community Advisory Commi
Community Advisory Commission

RETURN TO:
City Clerk's Office
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

ARE YOU AVAILABLE FOR:
Evening Meetings Yes Yes No ____
Daytime Meetings Yes Yes No ____

SIGNATURE

By: / Michael-Joseph Aparicio,/.
PLEASE PRINT NAME

Ninth of August, the Year of our Lord two tl
Date

CITY OF PITTSBURG
APPLICATION FOR CITIZEN PARTICIPATION MEASURE M OVERSIGHT COMMITTEE

Name of Commission: _____

Name: Zane Fiala

Address _____

Telephone: Residential: _____ Business: _____ _____

Email address: _____

Professional or Technical Experience: 20+ years of hospitality, restaurant, and wine experience. Owner/operator of Doctorbird Market, a wine, craft beer, and specialty food retail store in Old Town Pittburg.

Why are you interested in serving on this commission? As a local business owner, I have a personal stake in the success and development of Old Town Pittsburg. I am new to the community, but my wife and I have invested in Pittsburg both personally and professionally.

Other Community Activities or Organizations in which you participate: Chamber of Commerce

RETURN TO:
City Clerk's Office
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

ARE YOU AVAILABLE FOR:
Evening Meetings Yes X No _____
Daytime Meetings Yes _____ No X

_____
SIGNATURE

Zane Fiala
PLEASE PRINT NAME

_____
Date

Entry #: 2 - PFA EIFD Member **Status:** Submitted **Submitted:** 6/26/2024 11:52 AM

APPLICATION FOR THE PITTSBURG ENHANCED INFRASTRUCTURE FINANCING DISTRICT

Applications are due 6/30/24

Interviews scheduled for the evening of 7/15/24

Select the commission you are applying for from the list below

PFA EIFD Member

Name

David Akinsanya

Address

Email

Phone (Primary) **Phone (Alternate)**

Emergency Contact

Phone

Provide any professional or technical experience:

Information Technology - Network Infrastructure, Data Center Design and Operations, Server Administration, Network Administration, IoT and BYOD Integration, Wi-Fi Administration, Security and Cloud

Why are you interested in serving on this commission?

Opportunity to serve the community

Please list and briefly describe any other community activities or organizations in which you participate.

American College of Healthcare Excecutives, Health Information Management Systems Society

Are you avilable for evening meetings?

Yes

Are you available for daytime meetings?

Yes

Entry #: 3 - PFA EIFD Member **Status:** Submitted **Submitted:** 6/26/2024 11:55 AM

APPLICATION FOR THE PITTSBURG ENHANCED INFRASTRUCTURE FINANCING DISTRICT

Applications are due 6/30/24

Interviews scheduled for the evening of 7/15/24

Select the commission you are applying for from the list below

PFA EIFD Member

Name

Darith Choub

Address

Email

Phone (Primary)

Phone (Alternate)

Emergency Contact

Phone

Provide any professional or technical experience:

ICC Construction Inspector

Why are you interested in serving on this commission?

Help build a greater community for my city's Pittsburg!

Please list and briefly describe any other community activities or organizations in which you participate.

Community church group

Are you avilable for evening meetings?

Yes

Are you available for daytime meetings?

Yes

Entry #: 4 - PFA EIFD Member **Status:** Submitted **Submitted:** 6/26/2024 12:30 PM

APPLICATION FOR THE PITTSBURG ENHANCED INFRASTRUCTURE FINANCING DISTRICT

Applications are due 6/30/24

Interviews scheduled for the evening of 7/15/24

Select the commission you are applying for from the list below

PFA EIFD Member

Name

Gerard DCruz

Address

Email

Phone (Primary)

Phone (Alternate)

Emergency Contact

Phone

Provide any professional or technical experience:

CEO for a Construction Company with vast experience in different areas of an organization.

Why are you interested in serving on this commission?

Being a resident of this community and the experience I have, I firmly believe I could be a great asset to this commission and get an opportunity to serve my community.

Please list and briefly describe any other community activities or organizations in which you participate.

I have been an Active member of my Church, participating in different fund raising and regular Church activities.

Are you avilable for evening meetings?

Yes

Are you available for daytime meetings?

Yes

Entry #: 6 - PFA EIFD Member **Status:** Submitted **Submitted:** 6/26/2024 8:18 PM

APPLICATION FOR THE PITTSBURG ENHANCED INFRASTRUCTURE FINANCING DISTRICT

Applications are due 6/30/24

Interviews scheduled for the evening of 7/15/24

Select the commission you are applying for from the list below

PFA EIFD Member

Name

peter sanford

Address

Email

Phone (Primary)

Phone (Alternate)

Emergency Contact

Phone

Provide any professional or technical experience:

I was in a leadership role for five year is a Men's Division where we both supported each other to level up in our lives and in the community we served. I have experience creating meetings (agendas, delegation, scribes and implementation). I can select and hold helpful and enrolling context which at its peak exemplifies the importance of commitment before ego.

Why are you interested in serving on this commission?

We all have, I assume, criticized the performance of our government- think globally and act locally. If you will pardon the cliche.

Please list and briefly describe any other community activities or organizations in which you participate.

I currently am not serving the community.

Are you avilable for evening meetings?

Yes

Are you available for daytime meetings?

No

Entry #: 8 - PFA EIFD Member **Status:** Submitted **Submitted:** 6/27/2024 1:52 PM

APPLICATION FOR THE PITTSBURG ENHANCED INFRASTRUCTURE FINANCING DISTRICT

Applications are due 6/30/24

Interviews scheduled for the evening of 7/15/24

Select the commission you are applying for from the list below

PFA EIFD Member

Name

Iztaccuauhtli Gonzalez

Address

Email

Phone (Primary)

Phone (Alternate)

Emergency Contact

Phone

Provide any professional or technical experience:

Insurance and Financial Services and Real Estate Sales and Loans. Have Experience and actively rent homes.

Why are you interested in serving on this commission?

Want to Serve my community and be a voice for the people of our city.

Please list and briefly describe any other community activities or organizations in which you participate.

United Latino Voices. Network of Politically Active Latinos.

Are you avilable for evening meetings?

Yes

Are you available for daytime meetings?

Yes

Entry #: 9 - PFA EIFD Member **Status:** Submitted **Submitted:** 6/28/2024 3:02 AM

APPLICATION FOR THE PITTSBURG ENHANCED INFRASTRUCTURE FINANCING DISTRICT

Applications are due 6/30/24

Interviews scheduled for the evening of 7/15/24

Select the commission you are applying for from the list below

PFA EIFD Member

Name

Iman Azad

Address

Email

Phone (Primary)

Phone (Alternate)

Emergency Contact

Phone

Provide any professional or technical experience:

I am a graduate of University of Chicago with BS degree. I have worked as a management consultant at McKinsey & Co for a number of years before working at a startup as head of BizDev Asia/ME and eventually becoming a serial entrepreneur focused on acquisition, development and expansion of small to lower mid market local businesses. My focus is always has been on local, family owned businesses with deep roots in the community.

Why are you interested in serving on this commission?

As a new comer to the city of Pittsburg I feel I can be a fresh set of eyes and bring in a different perspective while leveraging my wide, varied and deep set of business and service experience/skills gained over the last 20+ years.

Please list and briefly describe any other community activities or organizations in which you participate.

I used sit on a number of large highrise boards in Chicago, managing budgets as large as $5million and interacting with 2k+ community members with regular board meetings and decision making.

Are you avilable for evening meetings?

Yes

Are you available for daytime meetings?

Yes

Entry #: 10 - PFA EIFD Member **Status:** Submitted **Submitted:** 6/28/2024 10:05 AM

APPLICATION FOR THE PITTSBURG ENHANCED INFRASTRUCTURE FINANCING DISTRICT

Applications are due 6/30/24

Interviews scheduled for the evening of 7/15/24

Select the commission you are applying for from the list below

PFA EIFD Member

Name

Mary Pyefinch

Address

Email

Phone (Primary)

Phone (Alternate)

Emergency Contact

Phone

Provide any professional or technical experience:

I worked for the CFO's office at Kaiser implementing an ERP (Accounting, AP/AR, Billing, Grants Management, etc.) software system for 5 years. The rollout was to 160,000 employees in all regions.

Why are you interested in serving on this commission?

I have lived here for 28 years and want to give back to our community.

Please list and briefly describe any other community activities or organizations in which you participate.

I was a Soroptimist of Pittsburg for a few years up until it disbanded.

Are you avilable for evening meetings?

Yes

Are you available for daytime meetings?

Yes

Entry #: 11 - PFA EIFD Member **Status:** Submitted **Submitted:** 6/28/2024 2:44 PM

APPLICATION FOR THE PITTSBURG ENHANCED INFRASTRUCTURE FINANCING DISTRICT

Applications are due 6/30/24

Interviews scheduled for the evening of 7/15/24

Select the commission you are applying for from the list below

PFA EIFD Member

Name

Elane Johnson

Address

Email

Phone (Primary)

Phone (Alternate)

Emergency Contact

-

Phone

Provide any professional or technical experience:

Current PSA VP at Hillview Jr. High and volunteered my time to other non-profit organizations and schools with in Pittsburg.

Why are you interested in serving on this commission?

I have lived in Pittsburg for over 20+ years and have deep rooting with in the community. I am a current Vice President of the PSA at Hillview. I am dedicated to giving back to enrich the future of the community of Pittsburg.

Please list and briefly describe any other community activities or organizations in which you participate.

(Current) PSA Vice President - Hillview Jr High
(2024/2025) Wrote Grants for Pittsburg Jr. Pirates Football and Cheer to the Keller Canyon Mitigation Fund
(Prior) PSA Secretary at Stoneman Elementary 1yr term
(Prior) Executive Admin for the Parent Committee at First Baptist Head Start - 2yr term
Volunteer Coach for Pittsburg Rec - Jr NBA 2023 season
Volunteer Coach for Pittsburg Rec - Soccer 2024 season

Are you avilable for evening meetings?

Yes

Are you available for daytime meetings?

No

Entry #: 12 - PFA EIFD Member **Status:** Submitted **Submitted:** 7/1/2024 2:11 PM

APPLICATION FOR THE PITTSBURG ENHANCED INFRASTRUCTURE FINANCING DISTRICT

Applications are due 6/30/24

Interviews scheduled for the evening of 7/15/24

Select the commission you are applying for from the list below

PFA EIFD Member

Name

Will Dunford

Address

Email

Phone (Primary)

Phone (Alternate)

Emergency Contact

Phone

Provide any professional or technical experience:

California Department of Real Estate Real Property Sales Agent DRE #02206780

Why are you interested in serving on this commission?

I am a proud 21-year Pittsburg resident and a recent member of the California Association of Realtors. I am establishing a commercial real estate division at my current brokerage and I eventually plan to establish a brokerage and title office of my own. Membership on the planning commission will provide me with first-hand experience with the mechanisms of municipal zoning process that will prove beneficial for my business and the City of Pittsburg.

Please list and briefly describe any other community activities or organizations in which you participate.

100 Black Men of the Bay Area, Kappa Alpha Psi Fraternity, Inc. Berkeley Alumni Chapter, the Northern California Chapter of the Historically Black Colleges and Universities Coalition (HBCUC), Jack and Jill of America Contra Costa Chapter, STS Academy

Are you avilable for evening meetings?

Yes

Are you available for daytime meetings?

No

CITY OF PITTSBURG
HOUSING AUTHORITY MEETING MINUTES

DATE: June 17, 2024

LOCATION: Council Chamber, City Hall, 65 Civic Avenue, Pittsburg, CA 94565

CITY COUNCIL/AGENCY MEMBERS
Juan Antonio Banales, Mayor/Chair
Jelani Killings, Vice-Mayor/Chair
Dionne Adams, Council/Agency Member
Angelica Lopez, Council/Agency Member
Shanelle Scales-Preston, Council/Agency Member
S.L. Floyd, Agency Member
Annie Hill Herring, Agency Member

APPOINTED OFFICIALS
Garrett Evans, City Manager/Executive Director
Donna Mooney, City Attorney/Legal Counsel
Alice E. Evenson, City Clerk/Agency Secretary (elected)
Nancy Parent, City Treasurer (elected)

Chair Banales called the meeting of the Housing Authority to order at 7:07 P.M. in the Council Chamber at City Hall, 65 Civic Avenue Pittsburg, CA

ROLL CALL

Member Lopez and Member Scales-Preston were absent and excused.

CONSIDERATION

1. Adoption of a Housing Authority of the City of Pittsburg Resolution Approving the Operating Budget Plan for Fiscal Year 2024-25 for the Housing Authority City of Pittsburg and Appropriation of Funds for Fiscal Year 2024-25

On Motion by Member Floyd, seconded by Member Herring and adopted by the following vote:

AYES: Adams, Floyd, Herring, Killings, Banales
ABSENT: Lopez, Scales-Preston

COMBINED CITY COUNCIL AND HOUSING AUTHORITY CONSENT CALENDAR

On Motion by Member Floyd, seconded by Member Herring and adopted by the following vote:

AYES: Adams, Floyd, Herring, Killings, Banales
ABSENT: Lopez, Scales-Preston

2. Minutes of April 15, 2024

3. Adoption of a City Council Resolution Authorizing Conveyance of 2362 Dover Way to the Housing Authority and a Housing Authority Resolution Authorizing Acceptance of 2362 Dover Way from the City of Pittsburg

HOUSING AUTHORITY MEMBER REMARKS

There were no Housing Authority Member remarks.

ADJOURNMENT

The Housing Authority was adjourned at 7:22 P.M.

Respectfully submitted,

Alice E. Evenson, Secretary

OFFICE OF THE CITY MANAGER/EXECUTIVE DIRECTOR
65 Civic Avenue
Pittsburg, CA 94565

TO: Chair and Governing Board Members

FROM: Garrett Evans, Executive Director

SUBJECT: Adoption of a Housing Authority Resolution Approving the Section 8 Management Assessment Program Certification for Fiscal Year End June 30, 2024

MEETING DATE: August 19, 2024

EXECUTIVE SUMMARY

As required compliance with the U.S. Department of Housing and Urban Development (HUD), the Housing Authority of the City of Pittsburg (Housing Authority) has prepared the Section 8 Management Assessment Program (SEMAP) Certification for submission for fiscal year end June 30, 2024.

FISCAL IMPACT

This action has no fiscal impact to the General Fund or the Housing Authority Funds.

RECOMMENDATION

Staff recommends the Governing Board of the Housing Authority adopt this Resolution approving the SEMAP Certification for fiscal year ending June 30, 2024, for submission to HUD no later than the August 30, 2024 deadline.

BACKGROUND

In 1999, HUD introduced the SEMAP as a management assessment system designed to provide an annual measurement of performance for all housing authorities administering the Section 8 Housing Choice Voucher program. HUD requires the SEMAP Certification be approved by resolution and transmitted electronically through HUD's Public and Indian Housing Information Center (PIC) system within 60 days following the end of the fiscal year.

The SEMAP system assesses Housing Authority on 14 key indicators that show whether families are assisted fairly and expeditiously and in accordance with the Federal regulations governing the program. These fourteen (14) indicators are: 1) Selection from Waiting List; 2) Reasonable Rent; 3) Determination of Adjusted Income; 4) Utility Allowance Schedule; 5) Housing Quality Standards (HQS) Quality Control; 6) HQS Enforcement; 7) Expanding

Housing Opportunities; 8) Payment Standards; 9) Annual Reexaminations; 10) Correct Tenant Rent Calculations; 11) Pre-contract HQS; 12) Annual HQS; 13) Lease Up (Utilization); and 14) Family Self-Sufficiency. Eight indicators are based on information certified by the Housing Authority and the remaining six indicators are based on HUD's PIC system data. Upon review of this SEMAP Certification by HUD, a determination will be made on the operational designation and regulatory compliance of the Housing Authority.

SUBCOMMITTEE FINDINGS

The SEMAP Certification was not discussed in a subcommittee.

STAFF ANALYSIS

The Housing Authority has prepared the SEMAP Certification to meet HUD's requirements and upon Board approval, will submit the SEMAP Certification to HUD on or before the due date of August 30, 2024, for compliance.

It is important to note that Indicator 14, Family Self-Sufficiency, is rated for those housing authorities operating a Family Self Sufficiency (FSS) Program and have an FSS Coordinator. As the Housing Authority does not operate this program, it is assessed on the remaining 13 indicators for a maximum of 135 points.

Within the 13 remaining indicators, there is a cumulative 135-point total scale where the attainment of 90% or above (122+ points) will yield a designation of "High Performer," a score between 60% and 89% (81 to 121 points) will yield a designation of "Standard Performer," and a score of less than 60% (80 points) will yield a designation of "Troubled Performer". HUD will conduct on-site reviews of housing authorities rated "Troubled" to assess the magnitude and severity of the problems.

The Housing Authority has in the past been designated a "High Performer" and current records indicate that it has successfully completed the 2024 requirements for most indicators to continue meeting the "High Performer" designation.

It is anticipated that HUD will post the Housing Authority's designation within 120 days of submission of the SEMAP Certification.

ATTACHMENTS: Resolution
Section 8 Management Assessment Program Certification

Report Prepared By: Tanya Ray, Housing Manager

BEFORE THE GOVERNING BOARD OF THE HOUSING AUTHORITY
OF THE CITY OF PITTSBURG

In the Matter of:

Adoption of a Housing Authority Resolution Approving the Section 8 Management Assessment Program Certification for Fiscal Year End June 30, 2024	))))	RESOLUTION NO. 24-

WHEREAS, in 1999, the U.S. Department of Housing and Urban Development (HUD), introduced the Section 8 Management Assessment Program (SEMAP) as a management assessment system designed to provide an annual measurement of performance for all housing authorities administering the Section 8 Housing Choice Voucher program; and

WHEREAS, HUD requires the SEMAP Certification be approved by resolution and transmitted electronically through HUD's Public and Indian Housing Information Center (PIC) system within 60 days following the end of the fiscal year; and

WHEREAS, the SEMAP system assesses housing authorities on 14 key indicators that show whether families are assisted fairly and expeditiously and in accordance with the Federal regulations governing the program. These fourteen (14) indicators are: 1) Selection from the Waiting List; 2) Reasonable Rent: 3) Determination of Adjusted Income; 4) Utility Allowance Schedule; 5) Housing Quality Standards (HQS) Quality Control; 6) HQS Enforcement; 7) Expanding Housing Opportunities; 8) Payment Standards; 9) Annual Reexaminations; 10) Correct Tenant Rent Calculations; 11) Pre-contract HQS; 12) Annual HQS; 13) Lease Up (Utilization); and 14) Family Self-Sufficiency. Eight indicators are based on information certified by the Housing Authority of the City of Pittsburg (Housing Authority) and the remaining six indicators are based on HUD's PIC system data. Upon review of this SEMAP Certification by HUD, a determination will be made on the operational designation and regulatory compliance of the Housing Authority; and

WHEREAS, Indicator 14, Family Self-Sufficiency, is rated for those housing authorities operating a Family Self Sufficiency (FSS) Program and have an FSS Coordinator. The Housing Authority does not operate this program and is therefore, assessed on the remaining 13 indicators for a maximum of 135 points; and

WHEREAS, the Housing Authority has identified policies, procedures and management practices to ensure compliance with SEMAP indicators identified by HUD.

NOW, THEREFORE BE IT RESOLVED**,** the Governing Board of the Housing Authority finds and determines that the SEMAP Certification for Fiscal Year End June 30, 2024 is a thorough and complete document, and supports the Housing Authority's policies, procedures and management practices.

BE IT FURTHER RESOLVED that the Governing Board of the Housing Authority hereby approves the SEMAP Certification for submission and adopts this Resolution and Exhibit A incorporated herein by this reference.

BE IT FURTHER RESOLVED that the Executive Director is hereby authorized to take such further actions as may be necessary or appropriate to carry out the Housing Authority's obligations pursuant to this Resolution.

PASSED AND ADOPTED by the Governing Board of the Housing Authority of the City of Pittsburg at a regular meeting on the 19th day of August 2024, by the following vote:

AYES:

NOES:

ABSTAINED:

ABSENT:

_____
Juan Antonio Banales, Chair

ATTEST:

_____
Alice E. Evenson, Agency Secretary

Section 8 Management Assessment Program (SEMAP) Certification

U.S. Department of Housing and Urban Development
Office of Public and Indian Housing

OMB Approval No. 2577-0215
(exp. 02/29/2020)

Public reporting burden for this collection of information is estimated to average 12 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This agency may not conduct or sponsor, and you are not required to respond to, a collection of information unless it displays a currently valid OMB control number.

This collection of information is required by 24 CFR sec 985.101 which requires a Public Housing Agency (PHA) administering a Section 8 tenant-based assistance program to submit an annual SEMAP Certification within 60 days after the end of its fiscal year. The information from the PHA concerns the performance of the PHA and provides assurance that there is no evidence of seriously deficient performance. HUD uses the information and other data to assess PHA management capabilities and deficiencies, and to assign an overall performance rating to the PHA. Responses are mandatory and the information collected does not lend itself to confidentiality.

Instructions Respond to this certification form using the PHA's actual data for the fiscal year just ended.

PHA Name	For PHA FY Ending (mm/dd/yyyy)	Submission Date (mm/dd/yyyy)
Housing Authority - City of Pittsburg CA060	06/30/2024	

Check here if the PHA expends less than $300,000 a year in Federal awards ☐
Indicators 1 - 7 will not be rated if the PHA expends less than $300,000 a year in Federal awards and its Section 8 programs are not audited for compliance with regulations by an independent auditor. A PHA that expends less than $300,000 in Federal awards in a year must still complete the certification for these indicators.

Performance Indicators

1. Selection from the Waiting List. (24 CFR 982.54(d)(1) and 982.204(a))
(a) The PHA has written policies in its administrative plan for selecting applicants from the waiting list.

PHA Response **Yes** ☑ **No** ☐

(b) The PHA's quality control samples of applicants reaching the top of the waiting list and of admissions show that at least 98% of the families in the samples were selected from the waiting list for admission in accordance with the PHA's policies and met the selection criteria that determined their places on the waiting list and their order of selection.

PHA Response **Yes** ☑ **No** ☐

2. Reasonable Rent. (24 CFR 982.4, 982.54(d)(15), 982.158(f)(7) and 982.507)
(a) The PHA has and implements a reasonable written method to determine and document for each unit leased that the rent to owner is reasonable based on current rents for comparable unassisted units (i) at the time of initial leasing, (ii) before any increase in the rent to owner, and (iii) at the HAP contract anniversary if there is a 5 percent decrease in the published FMR in effect 60 days before the HAP contract anniversary. The PHA's method takes into consideration the location, size, type, quality, and age of the program unit and of similar unassisted units, and any amenities, housing services, maintenance or utilities provided by the owners.

PHA Response **Yes** ☑ **No** ☐

(b) The PHA's quality control sample of tenant files for which a determination of reasonable rent was required shows that the PHA followed its written method to determine reasonable rent and documented its determination that the rent to owner is reasonable as required for (check one):

PHA Response ☑ **At least 98% of units sampled** ☐ **80 to 97% of units sampled** ☐ **Less than 80% of units sampled**

3. Determination of Adjusted Income. (24 CFR part 5, subpart F and 24 CFR 982.516)
The PHA's quality control sample of tenant files shows that at the time of admission and reexamination, the PHA properly obtained third party verification of adjusted income or documented why third party verification was not available; used the verified information in determining adjusted income; properly attributed allowances for expenses; and, where the family is responsible for utilities under the lease, the PHA used the appropriate utility allowances for the unit leased in determining the gross rent for (check one):

PHA Response ☑ **At least 90% of files sampled** ☐ **80 to 89% of files sampled** ☐ **Less than 80% of files sampled**

4. Utility Allowance Schedule. (24 CFR 982.517)
The PHA maintains an up-to-date utility allowance schedule. The PHA reviewed utility rate data that it obtained within the last 12 months, and adjusted its utility allowance schedule if there has been a change of 10% or more in a utility rate since the last time the utility allowance schedule was revised.

PHA Response **Yes** ☑ **No** ☐

5. HQS Quality Control Inspections. (24 CFR 982.405(b))
A PHA supervisor (or other qualified person) reinspected a sample of units during the PHA fiscal year, which met the minimum sample size required by HUD (see 24 CFR 985.2), for quality control of HQS inspections. The PHA supervisor's reinspected sample was drawn from recently completed HQS inspections and represents a cross section of neighborhoods and the work of a cross section of inspectors.

PHA Response **Yes** ☑ **No** ☐

6. HQS Enforcement. (24 CFR 982.404)
The PHA's quality control sample of case files with failed HQS inspections shows that, for all cases sampled, any cited life-threatening HQS deficiencies were corrected within 24 hours from the inspection and, all other cited HQS deficiencies were corrected within no more than 30 calendar days from the inspection or any PHA-approved extension, or, if HQS deficiencies were not corrected within the required time frame, the PHA stopped housing assistance payments beginning no later than the first of the month following the correction period, or took prompt and vigorous action to enforce the family obligations for (check one):

PHA Response ☑ **At least 98% of cases sampled** ☐ **Less than 98% of cases sampled**

7. Expanding Housing Opportunities. (24 CFR 982.54(d)(5), 982.153(b)(3) and (b)(4), 982.301(a) and 983.301(b)(4) and (b)(12)).
Applies only to PHAs with jurisdiction in metropolitan FMR areas.
Check here if not applicable ✔

(a) The PHA has a written policy to encourage participation by owners of units outside areas of poverty or minority concentration which clearly delineates areas in its jurisdiction that the PHA considers areas of poverty or minority concentration, and which includes actions the PHA will take to encourage owner participation.
PHA Response **Yes** ✔ **No** ☐

(b) The PHA has documentation that shows that it took actions indicated in its written policy to encourage participation by owners outside areas of poverty and minority concentration.
PHA Response **Yes** ✔ **No** ☐

(c) The PHA has prepared maps that show various areas, both within and neighboring its jurisdiction, with housing opportunities outside areas of poverty and minority concentration; the PHA has assembled information about job opportunities, schools and services in these areas; and the PHA uses the maps and related information when briefing voucher holders.
PHA Response **Yes** ✔ **No** ☐

(d) The PHA's information packet for voucher holders contains either a list of owners who are willing to lease, or properties available for lease, under the voucher program, or a list of other organizations that will help families find units and the list includes properties or organizations that operate outside areas of poverty or minority concentration.
PHA Response **Yes** ✔ **No** ☐

(e) The PHA's information packet includes an explanation of how portability works and includes a list of neighboring PHAs with the name, address and telephone number of a portability contact person at each.
PHA Response **Yes** ✔ **No** ☐

(f) The PHA has analyzed whether voucher holders have experienced difficulties in finding housing outside areas of poverty or minority concentration and, where such difficulties were found, the PHA has considered whether it is appropriate to seek approval of exception payment standard amounts in any part of its jurisdiction and has sought HUD approval when necessary.
PHA Response **Yes** ✔ **No** ☐

8. Payment Standards. The PHA has adopted current payment standards for the voucher program by unit size for each FMR area in the PHA jurisdiction and, if applicable, for each PHA-designated part of an FMR area, which do not exceed 110 percent of the current applicable FMR and which are not less than 90 percent of the current FMR (unless a lower percent is approved by HUD). (24 CFR 982.503)

PHA Response **Yes** ✔ **No** ☐

Enter current FMRs and payment standards (PS)

0-BR FMR	1825	1-BR FMR	2131	2-BR FMR	2590	3-BR FMR	3342	4-BR FMR	3954
PS	1825	PS	2131	PS	2590	PS	3342	PS	3954

If the PHA has jurisdiction in more than one FMR area, and/or if the PHA has established separate payment standards for a PHA-designated part of an FMR area, attach similar FMR and payment standard comparisons for each FMR area and designated area.

9. Annual Reexaminations. The PHA completes a reexamination for each participating family at least every 12 months. (24 CFR 982.516)

PHA Response **Yes** ✔ **No** ☐

10. Correct Tenant Rent Calculations. The PHA correctly calculates tenant rent in the rental certificate program and the family rent to owner in the rental voucher program. (24 CFR 982, Subpart K)

PHA Response **Yes** ✔ **No** ☐

11. Precontract HQS Inspections. Each newly leased unit passed HQS inspection before the beginning date of the assisted lease and HAP contract. (24 CFR 982.305)

PHA Response **Yes** ✔ **No** ☐

12. Annual HQS Inspections. The PHA inspects each unit under contract at least annually. (24 CFR 982.405(a))

PHA Response **Yes** ✔ **No** ☐

13. Lease-Up. The PHA executes assistance contracts on behalf of eligible families for the number of units that has been under budget for at least one year.

PHA Response **Yes** ✔ **No** ☐

14a. Family Self-Sufficiency Enrollment. The PHA has enrolled families in FSS as required. (24 CFR 984.105)
Applies only to PHAs required to administer an FSS program .
Check here if not applicable ✔

PHA Response

a. Number of mandatory FSS slots (Count units funded under the FY 1992 FSS incentive awards and in FY 1993 and later through 10/20/1998. Exclude units funded in connection with Section 8 and Section 23 project-based contract terminations; public housing demolition, disposition and replacement; HUD multifamily property sales; prepaid or terminated mortgages under section 236 or section 221(d)(3); and Section 8 renewal funding. Subtract the number of families that successfully completed their contracts on or after 10/21/1998.)

or, Number of mandatory FSS slots under HUD-approved exception

b. Number of FSS families currently enrolled

c. Portability: If you are the **initial** PHA, enter the number of families currently enrolled in your FSS program, but who have moved under portability and whose Section 8 assistance is administered by another PHA

Percent of FSS slots filled (b + c divided by a)

14b. Percent of FSS Participants with Escrow Account Balances. The PHA has made progress in supporting family self-sufficiency as measured by the percent of currently enrolled FSS families with escrow account balances. (24 CFR 984.305)
Applies only to PHAs required to administer an FSS program .
Check here if not applicable ✔

PHA Response **Yes** ☐ **No** ☐

Portability: If you are the **initial** PHA, enter the number of families with FSS escrow accounts currently enrolled in your FSS program, but who have moved under portability and whose Section 8 assistance is administered by another PHA

Deconcentration Bonus Indicator (Optional and only for PHAs with jurisdiction in metropolitan FMR areas).

The PHA is submitting with this certification data which show that:

(1) Half or more of all Section 8 families with children assisted by the PHA in its principal operating area resided in low poverty census tracts at the end of the last PHA FY;

(2) The percent of Section 8 mover families with children who moved to low poverty census tracts in the PHA's principal operating area during the last PHA FY is at least two percentage points higher than the percent of all Section 8 families with children who resided in low poverty census tracts at the end of the last PHA FY;

or

(3) The percent of Section 8 mover families with children who moved to low poverty census tracts in the PHA's principal operating area over the last two PHA FYs is at least two percentage points higher than the percent of all Section 8 families with children who resided in low poverty census tracts at the end of the second to last PHA FY.

PHA Response **Yes** ☐ **No** ✔ **If yes, attach completed deconcentration bonus indicator addendum.**

I hereby certify that, to the best of my knowledge, the above responses under the Section 8 Management Assessment Program (SEMAP) are true and accurate for the PHA fiscal year indicated above. I also certify that, to my present knowledge, there is not evidence to indicate seriously deficient performance that casts doubt on the PHA's capacity to administer Section 8 rental assistance in accordance with Federal law and regulations.

Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802)

Executive Director, signature

Date (mm/dd/yyyy) 08/19/2024

Chairperson, Board of Commissioners, signature

Date (mm/dd/yyyy) 08/19/2024

The PHA may include with its SEMAP certification any information bearing on the accuracy or completeness of the information used by the PHA in providing its certification.

SEMAP Certification - Addendum for Reporting Data for Deconcentration Bonus Indicator

Date (mm/dd/yyyy) _____

PHA Name _____

Principal Operating Area of PHA _____
(The geographic entity for which the Census tabulates data)

Special Instructions for State or regional PHAs. Complete a copy of this addendum for each metropolitan area or portion of a metropolitan area (i.e., principal operating areas) where the PHA has assisted 20 or more Section 8 families with children in the last completed PHA FY. HUD will rate the areas separately and the separate ratings will then be weighted by the number of assisted families with children in each area and averaged to determine bonus points.

1990 Census Poverty Rate of Principal Operating Area _____

Criteria to Obtain Deconcentration Indicator Bonus Points

To qualify for bonus points, a PHA must complete the requested information and answer yes for only one of the 3 criteria below. However, State and regional PHAs must always complete line 1) b for each metropolitan principal operating area.

1) _____ a. Number of Section 8 families with children assisted by the PHA in its principal operating area at the end of the last PHA FY who live in low poverty census tracts. A low poverty census tract is a tract with a poverty rate at or below the overall poverty rate for the principal operating area of the PHA, or at or below 10% whichever is greater.

_____ b. Total Section 8 families with children assisted by the PHA in its principal operating area at the end of the last PHA FY.

_____ c. Percent of all Section 8 families with children residing in low poverty census tracts in the PHA's principal operating area at the end of the last PHA FY (line a divided by line b).

Is line c 50% or more? **Yes** ☐ **No** ☐

2) _____ a. Percent of all Section 8 families with children residing in low poverty census tracts in the PHA's principal operating area at the end of the last completed PHA FY.

_____ b. Number of Section 8 families with children who moved to low poverty census tracts during the last completed PHA FY.

_____ c. Number of Section 8 families with children who moved during the last completed PHA FY.

_____ d. Percent of all Section 8 mover families with children who moved to low poverty census tracts during the last PHA fiscal year (line b divided by line c).

Is line d at least two percentage points higher than line a? **Yes** ☐ **No** ☐

3) _____ a. Percent of all Section 8 families with children residing in low poverty census tracts in the PHA's principal operating area at the end of the second to last completed PHA FY.

_____ b. Number of Section 8 families with children who moved to low poverty census tracts during the last two completed PHA FYs.

_____ c. Number of Section 8 families with children who moved during the last two completed PHA FYs.

_____ d. Percent of all Section 8 mover families with children who moved to low poverty census tracts over the last two completed PHA FYs (line b divided by line c).

Is line d at least two percentage points higher than line a? **Yes** ☐ **No** ☐

If one of the 3 criteria above is met, the PHA may be eligible for 5 bonus points.

See instructions above concerning bonus points for State and regional PHAs.

OFFICE OF THE CITY MANAGER/EXECUTIVE DIRECTOR
65 Civic Avenue
Pittsburg, CA 94565

TO: Mayor/Chair and Council/Governing Board Members

FROM: Garrett Evans, Executive Director/City Manager

SUBJECT: Adoption of a City Council Resolution Authorizing the City Manager to Negotiate and Execute an Agreement with Associated Right of Way Services Inc. for Project Management and Property Acquisition Services and a Housing Authority Resolution Authorizing the Use of Housing Successor Agency Funds

MEETING DATE: August 19, 2024

EXECUTIVE SUMMARY

The City and Associated Right of Way Services Inc. (ARWS) are proposing to enter into an agreement (Agreement) whereby ARWS would assist the City with project management and strategic property acquisition services.

FISCAL IMPACT

Staff proposes to use $100,000 of the Housing Successor Agency's (HSA) (Fund 248) approved budget for Fiscal Year (FY) 2024/25 to pay for the cost of the Agreement.

RECOMMENDATION

City Council adopt the Resolution authorizing the City Manager to negotiate and execute an agreement with ARWS for project management and property acquisition services.

Governing Board of the Housing Authority of the City of Pittsburg (Housing Authority) adopt the Resolution authorizing the use of $100,000 of the HSA's approved budget for FY 2024/25 to pay for the Agreement.

BACKGROUND

On August 5, 2024, the City Council adopted Resolution 24-14516, amending the 2040 General Plan (Chapter 14) by adopting amendments to the 2023-2031 Housing Element (the "6th Cycle"). During the 6th Cycle, the City is required to enable the production of 2,052 housing units, of which, 812 units are below 80% of the Area Median Income.

The Housing Authority currently seeks to acquire property to establish affordable housing units in Pittsburg. The City has identified the Old Town area as a potential location for these units, which may include supportive services and the potential for economic development enhancements to the area.

SUBCOMMITTEE FINDINGS

This item was not presented to a subcommittee.

STAFF ANALYSIS

ARWS is a full service right of way and real estate consulting firm. Staff is recommending retaining ARWS to assist the City with project management and potential property acquisition services due to their experience and track record of working with agencies, including the City. ARWS services include, but are not limited to, the facilitation of property negotiations and relocation services, if needed.

It should be noted that the proposed action would not authorize the actual purchase of properties, but simply the identification and negotiation of possible acquisitions.

ATTACHMENTS: City Council Resolution
Housing Authority Resolution

Report Prepared By: Jordan Davis, Director of Community and Economic Development

BEFORE THE GOVERNING BOARD OF THE HOUSING AUTHORITY
OF THE CITY OF PITTSBURG

In the Matter of:

Authorizing the Use of Housing Successor Agency Funds) RESOLUTION NO. 24-

WHEREAS, the Housing Authority of the City of Pittsburg (Housing Authority) currently seeks to acquire property to establish affordable housing units within the Pittsburg; and

WHEREAS, the Housing Authority, in conjunction with the City, has identified the Old Town area as a potential location for these units, which may include supportive services and the potential for economic development enhancements to the area; and

WHEREAS, Associated Right of Way Services (ARWS) is a full service right of way and real estate consulting firm with extensive experience, track record of working with agencies, including the City, and project management capabilities; and

WHEREAS, the City and AWRS are proposing to enter into an agreement whereby ARWS would assist the City with project management and strategic property acquisition services; and

WHEREAS, staff proposes to use $100,000 of the Housing Successor Agency's (HSA) (Fund 248) approved budget for Fiscal Year (FY) 2024/25 to pay for the cost of the Agreement; and

WHEREAS, this Resolution does not authorize the actual purchase of properties, but simply the identification and negotiation of possible acquisitions.

NOW, THEREFORE BE IT RESOLVED that the Governing Board of the Housing Authority of the City of Pittsburg hereby authorizes the use $100,000 of the HSA's approved budget for FY 2024/25 to pay for the cost of the Agreement.

PASSED AND ADOPTED by the Governing Board of the Housing Authority of the City of Pittsburg at a regular meeting on the 19th day of August 2024, by the following vote:

AYES:
NOES:
ABSTAINED:
ABSENT:

_____
Juan Antonio Banales, Chair

ATTEST:

_____
Alice E. Evenson, Agency Secretary

BEFORE THE CITY COUNCIL OF THE CITY OF PITTSBURG

In the Matter of:

Authorizing the City Manager to Negotiate and Execute an Agreement With Associated Right of Way Services For Project Management and Property Acquisition Services	)))))	RESOLUTION NO. 24-

WHEREAS, the Housing Authority of the City of Pittsburg (Housing Authority) currently seeks to acquire property to establish affordable housing units within Pittsburg; and

WHEREAS, the Housing Authority, in conjunction with the City, has identified the Old Town area as a potential location for these units, which may include supportive services and the potential for economic development enhancements to the area; and

WHEREAS, Associated Right of Way Services Inc. (ARWS) is a full service right of way and real estate consulting firm with extensive experience, track record of working with agencies, including the City, and project management capabilities; and

WHEREAS, the City and ARWS are proposing to enter into an agreement (Agreement), whereby ARWS would assist the City with project management and strategic property acquisition services; and

WHEREAS, staff proposes to use $100,000 of the Housing Successor Agency's (HSA) approved budget (Fund 248) for Fiscal Year 2024/25 to pay for the cost of the Agreement; and

WHEREAS, this Resolution does not authorize the actual purchase of properties but simply the identification and negotiation of possible acquisitions.

NOW, THEREFORE BE IT RESOLVED that the City Council of the City of Pittsburg hereby authorizes the City Manager to negotiate and execute an agreement with ARWS for project management and property acquisition services in an amount not to exceed One Hundred Thousand Dollars ($100,000).

PASSED AND ADOPTED by the City Council of the City of Pittsburg at a regular meeting on the 19th day of August 2024, by the following vote:

AYES:
NOES:
ABSTAINED:
ABSENT:

_____
Juan Antonio Banales, Mayor

ATTEST:

_____
Alice E. Evenson, City Clerk

OFFICE OF THE CITY MANAGER/EXECUTIVE DIRECTOR
65 Civic Avenue
Pittsburg, CA 94565

TO: Mayor and Council Members

FROM: Garrett Evans, City Manager

SUBJECT: Adoption of a City Council Resolution Authorizing the City Manager to Negotiate and Execute Software Service Agreements with 1) Tyler Technologies, Inc. for a New Citywide Enterprise Resource Planning (ERP) System; and 2) NEOGOV for Supplemental Human Resources Cloud-Based Services

MEETING DATE: August 19, 2024

EXECUTIVE SUMMARY

The proposed item would authorize the negotiation, execution and implementation of a new Citywide Enterprise Resource Planning (ERP) System through Tyler Technologies, Inc. This ERP System will replace existing Financial, Human Resources (HR), Payroll (PR) and Utility Billing (UB) systems. The new ERP system will be utilized by all departments and divisions of the City. The proposal includes supplemental modules for Human Resources to be provided by NEOGOV for integrated, cloud-based recruitment, development and talent management as well as contingency expenses for the implementation process.

FISCAL IMPACT

The cost of the new ERP system will be $3,918,692 over a five-year period. This includes one-time implementation fees, 5-year subscription/support fees, and purchases towards any unforeseen contingencies during the implementation phase. This table shows the annual cost over the five-year period.

	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	Total
Total	$1,461,334	$933,691	$605,530	$456,407	$461,730	$3,918,692

The funding for each of the fiscal years will be paid out of each department and division's approved budgets whose funding sources include, but are not limited to, General Fund, Enterprise Funds, and other Non-General Funds.

American Rescue Plan Act (ARPA) funds of $2,068,000 have been allocated to assist in the purchase and implementation of the new ERP System.

Vendor	ERP Modules to be procured	One-time implementation fees	Subscription fees for 5 Years	Total Fees
Tyler Technologies, Inc	Core Products • Financials • Human Resources • Payroll • Utility Billing Add-on Products • Transparency • Budget Publishing • Advanced Scheduling • Cashiering/Accela Interface	$ 1,614,431	$ 1,674,050	**$ 3,288,481**
GovernmentJobs.com (dba NEOGOV)	• Recruiting • Onboarding • Performance Evaluation • Learning Management System • eForms • Single Sign-on	$ 38,100	$ 392,111	**$ 430,211**
-	• Contingency purchases	$ 100,000	$ 100,000	**$ 200,000**
	Total :	**$ 1,752,531**	**$ 2,166,161**	**$ 3,918,692**

RECOMMENDATION

Adopt the Resolution and authorize the City Manager to negotiate and execute software service agreements with 1) Tyler Technologies, Inc. for a new citywide Enterprise Resource Planning (ERP) System; and 2) NEOGOV for supplemental Human Resources cloud based services.

BACKGROUND

The City currently utilizes Eden from Tyler Technology, Inc. (Tyler) for Financial, HR, PR and UB management. This software system has been used by the City for the past 15 years. The Eden product is built on older technology and Tyler has stopped making feature enhancements to this product. While Tyler is still supporting Eden, it has set the sunset date of Eden to be March 1, 2027. This means that the City will have to migrate to a new system by the end of calendar year 2026 to ensure uninterrupted performance of the City's vital systems.

While Eden customers of Tyler were notified about this sunset date in February 2022, the City was already aware of the impending plan to sunset Eden in advance of the February 2022 notification. This led the City to engage Government Finance Officers Association (GFOA) as a consultant in November 2021 to carry out an ERP assessment study, recommend process and policy improvements, and eventually select a replacement ERP vendor through a request for proposal (RFP) process.

GFOA conducted a study of City business processes by forming nine Process Improvement Teams (PIT) for each of the critical functional areas of the ERP system. Each PIT Team comprised of subject matter experts as well as Citywide users of the specific functional area, with a team size of about 10 members for each team. In addition, a Project Management Team, comprising key stakeholders from Finance and Human Resources departments, was formed to provide input to GFOA. After a series of meetings with GFOA, as well as internal meetings, an RFP was developed, which would cater to the City's ERP needs with respect to the core Financials, HR, and PR systems. This RFP was published to the vendor community on December 7, 2022. Pursuant to the GFOA recommendation, it was decided to have a separate RFP for the UB functionality.

SUBCOMMITTEE FINDINGS

The Finance Management Subcommittee was updated with the progress on the ERP procurement process at regular intervals as detailed below.

Date	Description of update
July 21, 2023	First status update on ERP. The update covered the reason for the new ERP, goals for the new ERP, milestones achieved, and the anticipated implementation time and costs.
September 15, 2023	Second status update on ERP. The update covered milestones achieved, milestones yet to be achieved, and the revised implementation time and costs.
February 16, 2024	ERP goals were presented as part of the Fiscal Year 2024-2025 goals under Efficiency.

STAFF ANALYSIS

City received responses from five vendors to RFP on the due date of February 7, 2023, as detailed below:

#	Vendor Name	Address	5 Year price
1	CentralSquare	1000 Business Center Dr, Lake Mary, FL 32746	$1,644,112
2	Cyret Technologies	10687 Gatkins Way, Suite 200, Manassas, VA 20109	$1,066,326
3	Forsys	691 S Milpitas Blvd, Milpitas, CA 95035	$5,331,045
4	Origin Utility	1930 Village Center Circle, Suite 3-704, Las Vegas, NV 89134	$5,395,218
5	Tyler Technologies	One Tyler Drive, Yarmouth, ME 04096	$2,555,342

The above prices were only for the Financials, HR and PR systems of the ERP system offered by each vendor, except for Forsys, which offered only Financials modules.

To evaluate the responses received for the RFP, the City established a nine-member Evaluation Team. The Evaluation Team is comprised of staff from Finance, HR, Information Technology (IT), Police, Public Works, Engineering, and the City Manager's Office. Of the five proposals received, the Tyler proposal scored significantly higher than the other four proposals in terms of the overall scoring. The two proposals which were lower priced that Tyler were either a) deficient in meeting the City's needs for an ERP; b) did not offer the best technical solution; or c) did not have adequate experience implementing ERPs for cities.

The next phase of evaluation consisted of discovery and demonstration sessions with Tyler. These sessions were conducted May through September of 2023 with the participation of the PITs, Evaluation Team, Project Management Team and GFOA. While the core ERP products of Tyler (Financials, HR, and PR) fully met or exceeded the RFP requirements, additional products or modules from Tyler and one more vendor (NEOGOV) were thought to be necessary as part of the new ERP system to fully meet the needs of the City effectively and economically. These additional products/modules are as follows:

1. Utility Billing: It was envisioned that the City would release a separate RFP for the UB needs, as it is a niche market and there are several non-ERP vendors who have solutions in this functional area. However, during the discovery sessions with Tyler, it emerged that the City's interest would be best served by opting for the UB system from Tyler as it included the functionality the City requires and can seamlessly integrate with the other modules. Continued demonstrations and discovery sessions were conducted for Tyler's UB modules. The UB modules demonstrated its capabilities and Tyler offered attractive pricing.

The UB staff are well acquainted with the existing UB modules of Eden. Continuation of the familiarity with the new UB modules from Tyler will assist in the migration process. Considering this, various evaluating teams recommended procurement of the UB modules from Tyler, rather than release a separate RFP for this requirement. Prices offered by Tyler for the UB modules are substantially lower than the industry pricing for a stand-alone product in this category.

The financial impact of the UB module is $ 396,716.

2. Expansion of NEOGOV products for Human Resources: During the discovery and demonstration session of the HR and PR modules of the new ERP system, it emerged that the new ERP system had limited capabilities in areas of recruitment, onboarding, learning and performance management. To align the City Council Strategic Goal of Increasing efficiency of City operations and services through technology and streamlined processes, HR staff proposed a supplement to the ERP by expanding services offered through HR's current applicant tracking system provider, NEOGOV, to integrate services with the new the ERP system. NEOGOV currently provides the City with interactive software for employee recruitment. This software application module enables the HR Department to provide efficient, high-quality services to prospective and current employees.

Integration between NEOGOV and the new ERP system will automate new hire on-boarding, employee records and forms, performance management, training and development, as well as enhance the security of employee data, expedite the timing of personnel transactions, notifications and approvals, and reduce reliance on the use of paper.

NEOGOV is a leading public sector cloud-based workforce platform, serving over 6,000 organizations with the popular GovernmentJobs.com website promoting over 1.5 million job matches. NEOGOV has grown its platforms significantly over its 23 years as a company. The City has been utilizing NEOGOV's applicant tracking software (Insight) for applicants to apply and track their status using their mobile or other computer devices.

NEOGOV's applicant tracking module saves the City on advertising costs as the service integrates with social media and garners over 6 million page views per month and provides staff with over 39 million applicant profiles. Accordingly, HR staff has recommended procurement of following modules from NEOGOV to cater to the entire employee lifecycle management.

a. Insight: This is a recruitment module already being used by the City.
b. Onboarding: This module transitions job candidates through paperless on-boarding processes that accelerate the hiring stage and enhance communication.
c. Learning Management: This module increases the productivity, safety, and retention of the workforce by engaging them in training opportunities and monitoring the training.
d. Performance Management: This module enhances communication, identifies employee strengths, and establishes a sense of purpose while measuring competencies and goals, developing succession plans, and automating the employee evaluation/coaching and development process.
e. eForms: This is a document and workflow management module that helps to create online forms, manage records and documents, and build seamless workflows.

NEOGOV will integrate with the new ERP system to automate the manual payroll, time, and attendance processes, and allow employees to access payroll and benefits information at their convenience. Combining these systems will eliminate spreadsheets and current tedious manual routines, as well as automated processes, provide greater transparency, and reduce the risk of human error.

Staff proposes to execute a five-year contract with NEOGOV for the implementation of a comprehensive human resources and talent management platform to support the entire employee lifecycle.

The financial impact of the above stated NEOGOV modules is $430,211.

3. Additional Products: During the discovery and demonstration sessions of the new ERP system, Tyler demonstrated its products in the areas of:

a. Transparency: Tyler has a product called Open Finance which provides a transparent look at the City's various revenue sources and types of expenses. Open Finance presents this data to the public in a highly interactive format using charts, graphs, and tables through the City's website. Many cities, counties and other public agencies are using this product to enhance financial transparency.
b. Budget Publishing: Tyler's PatternStream software automates the time-consuming process of publishing budget books by collecting data from the Financial system. The City currently uses third-party software (Budget Book Online) to accomplish this task. City will be migrating over to PatternStream for Budget Publishing after the Financial system of the new ERP is implemented.

c. Staff Scheduling: Advanced Scheduling automates, streamlines, and simplifies staff scheduling for departments like Public Works, Recreation, and Police. The system makes sure that the appropriate staff are engaged in operational duties at the right time for the departments which operate in shift schedules.
d. Interface between Accela and Cashiering module of new ERP: This interface will allow direct posting of fees collected through the Accela based Business License and Permitting modules to post the entries in the Cashiering module of new the ERP system.

The City's Evaluation Team, PITs, and Project Management teams have gone through detailed demonstrations of the above products and recommend that the City procure products or services in these three areas. Tyler has submitted attractive pricing for these products as a part of the RFP response.

The financial impact of these Additional Products is $289,005.

The new ERP system will be implemented over a period of about 20 to 33 months in a phased manner, with overlapping phases, as detailed below:

Phase	Description of activities	Duration
I	• Implementation of NEOGOV modules • Implementation of Tyler Financial System	9-12 Months
II	• Implementation of Tyler Human Resources and Payroll System • Implementation of Tyler Utility Billing System	9-12 Months
III	• Implementation of Transparency and Budget Publishing Systems • Implementation of Advanced Scheduling System	6-9 Months

In addition to improving business processes and workflows, the new ERP System will significantly improve the efficiency and effectiveness of customer service. Additionally, the products and services being procured for the new ERP system will be cloud based. Cloud based software service offers several advantages to the City, which are listed below:

- Alignment with the City's long-term goal of transitioning IT applications and system from the City's local network to the cloud which will severely reduce the risk of cyber incidences.
- Eliminates IT staff resources from managing on-premises hardware and enables staff to support the City in other ways.
- Responsibility placed on the respective vendor to update the software and push out the latest security patches as they become available.
- Cloud ensures that all the applications and systems are running on redundant systems including software, hardware, and data storage, which reduces the City's risk disasters or long-term power outages.

ATTACHMENTS: Resolution
Service Agreement with Tyler Technologies, Inc.
Service Agreement with NEOGOV

Report Prepared By: Jitendra Kaneria, Deputy Chief Information Systems Officer

BEFORE THE CITY COUNCIL OF THE CITY OF PITTSBURG

In the Matter of:

Authorizing the City Manager to Negotiate And Execute Software Services Agreements With 1) Tyler Technologies, Inc. for a New Citywide Enterprise Resource Planning System; and 2) NEOGOV for a Supplemental Human Resources Cloud-Based Services	)	RESOLUTION NO. 24-

WHEREAS, the City has been using Eden software to perform financial, human resource, procurement, payroll, and operational management for the past 15 years; and

WHEREAS, the Eden software will become obsolete on March 1, 2027; and

WHEREAS, staff has determined through an extensive request for proposal process that the Tyler Technologies, Inc. Munis Enterprise Resource Planning (ERP) system best meets the City's financial, payroll and human resources management requirements; and

WHEREAS, staff recommends supplemental modules for Human Resources to be provided by NEOGOV for integrated, cloud-based recruitment, development, and talent management; and

WHEREAS, staff is negotiating the terms of the proposed software services agreements with: 1) Tyler Technologies for implementation, licensing, and ongoing support of the Munis ERP System; and 2) NEOGOV for Cloud-Based recruitment, development, and talent management to include one-time services and licensing fees as well as annual support for an initial term of five (5) years; and

WHEREAS, the City proposes to execute contracts with Tyler Technologies, Inc. and NEOGOV to procure and implement the new ERP system by December 31, 2026.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Pittsburg hereby authorizes the City Manager to negotiate and execute contracts with Tyler Technologies, Inc for $3,288,481, NEOGOV for $430,211, and make contingency purchases, if needed, of $200,000 during the implementation phase, for a total project cost of $3,918,692.

PASSED AND ADOPTED by the City Council of the City of Pittsburg at a regular meeting on the 19th day of August 2024, by the following vote:

AYES:
NOES:
ABSTAINED:
ABSENT:

_____
Juan Antonio Banales, Mayor

ATTEST:

_____

Alice E. Evenson, City Clerk

SOFTWARE AS A SERVICE AGREEMENT

This Software as a Service Agreement is made between Tyler Technologies, Inc. and Client.

WHEREAS, Client selected Tyler to provide certain products and services set forth in this Agreement, including providing Client with access to Tyler's proprietary software products, and Tyler desires to provide such products and services under the terms of this Agreement;

NOW THEREFORE, in consideration of the foregoing and of the mutual covenants and promises set forth in this Agreement, Tyler and Client agree as follows:

SECTION A – DEFINITIONS

- **"Agreement"** means this Software as a Services Agreement.
- **"Business Travel Policy"** means our business travel policy. A copy of our current Business Travel Policy is attached as Schedule 1 to Exhibit B.
- **"Client**" means the City of Pittsburg, California.
- **"Data"** means your data necessary to utilize the Tyler Software.
- **"Data Storage Capacity"** means the contracted amount of storage capacity for your Data identified in the Investment Summary.
- **"Defect"** means a failure of the Tyler Software to substantially conform to the functional descriptions set forth in our Documentation including Tyler's responses to the Client Functional Requirements attached to this Agreement as Exhibit F, or their functional equivalent. Future functionality may be updated, modified, or otherwise enhanced through our maintenance and support services, and the governing functional descriptions for such future functionality will be set forth in our then-current Documentation.
- **"Defined Users"** means the number of users that are authorized to use the SaaS Services. The Defined Users for the Agreement are as identified in the Investment Summary. If Exhibit A contains Enterprise Permitting & Licensing labeled software, defined users mean the maximum number of named users that are authorized to use the Enterprise Permitting & Licensing labeled modules as indicated in the Investment Summary. "Concurrent users," as that term is used in the Investment Summary, does not include those end users who use the Employee Access, Vendor Access, Resident Access or Notify Tyler Software.
- **"Deliverable"** means the items identified in the Statement of Work and produced for the Client.
- **"Developer"** means a third party who owns the intellectual property rights to Third Party Software.
- **"Documentation"** means any online or written documentation related to the use or functionality of the Tyler Software that we provide or otherwise make available to you, including instructions, user guides, manuals and other training or self-help documentation.
- **"Effective Date"** means the date by which both your and our authorized representatives have signed the Agreement.
- **"Force Majeure"** means an event beyond the reasonable control of you or us, including, without

limitation, governmental action, war, riot or civil commotion, fire, natural disaster, or any other cause that could not with reasonable diligence be foreseen or prevented by you or us.

- **"Investment Summary"** means the agreed upon cost proposal for the products and services attached as Exhibit A.
- **"Invoicing and Payment Policy"** means the invoicing and payment policy attached as Exhibit B.
- **"Order Form"** means an ordering document that includes a quote or investment summary and specifying the items to be provided by Tyler to Client, including any addenda and supplements thereto.
- **"SaaS Fees"** means the fees for the SaaS Services identified in the Investment Summary.
- **"SaaS Services"** means software as a service consisting of system administration, system management, and system monitoring activities that Tyler performs for the Tyler Software, and includes the right to access and use the Tyler Software, receive maintenance and support on the Tyler Software, including Downtime resolution under the terms of the SLA, and Data storage and archiving. SaaS Services do not include support of an operating system or hardware, support outside of our normal business hours, or training, consulting or other professional services.
- **"SLA"** means the service level agreement. A copy of our current SLA is attached hereto as Exhibit C.
- **"Statement of Work"** means the implementation plan describing how our professional services will be provided to implement the Tyler Software, and outlining your and our roles and responsibilities in connection with that implementation. The Statement of Work is attached as Exhibit E.
- **"Support Call Process"** means the support call process applicable to all of our customers who have licensed the Tyler Software. A copy of our current Support Call Process is attached as Schedule 1 to Exhibit C.
- **"Third Party Hardware"** means the third party hardware, if any, identified in the Investment Summary.
- **"Third Party Products"** means the Third Party Software and Third Party Hardware.
- **"Third Party SaaS Services"** means software as a service provided by a third party, if any, identified in the Investment Summary. Any Third Party SaaS Services will be governed by any applicable Third Party Terms.
- **"Third Party Services"** means the third party services, if any, identified in the Investment Summary.
- **"Third Party Software"** means the third party software, if any, identified in the Investment Summary.
- **"Third Party Terms"** means, if any, the end user license agreement(s) or similar terms for the Third Party Products or other parties' products or services, as applicable, and attached or indicated at Exhibit D.
- **"Tyler"** means Tyler Technologies, Inc., a Delaware corporation.
- **"Tyler Software"** means our proprietary software, including any integrations, custom modifications, and/or other related interfaces identified in the Investment Summary and licensed by us to you through this Agreement.
- **"we", "us", "our"** and similar terms mean Tyler.
- **"you"** and similar terms mean Client.

SECTION B –SAAS SERVICES

1. Rights Granted.

1.1 We grant to you the non-exclusive, non-assignable limited right to use the SaaS Services solely for your internal business purposes for the number of Defined Users only. The Tyler Software will be made available to you according to the terms of the SLA. You acknowledge that we have no physical delivery obligations and we will not ship copies of the Tyler Software as part of the SaaS Services. You may use the SaaS Services to access updates and enhancements to the Tyler Software, as further described in Section C(9). Furthermore, your consultants, contractors, and business partners may access the Tyler Software, Documentation and Deliverables under your direction to the extent required for them to provide services to you. Any such use by, or disclosure to, said third parties is strictly subject to the terms and conditions of this Agreement. To the extent that disclosure of the Tyler Software or Documentation is necessary to facilitate integration between any third party software and the Tyler Software, you will provide notice to Tyler of your intent to disclose the Tyler Software or Documentation and Tyler shall have a right to require any such third party to sign a nondisclosure agreement ("NDA") with Tyler in the event an NDA is reasonably required for Tyler to protect its intellectual property rights in the Tyler Software and Documentation. You shall be liable for any failure of any third party to which you provide access to the Tyler Software or Documentation to abide by all applicable terms and conditions of this Agreement. The foregoing notwithstanding, to the extent we have sold you perpetual licenses for Tyler Software, if and listed in the Investment Summary, for which you are receiving SaaS Services, your rights to use such Tyler Software are perpetual, subject to the terms and conditions of this Agreement including, without limitation, Section B(4). We will make any such software available to you for download.

2. SaaS Fees. You agree to pay us the SaaS Fees for the SaaS Services. Those amounts are payable in accordance with our Invoicing and Payment Policy. The SaaS Fees are based on the number of Defined Users and amount of Data Storage Capacity. You may add additional users or additional data storage capacity on the terms set forth in Section H(1). In the event you regularly and/or meaningfully exceed the Defined Users or Data Storage Capacity, we reserve the right to charge you additional fees commensurate with the overage(s) provided Tyler provides written notice to Client in advance of charging such additional fees.

3. Ownership.

3.1 We retain all ownership and intellectual property rights to the SaaS Services, the Tyler Software, and anything developed by us under this Agreement. To the extent any Deliverable is created by Tyler under this Agreement, Tyler shall grant a perpetual license for you to use, copy, modify, and create derivative works from said Deliverable for your reasonable business purposes. Such reasonable business purposes shall not include distribution or sale outside of your organization or that of your consultants, contractors, and business partners pursuant to Section B(4.1). Your rights to use the Deliverable are perpetual through the term of this Agreement but may be revoked if you do not comply with the terms of this Agreement. You do not acquire under this Agreement any license to use the Tyler Software in excess of the scope and/or duration of the SaaS Services.

3.2 The Documentation is licensed to you and may be used and copied by your employees for internal, non-commercial reference purposes only.

3.3 You retain all ownership and intellectual property rights to the Data. You expressly recognize

that except to the extent necessary to carry out our obligations contained in this Agreement, we do not create or endorse any Data used in connection with the SaaS Services.

4. Restrictions. You may not: (a) make the Tyler Software or Documentation resulting from the SaaS Services available in any manner to any third party for use in the third party's business operations; (b) modify, make derivative works of, disassemble, reverse compile, or reverse engineer any part of the SaaS Services; (c) access or use the SaaS Services in order to build or support, and/or assist a third party in building or supporting, products or services competitive to us; or (d) license, sell, rent, lease, transfer, assign, distribute, display, host, outsource, disclose, permit timesharing or service bureau use, or otherwise commercially exploit or make the SaaS Services, Tyler Software, or Documentation available to any third party other than as expressly permitted by this Agreement. Notwithstanding the foregoing, it is expressly acknowledged that the Client is a governmental entity subject to the public records and open meetings laws of the State of California and nothing contained herein shall be construed as altering or prohibiting the Client from complying with such laws fully and in its sole and absolute discretion.

5. Software Warranty. We warrant that the Tyler Software will perform without Defects during the term of this Agreement. If the Tyler Software does not perform as warranted, we will use all reasonable efforts, consistent with industry standards, to cure the Defect in accordance with the maintenance and support process set forth in Section C(9), below, the SLA and our then current Support Call Process.

6. SaaS Services.

   6.1 Our SaaS Services are audited at least yearly in accordance with the AICPA's Statement on Standards for Attestation Engagements ("SSAE") No. 21. We have attained, and will maintain, SOC 1 and SOC 2 compliance, or its equivalent, for the duration of this Agreement. The scope of audit coverage varies for some Tyler Software solutions. Upon execution of a mutually agreeable Non-Disclosure Agreement ("NDA"), we will provide you with a summary of our compliance report(s) or its equivalent. Every year thereafter, for so long as the NDA is in effect and in which you make a written request, we will provide that same information. If our SaaS Services are provided using a 3rd party data center, we will provide available compliance reports for that data center.

   6.2 You will be hosted on shared hardware in a Tyler data center or in a third-party data center. In either event, databases containing your Data will be dedicated to you and inaccessible to our other customers. Tyler will use reasonable efforts to provide advance notice of at least one (1) year if Tyler elects to change the provider of data centers used for the SaaS Services delivered to Client pursuant to this Agreement. Any data center hosting Client's Data will be located in the United States.

   6.3 Our Tyler data centers have fully-redundant telecommunications access, electrical power, and the required hardware to provide access to the Tyler Software in the event of a disaster or component failure. In the event of a data center failure, we reserve the right to employ our disaster recovery plan for resumption of the SaaS Services. In that event, we commit to a Recovery Point Objective ("RPO") of 1 hour and a Recovery Time Objective ("RTO") of 24 hours. RPO represents the maximum duration of time between the most recent recoverable copy of your hosted Data and subsequent data center failure. RTO represents the maximum duration of

time following data center failure within which your access to the Tyler Software must be restored.

6.4 We conduct annual penetration testing of either the production network and/or web application to be performed. We will maintain industry standard intrusion detection and prevention systems to monitor malicious activity in the network and to log and block any such activity. We will provide you with a written or electronic record of the actions taken by us in the event that any unauthorized access to your database(s) is detected as a result of our security protocols. We will undertake an additional security audit, on terms and timing to be mutually agreed to by the parties, at your written request. You may not attempt to bypass or subvert security restrictions in the SaaS Services or environments related to the Tyler Software. Unauthorized attempts to access files, passwords or other confidential information, and unauthorized vulnerability and penetration test scanning of our network and systems (hosted or otherwise) is prohibited without the prior written approval of our IT Security Officer.

6.5 We test our disaster recovery plan on an annual basis. Our standard test is not client-specific. Should you request a client-specific disaster recovery test, we will work with you to schedule and execute such a test on a mutually agreeable schedule. At your written request, we will provide test results to you within a commercially reasonable timeframe after receipt of the request. Tyler will use commercially reasonable efforts to address any deficiencies in its disaster recovery services revealed in the Client-specific test.

6.6 We will be responsible for importing back-up and verifying that you can log-in. You will be responsible for running reports and testing critical processes to verify the returned Data.

6.7 We provide secure Data transmission paths between each of your workstations and our servers.

6.8 Tyler data centers are accessible only by authorized personnel with a unique key entry. All other visitors to Tyler data centers must be signed in and accompanied by authorized personnel. Entry attempts to the data center are regularly audited by internal staff and external auditors to ensure no unauthorized access.

6.9 Where applicable with respect to our applications that take or process card payment data, we are responsible for the security of cardholder data that we possess, including functions relating to storing, processing, and transmitting of the cardholder data and affirm that, as of the Effective Date, we comply with applicable requirements to be considered PCI DSS compliant and have performed the necessary steps to validate compliance with the PCI DSS. We agree to supply the current status of our PCI DSS compliance program in the form of an official Attestation of Compliance, which can be found at https://www.tylertech.com/about-us/compliance, and in the event of any change in our status, will comply with applicable notice requirements.

7. License Rights Terminate Upon Migration. When Tyler makes Tyler Software identified in the Investment Summary (the "Evergreen Modules") and licensed pursuant to this Agreement available to the Client for use in live production, the license to the Tyler software listed in Exhibit A, Schedule 1 (hereafter, "Migration Modules") will be restricted to read-only access, and Tyler's maintenance, support, and/or update obligations for such software terminates.

SECTION C –PROFESSIONAL SERVICES

1. Professional Services. We will provide you the various implementation-related services itemized in the Investment Summary and described in the Statement of Work.

2. Professional Services Fees. You agree to pay us the professional services fees in the amounts set forth in the Investment Summary. Those amounts are based on the scope of the project as of the Effective Date and are payable in accordance with our Invoicing and Payment Policy attached as Exhibit B. We will bill you the actual fees incurred based on the in-scope services provided to you, up to the maximum amounts set forth in the Investment Summary. This not to exceed commitment is contingent on your timely meeting of your obligations under this Agreement.

3. Additional Services. The Investment Summary contains, and the Statement of Work describes, the scope of services and related costs (including programming and/or interface estimates) required for the project based on our understanding of the specifications you supplied. If Client requests modified services or additional work is required, we will provide you with an addendum or change order, as applicable, outlining the changes to any payment terms for the modified or additional work. The price quotes in the addendum or change order will be valid for ninety (90) days from the date of the quote. For avoidance of doubt, no services beyond those listed in the Investment Summary will be added to the Agreement without mutual written consent of the parties.

4. Cancellation. If you cancel services less than four (4) weeks in advance (other than for Force Majeure or breach by us), you will be liable for all (a) daily fees associated with cancelled professional services if we are unable to reassign our personnel and (b) any non-refundable or non-transferable travel expenses already incurred by us on your behalf. If your services are invoiced on a milestone basis, the applicable cancellation fee will be based on the rates used to price the services included in the milestones. Such additional travel costs shall be billed separately by Tyler and paid by the City through a change order. We will make all reasonable efforts to reassign personnel, including pursuing options for remote work, in the event you cancel within four (4) weeks of scheduled commitments.

5. Services Warranty. We warrant that we will (a) perform the services in a professional, workmanlike manner, consistent with industry standards; b) perform the services in a manner that complies with all applicable laws and regulations; c) staff the project with a sufficient number of resources with skills and resources to perform services in accordance with the requirements of this Agreement; and d) comply with applicable functional requirements in the Statement of Work or other plans or specifications approved by Tyler and the City in any approved Deliverables. In the event we provide services that do not conform to this warranty, we will re-perform such services at no additional cost to you.

6. Site Access and Requirements. At no cost to us, you agree to provide us with reasonable access to your personnel, facilities, and equipment as may be reasonably necessary for us to provide implementation services, subject to any reasonable security protocols or other written policies provided to us as of the Effective Date, and thereafter as mutually agreed to by you and us.

7. Background Checks. For at least the past twelve (12) years, all of our employees have undergone criminal background checks prior to hire. All employees sign our confidentiality agreement and security policies.

8. Client Assistance. You acknowledge that the implementation of the Tyler Software is a cooperative process requiring the time and resources of your personnel. You agree to use all reasonable efforts to cooperate with and assist us as may be reasonably required to meet the agreed upon project deadlines and other milestones for implementation. This cooperation includes at least working with us to schedule the implementation-related services outlined in this Agreement. We will not be liable for failure to meet any deadlines and milestones when such failure is due to Force Majeure or to the failure by your personnel to provide such cooperation and assistance (either through action or omission).

9. Maintenance and Support. For so long as you timely pay your SaaS Fees according to the Invoicing and Payment Policy, then in addition to the terms set forth in the SLA and the Support Call Process, we will:

   9.1 perform our maintenance and support obligations in a professional, good, and workmanlike manner, consistent with industry standards, to resolve Defects in the Tyler Software (subject to any applicable release life cycle policy);

   9.2 provide support during our established support hours;

   9.3 maintain personnel that are sufficiently trained to be familiar with the Tyler Software and Third Party Software, if any, in order to provide maintenance and support services;

   9.4 make available to you all releases to the Tyler Software (including updates and enhancements) that we make generally available without additional charge to customers who have a maintenance and support agreement in effect; and

   9.5 provide non-Defect resolution support of prior releases of the Tyler Software in accordance with any applicable release life cycle policy.

   We will use all reasonable efforts to perform support services remotely. Currently, we use a third-party secure unattended connectivity tool called Bomgar, as well as GotoAssist by Citrix. Therefore, you agree to maintain a high-speed internet connection capable of connecting us to your PCs and server(s). You agree to provide us with a login account and local administrative privileges as we may reasonably require to perform remote services. We will, at our option, use the secure connection to assist with proper diagnosis and resolution, subject to any reasonably applicable security protocols. If we cannot resolve a support issue remotely, we may be required to provide onsite services. In such event, we will be responsible for our travel expenses, unless it is determined that the reason onsite support was required was a reason outside our control. All travel expenses incurred pursuant to this Agreement will follow the Business Travel Policy. Either way, you agree to provide us with full and free access to the Tyler Software, working space, adequate facilities within a reasonable distance from the equipment, and use of machines, attachments, features, or other equipment reasonably necessary for us to provide the maintenance and support services, all at no charge to us. We strongly recommend that you also maintain your VPN for backup connectivity purposes.

   For the avoidance of doubt, SaaS Fees do not include the following services: (a) onsite support (unless Tyler cannot remotely correct a Defect in the Tyler Software, as set forth above); (b) application design; (c) other consulting services; or (d) support outside our normal business hours as

listed in our then-current Support Call Process. Requested services such as those outlined in this section will be billed to you on a time and materials basis at our then current rates. You must request those services with at least one (1) weeks' advance notice. For avoidance of doubt, no services beyond those listed in the Investment Summary will be added to the Agreement without mutual written consent of the parties.

10. Support of Migration Modules. Beginning on the commencement of the initial term as set forth in Section F (1) of this Agreement, and contingent upon Client's timely payment of annual SaaS Fees for Tyler Evergreen Modules, Client is entitled to continue to receive, at no additional charge, maintenance and support for the Migration Modules until Tyler makes the Tyler Evergreen Modules available for use in live production.

11. Assignment and Removal of Personnel. After the Effective Date, and in coordination with the project kick-off activities identified in the Statement of Work, we will make our project staffing assignments. Upon request, we will provide you with project resumes, demonstrating relevant past project experience, for project team members that are allocated for onsite services on the project. You agree that those resumes are for your information and planning purposes only.

    Once our project team is assembled and your counterparts have been identified, both parties agree that, except for reasons outside of their control, they will not remove staff and personnel from their assigned project roles without reasonable advance notice and good cause, and that they will work together to mitigate project impacts after any such removal. The parties will also work together to manage the project impact resulting from the temporary unavailability of project staff from either party. We agree to use commercially reasonable efforts to maintain consistency of project personnel and commit to replacement resources having sufficient project knowledge, without additional cost to you, in order to render services in accordance with contractual requirements.

    In the event our personnel is/are not providing services consistent with our services warranty or are otherwise negatively impacting the project, you will notify us of that deficiency and give us a reasonable opportunity to correct it. If the deficiency persists, we will replace that project member, upon written request and demonstration of good cause. Replacement staff will be assigned following the same processes set forth above and shall have reasonably sufficient experience and project knowledge to fulfill applicable obligations under the Agreement. The foregoing notwithstanding, if the replacement personnel is providing services onsite, you shall remain liable for travel expenses incurred by such personnel, to be invoiced in accordance with the Business Travel Policy.

12. Tyler Software Acceptance. The Client will use the following acceptance process for each Phase, as defined in the SOW: Client will have a maximum of a thirty (30) calendar day "Test Period" to test the System in a live production environment to test for, and to report, documented Defects and to ensure that all Services have been completed. If there are no Defects reported during the Test Period and Services have been completed, the Client shall issue "Acceptance." Upon Acceptance of the last Phase of the project, Client shall also grant "Project Closure." If Client reports a documented Defect during the Test Period, Client will notify Tyler in writing. Tyler will correct the Defect(s) or provide a mutually agreeable plan for future resolution of any Defect(s). A dispute with respect to the plan shall be addressed pursuant to the Dispute Resolution Process of this Agreement. Upon resolution of a Defect during the Test Period, Client may re-perform testing for a maximum of fifteen (15) calendar days. This procedure shall repeat until all Defects have either been resolved or

the Client and Tyler, reasonably cooperating, have developed a mutually agreeable schedule for Defect resolution, at which point the Client shall issue Project Closure.

SECTION D – THIRD PARTY PRODUCTS

1. Third Party Hardware. We will sell, deliver, and install onsite the Third Party Hardware, if you have purchased any, for the price set forth in the Investment Summary. Those amounts are payable in accordance with our Invoicing and Payment Policy.

2. Third Party Software. As part of the SaaS Services, you will receive access to the Third Party Software and related documentation for internal business purposes only. Your rights to the Third Party Software will be governed by the Third Party Terms.

3. Third Party Products Warranties.

   3.1 We are authorized by each Developer to grant access to the Third Party Software.

   3.2 The Third Party Hardware will be new and unused, and upon payment in full, you will receive free and clear title to the Third Party Hardware.

   3.3 You acknowledge that we are not the manufacturer of the Third Party Products. We do not warrant or guarantee the performance of the Third Party Products. However, we grant and pass through to you any warranty that we may receive from the Developer or supplier of the Third Party Products.

4. Third Party Services. If you have purchased Third Party Services, those services will be provided independent of Tyler by such third-party at the rates set forth in the Investment Summary and in accordance with our Invoicing and Payment Policy.

SECTION E - INVOICING AND PAYMENT; INVOICE DISPUTES

1. Invoicing and Payment. We will invoice you the SaaS Fees and fees for other professional services in the Investment Summary per our Invoicing and Payment Policy, subject to Section E(2).

2. Invoice Disputes. If you believe any delivered software or service does not conform to the warranties in this Agreement, you will provide us with written notice within thirty (30) days of your receipt of the applicable invoice. The written notice must contain reasonable detail of the issues you contend are in dispute so that we can confirm the issue and respond to your notice with either a justification of the invoice, an adjustment to the invoice, or a proposal addressing the issues presented in your notice. We will work with you as may be necessary to develop an action plan that outlines reasonable steps to be taken by each of us to resolve any issues presented in your notice. You may withhold payment of the invoice amount(s) actually in dispute, and only those amounts, until we complete the action items outlined in the plan. If we are unable to complete the action items outlined in the action plan because of your failure, after a written notice and cure period, to complete the items agreed to be done by you, then you will remit full payment of the invoice. While an invoice is in dispute in accordance with this Section, the parties agree to continue with the implementation of the remainder of the tasks contemplated in this Agreement and the Statement of Work while the parties resolve the dispute on that particular invoice(s), unless the nature of the

dispute dictates otherwise. Payment of an invoice(s) does not waive or eliminate the Client's ability to contest the invoice or payment as set forth in this Agreement, or alter the parties' rights and obligations relating to requirements and warranties set forth in this Agreement. We reserve the right to suspend delivery of all SaaS Services, including maintenance and support services, if you fail to pay an invoice not disputed as described above within fifteen (15) days of notice of our intent to do so.

SECTION F – TERM AND TERMINATION

1. Term. The initial term of this Agreement is five (5) years, commencing on October 1, 2024, unless earlier terminated as set forth below. Upon expiration of the initial term, this Agreement will renew upon mutual agreement of the parties for additional one (1) year renewal terms. Client may indicate its agreement to renewal terms by timely payment of a Tyler invoice of annual fees for the applicable renewal term. Tyler shall communicate renewal pricing at least forty-five (45) days prior to the end of the then-current renewal term. Your right to access or use the Tyler Software and the SaaS Services will terminate at the end of this Agreement.

2. Termination. This Agreement may be terminated as set forth below. In the event of termination, you will pay us for all undisputed fees and expenses related to the software, products, and/or services you have received, or we have incurred or delivered, prior to the effective date of termination. Disputed fees and expenses in all terminations other than your termination for cause must have been submitted as invoice disputes in accordance with Section E(2).

   2.1 Failure to Pay SaaS Fees. You acknowledge that continued access to the SaaS Services is contingent upon your timely payment of SaaS Fees. If you fail to timely pay SaaS Fees that are otherwise not in dispute in accordance with Section E(2), we may discontinue the SaaS Services and deny your access to the Tyler Software. We may also terminate this Agreement if you don't cure such failure to pay within forty-five (45) days of receiving written notice of our intent to terminate.

   2.2 For Cause. If you believe we have materially breached this Agreement, you will invoke the Dispute Resolution clause set forth in Section H(3). You may terminate this Agreement for cause in the event we do not cure, or create a mutually agreeable action plan to address, a material breach of this Agreement within the thirty (30) day window set forth in Section H(3).

   2.3 Force Majeure. Either party has the right to terminate this Agreement if a Force Majeure event suspends performance of the SaaS Services for a period of forty-five (45) days or more.

   2.4 Lack of Appropriations. If you should not appropriate or otherwise make available funds sufficient to utilize the SaaS Services, you may unilaterally terminate this Agreement upon thirty (30) days written notice to us. You will not be entitled to a refund or offset of previously paid, but unused SaaS Fees. You agree not to use termination for lack of appropriations as a substitute for termination for convenience.

   2.5 For Convenience. Client may elect to terminate for convenience without payment of early termination fees if Actual Attainment, as defined in the SLA, is below 98.5% in three (3) or more months in any six (6) month period.

2.6 Return of Data. In the event of termination of the Agreement for any reason, and upon reasonable advance notice, Tyler shall promptly make all Data available to Client in the format of the database or other such format as may be mutually agreed upon, provided through Tyler's FTP server or such other secure method reasonably selected by Tyler. Such Data will be provided at no additional cost.

SECTION G – INDEMNIFICATION, LIMITATION OF LIABILITY AND INSURANCE

1. Intellectual Property Infringement Indemnification.

1.1 We will defend you against any third party claim(s) that the Tyler Software or Documentation infringes that third party's patent, copyright, or trademark, or misappropriates its trade secrets, and will pay the amount of any resulting adverse final judgment (or settlement to which we consent). You must notify us promptly in writing of the claim and give us sole control over its defense or settlement. You agree to provide us with reasonable assistance, cooperation, and information in defending the claim at our expense.

1.2 Our obligations under this Section G(1) will not apply to the extent the claim or adverse final judgment is based on your use of the Tyler Software in contradiction of this Agreement, including with non-licensed third parties, or your willful infringement.

1.3 If we receive information concerning an infringement or misappropriation claim related to the Tyler Software, we may, at our expense and without obligation to do so, either: (a) procure for you the right to continue its use; (b) modify it to make it non-infringing; or (c) replace it with a functional equivalent, in which case you will stop running the allegedly infringing Tyler Software immediately. Alternatively, we may decide to litigate the claim to judgment, in which case you may continue to use the Tyler Software consistent with the terms of this Agreement.

1.4 If an infringement or misappropriation claim is fully litigated and your use of the Tyler Software is enjoined by a court of competent jurisdiction, in addition to paying any adverse final judgment (or settlement to which we consent), we will, at our option, either: (a) procure the right to continue its use; (b) modify it to make it non-infringing; or (c) replace it with a functional equivalent. This section provides your exclusive remedy for third party copyright, patent, or trademark infringement and trade secret misappropriation claims.

2. General Indemnification.

2.1 We will indemnify and hold harmless you and your agents, officials, and employees from and against any and all third-party claims, losses, liabilities, damages, costs, and expenses (including reasonable attorney's fees and costs) for (a) personal injury or property damage to the extent caused by our negligence or willful misconduct; or (b) our violation of PCI-DSS requirements or a law applicable to our performance under this Agreement. You must notify us promptly in writing of the claim and give us sole control over its defense or settlement. You agree to provide us with reasonable assistance, cooperation, and information in defending the claim at our expense.

2.2 To the extent permitted by applicable law, you will indemnify and hold harmless us and our agents, officials, and employees from and against any and all third-party claims, losses,

liabilities, damages, costs, and expenses (including reasonable attorney's fees and costs) for personal injury or property damage to the extent caused by your negligence or willful misconduct; or (b) your violation of a law applicable to your performance under this Agreement. We will notify you promptly in writing of the claim and will give you sole control over its defense or settlement. We agree to provide you with reasonable assistance, cooperation, and information in defending the claim at your expense.

3. **DISCLAIMER. EXCEPT FOR THE EXPRESS WARRANTIES PROVIDED IN THIS AGREEMENT AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, WE HEREBY DISCLAIM ALL OTHER WARRANTIES AND CONDITIONS, WHETHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES, DUTIES, OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. CLIENT UNDERSTANDS AND AGREES THAT TYLER DISCLAIMS ANY LIABILITY FOR ERRORS THAT RELATE TO USER ERROR.**

4. **LIMITATION OF LIABILITY. EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN THIS AGREEMENT, OUR LIABILITY FOR DAMAGES ARISING OUT OF THIS AGREEMENT, WHETHER BASED ON A THEORY OF CONTRACT OR TORT, INCLUDING NEGLIGENCE AND STRICT LIABILITY, SHALL BE LIMITED TO YOUR ACTUAL DIRECT DAMAGES, NOT TO EXCEED (A) DURING THE INITIAL TERM, AS SET FORTH IN SECTION F(1), ONE AND A HALF (1.5) TIMES THE TOTAL FEES PAID AS OF THE TIME OF THE CLAIM ; OR (B) DURING ANY RENEWAL TERM, THE THEN-CURRENT ANNUAL SAAS FEES PAYABLE IN THAT RENEWAL TERM. THE PARTIES ACKNOWLEDGE AND AGREE THAT THE PRICES SET FORTH IN THIS AGREEMENT ARE SET IN RELIANCE UPON THIS LIMITATION OF LIABILITY AND TO THE MAXIMUM EXTENT ALLOWED UNDER APPLICABLE LAW, THE EXCLUSION OF CERTAIN DAMAGES, AND EACH SHALL APPLY REGARDLESS OF THE FAILURE OF AN ESSENTIAL PURPOSE OF ANY REMEDY. THE FOREGOING LIMITATION OF LIABILITY SHALL NOT APPLY TO CLAIMS THAT ARE SUBJECT TO SECTIONS G(1) AND G(2).**

5. **EXCLUSION OF CERTAIN DAMAGES. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL WE BE LIABLE FOR ANY SPECIAL, INCIDENTAL, PUNITIVE, INDIRECT, OR CONSEQUENTIAL DAMAGES WHATSOEVER, EVEN IF WE HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.**

6. Insurance. Before beginning any services under this Agreement, Tyler, at its own cost and expense, shall procure the types and amounts of insurance specified herein and maintain such insurance throughout the term of this Agreement.
    a. Workers' Compensation. Tyler shall, maintain Statutory Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed directly or indirectly by Tyler in the amount required by applicable law. The requirement to maintain Statutory Workers' Compensation and Employer's Liability Insurance may be waived by the City upon written verification that Tyler is a sole proprietor and does not have any employees and will not have any employees during the term of this Agreement.
    b. Commercial General and Automobile Liability Insurance.
        i. General requirements. Tyler, shall maintain commercial general and automobile liability insurance for the term of this Agreement in an amount of $2,000,000 per occurrence and $4,000,000 aggregate, combined single limit coverage for risks associated with the work contemplated by this Agreement. An excess or umbrella liability policy may be used to meet the liability

requirements.

ii. Minimum scope of coverage. Commercial general coverage shall be at least as broad as Insurance Services Office Commercial General Liability occurrence form CG 0001 (most recent edition), or equivalent, covering comprehensive General Liability on an "occurrence" basis. Automobile coverage shall be at least as broad as Insurance Services Office Automobile Liability form CA 0001 (most recent edition), or equivalent, covering any auto, or if Tyler has no owned autos, hired and non-owned autos.

iii. Additional requirements. Each of the following shall be included in the insurance coverage or added as a certified endorsement to the policy:

1. The Commercial General and Automobile Liability Insurance shall cover on an occurrence basis.
2. City, its officers, officials, employees, and volunteers shall be covered as additional insureds for liability arising out of work or operations on behalf of the Tyler, including materials, parts, or equipment furnished in connection with such work or operations; or automobiles owned, leased, hired, or borrowed by the Tyler. Coverage can be provided in the form of an endorsement to the Tyler's insurance at least as broad as CG 20 10 11 85, or both CG 20 10 10 01 and CG 20 37 10 01 or blanket endorsement.
3. For any claims related to this Agreement or the work hereunder, the Consultant's Commercial General Liability and Auto Liability insurance covered shall be primary insurance as respects the City, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the City, its officers, officials, employees, or volunteers shall be excess of the Consultant's insurance and non-contributing.
4. The policy shall cover inter-insured suits and include a "separation of Insureds" or "severability" clause which treats each insured separately.
5. Tyler agrees to give at least 30 days prior written notice to City before coverage is canceled or modified as to scope or amount.

c. Professional Liability Insurance.

i. General requirements. Tyler, shall maintain for the period covered by this Agreement professional liability insurance for licensed professionals performing work pursuant to this Agreement with a limit of $1,000,000 covering Tyler's errors and omissions.

ii. Claims-made limitations. The following provisions shall apply if the professional liability coverage is written on a claims-made form:

1. The retroactive date of the policy must be before the date of the Agreement.
2. Insurance must be maintained and evidence of insurance must be provided for at least three (3) years after completion of the Agreement or the work.

d. All Policies Requirements.

i. Submittal Requirements. Tyler shall submit the following to City prior to beginning services:

1. Certificate of Liability Insurance in the amounts specified in this Agreement; and
2. Blanket Additional Insured Endorsement as required for the General

Commercial and Automobile Liability Polices.

ii. Acceptability of Insurers. All insurance required by this Agreement is to be placed with insurers with a Bests' rating of no less than A:VII.

iii. Waiver of Subrogation. Commercial General Liability and Auto Liability shall contain a waiver of subrogation in favor of the City, its officers, officials, employees, and volunteers.

The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by the Tyler, its employees, agents, and subcontractors.

iv. Subcontractors. All coverages for subcontractors shall be subject to all of the requirements stated herein, and Tyler shall ensure that City, its officers, officials, employees, and volunteers are covered as additional insured on all coverages, with the exception of workers' compensation and professional liability.

SECTION H – GENERAL TERMS AND CONDITIONS

1. Additional Products and Services. You may purchase additional products and services at the rates set forth in the Investment Summary for twelve (12) months from the Effective Date by executing a mutually agreed addendum. If no rate is provided in the Investment Summary, or those twelve (12) months have expired, you may purchase additional products and services at our then-current list price, also by executing a mutually agreed addendum. The terms of this Agreement will control any such additional purchase(s), unless otherwise specifically provided in the addendum.

2. Optional Items. Pricing for any listed optional products and services in the Investment Summary will be valid for twelve (12) months from the Effective Date.

3. Dispute Resolution. You agree to provide us with written notice within thirty (30) days of becoming aware of a dispute. You agree to cooperate with us in trying to reasonably resolve all disputes, including, if requested by either party, appointing a senior representative to meet and engage in good faith negotiations with our appointed senior representative. Senior representatives will convene within thirty (30) days of the written dispute notice, unless otherwise agreed. All meetings and discussions between senior representatives will be deemed confidential settlement discussions not subject to disclosure under Federal Rule of Evidence 408 or any similar applicable state rule. If we fail to resolve the dispute, then the parties may participate in non-binding mediation in an effort to resolve the dispute. If the dispute remains unresolved after mediation, then either of us may assert our respective rights and remedies in a court of competent jurisdiction. Nothing in this section shall prevent you or us from seeking necessary injunctive relief during the dispute resolution procedures.

   During the pendency of a dispute between the parties pursuant to either Section E(2) or H(3) of this Agreement, Tyler will not interrupt or suspend or terminate the provision of Services to the Client or perform any action that prevents, impedes, or reduces in any way the provision of Services or the Client's ability to conduct its activities, unless authority to do so is granted by the Client or conferred by a court of competent jurisdiction or the nature of the dispute makes progress of the Services infeasible. Client will also continue to perform under this Agreement during the pendency of a dispute between the parties pursuant to either Section E(2) or H(3) of this Agreement unless the

nature of the dispute makes performance infeasible.

4. Taxes. The fees in the Investment Summary do not include any taxes, including, without limitation, sales, use, or excise tax. If you are a tax-exempt entity, you agree to provide us with a tax-exempt certificate. Otherwise, we will pay all applicable taxes to the proper authorities and you will reimburse us for such taxes. If you have a valid direct-pay permit, you agree to provide us with a copy. For clarity, we are responsible for paying our income taxes, both federal and state, as applicable, arising from our performance of this Agreement.

5. Nondiscrimination and Equal Opportunity. Tyler shall not discriminate, on the basis of a person's race, religion, color, national origin, age, physical or mental handicap or disability, medical condition, genetic information, marital status, sex, sexual orientation, gender or gender identity, against any employee, applicant for employment, subcontractor, bidder for a subcontract, or participant in, recipient of, or applicant for any services or programs provided by Tyler under this Agreement. Tyler shall comply with all applicable federal, state, and local laws, policies, rules, and requirements related to equal opportunity and nondiscrimination in employment, contracting, and the provision of any services that are the subject of this Agreement, including but not limited to the satisfaction of any positive obligations required of Tyler thereby.

6. E-Verify. We have complied, and will comply, with the E-Verify procedures administered by the U.S. Citizenship and Immigration Services Verification Division for all of our employees assigned to your project.

7. Subcontractors. We will not subcontract any services under this Agreement without your prior written consent, not to be unreasonably withheld. Tyler shall take necessary steps to ensure that applicable provisions of this Agreement are enforceable against subcontractors providing services required pursuant to this Agreement.

8. Binding Effect; No Assignment. This Agreement shall be binding on, and shall be for the benefit of, either your or our successor(s) or permitted assign(s). Neither party may assign this Agreement without the prior written consent of the other party; provided, however, your consent is not required for an assignment by us as a result of a corporate reorganization, merger, acquisition, or purchase of substantially all of our assets.

9. Force Majeure. Except for your payment obligations, neither party will be liable for delays in performing its obligations under this Agreement to the extent that the delay is caused by Force Majeure; provided, however, that within ten (10) business days of the Force Majeure event, the party whose performance is delayed provides the other party with written notice explaining the cause and extent thereof, as well as a request for a reasonable time extension equal to the estimated duration of the Force Majeure event.

10. No Intended Third Party Beneficiaries. This Agreement is entered into solely for the benefit of you and us. No third party will be deemed a beneficiary of this Agreement, and no third party will have the right to make any claim or assert any right under this Agreement. This provision does not affect the rights of third parties under any Third Party Terms.

11. Entire Agreement; Amendment. This Agreement represents the entire agreement between you and us with respect to the subject matter hereof, and supersedes any prior agreements, understandings,

and representations, whether written, oral, expressed, implied, or statutory. Purchase orders submitted by you, if any, are for your internal administrative purposes only, and the terms and conditions contained in those purchase orders will have no force or effect. This Agreement may only be modified by a written amendment signed by an authorized representative of each party.

12. Severability. If any term or provision of this Agreement is held invalid or unenforceable, the remainder of this Agreement will be considered valid and enforceable to the fullest extent permitted by law.

13. No Waiver. In the event that the terms and conditions of this Agreement are not strictly enforced by either party, such non-enforcement will not act as or be deemed to act as a waiver or modification of this Agreement, nor will such non-enforcement prevent such party from enforcing each and every term of this Agreement thereafter.

14. Independent Contractor. We are an independent contractor for all purposes under this Agreement. In the event that Tyler or any employee or agent of Tyler providing services under this Agreement is determined by a court of competent jurisdiction or the California Public Employees Retirement System (PERS) to be eligible for enrollment in PERS as an employee of City, Tyler shall indemnify, defend, and hold harmless City for the payment of any employee and/or employer contributions for PERS benefits on behalf of Tyler or its employees or agents, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of City.

    Except as City may specify in writing, Tyler shall have no authority, express or implied, to act on behalf of City in any capacity whatsoever as an agent. Tyler shall have no authority, express or implied, pursuant to this Agreement to bind City to any obligation whatsoever.

15. Notices. All notices or communications required or permitted as a part of this Agreement, such as notice of an alleged material breach for a termination for cause or a dispute that must be submitted to dispute resolution, must be in writing and will be deemed delivered upon the earlier of the following: (a) actual receipt by the receiving party; (b) upon receipt by sender of a certified mail, return receipt signed by an employee or agent of the receiving party; (c) upon receipt by sender of proof of email delivery; or (d) if not actually received, five (5) days after deposit with the United States Postal Service authorized mail center with proper postage (certified mail, return receipt requested) affixed and addressed to the other party at the address set forth on the signature page hereto or such other address as the party may have designated by proper notice. The consequences for the failure to receive a notice due to improper notification by the intended receiving party of a change in address will be borne by the intended receiving party.

16. Client Lists. You agree that we may identify you by name in client lists, marketing presentations, and promotional materials.

17. Confidentiality. Both parties recognize that their respective employees and agents, in the course of performance of this Agreement, may be exposed to confidential information and that disclosure of such information could violate rights to private individuals and entities, including the parties. Confidential information is nonpublic information that a reasonable person would believe to be confidential and includes, without limitation, personal identifying information (*e.g.*, social security numbers) and trade secrets, each as defined by applicable state law and any information, passcodes, or electronic keys necessary to access City facilities or systems or their security policies or processes.

Each party agrees that it will not disclose any confidential information of the other party and further agrees to take all reasonable and appropriate action to prevent such disclosure by its employees or agents. Both parties will make reasonable efforts to identify confidential information with a label indicating that the information is confidential. The confidentiality covenants contained herein will survive the termination or cancellation of this Agreement. This obligation of confidentiality will not apply to information that:

(a) is in the public domain, either at the time of disclosure or afterwards, except by breach of this Agreement by a party or its employees or agents;
(b) a party can establish by reasonable proof was in that party's possession at the time of initial disclosure;
(c) a party receives from a third party who has a right to disclose it to the receiving party; or
(d) is the subject of a legitimate disclosure request under the open records laws or similar applicable public disclosure laws governing this Agreement; provided, however, that in the event you receive an open records or other similar applicable request, you will give us prompt notice and otherwise perform the functions required by applicable law.

18. Quarantining of Client Data. Some services provided by Tyler require us to be in possession of your Data. In the event we detect malware or other conditions associated with your Data that are reasonably suspected of putting Tyler resources or other Tyler clients' data at risk, we reserve the absolute right to move your Data from its location within a multi-tenancy Tyler hosted environment to an isolated "quarantined" environment without advance notice. Your Data will remain in such quarantine for a period of at least six (6) months during which time we will review the Data, and all traffic associated with the Data, for signs of malware or other similar issues. If no issues are detected through such reviews during the six (6) month period of quarantine, we will coordinate with you the restoration of your Data to a non-quarantined environment. In the event your Data must remain in quarantine beyond this six (6) month period through no fault of Tyler's, we reserve the right to require payment of additional fees for the extended duration of quarantine. We will provide an estimate of what those costs will be upon your request.

19. Business License. Tyler represents and warrants to City that Tyler and its employees and agents have, and will maintain at their sole cost and expense, all licenses, permits, qualifications, and approvals of whatsoever nature that are legally required to practice their respective professions. In addition to the foregoing, Tyler shall obtain and maintain during the term of this Agreement applicable business licenses from City.

20. Governing Law. In the event that either party brings any action against the other under this Agreement, the parties agree that trial of such action shall be vested exclusively in the state courts of California in Contra Costa County or in the United States District Court for the Northern District of California.

21. Multiple Originals and Authorized Signatures. This Agreement may be executed in multiple originals, any of which will be independently treated as an original document. Any electronic, faxed, scanned, photocopied, or similarly reproduced signature on this Agreement or any amendment hereto will be deemed an original signature and will be fully enforceable as if an original signature. Each party represents to the other that the signatory set forth below is duly authorized to bind that party to this Agreement.

22. Data & Insights Solution Terms. Your use of certain Tyler solutions includes Tyler's Data & Insights

data platform. Your rights, and the rights of any of your end users, to use Tyler's Data & Insights data platform is subject to the Data & Insights SaaS Services Terms of Service, available at https://www.tylertech.com/terms/data-insights-saas-services-terms-of-service. By signing a Tyler Agreement or Order Form, or accessing, installing, or using any of the Tyler solutions listed at the linked terms, you certify that you have reviewed, understand, and agree to said terms.

23. Records. Tyler shall maintain any and all records or documents evidencing or relating to charges for services or expenditures and disbursements charged to the City under this Agreement for the greater of five (5) years from their date of creation, or for any longer period required by law. All such records shall be maintained in accordance with generally accepted accounting principles and shall be made available for inspection, audit, and/or copying once per year during regular business hours, upon one-week advance written request of the City. Unless otherwise agreed, the location of the records will be the Tyler office servicing this Agreement. The audit will not include access to Tyler's personnel records, or conditions of employment. Pursuant to Government Code Section 8546.7, the Agreement may be subject to the examination and audit of the State Auditor for a period of 3 years after final payment under the Agreement.

24. Conflict of Interest. Tyler may serve other clients, but none whose activities within the corporate limits of City or whose business, regardless of location, would place Tyler in a "conflict of interest," as that term is defined in the Political Reform Act, codified at California Government Code Section 81000 et seq.

    Tyler shall not employ any City official in the work performed pursuant to this Agreement. No officer or employee of City shall have any financial interest in this Agreement that would violate California Government Code Sections 1090 et seq.

25. Contract Documents. This Agreement includes the following exhibits:

Exhibit A	Investment Summary
	Schedule 1: Migration Modules
Exhibit B	Invoicing and Payment Policy
	Schedule 1: Business Travel Policy
Exhibit C	Service Level Agreement
	Schedule 1: Support Call Process
Exhibit D	Third Party Terms
Exhibit E	Statement of Work
Exhibit F	Functional Requirements

26. ThinPrint and DocOrigin. The parties acknowledge that Tyler's independent licenses for the third party software, ThinPrint and DocOrigin, are hereby extended to the Client for use with the Enterprise Forms Processing Software. The parties further acknowledge that any issue or dispute related primarily to the licensed Enterprise Forms Processing Software will be resolved in accordance with the terms of this Agreement, including but not limited to the software warranty set forth in Section B(5), and not the terms of the ThinPrint or DocOrigin End User License Agreements attached hereto as Exhibit D.

IN WITNESS WHEREOF, a duly authorized representative of each party has executed this Agreement as of the date(s) set forth below.

Tyler Technologies, Inc.	City of Pittsburg, California
By:_____	By:_____
Name:_____	Name:_____
Title:_____	Title:_____
Date:_____	Date:_____
Address for Notices: Tyler Technologies, Inc. One Tyler Drive Yarmouth, ME 04096 Attention: Chief Legal Officer	Address for Notices: City of Pittsburg 65 Civic Ave. Pittsburg, CA 94565-3814 Attention: City Manager

Exhibit A
Investment Summary

The following Investment Summary details the software and services to be delivered by us to you under the Agreement. This Investment Summary is effective as of the Effective Date, despite any expiration date in the Investment Summary that may have lapsed as of the Effective Date. Capitalized terms not otherwise defined will have the meaning assigned to such terms in the Agreement. In the event of conflict between the Agreement and terms in the Comments section of this Investment Summary, the language in the Agreement will prevail.

Tyler sales quotation to be inserted prior to Agreement execution.

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Quoted By:	Jason Cloutier
Quote Expiration:	08/31/24
Quote Name:	City of Pittsburg-ERP-EERP
Quote Description:	EERP 7.8.24
Saas Term	5.00

Sales Quotation For:

City of Pittsburg
65 Civic Ave
Pittsburg CA 94565-3814

Shipping Address:

Tyler SaaS and Related Services

Description	Qty	Imp. Hours	Annual Fee
Financial Management			
Accounting	1	0	$ 47,279.00
Accounts Payable	1	0	$ 16,783.00
Assets Mobile	1	0	$ 3,014.00
Budgeting	1	0	$ 16,783.00
Capital Assets	1	0	$ 15,685.00
Cash Management	1	0	$ 11,714.00
Contract Management	1	0	$ 7,301.00
eProcurement (Vendor Access and Punch-Out)	1	0	$ 10,920.00
Project & Grant Accounting	1	0	$ 10,173.00
Purchasing	1	0	$ 28,615.00
Human Resources Management			
Employee Expense Reimbursement	1	0	$ 6,087.00
Human Resources & Talent Management	1	0	$ 3,311.00
Payroll with Employee Access	1	0	$ 4,807.00
Time & Attendance w Mobile Access - Up to 350 Employees	1	0	$ 7,914.00

Revenue Management			
Accounts Receivable	1	0	$ 12,782.00
Cashiering	1	0	$ 19,037.00
General Billing	1	0	$ 7,107.00
Resident Access	1	0	$ 12,480.00
Utility Billing CIS	1	0	$ 8,883.00
Utility Billing Meter Interface	1	0	$ 2,849.00
Content Management			
Content Manager Core	1	0	$ 18,169.00
Data Insights			
Enterprise Analytics and Reporting w Executive Insights	1	0	$ 27,741.00
Additional			
Enterprise Forms Processing Software (including Common Form Set)	1	0	$ 8,450.00
Notify includes 150,000 Msgs and 5,000 Mins per year	1	0	$ 4,000.00
Integrations			
Cashiering API	1	0	$ 5,539.00
General Ledger API Toolkit	1	0	$ 3,610.00
SnapLogic - Up to 5 Integrations	1	0	$ 2,080.00

	Sub-Total:		$ 323,113.00
	Less Discount:		$ 33,172.00
	TOTAL	**0**	**$ 289,941.00**

Professional Services

Description	Quantity	Unit Price	Ext Discount	Extended Price	Maintenance
Project Management w/Travel (Utility Billing)	14	$ 10,340.00	$ 0.00	$ 144,760.00	$ 0.00
Executive Insights Implementation	1	$ 10,500.00	$ 10,500.00	$ 0.00	$ 0.00
GL Detail History Conversion- Two Years	1	$ 35,000.00	$ 0.00	$ 35,000.00	$ 0.00
Implementation Services with 25% Travel	1	$ 1,026,602.00	$ 0.00	$ 1,026,602.00	$ 0.00
Project Ledger Detail History Conversion	1	$ 25,000.00	$ 0.00	$ 25,000.00	$ 0.00
Project Management w/Travel (Finance & HR Payrol)	20	$ 10,340.00	$ 0.00	$ 206,800.00	$ 0.00

Purchasing - Closed PO's	1	$ 4,000.00	$ 0.00	$ 4,000.00	$ 0.00
Conversions – See Detailed Breakdown Below				$ 107,190.00	$ 0.00
TOTAL				**$ 1,549,352.00**	**$ 0.00**

Payments

	Use Case	List Price	Service %	Min	Basis Points	Rate	Cap	POS	Online	IVR
Payments - Client Card Cost - Interchange Plus										
Enterprise ERP										
Enterprise ERP Payments	General Billing				0.50%	$ 0.50		X	X	X
Enterprise ERP Payments	Utility Billing				0.50%	$ 0.50		X	X	X
Payments - Other Fees										
Enterprise ERP										
Client eCheck Cost		$ 1.95								
eCheck Rejects		$ 5.00								
Credit Card Chargebacks		$ 15.00								

Client Card Cost - Interchange Plus Per card transaction with Visa, MasterCard, Discover, and American Express for all transactions on top of industry-driven rates for bank fees, card brand fees, interchange fees, dues, assessments, and other processing fees.

Enterprise ERP Payments IVR Cost - Additional $0.50 per transaction on top of Card and eCheck fee.

Client eCheck Cost Per electronic check transaction.

eCheck Rejects When an eCheck transaction comes back as declined (e.g bounced check)

Credit Card Chargebacks If a card payer disputes a transaction at the card issuing bank (e.g. stolen card)

3rd Party Hardware, Software and Services

Description	Qty	Unit Price	Unit Discount	Total Price	Unit Maint/SaaS	Unit Maint/SaaS Discount	Total Maint/SaaS
Payments Lane 3000 Terminal Purchase	1	$ 419.00	$ 0.00	$ 419.00	$ 0.00	$ 0.00	$ 0.00
Payments PCI Service Fee (Per Device)	1	$ 0.00	$ 0.00	$ 0.00	$ 180.00	$ 180.00	$ 0.00

TOTAL	**$ 419.00**	**$ 0.00**

Summary	**One Time Fees**	**Recurring Fees**
Total Tyler License Fees	$ 0.00	$ 0.00
Total SaaS	$ 0.00	$ 289,941.00
Total Tyler Services	$ 1,549,352.00	$ 0.00
Total Third-Party Hardware, Software, Services	$ 419.00	$ 0.00
Summary Total	**$ 1,549,771.00**	**$ 289,941.00**
Contract Total	**$ 2,999,476.00**	

Unless otherwise indicated in the contract or amendment thereto, pricing for optional items will be held
For six (6) months from the Quote date or the Effective Date of the Contract, whichever is later.

Customer Approval: _____ Date: _____

Print Name: _____ P.O.#: _____

All Primary values quoted in US Dollars

Detailed Breakdown of Conversions (Included in Summary Total)

Description	Qty	Unit Price	Unit Discount	Extended Price
Accounting				
AC - Actuals up to 3 years	4	$ 3,000.00	$ 3,960.00	$ 8,040.00
AC - Budgets up to 3 years	4	$ 3,000.00	$ 6,000.00	$ 6,000.00
AC Standard COA	1	$ 3,500.00	$ 1,750.00	$ 1,750.00
Accounts Payable				
AP - Checks up to 5 years	2	$ 5,200.00	$ 5,200.00	$ 5,200.00
AP - Invoice up to 5 years	2	$ 6,500.00	$ 6,500.00	$ 6,500.00
AP Standard Master	1	$ 3,000.00	$ 1,500.00	$ 1,500.00
Capital Assets				
CA Std Master	1	$ 4,500.00	$ 2,250.00	$ 2,250.00

Content Management				
Content Manager Core - AC - Budgets	1	$ 1,800.00	$ 900.00	$ 900.00
Content Manager Core - AP - Checks	1	$ 1,800.00	$ 900.00	$ 900.00
Content Manager Core - AP Standard Master	1	$ 6,500.00	$ 3,250.00	$ 3,250.00
Content Manager Core - CA - History	1	$ 1,300.00	$ 650.00	$ 650.00
Content Manager Core - CA Standard - Master GL Accounts Purchase History	1	$ 2,600.00	$ 1,300.00	$ 1,300.00
Content Manager Core - GB - Bills	1	$ 3,000.00	$ 1,500.00	$ 1,500.00
Content Manager Core - GB Standard - CID	1	$ 1,300.00	$ 650.00	$ 650.00
Content Manager Core - Payroll - Certifications	1	$ 1,000.00	$ 500.00	$ 500.00
Content Manager Core - Payroll - Check History	1	$ 1,000.00	$ 500.00	$ 500.00
Content Manager Core - Payroll - Deductions	1	$ 1,400.00	$ 700.00	$ 700.00
Content Manager Core - Payroll - PM Action History	1	$ 1,000.00	$ 500.00	$ 500.00
Content Manager Core - Payroll - Position Control	1	$ 1,400.00	$ 700.00	$ 700.00
Content Manager Core - Payroll - Recruiting	1	$ 1,000.00	$ 500.00	$ 500.00
Content Manager Core - Payroll Standard - Employee Address	1	$ 7,000.00	$ 3,500.00	$ 3,500.00
Content Manager Core - Purchase Orders - Standard - Open POs	1	$ 3,600.00	$ 1,800.00	$ 1,800.00
Content Manager Core - Utility Billing - - Backflow	1	$ 1,000.00	$ 500.00	$ 500.00
Content Manager Core - Utility Billing - Standard - UB Account CIDs	1	$ 1,000.00	$ 500.00	$ 500.00
Content Manager Core - Work Order - Work Order Asset	1	$ 1,300.00	$ 650.00	$ 650.00
Contract Management				
Contracts	1	$ 6,000.00	$ 3,000.00	$ 3,000.00
General Billing				
GB - Bills up to 5 years	2	$ 5,500.00	$ 5,500.00	$ 5,500.00
GB - Recurring Invoices	1	$ 4,500.00	$ 2,250.00	$ 2,250.00
GB Std CID	1	$ 2,500.00	$ 1,250.00	$ 1,250.00
Payroll				
HR Human Resources - Certifications	1	$ 1,400.00	$ 700.00	$ 700.00
HR Human Resources - Education	1	$ 1,400.00	$ 700.00	$ 700.00
HR Human Resources - PM Action History up to 5 years	2	$ 1,400.00	$ 1,400.00	$ 1,400.00
HR Human Resources - Position Control	1	$ 1,400.00	$ 700.00	$ 700.00
PR Payroll - Accrual Balances	1	$ 1,500.00	$ 750.00	$ 750.00
PR Payroll - Accumulators up to 5 years	2	$ 1,400.00	$ 0.00	$ 2,800.00
PR Payroll - Check History up to 5 years	2	$ 1,200.00	$ 1,200.00	$ 1,200.00
PR Payroll - Deductions	1	$ 1,800.00	$ 900.00	$ 900.00

PR Payroll - Earning/Deduction Hist up to 5 years	2	$ 2,500.00	$ 2,500.00	$ 2,500.00
PR Payroll - Standard	1	$ 2,000.00	$ 1,000.00	$ 1,000.00
PR Payroll - State Retirement Tables	1	$ 1,400.00	$ 700.00	$ 700.00
Project & Grant Accounting				
PG - Actuals up to 3 years	4	$ 3,000.00	$ 6,000.00	$ 6,000.00
PG - Budgets up to 3 years	4	$ 3,000.00	$ 6,000.00	$ 6,000.00
PGA Standard	2	$ 3,500.00	$ 3,500.00	$ 3,500.00
Purchasing				
Purchasing - Standard	1	$ 4,000.00	$ 2,000.00	$ 2,000.00
Utility Billing				
Utility Billing - Backflow	1	$ 1,200.00	$ 600.00	$ 600.00
Utility Billing - Balance Forward AR	1	$ 5,600.00	$ 2,800.00	$ 2,800.00
Utility Billing - Budget Billing	1	$ 3,600.00	$ 1,800.00	$ 1,800.00
Utility Billing - Consumption History up to 5 years	1	$ 2,000.00	$ 1,000.00	$ 1,000.00
Utility Billing - Flat Inventory/Containers	1	$ 3,600.00	$ 1,800.00	$ 1,800.00
Utility Billing - Option 2 Assessments	1	$ 1,200.00	$ 600.00	$ 600.00
Utility Billing - Service Orders	1	$ 2,300.00	$ 1,150.00	$ 1,150.00
Utility Billing - Services	1	$ 3,600.00	$ 1,800.00	$ 1,800.00
Utility Billing - Standard	1	$ 4,100.00	$ 2,050.00	$ 2,050.00
	TOTAL			**$ 107,190.00**

Optional Tyler SaaS and Related Services

Description	Qty	Imp. Hours	Annual Fee
Human Resources Management			
Advanced Scheduling w Mobile Access - Up to 100 Employees	1	0	$ 5,331.00
Recruiting	1	0	$ 762.00
Revenue Management			
Business Licenses	1	0	$ 26,402.00
Civic Services			

Business Management Suite	15	0	$ 27,555.00
Civic Access - Business Management	1	0	$ 18,309.00
Civic Access - Community Development	1	0	$ 18,309.00
Community Development Suite	30	0	$ 55,110.00
Decision Engine	1	0	$ 15,000.00
e-Reviews	1	0	$ 32,908.00
Enterprise Permitting & Licensing Advanced Automation Bundle	1	0	$ 2,606.00
Enterprise Permitting & Licensing Core Foundation Bundle	1	0	$ 3,368.00
Enterprise Permitting & Licensing Mobile	1	0	$ 612.00
Report Toolkit	1	0	$ 3,061.00
Document Management			
Content Manager Enterprise Upgrade (Existing CL w/Tyler Content Manager Core)	1	0	$ 22,275.00
Data Insights			
Open Finance	1	0	$ 19,760.00
Additional			
ACFR Statement Builder	1	0	$ 12,576.00
GIS	45	0	$ 13,320.00
Notify Additional Block of 12,000 Messages Per Year	1	0	$ 300.00
Notify Additional Block of 5,000 Minutes Per Year	1	0	$ 300.00
Integrations			
3rd Party Applicant Tracking API Connector	1	0	$ 2,866.00
TOTAL:		**0**	**$ 280,730.00**

Optional Professional Services

Description	Quantity	Unit Price	Ext. Discount	Extended Price	Maintenance
Advanced Scheduling w Mobile Access Implementation - Billed as time and materials, not part of milestone pricing	132	$ 200.00	$ 0.00	$ 26,400.00	$ 0.00
Install Fee - Open Finance	1	$ 7,000.00	$ 0.00	$ 7,000.00	$ 0.00

Tyler Cashiering and Accella Integration Development	1	$ 16,875.00	$ 3,375.00	$ 13,500.00	$ 3,038.00
Conversion – See Detailed Breakdown Below				$ 57,650.00	$ 0.00
TOTAL				**$ 107,925.00**	**$ 3,038.00**

Optional 3rd Party Hardware, Software and Services

Description	Qty	Unit Price	Unit Discount	Total Price	Unit Maint/SaaS	Unit Maint/SaaS Discount	Total Maint/SaaS
Pattern Stream Automated Document System - Implementation	96	$ 185.00	$ 0.00	$ 17,760.00	$ 0.00	$ 0.00	$ 0.00
Pattern Stream Automated Document System - SaaS	1	$ 0.00	$ 0.00	$ 0.00	$ 27,360.00	$ 9,765.00	$ 17,595.00
TOTAL				**$ 17,760.00**			**$ 17,595.00**

Optional Conversion Details (Prices Reflected Above)

Description	Quantity	Unit Price	Discount	Total
Business License				
Business Licenses Opt 1 - Bills	1	$ 6,500.00	$ 0.00	$ 6,500.00
Business Licenses Std Master	1	$ 6,500.00	$ 0.00	$ 6,500.00
Conversions				
Business Management	1	$ 14,100.00	$ 0.00	$ 14,100.00
Community Development	1	$ 30,550.00	$ 0.00	$ 30,550.00
TOTAL				**$ 57,650.00**

Tyler Annual Discount Detail (Excludes Optional Products)

Description	Annual Fee	Annual Fee Discount	Annual Fee Net
Financial Management			
Accounting	$ 47,279.00	$ 0.00	$ 47,279.00
Accounts Payable	$ 16,783.00	$ 4,196.00	$ 12,587.00

Assets Mobile	$ 3,014.00	$ 0.00	$ 3,014.00
Budgeting	$ 16,783.00	$ 4,196.00	$ 12,587.00
Capital Assets	$ 15,685.00	$ 0.00	$ 15,685.00
Cash Management	$ 11,714.00	$ 0.00	$ 11,714.00
Contract Management	$ 7,301.00	$ 0.00	$ 7,301.00
eProcurement (Vendor Access and Punch-Out)	$ 10,920.00	$ 0.00	$ 10,920.00
Project & Grant Accounting	$ 10,173.00	$ 2,543.00	$ 7,630.00
Purchasing	$ 28,615.00	$ 7,154.00	$ 21,461.00
Human Resources Management			
Employee Expense Reimbursement	$ 6,087.00	$ 0.00	$ 6,087.00
Human Resources & Talent Management	$ 3,311.00	$ 828.00	$ 2,483.00
Payroll with Employee Access	$ 4,807.00	$ 240.00	$ 4,567.00
Time & Attendance w Mobile Access - Up to 350 Employees	$ 7,914.00	$ 0.00	$ 7,914.00
Revenue Management			
Accounts Receivable	$ 12,782.00	$ 3,196.00	$ 9,586.00
Cashiering	$ 19,037.00	$ 5,711.00	$ 13,326.00
General Billing	$ 7,107.00	$ 1,208.00	$ 5,899.00
Resident Access	$ 12,480.00	$ 0.00	$ 12,480.00
Utility Billing CIS	$ 8,883.00	$ 0.00	$ 8,883.00
Utility Billing Meter Interface	$ 2,849.00	$ 0.00	$ 2,849.00
Content Management			
Content Manager Core	$ 18,169.00	$ 0.00	$ 18,169.00
Data Insights			
Enterprise Analytics and Reporting w Executive Insights	$ 27,741.00	$ 3,900.00	$ 23,841.00
Additional			
Enterprise Forms Processing Software (including Common Form Set)	$ 8,450.00	$ 0.00	$ 8,450.00
Notify includes 150,000 Msgs and 5,000 Mins per year	$ 4,000.00	$ 0.00	$ 4,000.00
Integrations			
Cashiering API	$ 5,539.00	$ 0.00	$ 5,539.00
General Ledger API Toolkit	$ 3,610.00	$ 0.00	$ 3,610.00
SnapLogic - Up to 5 Integrations	$ 2,080.00	$ 0.00	$ 2,080.00
TOTAL	**$ 323,113.00**	**$ 33,172.00**	**$ 289,941.00**

Comments

Tyler's quote contains estimates of the amount of services needed, based on our preliminary understanding of the scope, level of engagement, and timeline as defined in the Statement of Work (SOW) for your project. The actual amount of services required may vary, based on these factors.

Tyler's pricing is based on the scope of proposed products and services contracted from Tyler. Should portions of the scope of products or services be altered by the Client, Tyler reserves the right to adjust prices for the remaining scope accordingly.

Unless otherwise noted, prices submitted in the quote do not include travel expenses incurred in accordance with Tyler's then-current Business Travel Policy.

Tyler's prices do not include applicable local, city or federal sales, use excise, personal property or other similar taxes or duties, which you are responsible for determining and remitting. Installations are completed remotely but can be done onsite upon request at an additional cost.

In the event Client cancels services less than four (4) weeks in advance, Client is liable to Tyler for (i) all non-refundable expenses incurred by Tyler on Client's behalf; and (ii) daily fees associated with the cancelled services if Tyler is unable to re-assign its personnel.

The Implementation Hours included in this quote assume a work split effort of 70% Client and 30% Tyler.

Implementation Hours are scheduled and delivered in four (4) or eight (8) hour increments.

Tyler provides onsite training for a maximum of 12 people per class. In the event that more than 12 users wish to participate in a training class or more than one occurrence of a class is needed, Tyler will either provide additional days at then-current rates for training or Tyler will utilize a Train-the-Trainer approach whereby the client designated attendees of the initial training can thereafter train the remaining users.

As a new Tyler client, you are entitled to a 14-day or a 30-day trial of the Managed Detection and Response cybersecurity service. Please reference https://www.tylertech.com/services/tyler-detect for more information on the service and contact CybersecuritySales@tylertech.com to initiate the trial.

Tyler currently supports the following identity providers (IdP's) for use with Tyler back-office solutions: Microsoft Active Directory through Azure AD, ADFS or Okta AD agent, Google Cloud Identity, Okta, and Identity Automation Rapid Identity. Any requirement by you to use an IdP not supported by Tyler will require additional costs, available upon request.

Business Management: Tyler leads and owns the "Assess and Define" and "Configuration" of 1 unique business transactions, 1 template business transactions, 1 geo-rules and 1 automation events. Configuration elements beyond this will be omned by the client.

Community Development: Tyler leads and owns the "Assess and Define" and "Configuration" 2 unique business transactions, 2 template business transactions, 1 geo-rules and 1 automation events. Configuration elements beyond this will be owned by the client.

Content Manager Core includes up to 1TB of storage. Should additional storage be needed it may be purchased as needed at an annual fee of $5,000 per TB.

The SaaS fees for product that are not named users are based on 150 concurrent users. Should the number of concurrent users be exceeded, Tyler reserves the right to re-negotiate the SaaS fees based upon any resulting changes in the pricing categories.

Each API Toolkit or Connector comes with 8 free hours of API Development Consulting hours. Each API Bundle comes with 16 free API Development Consulting hours. Additional hours can be purchased beyond this standard offering.

Your payment of the annual subscription or SaaS fee for Tyler Notify will include an identified amount of messages and/or minutes annually. Additional messages and/or minutes may be purchased from Tyler in defined packages at our then-current rates. Tyler Notify will not restrict use of messages and/or minutes that exceed the allotted messages but reserves the right to invoice you for documented overages occurring during the annual term. Any unused messages or minutes remaining at the end of your annual subscription term expire.

Utility billing library includes: standard Utility bill, standard UB receipt, standard UB delinquent notice, standard door hanger and standard final utility bill.

Your rights, and the rights of any of your end users, to use Tyler's Data & Insights SaaS Services, or certain Tyler solutions which include Tyler's Data & Insights data platform, are subject to the Terms of Services, available at https://www.tylertech.com/terms/data-insights-saas-services-terms-of-service. By signing this sales quotation, or accessing, installing, or using any of the Tyler solutions listed at the linked terms, you certify that you have reviewed, understand, and agree to said terms.

Business license library includes: standard business license and standard renewal application.

Fees for year one of hardware maintenance are invoiced upon delivery of the hardware, with subsequent years' fees billed annually, in advance.

Your use of Payments and any related items included on this order is subject to the terms found at: https://www.tylertech.com/terms/payment-card-processing-agreement. By signing this order or the agreement in which it is included, you agree you have read, understand, and agree to such terms. Please see attached Payments fee schedule.

In the event Client acquires from Tyler any edition of Content Manager software other than Enterprise Edition, the license for Content Manager is restricted to use with Tyler applications only. If Client wishes to use Content Manager software with non-Tyler applications, Client must purchase or upgrade to Content Manager Enterprise Edition.

Financial library includes: standard A/P check, standard EFT/ACH, standard Purchase order, standard Contract, 1099M, 1099INT, 1099S, 1099NEC and 1099G.

General Billing library includes: standard invoice, standard statement, standard general billing receipt and standard miscellaneous receipt.

Personnel Actions Forms Library includes: standard Personnel Action form - New and standard Personnel Action Form - Change.

Payroll library includes: standard PR check, standard direct deposit, standard vendor from payroll check, standard vendor from payroll direct deposit, W2, W2c, ACA 1095B, ACA 1095C and 1099 R.

Exhibit A
Schedule 1
Migration Modules

Cashiering
Accounts Payable
Accounts Receivable
Budget Preparation
Fixed Assets
General Ledger
HR Web Extension
Human Resources
LI Web Extension
Parcel Manager
Payments
Payroll
Permits/Inspections
Position Budgeting
Project Accounting
Purchasing
Requisitioning
UB Web Extension
Utility Billing
Tyler Notify
Tyler Notify IVR Plan (25,000 Minutes)
Tyler Notify SMS Text Plan (25,000 Messages)

Exhibit B
Invoicing and Payment Policy

We will provide you with the software and services set forth in the Investment Summary of the Agreement. Capitalized terms not otherwise defined will have the meaning assigned to such terms in the Agreement.

Invoicing: We will invoice you for the applicable software and services in the Investment Summary as set forth below. Your rights to dispute any invoice are set forth in the Agreement.

SaaS Fees: SaaS Fees are invoiced on an annual basis, beginning on the commencement of the initial term as set forth in Section F (1) of this Agreement. Your annual SaaS fees for the initial term are set forth in the Investment Summary and payments due under the initial term of this Agreement are defined below.

Payment	Period	Amount
Year 1	10/1/2024 – 9/30/2025	$289,941.00
Year 2	10/1/2025 – 9/30/2026	$289,941.00
Year 3	10/1/2026 – 9/30/2027	$289,941.00
Year 4	10/1/2027 – 9/30/2028	$289,941.00
Year 5	10/1/2028 – 9/30/2029	$289,941.00
Total		**$1,449,705.00**

***Implementation and Other Professional Services (including training)*:** Tyler will invoice Client for implementation services on a milestone basis. Tyler will invoice Client for the milestone amount set forth below upon completion and acceptance of the associated services in accordance with the Agreement and/or SOW:

Payment #	Phase	Milestone ID	Description	Milestone w/Travel
I-1	1	1.1	Initiate and Plan Stage Acceptance	$ 78,969.00
I-2	1	1.2	Chart of Accounts Design Acceptance	$ 118,454.00
I-3	1	1.3	Assess & Define Stage Acceptance	$ 138,196.00
I-4	1	1.4	Prepare Solution Stage Acceptance	$ 157,938.00
I-5	1	1.5	Production Readiness Stage Acceptance	$ 98,711.00
I-6	1	1.6	Production Stage Acceptance	$ 118,454.00

I-7	1	1.7	Close Stage Acceptance	$	78,969.00
I-8	2	2.1	Initiate and Plan Stage Acceptance	$	15,794.00
I-9	2	2.2	Assess & Define Stage Acceptance	$	31,588.00
I-10	2	2.3	Prepare Solution Stage Acceptance	$	39,485.00
I-11	2	2.4	Production Readiness Stage Acceptance	$	39,485.00
I-12	2	2.5	Production Stage Acceptance	$	15,794.00
I-13	2	2.6	Close Stage Acceptance	$	15,794.00
I-14	3	3.1	Initiate and Plan Stage Acceptance	$	7,897.00
I-15	3	3.2	Assess and Define Stage Acceptance	$	15,794.00
I-16	3	3.3	Prepare Solution Stage Acceptance	$	19,743.00
I-17	3	3.4	Production Readiness Stage Acceptance	$	19,743.00
I-18	3	3.5	Production Stage Acceptance	$	7,897.00
I-19	3	3.6	Close Stage Acceptance	$	7,897.00
	Total			$	1,026,602.00

Conversions. Fixed-fee conversions are invoiced 50% upon initial delivery of the converted, by conversion option, and 50% upon Client acceptance to load the converted Data into the Live/Production environment, by conversion option. The fixed-fee conversions in scope as of the Effective Date, and their associated cost, are as set forth in the following table:

Payment Number	Milestone	Conversion	Cost
C-1	Initial delivery of the converted Data	AC - Actuals up to 10 years	$4,020.00
C-2	Client acceptance to load the converted Data into the Live/Production environment	AC - Actuals up to 10 years	$4,020.00
C-3	Initial delivery of the converted Data	AC - Budgets up to 10 years	$3,000.00
C-4	Client acceptance to load the converted Data into the Live/Production environment	AC - Budgets up to 10 years	$3,000.00
C-5	Initial delivery of the converted Data	AC Standard COA	$875.00
C-6	Client acceptance to load the converted Data into the Live/Production environment	AC Standard COA	$875.00

C-7	Initial delivery of the converted Data	AP - Checks up to 10 years	$2,600.00
C-8	Client acceptance to load the converted Data into the Live/Production environment	AP - Checks up to 10 years	$2,600.00
C-9	Initial delivery of the converted Data	AP - Invoice up to 10 years	$3,250.00
C-10	Client acceptance to load the converted Data into the Live/Production environment	AP - Invoice up to 10 years	$3,250.00
C-11	Initial delivery of the converted Data	AP Standard Master	$750.00
C-12	Client acceptance to load the converted Data into the Live/Production environment	AP Standard Master	$750.00
C-13	Initial delivery of the converted Data	CA Std Master	$1,125.00
C-14	Client acceptance to load the converted Data into the Live/Production environment	CA Std Master	$1,125.00
C-15	Initial delivery of the converted Data	Content Manager Core - AC - BudgetsContent Manager Core - AC - Budgets	$450.00
C-16	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - AC - Budgets	$450.00
C-17	Initial delivery of the converted Data	Content Manager Core - AP - Checks	$450.00
C-18	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - AP - Checks	$450.00
C-19	Initial delivery of the converted Data	Content Manager Core - AP Standard Master	$1,625.00
C-20	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - AP Standard Master	$1,625.00
C-21	Initial delivery of the converted Data	Content Manager Core - CA - History	$325.00
C-22	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - CA - History	$325.00
C-23	Initial delivery of the converted Data	Content Manager Core - CA Standard - Master GL Accounts Purchase History	$650.00
C-24	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - CA Standard - Master GL Accounts Purchase History	$650.00

C-25	Initial delivery of the converted Data	Content Manager Core - GB - Bills	$750.00
C-26	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - GB - Bills	$750.00
C-27	Initial delivery of the converted Data	Content Manager Core - GB Standard - CID	$325.00
C-28	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - GB Standard - CID	$325.00
C-29	Initial delivery of the converted Data	Content Manager Core - Payroll - Certifications	$250.00
C-30	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - Payroll - Certifications	$250.00
C-31	Initial delivery of the converted Data	Content Manager Core - Payroll - Check History	$250.00
C-32	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - Payroll - Check History	$250.00
C-33	Initial delivery of the converted Data	Content Manager Core - Payroll - Deductions	$350.00
C-34	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - Payroll - Deductions	$350.00
C-35	Initial delivery of the converted Data	Content Manager Core - Payroll - PM Action History	$250.00
C-36	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - Payroll - PM Action History	$250.00
C-37	Initial delivery of the converted Data	Content Manager Core - Payroll - Position Control	$350.00
C-38	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - Payroll - Position Control	$350.00
C-39	Initial delivery of the converted Data	Content Manager Core - Payroll - Recruiting	$250.00
C-40	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - Payroll - Recruiting	$250.00
C-41	Initial delivery of the converted Data	Content Manager Core - Payroll Standard - Employee Address	$1,750.00
C-42	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - Payroll Standard - Employee Address	$1,750.00
C-43	Initial delivery of the	Content Manager Core -	$900.00

	converted Data	Purchase Orders - Standard - Open POs	
C-44	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - Purchase Orders - Standard - Open POs	$900.00
C-45	Initial delivery of the converted Data	Content Manager Core - Utility Billing - - Backflow	$250.00
C-46	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - Utility Billing - - Backflow	$250.00
C-47	Initial delivery of the converted Data	Content Manager Core - Utility Billing - Standard - UB Account CIDs	$250.00
C-48	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - Utility Billing - Standard - UB Account CIDs	$250.00
C-49	Initial delivery of the converted Data	Content Manager Core - Work Order - Work Order Asset	$325.00
C-50	Client acceptance to load the converted Data into the Live/Production environment	Content Manager Core - Work Order - Work Order Asset	$325.00
C-51	Initial delivery of the converted Data	Contracts	$1,500.00
C-52	Client acceptance to load the converted Data into the Live/Production environment	Contracts	$1,500.00
C-53	Initial delivery of the converted Data	GB - Bills up to 10 years	$2,750.00
C-54	Client acceptance to load the converted Data into the Live/Production environment	GB - Bills up to 10 years	$2,750.00
C-55	Initial delivery of the converted Data	GB - Recurring Invoices	$1,125.00
C-56	Client acceptance to load the converted Data into the Live/Production environment	GB - Recurring Invoices	$1,125.00
C-57	Initial delivery of the converted Data	GB Std CID	$625.00
C-58	Client acceptance to load the converted Data into the Live/Production environment	GB Std CID	$625.00
C-59	Initial delivery of the converted Data	HR Human Resources - Certifications	$350.00
C-60	Client acceptance to load the converted Data into the Live/Production environment	HR Human Resources - Certifications	$350.00
C-61	Initial delivery of the	HR Human Resources -	$350.00

	converted Data	Education	
C-62	Client acceptance to load the converted Data into the Live/Production environment	HR Human Resources - Education	$350.00
C-63	Initial delivery of the converted Data	HR Human Resources - PM Action History up to 10 years	$700.00
C-64	Client acceptance to load the converted Data into the Live/Production environment	HR Human Resources - PM Action History up to 10 years	$700.00
C-65	Initial delivery of the converted Data	HR Human Resources - Position Control	$350.00
C-66	Client acceptance to load the converted Data into the Live/Production environment	HR Human Resources - Position Control	$350.00
C-67	Initial delivery of the converted Data	PR Payroll - Accrual Balances	$375.00
C-68	Client acceptance to load the converted Data into the Live/Production environment	PR Payroll - Accrual Balances	$375.00
C-69	Initial delivery of the converted Data	PR Payroll - Accumulators up to 10 years	$1,400.00
C-70	Client acceptance to load the converted Data into the Live/Production environment	PR Payroll - Accumulators up to 10 years	$1,400.00
C-71	Initial delivery of the converted Data	PR Payroll - Check History up to 10 years	$600.00
C-72	Client acceptance to load the converted Data into the Live/Production environment	PR Payroll - Check History up to 10 years	$600.00
C-73	Initial delivery of the converted Data	PR Payroll - Deductions	$450.00
C-74	Client acceptance to load the converted Data into the Live/Production environment	PR Payroll - Deductions	$450.00
C-75	Initial delivery of the converted Data	PR Payroll - Earning/Deduction Hist up to 10 years	$1,250.00
C-76	Client acceptance to load the converted Data into the Live/Production environment	PR Payroll - Earning/Deduction Hist up to 10 years	$1,250.00
C-77	Initial delivery of the converted Data	PR Payroll - Standard	$500.00
C-78	Client acceptance to load the converted Data into the Live/Production environment	PR Payroll - Standard	$500.00
C-79	Initial delivery of the converted Data	PR Payroll - State Retirement Tables	$350.00
C-80	Client acceptance to load the	PR Payroll - State Retirement	$350.00

	converted Data into the Live/Production environment	Tables	
C-81	Initial delivery of the converted Data	PG - Actuals up to 10 years	$3,000.00
C-82	Client acceptance to load the converted Data into the Live/Production environment	PG - Actuals up to 10 years	$3,000.00
C-83	Initial delivery of the converted Data	PG - Budgets up to 10 years	$3,000.00
C-84	Client acceptance to load the converted Data into the Live/Production environment	PG - Budgets up to 10 years	$3,000.00
C-85	Initial delivery of the converted Data	PGA Standard	$1,750.00
C-86	Client acceptance to load the converted Data into the Live/Production environment	PGA Standard	$1,750.00
C-87	Initial delivery of the converted Data	Purchasing - Standard	$1,000.00
C-88	Client acceptance to load the converted Data into the Live/Production environment	Purchasing - Standard	$1,000.00
C-89	Initial delivery of the converted Data	Utility Billing - Backflow	$300.00
C-90	Client acceptance to load the converted Data into the Live/Production environment	Utility Billing - Backflow	$300.00
C-91	Initial delivery of the converted Data	Utility Billing - Balance Forward AR	$1,400.00
C-92	Client acceptance to load the converted Data into the Live/Production environment	Utility Billing - Balance Forward AR	$1,400.00
C-93	Initial delivery of the converted Data	Utility Billing - Budget Billing	$900.00
C-94	Client acceptance to load the converted Data into the Live/Production environment	Utility Billing - Budget Billing	$900.00
C-95	Initial delivery of the converted Data	Utility Billing - Consumption History up to 10 years	$500.00
C-96	Client acceptance to load the converted Data into the Live/Production environment	Utility Billing - Consumption History up to 10 years	$500.00
C-97	Initial delivery of the converted Data	Utility Billing - Flat Inventory/Containers	$900.00
C-98	Client acceptance to load the converted Data into the Live/Production environment	Utility Billing - Flat Inventory/Containers	$900.00

C-99	Initial delivery of the converted Data	Utility Billing - Option 2 Assessments	$300.00
C-100	Client acceptance to load the converted Data into the Live/Production environment	Utility Billing - Option 2 Assessments	$300.00
C-101	Initial delivery of the converted Data	Utility Billing - Service Orders	$575.00
C-102	Client acceptance to load the converted Data into the Live/Production environment	Utility Billing - Service Orders	$575.00
C-103	Initial delivery of the converted Data	Utility Billing - Services	$900.00
C-104	Client acceptance to load the converted Data into the Live/Production environment	Utility Billing - Services	$900.00
C-105	Initial delivery of the converted Data	Utility Billing - Standard	$1,025.00
C-106	Client acceptance to load the converted Data into the Live/Production environment	Utility Billing - Standard	$1,025.00
C-107	Initial delivery of the converted Data	GL Detail History Conversion-Two Years	$17,500.00
C-108	Client acceptance to load the converted Data into the Live/Production environment	GL Detail History Conversion-Two Years	$17,500.00
C-109	Initial delivery of the converted Data	Project Ledger Detail History Conversion – Two years	$12,500.00
C-110	Client acceptance to load the converted Data into the Live/Production environment	Project Ledger Detail History Conversion – Two Years	$12,500.00
C-111	Initial delivery of the converted Data	Purchasing - Closed PO's	$2,000.00
C-112	Client acceptance to load the converted Data into the Live/Production environment	Purchasing - Closed PO's	$2,000.00
Total			$171,190.00

Project Management: Dedicated project management services are billed monthly, in arrears, beginning on the first day of the month immediately following initiation of project planning. The dedicated project management services in scope as of the Effective Date are as set forth in the following table:

Payment Number	Services Month	PM Services	Payment Amount
PM-1	1	PM Services (Finance and HR Payroll)	$10,340.00
PM-2	2	PM Services (Finance and HR Payroll)	$10,340.00

PM-3	3	PM Services (Finance and HR Payroll)	$10,340.00
PM-4	4	PM Services (Finance and HR Payroll)	$10,340.00
PM-5	5	PM Services (Finance and HR Payroll)	$10,340.00
PM-6	6	PM Services (Finance and HR Payroll)	$10,340.00
PM-7	7	PM Services (Finance and HR Payroll)	$10,340.00
PM-8	8	PM Services (Finance and HR Payroll)	$10,340.00
PM-9	9	PM Services (Finance and HR Payroll)	$10,340.00
PM-10	10	PM Services (Finance and HR Payroll)	$10,340.00
PM-11	11	PM Services (Finance and HR Payroll)	$10,340.00
PM-12	12	PM Services (Finance and HR Payroll)	$10,340.00
PM-13	13	PM Services (Finance and HR Payroll)	$10,340.00
PM-14	14	PM Services (Finance and HR Payroll)	$10,340.00
PM-15	15	PM Services (Finance and HR Payroll)	$10,340.00
PM-16	16	PM Services (Finance and HR Payroll)	$10,340.00
PM-17	17	PM Services (Finance and HR Payroll)	$10,340.00
PM-18	18	PM Services (Finance and HR Payroll)	$10,340.00
PM-19	19	PM Services (Finance and HR Payroll)	$10,340.00
PM-20	20	PM Services (Finance and HR Payroll)	$10,340.00
PM-21	21	PM Services (Utility Billing)	$10,340.00
PM-22	22	PM Services (Utility Billing)	$10,340.00
PM-23	23	PM Services (Utility Billing)	$10,340.00
PM-24	24	PM Services (Utility Billing)	$10,340.00
PM-25	25	PM Services (Utility Billing)	$10,340.00
PM-26	26	PM Services (Utility Billing)	$10,340.00
PM-27	27	PM Services (Utility Billing)	$10,340.00
PM-28	28	PM Services (Utility Billing)	$10,340.00
PM-29	29	PM Services (Utility Billing)	$10,340.00
PM-30	30	PM Services (Utility Billing)	$10,340.00
PM-31	31	PM Services (Utility Billing)	$10,340.00
PM-32	32	PM Services (Utility Billing)	$10,340.00
PM-33	33	PM Services (Utility Billing)	$10,340.00
PM-34	34	PM Services (Utility Billing)	$10,340.00
		Total	**$351,560.00**

Expenses. The service rates in the Investment Summary and above include travel expenses. Travel expenses for Tyler delivered services will be billed as incurred in accordance with the Business Travel Policy attached hereto as Exhibit B, Schedule 1.

***Third Party Hardware*.** Third Party Hardware costs are invoiced upon delivery. The Third-Party Hardware costs in scope as of the Effective Date, and their associated cost are set forth below:

Payment #	Hardware	Quantity	Unit Price	Total Price
H-1	Payments Lane 3000 Terminal	1	$419.00	$419.00

	Total			**$419.00**

Third Party Hardware Maintenance. The first-year maintenance fee for Hardware is invoiced upon delivery of the hardware. Subsequent annual maintenance fees for hardware are invoiced annually, in advance, at then-current rates, upon each anniversary thereof. Year 1 maintenance fee discounted 100%.

Payment #	Hardware Maintenance	Quantity	Unit Price	Total Price
HM-1	Payments PCI Service Fee(per device)	1	$180.00	$0.00
	Total	1		**$0.00**

CONTRACT TOTAL: $2,999,476.00

Payment. Payment for undisputed invoices is due within forty-five (45) days of the invoice date. We prefer to receive payments electronically. Our electronic payment information is available by contacting AR@tylertech.com.

Exhibit B
Schedule 1
Business Travel Policy

1. Air Travel

   A. Reservations & Tickets

   The Travel Management Company (TMC) used by Tyler will provide an employee with a direct flight within two hours before or after the requested departure time, assuming that flight does not add more than three hours to the employee's total trip duration and the fare is within $100 (each way) of the lowest logical fare. If a net savings of $200 or more (each way) is possible through a connecting flight that is within two hours before or after the requested departure time and that does not add more than three hours to the employee's total trip duration, the connecting flight should be accepted.

   Employees are encouraged to make advanced reservations to take full advantage of discount opportunities. Employees should use all reasonable efforts to make travel arrangements at least two (2) weeks in advance of commitments. A seven (7) day advance booking requirement is mandatory. When booking less than seven (7) days in advance, management approval will be required.

   Except in the case of international travel where a segment of continuous air travel is six (6) or more consecutive hours in length, only economy or coach class seating is reimbursable. Employees shall not be reimbursed for "Basic Economy Fares" because these fares are non-refundable and have many restrictions that outweigh the cost-savings.

   B. Baggage Fees

   Reimbursement of personal baggage charges are based on trip duration as follows:

   - Up to five (5) days = one (1) checked bag
   - Six (6) or more days = two (2) checked bags

   Baggage fees for sports equipment are not reimbursable.

2. Ground Transportation

A. Private Automobile

Mileage Allowance – Business use of an employee's private automobile will be reimbursed at the current IRS allowable rate, plus out of pocket costs for tolls and parking. Mileage will be calculated by using the employee's office as the starting and ending point, in compliance with IRS regulations. Employees who have been designated a home office should calculate miles from their home.

B. Rental Car

Employees are authorized to rent cars only in conjunction with air travel when cost, convenience, and the specific situation reasonably require their use. When renting a car for Tyler business, employees should select a "mid-size" or "intermediate" car. "Full" size cars may be rented when three or more employees are traveling together. Tyler carries leased vehicle coverage for business car rentals; except for employees traveling to Alaska and internationally (excluding Canada), additional insurance on the rental agreement should be declined.

C. Public Transportation

Taxi or airport limousine services may be considered when traveling in and around cities or to and from airports when less expensive means of transportation are unavailable or impractical. The actual fare plus a reasonable tip (15-18%) are reimbursable. In the case of a free hotel shuttle to the airport, tips are included in the per diem rates and will not be reimbursed separately.

D. Parking & Tolls

When parking at the airport, employees must use longer term parking areas that are measured in days as opposed to hours. Park and fly options located near some airports may also be used. For extended trips that would result in excessive parking charges, public transportation to/from the airport should be considered. Tolls will be reimbursed when receipts are presented.

3. Lodging

Tyler's TMC will select hotel chains that are well established, reasonable in price, and conveniently located in relation to the traveler's work assignment. Typical hotel chains include Courtyard, Fairfield Inn, Hampton Inn, and Holiday Inn Express. If the employee has a discount rate with a local hotel, the hotel reservation should note that discount and the employee should confirm the lower rate with the hotel upon arrival. Employee memberships in travel clubs such as AAA should be noted in their travel profiles so that the employee can take advantage of any lower club rates.

"No shows" or cancellation fees are not reimbursable if the employee does not comply with the hotel's cancellation policy.

Tips for maids and other hotel staff are included in the per diem rate and are not reimbursed separately.

Employees are not authorized to reserve non-traditional short-term lodging, such as Airbnb, VRBO, and HomeAway. Employees who elect to make such reservations shall not be reimbursed.

4. Meals and Incidental Expenses

Employee meals and incidental expenses while on travel status within the continental U.S. are in accordance with the federal per diem rates published by the General Services Administration. Incidental expenses include tips to maids, hotel staff, and shuttle drivers and other minor travel expenses. Per diem rates are available at www.gsa.gov/perdiem.

Per diem for Alaska, Hawaii, U.S. protectorates and international destinations are provided separately by the Department of State and will be determined as required.

A. Overnight Travel

For each full day of travel, all three meals are reimbursable. Per diems on the first and last day of a trip are governed as set forth below.

Departure Day

Depart before 12:00 noon	Lunch and dinner
Depart after 12:00 noon	Dinner

Return Day

Return before 12:00 noon	Breakfast
Return between 12:00 noon & 7:00 p.m.	Breakfast and lunch
Return after 7:00 p.m.*	Breakfast, lunch and dinner

*7:00 p.m. is defined as direct travel time and does not include time taken to stop for dinner.

The reimbursement rates for individual meals are calculated as a percentage of the full day per diem as follows:

Breakfast	15%
Lunch	25%
Dinner	60%

B. Same Day Travel

Employees traveling at least 100 miles to a site and returning in the same day are eligible to claim lunch on an expense report. Employees on same day travel status are eligible to claim dinner in the event they return home after 7:00 p.m.*

*7:00 p.m. is defined as direct travel time and does not include time taken to stop for dinner.

5. Internet Access – Hotels and Airports

   Employees who travel may need to access their e-mail at night. Many hotels provide free high speed internet access and Tyler employees are encouraged to use such hotels whenever possible. If an employee's hotel charges for internet access it is reimbursable up to $10.00 per day. Charges for internet access at airports are not reimbursable.

6. International Travel

   All international flights with the exception of flights between the U.S. and Canada should be reserved through TMC using the "lowest practical coach fare" with the exception of flights that are six (6) or more consecutive hours in length. In such event, the next available seating class above coach shall be reimbursed.

   When required to travel internationally for business, employees shall be reimbursed for photo fees, application fees, and execution fees when obtaining a new passport book, but fees related to passport renewals are not reimbursable. Visa application and legal fees, entry taxes and departure taxes are reimbursable.

   The cost of vaccinations that are either required for travel to specific countries or suggested by the U.S. Department of Health & Human Services for travel to specific countries, is reimbursable.

   Section 4, Meals & Incidental Expenses, and Section 2.b., Rental Car, shall apply to this section.



Exhibit C
SERVICE LEVEL AGREEMENT

I. Agreement Overview

This SLA operates in conjunction with, and does not supersede or replace any part of, the Agreement. It outlines the information technology service levels that we will provide to you to ensure the availability of the application services that you have requested us to provide. All other support services are documented in the Support Call Process. This SLA does not apply to any Third Party SaaS Services. . All other support services are documented in the Support Call Process.

II. Definitions. Except as defined below, all defined terms have the meaning set forth in the Agreement.

Actual Attainment: The percentage of time the Tyler Software is available during a calendar month, calculated as follows: (Service Availability – Downtime) ÷ Service Availability.

Client Error Incident: Any service unavailability resulting from your applications, content or equipment, or the acts or omissions of any of your service users or third-party providers over whom we exercise no control.

Downtime: Those minutes during Service Availability, as defined below, when all users cannot launch, login, search or save primary data in the Tyler Software. Downtime does not include those instances in which only a Defect is present.

Emergency Maintenance Window: (1) maintenance that is required to patch a critical security vulnerability; (2) maintenance that is required to prevent an imminent outage of Service Availability; or (3) maintenance that is mutually agreed upon in writing by Tyler and the Client.

Planned Downtime: Downtime that occurs during a Standard or Emergency Maintenance window.

Service Availability: The total number of minutes in a calendar month that the Tyler Software is capable of receiving, processing, and responding to requests, excluding Planned Downtime, Client Error Incidents, denial of service attacks and Force Majeure. Service Availability only applies to Tyler Software being used in the live production environment.

Standard Maintenance: Routine maintenance to the Tyler Software and infrastructure. Standard Maintenance is limited to five (5) hours per week.

III. Service Availability

a. Your Responsibilities

Whenever you experience Downtime, you must make a support call according to the procedures outlined in the Support Call Process. You will receive a support case number.

b. Our Responsibilities

When our support team receives a call from you that Downtime has occurred or is occurring, we will work with you to identify the cause of the Downtime (including whether it may be the result of Planned Downtime, a Client Error Incident, denial of service attack or Force Majeure). We will also work with you to resume normal operations.

c. Client Relief

Our targeted Attainment Goal is 100%. You may be entitled to credits as indicated in the Client Relief Schedule found below. Your relief credit is calculated as a percentage of the SaaS Fees paid for the calendar month.

In order to receive relief credits, you must submit a request through one of the channels listed in our Support Call Process within fifteen days (15) of the end of the applicable month. We will respond to your relief request within thirty (30) day(s) of receipt.

The total credits confirmed by us will be applied to the SaaS Fee for the next billing cycle. Issuing of such credit does not relieve us of our obligations under the Agreement to correct the problem which created the service interruption.

Credits are only payable when Actual Attainment results in eligibility for credits in consecutive months and only for such consecutive months.

Client Relief Schedule	
Actual Attainment	**Client Relief**
99.99% - 99.70%	Remedial action will be taken
99.69% - 98.50%	2% of SaaS Fees paid for applicable month
98.49% - 97.50%	4% of SaaS Fees paid for applicable month
97.49% - 96.50%	6% of SaaS Fees paid for applicable month
96.49% - 95.50%	8% of SaaS Fees paid for applicable month
Below 95.50%	10% of SaaS Fees paid for applicable month

* Notwithstanding language in the Agreement to the contrary, Recovery Point Objective is one (1) hour.

IV. Maintenance Notifications

We perform Standard Maintenance during limited windows that are historically known to be reliably low-traffic times. If and when maintenance is predicted to occur during periods of higher traffic, we will provide advance notice of those windows and will coordinate to the greatest extent possible with you.

Not all maintenance activities will cause application unavailability. However, if Tyler anticipates that activities during a Standard or Emergency Maintenance window may make the Tyler Software unavailable, we will provide advance notice, as reasonably practicable, that the Tyler Software will be unavailable during the maintenance window.

Exhibit C
Schedule 1
Support Call Process

Support Channels

Tyler Technologies, Inc. provides the following channels of software support for authorized users*:

(1) On-line submission (portal) – for less urgent and functionality-based questions, users may create support incidents through the Tyler Customer Portal available at the Tyler Technologies website. A built-in Answer Panel provides users with resolutions to most "how-to" and configuration-based questions through a simplified search interface with machine learning, potentially eliminating the need to submit the support case.
(2) Email – for less urgent situations, users may submit emails directly to the software support group.
(3) Telephone – for urgent or complex questions, users receive toll-free, telephone software support.

** Channel availability may be limited for certain applications.*

Support Resources

A number of additional resources are available to provide a comprehensive and complete support experience:

(1) Tyler Website – www.tylertech.com – for accessing client tools, documentation, and other information including support contact information.
(2) Tyler Search -a knowledge based search engine that lets you search multiple sources simultaneously to find the answers you need, 24x7.
(3) Tyler Community –provides a venue for all Tyler clients with current maintenance agreements to collaborate with one another, share best practices and resources, and access documentation.
(4) Tyler University – online training courses on Tyler products.

Support Availability

Tyler Technologies support is available during the local business hours of 8 AM to 5 PM (Monday – Friday) across four US time zones (Pacific, Mountain, Central and Eastern). Tyler's holiday schedule is outlined below. There will be no support coverage on these days.

New Year's Day	Labor Day
Martin Luther King, Jr. Day	Thanksgiving Day
Memorial Day	Day after Thanksgiving
Independence Day	Christmas Day

For support teams that provide after-hours service, we will provide you with procedures for contacting support staff after normal business hours for reporting Priority Level 1 Defects only. Upon receipt of

such a Defect notification, we will use commercially reasonable efforts to meet the resolution targets set forth below.

We will also make commercially reasonable efforts to be available for one pre-scheduled Saturday of each month to assist your IT staff with applying patches and release upgrades, as well as consulting with them on server maintenance and configuration of the Tyler Software environment.

Incident Handling

Incident Tracking

Every support incident is logged into Tyler's Customer Relationship Management System and given a unique case number. This system tracks the history of each incident. The case number is used to track and reference open issues when clients contact support. Clients may track incidents, using the case number, through Tyler's Customer Portal or by calling software support directly.

Incident Priority

Each incident is assigned a priority level, which corresponds to the Client's needs. Tyler and the Client will reasonably set the priority of the incident per the chart below. This chart is not intended to address every type of support incident, and certain "characteristics" may or may not apply depending on whether the Tyler software has been deployed on customer infrastructure or the Tyler cloud. The goal is to help guide the Client towards clearly understanding and communicating the importance of the issue and to describe generally expected response and resolution targets in the production environment only.

References to a "confirmed support incident" mean that Tyler and the Client have successfully validated the reported Defect/support incident.

Priority Level	Characteristics of Support Incident	Resolution Targets*
1 Critical	Support incident that causes (a) complete application failure or application unavailability; (b) application failure or unavailability in one or more of the client's remote location; or (c) systemic loss of multiple essential system functions.	Tyler shall provide an initial response to Priority Level 1 incidents within one (1) business hour of receipt of the incident. Once the incident has been confirmed, Tyler shall use commercially reasonable efforts to resolve such support incidents or provide a circumvention procedure within one (1) business day. For non-hosted customers, Tyler's responsibility for lost or corrupted data is limited to assisting the Client in restoring its last available database.

Priority Level	Characteristics of Support Incident	Resolution Targets*
2 High	Support incident that causes (a) repeated, consistent failure of essential functionality affecting more than one user or (b) loss or corruption of data.	Tyler shall provide an initial response to Priority Level 2 incidents within four (4) business hours of receipt of the incident. Once the incident has been confirmed, Tyler shall use commercially reasonable efforts to resolve such support incidents or provide a circumvention procedure within ten (10) business days. For non-hosted customers, Tyler's responsibility for loss or corrupted data is limited to assisting the Client in restoring its last available database.
3 Medium	Priority Level 1 incident with an existing circumvention procedure, or a Priority Level 2 incident that affects only one user or for which there is an existing circumvention procedure.	Tyler shall provide an initial response to Priority Level 3 incidents within one (1) business day of receipt of the incident. Once the incident has been confirmed, Tyler shall use commercially reasonable efforts to resolve such support incidents without the need for a circumvention procedure with the next published maintenance update or service pack, which shall occur at least quarterly. For non-hosted customers, Tyler's responsibility for lost or corrupted data is limited to assisting the Client in restoring its last available database.
4 Non-critical	Support incident that causes failure of non-essential functionality or a cosmetic or other issue that does not qualify as any other Priority Level.	Tyler shall provide an initial response to Priority Level 4 incidents within two (2) business days of receipt of the incident. Once the incident has been confirmed, Tyler shall use commercially reasonable efforts to resolve such support incidents, as well as cosmetic issues, with a future version release.

**Response and Resolution Targets may differ by product or business need*

Incident Escalation

If Tyler is unable to resolve any priority level 1 or 2 defect as listed above or the priority of an issue has elevated since initiation, you may escalate the incident to the appropriate resource, as outlined by each product support team. The corresponding resource will meet with you and any Tyler staff to establish a mutually agreeable plan for addressing the defect.

Remote Support Tool

Some support calls may require further analysis of the Client's database, processes or setup to diagnose a problem or to assist with a question. Tyler will, at its discretion, use an industry-standard remote support tool. Tyler's support team must have the ability to quickly connect to the Client's system and view the site's setup, diagnose problems, or assist with screen navigation. More information about the remote support tool Tyler uses is available upon request.

Exhibit D
Third Party Terms

ThinPrint Terms. Your use of Tyler Forms software and forms is subject to the End User License Agreement terms for ThinPrint Engine, ThinPrint License Server, and Connected Gateway found here: https://www.thinprint.com/en/legal-notes/eula/. By signing a Tyler Agreement or Order Form, or accessing, installing, or using Tyler Forms software or forms, you agree that you have read, understood, and agree to such terms.

DocOrigin Terms. Your use of Tyler Forms software and forms is subject to the DocOrigin End User License Agreement available for download here: https://eclipsecorp.us/eula/. By signing a Tyler Agreement or Order Form including Tyler forms software or forms, or accessing, installing, or using Tyler Forms software or forms, you agree that you have read, understood, and agree to such terms.

Twilio Acceptable Use Policy. Your use of the Tyler solutions listed below includes functionality provided by a Third Party Developer, Twilio. Your rights, and the rights of any of your end users, to use said functionality are subject to the terms of the Twilio Acceptable Use Policy, available at http://www.twilio.com/legal/aup. By signing a Tyler Agreement or Order Form, or accessing, installing, or using any such Tyler solution, you certify that you have reviewed, understand and agree to said terms. Tyler hereby disclaims any and all liability related to your or your end user's failure to abide by the terms of the Twilio Acceptable Use Policy. Any liability for failure to abide by said terms shall rest solely with the person or entity whose conduct violated said terms.

- Electronic Warrants
- Online Dispute Resolution
- Enterprise Justice Notifications Add On (text notifications)
- Absence & Substitute
- Notify
- Enterprise Jury Manager
- Enterprise Supervision
- Virtual Court

Exhibit E
Statement of Work

Statement of Work, if applicable, to be inserted prior to Agreement execution.

City of Pittsburg, CA

SOW from Tyler Technologies, Inc.

7/16/2024

65 Civic Avenue
Pittsburg, CA 94565

Contact:
Rich Boven
Email: Rich.Boven@TylerTech.com
1 Tyler Drive, Yarmouth, Maine 04096

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Part 1: Executive Summary

1. Project Overview

1.1 Introduction

Tyler Technologies ("Tyler") is the largest and most established provider of integrated software and technology services focused solely on the public sector. Tyler's end-to-end solutions empower public sector entities including local, state, provincial and federal government, to operate more efficiently and connect more transparently with their constituents and with each other. By connecting data and processes across disparate systems, Tyler's solutions transform how clients gain actionable insights that solve problems in their communities.

1.2 Project Goals

This Statement of Work ("SOW") documents the methodology, implementation stages, activities, and roles and responsibilities, and project scope listed in the Investment Summary of the Agreement between Tyler and the Client (collectively the "Project").

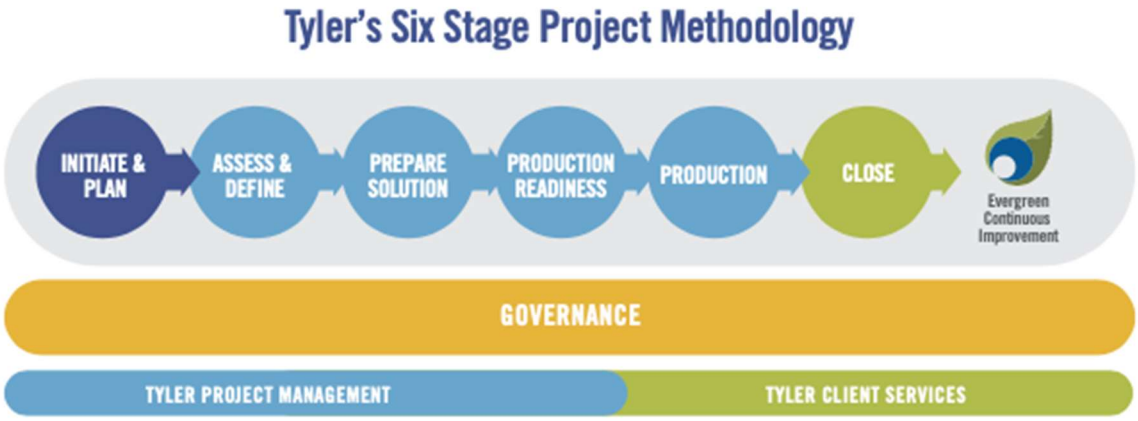
The overall goals of the project are to:

- Successfully implement the contracted scope on time and on budget
- Increase operational efficiencies and empower users to be more productive
- Improve accessibility and responsiveness to external and internal customer needs
- Overcome current challenges and meet future goals
- Implement functional requirements as responded by Tyler

1.3 Methodology

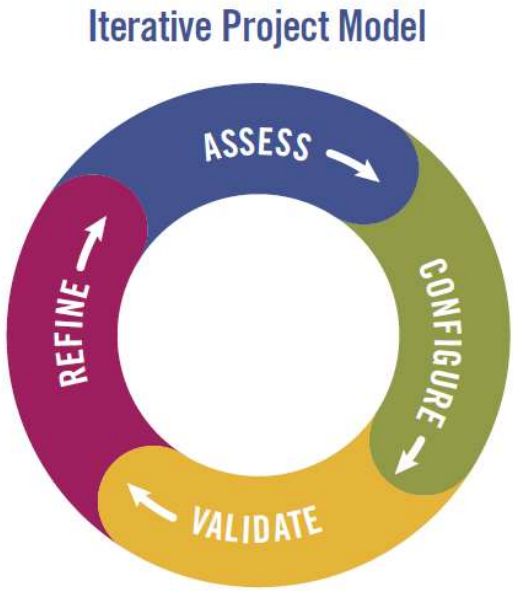
This is accomplished by Pittsburg and Tyler working as a partnership and Tyler utilizing its depth of implementation experience. While each Project is unique, all will follow Tyler's six-stage methodology. Each of the six stages is comprised of multiple work packages, and each work package includes a narrative description, objectives, tasks, inputs, outputs/deliverables, assumptions, and a responsibility matrix.

