Amended Agenda
Amended items are listed in Red
***BY VIRTUAL TELECONFERENCE ONLY***

Pursuant to the provisions of California Governor’s Executive Order N-29-20, issued on March 17, 2020, to prevent the spread of Covid-19, this meeting will be held by virtual teleconference only, with no physical location. The meeting will be broadcast on Cable TV Channel 26, live on YouTube at https://www.youtube.com/c/cityofpaloalto, and Midpen Media Center at https://midpenmedia.org. Members of the public who wish to participate by computer or phone can find the instructions at the end of this agenda.

PUBLIC COMMENT
Members of the public may speak to agendized items; up to three minutes per speaker, to be determined by the presiding officer. All requests to speak will be taken until 5 minutes after the staff’s presentation. Written public comments can be submitted in advance to city.council@cityofpaloalto.org and will be provided to the Council and available for inspection on the City’s website. Please clearly indicate which agenda item you are referencing in your email subject line.

TIME ESTIMATES
Time estimates are provided as part of the Council’s effort to manage its time at Council meetings. Listed times are estimates only and are subject to change at any time, including while the meeting is in progress. The Council reserves the right to use more or less time on any item, to change the order of items and/or to continue items to another meeting. Particular items may be heard before or after the time estimated on the agenda. This may occur in order to best manage the time at a meeting or to adapt to the participation of the public.

AMERICANS WITH DISABILITY ACT (ADA)
Persons with disabilities who require auxiliary aids or services in using City facilities, services or programs or who would like information on the City’s compliance with the Americans with Disabilities Act (ADA) of 1990, may contact (650) 329-2550 (Voice) 24 hours in advance

CALL TO ORDER

AGENDA CHANGES, ADDITIONS AND DELETIONS

PUBLIC COMMENT (5:00 PM – 5:25 PM)
Members of the public may speak to any item NOT on the agenda. Council reserves the right to limit the duration of Oral Communications period to 30 minutes.
CONSENT CALENDAR (5:25 PM – 5:30 PM)

Items will be voted on in one motion unless removed from the calendar by three Council Members.

1. Approval of Minutes from August 30, 2021 City Council Meeting

2. Request for Authorization to Amend the Existing Agreement for Litigation Defense Services with the Law Firm of Jarvis, Fay & Gibson (Contract S15159508) to Extend the Term to June 30, 2022.

3. Approval of a Budget Amendment (Requires 2/3 Approval) for General Fund Operating Budget in Community Services Department Implementing a Grant from the Institute of Museum and Library Services (IMLS) Museums for America Grant Awarded to the Palo Alto Art Center Foundation to Support Creative Attention Initiative at the Palo Alto Art Center

4. Approval of an Exemption to Competitive Solicitation and Change Order No. 1 to Existing Contract C20172366A With Hotline Construction, Inc. for Additional Underground Construction and Emergency Construction On-call Services, Increasing the Contract Amount by $6,800,000 for a new Not-to-Exceed Amount of $11,300,000; and Approve a Budget Amendment in the Electric Fund

5. Approval of Advanced Metering Infrastructure (AMI) Contract with Sensus USA Inc. in the Amount of $15,283,218; and Authorization for the City Manager to Negotiate and Execute Change Orders up to a Not-to-Exceed Amount of $1,484,000, for a Total Contract Amount Not-to-Exceed $16,767,218; Approval of Amendment No. 2 with E Source in an Amount Not-to-Exceed $1,339,947 for Phase 3 AMI Consulting; and 3) Adoption of a Resolution to Transfer up to $18,900,000 from the Electric Special Project Reserves to the Smart Grid Technology Installation Project EL-11014

6. Approval of Construction Contract Number C22181780 with Roofing Constructors, Inc. in the Amount Not-to-Exceed $362,713 to Replace the Existing F & FH Wing Roofs at Cubberley Community Center, Capital Improvement Program Project CB-16002; and Authorization of Contract Contingency in an Amount Not-to-Exceed $36,271 for Related, Additional but Unforeseen Work Which May Develop During the Project.

CITY MANAGER COMMENTS

ACTION ITEMS

Include: Reports of Committees/Commissions, Ordinances and Resolutions, Public Hearings, Reports of Officials,
Unfinished Business and Council Matters.

7. Update from the Palo Alto Advisory Committee on Early Care & Education (PAACECE) on recent Assessment of Local Families, Effect of COVID on Child Care providers and plans to address identified needs, including the Approval of Budget Amendments in the General Fund and the Child Care Trust Fund to Implement the PAACECE's Annual Work Plan. (5:30 PM – 6:00 PM)


AA1. Public Hearing: Adoption of Two Ordinances Implementing the Objective Standards Project, Including: 1) New Chapter 18.24, Objective Design Standards, to Replace Existing Context-Based Design Criteria; 2) Modifications to Affordable Housing (AH) and Workforce Housing (WH) Overlay Districts to Eliminate the Legislative Process; 3) Expansion of Affordable Housing (AH) and Housing Incentive Program (HIP) to PTOD-Eligible Properties; 4) Changes to Remove Inconsistencies and Redundancies, and Streamline Project Review Throughout Title 18 Chapters (6:30 PM - 8:30 PM)

COUNCIL MEMBER QUESTIONS, COMMENTS, ANNOUNCEMENTS

Members of the public may not speak to the item(s)

ADJOURNMENT

INFORMATION REPORTS

Information reports are provided for informational purposes only to the Council and the public but are not listed for action during this meeting’s agenda.

10. Information Report Transmits the Affordable Housing Commercial Impact Fee Feasibility Study Prepared by Strategic Economics and Will be Used in the City Council's Deliberation of an Ordinance Amending the City's Municipal Fee Scheduled on October 18, 2021
AMENDED AGENDA ITEMS

AA1. Public Hearing: Adoption of Two Ordinances Implementing the Objective Standards Project, Including: 1) New Chapter 18.24, Objective Design Standards, to Replace Existing Context-Based Design Criteria; 2) Modifications to Affordable Housing (AH) and Workforce Housing (WH) Overlay Districts to Eliminate the Legislative Process; 3) Expansion of Affordable Housing (AH) and Housing Incentive Program (HIP) to PTOD-Eligible Properties; 4) Changes to Remove Inconsistencies and Redundancies, and Streamline Project Review Throughout Title 18 Chapters (7:55 PM - 9:45 PM)

OTHER INFORMATION

Standing Committee Meetings

- Finance Committee Meeting October 5, 2021

Public Letters to Council As of September 20, 2021

Schedule of Meetings

Materials related to an item on this agenda submitted to the city council after distribution of the agenda packet are available for public inspection at www.CityofPaloAlto.org
PUBLIC COMMENT INSTRUCTIONS

Members of the Public may provide public comments to teleconference meetings via email, teleconference, or by phone.

1. **Written public comments** may be submitted by email to city.council@cityofpaloalto.org.

2. **Spoken public comments using a computer** will be accepted through the teleconference meeting. To address the Council, click on the link below to access a Zoom-based meeting. Please read the following instructions carefully.
   A. You may download the Zoom client or connect to the meeting in-browser. If using your browser, make sure you are using a current, up-to-date browser: Chrome 30+, Firefox 27+, Microsoft Edge 12+, Safari 7+. Certain functionality may be disabled in older browsers including Internet Explorer.
   B. You may be asked to enter an email address and name. We request that you identify yourself by name as this will be visible online and will be used to notify you that it is your turn to speak.
   C. When you wish to speak on an Agenda Item, click on “raise hand.” The Clerk will activate and unmute speakers in turn. Speakers will be notified shortly before they are called to speak.
   D. When called, please limit your remarks to the time limit allotted.
   E. A timer will be shown on the computer to help keep track of your comments.

3. **Spoken public comments using a smart phone** will be accepted through the teleconference meeting. To address the Council, download the Zoom application onto your phone from the Apple App Store or Google Play Store and enter the Meeting ID below. Please follow the instructions B-E above.

4. **Spoken public comments using a phone** use the telephone number listed below. When you wish to speak on an agenda item hit *9 on your phone so we know that you wish to speak. You will be asked to provide your first and last name before addressing the Council. You will be advised how long you have to speak. When called please limit your remarks to the agenda item and time limit allotted.

   CLICK HERE TO JOIN  Meeting ID: 362 027 238  Phone:1(669)900-6833
Title: Approval of Minutes from August 30, 2021 City Council Meeting

From: City Manager

Lead Department: City Clerk

Recommended Motion

To approve the minutes for September 13, 2021 as presented.

Attachments:

- Attachment1.a: 20210920amCCs DRAFT
The City Council of the City of Palo Alto met on this date in virtual teleconference at 5:01 P.M.

Participating Remotely: Burt, Cormack, DuBois, Filseth, Kou, Stone, Tanaka

Absent: None

SPECIAL ORDERS OF THE DAY

1. Adoption of Resolution 9989 Expressing Appreciation to Geoffrey Wong Upon His Retirement.

   **MOTION:** Mayor DuBois moved, seconded by Council Member Kou to adopt a Resolution Expressing Appreciation to Geoffrey Wong Upon His Retirement.

   **MOTION PASSED:** 7-0

2. Proclamation for Suicide Prevention Awareness Month.

   **NO ACTION TAKEN**

3. Neighbors Abroad.

   **NO ACTION TAKEN**

CLOSED SESSION

4. CONFERENCE WITH CITY ATTORNEY-EXISTING LITIGATION
   Subject: Green v. City of Palo Alto, et al. Santa Clara County Superior Court Case No. 16CV300760 Authority: Government Code Section 54956.9(d)(1).

AA1. CONFERENCE WITH CITY ATTORNEY-POTENTIAL LITIGATION
   Subject: Arbitration of Employee Discipline Matters
   Authority: Government Code Section 54956.9(d)(2) Two Potential Matters, as Defendant.
DRAFT ACTION MINUTES

MOTION: Council Member Cormack moved, seconded by Council Member Filseth to go into Closed Session.

MOTION PASSED: 7-0

Council adjourned to Closed Session at 5:33 P.M.

Council reconvened from Closed Session at 7:35 P.M.

Mayor DuBois announced Green vs Palo Alto, Council voted to authorize an appeal and that the City issue an explanation on the item.

AGENDA CHANGES, ADDITIONS AND DELETIONS

Mayor DuBois announced Item 7 was been withdrawn by the applicant.

Mayor DuBois advised that Item 9 is time sensitive and will start no later than 10 P.M.

PUBLIC COMMENT

CONSENT CALENDAR

Vice Mayor Burt registered a no vote on Agenda Item Number 6.

Council Member Tanaka registered a no vote on Agenda Item Number 6.

MOTION: Mayor DuBois moved, seconded by Council Member Cormack to approve Agenda Item Numbers 5-6.

5. Approval of Minutes from August 23, 2021.


MOTION PASSED ITEM 5: 7-0
MOTION PASSED ITEM 6: 5-2, Burt, Tanaka no
DRAFT ACTION MINUTES

ACTION ITEMS


8. PUBLIC HEARING: Staff recommend the City Council review the North Ventura Coordinated Area Plan (NVCAP) alternatives, take public comment, and determine the preferred alternative.

Public Hearing opened at 8:20 P.M.

Public Hearing closed at 9:01 P.M.

The City Council suspended consideration of the item at 10:05 P.M. and continued at 10:20 P.M.

MOTION: Mayor DuBois, seconded by Council Member Filseth to direct Staff to develop a preferred scenario with the following parameters:

A. For Housing, to follow Alternative 1 plus going to a 50 ft height in designated areas;

B. For Office, to follow Alternative 1 and evaluate the need for amortization of some office uses;

C. For Retail, incentivizing retail through parking requirements and other ways to encourage (or require) some ground floor retail on El Camino and Park Blvd;

D. For Park and Open Space, to focus on pursuing a naturalized creek, Alternative 1 for other buffers, parks, bike paths, and opportunities for park space in the plan area;

E. Maintain a maximum 50 ft height limit with exception for 100% affordable housing, and consider other incentives for affordable housing;

F. Allow higher density housing on the two largest properties in the NVCAP;
DRAFT ACTION MINUTES

G. Adaptive reuse of the historic structures subject to CEQA;

H. Request Staff to return with a recommendation on residential parking requirements based on the existing Fehrs and Peers study and other context-based conditions;

I. Commercial parking with a blended rate of 1 per 250 sq. ft;

J. Staff to minimize additional expenditures needed to complete the NVCAP;

K. Request Staff to return with a researched revision or set of alternatives for jobs created per 1000 sq. ft of office; and

L. Direct Staff to engage with the large property owners in order to meet the goals of this motion.

MOTION SPLIT FOR THE PURPOSE VOTING

MOTION PARTS B, E, I, K PASSED: 5-2, Cormack, Tanaka no

MOTION PARTS A, C, D, F-H, J PASSED: 6-1, Cormack no


City Council adjourned to break at 10:06 P.M. and returned at 10:12 P.M.

MOTION: Council Member Kou moved, seconded by Council Member Stone to authorize Staff to submit the Fiscal Year 2020-2021 Consolidated Annual Performance and Evaluation Report to the Department of Housing and Urban Development by the September 30, 2021 deadline.

MOTION PASSED: 7-0

ADJOURNMENT

The meeting was adjourned at 11:15 P.M.
Request for Authorization to Amend the Existing Agreement for Litigation Defense Services with the Law Firm of Jarvis, Fay & Gibson (Contract S15159508) to Extend the Term to June 30, 2022.

Recommendation

Staff recommends that the City Council authorize the City Attorney to extend the term of the litigation defense contract with Jarvis Fay & Gibson LLP to June 30, 2022, with no additional funds needed.

Discussion

Jarvis Fay & Gibson LLP is a law firm representing cities in a variety of areas, including land use, the California Environmental Quality Act (CEQA), construction law, and municipal taxes and fees.

In April 2015, the City entered into a $50,000 agreement with Jarvis Fay & Gibson for pre-litigation and initial litigation defense services in a Government Claims Act claim and subsequently-filed civil suit *Staats v. City of Palo Alto*, Santa Clara Co. Sup. Ct. Case No. 1-15-CV-284956. In November 2016 and March 2018, the City Council authorized amendment of the agreement to add $325,000 and $120,000, respectively, for a total of $495,000. The contract term was also extended to June 30, 2019. In June 2019, City Council authorized amendment of the agreement to add $200,000 and extend the term to June 30, 2021 to fund continuing defense services in this matter. The *Staats* case is nearing completion. Accordingly, staff now recommends extending the contract term to June 30, 2022, with no additional funds needed, to provide sufficient time to complete this litigation defense matter.

Resource Impact

Funding for this amendment does not require additional budgetary authority as it can be accommodated within the Office of the City Attorney’s budget for FY2022.

Environmental Review

Amendment of a legal services contract is not a project requiring environmental review under the California Environmental Quality Act (CEQA).
Department Head: Molly Stump, City Attorney
Title: Approval of a Budget Amendment (Requires 2/3 Approval) for General Fund Operating Budget in Community Services Department Implementing a Grant from the Institute of Museum and Library Services (IMLS) Museums for America Grant Awarded to the Palo Alto Art Center Foundation to Support Creative Attention Initiative at the Palo Alto Art Center

From: City Manager

Lead Department: Community Services

Recommendation
Staff Recommends that City Council amend the Fiscal Year 2022 Budget Appropriation for the General Fund Operating Budget, by a 2/3 vote for the Community Services Department (CSD) by:

1. Increasing the Other Revenue estimate for grants by $14,040 to recognize a reimbursement from the Palo Alto Art Center Foundation to the City of Palo Alto. This reimbursement is from the Foundation’s receipt of a grant from the Institute of Museum and Library Services, Museums for America program.
2. Increasing the salaries and benefits expense appropriation by $14,040 for a Public Programs coordinator limited hourly staff member to implement Creative Attention programs for Fiscal Year 2022.

Background and Discussion
The Palo Alto Art Center Foundation received notification of a $129,737 grant from the Institute of Museum and Library Services, Museums for America program on July 26, 2021. This grant is to support the Creative Attention initiative, a one-year initiative to support community healing and resilience through the arts.

Creative Attention: Art and Community Restoration is a multifaceted project that engages the community, showcasing the unique perspectives of artists and the transformative power of the arts in our current age of anxiety. Creative Attention builds on the Art Center’s rich tradition of artist residencies, exhibitions, art education programs, and outreach to the diverse mid-peninsula community, integrating a partnership with a licensed therapist/board-certified art therapist to activate the community in using the arts to address anxiety and recognize its many manifestations. The Art Center is highly regarded as an accessible arts hub for the community.
and serves as an oasis of creativity and expression and a respite from the pressures of living in the Bay Area.

Amid the additional stressors brought on by the pandemic, the Art Center has nimbly responded to community needs with virtual programming to its core audiences, including school-age children, seniors, families, and individuals of all income levels. The Art Center will leverage its position in local government to provide a multi-tier continuum of art experiences—including therapeutic art workshops, an artist residency, an intergenerational family day, and a high-quality contemporary art exhibition—developed in partnership with artists, community stakeholders, government agencies, local school districts, and regional social service organizations. *Creative Attention* provides high-quality, inclusive education opportunities that respond directly to expressed community needs and concerns, made even more urgent by the added stress of the pandemic.

This grant includes funding for a limited hourly staffing position at the City of Palo Alto for a one-year term to support implementing public programs. The action outlined in this CMR report will allow the position to be hired by the City of Palo Alto, then reimbursed by the Palo Alto Art Center Foundation through this grant in the amount of $14,040.

**Timeline**
The timeline for the grant is September 1, 2021 through August 31, 2022. The timeline for the *Creative Attention* initiative is November 1, 2022 through July 2022.

**Resource Impact**
Use of the IMLS grant as described in this report requires a budget amendment to recognize $14,040 in revenue and expenses in the General Fund, by a 2/3 Council vote, as recommended in this report. The cost share contribution of $132,164 will be provided through a combination of expenses from the Palo Alto Art Center Foundation ($75,264) and in $56,900 in City salaries and benefits for existing employees (Art Center Director, Studio Programs Director, Director of Education, Director of Volunteer Engagement, School and Teacher Programs Director), which are appropriated in the General Fund, Community Services Department Fiscal Year 2022 Adopted Operating Budget. Grant funds are disbursed as reimbursement.

**Policy Implications**
The recommended actions outlined in this report advance many important policy objectives related to the City Comprehensive Plan Policy Goal C-1: Deliver community services effectively and efficiently. These include:

- **Policy C-1.4** Promote City parks, open spaces, recreational facilities, libraries, classes and cultural activities for community members recognizing that these facilities and services build and strengthen community.
- **Policy C-1.6** Provide arts, science and recreational activities that foster healthy children, youth, and teen development.
• Policy C-1.20 Leverage available funding to support the development of, and improved access to, programs that address all types of developmental disabilities, including physical, cognitive, or social/emotional needs.

Stakeholder Engagement
Numerous stakeholders, community members, and community partners were consulted in the development of this proposal. Letters of support were written by community partners such as Project Safety Net, Avenidas, and Palo Alto Medical Foundation. Art Center staff have heard directly from customers, through visitor surveys, program surveys, and comments about the value of art during the pandemic and into recovery.

Environmental Review
The recommendation in this report is not subject to the provisions of the California Environmental Quality Act as it does not meet the definition of a ‘project’ as defined in Public Resource Code section 21065.
Title: Approval of an Exemption to Competitive Solicitation and Change Order No. 1 to Existing Contract C20172366A With Hotline Construction, Inc. for Additional Underground Construction and Emergency Construction On-call Services, Increasing the Contract Amount by $6,800,000 for a new Not-to-Exceed Amount of $11,300,000; and Approve a Budget Amendment in the Electric Fund

From: City Manager

Recommendation
Staff recommends that Council:
1. Approve and authorize the City Manager or their designee to execute an exemption from the City’s competitive solicitation process, procedures, and requirements and approve Change Order No. 1 (Attachment A), to the existing contract C20172366A (Linked Document) with Hotline Construction, Inc, adding $2,000,000 to the second year of the contract, $4,800,000 to the third year of the contract, and changing the scope of work to include underground construction services and on-call emergency response services. The new total amount not to exceed will be $11,300,000 for the entire 3 year term of contract ending February 23, 2023.

2. Amend the FY 2022 Budget Appropriation for the Electric Fund (requires 2/3 approval) by:
   a) Increasing the Electric Operating Budget appropriation for Contract Services by $1,000,000, and
   b) Decreasing the Electric Distribution Fund Reserve by $1,000,000.

Background
Over the last 20 years the Electric Utility has routinely hired contractors to assist City crews to offset the labor shortages caused by the inability to hire qualified journey level electric workers. These contractors have provided maintenance and capital system improvement construction work for the replacement or rebuilding of infrastructure as required.

The City issued an Invitation For Bid (IFB) in July 2019 (IFB #172366A) for overhead construction services. Council awarded Contract No. C20172366A (Linked Document) to Hotline
Construction, Inc. (HLC) on October 7, 2019 (Staff Report #10502). Under this contract, the total not-to-exceed amount is $4,500,000 for three years, with an annual not-to-exceed amount of $1,500,000. A notice to proceed was issued on February 24, 2020 and the contract term expires on February 23, 2023.

The contract was established to target the backlog of overhead distribution maintenance work. At the time the contract was issued the Electric Utility had enough internal resources to complete critical work for the day-to-day operation. Over the past two years, however, staffing levels have significantly declined due to the inability to retain and hire journey-level line workers and unexpected circumstances related to family or personal leaves.

The current labor market makes it difficult to hire journey-level line workers, specifically in a high cost of living area such as Palo Alto. There have been 10 journey level line worker positions (out of 16 authorized linesperson and overhead underground troubleperson) continually vacant for the past five (5) years. Just in the last 2 years, 3 journey level line workers that went through the apprenticeship program at the City left for other agencies in lower cost of living areas within the Bay Area, and 1 has gone to a higher paying line worker positions in PG&E. CPAU expects to continue to lose staff to other agencies and/or contractors due to these conditions. Additionally, the labor market for journey-level line workers has been heavily impacted by the need for this type of skilled labor to rebuild electric infrastructure in wildland urban areas and wildfire mitigation efforts across California.

To illustrate the effects of staffing shortages, for the month of July 2021 there were times when there was a single qualified journey-level line worker available to respond to emergencies, there were days where CPAU couldn’t address system outages in a prompt manner leading to extended service interruptions to our customers, the community, and neighboring agencies such as Caltrain. CPAU’s goal is to restore power as quickly and as safely as possible and it became necessary to call on HLC to perform corrective repairs to the system which was outside the current contract scope of services to restore power to the community and our customers.

Discussion
Currently the Electric Line Construction division has insufficient resources to meet daily operational demands, complete required work, connect new services, and respond to emergencies/unplanned outages. This is due to the high number of vacancies, lack of healthy and qualified journey-level linespersons, and inability to retain and hire qualified journey-level workers in a high demand labor market. Currently, the Utility is not able to maintain the necessary staffing levels required to support the electric distribution system. Critical utility electric operations will be compromised if the City does not contract out this work until CPAU can hire qualified journey level line workers and/or train internal staff in the form of an apprenticeship program, which takes on average four (4) years to complete.

It is essential for HLC to augment city staff and assist the City with completing maintenance and system improvement work necessary to keep the City’s electric distribution system in
compliance with state and utility regulations. With the new scope of work change, these construction services will also be called upon to provide aid and support during emergency situations and storm conditions. The lack of available resources combined with COVID restrictions and quarantine requirements throughout this pandemic have severely impacted the City’s ability to complete work and has resulted in loss of productivity. These conditions have exacerbated the accumulation and backlog of identified and anticipated construction work required to the system.

Furthermore, for emergency or unplanned service outage, a standby unit is needed to assess and isolate the system outage and perform corrective repairs. The ability to properly staff CPAU’s standby unit is very limited, followed by the inability to provide additional qualified staff to address the corrective actions/repairs to the system in a safe manner. Some system failures require emergency repair work matched with specialized journey-level line workers, construction equipment, and the resources that a licensed contractor crew can provide. This contract amendment is now a vital component of keeping in compliance with federal, state, and local regulations, ongoing maintenance, capital improvements to replace aging infrastructure, critical electric operations, and emergency response.

In addition to staff’s request for the City Council to approve the change order for HLC, staff is requesting an exemption from the City’s competitive solicitation process. According to Section 2.30.300(a) and 2.30.360(b)(2) of the Palo Alto Municipal Code, the Council may approve an exemption from competitive solicitation where solicitation would be “impracticable, unavailing or impossible ... [or] would not be useful or produce any operational or financial advantage for the city”. One situation where solicitations would be impractical is when, “due to circumstances beyond the control of the city, the time necessary to use the competitive solicitation process, procedures and requirements would result in a substantial economic loss to the city or the substantial interference with a required city operation”.

A competitive solicitation at this time would cause significant staffing, operational and reliability challenges under the current circumstances as described above, which would render such solicitation impracticable and unavailing, as well as being without operational advantage for the City.

The original invitation for bid (IFB172366A) was to seek electric line construction labor and equipment rates for overhead maintenance work. HLC was chosen competitively and was the lowest bidder. This Change Order No. 1 (One) is adding underground construction services and on-call emergency response services but this change in scope does not impact current labor or equipment rates that are established in the current contract. Even though labor and equipment rates are not changing from the original contract terms, an additional rate schedule for underground equipment is required to perform underground construction work. The driving factor for the increased contract costs and required funding is due to the addition of one to two contractor crew(s) and equipment to handle the majority of the underground construction work and emergency operations support. The Utilities Department foresees the need of these
additional contractor crews for the next several years until the new apprentices (5 FTEs) become journey level linesperson.

Approval of the exemption from competitive solicitation will allow the City to retain a valued contractor while maintaining the continuity the city/staff have with HLC to avoid down time or disruption in completing the required work and be able to respond to emergencies as necessary. Retaining the same contractor would give the city a pool of resources and equipment without time constraints and be more cost effective than seeking formal proposals for this work. Staff would be able to pull/group workforce effort and equipment as needed for whatever type of construction overhead or underground, CIP (large scale jobs), customer connections, and respond to all emergencies while keeping continuity, workmanship, and administrative controls intact.

The potential of awarding the underground construction to another contractor would create significant challenges as well, since having two contractors would require additional City staff and storage facilities that are not available. It would also cost the City more time and resources to manage two separate contracts and crews, which includes material management, equipment/vehicle storage, etc. This would further impose limitations on managing the system operations by splitting the tasks between two contractors. CPAU Electric staff require a unified method to conduct day to day operations, emergency response, and to provide customer service.

When the IFB originally went out to bid, the goal was to target the backlog of the overhead maintenance work in which staff did not have the required workforce effort to complete. Other work, as mentioned above, was being accomplished in-house; however, today, the Electric Department does not have sufficient staff to complete the current maintenance and handle unforeseen emergency situations. Hotline is willing to continue to allow Utility staff to work with HLC’s staff to complete overhead and underground maintenance.

There is a high probability of the City not receiving bids due to the high demand labor market. Staff is satisfied with the construction services HLC has provided thus far and now request additional services to amend the existing contract.

Staff will complete a formal solicitation process to seek construction support for the electric distribution system in 2022 prior to end of this contract.

**Timeline**

HLC will continue to provide electric overhead construction services and emergency support as needed. If Council approves the exemption and Change Order No. 1, HLC will provide the City with requested additional operations/crew(s) within 7 days of the issuance of Notice to Proceed.

**Resource Impact**
Additional funding needs for FY 2022 contract services will be approximately $3,600,000. Staff recommends an appropriation of $1,000,000 in the FY 2022 Electric Fund operating budget to fund the contract through June 30 2022, offset with a reduction to the Electric Distribution Fund Operations Reserve.

Approximately $2,600,000 is budgeted in both Electric Operating and Capital existing FY 2022 budgets. The existing Electric Operating FY 2022 budget will fund $800,000 by transferring salary savings from vacant lineperson positions to the operating budget fund. The FY 2022 Electric Capital budget funds $1,800,000 of the contract based on contract work anticipated among various existing projects (specific projects subject to change based on actual services rendered to each project):

- Electric Customer Connections (EL-89028) $500,000
- Electric System Improvements (EL-98003) $500,000
- Wood Pole Replacement (EL-19004) $800,000

Funding for the final year 3 contract services through February 23, 2023 will be submitted through the FY 2023 budget process. Due to fiscal year timing differences, staff anticipates funding for 4 months in FY 2023 at approximately $400,000 per month needed to cover extended contract services. Any funds unspent in the contract will be returned to Electric Distribution reserves after the three (3) year term.

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<th>FY22 Vacancy Savings</th>
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<tr>
<td>Various CIP</td>
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<tr>
<td><strong>Subtotal of FY22 Available funds</strong></td>
<td><strong>2,600,000</strong></td>
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<tr>
<td>Amend Y2 C20172366A, Oct to Feb</td>
<td>2,000,000</td>
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<tr>
<td>Amend Y3 C20172366A, Mar to Jun</td>
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<tr>
<td><strong>Subtotal of Needs</strong></td>
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<tr>
<td><strong>FY22 Funding gap</strong></td>
<td><strong>1,000,000</strong></td>
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Staff is advancing this recommendation as reflected in the City’s adopted budget. Should the City Council wish to defer this project in light of the current pandemic and other priorities related to community and economic recovery, this item may be removed from the Consent Calendar. Staff will then return to Council with this and other projects for reconsideration.

**Policy Implications**

The recommended Change Order No. 1 is consistent with City’s Policies and Procedures. This recommendation is also consistent with the Council-approved Utilities Strategic Plan 2018: Priority 4: Financial Efficiency and Resource Optimization, we must manage our finances optimally and use resources efficiently to meet our customers’ service priorities. Strategy 1. Establish a proactive infrastructure replacement program, based on planned replacement before failure to support reliability and resiliency.
Environmental Review
The recommended action is exempt from review under the California Environmental Quality Act pursuant to CEQA Guidelines Section 15301 (operation, repair and maintenance of existing facilities) and Section 15302 (replacement or construction of existing facilities.)

Attachments:
- **Attachment4.a:** Attachment A: Hotline Construction, Inc. Contract, Change Order #1 Contract C20172366A
**Contract Change Order**

**City of Palo Alto**
**Department:** Utilities Electric Operations  
**Contract Number:** C20172366A

<table>
<thead>
<tr>
<th>Project Title: Electric Overhead and Underground Construction and Emergency Operations Services</th>
<th>Project No.:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract Number: C20172366A</td>
<td>Date: 9/27/21</td>
</tr>
<tr>
<td>Contractor: Hotline Construction, Inc. (HLC)</td>
<td>Change Order: No.1</td>
</tr>
</tbody>
</table>

**Description of Change Order**

**Background Information:** Electric Operations has a construction contract with Hotline Construction, Inc. (HLC) to perform Electric Overhead Maintenance work and tasks necessary to keep our system operational and/or mitigate the impacts to the system in order to sustain safe and reliable services.

**Change Order Justification:**
1. Staffing Shortages - Utility Electric Operations (UEO) division has not been able to successfully hire and retain qualified journey level staff, specifically in our line construction section, to perform the required work on the Electric Distribution System.
2. Additional funding in the amount of $6,800,000.00 for the duration of the 3 year term contract ending on February 23, 2023.
3. Scope of Services to include Underground Electric Construction and Emergency Operations Services.

This change order will be subject to approval by the City Council.

**Description of Work to be Performed:** This change order will result in Electric Overhead and Underground construction work and emergency call out services being performed by HLC.

**Incorporates Field Order Number(s):** N/A

<table>
<thead>
<tr>
<th>Cost</th>
<th>Time</th>
</tr>
</thead>
</table>
| **This change order will:**
- No cost change: N/A
- Increase cost by $6,800,000
- Decrease cost by $ N/A |
| **This change order will:**
- No change in time
- Increase time by ___ days
- Decrease time by ___ days |

**The date of completion as of this change order remains as:**
Requesting this change for year 2 (current) and year 3 of contract.

**G/L account number(s):** 31991

**Basis for change in cost:**
- Unit price(s)
- **Lump sum**
- Cost plus
- Other: ____________________________
**Contract Change Order – continued**

**CONTRACTOR CERTIFICATION**: The undersigned Contractor approves this Change Order as to the changes, if any, in the contract price specified for each Line Item and as to the extension of time allowed, if any, for completion of the entire work on account of each Line Item, and agrees to furnish all labor and materials and perform all work necessary to complete any additional work specified therein, for the consideration stated therein. It is understood that the time and cost adjustments set forth in this Change Order include full compensation for any impacts or delays associated with the Line Items addressed in this Change Order.

**CLAIM PROCEDURE**: Any items in Contractor’s Change Order Request that are not included in this Change Order are hereby deemed rejected as of the date of this letter. If Contractor wishes to dispute this rejection, it may submit a Claim pursuant to Section 4.2 of the Contract General Conditions within thirty (30) days of the date of this Change Order.

**Scope of Work**

<table>
<thead>
<tr>
<th>PCO No.</th>
<th>ASI</th>
<th>EWA</th>
<th>COR</th>
<th>CO</th>
<th>Description</th>
<th>Amount</th>
<th>Reason for Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>Attachment A Scope of Services</td>
<td>$6,800,000</td>
<td>Staffing Shortages - Inability to perform critical construction work in-house.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>Attachment B Rate Schedule for Underground Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>Attachment C Underground Construction Specifications</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total for this change order</td>
<td>$6,800,000</td>
<td></td>
</tr>
</tbody>
</table>

**Accepted for Contractor:**

By: Casey Rush  
Title: District Manager, Hotline Construction, Inc.  
Date:  

**Accepted for City of Palo Alto:**

By: Letty Rodriguez  
Title: Utilities Supervisor  
Date:
### Contract Change Order – continued

#### Summary of Amounts Payable Under Contract (For Internal Purposes Only)

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Contract Amount:</td>
<td>$4,500,000.00</td>
</tr>
<tr>
<td>Previous Change Orders</td>
<td>$0.00</td>
</tr>
<tr>
<td>This Change Order</td>
<td>$6,800,000.00</td>
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<tr>
<td>Revised Contract Amount:</td>
<td>$11,300,000.00</td>
</tr>
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</table>

#### Compare to:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Contract Authorization:</td>
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<tr>
<td>Contingency:</td>
<td>$0.00</td>
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<tr>
<td>Contract Amendment Authorizations</td>
<td>$6,800,000.00</td>
</tr>
<tr>
<td>Contingency added:</td>
<td>$0.00</td>
</tr>
<tr>
<td>Contingency Authorizations:</td>
<td>$0.00</td>
</tr>
<tr>
<td>Used to date:</td>
<td>$0.00</td>
</tr>
<tr>
<td>Total Authorized Funding:</td>
<td>$11,300,000.00</td>
</tr>
<tr>
<td>Balance remaining:</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

Change orders shall not be initiated for Council-approved contracts if the revised contract total exceeds the total authorized funding amount.

#### Document Preparation

- **By:** Letty Rodriguez  
- **Title:** Utilities Supervisor  
- **Date:** 8/12/21

#### City Approval – Division Head

Signature required on all change orders

- **By:** Tomm Marshall  
  - **Title:** Assistant Director, Utilities Operations  
- **Date:**

#### City Approval – Department Head:

Signature required when any individual Change Order exceeds $10,000.

- **By:** Dean Batchelor  
  - **Title:** Director of Utilities  
- **Date:**
**Unforeseen:** Need to correct or address a condition that could not have been anticipated.

**Design:** Design error or omission.

**Upgrade:** Upgrade or improvement to an item in the original project specifications.

**Exp. Scope:** New mandate or requirement.

<table>
<thead>
<tr>
<th>G/L#</th>
<th>Description – (For Internal Purposes Only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>31041</td>
<td>Eng. Additional Services-Unforeseen</td>
</tr>
<tr>
<td>31071</td>
<td>Program &amp; Project Consultants</td>
</tr>
<tr>
<td>31141</td>
<td>Project. Consultant Additional Services-Unforeseen</td>
</tr>
<tr>
<td>31271</td>
<td>Facilities Repair</td>
</tr>
<tr>
<td>31601</td>
<td>Land Improvement</td>
</tr>
<tr>
<td>31611</td>
<td>Street Contractor Contingency-Unforeseen</td>
</tr>
<tr>
<td>31991</td>
<td>Other Contractor SVC Additional Services-Unforeseen</td>
</tr>
<tr>
<td>32101</td>
<td>Computer Software</td>
</tr>
<tr>
<td>32261</td>
<td>Electrical</td>
</tr>
<tr>
<td>32661</td>
<td>Electrical Contingency-Unforeseen</td>
</tr>
</tbody>
</table>
ATTACHMENT A
SCOPE OF SERVICES

INTRODUCTION
Hotline Construction, Inc. will be required to provide one four-man crew, at a minimum, to be used on an ongoing basis to assist with construction and operating activities on the City’s 12 kV and 4 kV Electric Distribution System as described in the attached Electric Underground Construction Specifications (Attachment C).

UNDERGROUND CONSTRUCTION SERVICES
The City will identify, assign, and oversee work being performed. The Contractor’s crew(s) is to complete each assignment within the estimated time and schedule, and in compliance with pertinent City Specifications and State requirements (General Order 95 & 128 of the California Public Utilities Commission (CPUC). In addition, the Contractor must provide its own tools and equipment. Unless otherwise specified, all main and essential material for the work will be furnished by the City.

A. Inspection tags or work orders for underground equipment and/or locations will be provided, these documents may not contain all the infractions or maintenance present but are required to be completed while performing work at that location. For example, where a G.O. 95 and/or 128 infraction exists but has not otherwise been identified by the City on such tag, the Contractor shall make corrections as though fully identified and specified.

B. The Contractor shall provide all equipment, labor, and tools necessary to complete the assigned work. The necessary equipment and labor will vary based on the type of work the Contractor is asked to perform. The City will continue to pay for the hourly labor costs listed in the original contract C20172366A executed on October 7, 2019. Newly added bid items for underground equipment will be paid according to the hourly rates described in the bid items and schedule of rates (Attachment B).

C. The typical four-man crew and three-man crew are described in the attached bid item list. The crew will be used primarily to assist with a backlog of maintenance work, system improvements, and customer service work. The crew is expected to be capable of performing all the work described in the underground construction specifications (Attachment C). The City can suspend the crew(s) for any period of time, this includes but not limited to due to lack of work, holidays, and available resources such as materials and budget deficits.

D. The Contractor will be required to provide additional personnel on an as needed basis to work. The City will provide a minimum 2 week notice when additional crew(s) will be required.

E. The regular working hours will be from 7:00 a.m. to 5:30 p.m. working 4 days a week, essentially a 4/10 work week, which will include a 30 minute non-compensated lunch period. If the crew is requested to work more than 40 hours in a work week, the City will pay overtime rates based on previously agreed bid items. Contractor shall be allotted one weekly 30 minute safety meeting.
F. Contractor’s equipment and tools should be certified to meet all mandated requirements and shall be required to furnish all necessary safety equipment including personal protective equipment (PPE) for their crew(s) to perform all electrical work assigned in a safe manner. All vehicle operators must be certified and trained to handle the equipment they are using. Valid certification for personnel will be required and submitted to City of Palo Alto Utilities prior to beginning any work.

G. The Contractor shall provide personnel who are trained, certified, and proficient in the skills necessary to complete the assigned work in a safe and efficient manner. An employee from the City’s Electric Operations division or an outside inspector will be assigned to oversee the construction crew(s) provided by the Contractor. The designated City employee(s) or inspector(s) will monitor the contracted crew(s) and assess the quality of work, ability to efficiently and safely complete assigned work, and proficiency of crew members’ skills to handle assigned tasks.

H. The Contractor may be asked to work on larger projects, in which different crew sizes and equipment may be needed to complete the project. In these cases, the Contractor shall submit an estimate for the work based on the bid items and schedule of rates for labor and equipment. The City must approve the estimate before Contractor proceeds with construction.

I. The Contractor is responsible for administrative management of the work performed, including but not limited to:

- Keeping detailed records of work completed, the data will include address, time spent for work completed, equipment, labor, and material used.
- Submitting as-built drawings
- Tracking of invoices to ensure the contract amount does not exceed contract terms
- Providing estimates for projects when requested
- Providing written explanations for discrepancies for estimates and actuals for work completed
- Submitting change order requests

EMERGENCY OPERATIONS

A. Upon the City’s request during normal work hours, the Contractor crew(s) shall be reassigned to the requested location for emergency work. This crew(s) shall work at the standard hourly rate.

B. Although normal work hours will be Monday through Thursday, 7:00 a.m. to 5:30 p.m., the Contractor shall have available sufficient skilled personnel and equipment to perform all work activities covered under this contract, 24 hours a day, seven days a week, and in all types of weather.

C. In the event of an emergency, the Contractor shall respond within two (2) hours of being notified by the City. Contract crews should be assembled and responding within the 2 hours from time of call by City representative. Communication with the Contractor shall be verbal, telephone/cell phone, or email.
D. Should an emergency occur, the Contractor may or may not be contacted by the City to assist with the emergency. If needed to assist, the City will notify the Contractor with the location, scope of work to be performed, and what personnel is required to perform the work.

E. All emergency construction services shall be in accordance with the procedures referenced in the Electric Underground Construction Specifications. The Contractor will be responsible for restoration of all locations as notified by the City.

F. The Contractor may charge no more than the overtime bid rates listed in the original contract C20172366A executed on October 7, 2019. Emergency crews will be paid only for the hours worked on the job, not for “standby” time, outside the normal working hours.

G. The Contractor shall provide the City with up to two (2) four man crews including one (1) Foreman for emergency services after the normal work hours of 7:00 a.m. to 5:30 p.m. when requested by the City.

H. The Contractor shall provide the City with a current call-out list of all contract personnel and phone numbers. This list shall be updated any time there are personnel changes. However, the Contractor’s General Foreman shall be responsible for coordinating call-out personnel and be point of contact with the City.
### UNDERGROUND EQUIPMENT RATES

<table>
<thead>
<tr>
<th>BID ITEM</th>
<th>DESCRIPTION</th>
<th>HOURLY RATE ($/HR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18k Boom Truck</td>
<td>$78.74</td>
</tr>
<tr>
<td>2</td>
<td>Single Reel Dolly Trailer</td>
<td>$18.96</td>
</tr>
<tr>
<td>3</td>
<td>3 Reel Dolly/Trailer or Truck</td>
<td>$44.25</td>
</tr>
<tr>
<td>4</td>
<td>5k LB Under Dawg Cable Puller Trailer</td>
<td>$126.97</td>
</tr>
<tr>
<td>5</td>
<td>Underground Splicing Van</td>
<td>$77.03</td>
</tr>
<tr>
<td>6</td>
<td>Traffic Control Services</td>
<td>$198.23</td>
</tr>
</tbody>
</table>

### ANTICIPATED UNDERGROUND CREW AND EQUIPMENT

**Sample of Crew Make-Up and Equipment/Tools**

**Four-Man Crew**

1 - Working Foreman/ Crew Leader (12 kV rubber glove certification required)
2 - Line Person/ Line Journeyman or Apprentice (12 kV rubber glove certification required)
1 - Truck Driver/ Ground Person (12 kV rubber glove certification required)
1 - Underground Splicing Van
1 - Single or 3 Reel Dolly
1 - 5k LB Under Dawg Cable Puller Trailer
1 - 18k Boom Truck
1 - Bucket Truck

**Three-Man Crew**

2 - Line Person/ Journeyman or Apprentice (12 kV rubber glove certification required)
1 - Truck Driver/ Ground Person (12 kV rubber glove certification required)
1 - Bucket Truck or Underground Splicing Van
ATTACHMENT C  
CITY OF PALO ALTO  
DEPARTMENT OF UTILITIES  

ELECTRIC UNDERGROUND CONSTRUCTION SPECIFICATIONS  
2021  

<table>
<thead>
<tr>
<th>SECTION I</th>
<th>SPECIFICATIONS</th>
<th>Pages 2-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>SECTION II</td>
<td>SAFETY</td>
<td>Page 5</td>
</tr>
<tr>
<td>SECTION III</td>
<td>INSTALLATION AND REMOVAL OF UNDERGROUND CABLE AND EQUIPMENT</td>
<td>Pages 6-9</td>
</tr>
</tbody>
</table>
SECTION I  
SPECIFICATIONS  

A. GENERAL  
1. The work assigned to the Contractor will be performed on the City of Palo Alto’s (City) Utility electric underground distribution system and may include but not limited to: installation, replacement, and removal of cable, transformers, switches, connectors, load break cabinets, and miscellaneous equipment and/or devices.  
2. The Contractor shall provide all labor and equipment including hand and power operated tools necessary to complete the assigned work. Work to be performed is different at various locations and a scope of work for each assignment will be provided by the City.  
3. All workmanship, equipment, and materials shall comply with the City’s specifications in every respect and shall meet all pertinent requirements of General Orders 95 and 128 of the California Public Utilities Commission (CPUC).  

B. OTHER WORK & SERVICES  
1. The City reserves the right to employ or contract with other entities for the performance of other work in or about the assigned work locations.  
2. If any portion of the work requires the work of another contractor or services provided by the City, the Contractor shall inspect and promptly report any defects in such work or services that render it unsuitable for the proper execution and results of the assigned work. Failure to inspect and report any defective work or unsatisfactory services shall constitute an acceptance by the Contractor as being fit and suitable for the proper execution and results of the work.  

C. CONTRACTOR RESPONSIBILITY  
1. The Contractor shall assume all responsibility for the completion of work and unless otherwise specified, shall furnish all labor, supervision, equipment, transportation, tools, and other services to complete the work in accordance with these specifications.  
2. The Contractor shall exercise due care and diligence to adequately protect all properties and materials through duration of this contract. The Contractor shall replace or make necessary repairs to public or private property and to any materials, equipment, and apparatus if an incident should occur. If the contractor fails to promptly make the said repairs and to the satisfaction of the City, the City will replace or repair at the Contractor’s expense.  
3. The Contractor shall operate their vehicles and equipment in accordance with the requirements of the City and the State of California to ensure the safety of their employees and the general public.  
4. The Contractor is required to keep detailed and accurate records of equipment and personnel used to complete work. The Contractor is required to submit as-built drawings for map changes as required.
5. The Contractor shall request a ticket via Underground Service Alert (USA) 811 prior to any required excavation work and comply with all aspects of Government Code 4216.

D. SWITCHING OPERATIONS, CUSTOMER OUTAGES, & COMMUNICATION

1. The Contractor shall follow established procedures for obtaining clearances and switching from the City. No primary switching shall be done without permission. The Contractor shall obtain approval from the City prior to commencing any work that involves working on or near energized lines and shall notify upon completion of all such work.

2. The Contractor is responsible for properly testing circuits, de-energizing, and grounding when required.

3. The Contractor is to arrange for a Non-Auto (Non-Test) on all circuits prior to any work where equipment or personnel could make contact with energized lines.

4. The Contractor shall provide the City with an exact diagram of any circuit changes at the end of every workday upon verifying the accuracy of such changes.

5. The Contractor shall contact the occupants of the premises prior to working on their property in the form of Planned Shutdown Notices, which shall be hand delivered, hanged, or taped where feasible. The Contractor shall coordinate all planned shutdowns with City to ensure we meet the notice requirements for both residential and commercial customers.

6. The Contractor shall post “No Parking Signs” at least 72 hours in advance of the intended work date. The Contractor will list all required information on the signs such as their contact information.

7. The Contractor is representing the City and shall perform their work in a safe and professional manner. The Contractor shall avoid disputes with property owners/occupants, the general public, or others. Where practical, the Contractor shall perform the prescribed work to accommodate reasonable requests of the property owners/occupants. For any objections made by property owners/occupants, the City will assist the Contractor in developing a work plan before the work proceeds.

8. The Contractor will not clear vegetation without prior approval from the City and shall coordinate any vegetation issues with the City.

E. MATERIALS

1. Unless otherwise specified, all main and essential material for the work will be furnished by the City.

2. The Contractor shall assume the risk of loss, theft, or damage to all materials delivered and accepted until such materials have been completely installed and accepted by the City. The Contractor's liability shall include damage to or loss of material in their possession, including material being loaded, unloaded, or handled.

3. The Contractor shall arrange for material pick up from the City's Municipal Service Center (MSC), located at 3201 East Bayshore Road, with a minimum of three (3) days advanced notice. It is the Contractor’s responsibility to ensure they receive all the necessary material required for completing the work. The Contractor shall notify the City of any needed changes to the material prior to proceeding with the prescribed work.
4. The Contractor is required to account for all material issued by the City. All unused material shall be returned within five (5) days of the contract end date. The Contractor shall be required to reimburse the City for all unaccounted material previously accepted and not installed.

F. CODES, STANDARDS, ORDERS, & RULES

The following Codes, Standards, Orders, and Rules are generally applicable for all construction under this contract. In case of a conflict between any standards of construction, the stricter standards shall prevail.

1. Rules for overhead electric line construction, General Order No. 95 State of California (CPUC).
2. Rules for underground electric line construction, General Order No. 128 State of California (CPUC).
3. The City of Palo Alto Public Works Standard Drawings & Specifications, which could be found @ https://www.cityofpaloalto.org/Departments/Public-Works/Engineering-Services/Public-Works-Standard-Drawings-and-Specifications
4. Electric Service Requirements, which could be found @ https://www.cityofpaloalto.org/files/assets/public/utilities/utilities-engineering/electrical/electric-service-requirements-2016.pdf
5. City of Palo Alto noise ordinance and demolition, construction and alteration activities, which could be found @ https://www.cityofpaloalto.org/files/assets/public/public-works/engineering-services/webpages/forms-and-permits/other-guidelines/cpa-noise-ordinance-030507.pdf
7. CAL/OSHA Title 8 Electrical Safety Rules.

G. PERMIT(S)

1. All rights-of-way, easements, and permits necessary for installations on private property, properties of other governmental agencies, or railroad crossings will be secured by the City.
2. The Contractor’s crew may be required to complete training for work on railroad rights of way when necessary.
SECTION II
GENERAL SAFETY REQUIREMENTS

A. SAFETY

1. All work shall be conducted in a safe manner and in strict accordance with the rules of the Division of Occupational Safety and Health (DOSH), better known as Cal/OSHA. The Contractor shall take all reasonable precautions necessary to protect all workers and other persons who may be in or about the construction area from personal injury and to prevent damage to the property of the City or others. The Contractor shall submit their safety program.

2. The Contractor and City will schedule “tail-board” meetings to assign work, review general rules and best practices regarding safety, arranging shutdowns, clearances, typical installations, equipment, and compliance.

3. Workers in the public rights-of-way shall wear high visibility safety vests, hard hats, and all required Personal Protective Equipment (PPE).

4. If any portion of the work is being done in an unsafe manner, the work will be stopped until corrective actions have taken place to make it safe.

5. The Contractor shall notify the City in writing of all accidents arising out of work being performed and shall submit a detailed report for each accident within 24 hours of the incident.

6. In any emergency threatening life, personal injury, or property, the Contractor shall, at its discretion and without instruction from City, immediately act to prevent such threat to loss of life, personal injury, or property.

7. The Contractor shall make arrangements for first aid and for the transportation of its own injured personnel. The Contractor shall comply with all reporting regulations for all injuries. The Contractor shall notify the City of any injuries in writing/email within 24 hours.

8. The Contractor shall conduct operations and maintain work site to ensure the least possible obstruction and inconvenience to traffic, pedestrians, cyclists, and adjacent property owners.

9. The Contractor shall remove and cleanup all debris and excess material from the job site at the end of each work day. After work has been completed, the Contractor shall restore planting areas and other areas abutting the worksite to prior conditions.

10. The Contractor shall furnish and maintain barriers, lights, and signs needed to warn the public adequately of the worksite and any dangerous conditions to be encountered as a result of the work in progress.

11. When necessary, the Contractor is required to submit a Traffic Control Plan and get approval before starting any work.

12. The Contractor shall not provide backup power by any means to the City’s customers. If the customer has a complaint about a planned shutdown, the Contractor will notify the City to handle the matter directly with the customer.
SECTION III
INSTALLATION AND REMOVAL OF UNDERGROUND CABLE AND EQUIPMENT

A. EQUIPMENT - PADMOUNT AND SUBMERSIBLE TRANSFORMERS, CABLE, CONNECTORS, SWITCHES, LOAD BREAK CABINETS, AND APPURTENANCES

1. All equipment shall be installed per manufacturer’s directions and in conformance with good industry practice.

2. The Contractor is expected to ensure the nameplates on all transformers to conform to circuit requirements before energizing and connecting any services to it.

3. The Contractor shall use great caution in the removal and transportation of transformers, placing the transformers in provided oil containment bags as necessary, and returning them to the assigned area.

4. The Contractor shall keep accurate records of all equipment being installed or removed. The data shall include all pertinent data, such as address, location number, size, City number, manufacturer, and serial number.

5. The Contractor shall test and record secondary voltage before connecting customer load. Phase rotation shall be checked, verified, and recorded where applicable. The Contractor will notify the City of any abnormal voltage measurements.

6. All transformers, switches, and miscellaneous equipment or devices shall be returned to MSC at designated locations and segregated by type.

B. PRIMARY CABLE

1. The types of primary cable to be installed are both 15kV strand filled or 25kV non-strand filled ethylene propylene rubber insulated cable with jacketed concentric neutral.

   a. Standard cable length per reel are:

   | 15kV, 1 conductor, 1/0 AWG Compressed Aluminum Strand Filled conductor, 220 mil EPR insulation, with 1/3 neutral copper concentric conductor | 4000 ft. |
   | 25kV, 1 conductor, 600 kcmil Compact Aluminum NON-Strand Filled conductor, 260 mil EPR insulation, with 1/6 neutral copper concentric conductor | 2000 ft. |
   | Cable, 15kV, 1 conductor, 750 kcmil Compressed Aluminum Strand Filled conductor, 220 mil EPR insulation, with 1/3 neutral concentric copper | 2000 ft. |

2. Largest reel size for primary cable has the following dimensions:
a. Maximum Flange Diameter - 78"
b. Maximum Overall Width - 54"
c. Minimum Drum Diameter - 36"

**C. SPLICES AND TERMINATIONS**

1. All materials shall be installed per manufacturer’s directions and in conformance with good industry practice.

2. Splices in manholes shall be located midway between cable racks on walls of manholes, and supported with cable arms at approximately the same elevation as the enclosing duct.

3. Load-break terminations for indoor and outdoor use: Elbow-type unit with test point and 200-A load make/break and continuous-current rating.

4. Dead-break terminations for indoor and outdoor use: Elbow-type unit with test point and 600-A continuous-current rating.

**D. PED CONNECTORS**

1. The Utilco PED connectors shall be installed per manufacturer’s directions and in conformance with good industry practice.

2. The Utilco PED connectors will be provided with provisions for 350MCM or 750MCM maximum size cable and to connect 3 to 6 cables per connector.

3. The specific Utilco PED connectors used in splice boxes will depend on the number and size of cables terminating in the box. Contractor shall select and use the appropriate connector with provisions to have unused positions available for all planned service connections.

**E. HANDLING REELS AND EQUIPMENT**

1. The Contractor shall inspect each reel upon receipt to determine whether or not visible damage has occurred during transit and/or storage.

2. Loading and Unloading
   a. Reels and equipment shall be handled in such a manner as to prevent smashing, nicking, cutting or other damage to the cable. When unloading reels from trucks, reels shall not be dropped to the ground or allowed to roll freely down ramps. Cranes or other equipment of adequate capacity shall be utilized and care shall be taken to avoid damage to the equipment, cable, or reels.

3. Final Inspection
   a. After removing lagging or other protective coverings from reels, Contractor shall examine outside layer of each reel to ensure that the cable is undamaged and that no nails, staples, or other sharp objects, which would damage the cable during unreeling protrude on the inside of the reel heads.

4. The Contractor shall return all reels to the MSC upon completion of the work.

**F. CABLE INSTALLATION**

1. All cable installation shall be installed per manufacturer’s directions and in conformance with good industry practice. A sufficient number of trained personnel and equipment shall be assigned to ensure the proper care and installation of the cable.
2. Cable must be installed by accepted construction practices and the procedure outlined in City of Palo Alto Cable pulling Procedure – Operating Bulletin Number – UG/OH Construction P&P # 0407-1 shall be used as a guide during cable installation.

3. The sizes of the cable to be installed will be specified on the drawing(s).

4. Sufficient length of cable shall be left in manholes (20ft.) and secondary splice boxes for training and connection.

5. Cable shall be installed in conduit above grade and duct bank below grade. All cable of a feeder shall be pulled simultaneously.

6. Cable shall be pulled into ducts with equipment designed for this purpose, including power-driven winches, cable-feeding flexible tube guides, cable grips, pulling eyes, and lubricants.

7. Cable reels shall be set up at the side of the manhole opening and above the duct or hatch level, allowing cable to enter through the opening without reverse bending. Flexible tube guides shall be installed through the opening in a manner that will prevent cable from rubbing on the edges of any structural member.

8. Cable shall be pulled directly into the duct from the coil or reel on which they are received. Cable shall not be pulled off and laid on the ground prior to installation.

9. Cable shall be unreeled from the top of the reel. Pay-out shall be carefully controlled. Cable to be pulled shall be attached through a swivel to the main pulling wire by means of a suitable cable grip and pulling eye. Woven-wire cable grips shall be used to grip the cable end when pulling small cable and short straight lengths of heavier cable.

10. Pulling eyes shall be attached to the cable conductors to prevent damage to the cable structure.

11. Cable shall be liberally coated with a City furnished lubricant as they enter the tube guide or duct. Rollers, sheaves, or tube guides around, which the cable is pulled from, shall conform to the minimum bending radius of the cable.

12. Cable shall be pulled into ducts at a reasonable speed. Cable pulling using a vehicle shall not be permitted. Pulling operations shall be stopped immediately at any indication of binding or obstruction and shall not be resumed until the potential for damage to the cable is corrected. Sufficient slack shall be provided for free movement of cable due to expansion or contraction.

13. Splices in manholes shall be firmly supported on cable racks. No splices shall be pulled in ducts. Cable ends shall overlap at the ends of a section to provide sufficient undamaged cable for splicing.

14. Cable cut in the field shall have the cut ends immediately sealed to prevent entrance of moisture. Cable ends shall be moisture proofed at all times until terminations are installed. Cable shall not be pulled with the ends open. Cable ends shall not be allowed to rest on the floor.

15. Whenever possible, the pullout manhole should be rigged to facilitate pulling into the manhole adequate amount (20ft minimum) of cable for splicing and racking without the necessity of taking hitches on the cable sheath or jacket.

16. Any and all sections of cable that are damaged by the application of grips shall be discarded.
17. The Contractor shall pay close attention to the cable footage markers and plan pulls to minimize the amount of short unusable cable lengths left on the reels.

18. Cable location tags must be installed on cable outside of each duct indicating cable run destination. In each manhole and pull box, install permanent tags on each circuit's cable to clearly designate the circuit identification and voltage. Arrange tags such that they can be read without moving cable.

19. Cable phasing marks (colored tapes) must be installed on both ends of each cable identifying phases.
Title: Approval of Advanced Metering Infrastructure (AMI) Contract with Sensus USA Inc. in the Amount of $15,283,218; and Authorization for the City Manager to Negotiate and Execute Change Orders up to a Not-to-Exceed Amount of $1,484,000, for a Total Contract Amount Not-to-Exceed $16,767,218; Approval of Amendment No. 2 with E Source in an Amount Not-to-Exceed $1,339,947 for Phase 3 AMI Consulting; and 3) Adoption of a Resolution to Transfer up to $18,900,000 from the Electric Special Project Reserves to the Smart Grid Technology Installation Project EL-11014

From: City Manager

Lead Department: Utilities

Recommendation
Staff recommend that Council:

1. Approve and authorize the City Manager or their designee to execute Contract C22177782 (Attachment A) with Sensus USA Inc. (Sensus), for advanced metering infrastructure (AMI) system and installation services, in an amount not to exceed $15,283,218 through 12/31/31;
   a. Authorize the City Manager or their designee to negotiate and execute one or more task orders for additional services under the contract with Sensus for related additional, but unforeseen work which may develop during the project; the total of which shall not exceed $1,484,000 or 10% of the implementation cost, for a total contract amount not to exceed of $16,767,218;
   b. Authorize the City Manager or their designee to determine whether executing the optional Network Performance Assurance Services (Contract Exhibit N) for post-deployment support of the AMI network and extension of performance warranty for two years, in an amount not to exceed $338,531 (included in the total Sensus contract amount above) is in the City's best interests, and approve and authorize the City Manager or their designee to execute Contract Exhibit N if it is determined to be in the City’s best interests, not later than six months from the anticipated completion of AMI deployment;

2. Approve and authorize the City Manager or their designee to execute Amendment No. 2 to Contract C17165774A (Attachment B) with E Source Companies, LLC, for phase 3 AMI consulting services including project management, system integration, change
management, and field installation oversight, in an amount not to exceed $1,339,947 through 12/31/2025;

3. Approve the adoption of a Resolution (Attachment C), in which Council:
   a. Authorizes the transfer of up to $18.9M from the Electric Special Project (ESP) reserves to the Smart Grid Technology Installation Project (EL-11014), as follows:
      i. Transfer up to $8.4 million from the ESP reserves to the Smart Grid Technology Installation Project (EL-11014) for Electric Advanced Metering Infrastructure (AMI) and smart grid-related expenditures;
      ii. Transfer up to $6.5 million from the ESP reserves to the Smart Grid Technology Installation Project (EL-11014) for Water AMI and smart grid-related expenditures as an inter-fund loan with a repayment term of 5-years with appropriate interest, upon completion of the project; and
      iii. Transfer up to $4.0 million from the ESP reserves to the Smart Grid Technology Installation Project (EL-11014) for Gas AMI and smart grid-related expenditures as an inter-fund loan with a repayment term of 5-years with appropriate interest, upon completion of the project.
      iv. Individual fiscal year transfer amounts up to the totals listed in the subsections above will be determined based on annual CIP budgets, and are currently estimated to be $7 million in FY 2022, $7 million in FY 2023, and $4.9 million in FY 2024.
   b. Approves the commitment of ESP funds to support the electric AMI Project expenses, and the loan of ESP funds to support the water and gas AMI Project expenses, and finds that the proposed fund transfers meet Council’s guidelines for managing the Electric Special Project Reserve.

Executive Summary
In 2018, the Utilities Advisory Commission (UAC) and City Council approved the Smart Grid Assessment and Technology Implementation Plan and supported implementation of the Advanced Metering Infrastructure (AMI) project. AMI is a foundational technology that is becoming a standard in the utilities industry to implement smart grid systems designed to improve customer experience, strengthen system reliability, enable City of Palo Alto Utilities (CPAU) to operate more effectively, and enable the community to meet its environmental sustainability and resiliency goals.

To implement AMI, staff identified detailed business requirements and issued a request for proposal to potential AMI systems and installation vendors. After evaluating 13 proposals, staff recommends Sensus USA Inc, for their AMI system and equipment installation services. Staff also recommends a contract amendment with E Source Companies to provide AMI consulting services for the final phase (#3) which includes project management, change management, system integration, support for testing and training, and field oversight throughout the project from 2021 through 2024. The combined initial (capital) costs of these two contracts are estimated at between $15.1 and $16.7 million, depending on the use of $1.6M in contingency funds. An additional $0.9 million in expenditures is projected over the 10-year term of the
Sensus contract for on-going annual software and hosting services, bringing the total contract amount to $17.6 million over the life of the contracts.

The Electric Special Projects (ESP) reserve fund is in place to fund major one-time electric utility expenditures, including the AMI project. Hence staff recommends using up to $8.4 million from ESP reserves to cover the electric share of the AMI project, and for the ESP to lend up to $10.5 million to cover the gas and water share of the project, with a plan to repay the loan with interest at an appropriate interest rate within 5 years after project completion. The use of ESP funds for this project is within the ESP reserve guidelines approved by UAC and Council in 2015 (Staff Report #5716).

The significant investments involved, the recommended actions are presented as part of the City Council’s consent calendar in recognition of the City’s interest in expediently implementing this initiative based on prior City Council direction. Should councilmembers wish to discuss the item, staff can agendize the topic on a future Council or Finance Committee agenda.

**Background**
In November 2018, the City Council approved the Utilities Smart Grid Assessment and Technology Implementation Plan (Staff Report # 9780). The assessment recommended the implementation of Advanced Metering Infrastructure (AMI) based smart grid systems for the benefit of electric, natural gas and water utility customers.

An AMI-based smart grid system will empower customers to more efficiently utilize utility supplies, facilitate customer adoption of distributed energy resources (DER) such as solar photovoltaics, energy storage, and electric vehicles, and enable the timely detection of water leaks. AMI will also enable CPAU to optimize operations and improve reliability by reducing restoration time for outages. AMI will be a critical system to meet the community’s greenhouse gas reductions goals by enabling time-of-use (TOU) electricity rates and to encourage the use of electrical appliances and charging EVs during periods of the day when electricity cost is low.

Given the large investment required to implement an AMI system, a cost-benefit analysis was undertaken in 2018 to determine financial viability of AMI, assess staffing requirements, and consider technological dependencies, project risks, and CPAU’s operational readiness. The analysis found that the overall net-present-value (NPV) of the investment over the 18-year life of the system was close to break-even, considering only the costs and benefits that can be quantified. This effectively means that there will be little or no impact on utility cost to customers over the 18-year life of the project. Upon including non-quantifiable benefits such as enhanced customer experience, improved system reliability, and better distribution asset utilization, the analysis suggests that this strategic investment would be a net benefit to all utility customers, particularly for the electricity and water utility customers. The estimated capital cost related to the AMI system installation was approximately $16 to $19 million with an investment life of 18 years. The evaluation also analyzed the operational impact and found that the investment will require a few staffing changes to implement and maintain the AMI
infrastructure to maximize the value of the investment. The annual operating cost of the AMI system is estimated to be $1.9 million, which would be offset by $3.3 million in benefits estimated to accrue from electricity and water use conservation, and current staffing related savings. The result is projected to be a net monetary benefit to of $1.4 million per year on an ongoing basis.

The UAC and Council acceptance in 2018 of staff’s recommendation to invest $16 to $19 million in AMI technology was based on a financial and economic analysis undertaken by expert consultants and the experience gained by CPAU after implementing the CustomerConnect AMI pilot in 2013-18

Discussion

I. RFP Issuance, Vendors Selection, and Contract Negotiations to Implement AMI Project

Following Council’s acceptance of staff’s recommendation to invest in AMI technology in November 2018, staff retained consultants to assist with soliciting AMI system vendor proposals. On March 31, 2020, a Request for Proposal (RFP) Number 177782 for ‘Equipment, Software, and Services for an Advanced Metering Infrastructure Project’ was issued. Staff received 13 proposals ranging from one to five components identified in the RFP: AMI network, water metering, gas metering, installation services, and meter data management system. The proposers were asked to submit a proposal on a single project component, multiple project components, or all five components. Proposers were also permitted to submit a joint proposal for one or more project components, to provide a proposal that best meets the City’s stated needs.

<table>
<thead>
<tr>
<th>Component Number</th>
<th>Component Name</th>
<th>Component Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AMI Field Area Network (“FAN”)</td>
<td>Equipment, software, and services capable of delivering billing and interval reads from customer meters, including networking infrastructure components and the installation thereof, AMI-integrated electric meters, water and gas endpoints/modules, and other ancillary equipment (batteries, water meter pit lids, etc.) necessary to attain functionality; additionally, integration services to tie the AMI headend to other business-critical systems</td>
</tr>
<tr>
<td>2</td>
<td>Water Metering</td>
<td>Water meters, registers, and lids</td>
</tr>
<tr>
<td>3</td>
<td>Gas Metering</td>
<td>Gas meters, indices, and some lids</td>
</tr>
<tr>
<td>4</td>
<td>Installation Services</td>
<td>Installation services for electric meters, AMI endpoints/modules, and other ancillary metering equipment (water and gas meters, water meter registers, gas meter indices, lids, boxes, etc.) related to the AMI Project; additionally, procurement of ancillary equipment, such as water meter boxes, as-needed upon request</td>
</tr>
<tr>
<td>5</td>
<td>Meter Data Management System (“MDMS”)</td>
<td>Software and services for the long-term retention, validation, estimation, and editing of meter reads, as well as advanced analytic tools for the data; additionally, integration services to tie the MDMS to other business-critical systems</td>
</tr>
</tbody>
</table>
Staff and the consultant assembled a cross-functional AMI project team consisting of members from Administration, Customer Service, Engineering, IT, Operations and Resource Management. The team met for eight months reviewing each proposal, interviewing vendors, participating in vendor demonstrations and presentations, and conducting customer reference calls.

The proposals were evaluated based on the following criteria. It was also specified that the weights associated with the criteria would be different for the five components of the RFP.

1. Quality and completeness of Proposal
2. Quality, performance, and effectiveness of the solution
3. Proposer’s experience
4. Cost to the City
5. Proposer’s financial condition and stability
6. Proposer’s ability to perform the requirements within the time specified
7. Proposer’s prior record of performance with City or other agencies
8. Proposer’s ability to provide future maintenance, repairs, parts and/or services
9. Proposer’s compliance with applicable laws, regulations, policies
10. Whether or not the Proposal is Turnkey; existence of synergies with existing City systems

The selected vendors have a proven history of AMI experience in the municipal sector with electric, gas, and water meters in California. The solutions and services they offered were the best fit for the City in the near term and for future business requirements.