Tailored specifically for Tyler's public sector clients, the project methodology contains Stage Acceptance Control Points throughout each Phase to ensure adherence to scope, budget, timeline controls, effective communications, and quality standards. Clearly defined, the project methodology repeats consistently across Phases, and is scaled to meet the Client's complexity and organizational needs.



The methodology adapts to both single-phase and multiple-phase projects.

To achieve Project success, it is imperative that both the Client and Tyler commit to including the necessary leadership and governance. During each stage of the Project, it is expected that the Pittsburg and Tyler Project teams work collaboratively to complete tasks. An underlying principle of Tyler's Implementation process is to employ an iterative model where the Client's business processes are assessed, configured, validated, and refined cyclically in line with the project budget. This approach is used in multiple stages and work packages as illustrated in the graphic below.



The delivery approach is systematic, which reduces variability and mitigates risks to ensure Project success. As illustrated, some stages, along with work packages and tasks, are intended to be overlapping by nature to complete the Project efficiently and effectively.

1.4 Project Scope

The project scope is comprised of the following modules, data conversions, interfaces, reports, workflows, and deliverables defined in this SOW plus any related professional services described throughout this SOW.

Software Modules

The scope of modules included in this project includes the Tyler and Third party software products listed in the investment summary (Exhibit X) to the Agreement and any products necessary to meet any of the agreed upon functional requirements (Exhibit F to the Agreement).

Project Schedule and Functional Scope

Implementation for the following functional areas and each of the modules related to the functional areas has been divided into the phases listed in Section 11 of this Statement of Work. Each phase will include all requirements as indicated in Exhibit F - Functional Requirements.

Data Conversion Scope

The scope of data conversion includes all that are listed in Section 9 of this Statement of Work.

Workflows

All of the available workflow functionality in the licensed modules shall be considered as in scope. Tyler consultants will work the Pittsburg's project team to help identify, configure, and train on included workflow processes including preparation of the System Design Document (DED-04).

Reports / Forms

Tyler will provide training on standard reports and reporting tools such as Tyler Hub, Excel data cubes and Munis reports. Tyler will provide training on the SSRS report writer tool to educate Pittsburg technical users how to develop custom reports. Custom reports are written by Pittsburg staff unless contracted by Tyler. Tyler will provide a quote and delivery timeframe for the custom report upon request.

Tyler ReadyForms includes standard configurable outputs for the following in-scope forms libraries: Financials, Payroll, Personnel Actions and General Billing. Included forms are listed in the comments section of the investment summary in the Agreement. Tyler will provide a quote for a custom form if deviations from the standard configurable formats are required.

Project Management

Tyler will provide project management services to guide and facilitate the project and all services identified in this SOW, including identifying risks and issues, initiating project communications, and managing the overall project plan and schedule. Project management services are listed in Section 2 of this SOW.

Quality Assurance / Control Points

Quality assurance is focused on the project's processes and, when executed properly, provides confidence

that quality requirements can be fulfilled. The iterative process for providing quality assurance will include review and completion of the following for each phase of the project. Below are the control points requiring acceptance before moving to the next implementation stage.

- Control Point 1: Initiate & Plan Stage Acceptance
- Control Point 2: Assess & Define Stage Acceptance
- Control Point 3: Prepare Solution Stage Acceptance
- Control Point 4: Production Readiness Stage Acceptance
- Control Point 5: Production Stage Acceptance
- Control Point 6: Close Stage Acceptance

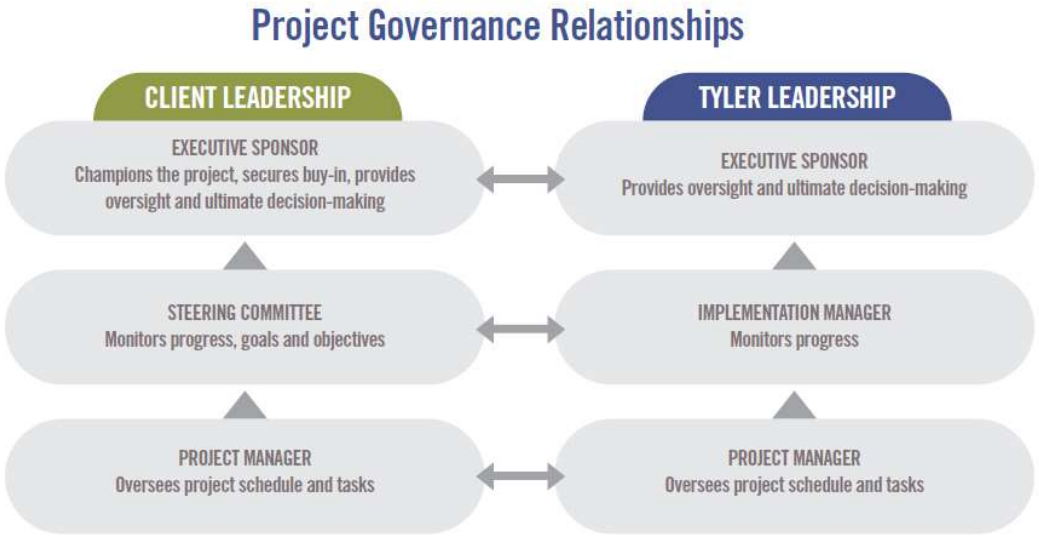
Part 2: Project Foundation

2. Project Governance

Project governance is the management framework within which Project decisions are made. The role of Project governance is to provide a decision-making approach that is logical, robust, and repeatable. This allows organizations to have a structured approach for conducting its daily business in addition to project related activities.

This section outlines the resources required to meet the business needs, objectives, and priorities for the Project, communicate the goals to other Project participants, and provide support and guidance to accomplish these goals. Project governance defines the structure for escalation of issues and risks, Change Control review and authority, and Organizational Change Management activities. Throughout the Statement of Work Tyler has provided RACI Matrices for activities to be completed throughout the implementation which will further outline responsibilities of different roles in each stage. Further refinement of the governance structure, related processes, and specific roles and responsibilities occurs during the Initiate & Plan Stage.

The chart below illustrates an overall team perspective where Tyler and Pittsburg collaborate to resolve Project challenges according to defined escalation paths. If project managers do not possess authority to determine a solution, resolve an issue, or mitigate a risk, Tyler implementation management and the Pittsburg Steering Committee become the escalation points to triage responses prior to escalation to the Pittsburg and Tyler executive sponsors. As part of the escalation process, each Project governance tier presents recommendations and supporting information to facilitate knowledge transfer and issue resolution. The Pittsburg and Tyler executive sponsors serve as the final escalation point.



2.1 Project Governance Roles and Responsibilities

2.1.1 Tyler Executive Sponsor

Tyler executive management has indirect involvement with the Project and is part of the Tyler escalation process. This team member offers additional support to the Project team and collaborates with other Tyler department managers as needed in order to escalate and facilitate implementation Project tasks and decisions.

- Provides clear direction for Tyler staff on executing on the Project Deliverables to align with satisfying Pittsburg 's overall organizational strategy.
- Authorizes required Project resources.
- Resolves all decisions and/or issues not resolved at the implementation management level as part of the escalation process.
- Acts as the counterpart to Pittsburg 's executive sponsor.

Name	Job Title	Email	Phone
Carrie Giesy	Sr. Implementation Director		
Jennifer Turgeon	V.P. Implementation		

2.1.2 Tyler Implementation Manager

- Tyler implementation management has indirect involvement with the Project and is part of the Tyler escalation process. The Tyler project managers consult implementation management on issues and outstanding decisions critical to the Project. Implementation management works toward a solution with the Tyler Project Manager or with Pittsburg management as appropriate. Tyler executive management is the escalation point for any issues not resolved at this level.
- Assigns Tyler Project personnel.
- Provides support for the Project team.
- Provides management support for the Project to ensure it is staffed appropriately and staff have necessary resources.
- Monitors Project progress including progress towards agreed upon goals and objectives.

Name	Job Title	Email	Phone
Richard Boven	Implementation Director – FIN/HRM		
Brian Bouchard	Implementation Director - UB		

2.1.3 Tyler Project Manager

Tyler assigns a project manager prior to the start of each Phase of the Project (some Projects may only be one Phase in duration). Additional Tyler resources are assigned as the schedule develops and as needs arise.

- The Tyler project manager(s) provides oversight of the Project, coordination of Tyler resources between departments, management of the Project budget and schedule, effective risk and issue

management, and is the primary point of contact for all Project related items. As requested by Pittsburg, the Tyler Project Manager provides regular updates to the Pittsburg Steering Committee and other Tyler governance members. Tyler Project Manager's role includes responsibilities in the following areas:

2.1.3.1 Contract Management

- Validates contract compliance throughout the Project.
- Ensures Deliverables meet contract requirements.
- Acts as primary point of contact for all contract and invoicing questions.
- Prepares and presents contract milestone sign-offs for acceptance by Pittsburg project manager(s).
- Coordinates Change Requests, if needed, to ensure proper Scope and budgetary compliance.

2.1.3.2 Planning

- Delivers project planning documents.
- Defines Project tasks and resource requirements.
- Develops initial Project schedule and Project Management Plan.
- Collaborates with Pittsburg project manager(s) to plan and schedule Project timelines to achieve on-time implementation.

2.1.3.3 Implementation Management

- On-site once (up to 2 days) per quarter when travel restrictions are lifted and it is safe to travel.
- Attends steering committee meetings monthly (on-site if coinciding with scheduled quarterly visit)
- Tightly manages Scope and budget of Project to ensure Scope changes and budget planned versus actual are transparent and handled effectively and efficiently.
- Establishes and manages a schedule and Tyler resources that properly support the Project Schedule and are also in balance with Scope/budget.
- Establishes risk/issue tracking/reporting process between Pittsburg and Tyler and takes all necessary steps to proactively mitigate these items or communicate with transparency to Pittsburg any items that may impact the outcomes of the Project.
- Collaborates with Pittsburg 's project manager(s) to establish key business drivers and success indicators that will help to govern Project activities and key decisions to ensure a quality outcome of the project.
- Collaborates with Pittsburg 's project manager(s) to set a routine communication plan that will aide all Project team members, of both Pittsburg and Tyler, in understanding the goals, objectives, current status, and health of the Project.

2.1.3.4 Resource Management

- Acts as liaison between Project team and Tyler manager(s).
- Identifies and coordinates all Tyler resources across all applications, Phases, and activities including development, forms, installation, reports, implementation, and billing.
- Provides direction and support to Project team.
- Manages the appropriate assignment and timely completion of tasks as defined in the Project Schedule, task list, and Go-Live Checklist.
- Assesses team performance and adjusts as necessary.
- Consulted on in Scope 3rd party providers to align activities with ongoing Project tasks.

Name	Job Title	Email	Phone
Paul Chmielewski	Project Manager		

Assignment of project team is made upon contract signing. The named Project Manager and Implementation Consultants will be assigned to the project if a contract is executed by October 1, 2024.

2.1.4 Pittsburg Executive Sponsor

The Pittsburg executive sponsor provides support to the Project by providing strategic direction and communicating key issues about the Project and its overall importance to the organization. When called upon, the executive sponsor also acts as the final authority on all escalated Project issues. The executive sponsor engages in the Project, as needed, in order to provide necessary support, oversight, guidance, and escalation, but does not participate in day-to-day Project activities. The executive sponsor empowers the Pittsburg steering committee, project manager(s), and functional leads to make critical business decisions for Pittsburg.

- Champions the project at the executive level to secure buy-in.
- Authorizes required project resources.
- Actively participates in organizational change communications.

Name	Job Title
Garrett Evans	City Manager

2.1.5 Pittsburg Steering Committee

The Pittsburg steering committee understands and supports the cultural change necessary for the Project and fosters an appreciation for the Project's value throughout the organization. The steering committee oversees the Pittsburg project manager and Project as a whole through participation in regular internal meetings. The Pittsburg steering committee remains updated on all Project progress, Project decisions, and achievement of Project milestones. The Pittsburg steering committee also serves as primary level of issue resolution for the Project.

- Works to resolve all decisions and/or issues not resolved at the project manager level as part of the escalation process.
- Attends all scheduled steering committee meetings.
- Provides support for the project team.
- Assists with communicating key project messages throughout the organization.
- Prioritizes the project within the organization.
- Ensures the project staffed appropriately and that staff have necessary resources.
- Monitors project progress including progress towards agreed upon goals and objectives.
- Has the authority to approve or deny changes impacting the following areas:
    - Cost
    - Scope
    - Schedule
    - Project Goals
    - Pittsburg Policies
    - Needs of other client projects

Name	Job Title
Maria Aliotti	Assistant City Manager
Paul Rodrigues	Director of Finance
Jennifer Brizel	Director of Human Resources

2.1.6 Pittsburg Project Manager

Pittsburg shall assign project manager(s) prior to the start of this project with overall responsibility and authority to make decisions related to Project Scope, scheduling, and task assignment. Pittsburg Project Manager should communicate decisions and commitments to the Tyler project manager(s) in a timely and efficient manner. When Pittsburg project manager(s) do not have the knowledge or authority to make decisions, he or she engages the necessary resources to participate in discussions and make decisions in a timely fashion to avoid Project delays. The client project manager(s) are responsible for reporting to client steering committee and determining appropriate escalation points.

2.1.6.1 Contract Management

- Validates contract compliance throughout the project.
- Ensures that invoicing and Deliverables meet contract requirements.
- Acts as primary point of contact for all contract and invoicing questions. Collaborates on and approves Change Requests, if needed, to ensure proper scope and budgetary compliance.

2.1.6.2 Planning

- Reviews and accepts project planning documents.
- Defines project tasks and resource requirements for Pittsburg project team.
- Collaborates in the development and approval of the project schedule.
- Collaborates with Tyler project manager(s) to plan and schedule project timelines to achieve on-time implementation.

2.1.6.3 Implementation Management

- Tightly manages project budget and scope.
- Collaborates with Tyler project manager(s) to establish a process and approval matrix to ensure that scope changes and budget (planned versus actual) are transparent and handled effectively and efficiently.
- Collaborates with Tyler project manager to establish and manage a schedule and resource plan that properly supports the project schedule as a whole and is also in balance with scope and budget.
- Collaborates with Tyler project manager(s) to establish risk and issue tracking and reporting process between Pittsburg and Tyler and takes all necessary steps to proactively mitigate these items or communicate with transparency to Tyler any items that may impact the outcomes of the project.
- Collaborates with Tyler project manager(s) to establish key business drivers and success indicators that will help to govern project activities and key decisions to ensure a quality outcome of the project.
- Routinely communicates with both Pittsburg staff and Tyler, aiding in the understanding of goals, objectives, current status, and health of the project by all team members.
- Manages the requirements gathering process and ensure timely and quality business requirements are being provided to Tyler.

2.1.6.4 Resource Management

- Acts as liaison between project team and stakeholders.
- Identifies and coordinates all Pittsburg resources across all modules, phases, and activities including data conversions, forms design, hardware and software installation, reports building, and satisfying invoices.
- Provides direction and support to project team.
- Builds partnerships among the various stakeholders, negotiating authority to move the project forward.
- Manages the appropriate assignment and timely completion of tasks as defined.
- Assesses team performance and takes corrective action, if needed.
- Provides guidance to Pittsburg technical teams to ensure appropriate response and collaboration with Tyler Technical Support Teams in order to ensure timely response and appropriate resolution.
- Owns the relationship with in-Scope 3rd party providers and aligns activities with ongoing project tasks.
- Ensures that users have appropriate access to Tyler project toolsets as required.
- Conducts training on proper use of toolsets.
- Validates completion of required assignments using toolsets.

Name	Job Title
Jitendra Kaneria	Deputy Chief Information Systems Officer

3. Project Scope Control

3.1 Managing Scope and Project Change

Project Management governance principles contend that there are three connected constraints on a Project: budget, timeline, and scope. These constraints, known as the “triple constraints” or project management triangle, define budget in terms of financial cost, labor costs, and other resource costs. Scope is defined as the work performed to deliver a product, service or result with the specified features and functions, while time is simply defined as the schedule. The Triple Constraint theory states that if you change one side of the triangle, the other two sides must be correspondingly adjusted. For example, if the scope of the Project is increased, cost and time to complete will also need to increase. The Project and executive teams will need to remain cognizant of these constraints when making impactful decisions to the Project. A simple illustration of this triangle is included here, showing the connection of each item and their relational impact to the overall Scope.



A pillar of any successful project is the ability to properly manage scope while allowing the appropriate level of flexibility to incorporate approved changes. Scope and changes within the project will be managed using the change control process outlined in the following section.

3.2 Change Control

If it is necessary to change the scope of this Project, Tyler and Pittsburg will follow the change control process specified in the Agreement.

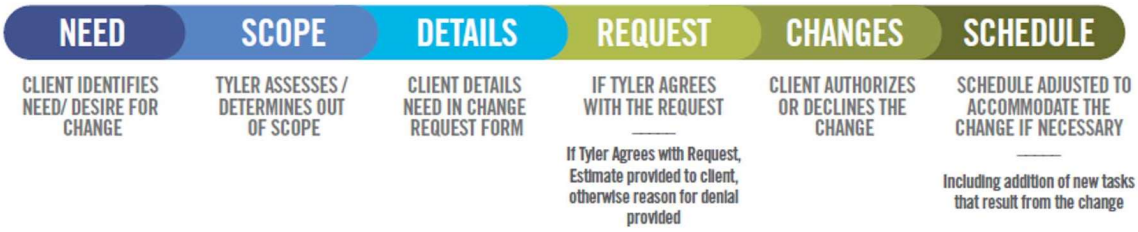
3.3 Change Request Management

Should the need for a change to Project scope, schedule, and/or cost be identified during the Project, the change will be brought to the attention of the Steering Committee and an assessment of the change will occur. While such changes may result in additional costs and delays relative to the schedule, some changes may result in less cost to Pittsburg; for example, Pittsburg may decide it no longer needs a deliverable originally defined in the Project. The Change Request will include the following information:

- The nature of the change.
- A good faith estimate of the additional cost or associated savings to Pittsburg, if any.
- The timetable for implementing the change.
- The effect on and/or risk to the schedule, resource needs or resource responsibilities.

Pittsburg will use its good faith efforts to either approve or disapprove any Change Request within ten (10) Business Days (or other period as mutually agreeable between Tyler and Pittsburg). Any changes to the Project scope, budget, or timeline must be documented and approved in writing using a Change Request form. These changes constitute a formal amendment to the Statement of Work and will supersede any conflicting term in the Statement of Work.

Change Request Process



4. Acceptance Process

The implementation of a Project involves many decisions to be made throughout its lifecycle. Decisions will vary from higher level strategy decisions to smaller, detailed Project level decisions. It is critical to the success of the Project that each Pittsburg office or department designates specific individuals for making decisions on behalf of their offices or departments.

Both Tyler and Pittsburg will identify representative project managers. These individuals will represent the interests of all stakeholders and serve as the primary contacts between the two organizations.

The coordination of gaining Pittsburg feedback and approval on Project deliverables will be critical to the success of the Project. The Pittsburg project manager will strive to gain deliverable and decision approvals from all authorized Pittsburg representatives. Given that the designated decision-maker for each department may not always be available, there must be a designated proxy for each decision point in the Project. Assignment of each proxy will be the responsibility of the leadership from each Pittsburg department. The proxies will be named individuals that have the authorization to make decisions on behalf of their department.

The following process will be used for accepting Deliverables and Control Points:

- Pittsburg shall have five (5) business days from the date of delivery, or as otherwise mutually agreed upon by the parties in writing, to accept each Deliverable or Control Point. If Pittsburg does not provide acceptance or acknowledgement within five (5) business days, or the otherwise agreed upon timeframe, not to be unreasonably withheld, Tyler deems the Deliverable or Control Point as accepted.
- If Pittsburg does not agree the Deliverable or Control Point meets requirements, Pittsburg shall notify Tyler project manager(s), in writing, with reasoning within five (5) business days, or the otherwise agreed-upon timeframe, not to be unreasonably withheld, of receipt of the Deliverable.
- Tyler shall address any deficiencies and issues on Issues Log and redeliver the Deliverable or Control Point. Pittsburg shall then have three (3) business days from receipt of the redelivered Deliverable or Control Point to accept or again submit written notification of reasons for rejecting the milestone. If Pittsburg does not provide acceptance within three (3) business days, or the otherwise agreed upon timeframe, not to be unreasonably withheld, Tyler deems the Deliverable or Control Point as accepted.

4.1 Deliverable Listing

This table lists the deliverables included in this project for each phase of the project. Each deliverable is described in more detail in the Deliverables Expectation Document located in the Additional Appendices section of this Statement of Work.

Deliverable ID	Deliverable Name
DED-01	Project Management Plan
DED-02	Project Operational Plan
DED-03	Initial Project Schedule / Project Plan
DED-04	System Design Document
DED-05	Data Conversion Plan
DED-06	Installation Checklist/System Document
DED-07	Requirements Traceability Matrix

DED-08	Solution Validation Test Plan
DED-09	Solution Validation Report
DED-10	Go Live Plan and Checklist
DED-11	Custom End User Training Guides
DED-12	Post Project Report
DED-13	Status Reports
DED-14	Site Reports

5. Other Roles and Responsibilities

The following defines the roles and responsibilities of each Project resource for Pittsburg and Tyler. Roles and responsibilities may not follow the organizational chart or position descriptions at Pittsburg, but are roles defined within the Project. It is common for individual resources on both the Tyler and Pittsburg project teams to fill multiple roles. Similarly, it is common for some roles to be filled by multiple people.

5.1 Tyler Roles & Responsibilities

Tyler assigns a project manager prior to the start of each Phase of the Project (some Projects may only be one Phase in duration). Additional Tyler resources are assigned as the schedule develops and as needs arise.

5.1.1 Tyler Implementation Consultant

- Completes tasks as assigned by the Tyler project manager(s).
- Documents activities for services performed by Tyler.
- Guides Pittsburg through software validation process following configuration.
- Assists during Go-Live process and provides support until Pittsburg transitions to Pittsburg Services.
- Facilitates training sessions and discussions with the Pittsburg and Tyler staff to ensure adequate discussion of the appropriate agenda topics during the allotted time.
- May provide conversion review and error resolution assistance.

Name	Job Title	Email	Phone
Esther Wilson	IC – Financials		
Michelle Cawood	IC – Human Capital Management		
	IC – Utility Billing		

5.1.2 Tyler Sales

- Supports Sales to Implementation knowledge transfer during Initiate & Plan.
- Provides historical information, as needed, throughout implementation.
- Participates in pricing activities if additional licensing and/or services are needed.

Name	Job Title	Email	Phone
Jason Cloutier	Account Executive		
David Jowett	V.P. Sales		

5.1.3 Tyler Technical Services

- Maintains Tyler infrastructure requirements and design document(s).
- Involved in system infrastructure planning/review(s).
- Provides first installation of licensed software with initial database on servers.
- Supports and assists the project team with technical/environmental issues/needs.
- Deploys Tyler products.

5.1.4 Tyler API Services

- Provides training in the use of the API Toolkit.
- Provides consulting services in the use of the API Toolkit to Pittsburg, as Pittsburg builds interfaces.

5.2 Pittsburg Roles & Responsibilities

Pittsburg resources will be assigned prior to the start of each Phase of the Project. One person may be assigned to multiple Project roles.

5.2.1 Pittsburg Functional Leads

- Makes business process change decisions under time sensitive conditions.
- Communicates existing business processes and procedures to Tyler consultants.
- Assists in identifying business process changes that may require escalation.
- Contributes business process expertise for Current & Future State Analysis.
- Identifies and includes additional subject matter experts to participate in Current & Future State Analysis.
- Validates that necessary skills have been retained by end users.
- Provides End Users with dedicated time to complete required homework tasks.
- Acts as an ambassador/champion of change for the new process and provide business process change support.
- Identifies and communicates any additional training needs or scheduling conflicts to the Pittsburg project manager.
- Actively participates in all aspects of the implementation, including, but not limited to, the following key activities:
    - Task completion
    - Stakeholder Meeting
    - Project Management Plan development
    - Schedule development
    - Maintenance and monitoring of risk register
    - Escalation of issues
    - Communication with Tyler project team
    - Coordination of Pittsburg resources
    - Attendance at scheduled sessions
    - Change management activities
    - Modification specification, demonstrations, testing and approval assistance
    - Data analysis assistance
    - Decentralized end user training
    - Process testing
    - Solution Validation

5.2.2 Pittsburg Power Users

- Participate in project activities as required by the project team and project manager(s).
- Provide subject matter expertise on the Pittsburg business processes and requirements.
- Act as subject matter experts and attend Current & Future State Analysis sessions as needed.
- Attend all scheduled training sessions.
- Participate in all required post-training processes as needed throughout project.
- Test all application configuration to ensure it satisfies business process requirements.
- Become application experts.
- Participate in Solution Validation.
- Adopt and support changed procedures.
- Complete all deliverables by the due dates defined in the project schedule.
- Demonstrate competency with Tyler products processing prior to Go-live.
- Provide knowledge transfer to the Pittsburg staff during and after implementation.
- Participate in conversion review and validation.

5.2.3 Pittsburg End Users

- Attend all scheduled training sessions.
- Become proficient in application functions related to job duties.
- Adopt and utilize changed procedures.
- Complete all deliverables by the due dates defined in the project schedule.
- Utilize software to perform job functions at and beyond Go-live.

5.2.4 Pittsburg Technical Lead

- Coordinates updates and releases with Tyler as needed.
- Coordinates the copying of source databases to training/testing databases as needed for training days.
- Coordinates and adds new users, printers and other peripherals as needed.
- Validates that all users understand log-on process and have necessary permission for all training sessions.
- Coordinates interface development for Pittsburg third party interfaces.
- Develops or assists in creating reports as needed.
- Ensures on-site system meets specifications provided by Tyler.
- Assists with software installation as needed.
- Extracts and transmits conversion data and control reports from Pittsburg's legacy system per the conversion schedule set forth in the project schedule.

5.2.4.1 Pittsburg Upgrade Coordination

- Becomes familiar with the software upgrade process and required steps.
- Becomes familiar with Tyler's releases and updates.
- Utilizes Tyler resources to stay abreast of the latest Tyler releases and updates, as well as the latest helpful tools to manage Pittsburg's software upgrade process.
- Assists with the software upgrade process during implementation.
- Manages software upgrade activities post-implementation.
- Manages software upgrade plan activities.
- Coordinates software upgrade plan activities with Pittsburg and Tyler resources.
- Communicates changes affecting users and department stakeholders.

- Obtains department stakeholder acceptance to upgrade production environment.

5.2.5 Pittsburg Change Management Lead

- Validates that users receive timely and thorough communication regarding process changes.
- Provides coaching to supervisors to prepare them to support users through the project changes.
- Identifies the impact areas resulting from project activities and develops a plan to address them proactively.
- Identifies areas of resistance and develops a plan to reinforce the change.
- Monitors post-production performance and new process adherence.

Part 3: Project Plan

6. Project Stages

Work Breakdown Structure

The Work Breakdown Structure (WBS) is a hierarchical representation of a Project or Phase broken down into smaller, more manageable components. The top-level components are called "Stages" and the second level components are called "Work Packages". The work packages, shown below each stage, contain the high-level work to be done. The detailed Project Schedule, developed during Project/Phase Planning and finalized during subsequent stages, lists the tasks to be completed within each work package. Each stage ends with a "Control Point", confirming the work performed during that stage of the Project has been accepted by Pittsburg.

Work Breakdown Structure (WBS)

1. Initiate & Plan	2. Assess & Define	3. Prepare Solution	4. Production Readiness	5. Production	6. Close
1.1 Initial Coordination	2.1 Solution Orientation	3.1 Initial System Deployment	4.1 Solution Validation	5.1 Go Live	6.1 Phase Close Out
1.2 Project/Phase Planning	2.2 Current & Future State Analysis	3.2 Configuration	4.2 Go Live Readiness	5.2 Transition to Client Services	6.2 Project Close Out
1.3 GIS Planning*	2.3 Modification Analysis	3.3 Process Refinement	4.3 End User Training	5.3 Post Go Live Activities	
1.4 Infrastructure Planning	2.4 Conversion Assessment	3.4 Conversion Delivery			
1.5 Stakeholder Meeting	2.5 Data Assessment	3.5 Data Delivery			
		3.6 Modifications*			

Items noted with an asterisk in the graphic above relate to specific products and services. If those products and services are not included in the scope of the contract, these specific work packages will be noted as "Intentionally Left Blank" in Section 6 of the Statement of Work.

6.1 Initiate and Plan

The Initiate and Plan stage involves Project initiation, infrastructure, and planning. This stage creates a foundation for the Project by identifying and establishing sequence and timing for each Phase as well as verifying scope for the Project. This stage will be conducted at the onset of the Project, with a few unique items being repeated for the additional Phases as needed.

6.1.1 Initial Coordination

Prior to Project commencement, Tyler management assigns project manager(s). Additional Project resources will be assigned later in the Project as a Project schedule is developed. Tyler provides Pittsburg with initial Project documents used to gather names of key personnel, their functional role as it pertains to the Project, as well as any blackout dates to consider for future planning. Pittsburg gathers the information requested by the provided deadline ensuring preliminary planning and scheduling can be conducted moving the Project forward in a timely fashion. Internally, the Tyler Project Manager(s) coordinate with sales to ensure transfer of vital information from the sales process prior to scheduling a Project Planning Meeting with Pittsburg's team. During this step, Tyler will work with Pittsburg to establish the date(s) for the Project and Phase Planning session.

Objectives:

- Formally launch the project.
- Establish project governance.
- Define and communicate governance for Tyler.
- Identify Pittsburg project team.

STAGE 1	Initial Coordination																
	Tyler								Pittsburg								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Tyler project team is assigned	A	R	C	I	I	I	I		I		I						
Client project team is assigned									A	I	R	I	I	I			
Provide initial project documents to the Client		A	R	C			C		I		I						
Gather preliminary information requested			I						A		R	C		C		C	C
Sales to implementation knowledge transfer		A	R	I	I	I	I				I						
Create Project Portal to store project artifacts and facilitate communication		A	R								I						

Inputs	Contract documents
	Statement of Work

Outputs/Deliverables	Working initial project documents
	Project portal

Work package assumptions:

- Project activities begin after the agreement has been fully executed.

6.1.2 Project/Phase Planning

Project and Phase planning provides an opportunity to review the contract, software, data conversions and services purchased, identify applications to implement in each Phase (if applicable), and discuss implementation timeframes.

During this work package Tyler will work with Pittsburg to coordinate and plan a formal Project planning meeting(s). This meeting signifies the start of the Project and should be attended by all Pittsburg Project team members and the Tyler Project Manager. The meeting provides an opportunity for Tyler to introduce its implementation methodology, terminology, and Project management best practices to Pittsburg's Project Team. This will also present an opportunity for project managers and Project sponsors to begin to discuss Project communication, metrics, status reporting and tools to be used to measure Project progress and manage change.

Tyler will work with the Pittsburg Project Team to prepare and deliver the Project Management Plan as an output of the planning meeting. This plan will continue to evolve and grow as the Project progresses and will describe how the project will be executed, monitored, and controlled.

During project planning, Tyler will introduce the tools that will be used throughout the implementation. Tyler will familiarize Pittsburg with these tools during project planning and make them available for review and maintenance as applicable throughout the project. Some examples are Solution validation plan, issue log, and go-live checklist.

STAGE 1	Project/Phase Planning																
	Tyler								Client								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Schedule and conduct planning session(s)		A	R						I		C	C	I				

Develop Project Management Plan		A	R						I		C	C	I				
Develop initial project schedule		A	R	I	I	I	I		I	I	C	C	I	I	C		I

Inputs	Contract documents
	Statement of Work
	Guide to Starting Your Project

Outputs / Deliverables	Project Management Plan (DED-01)
	Project Operational Plan (DED-02)
	Initial Project Schedule (DED-03)

Work package assumptions:

- Client has reviewed and completed the Guide to Starting Your Project document.

6.1.3 Infrastructure Planning

Procuring required hardware and setting it up properly is a critical part of a successful implementation. This task is especially important for Tyler-hosted/SaaS deployment models. Tyler will be responsible for building the environments for a hosted/SaaS deployment, unless otherwise identified in the Agreement. Tyler will install Licensed Software on application server(s) or train Pittsburg to install License Software. Pittsburg is responsible for the installation and setup of all peripheral devices.

Objectives:

- Ensure Pittsburg's infrastructure meets Tyler's application requirements.
- Ensure Pittsburg's infrastructure is scheduled to be in place and available for use on time.

STAGE 1	Infrastructure Planning																
	Tyler								Client								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts	Department Heads	End Users	Technical Leads
Provide Infrastructure Requirements and Design Document		A	R		C		C				I						I
Initial Infrastructure Meeting		A	R		C		C				C						C
Schedule SaaS Environment Availability		A	R				C				I						

Schedule Installation of All Licensed Software		A	R				C				I						I
Infrastructure Audit		A	R				C				I						C

Inputs	Initial Infrastructure Requirements

Outputs / Deliverables	
	Completed Infrastructure Requirements
	Infrastructure Audit

6.1.4 Stakeholder Meeting

Communication of the Project planning outcomes to Pittsburg Project team, executives and other key stakeholders is vital to Project success. The Stakeholder meeting is a strategic activity to inform, engage, gain commitment, and instill confidence in the Pittsburg team. During the meeting, the goals and objectives of the Project will be reviewed along with detail on Project scope, implementation methodology, roles and responsibilities, Project timeline and schedule, and keys to Project success.

Objectives:

- Formally present and communicate the project activities and timeline.
- Communicate project expectations.

STAGE 1	Stakeholder Meeting																
	Tyler								Client								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Create Stakeholder Meeting Presentation	I	A	R	I	I				I	I	C		I				
Review Stakeholder Meeting Presentation		I	C						A		R		C				
Perform Stakeholder Meeting Presentation	I	A	R	I	I				I	I	C	I	I	I	I	I	I

Inputs	Agreement
	SOW
	Project Management Plan

Outputs / Deliverables	
	Stakeholder Meeting Presentation

Work package assumptions:

- None

6.1.5 Intentionally left blank.

6.1.6 Control Point 1: Initiate & Plan Stage Acceptance

Acceptance criteria for this stage includes completion of all criteria listed below.

Note: Advancement to the Assess & Define stage is not dependent upon Tyler's receipt of this stage acceptance.

Initiate & Plan Stage Deliverables:

- Project Management Plan (DED-01)
- Project Operational Plan (DED-02)
- Initial Project Schedule (DED-03)

Initiate & Plan stage acceptance criteria:

- All stage deliverables accepted based on acceptance criteria previously defined
- Project governance defined
- Project portal made available to Pittsburg
- Stakeholder meeting complete

6.2 Assess & Define

The Assess & Define stage will provide an opportunity to gather information related to current Pittsburg business processes. This information will be used to identify and define business processes utilized with Tyler software. Pittsburg collaborates with Tyler providing complete and accurate information to Tyler staff and assisting in analysis, understanding current workflows and business processes.

6.2.1 Solution Orientation

The Solution Orientation provides the Project stakeholders a high-level understanding of the solution functionality prior to beginning the current and future state analysis. The primary goal is to establish a foundation for upcoming conversations regarding the design and configuration of the solution.

Tyler utilizes a variety of tools for the Solution Orientation, focusing on Pittsburg team knowledge transfer such as: eLearning, documentation, or walkthroughs. Pittsburg team will gain a better understanding of the major processes and focus on data flow, the connection between configuration options and outcome, integration, and terminology that may be unique to Tyler's solution.

Objectives:

- Provide a basic understanding of system functionality.
- Prepare Pittsburg for current and future state analysis.

STAGE 2	Solution Orientation															
	Tyler								Client							
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Provide pre-requisites			A	R							I	I		I	I		I
Complete pre-requisites											A	R		C			C
Conduct orientation			A	R							I	I		I	I		I

Inputs	Solution orientation materials
	Training Plan

6.2.2 Current & Future State Analysis

The Current & Future State Analysis provides the Project stakeholders and Tyler an understanding of process changes that will be achieved with the new system.

Pittsburg and Tyler will evaluate current state processes, options within the new software, pros and cons of each based on current or desired state and make decisions about the future state configuration and processing. This may occur before or within the same timeframe as the configuration work package. The options within the new software will be limited to the scope of this implementation and will make use of standard Tyler functionality.

Pittsburg will adopt the existing Tyler solution wherever possible to avoid project schedule and quality risk from over customization of Tyler products. It is Pittsburg's responsibility to verify that in-scope requirements are being met throughout the implementation if functional requirements are defined as part of the contract. The following guidelines will be followed when evaluating if a modification to the product is required:

- A reasonable business process change is available.
- Functionality exists which satisfies the requirement.
- Configuration of the application satisfies the requirement.
- An in-scope modification satisfies the requirement.

Requirements that are not met will follow the agreed upon change control process and can have impacts on the project schedule, scope, budget, and resource availability.

STAGE 2	Current & Future State Analysis	
	Tyler	Client

RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Current State process review, including required reports and interfaces			A	R	I	I	I				C	C	C	C			C
Discuss future-state options, including required reports and interfaces			A	R	C	C	C				C	C	C	C			C
Make future-state decisions (non-COTS)			C	C	C	C	C				A	R	I	C			C
Document anticipated configuration options required to support future state			A	R	C	C	C				I	I	I	I			I

Inputs	Client current state documentation
	Solution Orientation completion
	Requirements from RFP

Outputs / Deliverables	System Design Document (DED-04)

Work package assumptions:

- Pittsburg attendees possess sufficient knowledge and authority to make future state decisions.
- Pittsburg is responsible for any documentation of current state business processes.
- The Pittsburg team can effectively communicate current state processes.

6.2.3 Data Assessment

Given the completion of the Current & Future State Analysis, the Data Assessment will provide the implementation team the design for data delivery prior to configuration. The data Assessment will also allow the Tyler and the Pittsburg teams to identify the data that will be configured within the Tyler System. The team will develop and map out dataset structures to ensure that data is structured in a way that allows maximum utility.

The teams will review any existing data publish and metadata standards for Pittsburg's current data program to determine any necessary adjustments or configuration needs. Finally, the implementation team develops data workflows to map data from the source system(s) into the Tyler system, discussing any additional data requirements as needed.

Objectives:

- Communicate a common understanding of the project goals with respect to data.
- Ensure complete and accurate source data is available for review/transfer.
- Map the data from the source to the Tyler system.
- Document the data conversion/loading approach.

STAGE 2	Data Conversion Assessment																
	Tyler								Client								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Extract Data from Source Systems			I		C						A						R
Complete Data Analysis/Mapping		A	R	C	C						I	C		C			I
Review and Scrub Source Data			I	I	I						A	R		C			I
Build/Update Data Conversion Plan			R	C	C						C	I	I	I			I

Inputs	Client Source data
	Client Source data Documentation (if available)

Outputs / Deliverables	Data Conversion Plan (DED-05)

Work package assumptions:

- Tyler will be provided with data from the Legacy system(s) in a mutually agreed upon format.
- Tyler will work with Pittsburg representatives to identify business rules before writing the conversion.
- Pittsburg subject matter experts and resources most familiar with the current data will be involved in the data conversion planning effort.

6.2.4 Conversion Assessment

Data Conversions are a major effort in any software implementation. Tyler's conversion tools facilitate the predictable, repeatable conversion process that is necessary to support a successful transition to the Tyler system. The first step in this process is to perform an assessment of the existing ("legacy") system(s), to better understand the source data, risks, and options available. Once the data has been analyzed, the plan for data conversion is completed and communicated to the appropriate stakeholders.

Objectives:

- Communicate a common understanding of the project goals with respect to data.
- Ensure complete and accurate source data is available for review/transfer.
- Map the data from the source to the Tyler system.
- Document the data conversion/loading approach.

STAGE 2	Data Conversion Assessment																
	Tyler								Client								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Extract Data from Source Systems			I		C						A						R
Review and Scrub Source Data			I	I	I						A	R		C			I
Build/Update Data Conversion Plan			R	C	C						C	I	I	I			I

Inputs	Client Source data
	Client Source data Documentation (if available)

Outputs / Deliverables	Data Conversion Plan (DED-05)

Work package assumptions:

- Tyler will be provided with data from the Legacy system(s) in a mutually agreed upon format.
- Tyler will work with the Pittsburg representatives to identify business rules before writing the conversion.
- Pittsburg subject matter experts and resources most familiar with the current data will be involved in the data conversion planning effort.

6.2.5 Intentionally left blank.

6.2.6 Intentionally left blank.

6.2.7 Control Point 2: Assess & Define Stage Acceptance

Acceptance criteria for this Stage includes completion of all criteria listed below.

Note: Advancement to the Prepare Solution Stage is dependent upon Tyler's receipt of the Stage Acceptance.

Assess & Define Stage Deliverables:

- System Design Document (DED-04)
- Data Conversion Plan (DED-05)

Assess & Define Stage Acceptance Criteria:

- All stage deliverables accepted based on criteria previously defined.
- Solution Orientation is delivered.
- Conversion data extracts are received by Tyler.
- Data conversion plan built.

6.3 Prepare Solution

During the Prepare Solution stage, information gathered during the Initiate & Plan and Assess & Define stages will be used to install and configure the Tyler software solution. Software configuration will be validated by Pittsburg against future state decisions defined in previous stages and processes refined as needed to ensure business requirements are met.

6.3.1 Initial System Deployment

The timely availability of the Tyler Solution is important to a successful Project implementation. The success and timeliness of subsequent work packages are contingent upon the initial system deployment of Tyler Licensed Software on an approved network and infrastructure. Delays in executing this work package can affect the project schedule.

Objectives:

- All licensed software is installed and operational.
- Pittsburg can access the software.

STAGE 3	Initial System Deployment (Hosted/SaaS)																
	Tyler								Client								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Prepare hosted environment			A				R				I						C
Install Licensed Software with Initial Database on			A				R				I						C

Server(s) for Included Environments																	
Tyler System Administration Training			A				R				I						C

Outputs / Deliverables	Installation Checklist/System Document (DED-06)

Work package assumptions:

- The most current available version of the Tyler Licensed Software will be installed.
- Pittsburg will provide network access for Tyler modules, printers, and Internet access to all applicable Pittsburg and Tyler Project staff.

6.3.2 Configuration

The purpose of Configuration is to prepare the software product for validation.

Tyler staff collaborates with Pittsburg to complete software configuration based on the outputs of the future state analysis performed during the Assess and Define Stage. Pittsburg collaborates with Tyler staff iteratively to validate software configuration.

Objectives:

- Software is ready for validation.
- Educate Pittsburg Power User how to configure and maintain software.
- Prepare standard interfaces for process validation (if applicable).

STAGE 3	Configuration																
	Tyler								Client								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Conduct configuration training			A	R							I	C		C			
Complete Tyler configuration tasks			A	R							I	I		I			
Complete Client configuration tasks			I	C							A	R		C			

Standard interfaces configuration and training			A	R			C				I	C		C			C
Updates to Solution Validation testing plan			C	C							A	R		C			C
Develop Requirements Traceability Matrix (RTM)			A	R							C	C					
Validate Requirements			C	C							A	R					

Inputs	System Design Document
	Requirements Traceability Matrix

Outputs / Deliverables	Configured system
	Updated Requirements Traceability Matrix (items verified and marked complete)

Work package assumptions:

- Tyler provides guidance for configuration options available within the Tyler software. Pittsburg is responsible for making decisions when multiple options are available.

6.3.3 Process Refinement

Tyler will educate Pittsburg users on how to execute processes in the system to prepare them for the validation of the software. Pittsburg collaborates with Tyler staff iteratively to validate software configuration options to support future state.

Tyler will provide standard process documentation that Pittsburg may customize throughout this stage with instructions for their use of the software. Tyler will provide customized end user training guides for end users, which are a subset of the standard process documentation. The specific processes that Tyler will provide customized documentation for are outlined in the Deliverables Expectations Document at the end of this Statement of Work. See DED-11.

Objectives:

- Ensure that Pittsburg understands future state processes and how to execute the processes in the software.
- Refine each process to meet the business requirements.
- Validate standard interfaces, where applicable.
- Validate forms and reports, where applicable.

STAGE 3	Process Refinement	
	Tyler	Client

RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Conduct process training			A	R							I	C	I	C			
Confirm process decisions			I	C						A	R	C	I	C			
Test configuration			I	C							A	R		C			
Refine configuration (Client Responsible)			I	C							A	R		C			
Refine configuration (Tyler Responsible)			A	R							I	I		I			
Validate interface process and results			I	C			C				A	R		C			C
Update Client-specific process documentation (if applicable)			I	C							A	R		C			
Updates to Solution Validation testing plan			C	C							A	R		C			C

Inputs	Initial Configuration
	Documentation that describes future state decisions and configuration options to support future state decisions.
	Solution validation test plan

Outputs / Deliverables	
	Updated solution validation test plan
	Completed Client-specific process documentation (completed by Client)

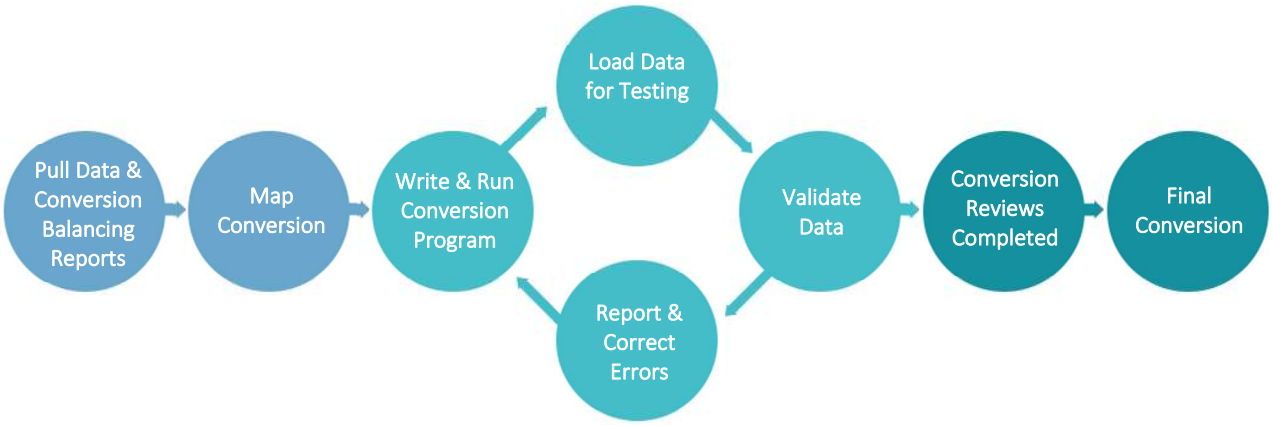
Work package assumptions:

- None

6.3.4 Conversion Delivery

The purpose of this task is to transition Pittsburg's data from their source ("legacy") system(s) to the Tyler system(s). The data will need to be mapped from the legacy system into the new Tyler system format. A well-executed data conversion is key to a successful cutover to the new system(s).

With guidance from Tyler, Pittsburg will review specific data elements within the system and identify / report discrepancies. Iteratively, Tyler will collaborate with Pittsburg to address conversion discrepancies. This process will allow for clean, reconciled data to transfer from the source system(s) to the Tyler system(s). Reference Conversion Appendix for additional detail.



Objectives:

- Data is ready for production (Conversion).

STAGE 3	Data Delivery & Conversion																
	Tyler								Client								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power Users)	Department Heads	End Users	Technical Leads
Provide data crosswalks/code mapping tool			A	C	R						I	I		I			
Populate data crosswalks/code mapping tool			I	C	C						A	R		C			
Iterations: Conversion Development			A	C	R						I						I
Iterations: Deliver converted data			A		R		I				I						I
Iterations: Proof/Review			C	C	C						A	R		C			C

data and reconcile to source system	

Inputs	
	Data Conversion Plan
	Configuration

Outputs / Deliverables	Code Mapping Complete / Validated
	Conversion Iterations / Reviews Complete

Work package assumptions:

- Pittsburg will provide a single file layout per source system as identified in the investment summary.
- Pittsburg subject matter experts and resources most familiar with the current data will be involved in the data conversion effort.
- Pittsburg project team will be responsible for completing the code mapping activity, with assistance from Tyler.

6.3.5 Intentionally left blank.

6.3.6 Intentionally left blank.

6.3.7 Control Point 3: Prepare Solution Stage Acceptance

Acceptance criteria for this Stage includes all criteria listed below in each Work Package.

Note: Advancement to the Production Readiness Stage is dependent upon Tyler's receipt of the Stage Acceptance.

Prepare Solution Stage Deliverables:

- Licensed software is installed.
- Installation checklist/system document.
- Conversion iterations and reviews complete.

Prepare Solution Stage Acceptance Criteria:

- All stage deliverables accepted based on criteria previously defined.
- Software is configured.
- Solution validation test plan has been reviewed and updated if needed.
- Requirements have been validated

6.4 Production Readiness

Activities in the Production Readiness stage will prepare the Pittsburg team for go-live through solution validation, the development of a detailed go-live plan and end user training. A readiness assessment will be conducted with Pittsburg to review the status of the project and the organizations readiness for go-live.

6.4.1 Solution Validation

Solution Validation is the end-to-end software testing activity to ensure that Pittsburg verifies all aspects of the Project (hardware, configuration, business processes, etc.) are functioning properly, and validates that all features and functions per the contract have been deployed for system use.

Objectives:

- Validate that the solution performs as indicated in the solution validation plan.
- Ensure the Pittsburg organization is ready to move forward with go-live and training (if applicable).

STAGE 4	Solution Validation																
	Tyler								Client								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Update Solution Validation plan			A	R	C						C	C		C			
Update test scripts (as applicable)			C	C	C						A	R		C			
Perform testing			C	C	C						A	R		C			
Document issues from testing			C	C	C						A	R		C			
Perform required follow-up on issues			A	R	C						C	C		C			

Inputs	Solution Validation plan
	Completed work product from prior stages (configuration, business process, etc.)

Outputs / Deliverables	Solution Validation Test Plan (DED-08)
	Solution Validation Report (DED-09)

Work package assumptions:

- Designated testing environment has been established.
- Testing includes current phase activities or deliverables only.

6.4.2 Go-Live Readiness

Tyler and Pittsburg will ensure that all requirements defined in Project planning have been completed and the Go-Live event can occur, as planned. A go-live readiness assessment will be completed identifying risks or actions items to be addressed to ensure Pittsburg has considered its ability to successfully Go-Live. Issues and

concerns will be discussed, and mitigation options documented. Tyler and Pittsburg will jointly agree to move forward with transition to production. Expectations for final preparation and critical dates for the weeks leading into and during the Go-Live week will be planned in detail and communicated to Project teams.

Objectives:

- Action plan for go-live established.
- Assess go-live readiness.
- Stakeholders informed of go-live activities.

STAGE 4	Go-Live Readiness																
	Tyler								Client								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Perform Readiness Assessment	I	A	R	C	C	I	C	I	I	I	I		I				I
Conduct Go-Live planning session		A	R	C							C	C	C	C	C		C
Order peripheral hardware (if applicable)			I							A	R						C
Confirm procedures for Go-Live issue reporting & resolution		A	R	I	I	I	I				C	C	I	I	I	I	I
Develop Go-Live checklist		A	R	C	C						C	C	I	C			C
Final system infrastructure review (where applicable)			A				R				C						C

Inputs	Future state decisions
	Go-live checklist

Outputs / Deliverables	Go-live Plan and Checklist (DED-10)

Work package assumptions:

- None

6.4.3 End User Training

End User Training is a critical part of any successful software implementation. Using a training plan previously reviewed and approved, the Project team will organize and initiate the training activities.

Tyler Led: Tyler provides training for all applicable users. One or multiple occurrences of each scheduled training or implementation topic will be covered.

Tyler will provide customized end user training guides. Guides will be provided in MS Word format and may be modified by Pittsburg for changes in functionality or process post go-live. The specific processes that will be documented are outlined in the Deliverable Expectations Document in the appendix of this SOW under deliverable ID DED-11.

Objectives:

- End users are trained on how to use the software prior to go-live.
- Pittsburg is prepared for on-going training and support of the application.

STAGE 4	End User Training																
	Tyler								Client								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Update training plan		A	R	C							C		I		C		
End User training (Tyler-led)		A	R	C							C	C	I	C	C	C	

Inputs	Training Plan
	List of End Users and their Roles / Job Duties
	Configured Tyler System

Outputs / Deliverables	Custom End User Training Guides (DED-11)
	End User Training

Work package assumptions:

- The Pittsburg project team will work with Tyler to jointly develop a training curriculum that identifies the size, makeup, and subject-area of each of the training classes.
- Tyler will work with Pittsburg as much as possible to provide end-user training in a manner that minimizes the impact to the daily operations of Pittsburg departments.
- Pittsburg will be responsible for training new users after go-live (exception—previously planned or regular training offerings by Tyler).

6.4.4 Control Point 4: Production Readiness Stage Acceptance

Acceptance criteria for this stage includes all criteria listed below. Advancement to the Production stage is dependent upon Tyler's receipt of the stage acceptance.

Production Readiness stage deliverables:

- Solution Validation Report (DED-09)
- Go-live plan and checklist (DED-10)
- Custom End User Training Guides (DED-11)

Production Readiness stage acceptance criteria:

- All stage deliverables accepted based on criteria previously defined.
- Go-Live planning session conducted.

6.5 Production

Following end user training the production system will be fully enabled and made ready for daily operational use as of the scheduled date. Tyler and Pittsburg will follow the comprehensive action plan laid out during Go-Live Readiness to support go-live activities and minimize risk to the Project during go-live. Following go-live, Tyler will work with Pittsburg to verify that implementation work is concluded, post go-live activities are scheduled, and the transition to Pittsburg Services is complete for long-term operations and maintenance of the Tyler software.

6.5.1 Go-Live

Following the action plan for Go-Live, defined in the Production Readiness stage, Pittsburg and Tyler will complete work assigned to prepare for Go-Live.

Pittsburg provides final data extract and Reports from the Legacy System for data conversion and Tyler executes final conversion iteration, if applicable. If defined in the action plan, Pittsburg manually enters any data added to the Legacy System after final data extract into the Tyler system.

Tyler staff collaborates with Pittsburg during Go-Live activities. Pittsburg transitions to Tyler software for day-to day business processing.

Some training topics are better addressed following Go-Live when additional data is available in the system or based on timing of applicable business processes and will be scheduled following Go-Live per the Project Schedule.

Objectives:

- Execute day to day processing in Tyler software.
- Pittsburg data available in Production environment.

STAGE 5	Go-Live	
	Tyler	Client

RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Provide final source data extract, if applicable			C		C						A						R
Final source data pushed into production environment, if applicable			A	C	R						I	C		C			C
Proof final converted data, if applicable			C	C	C						A	R		C			
Complete Go-Live activities as defined in the Go-Live action plan			C	C	C					A	R	C	I	C			
Provide Go-Live assistance			A	R	C	C		I			C	C	I	C		I	C

Inputs	Comprehensive Action Plan for Go-Live
	Final source data (if applicable)

Outputs / Deliverables	Data is available in production environment

Work package assumptions:

- Pittsburg will complete activities documented in the action plan for Go-Live as scheduled.
- External stakeholders will be available to assist in supporting the interfaces associated with the Go-Live live process.
- Pittsburg business processes required for Go-Live are fully documented and tested.
- Pittsburg Project team and subject matter experts are the primary point of contact for the end users when reporting issues during Go-Live.
- The Pittsburg Project Team and Power User's provide business process context to the end users during Go-Live.

6.5.2 Transition to Client Services

This work package signals the conclusion of implementation activities for the Phase or Project with the exception of agreed-upon post Go-Live activities. The Tyler project manager(s) schedules a formal transition of Pittsburg to the Tyler Client Services team, who provides the city with assistance following Go-Live, officially transitioning Pittsburg to operations and maintenance.

Objectives:

- Ensure no critical issues remain for the project teams to resolve.

- Confirm proper knowledge transfer to the Pittsburg teams for key processes and subject areas.

STAGE 5	Transition to Client Services																
	Tyler								Client								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Transfer Client to Client Services and review issue reporting and resolution processes	I	I	A	I	I			R	I	I	C	C		C			
Review long term maintenance and continuous improvement			A					R			C	C		C			

Inputs	Open item/issues List

Outputs / Deliverables	Client Services Support Document

Work package assumptions:

- No material project issues remain without assignment and plan.

6.5.3 Post Go-Live Activities

Some implementation activities are provided post-production due to the timing of business processes, the requirement of actual production data to complete the activities, or the requirement of the system being used in a live production state. Some of these include month-end processing, year-end processing, quarterly reporting, W-2 training, 1099 training, budget entry and benefits enrollment. Post live needs will be reviewed with Pittsburg and a post live schedule will be provided.

Objectives:

- Schedule activities that are planned for after Go-Live.
- Ensure issues have been resolved or are planned for resolution before phase or project close.

STAGE 5	Post Go-Live Activities	
	Tyler	Client

RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Schedule contracted activities that are planned for delivery after go-live		A	R	C	C	C	C	I			C	C	I	C			C
Determine resolution plan in preparation for phase or project close out		A	R	C	C	C		I			C	C	I	C			

Inputs	List of post Go-Live activities

Outputs / Deliverables	Updated issues log

Work package assumptions:

- System is being used in a live production state.

6.5.4 Control Point 5: Production Stage Acceptance

Acceptance criteria for this Stage includes completion of all criteria listed below:

- Advancement to the Close stage is not dependent upon Tyler's receipt of this Stage Acceptance.
- Converted data is available in production environment.

Production Stage Acceptance Criteria:

- All stage deliverables accepted based on criteria previously defined.
- Go-Live activities defined in the Go-Live action plan completed.
- Client services support document is provided.

6.6 Close

The Close stage signifies full implementation of all products purchased and encompassed in the Phase or Project. Pittsburg transitions to the next cycle of their relationship with Tyler (next Phase of implementation or long-term relationship with Tyler Client Services).

6.6.1 Phase Closeout

This work package represents Phase completion and signals the conclusion of implementation activities for the Phase. The Tyler Client Services team will assume ongoing support of Pittsburg for systems implemented in the Phase.

Objectives:

- Agreement from Tyler and the Pittsburg teams that activities within this phase are complete.

STAGE 6	Phase Close Out																
	Tyler								Client								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Reconcile project budget and status of contract Deliverables	I	A	R						I	I	C						
Hold post phase review meeting		A	R	C	C	C	C				C	C	C	C			C
Release phase-dependent Tyler project resources	A	R	I								I						

Participants	Tyler	Pittsburg
	Project Leadership	Project Manager
	Project Manager	Project Sponsor(s)
	Implementation Consultants	Functional Leads, Power Users, Technical Leads
	Technical Consultants (Conversion, Deployment, Development)	
	Client Services	

Inputs	Contract
	Statement of Work
	Project artifacts

Outputs / Deliverables	Final action plan (for outstanding items)
	Reconciliation Report
	Post Phase Review

Work package assumptions:

- Tyler deliverables for the phase have been completed.

6.6.2 Project Closeout

Completion of this work package signifies final acceptance and formal closing of the Project.

At this time Pittsburg may choose to begin working with Client Services to look at continuous improvement Projects, building on the completed solution.

Objectives:

- Confirm no critical issues remain for the project teams to resolve.
- Determine proper knowledge transfer to the Pittsburg teams for key processes and subject areas has occurred.
- Verify all deliverables included in the Agreement are delivered.

STAGE 6	Project Close Out																
	Tyler								Client								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (Power	Department Heads	End Users	Technical Leads
Conduct post project review		A	R	C	C	C	C				C	C	C	C			C
Deliver post project report to Client and Tyler leadership	I	A	R						I	I	C						
Release Tyler project resources	A	R	I								I						

Inputs	Contract
	Statement of Work

Outputs / Deliverables	Post Project Report (DED-12)

Work package assumptions:

- All project implementation activities have been completed and approved.
- No critical project issues remain that have not been documented and assigned.
- Final project budget has been reconciled and invoiced.
- All Tyler deliverables have been completed.

6.6.3 Control Point 6: Close Stage Acceptance

Acceptance criteria for this Stage includes completion of all criteria listed below.

Close Stage Deliverables:

- Post Project Report.

Close Stage Acceptance Criteria:

Completed report indicating all Project deliverables and milestones have been completed.

7. General Assumptions

Tyler and Pittsburg will use this SOW as a guide for managing the implementation of the Tyler Project as provided and described in the Agreement. There are a few assumptions which, when acknowledged and adhered to, will support a successful implementation. Assumptions related to specific work packages are documented throughout the SOW. Included here are general assumptions which should be considered throughout the overall implementation process.

7.1 Project

- Project activities will begin after the Agreement has been fully executed.
- Pittsburg Project Team will complete their necessary assignments in a mutually agreed upon timeframe to meet the scheduled go-live date, as outlined in the Project Schedule. All tasks, deadlines, and prerequisite activities will be listed on the Project Schedule.
- Sessions will be scheduled and conducted at a mutually agreeable time.
- Additional services, software modules and modifications not described in the SOW or Agreement will be considered a change to this Project and will require a Change Request Form as previously referenced in the definition of the Change Control Process.
- Tyler will provide a written agenda and notice of any prerequisites to the Pittsburg project manager(s) ten (10) business days or as otherwise mutually agreed upon time frame prior to any scheduled on-site or remote sessions, as applicable.
- Tyler will provide guidance for configuration and processing options available within the Tyler software. If multiple options are presented by Tyler, Pittsburg is responsible for making decisions based on the options available.
- Implementation of new software may require changes to existing processes, both business and technical, requiring Pittsburg to make process changes.
- With the exception of what is defined in this SOW, Pittsburg is responsible for defining, documenting, and implementing their policies that result from any business process changes.

7.2 Organizational Change Management

Unless otherwise contracted by Tyler, Pittsburg is responsible for managing Organizational Change. Impacted Pittsburg resources will need consistent coaching and reassurance from their leadership team to embrace and accept the changes being imposed by the move to new software. An important part of change is ensuring that impacted Pittsburg resources understand the value of the change, and why they are being asked to change.

7.3 Resources and Scheduling

- Pittsburg resources will participate in scheduled activities as assigned in the Project Schedule.
- The Pittsburg team will complete prerequisites prior to applicable scheduled activities. Failure to do so may affect the schedule.
- Tyler and Pittsburg will provide resources to support the efforts to complete the Project as scheduled and within the constraints of the Project budget.

- Abbreviated timelines and overlapped Phases require sufficient resources to complete all required work as scheduled.
- Changes to the Project Schedule, availability of resources or changes in Scope will be requested through a Change Request. Impacts to the triple constraints (scope, budget, and schedule) will be assessed and documented as part of the change control process.
- Pittsburg will ensure assigned resources will follow the change control process and possess the required business knowledge to complete their assigned tasks successfully. Should there be a change in resources, the replacement resource should have a comparable level of availability, change control process buy-in, and knowledge.
- Pittsburg makes timely Project related decisions to achieve scheduled due dates on tasks and prepare for subsequent training sessions. Failure to do so may affect the schedule, as each analysis and implementation session is dependent on the decisions made in prior sessions.
- Pittsburg will respond to information requests in a comprehensive and timely manner, in accordance with the Project Schedule.
- Pittsburg will provide adequate meeting space or facilities, including appropriate system connectivity, to the project teams including Tyler team members.
- For on-site visits, Tyler will identify a travel schedule that balances the needs of the project and the employee.
- The City and Tyler shall work together throughout the project to maintain a project roster identifying all resources filling the roles defined below. In the event personnel changes are required, each party shall notify the other promptly and update the project roster.

7.4 Data

- Data will be converted as provided and Tyler will not create data that does not exist.
- Pittsburg is responsible for the quality of legacy data and for cleaning or scrubbing erroneous legacy data.
- Tyler will work closely with the Pittsburg representatives to identify business rules before writing the conversion. Pittsburg must confirm that all known data mapping from source to target have been identified and documented before Tyler writes the conversion.
- All in-scope source data is in data extract(s).
- Each legacy system data file submitted for conversion includes all associated records in a single approved file layout.
- Pittsburg will provide the legacy system data extract in the same format for each iteration unless changes are mutually agreed upon in advance. If not, negative impacts to the schedule, budget and resource availability may occur and/or data in the new system may be incorrect.
- The Pittsburg Project Team is responsible for reviewing the converted data and reporting issues during each iteration, with assistance from Tyler.
- Pittsburg is responsible for providing or entering test data (e.g., data for training, testing interfaces, etc.)

7.5 Facilities

- Pittsburg will provide dedicated space for Tyler staff to work with Pittsburg resources for both on-site and remote sessions. If Phases overlap, Pittsburg will provide multiple training facilities to allow for independent sessions scheduling without conflict.
- Pittsburg will provide staff with a location to practice what they have learned without distraction.

7.6 Requirements Traceability Matrix (RTM)

- Tyler will work with Pittsburg in a dual effort to track and report to Pittsburg which Functional Requirements have been satisfied during each phase of the project for each of the software modules and services contracted.
- The RTM will be created based on the list of the Functional and Technical Requirements that were included in the Tyler proposal response.
- Tyler will create the RTM along with collaborative input from Pittsburg. As part of the "go-live" acceptance process for each phase, Pittsburg and Tyler shall agree that each requirement in the RTM for that phase has been satisfied per Tyler's responses (from proposal response where Tyler answered affirmatively that the feature/functionality exists in the installed release).

8. Glossary

Word or Term	Definition
Acceptance	Confirming that the output or deliverable is suitable and conforms to the agreed upon criteria.
Accountable	The one who ultimately ensures a task or deliverable is completed; the one who ensures the prerequisites of the task are met and who delegates the work to those responsible. [Also see RACI]
Application	A computer program designed to perform a group of coordinated functions, tasks, or activities for the benefit of the user.
Application Programming Interface (API)	A defined set of tools/methods to pass data to and received data from Tyler software products
Agreement	This executed legal contract that defines the products and services to be implemented or performed.
Business Process	The practices, policy, procedure, guidelines, or functionality that the Client uses to complete a specific job function.
Business Requirements Document	A specification document used to describe Client requirements for contracted software modifications.
Change Request	A form used as part of the Change Control process whereby changes in the scope of work, timeline, resources, and/or budget are documented and agreed upon by participating parties.
Change Management	Guides how we prepare, equip and support individuals to successfully adopt change in order to drive organizational success & outcomes
Code Mapping [where applicable]	An activity that occurs during the data conversion process whereby users equate data (field level) values from the old system to the values available in the new system. These may be one to one or many to one. Example: Old System [Field = eye color] [values = BL, Blu, Blue] maps to New Tyler System [Field = Eye Color] [value = Blue].
Consulted	Those whose opinions are sought, typically subject matter experts, and with whom there is two-way communication. [Also see RACI]
Control Point	This activity occurs at the end of each stage and serves as a formal and intentional opportunity to review stage deliverables and required acceptance criteria for the stage have been met.
Data Mapping [where applicable]	The activity determining and documenting where data from the legacy system will be placed in the new system; this typically involves prior data analysis to understand how the data is currently used in the legacy system and how it will be used in the new system.
Deliverable	A verifiable document or service produced as part of the Project, as defined in the work packages.
Go-Live	The point in time when the Client is using the Tyler software to conduct daily operations in Production.
Informed	Those who are kept up-to-date on progress, often only on completion of the task or deliverable, and with whom there is just one-way communication. [Also see RACI]

Infrastructure	The composite hardware, network resources and services required for the existence, operation, and management of the Tyler software.
Interface	A connection to and potential exchange of data with an external system or application. Interfaces may be one way, with data leaving the Tyler system to another system or data entering Tyler from another system, or they may be bi-directional with data both leaving and entering Tyler and another system.
Integration	A standard exchange or sharing of common data within the Tyler system or between Tyler applications
Legacy System	The software from which a Client is converting.
Modification	Custom enhancement of Tyler's existing software to provide features or functions to meet individual Client requirements documented within the scope of the Agreement.
On-site	Indicates the work location is at one or more of the Client's physical office or work environments.
Organizational Change	The process of changing an organization's strategies, processes, procedures, technologies, and culture, as well as the effect of such changes on the organization.
Output	A product, result or service generated by a process.
Peripheral devices	An auxiliary device that connects to and works with the computer in some way. Some examples: scanner, digital camera, printer.
Phase	A portion of the Project in which specific set of related applications are typically implemented. Phases each have an independent start, Go-Live and closure dates but use the same Implementation Plans as other Phases of the Project. Phases may overlap or be sequential and may have different Tyler resources assigned.
Project	The delivery of the software and services per the agreement and the Statement of Work. A Project may be broken down into multiple Phases.
RACI	A matrix describing the level of participation by various roles in completing tasks or Deliverables for a Project or process. Individuals or groups are assigned one and only one of the following roles for a given task: Responsible (R), Accountable (A), Consulted (C), or Informed (I).
Remote	Indicates the work location is at one or more of Tyler's physical offices or work environments.
Responsible	Those who ensure a task is completed, either by themselves or delegating to another resource. [Also see RACI]
Scope	Products and services that are included in the Agreement.

Solution	The implementation of the contracted software product(s) resulting in the connected system allowing users to meet Project goals and gain anticipated efficiencies.
Stage	The top-level components of the WBS. Each Stage is repeated for individual Phases of the Project.
Standard	Software functionality that is included in the base software (off-the-shelf) package; is not customized or modified.
Statement of Work (SOW)	Document which will provide supporting detail to the Agreement defining Project-specific activities, services, and Deliverables.
System	The collective group of software and hardware that is used by the organization to conduct business.
Test Scripts	The steps or sequence of steps that will be used to validate or confirm a piece of functionality, configuration, enhancement, or Use Case Scenario.
Training Plan	Document(s) that indicate how and when users of the system will be trained relevant to their role in the implementation or use of the system.
Validation (or to validate)	The process of testing and approving that a specific Deliverable, process, program, or product is working as expected.
Work Breakdown Structure (WBS)	A hierarchical representation of a Project or Phase broken down into smaller, more manageable components.
Work Package	A group of related tasks within a project.

Part 4: Appendices

9. Conversion

9.1 Content Manager Conversion Summary

9.1.1 Content Manager – Standard

- Up to 18 document type(s)
- All visible fields configured for Tyler Content Manager Enterprise installations or the standard fields that exist for Tyler Content Manager Core installations
- Images and Attachments as described below
- Lookups are imported with the assistance of the consultant

9.1.2 Accounting

9.1.2.1 Accounting - Actuals

- Summary account balances
- Up to 5 years

9.1.3 Accounting - Budgets

- Original budget, budget adjustments, revised budget summaries for accounts
- Up to 5 years

9.1.4 Accounts Payable

- Vendor Master file including names, addresses, SSN/FID, contacts, phone numbers
- Multiple remittance addresses
- Year-to-date 1099 amounts

9.1.5 Accounts Payable - Checks

- Check header data including vendor, warrant, check number, check date, overall check amount, GL cash account and clearing information
- Check detail data including related document and invoice numbers for each check
- Up to 5 years

9.1.6 Accounts Payable - Invoices

- Invoice header data containing general information for the invoice
- Invoice detail data containing line-specific information for the invoice
- Up to 5 years

9.1.7 Capital Assets Master

- Asset description, status, acquisition quantity, date and amount, codes for asset class, subclass, department, custodian, flags for capitalization and depreciation, estimated life, serial number, model,

model year, depreciation method, life-to-date depreciation amount, last depreciation date, disposal information (if any), purchase information, if any (vendor, PO, Invoice)

9.1.8 Contracts

- Contract header detail with many fields available to convert including fiscal year and period, vendor number, department code, description, enforcement method code, dates for award, approval, entry and expiration, retention information, user-defined type and review codes, status code, user id for entry and approver. Additional fields are also available. A balance forward contract amount is converted, if original amount is required there will be an additional charge and contracts, po's and invoices must be converted together.

9.1.9 General Billing

- Customer information

9.1.10 General Billing – Bills

- 5 years of open and closed invoices
- General Ledger information so open invoices can be processed in Enterprise ERP

9.1.11 General Billing – Recurring Invoices

- General Billing Invoices that are sent on a regular basis
- Header records with general information about the invoice
- Detail records with line-specific information

9.1.12 Human Resources Management

- Payroll Employee Master data including data such as name, address, SSN, legacy employee ID, date of birth, hire date, activity status (such as active/inactive), leave/termination code and date, phone(s), e-address, marital status, gender, race, personnel status (such as full-time, part-time, etc.), highest degree, advice-delivery (print/email/both) and check location, plus primary group, job, location, and account information

9.1.13 Payroll - Deductions

- Employee Deductions - including employee ID, deduction codes, tax information, and direct deposit information

9.1.14 Payroll – Accrual Balances

- Employee Accrual Balances including Vacation, Holiday, and other Leave balances
- Start of year balance, earned to date, used to date

9.1.15 Payroll – Accumulators

- YTD, QTD, MTD amounts for employee pay and deductions
- Needed for mid-calendar-year go-live
- May not be needed if converting earnings/deductions history
- Up to 5 years

9.1.16 Payroll – Check History

- Up to 5 years, additional years must be quoted. We convert amounts for earnings and deductions in employee check history, check number and date.

9.1.17 Payroll – Earning/Deduction Hist.

- Up to 5 years, additional years must be quoted. Earning and deduction history broken down my individual codes (earnings and deduction) and amounts per pay period, the detail of these lines, sums the check history in opt 4.

9.1.18 Payroll – Recruiting

- Application requisition applicant master data, plus applicant references, certifications, education, skills, tests, work history, and interviews

9.1.19 Payroll – PM Action History

- A variety of Personnel actions, such as job or salary changes and dates these events occurred.
- Up to 5 years

9.1.20 Payroll – Position Control

- Position, description, status, job code, bargaining group, location, number of employees allowed for each, FTE percentage, GL account, and max/min grade and step

9.1.21 Payroll – State Retirement Tables

- Specific state-required data, plus related service years information, when appropriate
- Needed for some states

9.1.22 Payroll – Certifications

- Certification area and certification type codes, certification number and effective date, expiration date, and required-by date, codes for certification level and subjects

9.1.23 Payroll – Education

- Codes, for institution, type of degree, and area(s) of study

9.1.24 Project Accounting

- Segments, account strings and fund string allocation table
- Requires the use of a Tyler provided (Chart of Accounts) spreadsheet for design and entry of the data to be converted

9.1.25 Project Grant Accounting - Actuals

- Summary project ledger string balances. If linking to GL, must be converted at the same time.
- Up to 3 years

9.1.26 Project Grant Accounting – Budget

- Original project ledger budget amounts. If linking to GL, must be converted at the same time.
- Up to 3 years

9.1.27 Purchase Orders

- Open purchase orders header data including vendor, buyer, date, accounting information, etc.
- Open purchase orders detail data including line-item descriptions, quantities, amounts, etc.
- Closed purchase orders header data including vendor, buyer, date, accounting information, etc.
- Closed purchase orders detail data including line-item descriptions, quantities, amounts, etc.

9.1.28 Utility Billing

- Account Master data including previous and current customer owner information- address info, phone, fax, SSN number, FID number, account status, parcel number, location street, apartment, city, state, zip, book number, read sequence, account start and end date, EFT bank information

9.1.29 Utility Billing –Services

- Current service codes, service status, type, factor, condo units, bill cycle codes, , current deposits held on account including unpaid deposit amounts, winter usage, current meter(s) associated with service, meter readings(current and previous), meter usage (current and previous) and sales tax information.

9.1.30 Utility Billing –Assessments

- Assessments are improvement costs that are spread across to property owner
- Utility Billing conversion option 4 (balance forward AR) must also be purchased in order to convert assessments

9.1.31 Utility Billing –Consumption History

- History of meter readings, usage, read dates, usage days, bill amounts, bill dates, read codes
- Up to 5 years

9.1.32 Utility Billing –Balance Forward AR

- Account balance forward information converted as total amount due. If the Client's business practices require current due and past due bills this can be broken into three balance forward bills (current balance due and up to two past due balance bills). These can be converted to one balance forward charge code or separate balance forward charge codes, and converted to the account/customer if the Client's legacy data contains this information.
- If late penalties will be applied in Enterprise ERP after the conversion, balance forward amounts must be converted by charge code

9.1.33 Utility Billing – Work Orders

- Work Orders data associated with accounts, including meter repairs, checks for leaky meter, reread a meter due to high reading

9.1.34 Utility Billing –Backflow

- Account information, backflow device information, backflow type, and backflow violations

9.1.35 Utility Billing –Budget Billing

- Converts information for budget average billing by account, customer and service. Legacy data must include: calculated budget amount by service; number of periods remaining until plan renews; budget plan balance/credit amount, broken out by service/customer; additional amortized amount by service.

9.1.36 Utility Billing –Flat Inventory/Containers

- Inventory for non-metered items tied to recurring service billing – flat rate is tied to inventory item(s)/item type(s) (vs consumption/usage). Trash/recycling containers, dumpsters, roll off containers, light poles, cable/internet equipment.

10. Additional Appendices

10.1 Deliverable Expectation Document

A description of each summary deliverable is provided below. All deliverables will be provided electronically in the format used to prepare the deliverable (example: Microsoft Word, Excel) to allow for updates and revisions.

Deliverable Number: DED-01	
Deliverable Name: Project Management Plan (WBS 1.2)	**Phase:** 1, 2, 3
Objective: To provide procedures for project management and managing changes to the project scope, schedule, or budget.	
Scope: Customized management plans to reflect Client's specific project approach. Management plans will document specific project management processes that are agreed upon between the Client and Tyler Project Manager. As part of project planning, the Tyler Project Manager will review the SOW and contract with Client. The management plan will include all information and procedures for all phases of the project.	
Format: Microsoft Word	
Outline: ***Scope Management Plan*** • Scope Management Approach • Scope Roles and Responsibilities • Scope Verification • Scope Control • Scope Change ***Communication Management Plan*** Purpose • Communications Planning • Information Distribution • Roles and Responsibilities • Communication Plan Matrix ***Resource Management Plan*** Purpose • Physical Resource Requirements • Facility Resource Matrix • Human Resources Requirements Matrix ***Quality Management Plan*** Purpose • Quality Approach • Quality Planning • Identify Quality Metrics • Establish Quality Control Checklist • Issue Resolution • Quality Assurance • Quality Control ***Risk Management Plan*** Purpose • Risk Assessment Procedures • Risk Management Procedures • Risk Measuring and Control Procedures • Risk Register • Risk Assessment	

Deliverable Number: DED-01
• SWOT Analysis • Risk Evaluation • Probability and Impact Matrix • Risk Management Planning • Risk Measuring and Control
Client Role: • Attend project planning sessions scheduled by Tyler • All project team members will participate in the development of these plans.
Tyler Role: • Tyler will lead development of the plans and will have responsibility for documenting all decisions as part of the deliverable.
Acceptance Criteria: • Client project team has read, understands, and agrees with the procedures and schedules within the Project Management Plan • The deliverable contains all the components specified in the Outline of this DED and the SOW • The respective Tyler and Client project team members have resolved all material content and/or quality issues. • The deliverable is free of formatting and spelling errors.

Deliverable Number: DED-02	
Deliverable Name: Project Operational Plan (WBS 1.2)	Phase: 1, 2, 3
Objective: To introduce and familiarize the Client with the tools that will be used throughout the implementation during project planning. To make the tools available for Client review and maintenance as applicable throughout the project.	
Scope: Includes Training Plan, Data Conversion Plan, Solution Validation Plan, Go-live Plan	
Format: MS Word	
• **Outline:** • Training Plan • Overview • Training descriptions • Classroom setup and resources • Prerequisites • Accompanying documents • Data Conversion Plan • Overview • Logistics • Prerequisites • Process • Accompanying documents • Module/Phase specific conversion schedule and proofing instructions • Solution Validation Plan • Overview • What to expect • Acceptability • Common misconceptions • Identifying Power Users for testing • Responsibilities • Testing steps • Accompanying documents • Go-Live Plan • Overview	

Deliverable Number: DED-02
• Benefits • Prerequisites to cutover commencement • Go-Live checklist • Accompanying documents • Appendix: Other accompanying documents • Stage sign-off forms • Change request form • Analysis questionnaires • Project phase reconciliation report
Client Role: • Review the plans and accompanying documents • Gain an understanding of how each plan is used and at what time in the project • Distribute plans, as applicable, to project team members
Tyler Role: • Provide the Project Operational Plan and accompanying documents • Review each plan and document with the Client project team; discuss how each will be used during the implementation, when it will be used, and who is responsible for each.
Acceptance Criteria: • The deliverable contains all the components specified in the Outline of this DED and the SOW • The respective Tyler and Client project team members have resolved all material content and/or quality issues. • The deliverable is free of formatting and spelling errors.

Deliverable Number: DED-03	
Deliverable Name: Initial Project Schedule / Project Plan (WBS 1.2)	Phase: 1, 2, 3
Objective: Task list with owners and due dates for successful completion of the project phase. Schedules are developed at the start of each phase.	
Scope: Includes all tasks and scheduled activities, along with owners, due dates, and dependencies.	
Format: Developed in MS Project, then uploaded and maintained as the master project plan on the Client Project SharePoint site.	
Outline: The project plan will follow the Tyler Implementation WBS and contain all WBS tasks, tasks necessary for completion of WBS tasks, deliverables, milestones, review/acceptance periods, and other key project events. The Project Plan will contain: • Project's activities and tasks • Dates of project activities and tasks • Specific resources assigned to project tasks • Detailed Project schedule / Work Breakdown Structure (WBS) featuring phases, deliverables, and work packages • Milestones and Deliverables • Client Review Periods for Milestones and Deliverables • Project Acceptance of Implementation Control Points	
Client Role: • Review project plan • Contribute information necessary to complete and maintain project plan • Adhere to due dates as defined in the project plan • Inform the Project Managers of barriers to meeting the defined due dates	
Tyler Role: • Provide initial on-site and remote session schedule to Client for approval • Create project plan • Post project plan to Project SharePoint site	

Deliverable Number: DED-03
• Maintain and update the project plan throughout the project
Acceptance Criteria: • The Client signs off on the project plan and schedule • The deliverable contains all the components specified in the Outline of this DED and the SOW • The respective Tyler and Client project team members have resolved all material content and/or quality issues. • The deliverable is free of formatting and spelling errors.

Deliverable Number: DED-04	
Deliverable Name: System Design Document (WBS 2.2)	Phase: 1, 2, 3
Objective: To document the decisions and processes resulting from analysis and identify how Client will use the Tyler system.	
Scope: Spreadsheet questionnaire outlining processing, workflow, and setup decisions	
Format: MS Excel	
Outline: Current Needs: • Identification of current process • Client Decision Making: • Process Decisions • Setup Decisions • Workflow Decisions utilizing Workflow Matrix • Follow Up Items • Detailed Enterprise ERP set-up considerations • Set up details • Modifications (if applicable) • Imports/Export • Workflow	
Client Role: • Participate in all meetings and make decisions • Review the documents provided by the Tyler project team • Identify any discrepancies • Ask for clarification from the Tyler team, if necessary	
Tyler Role: • Complete System Design Documents • Complete deliverable containing all information described in this DED. • Participate in meetings as required to gather information necessary to complete deliverable. • Post completed documents to SharePoint. • Update deliverable based on feedback from the Client within acceptance period	
Acceptance Criteria: • Design Document will include processes and configurations necessary to accommodate final functional requirements • All configurations for software documented in Design Document. • The deliverable contains all the components specified in the Outline of this DED • The respective Tyler and Client project team members have resolved all material content and/or quality issues. • The deliverable is free of formatting and spelling errors.	

Deliverable Number: DED-05	
Deliverable Name: Data Conversion Plan (WBS 2.3)	Phase: 1, 2, 3
Objective: Provide the Client with information necessary to understand and implement the conversion process.	

Deliverable Number: DED-05
Scope: All conversion options included in the Investment summary.
Format: MS Word
Outline: • Logistics • Conversion contacts • Prerequisites • Data mapping • Data extract • Verifying converted data • Reporting discrepancies • Conversion plan and schedule (for this phase) • Accompanying documents • Conversion descriptions • Conversion schemas • Conversion sign-off forms
Client Role: • The Client reads conversion plan • The Client participates in planning the conversion schedule • The Client follows the plan and proofing instructions throughout the project
Tyler Role: • Tyler works with the Client to plan the conversion schedule • Tyler delivers the plan; posts on the Project Portal • Tyler reviews the plan with the Client
Acceptance Criteria: • The deliverable contains all the components specified in the Outline of this DED and the SOW • The respective Tyler and Client project team members have resolved all material content and/or quality issues. • The deliverable is free of formatting and spelling errors.

Deliverable Number: DED-06	
Deliverable Name: Installation Checklist/System Document (WBS 3.1)	**Phase:** 1
Objective: Provide the Client with listing of all products, installation paths and accounts installed within the Client infrastructure.	
Scope: All Tyler products and associated Client hardware and software	
Format: MS Word	
Outline: • Application and Database Server details • Network names and domain(s) • Installation paths, IPs, and user accounts • Application and software user accounts details • Application and web service URLs • Tyler License Keys • Recommended on-going IT tasks	
Client Role: • The Client reviews document and stores it in a secure location	
Tyler Role: • Tyler deployment engineer provides document to Client	
Acceptance Criteria: • The deliverable contains all the components specified in the Outline of this DED and the SOW • The deliverable is free of formatting and spelling errors.	

Deliverable Number: DED-07	
Deliverable Name: Requirements Traceability Matrix (WBS 3.3)	**Phase:** 1, 2, 3
Objective: Provide listing of all system requirements outlined in the RFP formatted for updates to indicate owner, verification date, status, and next steps if applicable.	
Scope: System requirements outlined in the RFP and proposal.	
Format: SharePoint list; MS Excel	
Outline: • Includes applicable RFP Checklist Requirements.	
Client Role: • The Client reviews and verifies requirements.	
Tyler Role: • Tyler ensures all requirements are trained and verified. • Tyler updates testing statuses into the matrix.	
Acceptance Criteria: • The deliverable contains all the components specified in the Outline of this DED and the SOW • The respective Tyler and Client project team members have resolved all material content and/or quality issues. • The deliverable is free of formatting and spelling errors.	

Deliverable Number: DED-08	
Deliverable Name: Solution Validation Test Plan (WBS 3.3)	**Phase:** 1, 2, 3
Objective: Provide testing steps to guide users through testing business processes in Tyler software.	
Scope: Testing steps for Standard business processes.	
Format: MS Word; MS Excel	
Outline: • Detailed test scripts by business process for each major functional area/module in scope for the project.	
Client Role: • Review the System Design Validation plan • Provide feedback for additional processes to be tested • The Client performs Solution Validation Testing to verify software readiness for day-to-day business processing.	
Tyler Role: • Develop Solution Validation Test Plan • Incorporate Requirements Traceability Matrix into Solution Validation Plan	
Acceptance Criteria: • The deliverable contains all the components specified in the Outline of this DED and the SOW • The respective Tyler and Client project team members have resolved all material content and/or quality issues. • The deliverable is free of formatting and spelling errors.	

Deliverable Number: DED-09	
Deliverable Name: Solution Validation Report (WBS 4.1)	**Phase:** 1, 2, 3
Objective: Provide a high-level overview of the progress of the Solution Validation Test.	
Scope: Shows number of test cases by module in table and graph view.	
Format: Excel; tab in Solution Validation Checklist workbook	
Outline: • By Module • Number of cases not yet tested • Number of cases where testing is in progress • Number of cases passed	

Deliverable Number: DED-09
• Number of cases failed • Total number of cases
Client Role: • Review the report regularly throughout the Solution Validation Testing period. • Provide updates to Tyler Project Manager, as needed
Tyler Role: • Work with Client Project Team to ensure that failed test items are prioritized and resolved in a timely manner
Acceptance Criteria: • The deliverable contains all the components specified in the Outline of this DED and the SOW • The respective Tyler and Client project team members have resolved all material content and/or quality issues. • The deliverable is free of formatting and spelling errors.

Deliverable Number: DED-10	
Deliverable Name: Go-Live Plan and Checklist (WBS 4.2)	**Phase:** 1, 2, 3
Objective: Identify all tasks that will need to be completed for Go-live. Checklist will provide cutover timelines to cease processing in the legacy system, timeline for final conversions, contingency processing plans and instructions for decentralized departments.	
Scope: Implementation will provide the Client with a checklist of items needed to be completed for Go-Live	
Format: MS Word; MS Project	
Outline: Sample activities from a Payroll Go-Live Checklist: • Validate process of starting a payroll, switch T & A users • Review Dept. Time & Attendance process, proof reports • Verify GL Distribution Posting correctly- Finance Dept. approval • Verify appropriate permission levels on General, Time & Attendance and Payroll Run Processing for all users Checklist columns: • Item ID • Activity • Owner • Date Verified • Client Approval (initials) • Notes/Comments	
Client Role: • Review and complete the list of items required for go-live.	
Tyler Role: • Provide Client with a list of items required for completion for the go-live, by phase.	
Acceptance Criteria: • The deliverable contains all the components specified in the Outline of this DED and the SOW • The respective Tyler and Client project team members have resolved all material content and/or quality issues. • The deliverable is free of formatting and spelling errors.	

Deliverable Number: DED-11	
Deliverable Name: Custom End User Training Guides (WBS 4.3)	**Phase:** 1, 2, 3
Objective: Provide custom training guides on major functions for end user training	

Deliverable Number: DED-11

Scope: Customized training guides for major functions current version that Client will implement. These guides are intended for end user training and do not encompass all processes and configuration of the Enterprise ERP system. The following processes/programs will be documented in the training guides:

- Enterprise ERP General Topics for all Modules
  - Navigation
  - Enterprise ERP Office & Saved Reports
  - Dashboard
  - Tyler Content Manager SE
- Financials
- General Ledger
  - GL Account Inquiry
  - YTD Budget Report
- Purchasing & Requisitions
  - Requisition Entry
  - Attaching Documentation
  - Requisition Approval
  - PO Approvals
  - PO Receiving
  - PO Reports
- Accounts Payable
  - Request for Check
  - Invoice Entry /Proof
  - Invoice Approvals
  - AP Reports
  - Vendor Central
- Budget
  - NY Budget Entry
  - NY Budget Reports
  - Next Year Budget Detail Approval
  - Budget Transfer and Amendments
  - Budget Transfer and Amendments Approvals
- Project & Grant Accounting
  - Project Reports
- Contract Management
  - Contract Entry
  - Attaching Documentation
  - Contract Approvals
- Employee Expense Reimbursement
  - Entering an Expense Claim
  - Allocating an Expense Claim
  - Approving an Expense Claim
- Enterprise ERP Accounts Receivable
  - Applying a Payment to a General Bill
  - Miscellaneous Cash Receipt Entry
  - Accounts Receivable Payment Inquiry and Reports
  - Customer Central
- Enterprise ERP General Billing
  - GB Invoice Entry and Proof
- Payroll/Human Resources
  - Overall Payroll Process
  - Time Entry
  - Time Entry Approval

Deliverable Number: DED-11
▪ Personnel Actions Process[1] ▪ Actions Entry ▪ Actions Inquiry ▪ Recruiting – None
Format: MS Word
Outline: • Overview of Function • Detailed description of how to complete tasks in Enterprise ERP • Custom Training guides on major processes for end user training • Identification of options, fields, and functions built into the Tyler software.
Client Role: • Review Custom Training Guides • Distribute Custom Training Guides to end users
Tyler Role: • Provide Custom Training guides for end-user training in SharePoint Folder.
Acceptance Criteria: • The deliverable contains all the components specified in the Outline of this DED and the SOW • The custom training guides will be updated to reflect current features and functions in the software version that Client is implementing. • The respective Tyler and Client project team members have resolved all material content and/or quality issues. • The deliverable is free of formatting and spelling errors.

Deliverable Number: DED-12	
Deliverable Name: Post Project Report (WBS 6.2)	**Phase:** 1, 2, 3
Objective: Provide comparison of contract Scope and project budget.	
Scope: Contract Scope versus actual, analysis of services provided and remaining budget, identify any necessary Change Requests or project activity.	
Format: MS Word and/or Excel	
Outline: • Detailed report for outlining contracted services and delivered services for the phase.	
Client Role: • Review and accept report	
Tyler Role: • Develop and deliver report	
Acceptance Criteria: • Acceptance of services and budget analysis and plan for changes, if needed. • The deliverable contains all the components specified in the Outline of this DED and the SOW • The respective Tyler and Client project team members have resolved all material content and/or quality issues. • The deliverable is free of formatting and spelling errors.	

Deliverable Number: DED-13	
Deliverable Name: Project Status Reports (throughout project)	**Phase:** 1, 2, 3

[1] Personnel Actions document does not include details for every different kind of personnel action type but does include instructions for selecting the type and generic steps for completion.

Deliverable Number: DED-13
Objective: To provide project team members with a current snapshot of the project and advise of upcoming activities.
Scope: Status report provided at least 18 hours before each scheduled status meeting for project team review and gathering updates in advance of the meeting. Updated status report with meeting notes and task updates provided within 18 hours of completion of the status meeting.
Format: PDF
Outline: • Project Overview (% complete by stage graph) • Agenda Items • Recently Completed task list • Calendar events starting soon • Tasks starting soon • Tasks in progress • Tasks past due • Conversion tasks past due • Open items (Issues and Actions) • Risk Register • Budget Reconciliation • Notes
Client Role: • Review the status reports upon delivery • Distribute status reports to project stakeholders, as applicable • Communicate changes to task status and percent of completion to Tyler Project Manager • Notify Tyler Project Manager of discrepancies or inaccuracies per the acceptance procedure defined in this SOW
Tyler Role: • Provide a status report before and after each status meeting • Record tasks assigned, key decisions and unresolved items in appropriate PM tool (issues and actions, project plan)
• **Acceptance Criteria:** • The deliverable contains all the components specified in the Outline of this DED and the SOW • The respective Tyler and Client project team members have resolved all material content and/or quality issues. • The deliverable is free of formatting and spelling errors. • Sign-off is not required for this deliverable

Deliverable Number: DED-14	
Deliverable Name: Site Reports (throughout project)	**Phase:** 1, 2, 3
Objective: To provide project managers and team members with an update of what was covered during a scheduled implementation session.	
Scope: Site report to be uploaded to Project Portal within 3 business days of completion of the scheduled session. Consecutive days may be combined on one site report.	
Format: PDF	
Outline: • Date, start and end times • Modules covered • Attendees • Tasks assigned • Daily summary • Key decisions made	

Deliverable Number: DED-14
• Unresolved items
Client Role: • Review the site reports upon delivery • Notify Tyler Project Manager of discrepancies or inaccuracies per the acceptance procedure defined in this SOW
Tyler Role: • Provide a site report after each scheduled session (or consecutive sessions) • Record tasks assigned, key decisions and unresolved items in appropriate PM tool (issues and actions, project plan)
Acceptance Criteria: • The deliverable contains all the components specified in the Outline of this DED and the SOW • The respective Tyler and Client project team members have resolved all material content and/or quality issues. • The deliverable is free of formatting and spelling errors. • Sign-off is not required for this deliverable.

10.2 Enterprise ERP Standard 3rd Party Data Exchange & Application Programming Interfaces

10.2.1 Planning

An Integration is a real-time or automated exchange of data between two systems. Standard Data Exchange tools are available to fulfill Integrations with external systems by allowing Clients to get data in and out of the Tyler system. Data exchange tools can take the form of Imports and Exports, and Application Programming Interfaces (APIs)*. APIs may require additional licensing and may have some restrictions on use. Please refer to your licensing agreement for further information.

Imports and Exports

The Pittsburg and Tyler project manager(s) will work together to define/confirm which Imports and Exports are needed (if not outlined in the Agreement). Tyler will provide an Excel or ASCII file layouts for each Standard Data Exchange.

APIs*

Additional API licensing and data sharing agreements are required for integration with third-party applications. If APIs have been purchased, Tyler may provide integration assistance to understand API services and provide necessary support to complete the integration of Tyler software to the Pittsburg internal applications. Tyler will not provide any hands-on development unless expressly specified in the Agreement. It is Tyler's responsibility to ensure the API services operate correctly. It is Pittsburg's responsibility to fulfill integrations using Tyler's API services and ensure operation of the third party API services.

STAGE 2	Current & Future State Analysis - Data Exchange	
	Tyler	Client

RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (SMEs)	Department Heads	End Users	Technical Leads
Review Standard or contracted Data Exchanges			A	R	I		I				C	C		I			C
Define or confirm needed Data Exchanges			I	C	C		C				A	C		C			R

10.2.2 Validation

Tyler provides training on Data Exchange(s) (for both Import and Export, and APIs*) and Pittsburg tests each Data Exchange.

STAGE 3	Process Refinement – Data Exchange Validation																
	Tyler								Client								
RACI MATRIX KEY: R = Responsible A = Accountable C = Consulted I = Informed	Executive Manager	Implementation Manager	Project Manager	Implementation Consultant	Data Experts	Modification Services	Technical Services	Client Services	Executive Sponsor	Steering Committee	Project Manager	Functional Leads	Change Management Leads	Subject Matter Experts (SMEs)	Department Heads	End Users	Technical Leads
Train standard or contracted Data Exchange(s) processing in Tyler software			A	R	I		I				C	I		I			C
Coordinate 3rd Party Data Exchange activities			I	I	I		I				A	C		C			R
Test all Standard 3rd party Data Exchange(s)			I	I	I		I				A	C		R			C

* API services, available thru Enterprise ERP OpenAPI Toolkits and Connectors, are not part of the core Enterprise ERP applications and are only applicable if included in the license agreement.

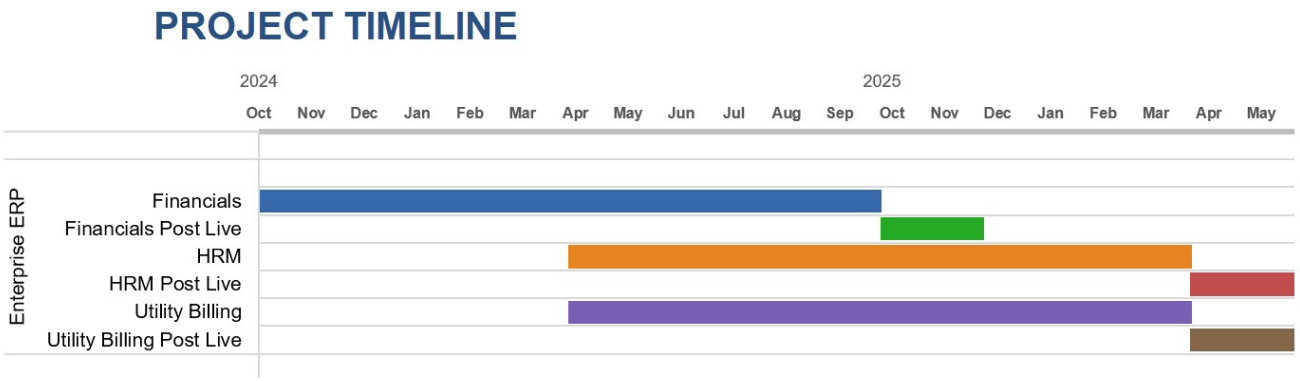
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11. Project Timeline

11.1 ERP Project Timeline

The Project Timeline establishes a target start and end date for each Phase of the Project. The timeline needs to account for resource availability, business goals, size and complexity of the Project, and task duration requirements. These will be reviewed and adjusted, if needed, during the Initiate and Plan Stage. Refer to the Project Stages section of this SOW for information on work packages associated with each stage of the implementation.

The following dates may be revised based on the date the Agreement is signed and further refined during the course of the project. Tyler requires up to forty-five (45) days to move from Agreement signing to the Initiate & Plan Stage.



Phase	Functional Area(s)	Modules	Start Date	Go-Live Date	Post-Live
1	Core Financials	• Accounting • Accounts Payable • Budgeting • Capital Assets • Cash Management • Contract Management • eProcurement • Purchasing • Project & Grant Accounting • Accounts Receivable • General Billing • Tyler Cashiering • Notify • Cashiering API • GL API	October 2024 or as defined in the Project Plan and mutually agreed upon	October 2025 or as defined in the Project Plan and mutually agreed upon	October-November 2025
	System Wide	• Analytics & Reporting w Executive Insights			

		• Enterprise Forms • Content Manager Core • Enterprise ERP Admin & Security • Snap Logic			
2	Enterprise Human Resources Management	• Payroll with Employee Access • Human Resources and Talent Management • Time & Attendance w/ Mobile Access	April 2025 or as defined in the Project Plan and mutually agreed upon	April 2026 or as defined in the Project Plan and mutually agreed upon	April-May 2026
3	Utility Billing	• Utility Billing CIS • Utility Billing Meter Interface • Resident Access	April 2025 or as defined in the Project Plan and mutually agreed upon	April 2026 or as defined in the Project Plan and mutually agreed upon	April-May 2026

Exhibit F
Functional Requirements

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Functional requirements to be inserted.

Pages 129-141 of the Tyler Technologies agreement are not included in this staff report due to the proprietary and confidential nature of technical information contained in these pages.

NEOGOV



HUMAN RESOURCES MANAGEMENT SUITE

for the public sector

Exhibit A
Order Form

NEOGOV

Governmentjobs.com, Inc. (dba "NEOGOV")
2120 Park Pl, Suite 100
El Segundo, CA 90245
United States
billing@neogov.com
Sales Rep: Alan Paul

Customer:

Pittsburg, City of (CA)
65 Civic Avenue
Pittsburg, CA 94565
USA

Quote Valid From: 11/8/2023
Quote Valid To: 8/31/2024

Quote Number: Q-13877
PaymentTerms: Annual,Net 30
Subscription Term in Months: 60

Employee Count: 350
Order Summary

Year 1 Incentive Applied to Bundle Rate

Service Description	Start Date	End Date	Term Price (USD)
Onboard Subscription	9/1/2024	8/31/2025	$4,221.20
Perform Subscription	9/1/2024	8/31/2025	$7,236.40
Learn Subscription	9/1/2024	8/31/2025	$9,166.40
eForms Subscription	9/1/2024	8/31/2025	$6,030.40
Single Sign On Subscription	9/1/2024	8/31/2025	$573.20
New Hire Export (IN+ON Data) Subscription	9/1/2024	8/31/2025	$640.40
Employee Import Subscription	9/1/2024	8/31/2025	$1,323.20
Document Export - Subscription	9/1/2024	8/31/2025	$1,200.00
Insight Subscription	12/15/2024	8/31/2025	$7,646.35
Year 1 Incentive Applied to Bundle Rate TOTAL:			$38,037.55

Year 2 reduced Incentive continued bundle pricing

Service Description	Start Date	End Date	Term Price (USD)
Onboard Subscription	9/1/2025	8/31/2026	$7,387.10

Service Description	Start Date	End Date	Term Price (USD)
Perform Subscription	9/1/2025	8/31/2026	$12,663.70
Learn Subscription	9/1/2025	8/31/2026	$16,041.20
eForms Subscription	9/1/2025	8/31/2026	$10,553.20
Single Sign On Subscription	9/1/2025	8/31/2026	$1,003.10
New Hire Export (IN+ON Data) Subscription	9/1/2025	8/31/2026	$1,120.70
Employee Import Subscription	9/1/2025	8/31/2026	$2,315.60
Document Export - Subscription	9/1/2025	8/31/2026	$2,100.00
Insight Subscription	9/1/2025	8/31/2026	$11,006.87
Year 2 reduced Incentive continued bundle pricing TOTAL:			$64,191.47

Year 3 Incentive ends, Bundle rate only

Service Description	Start Date	End Date	Term Price (USD)
Onboard Subscription	9/1/2026	8/31/2027	$11,080.65
Perform Subscription	9/1/2026	8/31/2027	$18,995.55
Learn Subscription	9/1/2026	8/31/2027	$24,061.80
eForms Subscription	9/1/2026	8/31/2027	$15,829.80
Single Sign On Subscription	9/1/2026	8/31/2027	$1,504.65
Insight Subscription	9/1/2026	8/31/2027	$11,588.21
New Hire Export (IN+ON Data) Subscription	9/1/2026	8/31/2027	$1,681.05
Employee Import Subscription	9/1/2026	8/31/2027	$3,473.40
Document Export - Subscription	9/1/2026	8/31/2027	$3,150.00
Year 3 Incentive ends, Bundle rate only TOTAL:			$91,365.11

Year 4 Renewal Cost

Service Description	Start Date	End Date	Term Price (USD)
Onboard Subscription	9/1/2027	8/31/2028	$11,713.83
Perform Subscription	9/1/2027	8/31/2028	$20,081.01
Learn Subscription	9/1/2027	8/31/2028	$25,436.76
eForms Subscription	9/1/2027	8/31/2028	$16,734.36
Single Sign On Subscription	9/1/2027	8/31/2028	$1,590.63
Insight Subscription	9/1/2027	8/31/2028	$12,261.21
New Hire Export (IN+ON Data) Subscription	9/1/2027	8/31/2028	$1,777.11
Employee Import Subscription	9/1/2027	8/31/2028	$3,671.88

Service Description	Start Date	End Date	Term Price (USD)
Document Export - Subscription	9/1/2027	8/31/2028	$3,330.00
		Year 4 Renewal Cost TOTAL:	$96,596.79

Year 5 Renewal Cost 2023 Q4 Incentive drops off year 3, regular renewal rate invoiced at renewal

Service Description	Start Date	End Date	Term Price (USD)
Onboard Subscription	9/1/2028	8/31/2029	$12,347.01
Perform Subscription	9/1/2028	8/31/2029	$21,166.47
Learn Subscription	9/1/2028	8/31/2029	$26,811.72
eForms Subscription	9/1/2028	8/31/2029	$17,638.92
Single Sign On Subscription	9/1/2028	8/31/2029	$1,676.61
Insight Subscription	9/1/2028	8/31/2029	$13,025.88
New Hire Export (IN+ON Data) Subscription	9/1/2028	8/31/2029	$1,873.17
Document Export - Subscription	9/1/2028	8/31/2029	$3,510.00
Employee Import Subscription	9/1/2028	8/31/2029	$3,870.36
		Year 5 Renewal Cost TOTAL:	$101,920.14

Year 1 Incentive Applied to Bundle Rate

Service Description	Start Date	End Date	Term Price (USD)
Onboard Setup			$3,600.00
Perform Setup			$6,000.00
Learn Setup			$6,000.00
eForms Setup			$3,600.00
Single Sign On Setup			$3,000.00
New Hire Export (IN+ON) Setup			$6,600.00
Employee Import Setup			$6,300.00
Document Export Setup			$3,000.00
Insight Setup			$0.00
		Year 1 Incentive Applied to Bundle Rate TOTAL:	$38,100.00

ORDER TOTAL (USD) : $430,211.06

A. Terms and Conditions

1. Agreement. This Ordering Document and the Services purchased herein are expressly conditioned upon the acceptance by Customer of the terms of the NEOGOV Services Agreement either affixed hereto or the version most recently published prior to execution of this Ordering Form available at https://www.neogov.com/service-specifications. Unless otherwise stated, all capitalized terms used but not defined in this Order Form shall have the meanings given to them in the NEOGOV Services Agreement.
2. Effectiveness & Modification. Neither Customer nor NEOGOV will be bound by this Ordering Document until it has been signed by its authorized representative (the “Effective Date”). Unless otherwise stated in this Ordering Document, all SaaS Subscriptions shall commence on the Effective Date. This Ordering Document may not be modified or amended except through a written instrument signed by the parties.
3. Summary of Fees. Listed above is a summary of Fees under this Order. Once placed, your order shall be non-cancelable and the sums paid nonrefundable, except as provided in the Agreement.
4. Order of Precedence. This Ordering Document shall take precedence in the event of direct conflict with the Services Agreement, applicable Schedules, and Service Specifications.

B. Special Conditions (if any).

"Pittsburg, City of (CA)"

Signature: _____

Print Name: _____

Date: _____

SERVICES AGREEMENT

V071423

You agree that by placing an order through a NEOGOV standard ordering document such as an "Order Form", "Service Order," "Ordering Document," "SOW" or other document mutually agreed by the parties detailing the services, pricing and subscription term (each, an "Order Form" for purposes of this Agreement), you agree to follow and be bound by the terms and conditions set forth herein. "Governmentjobs.com", "NEOGOV", "we", and "our" means Governmentjobs.com, Inc. (D/B/A/ NEOGOV), for and on behalf of itself and its subsidiaries PowerDMS, Inc., Cuehit, Inc., Ragnasoft LLC (D/B/A/ PlanIT Schedule), and Design PD, LLC (D/B/A Agency360) (collectively, "NEOGOV" and, where applicable, its other affiliates; "Customer", "you", "your" means the NEOGOV client, customer, and/or the subscriber identified in the Order Form).

"Services Agreement" or the "Agreement" shall be used to collectively refer to this NEOGOV Services Agreement, documents incorporated herein including the applicable Order Form, each Addendum (as applicable), and Special Conditions (if any). "Addendum" means each Addendum set forth either as an Exhibit hereto or otherwise made available at https://www.neogov.com/service-specifications (the "NEOGOV Site") and, as applicable, made a part of this Agreement. "Special Conditions" means individually negotiated variations, amendments and/or additions to this Service Agreement of which are either drafted, or incorporated by reference, into the Order Form.

1. Provision of Services. Subject to the terms of this Agreement NEOGOV hereby agrees to provide Customer with access to its SaaS Applications and Professional Services (each defined below) included or ordered by Customer in the applicable Order Form (collectively referred to as the "Services"). This Agreement entered into as of the earlier of: (i) date of your signature on an applicable Order Form; or (ii) use of the Services commences (the "Effective Date"). The Agreement supersedes any prior and contemporaneous discussions, agreements or representations and warranties.

2. SaaS Subscription.

   a) Subscription Grant. "SaaS Applications" means each proprietary NEOGOV web-based software-as-a-service application that may be set forth on an Order Form and subsequently made available by NEOGOV to Customer, and associated components as described in any written service specifications made available to Customer by NEOGOV (the "Service Specifications"). NEOGOV hereby grants to Customer a limited, non-exclusive, non-transferable, and non-sublicensable right to (i) onboard, access and use, and to permit Authorized Users to onboard, access and use, the SaaS Applications specified in the Order Form solely for Customer's internal, non-commercial purposes; (ii) generate, print, and download Customer Data as may result from any access to or use of the SaaS Applications; and (iii) train Authorized Users in uses of the SaaS Applications permitted hereunder (these rights shall collectively be referred to as the "SaaS Subscription"). "Authorized Users" means (1) Customer employees, agents, contractors, consultants ("Personnel") who are authorized by Customer to access and use the Services under the rights granted to Customer pursuant to this Services Agreement and (2) for whom access to the Services has been purchased hereunder. You shall not exceed the usage limits (if any) as detailed in the user tier in the applicable Order Form.. You may not access the SaaS Applications for purposes of benchmarking or competitive purposes. You shall be responsible for each Authorized User's access to and use of the SaaS Applications and compliance with applicable terms and conditions of this Agreement.

   b) Subscription Term. Unless otherwise specified in an applicable Order Form, SaaS Subscriptions shall commence on the Effective Date and remain in effect for twelve (12) consecutive months, unless terminated earlier in accordance with this Agreement (the "Initial Term"). Thereafter, SaaS Subscriptions shall renew upon mutual agreement of the parties (each a "Renewal Term" and together with the Initial Term, collectively, the "Term"). The Term for the Services is a continuous and non-divisible commitment for the full duration regardless of any invoice schedule. The purchase of any Service is separate from any other order for any other Service. Customer may purchase certain Services independently of other Services. Your obligation to pay for any Service is not contingent on performance of any other Service or delivery of any other Service.

3. Customer Responsibilities. Customer will not, and will ensure its Authorized Users do not (a) make any of the Services available to anyone other than Authorized Users or use any Services for the benefit of anyone other than Customer and its Authorized Users, unless otherwise agreed in writing by the parties, (b) sell, resell, license, sublicense, distribute, make available, rent or lease any of the Services, or include any of the Services in a service bureau or outsourcing offering, unless otherwise agreed in writing by the parties, (c) purposefully or knowingly use the Services to store or transmit infringing, libelous, or otherwise unlawful or tortious material, or to store or transmit material in violation of the privacy rights, publicity rights, copyright rights, or other rights of any person or entity, (d) purposefully or knowingly use the Services to store or transmit code, files, scripts, agents or programs intended to do harm, including, for example, viruses, worms, time bombs and Trojan horses, (e) purposefully or knowingly interfere with or disrupt the integrity or performance of the Services (including, without limitation, activities such as security penetration tests, stress tests, and spamming activity), (f) attempt to gain

unauthorized access to the Services or its related systems or networks, (g) disassemble, reverse engineer, or decompile the Services, or modify, copy, or create derivative works based on the Services or any part, feature, function or user interface thereof, (h) remove the copyright, trademark, or any other proprietary rights or notices included within NEOGOV Intellectual Property and on and in any documentation or training materials, or (i) use the Services in a manner which violates the terms of this Agreement, any Order Form or any applicable laws.

4. Professional Services. "Professional Services" shall mean professional services purchased by Customer as detailed in an applicable Order Form or NEOGOV Scope of Work (SOW) describing the work to be performed, fees, and any applicable milestones, dependencies, and other technical specifications or related information. Professional Services may include training, implementation, and best practices of and concerning the SaaS Applications. Order Forms or SOWs must be signed by Customer before NEOGOV shall commence work. The following terms shall apply to all Professional Services:
   a) Professional Services for initial product implementation or new user training purchased by a new Customer must be utilized within ninety (90) days of the Go-Live date for such products. Training and assessment services purchased by Customers after the Go-Live date must be used within ninety (90) days of the applicable Order Form or SOW, provided that for training related to Insight assessment the training hours must be used within ninety (90) days of the assessment completion date. All Professional Services purchased by Customer must be utilized within twelve (12) months of the date of the applicable Order Form or SOW.
   b) Customer agrees to provide assistance, cooperation, information, equipment, and data reasonably necessary to enable NEOGOV to perform the Professional Services (collectively, "Customer Cooperation"). Customer acknowledges that NEOGOV's ability to provide Professional Services as set forth herein may be affected if Customer does not provide Customer Cooperation.
   c) Each party shall designate a project manager who shall work together with the other party's project manager to facilitate the efficient delivery of the Professional Services.
   d) In order to change the description of Professional Services under a Statement of Work, Customer will submit a written request to NEOGOV specifying the proposed changes in detail and NEOGOV will provide an estimate of the charges and anticipated changes in the delivery schedule that will result from the proposed change. NEOGOV will continue performing the Professional Services in accordance with the applicable Statement of Work until the parties agree in writing on the change in scope of work, scheduling, and fees. NEOGOV shall not be responsible for a delay in the performance of the Services resulting from such change order.

5. Payment Terms.

   a) Fees. Customer shall pay all Subscription, Onboarding and Set-Up fees ("Subscription Fees") and Professional Service fees ("Professional Service Fees", collectively the "Fees") as set forth in an Order Form within thirty (30) days receipt of NEOGOV's invoice. Fees shall be invoiced annually in advance and in a single invoice for each Term. Unless explicitly stated otherwise in an Order Form, all payments due under an Order Form are expressed in and shall be paid in U.S. dollars. Invoices shall be delivered to the stated "Bill To" party on the Order Form. Unless explicitly provided otherwise, once placed the Order Form is non-cancellable and sums paid nonrefundable. If any amount owing by Customer is more than 30 days overdue, NEOGOV may, without limiting its other rights and remedies, suspend the Services until such amounts are paid in full. If Subscription Fees are based upon the Authorized User or employee count as may be specified in an Order Form, NEOGOV shall notify Customer of any potential additional fees and provide Customer an opportunity to bring usage level under compliance within terms of the Order Form. If Customer is unable to promptly comply wither Authorized User or employee counts, Customer and NEOGOV shall agree on additional fees and Customer shall owe NEOGOV supplemental Subscription Fees to the extent Customer exceeds the number of Authorized Users or employees set forth in the Order Form. Except as otherwise specifically stated in the Order Form, NEOGOV may change the charges for the Services with effect from the start of each Renewal Term by providing Customer with new pricing at least ninety (90) day notice prior to commencement of a Renewal Term. The new pricing shall be deemed to be effective if Customer (a) returns an executed Order Form to NEOGOV, or (b) remits payment to NEOGOV of the fees set forth in the invoice referencing the new pricing.

   b) Taxes. Customer will pay all taxes, duties and levies imposed by all federal, state, and local authorities (including, without limitation, export, sales, use, excise, and value-added taxes) based on the transactions or payments under this Agreement, except those taxes imposed or based on NEOGOV's net income or those exempt by applicable state law. Customer shall provide NEOGOV with a certificate or other evidence of such exemption within ten (10) days after the Effective Date of this Agreement and thereafter upon NEOGOV's request therefor.
   c) Purchase Orders. Any reference to a purchase order in an Order Form or any associated invoice is solely for Customer's convenience in record keeping, and no such reference or any delivery of services to Customer following receipt of any purchase order shall be deemed an acknowledgement of or an agreement to any terms or conditions referenced or included in any such purchase order. If a purchase order is delivered by Customer in connection with the purchase of Services, none of the terms and conditions contained in such purchase order shall have any effect or modify or supersede the terms

and conditions of this Agreement. NEOGOV's failure to object to terms contained in any such purchase order shall not be a waiver of the terms set forth in this provision or in this Agreement.

6. Term and Termination.

a) Term. This Agreement shall commence on the Effective Date and shall remain in effect until all SaaS Subscriptions have expired and/or both parties have achieved full performance of Professional Services, unless it is terminated earlier in accordance with this Agreement.

b) Termination for Cause; Either Party may terminate this Agreement immediately if the other is in material breach of this Agreement and such breach is not cured within thirty (30) days following non-breaching party's written specification of the breach. NEOGOV may temporarily suspend the Services immediately in the event the Services or Customer's use of the Services provided hereunder pose a security risk to the Services, NEOGOV or any third party, or become illegal or contrary to any applicable law, rule, regulation, or public policy.

c) Effect of Termination. Upon expiration or any termination of this Agreement, Customer shall cease all use and refrain from all further use of the Services and other NEOGOV Intellectual Property. In the event of termination of the Agreement for any reason, and upon reasonable advance notice, NEOGOV shall promptly make all Customer Data available or accessible to Customer in the format of the database or other such format as may be mutually agreed upon, provided through secure method mutually agreed upon between Customer and NEGOV. Such Customer Data will be provided at no additional cost. Unless otherwise specified, following 90 days after expiration or termination of the Agreement NEOGOV may remove Customer Data from NEOGOV Services and without Customer consent or notice. In the event of Customer's Termination for Cause, Customer shall receive a prorated refund for any unused SaaS Subscriptions.

7. Audit Rights. Upon reasonable notice, NEOGOV or its agent shall have the right to audit Customer's records relating to its compliance with this Agreement. Customer shall cooperate fully with this audit. All expenses, including any costs incurred by Customer associated with any such audit shall be paid by NEOGOV.

8. Maintenance; Modifications; Support Services. \

a) Maintenance, Updates, Upgrades. NEOGOV maintains NEOGOV's hardware and software infrastructure for the Services and is responsible for maintaining the NEOGOV server operation and NEOGOV database security. NEOGOV may in its sole discretion, periodically modify, Update, and Upgrade the features, components, and functionality of the Services during the Term. "Update" means any update, bug fix, patch or correction of the Services or underlying NEOGOV software that NEOGOV makes generally available to its customers of the same module, excluding Upgrades. Updates are automatic and available upon Customer's next login to the Services following an Update at no additional cost to Customer. "Upgrade" means any update of the Services or underlying NEOGOV software such as platform updates, and major product enhancements and/or new features that NEOGOV makes commercially available. NEOGOV shall have no obligation to provide Upgrades to customers and retains the right to offer Upgrades free of cost or on a per customer basis at additional cost. NEOGOV shall have no liability for, or any obligations to, investments in, or modifications to Customer's hardware, systems or other software which may be necessary to use or access the Services due to a modification, Update, or Upgrade of the Services.

b) Program Documentation; Training Materials. "Program Documentation" shall mean all user guides, training, and implementation material, and Service descriptions provided by NEOGOV to Customer in connection with the Services. NEOGOV hereby grants to Customer a non-exclusive, non-sublicensable, non-transferable license to use, print, and distribute internally via non-public platforms, the Program Documentation during the Term solely for Customer's internal business purposes in connection with its use of the Services. Primary training of NEOGOV Services is conducted by self-review of online materials. NEOGOV's pre-built, online training consists of a series of tutorials to introduce the standard features and functions (the "Training Materials"). The Training Materials may be used as reference material by Customer Personnel conducting day-to-day activities.

c) Implementation. For Services requiring implementation, NEOGOV implementation supplements the Training Materials and is conducted off-site unless otherwise agreed in the Order Form. . The length of the implementation time is dependent on the type of Service and the Customer's responsiveness. NEOGOV is not responsible or liable for any delay or failure to perform implementation caused in whole or in part by Customer's delay in performing its obligations hereunder and,

in the event of any such delay, NEOGOV may, in its sole discretion, extend all performance dates as NEOGOV deems reasonably necessary.

d) Support. Phone support for the Services is available to Customer Monday through Friday, excluding NEOGOV holidays. Customer may submit a request for online support for the Services 24 hours a day, seven days a week, and the NEOGOV support desk will acknowledge receipt of the request within a reasonable time. The length of time for a resolution of any problem is dependent on the type of case.

e) Limitations. Unless otherwise specified in the Order Form, this Agreement does not obligate NEOGOV to render any maintenance or support services that are not expressly provided herein, including, but not limited to data uploads, manual data entry, migration services, data conversion, refinement, purification, reformatting, SQL dump, or process consultation.

9. NEOGOV Intellectual Property. NEOGOV shall exclusively own all right, title and interest in and to all pre-existing and future intellectual property developed or delivered by NEOGOV including all Services, products, systems, software (including any source code or object code) or Service Specifications related thereto, Updates or Upgrades, trademarks, service marks, logos and other distinctive brand features of NEOGOV and all proprietary rights embodied therein (collectively, the "NEOGOV Intellectual Property"). This Agreement does not convey or transfer title or ownership of the NEOGOV Intellectual Property to Customer or any of its users. All rights not expressly granted herein are reserved by NEOGOV. Other than recommendation use or as required by law, all use of NEOGOV trademarks must be pre-approved by NEOGOV prior to use. Trademarks shall include any word, name, symbol, color, designation or device, or any combination thereof that functions as a source identifier, including any trademark, trade dress, service mark, trade name, logo, design mark, or domain name, whether or not registered.

10. Data Processing and Privacy.

a) Customer Data. "Customer Data" shall mean all data that is owned or developed by Customer, whether provided to NEOGOV by Customer or provided by a third party to NEOGOV in connection with NEOGOV's provision of Services to Customer, including Personnel data collected, loaded into, or located in Customer data files maintained by NEOGOV. NEOGOV Intellectual Property, including but not limited to the Services and all derivative works thereof, NEOGOV Confidential Information, and Platform Data do not fall within the meaning of the term "Customer Data". Customer exclusively owns all right, title, and interest in and to all Customer Data. Customer grants NEOGOV a license to host, use, process, display, create non-personal derivative works of, and transmit Customer Data to provide the Services. NEOGOV reserves the right to disable Customer Data stored, transmitted or published by Customer using the Services upon receipt of a bona fide notification that such content infringes upon the intellectual property rights of others, or if NEOGOV otherwise reasonably believes any such content is in violation of this Agreement.

b) Platform Data. "Platform Data" shall mean any anonymized data reflecting the access to or use of the Services by or on behalf of Customer or any user, including statistical or other analysis and performance information related to the provision and operation of the Services including any end user visit, session, impression, clickthrough or click stream data, as well as log, device, transaction data, or other analysis, information, or data based on or derived from any of the foregoing. NEOGOV shall exclusively own all right, title and interest in and to all Platform Data. Customer acknowledges NEOGOV may compile Platform Data based on Customer Data input into the Services. Customer agrees that NEOGOV may use Platform Data to the extent and in the manner permitted under applicable law. Such anonymized data neither identifies Customer or its users, nor can Customer or any its users can be derived from such data.

c) Data Processing Agreement. To the extent Customer uses the Services to target and collect personal information from users located in the European Union, European Economic Area, or Switzerland (the "EU") or the United Kingdom ("UK"), or has Authorized Users accessing the Services from the EU or UK, the terms of the NEOGOV Data Processing Addendum ("DPA") made available on the NEOGOV Site is hereby incorporated herein by reference and made part of this Agreement.

d) Data Responsibilities.

i) NEOGOV will maintain administrative, physical, and technical safeguards for protection of the security, confidentiality and integrity of the Customer Data. Those safeguards will include, but will not be limited to, measures for preventing access, use, modification or disclosure of Customer Data by NEOGOV personnel except (a) to provide the Services and prevent or address service or technical problems, (b) as compelled by applicable law, or (c) as Customer expressly permits in writing. Customer acknowledges and agrees that it is commercially reasonable for NEOGOV to rely upon the security processes and measures utilized by NEOGOV's cloud infrastructure providers.

ii) Customer is solely responsible for the development, content, operation, maintenance, and use of Customer Data, including but not limited to compliance with applicable laws. NEOGOV will have no responsibility or liability for the accuracy of the Customer Data prior to receipt of such data into the Services. Without limiting the foregoing, Customer shall be solely responsible for and shall comply with all applicable laws and regulations relating to (a) the accuracy and completeness of all information input, submitted, or uploaded to the Services, (b) the privacy of users of the Services, including, without limitation, providing appropriate notices to and obtaining appropriate consents from any individuals to whom Customer Data relates; and (c) the collection, use, modification, alteration, extraction, retention, copying, external storage, disclosure, transfer, disposal, and other processing of any Customer Data. NEOGOV is not responsible for lost data caused by the action or inaction of Customer or Authorized Users. Unless otherwise mutually agreed in writing, Customer shall not knowingly maintain any financial, health, payment card, or similarly sensitive data that imposes specific data security or data protection obligations within the Services. Customer shall provide and institute industry standard tools and procedures required to ensure the security of its own information system and, more specifically, to prevent, detect and destroy the occurrence of any viruses.

e) Breach Notice. NEOGOV will notify Customer of unauthorized access to, or unauthorized use, loss or disclosure of Customer Data within its custody and control (a "Security Breach") within 72 hours of NEOGOV's confirmation of the nature and extent of the same or when required by applicable law, whichever is earlier. Each party will reasonably cooperate with the other with respect to the investigation and resolution of any Security Breach. If applicable law or Customer's policies require notification of its Authorized Users or others of the Security Breach, at Customer's request NEOGOV shall be responsible for such notification. Subject to the limitations set forth in Section 15 below, in the event of a Security Breach which is attributable to NEOGOV's breach of this Section 10, NEOGOV shall provide a minimum of one (1) year of credit monitoring service for all affected Authorized Users..

f) Data Export, Retention and Destruction. Customer may export or delete Customer Data from the Services at any time during a Subscription Term, using the existing features and functionality of the Services. Customer is solely responsible for its data retention obligations with respect to Customer Data. If and to the extent Customer cannot export or delete Customer Data stored on NEOGOV's systems using the then existing features and functionality of the Services, NEOGOV will, upon Customer's written request, make the Customer Data available for export by Customer or destroy the Customer Data. If Customer requires the Customer Data to be exported in a different format than provided by NEOGOV, such additional services will be subject to a separate agreement on a time and materials basis. Except as otherwise required by applicable law, NEOGOV will have no obligation to maintain or provide any Customer Data more than ninety (90) days after the expiration or termination of this Agreement. Customer acknowledges that it is solely responsible for determining any retention requirements with respect to the Customer Data as required by applicable law and NEOGOV disclaims all liability in connection with such determination. In addition, to the extent Customer requests that NEOGOV retain Customer Data beyond the expiration of the retention period required by applicable law, rule or regulation, NEOGOV disclaims all liability in in connection with retaining such Customer Data including but not limited to any claims related to loss or destruction of such Customer Data.

11. Third Party Services. The Services may permit Customer and its Authorized Users to access services or content provided by third parties through the Services ("Third Party Services"). Customer agrees that NEOGOV is not the original source and shall not be liable for any inaccuracies contained in any content provided in any of the Third Party Services. NEOGOV makes no representations, warranties or guarantees with respect to the Third Party Services or any content contained therein. NEOGOV may discontinue access to any Third Party Services through the Services if the relevant agreement with the applicable third party no longer permits NEOGOV to provide such access. If loss of access to any Third Party Services (to which Customer has a subscription under this Agreement) occurs during a Subscription Term, NEOGOV will refund to Customer any prepaid fees for such Third Party Services covering the remainder of the Subscription Term.

12. Nondisclosure.

a) Definition of Confidential Information. "Confidential Information" means all information disclosed by a party ("Disclosing Party") to the other party ("Receiving Party"), whether orally or in writing, that is designated as confidential or that reasonably should be understood to be confidential given the nature of the information and the circumstances of disclosure. Customer's Confidential Information includes its Customer Data. NEOGOV Confidential Information includes the NEOGOV Intellectual Property and the Services. The Confidential Information of each party includes business and marketing plans, technology and technical information, product plans and designs, and business processes disclosed by such party. However, Confidential Information does not include any information that (a) is or becomes generally known to the public without breach of any obligation owed to the Disclosing Party, (b) was known to the Receiving Party prior to its disclosure by the Disclosing Party without breach of any obligation owed to the Disclosing Party, (c) is received from a third party without breach of any obligation owed to the Disclosing Party, (d) was

independently developed by the Receiving Party, or e) information subject to disclosure under applicable public records laws.

b) Obligations. The Receiving Party will: (i) use the same degree of care it uses to protect the confidentiality of its own confidential information of like kind (but not less than reasonable care); (ii) not use any Confidential Information of the Disclosing Party for any purpose outside the scope of this Agreement and (iii) except as otherwise authorized by the Disclosing Party in writing, limit access to Confidential Information of the Disclosing Party to those of its employees and contractors who need access for purposes consistent with this Agreement and who have signed confidentiality agreements with the Receiving Party containing protections not less protective of the Confidential Information than those herein.

c) Exceptions. The Receiving Party may disclose Confidential Information of the Disclosing Party to the extent compelled by law to do so, provided the Receiving Party gives the Disclosing Party prior notice of the compelled disclosure (to the extent legally permitted) and reasonable assistance, at the Disclosing Party's cost, if the Disclosing Party wishes to contest the disclosure.

d) Equitable Relief. The parties recognize and agree there is no adequate remedy at law for breach of the provisions of the confidentiality obligations set forth in this Section 12, that such a breach would irreparably harm the Disclosing Party and the Disclosing Party is entitled to seek equitable relief (including, without limitation, an injunction) with respect to any such breach or potential breach in addition to any other remedies available to it at law or in equity.

13. Representations, Warranties, and Disclaimers.

a) Mutual Representations. Each party represents and warrants to the other party that (i) it has full power and authority under all relevant laws and regulations and is duly authorized to enter into this Agreement; and (ii) to its knowledge, the execution, delivery and performance of this Agreement by such party does not conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, nor violate any law or regulation of any court, governmental body or administrative or other agency having jurisdiction over it.

b) Service Performance Warranty. NEOGOV warrants that a) it provides the Services using a commercially reasonable level of care and skill and in a professional manner in accordance with generally recognized industry standards for similar services. (b) it will perform the Services in a manner that complies with all applicable laws and regulations, and (c) when City requirements are included in an SOW, NEOGOV shall provide all Services and Work Products to comply with identified functional requirements.

c) In the event that any Service fails to conform to the foregoing warranty in any material respect, NEOGOV will, at its expense, promptly use commercially reasonable efforts to cure or correct such failure. In the event of NEOGOV's failure to remedy the deficiency, the City shall be entitled to terminate the affected Service and NEOGOV shall refund the City for any fees paid for such Service subject to the warranty claim or whose benefit to the City was materially impacted by the warranty claim for the period following such termination.

d) No Other Warranty. EXCEPT FOR THE EXPRESS WARRANTIES SET FORTH IN THIS WARRANTY SECTION, THE SERVICES ARE PROVIDED ON AN "AS IS" BASIS, AND CUSTOMER'S USE OF THE SERVICES IS AT ITS OWN RISK. NEOGOV DOES NOT MAKE, AND HEREBY DISCLAIMS, ANY AND ALL OTHER EXPRESS AND/OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, , AND ANY WARRANTIES ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE. NEOGOV DOES NOT WARRANT THAT THE SERVICES WILL BE UNINTERRUPTED, ERROR-FREE, OR COMPLETELY SECURE, OR THAT ANY ERROR WILL BE CORRECTED.

e) Disclaimer of Actions Caused by and/or Under the Control of Third Parties. NEOGOV DOES NOT AND CANNOT CONTROL THE FLOW OF DATA TO OR FROM THE NEOGOV SYSTEM AND OTHER PORTIONS OF THE INTERNET. SUCH FLOW DEPENDS IN LARGE PART ON THE PERFORMANCE OF INTERNET SERVICES PROVIDED OR CONTROLLED BY THIRD PARTIES. AT TIMES, ACTIONS OR INACTIONS OF SUCH THIRD PARTIES CAN IMPAIR OR DISRUPT CUSTOMER'S CONNECTIONS TO THE INTERNET (OR PORTIONS THEREOF). ALTHOUGH NEOGOV WILL USE COMMERCIALLY REASONABLE EFFORTS TO TAKE ALL ACTIONS IT DEEMS APPROPRIATE TO REMEDY AND AVOID SUCH EVENTS, NEOGOV CANNOT GUARANTEE THAT SUCH EVENTS WILL NOT OCCUR. ACCORDINGLY, NEOGOV DISCLAIMS ANY AND ALL LIABILITY RESULTING FROM OR RELATED TO SUCH EVENTS OR WITH RESPECT TO ANY THIRD PARTY SERVICES.

f) No Medical Advice. Through certain Services, NEOGOV may make certain telehealth related information available to Customer and/or facilitate user access to telemedicine, expert medical services, and/or emergency medical services. NEOGOV is independent from healthcare providers who provide telemedicine services and is not responsible for such healthcare providers' acts, omissions or for any content or communications made by them. The Services do not provide medical advice and do not create a healthcare provider/patient relationship between Customer and NEOGOV or otherwise. Any Services, or content accessed from the Services, are for informational purposes only and do not constitute medical advice. Customer should seek professional medical advice, diagnosis, and/or treatment for any and all medical conditions, whether as a result of using Services or otherwise. NEOGOV IS NOT RESPONSIBLE OR LIABLE FOR ANY ADVICE, COURSE OF TREATMENT, DIAGNOSIS OR ANY OTHER TREATMENT OR INFORMATION THAT CUSTOMER OR ITS USERS MAY OBTAIN THROUGH THE USE OF THE SERVICES.

14. Indemnification.

a) Customer Indemnity. To the extent permitted by applicable law, Customer will defend and indemnify NEOGOV from and against any claim, demand, suit or proceeding made or brought against NEOGOV (i) by a third party alleging that any Customer Data infringes or misappropriates such third party's intellectual property rights, (ii) in connection with Customer's violation of any applicable laws, or (iii) any claim or allegation by any third party resulting from or related to Customer's or any of its Authorized User's breach of Section 3 of this Agreement.

b) NEOGOV General Indemnity. NEOGOV agrees to indemnify, defend, and hold harmless Customer, its agents, officials, and employees from all third party claims and suits including court costs, attorney's fees and other expenses caused by (i) the gross negligence or willful misconduct of NEOGOV, and (ii) any act or omission by NEOGOV in connection with this Agreement which results in death, bodily injury or damage to tangible personal property.

c) NEOGOV Intellectual Property Indemnity. Subject to subsections 14(b)(i) through 14(b)(iii) and 14(c) of this Section, if a third party makes a claim against Customer that any NEOGOV intellectual property furnished by NEOGOV and used by Customer infringes a third party's intellectual property rights, NEOGOV will defend the Customer against the claim and indemnify the Customer from the damages and liabilities awarded by the court to the third-party claiming infringement or the settlement agreed to by NEOGOV.

i) Alternative Resolution. If NEOGOV believes or it is determined that any of the Services may have violated a third party's intellectual property rights, NEOGOV may choose to either modify the Services to be non-infringing or obtain a license to allow for continued use. If these alternatives are not commercially reasonable, NEOGOV may end the subscription or license for the Services and refund a pro-rata portion of any fees covering the whole months that would have remained, absent such early termination, following the effective date of such early termination.

ii) No Duty to Indemnify. NEOGOV will not indemnify Customer if Customer alters the Service or Service Specifications, or uses it outside the scope of use or if Customer uses a version of the Service or Service Specifications which has been superseded, if the infringement claim could have been avoided by using an unaltered current version of the Services or Service Specifications which was provided to Customer, or if the Customer continues to use the infringing material after the subscription expires. NEOGOV will not indemnify the Customer to the extent that an infringement claim is based upon any information, design, specification, instruction, software, data, or material not furnished by NEOGOV. NEOGOV will not indemnify Customer for any portion of an infringement claim that is based upon the combination of Service or Service Specifications with any products or services not provided by NEOGOV. NEOGOV will not indemnify Customer for infringement caused by Customer's actions against any third party if the Services as delivered to Customer and used in accordance with the terms of the Agreement would not otherwise infringe any third-party intellectual property rights.

iii) Exclusive Remedy. This Section provides the exclusive remedy for any intellectual property infringement claims or damages against NEOGOV.

d) Indemnification Procedures. In order to receive the indemnities described hereunder, the indemnified party must: (i) promptly notify the indemnifying party, in writing, of any claim; (ii) cooperate reasonably with indemnifying party, at the indemnifying party's expense, in the defense and/or settlement thereof; and (iii) allow the indemnifying party to control the defense and/or settlement thereof except that the indemnifying party may not, without the indemnified party's prior written consent, enter into any settlement that does not unconditionally release the indemnified party from liability. The indemnified party shall have the right to participate in any defense of a claim and/or to be represented by counsel of its own choosing at its own expense, provided that ultimate control of such defense shall remain solely with the indemnifying party.

15. Limitations of Liability.

a) EXCLUSION OF DAMAGES. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT WILL EITHER PARTY BE LIABLE UNDER OR IN CONNECTION WITH THIS AGREEMENT OR ITS SUBJECT MATTER UNDER ANY LEGAL OR EQUITABLE THEORY, INCLUDING BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, AND OTHERWISE, INCLUDING FOR ANY: (a) LOSS OF PRODUCTION, USE, BUSINESS, REVENUE, OR PROFIT OR DIMINUTION IN VALUE; (b) IMPAIRMENT, INABILITY TO USE OR LOSS, INTERRUPTION OR DELAY OF THE SERVICES; (c) LOSS, DAMAGE, CORRUPTION OR RECOVERY OF DATA, OR BREACH OF DATA OR SYSTEM SECURITY; (d) COST OF REPLACEMENT GOODS OR SERVICES; (e) LOSS OF GOODWILL, LOSS OF BUSINESS OPPORTUNITY OR PROFIT, OR LOSS OF REPUTATION; OR (f) CONSEQUENTIAL, INCIDENTAL, INDIRECT, EXEMPLARY, SPECIAL, ENHANCED, OR PUNITIVE DAMAGES, REGARDLESS OF WHETHER SUCH PERSONS WERE ADVISED OF THE POSSIBILITY OF SUCH LOSSES OR DAMAGES OR SUCH LOSSES OR DAMAGES WERE OTHERWISE FORESEEABLE, AND NOTWITHSTANDING THE FAILURE OF ANY AGREED OR OTHER REMEDY OF ITS ESSENTIAL PURPOSE.

b) CAP ON MONETARY LIABILITY. EXCEPT FOR DAMAGES ARISING OUT OF LIABILITY WHICH CANNOT BE LAWFULLY EXCLUDED OR LIMITED, NEOGOV's INDEMNIFICATION OBLIGATIONS UNDER THIS AGREEMENT, NEOGOV's GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, NEOGOV's BREACH OF SECTION 10 OF THIS AGREEMENT OR CUSTOMER'S OBLIGATIONS TO MAKE PAYMENT UNDER THIS AGREEMENT, THE TOTAL AGGREGATE LIABILITY OF EITHER PARTY FOR ANY AND ALL CLAIMS AGAINST THE OTHER PARTY UNDER THIS AGREEMENT, WHETHER ARISING UNDER OR RELATED TO BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, OR ANY OTHER LEGAL OR EQUITABLE THEORY, SHALL NOT EXCEED THE AMOUNT OF ALL PAYMENTS ACTUALLY RECEIVED BY NEOGOV FROM CUSTOMER IN CONNECTION WITH THIS AGREEMENT IN THE 12 MONTH PERIOD PRECEDING THE DATE OF THE EVENT INITIALLY GIVING RISE TO SUCH LIABILITY, OR $100,000, WHICHVER IS GREATER. WITH RESPECT TO NEOGOV'S BREACH OF SECTION 10 OF THIS AGREEMENT, THE TOTAL AGGREGATE LIABILITY OF NEOGOV FOR ANY AND ALL CLAIMS AGAINST IT UNDER THIS AGREEMENT, WHETHER ARISING UNDER OR RELATED TO BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, OR ANY OTHER LEGAL OR EQUITABLE THEORY, SHALL NOT EXCEED THE AMOUNT OF ALL PAYMENTS ACTUALLY RECEIVED BY NEOGOV FROM CUSTOMER IN CONNECTION WITH THIS AGREEMENT IN THE 24 MONTH PERIOD PRECEDING THE DATE OF THE EVENT INITIALLY GIVING RISE TO SUCH LIABILITY, OR $200,000, WHICHEVER IS GREATER. THE EXISTENCE OF ONE OR MORE CLAIMS WILL NOT ENLARGE THESE LIMITS.

16. Reimbursement of Costs in Third Party Litigation. With respect to any litigation or other court proceeding involving Customer and a third party, if any subpoena or other legally binding request related to such litigation or court proceeding is served to NEOGOV requesting copies of documents maintained by NEOGOV or otherwise requesting NEOGOV to appear as a witness in any capacity or provide testimony with respect to Customer's documentation,

17. Text Message Communications. NEOGOV may offer Personnel the opportunity to receive text messages regarding job application or hiring process reminders, applicant status updates, or other human resource related notices. Since these text message services depend on the functionality of third-party providers, there may be technical delays on the part of those providers. NEOGOV may make commercially reasonable efforts to provide alerts in a timely manner with accurate information, but cannot guarantee the delivery, timeliness, or accuracy of the content of any alert. NEOGOV shall not be liable for any delays, failure to deliver, or misdirected delivery of any alert; for any errors in the content of an alert; or for any actions taken or not taken by you or any third party in reliance on an alert. NEOGOV cannot vouch for the technical capabilities of any third parties to receive such text messages. To the extent you utilize text messaging features, NEOGOV shall not be responsible for your use of such features, and you shall indemnify NEOGOV with respect to any damages resulting from your use including but not limited any violations of applicable law. NEOGOV MAKES NO WARRANTIES OR REPRESENTATIONS OF ANY KIND, EXPRESS, STATUTORY, OR IMPLIED AS TO: (i) THE AVAILABILITY OF TELECOMMUNICATION SERVICES; (ii) ANY LOSS, DAMAGE, OR OTHER SECURITY INTRUSION OF THE TELECOMMUNICATION SERVICES; AND (iii) ANY DISCLOSURE OF INFORMATION TO THIRD PARTIES OR FAILURE TO TRANSMIT ANY DATA, COMMUNICATIONS, OR SETTINGS CONNECTED WITH THE SERVICES.

18. Publicity. Unless otherwise provided in the applicable Order Form, NEOGOV may identify Customer as one of its customers and use Customer's logo for such purposes, subject to any trademark usage requirements specified by Customer.

19. Force Majeure. Except for Customer's payment obligations to NEOGOV, neither party shall be liable for any damages, costs, expenses or other consequences incurred by the other party or by any other person or entity for any act, circumstance, event,

impediment or occurrence beyond such party's reasonable control, including, without limitation: (a) acts of God; (b) changes in or in the interpretation of any law, rule, regulation or ordinance; (c) strikes, lockouts or other labor problems; (d) transportation delays; (e) unavailability of supplies or materials; (f) fire or explosion; (g) riot, pandemic, military action or usurped power; (h) actions or failures to act on the part of a governmental authority; (i) wide-spread internet service interruptions or slowdowns, vandalism or cyber-attacks, or (j) any other cause beyond the reasonable control of such party.

20. Independent Contractor; No Third Party Beneficiary; Fulfillment Partners. The relationship of the parties shall be deemed to be that of an independent contractor and nothing contained herein shall be deemed to constitute a partnership between or a joint venture by the parties hereto or constitute either party the employee or agent of the other. Customer acknowledges that nothing in this Agreement gives Customer the right to bind or commit NEOGOV to any agreements with any third parties. This Agreement is not for the benefit of any third party and shall not be deemed to give any right or remedy to any such party whether referred to herein or not. NEOGOV may designate any third-party affiliate, or other agent or subcontractor (each a "Fulfillment Partner"), without notice to, or the consent of, Customer, to perform such tasks and functions to complete any Services.

21. Entire Agreement; Amendment; Addendum. This Services Agreement, the Exhibits hereto, each Addendum (as may be applicable pursuant to the terms therein) and documents incorporated herein, the applicable Order Form, and Special Conditions (if any) constitute the entire agreement between the parties with respect to the subject matter hereof and supersede all prior or contemporaneous oral and written statements of any kind whatsoever made by the parties with respect to such subject matter. It is expressly agreed that the terms of this Agreement and any NEOGOV Order Form shall supersede the terms in any non-NEOGOV purchase order or other ordering document. Notwithstanding the foregoing, any conflict of terms shall be resolved by giving priority in accordance with the following order: 1) Special Conditions (if any), 2) NEOGOV Order Form, 3) the NEOGOV Services Agreement, and 4) incorporated documents (including the Exhibits and each applicable Addendum and any Statement of Work). This Agreement supersedes the terms and conditions of any clickthrough agreement associated with the Services. This Agreement may not be modified or amended (and no rights hereunder may be waived) except through a written instrument signed by the parties to be bound. If you are subscribing for the HRIS or PowerEngage Platform, you hereby specifically agree to the terms of the applicable Addendum set forth on the NEOGOV Site.

22. General.
    a) Governing Law and Venue. This Agreement shall be governed by and construed in accordance with the laws of the state of California, without giving effect to conflict of law rules. Any legal action or proceeding relating to this Agreement shall be instituted only in any state or federal court in Los Angeles, California.

    b) Severability. If any provision of this Agreement is held to be illegal or unenforceable, such provision shall be limited or eliminated to the minimum extent necessary so that the remainder of this Agreement will continue in full force and effect. Provisions that survive termination or expiration are those relating to, without limitation, accrued rights to payment, acknowledgements and reservations of proprietary rights, confidentiality obligations, warranty disclaimers, and limitations of liability, and others which by their nature are intended to survive.

    c) Notices. All notices or other communications required or permitted hereunder shall be in writing and shall be deemed to have been duly given either when personally delivered, one (1) business day following delivery by recognized overnight courier or electronic mail, or three (3) business days following deposit in the U.S. mail, registered or certified, postage prepaid, return receipt requested. All such communications shall be sent to (i) Customer at the address set forth in the Order Form and (ii) NEOGOV at the address specified in the applicable Order Form.

    d) Waiver. The waiver, express or implied, by either party of any breach of this Agreement by the other party will not waive any subsequent breach by such party of the same or a different kind. This Agreement may be executed in two or more counterparts, each of which will be deemed an original, but all of which taken together shall constitute one and the same instrument.

    e) Electronic Delivery. Delivery of a copy of this Agreement or an Order Form bearing an original signature by electronic mail or by any other electronic means will have the same effect as physical delivery of the paper document bearing the original signature.

    f) Assignment. Customer may not assign this Agreement without the express written approval of NEOGOV Any attempt at assignment in violation of this Section shall be null and void.

    g) Construction. The parties intend this Agreement to be construed without regard to any presumption or rule requiring construction or interpretation against the party drafting an instrument or causing any instrument to be drafted. The exhibits, addendum, schedules, attachments, and appendices referred to herein are an integral part of this Agreement to the same extent as if they were set forth verbatim herein.

h) Subcontractors. For purposes of this Agreement, including any subsequent documentation requested by Customer pursuant to this Agreement, subcontractors are those specifically hired to provide to NEOGOV some or all of the services that are the subject of this Agreement and who will have access to Customer personal data, and does not include the general provision of services or utilities which are also provided to NEOGOV's other customers as well as Customer. To the extent that NEOGOV intends to utilize any subcontractor specifically for the Services provided to Customer, NEOGOV shall promptly notify Customer and obtain Customer's approval prior to such use.

i) Conflict of Interest. NEOGOV may serve other clients, but none whose activities within the corporate limits of City or whose business, regardless of location, would place NEOGOV in a "conflict of interest," as that term is defined in the Political Reform Act, codified at California Government Code Section 81000 et seq. NEOGOV shall not employ any City official in the work performed pursuant to this Agreement. No officer or employee of City shall have any financial interest in this Agreement that would violate California Government Code Sections 1090 et seq.

j) Records. NEOGOV shall maintain any and all records or documents evidencing or relating to charges for services or expenditures and disbursements charged to the City under this Agreement for a minimum of 3 years, or for any longer period required by law, from the date of final payment to NEOGOV to this Agreement. All such records shall be maintained in accordance with generally accepted accounting principles and shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of the City. Pursuant to Government Code Section 8546.7, the Agreement may be subject to the examination and audit of the State Auditor for a period of 3 years after final payment under the Agreement.

k) Nondiscrimination and Equal Opportunity. NEOGOV shall not discriminate, on the basis of a person's race, religion, color, national origin, age, physical or mental handicap or disability, medical condition, genetic information, marital status, sex, sexual orientation, gender or gender identity, against any employee, applicant for employment, subcontractor, bidder for a subcontract, or participant in, recipient of, or applicant for any services or programs provided by NEOGOV under this Agreement. NEOGOV shall comply with all applicable federal, state, and local laws, policies, rules, and requirements related to equal opportunity and nondiscrimination in employment, contracting, and the provision of any services that are the subject of this Agreement, including but not limited to the satisfaction of any positive obligations required of NEOGOV thereby.

l) Licenses and Permits. NEOGOV represents and warrants to City that NEOGOV and its employees, agents, and any subcontractors have, and will maintain at their sole cost and expense, all licenses, permits, qualifications, and approvals of whatsoever nature that are legally required to practice their respective professions. In addition to the foregoing, NEOGOV and any subcontractors shall obtain and maintain during the term of this Agreement valid business licenses from City.

m) Consultant Not an Agent. Except as City may specify in writing, NEOGOV shall have no authority, express or implied, to act on behalf of City in any capacity whatsoever as an agent. NEOGOV shall have no authority, express or implied, pursuant to this Agreement to bind City to any obligation whatsoever.

n) Insurance. Before beginning any services under this Agreement, NEOGOV, at its own cost and expense, shall procure the types and amounts of insurance specified herein and maintain that insurance throughout the term of this Agreement. NEOGOV shall be fully responsible for the acts and omissions of its subcontractors or other agents.

   i) Workers' Compensation. NEOGOV shall, at its sole cost and expense, maintain Statutory Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed directly or indirectly by NEOGOV in the amount required by applicable law. The requirement to maintain Statutory Workers' Compensation and Employer's Liability Insurance may be waived by the City upon written verification that NEOGOV is a sole proprietor and does not have any employees and will not have any employees during the term of this Agreement.
   ii) Commercial General and Automobile Liability Insurance.
      (1) General requirements. NEOGOV, at its own cost and expense, shall maintain commercial general and automobile liability insurance for the term of this Agreement in an amount not less than $1,000,000 per occurrence and $3,000,000 aggregate, combined single limit coverage for risks associated with the work contemplated by this Agreement.
      (2) Minimum scope of coverage. Commercial general coverage shall be at least as broad as Insurance Services Office Commercial General Liability occurrence form CG 0001 (most recent edition) covering comprehensive General Liability on an "occurrence" basis.

(3) Additional requirements. Each of the following shall be included in the insurance coverage or added as a certified endorsement to the policy:
   (a) The Commercial General and Automobile Liability Insurance shall cover on an occurrence basis.
   (b) City, its officers, officials, employees, agents, and volunteers shall be covered as additional insureds for liability arising out of work or operations on behalf of NEOGOV, including materials, parts, or equipment furnished in connection with such work or operations; or automobiles, leased, hired, or borrowed by NEOGOV. Coverage can be provided in the form of an endorsement to NEOGOV's insurance.
   (c) For any claims related to this Agreement or the work hereunder, NEOGOV's insurance covered shall be primary insurance as respects the City, its officers, officials, employees, agents, and volunteers. Any insurance or self-insurance maintained by the City, its officers, officials, employees, agents or volunteers shall be excess of NEOGOV's insurance and non-contributing.
   (d) The policy shall cover inter-insured suits and include a "separation of Insureds" or "severability" clause which treats each insured separately.
   (e) NEOGOV agrees to give at least 30 days prior written notice to City before coverage is canceled or modified as to scope or amount unless replaced by a policy with equal or better coverage.

iii) Professional Liability Insurance.
   (1) General requirements. NEOGOV, at its own cost and expense, shall maintain for the period covered by this Agreement professional liability insurance for licensed professionals performing work pursuant to this Agreement in an amount not less than $1,000,000 per occurrence or claim covering NEOGOV's errors and omissions.
   (2) Claims-made limitations. The following provisions shall apply if the professional liability coverage is written on a claims-made form:
      (a) The retroactive date of the policy must be shown and must be before the date of the Agreement.
      (b) Insurance must be maintained and evidence of insurance must be provided for at least three (3) years after completion of the Agreement or the work.
      (c) If coverage is canceled or not renewed and it is not replaced with another claims-made policy form with a retroactive date that precedes the date of this Agreement, NEOGOV must purchase an extended period coverage for a minimum of three (3) years after completion of work under this Agreement.

iv) All Policies Requirements.
   (1) Submittal Requirements. NEOGOV shall submit the following to City prior to beginning services:
      (a) Certificate of Liability Insurance in the amounts specified in this Agreement; and
      (b) Additional Insured Endorsement as required for the General Commercial and Automobile Liability Polices.
   (2) Acceptability of Insurers. All insurance required by this Agreement is to be placed with insurers with a Bests' rating of no less than A:VII.
   (3) Wasting Policies. No policy required herein shall include a "wasting" policy limit (e.g. limit that is eroded by the cost of defense).
   (4) Waiver of Subrogation. NEOGOV hereby agrees to waive subrogation which any insurer or contractor may require from NEOGOV by virtue of the payment of any loss. NEOGOV agrees to obtain any endorsements that may be necessary to effect this waiver of subrogation, but this provision applies regardless of whether or not the City has received a waiver of subrogation endorsement from the insurer.

The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by NEOGOV, its employees, agents, and subcontractors.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their respective duly authorized officers as of the date set forth below, and consent to the Agreement.

Customer	**GovermentJobs.com, Inc. (D/B/A/ NEOGOV), on behalf of itself and its subsidiaries PowerDMS, Inc., Cuehit, Inc., Ragnasoft LLC (D/B/A/ PlanIT Schedule), and Design PD, LLC (D/B/A Agency360)**
Entity Name:	

Signature: _____	Signature: _____
Print Name:	Print Name:
Date:	Date:

Exhibit A
Government Customer Addendum

If Customer is a Government Customer, the following Government Customer Addendum ("Government Addendum") forms part of the Services Agreement, and in the case of any conflict or inconsistency between the terms and provisions of this Addendum and any other provision of the Services Agreement, the terms of this Government Addendum shall control. For purposes hereof, a "Government Customer" means a Customer which is a (a) U.S. Federal agency, (b) state government, agency, department, or political subdivision (including a city, county or municipal corporation), or (c) instrumentality of any of the foregoing (including a municipal hospital or municipal hospital district, police or fire department, public library, park district, state college or university, Indian tribal economic development organization, or port authority).

1. **Applicability**. The provisions of this Addendum shall apply only if Customer is a Government Customer under the Services Agreement.

2. **Termination for Non-Appropriation of Funds**. Customer has the right to terminate the Services Agreement following the initial year of the Term at no additional cost and with no penalty by giving prior written notice documenting the lack of funding for the subsequent year in the event Customer's governing body does not appropriate funding for the Services Agreement. Customer will provide at least thirty (30) days advance written notice of such termination. It is expressly agreed that Customer shall not activate this non-appropriation provision for its convenience or to circumvent the requirements of this Agreement.
3.
4. **Indemnification**. If Customer is prohibited by federal, state or local law from agreeing to hold harmless or indemnify third parties, Section 14(a) and the indemnification provision included in Section 17 of the Services Agreement shall not apply to Customer, to the extent disallowed by applicable law.

5. **Cooperative Purchasing**. As permitted by law, it is understood and agreed by Customer and NEOGOV that any (i) federal, state, local, tribal, or other municipal government (including all administrative agencies, departments, and offices thereof); (ii) any business enterprise in which a federal, state, local, tribal or other municipal entity has a full, majority, or other controlling interest; and/or (iii) any public school (including without limitation K-12 schools, colleges, universities, and vocational schools) (collectively referred to as the "New Entity") may purchase the Services specified herein in accordance with the terms and conditions of this Agreement. It is also understood and agreed that each New Entity will establish its own contract with NEOGOV, be invoiced therefrom and make its own payments to NEOGOV in accordance with the terms of the contract established between the New Entity and NEOGOV. With respect to any purchases by a New Entity pursuant to this Section, Customer: (i) shall not be construed as a dealer, re-marketer, representative, partner or agent of any type of NEOGOV, or such New Entity; (ii) shall not be obligated, liable or responsible for any order made by New Entities or any employee thereof under the agreement or for any payment required to be made with respect to such order; and (iii) shall not be obliged, liable or responsible for any failure by any New Entity to comply with procedures or requirements of applicable law or to obtain the due authorization and approval necessary to purchase under the agreement. Termination of this Agreement shall in no way limit NEOGOV from soliciting, entering into, or continuing a contractual relationship with any New Entity. Any New Entity who purchases Services under this Section hereby represents that is has the authority to use this Services Agreement for the purchase and that the use of the Services Agreement for the purchase is not prohibited by law or procurement regulations applicable to the New Entity.

6. **Subcontractors**. For purposes of this Agreement, including any subsequent documentation requested by Customer pursuant to this Agreement, the term "subcontractors" shall exclude subcontractors (i) who perform routine software development and maintenance services which are not specific to the Customer, (ii) subcontractors who will not have any access to Customer Data, and (iii) subcontractors who have access to Customer Data solely within NEOGOV's or Customer's systems.

Exhibit B
Integration Terms Addendum

NEOGOV offers integrations and platform APIs for integrations to third party systems ("Integration Services"). Customer may use only those Integration Services purchased or subscribed to as listed within the NEOGOV Order Form. The following terms (the "Integration Terms Addendum") shall apply to the extent that Customer utilizes a system integration between the Services and either: (a) an affiliated integrated service, including those found at https://api.neogov.com/connect/marketplace.html and/or https://apidocs.powerdms.com ("Affiliated API") or to the extent that Customer utilizes a system integration between the Services and an unaffiliated third-party service ("Customer Application") integrated using NEOGOV's open API ("Open API"). Integration Services are not available for HRIS Services and this Exhibit B shall not apply to HRIS Services.

1. Provision of Integrations. Subject to and conditioned on compliance with all terms and conditions set forth in this Agreement, NEOGOV hereby grants Customer a limited, revocable, non-exclusive, non-transferable, non-sublicensable license during the applicable Term to use and/or access the Affiliated API as described in this Agreement, or the Open API for communication between Customer's human resource related third application(s) that will interoperate with NEOGOV Services (collectively these uses shall be referred to as the "API" or "Integration"). Customer acknowledges there are no implied licenses granted under this Agreement. NEOGOV reserves all rights that are not expressly granted. Customer may not use the API for any other purpose without our prior written consent. Customer may not share the API with any third party, must keep the API and all log-in information secure, and must use the API key as Customer sole means of accessing the API.

2. Integration Intellectual Property. All right, title, and interest in the API and any and all information, data, documents, materials, inventions, technologies, know-how, descriptions, requirements, plans, reports, works, intellectual property, software, hardware, systems, methods, processes, and inventions, customizations, enhancements, improvements and other modifications based on or derived from the API are and will remain, as appropriate, with NEOGOV. All right, title, and interest in and to the third-party materials, includingall intellectual property rights therein, are and will remain with their respective third-party rights holders subject to the terms and conditions of the applicable third-party license agreements. Customer has no right or license with respect to any third-party materials except as expressly licensed under such third-party license agreements.

3. Integration Terms of Use. Except as expressly authorized under this Agreement, you may not remove any proprietary notices from the API; use the API in any manner or for any purpose that infringes, misappropriates, or otherwise violates any intellectual property rightor other right of any person, or that violates any applicable law; combine or integrate the API with any software, technology, services, or materials not authorized by NEOGOV; design or permit Customer Application(s) to disable, override, or otherwise interfere with any NEOGOV-implemented communications to end users, consent screens, user settings, alerts, warning, or the like; use the API in any of Customer Application(s) to replicate or attempt to replace the user experience of the Services; or attempt to cloak or conceal Customer identity or the identity of Customer Application(s) when requesting authorization to use the API.

4. Customer Integration Responsibilities. Customer, Customer developed web or other software services or applications, and Customer third-party vendors that integrate with the API (collectively the "Customer Applications"), shall comply with all terms and conditions of this Agreement, all applicable laws, rules, and regulations, and all guidelines, standards, and requirements that may be posted on https://api.neogov.com/connect/index.html and/or https://apidocs.powerdms.com from time to time. In addition, Customer will not use the API in connection with or to promote any products, services, or materials that constitute, promote, or are used primarily for the purpose of dealing in spyware, adware,or other malicious programs or code, counterfeit goods, items subject to U.S. embargo, unsolicited mass distribution of email ("spam"),multi-level marketing proposals, hate materials, hacking, surveillance, interception, or descrambling equipment, libelous, defamatory, obscene, pornographic, abusive, or otherwise offensive content, stolen products, and items used for theft, hazardous materials, or any illegal activities.

5. Cooperation. If applicable, Customer shall timely provide such cooperation, assistance, and information as NEOGOV reasonably requests to enable the API. NEOGOV is not responsible or liable for any late delivery or delay or failure of performance caused in wholeor in part by Customer's delay in performing, or failure to perform, any of its obligations under this Agreement. NEOGOV will provide Customer maintenance and support services for API issues arising from the information technology designed, developed, and under then current control of NEOGOV. NEOGOV shall have no obligation to provide maintenance or support for issues arising from the inaction or action of Customer or third parties of which are outside NEOGOV control.