II. Sensus AMI Contract and Scope of Work
The AMI system provided by Sensus USA Inc. was selected. This system consists of five elements:

1. A 900 MHz point-to-multipoint network over FCC licensed radio band.
   - Five network poles will be erected at Hale Well Station, Peers Park Pump Station, Maybell Substation, Montebello Reservoir, and East Meadow Substation to receive wirelessly transmitted meter data from ~74,900 electric, gas and water meters.
   - There will be a total of 10 collector radios, ranging from one to three collectors per site, powered at 8 Watts, and are expected to collect meter data continuously and transmit every fifteen minutes.
   - Network and meter communication is secured via fiber backhaul and AES-256 encryption and the system meets all relevant NIST standards.

2. Approximately 27,100 Sensus residential/small commercial electric meters and ~2,900 Aclara kV2C commercial electric meters, both with Sensus radios, will replace all ~30,000 of the existing electric meters.
   - The 2 Watt-powered radio embedded in a meter is expected to transmit data (15-minute energy consumption and voltage data) on a hourly basis, but ~0.1 second each time. The customer consumption information will be made available to customers the day-after, on a hourly interval basis for electricity consumption and daily intervals for
water/gas consumption.

- On an optional basis the electric meters can have an embedded Zigbee radio, which when turned on by CPAU at customers request, will be able to communicate meter reading data within the home via a in-home-display (IHD) or wi-fi enabled gateway to a customer selected IHD/gateway service provider.

- Some electric meters will also have a remote disconnect switch. This feature could be used to turn off or limit the current flow to a delinquent customer. This feature will lower CPAU operating costs of travelling to customer site for customer turn-off or move outs.

- Replacement of the electric meter will result in a momentary outage for the customer. Customers will be notified in advanced of the electric meter replacement.

3. Approximately 20,798 water meters will be retrofitted with Sensus water meter end-point radios.

- Water meter radios are powered by batteries that are warrantied for 15-20 years and transmit to the collector at 2 Watts, 6 times a day, with transmission lasting ~ 0.1 seconds each time.

- Approximately 8,300 water meters are older than 20 years and are due for replacement with CPAU’s preferred Badger meters. To achieve operational efficiencies and economies related to installation, these older water meters will be replaced when AMI radios are installed at those locations. CPAU will directly purchase the Badger water meters from the manufacturer and provide them to Sensus for installation along with Sensus water end-point radios.

- Since the water meters will be procured by CPAU, outside the Sensus contract and are not directly related to the AMI project, these cost are not included in this report nor included as part of the AMI capital budget. Instead, these water meter replacements will be charged against the Water Meter Replacement CIP (WS-80015). Due to staffing constraints in previous years, CPAU has accumulated a large backlog of aged water meters in need of replacement. Water meter box lids will also be replaced or retrofitted to accommodate a mushroom shaped radio antenna that is mounted flush with the lid to provide a clear path for communication.

- All 20,798 Badger water meters will require an AMI radio to transmit the water meter data and alerts to the AMI network. The City has had Badger water meters as a standard for approximately 25 years. Based on the City’s water meter testing results and discussions with other water utilities, Badger meters have proven to be accurate and reliable. The City has an existing contract with Badger and will directly purchase the end-point radios from them because this will eliminate the mark up cost associated with a third party distributor. The estimated cost to retrofit all Badger water meters with AMI end-point radios is $0.9 million or $43 per unit.

4. Approximately 24,208 of existing gas meters will be retrofitted with Sensus gas meter end-point radios.

- Gas meter radios are powered by batteries that are warrantied for 20 years and
transmit to the collector at 2 Watts, 6 times a day, with transmission lasting ~ 0.2 seconds each time.

- The dials of the existing gas meters will be removed and be retrofitted with dials which can be connected to the gas meter radio/antennas.

5. A cloud-based meter Head End System (HES) will store all the data collected and transmitted by the meters. Sensus will be providing hosted HES solution for a initial 10 year period, extendable up to 20 years.
   - Data centers hosting the HES are located in the U.S and communication is secured through a VPN connection. Data is encrypted at rest including backups. All datacenters comply with System and Organization Controls 2 (SOC2) for physical security. No Personally Identifiable Information (PII) will be stored in the system.
   - Sensus maintains a set of security policies that are aligned with industry standards and has been certified by GE under the Achilles Practices Certification (APC) and Achilles Communication Certification (ACC) programs.
   - Sensus is in the process of obtaining ISO 27001 certification and expects to be certified by the end of CY 2021.

The total capital cost associated with procuring this system is estimated at $10.3 to $11.3 million, including a contingency amount of $1.0 million or 10 percent. The annual hosting, licensing and software fee is approximately $90,000. The term of the SaaS agreement is 10 years with a 3% annual escalation totalling approximately $1,031,749. The contingency amount is requested to purchase additional Zigbee and/or remote disconnect modules on electric meters. Over the next six months, staff will be conducting more research and performing cost benefit analysis on these optional devices. The contingency funds allocated to this contract will ensure that CPAU can mitigate schedule delays in roll-out, as well as avoid overruns in the overall budget. After completion of the project, all remaining dollars from the contract or contingency account will be returned to Electric Special Project reserves.

Since the Sensus contract is a hybrid of different types of contracts (i.e. Goods, Professional Services, Software), there are some non-standard City terms in the contract.
- **FCC Spectrum License Lease** – Since Sensus uses licensed radiofrequency (RF) from the Federal Communications Commission (FCC) for their AMI network, the City has to agree to the FCC terms. Sensus is unable to modify any of the terms under the FCC’s RF spectrum lease agreement. Staff has reviewed the FCC agreement and does not have any concerns with the standard terms and conditions of the FCC agreement. The private FCC licensed spectrum provides the City additional reliability, scalability, and security.

- **Non-appropriation** – If the contract is terminated for non-appropriation, the City will not replace the Sensus AMI network with a different vendor for the remainder of the term of the contract. In addition, the City will be responsible for any unavoidable costs incurred by Sensus as a result of a suspension or termination for non-appropriation. Unavoidable costs may include raw material and work in process, plus the furnished
Equipment and Services and any standby or demobilization fees or other applicable costs that may be incurred by Sensus. In no event will the termination/suspension costs exceed ten percent (10%) of the remaining Agreement cost related to implementation/installation of the AMI network.

- Optional Network Performance Assurance Services – For post-deployment AMI network support, Sensus offers a two-year network performance assurance service which includes ongoing RF network communication management and maintenance of the AMI network. Sensus will dedicate 0.5 FTE to monitor, troubleshoot, mitigate and resolve any AMI communication or equipment issues. This extended service will provide additional support and training for the AMI staff. This is an optional service that the City will determine if it in the City’s best interest no later than six months from the anticipated completion of AMI deployment.

III. Installation Services by Utility Partners of America (Subcontractor of Sensus)
Customer metering equipment installation services would also be provided by Sensus USA, under a subcontract with Utility Partners of America (UPA). UPA is one of the leaders in providing large-scale meter installation services. UPA served as the installation contractor for other municipal utilities in California such as Sacramento Municipal Utility District, Eastern Municipal Water District, the City of Long Beach Energy Services and the City of Santa Rosa. The Work Order Management System (WOMS) to aid the management and quality control will be based on Ensight+ software.

- Ensight+ software services are hosted by Rackspace, which is SOC 1, SOC 2, SOC 3, and ISO 27001 certified; and the data is stored with AES-256 bit encryption.
- Ensight+ as an organization is in the process of being SOC2 certified by early 2022.

Installation services include replacement of electric meters, retrofitting existing water meters with AMI radios, replacing water meter box/lids, replacement of aging water meters, retrofitting existing gas meters with AMI radios, removal and disposal of old equipment in accordance with City’s disposal and recycling policies.

Installation of electric meters will cause a momentary outage for the customer. Installing water and gas radio end-point will not cause service disruptions for the customer. Replacement of aging water meters will cause a 30 to 45-minute service disruption. Timely notices, including knocking on the doors, would be provided to customers during the mass installation phase of the project, anticipated to occur in the 2023-24 period.

New electric meters will be tested on a sample basis. Due to the volume of meter replacement and associated logistics, meters removed will not be tested. If customers perceive their meter to be inaccurate, tests will be performed on the new meters.

The 18 months of installation services by UPA are expected to begin in mid-2023 and the
The projected cost is $5.0 million including a contingency amount of $0.50 million or 10 percent. A need for contingency funding arises from the installation services to be performed by a contractor. CPAU has already taken steps to mitigate or otherwise account for auxiliary costs that are commonly incurred during mass meter change-out and AMI deployment, such as K- and A-base meter conversions, gas relights, and box/lid replacements, among other items. Despite this planning, field conditions are often subject to changing environments that can lead to accessibility issues or additional work that need to be performed before converting a meter to AMI.

IV. E Source Consulting Contract and Scope of Work

Staff recommends continuing to utilize the services of E Source Companies, LLC (previously UtiliWorks Consulting) to assist CPAU staff in managing this large specialized project. With their wide-ranging and in-depth AMI experience, E Source previously assisted CPAU with analyzing the cost-benefits of the AMI investment and also assisted with soliciting vendor proposals and evaluation during the vendor contract negotiations.

E Source has a proven history of working with CPAU in developing a strategic technology roadmap, completing the AMI business case and cost-benefit analysis, and supporting procurement of advanced metering infrastructure (AMI).

E Source services under the agreement will include project management, organizational change management, system integration, testing and training support, and field services oversight. The expenditure under this contract is projected to be $1.2 to $1.3 million including a contingency amount of $0.2 million. Given the complexity of the AMI project and system integration and coordination of multiple workstreams across CPAU, the contingency account will enable E Source to provide a greater level of effort to lead some of these areas, such as organizational change management, solutions architecture and engineering, or systems training and testing, depending on staff availability and constraints. Additionally, CPAU may opt to extend some services beyond the current schedule, such as mobilizing E Source resources for added installation oversight and quality assurance during Full Deployment.

V. Meter Data Management System (MDMS)

The MDMS will act as the system of record for all meter readings and customer consumption, integrating with various other system and feeding billing, customer service, and engineering operations. It will offer dashboards, visualizations, and analytics to view individual meters or aggregated meters. The MDMS also provides analysis tools for water leak detection, outage map, and transformer health.

Staff will bring forth the terms, conditions, and cost of the MDMS contract in a subsequent Council meeting. As a result of an industrywide semiconductor chip shortage, the lead time to build the AMI base stations and meters is approximately 12 – 16 weeks. Integration of the AMI
and MDMS systems cannot begin until the base stations are installed and meters are deployed, which is why staff is recommending approval of the AMI network and consulting contracts ahead of the MDMS contract.

VI. System Integration Services with Existing CPAU Technology Systems
In addition to equipment and services procured through these AMI contracts, additional resources will also be needed to implement this project:

- Augmenting SAP Consultants services to integrate MDMS with the CIS/Billing system.
- Augmenting consulting services with SEW, the MyCPAU customer account management portal provider to integrate AMI data into the portal.
- Re-assigning existing staff to new roles to implement and maintain AMI systems.
- Hiring temporary staff to back-fill for existing staff who will be assigned to the AMI project during implementation phase.

The cost of these additional resources is estimated at between $1.0 and 1.5 million.

An overview of the AMI and MDM systems selected and their communications and interfaces with CPAU’s existing technology systems are illustrated in Figure 1.

VII. Components of Project Cost & Projected Budgets
A description and summary of the Sensus and E Source contracts recommended to be approved by Council is provided in Table 1.

<table>
<thead>
<tr>
<th>Contracting Entity</th>
<th>Sensus USA, Inc.</th>
<th>Sensus USA, Inc. &amp; Subcontractor (Utility Partner of America)</th>
<th>E Source</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract Description</td>
<td>AMI equipment, software and hosting services, integration services, and professional services</td>
<td>Meter, radio, and lid installation services</td>
<td>Consulting services related to project management, change management, system integration and field services</td>
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<tr>
<td>Type of Service</td>
<td>10 years</td>
<td>One Time</td>
<td>4 years</td>
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<td>Costs</td>
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<td>Contingency</td>
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<td>Total Software Licensing</td>
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<td>Total NTE Amount (in millions) for Contract Term(s)</td>
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<td>11.3</td>
<td>$</td>
<td>5.5</td>
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</table>

A description of the total estimated AMI project cost including the meter data management system and Badger water meter radios is provided in Table 2. Staff will bring forth the terms, conditions, and cost of the MDMS and National Meter & Automation contracts in a subsequent Council meeting.

<table>
<thead>
<tr>
<th>Contracting Entity</th>
<th>Sensus USA, Inc.</th>
<th>Sensus USA, Inc. &amp; Subcontractor (Utility Partner of America)</th>
<th>E Source</th>
<th>Meter Data Management System (MDMS) Provider</th>
<th>National Meter &amp; Automation</th>
<th>Total</th>
</tr>
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<tr>
<td>Contract Description</td>
<td>AMI equipment, software and hosting services, integration services, and professional services</td>
<td>Meter, radio, and lid installation services</td>
<td>Consulting services related to project management, change management, system integration and field services</td>
<td>MDMS software through Smart Works, integration services, and professional services</td>
<td>New AMI-compatible retrofit radios for Badger water meters</td>
<td></td>
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<tr>
<td>Type of Service</td>
<td>10 years</td>
<td>One Time</td>
<td>4 years</td>
<td>5 years</td>
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<tr>
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<td>1.0</td>
<td>0.5</td>
<td>0.1</td>
<td>0.1</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Total Software Licensing</td>
<td>1.0</td>
<td>-</td>
<td>-</td>
<td>1.1</td>
<td>-</td>
</tr>
<tr>
<td>Total NTE Amount (in millions) for Contract Term(s)</td>
<td>$</td>
<td>11.3</td>
<td>$</td>
<td>5.5</td>
<td>$</td>
<td>1.3</td>
</tr>
</tbody>
</table>
The total estimated cost of the AMI project is approximately $20.9 million, of which $17.2 million is related to initial implementation, with the remaining funds accounting for annual SaaS and software licensing costs for the duration of the contracts ($2.1 million) and contingency funds ($1.7 million). Annual total software/hosting charges for Sensus are estimated at $90,000 for year one with a three percent annual escalator up to year ten.

VII. Project Funding & Allocation of Costs to the Electric, Water and Gas Funds

The Electric Special Projects (ESP) reserve will be used to fund the electric portion of the AMI investment. As a result, there will be no rate impact to the electric ratepayers. The gas and water funds will cover direct costs associated with their own equipment and installation costs. Of the initial implementation cost, $12.3 million could be directly attributable to one of the three utility services. Project costs that cannot be directly allocated to one of the three utilities (indirect costs, such as project management services, installation service mobilization cost, warehouse rental, etc. totaling $6.6 million) are proposed to be allocated based on the ratio of each of the three utility annual revenues during FY 2020. This results in an apportionment ratio for indirect project cost of 65% (electric), 18.5% (water) and 16.5% (gas). With these allocations, the total baseline capital cost of the vendor contracts of $17.2 million (without contingency funds) is estimated to be allocated as follows: $7.3 million (electric), $6.2 million (water) and $3.7 million (gas). The allocation of cost, including contingency, are as follows: $8.4 million (electric), $6.5 million (water) and $4.0 million (gas), totaling $18.9 million for implementation.

To reduce the short term cashflow impacts on the gas or water funds it is also proposed that the ESP reserve initially cover water and natural gas utility funding needs related to the AMI project, with a repayment plan to the ESP reserve at an appropriate interest rate over a 5-year period upon project completion. The proposed AMI capital improvement project (CIP) budget from ESP reserve and repayment schedule from the water and gas funds are illustrated in Table 3. The table below illustrates the expenses of $18.9 million during the 2021-24 period and repayment at current interest rates of 2.15% in the 2025-2029 period.

<table>
<thead>
<tr>
<th>Year</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
<th>2029</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESP Funding of Expenses &amp; Repayment</td>
<td>$0.1</td>
<td>$2.1</td>
<td>$5.4</td>
<td>$11.0</td>
<td>$(1.8)</td>
<td>$(2.1)</td>
<td>$(2.1)</td>
<td>$(2.1)</td>
<td>$(2.1)</td>
<td>$8.4</td>
</tr>
<tr>
<td>Gas Fund Repayment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$0.8</td>
<td>$0.8</td>
<td>$0.8</td>
<td>$0.8</td>
<td>$0.8</td>
<td>$4.0</td>
</tr>
<tr>
<td>Water Fund Repayment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$1.3</td>
<td>$1.3</td>
<td>$1.3</td>
<td>$1.3</td>
<td>$1.3</td>
<td>$6.5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$18.9</td>
</tr>
</tbody>
</table>

Costs that are to be repaid to the ESP Reserve by the gas and water funds have been straight-line amortized across a five-year period after implementation is completed.
VI. Overall Project Organizational Structure
The project will be implemented under the direction of the Strategic Business Manager and the AMI Project Core Team headed by the AMI Project Manager. Nine AMI implementation workgroups, with assigned leads, will be formed to implement workstream associated with the project. These groups will be working collaboratively with the AMI core team and relevant external vendors throughout the project.

Next Steps
Timeline

<table>
<thead>
<tr>
<th>Activity</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Council Approval</td>
<td>October 2021</td>
</tr>
<tr>
<td>Notice to Proceed Issued to Vendors</td>
<td>October – December 2021</td>
</tr>
<tr>
<td>Installation of AMI network, initial meters</td>
<td>Jan 2022 – June 2023</td>
</tr>
<tr>
<td>Availability of AMI System to Limited Number of Customers</td>
<td>Soft Launch mid 2023</td>
</tr>
<tr>
<td>Mass Deployment of Meters</td>
<td>June 2023 – December 2024</td>
</tr>
<tr>
<td>AMI Implementation Project Completion (Phase I)</td>
<td>CY Q1 2025</td>
</tr>
<tr>
<td>Phase II: Begin Initiatives to Optimize AMI Investment (e.g., conservation voltage reduction program)</td>
<td>CY Q3 2025</td>
</tr>
</tbody>
</table>

Resource Impact
Funding of the AMI implementation and capital costs of $18.9 million are available in the Electric CIP EL-11014 (Smart Grid Technology Installation) budget. For the first year of the project, $7,000,000 is available in the FY 2022 CIP budget. Future on-going annual operating costs for the AMI vendor system is estimated at $0.09 million/year for software licensing and SaaS support. Funding for FY 2023 and beyond is subject to City Council approval of the annual appropriation of funds through the annual budget process.

New permanent roles of AMI Manager (Utilities Supervisor), AMI Systems Technicians (Business Analyst) and MDMS Data Analyst (Business Analyst) have been identified as necessary for successful implementation, support, and management of AMI-related systems. Staff is currently evaluating whether this can be accomplished by converting existing vacant positions or will be recommended in the FY 2023 budget. These new roles are anticipated to be filled during the project implementation phase and the roles will take on the operation, maintenance, and enhancement roles post Phase I implementation. Furthermore, best efforts will be made to train and potentially reassign seven meter-reading staff to new roles since the meter reader position will be impacted after the implementation of this technology project.

Policy Implications
The recommendation conforms with the 2018 Utilities Strategic Plan (USP) that has identified implementation of AMI system as a key strategy under USP Priority #2 to “Invest in and utilize technology to enhance customer experience and maximize operational efficiency.”
A number of policies to implement and operate an AMI system must be considered and approved as the project implementation progresses. Such policies and procedures and related Utilities Rules and Regulations will include: ways to accommodate customers who elect to opt out of advanced meters at their homes, a backup customer billing process in the event AMI meters cannot be read remotely due to a cyber-attack or a communication network interruption, etc.

**Stakeholder Engagement**

The need for an AMI system has been discussed with the UAC and Council since 2013, including the implementation of a pilot AMI system in the 2013-2018.

As part of the 2018 Utilities Strategic Plan development, staff actively engaged with internal and external stakeholders to identify priorities to be carried out by staff over the next three to five years. AMI was a recurring theme and identified as a strategic initiative under the “Technology” priority to increase system reliability, enhance customer experience, improve response time, and meet the community’s sustainability goals.

On July 7, 2021, staff recommended the UAC recommend the City Council approve use of the Electric Special Project Reserves in an amount not-to-exceed $18.5M to fund the Smart Grid Installation Project (EL-11014) (**UAC Report 12285**). However, the total project estimate has increased to $18.9M to reflect potential annual CPI index escalator for installation services of $0.4M post January 1, 2023. Any unspent funds for the project will be returned to the appropriate reserves after project completion. The UAC approved staff’s recommendation 5-1 with Commissioner Metz voting no and Vice Chair Segal absent. Commissioner Metz indicated that distributed energy resources and demand response programs should be accelerated in phase 1 of the AMI deployment plan to increase energy and water conservation savings. The other commissioners were appreciative that the AMI project is moving forward.

Staff has begun a concerted effort to communicate the many facets of this project, including: customer and organization benefits and costs, project timeline and what can customers and employees expect during different stages of the project, how will this project impact individual staff members, staffing, and training needs. Utilities is coordinating this project with multiple departments (Administrative Services, IT, Attorney’s Office, Planning) and discussing impacts to their organizations. Appropriate channels will be used to effectively communicate and engage with stakeholders. The AMI project related information can be found at [www.cityofpaloalto.org/AMI](http://www.cityofpaloalto.org/AMI)

As the project progresses and mass meter deployment begins in mid-2023, additional meter installation related communications will also be undertaken with the community.
Environmental Review
Council approval of the AMI project, through adoption of the Resolution approving and authorizing ESP Reserve funding for the AMI project and approval of the AMI vendor contracts, is categorically exempt under California Environmental Quality Act (CEQA) Guidelines section 15301(b) as a Project involving minor alteration of existing public utilities facilities and equipment, with negligible or no expansion of existing or former use; therefore, CEQA review is not required.

Attachments:
- **Attachment 5.a:** Attachment A: Sensus USA Contract, Contract C22177782
- **Attachment 5.b:** Attachment B: E Source Companies, LLC. Contract; Amendment #2, C17165774A
- **Attachment 5.c:** Attachment C: Resolution
IN WITNESS WHEREOF, the parties have caused this Master Products and Services Agreement ("Agreement") to be executed by their duly authorized representatives as of the day and year written below. The date of the last party to sign is the "Effective Date."

This Agreement shall commence on the Effective Date and continue for/until: 10 Years ("Initial Term"). At the end of the Initial Term, this Agreement shall automatically renew for a maximum of two (2) additional terms of 5 years each (each a "Renewal Term"), unless the CITY provides written notice to Sensus of its desire to not renew the Agreement one hundred twenty (120) days before the end of the then existing Term. The "Term" shall refer to both the Initial Term and the Renewal Term.

This Agreement contains two parts: Part (1) is The FCC Notification for Spectrum Manager Lease Agreement, to be filed with the FCC by Sensus on behalf of the CITY and Part (2) is a Master Products and Services Agreement between Sensus and CITY. Together, these two parts create the Agreement.

Pricing remains firm until 5/1/2024 ("Trigger Date")

All purchase orders shall be sent to the address provided by Sensus. Sensus may change this address upon notice to CITY.

Contents of this Agreement:
Part 1: Notification for Spectrum Manager Lease Agreement
Part 2: Master Product and Services Agreement
Exhibit A Software
Exhibit B Technical Support
Exhibit C Pricing
Exhibit D Statement(s) of Work ("SOW")
  Section 1 Base Station Installation SOW
  Section 2 Professional Services and Integration SOW
  Section 3 Meter Installation Services SOW
Exhibit E System Requirements/Acceptance Testing
Exhibit F-1 FlexNet System Performance Warranty
Exhibit F-2 Equipment Warranties
Exhibit F-3 Return Material Authorization Process
Exhibit G Propagation Study
Exhibit H DIR Registration for Public Works Projects
Exhibit I Claims for Public Contract Code Section 9204 Public Works Projects
Exhibit J Insurance Requirements
Exhibit K Xylem Data Privacy Policy
Exhibit L Cybersecurity Terms and Conditions
Exhibit M CITY’s Zero Waste Program
Exhibit N Sensus Network Performance Assurance Services
Exhibit O Performance and Payment Bond Requirements

CITY order acknowledgements shall be sent to:

Sensus shall send all invoices to:
IN WITNESS WHEREOF, the parties hereto have by their duly authorized representatives executed this Agreement as of the Effective Date defined above.

CITY OF PALO ALTO

____________________________
City Manager

APPROVED AS TO FORM:

____________________________
City Attorney or designee

APPROVED:

____________________________
Utilities Director

SENSUS USA INC.

Officer 1

By: _______________________
Name: ____________________
Title: ____________________

Officer 2 (Required for Corp. or LLC)

By: _______________________
Name: ____________________
Title: ____________________
**Part 1: Notification for Spectrum Manager Lease**

In order for Sensus to apply to the FCC on the CITY’s behalf for a spectrum manager lease, CITY must complete the information below in boxes one (1) through ten (10) and certify via authorized signature. CITY’s signature will indicate that CITY authorizes Sensus to file the spectrum manager lease notification on FCC Form 608 with the CITY as spectrum Lessee, and if CITY does not already have one, ownership disclosure information on FCC Form 602.

### 1. CITY/Lessee Information

<table>
<thead>
<tr>
<th>CITY/Lessee Name:</th>
<th>Name of Real Party in Interest:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attention To:</td>
<td></td>
</tr>
<tr>
<td>Street Address:</td>
<td>CITY:</td>
</tr>
<tr>
<td>State:</td>
<td>Zip:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Email:</td>
</tr>
</tbody>
</table>

Is CITY contact information same as above? [ ] Yes [ ] No (If No, complete box 2 below)

### 2. Additional CITY/Lessee Contact Information

<table>
<thead>
<tr>
<th>Company Name:</th>
<th>Attention To:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Address:</td>
<td>CITY:</td>
</tr>
<tr>
<td>State:</td>
<td>Zip:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Email:</td>
</tr>
</tbody>
</table>

### 3. CITY/Lessee Type

CITY/Lessee is a(n) (Select one):
- [ ] Individual  
- [ ] Unincorporated Association  
- [ ] Trust  
- [ ] Government Entity  
- [ ] Corporation  
- [ ] Limited Liability Company  
- [ ] General Partnership  
- [ ] Limited Partnership  
- [ ] Limited Liability Partnership  
- [ ] Consortium  
- [ ] Other __________

### 4. FCC Form 602

FCC Form 602: FCC File Number of CITY’s Form 602 Ownership Information: _________. If CITY has not filed a Form 602, Sensus will file one for CITY.

Please complete questions 5, 6, and 7 below if CITY does not have a Form 602 on file.

CITY must complete items 8, 9 and 10 irrespective of whether CITY has an ownership report on file.

### 5. CITY Tax ID:

### 6. Individual Contact For FCC Matters

Please designate one individual (the Director of Public Works or similar person) who is responsible to the FCC for the operation of the FlexNet radio system.

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Email</th>
<th>Phone</th>
</tr>
</thead>
</table>

### 7. Ownership Disclosure Information

If CITY/Lessee is a government entity, list the names of the Mayor and all Council Members below, as well as verify citizenship and ownership interests in any entity regulated by the FCC. Such ownership must be disclosed where a mayor/council member owns 10% or more, directly or indirectly, or has operating control of any entity subject to FCC regulation. If any answer to Ownership question is Yes, or any answer to Citizenship question is No, provide an attachment with further explanation.

<table>
<thead>
<tr>
<th>Mayor</th>
<th>US Citizen?</th>
<th>Ownership Disclosure?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[ ] Yes</td>
<td>[ ] No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Council Member</th>
<th>US Citizen?</th>
<th>Ownership Disclosure?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[ ] Yes</td>
<td>[ ] No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Council Member</th>
<th>US Citizen?</th>
<th>Ownership Disclosure?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[ ] Yes</td>
<td>[ ] No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Council Member</th>
<th>US Citizen?</th>
<th>Ownership Disclosure?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[ ] Yes</td>
<td>[ ] No</td>
</tr>
</tbody>
</table>
8. Alien Ownership Questions (if the answer is Yes, provide an attachment explaining the circumstances)

<table>
<thead>
<tr>
<th>Council Member:</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Council Member:</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Council Member:</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Council Member:</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

9. Basic Qualification Information

1) Is the CITY/Lessee a foreign government or the representative of any foreign government? [ ] Yes [ ] No

2) Has the CITY or any party to this application had any FCC station authorization, license, or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? [ ] Yes [ ] No

3) Has the CITY or any party to this filing, or any party directly or indirectly controlling the CITY or any party to this filing ever been convicted of a felony by any state or federal court? [ ] Yes [ ] No

4) Has any court finally adjudged the CITY or any party directly or indirectly controlling the CITY guilty of unlawfully monopolizing or attempting to unlawfully monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition? [ ] Yes [ ] No

10. CITY/Lessee Certification Statements

1) The CITY/Lessee agrees that the Lease is not a sale or transfer of the license itself. [ ] Yes

2) The CITY/Lessee acknowledges that it is required to comply with the Commission’s Rules and Regulations and other applicable law at all times, and if the CITY/Lessee fails to so comply, the Lease may be revoked, cancelled, or terminated by either the Licensee or the Commission. [ ] Yes

3) The CITY/Lessee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C § 862, because of a conviction for possession or distribution of a controlled substance (See Section 1.2002(b) of the rules, 47 CFR § 1.2002(b), for the definition of “party to the application” as used in this certification.) [ ] Yes

4) The CITY/Lessee hereby accepts Commission oversight and enforcement consistent with the license and lease authorization. The Lessee acknowledges that it must cooperate fully with any investigation or inquiry conducted either by the Commission or the Licensee, allow the Commission or the Licensee to conduct on-site inspections of transmission facilities, and suspend operations at the direction of the Commission or the Licensee and to the extent that such suspension of operation would be consistent with applicable Commission policies. [ ] Yes

5) The CITY/Lessee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency. [ ] Yes

The CITY/Lessee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith. The CITY/Lessee shall notify Sensus in writing in the event any information supplied on this form changes.

CITY of Palo Alto

By: ___________________________

Name: ___________________________

Date: ___________________________

FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)) AND/OR FORFEITURE (U.S. Code Title 47, Section 503).
1. **Equipment.**

A. **Purchase of Equipment.**

i. **Equipment.** CITY will purchase from Sensus the quantities and types of Field Devices, RF Field Equipment, and other goods (collectively, "Equipment") set forth in Exhibit C at the prices set forth in Exhibit C.

ii. **First Article Testing.** Prior to manufacture of full order of FlexNet electric meters and/or modules, Sensus shall manufacture and deliver four (4) samples, or other CITY-designated quantity not to exceed twelve (12), (the “First Articles”) of each electric meter and/or module ordered to CITY to ensure that the meter and/or module meets the CITY’s Requirements Documentation. If CITY accepts the First Articles in accordance with Sensus’ first article process, Sensus will commence manufacture of the applicable meters and/or modules. As used herein, Requirements Documentation shall mean the meter order packet, nameplate definition and approval, manufacturing data file, specific metrology configuration, specific FlexNet configuration, and labeling information.

iii. **Delivery.** Customer shall pay for delivery of the Equipment from Sensus’ or Sensus’ contracted manufacturers’ factory to Sensus’ subcontractor’s warehouse. All Equipment is shipped DAP CITY’s designated ship to location (Incoterms 2020) prepay freight and add. Notwithstanding the foregoing, title to, and property in, Equipment will pass to CITY upon acceptance. CITY must provide notice to Sensus within fifteen (15) calendar days from delivery of Equipment shipments that are not deemed as accepted due to a failure to meet the agreed upon specifications; otherwise shipments shall be deemed as successfully accepted by CITY. Risk of Loss to the Equipment shall also pass to CITY upon acceptance.

iv. **Project Number.** CITY shall include the Sensus project number on all Purchase Orders. Orders submitted to Sensus may not be canceled or amended, or deliveries deferred, by City except with Sensus’ prior written consent, such consent not to be unreasonably withheld.

v. **Equipment Warranties.** The Equipment purchased directly from Sensus is warranted as set forth in this subsection (v).

   a. Sensus warrants its water metering equipment and gas SmartPoint Modules according to the terms and conditions (including all limitations and exclusions) in the Sensus G-500 warranty, attached to this Agreement as Exhibit F-2 ("G-500 Warranty"). To the extent the terms of the G-500 Warranty conflict with the terms in this Agreement, the terms of this Agreement shall control.

   b. Sensus warrants all other goods, software, and services, except for the water metering equipment and gas SmartPoint Modules, according to the terms and conditions (including all limitations and exclusions) in the Sensus Limited Warranty, attached to this Agreement as Exhibit F-2 ("General Limited Warranty"). To the extent the terms of the General Limited Warranty conflict with the terms in this Agreement, the terms of this Agreement shall control.

vi. **Equipment Services Warranty.** Sensus represents and warrants that: (a) Sensus and its applicable subcontractors will perform all services in a timely, professional and workmanlike manner in compliance with this Agreement and with a level of care, skill, practice and judgment consistent with generally recognized industry standards and practices for similar services, using personnel with the requisite skill, experience and qualifications, will devote adequate resources, and be responsible for its own methods and methods to meet its obligations under this Agreement; and (b) for a period of twelve (12) months from the date of installation, Field Devices installed by Sensus’ subcontractor at the premise of Customer’s End Users will remain free from any defects in workmanship and any such material which is supplied by the subcontractor during the installation services. Sensus or Sensus’ subcontractor shall repair (or cure the defect) for any breach of the foregoing warranties.

vii. **FlexNet Performance Warranty.** Sensus warrants the performance of the FlexNet System as set forth in the Exhibit F-1.

B. **Limitations and Exclusions.** THE WARRANTIES IN THIS SECTION 1 ARE THE ONLY WARRANTIES GIVEN WITH RESPECT TO THE GOODS, SOFTWARE LICENSES, AND SERVICES SOLD OR OTHERWISE PROVIDED BY SENSUS. SENSUS EXPRESSLY DISCLAIMS ANY AND ALL OTHER REPRESENTATIONS, WARRANTIES AND/OR CONDITIONS, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE REGARDING ANY MATTER IN CONNECTION WITH THIS AGREEMENT, INCLUDING WITHOUT LIMITATION, WARRANTIES AS TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, NON-INFRINGEMENT AND TITLE.