6. Provision of Open API. In the event license fees or other payments are not due in exchange for the right to use and access the Open API, you acknowledge and agree that this arrangement is made in consideration of the mutual covenants set forth

in this Agreement, including, without limitation, the disclaimers, exclusions, and limitations of liability set forth herein. Notwithstanding the foregoing, NEOGOV reserves the right to charge for access with effect from the start of each Renewal Term by giving Customer at least ninety (90) day notice prior to commencement of a Renewal Term.

7. API Key. In order to use and access the Open API, you must obtain an Open API key through the registration process. Customer agreesto monitor Customer Applications for any activity that violates applicable laws, rules and regulation, or any terms and conditions of this Agreement, including any fraudulent, inappropriate, or potentially harmful behavior. This Agreement does not entitle Customer to any support for the Open API. You acknowledge that NEOGOV may update or modify the Open API from time to time and at our sole discretion and may require you to obtain and use the most recent version(s). You are required to make any such changes to Customer Applications that are required for integration as a result of such Update at Customer sole cost and expense. Updates may adversely affect how Customer Applications communicate with the Services.

8. Efficient Processing. You must use efficient programming, which will not cause an overwhelming number of requests to be made in too short a period of time, as-determined solely by NEOGOV. If this occurs, NEOGOV reserves the right to throttle your API connections,or suspend or terminate your access to the Open API. NEOGOV shall use reasonable efforts to provide Customer notice and reasonable time to cure prior to taking such actions.

9. Open API Limitations. TO THE FULLEST EXTENT PERMITTED UNDER APPLICABLE LAW, IN NO EVENT WILL NEOGOVBE LIABLE TO CUSTOMER OR TO ANY THIRD PARTY UNDER ANY TORT, CONTRACT, NEGLIGENCE, STRICTLIABILITY, OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY DIRECT, LOST PROFITS, LOST OR CORRUPTED DATA, COMPUTER FAILURE OR MALFUNCTION, INTERRUPTION OF BUSINESS, OR OTHER SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND ARISING OUT OF THE USE OR INABILITY TO USE THE OPEN API; OR ANY DAMAGES, IN THE AGGREGATE, IN EXCESS OF FIFTY DOLLARS, EVEN IF NEOGOV HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGES AND WHETHER OR NOT SUCH LOSS OR DAMAGES ARE FORESEEABLE OR NEOGOV WAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. ANY CLAIM YOU MAY HAVE ARISING OUT OF OR RELATING TO THIS AGREEMENT MUST BE BROUGHT WITHIN ONE YEAR AFTER THE OCCURRENCE OF THE EVENT GIVING RISE TO SUCH CLAIM.

10. Open API Termination. Notwithstanding the additional Termination rights herein, NEOGOV may immediately terminate or suspend Customer access to Open APIs in our sole discretion at any time and for any reason, with or without notice or cause. In addition, your Open API subscription will terminate immediately and automatically without any notice if you violate any of the terms and conditions of this Agreement.

NEOGOV Statement of Work for Pittsburg City, CA

Adding Onboard, eForms, Learn and Perform with Integrations to existing NEOGOV Insight system.

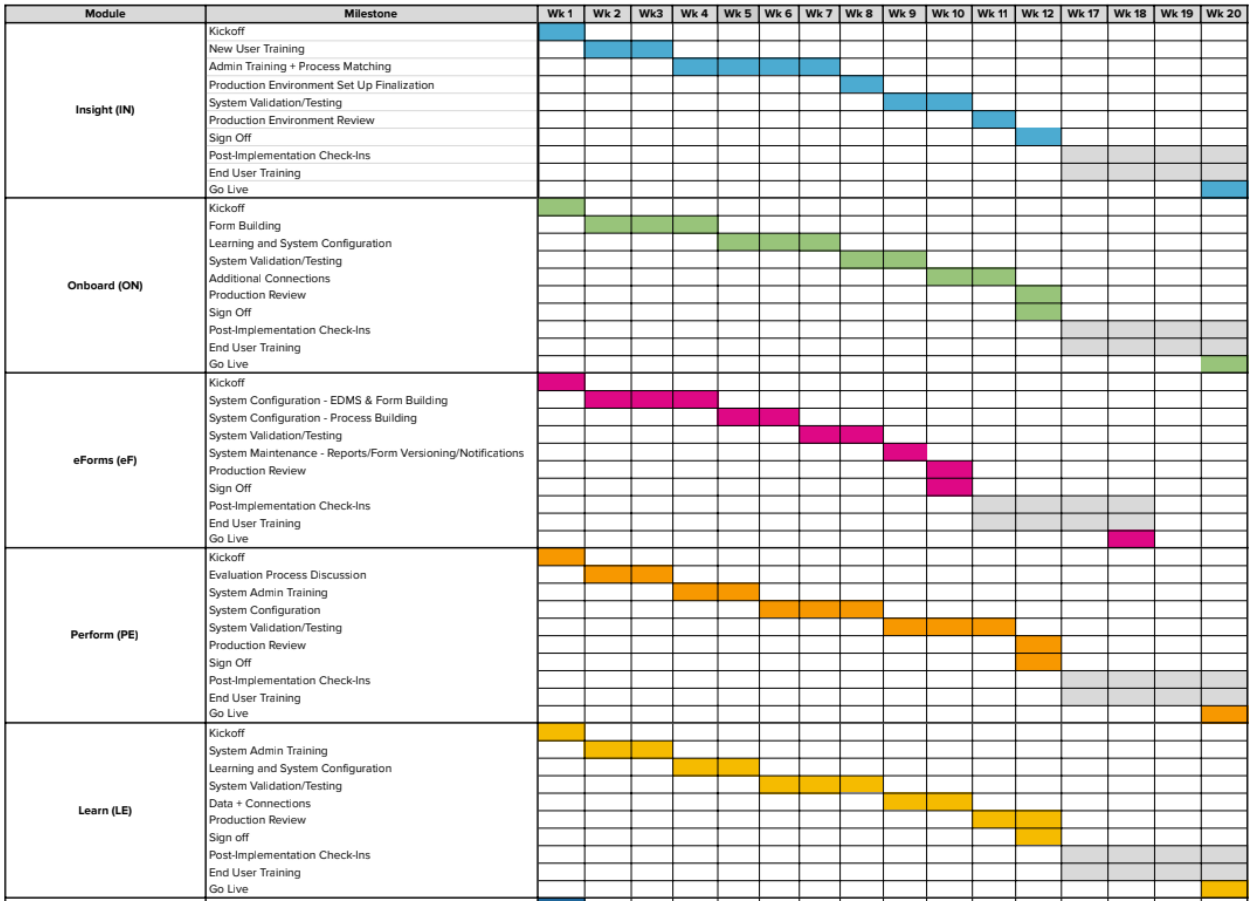


Project Objectives:

1. Keep Recruiting in NEOGOV
2. Add integrated Onboarding, eForms, Learn and Perform

3. Integration between and within Systems(NEOGOV, Munis, SSO)
4. Flow of Data - Reducing Redundancy and Data Entry
5. Easy Reports/Analytics, Documentation and Workflows
6. Public Sector Specific Functionality
7. System Automation
8. ESS/MSS and Mobile App
9. System Expandability ie Attract, Policy, etc.

Implementation Timeline by Product (Insight is already Live)



Overall Project Scope:

We will be providing and training the trainers at the City of Pittsburg, CA to setup and utilize Onboard, eForms, Perform and Learn Modules with flat file export integration of New Hire data and Employee Documents into an SFTP that Tyler can import. Also a flat file import of Employee Information from Tyler Munis and finally an SSO integration.

We will assign an implementation Project Manager and Implementation Consultant who's talents, abilities and capacity align best with the objectives and timeline of Pittsburg City, CA

We don't coordinate directly with Tyler Munis, we will work with appropriate team members of the City who will be able to coordinate with Tyler Munis as needed to ensure the transfer of data works as intended.

See product specific SOW's below for details around Data imports where applicable.

Customer responsibilities

- Attend weekly calls with the IC
- Manage scheduling adjustments
- Complete self-guided trainings and complete tasks/deliverables in a timely manner
- Own GuideCX task management (marking tasks complete in the project plan)
- Responsible for training internal members on Onboard post implementation (train-the-trainer approach)
- Communicate with the NEOGOV project team via GuideCX (@mention Neogov, etc.)

Neogov responsibilities

Project Manager:
- Develops project plan and maintains oversight of the project
- Addresses any risks/issues escalations that may hinder project implementation
- Conducts project checks to ensure project is in healthy standing

Implementation Consultant:
- Conduct weekly meetings and manage system configuration
- Provides guidance regarding Onboard product implementation as the SME
- Serves as the primary contact point for the customer throughout implementation

Implementation Overview

To achieve a high level of project success, and to ensure both an effective and timely implementation for our agencies, NEOGOV utilizes a dedicated professional services team and a tested and proven implementation approach. This approach has been continually refined and is designed to provide the most efficient and effective implementation while producing maximum user adoption and ongoing project success.

As part of the implementation process, NEOGOV incorporates a staged implementation approach which is designed to effectively manage and streamline the process. This staged implementation approach is in the style of train-the-trainer. For all implementations, NEOGOV is proud to offer an implementation expert to facilitate the process.

Agency Staffing Requirements

During implementation, customers are responsible for organizing a team consisting of at least one project manager and one administrator who will work with agency staff and NEOGOV during the project. The project manager should be familiar with project plans and understand the tasks associated with managing a team, working with a timeline, and interacting with an external vendor.

For an organization of 350 FTE, NEOGOV recommends 2-4 primary system administrators, with 1-2 back-ups in the event of vacation, leave, etc. The system administrators are typically HR staff. The system administrators should attend all status check-ins with the NEOGOV implementation consultant. You may include IT in these meetings, but this is optional.

The system administrator should be familiar with using a computer and Internet Explorer or Google Chrome. Within the team there should be an understanding of the existing relevant processes and content as the team will be responsible for reviewing and revising, where necessary, the existing processes to incorporate the additional NEOGOV functionality.

Before You Begin

Prior to the scheduled project kick-off meeting, the NEOGOV Project Manager (PM) will deliver a series of documents to the client Project Manager which include login credentials to GuideCX (a client-facing project management tool), and the system specific Pre-implementation Questionnaires. GuideCX provides a checklist of each of the tasks per phase, responsibilities, due dates, and overall timelines associated with each of the deliverables.

NEOGOV recommends a weekly status check in to review the progress between both the IC and customer Project Manager and to review accomplished activities, completed deliverables, upcoming deliverables, and functionality questions.

At the kick-off meeting, NEOGOV will review the project implementation timeline with the customer and both parties will agree upon a Target Sign-Off date. This meeting is used to clearly define the roles, responsibilities, deliverables, and tasks, in addition to presenting a high-level overview of the Onboard system as laid out in this proposal.

Contingency timeframes are always incorporated into the project plan to allow for some project timeline fluctuation. Each of the major deliverables in the timeline incorporate roughly a **10%** contingency estimate added to each activity. Based on the overall timeline requirements and NEOGOV's extensive history working with public sector and education agencies delivering this type of solution, we are confident that the timeline (including safe contingency planning estimates) will be successfully completed on time and within budget.

Onboard Objectives

The Onboard implementation process can take anywhere from **12** weeks, possibly longer/shorter, depending on any internal decisions yet to be made regarding the new hire processes.

A Project manager and an implementation consultant is assigned to your implementation and will serve as your point of contact to answer any of your questions and provide guidance. Your consultant will serve as your Onboard subject matter expert and is available to help and provide best practice advice on system functionality throughout the project.

Detailed Scope:

This implementation plan is designed to enable your organization to Sign-off with Onboard in **12** weeks. You'll use GuideCX as your step-by-step guide to track your progress and help you stay on track.

Milestone 1: Kickoff

This first milestone is the Project KickOff and being provided login credentials. **(1 Week)**

Step 1: Kickoff

- Review GuideCX, project tracking system
- Schedule and attend kickoff call with your implementation contact
- Receive login credentials for HR Admin(s) and test users
- Review preliminary questions with your implementation consultant
- Complete Internal Process Analysis form

Milestone 2: Form Building

Begin the self-paced Onboard system training and configuration. At the conclusion of this milestone, security permissions should be configured to ensure your employees, managers, HR Users and IT Users all have the appropriate system access. **(3 Weeks)**

Step 2: Onboard Overview

- Watch the Best Practices tutorials (accessed in the Community). Review corresponding Onboard user guides as well.
- Review the Administrative Settings to configure customizable email notifications.
- Schedule a call with your IC to review & finalize security permissions.

Step 3: Form Building

- Watch Form Building tutorials located in the Community. Review corresponding Onboard user guide as well.
- Use Onboard intuitive form builder to configure dynamic and background forms. Note that the Federal I9 and W4 are built and maintained by NEOGOV. Your IC will review forms for accuracy.
- Log any questions or issues encountered in GuideCX

Step 4: Process Discussion

- Work with your IC to determine if you will use preboarding, seasonal, onboarding, and integrations with other NEOGOV products.
- Log any questions or issues encountered in GuideCX.

Milestone 3: Learn & Configure the System

Continue the self-paced Onboard system training and configuration. When you reach this milestone your system will be configured according to your processes. **(3 Weeks)**

Step 5: Configure Checklists

- Watch the Checklists tutorials (accessed in the Community). Review corresponding Onboard user guides as well.
- Configure all necessary Checklists for your new hires. Checklists house the tasks your new hires, managers, IT, HR, payroll, etc, will complete during onboarding.
- Log any questions or issues encountered in GuideCX.

Step 6: Configure Portal

- Watch the Portal tutorials (accessed in the Community). Review corresponding Onboard user guides as well.
- Configure the home portal to display your agency culture, and to welcome the new hire.
- Log any questions or issues encountered in GuideCX.

One-Time Data Import: Employees & Positions (Optional)

- Populate (Excel) employee & position data workbook with all required fields.
- Return file to IC for import (Note: average turnaround time is **10-20** business days, depending on errors encountered).

Milestone 4: System Validation & Testing

Continue to verify permissions and validate your setup before a final Production Review with your IC. Note: Status calls can be scheduled with your IC as needed. The final Production Review call is mandatory before enrolling employees in courses and activating user accounts. **(3Weeks)**

Step 7: Business Process Validation

- Complete end-to-end business process validation once all configuration and security settings are complete.
- Watch the Onboarding Process tutorials (accessed in the Community). Review corresponding Onboard user guide as well.
- Practice onboarding a new hire, completing tasks (forms, videos, manual), downloading forms, and viewing reports.
- Log any questions or issues encountered in GuideCX.

Milestone 5: Additional Connections (optional)

Step 8: Review Optional Functions (1-2 Weeks)

- Review the Insight to Onboard connection via the New Hire Feed Training

Milestone 6: Production Environment Review + Go Live

In this step of the implementation process, you will be activating your users' accounts, and begin planning for training your end users on the process and use of the Onboard system. You will be reviewing your system with your Implementation Consultant to ensure the setup is correct and that you have successfully completed training. Upon successful production review, you will officially Go Live. You will activate your users' accounts, and train your end users on the process and use of the Onboard system. At this point, you will be transitioned from your Implementation Consultant to NEOGOV Customer Success.**(1 Week)**

Step 9: Production Environment Review

- See production review checklist (separate tab in the checklist) to ensure all decision points have been addressed and all configuration has been completed.
- Review the Customer Led Demo list in preparation for demoing on the Production Review call.
- Schedule and conduct final production review prior to launching to all users or a pilot group. **NOTE:** Make any final system configuration adjustments.
- Final acceptance.

Step 10: Go Live

- Have IT whitelist all IP addresses and emails from NEOGOV (document with emails and IP address will be provided by IC)
- Confirm with your IC that email notifications are switched on. **NOTE:** This MUST be done before accounts can be activated.

Step 11: End User Training

- Customer Admin to deliver training to HR users, managers, and employees as necessary.
- Optional - Can be delivered online or onsite with a NEOGOV Onboard trainer (additional cost associated).

Step 12: Post Go Live

- Project warranty period of 14 days during which the Implementation Consultant will stay allocated to the project to provide any post go live support needed.
- At the end of the project warranty period,
    - Contact Customer Support for any technical, system-related support.
    - Contact Customer Success Manager for any other support.

Major deliverables:

See Detailed Scope description above.

Task Name	Resource Name
Onboard Kick-Off Meeting	Both
Receive login credentials for HR Admin(s) and test users	Both
Begin self paced Onboard system training and configuration	Customer
Configure Forms	Customer
Configure Checklist(s)	Customer
Configure Portal(s)	Customer
Configure Administrative Settings	Customer
Configure Security Permissions	NEOGOV
Review the New Hire Feed	Both
Review how to test and validate	Both
Begin system validation and user testing. Test Onboard processes with sample new hires.	Customer

Review testing results.	Both
Populate employee data workbook with required fields and provide to IC, or manually enter users and positions into the Onboard system (optional).	Customer
NEOGOV to complete import (optional). Employee Workbook loaded within 5-10 business days.	NEOGOV
Prior to final call, use accompanying production review checklist to ensure system readiness for go-live.	Customer
Attend production review call and conduct the customer led demo.	Both
Launch Online Application: Activate and assign courses and activate user and conduct end user training if necessary.	Customer

Key Tasks for the Customer to start the Onboard Implementation:

- Gather all new hire forms and processes (fillable forms, read-only PDFs, videos, etc)
- Gather all media for the portal (pictures of agency, letter from the City Manager, handouts, links, etc).
- Customers should have their onboarding process in place and internally discuss & decide on any changes they want to make .

eForms Objectives

The eForms implementation process can take anywhere from 10-14 weeks, possibly longer/shorter, depending on any internal decisions yet to be made regarding the employee processes as well as time commitment from the customer project team.

An implementation consultant is assigned to your implementation and will serve as your point of contact to answer any of your questions and provide guidance. Your consultant will serve as your eForms subject matter expert and is available to help and provide best practice advice on system functionality throughout the project.

Detailed Scope:

This implementation plan is designed to enable your organization to Sign Off with eForms in **10-14** weeks. You'll use GuideCX as your step-by-step guide to track your progress and help you stay on track.

Milestone 1: Kickoff

This first milestone is the Project Kick-Off and being provided login credentials. **(1 Week)**

Step 1: Kickoff

- Review GuideCX, project tracking system
- Schedule and attend kickoff call with your implementation contact
- Receive login credentials for HR Admin(s) and test users
- Review preliminary questions with your implementation consultant
- Complete Internal Process Analysis form

Milestone 2: EDMS & Form Building

Begin the self-paced eForms system training and configuration. During this stage the customer system administrators are responsible for dedicating time to learn and building out EDMS and forms. With our "train the trainer" approach, it is vital for the system administrators to commit to learning the system, which will ultimately set your team up for success. With this approach, our customers become Subject Matter Experts themselves and will be self-sufficient after Sign-off. **(3-4 Weeks)**

Step 2: eForms New User and Admin Training

- Watch eForms Series B Tutorials, Module 1 (Creating Dynamic Forms) and Module 2 (Creating Background Forms) (accessed in the Community). Review corresponding eForms user guide as well.
- Log any questions or issues encountered in GuideCX.

Step 3: Employee Document Management System

- Create custom folder structures to organize completed employee forms
- Upload employee documents to employee's document folder

- Log any questions or issues encountered in GuideCX.

Step 4: Form Building

- Watch Form Building tutorials located in the Community. Review corresponding eForms user guide as well.
- Use eForms's intuitive form builder to configure dynamic and background forms. Your IC will review forms for accuracy.
- Log any questions or issues encountered in GuideCX.

Milestone 3: Process Building

Begin the self-paced eForms system training and configuration. At the conclusion of this milestone, security permissions should be configured to ensure your employees, managers, HR Users and custom roles all have the appropriate system access. **(2-3 Weeks)**

Step 5: Administrative Settings and Best Practices

- Watch the Best Practices tutorials (accessed in the Community). Review corresponding eForms user guides as well.
- Review the Administrative Settings to configure customizable email notifications, configure company announcements, upload agency logo, and customize self service portal.
- Review & finalize security permissions with your IC.

Step 6: Configure Processes

- Watch the Processes Builder tutorials (accessed in the Community). Review corresponding eForms user guides as well.
- Configure all necessary Processes for your new hires. Use the Process Builder to automate your Qualifying Life Event, Tuition Reimbursement, Outside Employment, Emergency Contact processes and more. Configure approval workflows, form tasks, and ad hoc notfications.
- Log any questions or issues encountered in GuideCX.

One-Time Data Import: Employees & Positions (Optional)

- Populate (Excel) employee & position data workbook with all required fields. Return file to IC for import (Note: average turnaround **5-10** business days, depending on errors encountered).

Milestone 4: System Validation & Testing

Continue to verify permissions and validate your setup before a final Production Review with your IC. Note: Status calls can be scheduled with your IC as needed. The final Production Review call is mandatory before enrolling employees in courses and activating user accounts. **(2-3 Weeks)**

Step 7: Business Process Validation

- Complete end-to-end business process validation once all configuration and settings are complete.
- Practice assigning processes, completing processes and all tasks included, running reports, and more.
- Log any questions or issues encountered in GuideCX.

Milestone 5: System Maintenance - Reports/Form Versioning/Notifications

During this time, the IC will review with the customer features around maintaining the system such as reporting, form versioning and notification. This will set the customer up for success as the system administrator who will be maintaining the system post go-live. **(1 Week)**

Step 8: System Maintenance

- Review reporting, form versioning, and notifications.
- Log any questions or issues encountered in GuideCX.

Milestone 6: Production Environment Review

For this milestone of the implementation process, you will be activating your users' accounts, and training your end users on the process and use of the eForms system. **(1-2 Weeks)**

Step 9: Production Environment Review

- See production review checklist to ensure all decision points have been addressed and all configuration has been completed.
- Review the Customer Led Demo list in preparation for demoing on the Production Review call.
- Schedule and conduct final production review prior to launching to all users or a pilot group. **NOTE:** This call is required before Sign-Off.
- Make any final system configuration adjustments.

Milestone 7: Sign-Off

Customers will sign-off on the production environment indicating the system is ready to be used. **(1-2 Days)**

Step 10: Sign-off

- Have IT whitelist all IP addresses and emails from NEOGOV (document with emails and IP address will be provided by IC)
- Confirm with your IC that email notifications are switched on. **NOTE:** This MUST be done before accounts can be activated.

Milestone 8: Post Sign-Off

Now that your organization is using Insight, you can continue to add new features and functionality by accessing the trainings and FAQs in the Community and attending quarterly Insight calls. At this point, you will be transitioned from your Implementation Consultant to NEOGOV Customer Success and you can begin training your end users so your employees and managers can use the system. Your Implementation Consultant will check-in with you, but any support questions should be directed to our Customer Support Team. **(1 Month)**

Step 11: Post Sign-Off

- 30-Day Check In
- Site adjustments
- Watch the tutorial on logging cases and contacting Customer Support.

Step 12: End User Training

- Customer Admin to deliver training to HR users, managers, and employees as necessary.
- Optional - Can be delivered online or onsite with a NEOGOV eForms trainer (additional cost associated).

Go-Live

Step 13: Go-Live

- After 30-Day Check In is complete, the customer is officially Live.
- The Implementation Consultant will officially close off the project.
- Continue to log cases and contact Customer Support.

Major deliverables:

See Detailed Scope description above.

Task Name	Resource Name
eForms Kick-Off Meeting	Both
Receive login credentials for HR Admin(s) and test users	Both
Begin self paced eForms system training and configuration	Customer
Configure Forms	Customer
Configure Employee Process(es)	Customer
Configure Employee Document Management System Folder Structure	Customer

Configure Administrative Settings	Customer
Configure Security Permissions	NEOGOV
Review how to test and validate	Both
Begin system validation and user testing. Test processes with test employees	Customer
Review testing results.	Both
Populate employee data workbook with required fields and provide to IC, or manually enter users and positions into the eForms system.	Customer
NEOGOV to complete import. Employee Workbook loaded within 5-10 business days.	NEOGOV
Prior to final call, use accompanying production review checklist to ensure system readiness for go-live.	Customer
Attend production review call and conduct the customer led demo.	Both
Launch eForms and assign processes to end users.	Customer

Key Tasks for the Customer to start the eForms Implementation:

- Gather and map out all employee processes (fillable forms, approval process, notifications, etc)
- Gather all Employee information, Position information, Department, and Divisions (if Employee data is not already loaded in the system)
- Customers should have their employee process in place and internally discuss & decide on any changes they want to make

Learn Objectives

The Learn implementation process can take anywhere from **10** to **14** weeks, possibly longer/shorter, depending on any internal decisions yet to be made regarding the training.

An implementation consultant is assigned to your implementation and will serve as your point of contact to answer any of your questions and provide guidance. Your consultant

will serve as your Learn subject matter expert and is available to help and provide best practice advice on system functionality throughout the project.

You will be given access to the Training environment first and will be advised to test and practice in this environment, before going live in production. If email notifications are something you have concerns about or would specifically like to test out while you're in the implementation phase, please discuss this with your consultant.

Detailed Scope:

This implementation plan is designed to enable your organization to Sign Off with Learn in **10 - 14** weeks. You'll use GuideCX as your step-by-step guide to track your progress and help you stay on track.

Milestone 1: Kickoff

This first milestone is the Project KickOff and being provided login credentials. **(1 week)**

Step 1: Kickoff

- Review GuideCX, project tracking system
- Schedule and attend kickoff call with your implementation contact
- Receive login credentials for HR Admin(s) and test users
- Review preliminary questions with your implementation consultant
- Complete Internal Process Analysis form

Milestone 2: System Admin Training

Begin the self-paced LE system training and configuration. At the conclusion of this milestone, security permissions should be configured to ensure your employees, managers, HR Users and custom roles all have the appropriate system access. **(2-3 Weeks)**

Step 2: Admin Settings

- Watch Admin Settings tutorial (accessed in the Community). Review corresponding Learn user guide as well.

- Configure Admin settings as necessary.
- Log any questions or issues encountered in GuideCX

Step 3: Process Decisions

- Work with your IC to determine if you will use associations, external learning, and integrations with other NEOGOV products.
- Log any questions or issues encountered in GuideCX.

Milestone 3: Learning and System Configuration

Use what you learned via the self paced tutorials and user guides to configure your system to your process needs. **(2-3 Weeks)**

Step 4: Configure Courses

- Watch Classroom Course, Pre-built Online and Custom Online tutorials. (accessed in the Community). Review corresponding Learn user guides as well.
- Configure all necessary Classroom, Pre-built Online and Custom Online courses.
- Log any questions or issues encountered in GuideCX.

Step 5: Import Courses from Global Catalog

- Review course catalog listing and decide which courses to import into your account.
- Configure attributes of these Pre-built Online courses as needed (e.g. self-enrollment, approvals, etc).
- Log any questions or issues encountered in GuideCX.

Step 6: Roster Updates

- Work with your IC to practice updating rosters for classroom courses.
- Log any questions or issues encountered in GuideCX.

Step 7: Security Permissions

- Schedule a call with your IC to review & finalize security permissions.

Milestone 4: System Validation and Testing

(3-4 Weeks)

Step 8: Enroll in Courses

- Watch the Enrolling tutorial (accessed in the Community). Review corresponding Learn user guide as well.
- Practice Enrolling in Classroom, Pre-built Online and Custom Online courses.
- Log any questions or issues encountered in GuideCX.

Step 9: Practice Taking Online Courses

- Watch Completing Courses tutorials (accessed in the Community). Review corresponding Learn user guide as well.
- Practice taking online courses.
- Log any questions or issues encountered in GuideCX.

Step 10: Business Process Validation

- Complete end-to-end business process validation in UAT/Training once all configuration and security settings are complete.
- Log any questions or issues encountered in GuideCX.

Milestone 5: Data and Connections

Complete any one-time data import based on customer needs. Also set up the connection between Learn and Perform if the customer also has Perform module. **(1-2 Weeks)**

Step 11: OneTime Data Import

- Employees
- Positions
- Historical Training Import (max 15k rows)
- Populate (Excel) data workbook with all required fields.
- Return file to NEOGOV for import (Note: average turnaround **5-10** business days, depending on errors encountered).

Milestone 6: Production Environment Review

Continue to verify permissions and validate your setup before a final Production Review with your IC. Note: Status calls can be scheduled with your IC as needed. The final Production Review call is mandatory before enrolling employees in courses and activating user accounts. **(1-2 Weeks)**

Step 12: Production Environment Review

- See production review checklist (attached in GuideCX) to ensure all decision points have been addressed and all configuration has been completed.
- Schedule and conduct final production review prior to launching to all users or a pilot group. **NOTE:** This call is required before Sign-off.
- Make any final system configuration adjustments.

Milestone 7: Sign-Off

Customers will sign-off on the production environment indicating the system is ready to be used. **(1-2 Days)**

Step 13: Sign-off

- Have IT whitelist all IP addresses and emails from NEOGOV (document with emails and IP address will be provided by IC)
- Confirm with your IC that email notifications are switched on. **NOTE:** This MUST be done before accounts can be activated.
- Watch the tutorial on logging cases and contacting Customer Support.

Milestone 8: Post Sign-Off

Now that your organization is using Learn, you can continue to add new features and functionality by accessing the trainings and FAQs in the Community and attending quarterly Learn calls. Your Implementation Consultant will check-in with you, but any support questions should be directed to our Customer Support Team. **(1 Month)**

Step 14: Post Sign-Off

- 30-Day Check In
- Site adjustments

Step 15: End User Training

- Customer Admin to deliver training to HR users, managers, and employees as necessary.
- Optional - Can be delivered online or onsite with a NEOGOV Learn trainer (additional cost associated).

Go-Live

Step 16: Go-Live

- After 30-Day Check In is complete, the customer is officially Live.
- The Implementation Consultant will officially close off the project.
- Continue to log cases and contact Customer Support.

Major deliverables:

See Detailed Scope description above.

Task Name	Resource Name
Learn Kick-Off Meeting	Both
Receive login credentials for HR Admin(s) and test users	Both
Begin self paced LE system training and configuration	Customer
Configure Admin Settings	Customer
Configure Courses	Customer
Enroll/Take Online Courses	Customer
Test Roster Updates	Customer
Configure course-specific advanced settings	Customer
Configure Security Permissions	NEOGOV

Review how to test and validate	Both
Begin system validation and user testing. Test Learn processes with sample employees.	Customer
Review testing results.	Both
Populate employee data workbook with required fields and provide to IC, or manually enter users and positions into the Learn system	Customer
NEOGOV to complete import (optional). Employee Workbook loaded within 5-10 business days.	NEOGOV
Prior to final call, use accompanying production review checklist to ensure system readiness for go-live.	Customer
Attend production review call and conduct the customer led demo.	Both
Launch Online Application: Activate and assign courses and activate users.	Customer

Key Tasks for the Customer to start the Learn Implementation:

- If Customer plans to import SCORM files, gather those files.
- Customers should have their training process in place and internally discuss & decide on any changes they want to make .

Perform Objectives

The Perform implementation process can take anywhere from 12 to 16 weeks, possibly longer/shorter, depending on any internal decisions yet to be made regarding the training.

An implementation consultant is assigned to your implementation and will serve as your point of contact to answer any of your questions and provide guidance. Your consultant will serve as your Perform subject matter expert and is available to help and provide best practice advice on system functionality throughout the project.

Detailed Scope:

This implementation plan is designed to enable your organization to Sign Off with Perform in **12 - 16** weeks. You'll use GuideCX as your step-by-step guide to track your progress and help you stay on track.

Milestone 1: Kickoff

This first milestone is the Project KickOff and being provided login credentials. **(1 Week)**

Step 1: Kickoff

- Review GuideCX, project tracking system
- Schedule and attend kickoff call with your implementation contact
- Receive login credentials for HR Admin(s) and test users
- Review preliminary questions with your implementation consultant
- Complete Internal Process Analysis form

Milestone 2: Process Discussion **(2 Weeks)**

Step 2: Perform Process Overview

- Watch Intro to Perform, Series A: Required Administrative Setup and Series B: Evaluation Program Setup (accessed in the Community).
- Evaluation Process Demonstration
- Submit and Review Evaluation related documentation
- Log any questions or issues encountered in GuideCX.

Step 3: Process Discussion

- Work with your IC to determine if you will use Development Plans, Goal Management, Talent Profile, Surveys, etc
- Log any questions or issues encountered in GuideCX

Milestone 3: System Admin Training

Begin the self-paced PE system training and configuration. At the conclusion of this phase, security permissions should be configured to ensure your employees, managers, HR Users all have the appropriate system access. **(2-3 Weeks)**

Step 4: Administrative Setup and Streamline Implementation Guide

- Watch Administrative Setup series and Quick Startup Guide tutorial (accessed in the Community). Review corresponding Perform user guide as well.
- Complete the Streamline Implementation Guide
- Log any questions or issues encountered in GuideCX

Milestone 4: Configure System

Step 5: Configure Evaluation Programs (3-4 Weeks)

- Watch the Evaluation Program Setup tutorial series (accessed in the Community). Review corresponding Perform user guides as well.
- Configure all necessary Evaluation Programs.
    - Input agency wide competencies, job specific competencies, goals, rating scales, etc.
    - Configure the evaluation process (self ratings, rated ratings, signatures, approvals, etc)
    - Populate the assignments, who should receive which evaluations (FT, PT, Fire, PD, Executives, etc)
- Log any questions or issues encountered in GuideCX

Step 6: Configure HR Setup Functions

- Watch the Additional HR Setup Functions tutorial series
- Configure and customize the Administrative Settings, create Writing Assistances, configure Journal Entries settings, etc.
- Log any questions or issues encountered in GuideCX

Step 7: Security Permissions

- Schedule a call with your IC to review & finalize security permissions.

One-Time Data Import: Employees & Positions (Optional)

- Populate (Excel) employee & position data workbook with all required fields.
- Return file to IC for import (Note: average turnaround 5-10 business days, depending on errors encountered).

Milestone 5: System Validation & Testing

Continue to verify permissions and validate your setup before a final Production Review with your IC. Note: Status calls can be scheduled with your IC as needed. The final Production Review call is mandatory before creating evaluations for employees and managers, and activating user accounts. **(3 Weeks)**

Step 8: Business Process Validation

- Complete end-to-end business process validation once all configuration and security settings are complete.
    - Complete an evaluation as a test employee and manager to ensure all settings and content are correct
- Log any questions or issues encountered in GuideCX

Milestone 6: Production Environment Review

Step 9: Production Environment Review (1 Week)

- See production review checklist (attached in the GuideCX) to ensure all decision points have been addressed and all configuration has been completed.
- Schedule and conduct final production review prior to launching to all users or a pilot group. **NOTE:** This call is required before Sign-Off.
- Make any final system configuration adjustments.

Milestone 7: Sign-Off

Customers will sign-off on the production environment indicating the system is ready to be used.
(1-2 Days)

Step 10: Sign-off

- Have IT whitelist all IP addresses and emails from NEOGOV (document with emails and IP address will be provided by IC)
- Confirm with your IC that email notifications are switched on. **NOTE:** This MUST be done before accounts can be activated.

Milestone 8: Post Sign-Off

Now that your organization is using Perform, you can continue to add new features and functionality by accessing the trainings and FAQs in the Community and attending quarterly Perform calls. Your Implementation Consultant will check-in with you, but any support questions should be directed to our Customer Support Team.**(1 Month)**

Step 11: Post Sign-Off

- 30-Day Check In
- Site adjustments
- Watch the tutorial on logging cases and contacting Customer Support.

Step 12: End User Training

- Customer Admin to deliver training to HR users, managers, and employees as necessary.
- Optional - Can be delivered online or onsite with a NEOGOV Perform trainer (additional cost associated).

Go-Live

Step 13: Go-Live

- After 30-Day Check In is complete, the customer is officially Live.
- The Implementation Consultant will officially close off the project.
- Continue to log cases and contact Customer Support.

Major deliverables:

See Detailed Scope description above.

Task Name	Resource Name
Perform Kick-Off Meeting	Both
Receive login credentials for HR Admin(s) and test users	Both

Begin self paced PE system training and configuration	Customer
Configure Admin Settings	Customer
Configure Performance Evaluation	Customer
Configure Rating Scales	Customer
Configure Security Permissions	NEOGOV
Review how to test and validate	Both
Begin system validation and user testing. Test performance evaluations with sample employees.	Customer
Review testing results.	Both
Populate employee data workbook with required fields and provide to IC, or manually enter users and positions into the Perform system	Customer
NEOGOV to complete import (optional). Employee Workbook loaded within 5-10 business days.	NEOGOV
Prior to final call, use the accompanying production review checklist to ensure system readiness for go-live.	Customer
Attend production review call and conduct the customer led demo.	Both
Launch Online Application: Create evaluations and activate users.	Customer

Key Tasks for the Customer to start the Perform Implementation:

- Customers should have their performance evaluation process in place and internally discuss &decide on any changes they want to make.
    - Make sure to review competencies, goals, rating scales, approval processes, frequencies, probation vs annual, etc.

Payment Terms, Costs, Maintenance Fees with Increases Projected:

See order form and addendum for special terms and conditions.

On-going Support Structure:

NEOGOV has a team of experienced professionals ready to help you learn our products and answer your questions by phone, email, or logging a case. Our live Customer Support Team is available from **6:00 AM** to **6:00 PM** (Pacific), Monday through Friday (excluding NEOGOV holidays). During these phone support hours, you have an unlimited number of calls available. If you call outside of these hours, or if all our representatives are busy, simply leave a message and your call will be returned once a team member is available.

There is no charge for calling into the Customer Support Team for help. Additional fees may apply if you choose to purchase additional onsite or online training in the future, or decide to attend the annual User Conference.

Escalation Procedures and Communication Plan:

When an issue is found to be a bug, a NEOGOV Customer Support representative will gather additional information from the user regarding the expected result and the steps to replicate the unexpected behavior. After a case has been escalated, the NEOGOV Customer Support representative will work with the customer to find a workaround for the issue so that the customer is not blocked in their processes while waiting for the issue to be resolved. If no workaround can be found, the resolution priority of the issue will be impacted. Factors that affect a bug's priority include how much of an effect the issue has on the customer's workflow and how many customers are affected. In general, fixes for bugs are released along with the rest of the code changes in an enhancement release. When the issue is resolved, a NEOGOV Customer Support representative will notify the customer of the resolution and close the support ticket. If the customer reaches out to Customer Support for an update, we can provide a status update if there is one, but exact release dates are not known until a week or so before resolution.

Pages 50-95 of the NEOGOV Agreement are not included in this staff report due to the proprietary and confidential nature of technical information contained in these pages.

CITY OF PITTSBURG
CITY COUNCIL/AGENCY CONCURRENT MEETING MINUTES

DATE: August 05, 2024

LOCATION: Council Chamber, City Hall, 65 Civic Avenue, Pittsburg, CA 94565

CITY COUNCIL/AGENCY MEMBERS
Juan Antonio Banales, Mayor/Chair
Jelani Killings, Vice-Mayor/Chair
Dionne Adams, Council/Agency Member
Angelica Lopez, Council/Agency Member
Shanelle Scales-Preston, Council/Agency Member
S.L. Floyd, Agency Member
Annie Hill Herring, Agency Member

APPOINTED OFFICIALS
Garrett Evans, City Manager/Executive Director
Donna Mooney, City Attorney/Legal Counsel
Alice E. Evenson, City Clerk/Agency Secretary (elected)
Nancy Parent, City Treasurer (elected)

Mayor Banales called the regular meeting to order at 7:02 P.M. in the Council Chamber at City Hall, 65 Civic Avenue Pittsburg, CA after having convened at 6:01 P.M. for a Special Meeting for Youth Advisory Commission Interview. Followed by convening in Closed Session at 6:07 P.M. for the following Closed Session:

2. CONFERENCE WITH REAL PROPERTY NEGOTIATORS pursuant to Section 54956.8
   Property: 1000 Center Drive (APN 086-100-037); City Negotiators: Garrett Evans, Maria Aliotti, Jordan Davis
   Negotiating Party: Discovery Builders, Inc.; Under Negotiation: Price and term of payment

3. CONFERENCE WITH LEGAL COUNSEL—ANTICIPATED LITIGATION: Initiation of litigation pursuant to Section 54956.9(d)(4)
   Number of cases: one

City Attorney Mooney reported the following action for Closed Session:

For Items 2 and 3, the City Attorney stated that City Council provided direction to staff and there was no reportable action.

ROLL CALL

Member Lopez was absent and excused.

PLEDGE OF ALLEGIANCE

Mayor Banales led the Pledge of Allegiance.

PROCLAMATIONS

4. National Night Out

CITY MANAGER REPORTS/REMARKS

Assistant City Manager Aliotti gave an update on Community events.

PUBLIC COMMENTS

David Manly, Pittsburg, spoke in regard to safety at Buchanan Pool after an assault incident that affected his great niece while swimming in the pool.

Bruce Ohlson, Pittsburg, noted that City Hall main door was locked at 7pm when he tried to enter the building to attend the City Council meeting, he suggested staff look into what happened as other members of the public were able to enter minutes before him.

Mayor Banales apologized to Mr. Manly for the incident he described and asked City Manager Evans to reach out to Mr. Manly to schedule a meeting, so all three could discuss the matter further.

COMMITTEE REPORTS

Vice Mayor Killings attended the Pittsburg Arts and Community Foundation (PACF) subcommittee, as well as the City and School District (2x2) subcommittee meeting.

Council member Adams attended the Infrastructure & Transportation subcommittee meeting.

PUBLIC HEARING

5. Adoption of a City Council Resolution Amending the 2040 General Plan (Chapter 14) by Adopting Updates to the 2023-2031 Housing Element

Motion by Member Adams, seconded by Member Scales-Preston and adopted by the following vote:

AYES: Adams, Killings, Scales-Preston, Banales
ABSENT: Lopez

CONSIDERATION

6. Adoption of a City Council Minute Order Appointing Candidates to the Youth Advisory Commission

On motion by Member Scales-Preston, seconded by Vice Mayor Killings, to appoint Morriah Crose to the Youth Advisory Commission for the 2-year term beginning August 1, 2024, through May 31, 2026, or until their successors are appointed, and adopted by the following vote:

AYES: Adams, Killings, Scales-Preston, Banales
ABSENT: Lopez

On motion by Member Adams, seconded by Member Scales-Preston, to appoint Loveleen Badhan to the Youth Advisory Commission for the 2-year term beginning August 1, 2024, through May 31, 2026, or until their successors are appointed, and adopted by the following vote:

AYES: Adams, Killings, Scales-Preston, Banales
ABSENT: Lopez

On motion by Vice Mayor Killings, seconded by Member Adams, to appoint Naleia Williams to the Youth Advisory Commission for the 2-year term beginning August 1, 2024, through May 31, 2026, or until their successors are appointed, and adopted by the following vote:

AYES: Adams, Killings, Scales-Preston, Banales
ABSENT: Lopez

On motion by Member Adams, seconded by Member Scales-Preston, to appoint Jacqueline Villasenor to the Youth Advisory Commission for the 2-year term beginning August 1, 2024, through May 31, 2026, or until their successors are appointed, and adopted by the following vote:

AYES: Adams, Killings, Scales-Preston, Banales
ABSENT: Lopez

CONFLICT OF INTEREST STATEMENT

There were no conflicts of interest statements.

COMBINED CITY COUNCIL, PITTSBURG ARTS AND COMMUNITY FOUNDATION, PITTSBURG POWER COMPANY, SOUTHWEST PITTSBURG GHAD II AND SUCCESSOR AGENCY CONSENT CALENDAR

On Motion by Vice Mayor Killings, seconded by Member Adams and adopted by the following vote:

AYES: Adams, Killings, Scales-Preston, Banales
ABSENT: Lopez

7. Minutes of July 1, 2024 and July 15, 2024

8. Adoption of a City Council Minute Order Approving a City Council Recess for Labor Day Holiday

9. Adoption of a City Council Resolution Designating a Voting Delegate and an Alternate for the League of California Cities 2024 Annual Conference and Expo

10. Adoption of a City Council Resolution Accepting the Plans and Specifications and Awarding Project 2028-Crestview Drive Safety Improvements

11. Adoption of a City Council Resolution Approving the Fiscal Year 2025 Business Improvement District Contract with the Pittsburg Chamber of Commerce

12. Adoption of a City Council Resolution Authorizing the City Manager to Execute an

Agreement Between the City of Pittsburg and WBA Consulting & Investigative Services

COUNCIL REQUEST FOR FUTURE AGENDA ITEMS

There were no requests for Future Agenda Items.

COUNCIL MEMBER REMARKS

Council Member Scales-Preston noted that she attended the 104th Anniversary celebration of First Baptist Church. She then thanked Branches of the Community for a successful backpack drive event. Lastly, she apologized to Mr. Manly [Public Speaker] for the incident that happened to his great niece at Buchanan Pool.

ADJOURNMENT

The meeting adjourned at 7:49 P.M. to August 19, 2024.

Respectfully submitted,

Alice E. Evenson, City Clerk

OFFICE OF THE CITY MANAGER/EXECUTIVE DIRECTOR
65 Civic Avenue
Pittsburg, CA 94565

TO: Mayor and Council Members

FROM: Garrett Evans, City Manager

SUBJECT: Adoption of a City Council Resolution Accepting Plans and Specifications and Authorize Award of Project 2038 – Citywide Roadway Improvements

MEETING DATE: August 19, 2024

EXECUTIVE SUMMARY

Project 2038 - Citywide Roadway Improvements (the "Project") installs and upgrades traffic advisory signs with new fluorescent sheeting, moves existing signs to locations compliant with the Manual on Uniform Traffic Control Devices (MUTCD), and replaces damaged poles. Project improvements also include modifications to edge-line and centerline striping along arterial roads throughout the City. If adopted, this resolution will accept the Project plans and specifications and award a construction contract to Pavement Coatings Co.

FISCAL IMPACT

The bid proposal from Pavement Coatings Co. is $1,837,109 for the Project. This total reflects the base bid in the amount of $1,760,577 plus Alternate "A" in the amount of $76,532. Funding for construction will be provided by the existing Project budget. No other funds will be required.

A Budget Summary is attached to this report.

RECOMMENDATION

Staff recommends that the City Council accept the plans and specifications and authorize the City Manager to execute a construction contract for the Project with Pavement Coatings Co., for a total amount not to exceed $1,837,109.

Staff recommends that the City Council allocate a construction contingency in the amount of $183,711 for any unanticipated costs and contract change orders.

Staff further recommends that the City Engineer be authorized to approve contract change orders in an amount not to exceed 50% of the construction contingency, and the City Manager be authorized to approve change orders in an amount not to exceed the approved project budget.

BACKGROUND

On August 28, 2020, staff applied to the California Department of Transportation (Caltrans) for a grant from the Highway Safety Improvement Program (HSIP) 10 Grant Program for traffic safety studies and improvements at multiple locations within the City; and

On March 30, 2021, the City received notification from Caltrans that the grant application was approved in the amount of $2,965,700.

On August 16, 2021, the City Council adopted Resolution No. 21-13978 accepting the HSIP 10 Grant.

On July 11, 2024, staff advertised the Project for construction bids.

On August 1, 2024, 1 construction bid was received, and Pavement Coatings Co. was the lowest responsive, responsible bidder with a base bid in the amount of $1,760,577, plus Alternative “A” in the amount of $76,532 for a total amount of $1,837,109.

SUBCOMMITTEE FINDINGS

This item was not presented to a subcommittee.

STAFF ANALYSIS

Staff have noted that numerous signs and striping are in need to be updated to the current regulations and standards. Installation and/or upgrades to the citywide signage and striping will enhance safety for pedestrians and motorists throughout the City.

The City received one (1) bid proposal for the construction of the Project. The low bid has been checked for arithmetical errors, completeness, and conformance with the bid requirements. The Pavements Coatings Co. was the lowest responsible bidder and is 2% over the engineer’s estimate.

ATTACHMENTS: Resolution
Project Budget Summary

Report Prepared By: Khristin Labao, Associate Engineer

BEFORE THE CITY COUNCIL OF THE CITY OF PITTSBURG

In the Matter of:

Accepting the Plans and Specifications)
And Awarding Project 2038 - Citywide) RESOLUTION NO. 24-
Roadway Improvements)

WHEREAS, Project 2038-Citywide Roadway Improvements (the "Project") installs and upgrades traffic advisory signs with new fluorescent sheeting, moves existing signs to locations compliant with the Manual on Uniform Traffic Control Devises (MUTCD), and replaces damaged poles. Project improvements also include modifications to edge-line and centerline striping along arterial roads throughout the City; and

WHEREAS, on August 28, 2020, staff applied to the California Department of Transportation (Caltrans) for a grant from the Highway Safety Improvement Program (HSIP) 10 for traffic safety studies and improvements at multiple locations within the City; and

WHEREAS, on March 30, 2021, the City received notification from Caltrans that the grant application was approved in the amount of $2,965,700; and

WHEREAS, on August 16, 2021, the City Council adopted Resolution No. 21-13978 accepting the HSIP 10 Grant; and

WHEREAS, on July 11, 2024, staff advertised the Project for construction bids; and

WHEREAS, on August 1, 2024, one (1) construction bid was received, and Pavements Coatings Co. was the lowest responsive, responsible bidder with a base bid in the amount of $1,760,577, plus Alternate "A" in the amount of $76,532 for a total of $1,837,109; and

WHEREAS, staff recommends that the City Council accept the plans and specifications; and

WHEREAS, staff recommends the City Council award a contract to Pavement Coatings Co. in the amount not to exceed $1,837,109 for construction of the Project; and

WHEREAS, staff further recommends establishing a construction contingency in the amount of $183,711 for unanticipated costs and contract change orders; and

WHEREAS, staff recommends that the City Engineer or his designee be authorized to approve contract change orders for a total amount not to exceed 50% of the contingency and the City Manager be authorized to approve change orders for a total amount not to exceed the approved project budget.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Pittsburg hereby accepts the plans and specifications, awards a contract to Pavement Coatings Co. in the amount of $1,837,109, authorizes a construction contingency in the amount of $183,711, authorizes the City Engineer or his designee to approve contract change orders for a total amount not to exceed 50% of the contingency, and authorizes the City Manager to approve change orders for an amount not to exceed 100% of the contingency.

PASSED AND ADOPTED by the City Council of the City of Pittsburg at a regular meeting on the 19th day of August 2024, by the following vote:

AYES:

NOES:

ABSTAINED:

ABSENT:

_____
Juan Antonio Banales, Mayor

ATTEST:

_____
Alice E. Evenson, City Clerk

Exhibit A - Project Budget Summary
Project 2038-HSIP 10 Citywide Roadway Improvements

Project Funding

	Highway Safety Improvement Program 10 Grant	$2,965,700
	Funding Total	**$2,965,700**

Project Expenditures:

Design: (Code 2122)	Consultant Design	$176,856
	Subtotal	$176,856
Miscellaneous: (Code 1399)	Advertising	$1,000
	Reproduction	$1,000
	Subtotal	$2,000
Construction: (Code 2281)	Construction	$1,760,577
	Alternative A	$76,532
	Construction Contingency (10%)	$183,711
	Subtotal	$2,020,820
Staff Time: (Code 1101)	Staff Costs During Design Phase	$30,000
	Staff Construction Management	$45,000
	Subtotal	$75,000
Administrative Overhead: (Code 2372)	Staff Overhead Costs during Design	$30,000
	Staff Overhead during Construction	$45,000
	Subtotal	$75,000
	Estimated Total Expenditures	**$2,349,676**
	Remaining Funds	**$616,024**

OFFICE OF THE CITY MANAGER/EXECUTIVE DIRECTOR
65 Civic Avenue
Pittsburg, CA 94565

TO: Mayor and Council Members

FROM: Garrett Evans, City Manager

SUBJECT: Adoption of a City Council Resolution Adopting the Local Road Safety Plan

MEETING DATE: August 19, 2024

EXECUTIVE SUMMARY

For Project 2022-Local Road Safety Plan (LRSP), staff recommends the adoption of the LRSP to promote safety improvements within the City. The plan is the result of the evaluation of existing intersections and roadway segments. If adopted, this resolution will incorporate the improvements within the LRSP to future projects throughout the City.

FISCAL IMPACT

None from this action. Adoption of this plan will support the City's future application for State and federal grants. As grant funds are secured, projects identified in the LRSP will be added to the City's 5-Year Capital Improvement Plan.

RECOMMENDATION

City Council adopt the attached Resolution adopting the Local Road Safety Plan.

BACKGROUND

On October 19, 2019, the City applied for the Local Road Safety Program grant in the amount of $80,000 for the development of a LRSP within the City.

On February 11, 2020, the California Department of Transportation (Caltrans) awarded the Local Road Safety Program grant in the amount of $72,000 to the City and requires matching funds in the amount of $8,000.

On May 4, 2020, City Council adopted Resolution No. 20-13775 authorizing the acceptance of the Local Road Safety Program grant in the amount of $72,000 and the reallocation of $8,000 from Project 2220 for the development of the LSRP, establishing a project budget of $80,000.

SUBCOMMITTEE FINDINGS

This item was not presented to a subcommittee.

STAFF ANALYSIS

The LRSP is a comprehensive study to evaluate the existing roadway segments and intersections with a history of serious vehicular crashes. From the analysis, the plan identifies potential corrections to improve safety. Improvements include, but are not limited to, modifications to traffic signals, pedestrian countdown signals, installing roadway lighting, directional signs, raised pavement markers, and traffic hardware. Adoption of this plan will continue to assist staff in obtaining information to mitigate and address safety concerns.

ATTACHMENTS: Resolution
Local Road Safety Plan

Report Prepared By: Khristin Labao, Associate Engineer

BEFORE THE CITY COUNCIL OF THE CITY OF PITTSBURG

In the Matter of:

Adopting the Local Road Safety Plan) RESOLUTION NO. 24-

WHEREAS, Project 2022-Local Road Safety Plan (LRSP) will evaluate roadway safety issues and recommend safety improvements within the City based on an extensive study; and

WHEREAS, on October 19, 2019, the City applied for the Local Road Safety Program grant in the amount of $80,000 for the development of a LRSP within the City; and

WHEREAS, on February 11, 2020, the California Department of Transportation (Caltrans) awarded the Local Road Safety Program grant in the amount of $72,000 to the City; and

WHEREAS, the LRSP grant requires matching funds from the City in the amount of $8,000; and

WHEREAS, on May 4, 2020, City Council adopted Resolution No. 20-13775 authorizing the acceptance of the Local Road Safety Program grant in the amount of $72,000 and the reallocation of $8,000 from Project 2220 for the development of the LSRP establishing a project budget of $80,000; and

WHEREAS, on July 24, 2024 staff received the final draft of the LRSP; and

WHEREAS, staff requests that the City Council authorize the execution of the LRSP.

NOW, THEREFORE, BE IT RESOLVED that the City Council hereby adopts the Local Road Safety Plan.

PASSED AND ADOPTED by the City Council of the City of Pittsburg at a regular meeting on the 19th of August 2024, by the following vote:

AYES:
NOES:
ABSTAINED:
ABSENT:

_____
Juan Antonio Banales, Mayor

ATTEST:

_____
Alice E. Evenson, City Clerk



City of Pittsburg

Local Road Safety Plan

Final Report

July 2024

PITTSBURG
CALIFORNIA

TJKM



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GLOSSARY

4 E's – Abbreviation for Education, Enforcement, Engineering, Emergency Medical Services (EMS): A traffic engineering approach for improving safety on the roadways.

ACS – Abbreviation for American Community Survey: A U.S. Census survey that helps local officials, community leaders, and businesses understand the changes taking place in their communities.

ADT – Abbreviation for average daily traffic: Refers to vehicle traffic volumes.

B/C Ratio – Abbreviation for benefit-cost ratio: Indicator used to quantify project benefits in relation to project costs.

LRSP – Abbreviation for local road safety plan. A document that provides a framework for identifying, analyzing, and prioritizing roadway safety improvements on local roads.

CRF – Abbreviation for crash reduction factor: The percentage of expected effect of a countermeasure or safety project to decrease collisions.

Collision Severity – Defined as the intensity of collisions typically in the following categories: fatal (F), severe injury (SI), other visible injury and complaint of pain (Other), and property damage only (PDO).

EMS – Abbreviation emergency medical services.

EPDO – Abbreviation for equivalent property damage only.

FHWA – Abbreviation for Federal Highway Administration: The federal agency responsible managing the nation's highway system, including bridges and tunnels.

F+SI – Abbreviation for fatal and severe injury collisions.

HSIP – Abbreviation for Highway Safety Improvement Program: A roadway safety funding program managed by Caltrans, California State Department of Transportation.

LRSM – Abbreviation for Local Roadway Safety Manual: A Manual for California's Local Road Owners.

Primary Violation Factor/Primary Collision Factor – Defined as contributing causes of collisions.

SWITRS - Abbreviation for Statewide Integrated Traffic Records System: A database managed by California Highway Patrol that collects and processes data gathered from collision scenes.

TIMS - Abbreviation for Transportation Injury Mapping System: A collision database managed by UC Berkeley SafeTREC system.

EXECUTIVE SUMMARY

The City of Pittsburg's Local Road Safety Plan (LRSP) is a comprehensive plan that creates a framework to systematically identify and address safety issues prevalent to the City of Pittsburg's jurisdiction. The analysis of crash history through the City's transportation network allows for opportunities to improve safety and develop safety measures aligning with the 4 E's of safety.

The LRSP takes a proactive approach to learn and reduce traffic accident fatalities and severe injury (F+SI) on public roads. It will be a living document, one that is routinely reviewed and updated every 5 years by City staff and their safety partners to reflect evolving collision trends and community needs and priorities. With the LRSP as a guide, the City will be able to apply for grant funds, such as the Federal Highway Safety Improvement Program (HSIP). The process and analysis performed in development of the City's LRSP, including an analysis of collisions that occurred in Pittsburg, high-injury locations, and recommended countermeasures at each of these high-risk locations, are summarized in this LRSP.

GOALS OF THE LRSP

The goals are summarized as follows:

- Systematically identify and analyze active transportation conflict areas and recommend improvements.
- Improve the safety of all road users by using proven effective countermeasures.
- Coordinate with key stakeholders to implement roadway safety improvements and response within Pittsburg.
- Continually leverage existing resources to secure additional funding for safety improvements. Seek consistent funding until the vision is fulfilled.

- Assist in prioritizing investments in traffic safety for all Pittsburg residents.

PROCESS

The guidelines on the LRSP process is provided at both FHWA (Federal Highway Administration) and Caltrans (California Department of Transportation) level. The systemic approach in preparing the LRSP involves the following steps:

- Develop plan goals and objectives
- Analyze collision data
- Meet with stakeholders/safety partners
- Determine focus areas and identify crash reduction strategies
- Prioritize countermeasures/projects
- Prepare the LRSP

COLLISION DATA

Collision data for a five year period spanning from January 1, 2015 through December 30, 2019 was collected from the University of California at Berkeley SafeTREC's Transportation Injury Mapping Service (TIMS) and the California Highway Patrol's Statewide Integrated Traffic Records System (SWITRS). For the purpose of this report the data was analyzed to identify top collision trends such as location type (Intersection vs Roadway Segment), injury severity, collision type, traffic violations, mode of transportation, lighting and weather conditions etc.

COLLISION TREND

Below is the summarization of key findings on collision patterns and trends. The detailed information is provided in the Chapter 4.

- A total of 765 injury collisions occurred between 2015 and 2019.
- There were 27 fatalities, 63 collisions resulted in severe injuries, 171 resulted in a visible injury, and 504 resulted in a complaint of pain injury.
- The year 2015 had highest number of collisions with 217 injury collisions, and 2019 had the lowest number of injury collisions with 110 collisions.
- The highest number of injury collisions occurred within 250 feet of an intersection (77%).
- Broadside and rear-end collisions, accounted for 30% and 24% of total injury collisions, respectively. 39% of F+SI collisions involved pedestrians.
- Unsafe Speed accounted for 25% of all injury collisions, followed by automobile right of way violations (14%).
- Most of the F+SI collisions occurred between 5:00 p.m. and 6:00 p.m.
- 58% of all injury collisions were motor vehicle involved with other motor vehicles

followed by motor vehicle involved with a fixed objects or other objects (15%).

- There were approximately a total of 99 injury collisions involves pedestrian and 34 involves bicycle during the study period.
- Top four collision trends for Pittsburg are nighttime collisions, pedestrian collisions, unsafe speed collisions, and hit object collisions.

HIGH RISK LOCATIONS

The collision analysis was performed on all city streets. The corridors were ranked to show the top 11 high-collision intersections and top 10 high-collision roadway segments.

Key findings of identifying high-risk intersections are as follows:

- There were a total of 69 injury collisions that occurred at intersections
- There were 22 collisions that led to F+SI collisions
- The intersection of Bailey Road and Leland Road had the highest number of injury collisions overall (13 injury collisions)

Key findings of identifying high-risk roadway segment are as follows:

- There were a total of 208 injury collisions that occurred on roadway segments
- There were 42 collisions that led to F+SI collisions
- Leland Road from Railroad Avenue to Century Boulevard had the highest number of injury collisions with 51

EMPHASIS AREAS

Emphasis areas are focus areas for the LRSP that are identified through the comprehensive collision analysis of the identified high injury locations within the City of Pittsburg. The six emphasis area identified for the City of Pittsburg are:

- Improve intersection safety (collisions within 250 feet of an intersection)
- Improve pedestrian and bicycle safety
- Address rear-end collisions and unsafe speed violations
- Address broadside collisions
- Address nighttime collisions
- Address hit object collisions

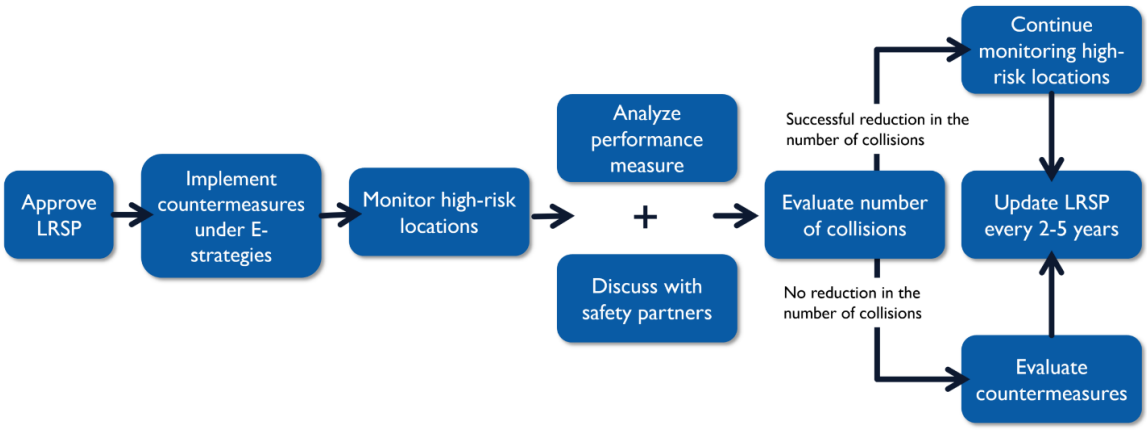
VIABLE SAFETY PROJECTS

A set of six safety projects were created for the high-risk intersections and roadway segments. The countermeasures were based off of approved countermeasures from the Caltrans Local Roadway Safety Manual (LRSM) used in HSIP grant calls for projects. These safety projects are:

- **Project 1**: Signalized intersections: Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, and number, improve signal timing (coordination, phases, red, yellow, or operation), install raised pavement markers and stripping through intersection
- **Project 2**: Signalized Intersections: Install pedestrian countdown signal heads, Install advance stop bar before crosswalk, Modify signal phasing to implement a Leading Pedestrian Interval (LPI)
- **Project 3**: Unsignalized Intersections: Add intersection lighting, Install/upgrade larger or additional stop signs or other intersection warning/regulatory signs
- **Project 4**: Roadway Segments: Install/upgrade pedestrian crossing (with enhanced safety features), Install Rectangular Rapid Flashing Beacon (RRFB)
- **Project 5**: Roadway Segments: Improve pavement friction (High Friction Surface Treatments), Install dynamic/variable speed warning signs
- **Project 6**: Citywide Segment Lighting: Add segment lighting

IMPLEMENTATION AND EVALUATION

The LRSP is a guidance document that is recommended to be updated every two to five years in coordination with the safety partners. The LRSP document provides the 4 E's of safety: Engineering, Education, Enforcement, and Emergency Medical Service-related (EMS) countermeasures that can be implemented throughout the City to reduce F+SI collisions. It is recommended that the City of Pittsburg implement the selected projects in high-collision locations in coordination with other projects proposed for the City's infrastructure development in their future Capital Improvement Plans. After implementing countermeasures, the performance measures for each emphasis area should be evaluated annually. The most important measure of success of the LRSP should be reducing F+SI collisions throughout the City. If the number of F+SI collisions does not decrease over time, then the emphasis areas and countermeasures should be re-evaluated.



Report Organization

CHAPTER 1 – INTRODUCTION

The Introduction describes what an LRSP is and details the study area. It also summarizes the systemic approach involved in preparing the LRSP and goal and objectives of the plan.

CHAPTER 2 – SAFETY PARTNERS AND PUBLIC OUTREACH

Involvement of safety partners is critical in the success of the LRSP. For the City of Pittsburg, this included the City Staff, City Police Department, City Fire Department, Pittsburg Unified School District, Contra Costa Transportation Authority (CCTA), and Pittsburg residents. This chapter summarizes the public outreach involvement of the stakeholders in the LRSP process.

CHAPTER 3 – EXISTING PLANNING EFFORTS

This chapter summarizes City and regional planning documents and projects that are relevant to the LRSP. It ensures that the recommendations of the LRSP are in line with existing goals, objectives, policies, or projects.

CHAPTER 4 – COLLISION DATA AND ANALYSIS

This chapter summarizes the collision data analysis approach and presents preliminary as well as detailed collision analysis and findings in the study area.

CHAPTER 5 – EMPHASIS AREAS

This chapter identifies the top six emphasis areas for the City and the safety strategies for each.

CHAPTER 6 – COUNTERMEASURE IDENTIFICATION

This chapter identifies the engineering countermeasures were selected for each of the high-risk locations and for the emphasis areas. These were based off of approved countermeasures from the Caltrans LRSM used in HSIP grant calls for projects. The intention is to give the City potential countermeasures for each high-risk location that can be implemented either in future HSIP calls for projects, or using other funding sources, such as the City's Capital Improvement Program. Non-engineering countermeasures were also selected using the 4 E's strategies, and are included with the emphasis areas.

CHAPTER 7 – SAFETY PROJECTS

This chapter summarizes the list of viable safety projects applicable to the high-risk intersections and roadway segments, along with the cost for implementation and their B/C Ratio.

CHAPTER 8 – IMPLEMENTATION AND EVALUATION

This chapter summarizes the process of implementation, monitoring, evaluation, and future updates.



1 | INTRODUCTION

1 INTRODUCTION

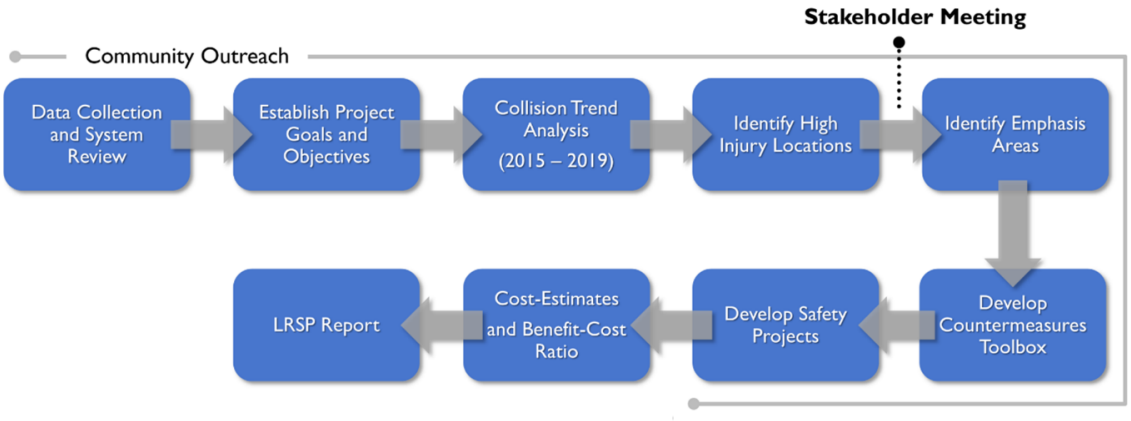
What is an LRSP?

The LRSP is a localized data-driven traffic safety plan that provides opportunities to address unique roadway safety needs and reduce the number of F+SI collisions. The LRSP creates a framework to systematically identify and analyze traffic safety-related issues, and recommend safety projects and countermeasures. It facilitates the development of local agency partnerships and collaboration, resulting in the development of a prioritized list of improvements that can qualify for HSIP funding. The LRSP is a proactive approach to addressing safety needs and is viewed as a living document that can be constantly reviewed and revised to reflect evolving trends, and community needs and priorities.

PROCESS

The systemic approach in preparing the LRSP involves the following steps:

- Develop plan goals and objectives
- Analyze collision data
- Meet with stakeholders/safety partners
- Determine focus areas and identify crash reduction strategies
- Prioritize countermeasures/projects
- Prepare the LRSP



Goals and Objectives

GOAL 1: SYSTEMATICALLY IDENTIFY AND ANALYZE ACTIVE TRANSPORTATION CONFLICT AREAS AND RECOMMEND IMPROVEMENTS

Objective 1: Use the Systemic Safety Analysis data-driven process to identify traffic collisions in Pittsburg, (with an emphasis on F+SI collisions); where, when, and how they are occurring, and implement appropriate and proven countermeasures.

Objective 2: Improve roadway planning, design, operations, and connectivity to enhance safety and mobility for all modes, and for users of all ages and abilities.

Objective 3: Implement traffic calming strategies to discourage speeding and other unsafe driving behaviors on residential streets.

Objective 4: Ensure that all recommended improvements are consistent with City of Pittsburg goals, as well as State and Federal plans and goals (such as, but not limited to: California Strategic Highway Safety Plan, and the FHWA Local and Rural Road Safety Program).

Objective 5: Review existing City policies and recommend improvements to ensure that they meet current best practices in the realm of traffic safety.

GOAL 2: IMPROVE THE SAFETY OF ALL ROAD USERS BY USING PROVEN EFFECTIVE COUNTERMEASURES

Objective 1: Identify safety issues and locations/hot spots where bicycle and pedestrian collisions occur in Pittsburg, and treat with appropriate and effective engineering countermeasures.

Objective 2: Provide educational programs for bicyclists, pedestrians, and motorists to inform on how to be safe in the public right-of-way; either through after-school programs, law enforcement programs, or other public/private sponsored programs.

Objective 3: Improve sidewalks, walkways, and crossings to be free of hazards and to minimize conflicts with vehicular traffic.

Objective 4: Prioritize improvements that promote Safe Routes to School efforts or are located near schools.

GOAL 3: COORDINATE WITH KEY STAKEHOLDERS TO IMPLEMENT ROADWAY SAFETY IMPROVEMENTS AND RESPONSE WITHIN PITTSBURG

Objective 1: Coordinate between City Departments, Police Department, Fire Department, School District and EMS agencies to ensure a coordinated response to traffic safety, including:

- Implementation of safety improvements
- Public education on safely traveling in the public right-of-way, regardless of mode
- Enforcement of traffic safety laws in the public right-of-way
- Minimizing impacts to emergency response times

Objective 2: Coordinate with local, regional, and state partners (such as CCTA, Tri-Delta, BART etc.), to identify and address traffic safety issues and ensure a coordinated response.

GOAL 4: CONTINUALLY LEVERAGE EXISTING RESOURCES TO SECURE ADDITIONAL FUNDING FOR SAFETY IMPROVEMENTS

Objective 1: Ensure the LRSP meets HSIP guidelines in order to apply for funding for identified countermeasures.

Objective 2: Provide a list of prioritized locations and improvements that guide City investments and grant funding applications.

Objective 3: Identify and prioritize specific types of countermeasures to address identified safety issues, for systemic implementation citywide.

Objective 4: Continually seek funding sources to implement engineering, education, enforcement, equity, and emergency response solutions to roadway safety issues in Pittsburg.

GOAL 5: ASSIST IN PRIORITIZING INVESTMENTS IN TRAFFIC SAFETY FOR ALL PITTSBURG RESIDENTS

Objective 1: Utilize public input to identify traffic issues and locations and inform prioritization based on community desires and needs.

Objective 2: Provide a forum for residents to submit traffic safety related concerns; and for City staff and officials to respond to such concerns.

Objective 3: Where feasible, implement community outreach to inform the public about upcoming safety improvements and seek input regarding viability and impacts while building trust and confidence to actively participate in such decisions.

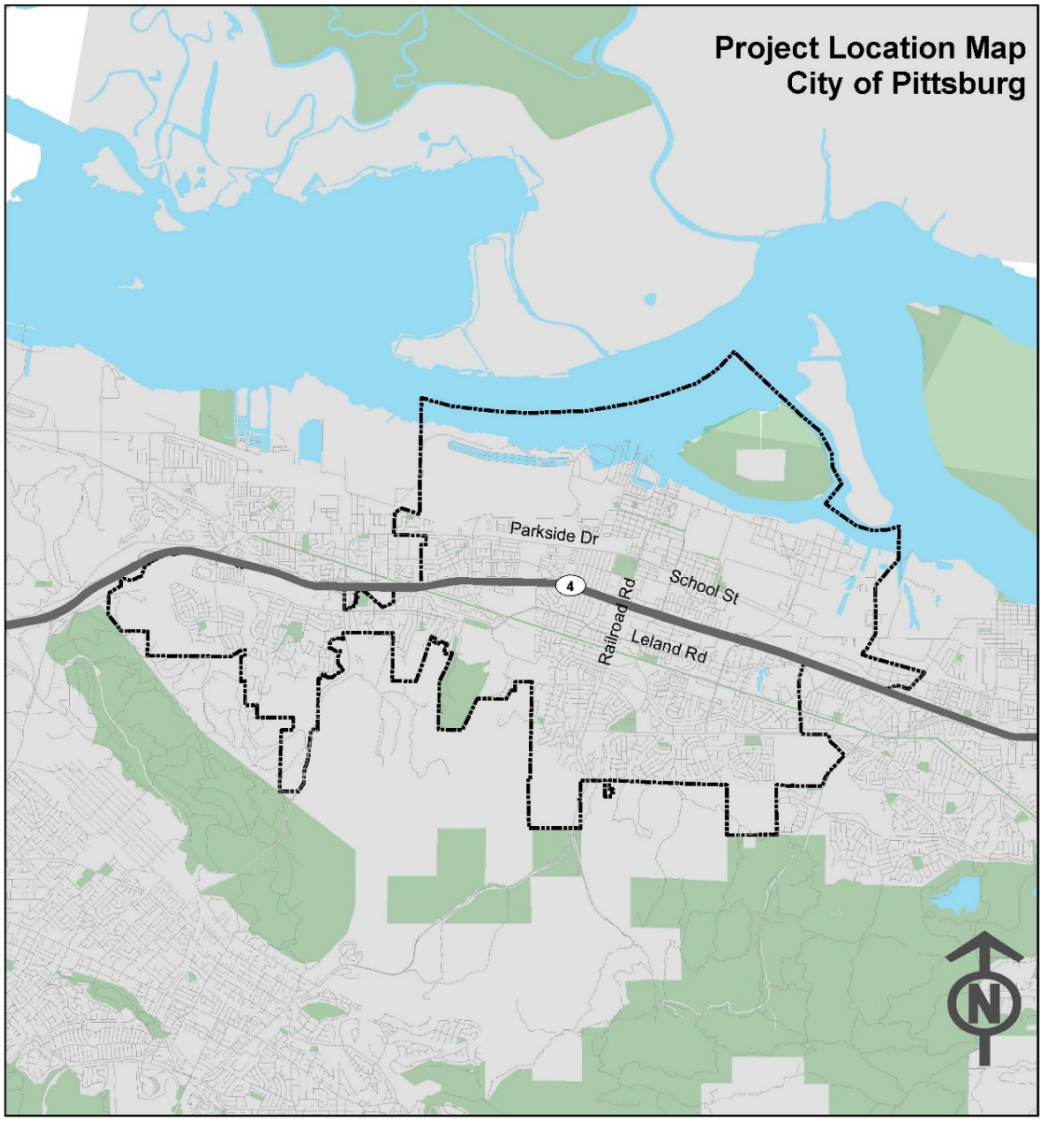
Objective 4: Ensure the consideration of equity when selecting where to make traffic safety improvements and establish metrics by which to make equitable decisions.

Objective 5: Identify groups with a special interest in roadway safety and help build their capacity to support the city in outreach efforts, including Safe Routes to School and Safe Routes for Seniors Programs.

Study Area

The City of Pittsburg, located in Contra Costa County, California, covers a total area of 19.7 square miles, of which 17.6 square miles is land and 2.07 square miles is water, including the Contra Costa Canal and New York Slough Channel. Pittsburg is located on the southern shore of the Suisun Bay in the East Bay region of the San Francisco Bay Area, and is part of the Sacramento–San Joaquin River Delta area. The City's estimated population is 76,416 (US Census 2020). Railroad Avenue, Leland Road, Willow Pass Road, 10th Street, and Buchanan Road are main thoroughfares that connect the City with nearby cities and State Route 4 (SR 4). The study area is mapped in **Figure 1** below.

Figure 1. Study Area



According to the five-year estimates from the American Community Survey (ACS) 2021[1] from the U.S. Census, 68% of Pittsburg commuters get to work by driving alone, more than both the Contra Costa County and State percentages. The second most common method of commuting to work in the City is carpooling at 14%. The different modes of transportation used by Pittsburg residents to commute to work are shown in **Table 1** below.

Table 1. Pittsburg Commute to Work Census Data

Commute to Work	Pittsburg	Contra Costa County	California
Drive Alone	68%	57%	64%
Carpool	14%	9%	8%
Public Transportation	8%	3%	2%
Walked	1%	2%	2%
Work from Home	7%	28%	21%
Other	1%	2%	2%

Source: Data from the Census Bureau ACS 5-year Estimate 2021

[1] https://data.census.gov/table?q=Pittsburg+city,+California&t=Transportation&tid=ACSDT5Y2021.B08141



2 | SAFETY PARTNERS

2 SAFETY PARTNERS

Safety partners are vital to the development and implementation of an LRSP. For the City of Pittsburg, these include City Staff, City Police Department, City Fire Department, Pittsburg Unified School District, CCTA, and Pittsburg residents. These stakeholders attended a virtual stakeholder meeting, held on July 21, 2022 to review project goals, findings, and solicit feedback and comments. **Figure 2** illustrates the power point presentation for the virtual Stakeholder Meeting.

Figure 2. Zoom Meeting from Stakeholder Meeting



This stakeholder outreach was supplemented by a project website with an interactive platform. The interactive map was used to solicit input from City of Pittsburg residents and stakeholders outside the confines of traditional meetings. **Figure 3** illustrates the landing page of the Pittsburg LSRP Project Website.

Figure 3. Pittsburg LRSP Project Website



In total, 57 comments were received through the project website and interactive map platform for Pittsburg. The most comments were received about West Leland Road, Harbor Street, and Railroad Avenue, with the most common concerns related to bicycle, pedestrian, and interesection safety. On the following page the results of the interactive map are shown in **Figure 4**, and summarized in **Figure 5**. In **Figure 4**, each dot and line (in blue color) represents a comment provided by a community member.

Figure 4. Interactive Map Comment Responses

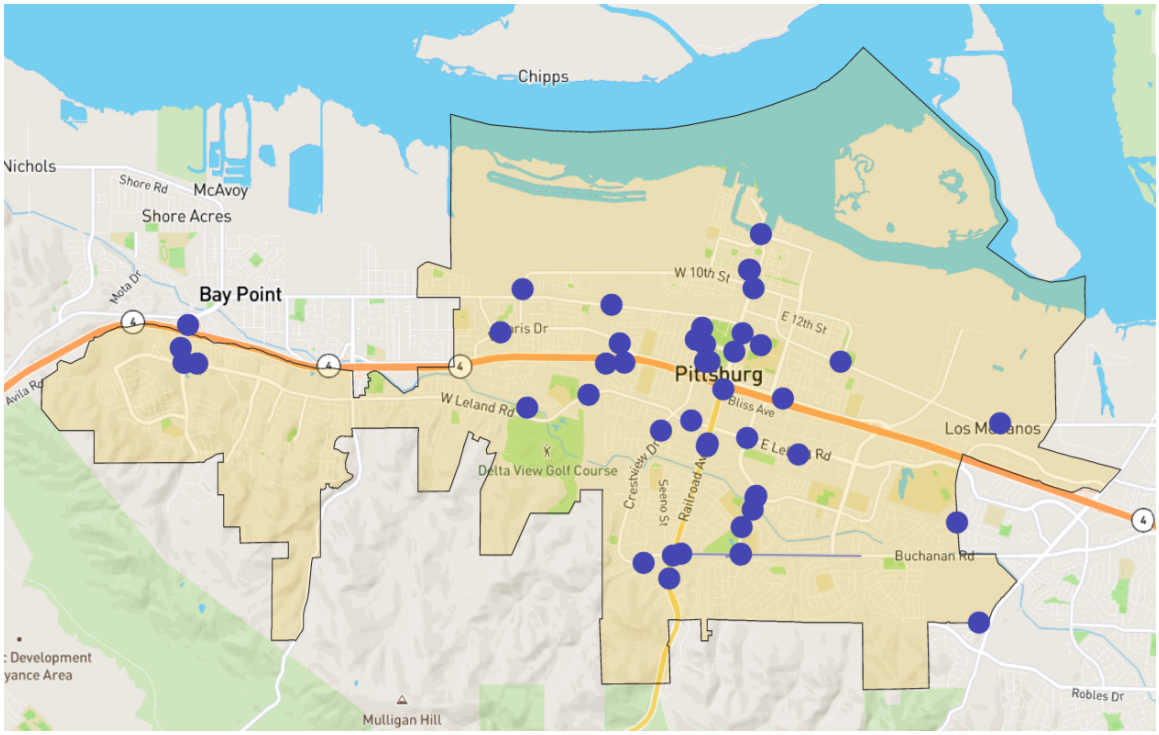
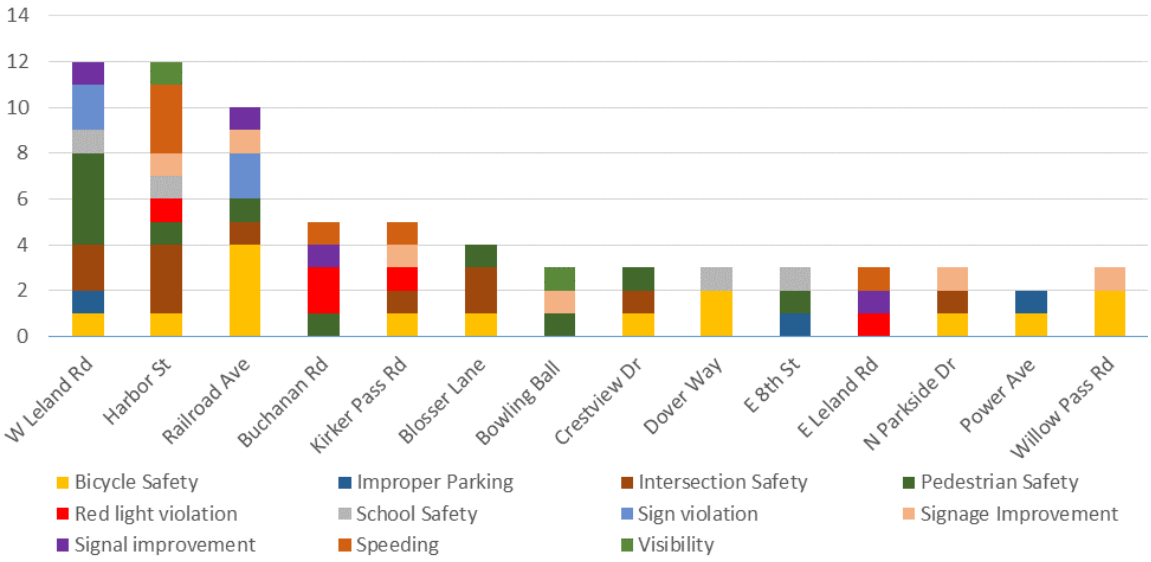


Figure 5. Public Comments on Traffic Safety by Location



Note: Corridors with less than three comments are not listed in this summary. Categories with less than four comments are included in 'Other'. Category was chosen based on the primary issue listed in the comment. Each comment was assigned to the major road if at an intersection.

The community comments collected through Interactive map platform is included in **Appendix A**.



3 | EXISTING PLANNING EFFORTS

3 EXISTING PLANNING EFFORTS

This chapter summarizes the planning documents, projects underway, and studies reviewed for the City of Pittsburg LRSP. The purpose of this memorandum is to ensure the LRSP vision, goals, and the 4 E's strategies (Education, Enforcement, Engineering, and EMS are aligned with prior planning efforts, planned transportation projects, and non-infrastructure programs for the City. The documents reviewed are listed below:

- City of Pittsburg General Plan 2020
- Pittsburg Moves Active Transportation Plan (2021)
- City of Pittsburg Systemic Safety Analysis Report (2018)
- Pittsburg Bay Point BART Master Plan (2011)
- City of Pittsburg Railroad Avenue Specific Plan (2009)
- City of Pittsburg Traffic Calming Policy (2004)
- City of Pittsburg Five-Year Capital Improvement Plan (FY 2021/22 – 2025/26)
- Contra Costa Countywide Bike and Pedestrian Plan (2018)
- CCTA Transportation Expenditure Plan (2020)
- Contra Costa Countywide Transportation Safety Policy and Implementation Guide (2021)
- CCTA Countywide Comprehensive Transportation Plan (2017)
- Contra Costa County Transportation Analysis Guidelines (2020)

The following sections include brief descriptions of these documents and how they inform the development of the LRSP. A detailed list of relevant policies and projects is listed in **Appendix B.**

CITY OF PITTSBURG GENERAL PLAN 2020

The General Plan transportation element identifies long-range future transportation needs, primarily through policies and standards to enhance capacity and provide new linkages to further an integrated multi-modal transportation system. These goals and policies inform City's LRSP to improve roadway safety for active transportation users while encouraging users to choose walking, bicycling, and transit as a mode of transportation in Pittsburg.



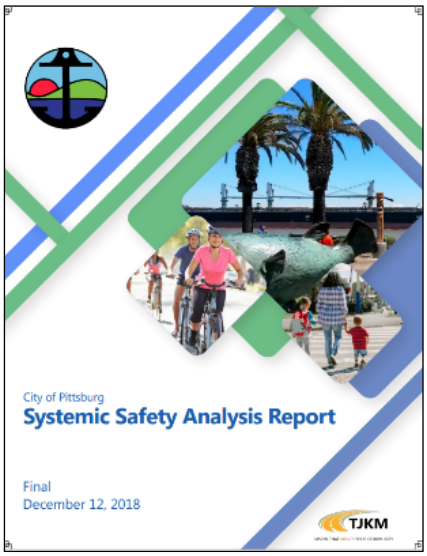
PITTSBURG MOVES ACTIVE TRANSPORTATION PLAN (2021)

Pittsburg Moves is a plan that was developed by the City of Pittsburg to promote better active transportation in the community. Active transportation is any self-propelled, human-powered form of transportation, such as walking or bicycling. By prioritizing active transportation, the City of Pittsburg hopes to improve its health, mobility, livability, economy, and environment. This document suggests various countermeasures to elevate bicycle and pedestrian safety in Pittsburg neighborhoods. The improvements identified in this plan will inform the safety improvements and strategies to be recommended in the City's LRSP.



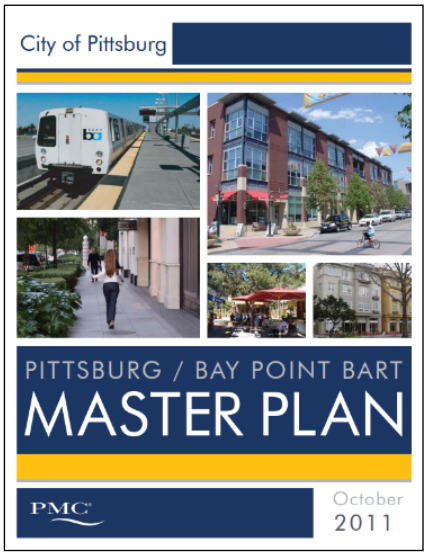
CITY OF PITTSBURG SYSTEMIC SAFETY ANALYSIS REPORT (2018)

The City of Pittsburg System Safety Analysis Report evaluates city wide crash trends and identify potential solutions. Based on the findings of the crash analysis, a local agency can develop a set of countermeasures using specific criteria and proactively implement them along major corridors and entire roadway network, rather than focusing narrowly on intersections with high crash history. The improvements identified in this plan will inform the safety improvements and strategies to be recommended in the City's LRSP.



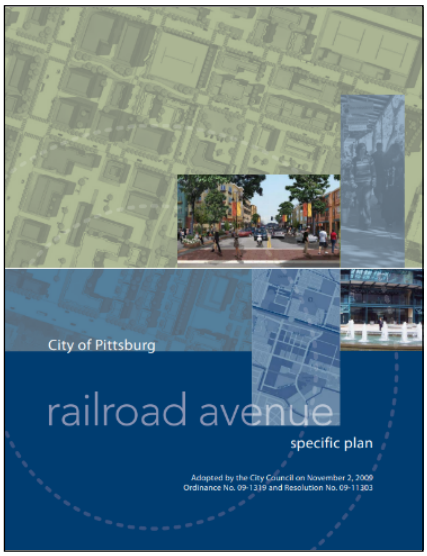
PITTSBURG/BAY POINT BART MASTER PLAN (2011)

The Pittsburg/Bay Point BART Master Plan (the Master Plan) guides the future development of approximately 50.6 acres adjacent to the Pittsburg/Bay Point BART Station over the course of 20 years. This Master Plan describes allowed land uses and densities, transportation and circulation improvements, pedestrian pathways and improvements, urban design guidelines and standards, infrastructure development and financing, and phasing and implementation strategies and guidelines. The improvements identified in this plan will inform the safety improvements and strategies to be recommended in the City's LRSP.



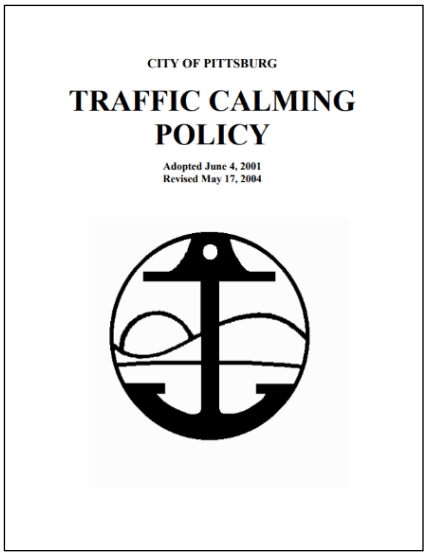
CITY OF PITTSBURG RAILROAD AVENUE SPECIFIC PLAN (2009)

The City of Pittsburg Railroad Avenue Specific Plan encompasses a half-mile radius around the proposed transit hub—a strategic location that is well positioned to capture future potential growth in the City. The Specific Plan will help guide that growth, while embracing concepts of transit accessibility, pedestrian friendly design, high-quality development, inclusiveness, and sustainability to create a vibrant 21st Century hub for Pittsburg. The improvements identified in this plan will inform the safety improvements and strategies to be recommended in the City's LRSP.



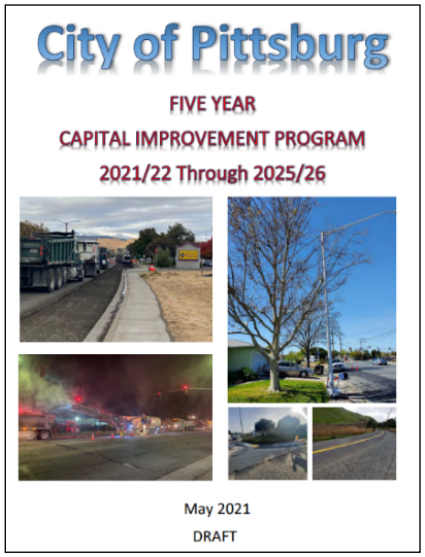
CITY OF PITTSBURG TRAFFIC CALMING POLICY (2004)

The City of Pittsburg's Traffic Calming Policy details a step by step process to respond to resident's complaints of speeding in residential neighborhoods. The plan focuses on speed humps as a traffic calming device, which aren't HSIP approved countermeasures, but also includes striping, signage and speed feedback signs which are HSIP approved countermeasures. The policy includes specific criteria around speed hump installation and removal. The improvements identified in this policy will inform the safety improvements and strategies to be recommended in the City's LRSP.



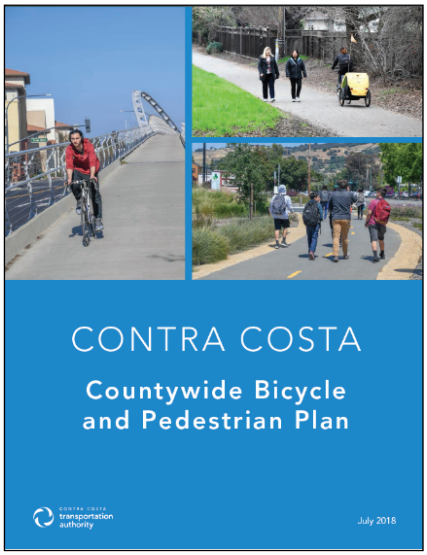
CITY OF PITTSBURG FIVE YEAR CAPITAL IMPROVEMENT PLAN (FY 2021/22 – 2025/26)

The City of Pittsburg's five-Year Capital Improvement Program is a multi-year planning instrument for construction of new facilities and infrastructure, and for the expansion, rehabilitation, or replacement of existing City-owned assets. The five-Year Capital Improvement Program is developed by City Staff and is adopted by the City Council as a guide for prioritization of various projects to accomplish community goals. The Capital Improvement Program is updated regularly to reflect changing priorities and funding availability, and to remove projects that have been completed. These improvements influence Pittsburg's built and natural environment and help guide the trajectory of future growth or change. The improvements identified in this plan will inform the safety improvements and strategies to be recommended in the City's LRSP.



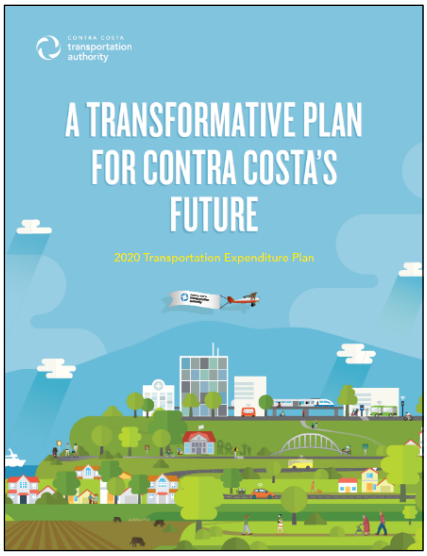
CONTRA COSTA COUNTYWIDE BIKE AND PEDESTRIAN PLAN (2018)

Revised in 2018, the Contra Costa Countywide Bike and Pedestrian Plan entails new policies, best practices and standards developed over the last decade as well as newly-adopted local active transportation plans. This plan highlights the need of increased interest and support for walking and bicycling. The plan also includes the pedestrian and bicycle collision density, design for pedestrian facilities, pedestrian priority area, level of traffic stress for bicycle users, and existing and proposed bicycle facilities. The improvements identified in this plan will inform the safety improvements and strategies to be recommended in the City's LRSP.



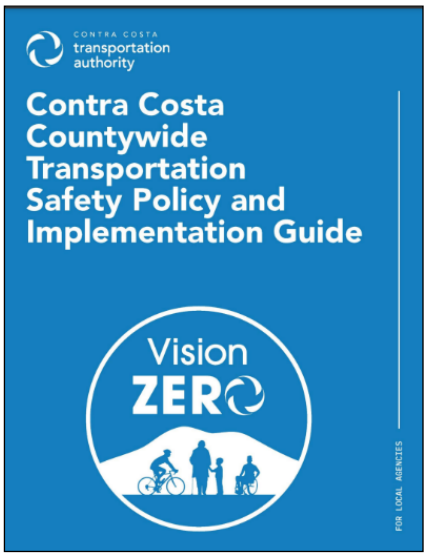
CCTA TRANSPORTATION EXPENDITURE PLAN (2020)

The 2020 Transportation Expenditure Plan is a carefully curated set of solutions designed to bring Contra Costa's transportation system into the future by moving more people efficiently, encouraging mode shift, and promoting shared mobility options for all. The Transportation Expenditure Plan is intentionally designed to be equitable across the entire County, based on population. This plan reflects the current progress of transportation projects in Contra Costa County and the commitment to pursuing transportation policies, planning, and investments.



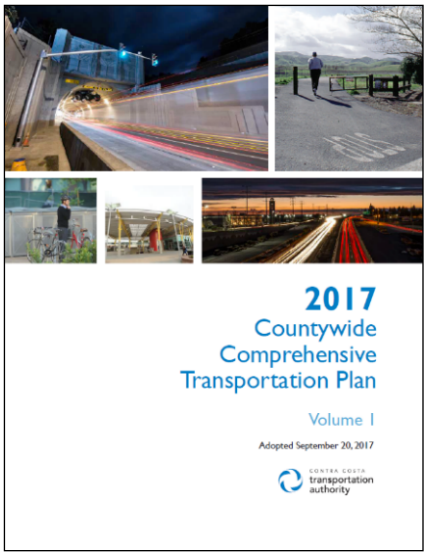
CONTRA COSTA COUNTYWIDE TRANSPORTATION SAFETY POLICY AND IMPLEMENTATION GUIDE (2021)

This report layout a framework for Safety Policy and implementation in Contra Costa County. The Safe System Approach integrating multimodal equity supports the Vision Zero goal of eliminating severe injuries and fatalities. This approach is especially critical for people using non-vehicular transportation modes who lack the physical protection provided to people traveling in multi-ton vehicles, which require compliance with carefully designed and regulated manufacturing requirements. CCTA launched their Vision Zero Framework and Systemic Safety Approach effort to serve as the basis for transportation planning, policy, design, construction, and funding throughout Contra Costa County.



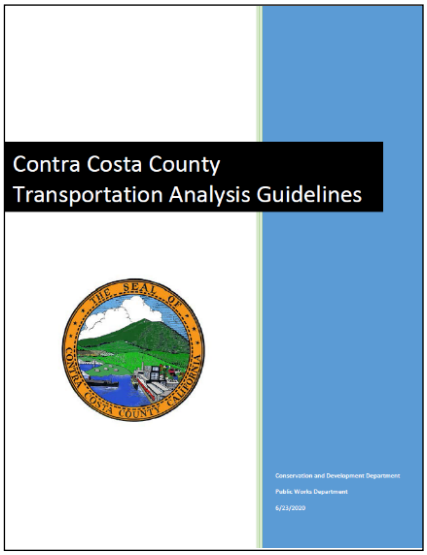
CCTA COUNTYWIDE COMPREHENSIVE TRANSPORTATION PLAN (2017)

The 2017 Countywide Comprehensive Transportation Plan provides the policy framework and steps necessary for the CCTA to achieve its vision. It includes an analysis of challenges and opportunities; a definition of the vision, goals, and strategies; and defines how the Comprehensive Transportation Plan will be carried out through a Long-Range Transportation Investment Program and an Implementation Program, with defined responsibilities and a schedule of activities. The Comprehensive Transportation Plan outlines the various strategies for addressing transportation and growth management issues within Contra Costa County.



CONTRA COSTA COUNTY TRANSPORTATION ANALYSIS GUIDELINES (2020)

The Contra Costa County Transportation Analysis Guidelines are provided to aid in the preparation of traffic analysis for project applicants and staff. The purpose of this document is to establish a uniform approach, methodology, and toolset to evaluate the impacts of land-use decisions and related transportation projects on the County's transportation system. This is a living document and is updated periodically to reflect newly acquired data and relevant policies. Capital Road Improvement and Complete Streets policies mentioned in this document will serve as a reference while developing a City's LRSP.





4 | COLLISION DATA AND ANALYSIS

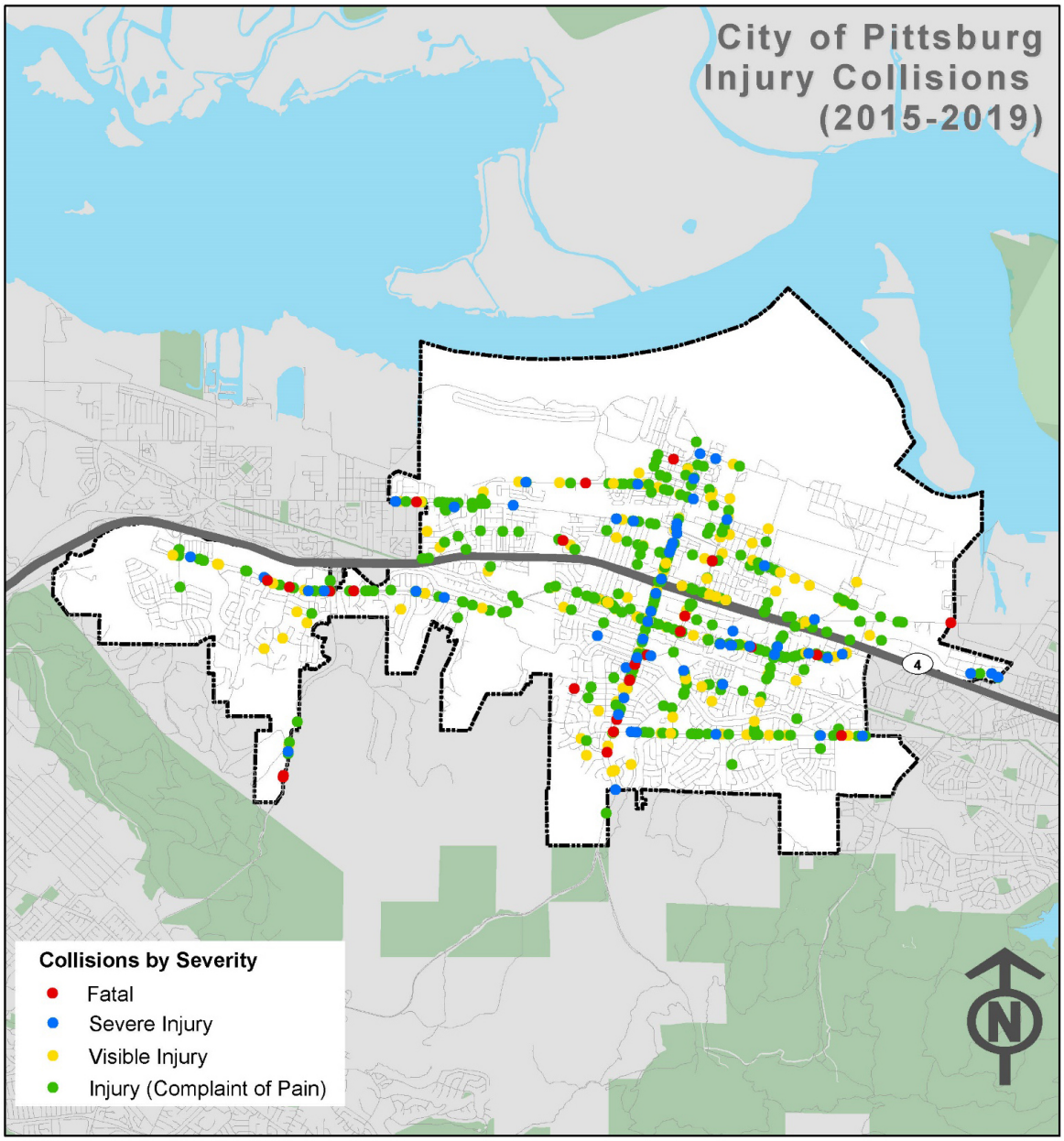
4 COLLISION DATA AND ANALYSIS

This chapter summarizes the results of the collision analysis of collisions that have occurred in the City of Pittsburg between January 1, 2015 and December 31, 2019, as part of the LRSP. This memorandum includes the following sections:

- Data Collection
- Collision Data Analysis
- F+SI Collision Analysis
- Geographic Collision Analysis
- High Injury Network
- Summary

The LRSP focuses on systemically identifying and analyzing safety issues and recommends appropriate safety improvements. The chapter starts with an analysis of the injury collisions for the City of Pittsburg. Further on, a detailed analysis was conducted for F+SI collisions that have occurred on the City's roadways. After this data was segregated, a comprehensive evaluation was conducted based on factors such as collision severity, type of collision, primary collision factor, lighting, weather, and time of the day. **Figure 6** illustrates all the injury collisions (excluding property damage only (PDO) collisions) that have occurred in the City from January 1, 2015 to December 31, 2019.

Figure 6. Injury Collisions City of Pittsburg (2015-2019)



Data Collection

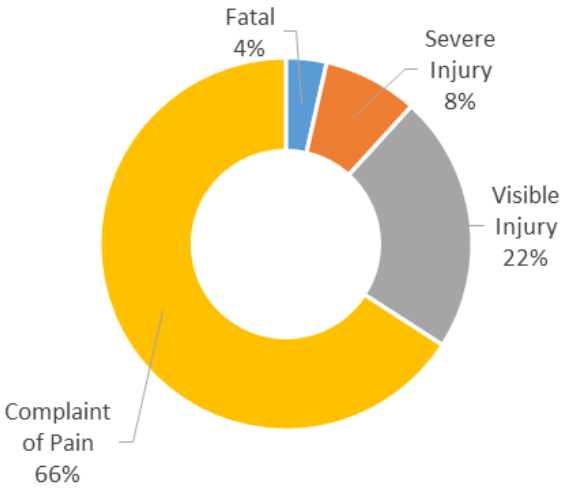
Collision data helps understand different factors that might be influencing collision patterns and various factors leading to collisions in a given area. For the purpose of this analysis, a five-year jurisdiction-wide collision data, from 2015 to 2019 was retrieved from TIMS and SWITRS. Collisions that occurred on state routes were excluded for this analysis. The collision data was analyzed and plotted in ArcMap to identify high-risk intersections and roadways segments.

Collision Data Analysis Results

COLLISION CLASSIFICATION

There were a total of 765 collisions reported citywide from 2015 to 2019. Out of these 504 collisions (66%) led to complaint of pain injury and 171 collisions (22%) led to a visible injury. There were 90 F+SI collisions, 63 collisions (8%) led to a severe injury and 27 collisions (4%) led to a fatality. **Figure 7** illustrates the classification of all collisions based on severity.

Figure 7. Collisions by Severity (2015-2019)



The analysis first includes a comparative evaluation between all collisions and F+SI collisions, including but not limited to: collision trend, primary collision factor, collision type, facility type, motor vehicle involved with, weather, lighting, and time of the day. Further on, a comprehensive analysis is conducted for only F+SI collisions. F+SI collisions cause the most damage to those affected, infrastructure and the aftermath of these collisions lead to great expenses for jurisdiction administration. The LRSP process thus focuses on these collision locations to proactively identify and counter their respective safety issues.

The collision data was segregated by facility type, i.e. based on collisions occurring on intersections and roadway segments. For the purposes of the analysis, a collision was designated to have occurred at an intersection if it occurred within 250 feet of it. The reported collisions categorized by facility type and collision severity are presented in **Table 2**.

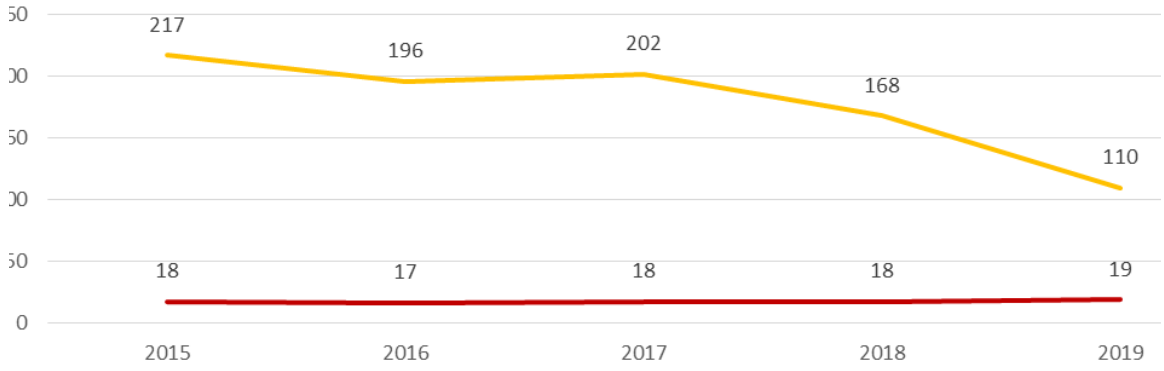
Table 2. Collisions by Severity and Facility Type

Collision Severity	Roadway Segment	Intersection	Total
Fatal	7	20	27
Severe Injury	19	44	63
Visible Injury	38	133	171
Complaint of Pain	113	391	504
Total	**177**	**588**	**765**

YEARLY TREND

For all injury collisions, the number of reported collisions decreased from 2015 to 2019. The highest number of collisions (217 collisions) were observed in 2015 and the lowest number of collisions (110) were observed in 2019. A total of 90 F+SI collisions occurred in the City of Pittsburg during the study period. They were observed to be the lowest (17 collision) in 2016, and the highest in 2019 (19 collisions). **Figure 8** illustrates the five-year collision trend for all collisions and F+SI collisions.

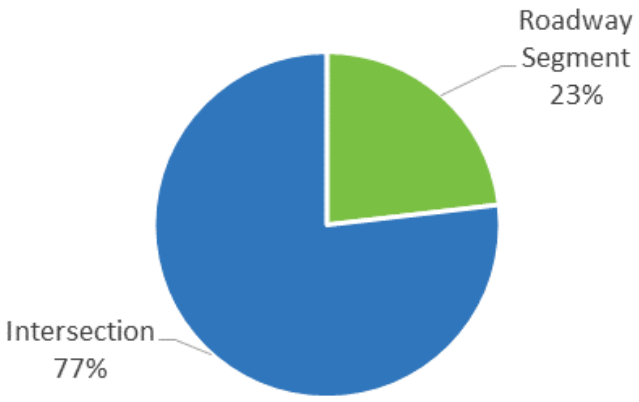
Figure 8. Five Year Collision Trend



ROADWAY SEGMENT VS. INTERSECTION

When evaluating the roadway geometry, it was observed that the majority of collisions occurred at intersections. In the City of Pittsburg, 77% of all collisions (588 collisions) occurred at intersections whereas 23% (177 collisions) occurred on roadway segments. This classification by facility type can be observed in **Figure 9.**

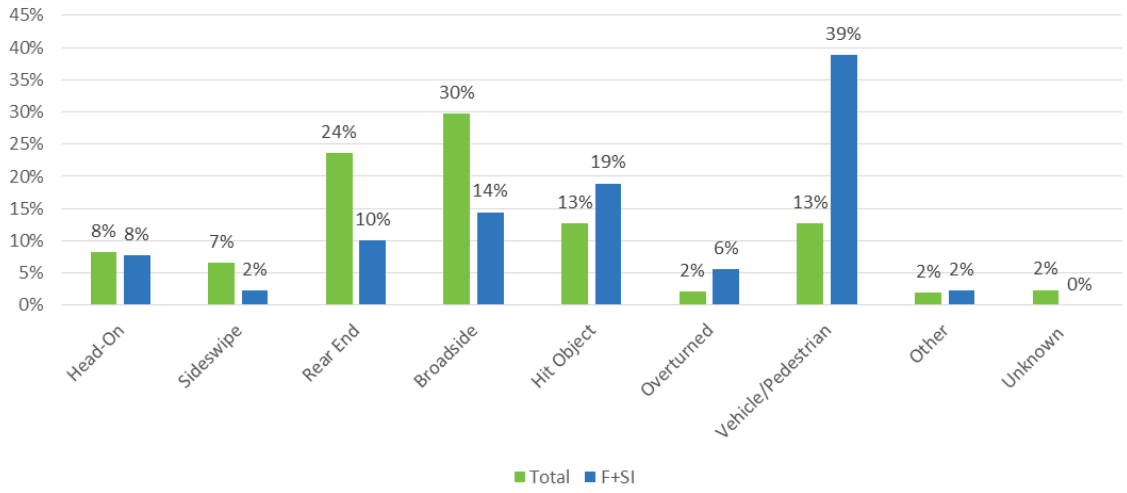
Figure 9. Intersection and Roadway Collisions – All Collisions



COLLISION TYPE

Considering all collisions, the most commonly occurring collision type was broadside collisions (30%) and rear end collisions (24%). The collision type for F+SI collisions are noticeably different. For F+SI collisions, the most commonly occurring collision type was vehicle/pedestrian collisions (39%) and hit object collisions (19%). **Figure 10** illustrates the collision type for all injury collisions as well as F+SI collisions.

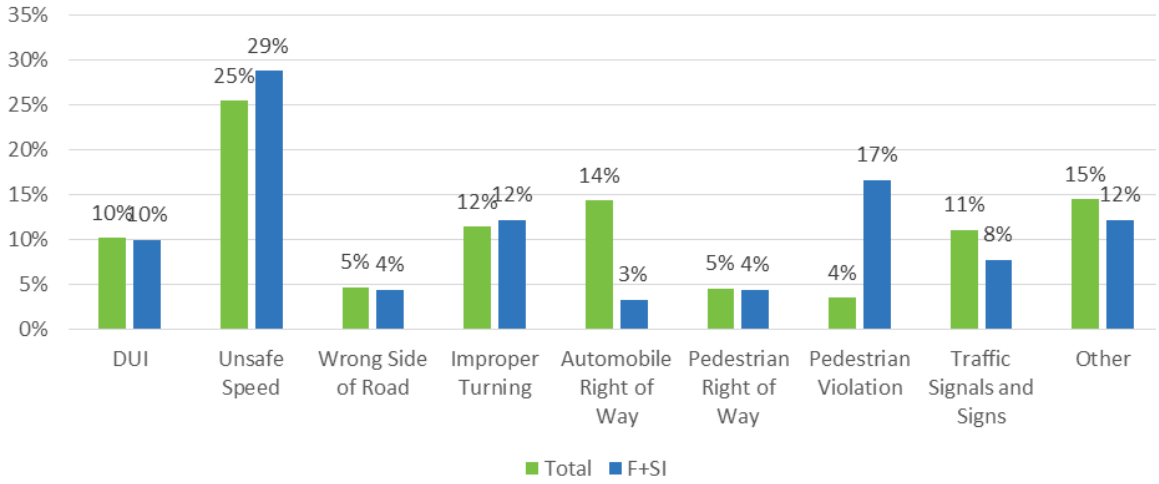
Figure 10. Collision Type – All Collisions and F+SI Collisions



PRIMARY COLLISION FACTOR

Primary collision factor refers to the violation which in the officer's opinion best describes the primary cause of the collision. Considering all injury collisions, the most common violation category was observed to be unsafe speed (25%), automobile right of way (14%) and improper turning collisions (12%). For F+SI collisions unsafe speed (29%) and pedestrian violations (17%) was observed to be the violation categories. **Figure 11** illustrates the violation category for all collisions and F+SI collisions.

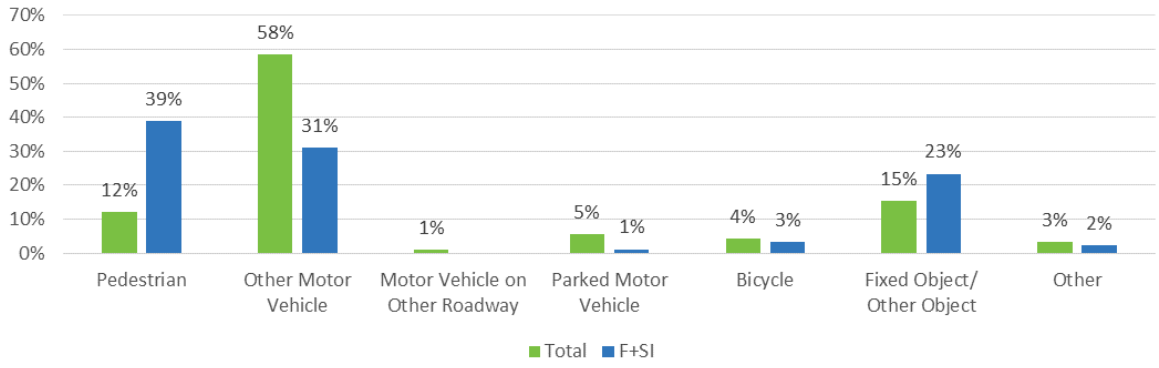
Figure 11. Violation Categories: All Injury Collisions and F+SI Collisions



MOTOR-VEHICLE INVOLVED WITH

This category refers to the involvement of motor vehicle with other mode of transportation or object at the time of collision. Considering all injury collisions, 58% of the collisions occurred between two motor vehicles. The remaining collisions include motor vehicle involved with fixed object (15%) and pedestrians (12%). For F+SI collisions, 39% of the collisions involved a pedestrian, 31% involved another motor vehicle, and 23% involved a fixed object/other object. **Figure 12** illustrates the percentage for all collisions as well as F+SI collisions.

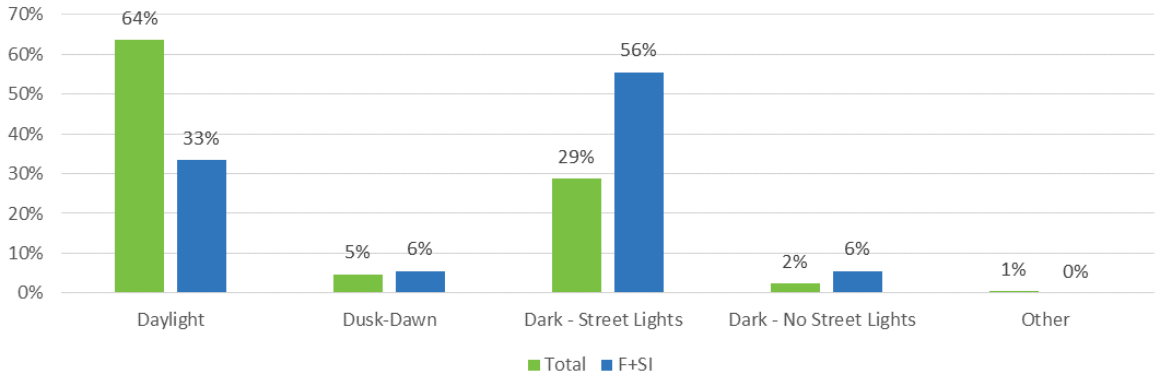
Figure 12. Motor Vehicle Involved with: All Collisions and F+SI Collisions



LIGHTING

This category shows what the lighting conditions were at the time of the collision to examine if lighting may have been a contributing factor. For injury collisions of all severity, 64% of collisions have occurred in daylight and 29% of collisions have occurred in the dark on streets with street lights. For F+SI collisions, 56% of collisions having occurred in the dark with street lights and 33% of collisions occurred in the daylight. The over occurrence of F+SI collisions at night suggests lighting may be a factor in theses collisions. **Figure 13** illustrates the lighting condition for all collisions and F+SI collisions.

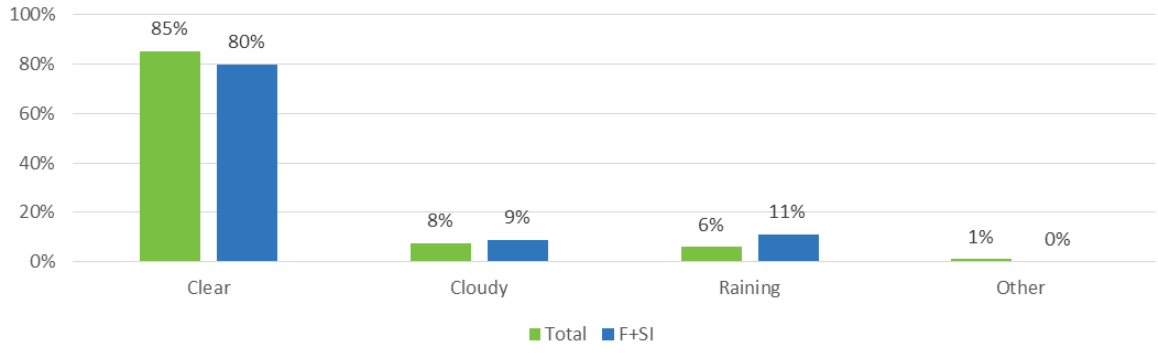
Figure 13. Lighting Conditions: All Collisions and F+SI Collisions



WEATHER

For all collisions, 85% of the collisions have occurred during clear weather conditions. For F+SI collisions similar trends have been observed, with 80% of the collisions having occurred during clear weather conditions. **Figure 14** illustrates the percentage distribution of weather conditions during occurrence of collisions of all severity as well as F+SI collisions.

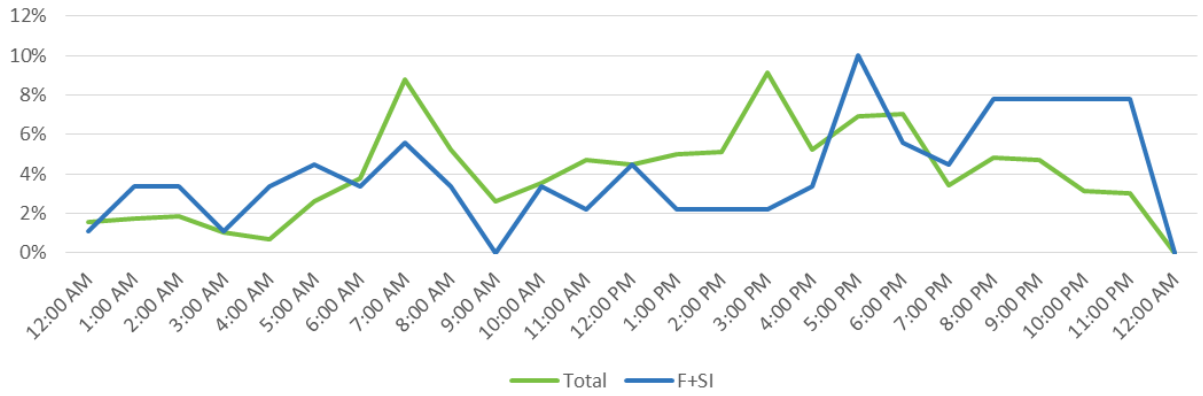
Figure 14. Weather Conditions: All Collisions and F+SI Collisions



TIME OF THE DAY

For injury collisions of all severity, maximum number of collisions occurred between 3:00 p.m. to 4:00 p.m. (9%) and no collisions occurred between 9:00 a.m. to 10:00 a.m. For all F+SI collisions, maximum number of collisions have been observed to occur between 5:00 p.m. to 7:00 p.m. **Figure 15** illustrates the percentage of collisions occurring during the day for all collisions as well as F+SI collisions.

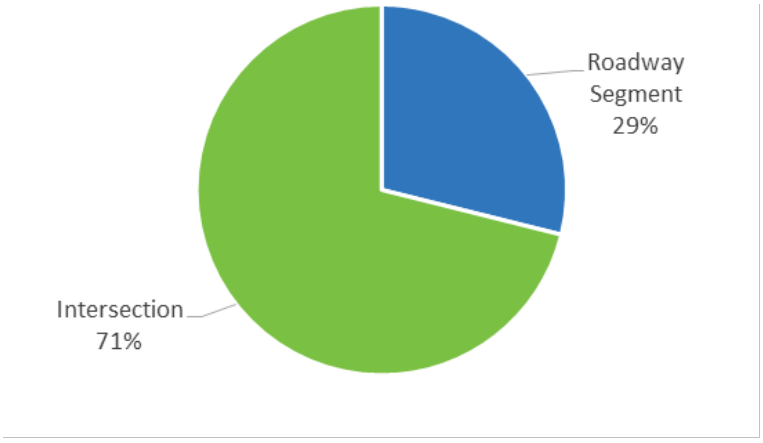
Figure 15. Time of Day: All Collisions and F+SI Collisions



F+SI Collisions

This section describes a detailed collision analysis performed for F+SI collisions occurring at roadway segments and intersections in the City of Pittsburg. Of the total 90 F+SI collisions that occurred during the study period, 26 collisions (29%) occurred on roadway segments and 64 collisions (71%) occurred at intersections. This distribution is illustrated in **Figure 16**.

Figure 16. F+SI Collisions: Roadway Segment and Intersection

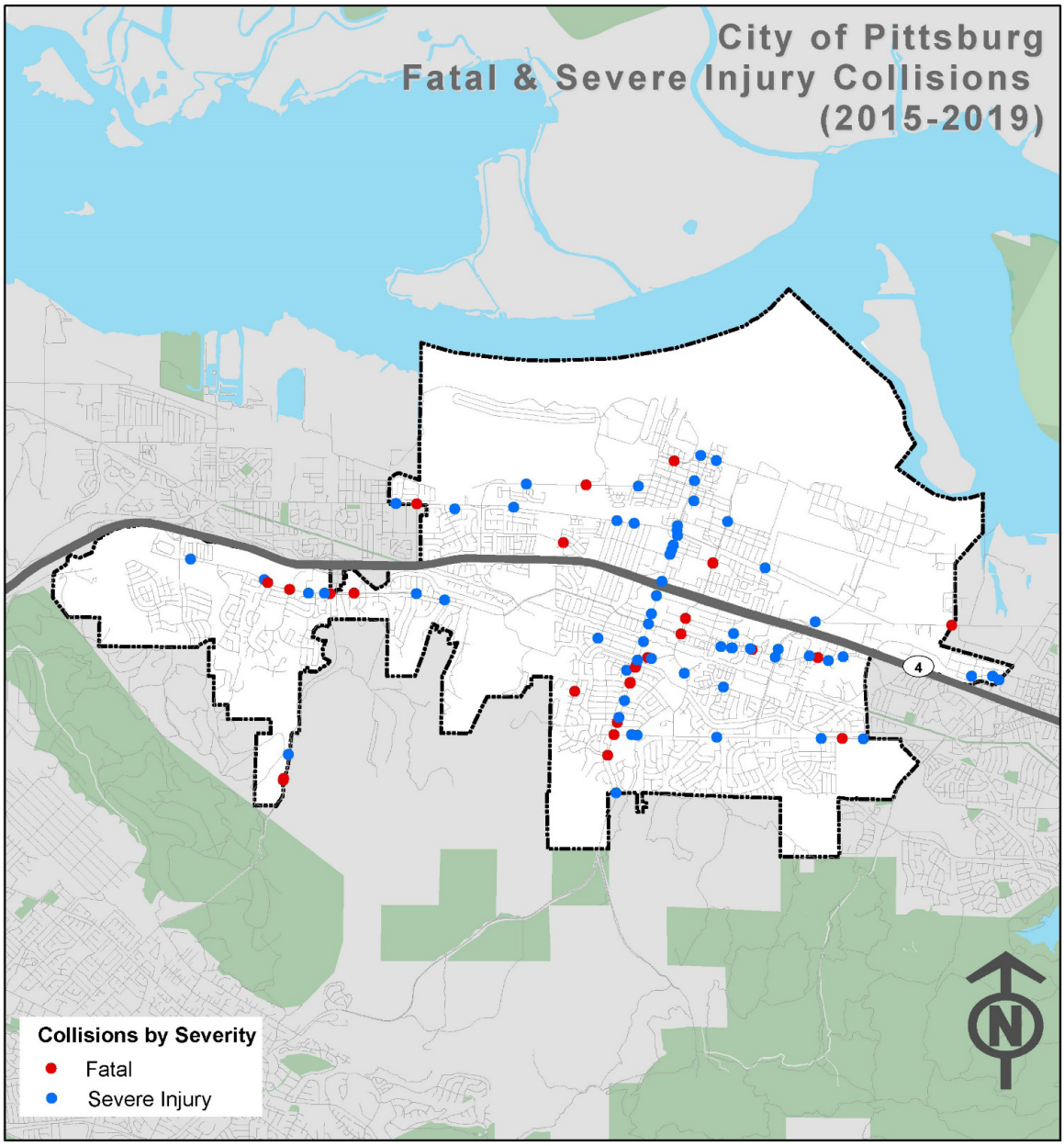


The detailed collision analysis is effective for identifying high-risk locations by evaluating a shorter list of collisions that have led to a fatality or a severe injury. Roadway segment and intersection F+SI collisions (see **Figure 17**) have been further analyzed taking into account the following collision attributes:

- Collision Type and Location Type
- Violation Category and Location Type
- Motor Vehicle Involved With and Location Type
- Lighting and Location Type
- Time of Day and Location Type

Figure 17 illustrates the F+SI collisions that occurred in Pittsburg in the study period.

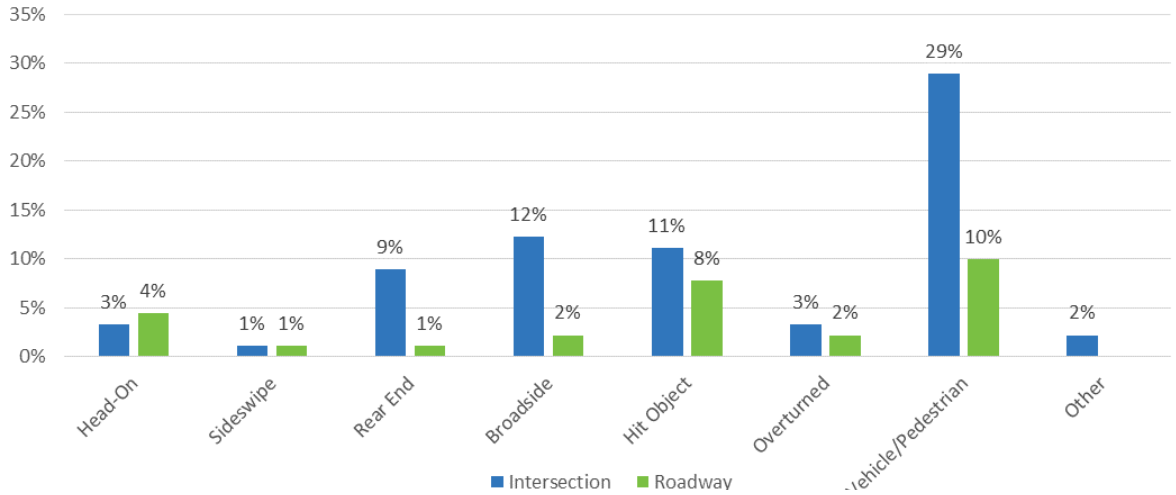
Figure 17. F+SI Collisions (2015-2019)



COLLISION TYPE AND LOCATION TYPE

For F+SI collisions, the most common collision type was vehicle/pedestrian collisions and broadside collisions. Vehicle/pedestrian collision and broadside collision types that led to a fatal or severe injury more commonly occurred at intersections. **Figure 18** shows F+SI collisions locations as well as the collision type.

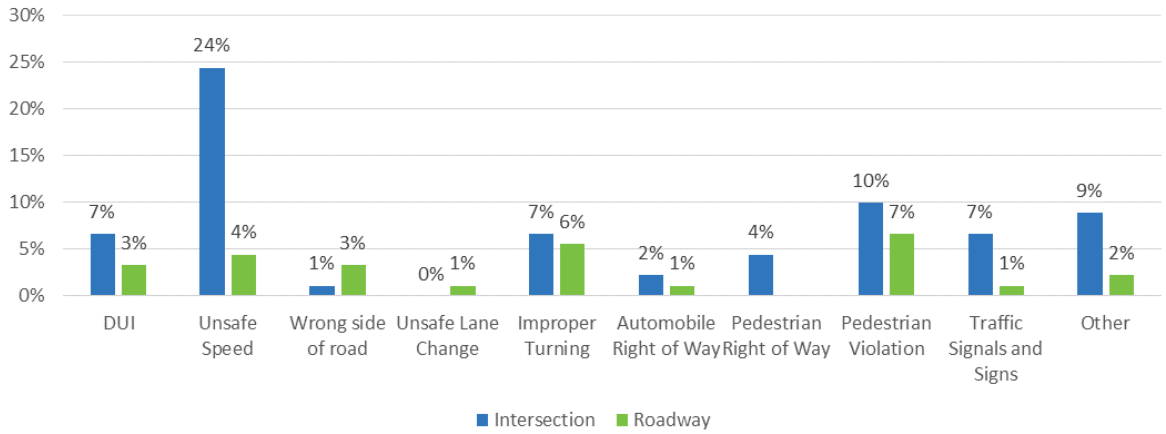
Figure 18. F+SI Collisions: Collision Type and Location



VIOLATION CATEGORY AND LOCATION TYPE

For F+SI collisions, the most common collision type was unsafe speed collisions and pedestrian violations collisions. Unsafe speed and pedestrian violation F+SI collisions occurred at intersections more often than roadway segments. **Figure 19** shows F+SI collisions as well as the location type and violation category.

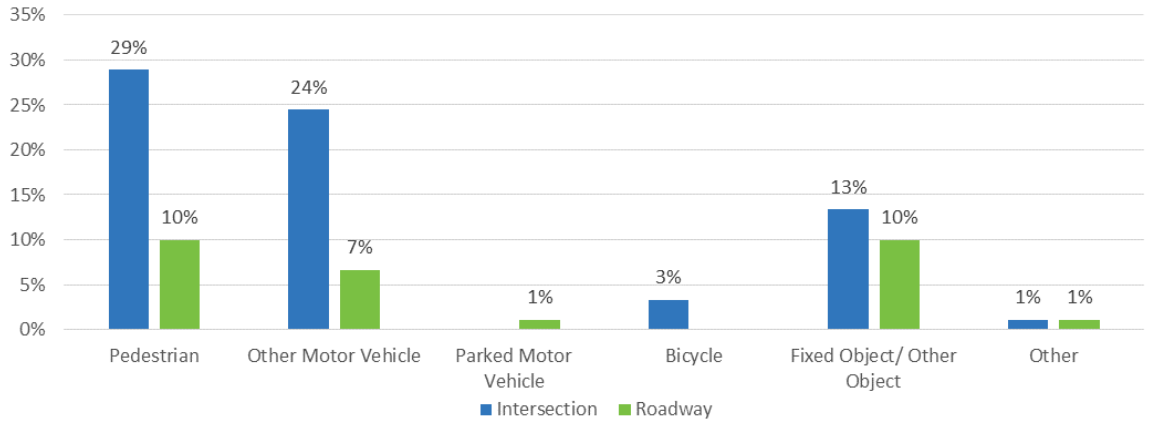
Figure 19. F+SI Collisions: Violation Category and Location



MOTOR VEHICLE INVOLVED WITH AND LOCATION TYPE

For F+SI collisions, the most common motor vehicle involved with collision types were pedestrian collisions and other motor vehicles at intersections. **Figure 20** shows F+SI collisions as well as the location type and motor vehicle involved with.

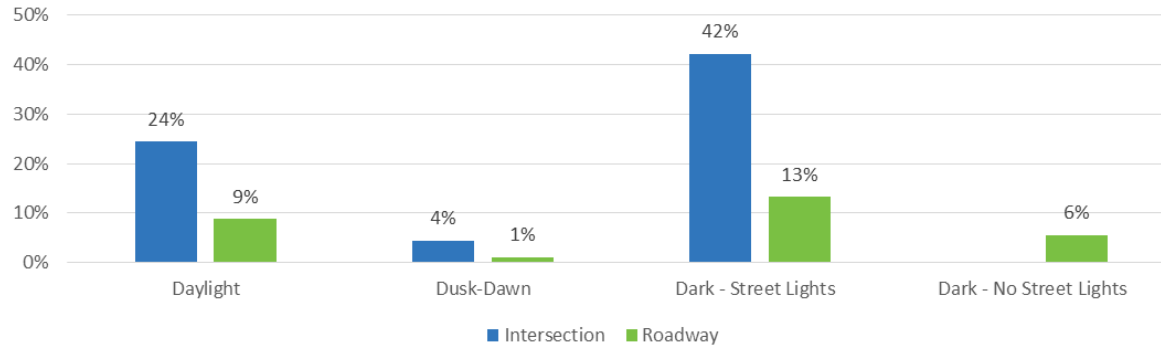
Figure 20. F+SI Collisions: Motor Vehicle Involved With and Location



LIGHTING AND LOCATION TYPE

For F+SI collisions, the most common lighting and location type is intersection collisions that occurred at nighttime at locations with street lights. **Figure 21** shows F+SI collisions as well as the location type and lighting conditions.

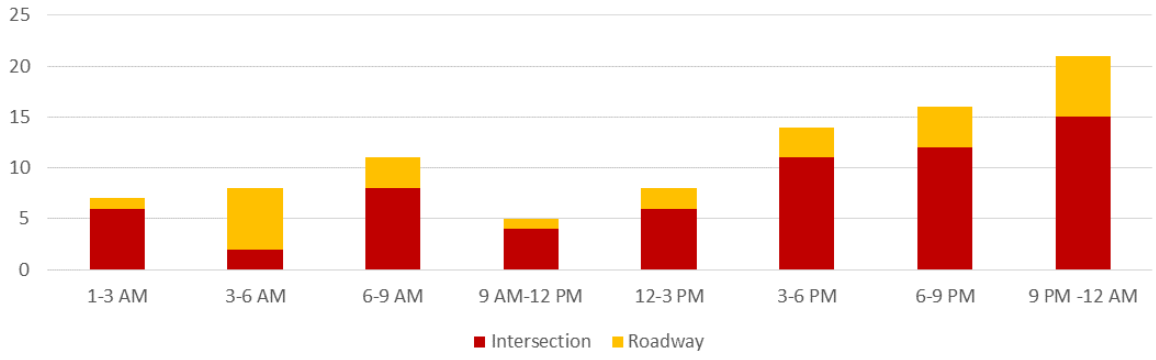
Figure 21. F+SI Collisions: Lighting and Location



TIME OF DAY AND LOCATION TYPE

For F+SI collisions, the common time for collisions to have occurred has been observed during evening hours between 9:00 p.m. to 12:00 a.m., with most collisions occurring at intersections. **Figure 22** shows F+SI collisions as well as the location type and time of day.

Figure 22. F+SI Collisions: Time of Day and Location



Geographic Collision Analysis

This section describes a detailed geographic collision analysis performed for injury collisions occurring at roadway segments and intersections in the City of Pittsburg. The above collision analysis was used to identify four main collision factors that highlight the top trends among collisions in Pittsburg. These four collision factors were identified to be nighttime collisions, pedestrian collisions, unsafe speed collisions, and hit object collisions.

NIGHTTIME COLLISIONS

For F+SI collisions in the City of Pittsburg, 61% of collisions occurred during at night. **Figure 23** shows the distribution of nighttime collisions throughout the City of Pittsburg between 2015 and 2019. California Avenue, Leland Road, and Loveridge Road have a higher concentration of nighttime collisions, compared to other Pittsburg roads. The Office of Traffic Safety ranked Pittsburg 20th out of 105 similarly sized cities with high levels of nighttime collisions (one being the highest, or worst)[2].

PEDESTRIAN COLLISIONS

For F+SI collisions in the City of Pittsburg, 39% of collisions were pedestrian collisions. **Figure 24** shows the distribution of pedestrian collisions throughout the City of Pittsburg between 2015 and 2019. Leland Road, Loveridge Road, Atlantic Avenue, and Railroad Avenue have a higher concentration of pedestrian collisions, compared to other Pittsburg roads. The Office of Traffic Safety ranked Pittsburg 29th out of 105 similarly sized cities with high levels of pedestrian collisions (one being the highest, or worst)[3].

[2] California Office of Traffic Safety. (2019). Office of Traffic Safety Rankings 2019. https://www.ots.ca.gov/media-and-research/crash-rankings-results/?wpv-wpcf-year=2019&wpv-wpcf-city_county=Pittsburg&wpv_filter_submit=Submit

[3] California Office of Traffic Safety. (2019). Office of Traffic Safety Rankings 2019. https://www.ots.ca.gov/media-and-research/crash-rankings-results/?wpv-wpcf-year=2019&wpv-wpcf-city_county=Pittsburg&wpv_filter_submit=Submit

UNSAFE SPEED COLLISIONS

For F+SI collisions in the City of Pittsburg, 29% of collisions were unsafe speed collisions. **Figure 25** shows the distribution of unsafe speed collisions throughout the City of Pittsburg between 2015 and 2019. Leland Avenue, Parde Drive, California Avenue, and Railroad Avenue have a higher concentration of unsafe speed collisions, compared to other Pittsburg roads. The Office of Traffic Safety ranked Pittsburg 23th out of 105 similarly sized cities with high levels of speed related collisions (one being the highest, or worst)[4].

HIT OBJECT COLLISIONS

For F+SI collisions in the City of Pittsburg, 19% of collisions were hit object collisions. **Figure 26** shows the distribution of hit object collisions throughout the City of Pittsburg between 2015 and 2019. Leland Avenue, Bailey Road, Pittsburg-Antioch Highway, and Balclutha Way have a higher concentration of hit object collisions, compared to other Pittsburg roads.

[4] California Office of Traffic Safety. (2019). Office of Traffic Safety Rankings 2019. https://www.ots.ca.gov/media-and-research/crash-rankings-results/?wpv-wpcf-year=2019&wpv-wpcf-city_county=Pittsburg&wpv_filter_submit=Submit

Figure 23. Nighttime Collisions (2015-2019)

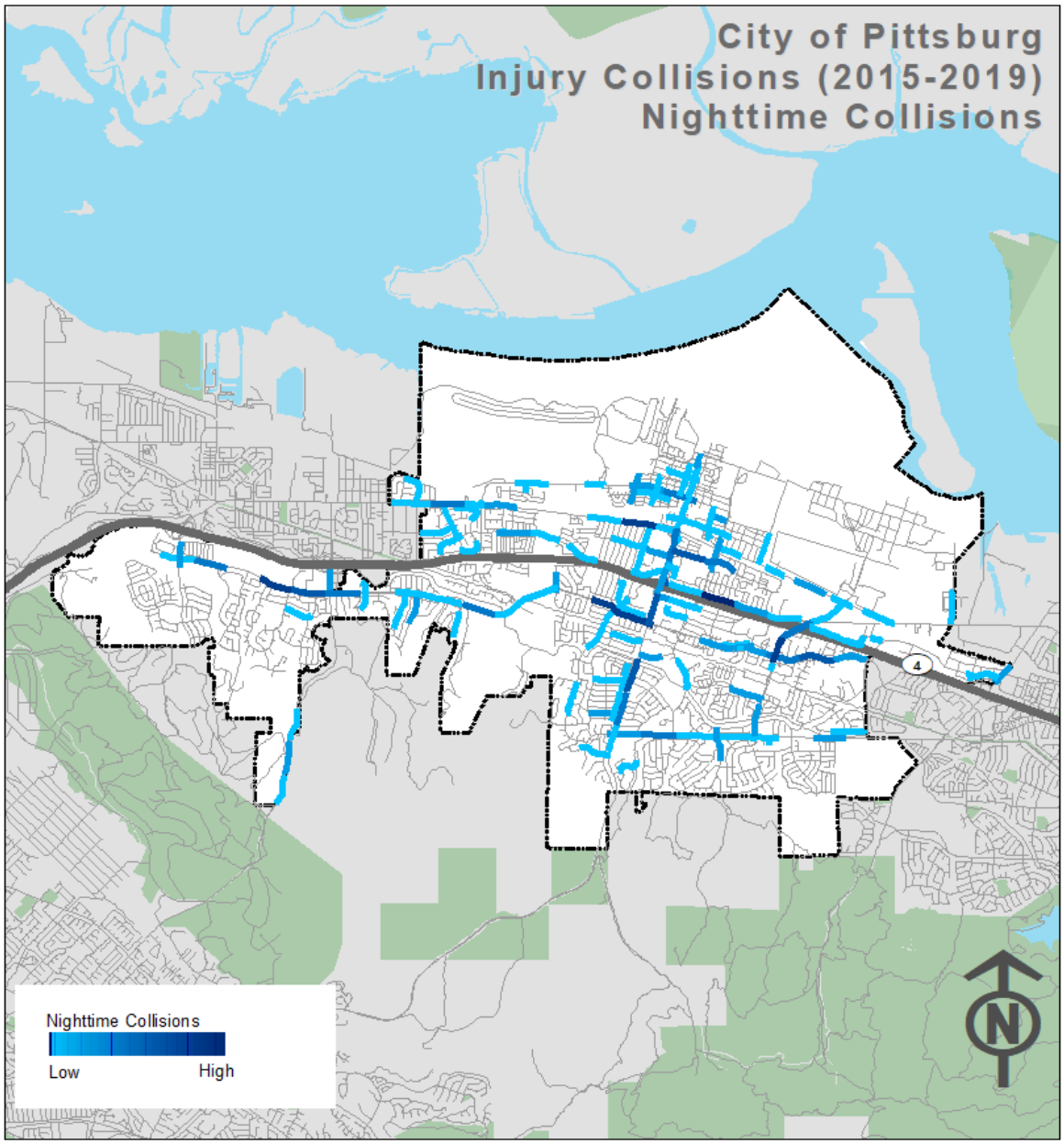


Figure 24. Pedestrian Collisions (2015-2019)

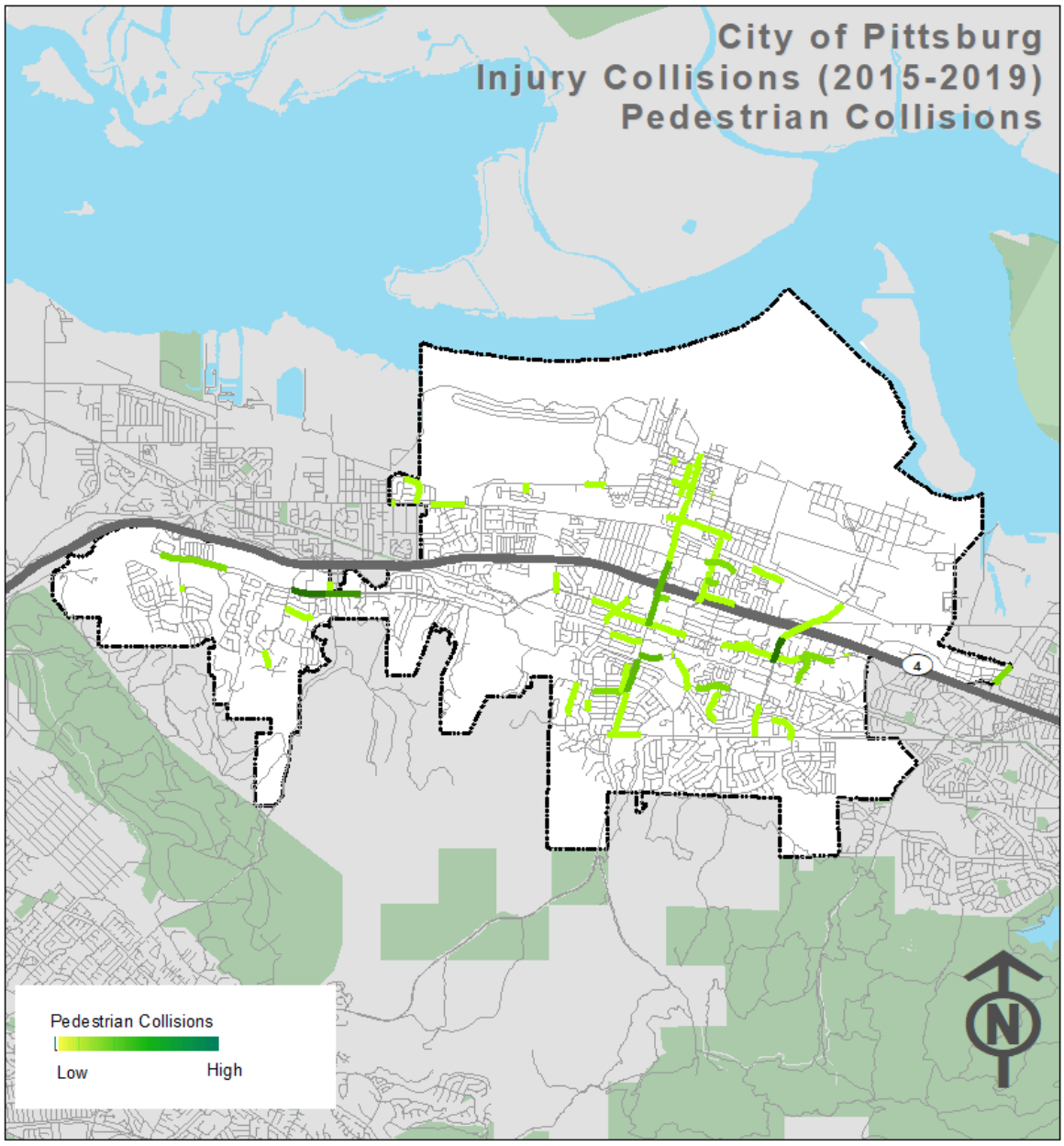


Figure 25. Unsafe Speed Collisions (2015-2019)

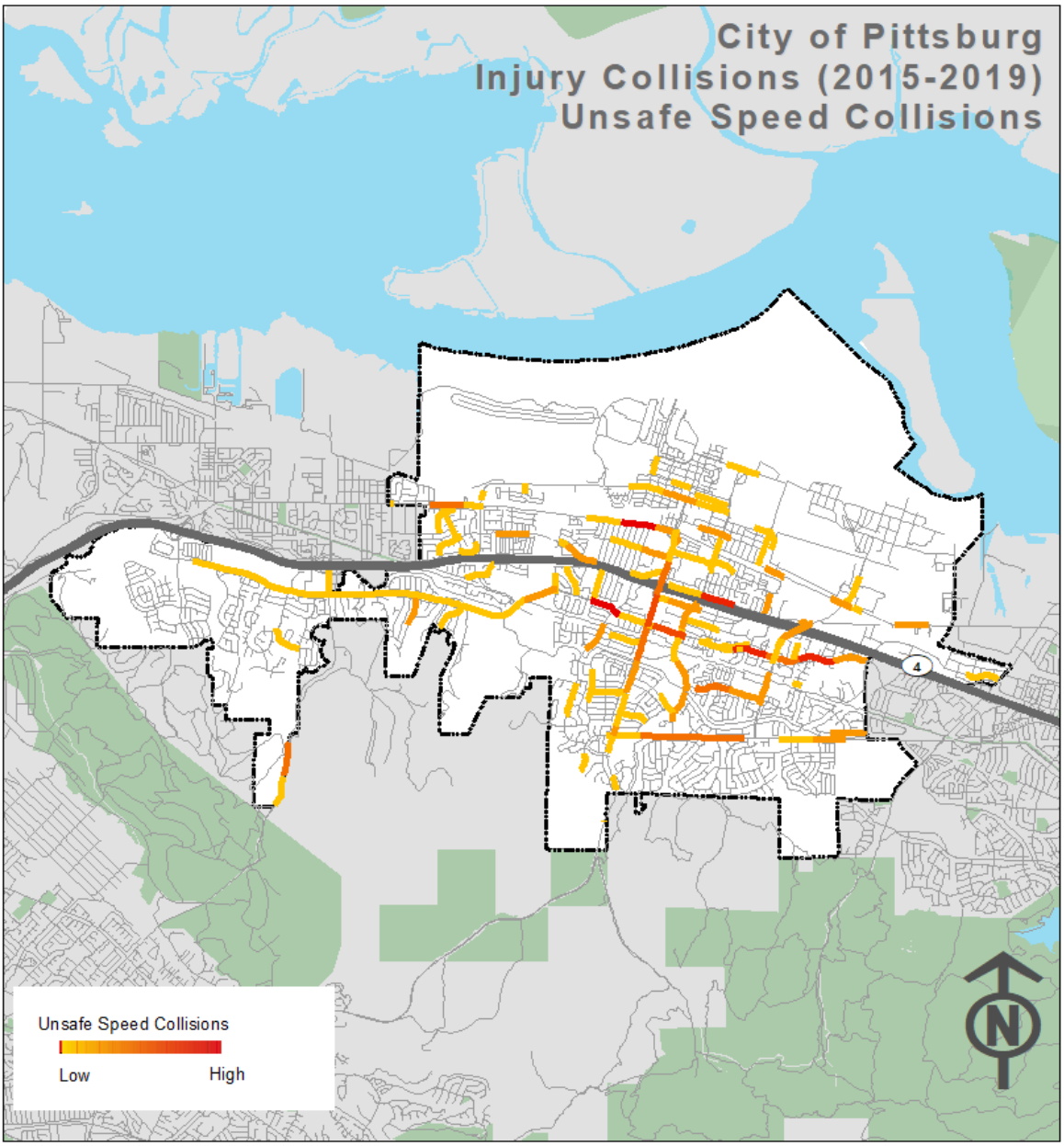
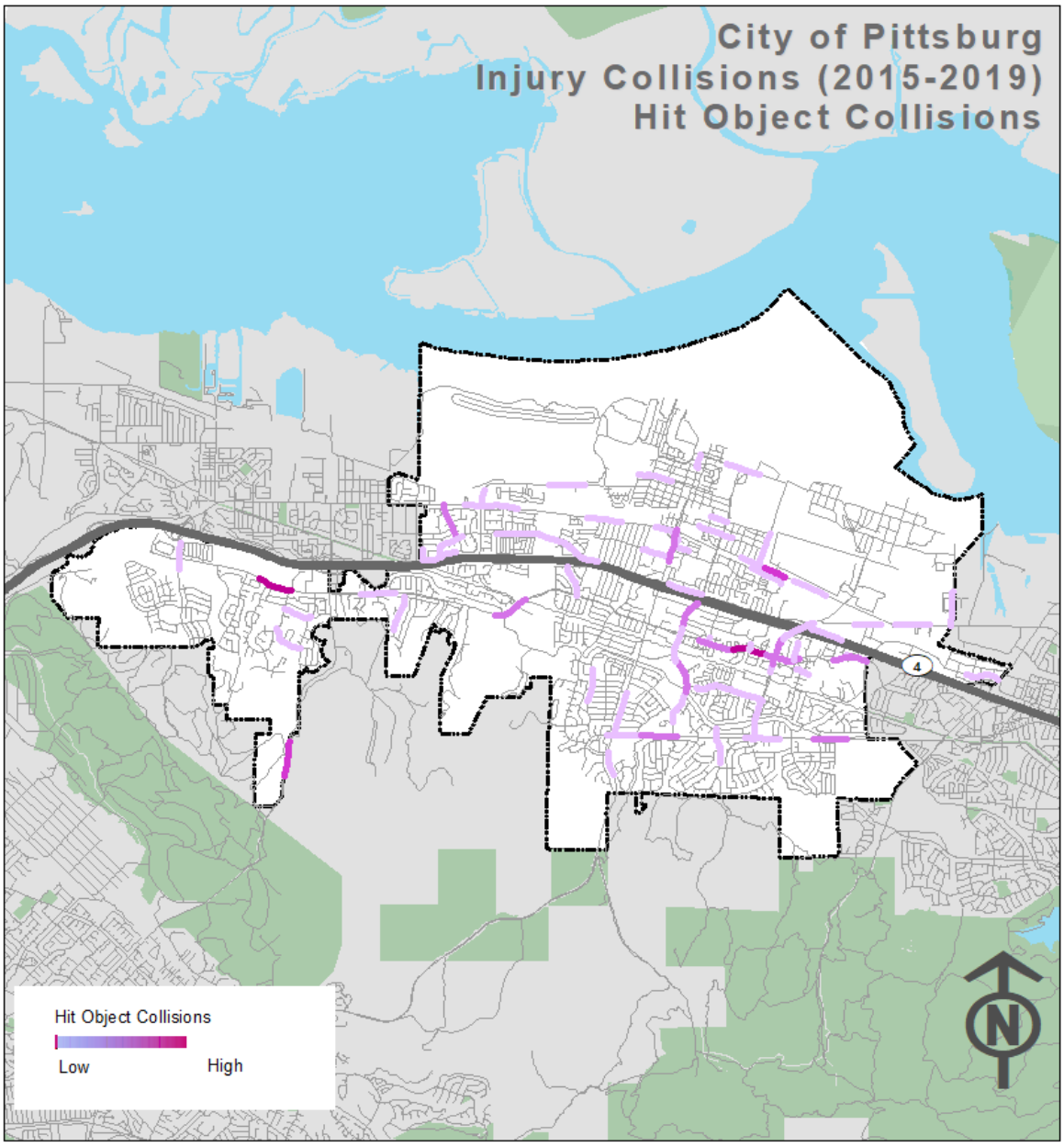


Figure 26. Hit Object Collisions (2015-2019)



Collision Severity Weight

A collision severity weight was used to identify the high severity collision network, using the Equivalent EPDO method. The EPDO method accounts for both the severity and frequency of collisions by converting each collision to an equivalent number of PDO collisions. The EPDO method assigns a crash cost and score to each collision according to the severity of the crash weighted by the comprehensive crash cost. These EPDO scores are calculated using a simplified version of the comprehensive crash costs per HSIP Cycle 11 application. The weights used in the analysis are shown below in **Table 3.**

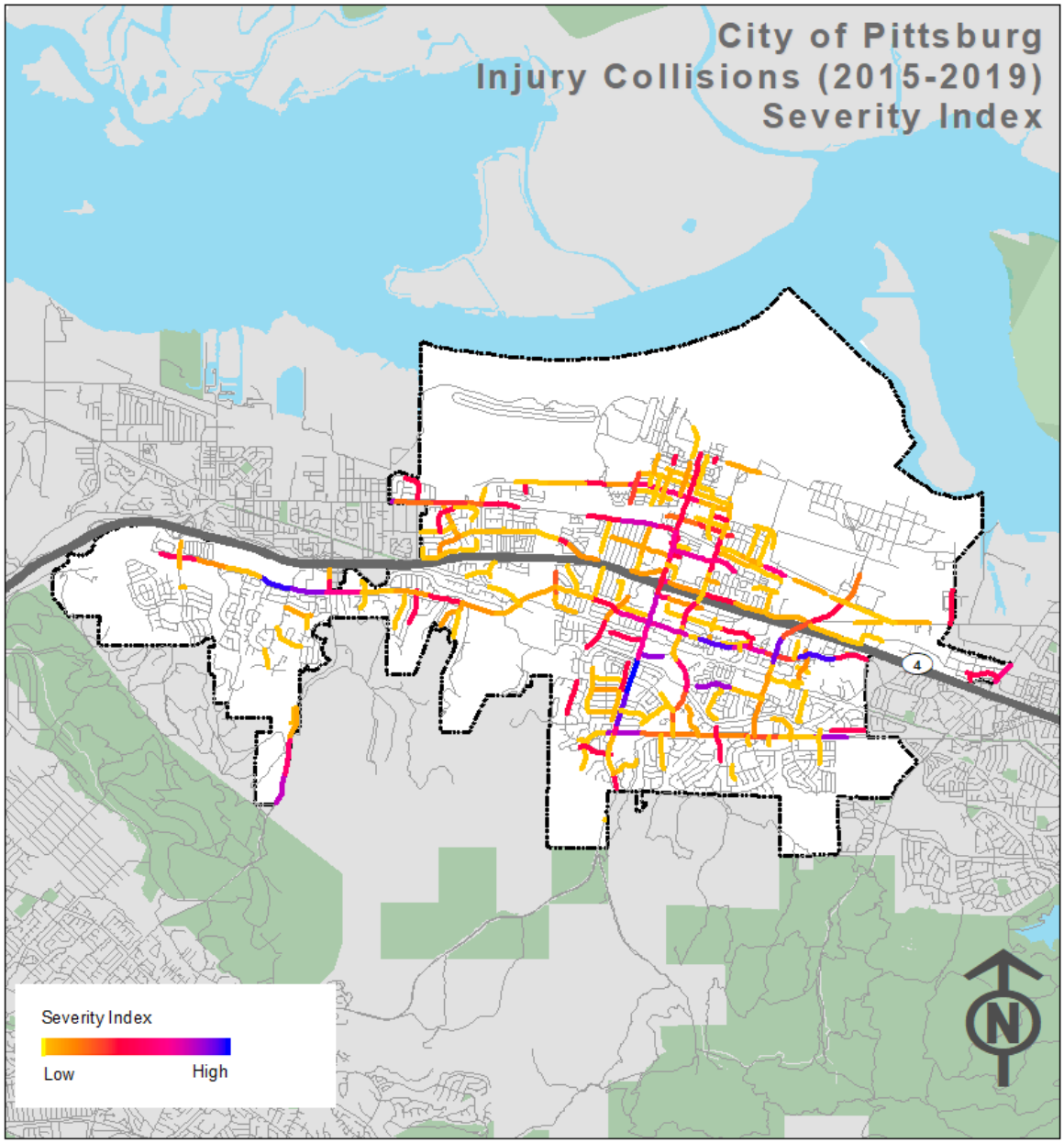
Table 3. EPDO Score used in HSIP Cycle 11

Collision Severity	EPDO Score
F+SI Combined	165*
Visible Injury	11
Possible Injury	6
PDO	1

**This is the score used in HSIP Cycle 11 for collisions on roadways segments, to simplify the analysis this study uses the same score for all F+SI collisions regardless of location.*

The EPDO scores for all collisions can then be aggregated in a variety of ways to identify collision patterns, such as location hot-spots. Because of the high score given to F+SI crashes, locations that have these type of crashes are more likely to receive a higher EPDO score than other locations that may have more collisions, but fewer fatal or severe injury collisions. The weighted collisions for the City of Pittsburg were geolocated onto Pittsburg's road network. **Figure 27** shows the location and geographic concentration of collisions by their EPDO score.

Figure 27. Severity Index



High Injury Network

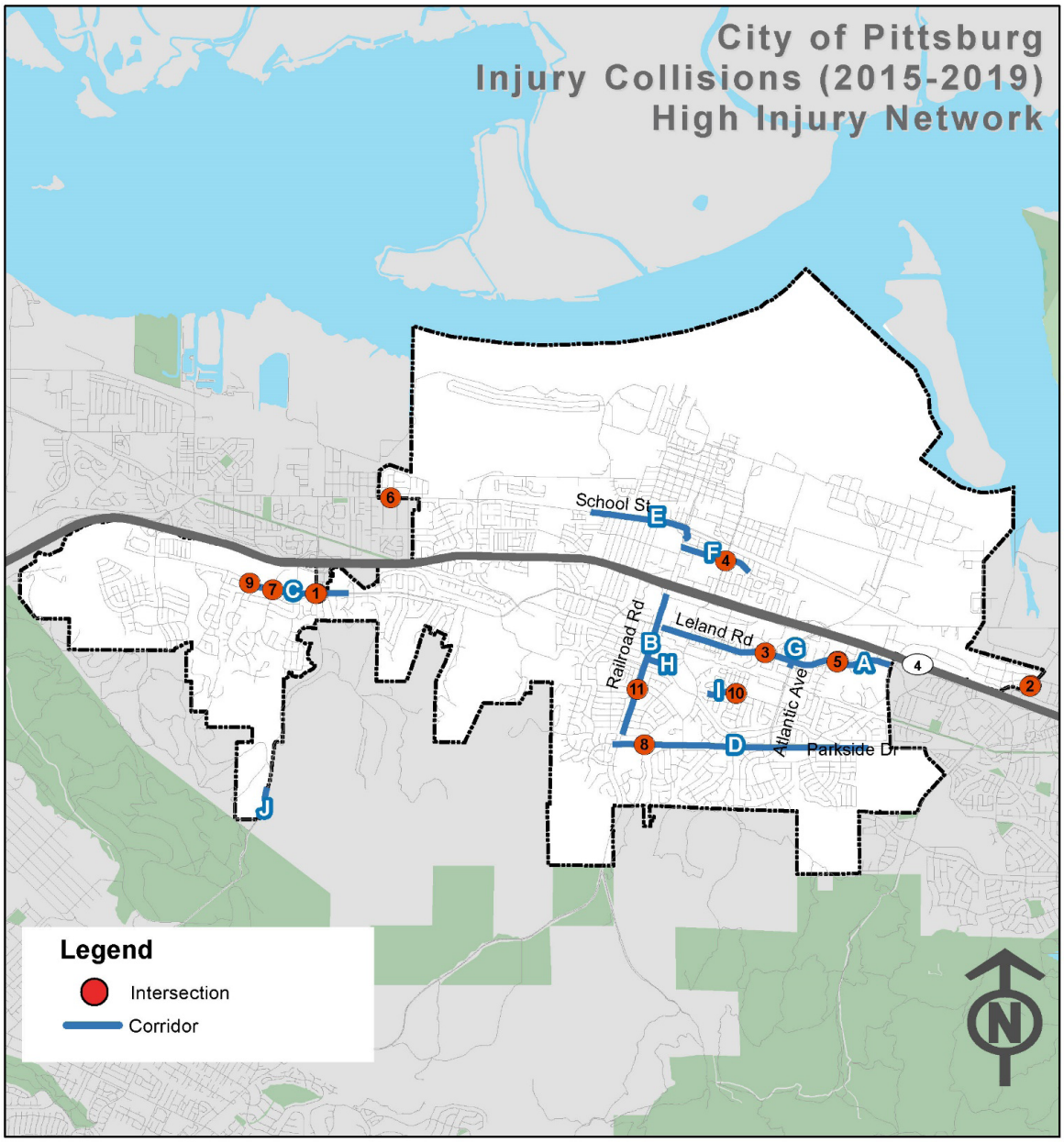
Following the detailed collision analysis, the next step was to identify the high-risk roadway segments and intersections in the City of Pittsburg. The methodology for scoring the high injury locations is the same method as used in the severity weight section. **Figure 28** shows the top 10 high-collision roadway segments and top 11 high-collision intersections.

For the purposes of the high collision network analysis, intersections include collisions that occurred within 250 feet of it and roadways include all collisions that occurred along the roadway except for collisions that occurred directly at an intersection, or collisions that are assigned a zero value in distance from intersection value column in the SWITRS.

Note: EPDO Score was calculated as follows:

EPDO Score = (165 x # of Fatal Collision) + (165 x # of Severe Injury Collisions) + (11 x # of visible injury collisions) + (6 x # complaint of pain collisions)

Figure 28. High Injury Network



INTERSECTION RANKING

Eleven intersections were identified as high injury intersections. There were a total of 22 F+SI collisions that occurred at these intersections. The intersection of Bailey Road and Leland Road has the highest EPDO score.

Table 4 lists the EPDO score of the top 11 identified high-collision intersections along with the type of collisions and the number of F+SI collisions that occurred at these locations.

Table 4. High Injury Intersections

ID	Intersection	Total	F+SI	Night-time	Veh/ Ped	Unsafe Speed	Hit Object	EPDO Score
		Collisions						
1	Bailey Rd and Leland Rd	13	2	4	5	0	0	401
2	Auto Center Dr and Century Blvd	10	2	3	2	1	1	378
3	Leland Rd and Piedmont Wy	7	2	3	1	2	1	365
4	Harbor St and School St	6	2	3	3	1	0	364
5	Commerce Pl and Leland Rd	7	2	3	1	4	0	360
6	Willow Pass Rd and Winter Wy	6	2	1	1	1	0	359
7	Leland Rd and Southwood Dr	6	2	3	2	0	1	354
8	Brookside Dr and Buchanan Rd	4	2	2	1	1	1	342
9	Leland Rd and Woodhill Dr	4	2	4	0	0	3	342
10	Meadowbrook Ave and Stoneman Ave	3	2	1	2	3	1	336
11	El Dorado Dr and Railroad Ave	3	2	2	2	0	0	336

ROADWAY SEGMENT RANKING

Ten corridors were identified as high injury corridors. There was a total 42 F+SI collisions on these corridors. The corridor with the highest amount of F+SI collisions is Leland Road and Railroad Avenue with nine F+SI collisions each.

Table 5 lists the collision rate of the top ten identified high-collision corridors along with the number of F+SI collisions and total collisions.

Table 5. High Injury Corridors

ID	Corridors	Total	F+SI	Night-time	Veh/ Ped	Unsafe Speed	Hit Object	Length (miles)	EPDO Score
		Collisions							
A	Leland Rd: Railroad Ave to Century Blvd	51	9	13	5	20	14	2.0	1767
B	Railroad Ave: Bliss Ave to Pueblo Dr	35	9	11	7	10	1	1.3	1671
C	Leland Rd: Chestnut Dr to Woodhill Dr	29	7	12	9	3	4	0.7	1302
D	Buchanan Rd: Railroad Ave to Eastern City limits	35	4	0	0	0	0	2.0	876
E	N Parkside Dr: Railroad Ave to Maidenhair St	18	3	7	0	10	2	0.6	610
F	School St: Railroad Ave to Deems St	14	2	7	2	2	0	0.6	417
G	Loveridge Rd: Loveridge Cir to Hwy 4 EB on ramp	9	2	5	5	1	2	0.3	382
H	Atlantic Ave: Railroad Ave to Atlantic Cir	9	2	2	3	0	0	0.3	382
I	Stoneman Ave: St Moritz Dr to Rolling Hills Dr	6	2	0	2	3	1	0.3	359
J	Bailey Rd: Southern City Limits to 1/3 mile north	2	2	1	0	1	0	0.3	330

Summary

Between 2015 and 2019, a total of 765 collisions occurred within the City of Pittsburg. Among all injury collisions, the most prominent collisions types were rear end and broadside, while unsafe speed and automobile right of way violations were the most common violation types.

For F+SI collisions in the City of Pittsburg, 61% of collisions were nighttime collisions. The maximum number of nighttime collisions have been observed along the corridors of California Avenue, Leland Road, and Loveridge Road. This may indicate that lighting at these locations should be evaluated to insure lumen levels are adequate. Many different factors can contribute to nighttime collisions, such as low lighting levels that can be targeted with countermeasures, but extraneous factors can also contribute to nighttime injury such as alcohol use, sleep, and fatigue.

This may suggest that evaluating lighting levels at these locations are needed. Improvements such as installing new lighting, upgrading existing lighting to a higher lumen, installing larger signal heads, installing and upgrade signs with new fluorescent sheeting, and installing pedestrian improvements with lighting elements such as Rectangular Rapid Flashing beacons (RRFB) and HAWKs can help make these locations safer for all road users.

For F+SI collisions in the City of Pittsburg, 39% of collisions were pedestrian collisions. Leland Road, Loveridge Road, Atlantic Avenue, and Railroad Avenue have a higher concentration of pedestrian collisions, compared to other Pittsburg roads. This calls for evaluating pedestrian conditions along the high injury network and throughout the City with similar characteristics that are highly unsafe for pedestrians. Improvements at these locations can include reducing pedestrian crossing distances, installing high visibility crosswalks, installing pedestrian refuge islands, installing RRFBs, and installing bulb outs.

For F+SI collisions in City of Pittsburg, 29% were due to unsafe speed violations, compared to 25% of collisions of all severity. Leland Road, Buchanan Road, N Parkside Drive, and Railroad Avenue have a higher concentration of unsafe speed violations, compared to other Pittsburg roads. Unsafe speed are not necessarily expressed as driving above posted speed limit but can be explained as a failure to stop the vehicle within safe distance due to excessive speeding. Improvements such as traffic calming strategies, installing dynamic speed warning signs, and road diet can all help to address unsafe speed violation collisions.

For F+SI collisions in City of Pittsburg, 13% were hit object collisions as well as 19% of all severity collisions. Leland Road, Harbor Street, Bailey Road, and Pittsburg-Antioch Highway have a higher concentration of hit object collisions, compared to other Pittsburg roads. Hit object collisions can potentially be mitigated through removing or relocating fixed objects (such as light and utility poles, traffic lights, road signs, curbs, fences, etc.) outside of Clear Recovery Zone, installing guardrails, and installing delineators, reflectors, and object markers.

The next steps include identifying strategies corresponding to the 4 E's of safety (Engineering, Enforcement, Education, and EMS) to comprehensively make the roadways of the City of Pittsburg safer for all modes of transportation.



5 | EMPHASIS AREAS

5 EMPHASIS AREAS

Emphasis areas are focus areas that are identified through analyzing the characteristics of collisions that have occurred in the City of Pittsburg within the last five years (2015-2019).

Emphasis areas help in identifying appropriate safety strategies and countermeasures that have the greatest potential to reduce collisions occurring at roadway segments and intersections. This technical memorandum summarizes six emphasis areas identified for the City of Pittsburg. These emphasis areas were derived by focusing on the collisions that have occurred on the high-injury network, previously identified for the City.

There are a number of different approaches to traffic safety studies. Some methodologies focus more on a reactive and responsive approach and others focus on a more proactive systemic approach to traffic safety data. A reactive approach to road safety is based on the analysis of existing crash data. Road safety improvements proposed are considered in reaction to identified safety problems brought to light by crashes that have occurred after the road has been designed, and built, and opened. Traditional reactive road safety engineering processes include such activities as information collection and management (crash information systems), identification of problem locations on the road network, analysis, development, and implementation of countermeasures. The Hazard Elimination Program or a jurisdictions high crash location list are examples of reactive approaches to crash frequency and/or severity reduction. A proactive approach focuses on the evolving "Science of Safety", that is, what is known about the evolving specific safety implications of highway design and operations decisions. The proactive approach applies this knowledge to the roadway design process or to the implementation of improvement plans on existing roads to diminish the potential of crashes occurring prior to the road being built or reconstructed. The Empirical Bayes method is an example of such proactive traffic safety approach that attempts to predict future crashes based on roadway typologies. Most methodologies use a balance of both reactive and systemic safety approaches.

Based on the systemic safety analysis that helped identified high-injury intersections and roadway segments, the top risk factors and emphasis areas determined for traffic safety in the City of Pittsburg are as follows:

- Improve Intersection safety (collisions within 250 feet of an intersection)
- Improve Pedestrian and Bicycle safety
- Address Rear-end collisions and Unsafe speed violations
- Address Broadside collisions
- Address Nighttime collisions
- Address Hit object collisions

The consolidated high-injury collision database can be found in **Appendix C**.

The 4 E's of Traffic Safety

LRSP utilizes a comprehensive approach to safety incorporating "4 E's of traffic safety": **E**ngineering, **E**nforcement, **E**ducation and **E**MS. This approach recognizes that not all locations can be addressed solely by infrastructure improvements. Incorporating the 4 E's of traffic safety is often required to ensure the successful implementation of significant safety improvements and reduce the severity and frequency of collisions throughout a jurisdiction.

Some of the common violation types that may require a comprehensive approach are speeding, failure-to-yield to pedestrians, red-light running, aggressive driving, failure to wear safety belts, distracted driving, and driving while impaired. When locations are identified as having these types of violations, coordination with the appropriate law enforcement agencies is needed to arrange visible targeted enforcement to reduce the potential for future driving violations and related crashes and injuries.

To improve safety, education efforts can also be used to supplement and improve the efficiency of enforcement, and vice versa. Education can also be employed in the short-term to address high crash locations until the recommended infrastructure project can be implemented, and addressed under Engineering improvements and countermeasures. Similarly, EMS entails strategies around supporting organizations that provide rapid response and care when responding to collisions causing injury, by stabilizing victims and transporting them to facilities.

Existing Traffic Safety Efforts in the City of Pittsburg

The City of Pittsburg already has implemented safety strategies corresponding to the 4 E's of traffic safety. The strategies detailed in this memorandum can supplement these existing programs and concentrate them on high injury collision locations and crash types. These initiatives are summarized in **Table 6** below:

Table 6. Existing Programs Summary

Document/ Program	Description	E's Addressed
The City of Pittsburg System Safety Analysis Report (2018)	This report evaluates citywide crash trends and identifies potential solutions. A recommended set of countermeasures includes installing or upgrading traffic signs with new fluorescent sheeting along the selected corridors and improving signal hardware at select intersections.	Engineering
The City of Pittsburg Traffic Calming Policy (2004)	This document details a step-by-step process to respond to resident's complaints of speeding in residential neighborhoods. The plan focuses on speed humps or speed cushions as a traffic calming device, which isn't an HSIP-approved countermeasure but also includes striping, signage, and speed feedback signs which are HSIP-approved countermeasures.	Engineering, Enforcement
Street Smarts Diablo Region and 511 Contra Costa Programs	Street Smarts Diablo delivers bicycle and pedestrian safety programs at no cost to qualifying public schools in Central and East Contra Costa County. 511 Contra Costa is a county-wide program that strives to reduce traffic congestion and improve air quality by providing the public with information, resources, and tools that promote mobility options beyond driving alone which includes bike and pedestrian safety resources.	Education
Contra Costa County Vision Zero	CCTA developed a Countywide Vision Zero Framework, which was a key implementation recommendation of the Countywide Bike/Ped Plan adopted by the CCTA Board in July 2018. This effort is focused on bicycle/pedestrian safety and developed a countywide "high-injury network (HIN)" [of common countywide collision corridors, known as "Countywide Safety Priority Locations" per 2008 through 2017 SWITRS data; the LRSP can designate "Local Safety Priority Locations" and a local priority project list for CCTA CBPP consideration RE: countywide significance], collision typologies, and a Vision Zero Transportation Safety Policy and Implementation Guide for Local Agencies. This Guide also includes a Toolbox to improve the safety of people walking and biking.	Engineering, Education, Enforcements, EMS

Factors Considered in the Determination of Emphasis Areas

This section presents collision data analysis of collision type, collision factors, facility type, and roadway geometries, analyzed for the various emphasized areas. Emphasis areas were determined by factors that led to the highest amount of injury collisions, with a specific emphasis on F+SI collisions. The City of Pittsburg experienced a total of 316 injury collisions at high injury network locations during the 2015-2019 study period, including 53 fatal or severe injury collisions. The data presented in each emphasis area is based on these collisions. This section also presents comprehensive programs, policies, and countermeasures to reduce collisions in specific emphasis areas.

Note: Engineering countermeasures are based on the Caltrans LRSM and are used in HSIP calls for projects. They are categorized as follows:

- S = Signalized Intersections Countermeasures
- NS = Non-Signalized Intersections Countermeasures
- R = Roadway Segments Countermeasures

An excerpt of the Caltrans LRSM providing additional details on each countermeasure is included in **Appendix D**.

EMPHASIS AREA 1 – IMPROVE INTERSECTION SAFETY

Intersection collisions made up the vast majority of collisions occurring on the Pittsburg high injury network during the study period, for a total of 70%. The 64% of F+SI collisions also occurred at intersections. The following collision data is based on only intersection collisions on the high injury network in the City of Pittsburg, followed by 4 E's strategies selected to address intersection collisions.

30% **Unsafe Speed**

35% **Rear-End Collisions**

19% **Pedestrian Collisions**

Table 7. Emphasis Area 1 Strategies

Objective: Reduce the number of F+SI collisions at intersections.			
	Strategy	**Performance Measure**	**Agencies/ Organizations**
Education	Conduct public information and education campaign for intersection safety laws regarding traffic signals, stop signs, and turning left or right.	Number of education campaigns or residents reached.	City/Police Department
Enforcement	Targeted enforcement at high-injury intersections to monitor right-of-way violations, speed limit laws and other violations that occur at intersections.	Decrease in number of citations and/or warnings issued over time due to increased driver compliance.	Police Department
Engineering	• S02, Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, and number • S03, Improve signal timing • S09, Install raised pavement markers • NS06, Install/upgrade larger or additional stop signs or other intersection warning/regulatory signs • NS07, Upgrade intersection pavement markings • NS08, Install Flashing Beacons at Stop-Controlled Intersections • NS09, Install flashing beacons as advance warning (Non-Signalized Intersection) (NS.I.) • NS11, Improve sight distance to intersection (Clear Sight Triangles) • NS13, Install splitter-islands on the minor road approaches • NS14, Install raised median on approaches • NS19PB, Install raised medians (refuge islands)	Number of intersections improved.	City
EMS	S05, Install emergency vehicle pre-emption systems Improve resource of deployment for emergency responses to collision sites Ensure emergency routes are clear and well defined	EMS vehicle response time.	City/Fire Department & EMS Response Teams

EMPHASIS AREA 2 – IMPROVE PEDESTRIAN SAFETY

On the high injury network, 54 (17%) collisions involved pedestrians. However, of those collisions, 10 led to a fatality. Four out of 10 pedestrian fatalities (40%) occurred on or near Railroad Avenue. The following collision data is based on only pedestrian collisions on the high injury network of the City of Pittsburg, followed by 4 E's strategies to address them.

44% **F+SI Collisions**

28% **Crossing not in Crosswalk**

30% **Pedestrian Violation**

Table 8. Emphasis Area 2 Strategies

Objective: Reduce the number of F+SI collisions involving pedestrians.			
	Strategy	**Performance Measure**	**Agencies/ Organizations**
Education	Conduct pedestrian safety campaigns and outreach to raise their awareness of pedestrian safety needs through media outlets, social media, and public events. Partner with Safe Routes to School to conduct bicycle and pedestrian safety programs in Pittsburg's schools.	Number of education campaigns or residents reached.	City/School District/ Police Department
Enforcement	Targeted enforcement at high-injury locations especially near schools, downtown Pittsburg, and other areas where pedestrians are more present. Continue to place a high priority on enforcement of motorist and pedestrian violations that most frequently cause injuries and fatalities among pedestrians.	Decrease in number of citations and/or warnings issued over time due to increased driver compliance.	Police Department
Engineering	• S17PB, Install pedestrian countdown signal heads • S18PB, Install pedestrian crossing (S.I.) • S21PB, Modify signal phasing to implement a Leading Pedestrian Interval • NS07, Upgrade intersection pavement markings (NS.I.) • NS19PB, Install raised medians (refuge islands) • NS21PB/R35PB, Install/upgrade pedestrian crossing (with enhanced safety features) • NS22PB/R37PB, Install RRFB • NS23PB, Install pedestrian signal (including Pedestrian Hybrid Beacon (HAWK)) • R36PB, Install raised pedestrian crossing • High-visibility crosswalks • Mid-block curb extension • Intersection bulb-outs	Number of locations improved.	City
EMS	S05, Install emergency vehicle pre-emption systems Improve resource of deployment for emergency responses to collision sites Ensure emergency routes are clear and well defined, particularly to areas and times of high pedestrian activity	EMS vehicle response time.	City/Fire Department & EMS Response Teams

EMPHASIS AREA 3 – ADDRESS REAR END COLLISIONS AND UNSAFE SPEED VIOLATIONS

A total of 101 (32%) of the high injury network collisions were rear-end collisions, including five F+SI collisions. 94 (30%) of high injury network collisions were caused due to unsafe speed violations. The following is based on only rear-end injury collisions on the high injury network, followed by 4 E's strategies to address them.

55%
Rear-End Collisions due to Unsafe Speed

75%
Occurred at Intersections

36%
Occurred on Leland Road

Table 9. Emphasis Area 3 Strategies

Objective: Reduce the number of F+SI rear end and unsafe speed collisions.			
	Strategy	**Performance Measure**	**Agencies/ Organizations**
Education	Conduct public information and education campaign for safety laws regarding unsafe speed and its dangers.	Number of education campaigns or residents reached.	City/Police Department
Enforcement	Targeted enforcement at high-injury locations where unsafe speed violations are more common. Deploy a radar trailer at locations where instances of unsafe speed is more prevalent	Decrease in number of citations and/or warnings issued over time due to increased driver compliance.	Police Department
Engineering	• S02, Improve signal hardware • S09, Install raised pavement markers and striping (Through Intersection) • S16/NS04/NS05, Convert intersection to roundabout • NS07, Upgrade intersection pavement markings (NS.I.) • R22, Install/Upgrade signs with new fluorescent sheeting • R27, Install delineators, reflectors and/or object markers • R26, Install dynamic/variable speed warning signs • R28, Install edge-lines and centerlines • Decrease width of travel lanes • Simplify turn configurations • Decrease curb radius of intersections • Traffic calming strategies where appropriate	Number of locations improved.	City
EMS	S05, Install emergency vehicle pre-emption systems Improve resource of deployment for emergency responses to collision sites Ensure emergency routes are clear and well defined	EMS vehicle response time.	City/Fire Department & EMS Response Teams

EMPHASIS AREA 4 – ADDRESS BROADSIDE COLLISIONS

A total of 54 (17%) of the high injury network collisions were broadside collisions, including nine F+SI collisions. The following collision data is based on only broadside injury collisions on the high injury network of the City of Pittsburg, followed by 4 E's strategies to address them.

32%
Automobile Right of Way Violation

20%
Improper Turning

60%
Occurred at Intersection

Table 10. Emphasis Area 4 Strategies

Objective: Reduce the number of F+SI broadside collisions.			
	Strategy	**Performance Measure**	**Agencies/ Organizations**
Education	Conduct public information and education campaigns for intersection safety laws regarding traffic lights, stop signs and turning left or right.	Number of education campaigns or residents reached.	City/Police Department
Enforcement	Targeted enforcement at high-injury locations where violations that lead to broadside collisions are more common, such as automobile right of way and traffic signal/stop sign violations.	Decrease in number of citations and/or warnings issued over time due to increased driver compliance.	Police Department
Engineering	• S02, Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, and number • S03, Improve signal timing (coordination, phases, red, yellow, or operation) • S08, Convert signal to mast arm (from pedestal-mounted) • S09, Install raised pavement markers and striping (Through Intersection) • S16/NS04/NS05, Convert intersection to roundabout • NS02, Convert to all-way STOP control (from 2-way or Yield control) • NS03, Install signals • NS06, Install/upgrade larger or additional stop signs or other intersection warning/regulatory signs • NS07, Upgrade intersection pavement markings (NS.I.) • NS08, Install flashing beacons at stop controlled intersections • NS09, Install flashing beacons as advance warning (NS.I.) • NS11, Improve sight distance to intersection (Clear Sight Triangles) • NS13, add splitter-islands on the minor road approaches • NS14, install raised median on approaches	Number of locations improved to mitigate broadside collisions.	City
EMS	S05, Install emergency vehicle pre-emption systems Improve resource of deployment for emergency responses to collision sites. Ensure emergency routes are clear and well defined	EMS vehicle response time.	City/Fire Department & EMS Response Teams

EMPHASIS AREA 5 – ADDRESS NIGHTTIME COLLISIONS

A total of 109 (35%) of high injury network collisions occurred at night or in low light (dawn/dusk) conditions, including 32 F+SI collisions (29%). The following collision data is based on only nighttime injury collisions on the high injury network of the City of Pittsburg, followed by 4 E's strategies selected to address nighttime collisions.

27%
Involved Alcohol

56%
Occurred on Leland & Railroad

23%
Pedestrian Collisions

Table 11. Emphasis Area 5 Strategies

Objective: Reduce the number of F+SI collisions that occur at night or dawn/dusk.			
	Strategy	**Performance Measure**	**Agencies/ Organizations**
Education	Develop an awareness program to inform motorists of safe nighttime driving habits and the dangers of drunk driving, as well as high-injury collision locations and the most common violations/collision types occurring at night.	Number of education campaigns or residents reached.	City/Police Department
Enforcement	Targeted enforcement at high-injury intersections and roadway locations where nighttime collisions are more common. Establish DUI checkpoints at night where appropriate.	Decrease in number of citations and/or warnings issued over time due to increased driver compliance.	Police Department
Engineering	• S01, Add intersection lighting • S02, Improve signal hardware • S10, Install flashing beacons as advance warning (S.I.) • NS01, Add intersection lighting • NS06, Install/upgrade larger or additional stop signs or other intersection warning/regulatory signs • NS07, Upgrade intersection pavement markings (NS.I.) • NS08, Install Flashing Beacons at Stop-Controlled Intersections • NS09, Install flashing beacons as advance warning (NS.I.) • NS22PB, Install RRFB • R01, Add Segment Lighting • R02, Remove or relocate fixed objects outside of Clear Recovery Zone • R22, Install/Upgrade signs with new fluorescent sheeting (regulatory or warning) • R27, Install delineators, reflectors and/or object markers • R28, Install edge-lines and centerlines	Number of locations improved.	City
EMS	S05, Install emergency vehicle pre-emption systems Improve resource of deployment for emergency responses to collision sites Ensure emergency routes are clear and well defined	EMS vehicle response time.	City/Fire Department & EMS Response Teams

EMPHASIS AREA 6 – ADDRESS HIT OBJECT COLLISIONS

A total of 44 (14%) high injury network collisions are classified as hit object collisions. However, of these 44 collisions, 11 led to a fatality or severe injury. Hit object collisions also made up 19% of all F+SI collisions. The following collision data is based on only hit object injury collisions on the high injury network of the City of Pittsburg, followed by 4 E's strategies selected to address DUI collisions.

32%
Unsafe Speed

32%
Improper Turning

45%
Nighttime Collisions

Table 12. Emphasis Area 6 Strategies

Objective: Reduce the number of F+SI collisions that occur due to collision with fixed objects.			
	Strategy	**Performance Measure**	**Agencies/ Organizations**
Education	Conduct public information and education campaigns on risks that can lead to hit object collisions, such as unsafe speeds, distracted driving, improper turning and driving under the influence.	Number of education campaigns or residents reached.	City/Police Department
Enforcement	Targeted enforcement at high-injury locations where hit object collisions are more common.	Decrease in number of citations and/or warnings issued over time due to increased driver compliance.	Police Department
Engineering	• S10/NS09, Install flashing beacon as advance warning • NS06, Install/upgrade larger or additional stop signs or other intersection warning/regulatory signs • R01, Add Segment Lighting • R02, Remove or relocate fixed objects outside of Clear Recovery Zone • R04, Install Guardrail • R15, Widen shoulder • R22, Install/Upgrade signs with new fluorescent sheeting (regulatory or warning) • R23, Install chevron signs on horizontal curves • R24 or R25, Install curve advance warning signs • R26, Install dynamic/variable speed warning signs • R27, Install delineators, reflectors and/or object markers • R28, Install edge-lines and centerlines	Number of locations improved.	City
EMS	S05, Install emergency vehicle pre-emption systems Improve resource of deployment for emergency responses to collision sites. Ensure emergency routes are clear and well defined. Increase the number of EMS personnel taking Traffic Incident Management Training	EMS vehicle response time.	City/Fire Department & EMS Response Teams



6 | COUNTERMEASURE SELECTION

6 COUNTERMEASURE SELECTION

Identification of Countermeasures

Upon the identification of high-risk locations and Emphasis Areas, the next step was to identify appropriate safety countermeasures. The Caltrans LRSM provides 82 countermeasures, of which 21 are eligible in the current HSIP call for signalized intersections, 23 for un-signalized intersections, and 38 for roadway segments. The LRSM provides guidance on where to apply the countermeasures including the crash types each countermeasure would address, and a CRF for each countermeasure. The FHWA CMF Clearinghouse and published research papers were reviewed by the project team to gain additional insight on CRFs and effectiveness of specific countermeasures.

The project team conducted a thorough review of the high-risk locations (intersections and roadway segments) using aerial photography, and Google Maps Street View software. Countermeasures were confirmed after review by City staff. Crash characteristics of all collisions occurring on the High Injury Network were considered. After combining the physical and collision characteristics, the project team developed a table of preliminary countermeasures that address each of the identified emphasis areas. The table was refined by selecting up to five countermeasures for each high-risk location that were most commonly recommended among all emphasis areas. By doing this, the project team was able to identify countermeasures with the greatest opportunity for systemic implementation.

Countermeasure Toolbox

Engineering countermeasures were selected for each of the high-risk locations and for the emphasis areas. These were based off of approved countermeasures from the Caltrans LRSM used in HSIP grant calls for projects. The intention is to give the City potential countermeasures for each location that can be implemented either in future HSIP calls for projects, or using other funding sources, such as the City's Capital Improvement Program. Non-engineering countermeasures were also selected using the 4 E's strategies, and are included with the emphasis areas. The countermeasure toolbox in **Appendix E** details the countermeasures for each high-risk location and emphasis area, separated by intersections and roadway segments. While not all of these countermeasures will be included in the resulting safety projects, they are included to give the City a toolbox for implementing future safety improvements through other means, such as the City's Capital Improvement Program.

Table 13 provides a description of each potential countermeasure along with the crash reduction factor (CRF), federal funding eligibility, and opportunity for systemic implementation. An excerpt of the LRSM, detailing each available HSIP countermeasure referenced in the recommendations tables, is included as **Appendix D**.

Table 13. Potential Countermeasures Selected for City of Pittsburg

Code	Countermeasure Name	Countermeasure Description	CRF	Federal Funding	Systemic Approach Opportunity
S02	Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, and number	Includes New LED lighting, signal back plates, retro-reflective tape outlining the back plates, or visors to increase signal visibility, larger signal heads, relocation of the signal heads, or additional signal heads.	15%	90%	Very High
S03	Improve signal timing (coordination, phases, red, yellow, or operation)	Includes adding phases, lengthening clearance intervals, eliminating or restricting higher-risk movements, and coordinating signals at multiple locations.	15%	50%	Very High
S08	Convert signal to mast arm (from pedestal-mounted)	Providing better visibility of intersection signs and signals aids the drivers' advance perception of the upcoming intersection. Visibility and clarity of the signal should be improved without creating additional confusion or distraction for drivers.	30%	90%	Medium
S09	Install raised pavement markers and striping (Through Intersection)	Adding clear pavement markings can guide motorists through complex intersections. When drivers approach and traverse through complex intersections, drivers may be required to perform unusual or unexpected maneuvers	10%	90%	Very High
S11	Improve pavement friction (High Friction Surface Treatments)	Improving the skid resistance at locations with high frequencies of wet road crashes and/or failure to stop crashes	55%	90%	Medium
S12	Install raised median on approaches (S.I.)	Raised medians next to left turn lanes at intersections offer a cost effective means for reducing crashes and improving operations at higher volume intersections	25%	90%	Medium

Code	Countermeasure Name	Countermeasure Description	CRF	Federal Funding	Systemic Approach Opportunity
S13PB	Install pedestrian median fencing on approaches	Signalized Intersections with high pedestrian-generators nearby (e.g. transit stops) may experience a high volumes of pedestrians J-walking across the travel lanes at mid-block locations instead of walking to the intersection and waiting to cross during the walk-phase.	30%	90%	Low
S17PB	Install pedestrian countdown signal heads	Signals that have signalized pedestrian crossing with walk/don't walk indicators and where there have been pedestrian vs. vehicle crashes.	25%	90%	Very High
S20PB	Install advance stop bar before crosswalk	Signalized Intersections with a marked crossing, where significant bicycle and/or pedestrians volumes are known to occur.	15%	90%	Very High
S21PB	Modify signal phasing to implement a LPI	Addition of LPI gives pedestrians the opportunity to enter an intersection 3-7 seconds before vehicles are given a green indication; only minor signal timing alteration is required.	60%	90%	Very High
NS01	Add intersection lighting (NS.I.)	Provision of lighting at intersection.	40%	90%	Medium
NS06	Install/upgrade larger or additional stop signs or other intersection warning/ regulatory signs	Additional regulatory and warning signs at or prior to intersections will help enhance the ability of approaching drivers to perceive them.	15%	90%	Very High
NS07	Upgrade intersection pavement markings (NS.I.)	Typical improvements include "Stop Ahead" markings and the addition of centerlines and stop bars.	25%	90%	Very High

Code	Countermeasure Name	Countermeasure Description	CRF	Federal Funding	Systemic Approach Opportunity
NS11	Improve sight distance to intersection (Clear Sight Triangles)	Unsignalized intersections with restricted sight distance and patterns of crashes related to lack of sight distance where sight distance can be improved by clearing roadside obstructions without major reconstruction of the roadway.	20%	90%	High
NS12	Improve pavement friction (High Friction Surface Treatments)	Non-signalized Intersections noted as having crashes on wet pavements or under dry conditions when the pavement friction available is significantly less than needed for the actual roadway approach speeds. This treatment is intended to target locations where skidding and failure to stop is determined to be a problem in wet or dry conditions and the target vehicle is unable to stop due to insufficient skid resistance.	55%	90%	Medium
NS14	Install raised median on approaches (NS.I.)	Effective access management is key to improving safety at, and adjacent to, intersections. The number of intersection access points coupled with the speed differential between vehicles traveling along the roadway often contributes to crashes. Any access points within 250 feet upstream and downstream of an intersection are generally undesirable.	25%	90%	Medium
NS15	Create directional median openings to allow (and restrict) left-turns and u-turns (NS.I.)	Crashes related to turning maneuvers include angle, rear-end, pedestrian, and sideswipe (involving opposing left turns) type crashes. If any of these crash types are an issue at an intersection, restriction or elimination of the turning maneuver may be the best way to improve the safety of the intersection.	50%	90%	Medium

Code	Countermeasure Name	Countermeasure Description	CRF	Federal Funding	Systemic Approach Opportunity
NS21PB	Install/upgrade pedestrian crossing at uncontrolled locations (with enhanced safety features)	Non-signalized intersections where pedestrians are known to be crossing intersections that involve significant vehicular traffic. They are especially important at school crossings and intersections with turn pockets, flashing beacons, curb extensions, advanced "stop" or "yield" markings, and other safety features should be added to complement the standard crossing elements.	35%	90%	Medium
NS22PB	Install Rectangular Rapid Flashing Beacon (RRFB)	RRFB includes pedestrian-activated flashing lights and additional signage that enhance the visibility of marked crosswalks and alert motorists to pedestrian crossings. It uses an irregular flash pattern that is similar to emergency flashers on police vehicles. RRFBs are installed at unsignalized intersections and mid-block pedestrian.	35%	90%	Medium
R01	Add Segment Lighting	Provision of lighting along roadways.	35%	90%	Medium
R02	Remove or relocate fixed objects outside of Clear Recovery Zone	Known locations or roadway segments prone to collisions with fixed objects such as utility poles, drainage structures, trees, and other fixed objects, such as the outside of a curve, end of lane drops, and in traffic islands. A clear recovery zone should be developed on every roadway, as space is available. In situations where public right-of-way is limited, steps should be taken to request assistance from property owners, as appropriate.	35%	90%	High
R04	Install Guardrail	Guardrail is installed to reduce the severity of lane departure crashes. However, guardrail can reduce crash severity only for those conditions where striking the guardrail is less severe than going down an embankment or striking a fixed object. Guardrail should only be installed where it is clear that crash severity will be reduced, or there is a history of run-off-the-road crashes at a given location that have resulted in severe crashes.	25%	90%	High

Code	Countermeasure Name	Countermeasure Description	CRF	Federal Funding	Systemic Approach Opportunity
R10PB	Install pedestrian median fencing	Roadway segments with high pedestrian-generators and pedestrian-destinations nearby (e.g. transit stops) may experience a high volume of pedestrians J-walking across the travel lanes at mid-block locations instead of walking to the nearest intersection or designated mid-block crossing. When this safety issue cannot be mitigated with shoulder, sidewalk and/or crossing treatments, then installing a continuous pedestrian barrier in the median may be a viable solution.	35%	90%	Low
R21	Improve pavement friction (High Friction Surface Treatments)	Improving the skid resistance at locations with high frequencies of wet road crashes and/or failure to stop crashes.	55%	90%	High
R22	Install/Upgrade signs with new fluorescent sheeting (regulatory or warning)	Additional or new signage can address crashes caused by lack of driver awareness or compliance of roadway signing.	15%	90%	Very High
R26	Install dynamic/ variable speed warning signs	Includes the addition of dynamic speed warning signs (also known as Radar Speed Feedback Signs).	30%	90%	High
R27	Install delineators, reflectors and/or object markers	Installation of delineators, reflectors and/or object markers are intended to warn drivers of an approaching curve or fixed object that cannot easily be removed.	15%	90%	Very High
R33PB	Install Separated Bike Lanes	Separated bikeways are most appropriate on streets with high volumes of bike traffic and/or high bike-vehicle collisions, presumably in an urban or suburban area. Separation types range from simple, painted buffers and flexible delineators, to more substantial separation measures including raised curbs, grade separation, bollards, planters, and parking lanes.	45%	90%	High

Code	Countermeasure Name	Countermeasure Description	CRF	Federal Funding	Systemic Approach Opportunity
R35PB	Install/upgrade pedestrian crossing (with enhanced safety features)	Roadway segments with no controlled crossing for a significant distance in high-use midblock crossing areas and/or multilane roads locations. flashing beacons, curb extensions, medians and pedestrian crossing islands and/ or other safety features should be added to complement the standard crossing elements.	35%	90%	Medium
R37PB	Install RRFB	RRFB includes pedestrian-activated flashing lights and additional signage that enhance the visibility of marked crosswalks and alert motorists to pedestrian crossings. It uses an irregular flash pattern that is similar to emergency flashers on police vehicles. RRFBs are installed at unsignalized intersections and mid-block pedestrian crossings.	35%	90%	Medium

** Code: S - Signalized intersection improvements*
NS - Non-signalized intersection improvements
R - Roadway segment improvements



7 | VIABLE SAFETY PROJECTS

7 VIABLE SAFETY PROJECTS

This chapter summarizes the process of selecting safety projects as part of the analysis for Pittsburg's LRSP. The next step after the identification of high-injury locations, emphasis areas and applicable countermeasures was to identify location specific safety improvements for all high-risk roadway segments and intersections.

Specific countermeasures and improvements were selected from the 2022 LRSM from Caltrans, where:

- S refers to improvements at signalized locations,
- NS refers to improvements at non-signalized locations, and
- R refers to improvements at roadway segments.

The corresponding number refers to the countermeasure number in the LRSM (2022). The countermeasures were grouped into safety projects for high-risk intersections and roadway segments. A total of eight safety projects were developed. All countermeasures were identified based on the technical teams' assessment of viability that consisted of extensive analysis, observations, City staff input, and stakeholder/community input. The most applicable and appropriate countermeasures as identified have been grouped together to form projects that can help make high-risk locations safer.

Table 14 lists the safety projects for high-risk intersections and roadway segments, along with total base planning level cost (2022 dollar amounts) estimates and the resultant preliminary Benefit-Cost (B/C) Ratio. The "Total Benefit" estimates were calculated for the proposed improvements being evaluated in the proactive safety analysis. This "Total Benefit" is divided by the "Total Cost per Location" estimates for the proposed improvements, giving the resultant B/C Ratio. The B/C Ratio Calculation follows the methodology as mentioned in the LRSM (2022).

Appendix F includes HSIP analyzer sheets which contains detailed methodology to calculate B/C Ratio for each project, as well as the complete cost, benefit and B/C Ratio calculation.

These safety projects were chosen based on the previously completed collisions analysis, which was used to identify main collision attributes that were found to be leading factors of fatal and severe collisions in Pittsburg. These collision factors are shown below, as well as viable safety projects that can help address these factors.

Nighttime Collisions: 61% of F+SI collisions in Pittsburg were nighttime collisions, compared to 36% of collisions of all severity. These collisions can potentially be mitigated with installing or upgrading street lighting with higher lumen, installing delineators, reflectors and object markers, adding fluorescent sheeting to traffic signs, and installing flashing beacons.

Pedestrian Collisions: For F+SI collisions in Pittsburg, 39% of collisions involved pedestrian. This is higher than its share of collisions of all severity (12%). Pedestrian collisions can potentially be mitigated by reducing pedestrian crossing distances, installing high visibility crosswalks, adding LPI at signalized intersections, installing pedestrian refuge islands, installing RRFBs, installing bulb outs and installing pedestrian median fencing to restrict pedestrian crossing movement outside of the designated crosswalk.

Unsafe Speed Violations: 29% of F+SI collisions in Pittsburg were due to unsafe speed violations, compared to 25% of collisions of all severity. Countermeasures such as traffic calming, dynamic speed warning signs, road diet can all help to address unsafe speed violation collisions.

Hit Object Collisions: 19% of collisions of all severity were hit object collisions. It also makes up 13% of F+SI collisions. Hit object collisions can potentially be mitigated through removing or relocating fixed objects outside of Clear Recovery Zone, installing Guardrail, installing delineators, reflectors, and object markers.

The next step in the process will be to secure grant funding for the recommended safety projects. As per the scope, TJKM will prepare up to three HSIP applications for Pittsburg to apply for HSIP grant in the upcoming cycle. However, it should be noted that while the LRSP projects are based on high-risk locations, HSIP applications can be expanded to include many locations across the city, which is reflected in Project 7. TJKM can work with the City to identify additional locations that may be beneficial to add to the HSIP application and calculate the B/C Ratio.

On the following page the identified projects are listed for the City of Pittsburg, with a preliminary cost estimate for each location and the resulting B/C Ratio of the project (the title of each countermeasure is located on **Table 14** on the following page).

Table 14. List of Viable Safety Projects

Location	CM1	CM2	CM3	Total Benefit	Total Cost	B/C Ratio
Project 1: Signalized Intersections: Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, and number, Improve signal timing (coordination, phases, red, yellow, or operation), Install Raised Pavement Markers and Stripping Through Intersection						
Auto Center Dr and Century Blvd	S02	S03	S09	$8,530,515	$180,200	47.34
Leland Rd and Piedmont Wy	S02	S03	S09			
Harbor St and School St	S02	S03				
Project 2: Signalized Intersections: Install pedestrian countdown signal heads, Install advance stop bar before crosswalk, Modify signal phasing to implement a LPI						
Bailey Rd and Leland Rd		S20PB	S21PB	$16,408,702	$58,600	280
Auto Center Dr and Century Blvd	S17PB	S20PB	S21PB			
Leland Rd and Piedmont Wy		S20PB	S21PB			
Harbor St and School St	S17PB	S20PB	S21PB			
Leland Rd and Southwood Dr	S17PB	S20PB	S21PB			
Project 3: Unsignalized Intersections: Add intersection lighting, Install/upgrade larger or additional stop signs or other intersection warning/regulatory signs						
Commerce Pl and Leland Rd	NS01	NS06		$7,171,144	$74,900	95.74
Willow Pass Rd and Winter Wy		NS06				
Brookside Dr and Buchanan Rd		NS06				
El Dorado Dr and Railroad Ave		NS06				
Project 4: Roadway Segments: Install/upgrade pedestrian crossing (with enhanced safety features), Install RRFB						
Leland Rd: Railroad Ave to East City Limit	R35PB			$73,920,283	$1,272,000	58.11
Railroad Ave: Bliss Ave to Pueblo Dr	R35PB					
Leland Rd: Chestnut Dr to Woodhill Dr	R35PB					
Loveridge Rd: Loveridge Cir to Hwy 4 EB on ramp	R35PB					
Atlantic Ave: Railroad Ave to Atlantic Cir		R37PB				

Location	CM1	CM2	CM3	Total Benefit	Total Cost	B/C Ratio
Project 5: Roadway Segments: Improve pavement friction (High Friction Surface Treatments), Install dynamic/variable speed warning signs						
Leland Rd: Railroad Ave to Century Blvd	R21	R26		$112,038,683	$13,030,000	8.6
Railroad Ave: Bliss Ave to Pueblo Dr	R21					
Buchanan Rd: Railroad Ave to Eastern city limits	R21					
Parkside Dr: Railroad Ave to Maidenhair St	R21	R26				
Loveridge Rd: Loveridge Cir to Hwy 4 EB on ramp		R26				
Stoneman Ave: St Moritz Dr to Rolling Hills Dr		R26				
Project 6: Citywide Segment Lighting: Add segment lighting						
Citywide Roadways	R01			$307,518,260	$5,034,200	61.1

Notes: CM – countermeasure. B/C ratio is the dollar amount of benefits divided by the cost of the countermeasure.

Countermeasure Name
S02 - Improve signal harwdware: lenses, back-plates with retroreflective borders, mounting, size, and number
S03 - Improve signal timing (coordination, phases, red, yellow, or operation)
S09 - Install raised pavement markers and striping (Through Intersection)
S17PB - Install pedestrian countdown signal heads
S20PB - Install advance stop bar before crosswalk (Bicycle Box)
S21PB - Modify signal phasing to implement a LPI
NS01 – Add Intersection Lighting
NS06 - Install/upgrade larger or additional stop signs or other intersection warning/regulatory signs
R01 - Add segment lighting
R21 - Improve pavement friction (High Friction Surface Treatments)
R26 - Install dynamic/variable speed warning signs
R35PB - Install/upgrade pedestrian crossing (with enhanced safety features)
R37PB - Install Rectangular Rapid Flashing Beacon (RRFB)



8 | IMPLEMENTATION AND EVALUATION

8 IMPLEMENTATION AND EVALUATION

This chapter describes the steps the City may take to evaluate the success of this plan and steps needed to update the plan in the future. The LRSP is a guidance document and requires periodic updates to assess its efficacy and re-evaluate potential solutions. It is recommended to update the plan every two to five years in coordination with the identified safety partners. This document was developed based on community needs, stakeholder input, and collision analysis conducted to identify priority emphasis areas throughout the City. The implementation of strategies under each emphasis area would aim to reduce F+SI collisions in the coming years.

Implementation

The LRSP is a guidance document that is recommended to be updated every two to five years in coordination with the safety partners. The LRSP document provides engineering, education, enforcement, and emergency medical service-related countermeasures that can be implemented throughout the City to reduce F+SI collisions. It is recommended that the City of Pittsburg implement the selected projects in high-collision locations in coordination with other projects proposed for the City's infrastructure development in their future Capital Improvement Plans. After implementing countermeasures, the performance measures for each emphasis area should be evaluated annually. The most important measure of success of the LRSP should be reducing F+SI collisions throughout the City. If the number of F+SI collisions does not decrease over time, then the emphasis areas and countermeasures should be re-evaluated.

Funding is a critical component of implementing any safety project. While the HSIP program is a common source of funding for safety projects, there are numerous other funding sources that could be pursued for such projects. (See **Table 15** below).

Table 15. List of Potential Funding Sources

Funding Source	Funding Agency	Amount Available	Next Call for Projects	Applicable E's	Notes
Active Transportation Program	Caltrans, California Transportation Commission, MTC	~$450 million per cycle (every two years)	2024	Engineering, Education	Can use used for most active transportation related safety projects as well as education programs? Funding available through Caltrans or MTC
Highway Safety Improvement Program	Caltrans	-Varies	2024	Engineering	Most common grant source for safety projects
One Bay Area Grant (OBAG) Cycle 4	MTC (Combines various federal funds)	TBD	County & Local Program: TBD	Engineering	Distributes federal funding to cities and counties in MTC region
Office of Traffic Safety Grants	California Office of Traffic Safety	Varies by grant	Closes January 31st annually	Education, Enforcement, Emergency Response	10 grants available to address various components of traffic safety
Affordable Housing and Sustainable Communities Program	Strategic Growth Council and Dept. of Housing and Community Development	~$10-15 million per award	TBD; most recent in 2023	Engineering, Education	Must be connected to affordable housing projects; typically focuses on bike/pedestrian infrastructure/ programs
Urban Greening	California Natural Resources Agency	$28.5 million	TBD; most recent in 2022	Engineering	Focused on bike/ pedestrian infrastructure and greening public spaces
Local Streets and Road Maintenance and Rehabilitation	CTC (distributed to local agencies)	$1.5 billion statewide	N/A; distributed by formula	Engineering	Typically pays for road maintenance type projects
RAISE Grant	USDOT	~$1.5 billion	2023	Engineering	Typically used for larger infrastructure projects
Sustainable Transportation Equity Project	California Air Resources Board	~$19.5 million	TBD; most recent call in 2023	Engineering, Education	Targets projects that will increase transportation equity in disadvantaged communities
Transformative Climate Communities	Strategic Growth Council	~$105 million	TBD; most recent call in 2022	Engineering	Funds community-led projects that achieve major reductions in greenhouse gas emissions in disadvantaged communities

Funding Source	Funding Agency	Amount Available	Next Call for Projects	Applicable E's	Notes
Safe Streets and Roads for All (SS4A)	USDOT	$200k - $50 million	2023	Engineering	Two types of SS4A grants available: Action Plan Grants and Implementation Grants
Clean California Local Grant Program	Caltrans	$100 – 5 million per award	2023	Engineering	Funding for local communities to beautify and improve local streets and roads, tribal lands, parks, pathways, and transit centers

Monitoring and Evaluation

For the success of the LRSP, it is crucial to monitor and evaluate the 4 E-strategies continuously. Monitoring and evaluation help provide accountability, ensures the effectiveness of the countermeasures for each emphasis area, and help making decisions on the need for new strategies. The process would help the City make informed decisions regarding the implementation plan's progress and accordingly, update the goals and objectives of the plan.

After implementing countermeasures, the strategies should be evaluated annually as per their performance measures. The evaluation should be recorded in a before-after study to validate the effectiveness of each countermeasure as per the following observations:

- Number of F+SI collisions
- Number of police citations
- Number of public comments and concerns

Evaluation should be conducted during similar time periods and durations each year. The most important measure of success of the LRSP should be reduction in F+SI collisions throughout the City. If the number of F+SI collisions doesn't decrease initially, then the countermeasures should be evaluated as per the other observations, as mentioned above. The effectiveness of the countermeasures should be compared to the goals for each emphasis area.

LRSP Update

The LRSP is a guidance document and is recommended to be updated every two to five years after adoption. After monitoring performance measures focused on the status and progress of the E's strategies in each emphasis area, the next LRSP update can be tailored to resolve any continuing safety problems. An annual stakeholder meeting with the safety partners is also recommended to discuss the progress for each emphasis area and oversee the implementation plan. The document should then be updated as per the latest collision data, emerging trends, and the E's strategies' progress and implementation.

APPENDIX A:
SUMMARY OF COMMUNITY COMMNETS

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
4to4p822abv4	1	38.019424	-121.966003	Y	W Leland Rd	Intersection is always backed up in the morning, especially the westbound lane trying to get into the on-ramps. Cars get hung up in the middle and is always a bottleneck for freeway users.	Motor Vehicles	Intersection Safety
4to4p822abv4	1	38.019424	-121.966003	Y	W Leland Rd	Intersection is always backed up in the morning, especially the westbound lane trying to get into the on-ramps. Cars get hung up in the middle and is always a bottleneck for freeway users.	Motor Vehicles	Traffic Congestion
6nab2uxf4ti8	2	37.998097	-121.895461	N	Buchanan Rd	Speeding both East & West traffic....	Motor Vehicles	Speeding
6nab2uxf4ti8	2	37.998097	-121.895461	N	Buchanan Rd	Speeding both East & West traffic....	Motor Vehicles	Traffic Congestion
3sa9l83z4ni3	3	37.995381	-121.897123	Y	Kirker Pass Rd	Commuter traffic speeding, and red light violations.	Motor Vehicles	Speeding
3sa9l83z4ni3	3	37.995381	-121.897123	Y	Kirker Pass Rd	Commuter traffic speeding, and red light violations.	Motor Vehicles	Red light violation
3sa9l83z4ni3	4	38.010384	-121.891722	N	Railroad Ave	Traffic from the new apartment development, in an already overburdened section of Railroad avenue.	Motor Vehicles	Traffic Congestion
9pu2itd9neb4	6	38.023221	-121.892503	N	Dimaggio Ave	Cars speed through here ALL the time; I believe it's about time that the Parkside neighborhoods get their speed bumps. Traffic from N. Parkside Dr. Uses DiMaggio Ave as a "short cut" to Railroad. There are plenty of kids on our street, and cars zoom passed the residential speed limit ALL the time. Please consider this.	Motor Vehicles	Speeding
9pu2itd9neb4	6	38.023221	-121.892503	N	Dimaggio Ave	Cars speed through here ALL the time; I believe it's about time that the Parkside neighborhoods get their speed bumps. Traffic from N. Parkside Dr. Uses DiMaggio Ave as a "short cut" to Railroad. There are plenty of kids on our street, and cars zoom passed the residential speed limit ALL the time. Please consider this.	Motor Vehicles	Neighborhood safety
9pu2itd9neb4	7	38.022653	-121.886753	N	N Parkside Dr	These lines need to get repainted or have raised barriers, it's a blind turn for traffic coming from Railroad Ave. On several occasions, many cars have crossed over the lane almost hitting me head on, slamming on my breaks.	Motor Vehicles	Intersection Safety
9pu2itd9neb4	7	38.022653	-121.886753	N	N Parkside Dr	These lines need to get repainted or have raised barriers, it's a blind turn for traffic coming from Railroad Ave. On several occasions, many cars have crossed over the lane almost hitting me head on, slamming on my breaks.	Motor Vehicles	Signage Improvement
9pu2itd9neb4	8	38.009195	-121.878869	N	E Leland Rd	This area is a high speed area choice for many cars. I've paced cars at 80mph while I'm going only 40mph. They zoom on this road ALWAYS. A high speed traffic deterrent is needed in this area.	Motor Vehicles	Speeding
9pu2itd9neb4	9	38.012625	-121.850347	Y	Pittsburg - Antioch Hwy	The homeless encampment in this area is not only an eye-sore but it is indeed a safety issue. Several times occupants in this area are in the middle of the street. This needs to be addressed ASAP	Other	Public Safety
9pu2itd9neb4	10	38.021478	-121.892085	Y	Civic Ave	Absolutely NO one, and I mean No one stops at this posted Stop sign. They more so "yield" but NEVER stop. I'm surprised that there isn't a motorcycle cop posted by this location. I'm sure he'd write tickets galore. Either put a speed bump here or they will continue to disregard this stop sign.	Motor Vehicles	Stop sign violation

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
9pu2itd9neb4	10	38.021478	-121.892085	Y	Civic Ave	Absolutely NO one, and I mean No one stops at this posted Stop sign. They more so "yield" but NEVER stop. I'm surprised that there isn't a motorcycle cop posted by this location. I'm sure he'd write tickets galore. Either put a speed bump here or they will continue to disregard this stop sign.	Motor Vehicles	Sign violation
9pu2itd9neb4	11	38.021956	-121.893363	Y	W 17th St	A taco truck is always posted here, which I personally don't mind. However, vehicles tend to stop and park sometimes in the middle of the street blocking access to the street as well traffic that exits DiMaggio cannot see around the cars parked on the corners of W.17th St. This indeed is a hazard. Maybe advise the taco truck of posting by City Park instead.	Motor Vehicles	Intersection Safety
9pu2itd9neb4	11	38.021956	-121.893363	Y	W 17th St	A taco truck is always posted here, which I personally don't mind. However, vehicles tend to stop and park sometimes in the middle of the street blocking access to the street as well traffic that exits DiMaggio cannot see around the cars parked on the corners of W.17th St. This indeed is a hazard. Maybe advise the taco truck of posting by City Park instead.	Motor Vehicles	Traffic Congestion
9pu2itd9neb4	12	38.010997	-121.886113	Y	E Leland Rd	The stop lights at this intersection either need to be reset or changed. It takes a lengthy amount of time when it changes in between sets. Some people have ignored the red light and simply went on.	Motor Vehicles	Signal improvement
9pu2itd9neb4	12	38.010997	-121.886113	Y	E Leland Rd	The stop lights at this intersection either need to be reset or changed. It takes a lengthy amount of time when it changes in between sets. Some people have ignored the red light and simply went on.	Motor Vehicles	Red light violation
99oj3637r9xa	13	38.019422	-121.965857	Y	W Leland Rd	West bound Leland to North bound San Marco Blvd. 1) During the morning commute, people bypass traffic and don’t use the right turn lane. They go to the light and make an illegal right turn. This creates a hazard for pedestrians and disrupts traffic flow. 2) This intersection and road leading to the West Bound Hwy 4 on ramp backs up heavily every morning. Frustrated drivers will cut others off or try to bypass it by going through the nearby residential neighborhood.	Motor Vehicles	Sign violation
99oj3637r9xa	13	38.019422	-121.965857	Y	W Leland Rd	West bound Leland to North bound San Marco Blvd. 1) During the morning commute, people bypass traffic and don’t use the right turn lane. They go to the light and make an illegal right turn. This creates a hazard for pedestrians and disrupts traffic flow. 2) This intersection and road leading to the West Bound Hwy 4 on ramp backs up heavily every morning. Frustrated drivers will cut others off or try to bypass it by going through the nearby residential neighborhood.	Motor Vehicles	Illegal turning

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
99oj3637r9xa	13	38.019422	-121.965857	Y	W Leland Rd	West bound Leland to North bound San Marco Blvd. 1) During the morning commute, people bypass traffic and don't use the right turn lane. They go to the light and make an illegal right turn. This creates a hazard for pedestrians and disrupts traffic flow. 2) This intersection and road leading to the West Bound Hwy 4 on ramp backs up heavily every morning. Frustrated drivers will cut others off or try to bypass it by going through the nearby residential neighborhood.	Motor Vehicles	Intersection Safety
99oj3637r9xa	13	38.019422	-121.965857	Y	W Leland Rd	West bound Leland to North bound San Marco Blvd. 1) During the morning commute, people bypass traffic and don't use the right turn lane. They go to the light and make an illegal right turn. This creates a hazard for pedestrians and disrupts traffic flow. 2) This intersection and road leading to the West Bound Hwy 4 on ramp backs up heavily every morning. Frustrated drivers will cut others off or try to bypass it by going through the nearby residential neighborhood.	Pedestrian	Pedestrian Safety
99oj3637r9xa	13	38.019422	-121.965857	Y	W Leland Rd	West bound Leland to North bound San Marco Blvd. 1) During the morning commute, people bypass traffic and don't use the right turn lane. They go to the light and make an illegal right turn. This creates a hazard for pedestrians and disrupts traffic flow. 2) This intersection and road leading to the West Bound Hwy 4 on ramp backs up heavily every morning. Frustrated drivers will cut others off or try to bypass it by going through the nearby residential neighborhood.	Motor Vehicles	Traffic Congestion
3js8pmu2w2e8	14	38.003071	-121.885364	Y	Harbor St	Southbound bicyclists on Harbor Street turning left onto Ventura Drive are in peril for their lives at this intersection. Harbor Street at this point is a four-lane with out a left turn lane. The actual intersection is hidden from motorists by the "hill" of the Contra Costa Canal until the motorist is right on top of the intersection. The wideness of Harbor Street proceeding south from Stoneman Drive encourages motorists to speed up as they accelerate away from the stop sign. Then as they are going down this slight hill, their speed gets away from them and they are travelling at a higher than speed limit rate. A glance at their phone or any other momentary distraction and the stage is set for mowing down the bicyclist! In my opinion, this is the most dangerous intersection in the entire city. of Pittsburg.	Bicycle	Bicycle Safety

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
3js8pmu2w2e8	14	38.003071	-121.885364	Y	Harbor St	Southbound bicyclists on Harbor Street turning left onto Ventura Drive are in peril for their lives at this intersection. Harbor Street at this point is a four-lane with out a left turn lane. The actual intersection is hidden from motorists by the "hill" of the Contra Costa Canal until the motorist is right on top of the intersection. The wideness of Harbor Street proceeding south from Stoneman Drive encourages motorists to speed up as they accelerate away from the stop sign. Then as they are going down this slight hill, their speed gets away from them and they are travelling at a higher than speed limit rate. A glance at their phone or any other momentary distraction and the stage is set for mowing down the bicyclist! In my opinion, this is the most dangerous intersection in the entire city. of Pittsburg.	Motor Vehicles	Intersection Safety
3js8pmu2w2e8	14	38.003071	-121.885364	Y	Harbor St	Southbound bicyclists on Harbor Street turning left onto Ventura Drive are in peril for their lives at this intersection. Harbor Street at this point is a four-lane with out a left turn lane. The actual intersection is hidden from motorists by the "hill" of the Contra Costa Canal until the motorist is right on top of the intersection. The wideness of Harbor Street proceeding south from Stoneman Drive encourages motorists to speed up as they accelerate away from the stop sign. Then as they are going down this slight hill, their speed gets away from them and they are travelling at a higher than speed limit rate. A glance at their phone or any other momentary distraction and the stage is set for mowing down the bicyclist! In my opinion, this is the most dangerous intersection in the entire city. of Pittsburg.	Motor Vehicles	Visibility
3js8pmu2w2e8	14	38.003071	-121.885364	Y	Harbor St	Southbound bicyclists on Harbor Street turning left onto Ventura Drive are in peril for their lives at this intersection. Harbor Street at this point is a four-lane with out a left turn lane. The actual intersection is hidden from motorists by the "hill" of the Contra Costa Canal until the motorist is right on top of the intersection. The wideness of Harbor Street proceeding south from Stoneman Drive encourages motorists to speed up as they accelerate away from the stop sign. Then as they are going down this slight hill, their speed gets away from them and they are travelling at a higher than speed limit rate. A glance at their phone or any other momentary distraction and the stage is set for mowing down the bicyclist! In my opinion, this is the most dangerous intersection in the entire city. of Pittsburg.	Motor Vehicles	Speeding

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
3js8pmu2w2e8	15	38.027697	-121.885243	Y	Railroad Ave	The northbound bicyclist who wants to stay on Railroad Avenue through the East Tenth Street intersection has significant difficulty claiming his or her place on the street. The entire Railroad Avenue portion of this intersection is completely dedicated to motor vehicles. We have bicycle lanes leading up to this intersection for the northbound bicyclist, then we throw him or her to the wolves at the intersection. Restriping the intersection with a bicycle lane is the obvious solution. A green dashed bicycle lane through the conflict zone would be the hot set-up. This will necessitate adjusting the vehicle travel lanes. We might be forced to remove one or both of the dedicated left turn lanes, northbound AND southbound, along with changing the timing of the traffic signals to accommodate protected left-turns as well as straight-through motor vehicle traffic at the same time. We need pedestrian crosswalks in all four quadrants of this signalized intersection.	Bicycle	Bicycle Safety
3js8pmu2w2e8	15	38.027697	-121.885243	Y	Railroad Ave	The northbound bicyclist who wants to stay on Railroad Avenue through the East Tenth Street intersection has significant difficulty claiming his or her place on the street. The entire Railroad Avenue portion of this intersection is completely dedicated to motor vehicles. We have bicycle lanes leading up to this intersection for the northbound bicyclist, then we throw him or her to the wolves at the intersection. Restriping the intersection with a bicycle lane is the obvious solution. A green dashed bicycle lane through the conflict zone would be the hot set-up. This will necessitate adjusting the vehicle travel lanes. We might be forced to remove one or both of the dedicated left turn lanes, northbound AND southbound, along with changing the timing of the traffic signals to accommodate protected left-turns as well as straight-through motor vehicle traffic at the same time. We need pedestrian crosswalks in all four quadrants of this signalized intersection.	Motor Vehicles	Intersection Safety

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
3js8pmu2w2e8	15	38.027697	-121.885243	Y	Railroad Ave	The northbound bicyclist who wants to stay on Railroad Avenue through the East Tenth Street intersection has significant difficulty claiming his or her place on the street. The entire Railroad Avenue portion of this intersection is completely dedicated to motor vehicles. We have bicycle lanes leading up to this intersection for the northbound bicyclist, then we throw him or her to the wolves at the intersection. Restriping the intersection with a bicycle lane is the obvious solution. A green dashed bicycle lane through the conflict zone would be the hot set-up. This will necessitate adjusting the vehicle travel lanes. We might be forced to remove one or both of the dedicated left turn lanes, northbound AND southbound, along with changing the timing of the traffic signals to accommodate protected left-turns as well as straight-through motor vehicle traffic at the same time. We need pedestrian crosswalks in all four quadrants of this signalized intersection.	Motor Vehicles	Unsafe turning
3js8pmu2w2e8	15	38.027697	-121.885243	Y	Railroad Ave	The northbound bicyclist who wants to stay on Railroad Avenue through the East Tenth Street intersection has significant difficulty claiming his or her place on the street. The entire Railroad Avenue portion of this intersection is completely dedicated to motor vehicles. We have bicycle lanes leading up to this intersection for the northbound bicyclist, then we throw him or her to the wolves at the intersection. Restriping the intersection with a bicycle lane is the obvious solution. A green dashed bicycle lane through the conflict zone would be the hot set-up. This will necessitate adjusting the vehicle travel lanes. We might be forced to remove one or both of the dedicated left turn lanes, northbound AND southbound, along with changing the timing of the traffic signals to accommodate protected left-turns as well as straight-through motor vehicle traffic at the same time. We need pedestrian crosswalks in all four quadrants of this signalized intersection.	Motor Vehicles	Signal improvement
3js8pmu2w2e8	16	38.016445	-121.889472	Y	Railroad Ave	The on-ramp to eastbound Highway 4 from northbound Railroad Avenue is a death-trap for pedestrians. Motorists during the afternoon commute are in a hurry. They are not yielding as required by law. It is just a matter of time before someone dies. The segment of northbound Railroad Avenue approaching the eastbound Highway 4 on-ramp has a marked shoulder. It is marked with a solid white 4" stripe. Motorists Don't know how to behave with regard to this marked shoulder. There is space for a bicycle lane. Why don't we install one? Dashed lines. Green paint. The works.	Pedestrian	Pedestrian Safety

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
3js8pmu2w2e8	16	38.016445	-121.889472	Y	Railroad Ave	The on-ramp to eastbound Highway 4 from northbound Railroad Avenue is a death-trap for pedestrians. Motorists during the afternoon commute are in a hurry. They are not yielding as required by law. It is just a matter of time before someone dies. The segment of northbound Railroad Avenue approaching the eastbound Highway 4 on-ramp has a marked shoulder. It is marked with a solid white 4" stripe. Motorists Don't know how to behave with regard to this marked shoulder. There is space for a bicycle lane. Why don't we install one? Dashed lines. Green paint. The works.	Motor Vehicles	Sign violation
3js8pmu2w2e8	16	38.016445	-121.889472	Y	Railroad Ave	The on-ramp to eastbound Highway 4 from northbound Railroad Avenue is a death-trap for pedestrians. Motorists during the afternoon commute are in a hurry. They are not yielding as required by law. It is just a matter of time before someone dies. The segment of northbound Railroad Avenue approaching the eastbound Highway 4 on-ramp has a marked shoulder. It is marked with a solid white 4" stripe. Motorists Don't know how to behave with regard to this marked shoulder. There is space for a bicycle lane. Why don't we install one? Dashed lines. Green paint. The works.	Bicycle	Bicycle Safety
3js8pmu2w2e8	17	38.020625	-121.887904	Y	Railroad Ave	The marked shoulder on northbound Railroad Avenue disappears through the intersection with Civic Avenue. There is no defensible reason for this abandonment of the bicyclist in this intersection. There are two left turn lanes from eastbound Civic Drive to northbound Railroad Avenue. No problem! The motorist is making their turn when there are no legally-operating bicyclists in the northbound right-hand side of Railroad Avenue. This abomination was designed back in the 1980s when motor vehicles ruled and everyone else was an afterthought. Now is the time to lead Pittsburg into the 21st Century.	Bicycle	Bicycle Safety
3js8pmu2w2e8	18	38.021529	-121.904198	Y	Power Ave	Eastbound Power Avenue in front of the apartment building just to the east of the PG&E high-voltage transmission line corridor has on-street parking. This Apartment building should provide sufficient parking within its own parking area to accommodate all the motor vehicles that belong there. This segment of Power Avenue should be striped as a bicycle lane. AT LEAST sign and enforce the parking as four-hour parking 24 hours per day. If this is politically infeasible, please require a parking decal to be displayed on the vehicle. Make the parking decal sufficiently expensive to convince those who are currently parking their junk-heap on the street to find a different place to store it.	Motor Vehicles	Improper Parking

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
3js8pmu2w2e8	18	38.021529	-121.904198	Y	Power Ave	Eastbound Power Avenue in front of the apartment building just to the east of the PG&E high-voltage transmission line corridor has on-street parking. This Apartment building should provide sufficient parking within its own parking area to accommodate all the motor vehicles that belong there. This segment of Power Avenue should be striped as a bicycle lane. AT LEAST sign and enforce the parking as four-hour parking 24 hours per day. If this is politically infeasible, please require a parking decal to be displayed on the vehicle. Make the parking decal sufficiently expensive to convince those who are currently parking their junk-heap on the street to find a different place to store it.	Bicycle	Bicycle Safety
3js8pmu2w2e8	18	38.021529	-121.904198	Y	Power Ave	Eastbound Power Avenue in front of the apartment building just to the east of the PG&E high-voltage transmission line corridor has on-street parking. This Apartment building should provide sufficient parking within its own parking area to accommodate all the motor vehicles that belong there. This segment of Power Avenue should be striped as a bicycle lane. AT LEAST sign and enforce the parking as four-hour parking 24 hours per day. If this is politically infeasible, please require a parking decal to be displayed on the vehicle. Make the parking decal sufficiently expensive to convince those who are currently parking their junk-heap on the street to find a different place to store it.	Motor Vehicles	Parking restrictions & Strategies
3js8pmu2w2e8	19	38.022789	-121.921075	Y	Polaris Dr	Continue the marked bicycle lanes along both sides of Power Avenue to the west of Range Road until you come to the first house that has its front door FACING Power Avenue. There are several blocks of houses that have the SIDE of their house facing Power Avenue. This segment of Power Avenue could easily support bicycle lanes.	Bicycle	Bicycle Safety
3js8pmu2w2e8	20	38.025811	-121.905308	N	N Parkside Dr	As one travels eastbound on North Parkside Drive in the marked bicycle lane, just to the east of the PG&E high voltage corridor, there is a narrow point where the bike lane is narrowed considerable for no discernible reason. This could easily be remedied. Bicyclists using this lane would say a million times "thank you." Note: three miles of bicycle lanes are negated by a one-block-long segment of missing bike lane. We need to strive for a continuous network.	Bicycle	Bicycle Safety
3js8pmu2w2e8	21	38.019355	-121.903533	Y	Dover Way	There is sufficient space between Dover Way and the Los Medanos Elementary School bike path is a segment of land that is parallel to the freeway with sufficient space for the installation of a bike path. Lacking this, there is sufficient space on Frontage Road to support the installation of marked bicycle lanes.	Bicycle	Bicycle Safety

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
3js8pmu2w2e8	22	38.019314	-121.906137	Y	Dover Way	At the intersection of Frontage Road with Dover Way, we should install a bike path that goes past the city well and goes over to the PG&E high voltage electric line right of way. This bike path could connect with the space between two houses on Bodega Drive that was intentionally left wide for the construction of such a bicycle path. We could also connect this path with a path that leads up toward Rancho Medanos Junior High School and connect with the Delta de Anza Regional Trail.	Bicycle	Bicycle Safety
3js8pmu2w2e8	22	38.019314	-121.906137	Y	Dover Way	At the intersection of Frontage Road with Dover Way, we should install a bike path that goes past the city well and goes over to the PG&E high voltage electric line right of way. This bike path could connect with the space between two houses on Bodega Drive that was intentionally left wide for the construction of such a bicycle path. We could also connect this path with a path that leads up toward Rancho Medanos Junior High School and connect with the Delta de Anza Regional Trail.	Bicycle	School Safety
3js8pmu2w2e8	23	38.019503	-121.891501	Y	General Roadway	We should install marked crosswalks in all four quadrants of every signalized intersection in the entire City of Pittsburg. This should be a policy of the City of Pittsburg. There should NOT be any need to create or devise a warrant for taking care of our pedestrians.	Pedestrian	Pedestrian Safety
3js8pmu2w2e8	23	38.019503	-121.891501	Y	General Roadway	We should install marked crosswalks in all four quadrants of every signalized intersection in the entire City of Pittsburg. This should be a policy of the City of Pittsburg. There should NOT be any need to create or devise a warrant for taking care of our pedestrians.	Motor Vehicles	Intersection Safety
3js8pmu2w2e8	24	38.012908	-121.894067	Y	W Leland Rd	The segment of West Leland Road between Railroad Avenue and Crestview Drive has rolled curbs. Unfortunately, this encourages people to park their cars with two wheels/tires up on the sidewalk because this segment of road way was designed in the 1950s when no provision was made of bicycles at all and precious little consideration was given to pedestrians. When the car is parked halfway up on the sidewalk, someone in a wheel chair is completely prohibited from using the sidewalk. this is an ADA lawsuit waiting to happen.	Motor Vehicles	Improper Parking
3js8pmu2w2e8	24	38.012908	-121.894067	Y	W Leland Rd	The segment of West Leland Road between Railroad Avenue and Crestview Drive has rolled curbs. Unfortunately, this encourages people to park their cars with two wheels/tires up on the sidewalk because this segment of road way was designed in the 1950s when no provision was made of bicycles at all and precious little consideration was given to pedestrians. When the car is parked halfway up on the sidewalk, someone in a wheel chair is completely prohibited from using the sidewalk. this is an ADA lawsuit waiting to happen.	Bicycle	Bicycle Safety

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
3js8pmu2w2e8	24	38.012908	-121.894067	Y	W Leland Rd	The segment of West Leland Road between Railroad Avenue and Crestview Drive has rolled curbs. Unfortunately, this encourages people to park their cars with two wheels/tires up on the sidewalk because this segment of road way was designed in the 1950s when no provision was made of bicycles at all and precious little consideration was given to pedestrians. When the car is parked halfway up on the sidewalk, someone in a wheel chair is completely prohibited from using the sidewalk. this is an ADA lawsuit waiting to happen.	Pedestrian	Pedestrian Safety
3js8pmu2w2e8	24	38.012908	-121.894067	Y	W Leland Rd	The segment of West Leland Road between Railroad Avenue and Crestview Drive has rolled curbs. Unfortunately, this encourages people to park their cars with two wheels/tires up on the sidewalk because this segment of road way was designed in the 1950s when no provision was made of bicycles at all and precious little consideration was given to pedestrians. When the car is parked halfway up on the sidewalk, someone in a wheel chair is completely prohibited from using the sidewalk. this is an ADA lawsuit waiting to happen.	Pedestrian	ADA Safety
3js8pmu2w2e8	25	38.011816	-121.898333	N	Crestview Dr	Please install RRFBs or HAWK signals at EVERY unsignalized crossing by any path or trail of any public street. Each RRFB or HAWK should be activated by the mere presence of the bicyclist or pedestrian walking past the pole and starting to enter the crosswalk.	Pedestrian	Pedestrian Safety
3js8pmu2w2e8	25	38.011816	-121.898333	N	Crestview Dr	Please install RRFBs or HAWK signals at EVERY unsignalized crossing by any path or trail of any public street. Each RRFB or HAWK should be activated by the mere presence of the bicyclist or pedestrian walking past the pole and starting to enter the crosswalk.	Pedestrian	Intersection Safety
3js8pmu2w2e8	25	38.011816	-121.898333	N	Crestview Dr	Please install RRFBs or HAWK signals at EVERY unsignalized crossing by any path or trail of any public street. Each RRFB or HAWK should be activated by the mere presence of the bicyclist or pedestrian walking past the pole and starting to enter the crosswalk.	Bicycle	Bicycle Safety
3js8pmu2w2e8	26	38.019499	-121.872899	Y	E 14th St	At the intersection of the East 14th Street and the Pittsburg-Antioch Highway, there needs to be a way for the bicyclist to "call" for the signal to change so that the bicyclist using the path in the green space parallel to the Pittsburg-Antioch Highway has a way to safely cross the intersection and proceed east on Pittsburg-Antioch Highway.	Bicycle	Bicycle Safety
3js8pmu2w2e8	27	38.001597	-121.856345	N	Via Delta de Anza Trail	We need to install a pedestrian and bicycle path on the Standard Oil utility corridor between North Park Boulevard and the new traffic (yet to be installed) signal at Buchanan Road. This segment of bicycle path will connect the Delta de Anza Regional Trail with both of these important streets.	Bicycle	Bicycle Safety

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
3js8pmu2w2e8	27	38.001597	-121.856345	N	Via Delta de Anza Trail	We need to install a pedestrian and bicycle path on the Standard Oil utility corridor between North Park Boulevard and the new traffic (yet to be installed) signal at Buchanan Road. This segment of bicycle path will connect the Delta de Anza Regional Trail with both of these important streets.	Pedestrian	Pedestrian Safety
3js8pmu2w2e8	28	37.990447	-121.853277	Y	Somersville Rd	We need to be sure that there is a space left between houses that back up against the small park close to the intersection of James Donlon Boulevard and Somersville Road so that a path can be built that will connect the new housing development with the park. This will allow the bicyclist from the intersection of Buchanan Road and the Standard Oil utility corridor to ride through the quiet residential streets and get up to James Donlon Boulevard and Somersville Road without having to ride on heavily-trafficked Somersville Road, especially the segment between Buchanan Road and the Contra Costa Canal that does not have a bicycle lane or a shoulder.	Bicycle	Bicycle Safety
3js8pmu2w2e8	29	38.027536	-121.917979	Y	Willow Pass Rd	The Willow Pass Road/Range Road/North Parkside Drive/railroad tracks abomination needs to be widened so that there is space for the bicyclist and the pedestrian to go under these underpasses. This configuration was built in the 1930s when Highway 4 followed Willow Pass Road through Bay Point and Pittsburg. Highway 4 was updated and is now an 8-lane freeway. We need to provide some safety for our non-automobile-dependent citizens. Yes, the Railroad Companies will be uncooperative and difficult to deal with. Yes, this reconstruction will be expensive. Do you think that building the freeway was cheap?	Bicycle	Bicycle Safety
3js8pmu2w2e8	29	38.027536	-121.917979	Y	Willow Pass Rd	The Willow Pass Road/Range Road/North Parkside Drive/railroad tracks abomination needs to be widened so that there is space for the bicyclist and the pedestrian to go under these underpasses. This configuration was built in the 1930s when Highway 4 followed Willow Pass Road through Bay Point and Pittsburg. Highway 4 was updated and is now an 8-lane freeway. We need to provide some safety for our non-automobile-dependent citizens. Yes, the Railroad Companies will be uncooperative and difficult to deal with. Yes, this reconstruction will be expensive. Do you think that building the freeway was cheap?	Bicycle	Bicycle Safety
3js8pmu2w2e8	30	38.02358	-121.965247	Y	Willow Pass Rd	Please work with the County and place a sign in each direction indicating where San Marco Boulevard and Willow Pass Road formally change names. The City of Pittsburg has done well to place a similar sign where West 10th Street and Willow Pass Road change names. Thank you.	Other	Signage Improvement

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
3js8pmu2w2e8	31	37.99787	-121.896607	Y	Kirker Pass Rd	Please paint green bicycle lanes on northbound Kirker Pass Road as it approaches Buchanan Road. Please retain the marked shoulder on southbound Kirker Pass Road. This intersection is very tight. You might have to adjust the traffic-lane striping to fit everyone in. Please install crosswalks in all four quadrants of this signalized intersection. The warrant for these crosswalks is that someone is requesting them. While we're on the subject, how about posting a sign where Kirker Pass Road and Railroad Avenue change names?	Bicycle	Bicycle Safety
3js8pmu2w2e8	31	37.99787	-121.896607	Y	Kirker Pass Rd	Please paint green bicycle lanes on northbound Kirker Pass Road as it approaches Buchanan Road. Please retain the marked shoulder on southbound Kirker Pass Road. This intersection is very tight. You might have to adjust the traffic-lane striping to fit everyone in. Please install crosswalks in all four quadrants of this signalized intersection. The warrant for these crosswalks is that someone is requesting them. While we're on the subject, how about posting a sign where Kirker Pass Road and Railroad Avenue change names?	Pedestrian	Intersection Safety
3js8pmu2w2e8	31	37.99787	-121.896607	Y	Kirker Pass Rd	Please paint green bicycle lanes on northbound Kirker Pass Road as it approaches Buchanan Road. Please retain the marked shoulder on southbound Kirker Pass Road. This intersection is very tight. You might have to adjust the traffic-lane striping to fit everyone in. Please install crosswalks in all four quadrants of this signalized intersection. The warrant for these crosswalks is that someone is requesting them. While we're on the subject, how about posting a sign where Kirker Pass Road and Railroad Avenue change names?	Other	Signage Improvement
3js8pmu2w2e8	32	37.997093	-121.900839	Y	W Buchanan Rd	Please mark or continue the marked bicycle lanes on West Buchanan Road between Railroad Avenue and Crestview Drive. Please install signs indicating that following Crestview north will lead the bicyclist to the Delta de Anza Regional Trail.	Bicycle	Bicycle Safety
3js8pmu2w2e8	32	37.997093	-121.900839	Y	W Buchanan Rd	Please mark or continue the marked bicycle lanes on West Buchanan Road between Railroad Avenue and Crestview Drive. Please install signs indicating that following Crestview north will lead the bicyclist to the Delta de Anza Regional Trail.	Bicycle	Signage Improvement
3js8pmu2w2e8	33	38.010109	-121.891874	Y	Railroad Ave	Please adjust the curb on northbound Railroad Avenue in the EBMUD utility corridor so that a bicyclist can safely exit the Delta de Anza Regional Trail and proceed north on Railroad Avenue. There is only a 20- or 30-foot segment that needs attention.	Bicycle	Bicycle Safety

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
3js8pmu2w2e8	34	38.020975	-121.966357	N	San Marco Blvd	Please build a sidewalk/path/trail on the west side of San Marco Boulevard between West Leland Road and the north side of Highway 4 where it will connect into the Delta de Anza Regional Trail. We already have a path along the west side of San Marco Boulevard between West Leland Road and Santa Teresa Drive. Note: We should continue this path south along San Marco Boulevard until it connects with Bailey Road at the top of the hill. The path should be ten-feet wide with a two-foot shoulder on each side of the path...with lots of trees. Pittsburg will have to cooperate with Caltrans for the 'under the freeway' portion of this path.	Bicycle	Bicycle Safety
3js8pmu2w2e8	34	38.020975	-121.966357	N	San Marco Blvd	Please build a sidewalk/path/trail on the west side of San Marco Boulevard between West Leland Road and the north side of Highway 4 where it will connect into the Delta de Anza Regional Trail. We already have a path along the west side of San Marco Boulevard between West Leland Road and Santa Teresa Drive. Note: We should continue this path south along San Marco Boulevard until it connects with Bailey Road at the top of the hill. The path should be ten-feet wide with a two-foot shoulder on each side of the path...with lots of trees. Pittsburg will have to cooperate with Caltrans for the 'under the freeway' portion of this path.	Pedestrian	Pedestrian Safety
3js8pmu2w2e8	35	38.015773	-121.908622	N	W Leland Rd	Widen the sidewalk on the westbound side of West Leland Road between Dover Way and Range Road. This sidewalk is HEAVILY used by Junior High School Students walking to and from school.	Pedestrian	Pedestrian Safety
3js8pmu2w2e8	35	38.015773	-121.908622	N	W Leland Rd	Widen the sidewalk on the westbound side of West Leland Road between Dover Way and Range Road. This sidewalk is HEAVILY used by Junior High School Students walking to and from school.	Pedestrian	School Safety
3js8pmu2w2e8	36	38.014416	-121.917312	N	Contra Costa Canal	Install a bridge over the Contra Costa Canal between John Henry Johnson Park and the canal maintenance road. The Contra Costa Water District regularly permits entities to use their canal maintenance roads for trails. Following the canal maintenance road from John Henry Johnson Park about 3/4 mile to the west, one comes to the Delta de Anza Regional Trail and Ambrose Community Park. This short segment of path will be a GREAT addition to the connectivity of our bicycle and pedestrian path network in Pittsburg.	Other	Bicycle and Pedestrian Connectivity Improvement

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
3js8pmu2w2e8	37	38.01949	-121.892078	N	Cop Recreation Department Rd	Be sure to hold the Seeno Organization to their condition of approval for the Faria development wherein they promised to build a path between the west edge of the Faria development adjacent to the City of Concord at the top of the ridge through Stoneman park and ultimately connecting to John Henry Johnson Park. This path construction should occur sooner rather than later. Note: The East Bay Regional Park District owns the segment of the former Naval Weapons Station that immediately abuts Pittsburg and the Faria property. Once the law suit is settled, negotiate with EBRPD so that any trail that they build will connect with the trail segment that the Seeno Organization is building. This path will be a GREAT addition to our bicycle and pedestrian path network.	Other	Bicycle and Pedestrian Connectivity Improvement
9vu3j7czh42p	38	37.998068	-121.887052	Y	Buchanan Rd	Heavy traffic during commute hours. And traffic going east and west are constantly running the red lights. If nothing is done sooner or later there will be a fatality. We need the bypass to alleviate the heavy traffic on Buchanan Rd.	Motor Vehicles	Red light violation
9vu3j7czh42p	38	37.998068	-121.887052	Y	Buchanan Rd	Heavy traffic during commute hours. And traffic going east and west are constantly running the red lights. If nothing is done sooner or later there will be a fatality. We need the bypass to alleviate the heavy traffic on Buchanan Rd.	Motor Vehicles	Traffic Congestion
9um6foy7w4g3	39	38.001048	-121.88693 3	Y	Harbor St	Tempting intersection for sideshows. Also a starting point for those drivers who want to speed down Harbor street.	Motor Vehicles	Intersection Safety
9um6foy7w4g3	39	38.001048	-121.88693 3	Y	Harbor St	Tempting intersection for sideshows. Also a starting point for those drivers who want to speed down Harbor street.	Motor Vehicles	Speeding
9smc87ync2e8	40	38.019332	-121.964027	Y	W Leland Rd	No traffic light for Toscana residents to exit safely. Specially at morning cars block the keep clear and do not obey. Rude drivers would not let us get on West Leland. Or San Marco Blvd.	Motor Vehicles	Signal improvement
9smc87ync2e8	40	38.019332	-121.964027	Y	W Leland Rd	No traffic light for Toscana residents to exit safely. Specially at morning cars block the keep clear and do not obey. Rude drivers would not let us get on West Leland. Or San Marco Blvd.	Motor Vehicles	Sign violation
6zn9cot9upr9	41	38.015416	-121.881025	Y	California Ave	There isn't enough lane capacity to manage the volume of traffic along this interchange. One exit lane creates a bottle neck for those exiting the freeway and those travelling west on California Ave. All westward traffic are competing to get through the next intersection on Harbor, again, all in one lane of traffic. The congestion has a negative impact on safety.	Motor Vehicles	Traffic Congestion

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
6zn9cot9upr9	41	38.015416	-121.881025	Y	California Ave	There isn't enough lane capacity to manage the volume of traffic along this interchange. One exit lane creates a bottle neck for those exiting the freeway and those travelling west on California Ave. All westward traffic are competing to get through the next intersection on Harbor, again, all in one lane of traffic. The congestion has a negative impact on safety.	Motor Vehicles	Corridor Safety
46z748yhk7a4	42	37.99798	-121.887066	Y	Buchanan Rd	Red Light running.....	Motor Vehicles	Red light violation
7g9ocp39l7w9	44	38.00439	-121.884898	Y	Harbor St	This intersection the 2 streets which are Harbor and Stoneman are wide, I've seen pedestrians about to get hurt because of the lack of attention of some drivers, sometimes they don't respect the red stop sign and if they do "stop" they don't allow pedestrians to walk and get safely to the other side of the street, pedestrians are crossing the road and a lot of the drivers don't take the time to stop and wait to let them step on the sidewalk they just start their vehicles, I have been in a few meetings in Hillview Junior High school and Stoneman Elementary with the city of Pittsburg planning commission, me and other parents and school personnel walked this roads with them to explain how dangerous this intersection is, I hope this time something gets done, I'm not sure if a traffic light or at least please install the lights on the road that light up when someone press the button, some type of signs or signals that are visible for drivers, install signs that say that if you continue	Motor Vehicles	Intersection Safety
7g9ocp39l7w9	44	38.00439	-121.884898	Y	Harbor St	This intersection the 2 streets which are Harbor and Stoneman are wide, I've seen pedestrians about to get hurt because of the lack of attention of some drivers, sometimes they don't respect the red stop sign and if they do "stop" they don't allow pedestrians to walk and get safely to the other side of the street, pedestrians are crossing the road and a lot of the drivers don't take the time to stop and wait to let them step on the sidewalk they just start their vehicles, I have been in a few meetings in Hillview Junior High school and Stoneman Elementary with the city of Pittsburg planning commission, me and other parents and school personnel walked this roads with them to explain how dangerous this intersection is, I hope this time something gets done, I'm not sure if a traffic light or at least please install the lights on the road that light up when someone press the button, some type of signs or signals that are visible for drivers, install signs that say that if you continue	Pedestrian	Pedestrian Safety

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
7g9ocp39l7w9	44	38.00439	-121.884898	Y	Harbor St	This intersection the 2 streets which are Harbor and Stoneman are wide, I've seen pedestrians about to get hurt because of the lack of attention of some drivers, sometimes they don't respect the red stop sign and if they do "stop" they don't allow pedestrians to walk and get safely to the other side of the street, pedestrians are crossing the road and a lot of the drivers don't take the time to stop and wait to let them step on the sidewalk they just start their vehicles, I have been in a few meetings in Hillview Junior High school and Stoneman Elementary with the city of Pittsburg planning commission, me and other parents and school personnel walked this roads with them to explain how dangerous this intersection is, I hope this time something gets done, I'm not sure if a traffic light or at least please install the lights on the road that light up when someone press the button, some type of signs or signals that are visible for drivers, install signs that say that if you continue	Motor Vehicles	Red light violation
7g9ocp39l7w9	44	38.00439	-121.884898	Y	Harbor St	This intersection the 2 streets which are Harbor and Stoneman are wide, I've seen pedestrians about to get hurt because of the lack of attention of some drivers, sometimes they don't respect the red stop sign and if they do "stop" they don't allow pedestrians to walk and get safely to the other side of the street, pedestrians are crossing the road and a lot of the drivers don't take the time to stop and wait to let them step on the sidewalk they just start their vehicles, I have been in a few meetings in Hillview Junior High school and Stoneman Elementary with the city of Pittsburg planning commission, me and other parents and school personnel walked this roads with them to explain how dangerous this intersection is, I hope this time something gets done, I'm not sure if a traffic light or at least please install the lights on the road that light up when someone press the button, some type of signs or signals that are visible for drivers, install signs that say that if you continue	Motor Vehicles	School Safety

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
7g9ocp39l7w9	44	38.00439	-121.884898	Y	Harbor St	This intersection the 2 streets which are Harbor and Stoneman are wide, I've seen pedestrians about to get hurt because of the lack of attention of some drivers, sometimes they don't respect the red stop sign and if they do "stop" they don't allow pedestrians to walk and get safely to the other side of the street, pedestrians are crossing the road and a lot of the drivers don't take the time to stop and wait to let them step on the sidewalk they just start their vehicles, I have been in a few meetings in Hillview Junior High school and Stoneman Elementary with the city of Pittsburg planning commission, me and other parents and school personnel walked this roads with them to explain how dangerous this intersection is, I hope this time something gets done, I'm not sure if a traffic light or at least please install the lights on the road that light up when someone press the button, some type of signs or signals that are visible for drivers, install signs that say that if you continue	Motor Vehicles	Signage Improvement
7g9ocp39l7w9	45	38.004561	-121.884779	Y	Harbor St	Continuation... I hope this time something gets done, I'm not sure if a traffic light or at least please install the lights on the road that light up when someone press the button, some type of signs or signals that are visible for drivers, install signs that say that if you don't do a full stop they are going to be fined, install cameras both ways please.	Motor Vehicles	Lighting
6777zmw2g6l8	46	38.029698	-121.885812	Y	E 8th St	To many cars double parking, speeding and blocking the handicap parking so the school bus cannot park. Suggestion during the hours of 7:00 am to 8 am kids arriving and the hours of 1:50 pm to 2:45 pm kids leaving and on Wed 12:50 pm to 1:45 pm kids leaving can they cone off the street and only have one lane for drop off only. A teacher aid or an additional cross guard could move the cone for the school buses or emergency vehicles. This would control traffic and make it safe for everyone. Also can they paint a cross walk from in front of the main door to cross the street.	Motor Vehicles	Improper Parking
6777zmw2g6l8	46	38.029698	-121.885812	Y	E 8th St	To many cars double parking, speeding and blocking the handicap parking so the school bus cannot park. Suggestion during the hours of 7:00 am to 8 am kids arriving and the hours of 1:50 pm to 2:45 pm kids leaving and on Wed 12:50 pm to 1:45 pm kids leaving can they cone off the street and only have one lane for drop off only. A teacher aid or an additional cross guard could move the cone for the school buses or emergency vehicles. This would control traffic and make it safe for everyone. Also can they paint a cross walk from in front of the main door to cross the street.	Motor Vehicles	School Safety

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
6777zmw2g6l8	46	38.029698	-121.885812	Y	E 8th St	To many cars double parking, speeding and blocking the handicap parking so the school bus cannot park. Suggestion during the hours of 7:00 am to 8 am kids arriving and the hours of 1:50 pm to 2:45 pm kids leaving and on Wed 12:50 pm to 1:45 pm kids leaving can they cone off the street and only have one lane for drop off only. A teacher aid or an additional cross guard could move the cone for the school buses or emergency vehicles. This would control traffic and make it safe for everyone. Also can they paint a cross walk from in front of the main door to cross the street.	Pedestrian	Pedestrian Safety
44gdm82jvc4a	48	37.99778	-121.889048	Y	Heights Ave	This is a major problem that I have mentioned on the city work order system. My wife and I have almost been hit multiple times. this is a very busy street also near a middle school. It is also a main cross walk for the nearest bus stop for public transportation. I would lighting cross walk that warns when someone is crossing. My previous requests listed: Request #:5667324 Request #:5917032	Pedestrian	Pedestrian Safety
44gdm82jvc4a	49	37.997877	-121.888726	Y	Buchanan Rd	I'm not sure if my last request went in but this crosswalk is very dangerous my wife and I have almost been hit a couple of times I've sent in a couple requests on the go request app. I would like to see there being light flashing to warn drivers people are crossing the street at minimum.	Pedestrian	Pedestrian Safety
44gdm82jvc4a	49	37.997877	-121.888726	Y	Buchanan Rd	I'm not sure if my last request went in but this crosswalk is very dangerous my wife and I have almost been hit a couple of times I've sent in a couple requests on the go request app. I would like to see there being light flashing to warn drivers people are crossing the street at minimum.	Pedestrian	Signal improvement
9um6foy7w4g3	51	38.001165	-121.886806	Y	Harbor St	Route for speeding vehicles. Speed bumps to deter speeders.	Motor Vehicles	Speeding
8cx87cih63w4	52	38.016534	-121.8899	Y	Railroad Ave	Dotted lines are not visible enough for traffic to adhere to. Drivers constantly Crossing over lines and almost hitting other cars.	Motor Vehicles	Signage Improvement
8cx87cih63w4	52	38.016534	-121.8899	Y	Railroad Ave	Dotted lines are not visible enough for traffic to adhere to. Drivers constantly Crossing over lines and almost hitting other cars.	Motor Vehicles	Sign violation

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
1c62-4807-9f57-670c	53			Y	Old Stage Road	Pedestrians of all ages walk along Old Stage Road between the intersections with Ocean Ridge Drive and the intersection with Pacific Woods Road. This route provides sole pedestrian access between residential neighborhoods, Bower Park, and Ocean Ridge Park. Pedestrians are not safe on this route, where they must walk on the fog line or adjacent uneven/unsurfaced ground. There are no pedestrian alternatives. Gualala village lacks continuous sidewalks. The California Coastal Trail currently dead-ends along the Gualala Bluff Trail. Pedestrian safety in the village is threatened by insufficient sidewalks on both sides of SR 1, visibility obscured by parking along the highway, poor vehicle speed control at the north hillside descent, insufficient crosswalks and crosswalk markings. The California Coastal Trail should be extended toward Sonoma County by a continuous Class 1 trail or sidewalks from Center Street across the SR 1 bridge, then up SR 1 to the Gualala Point Regional Park entrance. Thank you for your consideration.	Pedestrian	Pedestrian Safety
1c62-4807-9f57-670c	53			Y	Old Stage Road	Pedestrians of all ages walk along Old Stage Road between the intersections with Ocean Ridge Drive and the intersection with Pacific Woods Road. This route provides sole pedestrian access between residential neighborhoods, Bower Park, and Ocean Ridge Park. Pedestrians are not safe on this route, where they must walk on the fog line or adjacent uneven/unsurfaced ground. There are no pedestrian alternatives. Gualala village lacks continuous sidewalks. The California Coastal Trail currently dead-ends along the Gualala Bluff Trail. Pedestrian safety in the village is threatened by insufficient sidewalks on both sides of SR 1, visibility obscured by parking along the highway, poor vehicle speed control at the north hillside descent, insufficient crosswalks and crosswalk markings. The California Coastal Trail should be extended toward Sonoma County by a continuous Class 1 trail or sidewalks from Center Street across the SR 1 bridge, then up SR 1 to the Gualala Point Regional Park entrance. Thank you for your consideration.	Pedestrian	Sidewalk Improvements
7d69-4138-8265-021	54			N	Lakeview	The traffic in the left turn lane on eastbound YL turning south on Lakeview constantly backs up beyond the turn lane into traffic	Motor Vehicles	Traffic Congestion

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
306b-4c81-9d1e-3b29	55			Y	Blosser Lane	We have several areas of concern in the Willits area. First, the intersection of Blosser Lane and Hwy 20 remains a serious concern because of its location on a major school route. Second, the Hwy 20 portion (south end) of Main Street with 5 traffic lanes remains significantly challenging to pedestrians and cyclists. Finally, the 3-way intersection of Sherwood Rd and Birch in the Brooktrails subdivision sees daily near misses.. Increased safety in each of these locations would do a great deal to help our residents.	Motor Vehicles	Intersection Safety
306b-4c81-9d1e-3b29	55			Y	Blosser Lane	We have several areas of concern in the Willits area. First, the intersection of Blosser Lane and Hwy 20 remains a serious concern because of its location on a major school route. Second, the Hwy 20 portion (south end) of Main Street with 5 traffic lanes remains significantly challenging to pedestrians and cyclists. Finally, the 3-way intersection of Sherwood Rd and Birch in the Brooktrails subdivision sees daily near misses.. Increased safety in each of these locations would do a great deal to help our residents.	Bicycle	Bicycle Safety
306b-4c81-9d1e-3b29	55			Y	Blosser Lane	We have several areas of concern in the Willits area. First, the intersection of Blosser Lane and Hwy 20 remains a serious concern because of its location on a major school route. Second, the Hwy 20 portion (south end) of Main Street with 5 traffic lanes remains significantly challenging to pedestrians and cyclists. Finally, the 3-way intersection of Sherwood Rd and Birch in the Brooktrails subdivision sees daily near misses.. Increased safety in each of these locations would do a great deal to help our residents.	Pedestrian	Pedestrian Safety
306b-4c81-9d1e-3b29	55			Y	Blosser Lane	We have several areas of concern in the Willits area. First, the intersection of Blosser Lane and Hwy 20 remains a serious concern because of its location on a major school route. Second, the Hwy 20 portion (south end) of Main Street with 5 traffic lanes remains significantly challenging to pedestrians and cyclists. Finally, the 3-way intersection of Sherwood Rd and Birch in the Brooktrails subdivision sees daily near misses.. Increased safety in each of these locations would do a great deal to help our residents.	Motor Vehicles	Intersection Safety
a082-4e1b-be04-e9b7	56			Y	Bowling Ball	Hi,I was not able to use the map and drawing tool on my device. There is a problematic area across from Bowling Ball/Schooners gulch beach. People park across highway one and cross in a spot with no visibility. There's should be signage snd pedestrian crossing. It is getting more and more crowded and is very dangerous!	Motor Vehicles	Visibility

Respondent ID	#	Lat	Long	At Intersection?	Road Name	What traffic-related concern do you have at this location?	Mode	Pertinent Issue
a082-4e1b-be04-e9b7	56			Y	Bowling Ball	Hi,I was not able to use the map and drawing tool on my device. There is a problematic area across from Bowling Ball/Schooners gulch beach. People park across highway one and cross in a spot with no visibility. There's should be signage snd pedestrian crossing. It is getting more and more crowded and is very dangerous!	Pedestrian	Pedestrian Safety
a082-4e1b-be04-e9b7	56			Y	Bowling Ball	Hi,I was not able to use the map and drawing tool on my device. There is a problematic area across from Bowling Ball/Schooners gulch beach. People park across highway one and cross in a spot with no visibility. There's should be signage snd pedestrian crossing. It is getting more and more crowded and is very dangerous!	Pedestrian	Signage Improvement
-41ec-41d2-b1fb-7a5	58			Y	Fairmont Blvd	Please employ the powerful enforcement deterrent to protect pedestrians, animals and communities along Fairmont Blvd. between Old Ranch Road and Paseo de las Palomas. Most drivers adhere closely to the 40 MPH speed limit but some drive dangerously fast. Regular (as opposed to rare) sightings of a Police officer ticketing offending drivers along this road would encourage and reward law-abiding behavior.	Pedestrian	Pedestrian Safety
-41ec-41d2-b1fb-7a5	58			Y	Fairmont Blvd	Please employ the powerful enforcement deterrent to protect pedestrians, animals and communities along Fairmont Blvd. between Old Ranch Road and Paseo de las Palomas. Most drivers adhere closely to the 40 MPH speed limit but some drive dangerously fast. Regular (as opposed to rare) sightings of a Police officer ticketing offending drivers along this road would encourage and reward law-abiding behavior.	Motor Vehicles	Speeding

APPENDIX B:
SUMMARY OF PLANNING DOCUMENTS

Table 1: Matrix of Planning Goals, Policies, and Projects

Document	Highlights
City of Pittsburg General Plan 2020	• Policy 7-P-19: Rebuild the interchange/overpass between Willow Pass Road, Range Road, North Parkside Drive, and the SNSF Railroad tracks for safe and efficient movement of auto and bicycle traffic. • Policy 7-G-10: Study the feasibility of a comprehensive network of on- and off- road bike routes to encourage the use of bikes for commute, recreational and other trips. ○ A continuous network of safe and convenient bikeways has the potential to connect neighborhoods with major activity centers, parks, schools, employment centers, civic uses, the waterfront, and the County bicycle system. • Policy 7-P-34: As part of development approval, ensure that safe and contiguous routes for pedestrians and bicyclists are provided within new development projects and on any roadways that are impacted as a result of new development. • Policy 7-P-35: Work with school districts, school administrators and parents of elementary school students to develop a "suggested routes to school" program for students who bicycle and walk. • Policy 7-P-38: Develop a series of continuous pedestrian systems within Downtown and residential neighborhoods, connecting major activity centers and trails with City and County open space areas. Sidewalks should be creatively designed to invite safe use by pedestrians, and be free of obstacles, such as newspaper racks, bus benches, utility poles, and fire hydrants. • Policy 7-P-42: Improve pedestrian crossing safety at heavily used intersections by installing crossing controls that provide adequate time for pedestrians to cross the street. • Policy 7-P-47: Develop a multi-use bicycle path (approx. 2.5 miles) along the abandoned railroad tracks north of Willow Pass Road, providing linkage between Downtown and the Stake Point/Marina area. • Policy 7-P-48: Ensure that construction of bulb-outs and curb extensions at intersections for pedestrian safety does not endanger bicyclists by forcing them into traffic lanes

Document	Highlights
Pittsburg Moves Active Transportation Plan (2020)	• Priority Corridor #1 – Delta de Anza Regional Trail - Install a raised crosswalk at Atherton Avenue and Gladstone Drive. Install a median refuge at Crestview Drive. Work with property owners to close the trail gap between Ackerman Drive and W. Leland Road. Consider installing a protected intersection at Railroad Avenue. Install a PHB or traffic signal at Harbor Street with a median refuge, high-visibility crosswalk markings, and wayfinding signage • Priority Corridor #2 – Harbor Street - Install buffered bike lanes from Buchanan Road to Stoneman Avenue. Install separated bikeways from Stoneman Avenue to E. 3rd Street. Between the Highlands Elementary and Buchanan Park driveways, install a RRFB with a high-visibility crosswalk, median refuge, and curb extensions. • Priority Corridor #3 – Railroad Avenue - Install separated bikeways from E. 8th Street to Buchanan Road. Widen the sidewalk between California Avenue and City Park to provide a shared-use path with a minimum five foot landscape buffer from the street. At California Avenue, mark the southern crosswalk and install an LPI for the eastern crosswalk. Provide a two-step trail crossing with green paint along the northern and eastern crosswalks. • Priority Corridor #4 – Kirker Pass Road - Install separated bikeways from Buchanan Road to Pheasant Drive. At Pheasant Drive, remove the northeast and southeast slip lanes, straighten the eastern crosswalk, add a pedestrian refuge, and upgrade the curb ramps. • Priority Corridor #5 – Willow Pass Rd/ Parkside Dr - Coordinate with the County to install standard bike lanes from Loftus Road to the western city limit. At Balclutha Way, mark the western crosswalk and provide high-visibility markings. • Priority Corridor #6 – E. 14th Street/ P-A Highway - Add a PHB at the Harbor Street/ Hawthorne Street intersection and a trail crossing on E. 14th Street, just east of the bridge. • Install separated bikeways along P-A Highway, between Harbor Street and Central Park. • Priority Corridor #7 – Schooner Way/ Polaris Dr/ Power Ave/ California Ave - Install standard bike lanes along Schooner Way

Document	Highlights
	from the western city limit to Range Road. Install buffered bike lanes along Polaris Drive from Range Road to Andrew Avenue. • Priority Corridor #8 – Loveridge Rd - Install separated bikeways from Buchanan Road to Pittsburg Street. At California Avenue, install pork chop islands with raised crosswalks at all corners of the intersection to shorten crossing distances for pedestrians. • Priority Corridor #9 – Willow Pass Rd/ W. 10th St/ E. 10th St - Install a shared-use path from Parkside Drive to Enterprise Circle and standard bike lanes from Enterprise Circle to Railroad Avenue. At Enterprise Circle: install a PHB with a high-visibility crosswalk; add parking restrictions at the crosswalk approaches; provide adequate nighttime lighting; add curb extensions and a pedestrian refuge; and upgrade the curb ramps • Priority Corridor #10 – W. Leland Rd/ E. Leland Rd - When West Leland Road is extended via development from Avila Road, add a Class IV separated bikeway. At the S. Broadway Avenue intersection, add a marked crosswalk and install curb ramps across Broadway Avenue. Install a shared-use path on the south side of W. Leland Road from Villa Drive to the BART station access road northeast of Southwood Drive.
City of Pittsburg Systemic Safety Analysis Report (2018)	Roadway Segment Countermeasures • Add Segment Lighting • Remove or relocate fixed objects outside of Clear Recovery Zone • Install impact attenuators • Install/Upgrade signs with new fluorescent sheeting (regulatory or warning) • Install delineators, reflectors and/or object markers • Install centerline rumble strips/stripes • Install edgeline rumble strips/stripes Unsignalized Intersection Countermeasures • Add Intersection Lighting • Install/upgrade larger or additional stop signs or other intersection warning/ regulatory signs • Upgrade intersection pavement markings • Install flashing beacons as an advance warning Signalized Intersection Countermeasures • Add Intersection Lighting

Document	Highlights
	• Improve signal hardware (lenses, back-plates, mounting, size, and number) • Improve signal timing (coordination, phases, red, yellow, or operation) • Install raised pavement markers and striping (Through Intersection) • Install pedestrian countdown signal heads • Install pedestrian crossing • Install advance stop bar before crosswalk (Bicycle Box)
Pittsburg/Bay Point BART Master Plan (2011)	Project Goals • Establish the BART station area as a regional focal point. • Reduce greenhouse gas emissions and automobile trips by promoting sustainable development characterized by a mix of uses and a circulation system that prioritizes pedestrians, bicyclists, and transit riders over single-occupancy cars. • Foster healthy lifestyles by supporting walking and bicycling and improving pedestrian and bicycle linkages to/from the BART station. Pedestrian Spaces • Provide a network of convenient and safe pedestrian paths to connect areas within the project to building entrances, adjacent properties, transit stops, and public rights-of-way. Provide directness, continuity, street crossings, visual interest, shade, site furnishings, and safety for pedestrians within and entering the project. Transportation and Circulation Goals and Objectives • Provide safe and efficient connections to the BART Station and the intermodal station for all travel modes • Crosswalks shall be delineated with different paving material and colors to further emphasize pedestrian priority. Bollards and/or other features will be installed to safely manage pedestrian movement at these intersections • Enhance pedestrian connectivity, safety, and comfort. • Offset driveways and intersections should be minimized to make pedestrian street crossings convenient and safe. Pedestrian Crossing Design Standards

Document	Highlights
	• A minimum crosswalk width dimension equal to the Through Zone on the approaching sidewalk. • Curb extensions or bulbouts that extend to the edge of the travel way or bicycle lane to maximize pedestrian visibility. • Advanced vehicle stop bars on stop controlled approaches.
City of Pittsburg Railroad Avenue Specific Plan (2009)	Design and Development Goals • Provide a safe and inviting pedestrian environment to draw people to and from the eBART Station. • Celebrate the station area as a major gateway to the City. • Promote high quality development that is socially and environmentally sustainable. Design and Development Policies • 4-P-1 - Require high quality, pedestrian-friendly design and a high level of transparency along street fronts and pathways to activate the street environment, promote social interaction and support crime prevention. • 4-P-2 -Incorporate public pathways and greenways throughout private development located within the Civic Center and Transit Village sub-areas to facilitate pedestrian and bicycle movement throughout the Specific Plan Area. • 4-P-3 Provide high quality wayfinding signage throughout the Specific Plan Area Lighting and Street Furniture • Provide pedestrian-scaled lights on all streets in the Transit Village and Civic Center sub-areas and pedestrian paths, such as the linear parks between Garcia Avenue and East Leland Road, to improve safety and comfort. Transportation and Circulation Policies • 6-P-1 Encourage walking, bicycling and other non-motorized modes of transportation by providing clearly defined, generous, safe and enjoyable routes for pedestrians and cyclists. • 6-P-3 Provide wide sidewalks (a minimum of six-feet wide in residential areas and ten feet in commercial areas) to enhance the pedestrian experience. • 6-P-9 Incorporate traffic calming techniques such as wide sidewalks, narrow streets, bulb outs, on-street parking, and other strategies throughout the Transit Village, Civic Center and High School Village sub-areas.

Document	Highlights
City of Pittsburg Traffic Calming Policy (2004)	Speed hump installation Warrants: • The street or street segment shall be a two lane residential local or collector street where the primary function is to provide access to residential dwellings. • The street or the street segment shall be improved with curb and gutter. • The street or the street segment shall not be a part of a transit route. • The measured 85th percentile speed (the "critical speed") of the street or street segment shall be six miles per hour or greater than the posted speed limit. • At least 67% of households with side or front yards on the proposed street and within 100' of the outside limits of the proposed speed humps shall approve of speed hump installations. • For 14' speed humps, the street shall have a posted speed limit of 25 mph. For 22' speed humps, the street shall have a posted speed limit of 30 mph. • The street or street segment shall be at least 750 feet long. • The installation of speed humps shall not unduly affect response times of emergency services. This shall be determined by staff in conjunction with the affected emergency services. • The average daily traffic (ADT) shall be no less than 500 vehicles per day and no more than 3000 vehicles per day. • Speed humps shall not be installed on streets with a grade greater than 5 percent. • Speed humps shall not be installed on streets with more than one through travel lane per direction.
City of Pittsburg Five Year Capital Improvement Plan (FY 2021/22 – 2025/26)	Project in Design Phase • BART Pedestrian/Bicycle Connectivity Project • HSIP 9 Citywide Traffic Signal Improvement Project • HSIP 10-Crestview Drive Pavement and Pedestrian Improvement Project • HSIP 10- Signing and Striping Improvement Project Projects Under Construction • Stoneman Avenue Pedestrian Safety Improvements

Document	Highlights
	• West Leland Pavement Delineation, Warning Signage, High Visibility Crosswalk Improvements and Traffic Signal Modification at Range Road • West Leland Road Pavement Markers/Markings and Speed Signage Improvements • FY 2020/21 CDBG ADA Curb Ramp Replacement Project Other Streets Projects • Intersection Geometric Improvements (San Marco Boulevard/ W. Leland Road) Geometric Improvements • Delta DeAnza Trail Roadway Crossing Improvement • East Third Street Streetscape Improvements • Railroad Ave./Leland Rd. Geometric Improvements • Bailey Road Operational Safety Improvements • Century Boulevard Class III Bicycle Facility • Century Boulevard Class II Bicycle Lanes • Railroad Avenue Complete Streets
Contra Costa Countywide Bike and Pedestrian Plan (2018)	Goals • Encourage more people to walk and bicycle • Increase safety and security for pedestrians and bicyclists • Create a safe, connected, and comfortable network of bikeways and walkways for all ages and abilities • Increase the livability and attractiveness of Contra Costa's communities and districts • Equitably serve all of Contra Costa's communities while ensuring that public investments are focused on projects with the greatest benefits Objectives • Increase the share of trips made by walking and bicycling in Contra Costa • Reduce the rate of pedestrian and bicycle fatalities and injuries per capita • Increase the number of miles of low-stress bikeways in Contra Costa • Increase the number of jurisdictions in Contra Costa with bicycle, pedestrian, or active transportation plans • Integrate complete street principles and best practices into Authority funding and design guidance

Document	Highlights

CCTA Transportation Expenditure Plan (2020)	Goals
	• Relieve Traffic Congestion on Highways and Interchanges
	• Make Bus, Ferry, Passenger Train, and BART Rides Safer, Cleaner, and More Reliable
	• Provide Accessible and Safe Transportation for Children, Seniors, Veterans, and People with Disabilities
	• Improve Transportation in Our Communities
	Projects
	• Enhance I-80, I-580 (Richmond-San Rafael Bridge), Transit, and BART Corridor
	  • Improve Transit Reliability Along the I-80 Corridor
	  • Relieve Congestion and Improve Local Access Along the I-80 Corridor
	  • Improve Traffic Flow on Major Roads in West County
	  • Enhance Ferry Service and Commuter Rail in West County
	  • Improve Traffic Flow and Local Access to Richmond-San Rafael Bridge Along I-580 and Richmond Parkway
	  • Seamless Connected Transportation Options

Contra Costa Countywide Transportation Safety Policy and Implementation Guide (2021)	• **A. SIGNAL TIMING & PHASING**
	  ○ Additional Signal Heads
	  ○ Extend Pedestrian Crossing Time
	  ○ Flashing Yellow Turn Phase
	  ○ Leading Pedestrian Interval
	  ○ Pedestrian Phase Recall
	  ○ Replace Permissive with Protected Left Turn
	  ○ Pedestrian Scramble
	  ○ Reduce Cycle Lengths
	  ○ Coordinated Signal Operation
	  ○ Extend Green Time for Bikes
	  ○ Extend Yellow and All Red Time
	• **B. INTERSECTION & ROADWAY DESIGN**
	  ○ Close Slip Lane
	  ○ Raised Intersection
	  ○ Convert Two-Way Stop to All-Way Stop
	  ○ Install Sidewalk
	  ○ Protected Intersection
	  ○ Raised Median

Document	Highlights
	○ Lane Narrowing ○ Road Diet ○ Widen Shoulder ○ Roundabout ○ Signal Head Improvements ○ Traffic Circles ○ Programmable Signals/Visors/Louvers ○ Edge Line/Center Line Rumble Strips ○ Hardened Centerlines • **C. BIKEWAY DESIGN** ○ Bicycle Crossing (Solid Green Paint) ○ Bicycle Signal/Exclusive Bike Phase ○ Bike Detection ○ Class I Bicycle Path or Mixed Use Trail ○ Bike Box ○ Class II Bike Lane ○ Class IV Separated Bikeway ○ Green Bike Lane Conflict Zone Markings ○ Two-Stage Turn Queue Bike Box • **D. PEDESTRIAN CROSSINGS** ○ Install Pedestrian Countdown Timer ○ Pedestrian Hybrid Beacon (PHB) ○ Curb Extension ○ High-Visibility Crosswalk ○ Pedestrian Median Barrier ○ Raised Crosswalk ○ Pedestrian Refuge Island ○ Rectangular Rapid Flashing Beacon (RRFB) ○ Reduce Curb Radius ○ ADA-Compliant Directional Curb Ramps and Audible Push Buttons ○ Extended Time Push Button • **E. SIGNS & MARKINGS** ○ Prohibit Right-Turn-on-Red ○ Advance Yield Markings ○ Advance Stop Markings ○ Pedestrian Signs • **F. OTHER** ○ Access Management

Document	Highlights
	○ Intersection & Street Scale Lighting ○ Remove Obstructions for Sightlines
CCTA Countywide Comprehensive Transportation Plan (2017)	• GOAL 1: Support the efficient, safe, and reliable movement of people and goods using all available travel modes • GOAL 2: Manage growth to sustain Contra Costa's economy, preserve its environment and support its communities • GOAL 3: Expand safe, convenient and affordable alternatives to the single-occupant vehicle • GOAL 4: Maintain the transportation system • GOAL 5: Continue to invest wisely to maximize the benefits of available funding

Contra Costa County Transportation Analysis Guidelines (2020)	Transportation Policy Framework
	• Senate Bill 743 – California Environmental Quality Act
	• County General Plan
	  • Growth Management Element
	  • Transportation and Circulation Element
	• Capital Road Improvement & Preservation Program
	• Complete Streets
	  • Contra Costa County Complete Streets Principles
	  • Contra Costa County Complete Streets Implementation Measures
	• Vision Zero Contra Costa County
	• County Ordinance Code
	  • Section 74-4.006 – Electric Vehicle ("EV") Charging
	  • Chapter 82-16 – Off-Street Parking
	  • Chapter 82-32 – Transportation Demand Management
	  • Title 9 - Subdivisions
	• Contra Costa Transportation Authority
	  • CCTA Technical Procedures
	  • CCTA Countywide Bicycle and Pedestrian Plan
	  • CCTA Action Plans for Routes of Regional Significance

APPENDIX C:
CONSOLIDATED HIGH INJURY COLLISION DATABASE

CASE_ID	ACCIDENT_YEAR	PROC_DATE	JURIS	COLLISION_DATE	COLLISION_TIME	OFFICER_ID	REPORTING_DISTRICT	DAY_OF_WEEK	CHP_SHIFT
8404438	2017	8/29/2017	708	4/14/2017	2029	285		5	5
8808114	2019	43585	708	43544	124	323	46	3	5
8605025	2018	6/11/2018	708	4/17/2018	1030	237	8308	2	5
7166868	2016	1/28/2016	708	1/17/2016	2108	P343	PITTS	7	5
7189429	2016	2/26/2016	708	1/24/2016	1628	P343	PITTS	7	5
8498389	2017	12/7/2017	708	11/16/2017	545	359		4	5
8958555	2019	11/7/2019	708	9/2/2019	2024	253	46	1	5
9019434	2019	2/6/2020	708	12/10/2019	1949	253	46	2	5
7115883	2015	12/18/2015	708	12/1/2015	1504	285	46	2	5
8477579	2017	11/13/2017	708	10/12/2017	2301	359		4	5
8605256	2018	5/15/2018	708	4/18/2018	2103	366	46	3	5
8636514	2018	6/20/2018	708	6/3/2018	809	354	46	7	5
8761522	2018	1/23/2019	708	12/13/2018	1032	323	46	4	5
9045653	2019	2/14/2020	708	12/29/2019	2209	353		7	5
7200001	2016	4/10/2017	708	10/22/2016	1924	285		6	5
8286841	2016	42759	708	42711	2230	346	0	3	5
8615018	2018	5/1/2018	708	3/2/2018	1142	354	46	5	5
8626568	2018	6/5/2018	708	1/12/2018	2325	363	46	5	5
8973596	2019	11/15/2019	708	10/11/2019	1140	355	708	5	5
8677399	2018	8/22/2018	708	7/22/2018	829	362	46	7	5
8892620	2019	7/26/2019	708	6/11/2019	2244	372	46	2	5
7152144	2015	1/20/2016	708	12/23/2015	1601	P219		3	5
7199983	2016	4/12/2017	708	9/7/2016	2212	285		3	5
7199991	2016	4/12/2017	708	12/4/2016	1729	285		7	5
8801536	2019	3/4/2019	708	1/22/2019	1803	350	708	2	5
8703945	2018	10/4/2018	708	8/27/2018	1534	362	708	1	5
6678007	2015	1/29/2016	708	8/1/2015	855	229		6	5
8355829	2017	5/3/2017	708	4/17/2017	1449	344	DELTA	1	5
8635657	2018	6/19/2018	708	4/24/2018	808	363	708	2	5
7133890	2015	12/15/2015	708	11/16/2015	1010	P324		1	5
8284638	2016	1/23/2017	708	10/15/2016	1830	331	46	6	5
8564658	2018	3/6/2018	708	2/5/2018	2157	291		1	5
8662446	2018	7/31/2018	708	6/27/2018	2145	329	708	3	5
7105799	2015	42315	708	42290	745	195	46	2	5
8939046	2019	10/23/2019	708	7/5/2019	605	285	46	5	5
6917814	2015	5/2/2016	708	3/3/2015	1729	P332		2	5
7140946	2015	12/22/2015	708	12/10/2015	1458	285	46	4	5
8159248	2016	11/4/2016	708	10/1/2016	2031	344		6	5
9005393	2019	1/15/2020	708	11/19/2019	1751	374	46	2	5
8097767	2016	8/17/2016	708	7/28/2016	207	P10608	708	4	5
8329838	2017	3/30/2017	708	2/6/2017	744	343	46	1	5
8935812	2019	9/19/2019	708	8/12/2019	2145	378	46	1	5

CASE_ID	POPULATION	CNTY_CITY_LOC	SPECIAL_COND	BEAT_TYPE	CHP_BEAT_TYPE	CITY_DIVISION_LAPD	CHP_BEAT_CLASS	BEAT_NUMBER
8404438	5	708	0	0	0		0	3
8808114	5	708	0	0	0	0	0	3
8605025	5	708	0	0	0		0	3
7166868	5	708	0	0	0		0	3
7189429	5	708	0	0	0		0	3
8498389	5	708	0	0	0		0	3
8958555	5	708	0	0	0		0	3
9019434	5	708	0	0	0		0	3
7115883	5	708	0	0	0		0	2
8477579	5	708	0	0	0		0	2
8605256	5	708	0	0	0		0	2
8636514	5	708	0	0	0		0	2
8761522	5	708	0	0	0		0	2
9045653	5	708	0	0	0		0	2
7200001	5	708	0	0	0		0	4
8286841	5	708	0	0	0	0	0	5
8615018	5	708	0	0	0		0	5
8626568	5	708	0	0	0		0	2325
8973596	5	708	0	0	0		0	5
8677399	5	708	0	0	0		0	5
8892620	5	708	0	0	0		0	5
7152144	5	708	0	0	0		0	2
7199983	5	708	0	0	0		0	2
7199991	5	708	0	0	0		0	2
8801536	5	708	0	0	0		0	2
8703945	5	708	0	0	0		0	2
6678007	5	708	0	0	0		0	5
8355829	5	708	0	0	0		0	5
8635657	5	708	0	0	0		0	1
7133890	5	708	0	0	0		0	1
8284638	5	708	0	0	0		0	3
8564658	5	708	0	0	0		0	3
8662446	5	708	0	0	0		0	3
7105799	5	708	0	0	0	0	0	3
8939046	5	708	0	0	0		0	3
6917814	5	708	0	0	0		0	4
7140946	5	708	0	0	0		0	4
8159248	5	708	0	0	0		0	4
9005393	5	708	0	0	0		0	4
8097767	5	708	0	0	0		0	3
8329838	5	708	0	0	0		0	3
8935812	5	708	0	0	0		0	3

CASE_ID	PRIMARY_RD	SECONDARY_RD	DISTANCE	DIRECTION	TJKM_Int	INTERSECTION	COLLISION_SEVERITY	NUMBER_KILLED
8404438	WEST LELAND RD	BAILEY RD	20	W	Y	N	1	1
8808114	WEST LELAND RD	DELTA VISTA LN	158	E	Y	N	1	1
8605025	WEST LELAND RD	BAILEY RD	0		Y	N	4	0
7166868	BAILEY RD	WEST LELAND RD	0		Y	Y	4	0
7189429	BAILEY RD	WEST LELAND RD	0		Y	Y	4	0
8498389	BAILEY RD	WEST LELAND RD	0		Y	Y	4	0
8958555	BAILEY RD	WEST LELAND RD	43	N	Y	N	4	0
9019434	BAILEY RD	WEST LELAND RD	0		Y	Y	4	0
7115883	AUTO CENTER DR	CENTURY BL	115	S	Y	N	4	0
8477579	AUTO CENTER DR	CENTURY BL	0		Y	Y	4	0
8605256	CENTURY BL	AUTO CENTER DR	0		Y	Y	4	0
8636514	CENTURY BL	AUTO CENTER DR	0		Y	Y	4	0
8761522	CENTURY BL	AUTO CENTER DR	6	W	Y	N	2	0
9045653	CENTURY BL	AUTO CENTER DR	0		Y	Y	4	0
7200001	EAST LELAND RD	PIEDMONT WY	82	E	Y	N	1	1
8286841	EAST LELAND RD	IEDANOS COLLEGE WEST ENTR	20	E	Y	N	2	0
8615018	EAST LELAND RD	PIEDMONT WY	30	E	Y	N	4	0
8626568	EAST LELAND RD	PIEDMONT WY	0		Y	Y	2	0
8973596	EAST LELAND RD	PIEDMONT WY	10	W	Y	N	4	0
8677399	PIEDMONT WY	EAST LELAND RD	15	N	Y	N	4	0
8892620	PIEDMONT LN	EAST LELAND RD	10	S	Y	N	3	0
7152144	HARBOR ST	SCHOOL ST	0		Y	Y	3	0
7199983	HARBOR ST	SCHOOL ST	15	S	Y	N	1	1
7199991	HARBOR ST	SCHOOL ST	16	N	Y	N	1	1
8801536	HARBOR ST	SCHOOL ST	0		Y	Y	4	0
8703945	SCHOOL ST	HARBOR ST	17	E	Y	N	4	0
6678007	EAST LELAND RD	COMMERCE PL	0		Y	Y	1	1
8355829	EAST LELAND RD	COMMERCE PL	157	E	Y	N	4	0
8635657	WILLOW PASS RD	WINTER WY	0		Y	Y	3	0
7133890	WINTER WY	WILLOW PASS RD	0		Y	Y	4	0
8284638	WEST LELAND RD	WOODHILL DR	221	W	Y	N	2	0
8564658	WEST LELAND RD	SOUTHWOOD DR	2	W	Y	N	2	0
8662446	WEST LELAND RD	SOUTHWOOD DR	162	E	Y	N	4	0
7105799	WEST LELAND RD	OAKHILLS DR	299	W	N	N	2	0
8939046	WEST LELAND RD	SOUTHWOOD DR	0		Y	Y	1	1
6917814	BUCHANAN RD	BROOKSIDE DR	0		Y	Y	4	0
7140946	BUCHANAN RD	BROOKSIDE DR	247	W	Y	N	2	0
8159248	BUCHANAN RD	BROOKSIDE DR	0		Y	Y	2	0
9005393	BUCHANAN RD	BROOKSIDE DR	0		Y	Y	4	0
8097767	WEST LELAND RD	WOODHILL DR	2	E	Y	N	4	0
8329838	WEST LELAND RD	BAILEY RD	3	W	Y	N	4	0
8935812	WEST LELAND RD	WOODHILL DR	150	W	Y	N	4	0

CASE_ID	NUMBER_INJURED	PARTY_COUNT	PRIMARY_COLL_FACTOR	PCF_VIOL_CATEGORY	PCF_VIOLATION	PCF_VIOL_SUBSECTION	HIT_AND_RUN
8404438	0	2	A	11	21954	A	N
8808114	0	2	A	3	22350	0	N
8605025	1	2	A	21	22106		N
7166868	1	2	A	9	21453	C	N
7189429	1	3	A	9	21453	C	N
8498389	1	3	A	12	21453	A	N
8958555	1	2	A	1	23152		N
9019434	1	2	A	11	21456	B	N
7115883	1	2	A	8	22107		N
8477579	1	2	A	0	21453		N
8605256	3	2	D	0			N
8636514	2	2	A	1	23152	A	N
8761522	1	2	A	12	21453	A	N
9045653	1	2	A	10	21950	A	M
7200001	1	2	A	3	22350		F
8286841	1	2	A	11	21955	0	N
8615018	1	2	A	21	22106		N
8626568	1	2	A	12	21453		N
8973596	1	2	A	3	22350		N
8677399	1	1	A	8	22107		N
8892620	2	2	A	8	22107		F
7152144	1	2	A	9	21801	A	N
7199983	0	2	A	10	21950	A	N
7199991	0	2	A	3	22350		N
8801536	3	2	A	1	23152	B	N
8703945	1	2	A	4	21703		N
6678007	0	2	A	3	22350		N
8355829	2	3	A	3	22350		N
8635657	3	2	A	9	21801	A	N
7133890	1	2	A	5	21650	1	N
8284638	1	2	A	17	22109		F
8564658	1	1	C	18			N
8662446	1	2	A	12	21453	A	F
7105799	1	2	A	12	21453	A	N
8939046	0	2	A	1	23152	A	N
6917814	1	2	A	3	22350		N
7140946	1	1	C	18			N
8159248	1	2	A	11	21955		N
9005393	1	3	A	4	21703		N
8097767	1	1	A	8	22107		M
8329838	1	2	A	10	21950	A	N
8935812	1	1	A	1	23152	A	N

CASE_ID	TYPE_OF_COLLISION	MVIW	PED_ACTION	ROAD_SURFACE	ROAD_COND_1	ROAD_COND_2	LIGHTING	CONTROL_DEVICE
8404438	G	B	D	A	H	-	C	A
8808114	G	B	D	B	H	-	C	A
8605025	G	B	F	A	H	-	A	A
7166868	D	C	A	B	H	-	C	A
7189429	D	C	A	A	H	-	B	A
8498389	D	C	A	B	H	-	B	A
8958555	C	C	A	A	H	-	C	A
9019434	G	B	B	B	H	-	C	A
7115883	D	C	A	A	H	-	A	A
8477579	B	C	A	A	H	-	-	A
8605256	A	C	A	A	H	-	C	A
8636514	D	C	A	A	H	-	A	A
8761522	G	B	B	A	H	-	A	A
9045653	G	B	B	B	H	-	C	A
7200001	C	C	A	A	H	-	C	A
8286841	G	B	D	B	H	-	C	A
8615018	C	C	A	B	H	-	A	A
8626568	G	B	B	A	H	-	C	A
8973596	C	C	A	A	H	-	A	A
8677399	E	I	A	A	H	-	B	A
8892620	B	C	A	A	H	-	C	A
7152144	D	C	A	A	H	-	A	A
7199983	G	B	B	A	H	-	C	A
7199991	G	B	B	A	H	-	C	A
8801536	D	C	A	A	H	-	C	A
8703945	C	C	A	A	H	-	A	A
6678007	D	C	A	A	H	-	A	-
8355829	C	D	A	A	H	-	A	A
8635657	A	D	A	A	H	-	A	D
7133890	D	G	A	A	H	-	A	D
8284638	C	G	A	B	H	-	C	D
8564658	E	J	A	A	H	-	C	A
8662446	A	C	A	A	H	-	C	A
7105799	G	B	B	A	H	-	A	A
8939046	D	C	A	A	H	-	A	A
6917814	-	C	A	A	-	-	A	D
7140946	E	I	A	A	H	-	A	A
8159248	G	B	D	A	H	-	C	D
9005393	C	C	A	A	H	-	C	D
8097767	E	I	A	A	H	-	C	A
8329838	G	B	C	B	H	-	A	A
8935812	E	I	A	A	H	-	C	A

CASE_ID	CHP_ROAD_TYPE	PEDESTRIAN_ACCIDENT	BICYCLE_ACCIDENT	MOTORCYCLE_ACCIDENT	TRUCK_ACCIDENT	NOT_PRIVATE_PROPERTY
8404438	0	Y				Y
8808114	0	Y	0	0	0	Y
8605025	0	Y				Y
7166868	0					Y
7189429	0					Y
8498389	0					Y
8958555	0					Y
9019434	0	Y				Y
7115883	0					Y
8477579	0					Y
8605256	0					Y
8636514	0					Y
8761522	0	Y				Y
9045653	0	Y				Y
7200001	0			Y		Y
8286841	0	Y	0	0	0	Y
8615018	0					Y
8626568	0	Y				Y
8973596	0					Y
8677399	0					Y
8892620	0					Y
7152144	0					Y
7199983	0	Y				Y
7199991	0	Y				Y
8801536	0					Y
8703945	0					Y
6678007	0			Y		Y
8355829	0					Y
8635657	0					Y
7133890	0		Y			Y
8284638	0		Y			Y
8564658	0					Y
8662446	0			Y		Y
7105799	0	Y	0	0	0	Y
8939046	0			Y		Y
6917814	0					Y
7140946	0					Y
8159248	0	Y				Y
9005393	0					Y
8097767	0					Y
8329838	0	Y				Y
8935812	0					Y

CASE_ID	ALCOHOL_INVOLVED	STWD_VEHTYPE_AT_FAULT	CHP_VEHTYPE_AT_FAULT	COUNT_SEVERE_INJ	COUNT_VISIBLE_INJ	COUNT_COMPLAINT_PAIN
8404438	Y	N	60	0	0	0
8808114	Y	A	1	0	0	0
8605025		A	1	0	0	1
7166868		A	1	0	0	1
7189429		A	1	0	0	1
8498389		A	1	0	0	1
8958555	Y	A	7	0	0	1
9019434		N	60	0	0	1
7115883		A	1	0	0	1
8477579		A	7	0	0	1
8605256		-	-	0	0	3
8636514	Y	A	1	0	0	2
8761522	Y	D	22	1	0	0
9045653		A	7	0	0	1
7200001	Y	A	1	0	0	1
8286841	0	N	60	1	0	0
8615018		A	7	0	0	1
8626568		A	1	1	0	0
8973596		A	1	0	0	1
8677399	Y	D	22	0	0	1
8892620		A	7	0	2	0
7152144		-		0	1	0
7199983	Y	A	1	0	0	0
7199991		A	1	0	0	0
8801536	Y	A	8	0	0	3
8703945		A	1	0	0	1
6678007		C	2	0	0	0
8355829		A	1	0	0	2
8635657		A	1	0	2	1
7133890		L	4	0	0	1
8284638		-	99	1	0	0
8564658		-	-	1	0	0
8662446		C	2	0	0	1
7105799	0	-	0	1	0	0
8939046	Y	C	2	0	0	0
6917814		A	1	0	0	1
7140946		-	-	1	0	0
8159248		N	60	1	0	0
9005393		A	1	0	0	1
8097767		A	1	0	0	1
8329838		D	22	0	0	1
8935812	Y	A	7	0	0	1

CASE_ID	COUNT_PED_KILLED	COUNT_PED_INJURED	COUNT_BICYCLIST_KILLED	COUNT_BICYCLIST_INJURED	COUNT_MC_KILLED	COUNT_MC_INJURED
8404438	1	0	0	0	0	0
8808114	1	0	0	0	0	0
8605025	0	1	0	0	0	0
7166868	0	0	0	0	0	0
7189429	0	0	0	0	0	0
8498389	0	0	0	0	0	0
8958555	0	0	0	0	0	0
9019434	0	1	0	0	0	0
7115883	0	0	0	0	0	0
8477579	0	0	0	0	0	0
8605256	0	0	0	0	0	0
8636514	0	0	0	0	0	0
8761522	0	1	0	0	0	0
9045653	0	1	0	0	0	0
7200001	0	0	0	0	1	0
8286841	0	1	0	0	0	0
8615018	0	0	0	0	0	0
8626568	0	1	0	0	0	0
8973596	0	0	0	0	0	0
8677399	0	0	0	0	0	0
8892620	0	0	0	0	0	0
7152144	0	0	0	0	0	0
7199983	1	0	0	0	0	0
7199991	1	0	0	0	0	0
8801536	0	0	0	0	0	0
8703945	0	0	0	0	0	0
6678007	0	0	0	0	1	0
8355829	0	0	0	0	0	0
8635657	0	0	0	0	0	0
7133890	0	0	0	1	0	0
8284638	0	0	0	1	0	0
8564658	0	0	0	0	0	0
8662446	0	0	0	0	0	0
7105799	0	1	0	0	0	0
8939046	0	0	0	0	1	0
6917814	0	0	0	0	0	0
7140946	0	0	0	0	0	0
8159248	0	1	0	0	0	0
9005393	0	0	0	0	0	0
8097767	0	0	0	0	0	0
8329838	0	1	0	0	0	0
8935812	0	0	0	0	0	0

CASE_ID	COUNTY	CITY	POINT_X	POINT_Y
8404438	CONTRA COSTA	PITTSBURG	-121.9419894	38.01533
8808114	CONTRA COSTA	PITTSBURG	-121.9381332	38.01539993
8605025	CONTRA COSTA	PITTSBURG	-121.9419174	38.01533127
7166868	CONTRA COSTA	PITTSBURG	-121.9419199	38.01532992
7189429	CONTRA COSTA	PITTSBURG	-121.9419199	38.01532992
8498389	CONTRA COSTA	PITTSBURG	-121.9419199	38.01532992
8958555	CONTRA COSTA	PITTSBURG	-121.941925	38.01544952
9019434	CONTRA COSTA	PITTSBURG	-121.9419174	38.01533127
7115883	CONTRA COSTA	PITTSBURG	-121.8356009	38.00542088
8477579	CONTRA COSTA	PITTSBURG	-121.83534	38.00565999
8605256	CONTRA COSTA	PITTSBURG	-121.8353424	38.00566101
8636514	CONTRA COSTA	PITTSBURG	-121.8353424	38.00566101
8761522	CONTRA COSTA	PITTSBURG	-121.8353577	38.00566864
9045653	CONTRA COSTA	PITTSBURG	-121.8353424	38.00566101
7200001	CONTRA COSTA	PITTSBURG	-121.8746984	38.0090826
8286841	CONTRA COSTA	PITTSBURG	-121.8624938	38.0078154
8615018	CONTRA COSTA	PITTSBURG	-121.8748703	38.00912476
8626568	CONTRA COSTA	PITTSBURG	-121.8749695	38.00915146
8973596	CONTRA COSTA	PITTSBURG	-121.8750076	38.00915527
8677399	CONTRA COSTA	PITTSBURG	-121.8749542	38.00918961
8892620	CONTRA COSTA	PITTSBURG	-121.8749695	38.00915146
7152144	CONTRA COSTA	PITTSBURG	-121.8811299	38.01987992
7199983	CONTRA COSTA	PITTSBURG	-121.8811445	38.01984042
7199991	CONTRA COSTA	PITTSBURG	-121.8811136	38.01992198
8801536	CONTRA COSTA	PITTSBURG	-121.8811264	38.01987839
8703945	CONTRA COSTA	PITTSBURG	-121.881073	38.01987457
6678007	CONTRA COSTA	PITTSBURG	-121.8641999	38.00817989
8355829	CONTRA COSTA	PITTSBURG	-121.8636786	38.00805464
8635657	CONTRA COSTA	PITTSBURG	-121.9310532	38.02679825
7133890	CONTRA COSTA	PITTSBURG	-121.9310499	38.02679988
8284638	CONTRA COSTA	PITTSBURG	-121.9524573	38.01692866
8564658	CONTRA COSTA	PITTSBURG	-121.9484177	38.01576233
8662446	CONTRA COSTA	PITTSBURG	-121.9478607	38.01567841
7105799	CONTRA COSTA	PITTSBURG	-121.9453976	38.01533342
8939046	CONTRA COSTA	PITTSBURG	-121.94841	38.01575851
6917814	CONTRA COSTA	PITTSBURG	-121.89277	37.9981
7140946	CONTRA COSTA	PITTSBURG	-121.8936274	37.9981
8159248	CONTRA COSTA	PITTSBURG	-121.89277	37.9981
9005393	CONTRA COSTA	PITTSBURG	-121.8927689	37.99810028
8097767	CONTRA COSTA	PITTSBURG	-121.9519037	38.01651774
8329838	CONTRA COSTA	PITTSBURG	-121.9419304	38.01533
8935812	CONTRA COSTA	PITTSBURG	-121.9522476	38.01682281

CASE_ID	ACCIDENT_YEAR	PROC_DATE	JURIS	COLLISION_DATE	COLLISION_TIME	OFFICER_ID	REPORTING_DISTRICT	DAY_OF_WEEK	CHP_SHIFT
8939204	2019	5/28/2021	708	8/30/2019	2345	323	46	5	5
7190569	2016	11/22/2016	708	6/20/2016	1026	285		1	5
8537157	2017	1/30/2018	708	1/13/2017	238	323	46	5	5
8714884	2018	11/5/2018	708	9/20/2018	831	341	46	4	5
8732413	2018	11/26/2018	708	10/25/2018	755	364		4	5
7006705	2015	3/29/2017	708	11/20/2015	1724	229		5	5
8041219	2016	5/24/2016	708	5/4/2016	1850	229		3	5
8166866	2016	4/11/2017	708	11/12/2016	1945	229	46	6	5
6678185	2017	43560	708	42947	451	229	0	1	5
6718594	2017	43147	708	42991	546	328	0	3	5
6787163	2015	42055	708	42007	1620	P286	0	6	5
6799955	2015	42072	708	42024	702	195	46	2	5
6829023	2015	42086	708	42041	1114	P323	0	5	5
6833669	2015	42083	708	42043	210	316	0	7	5
6847392	2015	42256	708	42062	2046	331	46	5	5
6847420	2015	42241	708	42055	1224	197	0	5	5
6849720	2015	42088	708	42057	1548	P331	DELTA	7	5
6849736	2015	42088	708	42060	1144	288	0	3	5
6849744	2015	42088	708	42062	752	262	0	5	5
6849748	2015	42088	708	42062	712	285	0	5	5
6855448	2015	42087	708	42079	1515	254	DELTA	1	5
6880060	2015	42118	708	42085	1156	262	0	7	5
6880064	2015	42115	708	42091	1303	197	0	6	5
6880068	2015	42115	708	42085	1154	254	46	7	5
6905072	2015	42174	708	42162	1444	P283	46	7	5
6910122	2015	42139	708	42117	813	195	46	4	5
6914327	2015	42143	708	42130	935	321	0	3	5
6922965	2015	42158	708	42127	614	P323	DELTA	7	5
6922989	2015	42158	708	42130	824	321	0	3	5
6934389	2015	42172	708	42143	1911	333	DELTA	2	5
6943845	2015	42187	708	42135	2110	P331	DELTA	1	5
6963498	2015	42180	708	42134	1918	P326	0	7	5
6974427	2015	42194	708	42177	1153	195	46	1	5
7003076	2015	42223	708	42168	1312	PR001	0	6	5
7004964	2015	42227	708	42196	1212	P229	0	6	5
7004966	2015	42209	708	42192	1850	333	DELTA	2	5
7044419	2015	42255	708	42226	745	195	46	1	5
7047666	2015	42265	708	42244	1505	229	0	5	5
7048432	2015	42261	708	42236	1518	P288	DELTA	4	5
7052855	2015	42271	708	42214	1221	195	46	3	5
7053807	2015	42270	708	42250	756	229	0	4	5
8286940	2017	42760	708	42742	2336	338	0	6	5

CASE_ID	POPULATION	CNTY_CITY_LOC	SPECIAL_COND	BEAT_TYPE	CHP_BEAT_TYPE	CITY_DIVISION_LAPD	CHP_BEAT_CLASS	BEAT_NUMBER
8939204	5	708	0	0	0		0	3
7190569	5	708	0	0	0		0	4
8537157	5	708	0	0	0		0	4
8714884	5	708	0	0	0		0	5
8732413	5	708	0	0	0		0	5
7006705	5	708	0	0	0		0	5
8041219	5	708	0	0	0		0	4
8166866	5	708	0	0	0		0	4
6678185	5	708	0	0	0	0	0	5
6718594	5	708	0	0	0	0	0	4
6787163	5	708	0	0	0	0	0	2
6799955	5	708	0	0	0	0	0	5
6829023	5	708	0	0	0	0	0	5
6833669	5	708	0	0	0	0	0	2
6847392	5	708	0	0	0	0	0	4
6847420	5	708	0	0	0	0	0	4
6849720	5	708	0	0	0	0	0	5
6849736	5	708	0	0	0	0	0	4
6849744	5	708	0	0	0	0	0	1
6849748	5	708	0	0	0	0	0	2
6855448	5	708	0	0	0	0	0	4
6880060	5	708	0	0	0	0	0	1
6880064	5	708	0	0	0	0	0	4
6880068	5	708	0	0	0	0	0	2
6905072	5	708	0	0	0	0	0	1
6910122	5	708	0	0	0	0	0	5
6914327	5	708	0	0	0	0	0	5
6922965	5	708	0	0	0	0	0	3
6922989	5	708	0	0	0	0	0	5
6934389	5	708	0	0	0	0	0	2
6943845	5	708	0	0	0	0	0	4
6963498	5	708	0	0	0	0	0	4
6974427	5	708	0	0	0	0	0	4
7003076	5	708	0	0	0	0	0	4
7004964	5	708	0	0	0	0	0	5
7004966	5	708	0	0	0	0	0	4
7044419	5	708	0	0	0	0	0	5
7047666	5	708	0	0	0	0	0	5
7048432	5	708	0	0	0	0	0	4
7052855	5	708	0	0	0	0	0	1
7053807	5	708	0	0	0	0	0	5
8286940	5	708	0	0	0	0	0	1

CASE_ID	PRIMARY_RD	SECONDARY_RD	DISTANCE	DIRECTION	TJKM_Int	INTERSECTION	COLLISION_SEVERITY	NUMBER_KILLED
8939204	WEST LELAND RD	WOODHILL DR	30	W	Y	N	1	1
7190569	STONEMAN AV	MEADOWBROOK AV	6	E	Y	N	1	1
8537157	STONEMAN AV	MEADOWBROOK CIR	158	E	Y	N	4	0
8714884	STONEMAN AV	MEADOWBROOK AV	9	E	Y	N	2	0
8732413	STONEMAN AV	MEADOWBROOK AV	22	W	Y	N	4	0
7006705	RAILROAD AV	EL DORADO DR	25	N	Y	N	1	1
8041219	RAILROAD AV	EL DORADO AV	0		Y	Y	4	0
8166866	RAILROAD AV	EL DORADO AV	14	S	Y	N	1	1
6678185	ATLANTIC AV	RAILROAD AV	400	E	N	N	1	1
6718594	RAILROAD AV	MARKS BL	400	S	N	N	1	1
6787163	RAILROAD AV	VICTORY AV	100	N	Y	N	4	0
6799955	LOVERIDGE RD	EAST LELAND RD	956	S	N	N	3	0
6829023	STONEMAN AV	PARK PLACE DR	33	W	Y	N	4	0
6833669	NORTH PARKSIDE DR	N PARKSIDE DR 40	41	E	Y	N	2	0
6847392	RAIL ROAD AV	BLISS AV	259	S	N	N	4	0
6847420	RAILROAD AV	BLISS AV	50	S	Y	N	4	0
6849720	KIRKER PASS RD	BUCHANAN RD	64	S	Y	N	4	0
6849736	RAILROAD AV	EAST LELAND RD	413	N	N	N	4	0
6849744	CIVIC AV	RAILROAD AV	422	W	N	N	4	0
6849748	SCHOOL ST	HARBOR ST	353	W	N	N	3	0
6855448	RAILROAD AV	ATLANTIC AV	42	S	Y	N	3	0
6880060	PARKSIDE AV	DAVI AV	211	E	Y	N	4	0
6880064	ATLANTIC AV	RAILROAD AV	50	E	Y	N	4	0
6880068	CARPINO AV	BARRUS AV	156	E	Y	N	3	0
6905072	EAST 17TH ST	RAILROAD AV	32	E	Y	N	4	0
6910122	GARCIA AV	MARTIN WY	120	E	Y	N	2	0
6914327	EAST LELAND RD	LOS MEDANOS RD	15	E	Y	N	4	0
6922965	WEST LELAND RD	SOUTHWOOD DR	463	W	N	N	4	0
6922989	BUCHANAN RD	VENTURA DR	180	W	Y	N	3	0
6934389	CARPINO AV	RONNIE ST	227	E	Y	N	4	0
6943845	RAILROAD AV	LELAND RD	40.6	S	Y	N	2	0
6963498	RAMONA ST	HILLCREST AV	60	S	Y	N	3	0
6974427	LINSCHEID DR	MADOLINE ST	53	E	Y	N	3	0
7003076	RAILROAD AV	ALVARADO	93	N	Y	N	4	0
7004964	EAST LELAND RD	WESTGATE DR	83	W	Y	N	3	0
7004966	BUCHANAN RD	HEIGHTS AV	2745	W	N	N	4	0
7044419	BUCHANAN RD	MEADOWS AV	1802	E	N	N	4	0
7047666	LOVERIDGE RD	STONEMAN AV	850	N	N	N	4	0
7048432	KIRKER PASS RD	BUCHANAN RD	15	S	Y	N	3	0
7052855	NORTH PARKSIDE DR	RAILROAD AV	11	W	Y	N	3	0
7053807	BUCHANAN RD	LOVERIDGE RD	143	E	Y	N	3	0
8286940	RAILROAD AV	CENTRAL AV	296	S	N	N	2	0

CASE_ID	NUMBER_INJURED	PARTY_COUNT	PRIMARY_COLL_FACTOR	PCF_VIOL_CATEGORY	PCF_VIOLATION	PCF_VIOL_SUBSECTION	HIT_AND_RUN
8939204	0	1	A	1	23152	F	N
7190569	0	2	A	10	21950	C	N
8537157	1	1	A	3	22350		N
8714884	1	2	A	3	22350		N
8732413	1	2	A	3	22350		N
7006705	0	2	A	11	21954	A	N
8041219	2	2	A	9	21801	A	N
8166866	0	2	A	11	21950	B	N
6678185	0	2	A	11	21954	A	N
6718594	0	4	A	11	21955	0	F
6787163	1	2	A	4	21703	0	N
6799955	1	2	A	3	22350	0	N
6829023	1	1	A	8	22107	0	N
6833669	2	1	A	3	22350	0	N
6847392	1	2	A	1	23152	A	N
6847420	1	3	A	3	22350	0	N
6849720	1	2	A	7	21658	A	N
6849736	1	2	A	9	21804	A	N
6849744	1	2	A	3	22350	0	N
6849748	1	2	A	10	21950	A	N
6855448	1	1	A	3	22350	0	N
6880060	1	1	A	3	22350	0	N
6880064	1	2	A	4	21703	0	N
6880068	1	4	A	8	22107	0	M
6905072	1	2	A	17	22109	0	N
6910122	1	2	A	8	22107	0	N
6914327	1	2	A	3	22350	0	N
6922965	1	1	A	1	23152	A	N
6922989	1	2	A	3	22350	0	N
6934389	1	3	A	8	22107	0	N
6943845	2	2	A	11	21954	A	N
6963498	1	2	A	8	22107	0	N
6974427	1	2	A	10	21950	A	N
7003076	1	2	A	4	21703	0	N
7004964	1	2	A	9	21804	A	N
7004966	1	3	A	3	22350	0	N
7044419	1	5	A	3	22350	0	N
7047666	1	2	A	3	22350	0	M
7048432	2	3	A	1	23153	A	F
7052855	2	1	A	1	23152	A	N
7053807	1	2	A	6	21755	0	N
8286940	1	2	A	11	21955	0	N

CASE_ID	TYPE_OF_COLLISION	MVIW	PED_ACTION	ROAD_SURFACE	ROAD_COND_1	ROAD_COND_2	LIGHTING	CONTROL_DEVICE
8939204	E	I	A	A	H	-	C	A
7190569	G	B	B	A	H	-	A	A
8537157	E	I	A	A	H	-	C	D
8714884	G	B	B	A	H	-	A	A
8732413	C	E	A	A	H	-	A	D
7006705	G	B	D	A	H	-	C	D
8041219	D	C	A	A	H	-	A	A
8166866	G	B	D	A	H	-	C	A
6678185	G	B	E	A	H	-	C	A
6718594	G	B	D	A	H	-	C	D
6787163	C	C	A	A	H	-	A	A
6799955	C	C	A	A	H	-	A	A
6829023	A	I	A	B	H	-	A	D
6833669	F	I	A	B	H	-	C	A
6847392	C	C	A	A	H	-	C	A
6847420	C	C	A	A	H	-	A	A
6849720	B	J	A	A	H	-	A	A
6849736	B	C	A	A	H	-	A	A
6849744	C	C	A	A	H	-	A	A
6849748	G	B	C	A	H	-	A	A
6855448	A	I	A	A	H	-	A	A
6880060	A	I	A	A	H	-	A	D
6880064	C	C	A	A	H	-	A	A
6880068	A	E	A	A	H	-	A	A
6905072	C	C	A	A	H	-	A	A
6910122	D	C	A	A	H	-	A	A
6914327	C	C	A	A	H	-	A	A
6922965	A	I	A	-	H	-	A	A
6922989	C	C	A	A	H	-	A	A
6934389	B	C	A	A	H	-	A	A
6943845	G	B	D	A	H	-	C	D
6963498	C	E	A	A	H	-	A	A
6974427	-	-	-	-	-	-	-	-
7003076	C	C	A	A	H	-	A	A
7004964	D	C	A	A	H	-	A	D
7004966	C	C	A	A	H	-	A	A
7044419	C	C	A	A	H	-	A	A
7047666	C	C	A	A	H	-	A	A
7048432	C	C	A	A	H	-	A	A
7052855	A	I	A	-	H	-	A	A
7053807	D	C	A	A	H	-	A	A
8286940	G	B	E	B	H	-	C	A

CASE_ID	CHP_ROAD_TYPE	PEDESTRIAN_ACCIDENT	BICYCLE_ACCIDENT	MOTORCYCLE_ACCIDENT	TRUCK_ACCIDENT	NOT_PRIVATE_PROPERTY
8939204	0					Y
7190569	0	Y				Y
8537157	0					Y
8714884	0	Y				Y
8732413	0					Y
7006705	0	Y				Y
8041219	0					Y
8166866	0	Y				Y
6678185	0	Y	0	0	0	Y
6718594	0	Y	0	0	0	Y
6787163	0	0	0	0	0	Y
6799955	0	0	0	0	0	Y
6829023	0	0	0	0	0	Y
6833669	0	0	0	0	0	Y
6847392	0	0	0	0	0	Y
6847420	0	0	0	0	0	Y
6849720	0	0	0	0	0	Y
6849736	0	0	0	0	0	Y
6849744	0	0	0	0	0	Y
6849748	0	Y	0	0	0	Y
6855448	0	0	0	0	0	Y
6880060	0	0	0	0	0	Y
6880064	0	0	0	Y	0	Y
6880068	0	0	0	0	0	Y
6905072	0	0	0	Y	0	Y
6910122	0	0	0	Y	0	Y
6914327	0	0	0	0	0	Y
6922965	0	0	0	0	0	Y
6922989	0	0	0	0	0	Y
6934389	0	0	0	0	0	Y
6943845	0	Y	0	0	0	Y
6963498	0	0	0	0	0	Y
6974427	0	Y	0	0	0	Y
7003076	0	0	0	0	0	Y
7004964	0	0	0	Y	0	Y
7004966	0	0	0	0	0	Y
7044419	0	0	0	0	0	Y
7047666	0	0	0	0	0	Y
7048432	0	0	0	0	0	Y
7052855	0	0	0	0	0	Y
7053807	0	0	0	0	0	Y
8286940	0	Y	0	0	0	Y

CASE_ID	ALCOHOL_INVOLVED	STWD_VEHTYPE_AT_FAULT	CHP_VEHTYPE_AT_FAULT	COUNT_SEVERE_INJ	COUNT_VISIBLE_INJ	COUNT_COMPLAINT_PAIN
8939204	Y	A	1	0	0	0
7190569		A	7	0	0	0
8537157	Y	A	1	0	0	1
8714884		A	1	1	0	0
8732413		A	7	0	0	1
7006705	Y	N	60	0	0	0
8041219		A	1	0	0	2
8166866	Y	N	60	0	0	0
6678185	0	N	60	0	0	0
6718594	0	N	60	0	0	0
6787163	0	A	1	0	0	1
6799955	0	A	1	0	1	0
6829023	Y	D	22	0	0	1
6833669	0	A	1	2	0	0
6847392	Y	-	0	0	0	1
6847420	0	A	1	0	0	1
6849720	0	-	0	0	0	1
6849736	0	A	1	0	0	1
6849744	0	-	0	0	0	1
6849748	0	A	1	0	1	0
6855448	0	A	7	0	1	0
6880060	0	-	0	0	0	1
6880064	0	C	2	0	0	1
6880068	0	A	1	0	1	0
6905072	0	C	2	0	0	1
6910122	0	A	1	1	0	0
6914327	0	A	1	0	0	1
6922965	Y	A	1	0	0	1
6922989	0	A	1	0	1	0
6934389	0	A	1	0	0	1
6943845	0	N	60	1	1	0
6963498	0	-	0	0	1	0
6974427	0	A	1	0	1	0
7003076	0	A	7	0	0	1
7004964	0	C	2	0	1	0
7004966	Y	A	1	0	0	1
7044419	0	A	1	0	0	1
7047666	0	-	0	0	0	1
7048432	Y	A	1	0	1	1
7052855	Y	A	1	0	2	0
7053807	0	A	1	0	1	0
8286940	0	N	60	1	0	0

CASE_ID	COUNT_PED_KILLED	COUNT_PED_INJURED	COUNT_BICYCLIST_KILLED	COUNT_BICYCLIST_INJURED	COUNT_MC_KILLED	COUNT_MC_INJURED
8939204	0	0	0	0	0	0
7190569	1	0	0	0	0	0
8537157	0	0	0	0	0	0
8714884	0	1	0	0	0	0
8732413	0	0	0	0	0	0
7006705	1	0	0	0	0	0
8041219	0	0	0	0	0	0
8166866	1	0	0	0	0	0
6678185	1	0	0	0	0	0
6718594	1	0	0	0	0	0
6787163	0	0	0	0	0	0
6799955	0	0	0	0	0	0
6829023	0	0	0	0	0	0
6833669	0	0	0	0	0	0
6847392	0	0	0	0	0	0
6847420	0	0	0	0	0	0
6849720	0	0	0	0	0	0
6849736	0	0	0	0	0	0
6849744	0	0	0	0	0	0
6849748	0	1	0	0	0	0
6855448	0	0	0	0	0	0
6880060	0	0	0	0	0	0
6880064	0	0	0	0	0	1
6880068	0	0	0	0	0	0
6905072	0	0	0	0	0	1
6910122	0	0	0	0	0	1
6914327	0	0	0	0	0	0
6922965	0	0	0	0	0	0
6922989	0	0	0	0	0	0
6934389	0	0	0	0	0	0
6943845	0	1	0	0	0	0
6963498	0	0	0	0	0	0
6974427	0	1	0	0	0	0
7003076	0	0	0	0	0	0
7004964	0	0	0	0	0	1
7004966	0	0	0	0	0	0
7044419	0	0	0	0	0	0
7047666	0	0	0	0	0	0
7048432	0	0	0	0	0	0
7052855	0	0	0	0	0	0
7053807	0	0	0	0	0	0
8286940	0	1	0	0	0	0

CASE_ID	COUNTY	CITY	POINT_X	POINT_Y
8939204	CONTRA COSTA	PITTSBURG	-121.9519577	38.01659393
7190569	CONTRA COSTA	PITTSBURG	-121.8791601	38.00430503
8537157	CONTRA COSTA	PITTSBURG	-121.8759453	38.00351368
8714884	CONTRA COSTA	PITTSBURG	-121.8791504	38.00430298
8732413	CONTRA COSTA	PITTSBURG	-121.8792572	38.00432587
7006705	CONTRA COSTA	PITTSBURG	-121.8939751	38.00468579
8041219	CONTRA COSTA	PITTSBURG	-121.894	38.00461996
8166866	CONTRA COSTA	PITTSBURG	-121.8940132	38.00458299
6678185	CONTRA COSTA	PITTSBURG	-121.8912993	38.00787207
6718594	CONTRA COSTA	PITTSBURG	-121.8959694	37.9996226
6787163	CONTRA COSTA	PITTSBURG	-121.8883735	38.01981144
6799955	CONTRA COSTA	PITTSBURG	-121.8719322	38.00564931
6829023	CONTRA COSTA	PITTSBURG	-121.8815535	38.00418451
6833669	CONTRA COSTA	PITTSBURG	0	0
6847392	CONTRA COSTA	PITTSBURG	-121.8902014	38.01498036
6847420	CONTRA COSTA	PITTSBURG	-121.8900731	38.01554517
6849720	CONTRA COSTA	PITTSBURG	-121.8965757	37.99793475
6849736	CONTRA COSTA	PITTSBURG	-121.8907985	38.01328895
6849744	CONTRA COSTA	PITTSBURG	-121.8894909	38.02088969
6849748	CONTRA COSTA	PITTSBURG	-121.8823056	38.02015431
6855448	CONTRA COSTA	PITTSBURG	-121.8926626	38.00809967
6880060	CONTRA COSTA	PITTSBURG	-121.890315	38.02442647
6880064	CONTRA COSTA	PITTSBURG	-121.8924553	38.00816666
6880068	CONTRA COSTA	PITTSBURG	-121.8795117	38.02083198
6905072	CONTRA COSTA	PITTSBURG	-121.8873928	38.02204702
6910122	CONTRA COSTA	PITTSBURG	-121.8777028	38.01102069
6914327	CONTRA COSTA	PITTSBURG	-121.8625179	38.00795981
6922965	CONTRA COSTA	PITTSBURG	-121.9499837	38.01601966
6922989	CONTRA COSTA	PITTSBURG	-121.8688446	37.99799
6934389	CONTRA COSTA	PITTSBURG	-121.8750716	38.01935187
6943845	CONTRA COSTA	PITTSBURG	-121.891241	38.01209331
6963498	CONTRA COSTA	PITTSBURG	-121.8959898	38.00191213
6974427	CONTRA COSTA	PITTSBURG	-121.8950161	38.00361361
7003076	CONTRA COSTA	PITTSBURG	-121.8919331	38.01013991
7004964	CONTRA COSTA	PITTSBURG	-121.8839851	38.01041796
7004966	CONTRA COSTA	PITTSBURG	-121.8965	37.9981
7044419	CONTRA COSTA	PITTSBURG	-121.8575454	37.99803001
7047666	CONTRA COSTA	PITTSBURG	-121.8721696	38.00503329
7048432	CONTRA COSTA	PITTSBURG	-121.896518	37.99806135
7052855	CONTRA COSTA	PITTSBURG	-121.8871668	38.02374817
7053807	CONTRA COSTA	PITTSBURG	-121.8734637	37.99797178
8286940	CONTRA COSTA	PITTSBURG	-121.8868333	38.02449317