C. **Ongoing Maintenance of Equipment.**

i. **Field Devices.** CITY shall be responsible for the ongoing maintenance of the Field Devices. CITY shall provide the field services labor to visit a problem Field Device and perform diagnostics and repair or replacement. For electricity products, CITY shall first test and confirm that each socket to which a Field Device will be connected is in safe operating condition, is fully functional, is not corroded, does not contain improperly installed jaws or other deficiencies, complies with ANSI standards, and is not hot, damaged, or otherwise in need of maintenance or repair.

ii. **RF Field Equipment.** CITY shall be responsible for the ongoing maintenance of the RF Field Equipment. CITY shall be responsible for the ongoing monthly operations and expenses related to the RF Field Equipment, including any leasing costs, construction costs, taxes and costs of WAN Backhaul. CITY shall pay for electric power to the RF Field Equipment.

2. **Services.**

A. **Installation of Equipment.**

i. **Generally.** The parties shall have their respective obligations for the deployment and operation of the FlexNet System as set forth in the Statement of Work attached as Exhibit D.

   a. **Field Devices.** Sensus shall install the Field Devices at End Users’ premise or other location as applicable for the pricing set forth in Exhibit C. For electricity products, CITY shall first test and confirm that each socket to which a Network Device will be connected is in safe operating condition, is fully functional and is not “hot”, damaged or otherwise in need of maintenance or repair.

   b. **RF Field Equipment.** Sensus shall perform the propagation analysis in the Service Territory to determine where to locate the RF Field Equipment. For the prices set forth in Exhibit C, Sensus, or its subcontractor, shall perform Sensus’ obligations in Exhibit D with regards to the RF Field Equipment installation. CITY shall perform CITY’s obligations in Exhibit D with regards to the RF Field Equipment installation.

   c. **Prevailing Wages and DIR Registration for Public Works.** The Equipment installation work outlined in Exhibit D, Sections 3.3 through 3.9, is subject to prevailing wages and related requirements as a “public works” under California Labor Code Sections 1720 et seq., and related regulations. Sensus is required to pay general prevailing wages as defined in California Labor Code Section 1773.1 and Subchapter 3, Title 8 of the California Code of Regulations.
Section 16000 et seq., as amended from time to time. Pursuant to Labor Code Section 1773, the CITY has obtained the general prevailing rate of per diem wages and the general rate for holiday and overtime work in this locality for each craft, classification, or type of worker needed to execute the contract for this Project from the State of California Department of Industrial Relations (“DIR”). Copies of these rates may be obtained at the CITY’s Purchasing Department office. The general prevailing wage rates are also available at the DIR, Division of Labor Statistics and Research, web site (see e.g., http://www.dir.ca.gov/DLSR/PWD/index.htm) as amended from time to time. Sensus or its subcontractor shall post a copy of the general prevailing wage rates at all applicable job sites and shall pay the adopted prevailing wage rates as a minimum. SENBUS shall comply with all applicable provisions of Division 2, Part 7, Chapter 1 of the California Labor Code (Labor Code Section 1720 et seq.), including but not limited to Sections 1725.5, 1771, 1771.1, 1771.4, 1773.2, 1774, 1775, 1776, 1777.5, 1782, 1810, 1813 and 1815, and all applicable implementing regulations, including but not limited to Subchapter 3, Title 8 of the California Code of Regulations Section 16000 et seq. (8 CCR Section 16000 et seq.), as amended from time to time. Sensus shall comply with the requirements of Exhibit H, entitled “DIR REGISTRATION FOR PUBLIC WORKS CONTRACTS”, for any contract for public works construction, alteration, demolition, repair or maintenance, including but not limited to the obligations to register with, and furnish certified payroll records directly to, DIR.

v. Claims Procedure for “9204 Public Works Projects”. For purposes of this Section, a “9204 Public Works Project” means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind. (Cal. Pub. Cont. Code § 9204.) The Equipment installation is a 9204 Public Works Projects and is required to comply with the claims procedures set forth in Exhibit I, entitled “Claims for Public Contract Code Section 9204 Public Works Projects.”

vi. Performance Bond and Payment Bond Requirements. Sensus shall provide a performance bond and a payment bond for the Equipment installation services set forth in Exhibit D, Statement of Work, Sections 3.3 through 3.9, according to the terms outlined below and as set forth in Exhibit O, Performance and Payment Bond for Installation Services.

(a) Within ten (10) days after the issuance of the notice to proceed with the Equipment installation services, and prior to commencing those services, SENBUS shall provide to CITY a payment bond and a performance bond, each in the penal sum of 100% of the total payment due for the Equipment installation services set forth in Exhibit D, Sections 3.3 through 3.9, as specified in Exhibit C, Pricing. Each bond shall be in substantially the same form as contained in Exhibit O, Performance and Payment Bond for Installation Services, and shall be signed by the authorized representatives for Sensus and its bond surety and properly notarized. If CITY determines that any bond required hereunder is insufficient based on failure to comply with the requirements set forth herein, the bond shall be replaced within ten (10) days by a bond that fully complies with the requirements of this Section. Likewise, if the issuing surety cancels a bond or becomes insolvent, within ten (10) days, Sensus must substitute an acceptable admitted surety and provide a replacement bond. No further payments to Sensus for Equipment installation services performed pursuant to Exhibit D shall be made or due until Sensus has fully complied with the requirements of this Section.

(b) The payment bond must fully comply with the requirements California Civil Code section 9550 et seq. The performance bond shall remain in effect for the duration of the period of all warranties required for the Equipment installation services provided pursuant to Exhibit D, and shall assure faithful performance of all Sensus’ obligations with regard to those installation services, including, without limitation, all obligations that survive expiration or termination of this Agreement, including, but not limited to Sensus’ warranty and indemnity obligations.

(c) If the total amount of compensation due to Sensus for the Equipment installation services is increased by five percent (5%) or more over the original amount set forth in Exhibit C for those services, Sensus shall promptly furnish such additional security as may be required by CITY, which may include supplemental or replacement bonds, to protect CITY’s interests and those interests of persons or firms eligible to submit a claim for payment pursuant to section 9100 of the California Civil Code.

(d) Each bond surety must have a current A.M. Best A VIII rating and must be an admitted surety subject to the provisions of Code of Civil Procedure Section 965.610 et seq.

(e) CITY agrees to reimburse Sensus annually for its direct costs to provide the bonds required herein (not to exceed 2.75% of the total payment due by City for the equipment installation services).

(f) Each bond shall name CITY as obligee.

(g) Modifications to the requirements for Equipment installation services set forth in Exhibit D, Sections 3.3 through 3.9, including change orders or field orders, which operate to modify the compensation due for those services in Exhibit C, shall in no way release or exonerate Sensus or its sureties from their obligations and notice thereof is waived by its sureties.

(h) CITY and its authorized representatives may communicate with Sensus’ sureties with respect to matters that are related to Sensus’ performance of its obligations pursuant to Exhibit D of the Agreement. Such communications shall not create or be interpreted as creating any contractual relationship between CITY or any such surety.

B. IT Systems Integration Services. Integration of the Software into CITY’s new or existing internal IT systems is included in this Agreement as set forth in Exhibit D for the prices listed in Exhibit C.

C. Technical Support. Sensus shall provide CITY the technical support set forth in Exhibit B.

D. Project Management. Project management of the FlexNet System is included in this Agreement as set forth in Exhibit D for the prices listed in Exhibit C.

E. Training. Training on the use of the FlexNet System is included in this Agreement as set forth in Exhibit D for the prices listed in Exhibit C.

F. Optional Network Performance Assurance Services. Sensus shall provide CITY with the Network Performance Assurance Services as set forth in Exhibit N for the prices listed in Exhibit C only if CITY provides written notice to Sensus of its desire to receive said services six (6) months prior to the expected date of delivery of such services.
3. **Software.**
   A.  **Software as a Service (SaaS).** Sensus shall provide CITY with Software as a Service, as defined in Exhibit A, only so long as CITY is current in its payments for such services.
   B.  **UCITA.** To the maximum extent permitted by law, the Parties agree that the Uniform Computer Information Transaction Act as enacted by any state shall not apply, in whole or in part, to this Agreement.

4. **Spectrum.**
   A.  **Definitions in this Section 4.** In this Section 4 only, “Sensus” shall mean Sensus USA Inc. and its wholly owned subsidiary, Sensus Spectrum LLC.
   B.  **Spectrum Lease.** Sensus hereby grants to CITY, and CITY accepts, a spectrum manager lease (“Spectrum Lease”) over the frequencies of certain FCC license(s) ("FCC License") solely within CITY’s Service Territory. (The frequencies of the FCC License within CITY’s geographic Service Territory are called the “Leased Spectrum”). CITY shall pay the Ongoing Fees for use of the Leased Spectrum.
   C.  **FCC Forms.** At the Federal Communications Commission (“FCC”), Sensus will; (1) obtain an FCC Registration Number (“FRN”) for CITY; (2) submit on behalf of CITY the FCC Form 602 Ownership Disclosure Information if CITY has not already done so; and (3) file a FCC Form 608, notification/application for long-term spectrum manager lease. This Lease becomes effective when the FCC accepts the FCC Form 608.
   D.  **Lease Application.** In order to complete the FCC lease application, CITY will promptly:
      i.  Complete and sign the representations in Part 1 of this Agreement such that CITY demonstrates it qualifies for a spectrum lease under FCC rules. CITY’s signature will indicate that CITY authorizes Sensus to: (1) obtain an FRN on behalf of CITY; (2) submit the FCC Form 602 Ownership Disclosure Information on behalf of CITY if it has not already done so; and (3) file the spectrum manager lease notification on FCC Form 608 with the CIT as spectrum lessee.
      ii.  Give Sensus the coordinates of the boundaries of CITY’s Service Territory or, alternatively, approve Sensus’ estimation of the same.
      iii.  If CITY has not already done so; CITY hereby authorizes Sensus to apply on CITY’s behalf and obtain for CITY a Federal Registration Number (FRN, the FCC’s unique identifier for each licensee) and shall supply Sensus with CITY’s Taxpayer Identification Number (“TIN”).
      iv.  Provide any other information or other cooperation reasonably necessary for the Parties to perform as set forth herein.
   E.  **Permitted Use of Spectrum Lease.** CITY may transmit or receive over the Leased Spectrum only in the Service Territory and only using FlexNet equipment manufactured by Sensus and used in accordance with Sensus’ specifications. CITY may use the Leased Spectrum only to read and direct meters in support of CITY’s primary utility business or any other operation approved by Sensus in writing. Without limiting the foregoing, CITY is prohibited from reselling, sublicensing or subleasing the Leased Spectrum or from transmitting voice communications over the Leased Spectrum. For each piece of RF Equipment used by CITY, CITY shall affix a Sensus-supplied label to the exterior of the RF Field Equipment cabinet or other appropriate visible place to indicate that RF operation is conducted under authority of FCC License(s) issued to Sensus.
   F.  **Term of Spectrum Lease.** Unless terminated earlier (because, for example, CITY stops using the FlexNet equipment or because this Agreement terminates or expires for any reason), this Spectrum Lease will have the same term as the FCC license. If CITY is operating in compliance with this Agreement and is current on any payments owed to Sensus, when the FCC License renews, the Parties will apply to the FCC to renew this Spectrum Lease.
   G.  **Termination of Spectrum Lease.** The Spectrum Lease will terminate: (a) two months after CITY stops transmitting with FlexNet equipment manufactured by Sensus; (b) upon termination, revocation or expiration of the FCC License; (c) upon CITY’s breach of this Agreement; or (d) upon termination or expiration of this Agreement for any reason.
   H.  **FCC Compliance.** The following FCC requirements apply
      i.  Pursuant to 47 CFR 1.9040(a):
         a.  CITY must comply at all times with applicable FCC rules. This Agreement may be revoked by Sensus or the FCC if CITY fails to so comply;
         b.  If the FCC License is terminated, CITY has no continuing right to use the Leased Spectrum unless otherwise authorized by the FCC;
         c.  This Agreement is not an assignment, sale or other transfer of the FCC License;
         d.  This Agreement may not be assigned except upon written consent of Sensus, which consent may be withheld in its discretion; and
         e.  In any event, Sensus will not consent to an assignment that does not satisfy FCC rules.
      ii.  Referencing 47 CFR 1.9010, Sensus retains de jure and de facto control over the applicable radio facilities, including that,
         a.  Sensus will be responsible for CITY’s compliance with FCC policies and rules. Sensus is responsible for engineering the FlexNet equipment and accompanying software and other programs to comply with FCC rules. CITY will operate the FlexNet equipment subject to Sensus’ supervision and control and solely in accordance with Sensus’ specifications. Sensus retains the right to inspect CITY’s radio operations hereunder and to terminate this Agreement or take any other necessary steps to resolve a violation of FCC rules, including to order CITY to cease transmission. Sensus will act as spectrum manager in assigning spectrum under the FCC License so as to avoid any harmful interference or other violation of FCC rules. Sensus will be responsible for resolving any interference complaints or other FCC rule violations that may arise; and
         b.  Sensus will file any necessary FCC forms or applications and CITY agrees to reasonably assist Sensus with such filing by providing any necessary information or other cooperation. Sensus will otherwise interact with the FCC with respect to this Agreement, the FCC License or FlexNet equipment.
      iii.  CITY must continue operations on the spectrum during the Term of this Agreement. If CITY stops operations for any period of time, CITY must notify Sensus by sending an email to legal@xyleminc.com. CITY may not pause or discontinue operations for more than 180 days.
   I.  **Interference.** CITY agrees to report to Sensus promptly, and in no event later than 72 hours afterward, any incident related to the Leased Spectrum, including where CITY experiences harmful interference, receives a complaint or other notice of having caused harmful interference, or receives any type of communication from the FCC or other government agency regarding radio transmission.

5. **General Terms and Conditions.**
   A.  **Payment.** All payment and pricing is subject to the terms in Exhibit C.
   B.  **Indemnity.**
      i.  **Infringement Indemnity.** Sensus shall indemnify, hold harmless, and defend CITY from and against any claim, judgment by a court of competent jurisdiction, or settlement reached from any litigation instituted against CITY in the United States by a third party which alleges that the FlexNet System provided hereunder infringes upon the patents, copyrights, trade secrets, trademark, or other recognized right in intellectual property of such third party, provided that Sensus shall have the right to select counsel in such proceedings and control such proceedings; however, Sensus will not settle a claim or consent to the entry of any judgment that solely names CITY as a Sensus customer defendant without CITY’s consent except where the judgement or proposed settlement involves only the payment of money damages by Sensus, does not impose any obligation upon the CITY, and Sensus obtains a full
and complete release of CITY. Notwithstanding the foregoing, Sensus shall have no liability under this indemnity unless CITY provides Sensus with written notice of any claim hereunder within twenty (20) business days of receiving it. CITY agrees to reasonably cooperate with and assist Sensus in any such proceedings. Further, Sensus shall have no liability hereunder if such claim is related to: (i) any change, modification or alteration made to the FlexNet System by CITY or a third party, (ii) use of the FlexNet System in combination with any goods or services not provided by Sensus hereunder, (iii) CITY’s failure to use the most recent version of the Software provided by Sensus or to otherwise take any corrective action as reasonably directed by Sensus, (iv) compliance by Sensus with any designs, specifications or instructions provided by CITY, provided that Sensus first advises CITY in writing why such designs, specifications, or instructions are not advised, (v) use of the FlexNet System that is materially other than for the Permitted Use. In the event the FlexNet System is adjudicated to infringe the intellectual property rights of a third party and its use is enjoined, or, if in the reasonable opinion of Sensus, the FlexNet System is likely to become the subject of an infringement claim, Sensus, at its sole discretion and expense, may: (i) procure for CITY the right to continue using the FlexNet System or (ii) modify or replace the FlexNet System so that it becomes non-infringing provided the modified or replacement FlexNet System is functionally equivalent to the original FlexNet System contemplated under this Agreement. If neither of the foregoing options is reasonably available to Sensus, in its sole discretion, then CITY may terminate the Agreement and CITY shall be entitled to a prorated refund of any prepaid Ongoing Fees calculated as of the effective date of the Agreement’s termination. This SECTION STATES CITY’S SOLE AND EXCLUSIVE REMEDY AND SENSUS’ ENTIRE LIABILITY FOR ANY CLAIM OF INFRINGEMENT.

ii. General Indemnification. Sensus shall defend, indemnify, and hold harmless the CITY, its parent, subsidiaries, affiliates, and its directors, officers, agents, representatives, contractors, employees, successors and assigns from and against costs, expenses, damages, suits, actions, liabilities, losses and judgements, arising from third party claims for actual damages for personal injuries (including death) and tangible property damage, to the extent such third party claims arise from Sensus or Sensus’ subcontractor’s negligent acts or omissions or willful misconduct during the performance of this Agreement.

C. Limitation of Liability.

i. SENSUS LIMITATION OF LIABILITY. SENSUS’ AGGREGATE LIABILITY IN ANY AND ALL CAUSES OF ACTION ARISING UNDER, OUT OF OR IN RELATION TO THIS AGREEMENT, ITS NEGOTIATION, PERFORMANCE, BREACH OR TERMINATION (COLLECTIVELY “CAUSES OF ACTION”) SHALL NOT EXCEED THE TOTAL AMOUNT PAID BY CUSTOMER DIRECTLY TO SENSUS UNDER THIS AGREEMENT. THIS IS SO WHETHER THE CAUSES OF ACTION ARE IN TORT, INCLUDING, WITHOUT LIMITATION, NEGLIGENCE OR STRICT LIABILITY, IN CONTRACT, UNDER STATUTE OR OTHERWISE. SENSUS’ LIABILITY LIMIT SET FORTH HEREIN SHALL NOT APPLY TO (1) DAMAGES CAUSED BY SENSUS’ GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, (2) SENSUS’ OBLIGATIONS TO INDEMNIFY AND DEFEND THE CITY UNDER THIS AGREEMENT, (3) LIMIT CLAIMS OR GENERAL DAMAGES THAT FALL WITHIN THE INSURANCE COVERAGE REQUIREMENTS OF THIS AGREEMENT, (4) WRONGFUL DEATH CAUSED BY SENSUS. AS SEPARATE AND INDEPENDENT LIMITATIONS ON LIABILITY, SENSUS’ LIABILITY SHALL BE LIMITED TO DIRECT DAMAGES. IN NO EVENT SHALL SENSUS BE LIABLE TO CITY, REGARDLESS OF WHETHER ANY CLAIM IS BASED ON CONTRACT OR TORT, FOR SPECIAL, CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES OR FOR: (I) ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OR ANY OTHER PROVISION OF THIS AGREEMENT, NOR (II) ANY REVENUE OR PROFITS LOST BY CITY OR ITS AFFILIATES FROM ANY END USER(S), IRRESPECTIVE WHETHER SUCH LOSS REVENUE OR PROFITS IS CATEGORIZED AS DIRECT DAMAGES OR OTHERWISE; NOR (III) ANY IN/OUT COSTS. NOR (IV) MANUAL METER READ COSTS AND EXPENSES; (V) DAMAGES ARISING FROM MAINCASE OR BOTTOM PLATE BREAKAGE CAUSED BY FREEZING TEMPERATURES, WATER HAMMER CONDITIONS, OR EXCESSIVE WATER PRESSURE; (VI) DAMAGES ARISING FROM EQUIPMENT STRIKING THE METER AND DAMAGING THE METER IN ANY WAY, OVER RANGE CAPACITY USAGE, EXCESSIVE GAS PRESSURE ABOVE ALLOWABLE OPERATING PRESSURE; (VII) ANY DAMAGE OF ANY KIND, WHETHER TO THE GAS METER OR OTHERWISE, ARISING FROM THE USE OF GAS METERS WITH EROSIUS, CORROSIVE, OR POTENTIALLY FREEZING LIQUIDS OR GASSES. THE LIMITATIONS ON LIABILITY SET FORTH IN THIS AGREEMENT ARE FUNDAMENTAL INDUCEMENTS TO SENSUS ENTERING INTO THIS AGREEMENT. THEY APPLY UNCONDITIONALLY AND IN ALL RESPECTS. THEY ARE TO BE INTERPRETED BROADLY SO AS TO GIVE SENSUS THE MAXIMUM PROTECTION PERMITTED UNDER LAW.

ii. CITY LIMITATION OF LIABILITY. CITY’S PAYMENT OBLIGATIONS UNDER THIS AGREEMENT SHALL BE LIMITED TO THE PAYMENT OF THE COMPENSATION PROVIDED FOR IN EXHIBIT C OF THIS AGREEMENT. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT TO THE CONTRARY, EXCEPT FOR THE TERMINATION/SUSPENSION COSTS OUTLINED IN SECTION 5(X)(iii) BELOW, IN NO EVENT SHALL CITY BE LIABLE, REGARDLESS OF WHETHER ANY CLAIM IS BASED ON CONTRACT OR TORT, FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT OR THE SERVICES PERFORMED IN CONNECTION WITH THIS AGREEMENT.

D. Termination. Either party may terminate this Agreement earlier if the other party commits a material breach of this Agreement and such material breach is not cured within forty-five (45) days of written notice by the other party. In the event that any particular breach cannot reasonably be cured within such forty-five (45) day period, provided the party in breach is exerting continuous, good faith efforts to cure the breach, the forty-five (45) day period shall toll for so long as such efforts continue. Upon any expiration or termination of this Agreement, Sensus’ and CITY’s obligations hereunder shall cease and the software as a service and Intellectual Property Rights.

i. Software and Materials. No Intellectual Property is assigned to CITY hereunder. Excluding CITY Data, Sensus shall own or continue to own all right, title,
and interest in and to the Intellectual Property associated with the Software and related documentation, including any derivations and/or derivative works
(the “Sensus IP”). To the extent, if any, that any ownership interest in and to such Sensus IP does not automatically vest in Sensus by virtue of this
Agreement or otherwise, and instead vests in CITY, CITY agrees to grant and assign and hereby does grant and assign to Sensus all right, title, and
interest that CITY may have in and to such Sensus IP. CITY agrees not to reverse engineer any Sensus Products purchased or provided hereunder.

ii. CITY Data. Notwithstanding the prior paragraph, as between CITY and Sensus, CITY remains the owner of all right, title or interest in or to any CITY
Data. “CITY Data” means solely usage data collected by the Field Devices. To avoid doubt, CITY Data does not include non-End User usage data
collected by the Field Devices, Software, or FlexNet System, such as network and equipment status information or the like.

iii. Consent to Use of CITY Data. CITY hereby grants to Sensus a royalty-free, non-exclusive, irrevocable right and license to access, store, and use such
CITY Data and any other data or information provided to Sensus, to (1) provide the Service; (2) analyze and improve the Service; (3) analyze and improve
any Sensus or affiliate equipment, software, or service; or (4) for any other internal use, provided that the CITY Data is anonymized and aggregated. As
used herein, “Service” means Sensus’ obligations under this Agreement.

iv. Copy of CITY Data. Upon CITY’s written request, Sensus will provide CITY a quote to deliver a CMEP file consisting of the most recent 60 days of CMEP
interval file data. Sensus will deliver the CMEP file in accordance with the quote upon CITY’s acceptance of the quote.

G. Data Privacy.

i. CITY acknowledges that Sensus and its Affiliates (collectively, “Xylem”) will collect and process personal data for the purposes outlined in this Agreement.

ii. CITY Data is protected from disclosure. CITY shall notify Sensus within five (5) business days of receiving a request under the applicable laws for
CITY Confidential Information and Confidential Information excludes information that: (i) was publicly known at the time it was provided or has subsequently
become publicly known other than by a party’s breach of this Agreement; (ii) was rightfully in a party’s possession free of any obligation of confidence prior
to receipt of City Confidential Information and Confidential Information; (iii) is rightfully obtained by a party from a third party without breach of any
confidentiality obligation outlined this Agreement; (iv) is independently developed by employees of Sensus or the CITY without any use of or access to the
CITY Confidential Information and Confidential Information; (iii) is rightfully obtained by a party from a third party without breach of any
confidentiality obligation outlined this Agreement; (iv) is independently developed by employees of Sensus or the CITY without any use of or access to the
CITY Confidential Information and Confidential Information; or (v) Sensus has written consent to disclose CITY Confidential Information or Confidential
Information signed by an authorized representative of the disclosing party.

iii. CITY Confidential Information and Confidential Information excludes information that: (i) was publicly known at the time it was provided or has subsequently
become publicly known other than by a party’s breach of this Agreement; (ii) was rightfully in a party’s possession free of any obligation of confidence prior
to receipt of City Confidential Information and/or Confidential Information; (iii) is rightfully obtained by a party from a third party without breach of any
confidentiality obligation outlined this Agreement; (iv) is independently developed by employees of Sensus or the CITY without any use of or access to the
CITY Confidential Information or Confidential Information; or (v) Sensus has written consent to disclose CITY Confidential Information or Confidential
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become publicly known other than by a party’s breach of this Agreement; (ii) was rightfully in a party’s possession free of any obligation of confidence prior
to receipt of City Confidential Information and/or Confidential Information; (iii) is rightfully obtained by a party from a third party without breach of any
confidentiality obligation outlined this Agreement; (iv) is independently developed by employees of Sensus or the CITY without any use of or access to the
CITY Confidential Information or Confidential Information; or (v) Sensus has written consent to disclose CITY Confidential Information or Confidential
Information signed by an authorized representative of the disclosing party.

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become publicly known other than by a party’s breach of this Agreement; (ii) was rightfully in a party’s possession free of any obligation of confidence prior
to receipt of City Confidential Information and/or Confidential Information; (iii) is rightfully obtained by a party from a third party without breach of any
confidentiality obligation outlined this Agreement; (iv) is independently developed by employees of Sensus or the CITY without any use of or access to the
CITY Confidential Information or Confidential Information; or (v) Sensus has written consent to disclose CITY Confidential Information or Confidential
Information signed by an authorized representative of the disclosing party.

vi. CITY will notify CITY promptly upon learning of any breach in the security of its systems or unauthorized disclosure of, or access to, CITY Confidential
Information in its possession or control, and if such CITY Confidential Information consists of Personal Information, Sensus will provide information to CITY
sufficient to meet the notice requirements of Civil Code Section 1798 et seq., as applicable, as amended from time to time.

vii. Prior to or upon termination or expiration of this Agreement, Sensus will honor any request from the CITY to return or securely destroy all copies of CITY
Confidential Information except for City Confidential Information considered to be anonymized and aggregated CITY Data as outlined in Section 5(F) above.

viii. CITY Confidential Information and Confidential Information includes information that: (i) was publicly known at the time it was provided or has subsequently
become publicly known other than by a party’s breach of this Agreement; (ii) was rightfully in a party’s possession free of any obligation of confidence prior
to receipt of City Confidential Information and/or Confidential Information; (iii) is rightfully obtained by a party from a third party without breach of any
confidentiality obligation outlined this Agreement; (iv) is independently developed by employees of Sensus or the CITY without any use of or access to the
CITY Confidential Information or Confidential Information; or (v) Sensus has written consent to disclose CITY Confidential Information or Confidential
Information signed by an authorized representative of the disclosing party.

ix. CITY will notify CITY promptly upon learning of any breach in the security of its systems or unauthorized disclosure of, or access to, CITY Confidential
Information in its possession or control, and if such CITY Confidential Information consists of Personal Information, Sensus will provide information to CITY
sufficient to meet the notice requirements of Civil Code Section 1798 et seq., as applicable, as amended from time to time.

x. Prior to or upon termination or expiration of this Agreement, Sensus will honor any request from the CITY to return or securely destroy all copies of CITY
Confidential Information except for City Confidential Information considered to be anonymized and aggregated CITY Data as outlined in Section 5(F) above.

Compliance with Laws. Both parties shall comply with all applicable country, federal, state, and local laws and regulations, as set forth at the time of acceptance
and as may be amended, changed, or supplemented. Neither party shall take any action or permit the taking of any action by a third party, which may render
the other party liable for a violation of applicable laws. Sensus shall procure all permits and licenses, pay all applicable charges and fees, and give all notices
required by law in the performance of the Services.

i. **Export Control Laws.** CITY shall: (i) comply with all applicable U.S. and local laws and regulations governing the use, export, import, re-export, and transfer of products, technology, and services. By ordering equipment, software or services, CITY certifies that it is not on any U.S. government export exclusion list.

ii. **Anti-Corruption Laws.** CITY shall comply with the United States Foreign Corrupt Practices Act (FCPA), 15 U.S.C. §§ 78dd-1, et seq.; and any other applicable laws and regulations relating to anti-corruption in the CITY’s county or any country where performance of this Agreement, or delivery or use of equipment, software or services will occur.

J. **Non-Waiver of Rights.** A waiver by either party of any breach of this Agreement or the failure or delay of either party to enforce any of the articles or other provisions of this Agreement will not in any way affect, limit or waive that party’s right to enforce and compel strict compliance with the same or other articles or provisions.

i. **No Implied Waiver.** No payment, partial payment, acceptance, or partial acceptance by CITY shall operate as a waiver on the part of CITY of any of its rights under this Agreement. Moreover, any waiver by either party of any breach of this Agreement shall be in writing and shall not constitute a continuing waiver.

K. **Assignment and Sub-contracting.**

i. The parties agree that the expertise and experience of Sensus are material considerations for CITY entering into this Agreement. Sensus shall not assign the performance of any of SENSUS’ obligations hereunder without the prior written consent of the CITY. Consent to one assignment will not be deemed to be consent to any subsequent assignment. Any assignment made without the approval of the CITY will be void. Notwithstanding the foregoing, either party may assign, transfer, or delegate this Agreement by providing formal written notice to the other party but without requiring the other party’s consent; (i) to an Affiliate; (ii) as part of a merger; or (iii) to a purchaser of all or substantially all of its assets. Apart from the foregoing, neither party may assign, transfer or delegate this Agreement without the prior written consent of the other, which consent shall not be unreasonably withheld.

ii. CITY agrees that subcontractors may be used to complete the Services. Sensus shall be responsible for directing the work of any subcontractors and for any compensation due to subcontractors. CITY assumes no responsibility whatsoever concerning compensation of subcontractors. Sensus shall be fully responsible to CITY for all acts and omissions of subcontractors. Sensus shall change or add subcontractors only with the prior written approval of the CITY.

L. **Amendments.** No alteration, amendment, or other modification shall be binding unless in writing and signed by the duly authorized representatives of both CITY and Sensus.

M. **Governing Law and Dispute Resolution.** This Agreement shall be governed by, construed and enforced in accordance with the laws of the State of California. Any and all disputes arising under, out of, or in relation to this Agreement, its negotiation, performance or termination (“Disputes”) shall first be resolved by mediation between the Parties. TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE PARTIES AGREE TO A BENCH TRIAL AND THAT THERE SHALL BE NO JURY IN ANY DISPUTES. In the event that an action is brought, the parties agree that the venue for any trial will be in the state courts of California, in the County of Santa Clara, State of California.

N. **Acknowledgement of Events.** The parties acknowledge that this Agreement is being entered into in the context of a pandemic (known as the COVID-19 pandemic), which has the potential to cause disruptions and delays to the work beyond the Parties’ reasonable control. The Parties agree that an actual delay directly required by compliance with COVID-19 governmental orders or regulations, and not due to fault or negligence of the SENSUS, may be considered an excusable delay (as below) in accordance with this section. SENSUS may be entitled to an equitable adjustment in schedule in the event such COVID-19-related delays occur, but only to the extent reasonably required based upon the circumstances, as agreed in writing by the CITY’s Project Manager. A COVID-19-related excusable delay will not be a default or a ground for termination for cause of the Agreement, provided that the SENSUS provides the CITY with prompt and detailed notice of the COVID-19-related delay as soon as is reasonably feasible under the circumstances and uses reasonable efforts to overcome the effects of such delay as promptly as reasonably feasible under the circumstances. Notwithstanding the above provisions of this Section, in the event of a period of nonperformance by SENSUS lasting more than thirty (30) days due to a COVID-19-related delay, CITY may elect to terminate this Agreement pursuant to its termination rights outlined in Section 5(D) above. The parties shall work, in good faith, to make any reasonable adjustments that may be required as a result of COVID-19.

O. **Severability.** In the event any provision of this Agreement is held to be void, unlawful or otherwise unenforceable, that provision will be severed from the remainder of the Agreement and replaced automatically by a provision containing terms as nearly like the void, unlawful, or unenforceable provision as possible; and the Agreement, as so modified, will continue to be in full force and effect.

P. **Four Corners.** This written Agreement, including all of its exhibits, represents the entire understanding between and obligations of the parties and supersedes all prior understandings, agreements, negotiations, and proposals, whether written or oral, formal or informal between the parties. Any additional writings shall not modify any limitations or remedies provided in the Agreement. There are no other terms or conditions, oral, written, electronic or otherwise. There are no implied obligations. All obligations are specifically set forth in this Agreement. Further, there are no representations that induced this Agreement that are not included in it. The ONLY operative provisions are set forth in writing in this Agreement. Without limiting the generality of the foregoing, no purchase order placed by or on behalf of CITY shall alter any of the terms of this Agreement. The parties agree that such documents are for administrative purposes only, even if they have terms and conditions printed on them even if and when they are accepted and/or processed by Sensus. Any goods, software or services delivered or provided in anticipation of this Agreement (for e.g., as part of a pilot or because this Agreement has not yet been signed but the parties have begun the deployment) under purchase orders placed prior to the execution of this Agreement are governed by this Agreement upon its execution and it replaces and supersedes any such purchase orders.

Q. **Counterparts.** This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Additionally, this Agreement may be executed by facsimile or electronic copies, all of which shall be considered an original for all purposes.

R. **PROJECT MANAGEMENT.**

i. Sensus will assign Wayne Schmieder as the Sensus Project Manager to have supervisory responsibility for the performance, progress, and execution of
the Services and represent Sensus during the day-to-day performance of the Services. If circumstances cause the substitution of the Sensus' Project Manager or any other of Sensus' key personnel for any reason, the appointment of a substitute Project Manager and the assignment of any key new or replacement personnel will be subject to the prior written approval of the City's Project Manager. Sensus, at the City's request, shall promptly remove Sensus personnel who the City finds do not perform the Services in an acceptable manner, are uncooperative, or present a threat to the adequate or timely completion of the Services or a threat to the safety of persons or property.

ii. City's Project Manager is Dave Yuan, Utilities Administration Department, Palo Alto, California. 94301, Telephone: 650.329.2522. City's Project Manager will be Sensus' point of contact with respect to performance, progress, and execution of the Services. City may designate an alternate Project Manager from time to time.