CASE_ID	ACCIDENT_YEAR	PROC_DATE	JURIS	COLLISION_DATE	COLLISION_TIME	OFFICER_ID	REPORTING_DISTRICT	DAY_OF_WEEK	CHP_SHIFT
7056335	2016	42453	708	42443	1700	341	46	1	5
7056415	2016	42453	708	42433	1811	P320	0	5	5
7056416	2016	42500	708	42434	819	P336	DELTA	6	5
7069502	2015	42272	708	42250	1701	330	DELTA	4	5
8029411	2016	5/11/2016	708	4/17/2016	2303	P326		7	5
7105952	2015	42318	708	42286	1118	229	0	5	5
7106063	2015	42397	708	42286	1827	P313	0	5	5
7108595	2015	42314	708	42301	851	229	0	6	5
7108603	2015	42314	708	42300	2106	P329	0	5	5
7110156	2015	42322	708	42288	2329	P331	46	7	5
7111897	2015	42324	708	42301	1148	229	0	6	5
7120761	2015	42404	708	42294	446	P331	46	6	5
7133726	2015	42359	708	42337	1505	P332	DELTA	7	5
7133730	2015	42368	708	42328	1723	304	0	5	5
7140675	2015	42367	708	42343	1900	P320	46	6	5
7140942	2015	42360	708	42342	738	285	46	5	5
7152148	2015	42389	708	42358	1351	P332	0	7	5
7164564	2016	42401	708	42388	1123	P229	0	2	5
7166848	2016	42401	708	42383	2116	P305	DELTA	4	5
7166864	2016	42401	708	42383	644	285	46	4	5
7167239	2015	42408	708	42350	637	P332	0	6	5
7171106	2015	42401	708	42303	1745	P315	0	1	5
7189425	2016	42426	708	42396	1719	342	DELTA	3	5
7190548	2016	42691	708	42578	1401	285	0	3	5
7200000	2016	42836	708	42704	2027	285	0	3	5
7201544	2016	42445	708	42436	1032	285	46	1	5
8006253	2016	42459	708	42447	1101	229	0	5	5
8010344	2016	42472	708	42464	1226	P335	0	1	5
8014457	2016	42480	708	42464	1346	P331	46	1	5
8016084	2016	42473	708	42458	857	P335	0	2	5
8025559	2016	42479	708	42441	1949	P332	0	6	5
8029407	2016	42524	708	42476	1128	197	46	6	5
8519759	2017	43102	708	43069	506	331	46	4	5
8038489	2016	42501	708	42473	1602	P324	0	3	5
8793388	2019	43521	708	43481	1812	362	708	3	5
8041203	2016	42514	708	42502	933	229	0	4	5
8041215	2016	42514	708	42495	1317	232	0	4	5
8050002	2016	42535	708	42506	915	341	0	1	5
8070892	2016	42558	708	42500	1341	229	DELTA	2	5
8070896	2016	42559	708	42524	1539	229	0	5	5
8070955	2016	42559	708	42537	606	285	0	4	5
8073649	2016	42557	708	42506	1242	262	0	1	5

CASE_ID	POPULATION	CNTY_CITY_LOC	SPECIAL_COND	BEAT_TYPE	CHP_BEAT_TYPE	CITY_DIVISION_LAPD	CHP_BEAT_CLASS	BEAT_NUMBER
7056335	5	708	0	0	0	0	0	2
7056415	5	708	0	0	0	0	0	4
7056416	5	708	0	0	0	0	0	5
7069502	5	708	0	0	0	0	0	5
8029411	5	708	0	0	0		0	3
7105952	5	708	0	0	0	0	0	5
7106063	5	708	0	0	0	0	0	5
7108595	5	708	0	0	0	0	0	4
7108603	5	708	0	0	0	0	0	2
7110156	5	708	0	0	0	0	0	5
7111897	5	708	0	0	0	0	0	4
7120761	5	708	0	0	0	0	0	5
7133726	5	708	0	0	0	0	0	5
7133730	5	708	0	0	0	0	0	4
7140675	5	708	0	0	0	0	0	4
7140942	5	708	0	0	0	0	0	5
7152148	5	708	0	0	0	0	0	5
7164564	5	708	0	0	0	0	0	4
7166848	5	708	0	0	0	0	0	1
7166864	5	708	0	0	0	0	0	5
7167239	5	708	0	0	0	0	0	5
7171106	5	708	0	0	0	0	0	1
7189425	5	708	0	0	0	0	0	2
7190548	5	708	0	0	0	0	0	4
7200000	5	708	0	0	0	0	0	5
7201544	5	708	0	0	0	0	0	5
8006253	5	708	0	0	0	0	0	4
8010344	5	708	0	0	0	0	0	5
8014457	5	708	0	0	0	0	0	3
8016084	5	708	0	0	0	0	0	5
8025559	5	708	0	0	0	0	0	4
8029407	5	708	0	0	0	0	0	5
8519759	5	708	0	0	0	0	0	4
8038489	5	708	0	0	0	0	0	4
8793388	5	708	0	0	0	0	0	5
8041203	5	708	0	0	0	0	0	4
8041215	5	708	0	0	0	0	0	4
8050002	5	708	0	0	0	0	0	5
8070892	5	708	0	0	0	0	0	4
8070896	5	708	0	0	0	0	0	4
8070955	5	708	0	0	0	0	0	5
8073649	5	708	0	0	0	0	0	2

CASE_ID	PRIMARY_RD	SECONDARY_RD	DISTANCE	DIRECTION	TJKM_Int	INTERSECTION	COLLISION_SEVERITY	NUMBER_KILLED
7056335	CIVIC AV	RAILROAD AV	200	W	Y	N	4	0
7056415	WEST LELAND RD	PAMELIA WY	48	W	Y	N	3	0
7056416	GARCIA AV	HARBOR ST	585	E	N	N	4	0
7069502	EAST LELAND RD	LOVERIDGE RD	442	W	N	N	4	0
8029411	WEST LELAND RD	SOUTHWOOD DR	166	E	Y	N	4	0
7105952	LOVERIDGE RD	EAST LELAND RD	668	S	N	N	4	0
7106063	BUCHANAN RD	LOVERIDGE RD	10	E	Y	N	4	0
7108595	LOVERIDGE RD	EAST LELAND RD	376	N	N	N	4	0
7108603	SCHOOL ST	BARRUS AV	60	E	Y	N	4	0
7110156	BUCHANAN RD	WOODBOROUGH PL	10	W	Y	N	3	0
7111897	RAILROAD AV	EAST LELAND RD	200	S	Y	N	3	0
7120761	BUCHANAN RD	MCFAUL DR	43	W	Y	N	3	0
7133726	EAST LELAND RD	LOVERIDGE RD	315	E	N	N	4	0
7133730	RAILROAD AV	EAST LELAND RD	3	N	Y	N	4	0
7140675	EAST LELAND RD	WILLIAM WY	98	W	Y	N	4	0
7140942	MEADOWBROOK AV	FALLENLEAF WY	116	N	Y	N	4	0
7152148	BUCHANAN RD	RAILROAD AV	31	E	Y	N	4	0
7164564	RAILROAD AV	EAST LELAND RD	543	N	N	N	4	0
7166848	NORTH PARKSIDE DR	JIMNO AV	12	W	Y	N	4	0
7166864	BUCHANAN RD	HEIGHTS AV	80	E	Y	N	4	0
7167239	LOVERIDGE RD	EAST LELAND RD	22	S	Y	N	4	0
7171106	ANDREW AV	NORTH PARKSIDE DR	591	S	N	N	4	0
7189425	RAILROAD AV	OAK PL	11	N	Y	N	2	0
7190548	EAST LELAND RD	HARBOR ST	29	E	Y	N	1	1
7200000	BUCHANAN RD	MEADOWS AV	1062	E	N	N	1	1
7201544	STONEMAN AV	PARK PLACE DR	35	E	Y	N	4	0
8006253	EAST LELAND RD	LOVERIDGE RD	414	E	N	N	4	0
8010344	EAST LELAND RD	GLADSTONE DR	590	W	N	N	4	0
8014457	WEST LELAND RD	BAILEY RD	264	W	N	N	4	0
8016084	LELAND RD	COMMERCE PL	434	E	N	N	4	0
8025559	LORRAINE AV	MADOLINE ST	468	W	N	N	4	0
8029407	STONERIDGE DR	EAST LELAND RD	10	S	Y	N	4	0
8519759	RAILROAD AV	WEST LELAND RD	454	N	N	N	2	0
8038489	RAILROAD AV	MARIPOSA DR	95	N	Y	N	4	0
8793388	EAST LELAND RD	COMMERCE PL	400	W	N	N	2	0
8041203	HARBOR ST	STONEMAN AV	460	N	N	N	4	0
8041215	RAILROAD AV	ALVARADO	149	S	Y	N	4	0
8050002	EAST LELAND RD	GLADSTONE DR	30	W	Y	N	4	0
8070892	EAST LELAND RD	HARBOR ST	44	W	Y	N	4	0
8070896	EAST LELAND RD	GLADSTONE DR	197	W	Y	N	4	0
8070955	BUCHANAN RD	SANTA ANA DR	190	W	Y	N	4	0
8073649	ACACIA ST	14TH ST	23	S	Y	N	3	0

CASE_ID	NUMBER_INJURED	PARTY_COUNT	PRIMARY_COLL_FACTOR	PCF_VIOL_CATEGORY	PCF_VIOLATION	PCF_VIOL_SUBSECTION	HIT_AND_RUN
7056335	1	3	A	4	21703	0	N
7056415	3	3	A	3	22350	A	N
7056416	1	2	A	3	22350	0	N
7069502	1	2	A	8	22107	0	N
8029411	1	2	A	10	21950		M
7105952	1	2	A	9	21801	A	N
7106063	4	3	A	1	23152	A	N
7108595	1	2	A	9	21801	A	N
7108603	1	3	A	8	22107	0	N
7110156	1	2	A	8	22107	0	M
7111897	1	4	A	1	23152	E	M
7120761	1	1	A	8	22107	0	N
7133726	1	2	A	3	22350	A	N
7133730	1	2	A	9	21453	C	N
7140675	2	2	A	7	21658	A	N
7140942	1	2	A	8	22107	0	N
7152148	1	1	A	3	22350	0	N
7164564	1	2	A	9	21804	A	N
7166848	1	2	A	3	22350	0	N
7166864	1	1	A	8	22107	0	N
7167239	1	2	A	10	21950	A	N
7171106	1	2	A	21	22106	0	M
7189425	1	2	A	12	21453	A	N
7190548	6	3	A	3	22350	0	N
7200000	1	2	A	5	21650	0	N
7201544	2	2	A	3	22350	0	N
8006253	1	2	A	12	21453	A	N
8010344	1	1	A	3	22350	0	N
8014457	1	2	A	8	22107	0	N
8016084	5	2	A	12	21453	A	N
8025559	1	1	A	21	22106	0	N
8029407	1	2	A	21	22106	0	M
8519759	1	2	A	0	21954	0	N
8038489	1	2	A	3	22350	0	N
8793388	1	2	A	11	21953	0	N
8041203	4	2	A	9	21801	A	N
8041215	1	2	A	9	21804	A	N
8050002	1	2	A	4	21703	0	N
8070892	3	4	A	3	22350	0	N
8070896	3	2	A	3	22350	0	N
8070955	2	3	A	4	21703	0	N
8073649	1	1	A	1	23152	A	N

CASE_ID	TYPE_OF_COLLISION	MVIW	PED_ACTION	ROAD_SURFACE	ROAD_COND_1	ROAD_COND_2	LIGHTING	CONTROL_DEVICE
7056335	C	C	A	A	H	-	A	A
7056415	C	C	A	B	H	-	C	A
7056416	B	C	A	B	H	-	A	A
7069502	E	I	F	A	H	-	A	A
8029411	G	B	B	A	H	-	C	A
7105952	D	C	A	A	H	-	A	D
7106063	C	C	A	A	H	-	A	A
7108595	D	C	A	A	H	-	A	D
7108603	A	E	A	A	H	-	D	D
7110156	D	C	A	A	H	-	C	D
7111897	-	C	A	A	H	-	A	A
7120761	E	I	A	A	H	-	C	D
7133726	C	C	A	A	H	-	A	A
7133730	-	-	A	-	-	-	-	-
7140675	C	C	A	A	H	-	C	A
7140942	C	E	A	A	H	-	A	A
7152148	E	J	A	A	H	-	A	A
7164564	-	C	A	A	H	-	A	A
7166848	C	C	A	A	H	-	C	A
7166864	E	I	A	A	H	-	C	A
7167239	G	B	B	A	H	-	C	A
7171106	H	G	A	A	H	-	B	A
7189425	D	C	A	A	H	-	B	A
7190548	C	C	A	A	H	-	A	A
7200000	A	C	A	A	H	-	D	A
7201544	A	C	A	B	H	-	A	A
8006253	B	C	A	A	H	-	A	A
8010344	E	I	A	A	H	-	A	D
8014457	D	C	A	A	H	-	A	D
8016084	B	C	A	A	H	-	A	A
8025559	C	I	A	B	H	-	C	A
8029407	C	C	A	A	H	-	A	A
8519759	G	B	D	A	H	-	C	D
8038489	C	C	A	A	H	-	A	A
8793388	G	B	D	B	H	-	D	D
8041203	A	C	A	A	H	-	A	D
8041215	D	C	A	A	H	-	A	D
8050002	C	C	A	A	H	-	A	A
8070892	C	C	A	A	H	-	A	A
8070896	C	C	A	A	H	-	A	A
8070955	C	C	A	A	H	-	A	A
8073649	-	J	A	A	C	-	A	A

CASE_ID	CHP_ROAD_TYPE	PEDESTRIAN_ACCIDENT	BICYCLE_ACCIDENT	MOTORCYCLE_ACCIDENT	TRUCK_ACCIDENT	NOT_PRIVATE_PROPERTY
7056335	0	0	0	0	0	Y
7056415	0	0	0	0	0	Y
7056416	0	0	0	0	0	Y
7069502	0	Y	0	0	0	Y
8029411	0	Y				Y
7105952	0	0	0	Y	0	Y
7106063	0	0	0	0	0	Y
7108595	0	0	0	0	0	Y
7108603	0	0	0	0	0	Y
7110156	0	0	0	0	0	Y
7111897	0	0	0	Y	0	Y
7120761	0	0	0	0	0	Y
7133726	0	0	0	0	Y	Y
7133730	0	0	Y	0	0	Y
7140675	0	0	0	0	Y	Y
7140942	0	0	0	0	0	Y
7152148	0	0	0	0	0	Y
7164564	0	0	0	0	0	Y
7166848	0	0	0	0	0	Y
7166864	0	0	0	0	0	Y
7167239	0	Y	0	0	0	Y
7171106	0	0	Y	0	0	Y
7189425	0	0	0	Y	0	Y
7190548	0	0	0	0	0	Y
7200000	0	0	0	0	0	Y
7201544	0	0	0	0	0	Y
8006253	0	0	0	0	0	Y
8010344	0	0	0	0	0	Y
8014457	0	0	0	0	0	Y
8016084	0	0	0	0	0	Y
8025559	0	0	0	0	0	Y
8029407	0	0	0	0	0	Y
8519759	0	Y	0	0	0	Y
8038489	0	0	0	0	0	Y
8793388	0	Y	0	0	0	Y
8041203	0	0	0	0	0	Y
8041215	0	0	0	0	0	Y
8050002	0	0	0	0	0	Y
8070892	0	0	0	0	0	Y
8070896	0	0	0	0	0	Y
8070955	0	0	0	0	0	Y
8073649	0	0	0	0	0	Y

CASE_ID	ALCOHOL_INVOLVED	STWD_VEHTYPE_AT_FAULT	CHP_VEHTYPE_AT_FAULT	COUNT_SEVERE_INJ	COUNT_VISIBLE_INJ	COUNT_COMPLAINT_PAIN
7056335	0	-	0	0	0	1
7056415	0	A	1	0	1	2
7056416	0	A	7	0	0	1
7069502	0	A	1	0	0	1
8029411		A	1	0	0	1
7105952	0	A	1	0	0	1
7106063	Y	A	7	0	0	4
7108595	0	A	1	0	0	1
7108603	0	A	1	0	0	1
7110156	Y	A	7	0	1	0
7111897	Y	C	2	0	1	0
7120761	0	A	7	0	1	0
7133726	0	F	21	0	0	1
7133730	0	D	22	0	0	1
7140675	0	A	1	0	0	2
7140942	0	A	1	0	0	1
7152148	0	A	7	0	0	1
7164564	0	D	22	0	0	1
7166848	0	A	8	0	0	1
7166864	0	A	1	0	0	1
7167239	0	A	1	0	0	1
7171106	0	A	1	0	0	1
7189425	0	C	2	1	0	0
7190548	0	D	22	1	1	4
7200000	Y	A	1	0	1	0
7201544	0	A	7	0	0	2
8006253	0	D	22	0	0	1
8010344	0	-	0	0	0	1
8014457	0	A	1	0	0	1
8016084	0	A	7	0	0	5
8025559	0	A	1	0	0	1
8029407	0	A	1	0	0	1
8519759	0	N	60	1	0	0
8038489	0	A	7	0	0	1
8793388	0	N	60	1	0	0
8041203	0	A	1	0	0	4
8041215	0	-	0	0	0	1
8050002	0	A	1	0	0	1
8070892	0	A	1	0	0	3
8070896	0	D	22	0	0	3
8070955	0	D	22	0	0	2
8073649	Y	A	1	0	1	0

CASE_ID	COUNT_PED_KILLED	COUNT_PED_INJURED	COUNT_BICYCLIST_KILLED	COUNT_BICYCLIST_INJURED	COUNT_MC_KILLED	COUNT_MC_INJURED
7056335	0	0	0	0	0	0
7056415	0	0	0	0	0	0
7056416	0	0	0	0	0	0
7069502	0	1	0	0	0	0
8029411	0	1	0	0	0	0
7105952	0	0	0	0	0	1
7106063	0	0	0	0	0	0
7108595	0	0	0	0	0	0
7108603	0	0	0	0	0	0
7110156	0	0	0	0	0	0
7111897	0	0	0	0	0	1
7120761	0	0	0	0	0	0
7133726	0	0	0	0	0	0
7133730	0	0	0	1	0	0
7140675	0	0	0	0	0	0
7140942	0	0	0	0	0	0
7152148	0	0	0	0	0	0
7164564	0	0	0	0	0	0
7166848	0	0	0	0	0	0
7166864	0	0	0	0	0	0
7167239	0	1	0	0	0	0
7171106	0	0	0	1	0	0
7189425	0	0	0	0	0	1
7190548	0	0	0	0	0	0
7200000	0	0	0	0	0	0
7201544	0	0	0	0	0	0
8006253	0	0	0	0	0	0
8010344	0	0	0	0	0	0
8014457	0	0	0	0	0	0
8016084	0	0	0	0	0	0
8025559	0	0	0	0	0	0
8029407	0	0	0	0	0	0
8519759	0	1	0	0	0	0
8038489	0	0	0	0	0	0
8793388	0	1	0	0	0	0
8041203	0	0	0	0	0	0
8041215	0	0	0	0	0	0
8050002	0	0	0	0	0	0
8070892	0	0	0	0	0	0
8070896	0	0	0	0	0	0
8070955	0	0	0	0	0	0
8073649	0	0	0	0	0	0

CASE_ID	COUNTY	CITY	POINT_X	POINT_Y
7056335	CONTRA COSTA	PITTSBURG	-121.888754	38.02071096
7056415	CONTRA COSTA	PITTSBURG	-121.89301	38.01264679
7056416	CONTRA COSTA	PITTSBURG	-121.8834341	38.01238983
7069502	CONTRA COSTA	PITTSBURG	-121.8724264	38.00851744
8029411	CONTRA COSTA	PITTSBURG	-121.9478436	38.01567547
7105952	CONTRA COSTA	PITTSBURG	-121.8716435	38.0064067
7106063	CONTRA COSTA	PITTSBURG	-121.8739253	37.99797
7108595	CONTRA COSTA	PITTSBURG	-121.8706016	38.00915286
7108603	CONTRA COSTA	PITTSBURG	-121.8802018	38.01994388
7110156	CONTRA COSTA	PITTSBURG	-121.8716447	37.99798
7111897	CONTRA COSTA	PITTSBURG	-121.8914032	38.01167468
7120761	CONTRA COSTA	PITTSBURG	-121.8752193	37.99797917
7133726	CONTRA COSTA	PITTSBURG	-121.8699052	38.00793198
7133730	CONTRA COSTA	PITTSBURG	-121.8911971	38.01220791
7140675	CONTRA COSTA	PITTSBURG	-121.8923151	38.01247939
7140942	CONTRA COSTA	PITTSBURG	-121.8794596	38.00360405
7152148	CONTRA COSTA	PITTSBURG	-121.8963924	37.9981
7164564	CONTRA COSTA	PITTSBURG	-121.8906707	38.01363142
7166848	CONTRA COSTA	PITTSBURG	-121.8929214	38.02469372
7166864	CONTRA COSTA	PITTSBURG	-121.8885924	37.99800552
7167239	CONTRA COSTA	PITTSBURG	-121.8709832	38.00810244
7171106	CONTRA COSTA	PITTSBURG	-121.8980396	38.02355042
7189425	CONTRA COSTA	PITTSBURG	-121.8879687	38.02086887
7190548	CONTRA COSTA	PITTSBURG	-121.8860232	38.01089805
7200000	CONTRA COSTA	PITTSBURG	-121.860114	37.99802395
7201544	CONTRA COSTA	PITTSBURG	-121.8813211	38.00425074
8006253	CONTRA COSTA	PITTSBURG	-121.869576	38.007854
8010344	CONTRA COSTA	PITTSBURG	-121.8679635	38.0079093
8014457	CONTRA COSTA	PITTSBURG	-121.9428366	38.01533
8016084	CONTRA COSTA	PITTSBURG	-121.8627504	38.00785625
8025559	CONTRA COSTA	PITTSBURG	-121.8965226	38.00491181
8029407	CONTRA COSTA	PITTSBURG	-121.8765358	38.00934273
8519759	CONTRA COSTA	PITTSBURG	-121.8907583	38.01339699
8038489	CONTRA COSTA	PITTSBURG	-121.893017	38.00717036
8793388	CONTRA COSTA	PITTSBURG	-121.8655624	38.00836182
8041203	CONTRA COSTA	PITTSBURG	-121.8852752	38.00570089
8041215	CONTRA COSTA	PITTSBURG	-121.8921477	38.00949776
8050002	CONTRA COSTA	PITTSBURG	-121.866119	38.00839431
8070892	CONTRA COSTA	PITTSBURG	-121.8862653	38.01095736
8070896	CONTRA COSTA	PITTSBURG	-121.8666698	38.0082513
8070955	CONTRA COSTA	PITTSBURG	-121.8835695	37.99798
8073649	CONTRA COSTA	PITTSBURG	-121.87467	38.02003

CASE_ID	ACCIDENT_YEAR	PROC_DATE	JURIS	COLLISION_DATE	COLLISION_TIME	OFFICER_ID	REPORTING_DISTRICT	DAY_OF_WEEK	CHP_SHIFT
8595096	2018	43215	708	43148	1002	341	46	6	5
8078906	2016	42563	708	42528	817	229	708	2	5
8078910	2016	42563	708	42528	857	229	0	2	5
8099499	2016	42594	708	42512	2123	335	0	7	5
8099850	2016	42592	708	42523	1513	229	0	4	5
8110302	2016	42613	708	42601	1520	342	0	5	5
8139190	2016	42704	708	42633	808	262	0	2	5
8164609	2016	42683	708	42621	228	315	0	4	5
8167202	2017	43279	708	43061	655	285	0	3	5
8173274	2016	42692	708	42640	18	330	0	2	5
8187768	2016	42732	708	42692	1756	344	0	5	5
8187772	2016	42747	708	42712	817	335	0	4	5
8188301	2016	42717	708	42682	748	229	46	2	5
8188404	2016	42733	708	42650	709	336	708	5	5
8188448	2016	42718	708	42664	1830	340	0	5	5
8191082	2016	42725	708	42705	539	342	0	4	5
8191499	2016	42726	708	42659	148	320	0	7	5
8286600	2016	42766	708	42691	1203	262	0	4	5
8038498	2016	42501	708	42458	1718	P324	0	2	5
8742058	2018	43433	708	43326	707	323	46	2	5
8291007	2017	42769	708	42748	1537	349	46	5	5
8312135	2017	42793	708	42769	2125	329	46	5	5
8314641	2017	42828	708	42753	1848	344	0	3	5
8329688	2017	42823	708	42810	1420	229	0	4	5
8329692	2017	42823	708	42795	1812	318	46	3	5
8337222	2017	42835	708	42808	1040	247	46	2	5
8337325	2017	42829	708	42808	727	247	46	2	5
8361684	2017	42885	708	42856	1704	P10608	708	1	5
8361795	2016	42877	708	42712	1604	348	708	4	5
8365129	2017	42867	708	42833	2152	320	46	6	5
8369967	2017	42886	708	42860	719	10330	708	5	5
8369975	2017	42886	708	42878	719	351	708	2	5
8398382	2017	42919	708	42893	1418	285	0	3	5
8401764	2017	42937	708	42914	955	229	46	3	5
7053811	2015	42270	708	42248	1648	229	0	2	5
8416206	2017	42943	708	42918	1504	342	46	7	5
8873793	2019	6/10/2019	708	5/20/2019	1820	P253	46	1	5
8416634	2017	42947	708	42865	2106	331	46	3	5
8448289	2017	43003	708	42960	158	357	46	7	5
8477533	2017	43047	708	42998	1226	285	0	3	5
8491666	2017	43074	708	43035	729	247	0	5	5
8491770	2017	43089	708	43021	2154	358	0	5	5

CASE_ID	POPULATION	CNTY_CITY_LOC	SPECIAL_COND	BEAT_TYPE	CHP_BEAT_TYPE	CITY_DIVISION_LAPD	CHP_BEAT_CLASS	BEAT_NUMBER
8595096	5	708	0	0	0	0	0	4
8078906	5	708	0	0	0	0	0	1
8078910	5	708	0	0	0	0	0	1
8099499	5	708	0	0	0	0	0	5
8099850	5	708	0	0	0	0	0	0
8110302	5	708	0	0	0	0	0	4
8139190	5	708	0	0	0	0	0	4
8164609	5	708	0	0	0	0	0	4
8167202	5	708	0	0	0	0	0	0
8173274	5	708	0	0	0	0	0	2
8187768	5	708	0	0	0	0	0	5
8187772	5	708	0	0	0	0	0	5
8188301	5	708	0	0	0	0	0	4
8188404	5	708	0	0	0	0	0	3
8188448	5	708	0	0	0	0	0	4
8191082	5	708	0	0	0	0	0	5
8191499	5	708	0	0	0	0	0	2
8286600	5	708	0	0	0	0	0	2
8038498	5	708	0	0	0	0	0	4
8742058	5	708	0	0	0	0	0	1
8291007	5	708	0	0	0	0	0	3
8312135	5	708	0	0	0	0	0	4
8314641	5	708	0	0	0	0	0	5
8329688	5	708	0	0	0	0	0	5
8329692	5	708	0	0	0	0	0	4
8337222	5	708	0	0	0	0	0	4
8337325	5	708	0	0	0	0	0	4
8361684	5	708	0	0	0	0	0	5
8361795	5	708	0	0	0	0	0	4
8365129	5	708	0	0	0	0	0	3
8369967	5	708	0	0	0	0	0	2
8369975	5	708	0	0	0	0	0	4
8398382	5	708	0	0	0	0	0	5
8401764	5	708	0	0	0	0	0	4
7053811	5	708	0	0	0	0	0	1
8416206	5	708	0	0	0	0	0	4
8873793	5	708	0	0	0		0	3
8416634	5	708	0	0	0	0	0	4
8448289	5	708	0	0	0	0	0	5
8477533	5	708	0	0	0	0	0	4
8491666	5	708	0	0	0	0	0	1
8491770	5	708	0	0	0	0	0	4

CASE_ID	PRIMARY_RD	SECONDARY_RD	DISTANCE	DIRECTION	TJKM_Int	INTERSECTION	COLLISION_SEVERITY	NUMBER_KILLED
8595096	RAILROAD AV	BLISS AV	4	N	Y	N	2	0
8078906	EAST 17TH ST	RAILROAD AV	90	E	Y	N	4	0
8078910	NORTH PARKSIDE DR	ROSE ANN AV	15	E	Y	N	4	0
8099499	RAMONA ST	MAE AV	25	N	Y	N	4	0
8099850	HARBOR ST	STONEMAN AV	214	N	Y	N	4	0
8110302	RAILROAD AV	BLISS AV	167	S	Y	N	4	0
8139190	HARBOR ST	VENTURA DR	22	S	Y	N	4	0
8164609	RAILROAD AV	MARKS BL	45	S	Y	N	4	0
8167202	BAILEY RD	KELLEY CANYON LANDFILL	6864	S	N	N	1	1
8173274	CALIFORNIA AV	LOVERIDGE RD	827	W	N	N	4	0
8187768	BUCHANAN RD	MEADOWS AV	86	E	Y	N	2	0
8187772	EAST LELAND RD	PIEDMONT WY	327	W	N	N	3	0
8188301	BUCHANAN RD	MEADOWS AV	2012	E	N	N	2	0
8188404	WEST LELAND RD	DELTA VISTA LN	50	W	Y	N	4	0
8188448	BUCHANAN RD	QUERCAS LN	168	E	Y	N	4	0
8191082	BUCHANAN RD	HARBOR ST	865	E	N	N	4	0
8191499	EAST 14TH ST	BIRCH ST	24	W	Y	N	4	0
8286600	HARBOR ST	STONE HARBOUR DR	24.7	N	Y	N	4	0
8038498	EAST LELAND RD	HARBOR ST	678	W	N	N	3	0
8742058	RAILROAD AV	EAST 17TH ST	4	N	Y	N	2	0
8291007	WEST LELAND RD	CHESTNUT DR	381	E	N	N	4	0
8312135	KIRKER PASS RD	CASTLEWOOD DR	285	N	N	N	3	0
8314641	LOVERIDGE RD	BUCHANAN RD	76	N	Y	N	4	0
8329688	LOVERIDGE RD	WEST LELAND RD	953	N	N	N	4	0
8329692	ATLANTIC AV	RAILROAD AV	325	E	N	N	4	0
8337222	RAILROAD AV	YOSEMITE DR	4	N	Y	N	4	0
8337325	ATLANTIC AV	HARBOR ST	6	W	Y	N	4	0
8361684	BUCHANAN RD	SUZANNE DR	237	E	Y	N	4	0
8361795	BUCHANAN RD	WEST OF THE SUZANNE DR	384	W	N	N	4	0
8365129	WEST LELAND RD	OAK HILLS DR	10	W	Y	N	4	0
8369967	SCHOOL ST	SOMERS ST	201	W	Y	N	4	0
8369975	EAST LELAND RD	RAILROAD AV	534	E	N	N	4	0
8398382	EAST LELAND RD	STONERIDGE DR	246	W	Y	N	3	0
8401764	EAST LELAND RD	OUTH ENTRANCE TO WAL-MAF	16	E	Y	N	4	0
7053811	RAILROAD AV	CIVIC AV	126	S	Y	N	3	0
8416206	HARBOR ST	YOSEMITE DR	340	S	N	N	3	0
8873793	WEST LELAND RD	SOUTHWOOD DR	193	E	Y	N	4	0
8416634	HARBOR ST	VENTURA DR	105	N	Y	N	4	0
8448289	EAST LELAND RD	COMMERCE PL	439	E	N	N	4	0
8477533	ATLANTIC AV	ATLANTIC CIR	6	W	Y	N	2	0
8491666	RAILROAD AV	CIVIC AV	125	S	Y	N	4	0
8491770	HARBOR ST	STONEMAN AV	562	N	N	N	2	0

CASE_ID	NUMBER_INJURED	PARTY_COUNT	PRIMARY_COLL_FACTOR	PCF_VIOL_CATEGORY	PCF_VIOLATION	PCF_VIOL_SUBSECTION	HIT_AND_RUN
8595096	1	2	A	21	22106	0	F
8078906	2	1	B	22	0	0	N
8078910	1	3	A	3	22350	0	N
8099499	1	2	A	1	23152	A	N
8099850	1	2	A	11	21955	0	M
8110302	3	4	A	3	22350	0	N
8139190	1	2	A	12	22450	A	F
8164609	1	1	A	3	22350	0	N
8167202	2	3	A	3	22350	0	N
8173274	1	2	A	12	21453	A	N
8187768	1	1	A	8	22107	0	N
8187772	1	1	A	3	22350	0	N
8188301	2	2	A	5	21651	A	N
8188404	1	3	A	4	21703	0	N
8188448	1	3	A	4	21703	0	N
8191082	1	4	A	4	21703	0	N
8191499	1	2	A	1	23152	A	N
8286600	1	2	A	10	21950	A	F
8038498	1	2	A	5	21650	1	N
8742058	1	2	A	5	21650	1	N
8291007	1	1	A	17	21658	0	N
8312135	1	1	A	3	22350	0	N
8314641	1	1	C	18	0	0	N
8329688	1	2	A	3	22350	0	N
8329692	1	2	A	2	21654	0	N
8337222	1	2	A	12	21453	A	N
8337325	1	2	A	11	21950	B	N
8361684	2	5	A	3	22350	0	N
8361795	1	3	A	4	21703	0	N
8365129	3	2	A	3	22350	0	N
8369967	1	2	A	3	22350	0	N
8369975	2	2	A	6	21755	A	N
8398382	1	1	A	3	22350	0	N
8401764	2	2	A	12	21453	A	N
7053811	1	2	A	5	21650	1	N
8416206	1	1	A	8	22107	0	N
8873793	1	2	A	10	21950	A	N
8416634	1	3	A	3	22350	0	N
8448289	1	1	A	3	22350	0	N
8477533	2	2	A	10	21950	A	N
8491666	4	4	A	3	22350	0	N
8491770	2	1	A	1	23153	B	N

CASE_ID	TYPE_OF_COLLISION	MVIW	PED_ACTION	ROAD_SURFACE	ROAD_COND_1	ROAD_COND_2	LIGHTING	CONTROL_DEVICE
8595096	G	B	B	A	H	-	A	A
8078906	E	I	A	A	H	-	A	D
8078910	C	C	A	A	H	-	A	A
8099499	B	E	A	A	H	-	D	D
8099850	G	B	D	A	H	-	A	A
8110302	C	C	A	A	H	-	A	A
8139190	D	C	A	A	H	-	A	A
8164609	E	I	A	A	H	-	C	A
8167202	D	C	A	B	H	-	A	D
8173274	D	C	A	A	H	-	C	A
8187768	E	I	A	A	H	-	C	A
8187772	E	I	A	B	H	-	A	D
8188301	A	C	A	A	H	-	A	A
8188404	C	C	A	A	H	-	A	A
8188448	C	C	A	A	H	-	C	D
8191082	C	C	A	A	H	-	C	A
8191499	C	E	A	A	H	-	C	A
8286600	G	B	B	A	H	-	A	A
8038498	B	G	A	A	H	-	A	D
8742058	G	B	B	A	H	-	A	A
8291007	E	I	A	A	H	-	A	A
8312135	-	I	A	B	H	-	C	A
8314641	H	A	A	B	H	-	C	A
8329688	C	C	A	A	H	-	A	A
8329692	G	B	D	A	H	-	B	A
8337222	D	C	A	A	H	-	A	A
8337325	G	B	B	A	H	-	A	A
8361684	C	C	A	A	H	-	A	A
8361795	C	C	A	B	H	-	A	A
8365129	C	C	A	A	H	-	C	A
8369967	C	C	A	A	H	-	A	D
8369975	D	C	A	A	H	-	A	A
8398382	E	I	A	A	H	-	A	A
8401764	B	C	A	A	H	-	A	A
7053811	D	G	A	A	H	-	A	D
8416206	E	I	A	A	H	-	A	A
8873793	G	B	-	A	H	-	A	A
8416634	B	C	A	A	H	-	A	D
8448289	F	A	A	A	H	-	C	A
8477533	G	B	B	A	H	-	A	A
8491666	C	C	A	A	H	-	A	A
8491770	E	I	A	A	H	-	C	A

CASE_ID	CHP_ROAD_TYPE	PEDESTRIAN_ACCIDENT	BICYCLE_ACCIDENT	MOTORCYCLE_ACCIDENT	TRUCK_ACCIDENT	NOT_PRIVATE_PROPERTY
8595096	0	Y	0	0	0	Y
8078906	0	0	0	0	0	Y
8078910	0	0	0	0	0	Y
8099499	0	0	0	0	Y	Y
8099850	0	Y	0	0	0	Y
8110302	0	0	0	0	Y	Y
8139190	0	0	0	0	0	Y
8164609	0	0	0	0	0	Y
8167202	0	0	0	0	0	Y
8173274	0	0	0	0	0	Y
8187768	0	0	0	0	0	Y
8187772	0	0	0	0	Y	Y
8188301	0	0	0	0	0	Y
8188404	0	0	0	0	0	Y
8188448	0	0	0	0	0	Y
8191082	0	0	0	0	0	Y
8191499	0	0	0	0	0	Y
8286600	0	Y	0	0	0	Y
8038498	0	0	Y	0	0	Y
8742058	0	Y	0	0	0	Y
8291007	0	0	0	0	0	Y
8312135	0	0	0	0	0	Y
8314641	0	0	0	0	0	Y
8329688	0	0	0	0	0	Y
8329692	0	Y	0	0	0	Y
8337222	0	0	0	0	0	Y
8337325	0	Y	0	0	0	Y
8361684	0	0	0	0	0	Y
8361795	0	0	0	0	0	Y
8365129	0	0	0	0	0	Y
8369967	0	0	0	0	0	Y
8369975	0	0	0	0	0	Y
8398382	0	0	0	0	0	Y
8401764	0	0	0	0	0	Y
7053811	0	0	Y	0	0	Y
8416206	0	0	0	0	0	Y
8873793	0	Y				Y
8416634	0	0	0	0	0	Y
8448289	0	0	0	Y	0	Y
8477533	0	Y	0	0	0	Y
8491666	0	0	0	0	0	Y
8491770	0	0	0	0	0	Y

CASE_ID	ALCOHOL_INVOLVED	STWD_VEHTYPE_AT_FAULT	CHP_VEHTYPE_AT_FAULT	COUNT_SEVERE_INJ	COUNT_VISIBLE_INJ	COUNT_COMPLAINT_PAIN
8595096	0	A	1	1	0	0
8078906	0	A	1	0	0	2
8078910	0	A	1	0	0	1
8099499	Y	A	1	0	0	1
8099850	0	N	60	0	0	1
8110302	0	F	26	0	0	3
8139190	0	A	1	0	0	1
8164609	0	A	1	0	0	1
8167202	0	A	1	1	1	0
8173274	0	A	1	0	0	1
8187768	0	D	22	1	0	0
8187772	0	F	26	0	1	0
8188301	0	A	1	1	0	1
8188404	0	J	48	0	0	1
8188448	0	A	1	0	0	1
8191082	0	D	22	0	0	1
8191499	Y	A	1	0	0	1
8286600	0	D	22	0	0	1
8038498	0	L	4	0	1	0
8742058	0	N	60	1	0	0
8291007	Y	A	1	0	0	1
8312135	0	A	1	0	1	0
8314641	0	-	-	0	0	1
8329688	0	A	7	0	0	1
8329692	0	N	60	0	0	1
8337222	0	D	22	0	0	1
8337325	0	N	60	0	0	1
8361684	0	D	22	0	0	2
8361795	0	A	1	0	0	1
8365129	0	A	1	0	0	3
8369967	0	A	1	0	0	1
8369975	0	A	1	0	0	2
8398382	Y	A	1	0	1	0
8401764	0	A	7	0	0	2
7053811	0	L	4	0	1	0
8416206	Y	A	1	0	1	0
8873793		A	1	0	0	1
8416634	Y	A	1	0	0	1
8448289	0	C	2	0	0	1
8477533	0	A	1	1	0	1
8491666	0	A	1	0	0	4
8491770	Y	A	1	1	1	0

CASE_ID	COUNT_PED_KILLED	COUNT_PED_INJURED	COUNT_BICYCLIST_KILLED	COUNT_BICYCLIST_INJURED	COUNT_MC_KILLED	COUNT_MC_INJURED
8595096	0	1	0	0	0	0
8078906	0	0	0	0	0	0
8078910	0	0	0	0	0	0
8099499	0	0	0	0	0	0
8099850	0	1	0	0	0	0
8110302	0	0	0	0	0	0
8139190	0	0	0	0	0	0
8164609	0	0	0	0	0	0
8167202	0	0	0	0	0	0
8173274	0	0	0	0	0	0
8187768	0	0	0	0	0	0
8187772	0	0	0	0	0	0
8188301	0	0	0	0	0	0
8188404	0	0	0	0	0	0
8188448	0	0	0	0	0	0
8191082	0	0	0	0	0	0
8191499	0	0	0	0	0	0
8286600	0	1	0	0	0	0
8038498	0	0	0	1	0	0
8742058	0	1	0	0	0	0
8291007	0	0	0	0	0	0
8312135	0	0	0	0	0	0
8314641	0	0	0	0	0	0
8329688	0	0	0	0	0	0
8329692	0	1	0	0	0	0
8337222	0	0	0	0	0	0
8337325	0	1	0	0	0	0
8361684	0	0	0	0	0	0
8361795	0	0	0	0	0	0
8365129	0	0	0	0	0	0
8369967	0	0	0	0	0	0
8369975	0	0	0	0	0	0
8398382	0	0	0	0	0	0
8401764	0	0	0	0	0	0
7053811	0	0	0	1	0	0
8416206	0	0	0	0	0	0
8873793	0	1	0	0	0	0
8416634	0	0	0	0	0	0
8448289	0	0	0	0	0	1
8477533	0	1	0	0	0	0
8491666	0	0	0	0	0	0
8491770	0	0	0	0	0	0

CASE_ID	COUNTY	CITY	POINT_X	POINT_Y
8595096	CONTRA COSTA	PITTSBURG	-121.8900375	38.01568985
8078906	CONTRA COSTA	PITTSBURG	-121.8871997	38.02200165
8078910	CONTRA COSTA	PITTSBURG	-121.8937183	38.02476535
8099499	CONTRA COSTA	PITTSBURG	-121.8961551	38.00147578
8099850	CONTRA COSTA	PITTSBURG	-121.8851053	38.00504104
8110302	CONTRA COSTA	PITTSBURG	-121.8901505	38.01522968
8139190	CONTRA COSTA	PITTSBURG	-121.8853924	38.00292223
8164609	CONTRA COSTA	PITTSBURG	-121.8955971	38.00055216
8167202	CONTRA COSTA	PITTSBURG	-121.9489288	37.99196894
8173274	CONTRA COSTA	PITTSBURG	-121.8687323	38.01295059
8187768	CONTRA COSTA	PITTSBURG	-121.8635015	37.998
8187772	CONTRA COSTA	PITTSBURG	-121.8760948	38.00925871
8188301	CONTRA COSTA	PITTSBURG	-121.8568164	37.99803001
8188404	CONTRA COSTA	PITTSBURG	-121.9388536	38.01538725
8188448	CONTRA COSTA	PITTSBURG	-121.8907773	37.99806249
8191082	CONTRA COSTA	PITTSBURG	-121.8840477	37.99798317
8191499	CONTRA COSTA	PITTSBURG	-121.876566	38.02066703
8286600	CONTRA COSTA	PITTSBURG	-121.8819161	38.01771516
8038498	CONTRA COSTA	PITTSBURG	-121.888368	38.01147156
8742058	CONTRA COSTA	PITTSBURG	-121.8874969	38.02207947
8291007	CONTRA COSTA	PITTSBURG	-121.934988	38.01546663
8312135	CONTRA COSTA	PITTSBURG	-121.8973089	37.99626819
8314641	CONTRA COSTA	PITTSBURG	-121.8740354	37.99816996
8329688	CONTRA COSTA	PITTSBURG	-121.8696728	38.0105348
8329692	CONTRA COSTA	PITTSBURG	-121.89155	38.00792777
8337222	CONTRA COSTA	PITTSBURG	-121.8937159	38.0053505
8337325	CONTRA COSTA	PITTSBURG	-121.8871008	38.00830058
8361684	CONTRA COSTA	PITTSBURG	-121.8792675	37.99797586
8361795	CONTRA COSTA	PITTSBURG	-121.8814409	37.99798327
8365129	CONTRA COSTA	PITTSBURG	-121.9443947	38.01532
8369967	CONTRA COSTA	PITTSBURG	-121.8842752	38.02062711
8369975	CONTRA COSTA	PITTSBURG	-121.8894578	38.01172667
8398382	CONTRA COSTA	PITTSBURG	-121.8773869	38.00928303
8401764	CONTRA COSTA	PITTSBURG	-121.8691537	38.00787387
7053811	CONTRA COSTA	PITTSBURG	-121.888217	38.02021881
8416206	CONTRA COSTA	PITTSBURG	-121.88705	38.00007263
8873793	CONTRA COSTA	PITTSBURG	-121.9477539	38.01566315
8416634	CONTRA COSTA	PITTSBURG	-121.8852593	38.00325478
8448289	CONTRA COSTA	PITTSBURG	-121.8627336	38.00785279
8477533	CONTRA COSTA	PITTSBURG	-121.8906803	38.00774376
8491666	CONTRA COSTA	PITTSBURG	-121.888216	38.02022144
8491770	CONTRA COSTA	PITTSBURG	-121.885422	38.00595388

CASE_ID	ACCIDENT_YEAR	PROC_DATE	JURIS	COLLISION_DATE	COLLISION_TIME	OFFICER_ID	REPORTING_DISTRICT	DAY_OF_WEEK	CHP_SHIFT
8491774	2017	43083	708	43019	1400	323	46	3	5
8491778	2017	43076	708	43014	2320	341	46	5	5
8038485	2016	42501	708	42482	2011	P317	0	5	5
8491957	2017	43082	708	43048	1356	323	46	4	5
8491961	2017	43082	708	43040	1516	323	46	3	5
8498558	2017	43080	708	43067	1324	285	0	2	5
8498892	2017	43066	708	43048	752	285	0	4	5
8499055	2017	43066	708	42992	1858	320	708	4	5
8518421	2017	43091	708	43069	1621	323	46	4	5
8518429	2017	43091	708	43050	1546	323	46	6	5
8078902	2016	42563	708	42522	1356	229	46	3	5
8533385	2017	43116	708	42873	1837	281	708	4	5
8533432	2017	43117	708	43071	956	323	46	6	5
8533436	2017	43117	708	43086	1045	358	0	7	5
8549591	2017	43147	708	43094	1840	339	708	1	5
8549650	2018	43144	708	43125	751	285	0	4	5
8558198	2018	43283	708	43252	705	264	0	5	5
8564377	2018	43171	708	43141	2230	342	46	6	5
8564385	2018	43171	708	43159	1554	285	0	3	5
8570243	2018	43188	708	43162	1316	328	0	6	5
8574710	2018	43213	708	43129	1817	335	0	1	5
8593843	2018	43206	708	43129	1457	332	46	1	5
8593930	2018	43209	708	43155	1725	341	46	6	5
8410909	2017	42937	708	42906	1748	353	0	2	5
8602024	2018	43235	708	43165	2028	335	0	2	5
8615022	2018	43221	708	43190	1825	348	46	6	5
8615050	2018	43222	708	43204	2030	348	708	6	5
8616874	2018	43235	708	43131	740	262	8204	3	5
8616878	2018	43235	708	43115	1844	348	708	1	5
8625948	2018	43255	708	43224	2035	348	46	5	5
8636098	2018	43271	708	43193	634	341	0	2	5
8636333	2018	43284	708	43235	1100	352	46	2	5
8636635	2018	43271	708	43236	1814	350	46	3	5
8636677	2018	43276	708	43255	1605	342	46	1	5
8640241	2018	43279	708	43242	1054	352	46	2	5
8640263	2018	43276	708	43252	655	358	0	5	5
8645318	2018	43284	708	43246	913	323	46	6	5
8645322	2018	43284	708	43228	2031	350	708	2	5
8645404	2018	43283	708	43252	906	323	46	5	5
8646921	2018	43292	708	43257	1841	342	46	3	5
8648633	2018	43522	708	43358	2207	363	46	6	5
8659001	2018	43297	708	43265	708	352	46	4	5

CASE_ID	POPULATION	CNTY_CITY_LOC	SPECIAL_COND	BEAT_TYPE	CHP_BEAT_TYPE	CITY_DIVISION_LAPD	CHP_BEAT_CLASS	BEAT_NUMBER
8491774	5	708	0	0	0	0	0	4
8491778	5	708	0	0	0	0	0	5
8038485	5	708	0	0	0	0	0	4
8491957	5	708	0	0	0	0	0	4
8491961	5	708	0	0	0	0	0	4
8498558	5	708	0	0	0	0	0	4
8498892	5	708	0	0	0	0	0	4
8499055	5	708	0	0	0	0	0	3
8518421	5	708	0	0	0	0	0	3
8518429	5	708	0	0	0	0	0	5
8078902	5	708	0	0	0	0	0	4
8533385	5	708	0	0	0	0	0	5
8533432	5	708	0	0	0	0	0	4
8533436	5	708	0	0	0	0	0	4
8549591	5	708	0	0	0	0	0	1
8549650	5	708	0	0	0	0	0	2
8558198	5	708	0	0	0	0	0	5
8564377	5	708	0	0	0	0	0	3
8564385	5	708	0	0	0	0	0	3
8570243	5	708	0	0	0	0	0	5
8574710	5	708	0	0	0	0	0	0
8593843	5	708	0	0	0	0	0	2
8593930	5	708	0	0	0	0	0	3
8410909	5	708	0	0	0	0	0	3
8602024	5	708	0	0	0	0	0	0
8615022	5	708	0	0	0	0	0	4
8615050	5	708	0	0	0	0	0	4
8616874	5	708	0	0	0	0	0	2
8616878	5	708	0	0	0	0	0	4
8625948	5	708	0	0	0	0	0	4
8636098	5	708	0	0	0	0	0	4
8636333	5	708	0	0	0	0	0	5
8636635	5	708	0	0	0	0	0	5
8636677	5	708	0	0	0	0	0	4
8640241	5	708	0	0	0	0	0	5
8640263	5	708	0	0	0	0	0	5
8645318	5	708	0	0	0	0	0	4
8645322	5	708	0	0	0	0	0	5
8645404	5	708	0	0	0	0	0	5
8646921	5	708	0	0	0	0	0	5
8648633	5	708	0	0	0	0	0	4
8659001	5	708	0	0	0	0	0	5

CASE_ID	PRIMARY_RD	SECONDARY_RD	DISTANCE	DIRECTION	TJKM_Int	INTERSECTION	COLLISION_SEVERITY	NUMBER_KILLED
8491774	HARBOR ST	VENTURA DR	2	S	Y	N	3	0
8491778	LELAND RD	LOVERIDGE RD	13	E	Y	N	4	0
8038485	RAILROAD AV	CALIFORNIA AV	19	S	Y	N	3	0
8491957	ATLANTIC AV	RAILROAD AV	269	E	N	N	4	0
8491961	HARBOR ST	EAST LELAND RD	73	S	Y	N	4	0
8498558	EAST LELAND RD	HARBOR ST	48	W	Y	N	4	0
8498892	LELAND RD	HARBOR ST	592	W	N	N	4	0
8499055	WEST LELAND RD	BAILEY RD	283	W	N	N	3	0
8518421	BAILEY RD	WILLOW AV	7392	S	N	N	4	0
8518429	LOVERIDGE RD	LOVERIDGE RD 2203	202	S	Y	N	2	0
8078902	RAILROAD AV	WEST LELAND RD	222	N	Y	N	3	0
8533385	EAST LELAND RD	PIEDMONT WY	1357	W	N	N	2	0
8533432	RAILROAD AV	BLISS AV	449	S	N	N	3	0
8533436	RAILROAD AV	BLISS AV	112	S	Y	N	4	0
8549591	N PARKSIDE AV	BRUNO AV	19	E	Y	N	3	0
8549650	ARMY ST	HARBOR ST	9	W	Y	N	4	0
8558198	BUCHANAN RD	MC DERMOTT DR	60	E	Y	N	4	0
8564377	BAILEY RD	WILLOW AV	7286	S	N	N	2	0
8564385	BAILEY RD	MAYLARD ST	24	S	Y	N	4	0
8570243	EAST LELAND RD	STONERIDGE DR	373	W	N	N	2	0
8574710	BUCHANAN RD	HEIGHTS AV	90	E	Y	N	4	0
8593843	HARBOR ST	ARMY ST	19	S	Y	N	3	0
8593930	WEST LELAND RD	OAK HILLS DR	337	E	N	N	4	0
8410909	RAILROAD AV	YOSEMITE DR	223	N	Y	N	3	0
8602024	BLISS AV	RAILROAD AV	38	W	Y	N	4	0
8615022	EAST LELAND RD	HARBOR ST	285	W	N	N	4	0
8615050	MADOLINE ST	BELL DR	19	E	Y	N	2	0
8616874	CENTRAL AV	RAILROAD AV	13	E	Y	N	4	0
8616878	RAILROAD AV	BLISS AV	519	S	N	N	4	0
8625948	EAST LELAND RD	RAILROAD AV	241	E	Y	N	4	0
8636098	BUCHANAN RD	SANTA ANA DR	247	W	Y	N	4	0
8636333	LOVERIDGE RD	LOVERIDGE CIR	9	W	Y	N	3	0
8636635	BUCHANAN RD	VENTURA DR	552	W	N	N	4	0
8636677	ATLANTIC AV	RAILROAD AV	265	E	N	N	4	0
8640241	BUCHANAN RD	LOVERIDGE RD	153	E	Y	N	4	0
8640263	BUCHANAN RD	SANTA ANA DR	106	W	Y	N	4	0
8645318	EAST LELAND RD	HARBOR ST	278	W	N	N	4	0
8645322	EAST LELAND RD	HOMEWOOD DR	591	E	N	N	4	0
8645404	EAST LELAND RD	GLADSTONE DR	465	W	N	N	4	0
8646921	BUCHANAN RD	MEADOWS AV	58	E	Y	N	4	0
8648633	RAILROAD AV	ALTURAS AV	57	S	Y	N	1	2
8659001	BUCHANAN RD	LOVERIDGE RD	148	E	Y	N	4	0

CASE_ID	NUMBER_INJURED	PARTY_COUNT	PRIMARY_COLL_FACTOR	PCF_VIOL_CATEGORY	PCF_VIOLATION	PCF_VIOL_SUBSECTION	HIT_AND_RUN
8491774	1	2	A	5	21650	0	N
8491778	1	1	A	8	22107	0	N
8038485	3	4	A	17	21463	0	N
8491957	1	2	A	8	22107	0	F
8491961	1	4	A	3	22350	0	N
8498558	1	2	A	1	23152	A	N
8498892	1	4	A	3	22350	0	N
8499055	1	2	A	9	21801	A	N
8518421	1	1	A	3	22350	0	N
8518429	1	2	A	3	22350	0	N
8078902	1	2	A	11	21955	0	N
8533385	4	2	A	3	22350	0	N
8533432	1	4	A	3	22350	0	M
8533436	1	2	A	3	22350	0	N
8549591	2	1	A	1	23152	0	N
8549650	1	2	A	21	22106	0	N
8558198	3	2	A	8	22107	0	N
8564377	1	1	A	8	22107	0	N
8564385	1	2	A	3	22350	0	N
8570243	2	1	A	8	22107	0	N
8574710	1	3	A	3	22350	0	F
8593843	1	2	A	9	21801	A	N
8593930	1	2	A	9	21801	A	N
8410909	1	2	A	9	21801	A	N
8602024	1	2	B	22	0	0	N
8615022	1	3	A	8	22107	0	N
8615050	1	2	A	11	21955	0	N
8616874	1	2	A	10	21950	A	N
8616878	1	2	A	9	21801	A	N
8625948	1	3	A	4	21703	0	N
8636098	1	2	A	3	22350	0	N
8636333	1	2	A	4	21703	0	N
8636635	1	2	A	4	21703	0	N
8636677	1	2	A	9	21804	A	N
8640241	2	2	A	6	21755	0	N
8640263	1	3	A	3	22350	0	N
8645318	1	2	A	9	21801	A	N
8645322	1	2	A	9	21801	A	N
8645404	1	1	C	18	0	0	N
8646921	1	4	A	4	21703	0	N
8648633	0	2	A	3	22350	0	N
8659001	2	4	A	6	21755	0	N

CASE_ID	TYPE_OF_COLLISION	MVIW	PED_ACTION	ROAD_SURFACE	ROAD_COND_1	ROAD_COND_2	LIGHTING	CONTROL_DEVICE
8491774	G	G	A	A	H	-	A	A
8491778	E	I	A	A	H	-	C	A
8038485	D	B	F	A	H	-	C	A
8491957	D	C	A	A	H	-	A	A
8491961	C	C	A	A	H	-	A	A
8498558	C	C	A	A	H	-	A	A
8498892	C	C	A	B	H	-	A	A
8499055	D	C	A	A	H	-	A	A
8518421	E	I	A	A	H	-	A	D
8518429	C	C	A	A	H	-	A	A
8078902	G	B	D	A	H	-	A	A
8533385	F	I	A	A	H	-	A	A
8533432	C	C	A	A	H	-	A	A
8533436	C	C	A	A	H	-	A	A
8549591	A	I	A	A	H	-	C	A
8549650	G	B	B	A	H	-	A	A
8558198	B	C	A	A	H	-	A	A
8564377	E	J	A	A	H	-	D	A
8564385	C	C	A	A	H	-	A	A
8570243	E	I	A	B	H	-	A	D
8574710	C	C	A	A	H	-	C	A
8593843	D	C	A	A	H	-	A	D
8593930	A	C	A	A	H	-	A	D
8410909	H	G	A	A	H	-	A	A
8602024	C	C	A	A	H	-	C	A
8615022	D	C	A	A	H	-	A	D
8615050	G	B	D	A	H	-	C	A
8616874	G	B	B	A	H	-	A	A
8616878	D	C	A	A	H	-	C	A
8625948	C	C	A	A	H	-	C	A
8636098	C	C	A	A	H	-	A	D
8636333	C	C	A	A	H	-	A	A
8636635	D	C	A	A	H	-	A	A
8636677	B	C	A	A	H	-	A	A
8640241	D	C	A	A	H	-	A	D
8640263	C	C	A	A	H	-	A	A
8645318	D	C	A	A	H	-	A	A
8645322	D	C	A	A	H	-	C	A
8645404	E	J	A	A	H	-	A	A
8646921	C	C	A	A	H	-	A	A
8648633	B	C	A	A	H	-	C	D
8659001	D	C	A	A	H	-	A	A

CASE_ID	CHP_ROAD_TYPE	PEDESTRIAN_ACCIDENT	BICYCLE_ACCIDENT	MOTORCYCLE_ACCIDENT	TRUCK_ACCIDENT	NOT_PRIVATE_PROPERTY
8491774	0	0	Y	0	0	Y
8491778	0	0	0	0	0	Y
8038485	0	Y	0	0	0	Y
8491957	0	0	0	0	0	Y
8491961	0	0	0	0	0	Y
8498558	0	0	0	0	0	Y
8498892	0	0	0	0	0	Y
8499055	0	0	0	0	0	Y
8518421	0	0	0	0	0	Y
8518429	0	0	0	Y	0	Y
8078902	0	Y	0	0	0	Y
8533385	0	0	0	0	0	Y
8533432	0	0	0	0	0	Y
8533436	0	0	0	0	0	Y
8549591	0	0	0	0	0	Y
8549650	0	Y	0	0	0	Y
8558198	0	0	0	0	0	Y
8564377	0	0	0	0	0	Y
8564385	0	0	0	0	0	Y
8570243	0	0	0	0	0	Y
8574710	0	0	0	0	0	Y
8593843	0	0	0	Y	0	Y
8593930	0	0	0	Y	0	Y
8410909	0	0	Y	0	0	Y
8602024	0	0	0	0	0	Y
8615022	0	0	0	0	0	Y
8615050	0	Y	0	0	0	Y
8616874	0	Y	0	0	0	Y
8616878	0	0	0	0	0	Y
8625948	0	0	0	0	0	Y
8636098	0	0	0	0	0	Y
8636333	0	0	0	0	0	Y
8636635	0	0	0	0	0	Y
8636677	0	0	0	0	0	Y
8640241	0	0	0	0	0	Y
8640263	0	0	0	0	0	Y
8645318	0	0	0	0	0	Y
8645322	0	0	0	0	0	Y
8645404	0	0	0	0	0	Y
8646921	0	0	0	0	0	Y
8648633	0	0	0	0	0	Y
8659001	0	0	0	0	0	Y

CASE_ID	ALCOHOL_INVOLVED	STWD_VEHTYPE_AT_FAULT	CHP_VEHTYPE_AT_FAULT	COUNT_SEVERE_INJ	COUNT_VISIBLE_INJ	COUNT_COMPLAINT_PAIN
8491774	0	L	4	0	1	0
8491778	0	A	1	0	0	1
8038485	0	A	1	0	3	0
8491957	Y	D	22	0	0	1
8491961	0	A	1	0	0	1
8498558	Y	A	1	0	0	1
8498892	0	A	1	0	0	1
8499055	0	A	7	0	1	0
8518421	0	A	7	0	0	1
8518429	Y	C	2	1	0	0
8078902	0	N	60	0	1	0
8533385	0	A	1	1	2	1
8533432	Y	A	7	0	1	0
8533436	0	A	1	0	0	1
8549591	0	A	7	0	2	0
8549650	0	A	1	0	0	1
8558198	0	A	1	0	0	3
8564377	0	A	7	1	0	0
8564385	0	A	1	0	0	1
8570243	0	A	1	2	0	0
8574710	0	A	1	0	0	1
8593843	0	A	1	0	1	0
8593930	0	A	1	0	0	1
8410909	0	A	1	0	1	0
8602024	0	A	1	0	0	1
8615022	0	A	1	0	0	1
8615050	0	N	60	1	0	0
8616874	0	A	1	0	0	1
8616878	0	A	1	0	0	1
8625948	0	A	1	0	0	1
8636098	0	D	22	0	0	1
8636333	0	A	1	0	1	0
8636635	0	A	1	0	0	1
8636677	0	M	47	0	0	1
8640241	0	A	1	0	0	2
8640263	0	A	1	0	0	1
8645318	0	A	1	0	0	1
8645322	0	A	1	0	0	1
8645404	0	-	-	0	0	1
8646921	0	A	1	0	0	1
8648633	0	A	7	0	0	0
8659001	0	A	1	0	0	2

CASE_ID	COUNT_PED_KILLED	COUNT_PED_INJURED	COUNT_BICYCLIST_KILLED	COUNT_BICYCLIST_INJURED	COUNT_MC_KILLED	COUNT_MC_INJURED
8491774	0	0	0	1	0	0
8491778	0	0	0	0	0	0
8038485	0	2	0	0	0	0
8491957	0	0	0	0	0	0
8491961	0	0	0	0	0	0
8498558	0	0	0	0	0	0
8498892	0	0	0	0	0	0
8499055	0	0	0	0	0	0
8518421	0	0	0	0	0	0
8518429	0	0	0	0	0	1
8078902	0	1	0	0	0	0
8533385	0	0	0	0	0	0
8533432	0	0	0	0	0	0
8533436	0	0	0	0	0	0
8549591	0	0	0	0	0	0
8549650	0	1	0	0	0	0
8558198	0	0	0	0	0	0
8564377	0	0	0	0	0	0
8564385	0	0	0	0	0	0
8570243	0	0	0	0	0	0
8574710	0	0	0	0	0	0
8593843	0	0	0	0	0	0
8593930	0	0	0	0	0	1
8410909	0	0	0	1	0	0
8602024	0	0	0	0	0	0
8615022	0	0	0	0	0	0
8615050	0	1	0	0	0	0
8616874	0	1	0	0	0	0
8616878	0	0	0	0	0	0
8625948	0	0	0	0	0	0
8636098	0	0	0	0	0	0
8636333	0	0	0	0	0	0
8636635	0	0	0	0	0	0
8636677	0	0	0	0	0	0
8640241	0	0	0	0	0	0
8640263	0	0	0	0	0	0
8645318	0	0	0	0	0	0
8645322	0	0	0	0	0	0
8645404	0	0	0	0	0	0
8646921	0	0	0	0	0	0
8648633	0	0	0	0	0	0
8659001	0	0	0	0	0	0

CASE_ID	COUNTY	CITY	POINT_X	POINT_Y
8491774	CONTRA COSTA	PITTSBURG	-121.885372	38.00297475
8491778	CONTRA COSTA	PITTSBURG	-121.8709161	38.00815177
8038485	CONTRA COSTA	PITTSBURG	-121.8891988	38.01741997
8491957	CONTRA COSTA	PITTSBURG	-121.8917353	38.00797384
8491961	CONTRA COSTA	PITTSBURG	-121.8861938	38.01072817
8498558	CONTRA COSTA	PITTSBURG	-121.8862785	38.01096075
8498892	CONTRA COSTA	PITTSBURG	-121.8880836	38.01139964
8499055	CONTRA COSTA	PITTSBURG	-121.9429026	38.01533
8518421	CONTRA COSTA	PITTSBURG	-121.9482252	37.9946951
8518429	CONTRA COSTA	PITTSBURG	0	0
8078902	CONTRA COSTA	PITTSBURG	-121.8909853	38.01278564
8533385	CONTRA COSTA	PITTSBURG	-121.8796234	38.0093608
8533432	CONTRA COSTA	PITTSBURG	-121.8903565	38.01447577
8533436	CONTRA COSTA	PITTSBURG	-121.8901141	38.01537799
8549591	CONTRA COSTA	PITTSBURG	-121.8955444	38.02493417
8549650	CONTRA COSTA	PITTSBURG	-121.8819733	38.01765823
8558198	CONTRA COSTA	PITTSBURG	-121.8781052	37.99797058
8564377	CONTRA COSTA	PITTSBURG	-121.9481964	37.99498367
8564385	CONTRA COSTA	PITTSBURG	-121.9419708	38.01662445
8570243	CONTRA COSTA	PITTSBURG	-121.8778229	38.0092392
8574710	CONTRA COSTA	PITTSBURG	-121.8885574	37.99800491
8593843	CONTRA COSTA	PITTSBURG	-121.881958	38.01760101
8593930	CONTRA COSTA	PITTSBURG	-121.9431915	38.01532745
8410909	CONTRA COSTA	PITTSBURG	-121.8934952	38.00592614
8602024	CONTRA COSTA	PITTSBURG	-121.8900375	38.01567841
8615022	CONTRA COSTA	PITTSBURG	-121.8870621	38.01115417
8615050	CONTRA COSTA	PITTSBURG	-121.8945999	38.00621033
8616874	CONTRA COSTA	PITTSBURG	-121.8864899	38.02526093
8616878	CONTRA COSTA	PITTSBURG	-121.8904266	38.01429367
8625948	CONTRA COSTA	PITTSBURG	-121.8904343	38.01194763
8636098	CONTRA COSTA	PITTSBURG	-121.8837662	37.99798203
8636333	CONTRA COSTA	PITTSBURG	-121.8716583	38.00636673
8636635	CONTRA COSTA	PITTSBURG	-121.8701324	37.99798203
8636677	CONTRA COSTA	PITTSBURG	-121.8917465	38.00797653
8640241	CONTRA COSTA	PITTSBURG	-121.8734283	37.99797058
8640263	CONTRA COSTA	PITTSBURG	-121.8832779	37.99797821
8645318	CONTRA COSTA	PITTSBURG	-121.8870392	38.01115036
8645322	CONTRA COSTA	PITTSBURG	-121.8797073	38.00938034
8645404	CONTRA COSTA	PITTSBURG	-121.8675461	38.00801086
8646921	CONTRA COSTA	PITTSBURG	-121.8636017	37.9980011
8648633	CONTRA COSTA	PITTSBURG	-121.8932266	38.00662994
8659001	CONTRA COSTA	PITTSBURG	-121.8734436	37.99797058

CASE_ID	ACCIDENT_YEAR	PROC_DATE	JURIS	COLLISION_DATE	COLLISION_TIME	OFFICER_ID	REPORTING_DISTRICT	DAY_OF_WEEK	CHP_SHIFT
8667824	2018	43311	708	43270	1633	339	708	2	5
8669355	2018	43328	708	43249	1138	247	0	2	5
8491782	2017	43076	708	43011	656	338	0	2	5
8678146	2018	43348	708	43295	2021	363	708	6	5
8680220	2018	43378	708	43315	2125	359	46	5	5
8680863	2018	43377	708	43292	1357	323	46	3	5
8686405	2018	43343	708	43273	1751	362	708	5	5
8687940	2018	43342	708	43285	2252	331	46	3	5
8692713	2018	43382	708	43347	1850	320	46	2	5
8693013	2018	43371	708	43353	849	305	705	1	5
8693021	2018	43371	708	43344	1720	358	0	6	5
8693139	2018	43371	708	43340	1805	320	46	2	5
8693151	2018	43371	708	43318	1645	342	46	1	5
8693159	2018	43371	708	43327	1200	323	46	3	5
8704785	2018	43385	708	43354	1309	352	46	2	5
8714863	2018	43409	708	43368	2020	341	46	2	5
8732526	2018	43419	708	43403	304	363	708	2	5
8735851	2019	43564	708	43470	2004	348	46	6	5
8801472	2019	43529	708	43507	704	285	46	1	5
8746152	2018	43437	708	43375	1459	323	46	2	5
8746213	2018	43491	708	43412	711	285	46	4	5
8750395	2018	43440	708	43405	2101	277	0	4	5
8416214	2017	42943	708	42927	726	285	0	2	5
8757993	2018	43473	708	43230	2111	332	0	4	5
8758011	2018	43493	708	43439	628	285	46	3	5
8758168	2018	43483	708	43428	1231	341	46	6	5
8758180	2018	43483	708	43432	1512	323	46	3	5
8761628	2018	43487	708	43454	1436	341	46	4	5
8765253	2018	43476	708	43427	10	342	46	5	5
8774491	2018	43491	708	43443	1509	368	46	7	5
8774543	2018	43491	708	43443	1454	328	0	7	5
8774547	2018	43491	708	43442	722	341	46	6	5
8774555	2018	43491	708	43445	1542	323	46	2	5
8774559	2018	43491	708	43437	1831	371	0	1	5
8776048	2018	43482	708	43387	312	348	708	7	5
8791722	2018	43559	708	43352	1334	355	708	7	5
8813150	2019	43535	708	43512	724	323	46	6	5
8958539	2019	43776	708	43716	1304	371	708	7	5
8757989	2018	43493	708	43437	1810	253	46	1	5
8808485	2018	43977	708	43393	412	341	46	6	5
8813130	2019	43535	708	43515	1035	285	46	2	5
8813134	2019	43535	708	43504	1436	355	708	5	5

CASE_ID	POPULATION	CNTY_CITY_LOC	SPECIAL_COND	BEAT_TYPE	CHP_BEAT_TYPE	CITY_DIVISION_LAPD	CHP_BEAT_CLASS	BEAT_NUMBER
8667824	5	708	0	0	0	0	0	2
8669355	5	708	0	0	0	0	0	3
8491782	5	708	0	0	0	0	0	2
8678146	5	708	0	0	0	0	0	4
8680220	5	708	0	0	0	0	0	5
8680863	5	708	0	0	0	0	0	3
8686405	5	708	0	0	0	0	0	4
8687940	5	708	0	0	0	0	0	4
8692713	5	708	0	0	0	0	0	5
8693013	5	708	0	0	0	0	0	4
8693021	5	708	0	0	0	0	0	1
8693139	5	708	0	0	0	0	0	4
8693151	5	708	0	0	0	0	0	5
8693159	5	708	0	0	0	0	0	1
8704785	5	708	0	0	0	0	0	5
8714863	5	708	0	0	0	0	0	5
8732526	5	708	0	0	0	0	0	5
8735851	5	708	0	0	0	0	0	5
8801472	5	708	0	0	0	0	0	4
8746152	5	708	0	0	0	0	0	5
8746213	5	708	0	0	0	0	0	5
8750395	5	708	0	0	0	0	0	4
8416214	5	708	0	0	0	0	0	3
8757993	5	708	0	0	0	0	0	1
8758011	5	708	0	0	0	0	0	5
8758168	5	708	0	0	0	0	0	5
8758180	5	708	0	0	0	0	0	3
8761628	5	708	0	0	0	0	0	5
8765253	5	708	0	0	0	0	0	1
8774491	5	708	0	0	0	0	0	5
8774543	5	708	0	0	0	0	0	5
8774547	5	708	0	0	0	0	0	5
8774555	5	708	0	0	0	0	0	4
8774559	5	708	0	0	0	0	0	2
8776048	5	708	0	0	0	0	0	5
8791722	5	708	0	0	0	0	0	5
8813150	5	708	0	0	0	0	0	5
8958539	5	708	0	0	0	0	0	4
8757989	5	708	0	0	0	0	0	3
8808485	5	708	0	0	0	0	0	5
8813130	5	708	0	0	0	0	0	5
8813134	5	708	0	0	0	0	0	5

CASE_ID	PRIMARY_RD	SECONDARY_RD	DISTANCE	DIRECTION	TJKM_Int	INTERSECTION	COLLISION_SEVERITY	NUMBER_KILLED
8667824	CALIFORNIA AV	LOVERIDGE RD	728	W	N	N	4	0
8669355	WEST LELAND RD	BAILEY RD	261	W	N	N	2	0
8491782	RAILROAD AV	NORTH PARKSIDE DR	4	S	Y	N	3	0
8678146	EAST LELAND RD	FREED WY	20	W	Y	N	3	0
8680220	HANNA ST	TURNSTONE CIR	128	E	Y	N	4	0
8680863	WEST LELAND RD	WOODHILL DR	264	E	N	N	3	0
8686405	RAILROAD AV	YOSEMITE DR	240	N	Y	N	4	0
8687940	CAROLYN DR	CECELIA WY	12	E	Y	N	4	0
8692713	LOVERIDGE DR	BUCHANAN RD	280	W	N	N	4	0
8693013	RAILROAD AV	EAST LELAND RD	412	S	N	N	4	0
8693021	BUCHANAN RD	MEADOWS AV	1371	E	N	N	3	0
8693139	CASTLEWOOD DR	KIRKER PASS RD	20	S	Y	N	4	0
8693151	EAST LELAND RD	LAKEVIEW DR	9	W	Y	N	4	0
8693159	RAILROAD AV	SCHOOL ST	89	S	Y	N	3	0
8704785	EAST LELAND RD	PIEDMONT WY	471	E	N	N	4	0
8714863	LELAND RD	LOVERIDGE RD	486	E	N	N	3	0
8732526	LOVERIDGE RD	RT 4	37	S	Y	N	4	0
8735851	EAST LELAND RD	LOVERIDGE RD	40	N	Y	N	4	0
8801472	RAILROAD AV	LINSCHEID DR	24	S	Y	N	3	0
8746152	EAST LELAND RD	HOMEWOOD DR	48	E	Y	N	4	0
8746213	BUCHANAN RD	MEADOWS AV	1054	E	N	N	4	0
8750395	RAILROAD AV	MARKS BL	155	S	Y	N	2	0
8416214	WEST LELAND RD	BAILEY RD	260	W	N	N	4	0
8757993	NORTH PARKSIDE DR	ROSE ANN AV	26	N	Y	N	4	0
8758011	BUCHANAN RD	MEADOWS AV	2154	E	N	N	4	0
8758168	BUCHANAN RD	LOVERIDGE RD	153	E	Y	N	4	0
8758180	WEST LELAND RD	ALVES RANCH RD	53	W	Y	N	4	0
8761628	HARBOR ST	STONEMAN AV	62	S	Y	N	4	0
8765253	CIVIC AV	RAILROAD AV	97	W	Y	N	4	0
8774491	MEADOWBROOK CIR	GOLDENLEAF WY	40	S	Y	N	3	0
8774543	BUCHANAN RD	MEADOWS AV	682	E	N	N	4	0
8774547	HEATHERWOOD DR	LIMEWOOD PL	247	W	Y	N	4	0
8774555	RAILROAD AV	BLISS AV	283	S	N	N	4	0
8774559	NORTH PARK BL	LOVERIDGE RD	2112	E	N	N	4	0
8776048	EAST LELAND RD	STONERIDGE DR	20	W	Y	N	4	0
8791722	ROUNDHILL DR	PEPPERRIDGE PL	241	S	Y	N	4	0
8813150	EAST LELAND RD	GLADSTONE DR	3	E	Y	N	3	0
8958539	RAILROAD AV	ALVARADO AV	5	N	Y	N	3	0
8757989	WEST LELAND RD	OAK HILLS DR	398	W	N	N	4	0
8808485	BUCHANAN RD	BUCHANAN CROSSING	1657	W	N	N	1	1
8813130	BUCHANAN RD	HARBOR ST	26	E	Y	N	4	0
8813134	HARBOR ST	STONEMAN AV	172	N	Y	N	3	0

CASE_ID	NUMBER_INJURED	PARTY_COUNT	PRIMARY_COLL_FACTOR	PCF_VIOL_CATEGORY	PCF_VIOLATION	PCF_VIOL_SUBSECTION	HIT_AND_RUN
8667824	1	3	A	1	23152	0	N
8669355	4	2	A	9	21804	A	N
8491782	1	2	A	5	21650	1	F
8678146	1	1	C	18	0	0	N
8680220	1	3	A	3	22350	0	F
8680863	3	2	A	3	22350	0	N
8686405	1	2	A	9	21804	A	N
8687940	2	2	A	1	23152	A	N
8692713	1	2	A	5	21650	0	N
8693013	1	2	A	8	22107	0	N
8693021	2	3	A	3	22350	0	N
8693139	1	2	A	4	21703	0	M
8693151	2	1	A	8	22107	0	N
8693159	1	2	A	7	21658	0	F
8704785	1	2	A	9	21801	A	N
8714863	1	2	A	10	21950	A	N
8732526	1	1	A	3	22350	0	N
8735851	1	2	A	3	22350	0	N
8801472	1	2	A	10	21950	A	N
8746152	1	2	A	4	21703	0	N
8746213	2	2	A	3	22350	0	N
8750395	4	2	A	1	23152	A	N
8416214	1	2	A	10	21950	A	N
8757993	1	2	A	3	22350	0	N
8758011	2	3	A	3	22350	0	N
8758168	1	3	A	9	21801	A	N
8758180	1	2	A	3	22350	0	N
8761628	2	3	A	3	22350	0	N
8765253	1	1	A	1	23152	A	N
8774491	1	2	A	0	23103	A	F
8774543	2	2	A	4	21703	0	N
8774547	1	2	A	8	22107	0	N
8774555	1	2	A	5	21651	A	N
8774559	1	2	-	-	0	0	N
8776048	1	1	A	3	22350	0	N
8791722	1	2	A	1	23152	B	N
8813150	1	2	A	10	21950	0	F
8958539	1	2	A	10	21950	A	N
8757989	1	2	A	12	21453	A	N
8808485	0	2	A	7	21658	A	F
8813130	1	2	A	3	22350	0	F
8813134	1	1	A	3	22350	0	N

CASE_ID	TYPE_OF_COLLISION	MVIW	PED_ACTION	ROAD_SURFACE	ROAD_COND_1	ROAD_COND_2	LIGHTING	CONTROL_DEVICE
8667824	D	C	A	A	H	-	A	-
8669355	D	C	A	A	H	-	A	A
8491782	A	G	A	A	H	-	B	A
8678146	E	I	A	A	H	-	A	D
8680220	B	E	F	A	H	-	C	D
8680863	B	C	A	A	H	-	A	A
8686405	D	C	A	A	H	-	A	D
8687940	A	E	A	A	H	-	C	D
8692713	D	G	A	A	H	-	A	A
8693013	D	C	A	A	H	-	A	A
8693021	E	J	A	A	H	-	A	A
8693139	C	C	A	A	H	-	A	A
8693151	E	I	A	A	H	-	A	A
8693159	H	A	A	A	H	-	A	D
8704785	C	C	A	A	H	-	A	D
8714863	G	B	B	A	H	-	C	A
8732526	E	I	A	A	H	-	C	A
8735851	B	C	A	B	H	-	C	A
8801472	G	B	B	A	H	-	A	A
8746152	C	C	A	A	H	-	A	A
8746213	C	C	A	A	H	-	A	A
8750395	D	C	A	A	H	-	C	A
8416214	G	B	B	A	H	-	A	A
8757993	C	C	A	A	H	-	C	A
8758011	C	C	A	B	H	-	D	A
8758168	D	C	A	A	H	-	A	A
8758180	C	C	A	A	H	-	A	A
8761628	C	C	A	A	H	-	A	A
8765253	E	I	A	B	H	-	C	A
8774491	G	B	E	A	H	-	A	D
8774543	C	C	A	A	H	-	A	D
8774547	D	C	A	A	H	-	A	D
8774555	A	C	A	A	H	-	A	A
8774559	B	C	A	A	H	-	C	D
8776048	-	F	A	A	H	-	C	A
8791722	B	C	A	A	H	-	A	D
8813150	G	B	B	B	H	-	A	A
8958539	G	B	B	A	H	-	A	A
8757989	G	B	B	A	H	-	C	A
8808485	G	B	E	A	H	-	D	D
8813130	C	C	A	A	H	-	A	A
8813134	E	I	A	B	H	-	A	A

CASE_ID	CHP_ROAD_TYPE	PEDESTRIAN_ACCIDENT	BICYCLE_ACCIDENT	MOTORCYCLE_ACCIDENT	TRUCK_ACCIDENT	NOT_PRIVATE_PROPERTY
8667824	0	0	0	0	Y	Y
8669355	0	0	0	0	0	Y
8491782	0	0	Y	0	0	Y
8678146	0	0	0	0	0	Y
8680220	0	Y	0	0	0	Y
8680863	0	0	0	0	0	Y
8686405	0	0	0	Y	0	Y
8687940	0	0	0	0	0	Y
8692713	0	0	Y	0	Y	Y
8693013	0	0	0	0	0	Y
8693021	0	0	0	0	0	Y
8693139	0	0	0	0	0	Y
8693151	0	0	0	0	0	Y
8693159	0	0	0	Y	0	Y
8704785	0	0	0	0	0	Y
8714863	0	Y	0	0	0	Y
8732526	0	0	0	0	0	Y
8735851	0	0	0	0	0	Y
8801472	0	Y	0	0	0	Y
8746152	0	0	0	0	0	Y
8746213	0	0	0	0	0	Y
8750395	0	0	0	0	0	Y
8416214	0	Y	0	0	0	Y
8757993	0	0	0	0	0	Y
8758011	0	0	0	0	0	Y
8758168	0	0	0	0	0	Y
8758180	0	0	0	0	0	Y
8761628	0	0	0	0	0	Y
8765253	0	0	0	0	0	Y
8774491	0	Y	0	0	0	Y
8774543	0	0	0	0	0	Y
8774547	0	0	0	0	0	Y
8774555	0	0	0	0	0	Y
8774559	0	0	0	Y	0	Y
8776048	0	0	0	0	0	Y
8791722	0	0	0	0	0	Y
8813150	0	Y	0	0	0	Y
8958539	0	Y	0	0	0	Y
8757989	0	Y	0	0	0	Y
8808485	0	Y	0	0	0	Y
8813130	0	0	0	0	0	Y
8813134	0	0	0	0	0	Y

CASE_ID	ALCOHOL_INVOLVED	STWD_VEHTYPE_AT_FAULT	CHP_VEHTYPE_AT_FAULT	COUNT_SEVERE_INJ	COUNT_VISIBLE_INJ	COUNT_COMPLAINT_PAIN
8667824	Y	A	7	0	0	1
8669355	0	A	1	3	1	0
8491782	Y	D	22	0	1	0
8678146	0	-	-	0	1	0
8680220	0	A	7	0	0	1
8680863	0	A	1	0	1	2
8686405	0	D	22	0	0	1
8687940	Y	A	1	0	0	2
8692713	0	L	4	0	0	1
8693013	0	A	1	0	0	1
8693021	0	A	7	0	1	1
8693139	0	A	1	0	0	1
8693151	0	A	1	0	0	2
8693159	Y	A	1	0	1	0
8704785	0	A	1	0	0	1
8714863	0	A	1	0	1	0
8732526	0	A	1	0	0	1
8735851	0	A	7	0	0	1
8801472	0	A	1	0	1	0
8746152	0	A	8	0	0	1
8746213	0	A	1	0	0	2
8750395	Y	A	1	1	0	3
8416214	0	A	7	0	0	1
8757993	0	A	1	0	0	1
8758011	0	A	1	0	0	2
8758168	0	A	1	0	0	1
8758180	0	A	1	0	0	1
8761628	0	A	7	0	0	2
8765253	Y	A	7	0	0	1
8774491	0	A	1	0	1	0
8774543	0	A	8	0	0	2
8774547	0	A	1	0	0	1
8774555	0	A	1	0	0	1
8774559	0	-	-	0	0	1
8776048	0	A	1	0	0	1
8791722	Y	D	22	0	0	1
8813150	0	A	1	0	1	0
8958539	0	A	1	0	1	0
8757989	0	D	22	0	0	1
8808485	Y	D	22	0	0	0
8813130	0	A	1	0	0	1
8813134	0	A	1	0	1	0

CASE_ID	COUNT_PED_KILLED	COUNT_PED_INJURED	COUNT_BICYCLIST_KILLED	COUNT_BICYCLIST_INJURED	COUNT_MC_KILLED	COUNT_MC_INJURED
8667824	0	0	0	0	0	0
8669355	0	0	0	0	0	0
8491782	0	0	0	1	0	0
8678146	0	0	0	0	0	0
8680220	0	0	0	0	0	0
8680863	0	0	0	0	0	0
8686405	0	0	0	0	0	1
8687940	0	0	0	0	0	0
8692713	0	0	0	1	0	0
8693013	0	0	0	0	0	0
8693021	0	0	0	0	0	0
8693139	0	0	0	0	0	0
8693151	0	0	0	0	0	0
8693159	0	0	0	0	0	1
8704785	0	0	0	0	0	0
8714863	0	1	0	0	0	0
8732526	0	0	0	0	0	0
8735851	0	0	0	0	0	0
8801472	0	1	0	0	0	0
8746152	0	0	0	0	0	0
8746213	0	0	0	0	0	0
8750395	0	0	0	0	0	0
8416214	0	1	0	0	0	0
8757993	0	0	0	0	0	0
8758011	0	0	0	0	0	0
8758168	0	0	0	0	0	0
8758180	0	0	0	0	0	0
8761628	0	0	0	0	0	0
8765253	0	0	0	0	0	0
8774491	0	1	0	0	0	0
8774543	0	0	0	0	0	0
8774547	0	0	0	0	0	0
8774555	0	0	0	0	0	0
8774559	0	0	0	0	0	1
8776048	0	0	0	0	0	0
8791722	0	0	0	0	0	0
8813150	0	1	0	0	0	0
8958539	0	1	0	0	0	0
8757989	0	1	0	0	0	0
8808485	1	0	0	0	0	0
8813130	0	0	0	0	0	0
8813134	0	0	0	0	0	0

CASE_ID	COUNTY	CITY	POINT_X	POINT_Y
8667824	CONTRA COSTA	PITTSBURG	-121.8683929	38.01296616
8669355	CONTRA COSTA	PITTSBURG	-121.9428253	38.01533127
8491782	CONTRA COSTA	PITTSBURG	-121.8871335	38.02372938
8678146	CONTRA COSTA	PITTSBURG	-121.8816833	38.00998688
8680220	CONTRA COSTA	PITTSBURG	-121.878212	38.00941849
8680863	CONTRA COSTA	PITTSBURG	-121.9510727	38.01622772
8686405	CONTRA COSTA	PITTSBURG	-121.8934784	38.00597
8687940	CONTRA COSTA	PITTSBURG	-121.8940964	38.0136795
8692713	CONTRA COSTA	PITTSBURG	-121.874054	37.99872971
8693013	CONTRA COSTA	PITTSBURG	-121.8916168	38.01111603
8693021	CONTRA COSTA	PITTSBURG	-121.8590393	37.99803162
8693139	CONTRA COSTA	PITTSBURG	-121.8974075	37.99549103
8693151	CONTRA COSTA	PITTSBURG	-121.8595276	38.00846481
8693159	CONTRA COSTA	PITTSBURG	-121.887825	38.02124786
8704785	CONTRA COSTA	PITTSBURG	-121.8734131	38.00876236
8714863	CONTRA COSTA	PITTSBURG	-121.869339	38.00779343
8732526	CONTRA COSTA	PITTSBURG	-121.867775	38.01171494
8735851	CONTRA COSTA	PITTSBURG	-121.8710938	38.00819397
8801472	CONTRA COSTA	PITTSBURG	-121.8944092	38.00352859
8746152	CONTRA COSTA	PITTSBURG	-121.8815079	38.00982285
8746213	CONTRA COSTA	PITTSBURG	-121.8601379	37.99802399
8750395	CONTRA COSTA	PITTSBURG	-121.8957138	38.00026321
8416214	CONTRA COSTA	PITTSBURG	-121.9428227	38.01533
8757993	CONTRA COSTA	PITTSBURG	-121.8938599	38.02478027
8758011	CONTRA COSTA	PITTSBURG	-121.8563232	37.99803162
8758168	CONTRA COSTA	PITTSBURG	-121.8734283	37.99797058
8758180	CONTRA COSTA	PITTSBURG	-121.9554214	38.0177536
8761628	CONTRA COSTA	PITTSBURG	-121.8849335	38.00429916
8765253	CONTRA COSTA	PITTSBURG	-121.8884125	38.02062988
8774491	CONTRA COSTA	PITTSBURG	-121.8808289	38.00214386
8774543	CONTRA COSTA	PITTSBURG	-121.8614349	37.99801254
8774547	CONTRA COSTA	PITTSBURG	-121.8606186	37.99887466
8774555	CONTRA COSTA	PITTSBURG	-121.8902054	38.01491547
8774559	CONTRA COSTA	PITTSBURG	-121.859024	38.01015091
8776048	CONTRA COSTA	PITTSBURG	-121.8766098	38.00936127
8791722	CONTRA COSTA	PITTSBURG	-121.8672485	38.00008392
8813150	CONTRA COSTA	PITTSBURG	-121.8660126	38.00842285
8958539	CONTRA COSTA	PITTSBURG	-121.8919983	38.00990295
8757989	CONTRA COSTA	PITTSBURG	-121.9457397	38.01536942
8808485	CONTRA COSTA	PITTSBURG	-121.8964996	37.99810028
8813130	CONTRA COSTA	PITTSBURG	-121.8869629	37.99798965
8813134	CONTRA COSTA	PITTSBURG	-121.8850784	38.00492859

CASE_ID	ACCIDENT_YEAR	PROC_DATE	JURIS	COLLISION_DATE	COLLISION_TIME	OFFICER_ID	REPORTING_DISTRICT	DAY_OF_WEEK	CHP_SHIFT
8813138	2019	43560	708	43504	734	372	46	5	5
8962897	2019	43766	708	43726	1120	355	708	3	5
8832281	2019	43567	708	43518	1013	355	708	5	5
8833905	2019	43571	708	43539	1328	355	708	5	5
8835128	2019	43564	708	43500	712	323	46	1	5
8835195	2019	43560	708	43536	629	285	46	2	5
8851582	2019	43588	708	43536	747	323	46	2	5
8851586	2019	43588	708	43541	252	368	708	7	5
8853966	2019	43598	708	43525	2243	348	705	5	5
8854176	2019	43593	708	43553	619	371	46	5	5
8873557	2019	43627	708	43606	818	350	46	2	5
8873835	2019	43627	708	43588	1629	355	708	5	5
8878949	2019	43641	708	43616	1712	350	46	5	5
8878957	2019	43642	708	43594	1500	307	0	4	5
8879348	2019	43637	708	43607	1338	323	46	3	5
8879352	2019	43637	708	43615	1527	350	46	4	5
8886489	2019	43663	708	43622	1927	262	0	4	5
8892628	2019	43676	708	43654	1800	262	0	1	5
8892681	2019	43670	708	43630	1344	369	0	5	5
8892685	2019	43682	708	43635	1411	323	46	3	5
8907879	2019	43696	708	43661	102	358	0	1	5
8914641	2019	43690	708	43639	2121	P379	0	7	5
8914746	2019	43691	708	43657	1411	323	46	4	5
8914750	2019	43691	708	43657	854	357	708	4	5
8921426	2019	43726	708	43687	652	357	7080	6	5
8921888	2019	43704	708	43656	1144	247	8115	3	5
8671122	2018	43384	708	43301	30	262	0	5	5
8935329	2019	43733	708	43696	1442	323	46	1	5
8935804	2019	43727	708	43694	1315	368	708	6	5
8957654	2019	43768	708	43691	2135	372	0	3	5
8957662	2019	43768	708	43703	630	368	708	1	5
8925833	2019	43714	708	43668	1816	335	0	1	5
8961476	2019	43773	708	43713	1030	355	708	4	5
8961488	2019	43773	708	43718	732	285	46	2	5
8962893	2019	43766	708	43733	1706	369	0	3	5
8498557	2017	12/8/2017	708	11/20/2017	1503	285		1	5
8972660	2019	43784	708	43744	1328	370	46	7	5
8973107	2019	43788	708	43728	2026	348	708	5	5
8973210	2019	43788	708	43733	1454	323	46	3	5
8973214	2019	43783	708	43739	539	331	46	2	5
8973556	2019	43781	708	43738	728	323	46	1	5
8973560	2019	43781	708	43738	1644	378	46	1	5

CASE_ID	POPULATION	CNTY_CITY_LOC	SPECIAL_COND	BEAT_TYPE	CHP_BEAT_TYPE	CITY_DIVISION_LAPD	CHP_BEAT_CLASS	BEAT_NUMBER
8813138	5	708	0	0	0	0	0	5
8962897	5	708	0	0	0	0	0	4
8832281	5	708	0	0	0	0	0	5
8833905	5	708	0	0	0	0	0	4
8835128	5	708	0	0	0	0	0	5
8835195	5	708	0	0	0	0	0	5
8851582	5	708	0	0	0	0	0	3
8851586	5	708	0	0	0	0	0	2
8853966	5	708	0	0	0	0	0	5
8854176	5	708	0	0	0	0	0	5
8873557	5	708	0	0	0	0	0	4
8873835	5	708	0	0	0	0	0	5
8878949	5	708	0	0	0	0	0	5
8878957	5	708	0	0	0	0	0	5
8879348	5	708	0	0	0	0	0	1
8879352	5	708	0	0	0	0	0	5
8886489	5	708	0	0	0	0	0	2
8892628	5	708	0	0	0	0	0	1
8892681	5	708	0	0	0	0	0	4
8892685	5	708	0	0	0	0	0	5
8907879	5	708	0	0	0	0	0	4
8914641	5	708	0	0	0	0	0	1
8914746	5	708	0	0	0	0	0	5
8914750	5	708	0	0	0	0	0	5
8921426	5	708	0	0	0	0	0	4
8921888	5	708	0	0	0	0	0	1
8671122	5	708	0	0	0	0	0	2
8935329	5	708	0	0	0	0	0	5
8935804	5	708	0	0	0	0	0	4
8957654	5	708	0	0	0	0	0	5
8957662	5	708	0	0	0	0	0	4
8925833	5	708	0	0	0	0	0	1
8961476	5	708	0	0	0	0	0	2
8961488	5	708	0	0	0	0	0	3
8962893	5	708	0	0	0	0	0	4
8498557	5	708	0	0	0		0	5
8972660	5	708	0	0	0	0	0	4
8973107	5	708	0	0	0	0	0	5
8973210	5	708	0	0	0	0	0	5
8973214	5	708	0	0	0	0	0	4
8973556	5	708	0	0	0	0	0	3
8973560	5	708	0	0	0	0	0	5

CASE_ID	PRIMARY_RD	SECONDARY_RD	DISTANCE	DIRECTION	TJKM_Int	INTERSECTION	COLLISION_SEVERITY	NUMBER_KILLED
8813138	LOVERIDGE RD	EAST LELAND RD	792	N	N	N	4	0
8962897	E LELAND ROAD	RAILROAD AV	10	E	Y	N	3	0
8832281	LOVERIDGE RD	EAST LELAND RD	140	S	Y	N	4	0
8833905	EAST LELAND RD	RAILROAD AV	299	E	N	N	4	0
8835128	EAST LELAND RD	LAKEVIEW DR	201	W	Y	N	2	0
8835195	BUCHANAN RD	SUZANNE DR	230	E	Y	N	4	0
8851582	WEST LELAND RD	ALVES RANCH RD	5	E	Y	N	4	0
8851586	RAILROAD AV	CENTRAL AV	506	S	N	N	2	0
8853966	EAST LELAND RD	LOS MEDANOS RD	517	W	N	N	4	0
8854176	DIOKNO CT	GLADSTONE DR	95	E	Y	N	4	0
8873557	BUCHANAN RD	HARBOR ST	80	W	Y	N	3	0
8873835	LOVERIDGE RD	EAST LELAND RD	169	S	Y	N	4	0
8878949	BUCHANAN RD	QUERCUS LN	34	W	Y	N	4	0
8878957	EAST LELAND RD	FREED WY	10	E	Y	N	4	0
8879348	RAILROAD AV	CENTER DR	256	N	N	N	4	0
8879352	LOVERIDGE RD	LELAND RD	338	N	N	N	4	0
8886489	RAILROAD AV	CENTRAL AV	59	W	Y	N	4	0
8892628	RAILROAD AV	CENTER DR	19	S	Y	N	3	0
8892681	RAILROAD AV	EAST LELAND RD	68	S	Y	N	4	0
8892685	LOVERIDGE RD	EAST LELAND RD	5	S	Y	N	3	0
8907879	MARKS BL	SEENO AV	294	W	N	N	3	0
8914641	NORTH PARKSIDE DR	WARREN WY	47	E	Y	N	4	0
8914746	EAST LELAND RD	LOVERIDGE RD	166	E	Y	N	4	0
8914750	BUCHANAN RD	VENTURA RD	4	W	Y	N	4	0
8921426	RAILROAD AV	BLISS AV	131	N	Y	N	3	0
8921888	NORTH PARKSIDE DR	ROSE ANN AV	6	W	Y	N	4	0
8671122	RAILROAD AV	CIVIC AV	162	S	Y	N	4	0
8935329	BUCHANAN RD	SUZANNE DR	261	E	N	N	3	0
8935804	RAILROAD AV	ATLANTIC AV	254	S	N	N	2	0
8957654	LOVERIDGE RD	LELAND RD	641	S	N	N	4	0
8957662	RAILROAD AV	ALVARADO AV	3	S	Y	N	4	0
8925833	RAILROAD AV	CALIFORNIA AV	22	N	Y	N	4	0
8961476	CALIFORNIA AV	RAILROAD AV	4	E	Y	N	3	0
8961488	WEST LELAND RD	CHESTNUT DR	125	E	Y	N	4	0
8962893	RAILROAD AV	SIERRA DR	7	N	Y	N	4	0
8498557	EAST LELAND RD	PIEDMONT WY	23	E	Y	N	4	0
8972660	RAILROAD AV	ATLANTIC AV	71	S	Y	N	4	0
8973107	EAST LELAND RD	LOVERIDGE RD	810	W	N	N	4	0
8973210	EAST LELAND RD	LOVERIDGE RD	674	W	N	N	4	0
8973214	RAILROAD AV	BLISS AV	828	S	N	N	4	0
8973556	BAILEY RD	MAYLARD ST	38	S	Y	N	4	0
8973560	BUCHANAN RD	SANTA ANA DR	270	W	N	N	4	0

CASE_ID	NUMBER_INJURED	PARTY_COUNT	PRIMARY_COLL_FACTOR	PCF_VIOL_CATEGORY	PCF_VIOLATION	PCF_VIOL_SUBSECTION	HIT_AND_RUN
8813138	1	1	C	18	0	0	N
8962897	1	2	A	10	21950	A	F
8832281	1	1	A	8	22107	0	N
8833905	1	2	A	3	22350	0	N
8835128	3	1	A	3	22350	0	N
8835195	1	2	A	3	22350	0	N
8851582	1	2	A	4	21703	0	N
8851586	1	1	A	1	23152	A	N
8853966	1	2	A	4	21703	0	F
8854176	1	1	A	8	22107	0	N
8873557	2	1	A	8	22107	0	N
8873835	1	3	A	4	21703	0	N
8878949	4	3	A	3	22350	0	N
8878957	2	2	A	3	22350	0	N
8879348	1	3	A	3	22350	0	N
8879352	1	2	A	8	22107	0	N
8886489	4	2	A	8	22107	0	N
8892628	2	2	A	3	22350	0	N
8892681	2	2	A	3	22350	0	F
8892685	2	3	A	10	21950	A	N
8907879	1	4	A	1	23152	A	N
8914641	2	3	A	1	23153	A	M
8914746	1	2	A	21	22106	0	N
8914750	1	2	A	10	21950	A	N
8921426	1	1	A	8	22107	0	N
8921888	1	1	A	3	22350	0	N
8671122	1	2	A	11	21954	A	F
8935329	2	4	A	3	22350	0	N
8935804	2	3	A	3	22350	0	N
8957654	2	2	A	9	21801	A	N
8957662	1	3	A	3	22350	0	N
8925833	1	2	A	9	21804	A	N
8961476	1	2	A	10	21950	A	N
8961488	1	3	A	3	22350	0	N
8962893	1	2	A	3	22350	0	N
8498557	1	2	A	12	21453	A	N
8972660	1	3	A	3	22350	0	F
8973107	1	2	A	8	22107	0	N
8973210	1	2	A	8	22107	0	N
8973214	1	2	A	9	21801	A	N
8973556	1	2	A	12	21453	0	N
8973560	1	2	A	3	22350	0	N

CASE_ID	TYPE_OF_COLLISION	MVIW	PED_ACTION	ROAD_SURFACE	ROAD_COND_1	ROAD_COND_2	LIGHTING	CONTROL_DEVICE
8813138	E	I	A	B	H	-	A	A
8962897	G	B	B	A	H	-	A	A
8832281	G	I	A	A	H	-	A	A
8833905	D	C	A	A	H	-	A	A
8835128	E	J	A	B	H	-	A	A
8835195	C	C	A	A	H	-	C	A
8851582	C	C	A	A	H	-	A	A
8851586	E	I	A	A	H	-	C	D
8853966	C	C	A	A	H	-	C	A
8854176	E	I	A	B	H	-	B	D
8873557	E	I	A	A	H	-	A	A
8873835	C	C	A	A	H	-	A	A
8878949	C	C	A	A	H	-	A	A
8878957	C	C	A	A	H	-	A	A
8879348	C	C	A	A	H	-	A	A
8879352	D	C	A	A	H	-	A	A
8886489	D	C	A	A	H	-	A	A
8892628	C	C	A	A	H	-	A	A
8892681	B	C	A	A	H	-	A	A
8892685	G	B	B	A	H	-	A	A
8907879	A	E	A	A	H	-	C	A
8914641	C	C	A	A	H	-	C	A
8914746	D	C	A	A	H	-	A	A
8914750	G	B	B	A	H	-	A	A
8921426	B	I	A	A	H	-	A	A
8921888	F	A	A	A	H	-	A	D
8671122	G	B	D	A	H	-	C	A
8935329	C	C	A	A	H	-	A	A
8935804	C	C	A	A	H	-	A	D
8957654	E	I	A	A	H	-	C	A
8957662	D	C	A	A	H	-	A	A
8925833	G	B	B	A	H	-	A	A
8961476	G	B	B	A	H	-	A	A
8961488	C	C	A	A	H	-	A	A
8962893	C	C	A	A	H	-	A	A
8498557	C	G	A	A	H	-	A	A
8972660	C	C	A	A	H	-	A	A
8973107	D	C	A	A	H	-	C	A
8973210	C	C	A	A	H	-	A	A
8973214	D	-	A	A	H	-	C	A
8973556	A	C	A	A	H	-	A	A
8973560	C	C	A	A	H	-	A	D

CASE_ID	CHP_ROAD_TYPE	PEDESTRIAN_ACCIDENT	BICYCLE_ACCIDENT	MOTORCYCLE_ACCIDENT	TRUCK_ACCIDENT	NOT_PRIVATE_PROPERTY
8813138	0	0	0	0	0	Y
8962897	0	Y	0	0	0	Y
8832281	0	0	0	0	0	Y
8833905	0	0	0	Y	0	Y
8835128	0	0	0	0	0	Y
8835195	0	0	0	0	0	Y
8851582	0	0	0	0	0	Y
8851586	0	0	0	0	0	Y
8853966	0	0	0	0	0	Y
8854176	0	0	0	0	0	Y
8873557	0	0	0	0	0	Y
8873835	0	0	0	0	0	Y
8878949	0	0	0	0	0	Y
8878957	0	0	0	0	0	Y
8879348	0	0	0	0	0	Y
8879352	0	0	0	0	0	Y
8886489	0	0	0	0	0	Y
8892628	0	0	0	0	0	Y
8892681	0	0	0	Y	0	Y
8892685	0	Y	0	0	0	Y
8907879	0	0	0	0	0	Y
8914641	0	0	0	0	0	Y
8914746	0	0	0	0	0	Y
8914750	0	Y	0	0	0	Y
8921426	0	0	0	0	0	Y
8921888	0	0	0	Y	0	Y
8671122	0	Y	0	0	0	Y
8935329	0	0	0	0	0	Y
8935804	0	0	0	0	0	Y
8957654	0	0	0	0	0	Y
8957662	0	0	0	0	0	Y
8925833	0	Y	0	0	0	Y
8961476	0	Y	0	0	0	Y
8961488	0	0	0	0	0	Y
8962893	0	0	0	0	0	Y
8498557	0		Y			Y
8972660	0	0	0	0	0	Y
8973107	0	0	0	0	0	Y
8973210	0	0	0	0	Y	Y
8973214	0	0	0	0	0	Y
8973556	0	0	0	0	0	Y
8973560	0	0	0	0	0	Y

CASE_ID	ALCOHOL_INVOLVED	STWD_VEHTYPE_AT_FAULT	CHP_VEHTYPE_AT_FAULT	COUNT_SEVERE_INJ	COUNT_VISIBLE_INJ	COUNT_COMPLAINT_PAIN
8813138	0	-	-	0	0	1
8962897	0	-	99	0	1	0
8832281	0	D	22	0	0	1
8833905	0	C	2	0	0	1
8835128	Y	A	1	3	0	0
8835195	0	A	1	0	0	1
8851582	0	A	7	0	0	1
8851586	Y	A	1	1	0	0
8853966	0	D	22	0	0	1
8854176	0	A	7	0	0	1
8873557	0	A	1	0	1	1
8873835	0	A	8	0	0	1
8878949	0	A	8	0	0	4
8878957	0	I	20	0	0	2
8879348	0	A	1	0	0	1
8879352	0	A	1	0	0	1
8886489	0	A	1	0	0	4
8892628	0	A	7	0	1	1
8892681	0	C	2	0	0	2
8892685	0	A	1	0	2	0
8907879	Y	A	1	0	1	0
8914641	Y	A	7	0	0	2
8914746	0	A	1	0	0	1
8914750	0	A	1	0	0	1
8921426	0	D	22	0	1	0
8921888	0	C	2	0	0	1
8671122	Y	N	60	0	0	1
8935329	0	A	7	0	2	0
8935804	0	A	1	1	0	1
8957654	0	A	7	0	0	2
8957662	0	A	7	0	0	1
8925833	0	A	1	0	0	1
8961476	0	A	1	0	1	0
8961488	0	A	7	0	0	1
8962893	0	A	1	0	0	1
8498557		A	1	0	0	1
8972660	0	-	99	0	0	1
8973107	0	A	1	0	0	1
8973210	0	A	1	0	0	1
8973214	0	-	-	0	0	1
8973556	0	A	1	0	0	1
8973560	0	A	1	0	0	1

CASE_ID	COUNT_PED_KILLED	COUNT_PED_INJURED	COUNT_BICYCLIST_KILLED	COUNT_BICYCLIST_INJURED	COUNT_MC_KILLED	COUNT_MC_INJURED
8813138	0	0	0	0	0	0
8962897	0	1	0	0	0	0
8832281	0	0	0	0	0	0
8833905	0	0	0	0	0	1
8835128	0	0	0	0	0	0
8835195	0	0	0	0	0	0
8851582	0	0	0	0	0	0
8851586	0	0	0	0	0	0
8853966	0	0	0	0	0	0
8854176	0	0	0	0	0	0
8873557	0	0	0	0	0	0
8873835	0	0	0	0	0	0
8878949	0	0	0	0	0	0
8878957	0	0	0	0	0	0
8879348	0	0	0	0	0	0
8879352	0	0	0	0	0	0
8886489	0	0	0	0	0	0
8892628	0	0	0	0	0	0
8892681	0	0	0	0	0	0
8892685	0	2	0	0	0	0
8907879	0	0	0	0	0	0
8914641	0	0	0	0	0	0
8914746	0	0	0	0	0	0
8914750	0	1	0	0	0	0
8921426	0	0	0	0	0	0
8921888	0	0	0	0	0	1
8671122	0	1	0	0	0	0
8935329	0	0	0	0	0	0
8935804	0	0	0	0	0	0
8957654	0	0	0	0	0	0
8957662	0	0	0	0	0	0
8925833	0	1	0	0	0	0
8961476	0	1	0	0	0	0
8961488	0	0	0	0	0	0
8962893	0	0	0	0	0	0
8498557	0	0	0	1	0	0
8972660	0	0	0	0	0	0
8973107	0	0	0	0	0	0
8973210	0	0	0	0	0	0
8973214	0	0	0	0	0	0
8973556	0	0	0	0	0	0
8973560	0	0	0	0	0	0

CASE_ID	COUNTY	CITY	POINT_X	POINT_Y
8813138	CONTRA COSTA	PITTSBURG	-121.8700256	38.01019287
8962897	CONTRA COSTA	PITTSBURG	-121.8911743	38.01218414
8832281	CONTRA COSTA	PITTSBURG	-121.871109	38.00779343
8833905	CONTRA COSTA	PITTSBURG	-121.8902435	38.01190186
8835128	CONTRA COSTA	PITTSBURG	-121.8601761	38.0083313
8835195	CONTRA COSTA	PITTSBURG	-121.8792953	37.9979744
8851582	CONTRA COSTA	PITTSBURG	-121.9552231	38.01771545
8851586	CONTRA COSTA	PITTSBURG	-121.8869247	38.02399445
8853966	CONTRA COSTA	PITTSBURG	-121.8643417	38.0083313
8854176	CONTRA COSTA	PITTSBURG	-121.8662643	38.00630569
8873557	CONTRA COSTA	PITTSBURG	-121.8873291	37.99799347
8873835	CONTRA COSTA	PITTSBURG	-121.8711395	38.00771713
8878949	CONTRA COSTA	PITTSBURG	-121.8914795	37.99808121
8878957	CONTRA COSTA	PITTSBURG	-121.8815842	38.00996017
8879348	CONTRA COSTA	PITTSBURG	-121.8886032	38.01922226
8879352	CONTRA COSTA	PITTSBURG	-121.870636	38.00905228
8886489	CONTRA COSTA	PITTSBURG	-121.8865891	38.02511597
8892628	CONTRA COSTA	PITTSBURG	-121.8888855	38.01850128
8892681	CONTRA COSTA	PITTSBURG	-121.8912659	38.01202011
8892685	CONTRA COSTA	PITTSBURG	-121.8709641	38.00814819
8907879	CONTRA COSTA	PITTSBURG	-121.8988342	38.00072861
8914641	CONTRA COSTA	PITTSBURG	-121.8963699	38.02500534
8914746	CONTRA COSTA	PITTSBURG	-121.8704071	38.00804138
8914750	CONTRA COSTA	PITTSBURG	-121.8682327	37.9980011
8921426	CONTRA COSTA	PITTSBURG	-121.8899307	38.01602936
8921888	CONTRA COSTA	PITTSBURG	-121.8937912	38.02477264
8671122	CONTRA COSTA	PITTSBURG	-121.8882523	38.02012253
8935329	CONTRA COSTA	PITTSBURG	-121.8791809	37.9979744
8935804	CONTRA COSTA	PITTSBURG	-121.8928757	38.00754166
8957654	CONTRA COSTA	PITTSBURG	-121.8716125	38.00647736
8957662	CONTRA COSTA	PITTSBURG	-121.8920059	38.00988388
8925833	CONTRA COSTA	PITTSBURG	-121.8891525	38.01752853
8961476	CONTRA COSTA	PITTSBURG	-121.8891678	38.0174675
8961488	CONTRA COSTA	PITTSBURG	-121.9358749	38.01543808
8962893	CONTRA COSTA	PITTSBURG	-121.895401	38.00100708
8498557	CONTRA COSTA	PITTSBURG	-121.8748938	38.0091311
8972660	CONTRA COSTA	PITTSBURG	-121.8926926	38.00802231
8973107	CONTRA COSTA	PITTSBURG	-121.873642	38.00881958
8973210	CONTRA COSTA	PITTSBURG	-121.8731918	38.00871277
8973214	CONTRA COSTA	PITTSBURG	-121.8907318	38.01347733
8973556	CONTRA COSTA	PITTSBURG	-121.9419632	38.0165863
8973560	CONTRA COSTA	PITTSBURG	-121.8838501	37.99798203

CASE_ID	ACCIDENT_YEAR	PROC_DATE	JURIS	COLLISION_DATE	COLLISION_TIME	OFFICER_ID	REPORTING_DISTRICT	DAY_OF_WEEK	CHP_SHIFT
8973564	2019	43781	708	43732	29	379	0	2	5
8973600	2019	43784	708	43747	2	338	0	3	5
8973764	2019	43784	708	43750	2236	367	0	6	5
8979023	2019	43872	708	43743	1300	375	0	6	5
8980836	2019	43820	708	43755	1524	355	708	4	5
8991217	2019	43853	708	43799	1434	350	46	6	5
8991370	2019	43858	708	43796	1748	253	46	3	5
8991374	2019	43858	708	43795	1153	323	46	2	5
8991382	2019	43858	708	43782	1656	355	708	3	5
8991390	2019	43858	708	43781	1625	355	708	2	5
8992917	2019	43846	708	43781	1041	285	46	2	5
8995582	2019	43837	708	43792	203	359	0	6	5
90038930	2015	42304	9320	42289	745	18042	0	1	1
9019438	2019	43868	708	43809	1558	323	46	2	5
9031398	2019	43861	708	43820	1432	346	46	6	5
90352008	2016	42731	9320	42720	1400	21433	0	5	2
9054670	2019	43899	708	43821	330	359	46	7	5
90599545	2017	43060	9320	43055	810	20026	0	4	1
90606236	2017	43069	9320	43061	1510	20981	0	3	2
90686741	2017	43199	9320	43015	2214	21440	0	6	3
90747727	2018	43264	9320	43252	705	22013	0	5	1
91095618	2019	43749	9320	43744	2300	22049	0	7	3

CASE_ID	POPULATION	CNTY_CITY_LOC	SPECIAL_COND	BEAT_TYPE	CHP_BEAT_TYPE	CITY_DIVISION_LAPD	CHP_BEAT_CLASS	BEAT_NUMBER
8973564	5	708	0	0	0	0	0	4
8973600	5	708	0	0	0	0	0	1
8973764	5	708	0	0	0	0	0	4
8979023	5	708	0	0	0	0	0	5
8980836	5	708	0	0	0	0	0	0P1
8991217	5	708	0	0	0	0	0	5
8991370	5	708	0	0	0	0	0	5
8991374	5	708	0	0	0	0	0	5
8991382	5	708	0	0	0	0	0	3
8991390	5	708	0	0	0	0	0	1
8992917	5	708	0	0	0	0	0	5
8995582	5	708	0	0	0	0	0	0
90038930	5	708	0	2	S	0	2	901
9019438	5	708	0	0	0	0	0	5
9031398	5	708	0	0	0	0	0	5
90352008	5	708	0	1	3	0	2	403
9054670	5	708	0	0	0	0	0	2
90599545	5	708	1	4	S	0	2	901
90606236	5	708	0	2	S	0	2	901
90686741	5	708	0	2	4	0	2	72
90747727	5	708	0	2	S	0	2	901
91095618	5	708	0	2	4	0	2	72

CASE_ID	PRIMARY_RD	SECONDARY_RD	DISTANCE	DIRECTION	TJKM_Int	INTERSECTION	COLLISION_SEVERITY	NUMBER_KILLED
8973564	WEST LELAND RD	RAILROAD AV	1	N	Y	N	4	0
8973600	RAILROAD AV	CALIFORNIA AV	18	N	Y	N	4	0
8973764	RAILROAD AV	YOSEMITE DR	114	S	Y	N	4	0
8979023	STONEMAN AV	LUAU DR	101	E	Y	N	3	0
8980836	RAILROAD AV	CENTER DR	172	N	Y	N	4	0
8991217	EAST LELAND RD	STONERIDGE DR	136	W	Y	N	4	0
8991370	EAST LELAND RD	STONERIDGE DR	417	W	N	N	2	0
8991374	CALIFORNIA AV	CHEVRON DR	73	E	Y	N	4	0
8991382	WEST LELAND RD	SOUTHWOOD DR	697	E	N	N	3	0
8991390	NORTH PARKSIDE DR	WARREN WY	16	E	Y	N	2	0
8992917	HARBOR ST	EAST LELAND RD	29	N	Y	N	4	0
8995582	RAILROAD AV	VICTORY AV	6	S	Y	N	3	0
90038930	E. LELAND RD E/B	WALMART ST	25	W	Y	N	4	0
9019438	LOVERIDGE RD	STONEMAN APT ENTRANCE	23	S	Y	N	4	0
9031398	LELAND RD	FREED AV	575	E	N	N	4	0
90352008	/B FROM RAILROAD AVE. S/B ON	RAILROAD AVE	30	W	Y	N	4	0
9054670	RAILROAD AV	OAK PL	112	N	Y	N	4	0
90599545	EAST LELAND RD	HARBOR ST	100	E	Y	N	4	0
90606236	N PARKSIDE DRIVE	SOUTH AVENUE	400	N	N	N	3	0
90686741	BAILEY RD	MYRTLE DR	9504	N	N	N	1	1
90747727	BUCHANAN RD	MCDERMOTT DR	65	E	Y	N	4	0
91095618	BAILEY RD	SR-4	575	S	N	N	4	0

CASE_ID	NUMBER_INJURED	PARTY_COUNT	PRIMARY_COLL_FACTOR	PCF_VIOL_CATEGORY	PCF_VIOLATION	PCF_VIOL_SUBSECTION	HIT_AND_RUN
8973564	1	2	A	5	21650	0	N
8973600	1	2	A	3	22350	0	F
8973764	1	2	A	21	22106	0	N
8979023	1	1	C	18	0	0	N
8980836	2	3	A	3	22350	0	N
8991217	1	1	A	3	22350	0	N
8991370	1	1	A	8	22107	0	N
8991374	1	2	A	21	22106	0	N
8991382	3	2	A	12	21453	A	N
8991390	1	1	A	3	22350	0	N
8992917	1	1	A	1	23152	A	N
8995582	2	2	A	1	23153	A	N
90038930	1	2	A	3	22350	0	N
9019438	1	2	A	9	21800	0	N
9031398	1	2	A	9	21804	A	N
90352008	1	2	A	21	22106	0	N
9054670	1	1	A	1	23152	A	N
90599545	4	2	A	21	22106	0	N
90606236	1	2	A	3	22350	0	N
90686741	4	2	A	5	21460	A	N
90747727	1	2	A	7	21658	A	N
91095618	1	2	A	3	22350	0	M

CASE_ID	TYPE_OF_COLLISION	MVIW	PED_ACTION	ROAD_SURFACE	ROAD_COND_1	ROAD_COND_2	LIGHTING	CONTROL_DEVICE
8973564	D	C	A	A	H	-	C	A
8973600	C	C	A	A	H	-	C	A
8973764	C	C	A	A	H	-	C	A
8979023	E	I	A	A	H	-	A	A
8980836	C	C	A	A	H	-	A	A
8991217	E	I	A	B	H	-	A	A
8991370	E	J	A	B	H	-	C	D
8991374	C	C	A	B	H	-	A	A
8991382	D	C	A	A	H	-	B	A
8991390	E	I	A	A	H	-	A	A
8992917	E	I	A	A	H	-	A	A
8995582	A	F	A	A	H	-	C	D
90038930	C	C	A	A	H	-	A	A
9019438	H	G	A	A	H	-	A	A
9031398	C	C	A	A	H	-	A	A
90352008	C	C	A	A	H	-	A	D
9054670	E	I	A	A	H	-	C	D
90599545	C	C	A	B	H	-	A	D
90606236	E	I	A	A	H	-	A	D
90686741	A	C	A	A	H	-	D	D
90747727	B	C	A	A	H	-	A	D
91095618	C	C	A	A	H	-	C	A

CASE_ID	CHP_ROAD_TYPE	PEDESTRIAN_ACCIDENT	BICYCLE_ACCIDENT	MOTORCYCLE_ACCIDENT	TRUCK_ACCIDENT	NOT_PRIVATE_PROPERTY
8973564	0	0	0	Y	0	Y
8973600	0	0	0	0	0	Y
8973764	0	0	0	0	0	Y
8979023	0	0	0	0	0	Y
8980836	0	0	0	0	0	Y
8991217	0	0	0	0	0	Y
8991370	0	0	0	0	0	Y
8991374	0	0	0	0	0	Y
8991382	0	0	0	0	0	Y
8991390	0	0	0	Y	0	Y
8992917	0	0	0	0	0	Y
8995582	0	0	0	0	0	Y
90038930	0	0	0	0	Y	Y
9019438	0	0	Y	0	0	Y
9031398	0	0	0	Y	0	Y
90352008	0	0	0	0	0	Y
9054670	0	0	0	0	0	Y
90599545	0	0	0	0	0	Y
90606236	0	0	0	0	0	Y
90686741	0	0	0	0	0	Y
90747727	0	0	0	0	0	Y
91095618	0	0	0	0	0	Y

CASE_ID	ALCOHOL_INVOLVED	STWD_VEHTYPE_AT_FAULT	CHP_VEHTYPE_AT_FAULT	COUNT_SEVERE_INJ	COUNT_VISIBLE_INJ	COUNT_COMPLAINT_PAIN
8973564	0	C	3	0	0	1
8973600	Y	A	7	0	0	1
8973764	0	A	1	0	0	1
8979023	0	-	-	0	1	0
8980836	0	A	8	0	0	2
8991217	0	D	22	0	0	1
8991370	0	A	1	1	0	0
8991374	0	A	1	0	0	1
8991382	0	A	1	0	1	2
8991390	0	C	2	1	0	0
8992917	Y	A	7	0	0	1
8995582	Y	D	22	0	2	0
90038930	0	F	26	0	0	1
9019438	0	L	4	0	0	1
9031398	0	A	1	0	0	1
90352008	0	A	7	0	0	1
9054670	0	A	1	0	0	1
90599545	0	H	13	0	0	4
90606236	0	A	1	0	1	0
90686741	0	D	22	3	1	0
90747727	0	A	1	0	0	1
91095618	0	-	99	0	0	1

CASE_ID	COUNT_PED_KILLED	COUNT_PED_INJURED	COUNT_BICYCLIST_KILLED	COUNT_BICYCLIST_INJURED	COUNT_MC_KILLED	COUNT_MC_INJURED
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8973600	0	0	0	0	0	0
8973764	0	0	0	0	0	0
8979023	0	0	0	0	0	0
8980836	0	0	0	0	0	0
8991217	0	0	0	0	0	0
8991370	0	0	0	0	0	0
8991374	0	0	0	0	0	0
8991382	0	0	0	0	0	0
8991390	0	0	0	0	0	1
8992917	0	0	0	0	0	0
8995582	0	0	0	0	0	0
90038930	0	0	0	0	0	0
9019438	0	0	0	1	0	0
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9054670	0	0	0	0	0	0
90599545	0	0	0	0	0	0
90606236	0	0	0	0	0	0
90686741	0	0	0	0	0	0
90747727	0	0	0	0	0	0
91095618	0	0	0	0	0	0

CASE_ID	COUNTY	CITY	POINT_X	POINT_Y
8973564	CONTRA COSTA	PITTSBURG	-121.8912048	38.0121994
8973600	CONTRA COSTA	PITTSBURG	-121.8893051	38.01712418
8973764	CONTRA COSTA	PITTSBURG	-121.893837	38.00504303
8979023	CONTRA COSTA	PITTSBURG	-121.8825226	38.00400925
8980836	CONTRA COSTA	PITTSBURG	-121.8886871	38.01900101
8991217	CONTRA COSTA	PITTSBURG	-121.8770065	38.00932312
8991370	CONTRA COSTA	PITTSBURG	-121.8779755	38.0092392
8991374	CONTRA COSTA	PITTSBURG	-121.869072	38.01294708
8991382	CONTRA COSTA	PITTSBURG	-121.9460297	38.01540375
8991390	CONTRA COSTA	PITTSBURG	-121.8964767	38.02501678
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8995582	CONTRA COSTA	PITTSBURG	-121.8884888	38.01953506
90038930	CONTRA COSTA	PITTSBURG	-121.8693566	38.00779426
9019438	CONTRA COSTA	PITTSBURG	-121.8718262	38.00551987
9031398	CONTRA COSTA	PITTSBURG	-121.879715	38.00950623
90352008	CONTRA COSTA	PITTSBURG	-121.8896297	38.01714392
9054670	CONTRA COSTA	PITTSBURG	-121.8878632	38.02113342
90599545	CONTRA COSTA	PITTSBURG	-121.8857863	38.01084431
90606236	CONTRA COSTA	PITTSBURG	-121.8869116	38.02364687
90686741	CONTRA COSTA	PITTSBURG	-121.9489766	37.99170415
90747727	CONTRA COSTA	PITTSBURG	-121.8780823	37.99797058
91095618	CONTRA COSTA	PITTSBURG	-121.9419479	38.01716232

APPENDIX D:
LOCAL ROADWAY SAFETY MANUAL (LRSM) EXCERPT

Local Roadway Safety

A Manual for California's Local Road Owners

Version 1.6
April 2022



Created by Caltrans in conjunction with FHWA and SafeTREC
for the express benefit of California Local Agencies.

Caltrans

U. S. Department of Transportation
Federal Highway Administration

Safe Transportation Research & Education Center
SafeTREC

Document History

Version 1.0: 4/20/2012

The California Department of Transportation - Division of Local Assistance developed the first version of the Local Roadway Safety Manual (Version 1.0) in 2012 to support the Cycle 5 HSIP call-for-projects.

Version 1.1: 4/26/2013

Based on feedback and lessons learned from Cycle 5, Caltrans updated Appendix B: "Table of Countermeasures and Crash Reduction Factors" to better clarify text in "Where to use", "Why it works", and "General Qualities" for several of the countermeasures included in the original manual.

No other changes were made to the Local Roadway Safety Manual as part of Version 1.1

Version 1.2: 03/10/2015

Based on feedback and lessons learned from Cycle 6, Caltrans made minor updates to the text of the document as needed for achieving consistency with overall Caltrans local HSIP guidance documents. The following sections were updated: 1.2, 4.2, 5.1, 6.2, and Appendix B, E, F & G.

Version 1.3: 04/29/2016

Caltrans made updates to the text of the document as needed in the following sections: 4.2, 5.1 and Appendix B.

Version 1.4: 06/08/2018

3/30/18 - Caltrans made updates to the crash costs in Appendix D, some of the website links in Appendix G, and some other texts of the document.
6/8/18 - Countermeasure S22 ("Modify signal phasing to implement a Leading Pedestrian Interval (LPI)") is added.

Version 1.5: April 2020

Caltrans added a few more countermeasures (e.g. Pedestrian Scramble, Install Separated Bike Lanes, Reduced Left-Turn Conflict Intersections, and Curve Shoulder widening), renumbered the countermeasures and updated the crash costs in Appendix D.

Version 1.6: April 2022

For Cycle 11 Call-for-projects, Countermeasure S04 (Provide Advanced Dilemma Zone Detection for high-speed approaches) was deleted and Countermeasure NS05mr (Convert intersection to mini-roundabout) added. The HSIP Funding Eligibility was changed to 90% except for S03, of which the HSIP Funding Eligibility stays at 50%. The crash costs in Appendix D were updated.

Future Updates:

In the future, Caltrans anticipates that additional changes will be needed to keep the Local Roadway Safety Manual consistent with future Calls-for-Projects' Guidelines and Application Instructions. In addition, new local HSIP programs, improvements to California data on local roadways, data analysis tools, and the latest safety research and methodologies may give rise to the need to make more significant changes to this manual.

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Foreword

Why was this manual developed?

The California Department of Transportation - Division of Local Assistance's goal in developing this manual is to maximize the safety benefits for local roadways by encouraging all local agencies to proactively identify and analyze their safety issues and to position themselves to compete effectively in Caltrans' statewide, data-driven call-for-projects.

This goal is complicated by California's wide variety of local agencies, roadway types, and project types, including: rural vs. urban, low-volume vs. high-volume, and intersection vs. roadway segment vs. network-wide. This variety makes it difficult to administer a single program and provide one set of guidelines that meets the needs of all California's local roadway owners and users. Many of California's local agencies are also challenged by the lack of a basic safety analysis framework and analysis tools specifically designed for local roadway managers with widely varying responsibilities and safety training. Currently, there is a vast range of safety documents, program guidance, and analysis tools with a wide variety of complexity and applications. Without clear and simple safety guidance for locals, many agencies take a 'reactive' approach to safety, even when research has shown 'proactive' safety analysis of roadways is more effective in making system-wide safety improvements.

The Federal Highway Administration (FHWA) Office of Safety provides national leadership in identifying, developing, and delivering safety programs and products to local governments to improve highway safety on local and rural roads.[1] In 2010, FHWA published a set of three manuals designed specifically for rural road owners; Roadway Departure Safety, Intersection Safety, and Road Safety Information Analysis.[2] These manuals present a simple, data driven safety analysis framework for rural agencies across the nation. These manuals, in conjunction with Caltrans' ongoing short-term research and development contract with the Safe Transportation Research and Education Center (SafeTREC) at the University of California, Berkeley, provided a unique opportunity for Caltrans to pursue development of this document as a mirror of FHWA's new Manuals for Local Rural Road Owners. Much of the wording, formatting and references from these FHWA manuals have been directly incorporated into this manual for California's local road owners. Individual references to the FHWA manuals have not been included; instead these documents are intended to be referenced on a wholesale basis.

With FHWA's and SafeTREC's support and expertise, Caltrans was able to expedite the completion of this manual and can now offer California's local agencies a new tool intended to provide focused roadway safety information in one manual.

1. Introduction and Purpose

The information in this document is geared towards local road managers and other practitioners with responsibility for operating and maintaining local roads, regardless of safety-specific highway training. The primary goal of this document is to provide an easy-to-use and comprehensive framework of the steps and analysis tools needed to identify locations with roadway safety issues and the appropriate countermeasures. For novice practitioners, the concepts and framework will be new, while experienced safety practitioners may find this manual to be mostly review. In both cases, the manual will provide the practitioners with a good understanding of how to complete a proactive safety analysis and ensure they have the best opportunity to secure HSIP safety funding during Caltrans calls-for-projects.

It's expected that novice and experienced practitioners will utilize this manual to help position their local agency to better compete in future Caltrans' calls-for-projects for safety programs. Inexperienced local roadway practitioners are also a target audience for this manual to gain exposure to the basic concepts that make up a proactive safety analysis of a local agency's roadway network.

The intent of this manual is to focus on key safety activities that every local agency should conduct on an annual basis (or as established by the agency) with the objective of reducing the number and severity of crashes within their jurisdiction. This manual defines this overall process as a "proactive safety analysis" approach to roadway safety. The Highway Safety Manual (HSM), documents a very similar process and refers to it as the "Roadway Safety Management Process." While the process in this document is similar and suggests the same primary elements, the HSM goes into significantly more detail, focuses more on scientific and mathematical equations behind the process, and intends to provide a comprehensive understanding of the overall processes to be applied by individual agencies across the nation. In contrast, this manual attempts to streamline the discussion; and make accommodations for the more novice safety practitioners, provide an adequate understanding of the process to complete an initial safety analysis of their roadway network, and instruct them on how to prepare applications that will compete well in Caltrans' statewide calls-for-projects. In general, this manual is intended to follow the research and methodologies presented in the HSM; however, to support Caltrans' statewide calls-for-projects process, it is important to note this manual deviates from the HSM in areas related to countermeasure selection and benefit / cost calculations. The logic behind these deviations is explained at the specific topic sections.

This manual is not intended to cover many of the day-to-day basics of traffic engineering including: maintain standard signage per the Manual on Uniform Traffic Control Devices; maintain sight distance (cut vegetation, remove parking); maintain a recovery zone; work with local traffic law enforcement; monitor collisions; address complaints; and manage litigation. These activities are understood to be critical elements of a local agency's traffic engineering responsibilities, but are not within the intended scope of this document.

1.1 California Local Roadway Safety Challenges and Opportunities

California's local roads are managed by more than 600 local agencies, including: cities, counties, and tribal governments. These local roads vary from flat multi-lane urban arterials to rural gravel roads in mountainous areas. California local agencies invest extensive resources on roadway safety every year, yet many roadways operate with outdated or insufficient safety features. A portion of these roadways even lack basic signing, pavement markings, alignment, and traffic control devices. Limited funding often prevents agencies from constructing safety projects, which can be expected. At the same time, the lack of safety data, design challenges, and lack of adequate training also hinder local agencies' accurate evaluation of their roadway network safety issues, which is more preventable.

Many small California local agencies are challenged by a lack of crash data. Without data, they have no way to identify High Crash Concentration Locations (HCCLs) or high risk roadway features, which can leave them "flying blind" with respect to the safety of their overall roadway network. Without data and analysis results, local officials may overreact when a tragic crash occurs, resulting in resources being spent in areas that will not maximize the overall application of safety funds. In conjunction with the collision mapping and analysis tools developed by UC Berkeley's SafeTREC, this document helps ensure all California local agencies have direct access to data on fatal and injury crashes within their jurisdictions and the analysis tools to effectively assess and prioritize future safety projects.

1.2 Safe System Approach

The Infrastructure Investment and Jobs Act (IIJA), aka Bipartisan Infrastructure Law (BIL), was signed into law on November 15, 2021. Under IIJA, the Highway Safety Improvement Program (HSIP), codified as Section 148 of Title 23, United States Code (23 U.S.C §148), is a core federal-aid program to States for the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. The IIJA emphasizes the "safe system approach":

Safe system approach means a roadway design that emphasizes minimizing the risk of injury or fatality to road users; and that (i) takes into consideration the possibility and likelihood of human error; (ii) accommodates human injury tolerance by taking into consideration likely accident types, resulting impact forces, and the ability of the human body to withstand impact forces; and (iii) takes into consideration vulnerable road users. (23 U.S.C. 148(a)(9)).

FHWA recognizes that the funding available through HSIP alone will not achieve the goal of zero fatalities on the Nation's roads. The Safe System approach addresses the safety of all road users, including those who walk, bike, drive, ride transit, and travel by other modes. It involves a paradigm shift to improve safety culture, increase collaboration across all safety stakeholders, and refocus transportation system design and operation on anticipating human mistakes and lessening impact forces

to reduce crash severity and save lives. FHWA encourages States to prioritize safety in all Federal-aid investments and in all appropriate projects, using not only HSIP funding but also other Federal-aid funding.

The IIJA emphasizes the importance of vulnerable road user (non-motorized road user) safety in the HSIP by adding a definition for vulnerable road users, creating a vulnerable road user special rule, and requiring States to develop and update a vulnerable road user safety assessment. All of these provisions address the increasing number of fatalities involving vulnerable road users on U.S. roads. It is imperative that States consider the needs of all road users as part of the HSIP. Investment in highway safety improvement projects that promote and improve safety for all road users, particularly vulnerable road users, aligns with the IIJA and will help Build a Better America. States and other funding recipients should prioritize projects that maximize the existing right-of-way for accommodation of non-motorized modes and transit options that increase safety, equity, accessibility, and connectivity. Projects that separate users in time and space, match vehicle speeds to the built environment, and increase visibility (e.g., lighting) advance implementation of a Safe System approach and improve safety for vulnerable road users.

1.3 The State's Role in Local Roadway Safety

The California Department of Transportation (Caltrans)—Division of Local Assistance is responsible for administering California's HSIP safety funding intended for local roadway safety improvements. This funding primarily comes to the state through two federal programs: Highway Safety Improvement Program (HSIP)—a federal-aid program focused on reducing fatalities and serious injuries on all public roads; and the Active Transportation Program (ATP)—a federal aid and state funded program focused on improving safety and the overall use of non-motorized, active transportation modes of travel. Under SAFETEA-LU, High Risk Rural Roads Program (HR3) was established to focus on addressing rural road safety needs but in MAP-21 and FAST, it is now a 'special rule' under HSIP that if triggered, directs that a certain amount of HSIP funds will need to be allocated for those rural roads that meet the definition.

Caltrans' administration of these programs encompasses many responsibilities, including: establishing program guidance; reviewing applications for improvements on local roadways; ranking applications/projects on a statewide basis; selecting projects for funding based on the greatest potential for reducing fatalities and injuries; programming the selected projects in the Federal Statewide Transportation Improvement Program (FSTIP); and assisting with programming and delivery issues throughout the delivery of the local agency projects. One goal for developing this document is to improve Caltrans' overall data-driven approach to statewide project selection of safety projects and to maximize the long-term safety improvements across California. To show the relationship between Caltrans' project selection process and this manual, a diagram showing the HSIP Call-for-Projects Process is provided in Appendix A.

Many State Departments are also actively engaged in California's Strategic Highway Safety Plan (SHSP). Caltrans developed the SHSP in a cooperative process with local, State, federal, and private sector safety stakeholders. The SHSP is a data-driven, comprehensive plan that established statewide goals, objectives, integrated the five E's of traffic safety— engineering, enforcement, education, emergency response, and emerging technologies. This manual directly supports many of the emphasis areas of the California SHSP. Local agencies are encouraged to participate in ongoing SHSP update efforts and can find more information on the SHSP at the following website: https://dot.ca.gov/programs/safety-programs/shsp.

Local Roadway Safety Plan (LRSP) and Systemic Safety Analysis Report Program (SSARP)

The state-funded Systemic Safety Analysis Report Program (SSARP) was established in 2016. The intent of the SSARP was to assist local agencies in performing a collision analysis, identifying safety issues on their roadway networks, and developing a list of systemic low-cost countermeasures that can be used to prepare future HSIP and other safety program applications. Late 2019, the program was evolved to Local Roadway Safety Plan (LRSP) so that the focus is not just engineering solutions but also include safety improvements in other areas such as enforcement, Education and emergency response.

The state funding for the LRSP/SSARP program is made available by exchanging the local Highway Safety Improvement Program (HSIP) federal funds for State Highway Account (SHA) funds.

For more information, please visit the LRSP/SSARP webpage at https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/highway-safety-improvement-program/local-roadway-safety-plans.

1.4 The Local Roadway Crash Problem

Approximately 3,000 people die in California traffic crashes every year, representing nearly 10% of all traffic fatalities in the United States. Fifty-seven percent of these fatalities occur on local roadways, while only forty-three percent occur on the California State Highway System. A comparison of rural and urban roadways shows that local rural roadways have fatality rates 2 to 3 times higher than urban roadways per vehicle miles traveled. Based on these statistics, the total annual cost of local roadway fatal crashes to California is over $6 billion, while only $100 million is available annually in HSIP safety funds.

These statistics demonstrate the large and complex safety issues facing California. Through the development of this document, Caltrans is striving to help local agencies proactively identify high risk roadway features, roadway network locations/corridors with the highest safety needs, and encourage them to select effective low-cost improvements, whenever appropriate.

1.5 Reactive vs. Proactive Safety Issue Identification

Safety issues are identified on local roadways through a wide range of approaches. Although no single approach works best for all local agencies, some are far more effective at improving long-term roadway safety. Many agencies, often larger ones, have staff whose full-time job is dedicated to roadway safety; allowing them to focus on safety initiatives, be trained in the latest safety research, and have access to safety analysis data, tools and procedures. These agencies often utilize a 'proactive' approach to analyze their roadway network and identify safety issues.

At the same time many agencies, often the smaller ones, lack the financial ability to dedicate large portions of their staff resources to analyze safety issues and their staff has limited access to roadway safety training, safety expertise, and the latest safety analysis tools and procedures. Unfortunately, this can often result in identifying their safety issues in 'reaction' to tragic events.

The following is a basic outline of the differences in proactive vs. reactive identification approaches used by local agencies:

Reactive Approach

For this document, an agency is considered to be utilizing a reactive approach to roadway safety if they primarily identify safety improvements in reaction to:

- Recent crashes triggering safety investigations
- Specific crash concentrations triggering safety investigations
- Stakeholder identification of locations with safety issues and requests for improvements
- New funding becoming available

Crash concentrations and crash trends may be missed if local agencies rely exclusively on these identifiers for their roadway safety effort. They may also miss many opportunities to effectively utilize low-cost, systemic type improvements. This document encourages local agencies to adopt a more proactive approach to their roadway safety.

Proactive Approach

An agency is considered to be using a proactive approach to roadway safety if they go beyond the elements of a reactive approach and identify safety improvements by analyzing the safety of their entire roadway network, in one of the following ways:

- One-time, network-wide safety analysis of their roadways driven by new source of funding.
- Routine safety analyses of the roadway network (Preferred Approach!)

Agencies with a proactive approach utilize both systemic and spot location improvements (as defined in section 1.5 below). Applying improvements systemically across an entire corridor or network allows an agency to proactively address locations that have not had crash concentrations in the past, but have

similar features as those currently experiencing high levels of crashes. In addition, even though a spot location improvement may be based on 'past' crashes, agencies making improvements based on countermeasures with proven crash reduction factors at their highest crash locations often have the best chance of proactively reducing future crashes.

This document encourages safety practitioners to pursue a proactive approach and routinely analyze the safety of their roadway networks to yield the best overall safety results.

1.6 Implementation Approaches

When an agency proactively identifies their safety issues throughout their roadway network, it is likely they will find high crash concentrations at intersections, roadway segments, and corridors. The safety practitioner should consider which implementation approach to utilize. Typical approaches include:

- Systemic Approach
- Spot Location Approach
- Comprehensive Approach incorporating human behavior issues

Each of these approaches has benefits and drawbacks. As Local agency practitioners identify their safety issues and analyze the data for crash patterns, they should be open to implementing a combination of these approaches, as documented in Sections 2 and 3 of this manual.

Systemic Approach

The Systemic Approach is primarily based on application of proven safety countermeasures at multiple crash locations, corridors, or geographic areas. Implementation of the Systemic Approach is generally based on 'system-wide' crash data with the estimates of the impacts being made in terms of benefits measured in traffic crash reduction and deployment cost. Identified locations experiencing high levels of crashes and locations with similar geometric features can be treated systemically with low-cost, proven safety countermeasures. *Note: The term "Systemic" used throughout in this manual is often exchanged with the term "Systematic" in many national safety documents and research studies. In general, safety practitioners will find these terms interchangeable. This manual uses "Systemic" to match the new HSM and the FHWA CMF Clearinghouse.*

Benefits of the Systemic Approach may include:

- Widespread effect. The Systemic Approach addresses safety issues at a large number of locations or on an entire local roadway network. It can also generate projects that combine HCCLs and locations with the potential for crashes and still have high Benefit to Cost (B/C) ratios. An example of this type of project could be upgrading pavement delineation and warning signs along a rural corridor: crashes may not have occurred on every curve or segment along the corridor, but all of the corridor's pavement delineation and warning signs can be upgraded at one time. For urban applications, an example could be protecting the left-turn phase of signalized intersections with

existing left-turn pockets: severe crashes may not have occurred at each of the left-turn movements, but with minor changes to the signal hardware and signing, all or many of a city's unprotected left-turn phases can be protected with one safety project.

- Crash type prevention. By focusing on a predominant crash type, an agency can address locations that have not experienced significant numbers of these types of crashes, but have similar characteristics or conditions as existing HCCLs. The resulting B/C ratios for these types of projects will be less than if only HCCLs are included; but by using low-cost countermeasures and including as many high crash locations as possible, the resulting B/C ratios should still be high enough to allow agencies to proactively address locations that have not experienced high numbers of these types of crashes. For urban areas, projects improving pedestrian crossings can be good examples of the Systemic Approach. By applying the countermeasures systemically, the agency can often justify these projects based on relatively high B/C ratios, even though some of the improvement locations have not experienced enough crashes to yield moderate-to-high B/C ratios on their own.
- Cost-effectiveness. Implementing low-cost solutions across an entire system or corridor can be a more cost-effective approach to addressing system-wide safety issues. Even though this approach does not address all (or total) safety issues for a given location, the deployment of low-cost countermeasures often result in the highest overall safety benefit for an agency with limited safety funding. An example of this would be an agency choosing to install rumble stripes along an entire corridor for equal or less money than realigning a small portion the roadway to fix a single curve.
- Reduced data needs. The Systemic Approach can be used without a detailed crash history for specific locations, thereby reducing data needs. For example, consider a long rural corridor, which includes a section that passes through an Indian Reservation: Even if there is no documented crash data for the portion of the corridor that passes through the reservation, the entire limits can be treated with the same low-cost improvements. As long as there are sufficient past crashes documented for the entire corridor, the project will still have a reasonably high B/C ratio.

Drawbacks of the Systemic Approach may include:

- Justifying improvements can be difficult. Because this approach does not always address locations with a history of crashes and active stakeholders, it can be difficult to justify the improvements. The Systemic Approach will rarely include a recommendation for a large-scale safety improvement at a single location. Since large-scale projects usually garner attention from decision makers, the media, elected officials, and the general public, safety practitioners often need to make additional efforts to explain the Systemic Approach and its benefits to those groups. Safety practitioners can utilize the high B/C ratios of these systemic projects to convey their benefits compared to high-profile, single location projects with lower B/C ratios.

Spot Location Approach

The Spot Location Approach is typically based on an analysis of crash history to identify locations that have significantly higher crashes and treat them accordingly. It is important to practitioners to

understand that for many locations, safety issues can be complicated and sometimes the most appropriate fixes are not quick, easy or cheap.

Benefits of the Spot Location Approach may include:

- Focus on demonstrated needs. The Spot Location Approach focuses directly on locations with a history of crashes and specifically addresses those crashes. Intersection improvements are some of the most common spot location projects. Intersections tend to have higher concentrations of crashes resulting from opposing traffic movements. These high crash concentrations often require stand-alone improvements to adequately resolve the safety issues.
- Justifying improvements can be easy. Because this approach addresses locations with a history of crashes, it is usually easy to justify improvements. For urban areas, reconfiguring/ reconstructing an entire intersection can be a good example of an effective Spot Location Approach. Large urban intersections can have extremely high crash concentrations, making major changes to the intersection the only way to significantly reduce future crashes. With these types of scenarios, even the highest cost countermeasures can be cost effective.
- If low-cost countermeasures are used, this approach can prove very cost effective. The Spot Location Approach does not always have to include moderate or high cost improvements. It is often appropriate for local agencies to make low-cost improvements at one location at a time. Ongoing maintenance and development projects offer great opportunities for these low-cost improvements to be constructed with no additional expense to local agencies.

Drawbacks of the Spot Location Approach may include:

- Assumption that the past equals the future. This approach assumes locations with a history of crashes will continue to experience the same number and type of crashes in the future. When agencies do not account for the random nature of roadway crashes (i.e., Regression to the Mean), moderate to high cost projects can be erroneously justified. Practitioners can mitigate this by using 5 years of crash data when analyzing their roadways. In addition, significant changes to land use or roadway characteristics in or around proposed projects can either increase or decrease the expected number of future crashes.
- Minimal overall benefit to the roadway network. Some local agencies use this approach with medium and high cost improvements at locations which do not represent their worst high crash concentration locations. The result can be projects with low B/C ratios and overall safety benefits that are not as high as if they utilized a Systemic Approach. This drawback can be minimized by safety practitioners who analyze their entire roadway network, propose spot location fixes only at their highest crash locations, and utilize lower cost countermeasures wherever appropriate.

The Spot Location Approach to traffic safety is ideally implemented along with the Systemic Approach to provide the best combination of safety treatments. For instance, the Spot Location Approach can be applied at locations where low-cost countermeasures are not expected to be effective in significantly

reducing future crashes or at those locations that have had low-cost countermeasures previously installed systemically but, after an assessment, continue to show a higher-than-average crash rate.

Comprehensive Approach

The Comprehensive Approach introduces the concept of the "5 E's of Safety": Education, Enforcement, Engineering, Emergency Response and Emerging Technologies. This approach recognizes that not all locations can be addressed solely by infrastructure improvements. Incorporating the "5 E's of Safety" is often required to achieve marked improvement in roadway safety. For instance, some roadway segments will be identified for which targeted enforcement is an appropriate countermeasure. Some of the most common violations are speeding, failure-to-yield, red light running, aggressive driving, failure to wear safety belts, distracted driving, and driving while impaired. When locations are identified as having these types of violations, coordination with the appropriate law enforcement agencies is needed to deploy visible targeted enforcement to reduce the potential for future driving violations and related crashes. To improve safety, education and outreach efforts can also be used to supplement enforcement efforts. Enforcement and/or education can also be effectively utilized as short-term ways to address high crash locations, until the recommended infrastructure project can be implemented.

1.7 Our "Safety Challenge" for Local Agencies

Caltrans, FHWA and Safe Transportation Research and Education Center (SafeTREC) "challenge" local agencies to initially commit one or more days to understanding and applying the concepts and tools outlined in this manual. Experienced safety practitioners working in agencies currently using a proactive approach can quickly review the topics in the manual and consider/test some of the new tools (e.g., TIMS) identified within it. In contrast, novice safety practitioners may need several days to better understand the underlying concepts in this manual to be able to complete the basic elements of a proactive safety analysis of their roadway network. In these situations, the room for knowledge growth, internal process improvements, and expected safety benefits will be even greater, which should more than offset the additional time invested.

By utilizing this simple framework for identifying, analyzing and implementing a proactive approach for improving safety on their roadways, practitioners will have a better understanding of their agencies' unique safety issues, the proven low-cost countermeasures that can reduce crashes, and the existing and future funding to implement the projects. This small investment of time will help local agencies achieve significant reductions in future fatalities, injuries and overall crashes. We believe these local agencies may also gain the added unexpected benefit of improved job satisfaction of those involved, as there are few more rewarding tasks than knowing that your efforts will result in future roadway users arriving safely at their destination instead of becoming statistics.

1.8 Summary of information in this Document

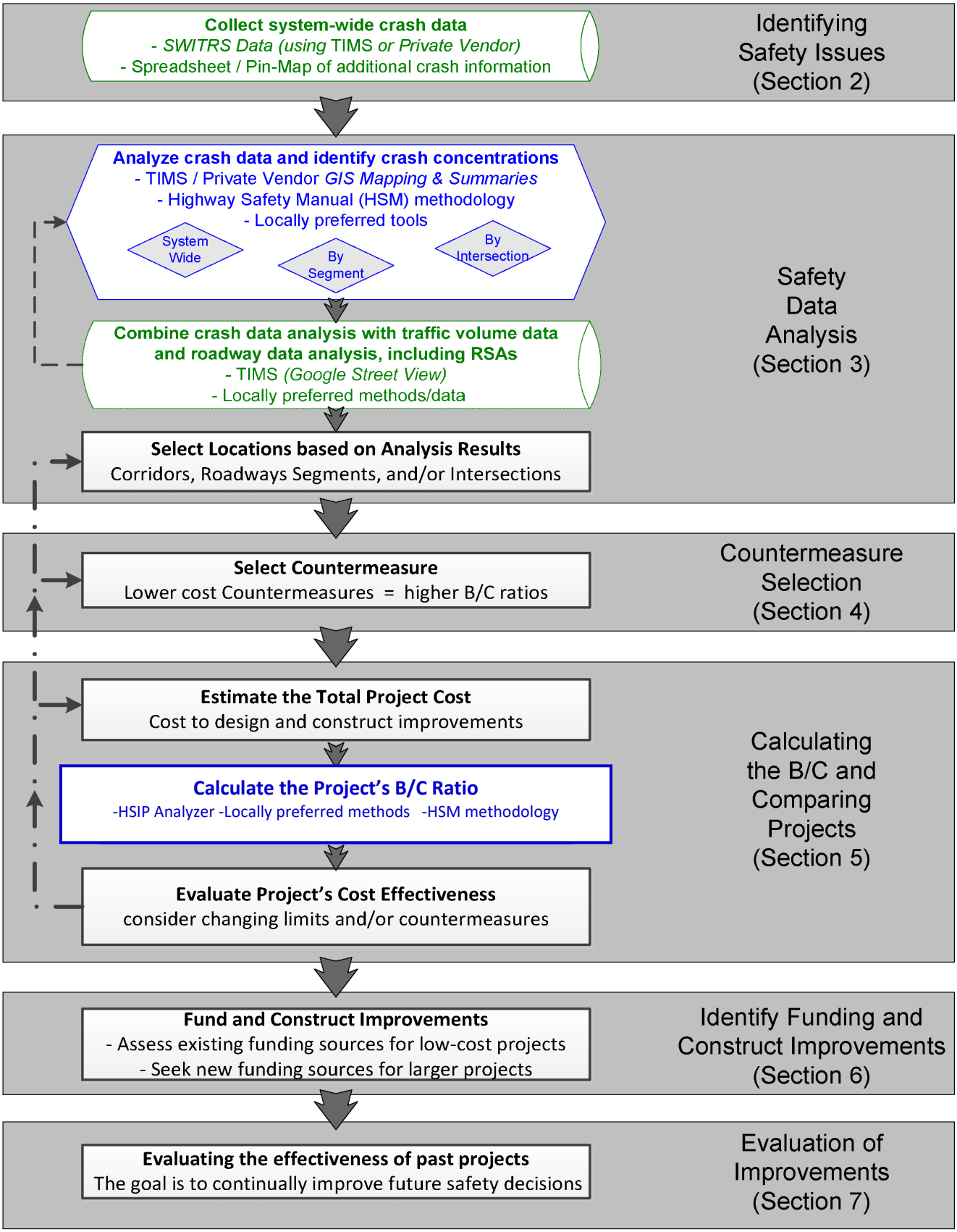
This document provides information on effectively identifying California's local roadway safety issues and the countermeasures that address them, ultimately leading to the effective implementation of safety projects that improve safety on local roadways. The document is not intended to be a comprehensive guide for roadway design and improvement or the only guide local agencies utilize for their safety analysis of their roadways.

Caltrans also expects this document will directly support its efforts in selecting local agency safety projects. The expectation is that as local agencies throughout the state utilize the proactive safety analysis approach outlined in this document, their applications for HSIP, and ATP projects will include lower cost improvements at locations with the highest safety needs. This will improve Caltrans' data-driven approach to statewide project selection of safety projects and maximize the safety benefits across California.

The proactive safety analysis framework incorporated in this document is summarized in Figure 1.

Figure 1

Local Roadway Safety: Proactive Safety Analysis Approach



The above flowchart illustrates how each of the individual sections of this document work together to make up a proactive safety analysis approach. These sections are briefly outlined below:

Section 2 of this manual provides an overview of the types of data to collect for the identification of roadway safety issues. It discusses sources of crash data and how they can be used.

Section 3 summarizes the types of analyses that can be conducted to determine what roadway countermeasures should be implemented. This section is the link between the data (Section 2) and the selection of appropriate countermeasures (Section 4). It provides definitions and examples of the qualitative and quantitative factors that should be considered when evaluating roadway safety issues.

Section 4 provides a description of selected countermeasures that have been shown to improve safety on local roads. It includes a basic set of strategies to implement at locations experiencing a history of crashes and their corresponding crash modification factors (CMF). The interrelationship between CMFs and Crash Reduction Factors (CRFs) are defined and used interchangeably throughout this document.

Section 5 defines a methodology for calculating a B/C ratio for a potential safety project. It includes sources for estimating projected costs and benefits and the specific values/formulas Caltrans uses for its statewide evaluations of HSIP projects. This section also discusses the potential value in reevaluating projects' overall cost effectiveness at this point in the safety analysis, including: refining the project's costs and/or changing the mix of countermeasures and locations.

Section 6 identifies existing and new funding opportunities for safety projects that local agencies should be considering. This section also briefly discusses some unique project development issues and strategies for safety projects as they proceed through design and construction.

Section 7 presents the process to complete an evaluation of installed treatments. After the countermeasures are installed, assessing their effectiveness will provide valuable information and can help determine which countermeasures should continue to be installed on other roadways to make them safer as well as those that should be limited or discontinued.

Appendix A presents a flowchart of the HSIP call-for-projects process. This flowchart demonstrates how this document interacts with these Caltrans calls-for-projects.

Appendix B contains Detailed Tables of countermeasures discussed in Section 4. This table includes detailed information about each countermeasure, including: where to use, why it works, general qualities (time, cost and effectiveness), crash type(s) addressed, crash reduction factor, and specific values for use in Caltrans HSIP calls-for-projects.

Appendix C includes a summary of "recommended actions" involved in a proactive safety analysis.

Appendix D contains the formulas used to calculate the B/C ratio of safety projects.

Appendix E presents TIMS tutorials that are available to assist local agencies in completing Caltrans call-for-projects application requirements and attachments. The tutorials include examples for Spot Location projects and systemic projects.

Appendix F presents a list of the abbreviations used in this document.

Appendix G presents a list of references.

2. Identifying Safety Issues

This document encourages local agency safety practitioners to proactively analyze their roadway networks with the intention of yielding the best overall safety benefits. When utilizing a proactive safety analysis approach, practitioners need to consider a wide range of data sources to get an overall picture of the safety needs.

There are a number of information sources that can be accessed to get a clearer picture of the roadway safety issues on the roadway network. These can be formal or informal sources, including:

Formal sources:

- State and local crash databases
- SafeTREC's TIMS website (or locally preferred mapping software)
- Law enforcement crash reports and citations
- Field assessments

Informal sources:

- Observational information from road maintenance crews, law enforcement, and first responders
- Citizen notification of safety concerns

Examining crash history will help practitioners identify locations with an existing roadway safety problem, and also identify locations that are susceptible to future roadway crashes. In addition to location identification, this data can provide information regarding crash causation that ultimately provides insight into identifying potentially effective countermeasures.

Emphasis on data-driven decisions is indicative of reliability and efficiency. The more reliable the data, the more likely the decisions regarding safety improvements will be effective. However, detailed, reliable crash data are not available in all areas. Under this circumstance, the practitioner should use the best available information and engineering judgment to make the best decisions. In an effort to mitigate these situations, UC Berkeley SafeTREC has developed the TIMS website, which includes GIS mapping tools to access fatal and injury crashes statewide. This site is now available to all California local agencies. See Section 2.2 for more details on TIMS.

It is generally accepted that at least 3 years, or preferably 5 years, of crash data be used for an analysis; additional years of crash data can provide better information. For low volume roadways and/or when only severe crashes are analyzed, more years of crash data may be necessary for an effective evaluation. Due to the randomness of crashes in a given year, a multi-year average of safety data will smooth outlier years of relatively high or low roadway crash rates. This concept is commonly referred to as "regression to the mean" and is critical in helping safety practitioners avoid making wrong inferences as they analyze their roadway network data. An example of this is an agency making a high-cost improvement at

a location in response to one or two tragic crashes. The Highway Safety Manual (HSM) includes more details on regression to the mean and methods to reduce the random nature of crashes.

There are some circumstances where additional years of crash data may not always be advantageous. First, it's important for practitioners to recognize that as more years of crash data are used, they need to consider changes in traffic patterns, physical infrastructure, land use, and demographics that may affect their projection of future crashes. Second, if practitioners only focus on many years of past crash data, they could miss emerging safety issues and crash trends. For these reasons, if practitioners sense one or more factors affecting crashes have changed or may be changing, they should consider looking at the crash data for the specific area on a yearly or 3-year moving average to expose any changes and crash trends that are occurring.

2.1 State and Local Crash Databases

California has a central repository for storing crash data called SWITRS, which stands for Statewide Integrated Traffic Records System. SWITRS is a comprehensive data source for doing roadway safety analysis that includes almost all public roads in the database except tribal roads which are currently not included. SWITRS information is available to California's local agencies, although many agencies have had difficulty identifying, extracting and utilizing their crash records from SWITRS. All California local agencies, especially those that currently have difficulty accessing and mapping crash data, are encouraged to utilize the SafeTREC TIMS website to access and map SWITRS data.

This document focuses on the SafeTREC TIMS website as a tool to access and map SWITRS data because TIMS is free to local agencies and the general public. At the same time, this document also acknowledges that TIMS currently does not offer some of the features currently available in some of the commercially available crash analysis software packages. For this reason, local agencies are encouraged to try TIMS, but they should not feel obligated to make a switch if they prefer using their vendor supplied crash analysis software. See section 2.2 for more details on TIMS.

Many agencies utilize one of several crash analysis software packages (e.g., Crossroads) to manage and access their crash records. Their use can be costly, but allows local road practitioners to identify locations with multiple roadway crashes, conduct an analysis that can produce predominant crash types, and identify associated roadway features that may have contributed. One drawback to agencies managing and updating their own individual databases is that the statewide database may become outdated and may not include the updated crash details like geo-coded locations. Agencies that manage and update their own individual databases are encouraged to share all updates, including any geo-coding information, with the SWITRS data managers at the California Highway Patrol. This will allow updated geo-coding and other crash features to be available on a statewide basis.