S. INDEPENDENT CONTRACTOR. Sensus acknowledges and agrees that Sensus and any agent or employee of Sensus will act as and shall be deemed at all times to be an independent contractor and shall be wholly responsible for the manner in which Sensus performs the Services requested by City under this Agreement. Sensus and any agent or employee of Sensus shall not have employee status with City, nor be entitled to participate in any plans, arrangements, or distributions by City pertaining to or in connection with any retirement, health or other benefits that City may offer its employees. Sensus shall be responsible for all obligations and payments, whether imposed by federal, state or local law, including, but not limited to, FICA, income tax withholdings, workers' compensation, unemployment compensation, insurance, and other similar responsibilities related to Sensus' performance of the Services, or any agent or employee of Sensus providing same. Nothing in this Agreement shall be construed as creating an employment or agency relationship between City and Sensus or any agent or employee of Sensus. Any terms in this Agreement referring to direction from City shall be construed as providing for direction as to policy and the result of Sensus' provision of the Services only, and not as to the means by which such a result is obtained.

T. AUDITS. During the Term of the Agreement, and for four years thereafter, upon reasonable notice from City and during a mutually agreed upon date and time, Sensus shall provide City and its agents and representatives with access to records and supporting documentation so that City may audit the fees charged, or expenses reimbursed to Sensus, in order to determine that such fees are accurate and in accordance with this Agreement and that work charged was actually performed.

U. ENVIRONMENTALLY PREFERRED PURCHASING AND ZERO WASTE REQUIREMENTS. Sensus shall use reasonable efforts to comply with the City's Environmentally Preferred Purchasing policies, without impacting the cost of the Equipment and/or Services, as stated below and as attached as Exhibit M. Sensus shall comply with waste reduction, reuse, recycling and disposal requirements of City's Zero Waste Program. Zero Waste best practices include, first, minimizing and reducing waste; second, reusing waste; and, third, recycling or composting waste. In particular, Sensus shall comply with the following Zero Waste requirements:

i. All printed materials provided by Sensus to City generated from a personal computer and printer including but not limited to, proposals, quotes, invoices, reports, and public education materials, shall be double-sided and printed on a minimum of 30% or greater post-consumer content paper, unless otherwise approved by City's Project Manager. Any submitted materials printed by a professional printing company shall be a minimum of 30% or greater post-consumer material and printed with vegetable-based inks.

ii. Goods purchased by Sensus on behalf of the City shall be purchased in accordance with City's Environmental Purchasing Policy including but not limited to Extended Producer Responsibility requirements for products and packaging. A copy of this policy is on file at the Purchasing Department's office.

iii. Reusable/returnable pallets shall be taken back by Sensus, at no additional cost to City, for reuse or recycling. Sensus shall provide documentation from the facility accepting the pallets to verify that pallets are not being disposed.

V. CONFLICT OF INTEREST.

i. In executing this Agreement, Sensus covenants that it presently has no interest, and will not acquire any interest, direct or indirect, financial or otherwise, which would conflict in any manner or degree with the performance of the Services. Sensus further covenants that, in the performance of this Agreement, it will not employ subcontractors or other persons or parties having such an interest. Sensus certifies that no person who has or will have any financial interest under this Agreement is an officer or employee of City; this provision will be interpreted in accordance with the applicable provisions of the Palo Alto Municipal Code and the Government Code of the State of California, as amended from time to time. Sensus agrees to notify City if any conflict arises.

ii. If the Sensus meet the definition of a "Consultant" as defined by the Regulations of the Fair Political Practices Commission, Sensus will file the appropriate financial disclosure documents required by the Palo Alto Municipal Code and the Political Reform Act of 1974, as amended from time to time.

W. COMPLIANCE WITH PALO ALTO MINIMUM WAGE ORDINANCE. Sensus shall comply with all requirements of the Palo Alto Municipal Code Chapter 4.62 (Citywide Minimum Wage), as amended from time to time. In particular, for any employee otherwise entitled to the State minimum wage, who performs at least two (2) hours of work in a calendar week within the geographic boundaries of the City, Sensus shall pay such employees no less than the minimum wage set forth in the Palo Alto Municipal Code Section 4.62.030 for each hour worked within the geographic boundaries of the City. In addition, Sensus shall post notices regarding the Palo Alto Minimum Wage Ordinance in accordance with Palo Alto Municipal Code Section 4.62.060.

X. NON-APPROPRIATION. This Agreement is subject to the fiscal provisions of the Charter of the City of Palo Alto and the Palo Alto Municipal Code, as amended from time to time. This Agreement may be suspended by the City without any penalty, upon seven (7) business days' written notice to Sensus at the end of any fiscal year in the event that funds are not appropriated by the City of Palo Alto for the following fiscal year. If the City suspends the Agreement for a period longer than one hundred eighty (180) days, then on no later than the one hundred eighty-first day following the applicable notified suspension, the City at its sole option shall either: (1) terminate the Agreement and pay the applicable termination costs outlined below or (2) execute a written change order with Sensus that has been negotiated during the applicable notified suspension period. This Section shall take precedence in the event of a conflict with any other covenant, term, condition, or provision of this Agreement.

i. Non-Substitution. If the Agreement is terminated for non-appropriation, the City may not replace the FlexNet System with AMR or AMI technology from a different vendor for the remainder of the Term.

ii. Best Efforts. City staff responsible for the management of this Agreement shall use best efforts to obtain an appropriation in the full amount required under the Agreement, including the submission of budget requests each year that are sufficient to cover City's payment obligations for the next fiscal year.

iii. Termination/suspension Costs. The termination and/or suspension costs encompasses City's liability for termination and/or suspension of the Agreement due to Non-Appropriation and are meant to cover Sensus' actual and unavoidable costs, including but not limited to, work and materials applicable solely to
the project and consistent with agreed upon purchase order commitments, if any, for raw material and work in process, plus the furnished Equipment and Services and any standby or demobilization fees or other applicable costs that may be incurred by Sensus during a suspension of the Agreement by the City for Non-Appropriation. In no event will the termination/suspension costs outlined in this Section exceed ten percent (10%) of the remaining Agreement cost related to implementation/installation of the FlexNet System.

Y. INSURANCE.
   i. Sensus, at its sole cost and expense, shall obtain and maintain, in full force and effect during the term of this Agreement, the insurance coverage described in Exhibit J entitled “INSURANCE REQUIREMENTS”. Sensus and its subcontractors, if any, shall obtain a policy endorsement naming CITY as an additional insured under any general liability or automobile policy or policies.
   ii. All insurance coverage required hereunder shall be provided through carriers with AM Best’s Key Rating Guide ratings of A-:VII or higher which are licensed or authorized to transact insurance business in the State of California. Any and all subcontractors of Sensus retained to perform Services under this Agreement will obtain and maintain, in full force and effect during the Term of this Agreement, identical insurance coverage, naming CITY as an additional insured under such policies as required above.
   iii. Certificates evidencing such insurance shall be filed with CITY concurrently with the execution of this Agreement. The certificates will be subject to the approval of CITY’s Risk Manager and will contain an endorsement stating that the insurance is primary coverage and will not be canceled, or materially reduced in coverage or limits, by the insurer except after filing with the CITY’s purchasing manager thirty (30) days’ prior written notice of the cancellation or modification. If the insurer cancels or modifies the insurance and provides less than thirty (30) days’ notice to Sensus, Sensus shall provide the purchasing manager written notice of the cancellation or modification within ten (10) business days of the Sensus’ receipt of such notice. Sensus shall be responsible for ensuring that current certificates evidencing the insurance are provided to CITY’s Chief Procurement Officer during the term of this Agreement.
   iv. The procuring of such required policy or policies of insurance will not be construed to limit Sensus’ liability hereunder nor to fulfill the indemnification provisions of this Agreement.

Z. NONDISCRIMINATION
   i. As set forth in Palo Alto Municipal Code Section 2.30.510, as amended from time to time, Sensus certifies that in the performance of this Agreement, it shall not discriminate in the employment of any person due to that person’s race, skin color, gender, gender identity, age, religion, disability, national origin, ancestry, sexual orientation, pregnancy, genetic information or condition, housing status, marital status, familial status, weight or height of such person. Sensus acknowledges that it has read and understands the provisions of Section 2.30.510 of the Palo Alto Municipal Code relating to Nondiscrimination Requirements and the penalties for violation thereof, and agrees to meet all requirements of Section 2.30.510 pertaining to nondiscrimination in employment.

AA. NOTICES. All notices hereunder will be given in writing and mailed, postage prepaid, by certified mail, addressed as follows:

To CITY:
Office of the CITY Clerk
CITY of Palo Alto
Post Office Box 10250
Palo Alto, CA 94303

With a copy to: CITY Purchasing Manager

To Sensus:
Sensus USA Inc.
Attention: Legal Department
637 Davis Drive
Morrisville, North Carolina 27560

With a copy to:
Xylem Inc.
Attention: Legal Department
1 International Drive
Rye Brook, New York 10573

SENSUS shall provide written notice to CITY of any change of address.

6. Definitions
A. “Affiliate” of a party means any other entity controlling, controlled by, or under common control with such party, where “control” of an entity means the ownership, directly or indirectly, of 50% or more of either; (i) the shares or other equity in such entity; or (ii) the voting rights in such entity.
B. “Available Meter” means an installed Sensus FlexNet meter (with a SmartPoint Module installed) or a Sensus SmartPoint Module which has been installed on a third party meter, and which, in either case, is not an Unavailable Meter (or on an Unavailable Meter in the case of SmartPoint Modules on third party meters) and which satisfies all of the following criteria: (i) it functions properly, is powered and is not a damaged or failed meter; (ii) it is in a deployment area of meters for CITY such that a sufficient number of two-way meters are in range of each other; (iii) it is serviced by RF Field Equipment that has not been subjected to a power failure greater than eight (8) total hours; (iv) neither it nor the RF Field Equipment that serves that meter has been affected by a Force Majeure event; (v) jamming of the radio spectrum is not preventing or interfering with radio communication to or from the meter; (vi) it is installed in the Service Territory; (vii) it has not been reported to CITY under Sensus’ or CITY’s preventative maintenance; (viii) its functioning or performance has not been adversely affected by a failure of CITY to perform its obligations or tasks for which it is responsible under this Agreement, including, but not limited to, testing and confirming that the socket to which the meter will be/is connected is in safe operating condition, is fully functional,
is not corroded, does not contain improperly installed jaws or other deficiencies, complies with ANSI standards, and is not hot, damaged, or otherwise in need of maintenance or repair; (ix) its functioning or performance has not been adversely affected by a failure or insufficiency of the back haul telecommunications network of CITY for communications among the components of the Sensus FlexNet System; and (x) it has been installed in compliance with the procedures and specifications approved by CITY and Sensus.

C. “Confidential Information” means any and all non-public information of either party, including all technical information about either party’s products or services, pricing information, marketing and marketing plans, CITY’s End Users’ data, FlexNet System performance, FlexNet System architecture and design, FlexNet System software, other business and financial information of either party, and all trade secrets of either party.

D. “End User” means any end user of electricity, water, and/or gas (as applicable) that pays CITY for the consumption of electricity, water, and/or gas, as applicable.

E. “Field Devices” means the SmartPoint Modules.

F. “FlexNet Base Station” identifies the Sensus manufactured device consisting of one transceiver, to be located on a tower that receives readings from the SmartPoint Modules (either directly or via an R100 unit) by radio frequency and passes those readings to the RNI by TCP/IP backhaul communication. For clarity, FlexNet Base Stations include Metro Base Stations.

G. “FlexNet System” is comprised of the SmartPoint Modules, RF Field Equipment, Server Hardware, software licenses, Spectrum Lease, and other equipment provided to CITY hereunder. The FlexNet System only includes the foregoing, as provided by Sensus. The FlexNet System does not include goods, equipment, software, licenses or rights provided by a third party or parties to this Agreement.

H. “Force Majeure” means an event beyond a party’s reasonable control, including, without limitation, acts of God, hurricane, flood, volcano, tsunami, tornado, storm, tempest, mudslide, vandalism, illegal or unauthorized radio frequency interference, strikes, lockouts, or other industrial disturbances, unavailability of component parts of any goods provided hereunder, acts of public enemies, wars, blockades, insurrections, riots, epidemics, earthquakes, fires, restraints or prohibitions by any court, board, department, commission or agency of the United States or any States, any arrests and restraints, civil disturbances and explosion.

I. “Hosted Software” means those items listed as an Application in Exhibit A.

J. “In/Out Costs” means any costs and expenses incurred by CITY in transporting goods between its warehouse and its End User’s premises and any costs and expenses incurred by CITY in installing, uninstalling and removing goods.

K. “Intellectual Property” means patents and patent applications, inventions (whether patentable or not), trademarks, service marks, trade dress, copyrights, trade secrets, know-how, data rights, specifications, drawings, designs, maskwork rights, moral rights, author’s rights, and other intellectual property rights, including any derivations and/or derivative works, as may exist now or hereafter come into existence, and all renewals and extensions thereof, regardless of whether any of such rights arise under the laws of the United States or of any other state, country or jurisdiction, any registrations or applications thereof, and all goodwill pertinent thereto.

L. “LCM” identifies the load control modules.

M. “Ongoing Fee” means the annual or monthly fees, as applicable, to be paid by CITY during the Term of this Agreement.

N. “Patches” means patches or other maintenance releases of the Software that correct processing errors and other faults and defects found previous versions of the Software. For clarity, Patches are not Updates or Upgrades.

O. “Permitted Use” means only for reading CITY’s Field Devices in the Service Territory. The Permitted Use does not include reading Field Devices outside the Service Territory.

P. “R100 Unit” identifies the Sensus standalone, mounted transceiver that takes the radio frequency readings from the SmartPoint Modules and relays them by radio frequency to the relevant FlexNet Base Station or directly to the RNI by TCP/IP backhaul communication, as the case may be.

Q. “Release” means both Updates and Upgrades.

R. “Remote Transceiver” identifies the Sensus standalone, mounted relay device that takes the radio frequency readings from the SmartPoint Modules and relays them directly to the RNI by TCP/IP backhaul communication.

S. “RF Field Equipment” means, collectively, FlexNet Base Stations, R100 units (if any) and Remote Transceivers (if any).

T. “RNI” identifies the regional network interfaces consisting of hardware and software used to gather, store, and report data collected by the FlexNet Base Stations from the SmartPoint Modules. The RNI hardware specifications will be provided by Sensus upon written request from CITY.

U. “RNI Software” identifies the Sensus proprietary software used in the RNI and any Patches, Updates, and Upgrades that are provided to CITY pursuant to the terms of this Agreement.

V. “Service Territory” identifies the geographic area where CITY utilizes Sensus equipment to provide services to End Users as of the Effective Date. This area will be described on the propagation study in the parties’ Spectrum Lease filing with the FCC.

W. “Server Hardware” means the RNI hardware.

X. “SmartPoint™ Modules” identifies the Sensus transmission devices installed on devices such as electric, natural gas and water meters, distribution automation equipment and demand/response devices located at CITY’s End Users’ premises (e.g. LCM) that communicate with the relevant devices and transmit those communications by radio frequency to the relevant piece of RF Field Equipment.

Y. “Software” means all the Sensus proprietary software provided pursuant to this Agreement, and any Patches, Updates, and Upgrades that are provided to CITY pursuant to the terms of this Agreement. The Software does not include any third party software.

Z. “TouchCoupler Unit” identifies an inductive coupler connection from a water register to the SmartPoint Module.

AA. “Unavailable Meters” include meters with sockets with power cut at the pole, meters that are booted on the line side, sockets that are not provided power due to a power delivery system failure, meters with tamper, theft or other human induced failures that render the meter or SmartPoint Module incapable of providing a read, a Force Majeure event induced failures of the power delivery system, socket or meter, and/or any system or meter maintenance issue that precludes the meter from transmitting its message to the network. Examples of Unavailable Meters include: (i) Cut At Pole: a meter for which power has been turned off to the socket by CITY; (ii) Booted on Line Side: nominally a meter for which power has been turned off by placing boots in the socket from which the power to the meter has effectively been turned off; (iii) Failed or flawed power delivery to the meter socket: CITY power generation, distribution or delivery system failure that has effectively turned off power to the socket and/or meter; (iv) Tampered Meters: sockets, meters or distribution assets that have been modified by unauthorized personnel rendering the meter incapable of providing accurate usage readings from that meter; (v) Broken TouchCoupler unit: the TouchCoupler unit is damaged by intentional or unintentional acts; (vi) Broken Clip: the clip that holds the TouchCoupler unit into the radio package housing is broken and the unit cannot complete the inductive electrical connection; (vii) Improper installation of the TouchCoupler unit: the TouchCoupler unit is not pushed all the way into the housing clip causing the unit to not be able to complete the inductive electrical connection; (viii) Unit not installed through the pit lid: the unit is not installed with the antenna positioned through the pit lid and properly secured with the retaining nut. The radio unit must
also be securely attached to the antenna section; (ix) Radio unit not securely attached to the Antenna unit: The water-proof SmartPoint Module housing is not properly installed and secured to the antenna unit; (x) Damaged antenna: the unit’s antenna is damaged by intentional or unintentional acts; (xi) Damaged radio package: the unit’s water-proof radio package is damaged by intentional or unintentional acts; (xii) Data Base errors: the unit is removed from the system but not updated in the database. Still shown as in the system when in fact has been removed; (xiii) Phantom Units: the unit is removed from the system but is still transmitting and being heard by the system; and (xiv) Other Installation Defect: the unit is otherwise installed improperly so that it does not communicate with the FlexNet Base Station.

BB. “Updates” means releases of the Software that constitute a minor improvement in functionality.

CC. “Upgrades” means releases of the Software which constitute a significant improvement in functionality or architecture of the Software.

DD. “WAN Backhaul” means the communication link between FlexNet Base Stations and RNI.
Software as a Service

I. Description of Services.

This exhibit contains the details of the Software as a Service that Sensus shall provide to CITY if both: (i) pricing for the application of Software as a Service has been provided to the CITY; and (ii) the CITY is current in its payments for such application of Software as a Service.

A. Software as a Service Generally.

Software as a Service is a managed service in which Sensus will be responsible for the day-to-day monitoring, maintenance, management, and supporting of CITY’s software applications. In a Software as a Service solution, Sensus owns all components of the solution (server hardware, storage, data center, network equipment, Sensus software, and all third-party software) required to run and operate the application. These software applications consist of the following (each an Application):

- Regional Network Interface (RNI) Software

The managed application systems consist of the hardware, Sensus Software, and other third-party software that is required to operate the software applications. Each Application will have a production, and Disaster Recovery (as described below) environment. Sensus will manage the Applications by providing 24 x 7 x 365 monitoring of the availability and performance of the Applications.

B. Use of Software as a Service.

Subject to the terms of this Agreement, Sensus shall make Software as a Service available to CITY to access and use solely for the Permitted Use and solely for so long as CITY is current in its payments to Sensus or its authorized distributor for Software as a Service. The Software as a Service term commences on the date that Sensus first makes Software as a Service available to CITY for use and ends upon the earlier of: (i) the expiration or termination of the Agreement; (ii) breach by CITY of this exhibit or the Agreement; or (iii) CITY’s termination of Software as a Service as set forth in paragraph (C) below.

C. Termination of an Application.

CITY shall have the option at any time before the end of the Term to terminate any Application by giving Sensus one hundred twenty (120) days prior written notice. Such notice, once delivered to Sensus, is irrevocable. Should CITY elect to terminate any Application, CITY acknowledges that: (a) CITY shall pay all applicable fees, including any unpaid Software as a Service fees due in the current calendar year plus a ten percent (10%) early termination fee, where such fee is calculated based on the annual Software as a Service fee due in the current calendar year; and (b) Software as a Service for such Application shall immediately cease. If CITY elects to terminate the RNI Application in the Software as a Service environment but does not terminate the Agreement generally, then upon delivery of the notice to Sensus, CITY shall purchase the necessary (a) RNI hardware from a third party and (b) RNI software license at Sensus’ then-current pricing. No portion of the Software as a Service fees shall be applied to the purchase of the RNI hardware or software license.

i. If System Uptime Rate (defined below) falls below 90% for six (6) consecutive months, CITY may terminate the RNI Software Application and Sensus will waive the Sensus RNI license fee and any applicable transition services fees necessary for CITY to deploy the Sensus RNI on premise at the CITY for the amounts listed in Exhibit C. CITY would still be responsible for all necessary RNI hardware, third party software, and IT personnel associated with managing the Sensus RNI on premise. For clarity and avoidance of doubt, the fee waivers outlined above do not apply if the CITY terminates the RNI Software Application for convenience.

D. Software as a Service means only the following services:

i. Sensus will provide the use of required hardware, located at Sensus’ or a third-party’s data center facility (as determined by Sensus), that is necessary to operate the Application.

ii. Sensus will provide production and disaster recovery environments for Application.

iii. Sensus will provide patches, updates, and upgrades to latest Sensus Hosted Software release.

iv. Sensus will work to provide documentation showing the ISO 27001 Certification implemented by Q1 2022, and annually thereafter.

v. Sensus will work to provide two-factor authentication by the close of Q2 2022 in the RNI. CITY will require an RNI Update to the latest version at this time to receive the feature.

vi. Sensus will configure and manage the equipment (server hardware, routers, switches, firewalls, etc.) in the data centers:

a. Network addresses and virtual private networks (VPN)

b. Standard time source (NTP or GPS)

c. Security access points

d. Respond to relevant alarms and notifications

evii. Capacity and performance management. Sensus will:

a. Monitor capacity and performance of the Application server and software applications 24x7x365 using KPI metrics, thresholds, and alerts to proactively identify any potential issues related to system capacity and/or performance (i.e. database, backspool, logs, message broker storage, etc.)

b. If an issue is identified to have a potential impact to the system, Sensus will open an incident ticket and manage the ticket through resolution per Exhibit B, Technical Support.

c. Manage and maintain the performance of the server and perform any change or configuration to the server, in accordance to standard configuration and change management policies and procedures.

d. Manage and maintain the server storage capacity and performance of the Storage Area Network (SAN), in accordance to standard configuration and change management policies and procedures.

e. Exceptions may occur to the system that require Sensus to take immediate action to maintain the system capacity and performance levels, and Sensus has authority to make changes without CITY approval as needed, in accordance to standard configuration and change management policies and procedures.

viii. Database management. Sensus will:

a. Implement the data retention plan and policy and will provide the policy upon request.
b. Perform routine database maintenance and cleanup of database to improve capacity and performance, such as rebuilding indexes, updating indexes, consistency checks, run SQL query/agent jobs, etc.

dii. Incident and Problem Management. Sensus will:
   a. Proactively monitor managed systems (24x7x365) for key events and thresholds to proactively detect and identify incidents.
   b. Respond to incidents and problems that may occur to the Application(s).
   c. Maintain policies and procedures for responding to incidents and performing root cause analysis for ongoing problems.
   d. Correlate incidents and problems where applicable.
   e. Sensus personnel will use the self-service portal to document and track incidents.
   f. In the event that a Sensus personnel is unable to resolve an issue, the issue will be escalated to the appropriate Subject Matter Expert (SME).
   g. Maintain responsibility for managing incident and problems through resolution and will coordinate with CITY’s personnel and/or any required third-party vendor to resolve the issue.
   h. Provide telephone support consistent with Exhibit B, Technical Support in the case of undetected events.

x. Security Management. Sensus will:
   a. Monitor the physical and cyber security of the server and Application(s) 24x7x365 to ensure system is highly secure in accordance with NIST Security Standards.
   b. Perform active intrusion prevention and detection of the data center network and firewalls and monitor logs and alerts.
   c. Conduct period penetration testing of the network and data center facilities. Sensus will provide an annual report confirming the penetration testing process has been performed.
   d. Conduct monthly vulnerability scanning by both internal staff and external vendors.
   e. Perform anti-virus and Malware patch management on all systems.
   f. Install updates to virus protection software and related files (including virus signature files and similar files) on all servers from the update being generally available from the anti-virus software provider.
   g. Respond to any potential threat found on the system and work to eliminate virus or malware found.
   h. Adhere to and submit certification to NERC/CIP Cyber Security standards.
   i. Monitor industry regulation/standards regarding security – NERC, FERC, NIST, OpenSG, etc. through the dedicated Sensus security team.
   j. Provide secure web portal access (SSL) to the Application(s).

xi. Backup and Disaster Recovery Management. Sensus will:
   a. Perform daily backups of data providing one (1) year of history for auditing and restoration purposes.
   b. Back-up and store data (on tapes or other storage media as appropriate) off-site to provide protection against disasters and to meet file recovery needs.
   c. Conduct incremental and full back-ups to capture data, and changes to data, on the Application(s).
   d. Replicate the Application(s) environments to a geographically separated data center location to provide a full disaster recovery environment for the Application production system.
   e. Provide disaster recovery environment and perform fail-over to disaster recovery environment within forty-eight (48) hours of declared event.
   f. Generate a report following each and any disaster measuring performance against the disaster recovery plan and identification of problem areas and plans for resolution.
   g. Maintain a disaster recovery plan. In the event of a disaster, Sensus shall provide the services in accordance with the disaster recovery plan.
   h. In the case of a disaster and loss of access to or use of the Application, Sensus would use commercially reasonable efforts per the Recovery Time Objectives (RTO) and Recovery Point Objectives (RPO) specified herein to restore operations at the same location or at a backup location within forty-eight (48) hours.
   i. The Application shall have a RTO of forty-eight (48) hours.
   j. The RPO shall be a full recovery of the Application(s), with an RPO of one (1) hour, using no more than a twenty-four (24) hour old backup. All meter-related data shall be pushed from each Base Station/TGB restoring the database to real-time minus external interfaced systems from the day prior.

k. Data from external interfaced systems shall be recreated within a forty-eight (48) hour period with the assistance of CITY personnel and staff, as needed.

xii. Configuration, Change, and Release Management. Sensus will:
   a. Coordinate and schedule all patches, updates, and upgrades to the Application(s) and other third-party applications with CITY’s personnel.
   b. Perform software patches, updates, and/or upgrades to the Application(s) in a test environment to test the features/functionality of the new release along with coordination of CITY’s personnel, in accordance to standard configuration and change management policies and procedures.
   c. Perform software patches, updates, and upgrades to all required third-party software applications (e.g., Microsoft® SQL server, Microsoft Windows Server, Red Hat Linux OS, and other third-party Software) to operate the Application(s) in a test environment along with coordination of CITY’s personnel, in accordance to standard configuration and change management policies and procedures.
   d. Once Sensus and CITY have verified and signed off on change and release of the patch, update, and/or upgrade, Sensus will apply the appropriate patches, updates, and/or upgrades to the production environment, in accordance to standard configuration and change management policies and procedures.

E. CITY Responsibilities:
   i. Coordinate and schedule any changes submitted by Sensus to the system in accordance with standard configuration and change management procedures.
   ii. Participate in all required configuration and change management procedures.
   iii. CITY will log incidents related to the managed Application with Sensus personnel via email, web portal ticket entry, or phone call.
   iv. Responsible for periodic processing of accounts or readings (i.e., billing files) for CITY’s billing system for billing or other analysis purposes.
v. Responsible for any field labor to troubleshoot any SmartPoint modules or smart meters in the field in populations that have been previously deployed and accepted.

vi. First response labor to troubleshoot FlexNet Base Station, R100s, Remote Transceivers or other field network equipment.

vii. Responsible for local area network configuration, management, and support.

viii. Identify and research problems with meter reads and meter read performance.

ix. Create and manage user accounts.

x. Support application users.

xi. Investigate application operational issues (e.g., meter reads, reports, alarms, etc.).

xii. Respond to alarms and notifications.

xiii. Perform firmware upgrades over-the-air, or delegate and monitor field personnel for on-site upgrades.

F. Software as a Service does not include any of the following services:

i. Parts or labor required to repair damage to any field network equipment that is the result of a Force Majeure event.

ii. Any integration between applications, such as a MDMS, would require a Professional Services contract agreement to be scoped, submitted, and agreed in a signed writing between Sensus and all the applicable parties.

If an item is not listed in subparagraphs in item (D) above, such item is excluded from the Software as a Service and is subject to additional pricing.

II. Further Agreements

A. System Uptime Rate.

i. Sensus (or its contractor) shall manage and maintain the Application(s) on computers owned or controlled by Sensus (or its contractors) and shall provide CITY access to the managed Application(s) via internet or point to point connection (i.e., Managed-Access use), according to the terms below. Sensus endeavors to maintain an average System Uptime Rate equal to ninety-nine (99.0) per Month (as defined below). The System Uptime Rate, cumulative across all Applications, shall be calculated as follows:

\[
\text{System Uptime Rate} = 100 \times \left( \frac{TMO}{\text{Total Non-Scheduled Downtime minutes in the Month}} \right)
\]

TMO

ii. Calculations

a. \textit{Targeted Minutes of Operation} or TMO means total minutes cumulative across all Applications in the applicable month minus the Scheduled Downtime in the Month.

b. \textit{Scheduled Downtime} means the number of minutes during the Month, as measured by Sensus, in which access to any Application is scheduled to be unavailable for use by CITY due to planned system maintenance. Sensus shall provide CITY notice (via email or otherwise) at least seven (7) days in advance of commencement of the Scheduled Downtime.

c. \textit{Non-Scheduled Downtime} means the number of minutes during the Month, as measured by Sensus, in which access to any Application is unavailable for use by CITY due to reasons other than Scheduled Downtime or the Exceptions, as defined below (e.g., due to a need for unplanned maintenance or repair).

iii. Exceptions. \textit{Exceptions} mean the following events:

- Force Majeure
- Emergency Work, as defined below; and
- Lack of Internet Availability, as described below.

a. Emergency Work. In the event that Force Majeure, emergencies, dangerous conditions or other exceptional circumstances arise or continue during TMO, Sensus shall be entitled to take any actions that Sensus, in good faith, determines is necessary or advisable to prevent, remedy, mitigate, or otherwise address actual or potential harm, interruption, loss, threat, security or like concern to any of the Application(s) ("Emergency Work"). Such Emergency Work may include, but is not limited to: analysis, testing, repair, maintenance, re-setting and other servicing of the hardware, cabling, networks, software and other devices, materials and systems through which access to and/or use of the Application(s) by the CITY is made available (the "Managed Systems"). Sensus shall endeavor to provide advance notice of such Emergency Work to CITY when practicable and possible.

b. Lack of Internet Availability. Sensus shall not be responsible for any deterioration of performance attributable to latencies in the public internet or point-to-point network connection operated by a third party. CITY expressly acknowledges and agrees that Sensus does not and cannot control the flow of data to or from Sensus’ networks and other portions of the Internet, and that such flow depends in part on the performance of Internet services provided or controlled by third parties, and that at times, actions or inactions of such third parties can impair or disrupt data transmitted through, and/or CITY’s connections to, the Internet or point-to-point data connection (or portions thereof). Although Sensus will use commercially reasonable efforts to take actions Sensus may deem appropriate to mitigate the effects of any such events, Sensus cannot guarantee that such events will not occur. Accordingly, Sensus disclaims any and all liability resulting from or relating to such events.
iv. **System Availability.** For each month that the System Uptime Rates for the production RNI falls below 99.0%, Sensus will issue CITY the following Service Level Credits:

<table>
<thead>
<tr>
<th>System Uptime Rate per calendar month</th>
<th>Service Level Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 99.0% but at least 97.5%</td>
<td>5% of the monthly RNI SaaS Fees in which the service level default occurred (Note: SaaS fees are pre-paid annually and for purposes of Service Level Credits are computed on a monthly basis.)</td>
</tr>
<tr>
<td>Less than 97.5% but at least 95.0%</td>
<td>10% of the monthly RNI SaaS Fees in which the service level default occurred</td>
</tr>
<tr>
<td>Less than 95.0% but at least 90%</td>
<td>25% of the monthly RNI SaaS Fees in which the service level default occurred</td>
</tr>
<tr>
<td>Less than 90%</td>
<td>30% of the monthly RNI SaaS Fees in which the service level default occurred</td>
</tr>
</tbody>
</table>

Service Level Credits for any single month shall not exceed 30% of the RNI SaaS Fee associated with the month in which the service level default occurred. Sensus records and data will be the sole basis for all Service Level Credit calculations and determinations, provided that such records and data must be made available to CITY for review and agreement by CITY. To receive a Service Level Credit, CITY must issue a written request no later than ten (10) days after the Service Level Credit has accrued. Sensus will apply each valid Service Level Credit to the CITY’s invoice within 2 billing cycles after Sensus’ receipt of CITY’s request and confirmation of the failure to meet the applicable Service Level Credit. Service Level Credits will not be payable for failures to meet the System Uptime Rate caused by any Exceptions. No Service Level Credit will apply if CITY is not current in its undisputed payment obligations under the Agreement. Service Level Credits are exclusive of any applicable taxes charged to CITY or collected by Sensus. Sensus shall not refund an unused Service Level Credits or pay cash to CITY for any unused Service Level Credits. Any unused Service Level Credits at the time the Agreement terminates will be forever forfeited. THE SERVICE LEVEL CREDITS DESCRIBED IN THIS SECTION ARE THE SOLE AND EXCLUSIVE REMEDY FOR SENSUS’ FAILURE TO MEET THE SYSTEM UPTIME REQUIREMENT OR ANY DEFECTIVE SaaS PERFORMANCE. IN NO EVENT SHALL THE AGGREGATE AMOUNT OF SERVICE LEVEL CREDITS IN ANY ANNUAL PERIOD EXCEED 25% OF THE ANNUAL RNI SaaS FEE.

B. **Data Center Site-Security.** Although Sensus may modify such security arrangements without consent or notice to CITY, CITY acknowledges the following are the current arrangements regarding physical access to and support of the primary hardware components of the Managed Systems:

i. The computer room(s) in which the hardware is installed is accessible only to authorized individuals.

ii. Power infrastructure includes one or more uninterruptible power supply (UPS) devices and diesel generators or other alternative power for back-up electrical power.

iii. Air-conditioning facilities (for humidity and temperature controls) are provided in or for such computer room(s) and can be monitored and adjusted for humidity and temperature settings and control. Such air systems are supported by redundant, back-up and/or switch-over environmental units.

iv. Such electrical and A/C systems are monitored on an ongoing basis and personnel are available to respond to system emergencies (if any) in real time.

v. Dry pipe pre-action fire detection and suppression systems are provided.

vi. Data circuits are available via multiple providers and diverse paths, giving access redundancy.

C. **Responsibilities of CITY.**

i. CITY shall promptly pay all Software as a Service fees.

ii. CITY may not (i) carelessly, knowingly, intentionally or maliciously threaten, disrupt, harm, abuse or interfere with the Application(s), Managed Systems or any of their functionality, performance, security or integrity, nor attempt to do so; (ii) impersonate any person or entity, including, but not limited to, Sensus, a Sensus employee or another user; or (iii) forge, falsify, disguise or otherwise manipulate any identification information associated with CITY’s access to or use of the Application(s).

iii. The provisioning, compatibility, operation, security, support, and maintenance of CITY’s hardware and software ("CITY’s Systems") is exclusively the responsibility of CITY. CITY is also responsible, in particular, for correctly configuring and maintaining (i) the desktop environment used by CITY to access the Application(s) managed by Sensus; and (ii) CITY’s network router and firewall, if applicable, to allow data to flow between the CITY’s Systems and Sensus’ Managed Systems in a secure manner via the public Internet.

iv. Upon receiving the system administrator account from Sensus, CITY shall create username and passwords for each of CITY’s authorized users and complete the applicable Sensus registration process (Authorized Users). Such usernames and passwords will allow Authorized Users to access the Application(s). CITY shall be solely responsible for maintaining the security and confidentiality of each user ID and password pair associated with CITY’s account, and Sensus will not be liable for any loss, damage or liability arising from CITY’s account or any user ID and password pairs associated with CITY. CITY is fully responsible for all acts and omissions that occur through the use of CITY’s account and any user ID and password pairs. CITY agrees (i) not to allow anyone other than the Authorized Users to have any access to, or use of CITY’s account or any user ID and password pairs at any time; (ii) to notify Sensus immediately of any actual or suspected unauthorized use of CITY’s account or any of such user ID and password pairs, or any other breach or suspected breach of security, restricted use or confidentiality; and (iii) to take the Sensus-recommended steps to log out from and otherwise exit the Application(s) and Managed Systems at the end of each session. CITY agrees that Sensus shall be entitled to rely, without inquiry, on the validity of the user accessing the Application(s) application through CITY’s account, account ID, usernames or passwords.

v. CITY shall be responsible for the day-to-day operations of the Application(s) and FlexNet System. This includes, without limitation, (i) researching problems with meter reads and system performance, (ii) creating and managing user accounts, (iii) customizing application configurations, (iv) supporting application users, (v) investigating application operational issues, (vi) responding to alarms and notifications, and (vii) performing over-the-air commands (such as firmware updates or configuration changes).

D. **Software Solution Components.**

i. **Description of Software Solutions.** Sensus software consists of a core communication module and a set of applications. Some applications are required to perform basic solution capabilities, other applications are optional and add additional capabilities and function to the overall solution. As CITY’s business process expands and/or new Sensus offerings are made available, additional applications and functionality can dynamically be added to the solution, provided CITY purchases such additional applications.

ii. **Regional Network Interface.** The Regional Network Interface (RNI) or Sensus head-end is the centralized intelligence of the FlexNet network; the RNI’s
primary objective is to transfer endpoint (such as meters) data to the CITY and the advanced feature applications. The RNI is adaptable to CITY configurations by simultaneously supporting a wide range of FlexNet enabled endpoints; including but not limited to meters (electric, water, gas), Home Area Network devices and Load Control devices. The FlexNet System supports Distribution Automation functionality with the addition of the Sensus AutomationControl Application. The FlexNet System supports street lighting control with the addition of the VantagePoint Software Application.

a. Core Package
   (i) Communication
      1. Manages all inbound and outbound traffic to and from endpoints
      2. Outbound routing optimization
      3. Route analyzer
      4. AES256 bit encryption of radio messages
      5. Reports and metric details of network performance and troubleshooting aids
      6. Management of RF equipment (base stations and endpoint radios)
   (ii) Data Collection
      1. Missing read management
      2. Management of duplicate reads
      3. 60 day temporary storage
   (iii) Application integration
      1. To Sensus Analytics applications
      2. Enable 3rd party application integration
      3. Batch CMEP file export
      4. Real-time access through MultiSpeak
   (iv) Endpoint Management
      1. Gas, water, electric, lighting concurrent support
      2. Remote configuration
      3. Remote firmware updates
      4. Reports, metrics and Troubleshooting
   (v) User Management
      1. Secure access
      2. Password management
      3. Definable user roles
      4. User permissions to manage access to capabilities

b. Integration of RNI. Sensus shall provide RNI integration support services to CITY only to the extent specifically provided below:
   (i) Sensus shall meet with the representative from the CITY's system(s) targeted for integration to determine which integration method is appropriate (e.g., MultiSpeak, CMEP, etc.).
      1. In scope and included integration efforts: Provide the gateway URLs to the integrating system as needed, provide CITY with standard integration API documentation, validate and test that the correct CITY information is flowing into and/or out of the RNI.
      2. Out of scope and subject to additional charges: Modifications or extensions to the standard API provided by Sensus and any integration efforts not outlined above as in scope and included.
   (ii) CITY Responsibilities:
      1. Provide Sensus with information about the relevant information CITY wishes to transfer and integrate with the RNI.
      2. Establish the network and security required for the two systems to reasonably communicate.
      3. Verify integration to third party system functionality is working as intended.
   (iii) If an item is not listed in subparagraph (i) above, such item is excluded from the integration of Sensus RNI Support and is subject to additional pricing.

III. Third party Software
A. RedHat Linux. If Sensus is providing CITY with a license to use RedHat Linux Software, CITY agrees to the following:
   By entering into this Agreement, CITY agrees to abide by and to be legally bound by the terms and conditions of the Red Hat End User License Agreements identified below, each of which are incorporated into this Agreement by reference and are available at the websites identified below. Please read the Red Hat End User License Agreements and incorporated references carefully.
   Subscription: End User License Agreement:
   Red Hat Enterprise Linux  http://www.redhat.com/licenses/rhel_rha_eula.html
   JBoss Enterprise Middleware  http://www.redhat.com/licenses/jboss_eula.html
Exhibit B
Technical Support

1. Introduction
Sensus Technical Services provides CITY with a single point of contact for Tier 1 support of technical issues as well as any coordination of additional resources required to resolve the issue. Requests that require specialized skills are to be forwarded to a senior support engineer or Technical Advisor within the team for further analysis. If Technical Services has exhausted all troubleshooting efforts for the product type, the issue will escalate to the Engineering Support Team. Occasionally, on-site troubleshooting/analysis may be required. The preferred order of on-site support is:

a) The CITY (for assistance with the easiest and lowest time-consuming activities such as power on/power off).
b) The local distributor.
c) Sensus employees or contracted personnel, if required to fulfill a contract commitment.

2. Support Categories

2.1. General questions regarding functionality, use of product, how-to, and requests for assistance on Sensus AMR, AMI, RF Network Equipment, Metering Products, Sensus Lighting Control, and Demand Response Management System (FlexNet Home).

2.2. Proactive reporting and resolution of problems.

2.3. Reactive reporting to isolate, document, and solve reported hardware/software defects.

2.4. Responding to service requests and product changes.

2.5. Addressing CITY inquiries with printed or electronic documentation, examples, or additional explanation/clarification.

3. Support Hours

3.1. Standard Support Hours: Toll-free telephone support (1-800-638-3748 option #2) is available Monday thru Friday from 8:00 a.m. EST to 8:00 p.m. EST. After-hours, holiday and weekend support for Severity 1 and Severity 2 issues is available by calling 1-800-638-3748, option #8.

4. Support Procedures

4.1. CITY identifies an issue or potential problem and calls Technical Services at 1-800-638-3748 Option #2. The CITY Service Associate or Technical Support Engineer will submit a SalesForce ticket.

4.2. The CITY Service Associate or Technical Support Engineer will identify the caller name and utility by the assigned software serial number, city, and state based on where the call originated. The CITY Service Associate or Technical Support Engineer will require a brief description of the problem symptoms, or error messages depending on nature of the incident. The nature of the problem and severity levels will be mutually agreed upon by both parties (either at the time the issue is entered or prior to upgrading or downgrading an existing issue) using the severity definitions below as a guideline. The severity level is then captured into SalesForce for ticket creation and resolution processing. Any time during the processing of this ticket, if the severity level is changed by Sensus, the CITY will be updated.

A. Severity Levels Description:

Sev1 CITY’s production system is down. The system is unusable resulting in total disruption of work. No workaround is available and requires immediate attention.

Example: Network mass outage, all reading collection devices inoperable, inoperable head end software (e.g., FlexWare, Sensus MDM). Not able to generate billing files.

Sev2 Major system feature/function failure. Operations are severely restricted; there is a major disruption of work, no acceptable work-around is available, and failure requires immediate attention.

Examples: Examples: Network equipment failure (e.g., FlexNet Echo, FlexNet Remote, Base Station transceiver, or VGB); inoperable reading devices (e.g., AR5500, VXU, VGB, or CommandLink); head end software application has important functionality not working and cannot create export file for billing system operations.

Sev3 The system is usable and the issue doesn’t affect critical overall operation.

Example: Minor network equipment failure (e.g., Echo/Remote false alarms or Base Station transceiver false alarms); head end software application operable but reports are not running properly, modification of view or some non-critical function of the software is not running.

4.3. The CITY Service Associate or Technical Support Engineer identifies whether or not the CITY is on support. If the CITY is not on support, the CITY is advised of the service options as well as any applicable charges that may be billed.

4.4. Calls are placed in a queue from which they are accessible to Technical Support Engineers on a first-come-first-served basis. A 1st level CITY Service Associate may assist the CITY, depending on the difficulty of the call and the representative’s technical knowledge. Technical Support Engineers (Tier 1 support) typically respond/resolve the majority of calls based on their product knowledge and experience. A call history for the particular account is researched to note any existing pattern or if the call is a new report. This research provides the representative a basis and understanding of the account as well as any associated problems and/or resolutions that have been communicated.

a. Technical Services confirms that there is an issue or problem that needs further analysis to determine its cause. The following information must be collected: a detailed description of the issue’s symptoms, details on the software/hardware product and version, a description of the environment in which the issue arises, and a list of any corrective action already taken.

b. Technical Services will check the internal database and product defect tracking system, to see if reports of a similar problem exist, and if any working solutions were provided. If an existing resolution is found that will address the reported issue, it shall be communicated to the CITY. Once it is confirmed that the issue has been resolved, the ticket is closed.

c. If there is no known defect or support that defines the behavior, Technical Services will work with the CITY to reproduce the issue. If the issue can be reproduced, either at the CITY site or within support center test lab, Technical Services will escalate the ticket for further investigation / resolution.

If the issue involves units that are considered to be defective with no known reason, the representative will open a Special Investigation RMA through the SalesForce system. If it is determined that a sample is required for further analysis, the CITY will be provided with instructions that detail where to send the
product sample(s) for a root cause analysis. Once it is determined that the issue cannot be resolved by Tier 1 resources, the ticket will be escalated to Tier 2 support for confirmation/workarounds to resolve immediate issue. Technical Services will immediately contact the CITY to advise of the escalation. The response and escalation times are listed in Section 5. At this time, screen shots, log files, configuration files, and database backups will be created and attached to the ticket.

5. **Response and Resolution Targets.**

Sensus Technical Support will make every reasonable effort to meet the following response and resolution targets:

<table>
<thead>
<tr>
<th>Severity</th>
<th>Standard Target Response</th>
<th>Standard Target Resolution</th>
<th>Resolution (one or more of the following)</th>
</tr>
</thead>
</table>
| 1        | 30 Minutes                | Immediately assign trained and qualified Services Staff to correct the error on an expedited basis. Provide ongoing communication on the status of a correction (24 hours). | • Satisfactory workaround is provided.  
• Program patch is provided.  
• Fix incorporated into future release.  
• Fix or workaround incorporated into SalesForce Knowledge Base. |
| 2        | 4 hours                   | Assign trained and qualified Services Staff to correct the error. Provide communication as updates occur (48 hours). | • Satisfactory workaround is provided.  
• Program patch is provided.  
• Fix incorporated into future release.  
• Fix or workaround incorporated into SalesForce Knowledge Base. |
| 3        | 1 Business Day            | 30 business days           | • Answer to question is provided.  
• Satisfactory workaround is provided.  
• Fix or workaround incorporated into SalesForce Knowledge Base.  
• Fix incorporated into future release. |

6. **Problem Escalation Process.**

6.1. If the normal support process does not produce the desired results, or if the severity has changed, the issue may be escalated as follows to a higher level of authority.

6.1.1. Severity 1 issues are escalated by Sales or Technical Services to a Supervisor if not resolved within 2 hours; to the Manager level if not resolved within 4 hours; to the Director level if not resolved within the same business day; and to the VP level if not resolved within 24 hours.

6.1.2. A CITY may escalate an issue by calling 1-800-638-3748, Option 2. Please specify the SalesForce ticket number and the reason why the issue is being escalated.

6.1.3. In the event that a CITY is not satisfied with the level of support or continual problem with their products, they may escalate a given SalesForce ticket to Manager of Technical Services (1-800-638-3748, Option 2).

7. **General Support Provisions and Exclusions.**

7.1. Sensus provides online documentation for Sensus products, and all Sensus customers are provided access to this online database, which includes operation, configuration and technical manuals. The CITY shall provide names and email accounts to Sensus so Sensus may provide access to the product documentation.

7.2. Specialized support from Sensus is available on a fee basis to address support issues outside the scope of this support plan or if not covered under another specific contract or statement of work. For example: specialized systems integration services or out of warranty network equipment repair.
Exhibit C Summary Pricing

<table>
<thead>
<tr>
<th>SUMMARY</th>
<th>ELECTRIC</th>
<th>$3,072,193</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WATER MODULES</td>
<td>$1,708,866</td>
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<tr>
<td></td>
<td>Water Retrofits (Retrofit registers to be sourced from CPA direct)</td>
<td>$-</td>
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<tr>
<td></td>
<td>GAS</td>
<td>$1,728,318</td>
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<td></td>
<td>AMI INFRASTRUCTURE, NETWORK SERVICES &amp; FIELD TOOLS</td>
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<td>RNI/HES - SaaS</td>
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<td></td>
<td>PROJECT MANAGEMENT</td>
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<td>PROFESSIONAL SERVICES &amp; INTEGRATION</td>
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<tr>
<td></td>
<td>INSTALLATION &amp; LIDS</td>
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<td></td>
<td>PERFORMANCE AND PAYMENT BOND</td>
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<td>OPTIONAL MANAGED SERVICES PERFORMANCE OFFERINGS</td>
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<td>OPTIONAL DRIVE BY READING SOFTWARE</td>
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<td>SUMMARY INCLUDING TAX</td>
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<tr>
<td></td>
<td>Tax (9%) on Goods</td>
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<tr>
<td>SUMMARY INCLUDING TAX</td>
<td>TOTAL</td>
<td>$15,283,218</td>
</tr>
</tbody>
</table>

ASSUMPTIONS:

1. Per Month Estimate. UPA and the City will jointly develop a plan for storage and warehouse logistics based on the available commercial real estate and market pricing in 2022 when Full Deployment is expected to begin. If project extends beyond initial time frame, the same monthly fee would apply.

2. CPA & UPA will jointly develop a solution and estimated cost based on frequency of occurrence.

3. For 3rd Party materials UPA will charge cost + 10%

4. Project pricing does not include any costs assessed by the CPA's CIO provider (e.g., per meter, or otherwise) that may be required to integrate the ENLIGHTS work order system with the CIO system. Any fees assessed by the CIO provider will be passed through at Sensus' cost for reimbursement.

Sensus’ proposal assumes that CPA will purchase all required CommandLink devices for UPA personnel (plus spares) necessary to perform the steps required by the AMI technology to program and/or register the AMI modules to the network at the time of installation.

Sensus/UPA’s Due Diligence Plan includes as many as two (2) physical cold call attempts, the delivery of two (2) door hangers (provided by UPA, alongside cold calls) and three (3) phone call attempts (if phone numbers are provided) in an effort to gain access to the meter or to schedule a customer appointment. If the meter is temporarily obstructed (e.g., behind a locked gate) or unable to work order to the utility (RTO), Sensus assumes that less than 3% of residential meters are considered “hard-to-access” or otherwise require an appointment to access the meter. Such meters located indoors, behind locked gates, or in seasonal homes without access to meter. Sensus will charge an additional fee per residential meter in excess of 3% that require an appointment, which includes the costs of scheduling and accommodating the appointment.

Sensus’ proposal is based on performing work in an efficient and sequenced manner (e.g., house-to-house), excluding scheduled appointments and revisits. If for any reason outside of Sensus or UPA’s control UPA is unable to perform work in an efficient and sequenced manner, all work completed by impacted field technicians will be billed at the hourly T&M rates rather than the unit installation rates, until work can recommence in an efficient and sequenced manner, or until a change order is implemented that fairly and equitably addresses the inefficient and out-of-sequence work.

Sensus’ proposal includes storage of approximately 8 weeks of new inventory at its warehouse location.

Electric Meter Exchange

Sensus assumes that all existing and/or new locks on rings are compatible and operable. Pricing does not include cutting, drilling or grinding of locking devices. Pricing is available upon request if not provided in Exhibit C – Pricing.

Sensus’ proposal does not include the installation of A/B or KA burning (bolt-in) meters. Pricing is available upon request if not provided in Exhibit C – Pricing.

Sensus’ proposal does include replacement of a subset of meters (roughly 126) requiring collection of more than two (2) reads, such as Time of Use (TOU) meters and bi-directional meters. Pricing is available upon request if not provided in Exhibit C – Pricing.

Sensus’ proposal does not include testing of new or removed meters. Pricing is available upon request if not provided in Exhibit C – Pricing.

Water Meter Retrofit and Replacement

Sensus assumes replacement registers will have Sensus TouchCoupler sensors so that they may be connected to the FlexNet modules without field splicing. Pricing for field splicing is available upon request if not provided in Exhibit C – Pricing.

Sensus assumes that water meter exchanges are like for like, same lay and length, and no major plumbing is required. Accounts requiring additional plumbing will be handled on a T&M basis or surveyed and quoted on a case-by-case basis.

Sensus’ installation unit rates do not include additional labor or groundwork needed to access meters (including but not limited to the cutting, removal and replacement of asphalt, concrete, or large tree roots). Pricing is available upon request if not provided in Exhibit C – Pricing.

Sensus’ installation unit rates do not include repair or replacement of meter boxes or meter vaults. Pricing is available upon request if not provided in Exhibit C – Pricing.

Gas Meter Retrofit and Replacement

Retrofit pricing does not include meters with pressure or temperature compensated indexes. Pricing is available upon request if not provided in Exhibit C – Pricing.

Pricing does not include broken-screw repairs. Sensus assumes that a retrofit will be considered complete with a minimum of three total screws intact, including the top two screws. Pricing for broken-screw repair is available upon request if not provided in Exhibit C – Pricing.

Pricing does not include gas retrofits that require an adapter plate (e.g., Square D 1A). Pricing is available upon request if not provided in Exhibit C – Pricing.

Pricing does not include costs for Sensus to perform leak survey work following the meter retrofit, whether during the same visit or a subsequent visit. Pricing is available upon request if not provided in Exhibit C – Pricing.

Escalations

Notwithstanding anything to the contrary, prices for subcontractor installation services are firm through 12/31/22, "Installation Services Trigger Date." Beginning 1/1/23, and each subsequent year thereafter, pricing is subject to an annual increase based off CPI (as defined in Exhibit C – pricing) in all unit and T&M rates, except for Storage and Equipment Warehousing.
Payment Terms

Escalation. CITY shall pay for goods and services rendered by Sensus hereunder at the prices set forth in this Exhibit C. The pricing in Exhibit C shall remain firm until the Trigger Date (as defined on the first page of the Agreement), or “Installation Service Trigger Date” defined in Exhibit C, as applicable. Starting on the applicable Trigger Date, and on each anniversary of the Trigger Date thereafter, the pricing in Exhibit C shall automatically adjust to equal the summation of (i) the amount charged for such pricing component during the immediately preceding year (“Base Amount”); plus (ii) the product of the Base Amount multiplied by the percentage rate of increase in the Escalator(s) during the immediately preceding year (which product shall not be less than zero, such that the pricing in Exhibit C cannot decrease under this section). The Escalator(s) will be calculated utilizing the Escalator(s) published the month prior to the anniversary of the Trigger Date compared to the equivalent month from one year earlier to determine the escalation. For example, if the Trigger Date occurs in January 2015, the Escalator(s) will be calculated by comparing December 2013 and December 2014 figures. “Escalator(s)” means the following:

1. For SaaS/Services: three percent (3%).
2. For SmartPoint® Modules: three percent (3%).
3. For Field Devices, RF Field Equipment, Server Hardware and any other goods sold by Sensus hereunder shall be delivered along with the relevant goods.
4. For For Water Meters: five percent (5%).
5. For all other goods and services: three percent (3%).

ii. For Installation Services: CPI, which means the Consumer Price Index for Urban Wage Earners and Clerical Workers for the San Francisco-Oakland-San Jose area, published by the United States Department of Labor Statistics (CPI) which is published most immediately preceding the commencement of the Installation Services Trigger Date and each Installation Services Trigger Date anniversary thereafter. Notwithstanding the foregoing, in no event shall Sensus’ compensation rates for Installation Services be increased by an amount exceeding five percent (5%) per year.

v. Any Escalator increases called forth in this Agreement shall be calculated to the third decimal point (e.g. 2.576%).

Equipment. Invoices for all Field Devices, RF Field Equipment, Server Hardware and any other goods sold by Sensus hereunder shall be delivered along with the relevant goods.

Third Party Devices. In cases where CITY requests or requires Sensus to deliver SmartPoint Modules to a third party manufacturer (or any other third party), payment for such modules is due within thirty (30) days of the invoice date to such manufacturer or other third party, irrespective of how long it takes such third party to deliver the SmartPoint Modules to CITY.

Services. Invoices for Ongoing Fees and services shall be delivered annually or monthly, as applicable, in advance. Invoices for other services shall be delivered upon completion of the applicable service.

Invoices and Payment. CITY shall pay invoices for Equipment within thirty (30) days from date of Equipment acceptance by the CITY. CITY shall pay all other invoices within thirty (30) days from the invoice date. Sensus reserves the right to establish credit limits for City and may require full or partial payment prior to shipment of any goods or commencement of any services provided hereunder. All payments shall be made via electronic payment to the account(s) indicated by Sensus from time to time, unless Sensus requests a change in payment methods in writing. Sensus shall ensure that, upon submittal to CITY for payment of an invoice for installation services, all installation work for which invoices have been previously issued and payment has been received from CITY, shall be free and clear of all claims, stop notices, security interests and encumbrances.

Disputed Invoices. If CITY disputes an invoice, CITY must give written notice of the dispute to Sensus within thirty (30) days of the invoice date. If CITY does not so, the entire invoice shall be deemed payable without reduction, set off, or claim. If CITY gives written notice of the dispute within the required thirty (30) days, it shall, at such time as the notice is given, pay the undisputed amount of the invoice and the disputed portion shall be resolved by the parties or, if necessary, under the dispute resolution provisions of this Agreement. If it is ultimately determined that some or all of the disputed amount was payable, that amount shall bear interest from the original due date until CITY pays it at the Interest Rate.

Withholding. CITY may withhold payment on an invoice for defective goods and services.

Final Invoice for Installation Services. Upon receipt of notice from Sensus that the meters are fully deployed, communicating on the FlexNet System, and Final System Acceptance is achieved, CITY will file a notice of completion with the County Clerk within fifteen (15) business days after Final System Acceptance. Before CITY authorizes the final payment for installation services, Sensus shall have completed the installation services in accordance with this Agreement and all applicable standards of care and CITY shall meet the following requirements with its invoice, together with supporting documentation:

- Delivery by Sensus to CITY of an affidavit, signed under penalty of perjury, stating that all workers and persons employed, all firms supplying the materials, and all subcontractors have been paid in full, and that there are no bills outstanding against the work for either labor or materials, except certain items, to be set forth in such affidavit covering disputed claims or items in connection with which notices to withhold have been filed under the provisions of the statutes of the State of California.
- All rubbish, tools, scaffolding and surplus materials and equipment have been removed from the installation and warehouse sites.
- Submission of conditional releases of claims and stop notices from Sensus and its Subcontractors with no reservation of rights for disputed claims or amounts.
- If a stop notice is received by the CITY after the notice of completion has been filed and prior to final payment for installation services, the CITY shall withhold the amount specified in the stop notice plus reasonable cost of any litigation pursuant to Civil Code Section 9358 from the final payment unless, at its option, instead supplies a stop notice release bond in the amount of 125% of the stop notice amount from a surety acceptable to the CITY.

Acceptance of final payment for installation services by Sensus shall constitute a complete waiver of all claims, except those previously made in writing and identified by Sensus as unsettled at the time of the invoice for final payment of installation services.

Taxes. All prices quoted are exclusive of federal, state and municipal taxes. CITY shall be liable for all sales, use and other taxes (whether local, state or federal) imposed on this Agreement or the goods, services, licenses, and/or other rights provided to CITY hereunder. Sensus shall be responsible for payment of all taxes, fees, contributions or charges applicable to the conduct of Sensus’ business.

Packaging. Equipment shall be adequately contained, packaged, marked, labeled and/or provided in compliance with all applicable federal and state laws and regulations (including materials deemed hazardous); Sensus will comply with CITY’s Environmentally Preferred Purchasing and Zero Waste Requirements at no extra charge to CITY. Shipping and completion dates quoted by Sensus are made in good faith but are not guaranteed.

Address for Purchase Orders. All purchase orders shall be sent to the address listed below. CITY may change this address at any time, upon written notice to the CITY (such notice may be provided via email).

Sensus USA Inc.
PO Box 487
Uniontown, PA 15401
Attn: CITY Service
Fax: 800-688-2403
Email: sensus.orders@xyleminc.com
1. DOCUMENT OVERVIEW

1.1 CONTRACT
This Scope of Work ("SOW") will become part of the Contract Terms & Conditions for Equipment and Installation Services ("Contract") between CITY OF PALO ALTO and Sensus.

1.2 DESCRIPTION
This document is intended to set forth the requirements for the Project Services required to deploy the AMI System in accordance with the Contract. The document defines the tasks, responsibilities, and deliverables of Sensus and CITY OF PALO ALTO to support this effort.

1.3 DEFINITIONS

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMO</td>
<td>Project Management Office</td>
</tr>
<tr>
<td>Project Team</td>
<td>Shall mean CITY OF PALO ALTO and SENSUS personnel assigned to the Project and responsible for deliverables as defined herein. Each party will assign their own project manager (&quot;Project Manager&quot;) as part of this Project Team.</td>
</tr>
<tr>
<td>Project Definition Document (PDD)</td>
<td>Shall mean the Project document defining Project framework, roles and responsibilities, Project processes and a detailed Project plan.</td>
</tr>
<tr>
<td>Project Plan</td>
<td>The deployment Project Plan including schedule jointly developed between Sensus and CITY OF PALO ALTO.</td>
</tr>
<tr>
<td>PO</td>
<td>Purchase Order</td>
</tr>
<tr>
<td>Stakeholder Register</td>
<td>Formal project register of stakeholders to the project recorded during the stakeholder identification process.</td>
</tr>
<tr>
<td>RACI Chart</td>
<td>The Responsibility chart listing task assignments to the project team members.</td>
</tr>
<tr>
<td>Prop Study</td>
<td>The RF Propagation study</td>
</tr>
<tr>
<td>CIS</td>
<td>The CITY OF PALO ALTO customer information system</td>
</tr>
<tr>
<td>Full Deployment Phase</td>
<td>Means the period in which Meters purchased under this Contract are installed within the CITY OF PALO ALTO service territory.</td>
</tr>
<tr>
<td>Meter(s)</td>
<td>Shall mean meter(s) provided under the AMI Agreement contract</td>
</tr>
<tr>
<td>MDMS</td>
<td>Meter Data Management System</td>
</tr>
<tr>
<td>Project</td>
<td>Means the planned effort in relation to the Project Services more specifically set out in this statement of work.</td>
</tr>
<tr>
<td>Routes</td>
<td>Shall mean a set of meters grouped together for reading and/or route acceptance.</td>
</tr>
<tr>
<td>Set Aside Account/ RTU</td>
<td>Shall mean an account of which all meter access commitments were met or an account in which the service or other conditions prohibits the installation of a meter and the account is removed from scope.</td>
</tr>
<tr>
<td>Work Order System</td>
<td>Shall mean the work order system utilized by SENSUS and supplied by the installation subcontractor to install Meters.</td>
</tr>
<tr>
<td>Work Breakdown Schedule (“WBS”) and Project Schedule</td>
<td>Shall mean the Project task list and Project schedule timeframes created to manage the Project activities.</td>
</tr>
</tbody>
</table>

1.4 Assumptions:
Data received from the CITY OF PALO ALTO will be as accurate and up-to-date as possible. Significant data discrepancies can cause changes in Scope, Schedule and/or Budget.

There are no union requirements.

CITY OF PALO ALTO will supply all materials not previously agreed upon as deliverables from Sensus (i.e., washers, seal gaskets, lock rings, meter bands, etc...)

Work identified by the project team as ‘out of scope’ will be managed through the change order process.

Any ‘out of scope’ work that directly effects Scope, Schedule or Budget will necessitate a signed Change Order before work can commence.

Sensus will be managing the physical deployment of meters in the field.

Sensus will manage the Basestation installation.

CITY OF PALO ALTO will provide route information to Sensus.

UPA will provide installed meter work order information to both CITY OF PALO ALTO and Sensus to compare installations with network performance.

CITY OF PALO ALTO will identify any locations that are medically sensitive or deemed unsafe, if available.

CITY OF PALO ALTO will assign sufficient staff to support the deployment.

CITY OF PALO ALTO will assist Sensus in identifying any required documentation or identification materials the installers will need to perform work in the area.

Sensus will be providing and managing Software as a Service (SaaS) for the RNI.

2. PROJECT OVERVIEW

Sensus will install the FCC Primary Use Licensed AMI System (FlexNet) throughout the City of Palo Alto Utility’s service territory for Electric, Water and Gas metering. In accordance with the contract this will include, roughly 30,076 Electric meters, 24,193 Gas Smart Points, 19,513 Water Smart Points, and 10 base stations at 5 separate locations, along with providing the Sensus SaaS Head End System (RNI). Proposed Base Station Site locations include: Montebello, Maybell Substation, Palo Alto Tank, East Meadow Substation, and Palo Alto Pump Station (Peers Park).

2.1 PROJECT OBJECTIVES

Utilization of project management services to deploy the Sensus FlexNet AMI System with the highest level of attention paid to quality, schedule and CITY OF PALO ALTO satisfaction.

Deployment of meters with the highest level of attention paid to quality, schedule, and CITY OF PALO ALTO satisfaction

Support for CITY OF PALO ALTO planned operational and business initiatives with Sensus FlexNet AMI technology

Supporting CITY OF PALO ALTO in maximizing benefits of Sensus FlexNet AMI technology

Enhancing CITY OF PALO ALTO operations and consumer satisfaction with Sensus FlexNet AMI technology

2.2 PROJECT PHASING

The project will consist of: Planning Phase, Alpha Proof of Concept Phase, Beta Proof of Concept Phase and Full Deployment Phase.

2.3 PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>Phase</th>
<th>Start Date</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Kickoff</td>
<td>January 2022</td>
<td>3 Months</td>
</tr>
<tr>
<td>Alpha Proof of Concept</td>
<td>January 2022</td>
<td>6 Months</td>
</tr>
<tr>
<td>Beta Proof of Concept</td>
<td>July 2022</td>
<td>12 Months</td>
</tr>
<tr>
<td>Full Deployment</td>
<td>July 2023 or sooner</td>
<td>18 Months</td>
</tr>
</tbody>
</table>

3. PROJECT WORK

3.1 PLANNING (PROJECT INITIATION & DESIGN)

3.1.1 Summary

The Planning (Project Initiation & Design) phase is when the project plans are documented, and the project deliverables and requirements are further refined. This phase is essential to set up the foundation through the remaining phases of the project.

3.1.2 Responsibilities and Deliverables

The following table describes the activities and responsibilities required for the Planning (Project Initiation and Design) Phase. “C” denotes a contributor to an item, and “O” denotes the owner of an item.

<table>
<thead>
<tr>
<th>Ref. #</th>
<th>Item</th>
<th>Customer</th>
<th>Sensus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Represent the AMI project team at the Project Management Office (PMO) along with core team members as required.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>2.</td>
<td>Assist CITY OF PALO ALTO with defining roles and expectations of the AMI operations team, both the core and extended team members.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>3.</td>
<td>Leverage and build an internal team of Sensus Experts assigned to provide support.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>4.</td>
<td>Assist with development of communication plan for field deployment, both internal to the project and external to project sponsors.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>5.</td>
<td>Perform Contract Requirements Analysis.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>6.</td>
<td>Document inventory management and RMA plan.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>7.</td>
<td>Lead meter deployment workshop.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>Ref. #</td>
<td>Item</td>
<td>Customer</td>
<td>Sensus</td>
</tr>
<tr>
<td>-------</td>
<td>----------------------------------------------------------------------</td>
<td>----------</td>
<td>--------</td>
</tr>
<tr>
<td>8.</td>
<td>Create Project Definition Document.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>9.</td>
<td>Develop Stakeholder Register.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>10.</td>
<td>Create and distribute Project Plan.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>11.</td>
<td>Develop Project Schedule.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>12.</td>
<td>Manage Inventory and order planning.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>13.</td>
<td>Provide PO Coordination and order set-up and support.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>14.</td>
<td>Work with CITY OF PALO ALTO to identify and formalize stakeholder</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>register and RACI Chart.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Propagation study validation and adherence.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>16.</td>
<td>Design meter rate configurations.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>17.</td>
<td>Inventory Forecasting and Lead Time Planning.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>18.</td>
<td>Manage changes to infrastructure deployment plan and coordinate Prop</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>study rerun with Sales/RF Team.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>Facilitate Weekly Deployment Planning Team Calls and document &amp;</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>distribute minutes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Create master project book, containing all processes and procedures</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>documentation (flow charts and reference documents).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>Develop Work Breakdown Schedule (WBS).</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>22.</td>
<td>Update and finalize AMI requirements through Design workshop(s).</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>23.</td>
<td>Test Plan Development (Alpha Proof of Concept, Beta Proof of Concept,</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>and Full Deployment Testing).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>Manage project collaboration software tools as needed (SmartSheet, MS</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Excel Templates, Web Data Collection Forms, ProjectManager.Com)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3.2 Risk Identification, Mitigation, & Management

#### 3.2.1 Summary

The Risk Identification, Mitigation, & Management phase is the process of identifying, analyzing, and mitigating risk. This includes planning responses to any identified risk that arises during the project.

#### 3.2.2 Responsibilities and Deliverables

The following table describes the activities and responsibilities required for the Risk Identification, Mitigation, & Management Phase.

<table>
<thead>
<tr>
<th>Ref. #</th>
<th>Item</th>
<th>Customer</th>
<th>Sensus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Lead the deployment workshop.</td>
<td>C</td>
<td>O</td>
</tr>
</tbody>
</table>
Document and formalize meter installation Standard Operating Procedures (SOP’s) as needed.

Document installation and communication processes and procedures related to new installs.