Recommended Action: Obtain at least 5 years of network-wide crash data to identify local roads that have a history of roadway crashes. This data will be used to identify predominant roadway crash locations, crash types and other common characteristics.

As practitioners gather formal and informal information relating to the safety of their roadway network, they are encouraged to develop one or more separate spreadsheets and/or pin-maps to help track and manage this data. (These spreadsheets/pin-maps should capture much of the data gathered in each of Sections 2.1 through 2.8). A spreadsheet and/or pin-map can serve as a database to help an agency identify locations and crash characteristics representing their greatest safety issues and guide them in identifying appropriate countermeasures.

The following spreadsheet is offered as an example, but each agency's spreadsheet should be reformatted to include data to meet their needs. Agencies should consider printing their spreadsheets on 'legal' or '11 x 17' paper for easy review of their data.

	General Information		Crash Information			Evaluation / Action		
Location & Date	Source/Type of information	Safety Issue/Problem	Nature of Crashes	Time of Day	Weather/Traffic Conditions	Staff Evaluation	Recommend Action	Resolution
1) Intersection "X"								
1) Feb 7, 2010	Input from law enforcement	Clearance Intervals need adjustment	V1-WB V2-SB Side-swipe	21:30	Dry, Night, Free-flowing	R. Jones 2/26/10	Increase all-red interval	Completed 2/26/10
1) Mar 9, 2010	Citizen Complaint	Ped Crossing unsafe due to RT turns	N/A	N/A	N/A	R. Jones 3/12/10	No RT on Red (Need study)	
2) Intersection "Y"								
2)								
3) Roadway Segment (PM 5.3 to PM 7.8)								
PM 6.4 to 6.8 Sep 29, 2011	Maintenance data	Extensive skid marks. Speed of Travel?	General WB: ROR	N/A	Dry Free-flowing	J. Smith 10/1/11	High Friction Overlay	Preparing HSIP App.
PM 7.1 Jan 5, 2011	Input from law enforcement	Stop Sign missing	N/A	N/A	N/A	J. Smith 1/5/11	Informed Maintenance	New sign 1/5/11

An example of a pin-map, which could be modified to capture much of the data gathered in Section 2, is shown in the following section as part of the TIMS output.

2.2 Transportation Injury Mapping System (TIMS)

The Safe Transportation Research and Education Center (SafeTREC) at the University of California, Berkeley, has developed a powerful website with tools for California's local agencies to gather data for their safety analyses. Their Transportation Injury Mapping System (TIMS) website provides safety practitioners with California crash data (SWITRS, i.e. Statewide Integrated Traffic Records System) and collision mapping and analysis tools. California local agencies are encouraged to utilize TIMS at: https://tims.berkeley.edu/

Site Features:

- Applications to query map and download geo-referenced SWITRS data.
- Summary tables based on data included in SWITRS individual crash reports. These summary tables can be generated based on specified data fields or spatial limits.
- Virtual field review by connecting the crash location to Google maps and Google Street View, allowing the examination of the existing roadway infrastructure and dimensions.
- A 'Help Tab' that provides step-by-step instructions.

Please note that SafeTREC is not able to incorporate all SWITRS crashes into TIMS due to poor crash location descriptions in the crash reports. Currently, TIMS includes the majority of California fatal and injury crashes but does not include Property Damage Only collisions.

Recommended Action: Consider augmenting your local agency's data collection approach with information available using the suite of TIMS tools. The TIMS tools (and/or purchased software applications) can help the safety practitioner complete or assist with each of the actions in Sections 2.1 through 2.8. This website includes several tutorials specifically designed to support the individual sections of this document. Local practitioners may find the TIMS output files as a great starting point to build their tracking spreadsheet discussed in the recommendation of Section 2.1.

2.3 Law Enforcement Crash Reports

Both State and local law enforcement officials can be an important source of roadway crash data. The actual law enforcement crash reports can be valuable in identifying the location and contributing circumstances to roadway crashes (e.g., did the highway hardware and features operate as intended: end treatment worked, no barrier in the passenger compartment, pavement not slippery when wet, signs visible, signal timing, etc.). The following variables can and should be extracted and compiled from the crash reports:

- Location
- Date and time
- Crash type
- Crash severity
- Weather conditions
- Lighting conditions
- Sequence of events and most harmful events
- Contributing circumstances
- Driver Variables: age of driver, DUIs, use of seat belt, etc.

Similar to the crash database, the information in the crash reports can be used to assist in the identification of potential infrastructure and non-infrastructure safety treatments and the deployment approach.

Recommended Action: Develop a working relationship with law enforcement officials responsible for enforcement and crash investigations. This could foster a partnership where sharing crash reports and safety information on problem roadway segments becomes an everyday occurrence. Practitioners with limited access to crash data are encouraged to use TIMS to assess the local crash report data.

2.4 Observational Information

Law enforcement officers, local agency maintenance crews, and Emergency Medical Services personnel can serve as valuable resources to identify problem areas. Since they travel extensively on local roads, they can continuously monitor roads for actual or potential problems (e.g., poor delineation, fixed objects near the roadway, missing signs, signs of vehicles leaving the road). Law enforcement observations of driver behavior and roadway elements can provide valuable information to the local road agency. Additionally, law enforcement officers are sometimes aware of problem areas based on citations written, even if crashes related to the violations have not yet occurred. Road maintenance crews may keep logs of their work, including sign and guardrail replacements, debris removal, and edge drop-off repairs. These logs can provide supplemental information about crashes and HCCLs that may not have been reported to law enforcement. Finally, Emergency Medical Service Crash Reports can provide an entirely different perspectives and set of observations relating to crash occurrences.

Information obtained from road maintenance crews, law enforcement officers, and Emergency Medical Services personnel can help support all three methods of implementation approaches: Spot Location treatments, systemic deployments, and the Comprehensive Approach. Often, traffic violations such as speeding and impaired driving lend themselves to education and enforcement solutions to address these behaviors and supplement the intended infrastructure countermeasures.

Recommended Action: Add information received from law enforcement, road maintenance crew, and Emergency Medical Service observations to the agency's tracking spreadsheet and/or pin-maps. Develop a system for maintenance crews to report and record observed roadway safety issues and a mechanism to address them.

2.5 Public Notifications

Occasionally, when unsafe situations are observed, local citizens may notify the local government by email, letter, telephone, or at a public meeting. Information identifying safety issues on local roads may also come from community or regional newspapers, newsletters, correspondence, and from local homeowner and neighborhood associations. These sources can serve as indicators that a safety issue may exist and may warrant further review and analysis to determine the extent of the issues. Citizen reports can be tracked along with official crash data; however, safety practitioners should not regard these reports as factual, unless proven by other methods. Local safety databases should only contain objective and verifiable data.

Recommended Action: Review and summarize information received from these sources, identifying segments or corridors with multiple notifications and record the locations, dates, and nature of the problem that are cited. Add information received from public notifications to tracking spreadsheets and/or pin-maps once confirmed.

2.6 Roadway Data and Devices

It is also valuable to obtain information about the existing roadway infrastructure. Currently, many local agencies have few of their roadway characteristics in a database. For these agencies, the establishment of a roadway database could be a long-term goal. The following roadway characteristics are often used to assist practitioners in safety analyses of roadway segments:

- Roadway surface (dirt, aggregate, asphalt, concrete)
- Roadway geometry (horizontal, vertical, flat)
- Lane information (number, width)
- Shoulder information (width, type)
- Median (type, width)
- Traffic control devices present (signs, pavement marking, signals, rumble stripes etc.)

- Roadside safety hardware (e.g., guardrail, crash cushions, drainage structures)

The TIMS site, described in Section 2.2, can provide safety practitioners with much of this roadway data virtually by using Google Maps and Google Street View. By utilizing TIMS (and/or private for-profit vendors), safety practitioners can save hours and even days of driving during the initial steps in the safety analysis of their network. Once agencies start to define individual safety projects for funding and future construction, actual field reviews are needed to ensure a complete understanding of the project location and context.

As local practitioners gather information about their existing roadway infrastructure, they need to determine whether it complies with the minimum standards for signs, breakaway supports, signals, pavement markings, protective barriers, etc. Practitioners should use the most current *California - Manual on Uniform Traffic Control Devices* (CA-MUTCD), which provides the minimum standard requirements for traffic control devices on all public streets, highways, bikeways, and private roads open to public travel.[6] In addition to ensuring compliance with the MUTCD, geometric standards for sight distance, curve radius, and intersection skew angle and roadway standards for lane width, shoulder width, clear recovery zone, and super-elevation should also be evaluated.

Roadway information can be combined with crash data to help local practitioners identify appropriate locations and treatments to improve safety. For example, if a local rural segment is experiencing a high number of horizontal curve-related crashes, analysis of the inventory of roadway elements could reveal that the roadway does not have sufficient signage installed in advance of many of those curves to give motorists warning of the pending change in roadway geometry.

Recommended Action: Identify and track roadway characteristics for the intersections, roadway segments, and corridors, including compliance with the minimum standards. At a minimum, this should be done for locations being considered for safety improvements, but ideally agencies would establish an extensive database of roadway data to help them proactively identify high risk roadway features.

2.7 Exposure Data

The number of crashes can sometimes provide misleading information about the most appropriate locations for treatment. Introducing exposure data helps to create a more effective comparison of locations. Exposure data provides a common metric to the crash data so roadway segments and intersections can be compared more appropriately, helping local agencies prioritize their potential safety improvements.

The most common type of exposure data used on roadway segments is traffic volume. Ideally, volume would be broken down by pedestrians, bicycles, cars, motorcycles, and large trucks. A count of the number of vehicles and non-motorized users can provide information for comparison. For example, if

two roadway segments have the same number of crashes but different traffic volumes, the segment with fewer vehicles (i.e., less exposure) will have a higher crash rate, meaning that vehicles were more likely to experience a crash along that roadway segment. In situations where traffic volume is not available, segment length or population can serve as an effective exposure element for comparison.

Recommended Action: Consider the availability of exposure data and track it along with the other crash data to help prioritize potential locations for safety improvements.

2.8 Field Assessments and Road Safety Audits

Local road practitioners should always consider conducting field assessments in conjunction with their collection of crash data to help identify problem locations. An assessment can be as informal as driving, walking or virtually viewing the road network looking for evidence of roadway crashes. Ideally, informal field assessments are to be performed by multidisciplinary teams that include a traffic safety expert, law enforcement personnel, and others. The team can visit several sites and document evidence of crashes or deficiencies on the roadway or roadside, including: damaged trees or fences, skid marks, ruts on the shoulder, car parts on the shoulder, and/or pavement drop-offs. This information, along with observations of actual driver-behavior, can be used to develop recommendations for improvement.

Field reviews can also be more formalized such as in conducting a Road Safety Audit (RSA). A RSA is a formal safety performance examination of an existing or future road by an independent, multidisciplinary team. The team examines and reports on existing or potential road safety issues and identifies opportunities for safety improvements for all road users. Agencies considering RSAs for the first time are encouraged to consider requesting support from FHWA. For more information on FHWA's free RSA support, go to their website at: http://safety.fhwa.dot.gov/rsa/.

Informal field assessments and more formal RSAs provide an opportunity for local safety practitioners to gather and summarize all of the information sources discussed in Section 2. They can also be used to identify potential project delivery obstacles. The field assessments/RSAs should identify major environmental, right-of-way, infrastructure, and operational issues that need to be considered when applying countermeasures.

Recommended Action: Consider completing formal or informal field assessments and RSAs at certain locations to help ensure all relevant information is collected and available for the safety practitioners to complete their safety analysis and identify the most appropriate countermeasures. It's recommended that local agencies develop simple straightforward criteria on when one of these will be undertaken. The information gathered during the assessments should be added to the agency's tracking spreadsheet, as discussed in section 2.

3. Safety Data Analysis

Proactive safety analysis will assist in making informed decisions on the type, deployment levels, and locations for safety countermeasures. This builds on the previous discussions on information sources that identify safety issues. 'Safety Data Analysis' is one of the most critical steps in an agency's overall proactive safety analysis approach. Ideally, agencies regularly analyze the safety data for their entire roadway networks to identify and prioritize the locations with the most severe safety issues. This step is often skipped by agencies reacting to a recent tragic crash and the corresponding public outcry, which may leave their most critical safety locations undetected.

As agencies analyze their safety data, they will need to select the implementation approach that most effectively address the safety issues identified; Systemic Approach, Spot Location Approach, Comprehensive Approach, or a combination of these approaches. For example, if a high number of crashes are occurring at a particular curve or along a short segment of roadway, a spot treatment may be appropriate. However, systemic treatment of multiple locations experiencing similar crash types may be necessary and most beneficial for reducing overall fatalities and injuries. These implementation approaches were described in Section 1.5. With all of the approaches, safety practitioners should be looking for patterns in the crash data and not just the total number of crashes. These patterns include: types of crashes, severity of crashes, mode of travel, pavement conditions, time of day, etc. Identifying and analyzing the patterns in the crash data will help ensure the most appropriate countermeasure is selected and the safety problems are effectively addressed.

3.1 Quantitative Analysis

Crash data analysis is used to determine the extent of the roadway safety issues, the priority for application of scarce resources, and the selection of appropriate countermeasures. The two main quantitative analysis methods for roadway crashes are crash frequency and crash rate.

Crash Frequency

Crash frequency is defined as the number of crashes occurring within a determined study area. A practitioner can determine crash volumes using methods discussed in Section 2, including: State crash database (SWITRS), TIMS, local agency crash databases, law enforcement crash reports, pin-maps, etc. The practitioner should analyze the data to identify locations and crash characteristics with the highest frequency. There are numerous methods to assist practitioners in this process. Each agency will have their own preferred methods for initially selecting their top priority locations. The following are a few examples of the methods used to determine Crash Frequency:

- Summarize the crashes by attributes such as type, severity and location to identify patterns in the crash data and the most significant problem locations.
    - Top 10 (or 20) lists of intersections and roadway segments. It is common to weight more severe crashes higher in this process.

- Spatially display the sites on a pin-map or a GIS software package.
    - For small or rural agencies with lower volume roadways, network-wide pin-maps may be all that is needed to identify the highest priority locations.
- Develop collision diagrams showing the direction of movement of vehicles, types of crashes, and pedestrians involved in the crashes.

As stated earlier, this manual acknowledges many local agency safety practitioners may have their preferred methods for completing these analyses. For those agencies that do not and for those willing to try something new, Caltrans recommends using the TIMS website along with the processes outlined in this document to complete these analyses.

Once the crash frequency information is collected and displayed, the practitioner can complete a methodical analysis by geographic area, route, or a cluster analysis to determine which locations have experienced a high or moderate level of crashes. The resulting crash information can be further analyzed for recurring patterns or events. As agencies consider their locations with high levels of crashes, they should understand the overall random nature of crashes and the concept of "regression to the mean", as discussed in Section 2. Otherwise, if the natural variations in crash occurrence are not accounted for, a site might be selected for study when the number of crashes is randomly high, or overlooked when the number of crashes is randomly low.

Crash Rate

Crash rate analysis can be a useful tool to determine how a specific roadway or segment compares with similar roadway types on the network. A simple count of the number of crashes can be inadequate when comparing multiple roadways of varying lengths and/or traffic volume. Local agencies are also encouraged to compare their crashes with those occurring in similar areas around the state; doing so will help in determining just how severe the number and types of crashes are in the local area. When working with limited budgets, Crash Rates are often used to prioritize locations for safety improvements that will achieve the greatest safety benefits with limited resources. Where traffic volume data is unavailable, other information can be used to provide exposure information. One often-used factor is the length of the roadway segment on each route studied. Comparing the number of roadway crashes per mile or per intersection can help an agency identify potential opportunities to improve safety. The FHWA Roadway Departure Safety and Intersection Safety manuals include the following formulas for calculating crash rates on roadway segments and intersections:

The crash rate for crashes on a roadway is calculated as:

R = (C x 100,000,000) / (V x 365 x N x L)

Where:

R = Crash rate for the road segment expressed as crashes per 100 million vehicle-miles of travel,
C = Total number of crashes in the study period
V = Traffic volumes using Average Annual Daily Traffic (AADT) volumes
N = Number of years of data
L = Length of the roadway segment in miles

The crash rate for crashes at an intersection is calculated as:

R = (1,000,000 x C) / (365 x N x V)

Where:

R = Crash rate for the intersection expressed as crashes per million entering vehicles (MEV)
C= Total number of intersection-related crashes in the study period
N = Number of years of data
V = Traffic volumes entering the intersection daily

Similar to Crash Frequency, there are numerous methods for local safety practitioners to utilize Crash Rate in their safety data analysis and each will have their own preferred methods for initially selecting their top priority locations. The following are a few examples:

- Top 10 (or 20) lists of roadway segments with the highest crashes in relationship to roadway length, traffic volumes, and/or population density.
- Top 10 (or 20) lists of intersections, sorted by crash rate.
- Top 10 (or 20) lists of the highest volume intersections, sorted by crash frequency or rate.

Even though crash frequency and crash rate are helpful for local agency safety practitioners to effectively rank their most critical locations for improvements, the lack of reliable statewide traffic volumes for all roadway types precludes Caltrans from using the crash rate methodology in their statewide project scoring and ranking processes for the HSIP (discussed in more detail in Section 5).

Recommended Action: Complete a quantitative analysis of the roadway data using both Crash Frequency and Crash Rate methodologies. Safety practitioners should look for patterns in the crash data, including: types of crashes, severity of crashes, mode of travel, pavement conditions, roadway characteristics, time of day, intersection control, etc.

3.2 Qualitative Analysis

Qualitative analysis considers the physical characteristics of the roadway network, through the examination of maps, photographs, and field assessments. Certain roadway infrastructure characteristics relate to design standard and compliance issues and should continually be identified and upgraded on a network-wide basis (e.g., signing and pavement delineation characteristics relating to CA-MUTCD compliance as discussed in more detail below). Other roadway characteristics are more important as they relate to locations with high crash frequencies and rates (e.g., well defined pedestrian

paths crossing the roadway or a high number of utility poles/fixed objects adjacent to the edge of travel way). All of these characteristics should to be accounted for in an agency's proactive safety analysis.

Ensuring Compliance with CA-MUTCD and Design Standards

It is important for local agencies to continually evaluate their roadways for compliance with the minimum safety standards. The CA-MUTCD provides the minimum standard requirements for traffic control devices on all public streets, highways, bikeways, and private roads open to public travel. In addition to ensuring compliance with the CA-MUTCD, geometric standards should be evaluated as they relate to sight distance, curve radius, and intersection skew angle and roadway standards for lane width, shoulder width, clear recovery zone, and super-elevation. Many local agencies have their own specific roadway design standards, while others rely on Caltrans' Highway Design Manual[7], FHWA's "Green Book" policy manual[8] and PEDSAFE guide[9], and AASHTO's Roadside Design Guide[10]. If the traffic control devices or roadway geometry are not in compliance, appropriate devices/countermeasures should be installed. Non-compliance is an important consideration that can affect road safety and may have liability implications for a jurisdiction. Using CA-MUTCD compliant devices results in uniformity among California roadways and serves to meet road user expectations.

Field Assessments

While the qualitative analysis of compliance issues should continually occur on a network-wide basis, a qualitative analysis should also occur for each of the locations and corridors identified as a result of a 'Quantitative Analysis'. The consideration of roadway infrastructure characteristics in conjunction with crash frequency or crash rate gives a more complete picture of overall safety and should be used in an agency's identification and prioritization process for locations needing safety improvements. The qualitative assessment of HCCLs can be completed through the examination of maps and photographs, but the importance of in-field assessments by multi-disciplinary teams should not be underestimated. In some cases, field reviews of all potential project locations may not be practical, so safety practitioners are encouraged to utilize internet-mapping tools to view maps and photographs and virtually visit these sites from their offices.

Actual field visits or RSAs can be done at the highest priority locations before or during the countermeasure selection process. In many cases, field assessments are often the only way for practitioners to identify potential countermeasure implementation and project delivery obstacles. Without in-field assessments, right-of-way, infrastructure, and operational constraints can be overlooked, including: sensitive environmental resources (widening may not be feasible next to wetlands), roadway users (rumble strips may not be feasible on roadways with high bicycle volumes and narrow shoulders), or nearby roadway stakeholders (flashing beacons may be problematic for adjacent residents.) Assessments can provide critical information for local practitioners as they prioritize their crash locations and select countermeasures with the greatest potential for cost effective deployment.

Recommended Action: Incorporate qualitative analysis elements into agency's proactive analysis approach. Consider completing field assessments and RSAs to identify locations with roadway

infrastructure characteristics that relate to both compliance issues and high crash frequencies/rates. As part of field assessments, common roadway and crash characteristics should be identified for the potential systemic deployment of countermeasures. Rather than reviewing all crash sites individually, agencies may find the use of Internet mapping tools offers significant time savings. For agencies without a preferred virtual field review method, the SafeTREC TIMS website automatically links the SWITRS crash locations to Google Maps and Google Street View.

Caltrans recommends all agencies complete both quantitative and qualitative analyses before starting their applications for HSIP program funding. The findings from these analyses should be documented in spreadsheets and/or pin-maps similar to the ones discussed in Section 2.

4. Countermeasure Selection

Once locations and crash problems are identified as illustrated in Sections 2 and 3, the safety practitioners will need to select the set of proposed safety improvements to reduce the likelihood of future crashes. Individual elements of standard safety improvements are referred to as countermeasures and most countermeasures have corresponding Crash Modification Factors (CMFs).

When applied correctly, CMFs can help agencies identify the expected safety impacts of installing various countermeasures to reduce crashes. CMFs are multiplicative factors used to estimate the expected number of crashes after implementing a given countermeasure at a specific site (the lower the CMF, the greater the expected reduction in crashes). Crash Reduction Factors (CRFs) are directly connected to the CMFs and are another indication of the effectiveness of a particular treatment, measured by the percentage of crashes the countermeasure is expected to reduce. The CRF for a countermeasure is defined mathematically as (1 – CMF) (the higher the CRF, the greater the expected reduction in crashes). *NOTE: Given that CRF values can be more intuitive when analyzing roadways for potential "reductions" in crashes; this document shows CRF values in the countermeasure tables. The terms CMFs and CRFs are used interchangeably throughout the text of this section and in other sections of this document.*

In an effort to stretch the limited highway safety funding, local transportation agencies are encouraged to identify and implement the optimal combination of countermeasures to achieve the greatest benefits. Combined with crash cost data and project cost information, CRFs can help safety practitioners compare the B/C ratio of multiple countermeasures and then choose the most appropriate application for their proposed safety improvement projects.

As agencies consider the overall scope/cost of their projects, they also need to consider the number of locations to which each countermeasure may be applied in order to maximize the B/C ratio and the overall effectiveness of their limited safety funding. For HCCLs with varying causes, the Spot Location Approach may be the most appropriate. In contrast, the Systemic Approach should be considered where a high proportion of similar crash types tend to occur at locations that share common geometric or operational elements. In these situations, installing the same low-cost safety countermeasure at multiple locations can increase the cost effectiveness of the safety improvement, allowing an increased number of treatments to be applied.

It is important to note that there are many safety issues and corresponding countermeasures that are more "maintenance" in nature (e.g., visibility issues relating to the need for brush clearing and roadway departure issues relating to the need to replace shoulder backing). As these issues are identified when investigating crash locations, it's expected that the local safety practitioners would take the necessary steps to remedy the situation in the short-term. For this reason, most of the common maintenance-type safety countermeasures are not included in this document.

4.1 Selecting Countermeasures and Crash Modification Factors / Crash Reduction Factors

Selecting an appropriate countermeasure and corresponding CMF is similar to choosing the right tool for a job. In some cases, a countermeasure and CMF may not be perfect, but will still work well enough to get the job done by providing a reasonable estimation of the countermeasure's effect. In other cases, using an improper countermeasure or CMF may do more harm than good. Applying a CMF that does not fit a specific situation may give a false sense of the countermeasure's safety effectiveness and may result in an increased safety problem.

The Federal Highway Administration (FHWA) is leading a concerted effort to develop information on CMFs and makes it available to State and local agencies to assist with highway safety planning. The CMF Clearinghouse, a free online database introduced in 2009 and accessible at http://www.cmfclearinghouse.org/, details the varying quality and reliability of CMFs available to transportation professionals.

FHWA has identified three main considerations to assure appropriate selection of CMFs for a given countermeasure: the **availability** of relevant CMFs, the **applicability** of available CMFs, and the **quality** of applicable CMFs. The following sections detail these considerations and describe how Caltrans recommended CRF and service life values meet these criteria.

Availability: The availability of a CMF that applies to a specific situation depends on whether research has been conducted to determine the safety effects of a particular countermeasure or combination of countermeasures, and whether researchers have documented it. The CMF Clearinghouse contains more than 2,900 CMFs and receives quarterly updates to include the latest research.

At this point, Caltrans has established a small subset of 82 countermeasures and a single CRF for each of these countermeasures that must be used when submitting applications for Caltrans statewide calls-for-projects. This methodology allows for a statewide data-driven process that facilitates a fair and accurate comparison of project applications. (The reason for limiting the number of countermeasures is further explained below under “applicability”).

Applicability: In general, once a local safety practitioner determines that one or more CMFs exist for a specific countermeasure, the next step is to determine which CMF is the most applicable. Applicability depends on how closely the CMF represents the situation to which it will be applied. Safety practitioners should evaluate the potentially applicable CMFs, eliminating any that are not appropriate for the situation. Practitioners should only choose the most appropriate CMFs for their specific project based on factors including but not limited to: urban areas vs. rural areas; low vs. high traffic volumes; 2-lane vs. 6-lane roadways; individual vs. combination treatments; signalized vs. non-signalized intersections; and minor crashes vs. fatal crashes. If practitioners choose to use a CMF outside the range of applicability, the safety effect will likely be over or underestimated.

The mix of countermeasures and CRFs included in this document is intended to meet Caltrans' goal for a data-driven award process for local agencies to follow that allows for a fair and accurate comparison of project applications. Where possible and appropriate, the CRF value intended for use in statewide calls-for-projects is based on research studies that specifically established the CRF to be used for 'all' project areas, roadway types, and traffic volumes. Where not all applicability factors have already been established by prior research, Caltrans worked closely with FHWA to approximate CRFs for countermeasures often utilized by local agencies.

Quality: Often a search of the CMF Clearing House results in multiple CMFs for the same countermeasure. A practitioner needs to examine the quality of each CMF. The quality of a CMF can vary greatly depending on several factors associated with the process of developing the CMF. The primary factors that determine the quality of a CMF are the study design, sample size, standard error, potential bias, and data source. The CMF Clearinghouse provides a star rating for each based on a scale of 1 to 5, where 5 indicates the highest quality. The most reliable CMFs in the HSM are indicated with a bold font.

Wherever possible, the CRFs included in this document are based on research that has a CMF Clearinghouse star rating of 3 or more. For countermeasures that do not have corresponding research of a star rating of 3 or more but were deemed important to provide flexibility to local practitioners, Caltrans worked closely with FHWA to establish CRFs based on the best available research.

4.2 List of Countermeasures

The list of countermeasures discussed in this section is not an all-inclusive list, and only includes those available in the Caltrans' HSIP Cycle 11 Call-for-projects. Only thoroughly researched countermeasures with a readiness to be applied by local agencies on a statewide basis are utilized. In addition, the California Local HSIP program places further restrictions on the eligibility of some countermeasures to meet the most critical needs on California local roadways. Practitioners are encouraged to utilize the FHWA CMF Clearinghouse for a more comprehensive list as they establish their local agency specific set of proposed improvements and prioritize their projects.

The countermeasures listed in the following three tables have been sorted into 3 categories: Signalized Intersection, Non-Signalized Intersection, and Roadway Segment. Pedestrian and bicycle related countermeasures have been included in each of these categories, as the consideration of non-motorized travel is important for all roadway classifications and locations. The countermeasures included in these tables are also used in the HSIP Analyzer. When selecting countermeasures and CMFs to apply to their specific safety needs, local agency safety practitioners should consider the **availability, applicability**, and **quality** of CMFs, as discussed in section 4.1.

Only Crash Types, CRFs, Expected Lives, and HSIP Funding Eligibility of the countermeasures for use in Caltrans local HSIP program are provided in this section. Fields in the countermeasure tables are:

- **Crash Types -** "All", "P & B" (Pedestrian and Bicycle), "Night", "Emergency Vehicle", or "Animal".
- **CRF -** Crash Reduction Factor used for HSIP calls-for-projects.
- **Expected Life -** 10 years or 20 years.
- **Funding Eligibility –** the maximum HSIP reimbursement ratio for HSIP Cycle 11 Call-for-projects.
    - Eighty-one (81) countermeasures: 90%
    - One (1) countermeasure: 50% (CM No. S03: Improve signal timing, as this CM will improve the signal operation rather than merely the safety.)
- **Systemic Approach Opportunity -** Opportunity to Implement Using a Systemic Approach: "Very High", "High", "Medium" or "Low".

The list of countermeasures presented in this section is intended to be a quick-reference summary. Appendix B of this manual provides more details on each of these countermeasures including Where to use, Why it works, General Qualities (Time, Cost and Effectiveness), and information from FHWA CMF Clearinghouse (Crash Types Addressed and range of Crash Reduction Factor).

Recommended Action: At this point, agencies should use all information and results obtained by completing the actions in Sections 2, 3 and 4 to select the appropriate countermeasures for their HCCLs and systemic improvements. As novice safety practitioners select countermeasures, they must realize that a reasonable level of traffic 'engineering judgment' is required and that this manual should not be used as a simple cheat-sheet for preparing and submitting applications for funding.

Table 2. Countermeasures for Non-Signalized Intersections

No.	Type	Countermeasure Name	Crash Type	CRF	Expected Life (Years)	HSIP Funding Eligibility	Systemic Approach Opportunity?
NS01	Lighting	Add intersection lighting (NS.I.)	Night	40%	20	90%	Medium
NS02	Control	Convert to all-way STOP control (from 2-way or Yield control)	All	50%	10	90%	High
NS03	Control	Install signals	All	30%	20	90%	Low
NS04	Control	Convert intersection to roundabout (from all way stop)	All	Varies	20	90%	Low
NS05	Control	Convert intersection to roundabout (from stop or yield control on minor road)	All	Varies	20	90%	Low
NS05mr*	Control	Convert intersection to mini-roundabout	All	30%	20	90%	Medium
NS06	Operation/ Warning	Install/upgrade larger or additional stop signs or other intersection warning/regulatory signs	All	15%	10	90%	Very High
NS07	Operation/ Warning	Upgrade intersection pavement markings (NS.I.)	All	25%	10	90%	Very High
NS08	Operation/ Warning	Install Flashing Beacons at Stop-Controlled Intersections	All	15%	10	90%	High
NS09	Operation/ Warning	Install flashing beacons as advance warning (NS.I.)	All	30%	10	90%	High
NS10	Operation/ Warning	Install transverse rumble strips on approaches	All	20%	10	90%	High
NS11	Operation/ Warning	Improve sight distance to intersection (Clear Sight Triangles)	All	20%	10	90%	High
NS12	Operation/ Warning	Improve pavement friction (High Friction Surface Treatments)	All	55%	10	90%	Medium
NS13	Geometric Mod.	Install splitter-islands on the minor road approaches	All	40%	20	90%	Medium
NS14	Geometric Mod.	Install raised median on approaches (NS.I.)	All	25%	20	90%	Medium
NS15	Geometric Mod.	Create directional median openings to allow (and restrict) left-turns and u-turns (NS.I.)	All	50%	20	90%	Medium
NS16	Geometric Mod.	Reduced Left-Turn Conflict Intersections (NS.I.)	All	50%	20	90%	Medium
NS17	Geometric Mod.	Install right-turn lane (NS.I.)	All	20%	20	90%	Low
NS18	Geometric Mod.	Install left-turn lane (where no left-turn lane exists)	All	35%	20	90%	Low
NS19PB	Ped and Bike	Install raised medians / refuge islands (NS.I.)	P & B	45%	20	90%	Medium
NS20PB	Ped and Bike	Install pedestrian crossing at uncontrolled locations (new signs and markings only)	P & B	25%	10	90%	High
NS21PB	Ped and Bike	Install/upgrade pedestrian crossing at uncontrolled locations (with enhanced safety features)	P & B	35%	20	90%	Medium
NS22PB	Ped and Bike	Install Rectangular Rapid Flashing Beacon (RRFB)	P & B	35%	20	90%	Medium
NS23PB	Ped and Bike	Install Pedestrian Signal (including Pedestrian Hybrid Beacon (HAWK))	P & B	55%	20	90%	Low

*CM NS05mr is a new countermeasure added for HSIP Cycle 11 Call-for-projects.

Table 1. Countermeasures for Signalized Intersections

No.	Type	Countermeasure Name	Crash Type	CRF	Expected Life (Years)	HSIP Funding Eligibility	Systemic Approach Opportunity?
S01	Lighting	Add intersection lighting (S.I.)	Night	40%	20	90%	Medium
S02	Signal Mod.	Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, and number	All	15%	10	90%	Very High
S03	Signal Mod.	Improve signal timing (coordination, phases, red, yellow, or operation)	All	15%	10	50%	Very High
~~S04*~~	~~Signal Mod.~~	~~Provide Advanced Dilemma Zone Detection for high speed approaches~~	~~All~~	~~40%~~	~~10~~	~~90%~~	~~High~~
S05	Signal Mod.	Install emergency vehicle pre-emption systems	Emergency Vehicle	70%	10	90%	High
S06	Signal Mod.	Install left-turn lane and add turn phase (signal has no left-turn lane or phase before)	All	55%	20	90%	Low
S07	Signal Mod.	Provide protected left turn phase (left turn lane already exists)	All	30%	20	90%	High
S08	Signal Mod.	Convert signal to mast arm (from pedestal-mounted)	All	30%	20	90%	Medium
S09	Operation/ Warning	Install raised pavement markers and striping (Through Intersection)	All	10%	10	90%	Very High
S10	Operation/ Warning	Install flashing beacons as advance warning (S.I.)	All	30%	10	90%	Medium
S11	Operation/ Warning	Improve pavement friction (High Friction Surface Treatments)	All	55%	10	90%	Medium
S12	Geometric Mod.	Install raised median on approaches (S.I.)	All	25%	20	90%	Medium
S13PB	Geometric Mod.	Install pedestrian median fencing on approaches	P & B	35%	20	90%	Low
S14	Geometric Mod.	Create directional median openings to allow (and restrict) left-turns and u-turns (S.I.)	All	50%	20	90%	Medium
S15	Geometric Mod.	Reduced Left-Turn Conflict Intersections (S.I.)	All	50%	20	90%	Medium
S16	Geometric Mod.	Convert intersection to roundabout (from signal)	All	Varies	20	90%	Low
S17PB	Ped and Bike	Install pedestrian countdown signal heads	P & B	25%	20	90%	Very High
S18PB	Ped and Bike	Install pedestrian crossing (S.I.)	P & B	25%	20	90%	High
S19PB	Ped and Bike	Pedestrian Scramble	P & B	40%	20	90%	High
S20PB	Ped and Bike	Install advance stop bar before crosswalk (Bicycle Box)	P & B	15%	10	90%	Very High
S21PB	Ped and Bike	Modify signal phasing to implement a Leading Pedestrian Interval (LPI)	P & B	60%	10	90%	Very High

*CM S04 has been deleted in HSIP Cycle 11 Call-for-projects.

Table 3. Countermeasures for Roadways

No.	Type	Countermeasure Name	Crash Type	CRF	Expected Life (Years)	HSIP Funding Eligibility	Systemic Approach Opportunity?
R01	Lighting	Add segment lighting	Night	35%	20	90%	Medium
R02	Remove/ Shield Obstacles	Remove or relocate fixed objects outside of Clear Recovery Zone	All	35%	20	90%	High
R03	Remove/ Shield Obstacles	Install Median Barrier	All	25%	20	90%	Medium
R04	Remove/ Shield Obstacles	Install Guardrail	All	25%	20	90%	High
R05	Remove/ Shield Obstacles	Install impact attenuators	All	25%	10	90%	High
R06	Remove/ Shield Obstacles	Flatten side slopes	All	30%	20	90%	Medium
R07	Remove/ Shield Obstacles	Flatten side slopes and remove guardrail	All	40%	20	90%	Medium
R08	Geometric Mod.	Install raised median	All	25%	20	90%	Medium
R09	Geometric Mod.	Install median (flush)	All	15%	20	90%	Medium
R10PB	Geometric Mod.	Install pedestrian median fencing on approaches	P & B	35%	20	90%	Low
R11	Geometric Mod.	Install acceleration/ deceleration lanes	All	25%	20	90%	Low
R12	Geometric Mod.	Widen lane (initially less than 10 ft)	All	25%	20	90%	Medium
R13	Geometric Mod.	Add two-way left-turn lane	All	30%	20	90%	Medium
R14	Geometric Mod.	Road Diet (Reduce travel lanes and add a two way left-turn and bike lanes)	All	35%	20	90%	Medium
R15	Geometric Mod.	Widen shoulder	All	30%	20	90%	Medium
R16	Geometric Mod.	Curve Shoulder widening (Outside Only)	All	45%	20	90%	Medium
R17	Geometric Mod.	Improve horizontal alignment (flatten curves)	All	50%	20	90%	Low
R18	Geometric Mod.	Flatten crest vertical curve	All	25%	20	90%	Low
R19	Geometric Mod.	Improve curve superelevation	All	45%	20	90%	Medium
R20	Geometric Mod.	Convert from two-way to one-way traffic	All	35%	20	90%	Medium
R21	Geometric Mod.	Improve pavement friction (High Friction Surface Treatments)	All	55%	10	90%	High

Table 3. Countermeasures for Roadways (Continued)

No.	Type	Countermeasure Name	Crash Type	CRF	Expected Life (Years)	HSIP Funding Eligibility	Systemic Approach Opportunity?
R22	Operation/ Warning	Install/Upgrade signs with new fluorescent sheeting (regulatory or warning)	All	15%	10	90%	Very High
R23	Operation/ Warning	Install chevron signs on horizontal curves	All	40%	10	90%	Very High
R24	Operation/ Warning	Install curve advance warning signs	All	25%	10	90%	Very High
R25	Operation/ Warning	Install curve advance warning signs (flashing beacon)	All	30%	10	90%	High
R26	Operation/ Warning	Install dynamic/variable speed warning signs	All	30%	10	90%	High
R27	Operation/ Warning	Install delineators, reflectors and/or object markers	All	15%	10	90%	Very High
R28	Operation/ Warning	Install edge-lines and centerlines	All	25%	10	90%	Very High
R29	Operation/ Warning	Install no-passing line	All	45%	10	90%	Very High
R30	Operation/ Warning	Install centerline rumble strips/stripes	All	20%	10	90%	High
R31	Operation/ Warning	Install edgeline rumble strips/stripes	All	15%	10	90%	High
R32PB	Ped and Bike	Install bike lanes	P & B	35%	20	90%	High
R33PB	Ped and Bike	Install Separated Bike Lanes	P & B	45%	20	90%	High
R34PB	Ped and Bike	Install sidewalk/pathway (to avoid walking along roadway)	P & B	80%	20	90%	Medium
R35PB	Ped and Bike	Install/upgrade pedestrian crossing (with enhanced safety features)	P & B	35%	20	90%	Medium
R36PB	Ped and Bike	Install raised pedestrian crossing	P & B	35%	20	90%	Medium
R37PB	Ped and Bike	Install Rectangular Rapid Flashing Beacon (RRFB)	P & B	35%	20	90%	Medium
R38	Animal	Install animal fencing	Animal	80%	20	90%	Medium

5. Calculating the B/C Ratio and Comparing Projects

Practitioners need to consider the expected B/C ratio of their proposed projects. This is an important step in a proactive safety analysis process because it provides two key pieces of information: First, it defines the cost effectiveness of the proposed projects; and second, it gives the safety practitioner a means to help prioritize their safety projects both inside the agency's traffic safety section and against other proposed operational and maintenance projects competing for funding.

5.1 Estimate the Benefit of Implementing Proposed Improvements

Sections 2 through 4 provide the practitioner all the information needed to calculate the expected 'Benefit' of the proposed safety projects. The resulting expected benefit value is derived by applying the proposed countermeasures and corresponding CMFs to the expected crashes. It is of critical importance for the practitioner to understand that misapplication of a CMF will lead to misinformed decisions. Four main factors need to be considered when applying countermeasures and CMFs to calculate the expected benefit value: (1) how to estimate the number of expected crashes without treatment, (2) how to apply CMFs by type and severity, (3) how to apply multiple CMFs if multiple treatments are to be included in the same project, and (4) how to apply a benefit value by crash severity. The following text explains how these factors affect the expected benefit value in more detail.

Estimating expected crashes without treatment: Before applying CMFs, local safety practitioners first need to select countermeasures and CMFs. The CMF is applied to the expected safety performance (expected crashes) without any treatment in order to estimate the expected crashes with the treatment. The reduction in expected crashes multiplied by the expected costs per each crash gives the practitioner the expected benefit.

As mentioned earlier in this manual, the random nature of roadway crashes suggests that over time the number of crashes at any particular locations will change. This concept is known as "regression to the mean" and it gives rise to the concern that a site might be selected for study when the crashes are at a randomly high fluctuation, or overlooked from study when the site is at a randomly low fluctuation. The HSM presents several methods for estimating the expected safety performance of a roadway or intersection including the Empirical Bayes method, which combines observed information from the site of interest with information from similar sites to estimate the expected crashes without treatment. Another common way to minimize the impact of regression to the mean is to increase the number of years of crash data being analyzed.

For statewide calls-for-projects, Caltrans strives to ensure that all projects are fairly ranked based on a consistent statewide approach. Given this, Caltrans has avoided using methodology requiring agencies to mathematically adjust their crash data (e.g., Empirical Bayes) and instead has opted to use 5 years of "observed crashes" in estimating "expected crashes."

Applying CMFs by type and severity: Section 4.1 of this manual discusses the application of CMFs and the need for them to represent the situation to which they will be applied. It also stresses the need for

practitioners to choose the most appropriate CMFs for their specific project. In many circumstances, estimating the change in crashes by type and severity is useful; however, local safety practitioners only can use this approach when CMFs exist for the specific crash types and severities in question. If practitioners choose to use a CMF outside the range of applicability, the safety effect may be over- or underestimated. (For example: past research relating to installing a channelized left turn lane, has estimated CMFs as high as 68% for Right-Angle crashes of all severities and as low as 11% for Rear-End crashes with severities of only fatal and injury).

Applying multiple CMFs: In real-world scenarios, transportation agencies commonly install more than one countermeasure per project as part of their safety improvement program. This leads to the question, "What is the safety effect of the combined countermeasures?" The calculation methods that Transportation agencies use include: applying the CMF for the single countermeasure expected to achieve the greatest reduction, applying CMFs separately by crash type and summing them to get a project-level effect, and applying CMFs based on a review of crash patterns, etc. Regardless of the specific method employed, “engineering judgment” is required when combining multiple CMFs and it is important for local agencies to apply their method consistently throughout their analysis to ensure a fair comparison of projects.

One common practice is to assume that CMFs are multiplicative when they are applied to the same set of crash data. In other words, each successive countermeasure will achieve an additional benefit when implemented in combination with other countermeasures. The multiplicative method is a common, generally accepted method and is presented in the HSM and in the CMF Clearinghouse. This method is also used in the HSIP calls-for-projects.

To allow agencies maximum flexibility in combining countermeasures and locations into a single project while ensuring all projects can be consistently ranked on a statewide basis, Caltrans only allows up to three (3) individual countermeasures can be utilized in the B/C ratio for a project location site. The CMFs are multiplicative if there are multiple countermeasures, i.e. each successive countermeasure will achieve an additional benefit based on the remainder of the crashes after the effect of the prior countermeasures, not the original number of the crashes.

More information on these requirements and procedures are provided in the documents (Application Form Instructions, etc.) for each call-for-projects.

Applying benefit value by crash severity: The last step in estimating the overall benefit of a proposed improvement project is to multiply the expected reduction in crashes by a generally accepted value for the “cost” of crashes. In other words, the expected “benefit” value for a project is actually the expected “reduction in costs” value from reducing future crashes. There are many sources for the costs of crashes (e.g., HSM, FHWA & National Safety Council) and some of the sources vary widely depending on how they account for the economic value of a life and when the numbers were last updated.

When calculating the "benefit" to be used in calculating an improvement's B/C ratio, it is important for the practitioner to consider whether a total benefit value for the "life" of the improvement is needed or if the benefit value should be annualized (i.e., benefit per year). Whichever method is used to calculate the overall cost of the improvements must also be used for calculating the benefit.

Caltrans has currently chosen to use published Cost-of-Crash values from the first edition of the HSM and increase the values by 4% annually. These values may be updated in the future, when updated cost-of-crash values are published by FHWA or another national source. The specific values for each of the crash severities and the formulas uses to calculate the total benefit are shown in Appendix D.

Recommended Action: Prepare Total Benefit estimates for the proposed projects being evaluated in the proactive safety analysis.

5.2 Estimate the Cost of Implementing Proposed Improvements

After calculating the expected benefit of the proposed safety projects, the next step for the practitioner is to develop an estimate of the Total Project Costs. These costs need to include both the construction costs and the project development and administration costs. The most common approach to estimating construction costs is through an "Engineer's Cost Estimate." A Template for Detailed Engineer's Estimate and Cost Breakdown by Countermeasures is included in the HSIP funding application website. When calculating the administration costs for a project, the complexity of the improvements must be accounted for: Low-cost countermeasures, typically used in the Systemic Approach, often have minimal environmental and right-of-way impacts and require minimal design effort. In contrast, many medium to high cost improvements tend to have greater impacts to the environment and right-of-way and require significant design efforts. It's crucial to account for these differences to accurately determine the true B/C ratio of the projects and prioritize them correctly.

When an agency is initially evaluating several potential locations and countermeasures as part of their proactive safety analysis or in preparing for Caltrans call-for-projects, they should consider first using rough 'ballpark' cost estimates using previous projects that had similar scope, if possible. Ballpark cost estimates can allow the practitioner to quickly establish B/C ratios for all of their potential projects and identify the projects with high cost effectiveness and with a reasonable chance of receiving HSIP funding in a Caltrans call-for-projects.

Recommended Action: Prepare 'Total Project Cost' estimates for the proposed projects being evaluated in the proactive safety analysis.

5.3 Calculate the B/C Ratio

In general, the B/C ratio is calculated by taking a project's overall benefit (as calculated in Section 5.1) and dividing it by the project's overall cost (as calculated in Section 5.2). There are, however, several

methods and input-factors available for calculating a project's B/C ratio and practitioners may want to consider other methods as defined in the HSM.

Based on Caltrans' need for a fair, data-driven, statewide project selection process for HSIP call-for-projects, Caltrans requires the B/C ratio for all applications to be completed using the same process. Applicants must utilize the HSIP Analyzer to calculate the B/C ratio of the project. Additional details and formulas included in the calculation are included in this document as Appendix D.

Recommended Action: Calculate the B/C ratio for each of the proposed projects being evaluated in the proactive safety analysis.

5.4 Compare B/C Ratios and Consider the Need to Reevaluate Project Elements

By implementing a comprehensive proactive safety analysis approach, agencies will likely identify more potential safety projects than they can fund and deliver. It will be important for an agency to prioritize their projects internally before funding is sought. It is not uncommon for projects to have a B/C ratio as low as 0.1 or as high as 100. Once the relative cost effectiveness of an agency's potential projects has been established, the projects with low to mid-ranged B/C ratios should be reassessed. Projects with very low initial B/C ratios may be dropped while projects with low to mid ranged B/C ratios may be redefined by changing the limits of the proposed improvements to focus on higher crash locations or incorporating lower-cost countermeasures. This reiterative process is illustrated in Figure 1 in Section 1 of this document.

At the conclusion of this step, the local agency should have several potential safety projects ready to move into the project development and construction phases. Ideally, there will be a variety of low cost safety projects and potentially a few higher cost roadway reconstruction projects. How each local agency prioritizes their list of safety improvements will vary, but projects with the highest B/C ratios should generally have a high overall priority. It should be understood that available funding will play a key role in local agency prioritization (e.g., higher-cost projects may have to wait for funding to become available while low-cost improvements with lower B/C ratios can be constructed with in-house maintenance crews), but in the goal of maximizing overall safety benefits, the role of politics and public influence should be minimized.

Recommended Action: Compare, reevaluate, and prioritize the potential safety projects. Consider changing the project limits to maximize the number of fatal and injury crashes addressed within the limits. Consider lower cost countermeasures in areas where high and medium cost countermeasures resulted in low B/C ratios.

6. Identifying Funding and Construct Improvements

Funding strategies for implementing safety projects need to vary as widely as local agency's roadway types, project costs, and proposed improvements. At this point in the proactive safety analysis process, local agencies should have several potential safety projects ready to move into the project development and construction phases. There are likely a wide range of 'approaches' to fund each of these projects. This section of the document discusses some of the most common approaches.

6.1 Existing Funding for Low-cost Countermeasures

For projects utilizing low-cost countermeasures, the total project cost may be low enough that the agency can construct the project using its existing roadway funding by utilizing the ongoing activities of their roadway maintenance staff and equipment. Other low-cost projects (e.g., overlays, sealcoats, drainage, signing, and striping projects) may be more important to incorporate into larger maintenance projects. It is common for agencies to have 1-, 5-, and 10-year plans for making these standard maintenance improvements. With upfront planning and coordination between agency staff, the low-cost safety projects identified through the proactive safety analysis can be incorporated with minimal costs to an agency's maintenance program. Maximizing the cost effectiveness of the program may even allow the transportation managers to justify increasing the funding for their overall roadway maintenance program.

In addition to their maintenance program, transportation managers should also strategically seek out planned capital improvement and development projects that can incorporate low and medium cost countermeasures identified in their safety analysis. Local agencies may also find opportunities to partner with private enterprises and insurance companies to fund special safety projects that further both organizations' strategic goals.

Recommended Action: Survey planned maintenance, developer and capital projects to determine whether they overlap any of the proposed safety projects. Where projects overlap, leverage the existing funding sources to include safety countermeasures.

6.2 HSIP and Other Funding Sources

In addition to the HSIP Program, the Division of Local Assistance's web site includes several other Caltrans administered funding programs:
https://dot.ca.gov/programs/local-assistance

Recommended Action: Consider all potential funding opportunities to incorporate the identified safety countermeasures.

6.3 Project Development and Construction Considerations

In general, roadway safety projects don't garner the same level of attention from decision makers, media, elected officials, and the general public, that large operational and development-driven projects do. As a result, local safety practitioners and project sponsors often find their projects have difficulty in competing for the agencies' limited project delivery resources. Establishing and implementing a comprehensive safety analysis process can assist safety practitioners in delivering their safety programs in many ways, including:

- Credibility and awareness to individual projects and delivery schedules.
- Increased stakeholders tracking and delivery of a project when low-cost improvements are incorporated into ongoing maintenance and capital projects.
- An increased focus on low-cost countermeasures typically corresponds to projects with less environmental, right-of-way and other impacts; resulting in projects that have streamlined project delivery processes and short construction schedules.

Recommended Action: Safety practitioners should follow their safety projects all the way through the project delivery and construction process. In addition, they should establish a safety program delivery plan that brings awareness and support to the expedited delivery of safety projects. Where possible, safety practitioners should involve the media and even consider having their own program intended to "toot their own safety-horn."

7. Evaluation of Improvements

Evaluation of the effectiveness of roadway treatments following installation should be used to guide future decisions regarding roadway countermeasures. Field reviews should also be conducted shortly after the project is completed to insure the project is operating as intended.

A record of crash history and countermeasure installation forms the foundation for assessing how well the implemented strategies have performed. An important database to maintain is a current list of installed countermeasures with documented "when/where/why" information. Periodic assessments will provide the necessary information to make informed decisions on whether each countermeasure contributed to an increase in safety, whether the countermeasure could or should be installed at other locations, and which factors may have contributed to each countermeasure's success.

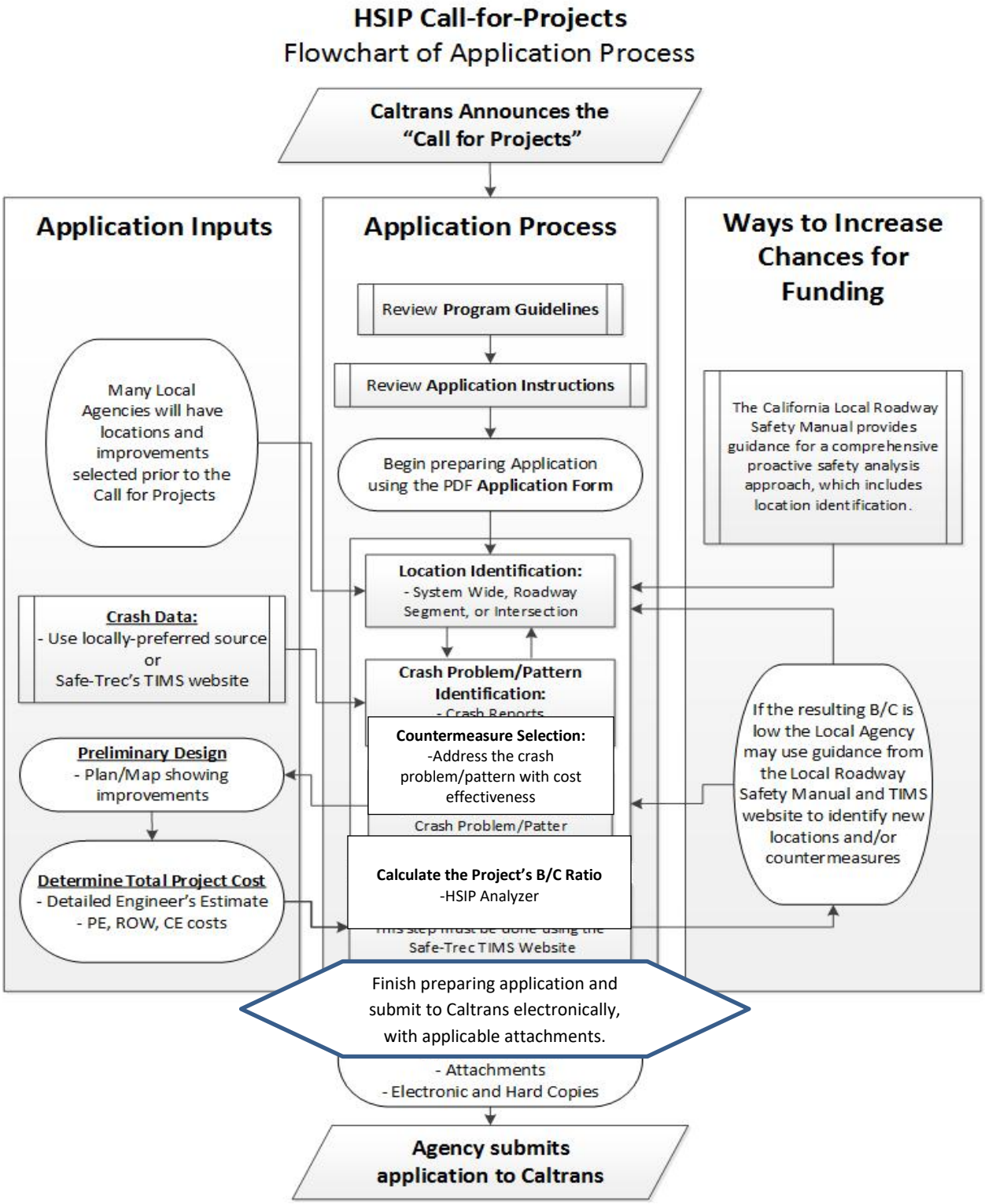
In order to perform the assessment, it is necessary to collect the required information for a certain period after strategies have been deployed at the locations. The time period varies, but whenever possible, 3 to 5 years is recommended to reduce the effects of the random nature of roadway crashes (i.e., Regression to the Mean). The information required may consist of public input and complaints, police reports, observations from maintenance crews, and local and State crash data.

It is important to keep the list of safety installations up-to-date since it will serve as a record of countermeasure deployment history (see table below for an example). By using this type of system, assessment dates can be scheduled to review the crashes and other pertinent information on segments where roadway countermeasures have been installed. Making "after" assessments will inform the practitioner on the effectiveness of past improvements and can provide data to help justify the value of continuing and expanding the local agency's safety program in the future.

Location	Type of Countermeasure Installed	Date Installed	Crashes Before (Duration and Severity)	Crashes After (Duration and Severity)	Comments

Recommended Action: Develop a spreadsheet or database to track future safety project installations and record 3 or more years of "before" and "after" crash information at those locations. Once safety countermeasures are constructed, schedule and track assessment dates to ensure they happen.

Appendix A: HSIP Call-for-Projects Process



Appendix B: Detailed Tables of Countermeasures

The intent of the information contained in this appendix is to provide local agency safety practitioners with a list of effective countermeasures that are appropriate remedies to many common safety issues. The tables in Section 4.2 present a quick summary of the specific values that the Caltrans Division of Local Assistance uses to assess and select projects for its calls- for-projects. In addition to the same information as in Section 4.2, this appendix also includes notes for Caltrans HSIP calls-for-projects and "General information" regarding where the countermeasure should be used, why it works, the general qualities that can be used to suggest the potential complexity of installation, and information from FHWA CMF Clearinghouse on the type of crashes where the countermeasure is best used and a range of their expected overall effectiveness.

The countermeasures have been sorted into 3 categories: Signalized Intersection, Non-Signalized Intersection, and Roadway Segment. Pedestrian and bicycle related countermeasures have been included in each of these categories.

Caltrans gives careful consideration to the fair application of its calls-for-projects process. Starting in 2012, the award of safety funding has been solely based on a determined benefit-to-cost ratio for each project. The fixed set of countermeasures and CRFs included in these tables are intended to allow for all projects to be evaluated consistently and fairly throughout the project selection process. However, at this time, there are no CRFs/CMFs available for several safety improvements, such as: "dynamic/variable speed regulatory signs", "non-motorized signs and markings (regulatory and warning)", "Square-up (reduce curve radius) turn lanes" and non-infrastructure elements. These safety improvement items can be included in project applications, but they will not be included into the B/C ratio calculations, unless the safety improvements meet the intent of other separate countermeasures included in the attached lists. Caltrans is interested in adding these countermeasures (and many others) to these tables once CRFs/CMFs have been established. Caltrans will continue to periodically update this list of allowable countermeasures and CRFs as new safety research data becomes available. With this in mind, Caltrans is interested in feedback and suggestions from local agency safety practitioners on the overall countermeasure list as well as specific details of individual countermeasures, including locally developed safety effectiveness information.

Caltrans used the following references to assist its team in developing the information shown in the following tables. Safety Practitioners are encouraged to utilize these references for a more expansive list of countermeasures and CRFs / CMFs.

The Crash Modification Factors Clearinghouse
https://www.cmfclearinghouse.org/

NCHRP Report 500 Series: Volumes 4, 5, 6, 7, 10, 12, 13, and others
https://www.trb.org/Main/Blurbs/152868.aspx

Highway Safety Manual (HSM)
http://www.highwaysafetymanual.org

Pedestrian and Bicycle - Tools to Diagnose and Solve the Problem
https://safety.fhwa.dot.gov/ped_bike/tools_solve/

FHWA Local and Rural Road / Training, Tools, Guidance and Countermeasures for Locals
https://safety.fhwa.dot.gov/local_rural/training/

For each countermeasure (CM):

(Title) CM No., CM Name

- CM No. is
  - S01 through S21PB for Intersection Countermeasures – Signalized,
  - NS01 through NS23PB for Intersection Countermeasures – Unsignalized, or
  - R01 through R38 for Roadway Countermeasures.

For HSIP Calls-for-projects:

- **Funding Eligibility -** 90% or 50%.
- **Crash Types Addressed -** "All", "Pedestrian and Bicycle", "Night", "Emergency Vehicle", or "Animal".
- **CRF -** Crash Reduction Factor used for HSIP calls-for-projects.
- **Expected Life -** 10 years or 20 years.
- **Notes -** Specific requirements are provided for utilizing the countermeasure on applications for Caltrans statewide calls-for-projects.
-

General Information:

- **Where to use** – Roadway segments and intersections with specific common characteristics can be addressed with similar countermeasures that are most effective.
- **Why it works** – A discussion of the benefit of a countermeasure is important to determine its appropriateness in addressing certain roadway crash types at areas with specific issues as determined by the data and roadway features.
- **General Qualities (Time, Cost and Effectiveness)** – This category is more subjective and can vary substantially. 'Time' refers to the approximate relative time it can take to implement the countermeasure. Costs can vary considerably due to local conditions, so 'cost' represents the relative cost of applying a countermeasure. A relative overall 'effectiveness' is also provided for some countermeasures. All of this subjective information may not be applicable to the unique circumstances for the agency and should not be utilized without verification by the safety practitioner.

- **FHWA CMF Clearinghouse**

- **Crash Types Addressed** – In order to effectively reduce the number and severity of roadway crashes, it is necessary to match countermeasures to the crash types they are intended to address. Depending on the type of problem, one or more of a range of countermeasures could be the most effective way to reduce the number and severity of future crashes.
- **Crash Reduction Factor** – The crash reduction factor (CRF) is an indication of the effectiveness of a particular treatment, measured by the percentage of crashes it is expected to reduce. Note: As mentioned earlier in this section, the effectiveness of a countermeasure can also be expressed as a Crash Modification Factor (CMF), which is defined mathematically as 1 – CRF. However, this document uses CRFs as they can be more insightful when analyzing roadways for potential "reductions" in crashes. There is a range of CRF values that exist for each of the countermeasures (or similar countermeasures). The range of CRFs is provided to give local safety practitioners a clear understanding that they may need to go to the FHWA CMF Clearinghouse to find the most appropriate countermeasure and CRF for their specific projects and local prioritization.

B.1 Intersection Countermeasures – Signalized

S01, Add intersection lighting (Signalized Intersection => S.I.)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	"night" crashes	40%	20 years
Notes:	This CM only applies to "night" crashes (all types) occurring within limits of the proposed roadway lighting 'engineered' area.		

General information				
Where to use:				
Signalized intersections that have a disproportionate number of night-time crashes and do not currently provide lighting at the intersection or at its approaches. Crash data should be studied to ensure that safety at the intersection could be improved by providing lighting (this strategy would be supported by a significant number of crashes that occur at night).				
Why it works:				
Providing lighting at the intersection itself, or both at the intersection and on its approaches, improves the safety of an intersection during nighttime conditions by (1) making drivers more aware of the surroundings at an intersection, which improves drivers' perception-reaction times, (2) enhancing drivers' available sight distances, and (3) improving the visibility of non-motorists. Intersection lighting is of particular benefit to non-motorized users. Lighting not only helps them navigate the intersection, but also helps drivers see them better.				
General Qualities (Time, Cost and Effectiveness):				
A lighting project can usually be completed relatively quickly, but generally requires at least 1 year to implement because the lighting system must be designed and the provision of electrical power must be arranged. The provision of lighting involves both a fixed cost for lighting installation and an ongoing maintenance and power cost which results in a moderate to high cost. Some locations can result in high B/C ratios, but due to higher costs, these projects often result in medium to low B/C ratios.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Night, All	CRF:	20-74%

S02, Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, and number

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	15%	10 years
Notes:	This CM only applies to crashes occurring on the approaches / influence area of the upgraded signals. This CM does not apply to improvements like "battery backup systems", which do not provide better intersection/signal visibility or help drivers negotiate the intersection (unless applying past crashes that occurred when the signal lost power). If new signal mast arms are part of the proposed project, CM "S2" should not be used and the signal improvements would be included under CM "S7".		

General information				
Where to use:				
Signalized intersections with a high frequency of right-angle and rear-end crashes occurring because drivers are unable to see traffic signals sufficiently in advance to safely negotiate the intersection being approached. Signal intersection improvements include new LED lighting, signal back plates, retro-reflective tape outlining the back plates, or visors to increase signal visibility, larger signal heads, relocation of the signal heads, or additional signal heads.				
Why it works:				
Providing better visibility of intersection signals aids the drivers' advance perception of the upcoming intersection. Visibility and clarity of the signal should be improved without creating additional confusion for drivers.				
General Qualities (Time, Cost and Effectiveness):				
Installation costs and time should be minimal as these type strategies are classified as low cost and implementation does not typically require the approval process normally associated with more complex projects. When considered at a single location, these low cost improvements are usually funded through local funding by local maintenance crews. However, This CM can be effectively and efficiently implemented using a systematic approach with numerous locations, resulting in low to moderate cost projects that are more appropriate to seek state or federal funding.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Rear-End, Angle	CRF:	0-46%

S03, Improve signal timing (coordination, phases, red, yellow, or operation)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
50%	All	15%	10 years
Notes:	This CM only applies to crashes occurring on the approaches / influence area of the new signal timing. For projects coordination signals along a corridor, the crashes related to side-street movements should not be applied. This CM does not apply to projects that only 'study' the signal network and do not make physical timing changes, including corridor operational studies and improvements to Traffic Operation Centers (TOCs). In Caltrans calls for projects, this CM has a HSIP reimbursement ratio of 50%, considering that it will improve the signal operation rather than merely the safety.		

General information				
Where to use:				
Locations that have a crash history at multiple signalized intersections. Signalization improvements may include adding phases, lengthening clearance intervals, eliminating or restricting higher-risk movements, and coordinating signals at multiple locations. Understanding the corridor or roadway's crash history can provide insight into the most appropriate strategy for improving safety.				
Why it works:				
Certain timing, phasing, and control strategies can produce multiple safety benefits. Sometimes capacity improvements come along with the safety improvements and other times adverse effects on delay or capacity occur. Corridor improvements often have the highest benefit but may take longer to implement. Projects focused on capacity improvements (without a separate focus on signal timing safety needs) may not result in a reduction in future crashes.				
General Qualities (Time, Cost and Effectiveness):				
In general, these low-cost improvements to multiple signalized intersections can be implemented in a short time. Typically these low cost improvements are funded through local funding by local maintenance crews. However, some projects requiring new interconnect infrastructure can have moderate to high costs making them more appropriate to seek state or federal funding. The expected effectiveness of this CM must be assessed for each individual project.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	0 - 41%

~~S04, Provide Advanced Dilemma-Zone Detection for high speed approaches~~

~~For HSIP Cycle 11 Call-for-projects~~			
~~Funding Eligibility~~	~~Crash Types Addressed~~	~~CRF~~	~~Expected Life~~
~~90%~~	~~All~~	~~40%~~	~~10 years~~
~~Notes:~~	~~This CM only applies to crashes occurring on the approaches / influence area of the new detection and signal timing.~~		

~~General information~~				
~~**Where to use:**~~				
~~More rural/remote areas that have a high frequency of right-angle and rear-end crashes. The Advanced Dilemma-Zone Detection system enhances safety at signalized intersections by modifying traffic control signal timing to reduce the number of drivers that may have difficulty deciding whether to stop or proceed during a yellow phase. This may reduce rear-end crashes associated with unsafe stopping and angle crashes due to illegally continuing into the intersection during the red phase.~~				
~~**Why it works:**~~				
~~Clearance times provide safe, orderly transitions in ROW assignment between conflicting streams of traffic. An Advanced Dilemma Zone Detection system has several benefits relative to traditional multiple detector systems, which have upstream detection for vehicles in the dilemma zone but do not take the speed or size of individual vehicles into account. These benefits include: Reducing the frequency of red-light violations; Reducing the frequency of crashes associated with the traffic signal phase change (for example, rear-end and angle crashes); Reducing delay and stop frequency on the major road and a reduction in overall intersection delay.~~				
~~**General Qualities (Time, Cost and Effectiveness):**~~				
~~Installation costs should be low and the time to implement short. Additional modifications to the traffic signal controller may also necessary. In general, This CM can be very effective and can be considered on a systematic approach. Video detection equipment is now available for this purpose, making installation and maintenance more efficient.~~				
~~**FHWA CMF Clearinghouse:**~~	~~Crash Types Addressed:~~	~~All~~	~~CRF:~~	~~39%~~

S05, Install emergency vehicle pre-emption systems

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Emergency Vehicle - only	70%	10 years
Notes:	This CM only applies to "E.V." crashes occurring on the approaches / influence area of the new pre-emption system.		

General information				
Where to use:				
Corridors that have a history of crashes involving emergency response vehicles. The target of this strategy is signalized intersections where normal traffic operations impede emergency vehicles and where traffic conditions create a potential for conflicts between emergency and nonemergency vehicles. These conflicts could lead to almost any type of crash, due to the potential for erratic maneuvers of vehicles moving out of the paths of emergency vehicles				
Why it works:				
Providing emergency vehicle preemption capability at a signal or along a corridor can be a highly effective strategy in two ways; any type of crash could occur as emergency vehicles try to navigate through intersections and as other vehicles try to maneuver out of the path of the emergency vehicles. In addition, a signal preemption system can decrease emergency vehicle response times therefore decreasing the time in receiving emergency medical attention, which is critical in the outcome of any crash. When data is not available for past crashes with emergency vehicles, an agency may consider combining the E.V. pre-emption improvements into a comprehensive project that also makes significant signal hardware and/or signal timing improvements.				
General Qualities (Time, Cost and Effectiveness):				
Costs for installation of a signal preemption system will vary from medium to high, based upon the number of signalized intersections at which preemption will be installed and the number of emergency vehicles to be outfitted with the technology. The number of detectors, a requirement for new signal controllers, and the intricacy of the preemption system could increase costs. This CM is considered systemic as it is usually implemented on a corridor-basis.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Emergency Vehicle - only	CRF:	70%

S06, Install left-turn lane and add turn phase (signal has no left-turn lane or phase before)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	55%	20 years
Notes:	This CM only applies to crashes occurring on the approaches / influence area of the new left turn lanes. This CM does NOT apply to converting a single-left into double-left turn.		

General information				
Where to use:				
Intersections that do not currently have a left turn lane or a related left-turn phase that are experiencing a large number of crashes. Many intersection safety problems can be traced to difficulties in accommodating left-turning vehicles, in particular where there is currently no accommodation for left turning traffic. A key strategy for minimizing collisions related to left-turning vehicles (angle, rear-end, sideswipe) is to provide exclusive left-turn lanes and the appropriate signal phasing, particularly on high-volume and high-speed major-road approaches. Agencies need to document their consideration of the MUTCD, Section 4D.19 guidelines; the section on implementing protected left-turn phases.				
Why it works:				
Left-turn lanes allow separation of left-turn and through-traffic streams, thus reducing the potential for rear-end collisions. Left-turn phasing also provides a safer opportunity for drivers to make a left-turn. The combination of left-turn storage and a left turn signal has the potential to reduce many collisions between left-turning vehicles and through vehicles and/or non-motorized road users.				
General Qualities (Time, Cost and Effectiveness):				
Implementation time may vary from months to years. At some locations, left-turn lanes can be quickly installed simply by restriping the roadway. At other locations, widening of the roadway, acquisition of additional right-of-way, and extensive environmental processes may be needed. Such projects require a substantial time for development and construction. Costs are highly variable and range from very low to high. Installing a protected left turn lane and phase where none exists results in a high Crash Reduction Factor and is often highly effective.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	17 - 58 %

S07, Provide protected left turn phase (left turn lane already exists)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	30%	20 years
Notes:	This CM only applies to crashes occurring on the approaches / influence area of the new left turn phases. This CM does NOT apply to converting a single-left into double-left turn (unless the single left is unprotected and the proposed double left will be protected).		

General information
Where to use:
Signalized intersections (with existing left turns pockets) that currently have a permissive left-turn or no left-turn protection that have a high frequency of angle crashes involving left turning, opposing through vehicles, and non-motorized road users. A properly timed protected left-turn phase can also help reduce rear-end and sideswipe crashes between left-turning vehicles and the through vehicles as well as vehicles behind them. Protected left-turn phases are warranted based on such factors as turning volumes, delay, visibility, opposing vehicle speed, distance to travel through the intersection, presence of non-motorized road users, and safety experience of the intersections. Agencies need to document their consideration of the MUTCD, Section 4D.19 guidelines; the section on implementing protected left-turn phases.
Why it works:
Left turns are widely recognized as the highest-risk movements at signalized intersections. Providing Protected left-turn phases (i.e., the provision for a specific phase for a turning movement) for signalized intersections with existing left turn pockets significantly improve the safety for left-turn maneuvers by removing the need for the drivers to navigate through gaps in oncoming/opposing through vehicles. Where left turn pockets are not protected, the pedestrian and bicyclist crossing phase often conflicts with these left turn maneuvers. Drivers focused on navigating the gaps of oncoming cars may not anticipate and/or perceive the non-motorized road users.
General Qualities (Time, Cost and Effectiveness):
If the existing traffic signal only requires a minor modification to allow for a protected left-turn phase, then the cost would also be low. The time to implement this countermeasure is short because there is no actual construction that has to take place. In-house signal maintainers can perform this operation once the proper signal phasing is determined so the cost is low. In addition, the countermeasure is tried and proven to be effective. Has the potential of being applied on a systemic/systematic approach.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Rear-End, Sideswipe, Broadside	CRF:	16 - 99%

S08, Convert signal to mast arm (from pedestal-mounted)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	30%	20 years
Notes:	This CM only applies to crashes occurring on the approaches / influence area of the converted signal heads that are relocated from median and/or outside shoulder pedestals to signal heads on master arms over the travel-lanes. Projects using CM "S7" should not also apply "S2" in the B/C calc.		

General information
Where to use:
Intersections currently controlled by pedestal mounted traffic signals (in medians and/or on outside shoulder) that have a high frequency of right-angle and rear-end crashes occurring because drivers are unable to see traffic signals in advance to safely negotiate the intersection. Intersections that have pedestal-mounted signals may have poor visibility and can result in vehicles not being able to stop in time for a signal change. Care should be taken to place the new signal heads (with back plates) as close to directly over the center of the travel lanes as possible.
Why it works:
Providing better visibility of intersection signs and signals aids the drivers' advance perception of the upcoming intersection. Visibility and clarity of the signal should be improved without creating additional confusion or distraction for drivers.
General Qualities (Time, Cost and Effectiveness):
Dependent on the scope of the project. Costs are generally moderate for this type of project. There is usually no right-of-way costs, minimal roadway reconstruction costs, and a shorter project development timeline. At the same time, new mast arms can be expensive. Some locations can result in high B/C ratios, but due to moderate costs, some locations may result in medium to low B/C ratios.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Rear-End, Angle	CRF:	12 - 74%

S09, Install raised pavement markers and striping (Through Intersection)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	10%	10 years
Notes:	This CM only applies to crashes occurring in the intersection and influence areas of the new pavement markers and/or markings.		

General information				
Where to use:				
Intersections where the lane designations are not clearly visible to approaching motorists and/or intersections noted as being complex and experiencing crashes that could be attributed to a driver's unsuccessful attempt to navigate the intersection. Driver confusion can exist in regard to choosing the proper turn path or where through-lanes do not line up. This is especially relevant at intersections where the overall pavement area of the intersection is large, and multiple turning lanes are involved or other unfamiliar elements are presented to the driver.				
Why it works:				
Adding clear pavement markings can guide motorists through complex intersections. When drivers approach and traverse through complex intersections, drivers may be required to perform unusual or unexpected maneuvers. Providing more effective guidance through an intersection will minimize the likelihood of a vehicle leaving its appropriate lane and encroaching upon an adjacent lane.				
General Qualities (Time, Cost and Effectiveness):				
Costs of implementing this strategy will vary based on the scope and number of applications. Applying raised pavement markers is relatively low cost but can be variable and determined largely by the material used for pavement markings (paint, thermoplastic, epoxy, RPMs etc.). When using this type delineators, an issue of concern is the cost-to-service-life of the material. (Note: When HSIP safety funding is used for these installations in high-wear-locations, the local agency is expected to maintain the improvement for a minimum of 10 years.) When considered at a single location, these low cost improvements are usually funded through local funding by local maintenance crews. However, This CM can be effectively and efficiently implemented using a systematic approach with numerous locations, resulting in moderate cost projects that are more appropriate to seek state or federal funding.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Wet, Night, All	CRF:	10 - 33%

S10, Install flashing beacons as advance warning (S.I.)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	30%	10 years
Notes:	This CM only applies to crashes occurring on the approaches / influence area of the new flashing beacons.		

General information				
Where to use:				
At signalized intersections with crashes that are a result of drivers being unaware of the intersection or are unable to see the traffic control device in time to comply.				
Why it works:				
Increased driver awareness of an approaching signalized intersection and an increase in the driver's time to react. Driver awareness of both downstream intersections and traffic control devices is critical to intersection safety. Crashes often occur when the driver is unable to perceive an intersection, signal head or the back of a stopped queue in time to react. Advance flashing beacons can be used to supplement and call driver attention to intersection control signs. Most advance warning flashing beacons can be powered by solar, thus reducing the issues relating to power source.				
General Qualities (Time, Cost and Effectiveness):				
Before choosing this CM, the agency needs to confirm the ability to provide power to the site (solar may be an option). Flashing beacons can be constructed with minimal design, environmental and right-of-way issues and have relatively low costs. This combined with a relatively high CRF, can result in high B/Cs for locations with a history of crashes and lead to a high effectiveness.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Rear End, Angle	CRF:	36 - 62%

S11, Improve pavement friction (High Friction Surface Treatments)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	55%	10 years
Notes:	This CM only applies to crashes occurring within the limits of the improved friction overlay. This CM is not intended to apply to standard chip-seal or open-graded maintenance projects for long segments of corridors or structure repaving projects intended to fix failed pavement.		

General information				
Where to use:				
Nationally, this countermeasure is referred to as "High Friction Surface Treatments" or HFST. Signalized Intersections noted as having crashes on wet pavements or under dry conditions when the pavement friction available is significantly less than needed for the actual roadway approach speeds. This treatment is intended to target locations where skidding and failure to stop is determined to be a problem in wet or dry conditions and the target vehicle is unable to stop due to insufficient skid resistance.				
Why it works:				
Improving the skid resistance at locations with high frequencies of wet-road crashes and/or failure to stop crashes can result in reductions of 50 percent for wet-road crashes and 20 percent for total crashes. Applying HFST can double friction numbers, e.g. low 40s to high 80s. This CM represents a special focus area for both FHWA and Caltrans, which means there are extra resources available for agencies interested in more details on High Friction Surface Treatment projects.				
General Qualities (Time, Cost and Effectiveness):				
This strategy can be relatively inexpensive and implemented in a short timeframe. The installation would be done by either agency personnel or contractors and can be done by hand or machine. In general, This CM can be very effective and can be considered on a systematic approach.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Wet, Night, ALL	CRF:	10 - 62 %

S12, Install raised median on approaches (S.I.)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	25%	20 years
Notes:	This CM only applies to crashes occurring on the approaches / influence area of the new raised median. All new raised medians funded with HSIP funding should not include the removal of the existing roadway structural section and should be doweled into the existing roadway surface. This requirement is being implemented to maximize the safety-effectiveness of the limited HSIP funding and to minimize project impacts. Landscaping, if included in the project, is considered non-participating.		

General information				
Where to use:				
Intersections noted as having turning movement crashes near the intersection as a result of insufficient access control. Application of this CM should be based on current crash data and a clearly defined need to restrict or accommodate the movement.				
Why it works:				
Raised medians next to left-turn lanes at intersections offer a cost-effective means for reducing crashes and improving operations at higher volume intersections. The raised medians prohibit left turns into and out of driveways that may be located too close to the functional area of the intersection.				
General Qualities (Time, Cost and Effectiveness):				
Raised medians at intersections may be most effective in retrofit situations where high volumes of turning vehicles have degraded operations and safety, and where more extensive CMs would be too expensive because of limited right-of-way and the constraints of the built environment. The result is This CM can be very effective and can be considered on a systematic approach. Raised medians can often be installed directly over the existing pavement. When agencies opt to install landscaping in conjunction with new raised medians, the portion of the cost for landscaping and other non-safety related items that exceeds 10% of the project total cost is not federally participated and must be funded by the applicant.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Angle	CRF:	21 -55 %

S13PB, Install pedestrian median fencing on approaches

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	35%	20 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring on the approaches/influence area of the new pedestrian median fencing.		

General information				
Where to use:				
Signalized Intersections with high pedestrian-generators nearby (e.g. transit stops) may experience a high volumes of pedestrians J-walking across the travel lanes at mid-block locations instead of walking to the intersection and waiting to cross during the walk-phase. When this safety issue cannot be mitigated with signal timing and shoulder/sidewalk treatments, then installing a continuous pedestrian barrier in the median may be a viable solution.				
Why it works:				
Adding pedestrian median fencing has the opportunity to enhance pedestrian safety at locations noted as being problematic involving pedestrians running/darting across the roadway outside the intersection crossings. Pedestrian median fencing can significantly reduce this safety issue by creating a positive barrier, forcing pedestrians to the designated pedestrian crossing.				
General Qualities (Time, Cost and Effectiveness):				
Costs associated with this strategy will vary widely depending on the type and placement of the median fencing. Impacts to transit and other land uses may need to be considered and controversy can delay the implementation. In general, this CM can be effective as a spot-location approach.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian, Bicycle	CRF:	25- 40%

S14, Create directional median openings to allow (and restrict) left-turns and U-turns (S.I.)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	50%	20 years
Notes:	This CM only applies to crashes occurring in the intersection / influence area of the new directional openings.		

General information				
Where to use:				
Crashes related to turning maneuvers include angle, rear-end, pedestrian, and sideswipe (involving opposing left turns) type crashes. If any of these crash types are an issue at an intersection, restriction or elimination of the turning maneuver may be the best way to improve the safety of the intersection.				
Why it works:				
Restricting turning movement into and out of an intersection can help reduce conflicts between through and turning traffic. The number of access points, coupled with the speed differential between vehicles traveling along the roadway, contributes to crashes. Affecting turning movements by either allowing them or restricting them, based on the application, can ensure safe movement of traffic.				
General Qualities (Time, Cost and Effectiveness):				
Turn prohibitions that are implemented by closing a median opening can be implemented quickly. The cost of this strategy will depend on the treatment. Impacts to businesses and other land uses must be considered and controversy can delay the implementation. In general, This CM can be very effective and can be considered on a systematic approach.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	51%

S15, Reduced Left-Turn Conflict Intersections (S.I.)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	50%	20 years
Notes:	This CM only applies to crashes occurring in the intersection / influence area of the new Reduced Left-Turn Conflict.		

General information

Where to use and Why it works:

Reduced left-turn conflict intersections are geometric designs that alter how left-turn movements occur in order to simplify decisions and minimize the potential for related crashes. Two highly effective designs that rely on U-turns to complete certain left-turn movements are known as the restricted crossing U-turn (RCUT) and the median U-turn (MUT).

Restricted Crossing U-turn (RCUT):

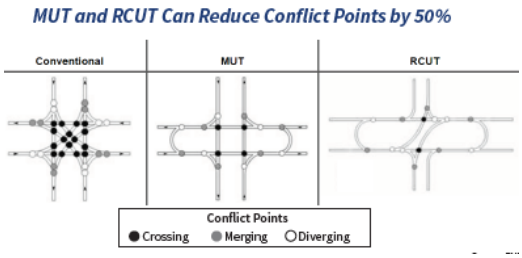
The RCUT intersection modifies the direct left-turn and through movements from cross-street approaches. Minor road traffic makes a right turn followed by a U-turn at a designated location (either signalized or unsignalized) to continue in the desired direction.

The RCUT is suitable for a variety of circumstances, including along rural, high-speed, four-lane, divided highways or signalized routes. It also can be used as an alternative to signalization or constructing an interchange. RCUTs work well when consistently used along a corridor, but also can be used effectively at individual intersections.

Median U-turn (MUT)

The MUT intersection modifies direct left turns from the major approaches. Vehicles proceed through the main intersection, make a U-turn a short distance downstream, followed by a right turn at the main intersection. The U-turns can also be used for modifying the cross-street left turns.

The MUT is an excellent choice for heavily traveled intersections with moderate left-turn volumes. When implemented at multiple intersections along a corridor, the efficient two-phase signal operation of the MUT can reduce delay, improve travel times, and create more crossing opportunities for pedestrians and bicyclists.



General Qualities (Time, Cost and Effectiveness):

Implementing this strategy may take from months to years, depending on whether additional R/W is required. Such projects require a substantial time for development and construction. Costs are highly variable and range from very low to high. The expected effectiveness of this CM must be assessed for each individual location.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Angle/Left-turn/Rear-End/All	CRF:	34.8-100%

S16, Convert intersection to roundabout (from signal)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	Varies	20 years
Notes:	This CM only applies to crashes occurring in influence area of the new roundabout. This CM is not intended for mini-roundabouts. The benefit of this CM is calculated using Caltrans procedure. The CRF is dependent on the ADT, project location (Rural/Urban) and the roundabout type (1 lane or 2 lanes). The benefit comes from both the reduction in the number and the severity of the crashes.		

General information				
Where to use:				
Signalized intersections that have a significant crash problem and the only alternative is to change the nature of the intersection itself. Roundabouts can also be very effective at intersections with complex geometry and intersections with frequent left-turn movements.				
Why it works:				
The types of conflicts that occur at roundabouts are different from those occurring at conventional intersections; namely, conflicts from crossing and left-turn movements are not present in a roundabout. The geometry of a roundabout forces drivers to reduce speeds as they proceed through the intersection. This helps keep the range of vehicle speed narrow, which helps reduce the severity of crashes when they do occur. Pedestrians only have to cross one direction of traffic at a time at roundabouts, thus reducing their potential for conflicts.				
General Qualities (Time, Cost and Effectiveness):				
Provision of a roundabout requires substantial project development. The need to acquire right-of-way is likely and will vary from site to site and depends upon the geometric design. These activities may require up to 4 years or longer to implement. Costs are variable, but construction of a roundabout to replace an existing signalized intersection are relatively high. The result is this CM may have reduced relative-effectiveness compared to other CMs.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	35 - 67%

S17PB, Install pedestrian countdown signal heads

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	25%	20 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring in the intersection/crossing with the new countdown heads.		

General information				
Where to use:				
Signals that have signalized pedestrian crossing with walk/don't walk indicators and where there have been pedestrian vs. vehicle crashes.				
Why it works:				
A pedestrian countdown signal contains a timer display and counts down the number of seconds left to finish crossing the street. Countdown signals can reassure pedestrians who are in the crosswalk when the flashing "DON'T WALK" interval appears that they still have time to finish crossing. Countdown signals begin counting down either when the "WALK" or when the flashing "DON'T WALK" interval appears and stop at the beginning of the steady "DON'T WALK" interval. These signals also have been shown to encourage more pedestrians to use the pushbutton rather than jaywalk.				
General Qualities (Time, Cost and Effectiveness):				
Costs and time of installation will vary based on the number of intersections included in this strategy and if it requires new signal controllers capable of accommodating the enhancement. When considered at a single location, these low cost improvements are usually funded through local funding by local crews. However, This CM can be effectively and efficiently implemented using a systematic approach with numerous locations, resulting in moderate cost projects that are more appropriate to seek state or federal funding.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian, Bicycle	CRF:	25%

S18PB, Install pedestrian crossing (S.I.)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	25%	20 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring in the intersection/crossing with the new crossing. This CM is not intended to be used for high-cost aesthetic enhancements to intersection crosswalks (i.e. stamped concrete or stamped asphalt).		

General information
Where to use:
Signalized Intersections with no marked crossing and pedestrian signal heads, where pedestrians are known to be crossing intersections that involve significant turning movements. They are especially important at intersections with (1) multiphase traffic signals, such as left-turn arrows and split phases, (2) school crossings, and (3) double-right or double-left turns. At signalized intersections, pedestrian crossings are often safer when the left turns have protected phases that do not overlap the pedestrian walk phase.
Why it works:
Adding pedestrian crossings has the opportunity to enhance pedestrian safety at locations noted as being problematic. Nearly one-third of all pedestrian-related crashes occur at or within 50 feet of an intersection. Of these, 30 percent may involve a turning vehicle. Another 22 percent of pedestrian crashes involve a pedestrian either running across the intersection or darting out in front of a vehicle whose view was blocked just prior to the impact. Finally, 16 percent of these intersection-related crashes occur because of a driver violation (e.g., failure to yield right-of-way). When agencies opt to install aesthetic enhancement to intersection crosswalks like stamped concrete/asphalt, the project design and construction costs can significantly increase. For HSIP applications, these costs must be accounted for in the B/C calculation, but these costs (over standard crosswalk markings) must be tracked separately and are not federally reimbursable and will increase the agency's local-funding share for the project costs.
General Qualities (Time, Cost and Effectiveness):
Costs associated with this strategy will vary widely, depending if curb ramps and sidewalk modifications are required with the crossing. When considered at a single location, these low cost improvements may be funded through local funding by local crews. However, This CM can be effectively and efficiently implemented using a systematic approach with numerous locations, resulting in moderate to high cost projects that are appropriate to seek state or federal funding.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian, Bicycle	CRF:	25%

S19PB, Pedestrian Scramble

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	40%	20 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring in the intersection with the new pedestrian crossing.		

General information
Where to use:
Pedestrian Scramble is a form of pedestrian "WALK" phase at a signalized intersection in which all vehicular traffic is required to stop, allowing pedestrians/bicyclists to safely cross through the intersection in any direction, including diagonally. Pedestrian Scramble may be considered at signalized intersections with very high pedestrian/bicycle volumes, e.g. in an urban business district.
Why it works:
Pedestrian Scramble has been shown to reduce injury risk and increase bicycle ridership due to its perceived safety and comfort.
General Qualities (Time, Cost and Effectiveness):
Not involving any additional R/W, Pedestrian Scramble should not require a long development process and should be implemented reasonably soon. A systemic approach may be used in implementing this CM, resulting in cost efficiency with low to moderate cost.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian, Bicycle	CRF:	-10% to 51%

S20PB, Install advance stop bar before crosswalk (Bicycle Box)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	15%	10 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring in the intersection-crossing with the new advanced stop bars.		

General information				
Where to use:				
Signalized Intersections with a marked crossing, where significant bicycle and/or pedestrians volumes are known to occur.				
Why it works:				
Adding advance stop bar before the striped crosswalk has the opportunity to enhance both pedestrian and bicycle safety. Stopping cars well before the crosswalk provides a buffer between the vehicles and the crossing pedestrians. It also allows for a dedicated space for cyclists, making them more visible to drivers (This dedicated space is often referred to as a bike-box.)				
General Qualities (Time, Cost and Effectiveness):				
Costs and time of installation will vary based on the number of intersections included in this strategy and if it requires new signal controllers capable of accommodating the enhancement. When considered at a single location, these low cost improvements are usually funded through local funding by local crews. However, This CM can be effectively and efficiently implemented using a systematic approach with numerous locations, resulting in moderate cost projects that are more appropriate to seek state or federal funding.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian, Bicycle	CRF:	35%

S21PB, Modify signal phasing to implement a Leading Pedestrian Interval (LPI)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	60%	10 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring in the intersections with signalized pedestrian crossing with the newly implemented Leading Pedestrian Interval (LPI).		

General information				
Where to use:				
Intersections with signalized pedestrian crossing that have high turning vehicles volumes and have had pedestrian vs. vehicle crashes.				
Why it works:				
A leading pedestrian interval (LPI) gives pedestrians the opportunity to enter an intersection 3-7 seconds before vehicles are given a green indication. With this head start, pedestrians can better establish their presence in the crosswalk before vehicles have priority to turn left. LPIs provide (1) increased visibility of crossing pedestrians; (2) reduced conflicts between pedestrians and vehicles; (3) Increased likelihood of motorists yielding to pedestrians; and (4) enhanced safety for pedestrians who may be slower to start into the intersection.				
General Qualities (Time, Cost and Effectiveness):				
Costs for implementing LPIs are very low, since only minor signal timing alteration is required. This makes it an easy and inexpensive countermeasure that can be incorporated into pedestrian safety action plans or policies and can become routine agency practice. When considered at a single location, the LPI is usually local-funded. However, This CM can be effectively and efficiently implemented using a systematic approach with numerous locations, resulting in moderate cost projects that are more appropriate to seek state or federal funding.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian, Bicycle	CRF:	59%

B.2 Intersection Countermeasures – Non-signalized

NS01, Add intersection lighting (NS.I.)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Night	40%	20 years
Notes:	This CM only applies to "night" crashes (all types) occurring within limits of the proposed roadway lighting 'engineered' area.		

General information
Where to use:
Non-signalized intersections that have a disproportionate number of night-time crashes and do not currently provide lighting at the intersection or at its approaches. Crash data should be studied to ensure that safety at the intersection could be improved by providing lighting (this strategy would be supported by a significant number of crashes that occur at night).
Why it works:
Providing lighting at the intersection itself, or both at the intersection and on its approaches, improves the safety of an intersection during nighttime conditions by (1) making drivers more aware of the surroundings at an intersection, which improves drivers' perception-reaction times, (2) enhancing drivers' available sight distances, and (3) improving the visibility of non-motorists. Intersection lighting is of particular benefit to non-motorized users as lighting not only helps them navigate the intersection, but also helps drivers see them better.
General Qualities (Time, Cost and Effectiveness):
A lighting project can usually be completed relatively quickly, but generally requires at least 1 year to implement because the lighting system must be designed and the provision of electrical power must be arranged. The provision of lighting involves both a fixed cost for lighting installation and an ongoing maintenance and power cost. For rural intersections, studies have shown the installation of streetlights reduced nighttime crashes at unlit intersections and can be more effective in reducing nighttime crashes than either rumble strips or overhead flashing beacons. Some locations can result in high B/C ratios, but due to higher costs, these projects often result in medium to low B/C ratios.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Night, All	CRF:	25- 50%

NS02, Convert to all-way STOP control (from 2-way or Yield control)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	50%	10 years
Notes:	This CM only applies to crashes occurring in the intersection and/or influence area of the new control. CA-MUTCD warrant must be met.		

General information
Where to use:
Unsignalized intersection locations that have a crash history and have no controls on the major roadway approaches. However, all-way stop control is suitable only at intersections with moderate and relatively balanced volume levels on the intersection approaches. Under other conditions, the use of all-way stop control may create unnecessary delays and aggressive driver behavior. MUTCD warrants should always be followed.
Why it works:
All-way stop control can reduce right-angle and turning collisions at unsignalized intersections by providing more orderly movement at an intersection, reducing through and turning speeds, and minimizing the safety effect of any sight distance restrictions that may be present. Advance public notification of the change is critical in assuring compliance and reducing crashes.
General Qualities (Time, Cost and Effectiveness):
The costs involved in converting to all-way stop control are relatively low. All-way stop control can normally be implemented at multiple intersections with just a change in signing on intersection approaches, and typically are very quick to implement. When considered at a single location, these low cost improvements are usually funded through local funding by local maintenance crews. However, This CM can be effectively and efficiently implemented using a systematic approach with numerous locations, resulting in moderate cost projects that are more appropriate to seek state or federal funding.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Left-turn, Angle	CRF:	6 - 80%

NS03, Install signals

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	30%	20 years
Notes:	This CM only applies to crashes occurring in the intersection and/or influence area of the new signals. **All new signals must meet MUTCD "safety" warrants: 4, 5 or 7.** Given the over-arching operational changes that occur when an intersection is signalized, no other intersection CMs can be applied to the intersection crashes in conjunction with this CM.		

General information				
Where to use:				
Traffic signals can be used to prevent the most severe type crashes (right-angle, left-turn). Consideration to signalize an unsignalized intersection should only be given after (1) less restrictive forms of traffic control have been utilized as the installation of a traffic signal often leads to an increased frequency of crashes (rear-end) on major roadways and introduces congestion and (2) signal warrants have been met. Refer to the CA MUTCD, Section 4C.01, Studies and Factors for Justifying Traffic Control Signals.				
Why it works:				
Traffic signals have the potential to reduce the most severe type crashes but will likely cause an increase in rear-end collisions. A reduction in overall injury severity is likely the largest benefit of traffic signal installation.				
General Qualities (Time, Cost and Effectiveness):				
Typical traffic signal costs fall in the medium to high category and are affected by application, type of signal and right-of-away considerations. Projects of this magnitude should only be considered after alternate and lesser means of correction have been evaluated. Some locations can result in high B/C ratios, but due to higher costs, these projects often result in medium to low B/C ratios.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	0 - 74%

NS04, Convert intersection to roundabout (from all way stop)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	Varies	20 years
Notes:	This CM only applies to crashes occurring in the intersection and/or influence area of the new control. The benefit of this CM is calculated using Caltrans procedure. The CRF is dependent on the ADT, project location (Rural/Urban) and the roundabout type (1 lane or 2 lanes). The benefit comes from both the reduction in the number and the severity of the crashes.		

General information				
Where to use:				
Intersections that have a high frequency of right-angle and left-turn type crashes. Whether such intersections have existing crash patterns or not, a roundabout provides an alternative to signalization. The primary target locations for roundabouts should be moderate-volume unsignalized intersections. Roundabouts may not be a viable alternative in many suburban and urban settings where right-of-way is limited.				
Why it works:				
Roundabouts provide an important alternative to signalized and all-way stop-controlled intersections. Modern roundabouts differ from traditional traffic circles in that they operate in such a manner that traffic entering the roundabout must yield the right-of-way to traffic already in it. Roundabouts can serve moderate traffic volumes with less delay than all-way stop-controlled intersections and provide fewer conflict points. Crashes at roundabouts tend to be less severe because of the speed constraints and elimination of left-turn and right-angle movements.				
General Qualities (Time, Cost and Effectiveness):				
Construction of roundabouts are usually relatively costly and major projects, requiring the environmental process, right-of-way acquisition, and implementation under an agency's long-term capital improvement program. (For this reason, roundabouts may not be appropriate for California's Federal Safety Programs that have relatively short delivery requirements.) Even with roundabouts higher costs, they still can have a relatively high effectiveness.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Left-turn, Angle	CRF:	12 - 78 %

NS05, Convert intersection to roundabout (from 2-way stop or Yield control)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	Varies	20 years
Notes:	This CM only applies to crashes occurring in the intersection and/or influence area of the new control. The benefit of this CM is calculated using Caltrans procedure. The CRF is dependent on the ADT, project location (Rural/Urban) and the roundabout type (1 lane or 2 lanes). The benefit comes from both the reduction in the number and the severity of the crashes.		

General information				
Where to use:				
Intersections that have a high frequency of right-angle and left-turn type crashes. Whether such intersections have existing crash patterns or not, a roundabout provides an alternative to signalization. The primary target locations for roundabouts should be moderate-volume unsignalized intersections. Roundabouts may not be a viable alternative in many suburban and urban settings where right-of-way is limited.				
Why it works:				
Roundabouts provide an important alternative to signalized and all-way stop-controlled intersections. Modern roundabouts differ from traditional traffic circles in that they operate in such a manner that traffic entering the roundabout must yield the right-of-way to traffic already in it. Roundabouts can serve moderate traffic volumes with less delay than all-way stop-controlled intersections and provide fewer conflict points. Crashes at roundabouts tend to be less severe because of the speed constraints and elimination of left-turn and right-angle movements.				
General Qualities (Time, Cost and Effectiveness):				
Construction of roundabouts are usually relatively costly and major projects, requiring the environmental process, right-of-way acquisition, and implementation under an agency's long-term capital improvement program. (For this reason, roundabouts may not be appropriate for California's Federal Safety Programs that have relatively short delivery requirements.) Even with roundabouts higher costs, they still can have a relatively high effectiveness.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Left-turn, Angle	CRF:	12 - 78 %

NS05mr, Convert intersection to mini-roundabout

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	30%	20 years
Notes:	This CM only applies to crashes occurring in the intersection and/or influence area of the new control.		

General information				
Where to use:				
Mini-roundabouts are characterized by a small diameter (45-90 ft) and traversable islands (central island and splitter islands). Mini-roundabouts offer most of the benefits of regular roundabouts with the added benefit of a smaller footprint. They are best suited to environments where speeds are already low and environmental constraints would preclude the use of a larger roundabout. Mini-roundabouts are most effective in lower speed environments in which all approaching roadways have posted speed of 30 mph or less and an 85th-percentile speed of less than 35 mph near the proposed yield and/or entrance line. For any location with an 85th-percentile speed above 35 mph, the mini-roundabout can be included as part of a broader system of traffic calming measures to achieve an appropriate speed environment.				
Why it works:				
Mini-roundabouts may be an optimal solution for a safety or operational issue at an existing intersection where there is insufficient right-of-way for a standard roundabout installation. The benefits of mini-roundabouts are the Compact size, operational efficiency, traffic safety improvement and traffic Calming.				
General Qualities (Time, Cost and Effectiveness):				
Construction costs for mini-roundabouts vary widely depending upon the extent of sidewalk modifications or other geometric improvements and the types of materials used. In most cases, mini-roundabouts have been installed with little or no pavement widening and with only minor changes to curbs and sidewalks. Construction costs can be minimum for an installation consisting entirely of pavement markings and signage or moderate for mini-roundabouts that include raised islands and pedestrian improvements.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	NA	CRF:	NA

NS06, Install/upgrade larger or additional stop signs or other intersection warning/regulatory signs

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	15%	10 years
Notes:	This CM only applies to crashes occurring in the influence area of the new signs. The influence area must be determined on a location by location basis.		

General information				
Where to use:				
The target for this strategy should be approaches to unsignalized intersections with patterns of rear-end, right-angle, or turning collisions related to lack of driver awareness of the presence of the intersection.				
Why it works:				
The visibility of intersections and, thus, the ability of approaching drivers to perceive them can be enhanced by installing larger regulatory and warning signs at or prior to intersections. A key to success in applying this strategy is to select a combination of regulatory and warning sign techniques appropriate for the conditions on a particular unsignalized intersection approach.				
General Qualities (Time, Cost and Effectiveness):				
Signing improvements do not require a long development process and can typically be implemented quickly. Costs for implementing this strategy are nominal and depend on the number of signs. When considered at a single location, these low cost improvements are usually funded through local funding by local maintenance crews. However, This CM can be effectively and efficiently implemented using a systematic approach with numerous locations, resulting in moderate cost projects that are more appropriate to seek state or federal funding.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	11 - 55%

NS07, Upgrade intersection pavement markings (NS.I.)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	25%	10 years
Notes:	This CM only applies to crashes occurring on the approaches / influence area of the new pavement markings. This CM is not intended to be used for general maintenance activities (i.e. the replacement of existing pavement markings in-kind) and must include upgraded safety features over the existing pavement markings and striping.		

General information				
Where to use:				
Unsignalized intersections that are not clearly visible to approaching motorists, particularly approaching motorists on the major road. The strategy is particularly appropriate for intersections with patterns of rear-end, right-angle, or turning crashes related to lack of driver awareness of the presence of the intersection. Also at minor road approaches where conditions allow the stop bar to be seen by an approaching driver at a significant distance from the intersection. Typical improvements include "Stop Ahead" markings and the addition of Centerlines and Stop Bars.				
Why it works:				
The visibility of intersections and, thus, the ability of approaching drivers to perceive them can be enhanced by installing appropriate pavement delineation in advance of and at intersections will provide approaching motorists with additional information at these locations. Providing visible stop bars on minor road approaches to unsignalized intersections can help direct the attention of drivers to the presence of the intersection. Drivers should be more aware that the intersection is coming up, and therefore make safer decisions as they approach the intersection.				
General Qualities (Time, Cost and Effectiveness):				
Pavement marking improvements do not require a long development process and can typically be implemented quickly. Costs for implementing this strategy are nominal and depend on the number of markings. When considered at a single location, these low cost improvements are usually funded through local funding by local maintenance crews. However, This CM can be effectively and efficiently implemented using a systematic approach with numerous locations, resulting in moderate cost projects that are more appropriate to seek state or federal funding. Note: When federal safety funding is used for these installations in high-wear-locations, the local agency is expected to maintain the improvement for a minimum of 10 years.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	13 - 60%

NS08, Install Flashing Beacons at Stop-Controlled Intersections

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	15%	10 years
Notes:	This CM only applies to crashes occurring on the stop-controlled approaches / influence area of the new beacons.		

General information				
Where to use:				
Flashing beacons can reinforce driver awareness of the Non-Signalized intersection control and can help mitigate patterns of right-angle crashes related to stop sign violations. Post-mounted advanced flashing beacons or overhead flashing beacons can be used at stop-controlled intersections to supplement and call driver attention to stop signs.				
Why it works:				
Flashing beacons provide a visible signal to the presence of an intersection and can be very effective in rural areas where there may be long stretches between intersections as well as locations where night-time visibility of intersections is an issue.				
General Qualities (Time, Cost and Effectiveness):				
Flashing beacons can be constructed with minimal design, environmental and right-of-way issues and have relatively low costs. Before choosing this CM, the agency needs to confirm the ability to provide power to the site (solar may be an option). In general, This CM can be very effective and can be considered on a systematic approach.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Angle, Rear-End	CRF:	5-34%

NS09, Install flashing beacons as advance warning (NS.I.)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	30%	10 years
Notes:	This CM only applies to crashes occurring on the approaches / influence area of the new beacons placed in advance of the intersection.		

General information				
Where to use:				
Non-Signalized Intersections with patterns of crashes that could be related to lack of a driver's awareness of approaching intersection or controls at a downstream intersection.				
Why it works:				
Advance flashing beacons can be used to supplement and call driver attention to intersection control signs. Flashing beacons are intended to reinforce driver awareness of the stop or yield signs and to help mitigate patterns of crashes related to intersection regulatory sign violations. Most advance warning flashing beacons can be powered by solar, thus reducing the issues relating to power source.				
General Qualities (Time, Cost and Effectiveness):				
Use of flashing beacons requires minimal development process, allowing flashing beacons to be installed within a short time period. Before choosing this CM, the agency needs to confirm the ability to provide power to the site (solar may be an option). In general, This CM can be very effective and can be considered on a systematic approach.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Angle, Rear-End	CRF:	36 - 62%

NS10, Install transverse rumble strips on approaches

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	20%	10 years
Notes:	This CM only applies to crashes occurring on the approaches / influence area of the new rumble strips.		

General information				
Where to use:				
Transverse rumble strips are installed in the travel lane for the purposes of providing an auditory and tactile sensation for each motorist approaching the intersection. They can be used at any stop or yield approach intersection, often in combination with advance signing to warn of the intersection ahead. Due to the noise generated by vehicles driving over the rumble strips, care must be taken to minimize disruption to nearby residences and businesses.				
Why it works:				
When motorists are traveling along the roadway, they are sometimes unaware they are approaching an intersection. This is especially true on rural roads, as there may be fewer clues indicating an intersection ahead. Transverse rumble strips warn motorists that something unexpected is ahead that they need to pay attention to.				
General Qualities (Time, Cost and Effectiveness):				
Use of transverse rumble strips requires minimal development process, allowing transverse rumble strips to be installed within a short time period. In general, This CM can be very effective and can be considered on a systematic approach, although care should be taken to not over-use this CM. Note: When federal safety funding is used for these installations in high-wear-locations, the local agency is expected to maintain the improvement for a minimum of 10 years.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	0 - 35%

NS11, Improve sight distance to intersection (Clear Sight Triangles)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	20%	10 years
Notes:	This CM only applies to crashes occurring on the approaches / influence area of the significantly improved new sight distance. Minor/incidental improvements to sight distance would not likely result in the CRF shown below.		

General information				
Where to use:				
Unsignalized intersections with restricted sight distance and patterns of crashes related to lack of sight distance where sight distance can be improved by clearing roadside obstructions without major reconstruction of the roadway.				
Why it works:				
Adequate sight distance for drivers at stop or yield-controlled approaches to intersections has long been recognized as among the most important factors contributing to overall safety at unsignalized intersections. By removing sight distance restrictions (e.g., vegetation, parked vehicles, signs, buildings) from the sight triangles at stop or yield-controlled intersection approaches, drivers will be able see approaching vehicles on the main line, without obstruction and therefore make better decisions about entering the intersection safely.				
General Qualities (Time, Cost and Effectiveness):				
Projects involving clearing sight obstructions on the highway right-of-way can typically be accomplished quickly, assuming the objects are readily moveable. Clearing sight obstructions on private property requires more time for discussions with the property owner. Costs will generally be low, assuming that in most cases the objects to be removed are within the right-of-way. In general, this CMs can be very effective and can be implemented by agencies' maintenance staff and/or implemented on a systematic approach. Usually only high-cost removals would be good candidates for Caltrans Federal Safety Funding. Note: When federal safety funding is used to remove vegetation that has the potential to grow back, the local agency is expected to maintain the improvement for a minimum of 10 years.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	11 - 56%

NS12, Improve pavement friction (High Friction Surface Treatments)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	55%	10 years
Notes:	This CM only applies to crashes occurring within the limits of the improved friction overlay. This CM is not intended to apply to standard chip-seal or open-graded maintenance projects for long segments of corridors or structure repaving projects intended to fix failed pavement.		

General information				
Where to use:				
Nationally, this countermeasure is referred to as "High Friction Surface Treatments" or HFST. Non-signalized Intersections noted as having crashes on wet pavements or under dry conditions when the pavement friction available is significantly less than needed for the actual roadway approach speeds. This treatment is intended to target locations where skidding and failure to stop is determined to be a problem in wet or dry conditions and the target vehicle is unable to stop due to insufficient skid resistance.				
Why it works:				
Improving the skid resistance at locations with high frequencies of wet-road crashes and/or failure to stop crashes can result in reductions of 50 percent for wet-road crashes and 20 percent for total crashes. Applying HFST can double friction numbers, e.g. low 40s to high 80s. This CM represents a special focus area for both FHWA and Caltrans, which means there are extra resources available for agencies interested in more details on High Friction Surface Treatment projects.				
General Qualities (Time, Cost and Effectiveness):				
This strategy can be relatively inexpensive and implemented in a short timeframe. The installation would be done by either agency personnel or contractors and can be done by hand or machine. In general, This CM can be very effective and can be considered on a systematic approach.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Wet, Night, ALL	CRF:	10 - 62 %

NS13, Install splitter-islands on the minor road approaches

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	40%	20 years
Notes:	This CM only applies to crashes occurring on the approaches / influence area of **the new splitter island on the minor road approaches.**		

General information				
Where to use:				
Minor road approaches to unsignalized intersections where the presence of the intersection or the stop sign is not readily visible to approaching motorists. The strategy is particularly appropriate for intersections where the speeds on the minor road are high. In creation of a splitter island allows for an additional stop sign to be placed in the median for the minor approach.				
Why it works:				
The installation of splitter islands allows for the addition of a stop sign in the median to make the intersection more conspicuous. Additionally, the splitter island on the minor-road provides for a positive separation between turning vehicles on the through road and vehicles stopped on the minor road approach.				
General Qualities (Time, Cost and Effectiveness):				
Splitter islands at non-signalized intersections can usually be installed with minimal roadway reconstruction and relatively quickly. In general, This CM can be very effective and can be considered on a systematic approach.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Angle, Rear-End	CRF:	35 - 100 %

NS14, Install raised median on approaches (NS.I.)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	25%	20 years
Notes:	This CM only applies to crashes occurring on the approaches / influence area of the new raised median. All new raised medians funded with federal HSIP funding should not include the removal of the existing roadway structural section and should be doweled into the existing roadway surface. This requirement is being implemented to maximize the safety-effectiveness of the limited HSIP funding and to minimize project impacts. Landscaping, if included in the project, is considered non-participating.		

General information				
Where to use:				
Where related or nearby turning movements affect the safety and operation of an intersection. Effective access management is key to improving safety at, and adjacent to, intersections. The number of intersection access points coupled with the speed differential between vehicles traveling along the roadway often contributes to crashes. Any access points within 250 feet upstream and downstream of an intersection are generally undesirable.				
Why it works:				
Raised medians with left-turn lanes at intersections offer a cost-effective means for reducing crashes and improving operations at higher volume intersections. The raised medians also prohibit left turns into and out of driveways that may be located too close to the functional area of the intersection.				
General Qualities (Time, Cost and Effectiveness):				
Raised medians at intersections may be most effective in retrofit situations where high volumes of turning vehicles have degraded operations and safety, and where more extensive approaches would be too expensive because of limited right-of-way and the constraints of the built environment. Because raised medians limit property access to right turns only, the need for providing alternative access ways should be considered. In general, This CM can be very effective and can be considered on a systematic approach. When agencies opt to install landscaping in conjunction with new raised medians, the portion of the cost for landscaping and other non-safety related items that exceeds 10% of the project total cost is not federally participated and must be funded by the applicant.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	20 - 39 %

NS15, Create directional median openings to allow (and restrict) left-turns and u-turns (NS.I.)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	50%	20 years
Notes:	This CM only applies to crashes occurring in the intersection / influence area of the new directional openings.		

General information				
Where to use:				
Crashes related to turning maneuvers include angle, rear-end, pedestrian, and sideswipe (involving opposing left turns) type crashes. If any of these crash types are an issue at an intersection, restriction or elimination of the turning maneuver may be the best way to improve the safety of the intersection. Because raised medians limit property access to right turns only, they should be used in conjunction with efforts to provide alternative access ways and promote driveway spacing objectives.				
Why it works:				
Agencies are increasingly using access management techniques on urban and suburban arterials to manage the number of conflicts experienced at an intersection. A key element of access management is to restrict certain movements, create directional median openings, or close median openings that are deemed too close to an intersection.				
General Qualities (Time, Cost and Effectiveness):				
Turn prohibitions that are implemented by closing a median opening can usually be implemented quickly. Costs are highly variable but in many cases could be considered low. In some cases this strategy may involve acquiring access or constructing replacement access; those actions will significantly increase the cost of the project. Impacts to businesses and other land uses must be considered and controversy can delay the implementation. In general, This CM can be very effective and can be considered on a systematic approach.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	51%

NS16, Reduced Left-Turn Conflict Intersections (NS.I.)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	50%	20 years
Notes:	This CM only applies to crashes occurring in the intersection / influence area of the new Reduced Left-Turn Conflict.		

General information

Where to use and Why it works:

Reduced left-turn conflict intersections are geometric designs that alter how left-turn movements occur in order to simplify decisions and minimize the potential for related crashes. Two highly effective designs that rely on U-turns to complete certain left-turn movements are known as the restricted crossing U-turn (RCUT) and the median U-turn (MUT).

Restricted Crossing U-turn (RCUT):

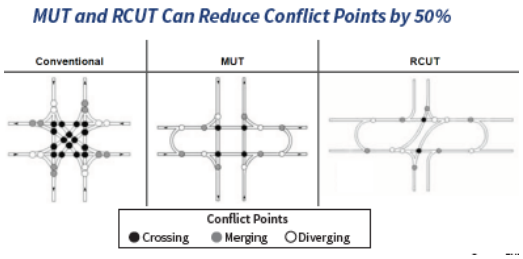
The RCUT intersection modifies the direct left-turn and through movements from cross-street approaches. Minor road traffic makes a right turn followed by a U-turn at a designated location (either signalized or unsignalized) to continue in the desired direction.

The RCUT is suitable for a variety of circumstances, including along rural, high-speed, four-lane, divided highways or signalized routes. It also can be used as an alternative to signalization or constructing an interchange. RCUTs work well when consistently used along a corridor, but also can be used effectively at individual intersections.

Median U-turn (MUT)

The MUT intersection modifies direct left turns from the major approaches. Vehicles proceed through the main intersection, make a U-turn a short distance downstream, followed by a right turn at the main intersection. The U-turns can also be used for modifying the cross-street left turns.

The MUT is an excellent choice for heavily traveled intersections with moderate left-turn volumes. When implemented at multiple intersections along a corridor, the efficient two-phase signal operation of the MUT can reduce delay, improve travel times, and create more crossing opportunities for pedestrians and bicyclists.



General Qualities (Time, Cost and Effectiveness):

Implementing this strategy may take from months to years, depending on whether additional R/W is required. Such projects require a substantial time for development and construction. Costs are highly variable and range from very low to high. The expected effectiveness of this CM must be assessed for each individual location.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Angle/Left-turn/Rear-End/All	CRF:	34.8-100%

NS17, Install right-turn lane (NS.I.)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	20%	20 years
Notes:	This CM only applies to crashes occurring on the approaches / influence area of the new right-turn lanes. This CM is not eligible for use at existing all-way stop intersections.		

General information				
Where to use:				
Many collisions at unsignalized intersections are related to right-turn maneuvers. A key strategy for minimizing such collisions is to provide exclusive right-turn lanes, particularly on high-volume and high-speed major-road approaches. When considering new right-turn lanes, potential impacts to non-motorized users should be considered and mitigated as appropriate. When considering new right-turn lanes, potential impacts to non-motorized users should be considered and mitigated as appropriate.				
Why it works:				
The strategy is targeted to reduce the frequency of rear-end collisions resulting from conflicts between vehicles turning right and following vehicles and vehicles turning right and through vehicles coming from the left on the cross street. Right-turn lanes also remove slow vehicles that are decelerating to turn right from the through-traffic stream, thus reducing the potential for rear-end collisions. Right-turn lanes can increase the length of the intersection crossing and create an additional potential conflict point for non-motorized users.				
General Qualities (Time, Cost and Effectiveness):				
Implementing this strategy may take from months to years. At some locations, right-turn lanes can be quickly and simply installed by restriping the roadway. At other locations, widening of the roadway, acquisition of additional right-of-way, and extensive environmental processes may be needed. Such projects require a substantial time for development and construction. Costs are highly variable and range from very low to high. The expected effectiveness of this CM must be assessed for each individual location.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	14 - 26 %

NS18, Install left-turn lane (where no left-turn lane exists)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	35%	20 years
Notes:	This CM only applies to crashes occurring on the approaches / influence area of the new left-turn lanes. This CM does NOT apply to converting a single-left into double-left turn. This CM is not eligible for use at existing all-way stop intersections.		

General information				
Where to use:				
Many collisions at unsignalized intersections are related to left-turn maneuvers. A key strategy for minimizing such collisions is to provide exclusive left-turn lanes, particularly on high-volume and high-speed major-road approaches. When considering new left-turn lanes, potential impacts to non-motorized users should be considered and mitigated as appropriate.				
Why it works:				
Adding left-turn lanes remove vehicles waiting to turn left from the through-traffic stream, thus reducing the potential for rear-end collisions. Because they provide a sheltered location for drivers to wait for a gap in opposing traffic, left-turn lanes may encourage drivers to be more selective in choosing a gap to complete the left-turn maneuver. This strategy may reduce the potential for collisions between left-turn and opposing through vehicles.				
General Qualities (Time, Cost and Effectiveness):				
Implementing this strategy may take from months to years. At some locations, left-turn lanes can be quickly and simply installed by restriping the roadway. At other locations, widening of the roadway, acquisition of additional right-of-way, and extensive environmental processes may be needed. Such projects require a substantial time for development and construction. Costs are highly variable and range from very low to high. The expected effectiveness of this CM must be assessed for each individual location.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	9 -55 %

NS19PB, Install raised medians (refuge islands)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	45%	20 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring in the crossing with the new islands. All new raised medians funded with federal HSIP funding should not include the removal of the existing roadway structural section and should be doweled into the existing roadway surface. This requirement is being implemented to maximize the safety-effectiveness of the limited HSIP funding and to minimize project impacts. Landscaping, if included in the project, is considered non-participating.		

General information				
Where to use:				
Intersections that have a long pedestrian crossing distance, a higher number of pedestrians, or a crash history. Raised medians decrease the level of exposure for pedestrians and allow pedestrians to concentrate on (or cross) only one direction of traffic at a time.				
Why it works:				
Raised pedestrian refuge islands, or medians at crossing locations along roadways, are another strategy to reduce exposure between pedestrians and motor vehicles. Refuge islands and medians that are raised (i.e., not just painted) provide pedestrians more secure places of refuge during the street crossing. They can stop partway across the street and wait for an adequate gap in traffic before completing their crossing.				
General Qualities (Time, Cost and Effectiveness):				
Median and pedestrian refuge areas are a low-cost countermeasure to implement. This cost can be applied to retrofit improvements or if it is a new construction project, implementing this countermeasure is even more cost-effective. In general, This CM can be very effective and can be considered on a systematic approach. When agencies opt to install landscaping in conjunction with new raised medians, the portion of the cost for landscaping and other non-safety related items that exceeds 10% of the project total cost is not federally participated and must be funded by the applicant.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian and Bicycle	CRF:	30 - 56 %

NS20PB, Install pedestrian crossing at uncontrolled locations (signs and markings only)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	25%	10 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring in the intersection/crossing with the new crossing. This CM is not intended to be used for high-cost aesthetic enhancements to intersection crosswalks (i.e. stamped concrete or stamped asphalt).		

General information				
Where to use:				
Non-signalized intersections without a marked crossing, where pedestrians are known to be crossing intersections that involve significant vehicular traffic. They are especially important at school crossings and intersections with right and/or left turns pockets. See Zegeer study (Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations) for additional guidance regarding when to install a marked crosswalk.				
Why it works:				
Adding pedestrian crossings has the opportunity to enhance pedestrian safety at locations noted as being problematic. Pavement markings delineate a portion of the roadway that is designated for pedestrian crossing. These markings will often be different for controlled verses uncontrolled locations. The use of "ladder", "zebra" or other enhanced markings at uncontrolled crossings can increase both pedestrian and driver awareness to the increased exposure at the crossing. Incorporating advanced "stop" or "yield" markings provides an extra safety buffer and can be effective in reducing the 'multiple-threat' danger to pedestrians. Nearly one-third of all pedestrian-related crashes occur at or within 50 feet of an intersection. Of these, 30 percent may involve a turning vehicle. There are several types of pedestrian crosswalks, including: continental, ladder, zebra, and standard. When agencies opt to install aesthetic enhancement to intersection crosswalks like stamped concrete/asphalt, the project design and construction costs can significantly increase. For HSIP applications, these costs must be accounted for in the B/C calculation, but these costs (over standard crosswalk markings) must be tracked separately and are not federally reimbursable and will increase the agency's local-funding share for the project costs.				
General Qualities (Time, Cost and Effectiveness):				
Costs associated with this strategy will vary widely, depending upon if curb ramps and sidewalk modifications are required with the crossing. When considered at a single location, these low cost improvements are usually funded through local funding by local crews. However, This CM can be effectively and efficiently implemented using a systematic approach with numerous locations, resulting in moderate cost projects that are more appropriate to seek state or federal funding.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian and Bicycle	CRF:	25 %

NS21PB, Install/upgrade pedestrian crossing at uncontrolled locations (with enhanced safety features)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	35%	20 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring in the new crossing (influence area) with enhanced safety features. This CM is not intended to be used for high-cost aesthetic enhancements to intersection crosswalks (i.e. stamped concrete or stamped asphalt).		

General information
Where to use:
Non-signalized intersections where pedestrians are known to be crossing intersections that involve significant vehicular traffic. They are especially important at school crossings and intersections with turn pockets. Based on the Zegeer study (Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations) at many locations, a marked crosswalk alone may not be sufficient to adequately protect non-motorized users. In these cases, **flashing beacons, curb extensions, advanced "stop" or "yield" markings, and other safety features** should be added to complement the standard crossing elements.
Why it works:
Adding pedestrian crossings that include enhances safety features has the opportunity to enhance pedestrian safety at locations noted as being especially problematic. The enhanced safety elements help delineate a portion of the roadway that is designated for pedestrian crossing. Incorporating advanced "yield" markings provide an extra safety buffer and can be effective in reducing the 'multiple-threat' danger to pedestrians. Nearly one-third of all pedestrian-related crashes occur at or within 50 feet of an intersection. When agencies opt to install aesthetic enhancement to intersection crosswalks like stamped concrete/asphalt, the project design and construction costs can significantly increase. For HSIP applications, these costs must be accounted for in the B/C calculation, but these costs (over standard crosswalk markings) must be tracked separately and are not federally reimbursable and will increase the agency's local-funding share for the project costs.
General Qualities (Time, Cost and Effectiveness):
Costs associated with this strategy will vary widely, depending upon the types of enhanced features that will be combined with the standard crossing improvements. The need for new curb ramps and sidewalk modifications will also be a factor. This CM may be effectively and efficiently implemented using a systematic approach with more than one location and can have relatively high B/C ratios based on past non-motorized crash history.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian and Bicycle	CRF:	37%

NS22PB, Install Rectangular Rapid Flashing Beacon (RRFB)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	35%	20 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring in the influence area (expected to be a maximum of within 250') of the crossing which includes the RRFB.		

General information
Where to use:
Rectangular Rapid Flashing Beacon (RRFB) includes pedestrian-activated flashing lights and additional signage that enhance the visibility of marked crosswalks and alert motorists to pedestrian crossings. It uses an irregular flash pattern that is similar to emergency flashers on police vehicles. RRFBs are installed at unsignalized intersections and mid-block pedestrian crossings.
Why it works:
RRFBs can enhance safety by increasing driver awareness of potential pedestrian conflicts and reducing crashes between vehicles and pedestrians at unsignalized intersections and mid-block pedestrian crossings. The addition of RRFB may also increase the safety effectiveness of other treatments, such as crossing warning signs and markings.
General Qualities (Time, Cost and Effectiveness):
RRFBs are a lower cost alternative to traffic signals and hybrid signals. This CM can often be effectively and efficiently implemented using a systematic approach with numerous locations.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian, Bicycle	CRF:	7 – 47.4%

NS23PB, Install Pedestrian Signal (including Pedestrian Hybrid Beacon (HAWK))

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	55%	20 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring in the intersection/crossing with the new signal. For HAWK or other pedestrian signals, the justification may be Warrant 4, 5 and/or 7, or passing the test in Figure 4F-1/4F-2 in Chapter 4F of CA MUTCD. Please refer to Chapter 4F of CA MUTCD for more details		

General information				
Where to use:				
Intersections noted as having a history of pedestrian vs. vehicle crashes and in areas where the likelihood of the pedestrian presence is high. Corridors should also be assessed to determine if there are adequate safe opportunities for non-motorists to cross and if a pedestrian signal, or a Pedestrian Hybrid Beacon (PHB) (also called High-Intensity Activated crossWalK beacon (HAWK)) are needed to provide an active warning to motorists when a pedestrian is in the crosswalk.				
Why it works:				
Adding a pedestrian signal has the opportunity to greatly enhance pedestrian safety at locations noted as being problematic. Nearly one-third of all pedestrian-related crashes occur at or within 50 feet of an intersection. In combination with this CM, better guidance signs and markings for non-motorized and motorized roadway users should be considered, including: sign and markings directing pedestrians and cyclists on appropriate/legal travel paths and signs and markings warning motorists of non-motorized uses of the roadway that should be expected.				
General Qualities (Time, Cost and Effectiveness):				
The cost of improvements are generally high, but can vary dependent on the type of signal and overall scope of the project. In most cases the project duration can be short. The expected effectiveness of this CM must be assessed for each individual location.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian and Bicycle	CRF:	15 - 69%

B.3 Roadway Countermeasures

R01, Add Segment Lighting

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Night	35%	20 years
Notes:	This CM only applies to "night" crashes (all types) occurring within limits of the proposed roadway lighting 'engineered' area.		

General information
Where to use:
Where to use: Noted substantial patterns of nighttime crashes. In particular, patterns of rear-end, right-angle, turning or roadway departure collisions on the roadways may indicate that night-time drivers can be unaware of the roadway characteristics.
Why it works:
Providing roadway lighting improves the safety during nighttime conditions by (1) making drivers more aware of the surroundings, which improves drivers' perception-reaction times, (2) enhancing drivers' available sight distances to perceive roadway characteristic in advance of the change, and (3) improving non-motorist's visibility and navigation.
General Qualities (Time, Cost and Effectiveness):
It expected that projects of this type may be constructed in a year or two and are relatively costly. There are several types of costs associated with providing lighting, including the cost of providing a permanent source of power to the location, the cost for the luminaire supports (i.e., poles), and the cost for routinely replacing the bulbs and maintenance of the luminaire supports. Some locations can result in high B/C ratios, but due to higher costs, these projects often result in medium to low B/C ratios.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Night, All	CRF:	18 - 69 %

R02, Remove or relocate fixed objects outside of Clear Recovery Zone

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	35%	20 years
Notes:	This CM only applies to crashes occurring within the limits of the new clear recovery zone (per Caltrans' HDM).		

General information
Where to use:
Known locations or roadway segments prone to collisions with fixed objects such as utility poles, drainage structures, trees, and other fixed objects, such as the outside of a curve, end of lane drops, and in traffic islands. A clear recovery zone should be developed on every roadway, as space is available. In situations where public right-of-way is limited, steps should be taken to request assistance from property owners, as appropriate.
Why it works:
While this strategy does not prevent the vehicle leaving the roadway, it does provide a mechanism to reduce the severity of a resulting crash. A clear zone is an unobstructed, traversable roadside area that allows a driver to stop safely or regain control of a vehicle that has left the roadway. Removing or moving fixed objects, flattening slopes, or providing recovery areas reduces the likelihood of a crash.
General Qualities (Time, Cost and Effectiveness):
Projects involving removing fixed objects from highway right-of-way can typically be accomplished quickly, assuming the objects are readily moveable. Clearing objects on private property requires more time for discussions with the property owner. Costs will generally be low, assuming that in most cases the objects to be removed are within the right-of-way. This CMs can be very effective and can be implemented by agencies' maintenance staff and/or implemented on a systematic approach. High-cost removals or removals implemented using a systematic approach would be good candidates for Caltrans Federal Safety Funding.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Fixed Object	CRF:	17 - 100 %

R03, Install Median Barrier

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	25%	20 years
Notes:	Note: For Caltrans' statewide Calls-for-Projects, this CM only applies to crashes occurring within the limits of the new barrier.		

General information
Where to use:
Areas where crash history indicates drivers are unintentionally crossing the median and the cross-overs are resulting in high severity crashes. The installation of median barriers can increase the number of PDO and non-severe injuries. The net result in safety from this countermeasure is connected more to reducing the severity of crashes not the number of crashes. It is recommended to review the warrants as outlined in Chapter 7 of the Caltrans Traffic Manual when considering whether to install median barriers.
Why it works:
This strategy is designed to prevent head-on collisions by providing a barrier between opposing lanes of traffic. The variety of median barriers available makes it easier to choose a site-specific solution. The main advantage is the reduction of the severity of the crashes. The key to success would be in selecting an appropriate barrier based on the site, previous crash history, maintenance needs, and median width.
General Qualities (Time, Cost and Effectiveness):
This strategy would in many cases be possible to implement within a short period after site selection. Costs will vary depending on the type of median barrier selected and whether the strategy is implemented as a stand-alone project or incorporated as part of a reconstruction or resurfacing effort. Maintenance costs and worker exposure will also vary depending on the type of barrier selected. The expected effectiveness of this CM must be assessed for each individual location.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Head-on	CRF:	0 - 94 %

R04, Install Guardrail

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	25%	20 years
Notes:	This CM only applies to crashes occurring within the limits of the new guardrail. This CM is not intended to be used for general maintenance activities (i.e. the replacement of existing damaged rail). For projects proposing to upgrade existing guardrail to current standards, this CM and corresponding CRF should only be applied to locations where past crash data or engineering judgment applied to the existing rail conditions suggests the upgraded guardrail may result in fewer or less severe crashes (justifying the use of the 25% CRF for this CM).		

General information
Where to use:
Guardrail is installed to reduce the severity of lane departure crashes. However, guardrail can reduce crash severity only for those conditions where striking the guardrail is less severe than going down an embankment or striking a fixed object. Guardrail should only be installed where it is clear that crash severity will be reduced, or there is a history of run-off-the-road crashes at a given location that have resulted in severe crashes. New and upgraded guardrail and end-treatments must meet current safety standards; see Method for Assessing Safety Hardware (MASH) for more information. Caltrans (or other national accepted guidance) slope/height criteria need to be considered and documented.
Why it works:
Guardrail redirects a vehicle away from embankment slopes or fixed objects and dissipates the energy of an errant vehicle.
General Qualities (Time, Cost and Effectiveness):
Strategies range from relatively inexpensive too costly. Costly projects may include those that upgrade existing guardrail applications to more semi-rigid and rigid barrier systems over extended distances. In general, this CMs can be effective and can be implemented by agencies' maintenance staff and/or implemented on a systematic approach.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Fixed Object, Run-off Road	CRF:	11 - 78 %

R05, Install impact attenuators

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	25%	10 years
Notes:	This CM only applies to crashes occurring within the limits of the new attenuators. This CM is not intended to be used for general maintenance activities (i.e. the replacement of existing damaged attenuators). For projects proposing to upgrade existing attenuators to current standards, this CM and corresponding CRF should only be applied to locations where past crash data or engineering judgment applied to the existing attenuator conditions suggests the upgraded attenuators may result in fewer or less severe crashes (justifying the use of the 25% CRF for this CM).		

General information				
Where to use:				
Impact attenuators are typically used to shield rigid roadside objects such as concrete barrier ends, steel guardrail ends and bridge pillars from oncoming automobiles. Attenuators should only be installed where it is impractical for the objects to be removed. New and upgraded barrier end-treatments must meet current safety standards; see MASH for more information.				
Why it works:				
Attenuators bring an errant vehicle to a more-controlled stop or redirect the vehicle away from a rigid object. Attenuators are effective at absorbing impact energy and increasing occupant safety. They also tend to draw attention to the fixed object, which helps drivers steer clear of the fixed objects.				
General Qualities (Time, Cost and Effectiveness):				
Costs depending on the scope of the project, type(s) used, and associated ongoing maintenance costs. Time to install is fairly quick once site is identified.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Fixed Object, Run-off Road	CRF:	5 - 50 %

R06, Flatten side slopes

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	30%	20 years
Notes:	This CM only applies to crashes occurring within the limits of the new side slopes. Minor/incidental flattening of side slopes would not likely result in the CRF shown below and may not be appropriate for use in Caltrans B/C calculations.		

General information				
Where to use:				
Roadways experiencing frequent lane departure crashes that result in roll-over type crashes as a result of the roadway slope being so severe as to not accommodate a reasonable degree of driver correction. When there is a need to reduce the severity of lane departure crashes without installing a barrier system that could result in increased numbers of crashes.				
Why it works:				
Flattened slopes provide a greater area for a driver to regain control of a vehicle. Steep slopes, ditches or unprotected hazardous drops-offs adjacent to a travel lane offer little opportunities to correct an inappropriate action by a driver and can result in sever crashes.				
General Qualities (Time, Cost and Effectiveness):				
Roadside modifications range from relatively inexpensive to very costly. Strategies that include creating safer side slopes where none exists can be moderately expensive based on the scope of the project and the associated clearing, grading, etc. The potential for high environmental and right-of-way impacts is high which can take several years to clear. In other cases This CM can be effective and can be implemented by agencies' maintenance staff and/or implemented on a systematic approach.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Fixed Object, Run-off Road	CRF:	5 - 62 %

R07, Flatten side slopes and remove guardrail

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	40%	20 years
Notes:	This CM only applies to crashes occurring within the limits of both the removed guardrail and the new side slopes.		

General information				
Where to use:				
Locations where high number of crashes originate as a lane departure and result in collision with guardrail or a fixed object located on the side slope shielded by guardrail. The guardrail may or may not meet current standards. Even though guardrails are generally installed to reduce the severity of departure crashes, they still can result in severe crashes in some locations.				
Why it works:				
Flattened side slopes and an unobstructed clear zone provide a greater area for a driver to regain control of a vehicle. The existing guardrail may help protect the steep slopes, fixed objects, or unprotected hazardous drops-offs adjacent to a travel lane, but removing all of these obstacles generally improves safety.				
General Qualities (Time, Cost and Effectiveness):				
Roadside modifications range from relatively inexpensive to very costly. Strategies that include creating safer side slopes where none exists can be moderately expensive based on the scope of the project and the associated clearing, grading, etc. The potential for high environmental and right-of-way impacts is high which can take several years to clear.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Roll Over, Fixed Object	CRF:	42%

R08, Install raised median

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	25%	20 years
Notes:	This CM only applies to crashes occurring within the limits of the new raised median. All new raised medians funded with federal HSIP funding should not include the removal of the existing roadway structural section and should be doweled into the existing roadway surface. This requirement is being implemented to maximize the safety-effectiveness of the limited HSIP funding and to minimize project impacts. Landscaping, if included in the project, is considered non-participating.		

General information				
Where to use:				
Areas experiencing head-on collisions that may be affected by both the number of vehicles that cross the centerline and by the speed of oncoming vehicles. Installing a raised median is a more restrictive approach in that it represents a more rigid barrier between opposing traffic. Application of raised medians on roadways with higher speeds is not advised - instead a median barrier should be considered. Including landscaping in new raised medians can be counterproductive to the HSIP safety goals and should only be done in ways that do not increase drivers' exposure to fixed objects and that will maintain driver's sight distance needs throughout the life of the proposed landscaping. **Agencies need to consider and document impacts of additional turning movements at nearby intersections.**				
Why it works:				
Adding raised medians is a particularly effective strategy as it adds to or reallocates the existing cross section to incorporate a buffer between the opposing travel lanes and reinforces the limits of the travel lane. Raised median may also be used to limit unsafe turning movements along a roadway.				
General Qualities (Time, Cost and Effectiveness):				
In some cases this strategy may be a retrofit into the existing roadway by utilizing a portion of the existing paved shoulder. These raised medians can be installed directly over the existing pavement. Cost and time to implement could significantly increase if the paved area is not sufficient to include a median. The surface treatment of the raised median also significantly affects their cost-effectiveness: standard concrete or other hardscape surfaces are usually more cost effective than landscaped medians. When agencies opt to install landscaping in conjunction with new raised medians, the project design and construction costs can significantly increase due to excavation, backfill/top-soil, water-connection, irrigation, planting, maintenance needed for the landscaping. When agencies opt to install landscaping in conjunction with new raised medians, the portion of the cost for landscaping and other non-safety related items that exceeds 10% of the project total cost is not federally participated and must be funded by the applicant.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Head-on	CRF:	20 - 75 %

R09, Install median (flush)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	15%	20 years
Notes:	This CM only applies to crashes occurring within the limits of the new flush median. The new median must be a minimum of 4 feet wide (or "wider" if a narrow median exists before the proposed project).		

General information
Where to use:
Areas experiencing head-on collisions that may be affected by both the number of vehicles that cross the centerline and by the speed of oncoming vehicles. Roadways with oversized lanes offer an opportunity to restripe the roadway to reduce the lanes to standard widths and use the extra width for the median.
Why it works:
Adding medians is a particularly effective strategy as it adds to or reallocates the existing cross section to incorporate a narrow buffer median between opposing flows, thereby providing a greater opportunity to correct an errant maneuver and further reinforce the limits of the travel lane. Application widths can vary based on the available cross section and intended application. Additional safety can be provided by combining this CM with rumble strips.
General Qualities (Time, Cost and Effectiveness):
In some cases this strategy may be retrofitted into the existing roadway by utilizing a portion of the existing paved shoulder and can ultimately be as simple as restriping the roadway. Costs and time to implement could significantly increase if the paved area is not sufficient to include a median.

FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	15 - 78 %

R10PB, Install pedestrian median fencing

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	35%	20 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring on the approaches/influence area of the new pedestrian median fencing.		

General information
Where to use:
Roadway segments with high pedestrian-generators and pedestrian-destinations nearby (e.g. transit stops) may experience a high volume of pedestrians J-walking across the travel lanes at mid-block locations instead of walking to the nearest intersection or designated mid-block crossing. When this safety issue cannot be mitigated with shoulder, sidewalk and/or crossing treatments, then installing a continuous pedestrian barrier in the median may be a viable solution.
Why it works:
Adding pedestrian median fencing has the opportunity to enhance pedestrian safety at locations noted as being problematic involving pedestrians running/darting across the roadway outside designated pedestrian crossings. Pedestrian median fencing can significantly reduce this safety issue by creating a positive barrier, forcing pedestrians to the designated pedestrian crossing.
General Qualities (Time, Cost and Effectiveness):
Costs associated with this strategy will vary widely depending on the type and placement of the median fencing. Impacts to transit and other land uses may need to be considered and controversy can delay the implementation. In general, this CM can be effective as a spot-location approach.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian, Bicycle	CRF:	25 - 40%

R11, Install acceleration/ deceleration lanes

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	25%	20 years
Notes:	This CM only applies to crashes occurring within the limits of the new accel/decel lanes on high speed roadways. Significant improvements to the merge length for lane-drop locations is also an acceptable use of this CM.		

General information				
Where to use:				
Areas proven to have crashes that are the result of drivers not being able to turn onto a high speed roadway to accelerate until the desired roadway speed is reached and areas that do not provide the opportunity to safety decelerate to negotiate a turning movement. This CM can also be used to improve the safety of merging vehicles at a lane-drop location.				
Why it works:				
A lane that does not provide enough deceleration length and storage space for turning traffic may cause the turn queue to back up into the adjacent through lane. This can contribute to rear-end and sideswipe crashes. An acceleration lane is an auxiliary or speed-change lane that allows vehicles to accelerate to highway speeds (high speed roadways) before entering the through-traffic lanes of a highway. Additionally, if acceleration by entering traffic takes place directly on the traveled way, it may disrupt the flow of through-traffic and cause rear-end and sideswipe collisions.				
General Qualities (Time, Cost and Effectiveness):				
Costs are highly variable. Where sufficient median or shoulder space exists it may be possible to provide acceleration/deceleration lanes at a moderate cost. Where the roadway must be widened and additional right-of-way must be acquired, higher costs and a lengthy time-to-construct are likely. The expected effectiveness of this CM must be assessed for each individual location.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Sideswipe, Rear-End	CRF:	10 - 75 %

R12, Widen lane (initially less than 10 ft)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	25%	20 years
Notes:	Note: For Caltrans' statewide Calls-for-Projects, this CM only applies to crashes occurring within the limits of the widened lanes. Widening must a minimum of 1 foot.		

General information				
Where to use:				
Horizontal curves or tangents and low speed or high speed roadways identified as having lane departure crashes, sideswipe or head-on crashes that can be attributed to an existing pavement width less than 10 feet.				
Why it works:				
Increasing pavement width can affect almost all crash types. A common practice is to widen the traveled way on horizontal curves to make operating conditions on curves comparable to those on tangents. Speed is a primary consideration when evaluating potential adverse impacts of lane width on safety. On high-speed, rural two-lane highways, an increased risk of cross-centerline head-on or cross-centerline sideswipe crashes is a concern because drivers may have more difficulty staying within the travel lane.				
General Qualities (Time, Cost and Effectiveness):				
Costs will depend on the amount of reconstruction necessary and on whether additional right-of-way is required. In general, this is one of the higher-cost strategies recommended, but it can also be very beneficial. Since this is a relatively expensive treatment, one of the keys to creating a cost effective project with at least a medium B/C ratio is targeting higher-hazard roadways.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	5 - 70 %

R13, Add two-way left-turn lane

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	30%	20 years
Notes:	This CM only applies to crashes occurring within the limits of the new lane, where an existing median did not already exist.		

General information
Where to use:
Roadways having a high frequency of drivers being rear-ended while attempting to make a left turn across oncoming traffic. Also can be effective for drivers crossing the centerline of an undivided multilane roadway inadvertently.
Why it works:
Two-way left-turn lanes provide a buffer between opposing directions of travel and separate left turning traffic from through traffic. They can also help to allow vehicles to begin to accelerate before entering the through-traffic lanes. They reduce the disruption of flow of through-traffic and reducing rear-end and sideswipe collisions. For some roadways the option of converting a four-lane undivided arterials to two-vehicle-lane roadways with a center left-turn lane and bike lanes should be considered (see "Road Diet" CM.)
General Qualities (Time, Cost and Effectiveness):
In some cases this strategy may be retrofitted into the existing roadway by utilizing a portion of the existing paved shoulder and can ultimately be as simple as restriping the roadway. Costs and time to implement could significantly increase if the paved area is not sufficient to include a median, requiring new right-of-way, and having significant environmental impacts. The expected effectiveness of this CM must be assessed for each individual location as the B/C ratios will vary from low to high.

FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	8 - 50 %

R14, Road Diet (Reduce travel lanes and add a two way left-turn and bike lanes)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	35%	20 years
Notes:	This CM only applies to crashes occurring within the limits of the new lane striping. "Intersection" crashes can only be applied when they resulted from turning movements that had no designated turn lanes/phases in the existing condition and the Road Diet will provide turn lanes/phases for these movements. This CM does not apply to roadway sections that already included left turn lanes or two way left turn lanes before the lane reductions. New bike lanes are also expected to be part of these projects. if any pavement is planned to be removed for the purpose of adding landscaping, planter-boxes, or other non-roadway user features, the cost should be non-participating.		

General information
Where to use:
Areas noted as having a higher frequency of head-on, left-turn, and rear-end crashes with traffic volumes that can be handled by only 2 free flowing lanes. Using this strategy in locations with traffic volumes that are too high could result in diversion of traffic to routes less safe than the original four-lane design. It may also result in congestion levels that contribute to other crashes.
Why it works:
The application of this strategy usually reduces the roadway segment speeds and serious head-on crashes. In many cases the extra pavement width can be used for the installation of bike lanes. In addition to increasing bicycle safety, these bike lanes can improve the safety of on-street parking.
General Qualities (Time, Cost and Effectiveness):
Implementation would require more time than in other low-cost treatments to complete environmental analyses, traffic studies and public input. Projects that only require new lane markings and minor signalization modifications will have relatively low cost and can be very effective and can be considered on a systematic approach. These striping and signal modification costs should be considered part of this CM and not an additional CM. (If additional signal hardware improvements are being made, over what is needed for the road diet, then the Improve Signal Hardware CM may also be used.) Often road diet projects need a seal-coat placed on the roadway to fully remove the old striping. These seal coats are considered part of the proper installation of this CM. In contrast, structural-overlays should not be considered part of this CM and are not considered eligible for funding in the California Local HSIP.

FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	26 - 43 %

R15, Widen shoulder

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	30%	20 years
Notes:	This CM only applies to crashes occurring within the limits of the new paved shoulder. A minimum of 2 feet width must be added and the new/resulting shoulders must be a minimum of 4 feet wide. This CM is not eligible unless it is done as the last step of an "incremental approach", for which the agency documents that: 1) they have already pursued and installed lower cost and lower impact CMs (i.e. signing/striping upgrades to MUTCD standards/recommendations, rumble strips, etc.), 2) they have already monitored the crash occurrences after these improvements were installed, and 3) the 'after' crash rate is still unacceptably high. This 'incremental approach' (or a special exception from the HSIP program manager) must be documented in the Narrative Questions in the application and a summary of the 'before' and 'after' crash analysis must be attached to the application.		

General information				
Where to use:				
Roadways that have a frequent incidence of vehicles leaving the travel lane resulting in an unsuccessful attempt to reenter the roadway. The probability of a safe recovery is increased if an errant vehicle is provided with an increased paved area in which to initiate such a recovery.				
Why it works:				
Based on the best available research, adding shoulder or widening an existing shoulder provides a greater area to regain control of a vehicle, as well as lateral clearance to roadside objects such as guardrail, signs and poles. They may also provide space for disabled vehicles to stop or drive slowly, provide increased sight distance for through vehicles and for vehicles entering the roadway, and in some cases reduce passing conflicts between motor vehicles and bicyclists and pedestrians. The likely safety benefits for adding or widening an existing shoulder generally increase as the widening width increases - practitioners should refer to NCHRP Report 500 Series, the CMF Clearinghouse or other references for more details.				
General Qualities (Time, Cost and Effectiveness):				
Shoulder widening costs would depend on whether new right-of-way is required and whether extensive roadside modification is needed. Since shoulder widening can be a relatively expensive treatment, one of the keys to creating a cost effective project with at least a medium B/C ratio is targeting higher-hazard roadways.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Fixed Object, Run-off Road, Sideswipe	CRF:	15 - 75 %

R16, Curve Shoulder widening (Outside Only)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	45%	20 years
Notes:	This CM only applies to crashes occurring within the limits (or influence area) of the new shoulder widening at curves. A minimum of 2-4 feet width must be added to the outside of horizontal curves and the new traversable shoulder must be a minimum of 4 feet wide.		

General information	
Where to use:	
Roadway curves noted as having frequent lane departure crashes due to inadequate or no shoulders, resulting in an unsuccessful attempt to reenter the roadway.	
Why it works:	
Adding shoulders (outside only) creates a recovery area in which a driver can regain control of a vehicle, as well as lateral clearance to roadside objects.	
General Qualities (Time, Cost and Effectiveness):	
To minimize the R/W needs and the cost, only outside shoulder at curves is to be widened. This CM can be implemented in a relatively short timeframe.	
FHWA CMF Clearinghouse:	NA

R17, Improve horizontal alignment (flatten curves)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	50%	20 years

Notes:	This CM only applies to crashes occurring within the limits (or influence area) of the improved alignment. **This CM is not eligible unless** it is done as the last step of an "incremental approach", including: the agency documents that: 1) they have already pursued and installed lower cost and lower impact CMs (i.e. signing/striping upgrades to MUTCD standards/recommendations, rumble strips, etc.), 2) they have already monitored the crash occurrences after these improvements were installed, and 3) the 'after' crash rate is still unacceptably high. This 'incremental approach' (or a special exception from the HSIP program manager) must be documented in the Narrative Questions in the application and a summary of the agency's 'before' and 'after' crash analysis must be attached to the application.

General information				
Where to use:				
Roadways with horizontal curves that have experienced lane departure crashes as a result of a roadway segment having compound curves or a severe radius. This strategy should generally be considered only when less expensive strategies involving clearing of specific sight obstructions or modifying traffic control devices have been tried and have failed to ameliorate the crash patterns.				
Why it works:				
Increasing the radius of a horizontal curve can be very effective in improving the safety performance of the curve. Curve modification reduces the likelihood of a vehicle leaving its lane, crossing the roadway centerline, or leaving the roadway at a horizontal curve; and minimizes the adverse consequences of leaving the roadway. Horizontal alignment improvement projects are expected to include standard/improved superelevation elements, which should be considered part of this CM and not an additional CM.				
General Qualities (Time, Cost and Effectiveness):				
This strategy is a long-term, higher-cost alternative for improving the safety of a horizontal curve because it usually involves total reconstruction of the roadway. It may also require acquisition of additional right-of-way and an environmental review. This strategy, albeit costly, has shown that increasing the radius of curvature can significantly reduce total curve-related crashes by up to 80 percent. The expected effectiveness of this CM must be assessed for each individual location.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	24 - 90%

R18, Flatten crest vertical curve

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	25%	20 years
Notes:	This CM only applies to crashes occurring within the limits (or influence area) of the improved alignment. This CM is not eligible unless it is done as the last step of an "incremental approach", including: the agency documents that: 1) they have already pursued and installed lower cost and lower impact CMs (i.e. signing/striping upgrades to MUTCD standards/recommendations, rumble strips, etc.), 2) they have already monitored the crash occurrences after these improvements were installed, and 3) the 'after' crash rate is still unacceptably high. This 'incremental approach' (or a special exception from the HSIP program manager) must be documented in the Narrative Questions in the application and a summary of the agency's 'before' and 'after' crash analysis must be attached to the application.		

General information				
Where to use:				
The target for this strategy is usually unsignalized intersections with restricted sight distance due to vertical geometry and with patterns of crashes related to that lack of sight distance that cannot be ameliorated by less expensive methods. This strategy should generally be considered only when less expensive strategies involving clearing of specific sight obstructions or modifying traffic control devices have been tried and have failed to ameliorate the crash patterns.				
Why it works:				
Adequate sight distance for drivers at stopped approaches to intersections has long been recognized as among the most important factors contributing to overall intersection safety. Vertical alignment improvement projects are expected to include standard/improved superelevation elements, which should be considered part of this CM and not an additional CM.				
General Qualities (Time, Cost and Effectiveness):				
Projects involving changing the horizontal and/or vertical alignment to provide more sight distance are quite extensive and usually take several years to accomplish. If additional right-of-way is required or environmental impacts are expected, these projects will require a substantial period of time. Since this is usually an expensive treatment, one of the keys to creating a cost effective project with at least a medium B/C ratio is targeting higher-hazard locations.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	20 - 51 %

R19, Improve curve superelevation

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	45%	20 years
Notes:	This CM only applies to crashes occurring within the limits (or influence area) of the improved superelevation. This CM does not apply to sections of roadways where the horizontal or vertical alignments are changing via another CM.		

General information				
Where to use:				
Roadways noted as having frequent lane departure crashes and inadequate or no superelevation. Safety can be enhanced when the superelevation is improved or restored along curves where the actual superelevation is less than the optimal.				
Why it works:				
Superelevation works with friction between the tires and pavement to counteract the forces on the vehicle associated with cornering. Many curves may have inadequate superelevation because of vehicles traveling at higher speeds than were originally designed for, because of loss of effective superelevation after resurfacing, or because of changes in design policy after the curve was originally constructed.				
General Qualities (Time, Cost and Effectiveness):				
This strategy can be a higher-cost alternative for improving the safety of a curve because it involves reconstruction to some degree. Other projects may be able to be constructed by simple overlays and minimal reconstruction of roadways features. When simple overlay fixes are pursued, a systematic installation approach may be appropriate. The expected effectiveness of this CM must be assessed for each individual location.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Run-off Road, All	CRF:	40 - 50 %

R20, Convert from two-way to one-way traffic

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	35%	20 years
Notes:	This CM only applies to crashes occurring within the limits of the new one-way sections.		

General information				
Where to use:				
One-way streets can offer improved signal timing and accommodate odd-spaced signals. One-way streets can simplify crossings for pedestrians, who must look for traffic in only one direction. While studies have shown that conversion of two-way streets to one-way generally reduces pedestrian crashes and the number of conflict points, one-way streets tend to have higher speeds which creates new problems. Care must be taken not to create conditions that cause driver confusion and erratic maneuvers.				
Why it works:				
Studies have shown a 10 to 50-percent reduction in total crashes after conversion of a two-way street to one-way operation. While studies have shown that con-version of two-way streets to one-way generally reduces pedestrian crashes, one-way streets tend to have higher speeds which creates new problems. At the same time, this strategy (1) increases capacity significantly and (2) can have safety-related drawbacks including pedestrian confusion and minor sideswipe crashes.				
General Qualities (Time, Cost and Effectiveness):				
The costs will vary depending on length of treatment and if the conversion requires modification to signals. Conversion costs can be high to build "crossovers" where the one-way streets convert back to two-way streets and to rebuild traffic signals. It's also likely that these types of modifications will require public involvement and could significantly add to the time it takes to complete the project. The expected effectiveness of this CM must be assessed for each individual location.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	26 - 43 %

R21, Improve pavement friction (High Friction Surface Treatments)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	55%	10 years
Notes:	This CM only applies to crashes occurring within the limits of the improved friction overlay. This CM is not intended to apply to standard chip-seal or open-graded **maintenance** projects for long segments of corridors or structure repaving projects intended to fix failed pavement.		

General information				
Where to use:				
Nationally, this countermeasure is referred to as "High Friction Surface Treatments" or HFST. Areas as noted having crashes on wet pavements or under dry conditions when the pavement friction available is significantly less than actual roadway speeds; including but not limited to curves, loop ramps, intersections, and areas with short stopping or weaving distances. This treatment is intended to target locations where skidding is determined to be a problem, in wet or dry conditions and the target vehicle is one that runs (skids) off the road or is unable to stop due to insufficient skid resistance.				
Why it works:				
Improving the skid resistance at locations with high frequencies of wet-road crashes and/or failure to stop crashes can result in a reduction of 50 percent for wet-road crashes and 20 percent for total crashes. Applying HFST can double friction numbers, e.g. low 40s to high 80s. This CM represents a special focus area for both FHWA and Caltrans, which means there are extra resources available for agencies interested in more details on High Friction Surface Treatment projects.				
General Qualities (Time, Cost and Effectiveness):				
This strategy can be relatively inexpensive and implemented in a short timeframe. The installation would be done by either agency personnel or contractors and can be done by hand or machine. In general, This CM can be very effective and can be considered on a systematic approach.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Wet, Rear-End, All	CRF:	17 - 68 %

R22, Install/Upgrade signs with new fluorescent sheeting (regulatory or warning)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	15%	10 years
Notes:	This CM only applies to crashes occurring within the influence area of the new/upgraded signs. This CM is not intended for maintenance upgrades of street-name, parking, guide, or any other signs without a primary focus on roadway safety. **<u>This CM is not eligible unless</u>** it is done as part of a larger sign audit project, including the study of: 1) the existing signs' locations, sizes and information per MUTCD standards, 2) missing signs per MUTCD standards, and 3) sign retroreflectivity. The overall sign audit scope (or a special exception from the HSIP program manager) must be documented in the Narrative Questions in the application. Based on the scope of the project/audit, it may be appropriate to combine other CMs in the B/C calculation.		

General information				
Where to use:				
The target for this strategy should be on roadway segments with patterns of head on, nighttime, non-intersection, run-off road, and sideswipe crashes related to lack of driver awareness of the presence of a specific roadway feature or regulatory requirement. Ideally this type of safety CM would be combined with other sign evaluations and upgrades (install chevrons, warning signs, delineators, markers, beacons, and relocation of existing signs per MUTCD standards.)				
Why it works:				
This strategy primarily addresses crashes caused by lack of driver awareness (or compliance) roadway signing. It is intended to get the drivers attention and give them a visual warning by using fluorescent yellow sheeting (or other retroreflective material).				
General Qualities (Time, Cost and Effectiveness):				
Signing improvements do not require a long development process and can typically be implemented quickly. Costs for implementing this strategy are nominal and depend on the number of signs. When considered at a single location, these low cost improvements are usually funded through local funding by local maintenance crews. However, This CM can be effectively and efficiently implemented using a systematic approach with numerous locations, resulting in moderate cost projects that are more appropriate to seek state or federal funding. When considering any type of federally funded sign upgrade project, California local agencies are encouraged to consider "Roadway Safety Signing Audit (RSSA) and Upgrade Projects". Including RSSAs in the development phase of sign projects are expected to identify non-standard (per MUTCD) sign features and missing signs that may otherwise go unnoticed. More information on RSSA is available on the Local Assistance HSIP webpage.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Head on, Run-off road, Sideswipe, Night	CRF:	18 - 35%

R23, Install chevron signs on horizontal curves

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	40%	10 years
Notes:	This CM only applies to crashes occurring within the influence area of the new signs. (i.e. only through the curve).		

General information				
Where to use:				
Roadways that have an unacceptable level of crashes on relatively sharp curves during periods of light and darkness. Ideally this type of safety CM would be combined with other sign evaluations and upgrades (install warning signs, delineators, markers, beacons, and relocation of existing signs per MUTCD standards.)				
Why it works:				
Post-mounted chevrons are intended to warn drivers of an approaching curve and provide tracking information and guidance to the drivers. While they are intended to act as a warning, it should also be remembered that the posts, placed along the roadside, represent a possible object with which an errant vehicle can crash into. Design of posts to minimize damage and injury is an important part of the considerations to be made when selecting these treatments.				
General Qualities (Time, Cost and Effectiveness):				
Signing improvements do not require a long development process and can typically be implemented quickly. Costs for implementing this strategy are nominal and depend on the number of signs. When considered at a single location, these low cost improvements are usually funded through local funding by local maintenance crews. However, This CM can be effectively and efficiently implemented using a systematic approach with numerous locations, resulting in moderate cost projects that are more appropriate to seek state or federal funding. When considering any type of federally funded sign upgrade project, California local agencies are encouraged to consider "Roadway Safety Signing Audit (RSSA) and Upgrade Projects". Including RSSAs in the development phase of sign projects are expected to identify non-standard (per MUTCD) sign features and missing signs that may otherwise go unnoticed. More information on RSSA is available on the Local Assistance HSIP webpage.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Run-off Road, All	CRF:	6 - 64 %

R24, Install curve advance warning signs

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	25%	10 years
Notes:	This CM only applies to crashes occurring within the influence area of the new signs. (i.e. only through the curve)		

General information				
Where to use:				
Roadways that have an unacceptable level of crashes on relatively sharp curves during periods of light and darkness. This countermeasure may also include horizontal alignment and/or advisory speed warning signs. Ideally this type of safety CM would be combined with other sign evaluations and upgrades (install warning signs, chevrons, delineators, markers, beacons, and relocation of existing signs per MUTCD standards.)				
Why it works:				
This strategy primarily addresses problem curves, and serves as an advance warning of an unexpected or sharp curve. It provides advance information and gives drivers a visual warning that their added attention is needed.				
General Qualities (Time, Cost and Effectiveness):				
Signing improvements do not require a long development process and can typically be implemented quickly. Costs for implementing this strategy are nominal and depend on the number of signs. When considered at a single location, these low cost improvements are usually funded through local funding by local maintenance crews. However, This CM can be effectively and efficiently implemented using a systematic approach with numerous locations, resulting in moderate cost projects that are more appropriate to seek state or federal funding. When considering any type of federally funded sign upgrade project, California local agencies are encouraged to consider "Roadway Safety Signing Audit (RSSA) and Upgrade Projects". Including RSSAs in the development phase of sign projects are expected to identify non-standard (per MUTCD) sign features and missing signs that may otherwise go unnoticed. More information on RSSA is available on the Local Assistance HSIP webpage.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Run-off Road, All	CRF:	20 - 30 %

R25, Install curve advance warning signs (flashing beacon)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	30%	10 years
Notes:	This CM only applies to crashes occurring within the influence area of the new signs. (i.e. only through the curve)		

General information				
Where to use:				
Roadways that have an unacceptable level of crashes on relatively sharp curves. Flashing beacons in conjunction with warning signs should only be used on horizontal curves that have an established severe crash history to help maintain their effectiveness.				
Why it works:				
This strategy primarily addresses problem curves, and serves as an enhanced advance warning of an unexpected or sharp curve. It provides advance information and gives drivers a visual warning that their added attention is needed. Flashing beacons are an added indication that a curve may be particularly challenging.				
General Qualities (Time, Cost and Effectiveness):				
Use of flashing beacons requires minimal development process, allowing flashing beacons to be installed within a short time period. Before choosing this CM, the agency needs to confirm the ability to provide power to the site (solar may be an option). In general, This CM can be very effective and can be considered on a systematic approach.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	30 %

R26, Install dynamic/variable speed warning signs

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	30%	10 years
Notes:	This CM only applies to crashes occurring within the influence area of the new signs. (i.e. through the curve) {**This CM does not apply to dynamic regulatory speed warning signs.** There are currently no nationally accepted CRFs for dynamic regulatory signs (also known as Radar Speed Feedback Signs). CRFs are being developed and Caltrans hopes to include these CMs and CRFs in future calls for projects.}		

General information				
Where to use:				
Curvilinear roadways that have an unacceptable level of crashes due to excessive speeds on relatively sharp curves.				
Why it works:				
This strategy primarily addresses crashes caused by motorists traveling too fast around sharp curves. It is intended to get the drivers attention and give them a visual warning that they may be traveling over the recommended speed for the approaching curve. Care should be taken to limit the placement of these signs to help maintain their effectiveness.				
General Qualities (Time, Cost and Effectiveness):				
Use of dynamic speed warning signs requires minimal development process, allowing them to be installed within a short time period. Before choosing this CM, the agency needs to confirm the ability to provide power to the site (solar may be an option). In general, This CM can be very effective and can be considered on a systematic approach.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	0 - 41 %

R27, Install delineators, reflectors and/or object markers

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	15%	10 years
Notes:	This CM only applies to crashes occurring within the limits / influence area of the new features. {**This is not a striping-related CM**}		

General information
Where to use:
Roadways that have an unacceptable level of crashes on curves (relatively flat to sharp) during periods of light and darkness. Any road with a history of fixed object crashes is a candidate for this treatment, as are roadways with similar fixed objects along the roadside that have yet to experience crashes. If a fixed object cannot be relocated or made break-away, placing an object marker can provide additional information to motorists. Ideally this type of safety CM would be combined with other sign evaluations and upgrades (install warning signs, chevrons, beacons, and relocation of existing signs per MUTCD standards.)
Why it works:
Delineators, reflectors and/or object markers are intended to warn drivers of an approaching curve or fixed object that cannot easily be removed. They are intended to provide tracking information and guidance to the drivers. They are generally less costly than Chevron Signs as they don't require posts to place along the roadside, avoiding an additional object with which an errant vehicle can crash into.
General Qualities (Time, Cost and Effectiveness):
These improvements do not require a long development process and can typically be implemented quickly. Costs for implementing this strategy are nominal and depend on the number of locations. When considered at a single location, these low cost improvements are usually funded through local funding by local maintenance crews. However, This CM can be effectively and efficiently implemented using a systematic approach with numerous locations, resulting in low to moderate cost projects that are more appropriate to seek state or federal funding. When considering any type of federally funded sign upgrade project, California local agencies are encouraged to consider "Roadway Safety Signing Audit (RSSA) and Upgrade Projects". Including RSSAs in the development phase of sign projects are expected to identify non-standard (per MUTCD) sign features and missing signs that may otherwise go unnoticed. More information on RSSA is available on the Local Assistance HSIP webpage.