Document installation and communication processes and procedures related to performance and network analysis.

Facilitate and document a Risk Mitigation Workshop and create a Risk Mitigation Plan with Rank, Likelihood and Severity.

Document and track all project risks in the project management portal, escalating and upgrading as needed throughout the life of the project.

---

3.3 **Alpha Proof of Concept**

### 3.3.1 Summary

The Alpha Proof of Concept phase consists of installing 4 base station location sites: Palo Alto Tank, Park Blvd Substation, MB Substation and Montebello as well as up to 100 each of electric meters, water and gas smart points, totaling roughly 300 meters total. This will also include RNI integrations to MDM and life-cycle information to SAP. In addition, this will include brief installation and water/gas module programming training from Sensus on performing meter installations.

In addition, Sensus will cause UPA to install WOMS system & integration with CIS in Alpha phase to be ready for CITY staff to install meters during Beta Phase.

### 3.3.2 Responsibilities and Deliverables

The following table describes the activities and responsibilities required for the Execution & Deployment Phase.

<table>
<thead>
<tr>
<th>Ref. #</th>
<th>Item</th>
<th>Customer</th>
<th>Sensus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Site walk selected Base Station location(s).</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>2.</td>
<td>Validate the chosen locations are viable per the RF Prop Study; if not, choose new locations and rerun the Prop Study.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>3.</td>
<td>Order installation material and Base Stations.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>4.</td>
<td>Identify meter locations to install.</td>
<td>O</td>
<td>C</td>
</tr>
<tr>
<td>5.</td>
<td>Obtain approvals and any necessary permitting for Base Stations, as necessary.</td>
<td>O</td>
<td>C</td>
</tr>
<tr>
<td>6.</td>
<td>Install Base Stations.</td>
<td>C</td>
<td>O</td>
</tr>
</tbody>
</table>
### 3.4 Beta Proof of Concept

#### 3.4.1 Summary

The Beta Proof of Concept phase consists of installing any remaining base stations, and installing additional meters up to 1,000 each of electric meters, water and gas smart points, totaling roughly up to 3,000 meters total, this phase will also include any outstanding integrations required to meet the integration architecture.

#### 3.4.2 Responsibilities and Deliverables

The following table describes the activities and responsibilities required for the Execution & Deployment Phase.

<table>
<thead>
<tr>
<th>Ref. #</th>
<th>Item</th>
<th>Customer</th>
<th>Sensus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Site walk any additional Base Station location(s) if any.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>2.</td>
<td>Validate the chosen locations are viable per the RF Prop Study; if not, choose new locations and rerun the Prop Study.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>3.</td>
<td>Order installation material and Base Stations.</td>
<td>C</td>
<td>O</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ref. #</th>
<th>Item</th>
<th>Customer</th>
<th>Sensus</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>Stand up and configure RNI, and validate connectivity (with DEV/TEST instance). Sensus is currently working towards ISO 27001 certification, with the intent that this certification will be completed by end of 2021.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>8.</td>
<td>Perform initial RNI training.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>9.</td>
<td>Perform certification at each installed Base Station location.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>10.</td>
<td>Commission the communication link between the Base Station and RNI.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>11.</td>
<td>Conduct Initial training of RNI and endpoints, and provide documentation (where applicable) for: user manuals for the AMI headend; standard system report samples, with descriptions of input/output parameters, and explanations of how reports are built and executed; error code and troubleshooting documentation; system documentations concurrent with the software environment; and system acceptance test plan.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>12.</td>
<td>Perform integration of the RNI to/from the MDMS to exchange all meter event data, reads, and initiation of remote commands.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>13.</td>
<td>Test the RNI data integration and transfer to the customer information system.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>14.</td>
<td>Provide Alpha POC meters and endpoints.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>15.</td>
<td>Install Alpha POC meters and endpoints.</td>
<td>O</td>
<td>C</td>
</tr>
<tr>
<td>16.</td>
<td>Perform Alpha POC testing and approval.</td>
<td>O</td>
<td>C</td>
</tr>
</tbody>
</table>
### 3.5 Full Deployment

#### 3.5.1 Summary

The Full Deployment phase consists of installation of the remaining meters and endpoints, validation of network performance, optimization, system acceptance testing, and project closeout.

#### 3.5.2 Responsibilities and Deliverables

The following table describes the activities and responsibilities required for the Full Deployment Phase.

<table>
<thead>
<tr>
<th>Ref. #</th>
<th>Item</th>
<th>Customer</th>
<th>Sensus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Gain formal project plan approval.</td>
<td>O</td>
<td>C</td>
</tr>
<tr>
<td>2.</td>
<td>Provide refresher training sessions for installers and AMI head end system operators.</td>
<td>C</td>
<td>O</td>
</tr>
</tbody>
</table>

3. Facilitate and send out minutes of weekly project meetings that may include:
   i. Network Deployment
   ii. Meter Installation Updates/Issues
   iii. Route Planning
   iv. Leadership Update Meetings

---

---
### 3.6 Contractor Management

#### 3.6.1 Summary
Contractor management includes the management of deliverables from subcontractors including the methods and work to ensure quality and project completion within the project schedule and budget.

#### 3.6.2 Responsibilities and Deliverables
The following table describes the activities and responsibilities required for Contractor Management.

<table>
<thead>
<tr>
<th>Ref. #</th>
<th>Item</th>
<th>Customer</th>
<th>Sensus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Quality control plan development and execution.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>2.</td>
<td>Cost control plan development and adherence.</td>
<td>C</td>
<td>O</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ref. #</th>
<th>Item</th>
<th>Customer</th>
<th>Sensus</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td>&lt;Monthly&gt; email reports of overall project metrics and KPIs including meter installations (as reported and verified with RNI), network performance, and issue tracking &amp; resolution. CITY can request weekly if desired.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>5.</td>
<td>Coordinate and support CITY OF PALO ALTO through acceptance testing.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>6.</td>
<td>Manage and communicate all software and AMI system implementation related issues via the Sensus Ticket system and the Project Action Item Tracker.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>7.</td>
<td>Manage Sensus Internal experts for resolution on any network implementation issues or concerns.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>8.</td>
<td>Manage the delivery of meters, endpoints, and other equipment, including ordering, shipping, RMA, and programming of meters, endpoints, and other equipment, as required by the AMI Agreement.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>9.</td>
<td>Manage and coordinate delivery of antennas, coaxial and other network related materials as required by the AMI Agreement.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>10.</td>
<td>Review Equipment and Hardware Configurations and Forecast/Orders.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>11.</td>
<td>Adhere to the Business Requirements of the AMI Agreement.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>12.</td>
<td>Lead the Solutions Architecture/RNI Systems Integration development.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>13.</td>
<td>Manage the First Article Test Plan as provided under the AMI Agreement.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>14.</td>
<td>Provide and perform in accordance with the training requirements and approach.</td>
<td>C</td>
<td>O</td>
</tr>
</tbody>
</table>
### 3.7 Monitoring & Controlling

#### 3.7.1 Summary
The Monitoring and Controlling phase involves the processes designed to identify, monitor, and deploy the controls and risk mitigation strategy. This phase is critical to ensuring the project remains within scope, on time, and on budget.

#### 3.7.2 Responsibilities And Deliverables
The following table describes the activities and responsibilities required for the Monitoring & Controlling Phase.

<table>
<thead>
<tr>
<th>Ref. #</th>
<th>Item</th>
<th>Customer</th>
<th>Sensus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Manage Change Order Requests and present for formal approval.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>2.</td>
<td>Monitor Installation actual vs estimate trending to ensure on schedule completion</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>3.</td>
<td>Implement, track, and manage all project related issues from identification to resolution in formal project tracking logs.</td>
<td>C</td>
<td>O</td>
</tr>
</tbody>
</table>
4. Review and discuss all changes for schedule/scope/budget impact with Project Leadership team.

5. Develop Key Performance Indicators (KPIs) which are based on Project daily, weekly and monthly goals and/or objectives including:
   i. Installation actual vs estimate trending
   ii. Software Implementation & Integrations
   iii. Material Completion Forecasting


7. Monitor and report on network performance, meter/endpoint performance, identify meter/endpoint issues, develop plans/proposals and solutions based on findings including:
   iv. Network Data Validation
   v. Read Interval Success %
   vi. Meter Profile/Configuration Confirmation

8. Optimize the read performance of all endpoints

3.8 **Acceptance Testing**

3.8.1 **Summary**

The Acceptance Testing phase is to ensure the solution by the project meets the requirements (both functional and non-functional) as specified in the contract and requirements.

3.8.2 **Responsibilities and Deliverables**

The following table describes the activities and responsibilities required for the Acceptance Testing Phase.
3.9 **Completion**

3.9.1 **Summary**

The Completion phase is focused on achieving and releasing the final deliverables, releasing project resources, finalizing project documentation, and providing transition support for post project operations.

3.9.2 **Responsibilities and Deliverable**

The following table describes the activities and responsibilities required for the Completion Phase.

<table>
<thead>
<tr>
<th>Ref. #</th>
<th>Item</th>
<th>Customer</th>
<th>Sensus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Manage project wrap-up including:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>i. RMA assistance</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>ii. Route Review &amp; Sign-off of network performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>iii. CITY OF PALO ALTO Assistance with MySensus Portal (if needed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>iv. Review and close out of outstanding claims (if applicable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Assist and facilitate transition training for CITY OF PALO ALTO to</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>ongoing customer support</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Review of contacts and available resources for ongoing support and</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>information</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. **DOCUMENT OVERVIEW**

1.1 **CONTRACT**

This Statement of Work (“SOW”) will become part of the Contract Terms & Conditions for Equipment and Installation Services (“Contract”) between CITY and Sensus.

1.2 **DESCRIPTION**

This document is intended to set forth the requirements for the installation of a Sensus M400B2 at CITY. The proposed site will be installed per this Statement of Work. This document provides a description of all work to be performed based on requirements developed during the site walk by a Sensus approved Base Station Installation Contractor and the assigned Sensus Project Manager. Any deviation from the RF design hereafter referred to as the Propagation Study (Exhibit G) with respect to antenna height, antenna azimuth, cable types/lengths, or grounding will require prior approval from Sensus RF Network Design Engineer or Project Manager.

The installation contractor will perform a daily *tailgate* Safety and Environmental briefing prior to the start of every site installation.

Sensus and Diversified Communication Services agree to maintain all requisite licenses, certifications and Workers Comp Certificates of Insurance current and good standing. In the event any of these articles lapse all work must stop until such time that currency is restored.

Where required Sensus and Diversified Communication Services agree to comply with governing agencies requirement to pay prevailing wages and document to the agency and Sensus of all required certified payroll documents.

Diversified Communication Services agrees to comply with all CITY safety and security practices such as the wearing of Personal Protective Equipment (PPE).

It is assumed for the purpose of this SOW that the installation of the M400B2 that the vertical asset used will be CITY provided.

1.3 **DEFINITIONS**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat 6</td>
<td>Standardized twisted pair cable for Ethernet rated to 10 gig bits per second.</td>
</tr>
<tr>
<td>dB</td>
<td>Decibel (dB) is a logarithmic unit of measure</td>
</tr>
<tr>
<td>FBS</td>
<td>FlexNet Base Station</td>
</tr>
<tr>
<td>GPS</td>
<td>Global Positioning Satellite</td>
</tr>
<tr>
<td>H Frame</td>
<td>Two Rectangular aluminum or steel frames, braced with cross bracing used a flexible transceiver mounting structure.</td>
</tr>
<tr>
<td>RF</td>
<td>Radio Frequency</td>
</tr>
<tr>
<td>VAC</td>
<td>Voltage, Alternating Current</td>
</tr>
<tr>
<td>Vertical Asset</td>
<td>Mono Pole, Communication Tower, Water Tank, Building or any structure for which an Antenna(s) and supporting components will be affixed.</td>
</tr>
<tr>
<td>VSWR</td>
<td>Voltage Standing Wave Ratio, a measure of reflective power at the antennae.</td>
</tr>
</tbody>
</table>

1.4 **ASSUMPTIONS:**
2. Project Overview

Sensus will work with Diversified Communication Services and CITY to perform site surveys of the 5 site locations and install 10 separate M400B2 Basestations at the 5 locations identified in the Sensus propagation study. Current Base Station Site locations include: Montebello, Maybell Substation, Hale Well, Palo Alto Pump Station (Peers Park) & East Meadow Substation. Sensus will provide Turn-Key installation of the M400B2 base stations, which includes both the Base Station Installation as well as the certification and commissioning process. Turn-Key Installation Includes any necessary labor, materials, and equipment required to realize a functioning network base station and head-end software system. CITY will only be responsible for electric power availability at the M400 Cabinet, cost of consumption at the sites, and Fiber Backhaul. If City of Palo Alto choses to have Sensus manage the backhaul, Sensus will deliver cellular backhaul modems at the pricing in Exhibit C.

2.1 Project Objectives

This Statement of Work describes the roles, responsibilities, processes, workflow, personnel identification, and communications between working groups to ensure the successful installation and necessary hand-offs between specific entities associated with all FlexNet Base Stations. It touches on site prospecting and propagation studies and provides a Base Station worksheet and general site requirements. For additional technical details or installation requirements reference the applicable Base Station Installation Manual or Reference guide below.

M400 Installation Guide (AIG-10014-04)
M400 Reference Guide (ARM-10009-03)
R100NA Installation Guide (AIG-10053-05)

3. Project Work

The following table describes the activities and responsibilities required for Base Station installation.

<table>
<thead>
<tr>
<th>RESPONSIBILITIES</th>
<th>Customer</th>
<th>Sensus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The following site preparation activities will be performed by either CITY OF PALO ALTO or Sensus as indicated, prior to installation activities:</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>2. Install conduit from power source on site and provide a dedicated 120VAC/15A circuit terminated at a junction box at the Base Station vertical asset mounting location.</td>
<td>O</td>
<td>C</td>
</tr>
<tr>
<td>3. Install conduit from power source on site and provide a dedicated 120VAC/15A circuit terminated at a junction box at the base of the new City of Palo Alto pole</td>
<td>O</td>
<td>C</td>
</tr>
<tr>
<td>4. Install the M400B2 transceiver cabinet on mounting structure, e.g. City of Palo Alto pole, H frame, or wall mount at “man height”.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>5. Connect grounding bus bar of M400B2 transceiver cabinet to the existing grounding grid or ground rods</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>6. Run transmission cable with jumpers at cabinet and antenna ends of the main transition cable.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>7. Mount M400B2 antenna specified at the designed centerline, elevation, and azimuth per the propagation study</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>8. Make all cable and antenna connections and weatherproof.</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>9. Verify that the Base Station is grounded IAW with the M400B2 Basestation Installation Documentation</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Sweep the antenna and coax system; install the GPS antenna; Install a Polyphaser on the GPS cable and mast as needed. Capture JPG of the sweep for the record.</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Perform screen capture of antenna sweep and provide along with as built documentation.</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Configure transmit mode for multi sync transmit operation.</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Verify proper configuration, IP Address and Default Gateway of the Transceiver and Cordex Power Controller if applicable.</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Connect Transceiver Ethernet Port to the modem or router RJ-45 using Cat 6 cable.</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Connect modem to 24 VDC, 3A ancillary power strip.</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>From command line on the transceiver PING IP Address 8.8.8.8 or other CITY OF PALO ALTO network address to test Backhaul performance.</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Verify Base Station Transmitter Operation Does Not Cause Any &quot;Red Light&quot; Failures.</td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>Measure Transmitter power output</td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>Normal Channel Reception Confirmed</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Noise verification, record, low, high and average readings ensuing &lt;15 dB</td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>Perform receiver Sensitivity and Calibration Measurements</td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>Measure Voltage reading from GPS port on rear of transceiver.</td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>Measure and record VSWR @ Receive Frequency.</td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>Measure and record VSWR @ Transmit Frequency</td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>Open &quot;FBS COMMISSIONING&quot; ticket by email to <a href="mailto:techservices.support@xylem.com">techservices.support@xylem.com</a> or contacting (800) METER IT (638 3748)</td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>Perform Base Station Certification and deliver documentation to CITY OF PALO ALTO</td>
<td></td>
</tr>
</tbody>
</table>
4. DOCUMENT OVERVIEW

Sensus plans to deliver the integration work outlined in the RFP, we will support or lead an integration workshop with Palo Alto to understand the preferred integration methods and work to execute those as it pertains to the Sensus system.

As the AMI and MDMS components of the Project are tightly coupled through integration, and as these components are being implemented concurrently through separate contracts, the following table has been developed to establish mutual obligations and co-dependencies between the services and systems being provided by the respective vendors for these components. This table outlines tasks (including integration services, with specifications listed if already identified) and denotes which parties are the owners ("O") or contributors ("C") of specific activities.

The City of Palo Alto shall be ultimately responsible for obtaining and coordinating adequate participation of the MDMS vendor to contribute to the listed tasks.

The tasks and integrations identified in this table will be superseded by any changes that occur and are mutually agreed-upon by all parties during the kickoff and workshopping tasks outlined in the SOW. Sensus will not be held liable for non-compliance as a result of the MDMS contract not being executed.

<table>
<thead>
<tr>
<th>Work Category</th>
<th>Activity</th>
<th>Customer</th>
<th>Sensus</th>
<th>MDMS Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>Develop Project Schedule.</td>
<td>C</td>
<td>O</td>
<td>C</td>
</tr>
<tr>
<td>Service</td>
<td>Design meter rate configurations.</td>
<td>C</td>
<td>O</td>
<td>C</td>
</tr>
<tr>
<td>Service</td>
<td>Update and finalize AMI requirements through Design workshop(s).</td>
<td>C</td>
<td>O</td>
<td>C</td>
</tr>
<tr>
<td>Service</td>
<td>Test Plan Development (Alpha Proof of Concept, Beta Proof of Concept, and Full Deployment Testing).</td>
<td>C</td>
<td>O</td>
<td>C</td>
</tr>
<tr>
<td>Service</td>
<td>Perform integration of the RNI to/from the MDMS to exchange all meter event data, reads, and initiation of remote commands.</td>
<td>C</td>
<td>O</td>
<td>C</td>
</tr>
<tr>
<td>Service</td>
<td>Perform Alpha POC testing and approval.</td>
<td>O</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Service</td>
<td>Perform Beta POC testing and approval.</td>
<td>O</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Service</td>
<td>Formal System Acceptance Test Design.</td>
<td>C</td>
<td>O</td>
<td>C</td>
</tr>
<tr>
<td>Service</td>
<td>Draft and facilitate approval and consensus of SAT Definitions.</td>
<td>C</td>
<td>O</td>
<td>C</td>
</tr>
<tr>
<td>Work Category</td>
<td>Activity</td>
<td>Customer</td>
<td>Sensus</td>
<td>MDMS Provider</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------------------------------------</td>
<td>----------</td>
<td>--------</td>
<td>---------------</td>
</tr>
<tr>
<td>Integration - SFTP</td>
<td>CMEP Read File</td>
<td>C</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Integration - SFTP</td>
<td>CMEP Voltage File</td>
<td>C</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Integration - SFTP</td>
<td>CMEP Event File</td>
<td>C</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Integration - MultiSpeak 4.1</td>
<td>Real-Time Events</td>
<td>C</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Integration - MultiSpeak 4.1</td>
<td>On-Demand Read</td>
<td>C</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Integration - MultiSpeak 4.1</td>
<td>Remote Disconnect</td>
<td>C</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Integration - MultiSpeak 4.1</td>
<td>Remote Connect</td>
<td>C</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Service</td>
<td>To Kick Off project and establish successful working relationship</td>
<td>C</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>Service</td>
<td>To obtain detailed agreement on Project Plan</td>
<td>C</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>Service</td>
<td>Conduct Discovery Sessions</td>
<td>C</td>
<td>C</td>
<td>O</td>
</tr>
<tr>
<td>Service</td>
<td>To write associated test cases that Customer would execute for acceptance of the Solution</td>
<td>O</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Service</td>
<td>Integration Testing</td>
<td>C</td>
<td>C</td>
<td>O</td>
</tr>
</tbody>
</table>
5. Palo Alto Integration Architecture

Sensus will organize and lead a series of consultative workshop sessions with Palo Alto’s departmental stakeholders and Subject Matter Experts (SMEs). Through interaction with Palo Alto’s stakeholders and SMEs, Sensus will gain an understanding of Palo Alto’s current processes and future state goals. During these consultative sessions, the Solution and Business architects from Sensus Professional Services will review the current architecture that is in place along with the proposed architecture diagram given below and formalize the Solution Architecture and data flow that supports Palo Alton’s business requirements.
1. Project Introduction
City of Palo Alto (CITY) requires installation services in support of its Advanced Meter Infrastructure (AMI) project. The project Full Deployment Phase installations will take place over a planned 20-month period.

Sensus, through its subcontractor meter installation vendor Utility Partners of America (UPA), will provide installation services, contract management, field-project management, inventory management, data management, call center services and a quality assurance program. Sensus shall also provide through UPA a uniform vehicle fleet, hand tools, uniforms, personal protective equipment, performance reports and the use of EnSight Plus Work Order Management System (WOMS).

Sensus, through our subcontractor installer UPA, will install Advanced Metering Infrastructure (AMI) equipped electric, water, and gas meters and retrofit modules in accordance with the Statement of Work and Exhibit C – Pricing.

2. Common Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMI</td>
<td>Shall mean Advanced Metering Infrastructure, specifically Sensus Advanced Metering Infrastructure, a system in which Sensus network elements communicate commodity measurements such as consumption data throughout the day</td>
</tr>
<tr>
<td>Blackout Period</td>
<td>Shall refer to a temporary period in which access to a particular route is limited or denied. Usually coincides with a reading of current meters so as to not interrupt the Utility’s billing cycle</td>
</tr>
<tr>
<td>C&amp;I Accounts</td>
<td>Shall mean Commercial and Industrial Accounts</td>
</tr>
<tr>
<td>CC</td>
<td>Shall mean Can’t Complete the work order to install a meter or module due to a temporary obstruction.</td>
</tr>
<tr>
<td>CIS</td>
<td>Shall mean Utility’s Customer Information Systems (SAP).</td>
</tr>
<tr>
<td>Custodial Care</td>
<td>Custodial Care is exclusive physical control supported by documentation. Documentation will take the form of a signed bill of lading or a documented inventory transfer.</td>
</tr>
<tr>
<td>Phase</td>
<td>Shall mean a Period of Performance</td>
</tr>
<tr>
<td>GPS</td>
<td>Shall mean Global Positioning System, a method to identify the longitude and latitude of a location</td>
</tr>
<tr>
<td>Meter(s)</td>
<td>Shall mean meter(s) provided under this Agreement (i.e., electric meters)</td>
</tr>
<tr>
<td>Network Elements</td>
<td>Shall mean endpoint devices that comprise the Sensus AMI System, including but not limited to electric meters.</td>
</tr>
<tr>
<td>POC</td>
<td>Proof of Concept phase</td>
</tr>
<tr>
<td>Project</td>
<td>Shall mean the delivery of the Full Deployment Phase.</td>
</tr>
<tr>
<td>Project Stakeholders</td>
<td>Shall mean Utility, UPA and Sensus personnel assigned to the Project and responsible for deliverables as defined herein.</td>
</tr>
<tr>
<td>Utility Intervention Required (UIR)</td>
<td>Shall mean a work order where due to any of the following reasons, Utility Intervention is Required (UIR): UPA’s Due Diligence Plan is complete, an unsafe or abnormal operating condition is identified, a permanent obstruction is present, a customer refuses service, evidence of theft or tampering is present, or UPA finds that the work order is found-complete upon arrival.</td>
</tr>
<tr>
<td>Return to Utility (RTU)</td>
<td>Shall mean a completed work order that is returned to the utility for service due to an unsafe or abnormal operating condition, customer refusal, permanent obstruction, theft or due to an inability to gain access to the meter after the approved meter-access strategy is employed.</td>
</tr>
<tr>
<td>Routes</td>
<td>Shall mean a set of meters grouped together for manual meter reading and/ or replacement operations</td>
</tr>
<tr>
<td>SOW</td>
<td>Shall mean the Statement of Work or Scope of Work.</td>
</tr>
<tr>
<td>Utility</td>
<td>Shall mean (City of Palo Alto) or (CITY).</td>
</tr>
</tbody>
</table>
3. Place of Performance
The work will be performed within CITY’s Service Territory.

4. Period of Performance
The meter installation services referenced herein will begin after the Agreement is executed and formal Notice to Proceed for the mass meter deployment is issued by CITY. Sensus and our subcontractor installer UPA will require at least sixty (60) days after formal Notice to Proceed to mobilize before the commencement of the work. The meter installation services will continue until the installation work associated with the project is complete. NTP will be issued towards the end of Alpha phase, to get access to WOMS/training for Palo Alto staff installing meters for Beta phase. NTP to secure warehousing/staging area and mobilizing full crew for Full Deployment will be given with ninety (90) days notice.

5. Scope of Work
The scope of work will be performed during the Period of Performance and in accordance with the provisions, requirements and assumptions listed in Section 6 and Exhibit C - Pricing. The scope of work includes:

Planning and Support Phase:
- Planning support (discussions, meeting participation and presentations will be conducted as needed via conference call or web conference)
  - Developing and drafting work plans
  - Other strategic planning (routes, standard operating procedures, customer communications, branding, safety, training, etc.)
  - Sending and receiving documentation
  - WOMS development and testing
- Site visit and assessment (to include storage facility, office, parking, etc.)
- Support of one on-site kickoff meetings that will take place during the week prior to the commencement of the Full Deployment Phase installations.
- Alpha Proof of Concept Support
  - Configuring the WOMS
  - Performing integration of the WOMS to/from the SAP HANA module to provide exchange of Work Order information
  - Providing adequate documentation of the WOMS, including guides on information access and key performance indicators or reports generated
- Beta Proof of Concept Support
  - Hiring adequate numbers of qualified personnel to staff installation services for Full Deployment
  - Acquiring adequate heavy equipment, space, and office/staging/warehousing facilitates to facilitate the installation services to be provided for Full Deployment
- Support of weekly status meetings during the Full Deployment Phase.
**Full Deployment Phase:** Sensus and subcontractor UPA will support the Full Deployment Phase over a 18 month period, beginning in 2023 (estimated). Included in the scope of work are: installation labor (10 installers), contract management, field project management, inventory management, data management, call center services, travel expenses, a uniform vehicle fleet (approximately 12-14, depending on need and scheduling), tools, uniforms and use of UPA’s Work Order Management System (WOMS).

The scope of work will be performed in accordance with the provisions, requirements and assumptions listed in Section 6.

### 6. Provisions, Requirements and Assumptions Related to the Scope of Work

The scope of work includes installation services, contract management, field-project management, inventory management, data management, call center services and a quality assurance program. Sensus and subcontractor UPA will source a warehouse facility during the Full Deployment Phase. Sensus and subcontractor UPA will also provide a uniform vehicle fleet, tools, uniforms, personal protective equipment, performance reports and UPA’s Work Order Management System (WOMS), titled Deployment Automation System which will interface with CITY’s CIS/AMS.

#### 6.1 UPA Provisions & Requirements

UPA will provide the following:

<table>
<thead>
<tr>
<th>ID</th>
<th>UPA Provision</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1.1</td>
<td>Installation Services</td>
<td>Sensus and UPA will staff the project with trained and qualified installation technicians. Installation technicians will be pre-qualified by UPA and interviewed by UPA’s Field Project Manager. Those applicants that are deemed pre-qualified will be subjected to a Motor Vehicle Record &quot;MVR&quot; Check, a nationwide background check (last seven (7) years), a sexual offender registry check, and a 5-panel drug test. Applicants who pass Sensus and UPA’s screening process will be extended an offer letter. If the offer letter is accepted, the applicants will be hired and asked to report for training on a specific date and time. Once hired, new associates will be trained and qualified to ensure they are qualified to work in a safe and effective manner. Sensus and UPA will deploy a trainer who will administer a classroom training course. Classroom training will encompass but is not limited to the following topics: work safety, avoiding hazards, defensive driving, SOW review, tools and hardware review, work order management training, installation techniques, tamper and theft, unsafe conditions and meter reading. Field training will follow classroom training. Installation Technicians deemed qualified once they have demonstrated all the necessary installation and safety techniques and they have passed a final exam. Installation technicians will perform the installation services associated with the SOW and in accordance with the manufacturer’s recommended installation specification. UPA will employ one (1) field supervisor for every ten (10) to twelve (12) installation technicians. Installation technicians will be subjected to UPA’s Quality Assurance Program.</td>
</tr>
<tr>
<td>6.1.2</td>
<td>Project Management</td>
<td>UPA’s Project Delivery Manager (PDM) will represent Sensus as it pertains to the meter installation work during planning and project status meetings and will maintain project budgets, project tracking and change management tools. The PDM will have the authority to develop and administer all aspects of UPA’s Statement of Work with Sensus, to negotiate with Sensus on UPA’s behalf, and develop solutions with</td>
</tr>
</tbody>
</table>
| 6.1.3 | Operations Management | UPA’s Field Operations Manager (FOM) responsibilities include managing the day-to-day aspects of the meter installation field operations including, but not limited to: safety management, quality control, personnel management, inventory management, schedule management and SOW adherence, and customer claims and complaints.

The FOM will live and work in Utility service territory during the Full Deployment Phase. The FOM will be supported by a Field Supervisor or a Senior Field Operations Manager (SFOM) any time the FOM is scheduled to be offsite (vacation, etc.).

The FOM will be tasked with ensuring that installation services are carried out in a safe and professional manner that complies with the SOW, the manufacturer’s recommended installation specifications, and all other applicable local, state and federal regulations. |

| 6.1.4 | Inventory Management | Sensus shall cause UPA to establish its inventory control system in anticipation of receiving, managing and reconciling allotments of meters and installation material. UPA shall accept delivery of the inventory. After physical delivery to the UPA-controlled site UPA shall be responsible for storing the inventory it receives from Utility. UPA will staff the project with an appropriate number of dedicated inventory technicians during the Full Deployment Phase. UPA will pick, stage and distribute meters and installation material that have been released from quarantine by Utility to installation technicians who will sign for the meters and installation material they receive. Meters and installation material will be managed by UPA on behalf of CITY until the meters and installation material are returned to Utility by way of completed work orders or by way of documented inventory transfers.

CITY will have access to an Inventory Report via UPA’s Project Web Portal. The Inventory Report will provide statistics regarding inventory on hand, inventory used, inventory returned to the manufacturer (RMA). Sensus and CITY will establish and document reordering thresholds and lead times and UPA will utilize the Inventory Report to alert Sensus and CITY that reordering is necessary. |

| 6.1.5 | Data Management | UPA’s Data & Dispatch Coordinator (DDC) will work closely with the Project Stakeholders to initiate and develop project work plans such as the Production Schedule and the Route Release Schedule. Work plans will be submitted to Utility for review and approval. The Production Schedule will be used to compare actual performance to planned performance. The Route Release Schedule will be used to facilitate the release of work orders and customer communication and will be used to facilitate meter and installation material ordering by Utility.

The DDC will assign work orders based on the Route Release Schedule, the geographic layout of the available routes, the number of Installation Technicians, CITY’s meter reading schedules and the number of previously scheduled installation appointments. Work orders will be organized the night before and dispatched to the field prior to the start of the workday.

The DDC will accept completed work orders, electronically, from the field daily. Data collected the previous day will be reviewed and scrubbed to ensure accuracy. The DDC will submit completed work orders to CITY two business days after the data is collected in the field. The completed work orders will be sent to Utility electronically at the appropriate time daily via an FTP site that UPA hosts on CITY’s behalf. |
<table>
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<tr>
<th>Section</th>
<th>Description</th>
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<tbody>
<tr>
<td>6.1.6 Call Center Services</td>
<td>Sensus and UPA will support the Full Deployment Phase with UPA’s call center which consists of its primary call center located in Greenville, SC and its overflow call center, MAP Communications located in Chesapeake, VA. UPA’s call center will be responsible for providing customer service, answering Frequently Asked Questions (FAQ) (if provided by Utility and approved to do so), scheduling installation appointments and facilitating the customer claims process. UPA will provide a toll-free and local exchange number that will be dedicated to CITY for customer inbound calling and will be printed on all customer communication material. UPA’s call centers are staffed with trained and qualified Customer Service Representatives (CSR) 24/7/365. UPA Call Center supports English and Spanish speaking customers. UPA utilizes a 3rd party translating service to communicate with customers speaking languages other than English, Spanish and French. Outbound and inbound scripts will be drafted by UPA’s call center manager and submitted to CITY for approval. Call Center disposition reports will be available via the Project Web Portal.</td>
</tr>
<tr>
<td>6.1.7 Quality Assurance Program</td>
<td>Sensus and UPA will provide a Quality Assurance Program which includes auditing 100% of the installation work performed by new associates during their first 3 working days of employment and a percentage of the installation work performed by all installation technicians thereafter. UPA will also audit 100% of the photographs taken in the field, verifying several recorded meter attributes and the recorded meter read, before the completed work order is returned to the Utility. UPA’s Field Project Manager and its Field Supervisors will perform random Quality Audits throughout the Period of Performance to maintain quality and adherence to UPA’s Standard Operating Procedures (SOP).</td>
</tr>
<tr>
<td>6.1.8 Uniform Vehicle Fleet</td>
<td>UPA will provide and maintain an appropriate number of work vehicles suited to facilitate the SOW. UPA’s work vehicles will be labeled with an approved semi-permanent decal that identifies UPA as an approved Utility contractor.</td>
</tr>
<tr>
<td>6.1.9 Tools</td>
<td>UPA will provide its personnel with applicable tools necessary to complete the SOW.</td>
</tr>
<tr>
<td>6.1.10 Uniforms</td>
<td>UPA will provide its Installation Technicians with uniforms and ID badges</td>
</tr>
<tr>
<td>6.1.11 Personal Protective Equipment</td>
<td>UPA will provide its personnel with applicable Personal Protective Equipment to ensure they can complete the requirements associated with the SOW safely.</td>
</tr>
<tr>
<td>6.1.12 Performance Reports</td>
<td>UPA will provide performance reports generated from its WOMS and made available to CITY via Project Web Portal. Performance Reports will include, but are not limited to: - EnSight+ Dashboard Report - Production Schedule - Route Status Report</td>
</tr>
</tbody>
</table>
### 6.1.13 Work Order Management System

Sensus and UPA will provide UPA’s Work Order Management System (WOMS), titled EnSight Plus (EnSight+) for use by its personnel and during the Period of Performance.

UPA will provide its Work Order Management System (WOMS) hardware (handheld computers) for use by its associates.

EnSight+ is a file interfaced work order management system comprised of both hardware and software used to facilitate the completion of work orders.