FHWA CMF Clearinghouse:	Crash Types Addressed:	All	CRF:	0 - 30 %

R28, Install edge-lines and centerlines

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	25%	10 years
Notes:	This CM only applies to crashes occurring within the limits of the new centerlines and/or edge-lines. This CM is not intended to be used for general maintenance activities (i.e. the replacement of existing striping and RPMs in-kind) and must include upgraded safety features over the existing striping. For two lane roadways allowing passing, a striping audit must be done to ensure the passing limits meeting the MUTCD standards. Both the centerline and edge-lines are expected to be upgraded, unless prior approval is granted by Caltrans staff in writing and attached to application.		

General information				
Where to use:				
Any road with a history of run-off-road right, head-on, opposite-direction-sideswipe, or run-off-road-left crashes is a candidate for this treatment - install where the existing lane delineation is not sufficient to assist the motorist in understanding the existing limits of the roadway. Depending on the width of the roadway, various combinations of edge line and/or center line pavement markings may be the most appropriate. Incorporating raised/reflective pavement markers (RPMs) into centerlines (and edge-lines) should be considered as it has been shown to improve safety.				
Why it works:				
Installing edge-lines and centerlines where none exists or making significant upgrades to existing lines (paint to thermoplastic, adding audible disks/bumps in the thermoplastic stripes, or adding RPMs) are intended/designed to help drivers who might leave the roadway because of their inability to see the edge of the roadway along the horizontal edge of the pavement or cross-over the centerline of the roadway into oncoming traffic. New pavement marking products tend to be more durable, are all-weather, more visible, and have a higher retroreflectivity than traditional pavement markings.				
General Qualities (Time, Cost and Effectiveness):				
These improvements do not require a long development process and can typically be implemented quickly. Costs for implementing this strategy are nominal and depend on the number and length of locations. This CM can be effectively and efficiently implemented using a systematic approach with numerous and long locations, resulting in low to moderate cost projects that are more appropriate to seek state or federal funding. When considering any type of federally funded striping upgrade project, California local agencies are encouraged to consider "Roadway Safety Striping Audit and Upgrade Projects". Including wide-scale striping audits in the development phase of striping projects are expected to identify non-standard (per MUTCD) striping/marking features, no-passing zone limits needing adjustment, and missing striping/markings that may otherwise go unnoticed. More information on this concepts is available on the Local Assistance HSIP webpage under an RSSA example document. Note: When federal safety funding is used for these installations in high-wear-locations, the local agency is expected to maintain the improvement for a minimum of 10 years.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Head-on, Run-off Road, All	CRF:	0 - 44 %

R29, Install no-passing line

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	45%	10 years
Notes:	This CM only applies to crashes occurring within the limits of the new or extended no-passing zones.		

General information
Where to use:
Roadways that have a high percentage of head-on crashes suggesting that many head-on crashes may relate to failed passing maneuvers. No-passing lines should be installed where drivers "passing sight distance" is not available due to horizontal or vertical obstructions. General restriping projects can be good opportunities to reevaluate and incorporate new no-passing zones limits. The incorporation 'No Passing Zone' pennants should also be considered when reevaluating the limits of no-passing zones. Installing no-passing limits in areas that are not warranted may reduce the overall safety of the corridor as drivers may become frustrated and attempt passing maneuvers at other locations without the necessary sight distance.
Why it works:
When the centerline markings do not differentiate between passing and no-passing areas, drivers may have difficulty determining where passing maneuvers can be completed safely. Providing clear and engineered passing and no-passing areas can encourage drivers to wait patiently for safe passing areas and avoid aggressively looking for passing opportunities.
General Qualities (Time, Cost and Effectiveness):
These improvements do not require a long development process and can typically be implemented quickly. Costs for implementing this strategy are nominal and depend on the number and length of locations. When considered at a single location, these low cost improvements are usually funded through local funding by local maintenance crews. However, This CM can be effectively and efficiently implemented using a systematic approach with numerous and long locations, resulting in low to moderate cost projects that are more appropriate to seek state or federal funding.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Head-on, Side-swipe	CRF:	40 - 53%

R30, Install centerline rumble strips/stripes

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	20%	10 years
Notes:	This CM only applies to crashes occurring within the limits of the new rumble strips/stripes.		

General information
Where to use:
Center Line rumble strips/stripes can be used on virtually any roadway – especially those with a history of head-on crashes. It is recommended that rumble strips/stripes be applied systematically along an entire route instead of only at spot locations. For all rumble strips/stripes, pavement condition should be sufficient to accept milled rumble strips. Care should be taken when considering installing rumble strips in locations with residential land uses or in areas with high bicycle volumes.
Why it works:
Rumble strips provide an auditory indication and tactile rumble when driven on, alerting drivers that they are drifting out of their travel lane, giving them time to recover before they depart the roadway or cross the center line. Additionally, rumble stripes (pavement marking in the rumble itself) provide an enhanced marking, especially in wet dark conditions.
General Qualities (Time, Cost and Effectiveness):
These improvements do not require a long development process and can typically be implemented quickly. Costs for implementing this strategy are nominal and depend on the number and length of locations. This CM can be effectively and efficiently implemented using a systematic approach with numerous and long locations, resulting in moderate cost projects that are more appropriate to seek state or federal funding.

FHWA CMF Clearinghouse:	Crash Types Addressed:	Head-on, Side-swipe, All	CRF:	15 - 68%

R31, Install edgeline rumble strips/stripes

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	All	15%	10 years
Notes:	This CM only applies to crashes occurring within the limits of the new rumble strips/stripes.		

General information				
Where to use:				
Shoulder and edge line milled rumble strips/stripes should be used on roads with a history of roadway departure crashes. It is recommended that rumble strips/stripes be applied systematically along an entire route instead of only at spot locations. For all rumble strips/stripes, pavement condition should be sufficient to accept milled rumble strips. Special requirements may apply and care should be taken when considering installing rumble strips in locations with residential land uses or in areas with high bicycle volumes.				
Why it works:				
Rumble strips provide an auditory indication and tactile rumble when driven on, alerting drivers that they are drifting out of their travel lane, giving them time to recover before they depart the roadway or cross the center line. Additionally, rumble stripes (pavement marking in the rumble itself) provide an enhanced marking, especially in wet dark conditions.				
General Qualities (Time, Cost and Effectiveness):				
These improvements do not require a long development process and can typically be implemented quickly. Costs for implementing this strategy are nominal and depend on the number and length of locations. This CM can be effectively and efficiently implemented using a systematic approach with numerous and long locations, resulting in moderate cost projects that are more appropriate to seek state or federal funding.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Run-off Road	CRF:	10 - 41%

R32PB, Install bike lanes

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	35%	20 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring within the limits of the Class II (not Class III) bike lanes. When an off-street bike-path is proposed that is not adjacent to the roadway, the applicant must document the engineering judgment used to determine which "Ped & Bike" crashes to apply.		

General information				
Where to use:				
Roadway segments noted as having crashes between bicycles and vehicles or crashes that may be preventable with a buffer/shoulder. Most studies suggest that bicycle lanes may provide protection against bicycle/motor vehicle collisions. Striped bike lanes can be incorporated into a roadway when is desirable to delineate which available road space is for exclusive or preferential use by bicyclists.				
Why it works:				
Most studies present evidence that bicycle lanes provide protection against bicycle/motor vehicle collisions. Bicycle lanes provide marked areas for bicyclist to travel along the roadway and provide for more predictable movements for both bicyclist and motorist. Evidence also shows that riding with the flow of vehicular traffic reduces bicyclists' chances of collision with a motor vehicle. Locations with bicycle lanes have lower rates of wrong-way riding. In combination with this CM, better guidance signs and markings for non-motorized and motorized roadway users should be considered, including: sign and markings directing cyclists on appropriate/legal travel paths and signs and markings warning motorists of non-motorized uses of the roadway that should be expected.				
General Qualities (Time, Cost and Effectiveness):				
Adding striped bicycle lanes can range from the simply restriping the roadway and minor signing to projects that require roadway widening, right-of-way, and environmental impacts. It is most cost efficient to create bike lanes during street reconstruction, street resurfacing, or at the time of original construction. The expected effectiveness of this CM must be assessed for each individual location. For simple installation scenarios, This CM can be very effective and can be considered on a systematic approach.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian, Bicycle	CRF:	0 - 53 %

R33PB, Install Separated Bike Lanes

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	45%	20 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring within the limits of the separated bike lanes. When an off-street bike-path is proposed that is not adjacent to the roadway, the applicant must document the engineering judgment used to determine which "Ped & Bike" crashes to apply.		

General information				
Where to use:				
Separated bikeways are most appropriate on streets with high volumes of bike traffic and/or high bike-vehicle collisions, presumably in an urban or suburban area. Separation types range from simple, painted buffers and flexible delineators, to more substantial separation measures including raised curbs, grade separation, bollards, planters, and parking lanes. These options range in feasibility due to roadway characteristics, available space, and cost. In some cases, it may be possible to provide additional space in areas where pedestrian and bicyclists may interact, such as the parking buffer, or loading zones, or extra bike lane width for cyclists to pass one another.				
Why it works:				
Separated bike lanes provide increased safety and comfort for bicyclists beyond conventional bicycle lanes. By separating bicyclists from motor traffic, "protected" or physically separated bike lanes can offer a higher level of comfort and are attractive to a wider spectrum of the public. Intersections and approaches must be carefully designed to promote safety and facilitate left-turns for bicyclists from the primary corridor to cross street. In combination with this CM, better guidance signs and markings for non-motorized and motorized roadway users should be considered, including: sign and markings directing cyclists on appropriate/legal travel paths and signs and markings warning motorists of non-motorized uses of the roadway that should be expected.				
General Qualities (Time, Cost and Effectiveness):				
The cost of Installing separated bike lanes can be low to medium or high, depending on whether roadway widening, right-of-way and environmental impacts are involved. It is most cost efficient to create bike lanes during street reconstruction, street resurfacing, or at the time of original construction. The expected effectiveness of this CM must be assessed for each individual location.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian, Bicycle	CRF:	3.7 - 100 %

R34PB, Install sidewalk/pathway (to avoid walking along roadway)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	80%	20 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring within the limits of the new walkway. This CM is not intended to be used where an existing sidewalk is being replaced with a wider one, unless prior Caltrans approval is included in the application. When an off-street multi-use path is proposed that is not adjacent to the roadway, the applicant must document the engineering judgment used to determine which "Ped & Bike" crashes to apply.		

General information
Where to use:
Areas noted as not having adequate or no sidewalks and a history of walking along roadway pedestrian crashes. In rural areas asphalt curbs and/or separated walkways may be appropriate.
Why it works:
Sidewalks and walkways provide people with space to travel within the public right-of-way that is separated from roadway vehicles. The presence of sidewalks on both sides of the street has been found to be related to significant reductions in the "walking along roadway" pedestrian crash risk compared to locations where no sidewalks or walkways exist. Reductions of 50 to 90 percent of these types of pedestrian crashes. In combination with this CM, better guidance signs and markings for non-motorized and motorized roadway users should be considered, including: sign and markings directing pedestrians and cyclists on appropriate/legal travel paths and signs and markings warning motorists of non-motorized uses of the roadway that should be expected.
General Qualities (Time, Cost and Effectiveness):

Costs for sidewalks will vary, depending upon factors such as width, materials, and existing of curb, gutter and drainage. Asphalt curbs and walkways are less expensive, but require more maintenance. The expected effectiveness of this CM must be assessed for each individual location. These projects can be very effective in areas of high-pedestrian volumes with a past history of crashes involving pedestrians.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian, Bicycle	CRF:	65 - 89 %

R35PB, Install/upgrade pedestrian crossing (with enhanced safety features)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	35%	20 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring in the influence area (expected to be a maximum of within 250') of the new crossing which includes new enhanced safety features. Note: This CM is not intended to be combined with the "Install raised pedestrian crossing" when calculating the improvement's B/C ratio. This CM is not intended to be used for high-cost aesthetic enhancements (i.e. stamped concrete or stamped asphalt).		

General information				
Where to use:				
Roadway segments with no controlled crossing for a significant distance in high-use midblock crossing areas and/or multilane roads locations. Based on the Zegeer study (Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations) at many locations, a marked crosswalk alone may not be sufficient to adequately protect non-motorized users. In these cases, flashing beacons, curb extensions, medians and pedestrian crossing islands and/or other safety features should be added to complement the standard crossing elements. For multi-lane roadways, advance "yield" markings can be effective in reducing the 'multiple-threat' danger to pedestrians.				
Why it works:				
Adding pedestrian crossings has the opportunity to greatly enhance pedestrian safety at locations noted as being problematic. The enhanced safety elements, which may include curb extensions, medians and pedestrian crossing islands, beacons, and lighting, combined with pavement markings delineating a portion of the roadway that is designated for pedestrian crossing. Care must be taken to warn drivers of the potential for pedestrians crossing the roadway and enhanced improvements added to the crossing increase the likelihood of pedestrians crossing in a safe manner. In combination with this CM, better guidance signs and markings for non-motorized and motorized roadway users should be considered, including: sign and markings directing pedestrians and cyclists on appropriate/legal travel paths and signs. When agencies opt to install aesthetic enhancement to crossing like stamped concrete/asphalt, the project design and construction costs can significantly increase. For HSIP applications, these costs must be accounted for in the B/C calculation, but these costs (over standard crosswalk markings) must be tracked separately and are not federally reimbursable and will increase the agency's local-funding share for the project costs.				
General Qualities (Time, Cost and Effectiveness):				
Costs associated with this strategy will vary widely, depending on the extent of the curb extensions, raised medians, flashing beacons, and other pedestrian safety elements that are needed with the crossing. When considered at a single location, these improvements can sometimes be low cost and funded through local funding by local crews. This CM can often be effectively and efficiently implemented using a systematic approach with numerous locations, resulting in moderate to high cost projects that are appropriate to seek state or federal funding.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian, Bicycle	CRF:	8 - 56%

R36PB, Install raised pedestrian crossing

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	35%	20 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring in the area with the new raised crossing. Note: This CM is not intended to be combined with the "Install pedestrian crossing (with enhanced safety features)" when calculating the improvement's B/C ratio.		

General information				
Where to use:				
On lower-speed roadways, where pedestrians are known to be crossing roadways that involve significant vehicular traffic. Based on the Zegeer study (Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations) at many locations, a marked crosswalk alone, may not be sufficient to adequately protect non-motorized users. In these cases, raised crossings can be added to complement the standard crossing elements. Special requirements may apply and extra care should be taken when considering installing raised crossings to ensure unintended safety issues are not created, such as: emergency vehicle access or truck route issues.				
Why it works:				
Adding a raised pedestrian crossing has the opportunity to enhance pedestrian safety at locations noted as being especially problematic. The raised crossing encourages motorists to reduce their speed and provides improved delineation for the portion of the roadway that is designated for pedestrian crossing. In combination with this CM, better guidance signs and markings for non-motorized and motorized roadway users should be considered, including: sign and markings directing pedestrians and cyclists on appropriate/legal travel paths.				
General Qualities (Time, Cost and Effectiveness):				
Costs associated with this strategy will vary widely, depending upon the elements of the raised crossing and the need for new curb ramps and sidewalk modifications. This CM may be effectively and efficiently implemented using a systematic approach with more than one location and can have medium to high B/C ratios based on past non-motorized crash history.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian, Bicycle	CRF:	30 - 46%

R37PB, Install Rectangular Rapid Flashing Beacon (RRFB)

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Pedestrian and Bicycle	35%	20 years
Notes:	This CM only applies to "Ped & Bike" crashes occurring in the influence area (expected to be a maximum of within 250') of the crossing which includes the RRFB.		

General information				
Where to use:				
Rectangular Rapid Flashing Beacon (RRFB) includes pedestrian-activated flashing lights and additional signage that enhance the visibility of marked crosswalks and alert motorists to pedestrian crossings. It uses an irregular flash pattern that is similar to emergency flashers on police vehicles. RRFBs are installed at unsignalized intersections and mid-block pedestrian crossings.				
Why it works:				
RRFBs can enhance safety by increasing driver awareness of potential pedestrian conflicts and reducing crashes between vehicles and pedestrians at unsignalized intersections and mid-block pedestrian crossings. The addition of RRFB may also increase the safety effectiveness of other treatments, such as crossing warning signs and markings.				
General Qualities (Time, Cost and Effectiveness):				
RRFBs are a lower cost alternative to traffic signals and hybrid signals. This CM can often be effectively and efficiently implemented using a systematic approach with numerous locations.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Pedestrian, Bicycle	CRF:	7 – 47.4%

R38, Install Animal Fencing

For HSIP Cycle 11 Call-for-projects			
Funding Eligibility	Crash Types Addressed	CRF	Expected Life
90%	Animal	80%	20 years
Notes:	This CM only applies to "animal" crashes occurring within the limits of the new fencing.		

General information				
Where to use:				
At locations with high percent of vehicular/animal crashes (reactive) or where there is a known high percent of animals crossing due to migratory patterns (proactive).				
Why it works:				
Animal fencing helps to channelize the identified animals to a natural or man-made crossing, eliminating the conflict between vehicles and animals on the same place. Animal fencing is typically installed at a bridge location with its "run of need" dependent on the surrounding terrain.				
General Qualities (Time, Cost and Effectiveness):				
Time to install fencing can be moderate to lengthy depending on the environmental commitments and agreed upon solution to mitigating project impacts. Costs will be fairly low and depend on the "run of need" length. There will be minimal reoccurring maintenance costs on keeping the fence intact. The expected effectiveness of this CM must be assessed for each individual location.				
FHWA CMF Clearinghouse:	Crash Types Addressed:	Animal	CRF:	70 - 90 %

Appendix C: Summary of "Recommended Actions"

The information contained here represent a brief summary of each section of this manual as well as the Summary of "Recommended Actions" from Sections 2 through 7. This is intended to be a quick-reference for local agency practitioners working on a "proactive safety analysis" of their roadway network.

Introduction and Purpose

As safety practitioners consider implementing a 'proactive safety analysis approach' they should consider the overall context of the safety issues facing California local agencies and Caltrans primary goals for preparing this Safety manual for California's local roadway owners. Figure 1 provides a flowchart of the process and Appendices E and F provide examples and lessons learned from recent statewide calls-for-projects.

Identifying Safety Issues

This section provides an overview of the types of data to collect for the identification of roadway safety issues. It discusses sources of crash data and how they can be used. As practitioners gather information they are encouraged to develop one or more separate spreadsheets and/or pin-maps to help track and manage this data. The following spreadsheet is offered as an example, but each agency's spreadsheet should include data and be formatted as necessary to meet their needs.

	General Information		Crash Information			Evaluation / Action		
Location & Date	Source/Type of information	Safety Issue/Problem	Nature of Crashes	Time of Day	Weather/Traffic Conditions	Staff Evaluation	Recommend Action	Resolution
1) Intersection "X"								
2) Roadway Segment (PM 5.3 to PM 7.8)								

State and Local Crash Databases

Recommended Action: Obtain at least 3 years of network-wide crash data to identify local roads that have a history of roadway crashes. This will be used to identify predominant roadway crash locations, crash types and other common characteristics.

Transportation Injury Mapping System (TIMS)

Recommended Action: Consider augmenting your local agency's data collection approach with information available using the suite of TIMS tools. The TIMS tools (and/or tools from private for-profit vendors) can help the safety practitioner access and manage their crash data.

Law Enforcement Crash Reports

Recommended Action: Develop a working relationship with law enforcement officials responsible for enforcement and crash investigations. This could foster a partnership where sharing crash reports and

safety information on problem roadway segments becomes an everyday occurrence. Practitioners with limited access to crash data are encouraged to use TIMS to assess the local crash report data.

Observational Information

Recommended Action: Gather information received from law enforcement and road maintenance crew observations. Develop a system for maintenance crews to report and record observed roadway safety issues and a mechanism to address them.

Public Notifications

Recommended Action: Review and summarize information received from these sources, identifying segments or corridors with multiple notifications and record the locations, dates, and nature of the problem that are cited.

Roadway Data and Devices

Recommended Action: Identify and track roadway characteristics for the intersections, roadway segments, and corridors, including compliance with the minimum standards. At a minimum, this should be done for locations being considered for safety improvements, but ideally agencies would establish an extensive database of roadway data to help them proactively identify high risk roadway features.

Exposure Data

Recommended Action: Consider the availability of exposure data and track it along with the other crash data to help prioritize potential locations for safety improvements.

Field Assessments and Road Safety Audits

Recommended Action: Consider completing formal or informal field assessments and RSAs at certain locations to help ensure all relevant information is collected and available for the safety practitioners to complete their safety analysis and identification of the most appropriate countermeasures. Develop simple straightforward criteria on when one of these will be undertaken.

Safety Data Analysis

This section summarizes the types of analyses that can be conducted to determine what roadway countermeasures should be implemented. This section is the link between the data (Section 2) and the selection of appropriate countermeasures (Section 4). It provides definitions and examples of the qualitative and quantitative factors that should be considered when evaluating roadway safety issues.

Quantitative Analysis

Recommended Action: Complete a quantitative analysis of their roadway data using both Crash Frequency and Crash Rate methodologies, including:

Crash Frequency

Top 10 (or 20) lists of intersections and roadway segments.

For lower volume roadways, network wide pin-maps may be more effective.

Develop collision diagrams showing the direction of movement of vehicles and pedestrians.

Crash Rate

Top 10 (or 20) lists of roadway segments in relationship to length, volumes, and/or density.

Top 10 (or 20) lists of intersections, sorted by crash rate.

Top 10 (or 20) lists of the highest volume intersections, sorted by crash frequency or rate.

Qualitative Analysis

Recommended Action: Consider completing field assessments and RSAs to identify roadway infrastructure characteristics relating to both locations with compliance issues and locations with high crash frequencies/rates. As part the field assessments, common roadway and crash characteristics should be identified for the potential systemic deployment of countermeasures.

Caltrans recommends all agencies complete both quantitative and qualitative analyses before starting their applications for HSIP program funding. The findings from these analyses should be documented in spreadsheets and/or pin-maps similar to the ones discussed in Section 2.

Countermeasures

This Section provides a description of selected countermeasures that have been shown in this manual. It includes a basic set of strategies to implement at locations experiencing a history of crashes and their corresponding crash modification factors (CMF). NOTE: Crash Reduction Factors (CRFs) are directly connected to the CMFs and are another indication of the effectiveness of a particular treatment. The CRF for a countermeasure is defined mathematically as 1 – CMF. The terms CMFs and CRFs are used interchangeably throughout this document.

Selecting Countermeasures and Crash Modification Factors / Crash Reduction Factors

Countermeasure Details and Characteristics

Recommended Action: Agencies should use all information and results obtained through completing the actions in Sections 2, 3 and 4 to select the appropriate countermeasures for their HCCLs and systemic improvements. As novice safety practitioners select countermeasures, they must realize that a reasonable level of traffic 'engineering judgment' is required and that this manual and should not be used as a simple cheat-sheet for preparing and submitting applications for funding.

Calculating the B/C ratio and Comparing Projects

This section defines a methodology for calculating a benefit to cost (B/C) ratio for a potential safety project. It includes sources for estimating projected costs and benefits and the specific values/formulas Caltrans uses for its statewide evaluations of HSIP projects. This section also discusses the potential value in reevaluating projects' overall cost effectiveness.

Estimating the Benefit of Implementing Proposed Improvements

Recommended Action: Prepare 'Total Benefit' estimates for the proposed projects being evaluated in the proactive safety analysis.

Estimating the Cost of Implementing Proposed Improvements

Recommended Action: Prepare 'Total Project Cost' estimates for the proposed projects being evaluated in the proactive safety analysis.

Calculating the B/C Ratio

Recommended Action: Calculate the B/C ratio for each of the proposed projects being evaluated in the proactive safety analysis.

Compare B/C Ratios and Consider the Need to Reevaluate Project Elements

Recommended Action: Compare, reevaluate, and prioritize the potential safety projects. Consider changing the project limits or utilizing lower cost countermeasures for projects with low initial B/C ratios.

Identifying Funding and Construct Improvements

This section identifies existing and new funding opportunities for safety projects that local agencies should be considering. This section also briefly discusses some unique project development issues and strategies for safety projects as they proceed through design and construction.

Existing Funding for Low-cost Countermeasures

Recommended Action: Survey planned maintenance, developer and capital projects to determine whether they overlap any of the proposed safety projects. Where projects overlap, leverage the existing funding sources to include safety countermeasures.

Other Funding Sources

Recommended Action: Consider all potential funding opportunities to incorporate the identified safety countermeasures including the HSIP and ATP Programs.

Project Development and Construction Considerations

Recommended Action: Safety practitioners should follow their safety projects all the way through the project delivery and construction process. In addition, they should establish a safety program delivery plan that brings awareness and support to the expedited delivery of safety projects. Where possible, safety practitioners should involve the media and even consider having their own program intended to "toot their own safety-horn."

Evaluation Improvements

This section presents the process to complete an evaluation of installed treatments. After the countermeasures are installed, assessing their effectiveness will provide valuable information and can help determine which countermeasures should continue to be installed on other roadways to make them safer as well.

Recommended Action: Develop a spreadsheet to track future safety project installations and record 3+ years of "before" and "after" crash information at those locations. Once safety countermeasures are constructed, schedule and track assessment dates to ensure they happen.

Appendix D: Benefit Cost Ratio (BCR) Calculations

This appendix includes the Benefit Cost methodology used in the Caltrans calls-for-projects in the HSIP programs. The HSM, Part B - Chapter 7, includes more details on conducting Economic Appraisal for roadway safety projects. Local agencies will be required to utilize the HSIP Analyzer to calculate the Benefit Cost Ratio (BCR) as part of their application for HSIP funding. Starting in Cycle 7 call for projects, the fatality and severe injury costs have been combined for calculating the benefit. Because fatality figures are small and are a matter of randomness, this change is being made to reduce the possibility of selecting an improvement project on the basis of randomness.

1) $Benefit\ (Annual) = \sum_{s=0}^{3} \frac{CRF \times N \times CC_{ave}}{Y}$

- CRF : Crash reduction factor in each countermeasure.
- S : Severity (0: PDO, 1: Minor Injury, 2: Injury, 3: Severe Injury/Fatal). See the below table.
- N : Number of Crashes, in severity levels, related to selected countermeasure.
- Y : Crash data time period (Year).
- CC_{ave} : Crash costs in severity levels.

Severity (S)	Crash Severity *	Location Type	Crash Cost ***
3	**Fatality and Severe Injury Combined (KA)	Signalized Intersection	$1,787,000
3		Non Signalized Intersection	$2,843,000
3		Roadway	$2,461,000
2	Evident Injury – Other Visible (B)		$159,900
1	Possible Injury–Complaint of Pain (C)		$90,900
0	Property Damage Only (O)		$14,900

* The letters in parenthesis (K, A, B, C and O) refer to the KABCO scale; it is commonly used by law enforcement agencies in their crash reporting efforts and is further documented in the HSM.

** Figures were calculated based on an average Fatality (K) / Severe Injury (A) ratio for each area type, a crash cost for a Fatality (K) of $8,112,200, and a crash cost of a Severe/Disabling Injury (A) of $437,100. These costs are used in the HSIP Analyzer.

*** Based on Table 7-1, Highway Safety Manual (HSM), First Edition, 2010. Adjusted to 2022 Dollars.

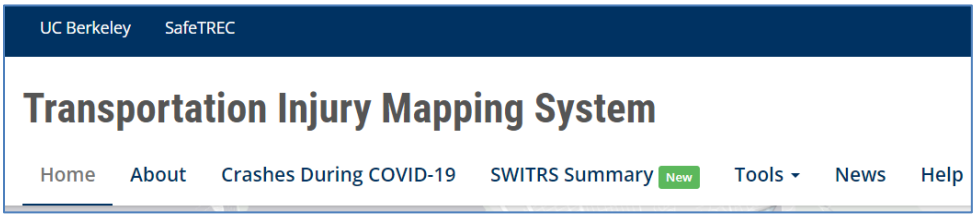
2) *Benefit (Life) = Benefit (annual) x Years of service life*

3) BCR (each countermeasure): $Benefit\ \ Cost\ Ratio_{(CM)} = \frac{Benefit\ (Life)_{(CM)}}{Total\ \mathrm{Pr}oject\ Cost_{(CM)}}$

4) BCR (project): $BCR\ (Project) = \frac{\sum_{CM=1}^{n} Benefit\ (Life)_{(CM)}}{Total\ \ Project\ Cost}$

Appendix E: Examples of Crash Data Collection and Analysis Techniques using TIMS

As demonstrated throughout the manual, SafeTREC's TIMS website http://tims.berkeley.edu/ can be used to assist local agencies in completing a proactive safety analysis of their roadway network. *(Note: This manual focuses on TIMS as a tool to access and map SWITRS data because TIMS is free to local agencies and the general public. Local agencies are encouraged to try TIMS, but they should not feel obligated to make a switch if they prefer using their vendor-supplied crash analysis software to complete their data collection and analysis process).*



SWITRS Query & Map:

The SWITRS Query & Map application is a tool for accessing and mapping fatal and injury collision data from the California Statewide Integrated Traffic Records System (SWITRS).

SWITRS GIS Map:

The SWITRS GIS Map offers an interactive map-centric approach to viewing and querying SWITRS collision data, with the capability of multiple tasks including Rank by Intersection, Collision Diagram, etc.

Collision Diagram Tool:

The Collision Diagram tool allows users to generate an interactive collision diagram. The Collision Diagram is accessible through SWITRS GIS Map after a set of collisions is selected.

ATP Maps & Summary Data:

The ATP Maps & Summary Data tool utilizes interactive collision maps to find pedestrian and bicycle collisions hot spot and generate data summaries within specified project and/or community limits. Though it is designed to support the California Active Transportation Program (ATP), this tool may be useful in developing an HSIP project targeting pedestrian and bicycle safety issues.

Appendix F: List of Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
ATP	Active Transportation Program
B/C; BCR	Benefit Cost Ratio
Caltrans	California Department of Transportation (Division of Local Assistance)
CA-MUTCD	California - Manual on Uniform Traffic Control Devices
CM	Countermeasure
CMF	Crash Modification Factor
CRF	Crash Reduction Factor
"5 E's of Safety"	Education, Enforcement, Engineering, Emergency Response and Emerging Technologies
EMS	Emergency Medical Services
FHWA	Federal Highway Administration
HCCL	High Crash Concentration Location
HR3	High Risk Rural Roads Program
HSIP	Highway Safety Improvement Program
HSM	Highway Safety Manual
RSA	Roadway Safety Audit
SafeTREC	Safe Transportation Research and Education Center (SafeTREC) at the University of California, Berkeley
SHSP	Strategic Highway Safety Plan
SWITRS	Statewide Integrated Traffic Records System
TIMS	Transportation Injury Mapping System (a product of SafeTREC)

Appendix G: References

1. FHWA, Office of Safety website: Local and Rural Road Safety Program
   - https://safety.fhwa.dot.gov/local_rural/

2. Highway Safety Manual (HSM). Product of the American Association of State Highway and Transportation Officials.
   - http://www.highwaysafetymanual.org/Pages/default.aspx

3. National Highway Traffic Safety Administration (NHTSA): National Center for Statistics and Analysis (NCSA) Motor Vehicle Traffic Crash Data Resource
   - https://crashstats.nhtsa.dot.gov/

4. California - Manual on Uniform Traffic Control Devices (CA-MUTCD)
   - https://dot.ca.gov/programs/safety-programs/camutcd

5. Caltrans' website on the Highway Design Manual
   - https://dot.ca.gov/programs/design/manual-highway-design-manual-hdm

6. FHWA, Research and Development website for Bikesafe and Pedsafe
   - https://safety.fhwa.dot.gov/ped_bike/tools_solve/

7. AASHTO - A Policy on Geometric Design of Highways and Streets ("Green Book")

   AASHTO - the Roadside Design Guide
   - https://store.transportation.org/

8. FHWA – Public Roads Magazine:
   - https://highways.dot.gov/public-roads/home

APPENDIX E:
COUNTERMEASURE TOOLBOX

Table 3. High-risk Intersections

ID	Intersection	Control	Consolidated CMs (HSIP-Eligible - Refer to LRSM* 2020)						Additional CM (non-HSIP)**	EA - 1 Improve Intersection Safety			EA - 2 Improve Pedestrian Safety			EA - 3 Address Rear-end collisions and Unsafe speed violations			EA - 4 Address Broadside collisions			EA - 5 Address Nighttime collisions			EA - 6 Address Hit object collisions		
			CM1	CM2	CM3	CM4	CM5	CM6		CM1	CM2	CM3	CM1	CM2	CM3	CM1	CM2	CM3	CM1	CM2	CM3	CM1	CM2	CM3	CM1	CM2	CM3
1	Bailey Rd and Leland Rd	Signalized	S21PB	S02	S03	S09	S20PB	S13PB		S02	S03		S21PB	S20PB	S13PB	S03	S09	S11	S02	S03	S12	S02	S09				
2	Auto Center Dr and Century Blvd	Signalized	S02	S03	S21PB	S20PB	S17PB	S09		S02	S03		S21PB	S20PB	S17PB				S02	S03		S02	S09				
3	Leland Rd and Piedmont Way	Signalized	S02	S03	S09	S11	S21PB	S20PB		S02	S03		S21PB	S20PB		S03	S09	S11				S02	S09				
4	Harbor St and School St	Signalized	S02	S03	S21PB	S20PB	S17PB	S08		S02	S03		S21PB	S20PB	S17PB	S03	S09	S11	S02	S03	S08	S02	S09				
5	Commerce Pl and Leland Rd	Stop Controlled	NS01	NS06	NS12	NS10				NS01	NS06					NS10	NS12		NS06	NS08		NS01	NS06				
6	Willow Pass Rd and Winter Way	Stop Controlled	NS06	NS07	NS14	NS21PB				NS06	NS07		NS21PB						NS06	NS07	NS14						
7	Leland Rd and Southwood Dr	Signalized	S02	S03	S21PB	S20PB	S17PB	S12		S02	S03		S21PB	S20PB	S17PB				S02	S03	S12	S02	S09				
8	Brookside and Buchanan	Stop Controlled	NS06	NS10	NS11	NS15				NS06	NS11		NS11			NS10									NS15		
9	Leland Rd and Woodhill Dr	Signalized	S02	S03	S09	S12				S02	S03					S03	S09					S02	S09				
10	Meadowbrook Ave and Stoneman Ave	Stop Controlled	NS22PB	NS10	NS12					NS22PB			NS22PB	NS23PB		NS12	NS10										
11	El Dorado Dr and Railroad Ave	Stop Controlled	NS21PB	NS01	NS06					NS21PB	NS06	NS01	NS21PB						NS07			NS01	NS06				

Code	Countermeasure Name
HSIP/Non-HSIP Code	
S01	Add intersection lighting
S02	Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, and number
S03	Improve signal timing (coordination, phases, red, yellow, or operation)
S05	Install emergency vehicle pre-emption systems
S06	Install left-turn lane and add turn phase (signal has no left-turn lane or phase before)
S07	Provide protected left turn phase (left turn lane already exists)
S08	Convert signal to mast arm (from pedestal-mounted)
S09	Install raised pavement markers and striping (Through Intersection)
S10	Install flashing beacons as advance warning (S.I.)
S11	Improve pavement friction (High Friction Surface Treatments)
S12	Install raised median on approaches (S.I.)
S13PB	Install pedestrian median fencing on approaches
S14	Create directional median openings to allow (and restrict) left-turns and U-turns (S.I.)
S15	Reduced Left-Turn Conflict Intersections (S.I.)
S16	Convert intersection to roundabout (from signal)
S17PB	Install pedestrian countdown signal heads
S18PB	Install pedestrian crossing (S.I.)
S19PB	Pedestrian Scramble
S20PB	Install advance stop bar before crosswalk
S21PB	Modify signal phasing to implement a Leading Pedestrian Interval (LPI)

Code	Countermeasure Name
NS01	Add intersection lighting (NS.I.)
NS02	Convert to all-way STOP control (from 2-way or Yield control)
NS03	Install Signals
NS04	Convert intersection to roundabout (from all way stop)
NS05	Convert intersection to roundabout (from 2-way stop or Yield control)
NS05mr	Convert intersection to mini-roundabout
NS06	Install/upgrade larger or additional stop signs or other intersection warning/regulatorysigns
NS07	Upgrade intersection pavement markings (NS.I.)
NS08	Install Flashing Beacons at Stop-Controlled Intersections
NS09	Install flashing beacons as advance warning (NS.I.)
NS11	Improve sight distance to intersection (Clear Sight Triangles)
NS12	Improve pavement friction (High Friction Surface Treatments)
NS13	Install splitter-islands on the minor road approaches
NS14	Install raised median on approaches (NS.I.)
NS15	Create directional median openings to allow (and restrict) left-turns and u-turns (NS.I.)
NS16	Reduced Left-Turn Conflict Intersections (NS.I.)
NS17	Install right-turn lane (NS.I.)
NS18	Install left-turn lane (where no left-turn lane exists)
NS19PB	Install raised medians (refuge islands)
NS20PB	Install pedestrian crossing at uncontrolled locations (signs and markings only)
NS22PB	Install Rectangular Rapid Flashing Beacon (RRFB)
NS23PB	Install Pedestrian Signal (including Pedestrian Hybrid Beacon (HAWK))

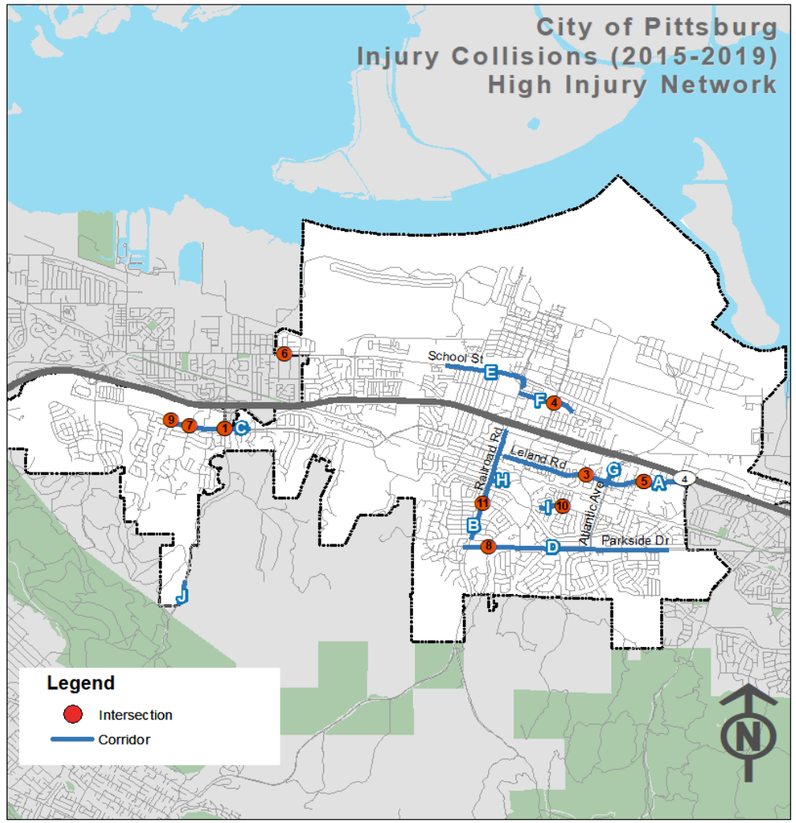


Table 4. High-risk Roadway Segments

ID	Roadway Segment	Consolidated CMs (HSIP-Eligible - Refer to LRSM* 2020)						Additional CM (non-HSIP)**	EA - 1 Improve Intersection Safety			EA - 2 Improve Pedestrian safety			EA - 3 Address Rear-end collisions and Unsafe speed violations			EA - 4 Address Broadside collisions			EA - 5 Address Nighttime collisions			EA - 6 Address Hit object collisions		
		CM1	CM2	CM3	CM4	CM5	CM6		CM1	CM2	CM3	CM1	CM2	CM3	CM1	CM2	CM3	CM1	CM2	CM3	CM1	CM2	CM3	CM1	CM2	CM3
A	Leland Rd: Railroad Ave to Century Blvd	R22	R26	R27	R21	R35PB						R35PB			R26	R21	R22				R01	R22	R27	R02	R27	
B	Railroad Ave: Bliss Ave to Pueblo Dr	R22	R27	R21	R35PB							R35PB				R21	R22				R01	R22	R27	R02	R27	
C	Leland Rd: Chestnut Dr to Woodhill	R22	R27	R35PB	R10PB	R02	R30	Repavement between Chestnut and Bailey				R35PB	R10PB		R26	R21	R22				R01	R22	R27	R02	R27	
D	Buchanan Rd: Railroad Ave to Eastern city limits	R22	R27	R37PB	R21	R02	R33PB	RRFB at Buchnan and Heights				R35PB	R33PB	R37PB		R21	R22				R01	R22	R27	R02	R27	
E	Parkside Dr: Railroad Ave to Maidenhair St	R22	R27	R21	R02	R30										R21	R22				R01	R22	R27	R02	R27	
F	School St: Railroad Ave to Deems St	R22	R27	R37PB	R30			Repavement				R37PB					R22				R01	R22	R27			
G	Loveridge Rd: Loveridge Cir to Hwy 4 EB on ramp	R22	R27	R35PB	R26	R02						R35PB			R26	R21	R22					R22	R27	R02	R27	
H	Atlantic Ave: Railroad Ave to Atlantic Cir	R22	R27	R37PB	R10PB			Upgrade Pavement Striping				R37PB	R10PB		R26	R21	R22					R22	R27			
I	Stoneman Ave: St Moritz Dr to Rolling Hills Dr	R22	R27	R37PB	R26	R02		Repavement				R37PB			R26	R21	R22					R22	R27	R02	R27	
J	Bailey Rd: Southern City Limits to 1/3 mile north	R22	R27	R01	R02	R04	R30								R26		R22				R01	R22	R27	R02	R27	R04

Code	Countermeasure Name
R01	Add Segment Lighting
R02	Remove or relocate fixed objects outside of Clear Recovery Zone
R03	Install Median Barrier
R04	Install Guardrail
R05	Install impact attenuators
R06	Flatten side slopes
R07	Flatten side slopes and remove guardrail
R08	Install raised median
R09	Install median (flush)
R10PB	Install pedestrian median fencing
R11	Install acceleration/ deceleration lanes
R12	Widen lane (initially less than 10 ft)
R13	Add two-way left-turn lane (without reducing travel lanes)
R14	Road Diet (Reduce travel lanes from 4 to 3 and add a two way left-turn and bike lanes)
R15	Widen shoulder
R16	Curve Shoulder widening (Outside Only)
R17	Improve horizontal alignment (flatten curves)
R18	Flatten crest vertical curve
R19	Improve curve superelevation
R20	Convert from two-way to one-way traffic
R21	Improve pavement friction (High Friction Surface Treatments)
R22	Install/Upgrade signs with new fluorescent sheeting (regulatory or warning)
R23	Install chevron signs on horizontal curves
R24	Install curve advance warning signs
R25	Install curve advance warning signs (flashing beacon)
R26	Install dynamic/variable speed warning signs
R27	Install delineators, reflectors and/or object markers
R28	Install edge-lines and centerlines
R29	Install no-passing line
R32PB	Install bike lanes
R33PB	Install Separated Bike Lanes
R34PB	Install sidewalk/pathway (to avoid walking along roadway)
R35PB	Install/upgrade pedestrian crossing (with enhanced safety features)
R36PB	Install raised pedestrian crossing
R37PB	Install Rectangular Rapid Flashing Beacon (RRFB)
R38	Install Animal Fencing

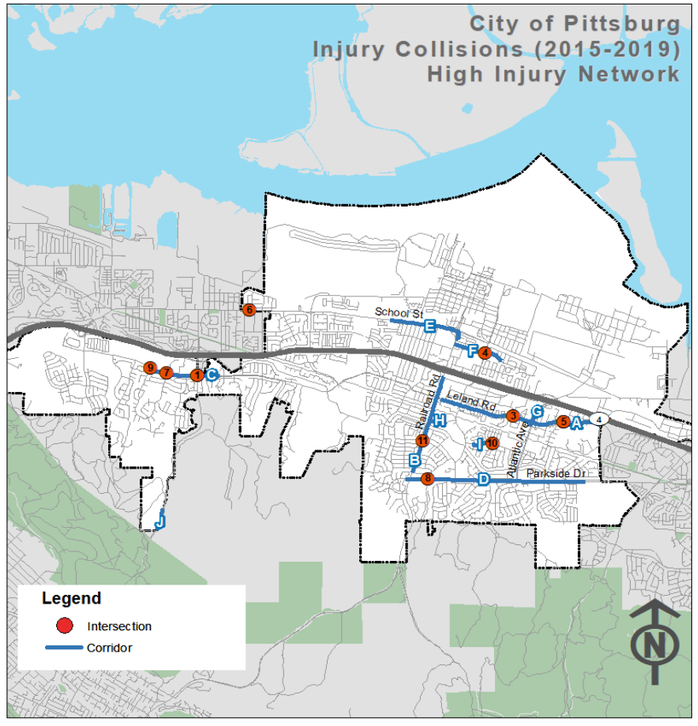


Table 5. Non-Engineering Countermeasures

	Strategy	Performance Measure	Organizations to be involved
Education	Conduct public information and education campaign for intersection safety laws, unsafe speeds, distracted driving, and driving under the influence.	Number of education campaigns	City/ School District/ Police Department
	Conduct pedestrian safety campaigns and outreach to raise their awareness of pedestrian safety needs through media outlets and social media.	Number of education campaigns	City/ School District/ Police Department
	Conduct bicycle safety campaigns and outreach to raise their awareness of bicycle safety needs through media outlets and social media.	Number of education campaigns	City/ School District/ Police Department
Enforcement	Targeted enforcement at high-risk locations.	Number of tickets issued.	Police Department
	Increase the number of personnel who have completed Advanced Roadside impaired Driving Enforcement (ARIDE) training	Number of personnel who have completed Advanced Roadside impaired Driving Enforcement (ARIDE) training	Police Department
Emergency Medical Services (EMS)	S05, Install emergency vehicle pre-emption systems	EMS vehicle response time.	Local Emergency Services Agency
	Increase the number of EMS/fire controll personnel taking Traffic Incident Managmenet Training	number of EMS/fire controll personnel taking Traffic Incident Managmenet Traising	Local Emergency Services Agency

Table 6. HSIP Eligible Countermeasures

City of Pittsburg LRSP

Countermeasures for Intersections

Signalized						
Sr. No.	**Code**	**Countermeasure Name**	**CM Description**	**CRF**	**Federal Funding**	**Systemic Approach Opportunity**
HSIP/Non-HSIP Code						
1	S01	Add intersection lighting	Provision of lighting at intersection.	40%	90%	Medium
2	S02	Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, a	Includes New LED lighting, signal back plates, retro-reflective tape outlining the back plates, or visors to increase signal visibility, larger signal heads, relocation of the signal heads, or additional signal heads.	15%	90%	Very High
3	S03	Improve signal timing (coordination, phases, red, yellow, or operation)	Includes adding phases, lengthening clearance intervals, eliminating or restricting higher-risk movements, and coordinating signals at multiple locations.	15%	50%	Very High
5	S05	Install emergency vehicle pre-emption systems	Corridors that have a history of crashes involving emergency response vehicles. The target of this strategy is signalized intersections where normal traffic operations impede emergency vehicles and where traffic conditions create a potential for conflicts between emergency and nonemergency vehicles. These conflicts could lead to almost any type of crash, due to the potential for erratic maneuvers of vehicles moving out of the paths of emergency vehicles	70%	90%	High
6	S06	Install left-turn lane and add turn phase (signal has no left-turn lane or phase before)	Intersections that do not currently have a left turn lane or a related left-turn phase that are experiencing a large number of crashes. Many intersection safety problems can be traced to difficulties in accommodating left-turning vehicles, in particular where there is currently no accommodation for left turning traffic. A key strategy for minimizing collisions related to left-turning vehicles (angle, rear-end, sideswipe) is to provide exclusive left-turn lanes and the appropriate signal phasing, particularly on high-volume and high-speed major-road approaches.	55%	90%	Low
7	S07	Provide protected left turn phase (left turn lane already exists)	Left turns are widely recognized as the highest-risk movements at signalized intersections. Providing Protected left-turn phases for signalized intersections with existing left turn pockets significantly improve the safety for left-turn maneuvers by removing the need for the drivers to navigate through gaps in oncoming/opposing through vehicles	30%	90%	High
8	S08	Convert signal to mast arm (from pedestal-mounted)	Providing better visibility of intersection signs and signals aids the drivers' advance perception of the upcoming intersection. Visibility and clarity of the signal should be improved without creating additional confusion or distraction for drivers.	30%	90%	Medium
9	S09	Install raised pavement markers and striping (Through Intersection)	Adding clear pavement markings can guide motorists through complex intersections. When drivers approach and traverse through complex intersections, drivers may be required to perform unusual or unexpected maneuvers	10%	90%	Very High
10	S10	Install flashing beacons as advance warning (S.I.)	Increased driver awareness of an approaching signalized intersection and an increase in the driver's time to react.	30%	90%	Medium
11	S11	Improve pavement friction (High Friction Surface Treatments)	Improving the skid resistance at locations with high frequencies of wet road crashes and/or failure to stop crashes	55%	90%	Medium
12	S12	Install raised median on approaches (S.I.)	Raised medians next to left turn lanes at intersections offer a cost effective means for reducing crashes and improving operations at higher volume intersections	25%	90%	Medium
13	S13PB	Install pedestrian median fencing on approaches	Signalized Intersections with high pedestrian-generators nearby (e.g. transit stops) may experience a high volumes of pedestrians J-walking across the travel lanes at mid-block locations instead of walking to the intersection and waiting to cross during the walk-phase.	30%	90%	Low
14	S14	Create directional median openings to allow (and restrict) left-turns and U-turns (S.I.)	Crashes related to turning maneuvers include angle, rear-end, pedestrian, and sideswipe (involving opposing left turns) type crashes. If any of these crash types are an issue at an intersection, restriction or elimination of the turning maneuver may be the best way to improve the safety of the intersection	50%	90%	Medium
15	S15	Reduced Left-Turn Conflict Intersections (S.I.)	Reduced left-turn conflict intersections are geometric designs that alter how left-turn movements occur in order to simplify decisions and minimize the potential for related crashes. Two highly effective designs that rely on U-turns to complete certain left-turn movements are known as the restricted crossing U-turn (RCUT) and the median U-turn (MUT).	50%	90%	Medium
16	S16	Convert intersection to roundabout (from signal)	Signalized intersections that have a significant crash problem and the only alternative is to change the nature of the intersection itself. Roundabouts can also be very effective at intersections with complex geometry and intersections with frequent left-turn movements.	Varies	90%	Low
17	S17PB	Install pedestrian countdown signal heads	Signals that have signalized pedestrian crossing with walk/don't walk indicators and where there have been pedestrian vs. vehicle crashes.	25%	90%	Very High
18	S18PB	Install pedestrian crossing (S.I.)	Signalized Intersections with no marked crossing and pedestrian signal heads, where pedestrians are known to be crossing intersections that involve significant turning movements. They are especially important at intersections with (1) multiphase traffic signals, such as left-turn arrows and split phases, (2) school crossings, and (3) double-right or double-left turns. At signalized intersections, pedestrian crossings are often safer when the left turns have protected phases that do not overlap the pedestrian walk phase.	25%	90%	High
19	S19PB	Pedestrian Scramble	Pedestrian Scramble is a form of pedestrian "WALK" phase at a signalized intersection in which all vehicular traffic is required to stop, allowing pedestrians/bicyclists to safely cross through the intersection in any direction, including diagonally. Pedestrian Scramble may be considered at signalized intersections with very high pedestrian/bicycle volumes, e.g. in an urban business district.	40%	90%	High
20	S20PB	Install advance stop bar before crosswalk (Bicycle Box)	Signalized Intersections with a marked crossing, where significant bicycle and/or pedestrians volumes are known to occur.	15%	90%	Very High
21	S21PB	Modify signal phasing to implement a Leading Pedestrian Interval (LPI)	Addition of LPI gives pedestrians the opportunity to enter an intersection 3-7 seconds before vehicles are given a green indication; only minor signal timing alteration is required.	60%	90%	Very High

Unsignalized						
Sr. No.	**Code**	**Countermeasure Name**	**CM Description**	**CRF**	**Federal Funding**	**Systemic Approach Opportunity**
1	NS01	Add intersection lighting (NS.I.)	Provision of lighting at intersection.	40%	90%	Medium
2	NS02	Convert to all-way STOP control (from 2-way or Yield control)	Unsignalized intersection locations that have a crash history and have no controls on the major roadway approaches. However, all-way stop control is suitable only at intersections with moderate,and relatively balanced volume levels on the intersection approaches. Under other conditions, the use of all-way stop control may create unnecessary delays and aggressive driver behavior.	50%	90%	High
3	NS03	Install Signals	Installation of traffic signals	25%	90%	Low
4	NS04	Convert intersection to roundabout (from all way stop)	Intersections that have a high frequency of right-angle and left-turn type crashes. Whether such intersections have existing crash patterns or not, a roundabout provides an alternative to signalization. The primary target locations for roundabouts should be moderate-volume unsignalized intersections.	Varies	90%	Low
5	NS05	Convert intersection to roundabout (from 2-way stop or Yield control)	Intersections that have a high frequency of right-angle and left-turn type crashes. Whether such intersections have existing crash patterns or not, a roundabout provides an alternative to signalization. The primary target locations for roundabouts should be moderate-volume unsignalized intersections.	Varies	90%	Low
6	NS05mr	Convert intersection to mini-roundabout	Mini-roundabouts are characterized by a small diameter (45-90 ft) and traversable islands (central island and splitter islands).	30%	90%	High
7	NS06	Install/upgrade larger or additional stop signs or other intersection warning/regulatorysign	Additional regulatory and warning signs at or prior to intersections will help enhance the ability of approaching drivers to percieve them	15%	90%	Very High
8	NS07	Upgrade intersection pavement markings (NS.I.)	Typical improvements include "Stop Ahead" markings and the addition of centerlines and stop bars	25%	90%	Very High
9	NS08	Install Flashing Beacons at Stop-Controlled Intersections	Flashing beacons can reinforce driver awareness of the Non-Signalized intersection control and can help mitigate patterns of right-angle crashes related to stop sign violations. Post-mounted advanced flashing beacons or overhead flashing beacons can be used at stop-controlled intersections to supplement and call driver attention to stop signs.	15%	90%	High
10	NS09	Install flashing beacons as advance warning (NS.I.)	Installation of advance flashing beacoms to call drivers attention to intersection control signs	30%	90%	High
12	NS11	Improve sight distance to intersection (Clear Sight Triangles)	Unsignalized intersections with restricted sight distance and patterns of crashes related to lack of sight distance where sight distance can be improved by clearing roadside obstructions without major reconstruction of the roadway.	20%	90%	High
13	NS12	Improve pavement friction (High Friction Surface Treatments)	Non-signalized Intersections noted as having crashes on wet pavements or under dry conditions when the pavement friction available is significantly less than needed for the actual roadway approach speeds. This treatment is intended to target locations where skidding and failure to stop is determined to be a problem in wet or dry conditions and the target vehicle is unable to stop due to insufficient skid resistance.	55%	90%	Medium
14	NS13	Install splitter-islands on the minor road approaches	The installation of a splitter island allows for the addition of a stop sign in the median to make the intersection more conspicuous.	40%	90%	Medium
15	NS14	Install raised median on approaches (NS.I.)	Effective access management is key to improving safety at, and adjacent to, intersections. The number of intersection access points coupled with the speed differential between vehicles traveling along the roadway often contributes to crashes. Any access points within 250 feet upstream and downstream of an intersection are generally undesirable.	25%	90%	Medium
16	NS15	Create directional median openings to allow (and restrict) left-turns and u-turns (NS.I.)	Crashes related to turning maneuvers include angle, rear-end, pedestrian, and sideswipe (involving opposing left turns) type crashes. If any of these crash types are an issue at an intersection, restriction or elimination of the turning maneuver may be the best way to improve the safety of the intersection.	50%	90%	Medium
17	NS16	Reduced Left-Turn Conflict Intersections (NS.I.)	Reduced left-turn conflict intersections are geometric designs that alter how left-turn movements occur in order to simplify decisions and minimize the potential for related crashes.	50%	90%	Medium
18	NS17	Install right-turn lane (NS.I.)	Many collisions at unsignalized intersections are related to right-turn maneuvers. A key strategy for minimizing such collisions is to provide exclusive right-turn lanes, particularly on high-volume and high-speed major-road approaches. When considering new right-turn lanes, potential impacts to non-motorized users should be considered and mitigated as appropriate.	20%	90%	Low
19	NS18	Install left-turn lane (where no left-turn lane exists)	Many collisions at unsignalized intersections are related to left-turn maneuvers. A key strategy for minimizing such collisions is to provide exclusive left-turn lanes, particularly on high-volume and high-speed major-road approaches. When considering new left-turn lanes, potential impacts to non-motorized users should be considered and mitigated as appropriate.	35%	90%	Low
20	NS19PB	Install raised medians (refuge islands)	Intersections that have a long pedestrian crossing distance, a higher number of pedestrians, or a crash history. Raised medians decrease the level of exposure for pedestrians and allow pedestrians to concentrate on (or cross) only one direction of traffic at a time.	45%	90%	Medium
21	NS20PB	Install pedestrian crossing at uncontrolled locations (signs and markings only)	Non-signalized intersections without a marked crossing, where pedestrians are known to be crossing intersections that involve significant vehicular traffic. They are especially important at school crossings and intersections with right and/or left turns pockets. See Zegeer study (Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations) for additional guidance regarding when to install a marked crosswalk.	25%	90%	High
23	NS22PB	Install Rectangular Rapid Flashing Beacon (RRFB)	Rectangular Rapid Flashing Beacon (RRFB) includes pedestrian-activated flashing lights and additional signage that enhance the visibility of marked crosswalks and alert motorists to pedestrian crossings. It uses an irregular flash pattern that is similar to emergency flashers on police vehicles. RRFBs are installed at unsignalized intersections and mid-block pedestrian crossings.	35%	90%	Medium
24	NS23PB	Install Pedestrian Signal (including Pedestrian Hybrid Beacon (HAWK))	Intersections noted as having a history of pedestrian vs. vehicle crashes and in areas where the likelihood of the pedestrian presence is high. Corridors should also be assessed to determine if there are adequate safe opportunities for non-motorists to cross and if a pedestrian signal, or a Pedestrian Hybrid Beacon (PHB) (also called High-Intensity Activated crossWalK beacon (HAWK)) are needed to provide an active warning to motorists when a pedestrian is in the crosswalk.	55%	90%	Low

Countermeasures for Roadway Segments

Sr. No.	Code	Countermeasure Name	CM Description	CRF	Federal Funding	Systemic Approach Opportunity
1	R01	Add Segment Lighting	Provision of lighting along roadways.	35%	90%	Medium

2	R02	Remove or relocate fixed objects outside of Clear Recovery Zone	Known locations or roadway segments prone to collisions with fixed objects such as utility poles, drainage structures, trees, and other fixed objects, such as the outside of a curve, end of lane drops, and in traffic islands. A clear recovery zone should be developed on every roadway, as space is available. In situations where public right-of-way is limited, steps should be taken to request assistance from property owners, as appropriate.	35%	90%	High
3	R03	Install Median Barrier	Areas where crash history indicates drivers are unintentionally crossing the median and the cross-overs are resulting in high severity crashes. The installation of median barriers can increase the number of PDO and non-severe injuries. The net result in safety from this countermeasure is connected more to reducing the severity of crashes not the number of crashes.	25%	90%	Medium
4	R04	Install Guardrail	Guardrail is installed to reduce the severity of lane departure crashes. However, guardrail can reduce crash severity only for those conditions where striking the guardrail is less severe than going down an embankment or striking a fixed object. Guardrail should only be installed where it is clear that crash severity will be reduced, or there is a history of run-off-the-road crashes at a given location that have resulted in severe crashes.	25%	90%	High
5	R05	Install impact attenuators	Impact attenuators are typically used to shield rigid roadside objects such as concrete barrier ends, steel guardrail ends and bridge pillars from oncoming automobiles. Attenuators should only be installed where it is impractical for the objects to be removed.	25%	90%	High
6	R06	Flatten side slopes	Roadways experiencing frequent lane departure crashes that result in roll-over type crashes as a result of the roadway slope being so severe as to not accommodate a reasonable degree of driver correction. When there is a need to reduce the severity of lane departure crashes without installing a barrier system that could result in increased numbers of crashes.	30%	90%	Medium
7	R07	Flatten side slopes and remove guardrail	Locations where high number of crashes originate as a lane departure and result in collision with guardrail or a fixed object located on the side slope shielded by guardrail. The guardrail may or may not meet current standards. Even though guardrails are generally installed to reduce the severity of departure crashes, they still can result in severe crashes in some locations.	40%	90%	Medium
8	R08	Install raised median	Areas experiencing head-on collisions that may be affected by both the number of vehicles that cross the centerline and by the speed of oncoming vehicles. Installing a raised median is a more restrictive approach in that it represents a more rigid barrier between opposing traffic.	25%	90%	Medium
9	R09	Install median (flush)	Areas experiencing head-on collisions that may be affected by both the number of vehicles that cross the centerline and by the speed of oncoming vehicles. Roadways with oversized lanes offer an opportunity to restripe the roadway to reduce the lanes to standard widths and use the extra width for the median.	15%	90%	Medium
10	R10PB	Install pedestrian median fencing	Roadway segments with high pedestrian-generators and pedestrian-destinations nearby (e.g. transit stops) may experience a high volume of pedestrians J-walking across the travel lanes at mid-block locations instead of walking to the nearest intersection or designated mid-block crossing. When this safety issue cannot be mitigated with shoulder, sidewalk and/or crossing treatments, then installing a continuous pedestrian barrier in the median may be a viable solution.	35%	90%	Low
11	R11	Install acceleration/ deceleration lanes	Areas proven to have crashes that are the result of drivers not being able to turn onto a high speed roadway to accelerate until the desired roadway speed is reached and areas that do not provide the opportunity to safety decelerate to negotiate a turning movement.	25%	90%	Low
12	R12	Widen lane (initially less than 10 ft)	Horizontal curves or tangents and low speed or high speed roadways identified as having lane departure crashes, sideswipe or head-on crashes that can be attributed to an existing pavement width less than 10 feet.	25%	90%	Medium
13	R13	Add two-way left-turn lane (without reducing travel lanes)	Roadways having a high frequency of drivers being rear-ended while attempting to make a left turn across oncoming traffic. Also can be effective for drivers crossing the centerline of an undivided multilane roadway inadvertently.	30%	90%	Medium
14	R14	Road Diet (Reduce travel lanes from 4 to 3 and add a two way left-turn and bike lanes)	Areas noted as having a higher frequency of head-on, left-turn, and rear-end crashes with traffic volumes that can be handled by only 2 free flowing lanes. Using this strategy in locations with traffic volumes that are too high could result in diversion of traffic to routes less safe than the original four-lane design.	30%	90%	Medium
15	R15	Widen shoulder	Roadways that have a frequent incidence of vehicles leaving the travel lane resulting in an unsuccessful attempt to reenter the roadway. The probability of a safe recovery is increased if an errant vehicle is provided with an increased paved area in which to initiate such a recovery.	30%	90%	Medium
16	R16	Curve Shoulder widening (Outside Only)	Roadway curves noted as having frequent lane departure crashes due to inadequate or no shoulders, resulting in an unsuccessful attempt to reenter the roadway.	45%	90%	Medium
17	R17	Improve horizontal alignment (flatten curves)	Roadways with horizontal curves that have experienced lane departure crashes as a result of a roadway segment having compound curves or a severe radius. This strategy should generally be considered only when less expensive strategies involving clearing of specific sight obstructions or modifying traffic control devices have been tried and have failed to ameliorate the crash patterns.	50%	90%	Low
18	R18	Flatten crest vertical curve	The target for this strategy is usually unsignalized intersections with restricted sight distance due to vertical geometry and with patterns of crashes related to that lack of sight distance that cannot be ameliorated by less expensive methods. This strategy should generally be considered only when less expensive strategies involving clearing of specific sight obstructions or modifying traffic control devices have been tried and have failed to ameliorate the crash patterns.	25%	90%	Low
19	R19	Improve curve superelevation	Roadways noted as having frequent lane departure crashes and inadequate or no superelevation. Safety can be enhanced when the superelevation is improved or restored along curves where the actual superelevation is less than the optimal.	45%	90%	Medium
20	R20	Convert from two-way to one-way traffic	One-way streets can offer improved signal timing and accommodate odd-spaced signals. One-way streets can simplify crossings for pedestrians, who must look for traffic in only one direction. While studies have shown that conversion of two-way streets to one-way generally reduces pedestrian crashes and the number of conflict points, one-way streets tend to have higher speeds which creates new problems.	35%	90%	Medium
21	R21	Improve pavement friction (High Friction Surface Treatments)	Improving the skid resistance at locations with high frequencies of wet road crashes and/or failure to stop crashes	55%	90%	High
22	R22	Install/Upgrade signs with new fluorescent sheeting (regulatory or warning)	Additional or new signage can address crashes caused by lack of driver awareness or complaince of roadway signing.	15%	90%	Very High
23	R23	Install chevron signs on horizontal curves	Roadways that have an unacceptable level of crashes on relatively sharp curves during periods of light and darkness.		90%	
24	R24	Install curve advance warning signs	Addition of advance curve warning signs; may also include horizontal alignment and/or advisory speed warning signs	25%	90%	Very High
25	R25	Install curve advance warning signs (flashing beacon)	Roadways that have an unacceptable level of crashes on relatively sharp curves. Flashing beacons in conjunction with warning signs should only be used on horizontal curves that have an established severe crash history to help maintain their effectiveness.		90%	
26	R26	Install dynamic/variable speed warning signs	Includes the addition of dynamic speed warning signs (also known as Radar Speed Feedback Signs)	30%	90%	High
27	R27	Install delineators, reflectors and/or object markers	Installation of delineators, reflectors and/or object markers are intended to warn drivers of an approaching curve or fixed object that cannot easily be removed.	15%	90%	Very High
28	R28	Install edge-lines and centerlines	Any road with a history of run-off-road right, head-on, opposite-direction-sideswipe, or run-off-road-left crashes is a candidate for this treatment -install where the existing lane delineation is not sufficient to assist the motorist in understanding the existing limits of the roadway. Depending on the width of the roadway, various combinations of edge line and/or center line pavement markings may be the most appropriate.	25%	90%	Very High

29	R29	Install no-passing line	Roadways that have a high percentage of head-on crashes suggesting that many head-on crashes may relate to failed passing maneuvers. No-passing lines should be installed where drivers "passing sight distance" is not available due to horizontal or vertical obstructions.	45%	90%	Very High
32	R32PB	Install bike lanes	Roadway segments noted as having crashes between bicycles and vehicles or crashes that may be preventable with a buffer/shoulder.	35%	90%	High
33	R33PB	Install Separated Bike Lanes	Separated bikeways are most appropriate on streets with high volumes of bike traffic and/or high bike-vehicle collisions, presumably in an urban or suburban area. Separation types range from simple, painted buffers and flexible delineators, to more substantial separation measures including raised curbs, grade separation, bollards, planters, and parking lanes.	45%	90%	High
34	R34PB	Install sidewalk/pathway (to avoid walking along roadway)	Areas noted as not having adequate or no sidewalks and a history of walking along roadway pedestrian crashes. In rural areas asphalt curbs and/or separated walkways may be appropriate.	80%	90%	Medium
35	R35PB	Install/upgrade pedestrian crossing (with enhanced safety features)	Roadway segments with no controlled crossing for a significant distance in high-use midblock crossing areas and/or multilane roads locations. flashing beacons, curb extensions, medians and pedestrian crossing islands and/or other safety features should be added to complement the standard crossing elements.	35%	90%	Medium
36	R36PB	Install raised pedestrian crossing	On lower-speed roadways, where pedestrians are known to be crossing roadways that involve significant vehicular traffic.	35%	90%	Medium
37	R37PB	Install Rectangular Rapid Flashing Beacon (RRFB)	Rectangular Rapid Flashing Beacon (RRFB) includes pedestrian-activated flashing lights and additional signage that enhance the visibility of marked crosswalks and alert motorists to pedestrian crossings. It uses an irregular flash pattern that is similar to emergency flashers on police vehicles. RRFBs are installed at unsignalized intersections and mid-block pedestrian crossings	35%	90%	Medium
38	R38	Install Animal Fencing	At locations with high percent of vehicular/animal crashes (reactive) or where there is a known high percent of animals crossing due to migratory patterns (proactive).	80%	90%	Medium

APPENDIX F:
HSIP ANALYSER
(B/C RATIO CALCULATION)

OFFICE OF THE CITY MANAGER/EXECUTIVE DIRECTOR
65 Civic Avenue
Pittsburg, CA 94565

TO: Mayor and Council Members

FROM: Garrett Evans, City Manager

SUBJECT: Adoption of a City Council Resolution Authorizing the Execution of a Funding Agreement Between the City of Pittsburg and Contra Costa Transportation Authority

MEETING DATE: August 19, 2024

EXECUTIVE SUMMARY

As part of Project 2243 – Countywide Smart Signals (the "Project"), the City of Pittsburg and Contra Costa Transportation Authority (CCTA) have developed a Funding Agreement regarding the design and construction of upgrades to a total of thirty (30) traffic signal intersections within the City. If adopted, this resolution with authorize the execution of this Funding Agreement as part of the Project.

FISCAL IMPACT

None from this action. With adoption of Resolution No. 23-14318 on June 19, 2023, the Project is funded with the CCTA programmed total of $1,332,724 from the One Bay Area Grant 3 (OBAG3) and $152,834 from Highway Users Tax Account (HUTA) to provide local matching funds. The total Project cost of improvements for the City is $1,485,558.

RECOMMENDATION

City Council adopt the attached resolution to authorize the City Manager to execute the Funding Agreement with CCTA.

BACKGROUND

CCTA is the Project sponsor and designated lead agency for implementing the Countywide Smart Signals Project within Contra Costa County. The Project will install traffic signal systems and intelligent transportation system equipment upgrades to key identified intersections within the City. The following upgrades will help the City collect traffic data, upgrade existing infrastructure, and improve safety for drivers, pedestrians, and cyclists.

SUBCOMMITTEE FINDINGS

This item was not presented to a subcommittee.

STAFF ANALYSIS

The Smart Signals Project will develop, manage, and implement systems that will improve multimodal mobility, maximize highway and arterial system throughput, reduce environmental impact, and improve operation efficiency and safety throughout Contra Costa County.

ATTACHMENTS: Resolution
Funding Agreement

Report Prepared By: Nhat Phan, Associate Engineer

Exhibit "A"- Budget Summary
Project 2243 - Countywide Smart Signals

Project Funding

One Bay Area Grant 3 (OBAG3)	$1,332,724
Highway Users Tax Account (HUTA) - Local Match	$152,834
Funding Total	**$1,485,558**

BEFORE THE CITY COUNCIL OF THE CITY OF PITTSBURG

In the Matter of:

Authorizing the Execution of a)
Funding Agreement Between)
The City of Pittsburg and Contra) RESOLUTION NO. 24-
Costa Transportation Authority)

WHEREAS, the Contra Costa Transportation Authority (CCTA) was awarded a One Bay Area Grant Cycle 3 (OBAG3) for the design, construction, and deployment of Project 2243 – Countywide Smart Signals (the "Project"); and

WHEREAS, the Project will install signal system and intelligent transportation system (ITS) equipment upgrades to key identified intersections within Contra Costa County cities with the objective to coordinate and synchronize the timing of the signals; and

WHEREAS, the City and CCTA have identified 30 intersections to recommend for signal system and ITS equipment upgrades for inclusion in the Project estimated at $1,332,724; and

WHEREAS, the City and CCTA desire to enter into a funding agreement to provide CCTA the required matching funds for this project; and

WHEREAS, staff requests that the City Council authorize the City Manager to authorize the execution of the Funding Agreement.

NOW, THEREFORE, BE IT RESOLVED that the City Council hereby authorizes the City Manager to execute a Funding Agreement between the City and CCTA.

PASSED AND ADOPTED by the City Council of the City of Pittsburg at a regular meeting on the 19th of August 2024, by the following vote:

AYES:
NOES:
ABSTAINED:
ABSENT:

_____
Juan Antonio Banales, Mayor

ATTEST:

_____
Alice E. Evenson, City Clerk

FUNDING AGREEMENT NO. 648
BETWEEN
THE CONTRA COSTA TRANSPORTATION AUTHORITY
AND
THE CITY OF PITTSBURG
FOR COST SHARING COMMITMENTS TO DESIGN AND CONSTRUCT THE COUNTYWIDE SMART SIGNALS PROJECT

This Agreement is made and entered into on June 21, 2023 by the City of Pittsburg hereinafter referred to as **("CITY") and the CONTRA COSTA TRANSPORTATION AUTHORITY** hereinafter referred to as **("AUTHORITY"). CITY** and **AUTHORITY** are collectively referred to herein as the "Parties" and each individually as a "Party."

RECITALS

1. **AUTHORITY** is the project sponsor and designated lead agency for implementing the Countywide Smart Signals Project within Contra Costa County, hereinafter referred to as **"PROJECT"**, which is a program to install signal system and intelligent transportation system (ITS) equipment upgrades to key identified intersections within Contra Costa County cities with the objective to coordinate and synchronize the timing of the signals.

2. **AUTHORITY** is the recipient of the Metropolitan Transportation Commission's (MTC's) One Bay Area Cycle 3 (OBAG 3) funds for design, construction, and deployment of the **PROJECT.**

3. **CITY** and **AUTHORITY** have identified 30 intersections to recommend for signal system and intelligent transportation system (ITS) equipment upgrades for inclusion in the **PROJECT** estimated at $1,332,724 (See Exhibit A)

4. **CITY** agrees to provide **AUTHORITY** with the minimum 11.47% local matching funds to the OBAG 3 funds in the amount of $152,834 in Fiscal Year 2023-24 to pay for the design and installation of upgraded equipment located within **CITY's** right-of-way and cost of construction as part of the **PROJECT**.

5. **CITY** and **AUTHORITY** agree that the final matching funds requirements may be adjusted accordingly based on the final actual design and construction costs incurred and will be reconciled at the completion of the **PROJECT** as defined in paragraph 6 below.

NOW, THEREFORE, in consideration of the foregoing, the **AUTHORITY** and **CITY** do hereby agree as follows:

SECTION I

CITY AGREES:

1. To provide **AUTHORITY** matching funds for upgrading equipment and construction cost for the City's portion of the **PROJECT** in an amount of $152,834, which represents 11.47% of the OBAG3 funds of $1,332,724, no later than 30 days from receiving an invoice from **AUTHORITY**.

2. To work collaboratively with **AUTHORITY** to implement the **PROJECT**.

SECTION II

AUTHORITY AGREES:

1. To lead the development process including planning, design, construction, and deployment of the **PROJECT**, as described in Exhibit A and the Operations and Maintenance Agreement to be negotiated by the **CITY** and **AUTHORITY** following execution of this Agreement.

2. To submit an invoice to **CITY** for an amount of $152,834 prior to December 31, 2023.

3. To work collaboratively with **CITY** to implement the **PROJECT.**

SECTION III

IT IS MUTUALLY AGREED:

1. (a) That the cost to complete **PROJECT** is only an estimate and may require adjustments depending on the final cost. At the completion of the **PROJECT**, and if **AUTHORITY** determines that the match amount provided by **CITY** is exceeded, it will notify and seek approval of **CITY** to provide additional matching funds. Completion of the Project is defined as when **AUTHORITY** accepts and certifies that all phases of the **PROJECT** construction–including but not limited to installation, deployment, and activation of equipment–are completed.

(b) If **AUTHORITY** determines that the match amount provided by **CITY** exceeded the amount needed to complete the **PROJECT** then **AUTHORITY** will refund **CITY** the balance of the original match amount provided by **CITY** and indicated in paragraph 1 of Section I.

2. Term: This Agreement will remain in effect through December 31, 2028, or at the completion of the **PROJECT**, whichever occurs first, or until discharged as provided in Paragraph 3 below or as a result of paragraph 12 below.

3. Discharge: This Agreement shall be subject to discharge as follows:

a. Either Party may terminate this Agreement at any time until construction of the **PROJECT** begins, other than for breach. Either Party may terminate by giving written notice of termination to the other Party which shall specify both the cause and the effective date of termination. Notice of termination under this provision shall be given at least ninety (90) days before the effective date of such termination. Once construction of the **PROJECT** begins, neither party may terminate this Agreement unless there is a breach as addressed in paragraph 3(b) below.

b. This Agreement may be canceled by a Party for breach of any obligation, covenant, or condition hereof by the other Party, upon notice to the breaching Party. With respect to any breach which is reasonably capable of being cured, the breaching Party shall have 30 days from the date of the notice to initiate steps to cure. If the breaching party diligently pursues cure, such party shall be allowed a reasonable time to cure, not to exceed sixty (60) days from the date of the initial notice, unless a further extension is granted by the non-breaching Party. On cancellation, the non-breaching party retains the same rights as a Party exercising its right to terminate under the provisions of paragraph 3(a), except that the canceling Party also retains any remedy for breach of the whole contract or any unperformed balance.

c. By mutual consent of both PARTIES, this Agreement may be terminated at any time.

d. In the event of termination, **AUTHORITY** shall reimburse **CITY,** if **AUTHORITY** deems necessary, for overpayment by **CITY** based on the difference between actual cost share and estimated cost share, which such difference shall be determined in **AUTHORITY's** sole discretion. In no event shall the maximum expenditure allowed under this Agreement, as it may be adjusted by a written amendment signed by both parties, be exceeded.

4. Indemnity: It is mutually understood and agreed, relative to the reciprocal indemnification of **AUTHORITY** and **CITY**:

a. That neither **AUTHORITY**, nor any officer or employee thereof, shall be responsible for, and **CITY** shall fully indemnify and hold harmless **AUTHORITY** against, any damage or liability occurring by reason of anything done or omitted to be done by **CITY** under or in connection with any work, authority or jurisdiction by **CITY** under the Agreement. It is also understood and agreed that pursuant to Government Code Section 895.4, **CITY** shall fully indemnify and hold the **AUTHORITY** harmless from any liability imposed for injury as defined by Government Code Section 810.8 occurring by reason of anything done or omitted to be done by **CITY** under this Agreement or in connection with any work, authority, or jurisdiction delegated to **CITY** under this Agreement.

b. That neither **CITY**, nor any officer or employee thereof, shall be responsible for, and **AUTHORITY** shall fully indemnify and hold harmless **CITY** against any damage or liability occurring by reason of anything done or omitted to be done by **AUTHORITY** under or in connection with any work, authority, or jurisdiction by **AUTHORITY** under the Agreement. It is also understood and agreed that pursuant to Government Code Section 895.4, **AUTHORITY** shall fully indemnify and hold the **CITY** harmless from any liability imposed for injury as defined by Government Code Section 810.8 occurring by reason of anything done or omitted to be done by

AUTHORITY under this Agreement or in connection with any work, authority, or jurisdiction delegated to **AUTHORITY** under this Agreement.

5. Notices: Any notice which may be required under this Agreement shall be in writing, shall be effective when received, and shall be given by personal service, or by certified or registered mail, return receipt requested, to the addresses set forth below, or to such addresses which may be specified in writing to the parties hereto.

Garrett Evans
City Manager
65 Civic Avenue
Pittsburg, CA 94565

Timothy Haile
Executive Director
Contra Costa Transportation Authority
2999 Oak Road, Suite 100
Walnut Creek, CA 94597

6. Additional Acts and Documents: Each Party agrees to do all such things and take all such actions, and to make, execute and deliver such other documents and instruments, as shall be reasonably requested to carry out the provisions, intent and purpose of this Agreement.

7. Integration: This Agreement represents the entire Agreement of the Parties with respect to the subject matter hereof. No representations, warranties, inducements or oral agreements have been made by any of the Parties except as expressly set forth herein, or in other contemporaneous written agreements.

8. Amendment: This Agreement may not be changed, modified or rescinded except in writing, signed by all Parties hereto, and any attempt at oral modification of this Agreement shall be void and of no effect.

9. Independent Agency: **AUTHORITY** renders its services under this Agreement as an independent agency. None of the **AUTHORITY**'s agents or employees shall be agents or employees of the **CITY**.

10. Assignment: This Agreement may not be assigned, transferred, hypothecated, or pledged by any Party without the express written consent of the other Party.

11. Binding on Successors, etc.: This Agreement shall be binding upon the successor(s), assignee(s) or transferee(s) of the **AUTHORITY** or **CITY** as the case may be. This provision shall not be construed as an authorization to assign, transfer, hypothecate or pledge this Agreement other than as provided above.

12. Severability: Should any part of this Agreement be determined to be unenforceable, invalid, or beyond the authority of either Party to enter into or carry out, such determination shall not

affect the validity of the remainder of this Agreement which shall continue in full force and effect; provided that, the remainder of this Agreement can, absent the excised portion, be reasonably interpreted to give effect to the intentions of the Parties.

13. Limitation: All obligations of **AUTHORITY** under the terms of this Agreement are expressly subject to the **AUTHORITY**'s continued authorization to collect and expend the sales tax proceeds provided by **MEASURE C and MEASURE J**. If for any reason the **AUTHORITY**'s right to collect or expend such sales tax proceeds is terminated or suspended in whole or part, the **AUTHORITY** shall promptly notify CITY, and the **PARTIES** shall consult on a course of action to determine how to accomplish the **PROJECT** or if this Agreement should be terminated. If, after sixty (60) working days of the termination or suspension of sales tax proceeds authority, a course of action is not agreed upon by the PARTIES, this Agreement shall be deemed terminated by mutual or joint consent; provided, that any obligation to fund from the date of the notice shall be expressly limited by and subject to (i) the lawful ability of the **AUTHORITY** to expend sales tax proceeds for the purposes of the Agreement; and (ii) the availability, taking into consideration all the obligations of the **AUTHORITY** under all outstanding contracts, agreements to other obligations of the **AUTHORITY**, of funds for such purposes.

14. No Third Party Beneficiaries: This Agreement is not for the benefit of any person or entity other than the parties.

15. Dispute Resolution: The Parties shall work together in the spirit of good faith and cooperation to successfully implement this Agreement. Should a substantive disagreement arise between the Parties, the disagreement shall immediately be raised between the Parties. Prior to initiating any legal action, the Parties agree to meet in good faith to attempt to resolve any dispute, including but limited to meetings between executive management and participating in mediation. The Parties shall jointly select and engage the effort of a mediator to help resolve the dispute. The Parties shall equally share the costs of the mediator. If the issue is still unresolved, either Party may bring a legal action seeking resolution of the disagreement. However, any and all legal actions may only be brought if the preceding dispute resolution process has been satisfied.

16. Venue: This Agreement and all work performed thereunder shall be interpreted under and pursuant to the laws of the State of California. The Parties agree that the jurisdiction and venue of any dispute arising under this Agreement shall be the Superior Court of Contra Costa County.

17. Counterparts: This Agreement may be executed in any number of original counterpart signature pages, and each counterpart signature page shall be attached to and incorporated into this original Agreement.

Signatures on the following page.

CITY OF PITTSBURG	**CONTRA COSTA TRANSPORTATION AUTHORITY**
By:_____	**By:**_____
Garrett Evans, City Manager	**Federal Glover, Chair**
ATTEST:	
By:_____	**By:** _____
Alice Evenson, City Clerk	**Tarienne Grover, Clerk of the Board**
APPROVED as to form:	
By:_____	**By:**_____
Donna Mooney, City Attorney	**Fennemore Wendel, Legal Counsel**

FUNDING AGREEMENT NO. 648
between
The Contra Costa Transportation Authority
and
The City of Pittsburg

EXHIBIT A

DESCRIPTION OF THE PROJECT

BACKGROUND

The Smart Signals project in Contra Costa County is a CCTA led countywide project to upgrade traffic signal system and communication systems throughout its 19 cities and unincorporated communities.

Contra Costa County is home to 19 cities/towns and the County, which includes numerous unincorporated communities. There are approximately 1400 traffic signals within the County, Caltrans-owned and various city-owned. Most of these traffic signals are located either along major arterials, including State Routes, identified as Routes of Regional Significance (RSS) or other major and minor arterials in the cities/towns.

The project will develop, manage, and implement Intelligent Transportation System (ITS) initiatives such as upgrading the existing legacy systems, providing interconnectivity throughout Contra Costa County signal systems and enhance the sharing of real-time information between agencies and the public.

The existing traffic signal systems in most jurisdictions located within Contra Costa County are legacy systems and are outdated or antiquated compared to newer traffic signal systems. These signal systems currently lack the communication infrastructure such as fiber and cellular/wireless-based communication, which makes it difficult to implement traffic signal synchronization and coordination between traffic signals along an arterial. Most corridors do not currently include Signal Control and Prioritization (SCP) technologies to promote transit usage to reduce delay and travel times for transit vehicles and reduce response time for emergency vehicles.

These deficiencies result in severe traffic congestion within the cities/towns and may result in spillover onto freeways and cause a chain reaction of congestion along local arterials. The current system contributes to overall commuter travel times and delays, increases greenhouse gas emissions and fuel consumption, as well as incidents and collisions. These deficiencies were documented following extensive discussions with the cities and towns regarding traffic signal operation within the Contra Costa County.

CCTA and the project Stakeholders have initially identified these deficiencies, which are translated as the following project goals: 1) Improve safety and minimize crashes, injuries, and fatalities between motorists, bicyclists, and pedestrians; 2) Optimize mobility along major corridors and RRS; and 3) Advance to Smart City and Internet of Things (IOT) solutions.

PROJECT ELEMENTS

The Smart Signals project will develop, manage, and implement ITS initiatives that improve the safety and efficiency of multimodal mobility, maximize highway and arterial system throughput, and improve operational efficiency, safety, and reduce environmental impact throughout the county. By upgrading the existing legacy systems and providing interconnectivity throughout Contra Costa County signal systems, the county's traffic signal systems can be prepared for future emerging technologies including connected and/or autonomous vehicles, big data, integrated corridor management (ICM), enable implementation of incident management strategies and Smart Cities initiatives. This solution can enhance the sharing of real-time information between agencies and the public using existing and next generation ITS technologies.

The upgraded traffic signal systems and signal interconnect will help smooth traffic flow and ease recurring traffic congestion by expanding mode choice options and reducing travel time on local streets and roads. Upgraded traffic signals will benefit pedestrians and transit commuters by reducing wait times at intersections, improving total travel time for all modes while making transit and pedestrian more viable transportation options. The Smart Signal systems would also improve the safety of pedestrians, bicyclists, vulnerable road users, and people with disabilities by deployment of detection systems.

To accomplish these goals, CCTA is applying a Smart Signal approach that will include the implementation of ITS equipment including upgraded traffic signal controllers and cabinets, upgraded Advanced Traffic Management System (ATMS) for each agency to provide remote command and control from a centralized Traffic Management Center (TMC) or Traffic Operations Center (TOC) location, Closed-circuit Television (CCTV) cameras, SCP for transit and emergency vehicles, and vehicle detection systems deployed on predefined designated arterials and state routes. These improvements will provide local cities and Caltrans day-to-day county-wide traffic management capabilities in addressing recurrent traffic congestion as well as provide CCTA capabilities for managing the system during non-recurring traffic congestion caused by diverted traffic due to major incidents on the freeway or during any evacuation efforts.

The PROJECT's key features and benefits include but are not limited to some of the following:

- Providing infrastructure for a countywide traffic management system
- Upgrading local signal controllers and signal system hardware, software, and firmware
- Deploying bicycle and pedestrian detection software for vulnerable road user protection
- Providing SCP, including Transit Signal Priority (TSP) and Emergency Vehicle Preemption (EVP) capabilities
- Enabling local event management signal timing options
- Taking a proactive approach to safety by identifying "near miss" situations for analysis
- Enabling cities and CCTA to proactively manage day-to-day traffic
- Enabling cities to proactively manage traffic on local streets that has diverted off the freeway due to a major freeway incident
- Identifying alternative routes with timing optimized for incident management

- Allowing shared control and operation, improving cross jurisdictional traffic management
- Allowing cities/CCTA access to monitor all CCTV cameras and traffic signals for the purpose of optimizing day-to-day operations

Deployment of the Smart Signals Project is expected to result in operational and safety improvements for all modes of transportation, such as:

- Decrease in travel time,
- Decrease in total delay,
- Reduction in number of stops
- Reduction in secondary accidents
- Decrease in fuel consumption and greenhouse gas emissions
- Promotion of transit ridership
- Reduction of response time for emergency vehicles

When operating together, these enhancements increase safety and reliability, and support environmental sustainability, economic development, and equitable access for all travelers.

CITY OF PITTSBURG ELEMENTS

The signals located at the following intersection are included in the Project and are proposed to receive Smart Signal upgrades. (See Table 1 and Figure 1 below)

Table 1: City of Pittsburg PROJECT Intersections

LIST OF INTERSECTIONS

Signal No.	Primary Street	Secondary Street
1	Bailey Road	W Leland Rd
2	Buchanan Rd	Harbor St
3	Buchanan Rd	Suzanne Dr
4	Buchanan Rd	Loveridge Rd
5	Buchanan Rd	Ventura Dr
6	Buchanan Rd	Meadows Ave
7	W. Leland Rd	San Marco Blvd
8	W. Leland Rd	Alves Ranch Rd
9	W. Leland Rd	Woodhill Dr
10	W. Leland Rd	Southwood Dr / Bart Exit
11	W. Leland Rd	Bart Entrance
12	W. Leland Rd	Oak Hills Dr
13	W. Leland Rd	Chestnut Dr
14	W. Leland Rd	Jacqueline Dr
15	W. Leland Rd	Montevideo Dr
16	W. Leland Rd	Golf Club Rd/ Range Rd
17	W. Leland Rd	Dover Way

18	W. Leland Rd	Burton Ave
19	W. Leland Rd	Crestview Dr
20	Railroad Ave	Buchanan Rd
21	Railroad Ave	Marks Blvd / Sierra Dr
22	Railroad Ave	Linscheid Dr
23	Railroad Ave	Yosemite Dr
24	Railroad Ave	Alturas Ave/Mariposa Dr
25	Railroad Ave	Atlantic Ave
26	Railroad Ave	Alvarado Ave
27	Railroad Ave	Leland Rd
28	Railroad Ave	Civic Ave / Oak Pl
29	Railroad Ave	Central Ave
30	Railroad Ave	E 10th St

The recommended upgrades for signals located in Pittsburg include:

- Signal controller firmware updates
- Video/Radar detection
- An Advanced Traffic Management System (ATMS)
- Traffic signal synchronization
- Emergency Vehicle Preemption (EVP)
- Transit Signal Priority (TSP), and
- Video Analytics.

Based on preliminary estimates, the upgraded equipment, including cost of construction, is shown below. The City is responsible to provide the minimum 11.47% match.

- Total Number of Signals – 30
- Local funding – $1,332,724
- Local match required – $152,834 (11.47%)

CONTRA COSTA transportation authority

Authority Board **STAFF REPORT**

Meeting Date: June 21, 2023

Subject	**NEW ITEM: Authorization to Execute Funding Agreements with Contra Costa County Jurisdictions and Contra Costa County to Provide Authority Local Match for the Contra Costa Countywide Smart Signals Project (Project)**
Summary of Issues	The Authority, as the lead agency for the Project, applied for and was awarded One Bay Area Grant Cycle 3 (OBAG 3) funding in the amount of $26,555,000 for the design and construction phases of the Project. This federal grant requires a minimum 11.47% local match, which will be provided by the 20 jurisdictions.
Recommendations	Staff seeks authorization for the Chair to execute 20 individual funding agreements with each of the 19 jurisdictions and Contra Costa County, in the aggregated total amount of $3,529,142, to be provided as the 11.47% local match to the $26,555,000 in One Bay Area Grant Cycle 3 funding, to be applied towards the Project, and to allow the Executive Director or designee to make any non-substantive changes to the language of the individual funding agreements as needed.
Staff Contact	John Hoang
Financial Implications	OBAG 3: $26,555,000; Local Match from Jurisdictions: $3,529,142; Additional Authority Match: $690,280; Total Project Cost: $30,774,422
Options	The Authority Board could elect to not approve these Funding Agreements.
Attachments	**A.** Local Match Breakdown by Jurisdiction

	B. Draft Funding Agreement
Changes from Committee	*N/A*

Background

The Authority is the lead agency and project sponsor for the Project, working with and coordinating with the 19 cities/towns and unincorporated Contra Costa County, referred to as the 20 Jurisdictions. The Project addresses safety, operational improvements, and traffic management enhancements, which will upgrade existing traffic signal systems, including controllers and communication systems, to provide interconnectivity throughout Contra Costa County. The existing traffic signal systems in Contra Costa County are mostly legacy systems and are outdated. The Project will upgrade the signal system countywide, upgrading traffic signals at approximately 328 intersections throughout Contra Costa County and will provide capabilities to enhance the sharing of real-time information and data between agencies. Having a unified signal system and other technologies will provide the ability to implement video analytics, transit priority lanes, improve bicycle signals/phases, and signal control prioritization technologies to promote transit use by reducing delay and travel times for transit vehicles.

At the May 17, 2023 Authority Board meeting, the Authority Board received an update of the Project. The Project is currently in the planning stages followed by the project development phase and design phase in 2024 with construction beginning in late 2025.

The Authority applied for and received $26,555,000 in OBAG 3 federal funds for the Project design and construction phases. In addition, the local minimum 11.47% match to the federal funds, totaling $3,529,142, will be provided by the 20 jurisdictions. The breakdown of the local match by jurisdiction is included in Attachment A and a Draft Agreement is included in Attachment B. The Authority is also asking that the jurisdictions provide the local match during the Fiscal Year 2023-24. In addition to the OBAG 3 grant and local match from the jurisdictions, the Authority is also contributing the amount of $690,280 for a total amount of $30,774,422, which is programmed and available to design and construct the Project.

Staff seeks authorization for the Chair to execute 20 individual funding agreements with each of the 19 jurisdictions and Contra Costa County, in the aggregated total amount of $3,529,142, to be provided as the 11.47% local match to the $26,555,000 in One Bay Area Grant Cycle 3 funding, to be applied towards the Project, and to allow the Executive

Director or designee to make any non-substantive changes to the language of the individual funding agreements as needed.

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CONTRA COSTA COUNTYWIDE SMART SIGNALS PROJECT

LOCAL MATCH TO ONE BAY AREA GRANT CYCLE 3 (OBAG 3) GRANT

FOR DESIGN AND CONSTRUCTION

Jurisdiction	Local Match		OBAG 3 (88.53%)	Total
	Jurisdiction (11.47%)	Measure J		
Antioch	$ 334,175	$ 65,363	$ 2,514,497	$ 2,914,035
Brentwood	$ 228,393	$ 44,672	$ 1,718,538	$ 1,991,603
Clayton	$ 55,804	$ 10,915	$ 419,898	$ 486,618
Concord	$ 499,173	$ 97,635	$ 3,756,021	$ 4,352,829
County	$ 285,535	$ 55,849	$ 2,148,503	$ 2,489,886
Danville	$ 119,972	$ 23,466	$ 902,725	$ 1,046,162
El Cerrito	$ 100,792	$ 19,714	$ 758,409	$ 878,915
Hercules	$ 65,091	$ 12,731	$ 489,775	$ 567,597
Lafayette	$ 149,747	$ 29,290	$ 1,126,767	$ 1,305,803
Martinez	$ 73,362	$ 14,349	$ 552,011	$ 639,722
Moraga	$ 71,390	$ 13,964	$ 537,175	$ 622,528
Oakley	$ 169,234	$ 33,101	$ 1,273,396	$ 1,475,731
Orinda	$ 87,063	$ 17,029	$ 655,101	$ 759,193
Pinole	$ 154,302	$ 30,181	$ 1,161,045	$ 1,345,527
Pittsburg	$ 152,834	$ 29,893	$ 1,149,997	$ 1,332,725
Pleasant Hill	$ 152,780	$ 29,883	$ 1,149,595	$ 1,332,258
Richmond	$ 182,336	$ 35,664	$ 1,371,985	$ 1,589,985
San Pablo	$ 217,877	$ 42,615	$ 1,639,411	$ 1,899,903
San Ramon	$ 248,126	$ 48,532	$ 1,867,025	$ 2,163,684
Walnut Creek	$ 181,159	$ 35,434	$ 1,363,126	$ 1,579,719
TOTAL	**$ 3,529,142**	**$ 690,280**	**$ 26,555,000**	**$ 30,774,422**

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FUNDING AGREEMENT NO. XX
BETWEEN
THE CONTRA COSTA TRANSPORTATION AUTHORITY
AND
AGENCY NAME HERE
FOR COST SHARING COMMITMENTS TO DESIGN AND CONSTRUCT THE COUNTYWIDE SMART SIGNALS PROJECT

This Agreement is made and entered into on _____, 2023 by the AGENCY NAME hereinafter referred to as **("CITY/TOWN/ OR COUNTY") and the CONTRA COSTA TRANSPORTATION AUTHORITY** hereinafter referred to as **("AUTHORITY").** **CITY/TOWN/ OR COUNTY** and **AUTHORITY** are collectively referred to herein as the "Parties" and each individually as a "Party."

RECITALS

1. **AUTHORITY** is the project sponsor and designated lead agency for implementing the Countywide Smart Signals Project within Contra Costa County, hereinafter referred to as **"PROJECT"**, which is a program to install signal system and intelligent transportation system (ITS) equipment upgrades to key identified intersections within Contra Costa County cities with the objective to coordinate and synchronize the timing of the signals.

2. **AUTHORITY** is the recipient of the Metropolitan Transportation Commission's (MTC's) One Bay Area Cycle 3 (OBAG 3) funds for design, construction, and deployment of the **PROJECT.**

3. **CITY/TOWN/ OR COUNTY** and **AUTHORITY** have identified 18 intersections to recommend for signal system and intelligent transportation system (ITS) equipment upgrades for inclusion in the **PROJECT** estimated at $XXXX (See Exhibit A)

4. **CITY/TOWN/ OR COUNTY** agrees to provide **AUTHORITY** with the minimum 11.47% local matching funds to the OBAG 3 funds in the amount of $XXXX in Fiscal Year 2023-24 to pay for the design and installation of upgraded equipment located within **CITY/TOWN/ OR COUNTY** right-of-way and cost of construction as part of the **PROJECT**.

5. **CITY/TOWN/ OR COUNTY** and **AUTHORITY** agree that the final matching funds requirements may be adjusted accordingly based on the final actual design and construction costs incurred and will be reconciled at the completion of the **PROJECT**.

NOW, THEREFORE, in consideration of the foregoing, the **AUTHORITY** and **CITY/TOWN/ OR COUNTY** do hereby agree as follows:

SECTION I

CITY/TOWN/ OR COUNTY AGREES:

1. To provide **AUTHORITY** matching funds for upgrading equipment and construction cost for the City's/Town's or County's portion of the **PROJECT** in an amount of $XXXX, which represents 11.47% of the OBAG3 funds of $XXXX, no later than 30 days from receiving an invoice from **AUTHORITY**.

2. To work collaboratively with **AUTHORITY** to implement the **PROJECT**.

SECTION II

AUTHORITY AGREES:

1. To lead the development process including planning, design, construction, and deployment of the **PROJECT**, as described in Exhibit A and the Operations and Maintenance Agreement to be negotiated by the **CITY/TOWN/ OR COUNTY** and **AUTHORITY** following execution of this Agreement.

2. To submit an invoice to **CITY/TOWN/ OR COUNTY** for an amount of $XXXX prior to December 31, 2023.

3. To work collaboratively with **CITY/TOWN/ OR COUNTY** to implement the **PROJECT.**

SECTION III

IT IS MUTUALLY AGREED:

1. (a) That the cost to complete **PROJECT** is only an estimate and may require adjustments depending on the final cost. At the completion of the **PROJECT**, and if **AUTHORITY** determines that the match amount provided by **CITY/TOWN/ OR COUNTY** is exceeded, it will notify and seek approval of **CITY/TOWN/ OR COUNTY** to provide additional matching funds. Completion of the Project is defined as when **AUTHORITY** accepts and certifies that all phases of the **PROJECT** construction–including but not limited to installation, deployment, and activation of equipment–are completed.

(b) If **AUTHORITY** determines that the match amount provided by **CITY/TOWN/ OR COUNTY** exceeded the amount needed to complete the **PROJECT** then **AUTHORITY** will refund **CITY/TOWN/ OR COUNTY** the balance of the original match amount provided by **CITY/TOWN/ OR COUNTY** and indicated in paragraph 1 of Section I.

2. Term: This Agreement will remain in effect through December 31, 2028, or at the completion of the **PROJECT**, whichever occurs first, or until discharged as provided in Paragraph 3 below or as a result of paragraph 12 below.

3. Discharge: This Agreement shall be subject to discharge as follows:

a. Either Party may terminate this Agreement at any time until construction of the

PROJECT begins, other than for breach. Either Party may terminate by giving written notice of termination to the other Party which shall specify both the cause and the effective date of termination. Notice of termination under this provision shall be given at least ninety (90) days before the effective date of such termination. Once construction of the **PROJECT** begins, neither party may terminate this Agreement unless there is a breach as addressed in paragraph 3(b) below.

b. This Agreement may be canceled by a Party for breach of any obligation, covenant, or condition hereof by the other Party, upon notice to the breaching Party. With respect to any breach which is reasonably capable of being cured, the breaching Party shall have 30 days from the date of the notice to initiate steps to cure. If the breaching party diligently pursues cure, such party shall be allowed a reasonable time to cure, not to exceed sixty (60) days from the date of the initial notice, unless a further extension is granted by the non-breaching Party. On cancellation, the non-breaching party retains the same rights as a Party exercising its right to terminate under the provisions of paragraph 3(a), except that the canceling Party also retains any remedy for breach of the whole contract or any unperformed balance.

c. By mutual consent of both PARTIES, this Agreement may be terminated at any time.

d. In the event of termination, **AUTHORITY** shall reimburse **CITY/TOWN/ OR COUNTY** if **AUTHORITY** deems necessary, for overpayment by **CITY/TOWN/ OR COUNTY** based on the difference between actual cost share and estimated cost share, which such difference shall be determined in **AUTHORITY's** sole discretion. In no event shall the maximum expenditure allowed under this Agreement, as it may be adjusted by a written amendment signed by both parties, be exceeded.

4. Indemnity: It is mutually understood and agreed, relative to the reciprocal indemnification of **AUTHORITY** and **CITY/TOWN/ OR COUNTY**:

a. That neither **AUTHORITY**, nor any officer or employee thereof, shall be responsible for, and **CITY/TOWN/ OR COUNTY** shall fully indemnify and hold harmless **AUTHORITY** against, any damage or liability occurring by reason of anything done or omitted to be done by **TOWN** under or in connection with any work, authority or jurisdiction by **CITY/TOWN/ OR COUNTY** under the Agreement. It is also understood and agreed that pursuant to Government Code Section 895.4, **CITY/TOWN/ OR COUNTY** shall fully indemnify and hold the **AUTHORITY** harmless from any liability imposed for injury as defined by Government Code Section 810.8 occurring by reason of anything done or omitted to be done by **CITY/TOWN/ OR COUNTY** under this Agreement or in connection with any work, authority, or jurisdiction delegated to **TOWN** under this Agreement.

b. That neither **CITY/TOWN/ OR COUNTY**, nor any officer or employee thereof, shall be responsible for, and **AUTHORITY** shall fully indemnify and hold harmless **CITY/TOWN/ OR COUNTY** against any damage or liability occurring by reason of anything done or omitted to be done by **AUTHORITY** under or in connection with any work, authority, or jurisdiction by **AUTHORITY** under the Agreement. It is also understood and agreed that pursuant to Government Code Section 895.4, **AUTHORITY** shall fully indemnify and hold the **CITY/TOWN/ OR COUNTY** harmless from any liability imposed for injury as defined by Government Code Section 810.8 occurring by reason of anything done or omitted to be done by **AUTHORITY** under this

Agreement or in connection with any work, authority, or jurisdiction delegated to **AUTHORITY** under this Agreement.

5. Notices: Any notice which may be required under this Agreement shall be in writing, shall be effective when received, and shall be given by personal service, or by certified or registered mail, return receipt requested, to the addresses set forth below, or to such addresses which may be specified in writing to the parties hereto.

NAME
TITLE
STREET ADDRESS
CITY, STATE ZIP

Timothy Haile
Executive Director
Contra Costa Transportation Authority
2999 Oak Road, Suite 100
Walnut Creek, CA 94597

6. Additional Acts and Documents: Each Party agrees to do all such things and take all such actions, and to make, execute and deliver such other documents and instruments, as shall be reasonably requested to carry out the provisions, intent and purpose of this Agreement.

7. Integration: This Agreement represents the entire Agreement of the Parties with respect to the subject matter hereof. No representations, warranties, inducements or oral agreements have been made by any of the Parties except as expressly set forth herein, or in other contemporaneous written agreements.

8. Amendment: This Agreement may not be changed, modified or rescinded except in writing, signed by all Parties hereto, and any attempt at oral modification of this Agreement shall be void and of no effect.

9. Independent Agency: **AUTHORITY** renders its services under this Agreement as an independent agency. None of the **AUTHORITY**'s agents or employees shall be agents or employees of the **TOWN**.

10. Assignment: This Agreement may not be assigned, transferred, hypothecated, or pledged by any Party without the express written consent of the other Party.

11. Binding on Successors, etc.: This Agreement shall be binding upon the successor(s), assignee(s) or transferee(s) of the **AUTHORITY** or **CITY/TOWN/ OR COUNTY** as the case may be. This provision shall not be construed as an authorization to assign, transfer, hypothecate or pledge this Agreement other than as provided above.

12. Severability: Should any part of this Agreement be determined to be unenforceable, invalid, or beyond the authority of either Party to enter into or carry out, such determination shall not affect the validity of the remainder of this Agreement which shall continue in full force and effect;

provided that, the remainder of this Agreement can, absent the excised portion, be reasonably interpreted to give effect to the intentions of the Parties.

13. Limitation: All obligations of **AUTHORITY** under the terms of this Agreement are expressly subject to the **AUTHORITY**'s continued authorization to collect and expend the sales tax proceeds provided by **MEASURE C and MEASURE J**. If for any reason the **AUTHORITY**'s right to collect or expend such sales tax proceeds is terminated or suspended in whole or part, the **AUTHORITY** shall promptly notify **CITY/TOWN/ OR COUNTY**, and the **PARTIES** shall consult on a course of action to determine how to accomplish the **PROJECT** or if this Agreement should be terminated. If, after sixty (60) working days of the termination or suspension of sales tax proceeds authority, a course of action is not agreed upon by the PARTIES, this Agreement shall be deemed terminated by mutual or joint consent; provided, that any obligation to fund from the date of the notice shall be expressly limited by and subject to (i) the lawful ability of the **AUTHORITY** to expend sales tax proceeds for the purposes of the Agreement; and (ii) the availability, taking into consideration all the obligations of the **AUTHORITY** under all outstanding contracts, agreements to other obligations of the **AUTHORITY**, of funds for such purposes.

14. No Third Party Beneficiaries: This Agreement is not for the benefit of any person or entity other than the parties.

15. Dispute Resolution: The Parties shall work together in the spirit of good faith and cooperation to successfully implement this Agreement. Should a substantive disagreement arise between the Parties, the disagreement shall immediately be raised between the Parties. Prior to initiating any legal action, the Parties agree to meet in good faith to attempt to resolve any dispute, including but limited to meetings between executive management and participating in mediation. The Parties shall jointly select and engage the effort of a mediator to help resolve the dispute. The Parties shall equally share the costs of the mediator. If the issue is still unresolved, either Party may bring a legal action seeking resolution of the disagreement. However, any and all legal actions may only be brought if the preceding dispute resolution process has been satisfied.

16. Venue: This Agreement and all work performed thereunder shall be interpreted under and pursuant to the laws of the State of California. The Parties agree that the jurisdiction and venue of any dispute arising under this Agreement shall be the Superior Court of Contra Costa County.

17. Counterparts: This Agreement may be executed in any number of original counterpart signature pages, and each counterpart signature page shall be attached to and incorporated into this original Agreement.

Signatures on the following page.

NAME OFAGENCY	**CONTRA COSTA TRANSPORTATION AUTHORITY**
By:_____	**By:**_____
NAME, TITLE	**Federal Glover, Chair**
ATTEST:	
By:_____	**By:** _____
NAME, TITLE	**Tarienne Grover, Clerk of the Board**
APPROVED as to form:	
By:_____	**By:**_____
NAME, TITLE	**Fennemore Wendel, Authority Counsel**

FUNDING AGREEMENT NO. XX
between
The Contra Costa Transportation Authority
and
Agency Name

EXHIBIT A

DESCRIPTION OF THE PROJECT

BACKGROUND

The Smart Signals project in Contra Costa County is a CCTA led countywide project to upgrade traffic signal system and communication systems throughout its 19 cities and unincorporated communities.

Contra Costa County is home to 19 cities/towns and the County, which includes numerous unincorporated communities. There are approximately 1400 traffic signals within the County, Caltrans-owned and various City/Town-owned. Most of these traffic signals are located either along major arterials, including State Routes, identified as Routes of Regional Significance (RSS) or other major and minor arterials in the cities/towns.

The project will develop, manage, and implement Intelligent Transportation System (ITS) initiatives such as upgrading the existing legacy systems, providing interconnectivity throughout Contra Costa County signal systems and enhance the sharing of real-time information between agencies and the public.

The existing traffic signal systems in most jurisdictions located within Contra Costa County are legacy systems and are outdated or antiquated compared to newer traffic signal systems. These signal systems currently lack the communication infrastructure such as fiber and cellular/wireless-based communication, which makes it difficult to implement traffic signal synchronization and coordination between traffic signals along an arterial. Most corridors do not currently include Signal Control and Prioritization (SCP) technologies to promote transit usage to reduce delay and travel times for transit vehicles and reduce response time for emergency vehicles.

These deficiencies result in severe traffic congestion within the cities/towns and may result in spillover onto freeways and cause a chain reaction of congestion along local arterials. The current system contributes to overall commuter travel times and delays, increases greenhouse gas emissions and fuel consumption, as well as incidents and collisions. These deficiencies were documented following extensive discussions with the cities and towns regarding traffic signal operation within the Contra Costa County.

CCTA and the project Stakeholders have initially identified these deficiencies, which are translated as the following project goals: 1) Improve safety and minimize crashes, injuries, and fatalities between motorists, bicyclists, and pedestrians; 2) Optimize mobility along major corridors and RRS; and 3) Advance to Smart City and Internet of Things (IOT) solutions.

PROJECT ELEMENTS

The Smart Signals project will develop, manage, and implement ITS initiatives that improve the safety and efficiency of multimodal mobility, maximize highway and arterial system throughput, and improve operational efficiency, safety, and reduce environmental impact throughout the county. By upgrading the existing legacy systems and providing interconnectivity throughout Contra Costa County signal systems, the county's traffic signal systems can be prepared for future emerging technologies including connected and/or autonomous vehicles, big data, integrated corridor management (ICM), enable implementation of incident management strategies and Smart Cities initiatives. This solution can enhance the sharing of real-time information between agencies and the public using existing and next generation ITS technologies.

The upgraded traffic signal systems and signal interconnect will help smooth traffic flow and ease recurring traffic congestion by expanding mode choice options and reducing travel time on local streets and roads. Upgraded traffic signals will benefit pedestrians and transit commuters by reducing wait times at intersections, improving total travel time for all modes while making transit and pedestrian more viable transportation options. The Smart Signal systems would also improve the safety of pedestrians, bicyclists, vulnerable road users, and people with disabilities by deployment of detection systems.

To accomplish these goals, CCTA is applying a Smart Signal approach that will include the implementation of ITS equipment including upgraded traffic signal controllers and cabinets, upgraded Advanced Traffic Management System (ATMS) for each agency to provide remote command and control from a centralized Traffic Management Center (TMC) or Traffic Operations Center (TOC) location, Closed-circuit Television (CCTV) cameras, SCP for transit and emergency vehicles, and vehicle detection systems deployed on predefined designated arterials and state routes. These improvements will provide local cities and Caltrans day-to-day county-wide traffic management capabilities in addressing recurrent traffic congestion as well as provide CCTA capabilities for managing the system during non-recurring traffic congestion caused by diverted traffic due to major incidents on the freeway or during any evacuation efforts.

The PROJECT's key features and benefits include but are not limited to some of the following:

- Providing infrastructure for a countywide traffic management system
- Upgrading local signal controllers and signal system hardware, software, and firmware
- Deploying bicycle and pedestrian detection software for vulnerable road user protection
- Providing SCP, including Transit Signal Priority (TSP) and Emergency Vehicle Preemption (EVP) capabilities
- Enabling local event management signal timing options
- Taking a proactive approach to safety by identifying "near miss" situations for analysis
- Enabling cities and CCTA to proactively manage day-to-day traffic
- Enabling cities to proactively manage traffic on local streets that has diverted off the freeway due to a major freeway incident
- Identifying alternative routes with timing optimized for incident management
- Allowing shared control and operation, improving cross jurisdictional traffic management

- Allowing CITY/TOWN/ OR COUNTY/CCTA access to monitor all CCTV cameras and traffic signals for the purpose of optimizing day-to-day operations

Deployment of the Smart Signals Project is expected to result in operational and safety improvements for all modes of transportation, such as:

- Decrease in travel time,
- Decrease in total delay,
- Reduction in number of stops
- Reduction in secondary accidents
- Decrease in fuel consumption and greenhouse gas emissions
- Promotion of transit ridership
- Reduction of response time for emergency vehicles

When operating together, these enhancements increase safety and reliability, and support environmental sustainability, economic development, and equitable access for all travelers.

CITY/TOWN/ OR COUNTY ELEMENTS

The signals located at the following intersection are included in the Project and is proposed to receive Smart Signal upgrades. (See Table 1 below)

Table 1: AGENCY PROJECT Intersections

LIST OF INTERSECTIONS

Signal No.	Primary Street	Secondary Street
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		

The recommended upgrades for signals located in AGENCY NAME include:

- xxxxx
- xxxxx
- xxxxx

Based on preliminary estimates, the upgraded equipment, including cost of construction, is shown below. The CITY/TOWN/ OR COUNTY is responsible to provide the minimum 11.47% match.

- Total Number of Signals – XX
- Total funding – $XX
- Local match required – $XX (11.47%)

OFFICE OF THE CITY MANAGER/EXECUTIVE DIRECTOR
65 Civic Avenue
Pittsburg, CA 94565

TO: Mayor and Council Members

FROM: Garrett Evans, City Manager

SUBJECT: Adoption of a City Council Resolution Allocating Additional Funds, Accepting the Plans and Specifications, and Awarding Project 5704-Central Harbor Park and Boat Launch Facilities

MEETING DATE: August 19, 2024

EXECUTIVE SUMMARY

Project 5704-Central Harbor Park and Boat Launch Facilities (Project) will improve the infrastructure at the Boat Launch Ramp, Central Harbor Park, and nearby parking lots as part of a greater effort to revitalize the waterfront. If approved, this Resolution will allocate additional funding, accept the contract plans and specifications, and award a construction contract with NTK Construction, Inc.

FISCAL IMPACT

The construction bid proposal from NTK Construction, Inc. for the Base Bid is $2,755,035.05, for Bid Alternative 1 is $30,299 and for Bid Alternative 3 is $100,000 for a total amount of $2,885,334.05 for the Project.

Funding will be provided by $3,544,395 Sacramento-San Joaquin Delta Conservancy (Conservancy) Climate Access and Restoration Grant (CAR 22 Grant) received in 2023.

This resolution will allocate additional funding from the following sources.

- $400,000 US EPA Grant Fund 541
- $100,000 Waterfront Fund 540
- $100,000 Solid Waste Fund 210

If approved, the total Project budget will be $4,144,395.

RECOMMENDATION

City Council adopt the attached Resolution allocating an additional funding amount of $600,000 to the Project as follows; $400,000 from US EPA Grant (Fund 541), $100,000 from Waterfront (Fund 540), $100,000 from Solid Waste (Fund 210), accepting the plans and specifications and authorizing the City Manager to execute a construction contract for the Project with NTK Construction, Inc. for the Base Bid of $2,755,035.05, Bid Alternative 1 of $30,299.00, and Bid Alternative 3 of $100,000.00 for a total amount of $2,885,334.05 for the Project.

Staff recommends that the City Council allocate a construction contingency in the amount of $288,533 for unanticipated costs and contract change orders.

Staff further recommends that the City Engineer be authorized to approve contract change orders in an amount not to exceed 50% of the construction contingency, and the City Manager be authorized to approve change orders in an amount not to exceed the approved Project budget.

BACKGROUND

On September 20, 2021, by Resolution 21-13995, the City entered into a $145,621 engineering design agreement with R.E.Y. Engineers for the design of the Project. On March 20, 2023, by Resolution 23-14259, City Council authorized an application for a CAR 22 Grant and to receive $3,544,395 to implement the Project.

On November 6, 2023, by Resolution 23-15398, the City amended the engineering design agreement with R.E.Y. to include Project Management, Construction Engineering Support, and development of as-built drawings to the scope of work and added $124,548 to the original contract amount totaling a total contract amount of $270,169.

SUBCOMMITTEE FINDINGS

This item was not presented to a subcommittee.

STAFF ANALYSIS

The City of Pittsburg's Central Harbor Park and Boat Launch has been an established attraction for residents seeking recreation. Improvements to this facility and adjacent areas will increase safety, promote leisure services, and enrich surrounding neighborhoods. The Project will also contribute to the City's overall goal of revitalizing the waterfront, increasing sustainability for all residents and visitors.

On June 24, 2024, staff advertised the Project for construction with a bid due date of July 30th. On July 30, 2024, six (6) bids for construction of the Project were received. The low bid was checked for arithmetical errors, completeness, and conformance with the bid requirements and NTK Construction, Inc. was the lowest responsive, responsible bidder with a base bid in the amount of Base Bid of $2,755,035.05 for the Project.

After reviewing the bid amounts for the three (3) bid alternatives, staff recommends awarding the construction contract to NTK Construction, Inc. with a base bid in the amount of $2,755,035.05, Bid Alternative 1 of $30,299 (additional driveway and parking lot repairs), and Bid Alternative 3 of $100,000.00 (ingress and egress access gates at the boat launch area) for a total amount of $2,885,334.05 for the Project. Bid Alternate 2 (storm drain pump station) is not recommended due to budgetary constraints. Staff will further study the storm drain system to determine if there is an alternative design that can improve the performance of the storm drain system.

ATTACHMENTS: Resolution
Project Budget Summary

Report Prepared By: Dayne Johnson, Assistant City Engineer

BEFORE THE CITY COUNCIL OF THE CITY OF PITTSBURG

In the Matter of:

Allocating Additional Funds, Accepting)
The Plans and Specifications, And)
Awarding Project 5704- Central) RESOLUTION NO. 24-
Harbor Park and Boat Launch Facilities)

WHEREAS, Project 5704-Central Harbor Park and Boat Launch Facilities (the "Project"), is for the improvement of the City of Pittsburg Boat Launch Ramp, Central Harbor Park, nearby parking lots, and surrounding areas; and

WHEREAS, on March 20, 2023, by Resolution 23-14259, City Council authorized an application for a Climate, Access and Restoration (CAR) 22 Grant and received $3,544,395 to implement the Project; and

WHEREAS, on June 24, 2024, staff advertised the Project for bids; and

WHEREAS, on July 30, 2024, six (6) bids for construction of the Project were received; and

WHEREAS, NTK Construction, Inc. was ranked as the most responsive, responsible bidder based on the selection criteria with a base bid in the amount of $2,755,035.05; and

WHEREAS, staff recommends that the City Council allocate $400,000 from US EPA Grant (Fund 541), $100,000 from Waterfront (Fund 540), $100,000 from Solid Waste (Fund 210) to the Project; and

WHEREAS, staff recommends that the City Council accept the plans and specifications; and

WHEREAS, staff recommends that the City Council award a construction contract with NTK Construction, Inc. for the Base Bid of $2,755,035.05, Bid Alternative 1 of $30,299, and Bid Alternative 3 of $100,000 for a total amount of $2,885,334.05 for the Project; and

WHEREAS, staff recommends establishing a contingency in an amount of $288,533 for unanticipated costs and contract change orders; and

WHEREAS, staff further recommends that the City Engineer be authorized to approve contract change orders in an amount not to exceed 50% of the construction contingency, and the City Manager be authorized to approve change orders in an amount not to exceed the approved Project budget.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Pittsburg hereby accepts the plans and specifications, awards a construction contract with NTK Construction, Inc. for the Base Bid of $2,755,035.05 and Bid Alternative 1 of $30,299 and Bid Alternative 3 of $100,000 for a total amount of $2,885,334.05, authorizes a construction contingency in the amount of $288,533, authorizes the City Engineer to approve contract change orders in an amount not to exceed 50% of the contingency, and authorizes the City Manager to approve change orders for an amount not to exceed the approved Project budget.

BE IT FURTHER RESOLVED, that the City Council of the City of Pittsburg allocates an additional funding amount of $600,000 to the Project as follows: $400,000 from US EPA Grant (Fund 541), $100,000 from Waterfront (Fund 540), and $100,000 from Solid Waste (Fund 210).

PASSED AND ADOPTED by the City Council of the City of Pittsburg at a regular meeting on the 19th day of August 2024, by the following vote:

AYES:

NOES:

ABSTAINED:

ABSENT:

_____
Juan Antonio Banales, Mayor

ATTEST:

_____
Alice E. Evenson, City Clerk

PROJECT BUDGET SUMMARY

Central Harbor Park and Boat Launch Facilities

Project 5704

Date: August 2024

Project Funding:

	Climate Access and Restoration Grant (CAR 22 Grant)	$3,544,395
	US EPA Grant (Fund 541)	$400,000
	Waterfront (Fund 540)	$100,000
	Solid Waste (Fund 210)	$100,000
	Funding Total	**$4,144,395**

Project Expenditures:

Miscellaneous:	Misc. Services & Supplies		$5,000
(Code 1399)		Subtotal	$5,000
Advertising:	Advertising		$2,500
(Code 2203)		Subtotal	$2,500
Construction:	Construction		$2,885,334
(Code 2281)	Construction Contingency (10%)		$288,533
	Construction Support		$125,008
	Material Testing		$40,000
	Permitting		$95,000
	City Furnished Substation Modular		$86,500
	City Furnished Restrooms		$536,500
		Subtotal	$4,056,875
Staff Time:	Staff		$40,000
(Code 1101)		Subtotal	$40,000
Admin:	Admin Overhead		$40,000
(Code 2372)		Subtotal	$40,000
		Expenditures Total	**$4,144,375**

OFFICE OF THE CITY MANAGER/EXECUTIVE DIRECTOR
65 Civic Avenue
Pittsburg, CA 94565

TO: Mayor and Council Members

FROM: Garrett Evans, City Manager

SUBJECT: Adoption of a City Council Resolution to Renew and Execute and Agreement with The 100 Companies LLC for the East Bay 100

MEETING DATE: August 19, 2024

EXECUTIVE SUMMARY

On May 6, 2019, the City Council approved a five year agreement with The 100 Companies LLC for a digital media platform that came to be called 'The East Bay 100'. This platform provides the City with an opportunity to create and share content as it pertains to the economic development news and events in Pittsburg and the greater region. Throughout the lifetime of the contract, the City has utilized this resource to share content to a targeted regional database of Contra Costa and Alameda County business professionals and has seen a steady growth in engagement of the newsletter content. Staff believes that this can continue to be a valuable resource to outreach and promote our City and surrounding region to a greater audience. Staff is seeking approval to renew the City's agreement, by resolution, with The 100 Companies LLC for an additional five years to continue exclusive partnership in the publishing of The East Bay 100 newsletter.

FISCAL IMPACT

The agreement is for five years for a total of $187,443 over the lifespan of the contract. Those costs include the annual membership fees, plus a $1,000 per month fee for content production. The agreement allows for the City to publish up to 24 issues of The East Bay 100 Newsletter per year. The total amount of the agreement will be funded by the Economic Development fund (Fund 202).

RECOMMENDATION

By Resolution, approve the renewal of the membership agreement with The 100 Companies LLC and authorize the City Manager to complete any additional tasks required to carry out the obligations of the Resolution and execute additional documents as may be necessary.

BACKGROUND

On May 6th, 2019, the City entered into an agreement with The 100 Companies LLC to develop and publish a digital media platform called “The East Bay 100”. This built off the momentum at the time to market the City of Pittsburg to potential businesses, industries, and site selectors. The content marketing platforms for The 100 Companies LLC all together reach 500,000 worldwide subscribers. They provide users with the opportunity to create marketing content on a wide variety of topics, no longer than 100 words per article or 100 seconds per video. This gives the users the opportunity to easily engage with interesting content and for the City to augment its digital presence across the region. The City brought this platform and territorial rights for Contra Costa and Alameda Counties for the purpose of marketing the business and industrial community in the East Bay, with the goal of bring in other cities in the East Bay region to provide content that promotes business and industrial activity across the region. The 100 Companies LLC compiled an initial database of 20,000 contacts in Contra Costa and Alameda Counties that met the following criteria:

- Profiles are ages 35 to 65 with college degrees
- Profiles are managers, directors, VPs and C-Levels
- Company sizes are 5 or more employees

The newsletter is also available for local subscription by users through a simple sign-up form.

SUBCOMMITTEE FINDINGS

This item was not presented to a subcommittee.

STAFF ANALYSIS

Staff conducted analysis in coordination with The 100 Companies LLC to assess if the newsletter experienced growth and engagement over the lifespan of the initial agreement. Analysis of the figures shows that over the five-year period of the agreement, there was consistent growth in key metrics such as average emails opened per campaign, average open rates, and opener click-through rates. This growth occurred despite differing amounts of email campaigns sent out annually during the lifespan of the initial agreement. These figures show that subscribers were consistently more and more engaged with the content, which in turn provides more exposure for the City of Pittsburg and the greater regional market. Staff came to the recommendation that it would like to continue to build off this momentum and continue to use The East Bay 100 as a tool to market and promote our economic region. With this renewal, staff is also making the commitment to ensuring that the content remains expanded to promote the greater East Bay region as well. Staff intends to achieve this goal by both making efforts to search for news content across the region, and to reach out to other cities across the region asking for content to be considered for placement in The East Bay 100 newsletter.

ATTACHMENTS: Attachment A – Resolution Approving the Renewal of Agreement with The 100 Companies LLC
Attachment B – Agreement with The 100 Companies LLC

Report Prepared By: Robert Carrera, Economic Development Manager

BEFORE THE CITY COUNCIL OF THE CITY OF PITTSBURG

In the Matter of:

Adoption of a City Council Resolution to Authorize	)	
And Execute a Renewal Agreement with the 100	)	RESOLUTION NO. 24-
Companies LLC for The East Bay 100	)	

WHEREAS, the City of Pittsburg sought innovative and engaging ways to market to potential businesses, industries, and site selectors; and

WHEREAS, on May 6, 2019, the City signed a five-year agreement with The 100 Companies LLC to create the regional, digital media platform 'The East Bay 100'; and

WHEREAS, over the five-year period of the initial agreement, the City and The 100 Companies LLC worked to create and publish email campaigns and content that promoted the economic vitality of the City and the greater East Bay region; and

WHEREAS, data over the five-year period shows that there was consistent growth in key metrics that pertain to the engagement with the content of The East Bay 100 newsletter; and

WHEREAS, the City has come to the conclusion that based on the data and its continued goals to market and promote the City and greater region, it would like to continue the momentum in growth that it has experienced in its partnership with The 100 Companies LLC.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Pittsburg hereby approves a five-year agreement with The 100 Companies LLC for a total of $187,443 to continue the digital media platform 'The East Bay 100'.

PASSED AND ADOPTED by the City Council of the City of Pittsburg at a regular meeting on the 19th day of August 2024, by the following vote:

AYES:
NOES:
ABSTAINED:
ABSENT:

_____
Juan Antonio Banales, Mayor

ATTEST:

_____
Alice E. Evenson, City Clerk

Membership Agreement

This Membership Agreement (together with all exhibits, the "Agreement") is by and between The 100 Companies LLC ("THE 100") and the following:

Member: City of Pittsburg ("Member")

Effective Date: July 1, 2024 ("Effective Date")

Protected Territory: (check one)

☒ Protected Geography Issues per Year: 12-24

Describe: Contra Costa County, CA (the "Protected Territory").

The term Member shall include any entity which, directly or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with Member, including without limitation, any newly formed entity to conduct the Local Business. THE 100 and Member are sometimes hereinafter individually referred to as a "Party" and collectively referred to as the "Parties." All of the terms and conditions set forth herein, including those contained in the attached Terms and Conditions, attached hereto as Exhibit A (the "Terms") and the Operations Document, attached hereto as Exhibit B (the "Document"), are hereby incorporated by reference and made a part of the Agreement, binding and enforceable between the Parties as of the Effective Date. In case of conflict or inconsistency, the terms of the Agreement shall govern. Capitalized terms used but not otherwise defined in the Agreement shall have the same meanings ascribed to them in the Terms.

WHEREAS, THE 100 developed and manages a network of member entities and individuals, as indicated on Exhibit C (and others as may be added or removed by THE 100 from time to time in its sole discretion without notice) (collectively, the "Members" or the "Membership"), that publishes and circulates electronic newsletters, websites and social media channels (the "Content") comprised of 100-word stories and 100-second videos about news, trends, strategies, interviews and events (the "Format"), using THE 100's Marks and Methods (the "Business");

WHEREAS, Member desires to become a member of THE 100 and operate a local franchise of the Business within the Protected Territory (the "Local Business"), and THE 100 desires to grant Member a license to operate the Local Business;

NOW, THEREFORE, in consideration of the mutual covenants and promises of the Parties and other good and valuable consideration, the sufficiency and receipt of which is hereby acknowledged, the Parties agree as follows:

A. Name. The Business will be named **The East Bay 100**.

B. License. Subject to the terms and conditions of the Agreement, including without limitation Section 5 of the Terms, THE 100 hereby grants to Member a non-exclusive license to use the Marks and Methods for the sole purpose of operating the Local Business in accordance with the Agreement and the Document.

C. Exclusive in Protected Territory. Subject to Section 4, provided that Member is in full compliance with the Agreement, during the Term THE 100 shall not grant another party rights, within the Protected Territory to: (i) operate a competing Local Business using the Marks, Methods or Formats (the "Licensed Property"), or (ii) publish content substantially similar to the Business.

D. Fees. Member shall pay the following fees ("Membership Fees") during the applicable term, plus a $1,000 per month fee for content production, if preferred:

Period	Amount
Initial Term Membership Fee:	$24,000
Year 2 Membership Fee	$24,000
Year 3 Membership Fee	$25,200
Year 4 Membership Fee	$26,460
Year 5 Membership Fee	$27,783

E. Term. The Agreement is for an initial, non-cancelable term of twelve (12) months from the Effective Date (the "Initial Term") and shall automatically renew for successive one (1) year periods (each an "Extension"), (together, the "Term"), unless either party provides the other party written notice of its desire to terminate at least ninety (90) days prior to the end of the then-current Term.

F. Email Lists. THE100 developed an existing database of email addresses (the "Email List") to receive the electronic newsletter (the "Local Newsletter") within the Protected Territory, which may be supplemented by additional subscribers to the Local Newsletter or the Local Business' website (the "Local Website"). The Member may supplement additional jointly developed lists to the current database if desired at the cost of The Member. The Email List shall be owned and administered by THE 100 and THE 100 grants Member a non-exclusive, royalty free license to use the Email List during the Term. Email addresses provided by Member of its own clients or contacts contained within the Email List shall remain owned by Member, subject to THE100's license rights in Section 3(f) of the Terms.

G. Copyrights. Subject to Section 6 of the Terms, Member shall create, develop, publish, and circulate articles using THE 100's Format that are related to the Protected Territory ("Local Content"). Any present or future rights, including all copyrights, relating to the Local Website, Local Newsletter, Local Content and any other content created by THE 100 or Member for the Local Business belong solely and exclusively to THE 100 and Member hereby transfers and assigns any such rights to THE 100. Notwithstanding the foregoing, Member may repurpose its own Local Content elsewhere during the Term so long as Member does not represent that such material is original.

H. Miscellaneous. The Agreement and any Exhibits herein set forth the entire agreement and understanding between the Parties as to the subject matter hereof and supersedes all prior discussions, agreements and understandings of any kind, and every nature between them. The Agreement may not be modified or amended except in a writing signed by a duly authorized representative of each Party; no other act, document, usage or custom shall be deemed to amend or modify the Agreement. The Agreement shall be interpreted and enforced in accordance with the laws of the State of Georgia, without regard to principles of conflicts of law. Any claim or controversy that arises out of or relates to the Agreement, other than for Member's non-payment, will be settled by arbitration in Atlanta, Georgia, in accordance with the American Arbitration Association rules and each Party hereby consents to jurisdiction in Atlanta Georgia. Judgment upon the award rendered may be entered in Cobb County Superior Court. Each Party waives any objection which it may have to venue of any such arbitration proceeding and agrees that Georgia is the most convenient forum for any such arbitration, suit, action, or legal proceeding. Claims regarding unpaid accounts may be referred to a collection agency or attorney for collection and may be brought in state or Federal courts located within Cobb County, Georgia. All costs of collection, including reasonable attorney fees, shall be paid by Member to THE 100 in addition to all other amounts due.

MEMBER INFORMATION:		**BILLING INFORMATION (if different from Member Information)**	
Company Name:	City of Pittsburg		
Address:	65 Civic Avenue	Address:	
Contact:	Robert Carrera	Contact:	
E-mail Address:	rcarrera@pittsburgca.gov	E-mail Address:	

IN WITNESS HEREOF, the Parties hereto have caused this Membership Agreement to be executed and delivered as of the Effective Date indicated above.

THE 100 COMPANIES, LLC

By: _____

Name: _____

Title: _____

Date: _____

MEMBER

By: _____

Name: _____

Title: _____

Date: _____

Exhibit A
Terms and Conditions

This Exhibit A is an integral part of the Membership Agreement (the "Agreement") by and between THE 100 and Member and is incorporated by reference into the Agreement. In case of conflict or inconsistency, the terms of the Agreement shall govern over this Exhibit A. Capitalized terms used but not otherwise defined in this Exhibit A shall have the same meanings ascribed to them in the Agreement.

1. ***Purpose.*** The purpose of the Local Business is to create, develop, publish, and deliver to recipients in accordance with the Document, the electronic Local Newsletter, Local Website and social media channels comprised of a combination of 9-12 100-word stories and 100-second videos about news, trends, lifestyle and events issues in the Protected Territory created, developed, and submitted by the Members and THE 100 in accordance with the Document.

2. ***Membership Fees.*** THE 100 will invoice Member, via email, on or about the 15th day prior to each applicable month. Member will pay all fees payable under the Agreement within fifteen (15) days of the invoice date. If Member fails to pay any amounts when due under the Agreement, Member shall pay to THE 100 interest on such past due amounts from the date due until paid at the rate of one and one half percent (1½%) of the unpaid balance per month or, where a lower rate is prescribed by law, the highest rate thereby permitted. In the event of such nonpayment, subject to Member's five (5) business day right to cure, THE 100 may at its option and in addition to any other right that it has under the Agreement at law or in equity, terminate the Agreement.

3. ***Early Termination.***

a. *Mutual Termination for Breach*. Notwithstanding Section E of the Agreement, either Party may terminate the Agreement immediately upon providing written notice thereof to the other party, if the other party materially breaches the Agreement or the Document and fails to cure such breach within thirty (30) days after receiving written notice from the non-breaching Party (except that the cure period shall be five (5) calendar days with respect to any breach involving failure by Member to pay amounts due and payable under the terms of the Agreement.

b. *Bankruptcy or Insolvency*. Notwithstanding Section 3(a), THE 100 may terminate the Agreement immediately if Member: (A) voluntarily commences any proceeding or files any petition seeking relief under Title 11 of the United States Code or any other federal, state or foreign bankruptcy, insolvency, liquidation or similar law; (B) becomes subject to any involuntary proceeding or petition seeking relief under Title 11 of the United States Code or any other federal, state or foreign bankruptcy, insolvency, liquidation or similar law, which proceeding or petition is not stayed or dismissed within ninety (90) days after commencement or filing; (C) applies for, or consents to, the appointment of a receiver, trustee, custodian, sequestrator, or similar official for such Party or for a substantial part of its property or assets; (D) makes a general assignment for the benefit of creditors; (E) takes corporate action for the purpose of effecting any of the foregoing; or (F) liquidates, winds up, or ceases its business operations, for any reason.

c. *No Refunds; Acceleration of Fees*. If Member breaches the Agreement, there shall be no refund, in whole or in part, of any payments already made, and Member shall make all payments due prior to the date of termination. Member acknowledges that THE 100 will make significant investments of time and money in Member throughout the duration of the Agreement to meet the needs of Member and which are not charged directly to Member but are recouped in fees paid during the Agreement. Accordingly, in the event that the Agreement is terminated prior to the end of the Term due to Member's breach, Member shall pay a fee for termination ("Termination Fee") equal to the average monthly Membership Fee prior to termination multiplied by the number of remaining months in the Term or six (6) months, whichever is longer. The Termination Fee shall be liquidated damages, a non-exclusive remedy, and not a penalty. THE 100 shall be entitled to recover any costs of collection, including reasonable attorney's fees and costs, incurred in collection of the Termination Fee. Member acknowledges that Member shall have no right to withhold any payment due as a set off against claims against THE 100 and hereby waives any such claim as a defense to termination by THE 100.

d. *Rights Terminated*. Upon termination of the Agreement pursuant to this Section 3, (i) the rights granted to Member hereunder shall immediately terminate, (ii) Member shall immediately take all action required to cancel all assumed names, corporate names or equivalents relating to the use of the Marks by Member, and (iii) Member shall not, directly or indirectly, in any manner, identify itself or any individual connected with it as "THE 100" or as otherwise having been associated with THE 100. Member acknowledges that Member's failure to abide by the provisions of this Section 3(d) will result in irreparable harm to THE 100, and that THE 100's remedy at law for damages will be inadequate. Accordingly, THE 100 shall be entitled to injunctive relief (including the remedy of specific performance) in addition to any other remedies available at law or in equity, without posting any bond.

e. *Other Remedies*. Termination of the Agreement shall be in addition to any other right or remedy which the terminating party may have either at law or in equity or under the Agreement. The right of termination granted hereby is in addition to, and not in lieu of, any and all other rights and remedies available to each party at law, in equity or otherwise, all of which are cumulative.

f. *Rights to Protected Territory*. Upon expiration or termination of the Agreement, THE 100 shall, in its sole discretion, be entitled to: (i) operate the Local Business within the Protected Territory using the Licensed Property and the Email List, or (ii) grant to any third-party rights to operate the Local Business within the Protected Territory using the Licensed Property and Email List.

4. ***Protected Territory.***

a. *Location Selection and Protection*. Member is solely responsible to independently assess the geographic location and size of the Protected Territory. Nothing contained in the Agreement shall constitute a representation or warranty of any kind as to the appropriateness of and the potential success or profitability of the Local Business in the Protected Territory.

b. *Types*. Members have either protected geographic territories, which may vary in size from a city, state or other geographic area (each, a "Protected Geography") or protected subject matter issues (each, a "Protected Field") which may overlap with a Protected Geography (Protected Geographies and Protected Fields are referred to collectively as "Protected Territories"), and Members are prohibited from actively soliciting subscribers or advertisers outside of their respective Protected Territories. THE 100 has granted licenses and intends to grant additional licenses in the future to new Members outside of Member's Protected Geography or Protected Field, as applicable.

c. *Protected Fields*. To the extent that Member is granted a Protected Field, the exclusivity granted in Section C of the Agreement shall not be construed as an absolute ban prohibiting THE 100 or other Members from publishing any content related to the subject matter of the Protected Field whatsoever. THE 100 and other Members may occasionally publish content relating to the Protected Field, provided that it is de minimis (less than 10% of all content published over a one-year period). Members with Protected Fields acknowledge that they have no exclusive rights to any geographic territory

d. *Protected Geographies*. To the extent that Member is granted a Protected Geography, the exclusivity granted in Section C of the Agreement shall not be construed as an absolute ban prohibiting Members with Protected Fields from publishing content related to Member's Protected Geography, from circulating its newsletter to recipients within Member's Protected Geography, or from promoting its website or soliciting subscribers from within Member's Protected Geography. Members with Protected Geographies acknowledge that they have no exclusive rights to any specific subject matter.

e. *Reservation of Rights*.

i. Except as expressly limited by Section C, THE 100 retains all rights with respect to the Marks, Methods, Formats, all content, social media, Internet, industries, subject matter, and geographic territories and any other products, services, communications or content, anywhere in the world, including, without limitation, the right, and the right to grant others licenses, to create, develop, publish, circulate, commercialize, exploit, market or otherwise disseminate any content or provide any product or service outside of a Protected Territory through any channel, whether or not using the Marks.

ii. THE 100 reserves all rights to operate or grant others the right to operate other Protected Geographies and other Protected Fields as THE 100 in its sole discretion, deems appropriate.

iii. Member shall not attempt to exclude, control, or impose conditions on: (1) the location in which THE 100 or its Members (current and future) operate, (2) the development of other licenses using the Marks, Methods or Formats, or (3) any other products, services, activities, communications or content of THE 100, except for those that may result in a direct breach of the Agreement.

5. **License.**

a. *No Ownership*. The non-exclusive license provided in Section B does not grant to Member any ownership interest in the Licensed Property. Member acknowledges and agrees that THE 100 owns all right, title, and interest in the Licensed Property and Member shall not contest, directly or indirectly, THE 100's ownership, title, right or interest in or to, or the validity of, the Marks, or any trade secrets, methods or procedures that are part of the Methods or any copyrights, or contest THE 100's sole right to register, use or license others to use the Marks, copyrights, trade secrets, methods or procedures or any other mark or name which incorporates the words "The 100" or any similar words. Any copy, modification, revision, enhancement, adaptation, translation, or derivative work of or created from the Licensed Property made by or at the direction of Member shall be owned solely and exclusively by THE 100. In addition, all patent rights, copyrights, trade secret rights, trademark rights, and all other proprietary rights, worldwide, in the same shall be owned solely and exclusively by THE 100.

b. *Use; Cooperation*. Member shall use the Marks only for the operation of the Local Business. Member shall comply, at THE 100's reasonable expense, with THE 100's instructions in filing and maintaining trade name or fictitious name registrations and shall execute all documents required by THE 100 to obtain protection for the Marks or to maintain their continued validity and enforceability. All provisions of the Agreement applicable to the Marks shall apply to any other trade names, trademarks, service marks or other commercial symbols licensed to Member by THE 100.

c. *Termination*. Upon the expiration or termination of the Agreement for any reason, all rights of Member to use the Marks shall automatically revert to THE 100 without cost and without the execution or delivery of any document. Upon THE 100's request, Member shall execute all documents required by THE 100 to confirm such reversion.

6. Member Responsibilities.

a. *Operations Document*. Member agrees to abide by the rules, procedures, standards, specifications, and requirements described in the Document. Member acknowledges that before Member executed the Agreement, THE 100 provided Member with sufficient time to (i) review the Document and Member has reviewed the Document, and (ii) consult with Member's own counsel about the Document.

b. *Amendment of Document*. If at least 14 days before the effective date of an amendment, modification, or change to the Document, THE 100 (i) notifies Member in writing of its intent to amend, modify, or change the Document and the effective date thereof and (ii) provides to Member copies of the same, then that amendment, modification, or change to the Document, will become effective on the effective date specified therein.

c. *Copyrights*. Subject to Section G, THE 100 shall have, and Member hereby irrevocably assigns and quitclaims to THE 100 the exclusive right, in THE 100's sole discretion, to bring an action for infringement of copyrights in any copyrightable property of THE 100. All rights to the Local Business, Local Website, Local Newsletter, Local Content and any other Content are hereby transferred and assigned to THE 100 and THE 100 grants to Member and Member accepts a non-exclusive, royalty-free license for the life of such copyrights transferred and assigned to THE 100 relating to the Local Business, Local Website, Local Newsletter, Local Content and other Content for purpose of all activities allowed or authorized by 17 USCS Sec. 106, et seq. THE 100 shall have the sole and exclusive right to prosecute, settle or compromise any and all actions for infringement of any and all copyrights, and THE 100 shall be entitled to retain any and all proceeds, damages and other sums, including attorneys' fees, recovered by or owed to THE 100 or its respective affiliates by reason of or in connection with any such infringement or action for infringement. Registration and other protection of copyrights, if any, shall be in the sole and absolute discretion of THE 100, and at THE 100's expense. Member shall execute and deliver to THE 100, its respective successors and assigns, any assignments, documents and instruments as THE 100 may reasonably request from time to time for the purposes of establishing, registering, evidencing, enforcing or defending THE 100's complete, exclusive, perpetual and worldwide ownership of all rights, titles and interests in THE 100's copyrights. If THE 100 decides, in its reasonable discretion, that Member should modify or discontinue using any of THE 100's copyrights, Member shall do so, provided that the parties shall use their reasonable efforts to discuss and agree upon any such proposed modification or discontinuance.

d. *Proprietary Information*. Member acknowledges that at any time before or during the term of the Agreement, THE 100 may disclose to Member, either orally or in writing, certain trade secrets, know-how and confidential information (collectively, "Proprietary Information") relating to the management, operation, financial condition, business plans, strategies; marketing or promotion of the Local Business. Without limiting the generality of the foregoing, Proprietary Information shall also include (1) Methods, techniques, equipment, specifications, standards, policies, procedures, information, concepts and systems relating to and knowledge of and experience in the development, operation and licensing of the Local Business, and (2) the Document. Proprietary Information does not include information general known to the public, or in the public domain at no fault of the Member or developed or created by the Member. Member shall not, nor shall Member permit any unauthorized individual or entity to, use or disclose any Proprietary Information to any other unauthorized individual or entity; provided, however, that Member may use and disclose Proprietary Information to the extent necessary for Member's employees and independent contractors to perform their functions in the operation of the Local Business. Member shall take reasonable precautions to protect Proprietary Information from unauthorized use or disclosure, including without limitation conducting orientation and training programs for Member's employees and independent contractors to inform such employees of Member's obligation to protect all Proprietary Information from unauthorized use or disclosure, and such employees' responsibilities and obligations therefor. Member shall be liable to THE 100 for all unlawful disclosures of Proprietary Information by any individual or entity to whom Member has directly or indirectly disclosed such information.

7. Representations and Warranties.

a. *By Member*. Member represents, warrants and agrees as follows:

i. The Agreement has been duly authorized and executed by or on behalf of Member and constitutes the valid and binding obligation of Member, enforceable in accordance with its terms.

ii. Member has reviewed the Agreement and has had sufficient time to consult with and ask questions of THE 100's representatives and consult with Member's own legal and other advisors about the potential risks and benefits of the Agreement.

iii. None of THE 100, its affiliates, officers, directors, managers, members, employees or agents has made any representation to Member about the anticipated revenues, earnings or profitability of the Local Business. In entering into the Agreement, the only information furnished by or on behalf of THE 100 on which Member is relying is contained herein.

iv. Member shall devote adequate time and continuously exert its best efforts to operate, promote, and enhance the Local Business.

b. *By THE 100*. THE 100 represents, warrants and agrees that the Agreement has been duly authorized and executed by or on behalf of THE 100 and constitutes the valid and binding obligation of THE 100, enforceable in accordance with its terms.

8. Restrictive Covenants.

a. *Non-Competition*. For purposes of this Agreement, "Competitive Publication" means publishing Content similar to or using a format similar to THE 100's Format. For a continuous, uninterrupted period beginning immediately upon termination of this Agreement for any reason and continuing for two years thereafter, except as otherwise approved in writing by THE 100, Member shall not, directly or indirectly, for themselves or through, on behalf of, or in conjunction with any individual or entity:

i. own, have any record or beneficial interest in, manage, engage in, participate in or act as an agent for, whether as a director, officer, manager, employee, consultant, representative, instructor, advisory, coordinator, agent, or otherwise to any Competitive Publication;

ii. perform services as a director, officer, manager, employee, consultant, representative, instructor, advisory, coordinator, agent, or otherwise for any Competitive Publication;

iii. divert or attempt to divert any business or any customers to any Competitive Publication;

iv. communicate, divulge or use for its benefit or the benefit of any other person or entity, any trade secrets or other Proprietary Information.

v. perform any other act injurious or prejudicial to the goodwill associated with the Marks and THE 100's system;

vi. without THE 100's prior written consent, solicit for employment or as an independent contractor any person who is at that time or was at any time within the immediate past 36 months employed by THE 100, Member, another licensed or any of their respective affiliates. Likewise, THE 100 shall not directly or indirectly hire any of the Member's employees without Member's prior written consent within 36 months of the expiration or termination of this Agreement.

Nothing contained in this Section 8(a) shall be construed to prohibit Member from operating its current business (which includes emailed and online news) or from normal and customary business operations of a marketing and social media firm, including its posting of email and online news and entertainment content.

b. *Non-Disparagement*. For the duration of this Agreement and for two years after its termination for any reason, Member shall not damage or destroy the goodwill and esteem of THE 100, or impair or interfere with the relationships of THE 100 with any of its members, instructors, employees, customers, and any individuals or entities that may have or have had business relations with THE 100.

c. *Scope*. Member acknowledges that (1) the time, location, and scope of the provisions of this Section 8 are reasonable and necessary to protect THE 100's legitimate business interests, (2) Member has received sufficient and valid consideration in exchange for the same, (3) enforcement of the same would not impose undue hardship on Member, and (4) the period of protection provided to THE 100 by this Section 8 will not be reduced by any period of time during which Member is in violation of the provisions of this Section 8 or any period of time required for enforcement of this Section 8.

d. *Blue Pencil*. If any part or parts of this Section 8 is held to be unenforceable or invalid, the parties desire that a court of competent jurisdiction modify those provisions to the extent necessary to cause those provisions to be reasonable, enforceable, and valid and, in the alternative, that the court should sever the remaining parts thereof so that they will continue to be valid and enforceable as though the invalid portion or portions were not a part hereof. If any of the provisions of this Section 8 relating to the periods or geographic area of restriction shall be deemed to exceed the maximum periods of time or area which a court of competent jurisdiction would deem enforceable, the times and area shall, for the purposes of this Section 8, be deemed to be the maximum time periods and area which a court of competent jurisdiction would deem valid and enforceable in any state in which such court of competent jurisdiction shall be convened.

e. *Violation*. Member acknowledges that the existence of any claim it may have against THE 100, whether or not arising from this Agreement, is not a defense to the enforcement this Section 8. The Parties acknowledge that compliance with the provisions of the foregoing paragraphs are necessary to protect their businesses and goodwill and that any actual or prospective breach will irreparably cause damage to them, for which money damages may not be adequate. Therefore, the Parties agree that if Member breaches, or attempts to breach, the obligations set forth herein, THE 100 shall be entitled to obtain temporary, preliminary and/or permanent equitable relief, without bond, to restrain such breach, together with any and all other legal and equitable remedies available under applicable law or as set forth herein.

9. Limitation of Liability. IN NO EVENT SHALL ANY PARTY BE LIABLE TO THE OTHER FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL, OR PUNITIVE DAMAGES (INCLUDING, WITHOUT LIMITATION, LOST PROFITS, LOST BUSINESS, LOSS OF DATA OR COST OF SUBSTITUTE SERVICES) ARISING OUT OF OR IN CONNECTION WITH ANY AGREEMENT BETWEEN THE PARTIES OR SERVICES PROVIDED TO MEMBER UNDER ANY THEORY OF LIABILITY (WHETHER IN CONTRACT, TORT, STRICT LIABILITY OR OTHERWISE). IN ADDITION, THE 100 SHALL ONLY BE LIABLE TO MEMBER FOR ANY DIRECT DAMAGES IN AMOUNT EQUAL TO (A) ACTUAL DAMAGES OR (B) $500, WHICHEVER IS LESS.

10. *Disclaimer of Warranties.* ALL RIGHTS AND SERVICES ARE PROVIDED ON AN "AS IS" BASIS. THE 100 EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND WARRANTIES AS TO ACCURACY, OR COMPLETENESS.

11. Mutual Indemnification.

a. *Indemnification*. Each Party (each, an "Indemnifying Party") agrees to indemnify, defend and hold harmless the other Party and its affiliates, and their respective investors, officers, directors, managers, members, employees, contractors, successors, and assigns ("Indemnified Parties") from and against any and all losses, liabilities, costs, damages, claims, demands, judgments, proceedings, lawsuits, settlements, fines, fees, and penalties assessed by any governmental or regulatory authority, or expenses (including reasonable attorneys' fees and expenses) (collectively, "Losses") incurred by the Indemnified Party arising out of or related to any actual or alleged:

i. breach by the Indemnifying Party of any of its representations, warranties, covenants, or obligations under the Agreement or the Document;
ii. negligence, fraud, or willful misconduct on the part of the Indemnifying Party or its officers, directors, employees, agents, or representatives; or
iii. failure of the Indemnifying Party to comply with applicable law in the performance of its obligations related to the Agreement.

b. *Member Indemnification*. Without limiting the generality of Section 11(a), Member shall also indemnify, defend and hold harmless THE 100's Indemnified Parties from and against any and all Losses arising out of or related to any actual or alleged:

i. any dispute between Member and its affiliated entities and their respective customers, vendors, employees, independent contractors or other third-parties;
ii. any act, omission or breach by Member or other person engaged on Member's behalf related to the Local Business or arising as a result of Member's operation of the Local Business, regardless of the reason or legal theory used to impose any such liability on any Indemnifying Party (including, without limitation, as a result of operation of law, application of any law, statute, regulations, court

or administrative decision, or other legal doctrine such as de facto partnership, de facto franchise, or successor liability); or

iii. any infringement or misappropriation of THE 100's Marks, Methods, Format, Content owned by THE 100, copyrights or other intellectual property rights.

c. *Process*. The foregoing indemnity obligation is contingent upon the Indemnified Party providing the Indemnifying Party prompt written notice of any matters in respect of which the foregoing indemnity may apply and of which the Indemnified Party has knowledge, and giving the Indemnifying Party the opportunity to control the response thereto and the defense thereof; provided, however, that the Indemnified Party shall have the right to participate in any legal proceeding to contest and defend a claim for indemnification involving a third party and to be represented by its own attorneys, all at the Indemnified Party's cost and expense; and provided further, however, that no settlement or compromise of an asserted third party claim may be made without the prior written consent of the Indemnified Party.

d. *THE 100's Intellectual Property*. In the event that THE 100 believes that any intellectual property claims may be made or intellectual property claims are made which may materially impact Member or its rights to use content, THE 100 may, at THE 100's option and at no additional cost to Member, either: (i) procure for Member the right to continue using the affected content subject to such intellectual property claims; or (ii) replace or modify the affected content so that it is no longer subject to any such intellectual property claims. If THE 100 cannot, after exercising commercially reasonable efforts, perform under subsection (i) or (ii) of the previous sentence, Member must stop all publication using the affected content and THE 100 will, at its option, provide Member with replacement content. THE REMEDIES SET FORTH IN THIS SECTION 14(d) ESTABLISH THE 100'S ENTIRE OBLIGATION IN REGARD TO INTELLECTUAL PROPERTY CLAIMS.

12. Miscellaneous.

a. *Survival of Representations*. All representations, warranties, stipulations, covenants, and agreements made by each party shall survive the execution of this Agreement and the consummation of the transactions contemplated hereby.

b. *Assignability*. The Agreement may not be assigned by either party without the written consent of the other party.

c. *Severability*. Any provision of the Agreement that is unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such unenforceability without invalidating the remaining provisions hereof, and any unenforceability in any jurisdiction shall not render unenforceable such provision in any other jurisdiction.

d. *No Third-Party Beneficiary Right*. Nothing in the Agreement, expressed or implied, is intended to confer upon any person, other than the Parties and their successors and permitted assigns, any of the rights hereunder.

IN WITNESS WHEREOF, each party is signing these Terms and Conditions as of the Effective Date.

THE 100 COMPANIES, LLC

_____

Name:_____

Title: _____

MEMBER

_____

Name:___ _____

Title: _____

Telephone No. _____

OFFICE OF THE CITY MANAGER/EXECUTIVE DIRECTOR
65 Civic Avenue
Pittsburg, CA 94565

TO: Mayor and Council Members

FROM: Garrett Evans, City Manager

SUBJECT: Adoption of a City Council Resolution Authorizing the Applications for Various Funding Opportunities and Acceptance of Awarded Funds

MEETING DATE: August 19, 2024

EXECUTIVE SUMMARY

In 2024, the Environmental Services Division is pursuing a variety of sustainable community funding opportunities ranging from zero emission fuels projects to climate resiliency projects. As required by each granting organization, adoption of this Resolution would authorize staff to apply for and receive any funds awarded for grant applications submitted in 2024.

FISCAL IMPACT

This item will have no impact on the General Fund. Approximate award ranges per funding opportunities are as follows:

- US Department of Transportation (USDOT) Charging and Fueling Infrastructure (CFI) Grant: $500,000 - $15,000,000
- California Transportation Commission's Local Transportation Climate Adaptation Program (LTCAP) Grant: $50,000,000 maximum
- San Francisco Bay Restoration Authority (SFBRA) Measure AA Grant: $600,000 – $6,000,000
- United States Environmental Protection Agency (USEPA) Water Infrastructure Community Grant: $959,752
- California Ocean Protection Council (Council) Senate Bill 1 Technical Assistance (SB 1 TA) Program: $200,000 - $10,000,000

Future projects funded by grant funds received will be presented to the City Council when the projects are awarded.

RECOMMENDATION

Staff recommends that the City Council adopt the attached Resolution authorizing the applications for various funding opportunities in 2024 and acceptance of awarded funds.

BACKGROUND

Pittsburg's waterfront infrastructure is aging and has endured significant weathering brought on by climate change and sea level rise. In 2021 and 2022 respectively, the City commissioned a Conditions Assessment Report of the City's industrial wharf and a Marina Breakwater and Rip Rap Shore Protection Routine Above and Below Water Inspection Report (collectively referred to as the "Reports") to determine condition and approximate cost of eventual waterfront infrastructure maintenance. The Reports concluded that the wharf would cost $8.7 million to repair and $21.3 million to replace while full repair of Marina breakwaters would cost at least $11.5 million. The City has pursued and received all permits required to begin repairs of Basin III breakwaters.

Hydrogen fuel, when used in fuel cells, is a zero-emission fuel and viable alternative to fossil fuels in the industrial sector. The City requested and was selected for a nearly $1 million federal earmark from the Interior, Environment, and Related Agencies Appropriations Act for Fiscal Year 2024 to establish a hydrogen fuel cell at the City's Water Treatment Plant. The City must access this funding through the USEPA Water Infrastructure Community Grant program.

Hydrogen fuel is also a viable alternative to fossil fuels in the transportation sector, and some vehicle manufacturers like Honda, Hyundai, and Toyota produce consumer hydrogen vehicles.

SUBCOMMITTEE FINDINGS

This item was presented to the Finance Management Subcommittee August 16, 2024.

STAFF ANALYSIS

The Pittsburg Marina is an economic development driver, important local and regional recreational establishment, and part of Pittsburg's identity. Annual Marina revenues grow slower than operational costs and are not sufficient for major capital costs like dock, shed, office, and breakwater repairs and replacements. Repairs and replacements of Marina infrastructure would foster climate resiliency related to sea level rise caused by global climate change. Building resiliency, especially in severely disadvantaged communities like the one adjacent to the Marina, is a tenet of the City's Sustainability Plan.

Likewise, the City's industrial wharf is an asset with potential to provide economic development or recreational benefits. As grantee of Pittsburg's submerged sovereign tidelands through SB 551 statutes of 2011, the City is required to operate granted tidelands according to the Public Trust Doctrine and is allowed to generate revenues from tidelands for additional investment in the Pittsburg waterfront.

Staff has identified the LTCAP, SFBRA Measure AA, and Council SB 1 TA grants as potential funding opportunities to build climate resilient infrastructure and communities on the waterfront. The primary objective of California Transportation Commission's LTCAP is to provide competitive grants to local agencies for the development and implementation of capital projects adapting local transportation infrastructure to climate changes, including port and marine transportation. The SFBRA's Measure AA Grant prioritizes three areas including projects that improve recreational amenities that facilitate public access to the waterfront. The Council SB 1 TA grants provide funding to local and regional governments for sea level rise planning and implementing adaptation projects to build resilience along the coast and shoreline of the San Francisco Bay.

Hydrogen fuel has the potential to decarbonize energy systems, contribute to energy security, and sustainably modernize the transportation and industrial sectors. Powering the Water Treatment Plant with a hydrogen fuel cell contributes to local emission reductions and provides financial protection to the Pittsburg community from skyrocketing energy rates. Furthermore, the City's Sustainability Plan aims to "increase zero-emission vehicle and equipment use by increasing passenger zero-emission vehicle adoption from 2.3% in 2010 to 15% by 2030 and 100% by 2045." Providing public hydrogen fueling stations propel the City toward achievement of this goal and can also facilitate adoption of zero emissions vehicles in a financially impacted community like Pittsburg.

Staff has identified the USDOT CFI grant, which provides funding to strategically deploy publicly accessible electric vehicle charging infrastructure and other alternative fueling infrastructure, as potential funding opportunity for working toward Pittsburg Sustainability Plan emissions reduction goals.

Should one of the abovementioned grants require a match by the City, staff will return to the City Council with a recommendation for source funds and authorization.

ATTACHMENTS: Resolution

Report Prepared By: Sara Bellafronte, Assistant to the City Manager

BEFORE THE CITY COUNCIL OF THE CITY OF PITTSBURG

In the Matter Of:

Authorizing the Applications for Various Funding Opportunities and Acceptance of Awarded Funds) RESOLUTION NO. 24-

WHEREAS, in 2024 the Environmental Services Division is pursuing a variety of sustainable community funding opportunities ranging from zero emission fuels projects to climate resiliency projects; and

WHEREAS, potential funding opportunities include but are not limited to: 1) the United States Department of Transportation (USDOT) Charging and Fueling Infrastructure (CFI) Grant, 2) the California Transportation Commission's Local Transportation Climate Adaptation Program (LTCAP) Grant, 3) the San Francisco Bay Restoration Authority (SFBRA) Measure AA Grant, 4) the United States Environmental Protection Agency (USEPA) Water Infrastructure Community Grant, and 5) the California Ocean Protection Council (Council) Senate Bill 1 Technical Assistance (SB 1 TA) Program; and

WHEREAS, each of the potential funding opportunities align with the City's Sustainability Plan for achieving local climate resiliency or emissions reductions.

NOW, THEREFORE BE IT RESOLVED that the City Council of the City of Pittsburg hereby authorizes the applications for various funding sources in 2024 including the DOT CFI Grant, the California Transportation Commission's LTCAP Grant, the SFBRA Measure AA Grant, the USEPA Water Infrastructure Community Grant, and the Council SB 1 TA Program.

BE IT FURTHER RESOLVED that the City Council authorizes staff to submit for each grant and if a matching amount is required from the City, it will return to the City Council for authorization.

BE IT FURTHER RESOLVED that the City Council authorizes the City Manager or his designee to execute all necessary forms for the purposes of securing payments, implementing and carrying out the purpose of the grants, and authorizes the Director of Finance to receive all awarded grants funds for the purpose of administering each program.

PASSED AND ADOPTED by the City Council of the City of Pittsburg at a regular meeting on the 19th day of August 2024, by the following vote:

AYES:
NOES:
ABSTAINED:
ABSENT:

_____
Juan Antonio Banales, Mayor

ATTEST:

_____
Alice E. Evenson, City Clerk

OFFICE OF THE CITY MANAGER/EXECUTIVE DIRECTOR
65 Civic Avenue
Pittsburg, CA 94565

TO: Mayor and Council Members

FROM: Garrett Evans, City Manager

SUBJECT: Adoption of a City Council Resolution to Approve a Lease Agreement by and between the City of Pittsburg and Taco & Company, LLC

MEETING DATE: August 19, 2024

EXECUTIVE SUMMARY

The City proposes to enter into a Lease Agreement (Agreement) with Taco & Company, LLC for the operation of a counter service restaurant at 1005 Center Drive ("Premises").

FISCAL IMPACT

The lease term is for five (5) years, starting on September 1, 2024 and expiring on August 31, 2029 (Initial Term). The monthly lease payment will be One Thousand Dollars ($1,000) per month, commencing October 1, 2024, and will increase by 3% annually starting in Year 2. Additionally, the tenant will be responsible for paying the common area maintenance costs (CAM), which is currently estimated at Forty-Three Dollars ($43) per month.

Tenant shall have one (1) five (5) year option to extend the lease. If the option to extend is exercised, rent will be set at the market rate as determined by a reasonable method selected by the City Manager.

RECOMMENDATION

City Council adopt the Resolution approving the Lease Agreement with Taco & Company, LLC.

BACKGROUND

The Pittsburg Public Library is located at 80 Power Avenue, Assessor's Parcel Number 086-100-042 (Property). Within the Property is a 1,280 square feet of leasable interior space and an additional 910 square feet of outdoor dining area with an address of 1005 Center Drive.

On January 22, 2019, the City Council adopted Resolution 19-13588, authorizing the City Manager to execute a Lease Agreement with Rocky's Deli, LLC. The proprietor of Rocky's Deli, LLC subsequently subleased the Premises to Taco & Company, LLC. The lease with Rocky's Deli, LLC expired on March 31, 2024.

During the term of the sublease, Taco & Company, LLC has proven to be a valued operator, contributing to the local community. Given the successful tenure of Taco & Company, LLC under the sublease arrangement, the City is providing Taco & Company LLC an opportunity to lease directly from the City.

SUBCOMMITTEE FINDINGS

This item was not discussed in a subcommittee meeting.

STAFF ANALYSIS

The Premises is located within the Civic Center, a close proximity to City Hall, the Pittsburg Unified School District Administration Building, Pittsburg Library, Richard E. Arnason Justice Center, and the soon-to-open Courtyard by Marriott Hotel, making the restaurant a prime location within walking distance to the City and school district employees, jurors, library patrons and hotel guest.

The recent opening of the Starbucks café further enhanced the appeal of this Premises. The Starbucks café and Courtyard by Marriott Hotel are anticipated to significantly increase foot traffic in the area, presenting an opportunity for the restaurant to attract new customers and expand its business.

Taco & Company, LLC has become a popular dining option within the community, attracting a steady stream of customers and contributing positively to the local economy.

By directly leasing to Taco & Company, LLC, the City will benefit from simplified property management arrangement and ability to maintain a direct relationship with the tenant. This will ensure clearer communication and more efficient resolution to any issues that may arise. The success of Taco & Company, LLC at this location underscores the potential for continued growth and community engagement, making it a valuable tenant for the City.

ATTACHMENTS: Resolution
Lease Agreement

Report Prepared By: Ishani Rasanayagam, Administrative Analyst II

BEFORE THE CITY COUNCIL OF THE CITY OF PITTSBURG

In the Matter of:

Approving a Lease Agreement by and Between the City of Pittsburg and Taco & Company, LLC) RESOLUTION NO. 24-

WHEREAS, the City of Pittsburg, a municipal corporation, owns certain real property located at 80 Power Avenue, Assessor's Parcel Number 086-100-042 (Property). Within the Property is a 1,280 square feet of leasable interior space and an additional 910 square feet of outdoor dining area with an address of 1005 Center Drive (Premises); and

WHEREAS, Rocky's Deli, LLC, a California Limited Liability Company, entered into a lease agreement with the City in April 2019 to lease the Premises for operating a restaurant and who then subsequently leased the Premises to Taco & Company, LLC; and

WHEREAS, the lease agreement with Rocky's Deli, LLC was set for a period of five years and expired on March 31, 2024, thereby also terminating the sublease with Taco & Company, LLC; and

WHEREAS, Taco & Company, LLC has become a popular and convenient dining option for employees working for the City, Pittsburg Unified School District, and the Richard E. Arneson Justice Center, as well as jurors and visitors alike, all within walking distance; and,

WHEREAS, upon the expiration of the lease agreement with Rocky's Deli, LLC, Taco & Company, LLC negotiated a lease agreement directly with the City; and

WHEREAS, the proposed lease rate is One Thousand Dollars ($1,000) per month for the initial year, with an annual increase of 3% starting on September 1, 2025. Additionally, the tenant will be responsible for paying the common area maintenance costs, currently estimated at Forty-Three Dollars ($43) per month.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Pittsburg hereby approves the lease agreement by and between the City and Taco & Company, LLC and authorize the City Manager to take such further action as maybe necessary or appropriate regarding the terms of the Lease.

PASSED AND ADOPTED by the City Council of the City of Pittsburg at a regular meeting on the 19th day of August 2024 by the following vote:

AYES:
NOES:
ABSTAINED:
ABSENT:

Juan Antonio Banales, Mayor

ATTEST:

Alice E. Evenson, City Clerk

LEASE AGREEMENT

By and between

THE CITY OF PITTSBURG

And

TACO & COMPANY

This Lease ("Agreement") is entered into as of the date set forth in Article I by and between the City of Pittsburg, a municipal corporation ("Landlord" and "City" used interchangeably) and Taco & Company, LLC , a California limited liability company ("Tenant"). Landlord and Tenant are collectively referred to in this Agreement as the "Parties".

ARTICLE I

FUNDAMENTAL LEASE PROVISIONS

1.1	**Date of Execution**	August 20, 2024
1.2	**Tenant**	Taco & Co 8021 Crestview Drive Pittsburg, CA 94565
1.3	**Landlord**	City of Pittsburg, a municipal corporation 65 Civic Avenue Pittsburg, CA 94565
1.4	**Premises**	The Premises will consist of one thousand two hundred eighty (1,280) of indoor rentable square feet at 1005 Center Drive located on a portion of property with a situs address of 80 Power Avenue, Assessor's Parcel Number 086-100-042. The Premises shares the building where the Pittsburg branch of the Contra Costa Library ("Library") is located as shown in Exhibit A. The Premises includes additional outdoor patio area ("Outdoor Patio Area") with private access to a gate, as detailed in Exhibit B, attached and incorporated herein.
1.5	**Tenant's Trade Name**	Taco & Company, LLC
1.6	**Initial Lease Term**	The initial Term (as defined in Section 3.1) of

		five (5) years shall commence upon September 1, 2024 as provided in Section 1.1.
1.7	**Rental Rate**	The rent shall be One Thousand ($1,000) per month for the initial year and increasing by three percent (3%) per annum in Year 2. Rent will be at market rate as established by a reasonable method selected by the City Manager if the option to extend is exercised.
1.8	**Rent Commencement Date**	The obligation to pay rent shall occur on October 1, 2024.
1.9	**Option to Extend**	Tenant shall have one (1) five (5) year option to extend the lease.
1.10	**Parking**	Tenant shall be allowed use of public parking stalls.
1.11	**Security Deposit**	The Tenant shall pay Two Thousand Dollars ($2,000.00) security deposit.
1.12	**Use**	Tenant shall operate a cafe, which shall provide food and beverage items that Tenant deems appropriate, may include beer and wine, but not hard liquor, and may offer catering from the Premises.
1.13	**Assignment**	Prior to any assignment, Tenant must obtain Landlord's written consent, which shall not be unreasonably withheld in light of, among other factors, assignee's ability to abide by the terms of the Agreement, creditworthiness and experience in the restaurant business.
1.14	**Access**	Tenant shall have reasonable access to the Premises, as well as parking and common areas, twenty-four (24) hours per day, seven (7) days a week.
1.15	**Tenant Maintenance**	Tenant shall be responsible for all maintenance and repair of all equipment, including fixtures and grease trap on, within, and serving the Premises.
1.16	**Broker Commissions**	Landlord and Tenant hereby represent that they

have not engaged any real estate broker and no commission or finder's fees are due.

1.17 Addresses for Notices and Payments

LANDLORD	TENANT
City Manager	Israel Castro Cortez
City of Pittsburg	Taco & Company, LLC
65 Civic Avenue	8021 Crestview Drive
Pittsburg, CA 94565	Pittsburg, CA 94565

Article 1 is intended to supplement and/or summarize the provisions set forth in the balance of this Agreement. If there is any conflict between any provisions contained in this Article 1 and the balance of this Agreement, the balance of the Agreement shall control.

ARTICLE II - PREMISES

2.1 LEASE OF PREMISES. Landlord hereby leases the Premises to Tenant. The term "Premises", as used in this Agreement shall mean all areas designated on Exhibit B.

ARTICLE III - TERM

3.1 TERM. Subject to provisions of this Agreement, the term of this Agreement shall commence on September 1, 2024 and shall continue, unless sooner terminated in accordance with the provisions of this Agreement, for the period of five (5) years (the "Initial Term"). References to the "Term" of this Agreement shall include the Initial Term and the Option to Extend (as defined in Section 3.2), if exercised, in accordance with the terms and provisions of Section 3.2.

3.2 OPTION TO EXTEND. In addition to the Initial Term, Tenant shall have one (1) five (5) year option to extend this Agreement (the "Option Period") following expiration of the Initial Term. The Option Period would commence September 1, 2029 and expire August 31, 2034. In the event that Tenant wishes to exercise the Option Period, Tenant shall give written notice of its interest to Landlord at least six (6) months but not more than one (1) year before expiration of the Initial Term. Notwithstanding the foregoing, if Tenant is in default, as defined in Article XIII, on either (a) the date occurring six (6) months prior to the expiration of the term in question or (b) the date of the Option Period is to commence, the Option Period in question shall not commence, and this Agreement shall expire at the end of the Initial Term or the Option Period. During the Option Period, all terms and conditions of this Agreement shall remain the same, provided that Rent during the Option Period shall be as set forth in Section 1.7.

3.2.1 Rent during Option of Lease Extension Term. If Tenant elects to extend the Term in accordance with Section 3.2, rent for the first year of the Option Period will be fair market value as established by a reasonable method selected

by the City Manager. Rent during the Option Period commences on September 1, 2029, increasing by three percent (3%) per annum during the Option Period.

ARTICLE IV - RENTAL

4.1 RENT COMMENCEMENT DATE. Tenant's obligation to pay rent commences on October 1, 2024 ("Rent Commencement Date").

4.2 RENT. Tenant covenants and agrees to pay rent in advance, on or before the first (1st) day of each month, without prior demand, offset or deduction, commencing on the Rent Commencement Date. On the first (1st) anniversary of the Rent Commencement Date and each anniversary of the Commencement Date (the "Anniversary Date") thereafter, rent will increase by three percent (3%). Tenant shall have the option, at its discretion, to prepay the rent for the entire year in full, which shall include the calculation of the annual three percent (3%) increase of the rent .

The rent includes all subscription charges for removal of recyclables (glass, aluminum, paper, and cardboard) and non-recyclable refuse (recyclable and non-recyclable refuse collectively termed "Waste"). The cost of electricity, gas, internet, water, sewer, telephone services, and any other utilities needed by Tenant are not covered by Landlord and must be subscribed and maintained by Tenant.

4.2.1 PAYMENT OF UTILITIES. Landlord shall subscribe to and pay for only the removal of Waste from Premises. However, in the event that Tenant fails to pay Rent in full and continues in default for sixty (60) days, Landlord may discontinue payment of Waste removal service.

The cost of electricity, gas, internet, water, sewer, telephone services, and any other utilities are the Tenant's responsibility as described in Section 4.2.

4.2.2 WAIVER OF UTILITY LIABILITY. Landlord shall not be liable in damages for any failure or interruption of any utilities, either subscribed by and paid for by Landlord or Tenant. However, if any utility to the Premises should become unavailable for a period in excess of seventy-two (72) consecutive hours and such unavailability is directly caused by the willful act or negligence of Landlord, rent charge shall abate until utility service to the Premises is restored. However, if any utility to the Premises should become unavailable for a period in excess of seventy-two (72) consecutive hours and such unavailability is directly caused by the willful act or negligence of Tenant, Tenant will be required to take the necessary actions to restore the utility service to the Premises. Should Tenant fail to restore the utility service, Landlord may but is not obligated, take the necessary actions to restore the utility service at the sole cost of the Tenant.

4.2.3 LATE FEES. Tenant hereby acknowledges that late rent payment by Tenant to Landlord will cause Landlord to incur costs not contemplated by this Agreement, the exact amount of which will be extremely difficult to ascertain. Such costs include, but are not limited to, processing and accounting charges and personnel costs. Accordingly, if any rent due from the Tenant is not received by the date on which rent is

due, Tenant shall pay a late charge equal to ten percent (10%) of such overdue rent. Landlord and Tenant hereby agree that such late charge represents a fair and reasonable estimate of the costs Landlord shall incur by reason of late payment by Tenant. Acceptance of such late charge by Tenant shall in no event constitute a waiver of Tenant's default with respect to such overdue amount, nor prevent Landlord from exercising any of the other rights and remedies granted hereunder.

4.3 COMMON AREA MAINTENANCE CHARGES. Tenant's Share of Operating Costs. In addition to all other sums due under this lease, Tenant shall pay to Landlord, in the manner and at the times set forth in this Section, Tenant's Share of Operating Costs (as defined in Section 4.3.3) for each lease year or other fiscal year that may be established by Landlord during the Term.

4.3.1 The phrase "**Operating Costs**" means the sum of Building and Common Area costs.

4.3.2 The term **"Building and Common Area Costs"** means all costs and expenses of every kind and nature whatsoever as may be paid or incurred by Landlord, related entities, or third parties in operating, managing, insuring, repairing and maintaining the Buildings and/or the Common areas in the Library Building, computed in accordance with generally accepted accounting principles consistently applied or such other method of accounting as may be adopted by Landlord. Building and Common Area Costs include, but are not limited to costs and expenses incurred with respect to the items enumerated in Exhibit C.

4.3.3 "Tenant's Share of Operating Costs" will be determined by multiplying total Operating Costs by the fraction calculated by dividing total square feet of the Premises by the total square feet of the Building.

4.3.4 Tenant shall pay to Landlord, on the first day of each month during the Term, an amount equal to Tenant 's estimated Share of Operating Costs for the lease year in question, divided by the number of months (full or partial) in such lease year ("Tenant's Monthly Operating Costs Payment"). Payment of Tenant's Monthly Operating Costs will commence on October 1, 2024. The Tenant's Monthly Operating Costs payment is Forty-Three Dollars ($43.00) per month which is Three Cents ($0.03) per square foot, which will be revised when CAM is calculated at the beginning of the fiscal year 2025-2026.

Annual Adjustments. Within ninety (90) days following the end of each lease year, or within a reasonable time thereafter, Landlord shall prepare and deliver to Tenant a statement setting forth the calculation of Tenant's actual Share of Operating Costs for the previous lease year. Within thirty (30) days after receipt of the statement of Tenant's actual Share of Operating Costs, Tenant shall pay to Landlord, or Landlord shall credit against the next Monthly Operating Costs Payment due from Tenant, as the case may be, the difference between Tenant's actual Share of Operating Costs for the preceding lease year and the amount of Tenant's Monthly Operating Costs Payments paid by Tenant during such lease year; except, Landlord shall pay Tenant any excess at the time Landlord furnishes the statement to Tenant in connection with the final adjustment of Operating Costs for the last lease year, provided Tenant is not in default under any provisions of this lease.

ARTICLE V - USE OF PREMISES

5.1 USES BY TENANT. Following delivery, Tenant is permitted to use the Premises for a cafe serving food and beverages, which may include wine and beer, subject to appropriate licenses, but not hard liquor. Items may be sold for consumption on and off the Premises. Every part of Premises shall be kept by Tenant in a clean and wholesome condition, free of any objectionable noises, odor or nuisances, and that all health and police regulations shall, in all respects and at all times, be fully complied with by Tenant. Tenant further covenants and agrees that during the Term hereof, the Outdoor Patio Area designated on Exhibit B, and incorporated herein, and every part thereof, shall be kept by Tenant in a clean and wholesome condition, free of any objectionable noises, odor or nuisances, and that all health and police regulations shall, in all respects and at all times, be fully complied with by Tenant. Tenant shall not use or permit any person or persons to use the Premises in any manner that will create waste, odor, or nuisance and shall not unreasonably disturb library operations or the use of the Building by its patrons, provided nothing herein shall prohibit Tenant from conducting normal business activities in the Premises.

> **5.1.1 ODORS**. Tenant shall not permit foul or offensive odor to emanate from the Premises, or any garbage or trash containers within the Premises and shall immediately take steps to abate any such odor. Nothing shall be prepared, manufactured or mixed in the Premises which emit any odors into the Building.

5.2 USES BY LANDLORD. Landlord reserves the right to use the exterior floor, walls and roof above the Premises for the installation, maintenance, use and replacement of pipes, ducts, conduits, wires, alarm lines, heating, ventilating and air conditioning lines, fire protection lines and systems, electric power, telephone and communication lines and systems, elements serving the Building, provided the Premises and the business conducted therein are not adversely affected or aesthetically altered thereby, and provided further that Landlord's exercise of such rights does not materially impair or interfere with Tenant's use of the Premises as provided in this Article.

5.3 WASTE. Tenant agrees to cause all Waste from the Premises to be deposited within receptacles in the designated Waste enclosure area provided by the Waste hauler on at least a daily basis. In the event Tenant fails to dispose of all Waste in the receptacles provided by the Waste hauler, Tenant shall be liable to Landlord for all reasonable costs to facilitate removal and maintenance of a neat and clean Waste enclosure area, to the extent such costs are incurred as a result of Tenant's failure to comply with the provisions of this Section or polices of the Waste hauler.

5.4 OUTDOOR DISPLAY. Except as expressly provided in this Agreement, Tenant may not display or sell merchandise or allow portable signs, devices or any other objects to be stored or remain outside the exterior walls and permanent doorways of the Premises.

5.5 DELIVERIES. All deliveries to the Premises shall be made from the parking lot area nearest Premises. Tenant shall advise its concessionaires, agents, employees, vendors, suppliers and independent contractors of this restriction.

5.6 PARKING. The parking lot abutting the Building and the parking lot serving City Hall are parking lots for public parking that require official parking permits. City shall supply Tenant with the appropriate parking permit for Tenant's staff.

5.7 MAINTENANCE AND INSPECTION OF THE PREMISES.

5.7.1 TENANT'S MAINTENANCE. At the Tenant's sole cost and expense, Tenant shall operate, maintain, repair and manage the Premises throughout the Term, including without limitation, the following: (a) interior surfaces of walls, ceilings, and floors; (b) wall and floor coverings; (c) all windows and plate glass; (d) doors; (e) locks or closing devices; (f) plumbing and electrical systems (including grease traps and the heating, ventilation , and air conditioning systems) within/serving the Premises; (g) signs; (h) Outside Patio Area and (i) all equipment, including FF&Es, thereon in good order and repair and in neat, clean sanitary and safe condition in compliance with all local, state and federal laws, statutes and regulations relating to the use, occupancy or operation of the Premises. Tenant shall promptly, at the sole cost and expense of Tenant, make all necessary repairs, including replacements or renewals when necessary, and all such repairs shall be at least equal in quality to the original work, reasonable wear and tear accepted. FF&Es replaced by Tenant due to depreciation and shall remain the property of Tenant. Tenant shall keep and maintain all portions of the Premises in a clean and orderly condition, free of accumulation of dirt, rubbish, and graffiti. The failure of Tenant to maintain the Premises in accordance with this Agreement shall be grounds for termination of this Agreement pursuant to Article XIII.

5.7.2 LANDLORD'S MAINTENANCE. Landlord shall maintain: (a) roof (excluding interior ceilings), foundations, and exterior walls at the Premises (excluding all doors, plate glass, storefronts, display and other windows) and (b) exterior plumbing, pipes and conduits serving the common area, (c) landscaping and its maintenance. On demand, Tenant shall reimburse Landlord for all costs and expenses incurred by Landlord to make any repair to the Premises in connection with or resulting from (i) any alteration or modification to the Premises performed by, for or because of Tenant after the Delivery Date, (ii) the installation, use or operation of Tenant's property, fixtures and equipment, (iii) the moving of Tenant's property into or out of the Premises or in and about the Premises, (iv) Tenant's use or occupancy of the Premises in violation of this Agreement or in violation of Applicable Law or
(v) acts or omissions of Tenant or Tenant's invitees and/or licensees.

5.7.3 LANDLORD INSPECTION. At any time during the Term, upon reasonable advance notice and during normal business hours, except in the event of an emergency, the Landlord may conduct interior and/or exterior inspections of the Premises to confirm that it is being properly maintained as required herein. Following its inspection, the Landlord may deliver to Tenant written notification of any portions of the Premises which the Landlord has determined are not being properly maintained, and Tenant shall promptly prepare and deliver to the Landlord the proposed plan for remedying the indicated deficiencies of Tenant. The failure of Tenant to deliver a remedial plan and to complete remedial work within one year from the date of notice as determined by the Landlord in its reasonable discretion shall be a default under this Agreement pursuant to Article XIII. The failure of the Landlord to inspect or to notify

Tenant of any deficiency shall not be a waiver of default or of the Landlord's right to enforce the maintenance and repair obligations of Tenant.

5.8 LANDLORD'S RIGHT TO PERFORM TENANT OBLIGATIONS. If Tenant fails to perform its obligations to maintain the Premises or perform any obligation in accordance with the standards set forth in this Agreement, the Landlord shall have the right, but not the obligation, to perform such work or make any payment to perform such work upon delivery of written notice to Tenant. Any payment or cost of performance (together with interest thereon at the Default Rate from the respective dates of the Landlord's making of each such payment) shall constitute additional rent payable by Tenant under this Agreement and shall be paid by Tenant to the Landlord on demand. The "Default Rate" shall mean interest calculated at an annual rate equal to the lesser of twelve percent (12%) or the maximum rate of interest permitted by law. The Landlord's election to undertake such obligation shall not operate as a waiver of any other right or remedy the Landlord may have pursuant to this Agreement.

5.9 LANDLORD NOT OBLIGATED TO PERFORM REPAIRS. Notwithstanding any contrary provision herein, the Landlord shall not be obligated to make any repairs, alterations, additions, improvements or betterments to the Premises during the term of this Agreement nor shall the Landlord be obligated to maintain or operate the Premises.

5.10 COMPLIANCE WITH LAWS. Tenant, at its sole cost and expense, shall comply with all applicable federal, state and local laws and regulations, including permits, pertaining to the use, operation, and management of the Premises ("Applicable Laws").

Tenant shall not use the Premises for any unlawful purpose or perform or permit any act of omission or commission upon or about the Building or the Premises which would result in a nuisance or a violation of Applicable Law. Tenant shall use its best efforts to not permit any permitees, licensees, guests or invitees to use the Premises for any unlawful purpose or perform or permit any act of omission or commission upon or about the Building or the Premises which would result in a nuisance or a violation of Applicable Law. Tenant further agrees to notify Landlord in writing within ten (10) days of its receipt of service or notice in any administrative or judicial proceeding in which Tenant is named as a party that is related to the occupation or use of the Premises.

5.10.1 IMPOSITIONS. Throughout the Term, the Tenant shall pay prior to delinquency, all real property taxes, possessory interest, license and permit fees, sales, use or occupancy taxes, assessments whether general or special, ordinary or extraordinary, unforeseen, as well as foreseen, of any kind or nature whatsoever, pertaining to the Premises or part thereof, including, but not limited to any assessment, levy, imposition or charge in lieu of or in substitution for real estate taxes, and (ii) any assessment for public improvements, or benefits which is assessed, levied, or imposed upon or which becomes due and payable and a lien upon (a) the Premises or any part thereof, (b) the rent or income received by Tenant, (c) any use or occupancy of the Premises or part thereof, or (d) this transaction or any document to which Tenant is party creating or transferring an estate or interest in the Premises or part thereof. All the foregoing are hereinafter referred to as "Impositions".

5.11 TENANT'S RIGHT TO CONTEST LAW. Tenant shall have the right to contest by appropriate proceedings, in the name of Tenant, and without cost or expense to the Landlord,

the validity or application of any Applicable Law. If compliance with any Applicable Law may legally be delayed pending the prosecution of any such proceeding without the incurrence of any lien, charge or liability against the Premises or the interest of Tenant therein, and without subjecting Tenant or the Landlord to any liability, civil or criminal, for failure so to comply therewith, Tenant may delay compliance therewith until the final determination of such proceeding. Tenant shall indemnify, defend (with counsel approved by the Landlord), protect and hold the Indemnitees harmless from and against all Claims arising in connection with any such contest brought by Tenant. The foregoing indemnity obligation shall survive the expiration or earlier termination of this Agreement.

ARTICLE VI - CONDITION OF THE PREMISES; ENVIRONMENTAL MATTERS

6.1 CONDITION OF THE PREMISES.

6.1.1 AS-IS CONDITION. Tenant will lease the Premises in its "AS IS" condition as such condition exists.

6.1.2 NO REPRESENTATIONS. Tenant acknowledges that except as expressly set forth herein, Landlord makes no representations or warranties expressed or implied regarding the condition of the Premises or the fitness or suitability thereof for the purposes of Tenant, including but not limited to, the condition of the soil, its geology, topography, the presence or absence of fill, the presence or absence of Hazardous Materials, drainage, flood zone designation, or compliance with Hazardous Materials Laws, and no patent or latent defect or deficiency in the condition of the Premises shall affect the rights of Tenant or the Landlord hereunder. Tenant shall rely solely on its own independent investigation and judgment as to all matters relating to the Land. Tenant acknowledges and agrees that prior to the Date of Execution it has made such investigations of the Premises, including without limitation such inquiries of governmental agencies, soils testing, tests and inspections as Tenant deemed necessary to determine the condition of the Premises, and has approved all such characteristics and conditions and shall lease the Premises in its condition, subject to the rights in Article VII, as of the Date of Execution "AS-IS" "WHERE-IS" AND WITH ALL FAULTS. Tenant further acknowledges that the Landlord has made available all data and information on the Premises available to the Landlord, but without warranty or representation by the Landlord as to the completeness, correctness or validity of such data and information, except as otherwise set forth in this Agreement.

6.2 TENANT'S COVENANTS. Tenant hereby covenants and agrees that throughout the Term:

(a) The Premises, and the use and operation thereof, shall be in compliance with all Hazardous Materials Laws, and Tenant shall not cause or permit the Premises or any portion thereof to be in violation of any Hazardous Materials Laws.

(b) Tenant shall not permit the Premises or any portion thereof to be a site for the use, generation, treatment, manufacture, storage, disposal or transportation of Hazardous Materials nor shall Tenant permit the presence or release of Hazardous Materials in, on, under, about or from the Premises with the exception of materials customarily used

in construction, operation, use or maintenance of business facilities, provided such materials are used, stored and disposed of in compliance with Hazardous Materials Laws.

(c) Upon receiving knowledge of the same, Tenant shall immediately advise Landlord in writing of: (i) any and all enforcement, cleanup, removal or other governmental or regulatory actions instituted, completed or threatened against Tenant, the Premises or the Building pursuant to any applicable Hazardous Materials Laws; (ii) any and all complaints, claims, citations, demands, inquiries, reports, or notices made or threatened by any third party against Tenant, the Premises relating to damage, contribution, cost recovery, compensation, loss or injury resulting from any Hazardous Materials; (iii) the presence or release of any Hazardous Materials in, on, under, about or from the Premises or the Building; or (iv) the discovery of any occurrence or condition, by Tenant, on any real property adjoining or in the vicinity of the Building classified as "Border Zone Property" California Health and Safety Code, former Sections 25220 et seq., or any regulation adopted in connection therewith, that may in any way affect the Premises pursuant to any Hazardous Materials Laws or cause it or any part thereof to be designated as Border Zone Property. The matters set forth in the foregoing clauses (i) through (iv) are hereinafter referred to as "Hazardous Materials Claims." Landlord shall have the right to join and participate in, as a party if it so elects, any legal proceedings or actions initiated in connection with any Hazardous Materials Claim, and to have its reasonable attorney's fees in connection therewith paid by Tenant.

(d) Without Landlord's prior written consent, which shall not be unreasonably withheld, Tenant shall not take any remedial action in response to the presence of any Hazardous Materials in, on, under, or about the Premises or the Building (other than in emergency situations or as required by governmental agencies having jurisdiction in which case the Landlord agrees to provide its consent), nor enter into any settlement agreement, consent decree, or other compromise with respect to any Hazardous Materials Claim.

(e) If the presence of any Hazardous Material on the Premises results in any contamination of the Building in violation of Hazardous Materials Laws, except to the extent such contamination is caused by Landlord, Tenant shall promptly take all actions at its sole expense as are necessary to remediate the Premises as required by law; provided that Tenant first obtains Landlord approval of such actions, which approval may be withheld in the Landlord's reasonable discretion. All costs and expenses of any Remedial Work shall be paid by Tenant, it being understood that the Landlord shall incur no cost, expense or liability in connection with any Remedial Work. The Landlord shall have the right, but no obligation, to join and participate in, as a party if it so elects at the Landlord's cost, any legal proceedings or actions initiated in connection with any Hazardous Material Claims. For purposes of this Agreement , "Remedial Work" means all investigation, testing, analysis, monitoring, restoration, abatement, detoxification, containment, handling, treatment, removal, storage, decontamination, clean-up, transport, disposal or other ameliorative work or response action required by (i) any Hazardous Materials Laws, (ii) any order or request of any federal, state or local governmental agency, or (iii) any judgment, consent decree,

settlement or compromise with respect to any and all enforcement, clean-up, removal, remedial or other governmental or regulatory actions or agreements or orders threatened, instituted, or completed pursuant to any Hazardous Materials Laws or any actions, proceedings or claims by such entities or third parties relating to or arising out of the breach of any Hazardous Materials Laws or the presence or release of any Hazardous Material in, on, under or from the Premises or the Building.

6.3 RELEASE OF CLAIMS. Tenant hereby waives, releases and discharges forever the Indemnitees from all present and future claims Tenant may have arising directly or indirectly from the presence or alleged presence of Hazardous Materials on, under, in or about the Premises.

Tenant is aware of and familiar with the provisions of Section 1542 of the California Civil Code which provides:

A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM MUST HAVE MATERIALLY AFFECTED HIS SETTLEMENT WITH THE DEBTOR.

As such relates to this Section 6.3, Tenant hereby waives and relinquishes all rights and benefits which it may have under Section 1542 of the California Civil Code.

_____
Tenant Initials

6.4 ENVIRONMENTAL INDEMNITY. Tenant shall indemnify, defend (with counsel reasonably acceptable to Landlord) and hold the Indemnitees harmless from and against all claims arising during the Term and resulting, arising, or based directly or indirectly in whole or in part, upon (i) the presence, release, use, generation, discharge, transport, storage or disposal of any Hazardous Materials on, under, in or about, or the transportation of any such Hazardous Materials to or from the Premises during the Term, (ii) the failure of Tenant, or the employees, agents, contractors, subcontractors , licensees, permittees, or any person acting on behalf of any of Tenant to comply with Hazardous Materials Laws, or (iii) the breach by Tenant of any of its covenants contained in this Article VI. The foregoing indemnity shall further apply to any residual contamination in, on, under or about the Premises or affecting any natural resources, and to any contamination of any property or natural resources arising in connection with the generation, use, handling, treatment, storage, transport or disposal of any such Hazardous Materials, and irrespective of whether any of such activities were or will be undertaken in accordance with Hazardous Materials Laws and shall include, without limitation, any Claims arising in connection with any investigation of site conditions or any cleanup, remedial, removal or restoration work ordered by a court or required by any federal, state, or local governmental agency or political subdivision. This Section 6.4 shall survive the expiration or earlier termination of this Agreement.

6.5 DEFINITIONS.

6.5.1 Hazardous Materials. As used herein, "Hazardous Materials" means any substance, material, or waste which is or becomes regulated by any local, state or federal authority, agency or governmental body, including any material or substance which is: (i) defined as a "hazardous waste," "extremely hazardous waste," or "restricted hazardous waste" under Sections 25115, 25117 or 25122.7, or listed pursuant to Section 25140 of the California Health and Safety Code, Division 20, Chapter 6.5 (Hazardous Waste Control Law); (ii) defined as a "hazardous substance" under Section 25316 of the California Health and Safety Code, Division 20, Chapter 6.8 (Carpenter-Presley-Tanner Hazardous Substance Account Act); (iii) defined as a "hazardous material," "hazardous substance," or "hazardous waste" under Section 25501 of the California Health and Safety Code, Division 20, Chapter 6.95 (Hazardous Materials Release Response Plans and Inventory); (iv) defined as a "hazardous substance" under Section 25281 of the California Health and Safety Code, Division 20, Chapter 6.7 (Underground Storage of Hazardous Substances); (v) petroleum; (vi) friable asbestos; (vii) polychlorinated biphenyls; (viii) listed under Article 9 or defined as "hazardous" or "extremely hazardous" pursuant to Article 11 of Title 22 of the California Administrative Code, Division 4, Chapter 20; (ix) designated as "hazardous substances" pursuant to Section 311 of the Clean Water Act (33 U.S.C. §1317);
defined as a "hazardous waste" pursuant to Section 1004 of the Resource Conservation and Recovery Act, 42 U.S.C. §6901, et seq. (42 U.S.C. §6903); or
defined as "hazardous substances" pursuant to Section 101 of the Comprehensive Environmental Response, Compensation, and Liability Act, 42
U.S.C. §9601, et seq., as the foregoing statutes and regulations now exist or may hereafter be amended.

6.5.2 Hazardous Materials Laws. As used herein "Hazardous Materials Laws" means all federal, state and local laws, ordinances, regulations, orders and directives pertaining to Hazardous Materials, including without limitation, the laws, statutes and regulations cited in the preceding Section 6.5.1, as any of the foregoing may be amended from time to time.

ARTICLE VII - ALTERATIONS

7.1 INSTALLATION OF FIXTURES, FINISHES AND EQUIPMENT. If odors, as described in Section 5.1.1 of this Agreement, become a disruption to the operations of the Library, the Tenant must install or cause the installation of a pollution control unit to abate the odors.

7.2 & 7.3 TENANT'S DUTY TO INSPECT PREMISES. Prior to the Date of Execution, Tenant shall inspect Premises and all FF&Es and provide Landlord a certificate stating that the Premises is ready for Tenant's business. Following the Date of Execution, Landlord shall have no responsibility for FF&Es.

7.4 SIGNAGE. Consistent with all Applicable Law, including City zoning rules and procedures, Tenant may construct and/or install a sign or signs for its business on the interior and on the exterior of the Building (collectively "Signage").

7.5 CHANGES AND ALTERATIONS. Except for as provided in Section 7.1, during the Term of this Agreement, Tenant shall not make any change, alteration or addition to the

Premises (collectively, the "Improvements") that would materially alter the function or exterior appearance of the Premises, without the prior written consent of the Landlord. All Improvements, including those pursuant to Sections 7.1, must comply with all of the following:

(a) The Improvements must not materially impair the value or structural integrity of the Premises.

(b) The Improvements must be necessary for the operation of the business.

(c) No Improvements may be undertaken until Tenant has obtained all required permits and authorizations under Applicable Law.

(d) The Improvements must be made in a good and workmanlike manner and in accordance with all applicable permits and Applicable Laws. All repairs and Improvements to the Premises must be performed by licensed and bonded contractors.

(e) During the construction of any Improvements in, to or of, the Premises, or the permitted demolition or new construction or any restoration, Tenant shall comply with the insurance requirements set forth in Section 8.2, which policy or policies by endorsement thereto, if not then covered, will also insure any change, alteration or addition or new construction, including all materials and equipment incorporated in, on or about the Premises.

(f) Prior to commencement of any construction, change, alteration or repair, Tenant shall deliver to the City not later than ten (10) business days written notice of the proposed work, a general description of the proposed work and sufficient information to permit the City to post a notice of non-responsibility on the Premises.

7.6 NO RIGHT TO DEMOLISH. Tenant shall have no right to demolish any Improvements, once built, unless Tenant shall have received the prior written approval from the Landlord.

7.7 FIXTURES. Tenant shall have the right to place and install personal property, such as trade fixtures, equipment and other temporary installments in and upon the Premises. During the Term, Tenant shall have the right to remove all personal property installed by Tenant, provided that all damage to the Premises caused by such removal is repaired by the Tenant at the Tenant's expense. FF&Es installed pursuant to Sections 7.1 shall remain the property of Landlord and may not be removed by Tenant without Landlord's written consent excluding depreciated assets after which Tenant shall purchase, replace and retain ownership of the replaced FF&E.

7.8 LIENS ON PREMISES. Subject to the right to contest the same prior to payment, Tenant agrees to keep the Premises free and clear of all mechanics' liens, stop notices and other liens or claims on account of work done by or for a Party.

7.9 PREVAILING WAGES. To the extent required by Applicable Laws, Tenant and its contractors and agents shall comply with California Labor Code Section 1720 et seq., as may be amended, and are responsible for carrying out the requirements of such provisions.

ARTICLE VIII - INDEMNITY AND INSURANCE

8.1 INDEMNITY. To the fullest extent permitted by law, Tenant shall indemnify, defend (with counsel reasonably acceptable to the Landlord) and hold the Landlord and its elected and appointed officers, officials, employees, agents and representatives (all of the foregoing, collectively the "Indemnitees") harmless from and against all liabilities, losses, damages, fines, deficiencies, penalties, claims, demands, suits, actions, causes of action, legal or administrative proceedings, judgments, costs and expenses (including without limitation reasonable attorneys' fees and court costs) (all of the foregoing, collectively "Claims") arising from or in connection with any of the following, which occurred during the Term: (i) the operation or management of the Premises, (ii) any work or thing done on or in the Premises, (iii) any condition of any alteration or addition constructed by Tenant on the Premises, including FF&Es, (iv) any breach or default by Tenant in the performance of any covenant or agreement to be performed by Tenant pursuant to the terms of this Agreement, (v) any negligence of Tenant, or any of its agents, contractors, subcontractors, employees, or licensees, (vi) any accident, injury or damage caused to any person in or on the Premises and (vii) any failure to comply with Applicable Law. In the event any such action or proceeding is brought against the Landlord by reason of any such Claim, Tenant, upon notice from the Landlord, covenants to defend such action or proceeding by counsel reasonably satisfactory to the Landlord. If an insurer under insurance required to be maintained by Tenant hereunder shall undertake to defend the Landlord under a reservation of rights with respect to ultimate coverage and the Landlord shall reasonably deem it necessary to retain independent counsel with respect to such matter, Tenant shall pay the reasonable fees of such counsel. The obligations of Tenant under this Article VIII do not apply to any Claim or other matter to the extent such arises as a result of the gross negligence or willful misconduct of the Indemnitees. This Section shall survive the expiration or earlier termination of this Agreement.

8.2 INSURANCE REQUIREMENTS. Tenant shall procure, at its sole expense, and maintain in full force and effect during the Term, the following insurance naming the Landlord as additional insured and/or loss payee and endorsements specifying that the Landlord's insurance is excess and non-contributing and that Tenant's insurance is primary:

(a) Comprehensive General Liability insurance against claims for bodily and personal injury, death and property damage caused by or occurring in conjunction with the operation of the Premises and the Business with a policy limit of at least two million dollars ($2,000,000) per occurrence.

(b) Property insurance covering all risks of loss including floor (if required) for one hundred percent (100%) of the replacement value of the Premises and any Improvements, naming Landlord as loss payee as its interests may appear.

(c) Workers' compensation insurance that complies with the statutory requirements of the State of California must be identified by Tenant and must be in an amount satisfactory to the City.

8.2.1 CONTRACTORS. If Tenant undertakes the construction of the Improvements pursuant to Article VII, Tenant shall ensure that its general contractor carries liability, property damage, workers' compensation, and builder's risk insurance throughout

construction of the Improvements, naming the Indemnitees as additional insureds and otherwise in compliance with all requirements set forth in this Section 8.2.

8.3 CERTIFICATES OF INSURANCE. Prior to the Date of Execution, Tenant shall furnish Landlord with certificates of insurance and endorsements evidencing the insurance coverage required by this Article. Tenant shall give notice in writing of any cancellation, termination or nonrenewal of the coverage at least thirty (30) days in advance of the effective date of any such material change, cancellation, termination or nonrenewal.

ARTICLE IX - [RESERVED]

ARTICLE X - [RESERVED]

ARTICLE XI - DAMAGE AND DESTRUCTION

11.1 DAMAGE OR DESTRUCTION. In the event of any damage to or destruction of the Premises during the Term, the Landlord shall elect by written notice delivered to Tenant within sixty (60) days following the date of the occurrence of the damage to either remove the Premises or restore and rebuild the Premises as nearly as possible to their condition immediately prior to such damage or destruction, subject to any restrictions imposed by changes in any Applicable Law. If the Landlord elects to restore the Premises, the Landlord shall commence diligently and continuously to carry out such rebuilding to full completion as soon as possible and shall commence reconstruction of the Premises within the earlier of ninety (90) days following the date of occurrence of the damage or the date upon which insurance proceeds are made available for such work. Upon the occurrence of damage or destruction, all insurance proceeds paid in respect of such damage or destruction shall be applied to the payment of the costs of the restoration and rebuilding required to be performed by the Landlord pursuant to this Agreement. If the Landlord does not elect to restore the Premises and the Landlord does not exercise its right to terminate this Agreement pursuant to Section 13.3 within one hundred twenty (120) days following the date of the occurrence of the damage, then at the Landlord's option, this Agreement will terminate upon delivery of written notice to Tenant. If the Landlord elects to restore the Premises, the Landlord shall confer with Tenant regarding the design and plans for such restoration of the Premises.

11.2 NOTICE REQUIRED. In the event of material damage to or destruction of the Premises, or any part thereof, Tenant shall promptly give the Landlord notice of such occurrence and take all actions reasonably required to protect against hazards caused by such damage or destruction. For purposes of this Article, damage or destruction shall be deemed to be material if the estimated cost to repair equals or exceeds Fifty Thousand Dollars ($50,000).

11.3 LANDLORD'S RIGHT TO TERMINATE. Notwithstanding any contrary provision of this Article XI, the Landlord has the option to terminate this Agreement and be relieved of the obligation to restore the Premises where all or substantially all of the Premises are substantially damaged or destroyed and such damage or destruction resulted from a cause not insured against by Tenant.

Not related to damage or destruction, City, in its sole discretion, may terminate this

Agreement with at least 180 days' notice to Tenant. Tenant will not be entitled to relocation benefits. The City may, but is not obligated to, assist the Tenant in seeking a new location. No City funds will be expended in the efforts related to seeking a replacement location.

ARTICLE XII - ASSIGNMENT, TRANSFER, SUBLETTING

12.1 RESTRICTIONS ON TRANSFER, ASSIGNMENT AND ENCUMBRANCE. Tenant has no right to sell, transfer, sublet, assign, encumber, mortgage, hypothecate or otherwise convey ("Transfer") its leasehold interest hereunder or any portion of its interest in the Premises, the fixtures, any Improvements or this Agreement voluntarily, involuntarily, by operation of law, or otherwise, except with Landlord's written permission, which shall not be unreasonably withheld in light of, among other factors, assignee's ability to abide by the terms of the Agreement, creditworthiness and experience in the restaurant business.

12.2 NO INVOLUNTARY TRANSFERS. No interest of Tenant in this Agreement, the Premises or part thereof is assignable or transferable: (i) pursuant to any voluntary or involuntary proceeding under federal or state bankruptcy or insolvency law; (ii) pursuant to any assignment of the assets of Tenant for the benefit of its creditors; or (iii) pursuant to any order of attachment, garnishment, receivership, or similar action. Any transfer described in this Section 12.2 constitutes an Event of Default under this Agreement by Tenant, and Landlord has the right to terminate this Agreement pursuant to Article XIII as a result of any such transfer taking place, in which case this Agreement shall not be treated as an asset of Tenant.

ARTICLE XIII - DEFAULT, REMEDIES AND TERMINATION

13.1 EVENT OF DEFAULT. Tenant will be in default under this Agreement upon the occurrence of any of the following events of default (each, an "Event of Default"):

(a) **MONETARY OBLIGATIONS.** Tenant at any time is in default hereunder as to any monetary obligation, and such default continues for thirty (30) days after the date upon which the Landlord shall have given Tenant a Notice of Default (as defined in Section 13.2.1);

(b) **INSURANCE.** Tenant fails to obtain and maintain any insurance required pursuant to Section 8.2 of this Agreement, and Tenant fails to cure such default within ten (10) days following receipt of Notice of Default;

(c) **ABANDONMENT.** Tenant abandons the Premises and ceases to use it for the purposes authorized hereby for a period of ninety (90) days or more or as established pursuant to Section 1951.3 of the California Civil Code except when prevented by Force Majeure;

(d) **TRANSFER.** A voluntary or involuntary Transfer of all or any portion of the Tenant hold interest of Tenant in this Agreement without Landlord consent occurs in violation of the provisions of Article XII;

(e) **NON-MONETARY OBLIGATIONS**. Tenant defaults in the performance of any term, provision, covenant or agreement contained in this Agreement other than an obligation enumerated in this Section 13.1, and unless a shorter cure period is specified for such default, the default continues for thirty (30) days after the date upon which the Landlord has given written notice of the default to Tenant; provided however, if the default is of a nature that it cannot be cured within thirty (30) days, an

Event of Default shall not arise hereunder if Tenant commences to cure the default within thirty (30) days and thereafter prosecutes the curing of such default with due diligence and in good faith to completion and in no event later than one hundred and eighty (180) days after receipt of a Notice of Default;

(f) **BANKRUPTCY**. Tenant files a voluntary petition in bankruptcy or files any petition or answer seeking or acquiescing in any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief for itself under any present or future federal, state or other statute, law or regulation relating to bankruptcy, insolvency or other relief for debtors; or seeks or consents to or acquiesces in the appointment of any trustee, receiver or liquidator of Tenant or of all or any substantial part of its property, or of any or all of the royalties, revenues, rents, issues or profits thereof, or makes any general assignment for the benefit of creditors, or admits in writing its inability to pay its debts generally as they become due;

(g) **REORGANIZATION**. A court of competent jurisdiction enters an order, judgment or decree approving a petition filed against Tenant seeking any reorganization, dissolution or similar relief under any present or future federal, state or other statute, law or regulation relating to bankruptcy, insolvency or other relief for debtors, and such order, judgment or decree remains unvacated and unstayed for an aggregate of sixty (60) days from the first date of entry thereof, or any trustee receiver or liquidator of Tenant or of all or any substantial part of its property, or of any or all of the royalties, revenues, rents, issues or profits thereof is appointed without the consent or acquiescence of Tenant and such appointment remains unvacated and unstayed for an aggregate of sixty (60) days, such sixty (60) day period to be extended in all cases during any period of a bona fide appeal diligently pursued by Tenant;

(h) **ATTACHMENT**. A writ of execution or attachment or any similar process is issued or levied against all or any part of the interest of Tenant in the Premises and such execution, attachment or similar process is not released, bonded, satisfied, or vacated or stayed within sixty (60) days after its entry or levy, such sixty (60) day period to be extended during any period of a bona fide appeal diligently pursued by Tenant;

(i) **LIENS.** A lien is recorded or stop notice filed, and Tenant does not, within twenty (20) days, cause the lien or notice to be removed by bonding or otherwise.

13.2 NOTICE AND OPPORTUNITY TO CURE.

13.2.1 NOTICE OF DEFAULT. Upon the occurrence of a default hereunder, the non-defaulting party shall deliver a notice to the nonperforming party (the "Notice of Default"), stating the nature of the obligation which such nonperforming party has failed to perform, and stating the applicable period of time, if any, permitted to cure the default.

13.2.2 FAILURE TO GIVE NOTICE; NO WAIVER. Failure to give, or delay in giving, the Notice of Default shall not constitute a waiver of any obligation, requirement or covenant required to be performed hereunder. No failure or delay by either party in asserting any rights and remedies as to any breach shall operate as a waiver of any breach or of any such rights or remedies. Delay by either party in asserting any of its rights and remedies shall not deprive such party of the right to institute and maintain any action or proceeding which it may deem appropriate to protect, assert or enforce any such rights or remedies.

13.3 REMEDIES UPON DEFAULT.

13.3.1 LANDLORD'S REMEDIES. Upon the occurrence of any Event of Default and in addition to any and all other rights or remedies of the Landlord hereunder and/or provided by law, the Landlord has the right to terminate this Agreement and the possessory rights of Tenant hereunder, in accordance with applicable law to re-enter the Premises and take possession of the Premises and of the fixtures and any Improvements, and except as otherwise provided herein, to remove all persons and property therefrom, and to store such property at the risk of Tenant and for the account of Tenant, and Tenant shall have no further claim thereon or hereunder. The Landlord's re-entry or taking of possession of the Premises may not be construed as an election on the Landlord's part to terminate this Agreement unless the Landlord has given written notice of such intention to Tenant. In no event shall this Agreement be treated as an asset of Tenant after any final adjudication in bankruptcy except at the Landlord's option so to treat the same but no trustee, receiver, or liquidator of Tenant shall have any right to disaffirm this Agreement.

13.3.2 REMEDIES UPON ABANDONMENT. If Tenant should default under this Agreement and abandon the Premises, the Landlord may, at its option, enforce all of its rights and remedies under this Agreement, including the right to recover the rent as it becomes due hereunder. Additionally, the Landlord is entitled to recover from Tenant all costs of maintenance and preservation of the Premises, and all costs, including attorneys' and receiver's fees incurred in connection with the appointment of and performance by a receiver to protect the Premises and the Landlord's interest under this Agreement.

13.3.3 LANDLORD'S RIGHT TO CONTINUE LEASE. In the event of any default under this Agreement by Tenant (and regardless of whether or not Tenant has abandoned the Premises), this Agreement does not terminate (except by an exercise

of the Landlord's right to terminate under Section 13.3.1) unless the Landlord makes such election by the giving of any notice (including, without limitation, any notice preliminary or prerequisite to the bringing of legal proceedings in unlawful detainer) to terminate the right to possession held by Tenant. For so long as this Agreement continues in effect, the Landlord may enforce all of the Landlord's rights and remedies under this Agreement, including, without limitation, the right to recover all rent and other monetary payments as they become due hereunder. For the purposes of this Agreement, the following shall not constitute termination of the right to possession held by Tenant: (a) acts of maintenance or preservation or efforts to relet the Premises; or (b) the appointment of a receiver upon initiative of the Landlord to protect the Landlord interest under this Agreement.

13.3.4 RIGHT TO INJUNCTION; SPECIFIC PERFORMANCE. In the event of a default by Tenant under this Agreement, the Landlord shall have the right to commence an action against Tenant for damages, injunction and/or specific performance. The failure, for any reason, of Tenant to comply with a court-ordered injunction or order for specific performance shall constitute a breach under this Agreement.

13.3.5 RIGHT TO RECEIVER. Following the occurrence of an Event of Default, if Tenant fails after receipt of a Notice of Default to cure the default within the time period set forth in this Agreement, the Landlord, at its option, may have a receiver appointed to take possession of the interest of Tenant in the Premises with power in the receiver (a) to administer the interest in the Premises held by Tenant, (b) to collect all funds available in connection with the operation of the Premises, and (c) to perform all other acts consistent with the obligations of Tenant under this Agreement, as the court deems proper.

13.4 REMEDIES CUMULATIVE. No remedy specified in this Article XIII shall be considered exclusive of any other remedy, but the same shall be cumulative and shall be in addition to every other remedy provided hereunder or now or hereafter existing at law or in equity or by statute, and every power and remedy provided by this Agreement may be exercised from time to time and as often as occasion may arise or as may be deemed expedient, subject to any limitations set forth herein.

13.5 NO ELECTION OF REMEDIES. The rights given in this Article XIII to receive, collect or sue for any rent or rents, moneys or payments, or to enforce the terms, provisions and conditions of this Agreement, or to prevent the breach or nonobservance thereof, or the exercise of any such right or of any other right or remedy hereunder or otherwise granted or arising, shall not in any way affect or impair or toll the right or power of the Landlord upon the conditions and subject to the provisions in this Agreement to terminate the right of possession held by Tenant because of any default in or breach of any of the covenants, provisions or conditions of this Agreement beyond the applicable cure period.

13.6 SURVIVAL OF OBLIGATIONS. Nothing herein shall be deemed to affect the right of the Landlord under Agreement to indemnification for liability arising prior to the termination of this Agreement for personal injuries or property damage, nor shall anything herein be deemed to affect the right of the Landlord to equitable relief where such relief is appropriate.

No expiration or termination of the Term by operation of law, or otherwise, and no repossession of the Improvements or any part thereof shall relieve Tenant of its previously accrued liabilities and obligations hereunder, all of which shall survive such expiration, termination or repossession.

ARTICLE XIV - GENERAL PROVISIONS

14.1 FORCE MAJEURE; EXTENSION OF TIMES OF PERFORMANCE. Subject to the limitations set forth below, performance by either Party shall not be deemed to be in default, and all performance and other dates specified in this Agreement shall be extended where delays are due to: war, insurrection, strikes, lockouts, riots, floods, earthquakes, fires, casualties, acts of God, acts of the public enemy, epidemics, acts or omissions of the other Party, acts or failures to act of any public or governmental agency or entity (other than the Parties which shall not excuse delay in performance), or any other cause beyond the affected Party's reasonable control (all of the foregoing "Force Majeure"). An extension of time for any such cause shall be for the period of the enforced delay and shall commence to run from the time of the commencement of the cause, if notice by the Party claiming such extension is sent to the other Party within ten (10) days of the commencement of the cause and such extension is not rejected in writing by the other Party within ten (10) days of receipt of the notice. Neither Party shall unreasonably withhold consent to an extension of time pursuant to this Section.

Times of performance under this Agreement may also be extended in writing by the mutual agreement of Tenant and the Landlord (acting in the discretion of its City Manager unless he or she determines in his or her discretion to refer such matter to the City Council). Each Party expressly assumes the risk of such adverse economic or market changes and/or financial inability, whether or not foreseeable as of the Date of Execution.

14.2 PAYMENT FOR CITY SERVICES. Tenant shall reimburse City for any costs incurred by City to provide additional personnel or services (including, but not limited to, Police services, and Public Works services) that are, in City's sole discretion, (i) directly related to Tenant's use of the Premises and (ii) beyond the number of City personnel or type of service normally provided by City. The charge for such reimbursement will be calculated based on the cost City charges for provision of additional personnel or services for special events requiring a City Special Event permit, whether or not the personnel or services are related to activities or events that require the City Special Events permit.

14.3 MISCELLANEOUS.

14.3.1 SEVERABILITY. If any term or provision of this Agreement or the application thereof to any person or circumstance shall, to any extent, be held by a court of competent jurisdiction to be invalid or unenforceable, the remainder of this Agreement, or the application of such term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby, and each term and provision of this Agreement shall be valid and be enforced to the fullest extent permitted by law.

14.3.2 NOTICES. Except as otherwise specified herein, all notices to be sent pursuant to this Agreement shall be made in writing and sent to the Parties at their respective addresses specified below or to such other address as a Party may designate by written notice delivered to the other parties in accordance with this Section. All such notices shall be sent by one of the following methods: (i) personal delivery, in which case notice is effective upon delivery;

(i) certified or registered mail, return receipt requested, in which case notice shall be deemed delivered on receipt if delivery is confirmed by a return receipt;

(ii) nationally recognized overnight courier, with charges prepaid or charged to the sender's account, in which case notice is effective on delivery if delivery is confirmed by the delivery service; or

(iii) electronic mail or facsimile transmission, in which case notice shall be deemed delivered upon transmittal, provided that (a) a duplicate copy of the notice is promptly delivered by first-class or certified mail or by overnight delivery, or (b) a transmission report is generated reflecting the accurate transmission thereof. Any notice given by electronic mail or facsimile shall be considered to have been received on the next business day if it is received after 5:00 p.m. recipient's time or on a nonbusiness day.

Landlord:
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565
Attention : City Manager
Telephone: (925) 252-4850
Facsimile: (925) 252-4851

Tenant:
Taco & Company, LLC
8021 Crestview Drive
Pittsburg, CA 94565
Telephone: (925)-812-4858

14.3.3 CAPTIONS; CONSTRUCTION. The section headings and captions used herein are solely for convenience and shall not be used to interpret this Agreement. The Parties acknowledge that this Agreement is the product of negotiation and compromise on the part of both Parties, and the Parties agree that since both Parties have participated in the negotiation and drafting of this Agreement with the advice of counsel, this Agreement shall not be construed as if prepared by one of the Parties, but rather according to its fair meaning as a whole, as if both Parties had prepared it.

14.3.4 SUCCESSORS AND ASSIGNS. Subject to the restrictions on transfer set forth in Article XII, this Agreement shall be binding upon and shall inure to the benefit of the Parties and their respective successors and assigns. Any reference in this Agreement to a specifically named Party shall be deemed to apply to any permitted successor and assign of such Party who has acquired an interest in compliance with this Agreement as if in every case so expressed.

14.3.5 GOVERNING LAW. This Agreement shall be governed by and construed in accordance with the laws of the State of California without regard to principles of conflicts of laws. Any action to enforce or interpret this Agreement shall be filed in the Superior Court of Contra Costa County, California or in the Federal District Court for the Northern District of California.

14.3.6 ATTORNEY'S FEES. If either Party commences an action against the other to enforce any obligation contained herein, or to interpret any provision hereof, the prevailing party shall be entitled to recover from the other Party reasonable counsel fees, costs and necessary disbursements, as determined by the court having jurisdiction over the action.

14.3.7 NO THIRD-PARTY BENEFICIARIES; DISCLAIMER OF PARTNERSHIP, LENDER/TENANT RELATIONSHIP. Nothing contained in this Agreement is intended to or shall be deemed to confer upon any person, other than the Parties any rights or remedies hereunder. The relationship of the Parties under this Agreement is solely that of Landlord and Tenant, and it is expressly understood and agreed that the Landlord does not, as a result of this Agreement, in any way nor for any purpose, become a partner of Tenant or a joint venturer with Tenant in the conduct of business or otherwise by Tenant. This Agreement is not intended to, and shall not be construed to, create the relationship of principal and agent, partnership, joint venture, or association between the Landlord and Tenant.

14.3.8 ENTIRE AGREEMENT. This Agreement, together with Exhibits A, B and C, which by this reference are hereby incorporated herein, contains the entire agreement between the Parties relative to the transactions covered hereby. All previous correspondence, communications, discussions, agreements, understandings or proposals and acceptances thereof between the Parties or their representatives, whether oral or written, are deemed to have been integrated into and superseded by this Agreement and are of no further force and effect except as expressly provided in this Agreement.

14.3.9 WAIVER; MODIFICATION. No waiver of any breach of any covenant or provision of this Agreement shall be deemed a waiver of any subsequent breach of the same or any other covenant or provision hereof. No waiver shall be valid unless in writing and executed by the waiving party. An extension of time for performance of any obligation or act shall not be deemed an extension of the time for performance of any other obligation or act, and no extension shall be valid unless in writing and executed by the waiving party. This Agreement may be amended or modified only by a written instrument executed by the Parties.

The City Manager, in his/her sole discretion, may make minor amendments to this Agreement. A minor amendment shall be any modification that does not make a substantive change, modification or deviation in the terms this Agreement or any Exhibits or Schedules attached hereto ("Minor Amendment"). Minor Amendments shall include, but are not limited to, the times for performance, square footage available for lease; changes in maintenance responsibilities, and improvements to the Premises.

Minor Amendments may be approved by the prior written consent of the City Manager. The City Manager's determination as to the status of any Minor Amendment is final. The City Manager also may, at his/her discretion, determine that a Minor Amendment shall be reviewed and acted upon by the City Council and not by the City Manager. No provision of this Lease may be amended except by a mutual agreement in writing signed by the parties hereto or their respective successors in interest.

14.3.10 TIME IS OF THE ESSENCE. Time is of the essence of this Agreement and of each provision hereof.

14.3.11 COUNTERPARTS. This Agreement may be executed in one or more counterparts , each of which shall be an original and all of which together shall constitute one and the same instrument.

14.3.12 ACTION BY THE PARTIES. Except as may be otherwise specifically provided herein, whenever any approval, notice, direction, consent or request by the City in its capacity as Landlord hereunder is required or permitted under this Agreement, such action shall be in writing, and such action may be given, made or taken by the City Manager or by any person who shall have been designated by the City Manager, without further approval by the City Council unless the City Manager determines in his or her discretion that such matter requires consideration by the City Council.

14.3.13 NON-LIABILITY OF OFFICIALS, EMPLOYEES AND AGENTS. No member, official, employee or agent of the City shall be personally liable to Tenant or its successors in interest in the event of any default or breach by the City or for any amount which may become due to Tenant or the permitted successors in interest of Tenant pursuant to this Agreement.

[Signatures on Following Page]

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement by their duly authorized representatives in the City of Pittsburg, State of California, as of the date first written above.

LANDLORD, CITY OF PITTSBURG, a municipal corporation

By: _____
Garrett D. Evans, City Manager

APPROVED AS TO FORM

By: _____
Donna Mooney, City Attorney

Taco & Company, LLC,, a California limited liability company

By: _____
Israel Castro Cortez
Its: Owner

Exhibit A

Building

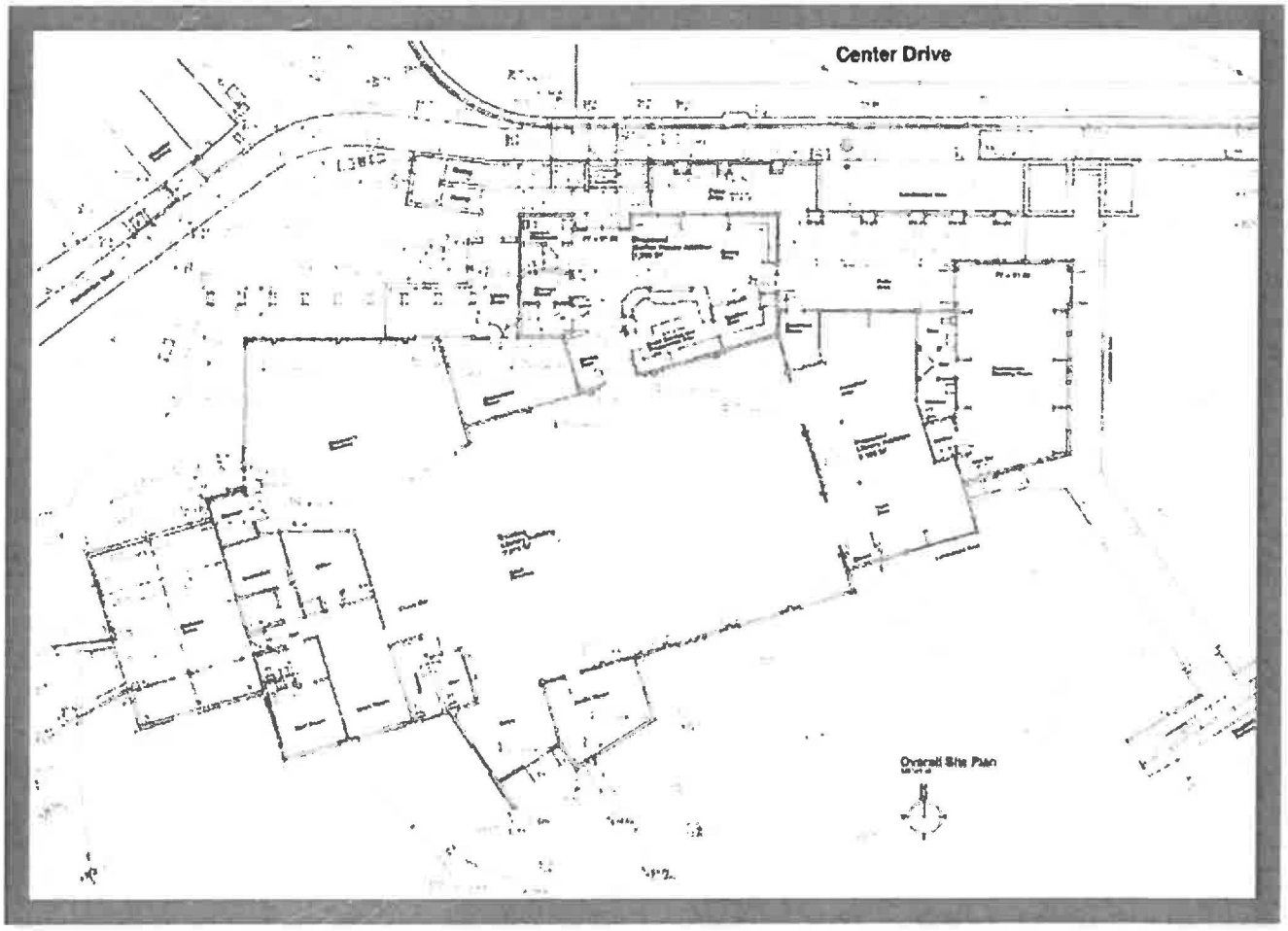


Exhibit B

Premises

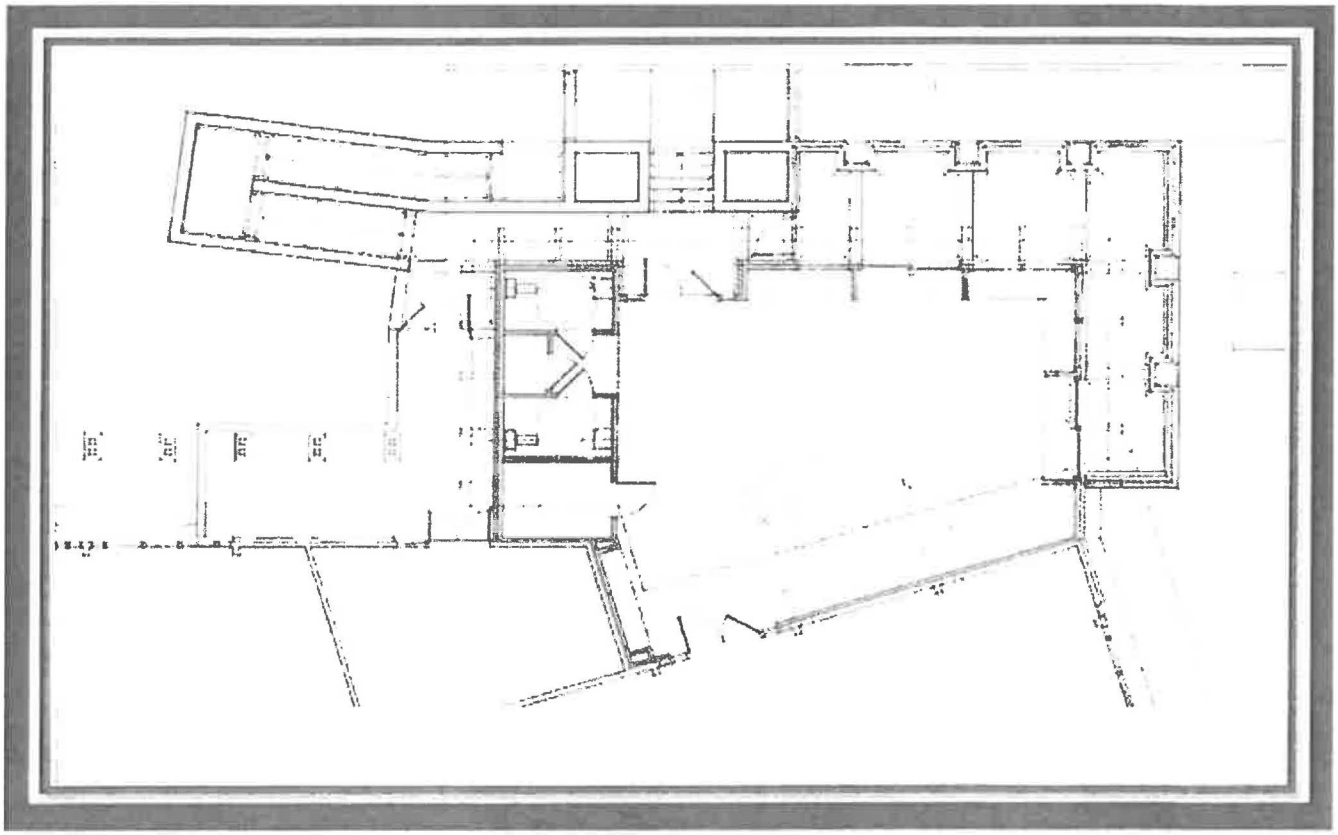


Exhibit C

Building and Common Area Costs

Building - 10,476 sf
Space - 1,280 sf (12%)

Roof

Roof Repatch

Exterior Paint

Exterior Paint Touchup as Needed

Exterior Cleaning

Landscaping

OFFICE OF THE CITY MANAGER/EXECUTIVE DIRECTOR
65 Civic Avenue
Pittsburg, CA 94565

TO: Mayor and Council Members

FROM: Garrett Evans, City Manager

SUBJECT: Adoption of a City Council Resolution Authorizing the Execution of a Consulting Services Agreement with Chambers Group Inc. for contract Planning Services related to the Blue Planet Global Innovation Center Project.

MEETING DATE: August 19, 2024

EXECUTIVE SUMMARY

The proposed item would authorize the City Manager to execute a Consulting Services Agreement with Chambers Group Inc. in an amount not to exceed One Hundred and Sixteen Thousand, Seven Hundred and Eighty-Seven dollars and Eighty-Five cents ($116,787.85) for CEQA Consultant Fees and would allocate Seventy-Five Thousand, Three Hundred and Forty-Seven dollars ($75,347) for the consultant budget for contract planning services related to the Blue Planet Global Innovation Center Project located at 895 East 3rd Street.

FISCAL IMPACT

Staff is requesting the City Council allocate to the project review budget, the sum of $116,787.85 to cover consultant costs related to the processing of the proposed application. The requested budget would cover the $75,347 cost for CEQA services by Chambers Group to prepare an Initial Study/Mitigated Negative Declaration (IS/MND), as well as $22,604.10 for the 30% City Environmental Review services fees in accordance with the City's Master Fee Schedule effective January 1, 2024, and approximately $18,836.75 as 25% refundable contingency reserve funds.

Prior to execution of any consultant contracts, the developer, Blue Planet Systems, Inc. would be required to execute a reimbursement agreement with the City and provide funds to cover the base cost. As such, there is no fiscal impact to the City.

RECOMMENDATION

Staff recommends the City Council adopt the Resolution authorizing the City Manager to execute the Consulting Services Agreement with RCH Group, Planning & Environmental Consulting, Inc. for preparation of CEQA Analysis and related services for the Blue Planet Global Innovation Center Project.

BACKGROUND

San Francisco Bay Aggregates, LLC (SFBA) is a wholly owned subsidiary of Blue Planet Systems, Inc. (Blue Planet), a cleantech start-up company founded in 2012 by Brent R. Constantz, Ph.D., and headquartered in Los Gatos, California. Blue Planet is developing technology, products and services related to economically sustainable carbon capture. The company created SFBA in 2017 with the intent to develop a project in Pittsburg to demonstrate its carbon capture and mineralization process, which uses carbon dioxide gas (CO2) and waste concrete as raw materials to produce 'upcycled' and carbon-sequestered rocks for use in fresh concrete. SFBA intends to sell these rock products to Bay Area businesses, governments and consumers for use in a wide range of low carbon and high-performance concrete applications. It is anticipated that the successful development of SFBA by Blue Planet will allow Pittsburg and the greater Bay Area to be a world leader in sustainable construction materials.

On September 10, 2019, the Planning Commission adopted Resolution No. 10130 to approve a use permit that would allow the applicant, San Francisco Bay Aggregates, LLC to operate a small, temporary carbon capture and mineralization facility at 895 East 3rd Street.

On September 20, 2019, Charlie Davidson and Joanne Fanucchi filed a joint appeal of the Commission's decision. The appeal expressed concerns regarding potential environmental impacts that could occur if a larger, permanent facility were to be built at the project site. The appeal did not oppose any of the findings that were made by the Planning Commission in approving the use permit for the proposed project.

On November 4, 2019, the City Council held a duly noticed public hearing on the appeal request, considered testimony, and voted 4-1 to adopt Resolution No. 19-13713, upholding Planning Commission Resolution No. 10130, approving a mitigated negative declaration, mitigation monitoring and reporting program, and use permit for the project, subject to conditions.

On August 20, 2021, Jacob Schneider, on behalf of SFBA, filed Use Permit Application No. 21-1590, requesting approval of a use permit amendment in order to construct and operate an 880-foot pipeline transporting flue gas from the Los Medanos Energy Center to the previously approved temporary carbon capture and mineralization facility (the "Project") site. The use of flue gas is part of the proof of concept for the temporary facility, to extract CO2 from the flue gas and mix with recycled cement to produce upscaled rock product.

On November 9, 2021, the Planning Commission adopted Resolution No. 10179 to approve the Mitigated Negative Declaration Addendum (#1) and Use Permit to construct and operate an 880-foot pipeline to a Temporary Carbon Capture and Mineralization Facility located at 895 East 3rd Street, for "SFBA Carbon Capture & Mineralization Facility Pilot Project Addendum (#1), AP-21-1590 (UP)."

On April 3, 2024, Blue Planet, filed a development application for a Use Permit and Design Review to permanently establish a Blue Planet Global Innovation Center Project located at 895 East 3rd Street.

SUBCOMMITTEE FINDINGS

The item was not presented to a sub-committee.

STAFF ANALYSIS

Staff has determined that the IS/MND to be prepared by Chambers Group Inc., pursuant to CEQA are necessary for the continued processing of the application due to the complexity of the Project. Prior to entering into any contract, the City will require a fully executed reimbursement agreement submitted by the applicant.

ATTACHMENTS:

1. Resolution
2. Contract and Services Agreement Chambers Group Inc. with Exhibits

Report Prepared By: Maurice Brenyah-Addow, Senior Planner

BEFORE THE CITY COUNCIL OF THE CITY OF PITTSBURG

In the Matter Of:

Authorizing City Manager to Execute)	
Consulting Services Agreement with)	
Chambers Group, Inc. for Environmental)	RESOLUTION NO. 24-
Review Services and Allocating Budget)	
AP-24-0067)	

WHEREAS, on April 3, 2024, Antonio Richmond of Blue Planet Systems ("Developer"), a company that operates a pilot carbon sequestration technology plant at 895 East 3rd Street, filed Planning Application No. AP-24-0067 for a Use Permit, Design Review and height Variance to establish a permanent carbon sequestration plant at the subject site; and

WHEREAS, the City intends to enter into contract with Chamber Group Inc., a CEQA Consulting company for environmental review services pursuant to the California Environmental Quality Act (CEQA) ("Consultant"); and

WHEREAS, Developer will be required to deposit the sum of One Hundred and Sixteen Thousand, Seven Hundred and Eighty-Seven dollars and Eighty-Five cents ($116,787.85) with the City, as Initial Deposit for the City to use for the cost of project management and environmental review services provided by Chambers Group, Planning & Environmental Consulting, Inc. with the following breakdown:

a) Seventy-Five Thousand, Three Hundred and Forty-Seven dollars ($75,347) for CEQA Consultant fees,
b) Twenty-Two Thousand, Six Hundred and Four dollars and Ten cents ($22,604.10) for City Environmental Review services fees in accordance with the City's Master Fee Schedule effective January 1, 2024, and
c) Eighteen Thousand, Eight Hundred and Thirty-Six dollars and Seventy-Five cents ($18,836.75) as refundable contingency reserve funds.

NOW, THEREFORE, BE IT RESOLVED that the City Council hereby authorizes the City Manager to execute a Consulting Services Agreement with Chambers Group, Inc. in an amount not to exceed $116,787.85 upon completion of a reimbursement agreement with the Developer and allocates $75,347 to the consultant budget, $22,604.10 for City Environmental Review services along with $18,836.75 for refundable contingency reserve funds.

PASSED AND ADOPTED by the City Council of the City of Pittsburg at a regular meeting on the 19th day of August 2024, by the following vote:

AYES:

NOES:

ABSTAINED:

ABSENT:

_____
Juan Antonio Banales, Mayor

ATTEST:

_____
Alice E. Evenson, City Clerk

CONSULTING SERVICES AGREEMENT BETWEEN THE CITY OF PITTSBURG AND CHAMBERS GROUP INC.

THIS Agreement ("Agreement") for consulting services is made by and between the City of Pittsburg, a municipal corporation ("City") and Chambers Group Inc, a California corporation ("Consultant") (together referred to as the "Parties") as of August 19, 2024 (the "Effective Date").

Section 1. SERVICES. Subject to the terms and conditions set forth in this Agreement, Consultant shall provide to City the services described in the Scope of Work attached as Exhibit A, and incorporated herein, at the time and place and in the manner specified therein.

1.1 Term of Services. The term of this Agreement shall begin on the Effective Date and shall end on August 19, 2026, or the date the Consultant completes the services specified in Exhibit A, whichever occurs first, unless the term of the Agreement is otherwise terminated or extended, as referenced herein.

1.2 Standard of Performance. Consultant shall perform all services required pursuant to this Agreement according to the standards observed by a competent practitioner of the profession in which Consultant is engaged.

1.3 Assignment of Personnel. Consultant shall assign only competent personnel to perform services pursuant to this Agreement. In the event that City, in its sole discretion, at any time during the term of this Agreement, requests in writing the reassignment of any such persons to ensure Consultant performs services in accordance with the Standard of Performance, Consultant shall, immediately upon receiving City's request, reassign such persons.

1.4 Time. Consultant shall devote such time to the performance of services pursuant to this Agreement as may be reasonably necessary to meet the standard of performance provided herein above and to satisfy Consultant's obligations hereunder.

Section 2. COMPENSATION. City hereby agrees to pay Consultant a sum not to exceed Ninety-Four Thousand, One Hundred and Eighty-Three dollars and Seventy-Five cents ($94,183.75), as set forth in Exhibit B, attached hereto and incorporated herein for services to be performed and reimbursable expenses incurred under this Agreement. This dollar amount is not a guarantee that the City will pay that full amount to the Consultant, but is merely a limit of potential City expenditures under this Agreement.

This dollar amount is not a guarantee that the City will pay that full amount to the Consultant, but is merely a limit of potential City expenditures under this Agreement. Consultant and City acknowledge and agree that compensation paid by City to Consultant under this Agreement is based upon Consultant's estimated costs of providing the services required hereunder, including salaries and benefits of employees and subcontractors of Consultant. Consequently, the parties further agree that compensation hereunder is intended to include the costs of contributions to any pensions and/or annuities to which Consultant and its employees, agents, and subcontractors may be eligible. City therefore has no responsibility for such contributions beyond compensation required under this Agreement.

2.1 **Invoices.** Consultant shall submit invoices, not more often than once a month during the term of this Agreement, based on the cost for services performed and reimbursable costs incurred prior to the invoice date. Invoices shall contain the following information, unless waived by the City Manager, or his or her designee:

- Serial identifications of progress bills; i.e., Progress Bill No. 1 for the first invoice, etc.;
- The beginning and ending dates of the billing period;
- A Task Summary containing the original contract amount, the amount of prior billings, the total due this period, the balance available under the Agreement, and the percentage of completion;
- At City's option, for each work item in each task, a copy of the applicable time entries or time sheets shall be submitted showing the name of the person doing the work, the hours spent by each person, a brief description of the work, and each reimbursable expense;
- The total number of hours of work performed under the Agreement by Consultant and each employee, agent, and subcontractor of Consultant performing services hereunder;
- The Consultant's signature.

2.2 **Monthly Payment.** City shall make monthly payments, based on invoices received, for services satisfactorily performed, and for authorized reimbursable costs incurred. City shall pay undisputed invoices that comply with the above requirements within 30 days from the receipt of the invoice.

2.3 **Final Payment.** Consultant shall submit its final invoice within 60 days of completing its services. Consultant's failure to submit its final invoice within this 60 day period shall constitute Consultant's waiver of any further billings to, or payments from, City.

2.4 **Reimbursable Expenses.** Reimbursable expenses, if any, are specified in Exhibit B and included in the total compensation referenced in Section 2. Expenses not listed in Exhibit B are not chargeable to, or reimbursable by, City.

2.5 **Payment of Taxes.** Consultant is solely responsible for the payment of all federal, state and local taxes, including employment taxes, incurred under this Agreement.

2.6 **Authorization to Perform Services.** The Consultant is not authorized to perform any services or incur any costs whatsoever under the terms of this Agreement until receipt of a written authorization from the City Manager, or his or her designee.

Section 3. FACILITIES AND EQUIPMENT. Except as set forth herein, Consultant shall, at its sole cost and expense, provide all facilities and equipment that may be necessary to perform the services required by this Agreement

Section 4. INSURANCE REQUIREMENTS. Before beginning any services under this Agreement, Consultant, at its own cost and expense, shall procure the types and amounts of insurance specified herein and maintain that insurance throughout the term of this Agreement. The cost of such insurance shall be included in the Consultant's bid or proposal. Consultant shall be fully responsible for the acts and omissions of its subcontractors or other agents.

4.1 **Workers' Compensation.** Consultant shall, at its sole cost and expense, maintain Statutory Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed directly or indirectly by Consultant in the amount required by applicable law. The requirement to maintain Statutory Workers' Compensation and Employer's Liability Insurance may be waived by the City upon written verification that Consultant is a sole proprietor and does not have any employees and will not have any employees during the term of this Agreement.

4.2 **Commercial General and Automobile Liability Insurance.**

4.2.1 **General requirements.** Consultant, at its own cost and expense, shall maintain commercial general and automobile liability insurance for the term of this Agreement in an amount not less than $2,000,000 per occurrence and $4,000,000 aggregate, combined single limit coverage for risks associated with the work contemplated by this Agreement.

4.2.2 **Minimum scope of coverage.** Commercial general coverage shall be at least as broad as Insurance Services Office Commercial General Liability occurrence form CG 0001 (most recent edition) covering comprehensive General Liability on an "occurrence" basis. Automobile coverage shall be at least as broad as Insurance Services Office Automobile Liability form CA 0001 (most recent edition) covering any auto (Code 1), or if Consultant has no owned autos, hired (code 8) and non-owned autos (Code 9). No endorsement shall be attached limiting the coverage.

4.2.3 **Additional requirements.** Each of the following shall be included in the insurance coverage or added as a certified endorsement to the policy:

a. The Commercial General and Automobile Liability Insurance shall cover on an occurrence basis.

b. City, its officers, officials, employees, agents, and volunteers shall be covered as additional insureds for liability arising out of work or operations on behalf of the Consultant, including materials, parts, or equipment furnished in connection with such work or operations; or automobiles owned, leased, hired, or borrowed by the Consultant. Coverage can be provided in the form of an endorsement to the Consultant's insurance at least as broad as CG 20 10 11 85, or both CG 20 10 10 01 and CG 20 37 10 01.

c. For any claims related to this Agreement or the work hereunder, the Consultant's insurance covered shall be primary insurance as respects the City, its officers, officials, employees, agents, and volunteers. Any insurance or self-insurance maintained by the City, its officers, officials, employees, agents or volunteers shall be excess of the Consultant's insurance and non-contributing.

d. The policy shall cover inter-insured suits and include a "separation of Insureds" or "severability" clause which treats each insured separately.

e. Consultant agrees to give at least 30 days prior written notice to City before coverage is canceled or modified as to scope or amount.

4.3 Professional Liability Insurance.

4.3.1 General requirements. Consultant, at its own cost and expense, shall maintain for the period covered by this Agreement professional liability insurance for licensed professionals performing work pursuant to this Agreement in an amount not less than $1,000,000 per occurrence or claim covering the Consultant's errors and omissions.

4.3.2 Claims-made limitations. The following provisions shall apply if the professional liability coverage is written on a claims-made form:

a. The retroactive date of the policy must be shown and must be before the date of the Agreement.

b. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the Agreement or the work.

c. If coverage is canceled or not renewed and it is not replaced with another claims-made policy form with a retroactive date that precedes the date of this Agreement, Consultant must purchase an extended period coverage for a minimum of five (5) years after completion of work under this Agreement.

d. A copy of the claim reporting requirements must be submitted to the City for review prior to the commencement of any work under this Agreement.

4.4 All Policies Requirements.

4.4.1 Submittal Requirements. Consultant shall submit the following to City prior to beginning services:

a. Certificate of Liability Insurance in the amounts specified in this Agreement; and

b. Additional Insured Endorsement as required for the General Commercial and Automobile Liability Polices.

4.4.2 Acceptability of Insurers. All insurance required by this Agreement is to be placed with insurers with a Bests' rating of no less than A:VII.

4.4.3 **Deductibles and Self-Insured Retentions.** Insurance obtained by the Consultant shall have a self-insured retention or deductible of no more than $100,000.

4.4.4 **Wasting Policies**. No policy required herein shall include a "wasting" policy limit (i.e. limit that is eroded by the cost of defense).

4.4.5 **Waiver of Subrogation.** Consultant hereby agrees to waive subrogation which any insurer or contractor may require from Consultant by virtue of the payment of any loss. Consultant agrees to obtain any endorsements that may be necessary to effect this waiver of subrogation, but this provision applies regardless of whether or not the City has received a waiver of subrogation endorsement from the insurer.

The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by the Consultant, its employees, agents, and subcontractors.

4.4.6 **Subcontractors.** Consultant shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein, and Consultant shall ensure that City, its officers, officials, employees, agents, and volunteers are covered as additional insured on all coverages.

4.4.7 **Excess Insurance.** If Consultant maintains higher insurance limits than the minimums specified herein, City shall be entitled to coverage for the higher limits maintained by the Consultant.

4.5 **Remedies.** In addition to any other remedies City may have if Consultant fails to provide or maintain any insurance policies or policy endorsements to the extent and within the time herein required, City may, at its sole option: 1) obtain such insurance and deduct and retain the amount of the premiums for such insurance from any sums due under the Agreement; 2) order Consultant to stop work under this Agreement and withhold any payment that becomes due to Consultant hereunder until Consultant demonstrates compliance with the requirements hereof; and/or 3) terminate this Agreement.

Section 5. INDEMNIFICATION AND CONSULTANT'S RESPONSIBILITIES.

5.1 **General Indemnification**. Consistent with California Civil Code Section 2782.8, Consultant shall, to the fullest extent permitted by law, indemnify, protect, defend and hold harmless City, and its employees, officials, and agents, from any and all demands, losses, claims, costs, liabilities, and expenses for any damage, injury, or death, including any and all administrative fines, penalties, or costs imposed as a result of an administrative proceeding, that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of Consultant, its officers, employees, agents, contractors, subconsultants, or any persons under its direction or control. If requested by City, Consultant shall defend any such suits at its sole cost and expense. If City elects to provide its own defense, Consultant shall reimburse City for any expenditures, including reasonable attorneys' fees and costs. Consultants' obligations under this section exist regardless of concurrent negligence or willful misconduct on the part of City or any other person; provided, however, that Consultant will not be required to indemnify, including the cost to defend, City for the proportion of liability a court determines does not arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of Consultant, its officers, employees, agents, contractors, subconsultants, or any persons under its direction or control. This Section **5.1** shall survive any expiration or termination of this Agreement.

5.2 **PERS Indemnification.** In the event that Consultant or any employee, agent, or subcontractor of Consultant providing services under this Agreement is determined by a court of competent jurisdiction or the California Public Employees Retirement System (PERS) to be eligible for enrollment in PERS as an employee of City, Consultant shall indemnify, defend, and hold harmless City for the payment of any employee and/or employer contributions for PERS benefits on behalf of Consultant or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of City.

Section 6. STATUS OF CONSULTANT.

6.1 **Independent Contractor.** At all times during the term of this Agreement, Consultant shall be an independent contractor and shall not be an employee of City.

6.2 **Consultant Not an Agent.** Except as City may specify in writing, Consultant shall have no authority, express or implied, to act on behalf of City in any capacity whatsoever as an agent. Consultant shall have no

authority, express or implied, pursuant to this Agreement to bind City to any obligation whatsoever.

Section 7. LEGAL REQUIREMENTS.

7.1 Governing Law. The laws of the State of California shall govern this Agreement.

7.2 Compliance with Applicable Laws. Consultant and any subcontractors shall comply with all laws applicable to the performance of the work hereunder. Consultant shall also, to the extent required by the California Labor Code, pay not less than the latest prevailing wage rates as determined by the California Department of Industrial Relations.

7.3 Licenses and Permits. Consultant represents and warrants to City that Consultant and its employees, agents, and any subcontractors have, and will maintain at their sole cost and expense, all licenses, permits, qualifications, and approvals of whatsoever nature that are legally required to practice their respective professions. In addition to the foregoing, Consultant and any subcontractors shall obtain and maintain during the term of this Agreement valid business licenses from City.

7.4 Nondiscrimination and Equal Opportunity. Consultant shall not discriminate, on the basis of a person's race, religion, color, national origin, age, physical or mental handicap or disability, medical condition, genetic information, marital status, sex, sexual orientation, gender or gender identity, against any employee, applicant for employment, subcontractor, bidder for a subcontract, or participant in, recipient of, or applicant for any services or programs provided by Consultant under this Agreement. Consultant shall comply with all applicable federal, state, and local laws, policies, rules, and requirements related to equal opportunity and nondiscrimination in employment, contracting, and the provision of any services that are the subject of this Agreement, including but not limited to the satisfaction of any positive obligations required of Consultant thereby.

Section 8. TERMINATION AND MODIFICATION.

8.1 Termination. Upon ten days' prior written notice, City may cancel this Agreement at any time and without cause upon such written notification to Consultant. In the event of termination, Consultant shall be entitled to compensation for services performed to the effective date of termination; City, however, may condition payment of such compensation upon Consultant delivering to City any or all documents, photographs, computer software, video and audio tapes, and other materials provided to Consultant

or prepared by or for Consultant or the City in connection with this Agreement.

8.2 **Amendments.** The parties may amend this Agreement only by a writing signed by the parties hereto.

8.3 **Assignment and Subcontracting.** City and Consultant recognize and agree that this Agreement contemplates personal performance by Consultant and is based upon a determination of Consultant's unique personal competence, experience, and specialized personal knowledge. Moreover, a substantial inducement to City for entering into this Agreement was and is the professional reputation and competence of Consultant. Consultant may not assign this Agreement or any interest therein without the prior written approval of the City Manager, or his or her designee. Consultant shall not subcontract any portion of the performance contemplated and provided for herein, other than to the subcontractors noted in the proposal, without prior written approval of the City Manager, or his or her designee.

8.4 **Survival.** All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating liability between City and Consultant, including but not limited to the provisions of Section 5, shall survive the termination of this Agreement.

8.5 **Options upon Breach by Consultant.** If Consultant materially breaches any of the terms of this Agreement, City's remedies shall include, but not be limited to, the following:

8.5.1 Immediately terminate the Agreement;

8.5.2 Retain the plans, specifications, drawings, reports, design documents, and any other work product prepared by Consultant pursuant to this Agreement;

8.5.3 Retain a different consultant to complete the work described in Exhibit A not finished by Consultant; or

8.5.4 Charge Consultant the difference between the cost to complete the work described in Exhibit A that is unfinished at the time of breach and the amount that City would have paid Consultant pursuant to Section 2 if Consultant had completed the work.

8.5.5 The remedies mentioned in this Agreement are not exclusive of any other right, power or remedy permitted by law. The City's failure or

delay in exercising any remedy shall not constitute a waiver of such remedy or preclude the further exercise of City's rights.

Section 9. KEEPING AND STATUS OF RECORDS.

9.1 Records Created as Part of Consultant's Performance. All final versions of reports, data, maps, models, charts, studies, surveys, photographs, memoranda, plans, studies, specifications, records, files, or any other documents or materials, in electronic or any other form, that Consultant prepares or obtains pursuant to this Agreement and that relate to the matters covered hereunder shall be the property of the City. Consultant hereby agrees to deliver those documents to the City upon termination of the Agreement, and the City may use, reuse or otherwise dispose of the documents without Consultant's permission. It is understood and agreed that the documents and other materials, including but not limited to those described above, prepared pursuant to this Agreement are prepared specifically for the City and are not necessarily suitable for any future or other use. City and Consultant agree that, until final approval by City, all data, plans, specifications, reports and other documents are confidential drafts and will not be released to third parties by Consultant without prior written approval of City.

9.2 Consultant's Books and Records. Consultant shall maintain any and all records or documents evidencing or relating to charges for services or expenditures and disbursements charged to the City under this Agreement for a minimum of 3 years, or for any longer period required by law, from the date of final payment to the Consultant to this Agreement. All such records shall be maintained in accordance with generally accepted accounting principles and shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of the City. Pursuant to Government Code Section 8546.7, the Agreement may be subject to the examination and audit of the State Auditor for a period of 3 years after final payment under the Agreement.

Section 10 MISCELLANEOUS PROVISIONS.

10.1 Attorneys' Fees. If a party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provision of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees in addition to any other relief to which that party may be entitled. The court may set such fees in the same action or in a separate action brought for that purpose.

10.2 **Venue.** In the event that either party brings any action against the other under this Agreement, the parties agree that trial of such action shall be vested exclusively in the state courts of California in Contra Costa County or in the United States District Court for the Northern District of California.

10.3 **Severability.** If a court of competent jurisdiction finds or rules that any provision of this Agreement is invalid, void, or unenforceable, the provisions of this Agreement not so adjudged shall remain in full force and effect. The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.

10.4 **No Implied Waiver of Breach**. The waiver of any breach of a specific provision of this Agreement does not constitute a waiver of any other breach of that term or any other term of this Agreement.

10.5 **Successors and Assigns.** The provisions of this Agreement shall inure to the benefit of and shall apply to and bind the successors and assigns of the parties.

10.6 **Conflict of Interest.** Consultant may serve other clients, but none whose activities within the corporate limits of City or whose business, regardless of location, would place Consultant in a "conflict of interest," as that term is defined in the Political Reform Act, codified at California Government Code Section 81000 *et seq.*

Consultant shall not employ any City official in the work performed pursuant to this Agreement. No officer or employee of City shall have any financial interest in this Agreement that would violate California Government Code Sections 1090 *et seq.*

10.7 **Solicitation.** Consultant agrees not to solicit business at any meeting, focus group, or interview related to this Agreement, either orally or through any written materials.

10.8 **Notices.** Any notice, demand, request, consent or approval that either party is required to give the other pursuant to this Agreement, shall be in writing and may be given by either (i) personal service, or (ii) certified United States mail, postage prepaid, return receipt requested, Notice shall be effective upon personal delivery or delivery to the addresses specified below, as reflected on the receipt of delivery or return receipt, as applicable.

Consultant: Chambers Group, Inc.
ATTN: Mike McEntee, President
3151 Airway Avenue, Suite F208,
Costa Mesa, CA 92626

City: City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565
ATTN: City Manager

10.9 Professional Seal. Where applicable in the determination of the City Manager, or his or her designee, the first page of a technical report, first page of design specifications, and each page of construction drawings shall be stamped/sealed and signed by the licensed professional responsible for the report/design preparation. The stamp/seal shall be in a block entitled "Seal and Signature of Registered Professional with report/design responsibility."

10.10 Integration. This Agreement, including the scope of work attached hereto and incorporated herein as Exhibits A and B represents the entire and integrated agreement between City and Consultant and supersedes all prior negotiations, representations, or agreements, either written or oral. To the extent there are any inconsistences between this Agreement, the Exhibits, and Consultant's proposal, the Agreement shall control. To the extent there are any inconsistences between the Exhibits and the Consultant's Proposal, the Exhibits shall control.

Exhibit A Scope of Services
Exhibit B Compensation Schedule

10.11 Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one agreement.

10.12 Construction of Agreement. Each party hereto has had an equivalent opportunity to participate in the drafting of the agreement and/or to consult with legal counsel. Therefore, the usual construction of an agreement against the drafting party shall not apply hereto.

10.13 No Third Party Beneficiaries. This Agreement is made solely for the benefit of the parties hereto, with no intent to benefit any third parties.

The Parties have executed this Agreement as of the Effective Date.

CITY OF PITTSBURG	**CONSULTANT**
_____	_____
Garrett Evans, City Manager	Mike McEntee, President

Approved as to Form:

_____
Donna Mooney, City Attorney

EXHIBIT A

SCOPE OF SERVICES

Consultant shall perform the following services:

Prepare CEQA analysis for the Global Innovation Center. The appropriate CEQA documentation for the Project will be determined through the preparation of an IS Checklist :
Consultant shall:
• Assist with determining the level of documentation (e.g. IS) required based on the scope noted above,
• Prepare all CEQA documentation according to all applicable State and Local requirements,
• Coordinate and supervise of any sub-consultant specialists as required,
• Coordinate and collaborate with City staff, a subconsultant, and Blue Planet as required,
• Complete biological resource desk top studies,
• Attend a public meeting as needed, and
• Assist City staff with preparation and filing of notices with the County and State Clearing House.

Consultant shall include City staff in all communications with Blue Planet. Consultant shall begin work upon receipt of written notice to proceed (NTP). Consultant shall perform the following tasks:

Task 1: Project Initiation

Task 1A: Initial Meeting and Data Acquisition

After receiving NTP, the Chambers Group Project Manager shall be prepared to meet with representatives from the City and Blue Planet at a Project Initiation/Kick-Off Meeting to discuss the project description, specific project issues, and CEQA schedule; as well as receive any pertinent project information reports in addition to the Blue Planet's Project description. The Chambers Group Project Manager shall be available to survey the project site and the immediate surrounding area and make a photographic record to document the existing conditions.

Chambers Group shall review all available project-related data and reports provided by Blue Planet. Consultant is not responsible for the accuracy of any existing technical reports not authored by Consultant. Following the review of existing data, Consultant shall provide identify gaps in the data, and provide recommendations for correcting the gaps, in a memorandum to the City. Chambers Group shall work closely with the City to determine what additional data must be collected in support of the CEQA document being prepared. Chambers Group may use these documents in the analysis of the Project.

Task 1B: Project Description

Chambers Group will develop a comprehensive description of the Proposed Project that will form the basis for the analysis of the potential impacts on the environment, based on the information provided by Blue Planet. The Project description shall include a narrative and graphical presentation of the Proposed Project, including components, location and boundaries, regional and vicinity maps, and a statement of the Project goals and objectives.

Chambers Group assumes that Blue Planet will provide Project details necessary to develop the Project description, including but not limited to site maps, construction equipment, quantities of materials imported or exported, schedule, and site plans. Consultant assumes Blue Planet will ensure stability and accuracy of the technical details to be used in the impact analysis conducted on behalf of the City.

Deliverables: Kickoff Meeting Notes, one data gap memorandum, if necessary, and one electronic Word and PDF copy of the Project description for City and Blue Planet review. One electronic copy of the final Project description.

Task 2: Technical Studies
Based on the Proposed Project improvements, Consultant shall deliver the technical studies below to supplement the analysis in the appropriate CEQA document.

Task 2A: Air/GHG/Energy
Consultant shall retain Tamura and ensure completion of the Air, GHG, and energy analysis of the IS. The latest version of CAPCOA's CalEEMod® software will be used to estimate emissions from construction and commercial operations/road traffic, but it is assumed that off-model calculations will likely be needed to estimate emissions from activities such as the yet-unspecified research projects, industrial activity, and (potentially) any marine/rail operations associated with the project. For the energy portion of the IS/MND Consultant shall answer the checklist questions and provide supporting text similar in detail to the 2019 MND.

The schedule is dependent on the speed with which Tamura receives responses to information requests, and the level of effort needed to estimate emissions from unusual sources. Assuming that the research projects are relatively few in number and relatively benign with regard to emissions estimation efforts, Consultant shall complete draft documentation within three work weeks after receiving those responses.

Deliverables: One electronic draft report to be included as an appendix to the MND. Consultant shall ensure Tamura will incorporate one round of comments into one final electronic report.

Task 2B: Biological Resources Desktop Analysis
According to the Biological Resource Assessment report prepared for the Pilot Project in 2019 by Wood Biological Consulting (BRA), aside from the small shoreline area, the Project site is developed with areas of non-native vegetation. In addition, the report and project description state that there will be no in-water work. Therefore, the scope of work includes a desktop analysis of biological resources including an updated literature review.

Prior to commencing the desktop analysis, Chambers Group will conduct a literature review. This task will include a review of the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) and the California Native Plant Society's Electronic Inventory (CNPSEI) for the latest records of reported occurrences of federal- or state-listed endangered or threatened species, California Species of Concern (SSC), or otherwise special status species or habitats that may occur within or in the immediate vicinity (within 5 miles) of the Project site. A Trust Resource Report will be generated through the United States Fish and Wildlife (USFWS) Information for Planning and

Conservation (IPaC) planning tool for species occurrences and critical habitat that may occur within or in the immediate vicinity (within 5 miles) of the Project site. The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey will be reviewed to identify soils that occur within the Project site. In addition, the USFWS National Wetlands Inventory (NWI) maps, Google Earth, and historical aerial photographs of the Project area will be reviewed for hydrological features within the Project site that may fall under the regulatory jurisdiction of the US Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act, Regional Water Quality Control Board (RWQCB) jurisdiction pursuant to Section 401 of the Clean Water Act, and CDFW jurisdiction pursuant to Section 1602 of the Fish and Game Code. This task will also include a review of the BRA.

After completing the desktop assessment, Chambers Group will prepare a brief letter report summarizing the results of the literature review. The report will either state that based on the existing site conditions and the updated literature review, no changes or new potential impacts to biological resources have occurred or exist on the Project site or will list changes that may have occurred to adequately address impacts to biological resources. The report will contain approximately 15 pages of text with attachments including literature review reports. The report will include one electronic draft report to be included as an appendix to the MND. Chambers Group will incorporate one round of comments into one final electronic report.

Deliverables: The Biological Resources letter report will contain approximately 15 pages of text with attachments including literature review reports. The report will include one electronic draft report to be included as an appendix to the MND. Chambers Group will incorporate one round of comments into one final electronic report.

Task 2C: Cultural Resources Report

Literature Review

Chambers Group will conduct a literature review, including a review of the findings of a records search through the California Historical Resources Information System (CHRIS) database at the appropriate Information Center (IC). The records search will be conducted by IC staff and review relevant previously recorded cultural resources and previous investigations completed for the half-mile search radius surrounding the project site. Information to be reviewed will include location maps for all previously recorded cultural resources, previously conducted investigation boundaries, National Archaeological Database (NADB) citations and copies for associated reports, historic maps, and historic addresses. Chambers Group will also review properties listed on/as the California Points of Historical Interest (CPHI), California Historical Landmarks (CHL), Caltrans Historic Highway Bridge Inventory, California Historical Resources Inventory, local city and county registries of historic properties, the California Register of Historic Resources (CRHR), and the National Register of Historic Places (NRHP). Additional sources of information that may be reviewed include but are not limited to Certified Local Government annual reports and other data, HABS/HAER records, the National Register Information System, the on-line database for National Register sites, Calisphere Digital Resources, Online Archive of California, General Land Office Plat Maps, Sanborn Fire Insurance Maps, local historical societies and libraries, as well as inventory files and data on-file with other agencies that control property near the area. The task will also include a search for potential prehistoric and/or historic burials (human

remains) evident in previous site records and/or historical maps (i.e., Sanborn Fire Insurance Maps, General Land Office Plat Maps).

I Consultant shall request review of the sacred land files (SLF) of the Native American Heritage Commission (NAHC) to identify if any resources important to Native Americans have been recorded within the project area and surrounding vicinity. The NAHC will provide the results and a list of affiliated tribal representatives to contact for additional information. Chambers Group will provide the results of the NAHC SLF search and list of tribes in the desktop cultural resources letter report. Chambers Group shall conduct informal Native American outreach in the form of NAHC Scoping notification emails and follow up phone calls to all NAHC-listed points of contact provided with the SLF results. Chambers Group shall assist in coordinating AB 52 consultation requirements.

Assumptions:

• City will provide Chambers Group with confirmation on the Project footprint at the time of authorization or NTP. It is assumed that this information will not change once Chambers Group has initiated the tasks above.

• All required records searches will be submitted within one week of receipt of NTP.

• Fees incurred by the IC and Museum to conduct the record searches, estimated at $1,200, are included as part of this task. Consultant will bill the actual amount the institutions charge without a markup.

*• Currently, the IC estimates **4 to 6 weeks** from the date of request to provide results for a records search. Currently, the NAHC estimates **6 to 8 weeks** from the date of request to provide results for the SLF request.*

• This task does include the issuance of NAHC Scoping Notification Letters to NAHC-listed points of contact to request information regarding the proposed Project site.

• This task assumes that no previously documented cultural resources are recorded within the Project site. If the records search data reveals that potentially significant cultural resources are documented within the Project site and/or surrounding half-mile radius study area that may be affected by the Project, further research and updated documentation may be required, at additional cost.

• This task does not include cultural resources survey, testing, data recovery, analysis, monitoring, or similar programs.

Field Survey

Chambers Group shall complete a field survey of a portion of the Project site (APN 073-020-019-3). Considering that most of the Project site is fully developed with concrete surface throughout the existing facility, the survey will focus on the area just outside the existing facility along the E. 3rd Street Road alignment to address the proposed underground utility work associated with the Project. The cultural resources survey will be conducted in accordance with the professional standards as described by the National Parks Service, Secretary of Interior's Standards and Guidelines, as amended, for Archaeology and Historic Preservation. Chambers Group cultural resources specialist will survey the Project area for the presence of:

• Prehistoric artifacts (e.g., flaked stone tools) , stone milling tools, tool-making debris,

• Historic artifacts (e.g., metal, glass, ceramics),

• Sediment discoloration (ex. midden, hearth features),

• Depressions and other features indicative of the former presence of structures or buildings (e.g., post holes, foundations),

• Historic ruins, buildings, structures, and/or objects.

Based on available data, this task scope and cost estimate assumes no cultural resources will be identified during the survey. Should cultural resources be identified, a revised scope of work and cost may be necessary.

Assumptions:

• This task assumes that the City will provide Chambers Group with confirmation of the Project footprint at the time of authorization or NTP. It is assumed that this information will not change once Chambers Group has initiated the tasks above.

• This cost estimate assumes that Chambers Group will not be accompanied by a tribal monitor while conducting survey of the Project site. If a tribal monitor is required, it is assumed that the City will address the associated cost, or a revised scope of work and cost will be necessary

• This task assumes no cultural resources will be encountered during the field survey. If any resources are identified during the survey, these findings will require in-field and post-field documentation and need to be discussed in the report and DPR forms (archaeological site records) will need to be prepared and included as a confidential appendix. If cultural resources are identified, and pending approval to record such items, a change order will be required.

Cultural Resources Report

Chambers Group will prepare a Cultural Resources Report deliverable. The Cultural Resources Report will be prepared according to Archaeological Resource Management Report (ARMR) Guidelines and California State Historic Preservation Office (SHPO) Guidelines, detail the methods used, and describe the results of the records search, survey, all additional research and literature review, and any related recommendations. The report will include results from an on-ground survey of the proposed Project site. The report is assumed to contain up to 30 pages of text, graphics, and appendices. The report will also discuss the paleontological records search results and the basic geologic context of the Project site, to support any related recommendations regarding paleontology, as well as addressing the results of the NAHC SLF records search and related informal NAHC-listed Native American outreach.

Assumptions:

• Chambers Group will provide a draft report to the City for review within six weeks after the survey is completed.

• This task cost estimate assumes that only one round of consolidated report comments from the City will be received to be incorporated into the final document within two weeks after draft review. If additional comments are received, a revised scope of work and cost for additional review may be necessary.

• This task assumes that no previously documented cultural resources are recorded within the Project site, and no newly identified cultural resources will be identified during the survey. If the records search

data reveals that cultural resources are documented within the Project site, or if resources are identified during the survey, a revised scope of work may be necessary.

• This task does not include cultural resources testing, data recovery, analysis, monitoring, or similar programs.

• This task does not include survey and analysis of historic-period built environment resources. It is assumed that no such resources are located within the Project site or adjacent right-of-way (publicly accessible surface streets). If historic-period built environment infrastructure are identified within the Project right-of-way, and may be affected by the Project, these resources would need to be evaluated for eligibility for listing on the National Register of Historic Places, the California Register of Historical Resources, and/or a local register. If historic-period built environment resources that may be affected by the Proposed Project are identified, a separate scope and cost will be required to assess these resources.

• The report associated with this task will focus on the known areas of direct impact as illustrated in associated documents provided by the Applicant. Laydown, storage, or utility yards, or the like, have not been identified, and are therefore not part of this study proposal.

Deliverables: Records search requests, email NAHC scoping letters, sending, tracking, and follow up calls to conduct informal Native American outreach, pedestrian field survey, and Cultural Resources Report

Task 3: Prepare an IS

Once the project description has been approved, Chambers Group will prepare an IS Checklist to confirm the preparation of an appropriate CEQA Documentation for the Proposed Project. The IS will be prepared using the most recent revision of the IS Environmental Checklist Form suggested in the CEQA Guidelines Appendix G. In compliance with CEQA Section 15063, the IS will contain the following, in brief form:

• A description of the project, including the location of the Project;
• An identification of the environmental setting;
• A preliminary identification of environmental effects by use of a checklist, matrix, or other method, with some evidence to support the entries; and
• A preliminary discussion of the ways to mitigate the significant effects identified; if any.

The environmental factors outlined in the CEQA checklist include:

• Aesthetics
• Agricultural and Forestry Resources
• Air Quality
• Biological Resources
• Cultural Resources
• Energy
• Geology and Soils
• Greenhouse Gas Emissions
• Mandatory Findings of Significance
• Mineral Resources
• Noise
• Population and Housing
• Public Services
• Recreation
• Transportation
• Tribal Cultural Resources
• Utilities and Service Systems

- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Wildfire
- Land Use and Planning

Deliverables: One electronic copy of the Administrative IS for City review.

Task 4: CEQA Documentation
After completion of the draft IS, Chambers Group will provide a recommendation for the appropriate level of CEQA documentation. The IS will be used as a guide in the decision as to the appropriate environmental documentation to prepare for the Project. Based on coordination with the City and results of the analysis within the IS including the technical studies, Chambers Group will prepare an ND or MND CEQA Documentation for City adoption. If it is determined that an Environmental Impact Report (EIR) would be the appropriate CEQA document, an amendment to this Agreement would be required to complete the CEQA process. After the amendment is executed, the IS would be finalized to develop a focused EIR addressing resource areas with impacts.

This scope is for an ND or an MND. The process for preparing a ND is the same as an MND with the exception that a MMRP is not required under an ND. Therefore, only the MND process is described below.

Task 4A: Prepare Administrative Draft MND
After receipt of one set of integrated comments on the draft IS from the City, Chambers Group will revise the IS accordingly. If one or more significant impacts are identified during the IS process, including the results from the (Biological, Air, Energy, and GHG studies), CEQA allows the preparation of an MND when those impacts can be mitigated to a less than significant level.
The following is a list of the required contents of an MND:

- a brief description of the project;
- the location of the project (preferably shown on a map);
- the name of the project proponent;
- a finding that the project will not have a significant effect on the environment;
- mitigation measures included in the project to avoid potentially significant effects; and
- a copy of the IS.

For each CEQA environmental checklist discipline item, the existing environmental setting of the project site and surroundings will be characterized from the existing literature base. An environmental impacts analysis will be prepared for each checklist entry. Based on CEQA-defined significance criteria, Chambers Group will determine the potential for any adverse or significant adverse impacts and present mitigation measures to reduce any such impacts to a level below significance.

Deliverables: One electronic copy of the Administrative Draft MND for City review.

Task 4B: Prepare/Distribute the Public Review MND

After receipt of one set of integrated comments on the Administrative Draft MND from the City, Chambers Group will then revise the MND accordingly. Chambers Group will prepare and distribute copies of the Draft MND to the City and State Clearinghouse.

If the City allows for external submittal to the OPR, Chambers Group will draft a Notice of Intent (NOI), Notice of Completion (NOC), Summary Form, and the Public Review Draft MND with associated appendices to be submitted electronically on behalf of the City. The City must approve Chambers Group as a submitter on the OPR CEQANet Web portal. For submittal to the County Clerk, documents will be submitted directly to the County offices by the Project Manager. It is assumed that the City will distribute the NOI through at least one of the following methods:

- Publication at least one time in a newspaper of general circulation in the area affected by the Project.
- Posting of the notice on and off-site in the area where the Project is located.
- Direct mailing to the owners and occupants of property contiguous to the Project.

Chambers Group will support the City in developing notices to be published in public newspapers, on websites, and at the Project site. Fees associated with coordinating and publishing in public newspapers, on websites, or posting of a physical notice at the Project are not included in this scope and associated fees for newspaper postings vary.

Deliverables: One electronic copy of the Public Draft MND and technical reports as appendices for Public Review Distribution by the City. For OPR submittal, one electronic copy of the NOC, one electronic copy of the Summary Form, one electronic copy of the NOI, electronic copies of the Public Draft MND and technical reports, and one electronic copy of the Summary Form.

Task 4C: Prepare Final MND with Response to Comments

Final MND with Response to Comments. Based upon comments received from public review, responses to the comments will be prepared. A draft of these responses will be provided to the City. Upon receipt of one complete set of comments from the City on the responses, a Final MND will be prepared. This document combined with the Draft MND will constitute the Final MND to be used by the City when considering approval of the project.

It is assumed that Chambers Group would coordinate with the City and Blue Planet to address public comments received and comments would be addressed based on available data. We anticipate no more than 6 comment letters with an average of 5 comments each (30 different comments total) will be received and addressed. The cost estimate for this task assumes that no new technical analysis would be required in response to the public comments. If more comments than assumed are received or more analysis will be required to respond to comments, Chambers Group will coordinate with the City to identify comments to be addressed by the Chambers Group team and/or provide these services under a separate scope and fee.

Deliverables: One electronic PDF copy of the Final MND for the City.

Prepare Mitigation Monitoring and Reporting Plan. Following preparation of the MND, Chambers Group will prepare a Draft Mitigation Monitoring and Reporting Plan (MMRP) as required by CEQA for

review by the City. The Final MMRP incorporating the City's comments will be incorporated into the Final MND.

Deliverables: MMRP incorporated into Final MND.

Notice of Determination. The Notice of Determination (NOD) is filed following the City's decision to carry out or approve the project for which the MND has been prepared. Chambers Group will prepare the NOD and will file the NOD with the State Clearinghouse and the Contra Costa County Clerk. Chambers will not be responsible for Fish and Game filing fees.
Deliverables: One electronic copy of the NOD for the City. One NOD to be filed with the State Clearinghouse and the Contra Costa County Clerk.

Task 5: Meetings/Public Hearings
Chambers Group's Project Manager and key technical personnel will attend 6 bi-monthly progress meetings (2 per month for 3 months) with the City. Consultant shall attend one public hearing. The Chambers Group will coordinate with City staff to plan and support the City's presentation of the CEQA document at the public hearings. It is assumed that internal progress meetings will take no more than one hour (if there are 30-minute meetings, then we are available for 12 meetings), and the public meeting will take no more than three hours. Chambers Group will attend any other additional meetings requested by the City on a time and materials basis.

Assumptions:
• This scope assumes that the magnitude and nature of the emissions generated by the Project will not be substantial enough to necessitate dispersion modeling or a quantitative health risk assessment (HRA).
• This scope assumes no ground disturbance and native soils would be disturbed to the extent that a cultural resource data request and associated report would be required. If unanticipated soil disturbance is required, an amendment to this Agreement would be necessary to produce a Cultural Resources Desktop Study Letter Report for completion of the CEQA analysis.
• This scope assumes that the amount of traffic generated by the Project would not trigger a full VMT analysis. If the traffic generated is higher volume than anticipated an amendment to this Agreement would be necessary to complete a traffic impact assessment.
• Kickoff Meeting is in Task 1 and not included with the 6 progress meetings in Task 5.
• If the CEQA documentation requires an EIR the scope and budget will need to be revisited to complete CEQA requirements for an EIR.
• This scope assumes the City will create a distribution list of agencies and interested parties to receive notification required for the CEQA process and mail the notices to the distribution list.
• This scope assumes all hard copies will be produced by the City.

PROJECT ACTION	PROJECT DURATION
Notice to Proceed	*1 Day*
Kick-Off/Data Collection	*1 Week from the NTP*
Project Description*	*2 Week*
City review of Project Description	*1 Week*
Prepare Draft Initial Study*	*11 Weeks*
City Review of Draft Initial Study	*1 Week*
Prepare Administrative Draft IS/MND	*2 Weeks*
City Review of Administrative Draft IS/MND	*1 Week*
Prepare/Distribute the IS/MND and Notices	*2 Weeks*
City Review of Draft IS/MND and Notices	*1 Week*
Public Circulation	*30 Days*
Prepare Final MND with Response to Comments and MMRP	*2 Weeks*
City Review of Final IS/MND, Response to Comment, and MMRP	*1 Week*
Notice of Determination	*1 Week*
Approximate Total	*30 weeks*

EXHIBIT B

COMPENSATION SCHEDULE

Billing Rates

Effective through contract termination date.

STAFF. Charges for all professional, technical, and administrative personnel directly charging time to the project will be calculated and billed on the basis of the following staff category hourly "Billing Rates." Billing Rates include fringe benefits, burden, and fee.

Staff Title	Rate	Staff Title	Rate
Senior Director	$260.00	Director	$231.00
Project Manager 4	$221.00	GIS Technician 4	$174.00
Project Manager 3	$200.00	GIS Technician 3	$145.00
Project Manager 2	$168.00	GIS Technician 2	$128.00
Project Manager 1	$152.00	GIS Technician 1	$117.00
Environmental Planner 7	$217.00	Cultural Resources Specialist 7	$194.00
Environmental Planner 6	$194.00	Cultural Resources Specialist 6	$171.00
Environmental Planner 5	$184.00	Cultural Resources Specialist 5	$161.00
Environmental Planner 4	$161.00	Cultural Resources Specialist 4	$141.00
Environmental Planner 3	$137.00	Cultural Resources Specialist 3	$123.00
Environmental Planner 2	$124.00	Cultural Resources Specialist 2	$110.00
Environmental Planner 1	$112.00	Cultural Resources Specialist 1	$87.00
Biologist/Botanist 7	$217.00	Technical Editor	$116.00
Biologist/Botanist 6	$194.00	Project Controls Specialist	$105.00
Biologist/Botanist 5	$184.00	Word Processor	$84.00
Biologist/Botanist 4	$161.00	Clerical/Technician	$74.00
Biologist/Botanist 3	$137.00		
Biologist/Botanist 2	$124.00		
Biologist/Botanist 1	$112.00		
	Restoration Construction		
Superintendent	$110.00	Restoration Specialist 3	$84.00
Foreman / QAL	$95.00	Restoration Specialist 2	$63.00
Crew Lead	$74.00	Restoration Specialist 1	$53.00

EQUIPMENT/OTHER DIRECT COSTS

OTHER DIRECT COSTS	UNIT	UNIT COST
Copies - Internal	per page	$0.15
Color Copies 8"X11"	per page	$1.00
Color Copies 8"X17"	per page	$2.00
GIS Materials	actual	
Field Vehicle Use: Off Road 4WD	per day	$65.00
Mileage	per mile	Fed Rate
GPS – Real time, Trimble	per day	$60.00
CD-ROM's	per CD	$2.00
Mail/Delivery	actual	
Outside Printing	actual	
All Other Outside Services	actual	
Bio Survey/Monitoring Equipment	per day	$6.00
Bio Survey/JD/Restoration Equipment	per day	$8.00
Bio Fish Survey Equipment	per day	$15.00
Focused Plant Survey Equipment	per day	$10.00
Cultural Survey Equipment	per day	$6.00
Cultural Site Recording	per day	$8.00
Cultural Testing/Excavation	per day	$14.00
Cultural Monitoring Equipment	per day	$10.00
iGage	per day	$15.00
Sonabat	per day	$46.00
Electrofisher	per day	$200.00

- All outside services carry a 15% markup.

COMPENSATION SCHEDULE
PROJECT COST ESTIMATE

TASK	FEE
Task 1A: Project Initiation	$2,922
Task 1B: Project Description	$5,216
Task 2A: Air, GHG, and Energy Technical Report	$12,276
Task 2B: Biological Resource Desktop Study	$6,751
Task 2C:	$13,616
Task 3: Draft IS	$10,924
Task 4A: Administrative Draft MND	$7,005
Task 4B: Public Draft MND	4,642
Task 4C: Final MND and Notices	7,841
Task 5: Meetings	$4,154
IS and MND PROJECT COST	**$75,347**

CERTIFICATE OF COMPLIANCE WITH LABOR CODE § 3700

I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

CONSULTANT

By: _____

Title: _____

OFFICE OF THE CITY MANAGER/EXECUTIVE DIRECTOR
65 Civic Avenue
Pittsburg, CA 94565

TO: Mayor/Chair and Council/Governing Board Members

FROM: Garrett Evans, Executive Director/City Manager

SUBJECT: Adoption of a Pittsburg Power Company Resolution Approving the Fiscal Year 2024/25 Consultant Agreement with Open Opportunities Incorporated

MEETING DATE: August 19, 2024

EXECUTIVE SUMMARY

Pittsburg Power Company (PPC) is seeking approval for the fiscal year (FY) 2024/25 consultant agreement (Agreement) with Open Opportunities Incorporated (OOI) in the amount of $415,000 for the case management and day to day program supervision of the Future Build Program.

FISCAL IMPACT

The Agreement between PPC and OOI will be for the amount of $415,000. PPC, through Contract Number 18-466-3, will be receiving a grant from Workforce Development Board (WDB) up to the amount of $300,000 in FY 2024/25 which will reimburse PPC's budget. The difference of $115,000 will come from grants from the Environmental Protection Agency and California Workforce Trades Initiative, and revenue from other sources that have been previously received and accepted by PPC and have been placed in PPC's Fund Balance.

No City General Fund, including Measure M, are used to operate Future Build in Fiscal Year 2024/25.

RECOMMENDATION

The Governing Board of PPC approve the Agreement. It is recommended that the PPC Board authorize the Executive Director or his designee to amend future agreements and budgets as required by subsequent contracts and amendments from external funding sources. The Executive Director is authorized to execute other documents and take such further actions as may be necessary or appropriate to ensure that funds are utilized appropriately by Future Build.

BACKGROUND

Future Build is a partnership of the PPC, WDB, Pittsburg Adult Education Center (PAEC), Environmental Protection Agency (EPA), Contra Costa Building and Construction Trades Council, GRID Alternatives, Northern California Laborers Training, California Workforce Trades Initiative, and Open Opportunities, Inc. (OOI) to provide low-income East County residents with 16+ weeks of pre-apprenticeship training in the building trades and solar theory, construction, and installation. Each training session is referred to as a cohort.

Future Build's managing partner and fiscal agent is the PPC. OOI provides case management, solar training, and day to day program supervision and administration of the skill-based instructional staff. PAEC provides general academic and life skills instruction. Northern California Laborers provide EPA required trainings. The Contra Costa Building and Construction Trades Council provides tools and instruction from its member trade unions as well as general orientations into the construction related trades. GRID Alternatives provides solar installation training while providing local lower income area residents with free solar panels.

PPC and WDB executed the initial contract in April 2012, and WDB executed subsequent contracts in the following years, continuing the funding for the Future Build Program.

SUBCOMMITTEE FINDINGS

This item was not discussed in a subcommittee.

STAFF ANALYSIS

PPC entered into Contract Number 18-466-3 with WDB for Cohort 26 and 27 for July 1, 2024 to June 30, 2025. The Agreement will allow OOI to continue providing the Future Build Program with case management and day to day program supervision and administration of the skill-based instructional staff.

Future Build provides a life-changing experience for the trainees that leads to reengagement in the workforce and post-secondary educational opportunities. Pre-apprenticeship training, classroom and laboratory are combined in practical applications in the field. The practical applications can also be referred to as "community benefit projects". Community benefit projects are where the trainees exercise what they have learned by improving facilities in public housing projects, solar installations of homes for low-income residents, schools, and public recreational facilities such as parks. Some of Future Build's efforts includes the completion of the rehabilitation at the Pittsburg Police Department shooting range facility, solar installations, in partnership with GRID alternatives, of area residences, Small World Park repairs and improvements, and the rehabilitation of Buchanan Park picnic area.

ATTACHMENTS: Resolution
Contract for Services

Report Prepared By: Candace Hatch, Administrative Analyst I

BEFORE THE GOVERNING BOARD OF THE PITTSBURG POWER COMPANY
OF THE CITY OF PITTSBURG

In the Matter of:

Approving the FY 2024/25 Consultant)
Agreement with Open Opportunities) RESOLUTION NO. 24-
Incorporated)

WHEREAS, the Pittsburg Power Company (PPC) is seeking approval of the Fiscal Year 2024/25 consultant agreement (Agreement) with Open Opportunities Incorporated (OOI) for the Future Build Program; and

WHEREAS, the Future Build Program is a partnership of the PPC, Workforce Development Board (WDB), OOI, Pittsburg Adult Education Center (PAEC), Contra Costa Building and Construction Trades Council, GRID Alternatives, and Northern California Laborers Training to provide low-income East County residents with 16+ weeks of pre-apprenticeship training in the building trades and solar theory, construction, and installation. Each training session is referred to as a cohort; and

WHEREAS, Future Build's managing partner and fiscal agent is the PPC. OOI provides case management, solar training, and day to day program supervision and administration of the skill-based instructional staff. PAEC provides general academic and life skills instruction. Northern California Laborers provide EPA required trainings. The Contra Costa Building and Construction Trades Council provides tools and instruction from its member trade unions as well as general orientations into the construction related trades. GRID Alternatives provides solar installation training while providing local lower income area residents with free solar panels; and

WHEREAS, PPC and WDB executed the initial contract in April 2012 and PPC and WDB executed subsequent contracts in the following years, continuing the funding for the Future Build Program; and

WHEREAS, the Agreement between PPC and OOI will be for the amount of $415,000; and

WHEREAS, PPC entered into Contract Number 18-466-3 with WDB for Cohort 26 and 27 for July 1, 2024 to June 30, 2025; and

WHEREAS, PPC will be receiving a grant from WDB of up to the amount of $300,000 in Fiscal Year 2024/25. In addition to the WDB grant, Future Build receives grants from the Environmental Protection Agency, California Workforce Trades Initiative, and revenues from other sources that have been previously received and accepted by PPC and have been placed in PPC's Fund Balance; and

WHEREAS, no City General Fund, including Measure M, are used to operate Future Build in Fiscal Year 2024/25.

NOW, THEREFORE BE IT RESOLVED that the Governing Board of the Pittsburg Power Company hereby approves the Agreement with OOI for FY 2024/25 for the amount of $415,000.

PASSED AND ADOPTED by the Governing Board of the Pittsburg Power Company of the City of Pittsburg at a regular meeting on the 19th day of August 2024, by the following vote:

AYES:

NOES:

ABSTAINED:

ABSENT:

_____
Juan Antonio Banales, Chair

ATTEST:

_____
Garrett Evans, Executive Secretary

CONSULTING SERVICES AGREEMENT BETWEEN
PITTSBURG POWER COMPANY AND
OPEN OPPORTUNITIES, INC.

THIS CONTRACT is made on July 1, 2024, between the Pittsburg Power Company (**PPC**) and Open Opportunities, Incorporated, a California 501c3 Non-Profit Corporation (**Consultant**).

WHEREAS, the PPC operates the program known as Future Build as memorialized in 2012 by Contract No. 18-290-0 with the Contra Costa County Workforce Development Board (WDB) and its successor amendments including the current contract 18-466-3; and

WHEREAS, the Future Build program will train Workforce Innovation and Opportunity Act (WIOA) eligible people in the construction trades to the pre-apprentice level and in green energy efficient trades; allowing them to gain valuable experience in the industry through a 16-week training program that is recognized by the Multi-Craft Core Curriculum (MC3); and

WHEREAS, a goal of the Future Build program is to provide job training within the City and to include energy efficiency retrofit components to existing buildings or work with local employers to hire trainees and graduates to work on new and retrofitted buildings that will incorporate alternative energy upgrades and to provide trained works for alternative energy projects and area of manufacturing opportunities; and

WHEREAS, the PPC, a municipal utility, is the Fiscal Agent and administrator of Future Build and has the overall management responsibility for its operation. This includes activities prior to training, during training, and after training; and

WHEREAS, the Consultant is the daily onsite supervisor of Future Build, taking those actions necessary to ensure an effective operation of Future Build as described in WDB's Contract No. 18-466-3 the current successor amendment with the PPC.

NOW, THEREFORE, the Parties hereto mutually agree as follows:

Section 1. **SERVICES**. Subject to the terms and conditions set forth in this Agreement, Consultant shall provide to PPC the services described in the Scope of Work attached as Exhibit A, and incorporated herein, at the time and place and in the manner specified therein.

1.1 **Term of Services.** The term of this Agreement shall begin on the Effective Date and shall end on June 30, 2025 or the date the Consultant completes the services specified in Exhibit A, whichever occurs first,

unless the term of the Agreement is otherwise terminated or extended, as referenced herein.

1.2 **Standard of Performance.** Consultant shall perform all services required pursuant to this Agreement according to the standards observed by a competent practitioner of the profession in which Consultant is engaged.

1.3 **Assignment of Personnel.** Consultant shall assign only competent personnel to perform services pursuant to this Agreement. In the event that PPC, in its sole discretion, at any time during the term of this Agreement, requests in writing the reassignment of any such persons to ensure Consultant performs services in accordance with the Standard of Performance, Consultant shall, immediately upon receiving PPC's request, reassign such persons.

1.4 **Time.** Consultant shall devote such time to the performance of services pursuant to this Agreement as may be reasonably necessary to meet the standard of performance provided herein above and to satisfy Consultant's obligations hereunder.

Section 2. **COMPENSATION.** PPC hereby agrees to pay Consultant a sum not to exceed Four Hundred Fifteen Thousand Dollars ($415,000), as set forth in Exhibit B, attached hereto and incorporated herein for services to be performed and reimbursable expenses incurred under this Agreement. This dollar amount is not a guarantee that PPC will pay that full amount to the Consultant but is merely a limit of potential PPC expenditures under this Agreement.

Consultant and PPC acknowledge and agree that compensation paid by PPC to Consultant under this Agreement is based upon Consultant's estimated costs of providing the services required hereunder, including salaries and benefits of employees and subcontractors of Consultant. Consequently, the parties further agree that compensation hereunder is intended to include the costs of contributions to any pensions and/or annuities to which Consultant and its employees, agents, and subcontractors may be eligible. PPC therefore has no responsibility for such contributions beyond compensation required under this Agreement.

2.1 **Invoices.** Consultant shall submit invoices, not more often than once a month during the term of this Agreement, based on the cost for services performed and reimbursable costs incurred prior to the invoice date. Invoices shall contain the following information, unless waived by the Executive Director, or his or her designee:

- Serial identifications of progress bills; i.e., Progress Bill No. 1 for the first invoice, etc.;
- The beginning and ending dates of the billing period;

- A Task Summary containing the original contract amount, the amount of prior billings, the total due this period, the balance available under the Agreement, and the percentage of completion;
- At PPC's option, for each work item in each task, a copy of the applicable time entries or time sheets shall be submitted showing the name of the person doing the work, the hours spent by each person, a brief description of the work, and each reimbursable expense;
- The total number of hours of work performed under the Agreement by Consultant and each employee, agent, and subcontractor of Consultant performing services hereunder;
- The Consultant's signature.

2.2 **Monthly Payment.** PPC shall make monthly payments, based on invoices received, for services satisfactorily performed, and for authorized reimbursable costs incurred. PPC shall pay undisputed invoices that comply with the above requirements within 30 days from the receipt of the invoice.

2.3 **Final Payment.** Consultant shall submit its final invoice within 60 days of completing its services. Consultant's failure to submit its final invoice within this 60 day period shall constitute Consultant's waiver of any further billings to, or payments from, PPC.

2.4 **Reimbursable Expenses.** Reimbursable expenses, if any, are specified in Exhibit B and included in the total compensation referenced in Section 2. Expenses not listed in Exhibit B are not chargeable to, or reimbursable by, PPC.

2.5 **Payment of Taxes.** Consultant is solely responsible for the payment of all federal, state and local taxes, including employment taxes, incurred under this Agreement.

2.6 **Authorization to Perform Services.** The Consultant is not authorized to perform any services or incur any costs whatsoever under the terms of this Agreement until receipt of a written authorization from the Executive Director, or his or her designee.

Section 3. **FACILITIES AND EQUIPMENT.** Except as set forth herein, Consultant shall, at its sole cost and expense, provide equipment that may be necessary to perform the services required by this Agreement. Consultant shall make modifications or alterations to the city owned facility at 2555 Harbor Street without the expressed pre-approval of the City.

Section 4. INSURANCE REQUIREMENTS. Before beginning any services under this Agreement, Consultant, at its own cost and expense, shall procure the types and amounts of insurance specified herein and maintain that insurance throughout the term of this Agreement. The cost of such insurance shall be included in the Consultant's bid or proposal. Consultant shall be fully responsible for the acts and omissions of its subcontractors or other agents.

4.1 Workers' Compensation. Consultant shall, at its sole cost and expense, maintain Statutory Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed directly or indirectly by Consultant in the amount required by applicable law. The requirement to maintain Statutory Workers' Compensation and Employer's Liability Insurance may be waived by PPC upon written verification that Consultant is a sole proprietor and does not have any employees and will not have any employees during the term of this Agreement.

4.2 Commercial General and Automobile Liability Insurance.

4.2.1 General requirements. Consultant, at its own cost and expense, shall maintain commercial general and automobile liability insurance for the term of this Agreement in an amount not less than $2,000,000 per occurrence and $4,000,000 aggregate, combined single limit coverage for risks associated with the work contemplated by this Agreement.

4.2.2 Minimum scope of coverage. Commercial general coverage shall be at least as broad as Insurance Services Office Commercial General Liability occurrence form CG 0001 (most recent edition) covering comprehensive General Liability on an "occurrence" basis. Automobile coverage shall be at least as broad as Insurance Services Office Automobile Liability form CA 0001 (most recent edition) covering any auto (Code 1), or if Consultant has no owned autos, hired (code 8) and non-owned autos (Code 9). No endorsement shall be attached limiting the coverage.

4.2.3 Additional requirements. Each of the following shall be included in the insurance coverage or added as a certified endorsement to the policy:

a. The Commercial General and Automobile Liability Insurance shall cover on an occurrence basis.

b. PPC, its officers, officials, employees, agents, and volunteers shall be covered as additional insureds for liability arising out of work or operations on behalf of the Consultant,

including materials, parts, or equipment furnished in connection with such work or operations; or automobiles owned, leased, hired, or borrowed by the Consultant. Coverage can be provided in the form of an endorsement to the Consultant's insurance at least as broad as CG 20 10 11 85, or both CG 20 10 10 01 and CG 20 37 10 01.

c. For any claims related to this Agreement or the work hereunder, the Consultant's insurance covered shall be primary insurance as respects PPC, its officers, officials, employees, agents, and volunteers. Any insurance or self-insurance maintained by PPC, its officers, officials, employees, agents or volunteers shall be excess of the Consultant's insurance and non-contributing.

d. The policy shall cover inter-insured suits and include a "separation of Insureds" or "severability" clause which treats each insured separately.

e. Consultant agrees to give at least 30 days prior written notice to PPC before coverage is canceled or modified as to scope or amount.

4.3 Professional Liability Insurance.

4.3.1 General requirements. Consultant, at its own cost and expense, shall maintain for the period covered by this Agreement professional liability insurance for licensed professionals performing work pursuant to this Agreement in an amount not less than $1,000,000 per occurrence or claim covering the Consultant's errors and omissions.

4.3.2 Claims-made limitations. The following provisions shall apply if the professional liability coverage is written on a claims-made form:

a. The retroactive date of the policy must be shown and must be before the date of the Agreement.

b. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the Agreement or the work.

c. If coverage is canceled or not renewed and it is not replaced with another claims-made policy form with a retroactive date that precedes the date of this Agreement, Consultant must

purchase an extended period coverage for a minimum of five (5) years after completion of work under this Agreement.

d. A copy of the claim reporting requirements must be submitted to PPC for review prior to the commencement of any work under this Agreement.

4.4 All Policies Requirements.

4.4.1 Submittal Requirements. Consultant shall submit the following to PPC prior to beginning services:

a. Certificate of Liability Insurance in the amounts specified in this Agreement; and

b. Additional Insured Endorsement as required for the General Commercial and Automobile Liability Polices.

4.4.2 Acceptability of Insurers. All insurance required by this Agreement is to be placed with insurers with a Bests' rating of no less than A:VII.

4.4.3 Deductibles and Self-Insured Retentions. Insurance obtained by the Consultant shall have a self-insured retention or deductible of no more than $100,000.

4.4.4 Wasting Policies. No policy required herein shall include a "wasting" policy limit (i.e. limit that is eroded by the cost of defense).

4.4.5 Waiver of Subrogation. Consultant hereby agrees to waive subrogation which any insurer or contractor may require from Consultant by virtue of the payment of any loss. Consultant agrees to obtain any endorsements that may be necessary to effect this waiver of subrogation, but this provision applies regardless of whether or not PPC has received a waiver of subrogation endorsement from the insurer.

The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of PPC for all work performed by the Consultant, its employees, agents, and subcontractors.

4.4.6 Subcontractors. Consultant shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated

herein, and Consultant shall ensure that PPC, its officers, officials, employees, agents, and volunteers are covered as additional insured on all coverages.

4.4.7 **Excess Insurance.** If Consultant maintains higher insurance limits than the minimums specified herein, PPC shall be entitled to coverage for the higher limits maintained by the Consultant.

4.5 **Remedies.** In addition to any other remedies PPC may have if Consultant fails to provide or maintain any insurance policies or policy endorsements to the extent and within the time herein required, PPC may, at its sole option: 1) obtain such insurance and deduct and retain the amount of the premiums for such insurance from any sums due under the Agreement; 2) order Consultant to stop work under this Agreement and withhold any payment that becomes due to Consultant hereunder until Consultant demonstrates compliance with the requirements hereof; and/or 3) terminate this Agreement.

Section 5. INDEMNIFICATION AND CONSULTANT'S RESPONSIBILITIES.

5.1 **General Requirement.** To the fullest extent permitted by law, Consultant shall indemnify, defend with counsel acceptable to PPC, and hold harmless PPC and its officers, officials, employees, agents and volunteers (collectively, "Indemnitees") from and against any and all liability, loss, damage, claims, expenses, and costs, including without limitation, attorney's fees, costs and fees of litigation, (collectively, "Liability") of every nature arising out of or in connection with Consultant's performance of the services under this Agreement, or its failure to comply with any of its obligations contained in this Agreement, or its failure to comply with any applicable law or regulation, except such Liability caused by the sole negligence or willful misconduct of PPC.

Acceptance by PPC of insurance certificates and endorsements required under this Agreement does not relieve Consultant from liability under this indemnification and hold harmless clause. This indemnification and hold harmless clause shall apply to any damage or claims for damages whether or not such insurance policies shall be determined to apply.

5.2 **PERS Indemnification.** In the event that Consultant or any employee, agent, or subcontractor of Consultant providing services under this Agreement is determined by a court of competent jurisdiction or the California Public Employees Retirement System (PERS) to be eligible for enrollment in PERS as an employee of PPC, Consultant shall indemnify, defend, and hold harmless PPC for the payment of any employee and/or employer contributions for PERS benefits on behalf of Consultant or its

employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of PPC.

Section 6. STATUS OF CONSULTANT.

6.1 **Independent Contractor.** At all times during the term of this Agreement, Consultant shall be an independent contractor and shall not be an employee of PPC.

6.2 **Consultant Not an Agent.** Except as PPC may specify in writing, Consultant shall have no authority, express or implied, to act on behalf of PPC in any capacity whatsoever as an agent. Consultant shall have no authority, express or implied, pursuant to this Agreement to bind PPC to any obligation whatsoever.

6.3 **Independent Investigation.** Consultant agrees it has satisfied by its own investigation and research regarding the conditions affecting the work to be done and labor and materials needed, and that its decision to execute this Contract is based on such independent investigation and research.

6.5 **Non-Profit.** Consultant certifies that it is a California 501(c)(3) Non-Profit Corporation in good standing and has not been disbarred, suspended or found to have disallowed costs.

6.4 **Subrecipient.** Consultant agrees that it is a subrecipient as defined by CFR 200.331 and the attached executed subrecipient agreement as set forth in Exhibit “C” and further understands that all requirements placed on the PPC by the WDV are also requirements placed on the Consultant.

Section 7. LEGAL REQUIREMENTS.

7.1 **Governing Law.** The laws of the State of California shall govern this Agreement.

7.2 **Compliance with Applicable Laws.** Consultant and any subcontractors shall comply with all laws applicable to the performance of the work hereunder. Consultant shall also, to the extent required by the California Labor Code, pay not less than the latest prevailing wage rates as determined by the California Department of Industrial Relations.

7.3 **Licenses and Permits.** Consultant represents and warrants to PPC that Consultant and its employees, agents, and any subcontractors have, and will maintain at their sole cost and expense, all licenses, permits,

qualifications, and approvals of whatsoever nature that are legally required to practice their respective professions. In addition to the foregoing, Consultant and any subcontractors shall obtain and maintain during the term of this Agreement valid business licenses from PPC.

7.4 **Nondiscrimination and Equal Opportunity.** Consultant shall not discriminate, on the basis of a person's race, religion, color, national origin, age, physical or mental handicap or disability, medical condition, genetic information, marital status, sex, sexual orientation, gender or gender identity, against any employee, applicant for employment, subcontractor, bidder for a subcontract, or participant in, recipient of, or applicant for any services or programs provided by Consultant under this Agreement. Consultant shall comply with all applicable federal, state, and local laws, policies, rules, and requirements related to equal opportunity and nondiscrimination in employment, contracting, and the provision of any services that are the subject of this Agreement, including but not limited to the satisfaction of any positive obligations required of Consultant thereby.

Section 8. TERMINATION AND MODIFICATION.

8.1 **Termination.** Upon ten days' prior written notice, PPC may cancel this Agreement at any time and without cause upon such written notification to Consultant. In the event of termination, Consultant shall be entitled to compensation for services performed to the effective date of termination; PPC, however, may condition payment of such compensation upon Consultant delivering to PPC any or all documents, photographs, computer software, video and audio tapes, and other materials provided to Consultant or prepared by or for Consultant or PPC in connection with this Agreement.

8.2 **Amendments.** The parties may amend this Agreement only by a writing signed by the parties hereto.

8.3 **Assignment and Subcontracting.** PPC and Consultant recognize and agree that this Agreement contemplates personal performance by Consultant and is based upon a determination of Consultant's unique personal competence, experience, and specialized personal knowledge. Moreover, a substantial inducement to PPC for entering into this Agreement was and is the professional reputation and competence of Consultant. Consultant may not assign this Agreement or any interest therein without the prior written approval of the Executive Director, or his or her designee. Consultant shall not subcontract any portion of the performance contemplated and provided for herein, other than to the

subcontractors noted in the proposal, without prior written approval of the Executive Director, or his or her designee.

8.4 **Survival.** All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating liability between PPC and Consultant, including but not limited to the provisions of Section 5, shall survive the termination of this Agreement.

8.5 **Options upon Breach by Consultant.** If Consultant materially breaches any of the terms of this Agreement, PPC's remedies shall include, but not be limited to, the following:

8.5.1 Immediately terminate the Agreement;

8.5.2 Retain the plans, specifications, drawings, reports, design documents, and any other work product prepared by Consultant pursuant to this Agreement;

8.5.3 Retain a different consultant to complete the work described in Exhibit A not finished by Consultant; or

8.5.4 Charge Consultant the difference between the cost to complete the work described in Exhibit A that is unfinished at the time of breach and the amount that PPC would have paid Consultant pursuant to Section 2 if Consultant had completed the work.

8.5.5 The remedies mentioned in this Agreement are not exclusive of any other right, power or remedy permitted by law. PPC's failure or delay in exercising any remedy shall not constitute a waiver of such remedy or preclude the further exercise of PPC's rights.

Section 9. KEEPING AND STATUS OF RECORDS.

9.1 **Records Created as Part of Consultant's Performance.** All final versions of reports, data, maps, models, charts, studies, surveys, photographs, memoranda, plans, studies, specifications, records, files, or any other documents or materials, in electronic or any other form, that Consultant prepares or obtains pursuant to this Agreement and that relate to the matters covered hereunder shall be the property of PPC. Consultant hereby agrees to deliver those documents to PPC upon termination of the Agreement, and PPC may use, reuse or otherwise dispose of the documents without Consultant's permission. It is understood and agreed that the documents and other materials, including but not limited to those described above, prepared pursuant to this Agreement are prepared specifically for PPC and are not necessarily

suitable for any future or other use. PPC and Consultant agree that, until final approval by PPC, all data, plans, specifications, reports and other documents are confidential drafts and will not be released to third parties by Consultant without prior written approval of PPC.

9.2 **Consultant's Books and Records.** Consultant shall maintain any and all records or documents evidencing or relating to charges for services or expenditures and disbursements charged to PPC under this Agreement for a minimum of 3 years, or for any longer period required by law, from the date of final payment to the Consultant to this Agreement. All such records shall be maintained in accordance with generally accepted accounting principles and shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of PPC. Pursuant to Government Code Section 8546.7, the Agreement may be subject to the examination and audit of the State Auditor for a period of 3 years after final payment under the Agreement.

Section 10 MISCELLANEOUS PROVISIONS.

10.1 **Attorneys' Fees.** If a party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provision of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees in addition to any other relief to which that party may be entitled. The court may set such fees in the same action or in a separate action brought for that purpose.

10.2 **Venue.** In the event that either party brings any action against the other under this Agreement, the parties agree that trial of such action shall be vested exclusively in the state courts of California in Contra Costa County or in the United States District Court for the Northern District of California.

10.3 **Severability.** If a court of competent jurisdiction finds or rules that any provision of this Agreement is invalid, void, or unenforceable, the provisions of this Agreement not so adjudged shall remain in full force and effect. The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.

10.4 **No Implied Waiver of Breach**. The waiver of any breach of a specific provision of this Agreement does not constitute a waiver of any other breach of that term or any other term of this Agreement.

10.5 **Successors and Assigns.** The provisions of this Agreement shall inure to the benefit of and shall apply to and bind the successors and assigns of the parties.

10.6 **Conflict of Interest.** Consultant may serve other clients, but none whose activities within the corporate limits of PPC or whose business, regardless of location, would place Consultant in a "conflict of interest," as that term is defined in the Political Reform Act, codified at California Government Code Section 81000 *et seq.*

Consultant shall not employ any PPC official in the work performed pursuant to this Agreement. No officer or employee of PPC shall have any financial interest in this Agreement that would violate California Government Code Sections 1090 *et seq.*

10.7 **Solicitation.** Consultant agrees not to solicit business at any meeting, focus group, or interview related to this Agreement, either orally or through any written materials.

10.8 **Notices.** Any notice, demand, request, consent or approval that either party is required to give the other pursuant to this Agreement, shall be in writing and may be given by either (i) personal service, or (ii) certified United States mail, postage prepaid, return receipt requested. Notice shall be effective upon personal delivery or delivery to the addresses specified below, as reflected on the receipt of delivery or return receipt, as applicable.

Consultant : Open Opportunities, Incorporated
P.O. Box 8251
Pittsburg, CA 94565
ATTN: Debbie Neely
Board Chair

PPC: Pittsburg Power Company
65 Civic Avenue
Pittsburg, CA 94565
ATTN: Donna Mooney
General Counsel

10.9 **Professional Seal.** Where applicable in the determination of the Executive Director, or his or her designee, the first page of a technical report, first page of design specifications, and each page of construction drawings shall be stamped/sealed and signed by the licensed professional responsible for the report/design preparation. The stamp/seal shall be in a block entitled "Seal and Signature of Registered Professional with report/design responsibility."

10.10 **Integration.** This Agreement, including the scope of work attached hereto and incorporated herein as Exhibits A and B represents the entire and

integrated agreement between PPC and Consultant and supersedes all prior negotiations, representations, or agreements, either written or oral. To the extent there are any inconsistencies between this Agreement, the Exhibits, and Consultant's proposal, the Agreement shall control. To the extent there are any inconsistencies between the Exhibits and the Consultant's Proposal, the Exhibits shall control.

Exhibit A	Work Program
Exhibit B	Budget and Payment Plan
Exhibit C	Subaward Agreement – Workforce Development Board

10.11 Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one agreement.

10.12 Construction of Agreement. Each party hereto has had an equivalent opportunity to participate in the drafting of the agreement and/or to consult with legal counsel. Therefore, the usual construction of an agreement against the drafting party shall not apply hereto.

10.13 No Third Party Beneficiaries. This Agreement is made solely for the benefit of the parties hereto, with no intent to benefit any third parties.

The Parties have executed this Agreement as of the Effective Date.

PITTSBURG POWER COMPANY	**OPEN OPPORTUNITIES, INC.**
_____	_____
Garrett Evans, Executive Director	Debbie Neely, Board Chair

Approved as to Form:

_____
Donna Mooney, General Counsel

EXHIBIT A

WORK PROGRAM

I
Roles

1. The PPC, a municipal utility, is the Fiscal Agent and administrator of Future Build and has the overall management responsibility for its operation. This includes activities prior to training, during draining, and after training.

2. Open Opportunities, Incorporated, a California 501(c)(3) a Non-profit Corporation ("OOI"), is the daily onsite supervisor of Future Build taking those actions necessary to ensure an effective operation of Future Build as described in the RFP 1176 and the subsequent contractor and any successor amendments with the County. The contract number for Fiscal Year **2024-2025** is **18-466-3**.

3. The parties agree that the PPC is the administrator of Future Build. The administrator is the final authority on Future Build revenues, expenditures, operations, fiscal records, participant records, chart of accounts, accounting procedures, leases, rents, participant supportive services, any subcontractors, subcontractor expenditures, records retention, communication wit funding sources, or any other activities necessary to ensure the administration and continued operation of Future Build. This authority is restricted to Future Build and does not apply to other activities that the PPC or OOI may be involved in the furtherance of their respective missions, roles and responsibilities.

4. The PPC enters into this agreement with OOI to utilizes OOI's resource and abilities in community building, community resources, participant outreach, participant-referral to community resources, daily operational coordination of Future Build activities, daily on-site supervision of Future Build activities, contributing to the development of participant Individualized Employment Plans (IEP), gathering information and data necessary for entry into the Management Information System (MIS) administered by the Workforce Development Board (WDB). OOI is responsible for completing any required reports that are based on the data and accurately entering into the CalJobs and ACRES reporting system.

   OOI is responsible for the daily site and participant supervision of Future Build in the absence of the administrator. OOI assures that whenever trainees are in the training facility using equipment there will be a minimum of one OOI staff member supervising the training facility. OOI and PPC will jointly conduct the follow up activities for Future Build graduates as described in the RFP 1176 and the subsequent contract and as amended in Contract No. 18-466-3 its successor amendment.

5. The parties agree that the respective roles of the PPC and OOI are also outlined in a chronological fashion in the Program Timeline section of RFP 1176, the provisions of which are incorporated herein by reference.

6. The parties agree that Future Build is a training endeavor that involves several agencies, as described in RFP 1176 and Contract No. 18-466-3 and that great care must be exercised to respect the rights and roles of the various entities to promote the effectiveness of Future Build. The parties agree that if correction action is required with any of the entities involved with Future Build's effectiveness that it will be the PPC that determines what form that action takes.

II
Responsibilities

1. The parties agree that the PPC is the fiscal agent for Future Build and is responsible for submitting funding applications, establishing accounts to receive funds, establishing accounts for expenditures, and performing accounting tasks that track revenue and expenditures using generally approved accounting practices.

2. The parties agree that OOI, a nonprofit corporation, and may receive funds dedicated to the Future Build program and that those funds will be deposited into an account maintained by OOI. When this occurs, OOI is to secure these funds and insure that they are solely for the benefit of Future Build as determined by the Future Build administrator. To maintain the integrity of Future Build's accounting, OOI will provide the PPC with at timely accounting of such funds when required.

3. The parties agree that the funds referred to in this Section 2 are funds not anticipated at this time and are more commonly knowns as donations made for the specific benefit of Future Build. The parties further agree that the OOI may charge a reasonable administrative fee for maintaining and accounting for these dedicated donations not to exceed 2% of the donated cash amount.

4. The parties agree that the PPC is responsible for any audits of Future Build and any audit responses, and that OOI will supply the PPC with any and all information it has to meet this responsibility. The PPC and OOI will fully cooperate with any authorized internal and external auditors.

5. The parties agree that Future Build's success is dependent upon their close coordination of activities, establishment of priorities and timeframes for accomplishing tasks. Should either party know of an issue effecting Future Build's success it is to be immediately communicated, preferably via email, the issues to the other party.

III
Property

The parties agree that all materials, equipment, supplies, records and other tangible property funded by this contract and acquired for the benefit of Future Build, shall be the property of the PPC for the benefit of Future Build, or its successor program.

IV
Operational Notifications

1. The parties agree that all daily operational notices that are necessary, shall be given by one party to the other writing, via email

2. The email addresses for all operational communiques to the PPC shall be the following:

    i. Candace Hatch, chatch@pittsburgca.gov
    ii. Jordan Davis, jdavis@pittsburgca.gov
    iii. Gerry Dunbar, gldcop@yahoo.com

3. The email addresses for all operational communiques to OOI shall be merl@futurebuildec.com.

EXHIBIT B

Future Build
Budget and Payment Plan
Open Opportunities, Incorporated

OOI shall deliver on the Contract and attached Work Plan as directed and provide PPC a monthly status report. OOI agrees to invoice the PPC on a monthly basis subject to Section 2 of this contract. OOI may also invoice in advance to address costs associated with the Work Plan.

In the event that no charges or expenses are disputed by the PPC, then the invoice shall be approved and paid within thirty (30) days of receipt of OOI's invoice. In the even any charges or expenses are disputed by the PPC, the invoice shall be returned by the PPC to OOI for correction and resubmission.

Payment to OOI for the work performed pursuant to this contract for services shall not be deemed to waive any defects in work performed by OOI.

Project Budget

Object Class Categories	**Budgeted Amount**
Personnel: Instructors, Case Manager	$295,000.00
Operating Expenses: Utilities, Rent, Supplies	$11,500.00
Participant Cost: Training Supplies, Materials, etc.	$43,500.00
Other – Participant Cost: Safety equipment, tools, supportive services.	$65,000.00
Total Direct Charges	$415,000.00

EXHIBIT C

Subaward Agreement
Workforce Development Board
(Next Page)

CERTIFICATE OF COMPLIANCE WITH LABOR CODE § 3700

I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

OPEN OPPORTUNITIES, INC.

By: _____

Title: _____

Subaward Agreement
Workforce Development Board (WDB)

Article 1. Subaward Agreement between the Pittsburg Power and Open Opportunities, Incorporated, a non-profit corporation, for the purpose of providing services that improve and enhance the employability of Future Build enrollees and graduates.

Article 2. Specific services to be provided by Open Opportunities, Inc. including but are not limited to:

- Program Management and Recording Keeping
- Employment Counseling otherwise known as “Job Coaching”
- Follow-up Services on graduates
- All services outlined in the contract between the Pittsburg Power Company and Contra Costa County, Contract No. 18-466-3

Article 3. Unique Entity Identification for Open Opportunities, Inc. is 036694799 (DUNS number)

Article 4. County Contract No. 18-466-3

Article 5. Contract Commencement Date: July 1, 2024

Article 6. Subaward Period of Performance, i.e. approximate start and end date for performance utilizing these grant funds: July 1, 2024 to June 30, 2025

Article 7. Total amount of Federal funds obligated by the action: Two Hundred Seventy-Two Thousand Three Hundred and Sixty Dollars ($272,360).

Article 8. Total amount of Federal Funds awarded to the Pittsburg Power Company; Three Hundred Thousand Dollard ($300,000).

Article 9. Award project description: This project provides funding for the Pittsburg Power Company/Future Build to recruit, train, and place unemployed and underemployed residents of East Contra Costa County with skills needed to qualify for entry level construction related occupations, as well as appropriate training in solar panel technology and installation.

Article 10. Awarding Agency: Workforce Development Board (WDB) of Contra Costa County.

WDB Contact:	Ms. Verneda Clapp vclapp@ehsd.cc
Pass Through Entity:	Pittsburg Power Company (PPC)
PPC Contact:	Candace Hatch chatch@pittsburgca.gov

Article 11. This subaward agreement is not for research and development.

Article 12. There are no indirect costs associated with this subaward, all costs are direct.

Article 13. Incorporated into this subaward agreement by reference is the attached Contract No. 18-466-3 which outlines administrative requirements of the Pittsburg Power Company and Open Opportunities, Inc., when accepting Federal funds distributed by the Department of Labor. Specifically see Exhibit A the “SPECIAL CONDITIONS Federal Subaward Conditions”.

IN WITHNESS WHEREOF, the parties have executed this agreement as of the date first shown in Article 6 above.

CITY OF PITTSBURG, CALIFORNIA	**OPEN OPPORTUNITIES, INC.**
_____	_____
Candace Hatch	Debbie Neely
Future Build Administrator	Board Chair

EXHIBIT A

SPECIAL CONDITIONS
Federal Subaward Conditions
18-466-3

I. The contract meets the conditions of a Federal subaward and the Contractor is subject to the Subrecipient provisions in 2 CFR § 200.

II. Definitions:

A. CFR means Code of Federal Regulations

B. CFDA means Catalog of Federal Domestic Assistance

C. Subrecipient -- Title 2 CFR section § 200.93
Subrecipient means a non-Federal entity that receives a subaward from a pass-through entity to carry out part of a Federal program; but does not include an individual that is a beneficiary of such program. A subrecipient may also be a recipient of other Federal awards directly from a Federal awarding agency.

D. Subaward -- Title 2 CFR section § 200.92
Subaward means an award provided by a pass-through entity to a subrecipient for the subrecipient to carry out part of a Federal award received by the pass-through entity. It does not include payments to a contractor or payments to an individual that is a beneficiary of a Federal program. A subaward may be provided through any form of legal agreement, including an agreement that the pass-through entity considers a contract.

E. Pass-through Entity -- Title 2 CFR section § 200.74
Pass-through entity means a non-Federal entity that provides a subaward to a subrecipient to carry out part of a Federal program.

III. The pass-through entity is the County of Contra Costa.
IV. The Subrecipient is Pittsburg Power Company
V. The Subrecipient's unique identification number is DS5LP1EQ6Z95
VI. If applicable, the Federal Award Date is 04/1/2023
VII. If applicable, the Federal Award Identification Number (FAIN) is 23A55AY000012
VIII. The Subaward Period of Performance is from 7/01/2024 to 6/30/2025
IX. The total amount of Federal Funds Obligated to the subrecipient in this Federal subaward award is: $ 300,000.00
X. The CFDA Number is 17.258
XI. The Federal Program Title is Workforce Innovation and Opportunity Act (WIOA) Adult Program
XII. The Subrecipient's federally approved indirect cost rate agreement is incorporated by reference if the Subrecipient's budget submitted includes a federally approved indirect cost.
XIII. The Subrecipient shall use the Federal award in accordance with Federal statutes, regulations and the terms and conditions of the Federal award.