In collaboration with Utility, UPA will gather requirements and design a workflow to record and validate information associated with each work order. The workflow will offer various collection method options including drop down menus, checkboxes, scannable text fields and free form comment fields. The workflow will also accommodate photo documentation and GPS collection.

UPA will design the workflow to enforce data integrity and to accommodate real-time data validation.

UPA and Utility will jointly define and test the workflow requirements, the associated field lengths, and the file formats in an effort to facilitate the transference of data between EnSight+ and Utility’s CIS/AMS.

UPA will build the workflow and the associated file that it will use to transfer data to Utility’s CIS to meet the specification agreed to by both UPA and Utility.

All requirements gathering, design and testing services will be performed remotely via conference call or web conference.

UPA will provide a sufficient number of handheld computers. Each handheld computer will be pre-loaded with UPA’s EnSight+ software.

UPA will provide regular maintenance of EnSight+ software and hardware and continuous IT support during the Period of Performance. Maintenance and IT support will be provided remotely.

EnSight+ is currently working towards SOC 2 certification, with the intent that this certification will be completed in early 2022.

### 6.1.14 Warehouse

Sensus and UPA will provide a warehouse facility of appropriate size in Utility service territory.

### 6.1.15 Waste Disposal

UPA will be responsible for the disposal of all trash, cardboard, removed meters, debris removed from site, and any material UPA removes from Utility service territory on Utility’s behalf, abiding to City and State policies and regulations on disposal.

### 6.1.16 Meter Salvage

Sensus and UPA will arrange for regular pick up of accumulated legacy meters for disposal. Due to the high volatility of the metals market, Sensus and UPA may negotiate fixed or market variable rates on a per meter or per pound basis with the scrap vendor. For each scrap load, Sensus and UPA will remit 50% of the received scrap proceeds, net of any costs and fees, in the form of an invoice credit within 30 days.

### 6.1.17 Insurance Coverage

Sensus and UPA will maintain adequate insurance coverage (outlined in the Agreement) to cover CITY, UPA employees, UPA vehicles, and...
6.1.18 Warranty

Sensus and UPA will provide a 12-Month Equipment Installation Warranty.

Utility Partners of America (UPA) guarantees that all service work related to the installation of the specified products (the “Products”) substantially conforms to the Statement of Work. UPA will reinstall the Products, in the event the service work related to the installation is shown to have been inconsistent with the Statement of Work. Excluded is any defect that was apparent or ascertainable at the time of the service work related to the installation was performed.

In the event additional Product is needed, Sensus shall supply all necessary materials, including the replacement Product.

6.2 Utility Provisions & Requirements

Utility will provide the following personnel, services, and materials:

<table>
<thead>
<tr>
<th>ID</th>
<th>Utility Provision</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.2.1</td>
<td>Work Orders &amp; Customer Data</td>
<td>CITY will provide work orders in route read sequence and a format agreed to by CITY, Sensus and UPA. The work order data will define the work to be completed at the premise (i.e. meter retrofit or meter exchange) and will include the most current customer data needed to perform the SOW.</td>
</tr>
<tr>
<td>6.2.2</td>
<td>Blackout Schedule</td>
<td>CITY will provide a meter reading schedule defining the dates when UPA cannot install meters in a specific billing cycle.</td>
</tr>
<tr>
<td>6.2.3</td>
<td>Inventory File</td>
<td>CITY will provide an electronic inventory file that includes a description and a serial number associated with all assets that are transferred into UPA’s custodial care.</td>
</tr>
<tr>
<td>6.2.4</td>
<td>Customer Communications</td>
<td>CITY will design, print, and deliver a notification letter by route/cycle to customers two-to-four weeks prior to installation activity. CITY will design and print door hangers for customer notification which will be distributed by UPA after attempting to complete a work order. UPA provided optional pricing for this effort in the instance CITY chooses not to provide.</td>
</tr>
<tr>
<td>6.2.5</td>
<td>Meters and Installation Materials</td>
<td>CITY will purchase and supply Sensus and UPA with all Metering and Installation Materials needed to perform the SOW. Materials to be purchased or otherwise supplied by CITY include but are not limited to:</td>
</tr>
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</table>

**Metering**
- Electric Meters
- Water meters
- Water meter registers
- Meter End Points
- Gas meters
- Gas Modules

**Electric Installation Materials**
- Meter Boots (few if any)
- Meter Rings
- Meter Seals
- Meter Keys
- Meter Locking Devices
- Maps of service territory and any established meter reading routes

**Water Installation Materials**
• Pre-drilled water meter pit lids
• Wire (cables)
• Wire connectors
• Washers and gaskets
• Flange kits
• Bolts
• Maps of service territory and any established meter reading routes

Gas Installation Materials
• Indexes (If Replaced)
• Screws
• Maps of service territory and any established meter reading routes

Sensus will provide Metering to meet the established Production Schedule and Route Release Schedule. CITY will order and provide Installation Materials to meet the established Production Schedule and Route Release Schedule.

6.2.6 AMI Programming Devices
CITY will purchase and Sensus will provide a sufficient number of FlexNet CommandLinks (one per installer plus spares) for use by UPA technicians.

6.2.6 Keys and Gate Codes
CITY will provide keys to utility lock boxes and other utility locks and access to gate codes needed to perform the Scope of Work.

6.2.7 Utility Support
CITY will provide expeditious support in the event that UPA requires assistance with access, locating a meter, resolving an exception stemming from errant CIS data, addressing a customer concern or dealing with an abnormal operating condition.

6.3 (Intentionally Omitted)

6.4 Scope of Work and Pricing Assumptions

<table>
<thead>
<tr>
<th>ID</th>
<th>Scope of Work, General</th>
</tr>
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<tbody>
<tr>
<td>6.4.1</td>
<td>Project pricing does not include any costs assessed by the CITY’s CIS provider (lump sum, per meter, or otherwise) that may be required to integrate the ENSIGHT+ work order system with the CIS system. Any fees assessed by the CIS provider will be passed through at Sensus’ cost for reimbursement.</td>
</tr>
<tr>
<td>6.4.2</td>
<td>Sensus’ proposal assumes that CITY will purchase all any required CommandLink devices for UPA personnel (plus spares) necessary to perform the steps required by the AMI technology to program and/or register the AMI modules to the network at the time of installation.</td>
</tr>
<tr>
<td>6.4.3</td>
<td>Sensus/UPA’s Due Diligence Plan includes as many as two (2) physical cold call attempts, the delivery of two (2) door hangers (provided by UPA, alongside the cold calls) and three (3) phone call attempts (if phone numbers are provided) in an effort to gain access to the meter or to schedule a customer appointment if the meter is temporarily obstructed (i.e., behind a locked gate) before returning a work order to the Utility (RTU).</td>
</tr>
<tr>
<td>6.4.4</td>
<td>Sensus assumes that less than 3% of residential meters are considered “hard-to-access” or otherwise require an appointment to access the meter, such as meters located indoors, behind locked gates, or in seasonal homes without access to meter. Sensus will charge an additional fee per residential meter in excess of 3% that require an appointment, which includes the costs of scheduling and accommodating the appointment.</td>
</tr>
<tr>
<td>6.4.5</td>
<td>Sensus assumes that the Utility will provide available keys for meters that are located behind locked gates.</td>
</tr>
<tr>
<td>6.4.6</td>
<td>Sensus and UPA will notify CITY if UPA is unable to complete a work order due to any of the following reasons and if CITY Intervention is Required (UIR): Sensus/UPA’s Due Diligence Plan is complete, an unsafe or abnormal operating condition is identified, a permanent obstruction is present, a customer refuses service, evidence of theft or tampering is present, or UPA finds that the work order is found-complete upon arrival. If CITY intervenes and resolves the issue within 15 business days, UPA will complete the work order as planned. If CITY does not resolve the issue within 15 business days, Sensus and UPA will return the work order to the Utility (RTU) for completion.</td>
</tr>
<tr>
<td>6.4.7</td>
<td>Work orders that are RTU’d for the aforementioned reasons will be billed at the applicable unit rate less a 5% discount. Sensus and UPA will dispatch all RTUs to a Sensus/UPA supplied handheld that can be used by the Utility for processing the returned work order.</td>
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<tr>
<td>6.4.8</td>
<td>UPA will quality audit each new employee’s work during the first 3 days and a percentage of their work thereafter.</td>
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<tr>
<td>6.4.9</td>
<td>UPA will quality audit 100% of meter photographs taken in the field.</td>
</tr>
<tr>
<td>6.4.10</td>
<td>Sensus’ proposal is based on performing work in an efficient and sequenced manner (i.e., house-to-house), excluding scheduled appointments and revisits. If for any reason outside of Sensus or UPA’s control UPA is unable to perform work in an efficient and sequenced manner, all work completed by impacted field technicians will be billed at the hourly T&amp;M rates rather than the unit installation rates, until work can recommence in an efficient and sequenced manner, or until a change order is implemented that fairly and equitably addresses the inefficient and out-of-sequenced work.</td>
</tr>
<tr>
<td>6.4.11</td>
<td>Sensus assumes that CITY maintains and will provide for each metered account, the complete and accurate 911-registered address information.</td>
</tr>
<tr>
<td>6.4.12</td>
<td>Sensus assumes that all work orders will be provided to Sensus and UPA with the route-read sequence followed by CITY.</td>
</tr>
<tr>
<td>6.4.13</td>
<td>Sensus and UPA assume a seamless flow of work other than designated holidays and weather days.</td>
</tr>
<tr>
<td>6.4.14</td>
<td>Sensus’ proposal includes provision of a warehouse with storage and office space, including utilities, high speed internet and adequate parking.</td>
</tr>
<tr>
<td>6.4.15</td>
<td>Sensus’ proposal includes storage of approximately 8 weeks’ worth of new inventory at its warehouse location.</td>
</tr>
<tr>
<td>6.4.16</td>
<td>Sensus assumes old meters and materials removed from the field will be returned to UPA’s storage facility each day and kept for no more than 30 days before disposal or relocation.</td>
</tr>
<tr>
<td>6.4.17</td>
<td>If scrapping and disposal services are included as part of Sensus’ scope of work responsibilities, Sensus will identify a meter salvage/recycling vendor to provide meter scrapping services of legacy meters. Sensus or its scrap vendor will arrange for regular pick up of accumulated legacy meters for disposal. Due to the high volatility of the metals market, Sensus may negotiate fixed or market variable rates on a per meter or per pound basis with the scrap vendor. For each scrap load, Sensus will remit 50% of the received scrap proceeds, net of any costs and fees, in the form of an invoice credit within 30 days.</td>
</tr>
<tr>
<td>6.4.18</td>
<td>Sensus assumes that the Utility will provide a location for UPA to dump the dirt and debris collected from water and gas meter pits on a daily basis.</td>
</tr>
<tr>
<td>6.4.19</td>
<td>Sensus assumes it will not be responsible for extensive sorting, palletizing, labeling, or packaging of old meters.</td>
</tr>
<tr>
<td>6.4.20</td>
<td>Sensus assumes that it will only be responsible for the repair of damages caused directly by Sensus or UPA negligence.</td>
</tr>
<tr>
<td>6.4.21</td>
<td>Sensus assumes that CITY will provide timely assistance with unsafe meter installations or other special circumstances.</td>
</tr>
<tr>
<td>6.4.22</td>
<td>Sensus assumes that if tampering or unsafe conditions are found requiring the installation technician to wait for a utility employee to arrive, the response time will not exceed 30 minutes. Should a UPA employee be required to stay beyond this time, Sensus assumes it will be reimbursed at a Time &amp; Material (T&amp;M) rate.</td>
</tr>
<tr>
<td><strong>Scope of Work, Electric Meter Exchange</strong></td>
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</tr>
<tr>
<td>6.4.23</td>
<td>Sensus assumes that all installation material including, but not limited to electric meters, seals, boots, rings, and locking devices will be purchased and/or otherwise provided to UPA by CITY and will be present at the time of need.</td>
</tr>
<tr>
<td>6.4.24</td>
<td>Sensus assumes that single phase electric meter replacements provided by Sensus or a third-party be pre-programmed at the factory and will not require field programming at the time of installation.</td>
</tr>
<tr>
<td>6.4.25</td>
<td>Sensus assumes that all existing and/or new locking rings are compatible and operable. Pricing does not include cutting, drilling or grinding of locking devices. Pricing is available upon request if not provided in Exhibit C – Pricing.</td>
</tr>
<tr>
<td>6.4.26</td>
<td>Sensus assumes the Utility will provide keys for the removal and replacement of locking devices.</td>
</tr>
<tr>
<td>6.4.27</td>
<td>Sensus assumes residential meter replacements will not require the use of jumpers or bypasses.</td>
</tr>
<tr>
<td>6.4.28</td>
<td>Sensus assumes any existing bypasses on commercial services are operable and in good working condition. If it is not operable, UPA will UIR the work order.</td>
</tr>
<tr>
<td>6.4.29</td>
<td>Sensus assumes that the Utility will provide a list of life support and critical load meters prior to the project start date. Sensus or UPA will not be held responsible for customer claims where it was not properly notified of an existing medical alert situation.</td>
</tr>
<tr>
<td>6.4.30</td>
<td>Sensus assumes all new meter installations will be exchanged “like-for-like” (same form and class as existing meter), unless otherwise directed by CITY.</td>
</tr>
<tr>
<td>6.4.31</td>
<td>Sensus assumes all meters are readily accessible by field technician and standard 2-wheel drive work vehicle and are no more than 6 feet above ground level.</td>
</tr>
<tr>
<td>6.4.32</td>
<td>Sensus’ proposal does not include meter-base repair services. CITY will repair when required, notification on services requiring repair can come in the form of a UIR.</td>
</tr>
<tr>
<td>6.4.33</td>
<td>Sensus assumes that commercial accounts will be released and available for installation on a consistent basis throughout the project. Sensus reserves the right to open future routes early to maintain sufficient available work orders for commercial installation crews deployed.</td>
</tr>
<tr>
<td>6.4.34</td>
<td>Sensus’ proposal does not include the installation of A-base adapters or K-base (bolt-in) meter bases. Pricing is available upon request if not provided in Exhibit C – Pricing.</td>
</tr>
<tr>
<td>6.4.35</td>
<td>Sensus’ proposal does include replacement of a subset of meters (roughly 125) requiring collection of more than two (2) reads, such as Time of Use (TOU) meters and bi-directional net meters. Pricing is available upon request if not provided in Exhibit C – Pricing.</td>
</tr>
<tr>
<td>6.4.36</td>
<td>Sensus’ proposal does not include testing of new or removed meters. Pricing is available upon request if not provided in Exhibit C – Pricing.</td>
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**Scope of Work, Water Meter (Retrofit/Replacement)**

| 6.4.37 | Sensus assumes water meter replacements will include complete exchange of existing meter with new meter, encoder register, and module. |
| 6.4.38 | Sensus assumes water meter retrofits will include replacement of the existing meter register with new encoder register and module. |
| 6.4.39 | Unit rates for water meter exchanges and retrofits assumes field programming of the FlexNet radios can be successfully achieved in 4 minutes or less, on average. |
| 6.4.40 | Sensus assumes that all installation material, including but not limited to meters, registers, modules, nuts, bolts, gaskets, washers, flange packs, couplers, spool pieces, wires, wire connections, gel caps, lids, and meter boxes will be purchased and/or otherwise provided by CITY to UPA and will be present at the time of need. |
| 6.4.41 | Sensus assumes all non-commercial water meters are located outside in pits, reasonably clean of dirt and debris, with meter connection points exposed and less than 24” below ground level, with unlocked access and will not require appointments (for retrofits if the meter pit debris is below the register). In the event that the Utility’s pits are not found in the cleaned condition described, Sensus can provide a pit cleaning service at the per meter price adder provided and will document in the work order with before and after photos. |
| 6.4.42 | Sensus’ installation pricing for all water meter services assumes that water meters are not located in a confined space as defined by OSHA. Meters located in confined space requiring an additional safety resource will be charged at the Confined Space Adder provided. |
| 6.4.43 | Sensus assumes that commercial accounts (1.5-12”) will be released and available for installation on a consistent basis throughout the project. Sensus reserves the right to open future routes early to maintain sufficient available work orders for commercial installation crews deployed. |
| 6.4.44 | Sensus assumes modules will be mounted through existing lid (with mounting hole) or replacement lid provided by the Utility. |
| 6.4.45 | Sensus assumes existing and new pit lids do not exceed 50 pounds in weight. Locations with oversized pit lids may be returned to the Utility for replacement or performed by Sensus subcontractor UPA on a T&M basis. |
| 6.4.46 | Sensus assumes replacement registers will have Sensus TouchCoupler sensors so that they may be connected to the FlexNet modules without field splicing. Pricing for field splicing is available upon request if not provided in Exhibit C – Pricing. |
| 6.4.47 | Sensus’ pricing assumes that water meter retrofits will not require disruption of water service. |
| 6.4.48 | Sensus’ pricing assumes that water meter retrofits will not require removal of top plates or impeller shafts. |
| 6.4.49 | Sensus will dispose of lead seals or other hazardous waste in CITY-provided bins. |
| 6.4.50 | Sensus will attend valve training from CITY prior to turning valves, and CITY will inform Sensus of any tools used in turning valves. Sensus and UPA will not be financially responsible for the repair of curb stops or valves that are not fully operable or not in good working condition and are damaged when UPA attempts to operate them in the normal course of installation. If a meter service is found with the curb stop or shut-off valve in the “OFF” position without a physical lock, UPA will return the account (RTU) to the Utility for completion per the RTU process described above. |
| 6.4.51 | Sensus and UPA assume we will not be held responsible for the repair of service line and equipment damage that can be reasonably attributed to pre-existing conditions such as excessive corrosion, plumbing irregularities, and code violations. |
| 6.4.52 | Sensus’ proposal does not include provision of or replacement of expansion connectors, meter couplings, setters, flanges, curb stops, valves, strainers, or backflow devices. Pricing is available upon request if not provided in Exhibit C – Pricing. |
| 6.4.53 | Sensus assumes that water meters are on setters or equipped with standard meter connections that can be reused during installation activities. |
| 6.4.54 | Sensus assumes that water meter exchanges are like for like, same lay and length, and no major plumbing is required. Accounts requiring additional plumbing will be handled on a T&M basis or surveyed and quoted on a case-by-case basis. |
| 6.4.55 | Sensus’ installation unit rates do not include additional labor or groundwork needed to access meters (including but not limited to the cutting, removal and replacement of asphalt, concrete, or large tree roots). Pricing is available upon request if not provided in Exhibit C – Pricing. |
| 6.4.56 | Sensus’ installation unit rates do not include repair or replacement of meter boxes or meter vaults. Pricing is available upon request if not provided in Exhibit C – Pricing. |
| 6.4.57 | Sensus’ proposal does not include testing of new or removed meters. Pricing is available upon request if not provided in Exhibit C – Pricing. |

**Scope of Work, Gas Meters (Retrofit/Exchange)**

| 6.4.58 | Sensus assumes that all installation material including, but not limited to, gas meters, meter modules, gaskets, screws, indexes, couplings, valves, piping, etc. will be purchased and/or otherwise provided by CITY to UPA and will be present at the time of need. |
| 6.4.59 | Sensus assumes that gas meter retrofits will not require disruption of gas service. |
| 6.4.60 | Sensus assumes that retrofits will not be limited by blackout schedule. |
| 6.4.61 | Sensus assumes existing meter indexes will be reused. |
| 6.4.62 | Retrofit pricing does not include meters with pressure or temperature compensated indexes. Pricing is available upon request if not provided in Exhibit C – Pricing. |
| 6.4.63 | Pricing for meter retrofit services does not include painting of meters or meter sets. |
| 6.4.64 | Pricing does not include broken-screw repairs. Sensus assumes that a retrofit will be considered complete with a minimum of three total screws intact, including the top two screws. Pricing for broken-screw repair is available upon request if not provided in Exhibit C – Pricing. |
| 6.4.65 | Pricing does not include gas retrofits that require an adapter plate (e.g., Sprague 1A). Pricing is available upon request if not provided in Exhibit C – Pricing. |
| 6.4.66 | Sensus assumes the Utility will provide keys/tools for the removal and replacement of locking devices as needed. |
| 6.4.67 | Pricing does not include costs for Sensus to perform leak survey work following the meter retrofit, whether during the same visit or a subsequent visit. Pricing is available upon request if not provided in Exhibit C – Pricing. |
| 6.4.68 | Unit rates for gas meter exchanges and retrofits assumes field programming of the selected AMI technology radio can be successfully achieved in 4 minutes or less, on average. |

**Contract & Billing Assumptions**

| 6.4.69 | Sensus assumes there are no contractual requirements pertaining to Disadvantaged Business Enterprises (DBE, MBE, WBE or otherwise) or local area business requirements. |
| 6.4.70 | Sensus assumes there is no requirement to use unionized labor for this project. |
| 6.4.71 | Pricing does not include the provision of performance and/or payment bonds. Bonds can be provided at a cost of 2.75% of the total contract value. |
| 6.4.72 | Sensus’ proposal excludes any contractual language assessing liquidated damage penalties or provisions without review and acceptance by Sensus and our subcontractor installer UPA. |
| 6.4.73 | Pricing is based on a fuel price of $4.00 per gallon. In the event that fuel costs exceed $4.00 per gallon during the project, Sensus will assess a fuel surcharge based on existing fuel prices. |
| 6.4.74 | Pricing does not include any local or state sales, use or gross receipts taxes on Sensus’ installation services. Any taxes on Sensus’ services will be applied to each regular invoice. |
| 6.4.75 | Sensus will invoice approximately every 30 days for the services and resources provided during that month with net 30 pay terms. |
| 6.4.76 | Sensus assumes no retainage will be withheld from payments. |
| 6.4.77 | All prices are stated in U.S. dollars. |
| 6.4.78 | Prices are firm through 12/31/22. Beginning 1/1/23, and each subsequent year, pricing is subject to an annual 3% increase in all unit and T&M rates. |
7. Installation Procedures
A general description of services to be provided by Sensus’ subcontractor installation technicians at each field installation site during the Period of Performance:

7.1 General Installation Procedure – Water Meter Retrofit

<table>
<thead>
<tr>
<th>ID</th>
<th>Work Requirement for Water Meter Retrofit</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1.1</td>
<td>Park</td>
<td>Safely Park Work Vehicle. Safety cones will be placed in front and rear of parked vehicle. Technician will wear high visibility shirt and/or vest.</td>
</tr>
<tr>
<td>7.1.2</td>
<td>Location and Verification</td>
<td>The installation technician will locate the water meter and verify the premise. Submeter GPS Coordinates provided. Location comments to be provided.</td>
</tr>
<tr>
<td>7.1.3</td>
<td>Notify Customer</td>
<td>The installation technician will attempt to notify customer prior to performing installation work.</td>
</tr>
<tr>
<td>7.1.4</td>
<td>Pre-installation Inspection</td>
<td>The installation technician will inspect the water meter pit for any abnormal conditions, such as leaks, tamper, unsafe conditions, or installations which will require work at the T&amp;M rate to complete the installation not previously authorized (such as removal of excess shrubs). If abnormal conditions exist, the installation technician will escalate the issue to the respective UPA field supervisor, and then notify Utility if judgement cannot be made to continue. UPA Field Supervisor or installer will remain near for 30 minutes for onsite inspection/determination by Utility. If no determination made within 30 minutes, the location will be Returned to Utility (RTU).</td>
</tr>
<tr>
<td>7.1.5</td>
<td>Pre-installation Photograph</td>
<td>The installation technician will take pre-installation photos as follows: (1) overview of pit, (2) pit with lid open, and (3) register read photograph.</td>
</tr>
<tr>
<td>7.1.6</td>
<td>Installation</td>
<td>The installation technician will perform the retrofit of the water meter register and the meter box and pit lid and the installation of the Sensus End Point in accordance with the SOW and the manufacturers’ suggested installation specification.</td>
</tr>
<tr>
<td>7.1.7</td>
<td>Endpoint Commissioning</td>
<td>The installation technician will complete endpoint commissioning of the new SmartPoint endpoint using the Command Link Handheld.</td>
</tr>
<tr>
<td>7.1.8</td>
<td>Post installation Photographs</td>
<td>The installation technician will take a post installation photographs; (1) register after flow test, (2) pit after work complete, and (3) surrounding area after work complete</td>
</tr>
<tr>
<td>7.1.9</td>
<td>Work Order Data Capture</td>
<td>The installation technician will capture and validate work order data using UPA’s work order management system.</td>
</tr>
<tr>
<td>7.1.10</td>
<td>Clean Work Area</td>
<td>The installation technician will clean the work area and remove any debris associated with the SOW so that the work area is left in the as found condition or better.</td>
</tr>
<tr>
<td>7.1.11</td>
<td>Post Installation Notification</td>
<td>The installation technician will leave a door hanger on the front door that notifies the customer that the installation was complete or prompts the customer to call a toll-free number to schedule an installation appointment at a later point in time if the installation could not be completed.</td>
</tr>
</tbody>
</table>

7.2 General Installation Procedure – Water Meter Exchange

<table>
<thead>
<tr>
<th>ID</th>
<th>Work Requirement for Water Meter Exchange</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.2.1</td>
<td>Park</td>
<td>Safely Park Work Vehicle. Safety cones will be placed in front and rear of parked vehicle. Technician will wear high visibility shirt and/or vest.</td>
</tr>
<tr>
<td>7.2.2</td>
<td>Location and Verification</td>
<td>The installation technician will locate the water meter and verify the premise. Submeter GPS Coordinates provided. Location comments to be provided.</td>
</tr>
<tr>
<td>-------</td>
<td>---------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>7.2.3</td>
<td>Notify Customer</td>
<td>The installation technician will attempt to notify customer prior to performing installation work.</td>
</tr>
</tbody>
</table>
| 7.2.4 | Pre-installation Inspection | The installation technician will inspect the water meter pit for any abnormal conditions, such as leaks, tamper, unsafe conditions, or installations which will require work at the T&M rate to complete the installation not previously authorized (such as removal of excess shrubs). If abnormal conditions exist, the installation technician will escalate the issue to the respective UPA field supervisor, and then notify Utility if judgement cannot be made to continue. UPA Field Supervisor or installer will remain near for 30 minutes for onsite inspection/determination by Utility. If no determination made within 30 minutes, the location will be Returned to Utility (RTU). If during inspection, the water valve is “Found Off”, technician will note if the valve is physically locked in the “Off Position”:
  - If the Valve IS physically locked in the “Off Position”
    - Installation will proceed as normal without flushing the meter post installation.
  - If the Valve IS NOT physically locked in the “Off Position”
    - Installation will be halted, and the account will be Returned to Utility (RTU). or
    - Technician can secure the valve in the “Off Position” using a plastic zip tie, and then proceed as normal without flushing the meter post installation. |
| 7.2.5 | Turn Water Off            | The installation technician will turn the street-side water valve to the off position.                                                                 |
| 7.2.6 | Pre-installation Photographs | The installation technician will take pre-installation photos as follows: (1) overview of pit, (2) pit with lid open, and (3) register read photograph. |
| 7.2.7 | Installation              | The installation technician will perform the exchange of the water meter and the meter pit lid and the installation of the Sensus End Point in accordance with the SOW and the manufacturers’ suggested installation specification. |
| 7.2.8 | Turn Water On             | The installation technician will turn the street-side water valve back to the on position.                                                                 |
| 7.2.9 | Endpoint Commissioning    | The installation technician will complete endpoint commissioning of the new Sensus End Point using the Manufacturer provided Handheld. |
| 7.2.10| Flow Water                | The installation technician will flow water (approximately 1 gallon) from the nearest spigot (if available) to clear the applicable water line of air or debris that may have entered the line inadvertently during the exchange or installation process. |
| 7.2.11| Post-installation Photograph | The installation technician will take a post installation photograph and, where necessary, exception photos at each installation. |
| 7.2.12| Work Order Data Capture   | The installation technician will capture and validate work order data using UPA’s WOMS.                                                                 |
| 7.2.13| Clean Work Area           | The installation technician will clean the work area and remove any debris associated with the SOW so that the work area is left in the as found condition or better. |
### 7.2.14 Post Installation Notification

The installation technician will leave a door hanger on the front door that notifies the customer that the installation was complete or prompts the customer to call a toll-free number to schedule an installation appointment at a later point in time if the installation could not be completed.

### 7.3 General Installation Procedure – Electric Meter

<table>
<thead>
<tr>
<th>ID</th>
<th>Work Requirement For Electric Meter Exchange</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3.1</td>
<td>No Batching of Installations</td>
<td>Installation technicians shall not adopt the practice at locations where there are multiple meters of removing all meters at one time. Each installation must be completed in its entirety prior to moving to the next meter.</td>
</tr>
<tr>
<td>7.3.2</td>
<td>Park</td>
<td>Safely Park Work Vehicle.</td>
</tr>
<tr>
<td>7.3.3</td>
<td>Location and Verification</td>
<td>The installation technician will locate the electric meter and verify the premise.</td>
</tr>
<tr>
<td>7.3.4</td>
<td>Notify Customer</td>
<td>The installation technician will attempt to notify customer prior to performing installation work.</td>
</tr>
<tr>
<td>7.3.5</td>
<td>No Batching of Installations</td>
<td>Installation technicians shall not adopt the practice at locations where there are multiple meters of removing all meters at one time. Each installation must be completed in its entirety prior to moving to the next meter.</td>
</tr>
<tr>
<td>7.3.6</td>
<td>Photo of Site as Found</td>
<td>Take picture of meter and surrounding area.</td>
</tr>
<tr>
<td>7.3.7</td>
<td>Verify Meter Seal Color</td>
<td>Clean debris from index and cover.</td>
</tr>
<tr>
<td>7.3.8</td>
<td>Pre-install</td>
<td>Note any issues/concerns. Take Pre-install photo of existing meter face.</td>
</tr>
<tr>
<td>7.3.9</td>
<td>PPE</td>
<td>Don PPE.</td>
</tr>
<tr>
<td>7.3.10</td>
<td>Examine Work Area</td>
<td>Note any signs of danger, theft, or irregularity. Take picture if necessary.</td>
</tr>
<tr>
<td>7.3.11</td>
<td>Install</td>
<td>Remove Meter Seal and Meter Ring if applicable.</td>
</tr>
<tr>
<td>7.3.12</td>
<td>Examine Inside of Meter Box</td>
<td>Note any signs of excessive heating, loose connections, bent or wide gapped lugs, corrosion, danger, theft, or irregularity. Take picture if necessary.</td>
</tr>
<tr>
<td>7.3.13</td>
<td>Examine Spades on existing Meter</td>
<td>Note any signs of excessive heating, corrosion, discoloration, danger, theft, or irregularity. Take picture if necessary.</td>
</tr>
<tr>
<td>7.3.14</td>
<td>Voltage Check</td>
<td>Take a voltage reading (if accessible), first reading across both phases and then each phase to ground individually.</td>
</tr>
<tr>
<td>7.3.15</td>
<td>Install New Meter</td>
<td>If the meter can, block and contents appear to be in good condition, the tech will approach the meter can with the new meter. The tech will test the meter for operability including display and check for voltage on load side. If the meter is operable, the tech will install the meter cover or meter ring and a new tamper seal using the proper utility selected color.</td>
</tr>
<tr>
<td>7.3.16</td>
<td>Programming</td>
<td>No meter programming is expected to be necessary.</td>
</tr>
<tr>
<td>7.3.17</td>
<td>Photo of New Meter</td>
<td>Take picture of meter face of new meter.</td>
</tr>
<tr>
<td>7.3.18</td>
<td>Photo of Site as Left</td>
<td>Take photo of new meter and surrounding area as left.</td>
</tr>
<tr>
<td>7.3.19</td>
<td>Work Order Data Capture</td>
<td>The installation technician will capture and validate work order data using the UPA's WOMS.</td>
</tr>
<tr>
<td>7.3.20</td>
<td>Clean Work Area</td>
<td>The installation technician will clean the work area and remove any debris associated with the SOW so that the work area is left in the as found condition or better.</td>
</tr>
<tr>
<td>7.3.21</td>
<td>Post Installation Notification</td>
<td>The installation technician will leave a door hanger on the front door that notifies the customer that the installation was complete or prompts the customer to call a toll-free number to schedule an installation appointment at a later point in time if the installation could not be completed.</td>
</tr>
<tr>
<td>7.3.22</td>
<td>Handheld Return</td>
<td>Return the handheld to the UPA office/staging area at the end of each day.</td>
</tr>
</tbody>
</table>
### 7.4 General Installation Procedure – Gas Meter Retrofit

<table>
<thead>
<tr>
<th>ID</th>
<th>Work Requirement For Gas Meter Retrofit</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.4.1</td>
<td>Park</td>
<td>Safely Park Work Vehicle.</td>
</tr>
<tr>
<td>7.4.2</td>
<td>Location and Verification</td>
<td>The installation technician will locate the gas meter and verify the premise and meter number</td>
</tr>
<tr>
<td>7.4.3</td>
<td>Notify Customer</td>
<td>The installation technician will attempt to notify customer prior to performing installation work.</td>
</tr>
<tr>
<td>7.4.4</td>
<td>Pre-installation Inspection</td>
<td>The installation technician will inspect the meter loop for any abnormal operating conditions, such as leaks, tamper or unsafe conditions. If abnormal operating conditions exist, the installation technician will escalate the issue to the respective Field Supervisor. The respective Field Supervisor will notify CITY.</td>
</tr>
<tr>
<td>7.4.5</td>
<td>Atmospheric Corrosion Survey</td>
<td>The installation technician will perform an atmospheric corrosion survey and record the results.</td>
</tr>
<tr>
<td>7.4.6</td>
<td>Pre-installation Photograph</td>
<td>The installation technician will take a pre-installation photograph.</td>
</tr>
<tr>
<td>7.4.7</td>
<td>Installation</td>
<td>The installation technician will perform the installation of the Module in accordance with the SOW and the manufacturer’s suggested installation specification.</td>
</tr>
<tr>
<td>7.4.8</td>
<td>Programming</td>
<td>The installation technician will program the new Module.</td>
</tr>
<tr>
<td>7.4.9</td>
<td>Post-installation Photograph</td>
<td>The installation technician will take a post-installation photograph and, where necessary, exception photos at each installation.</td>
</tr>
<tr>
<td>7.4.10</td>
<td>Work Order Data Capture</td>
<td>The installation technician will capture and validate work order data using the UPA’s DAS WOMS</td>
</tr>
<tr>
<td>7.4.11</td>
<td>Clean Work Area</td>
<td>The installation technician will clean the work area and remove any debris associated with the SOW so that the work area is left in the as found condition or better.</td>
</tr>
<tr>
<td>7.4.12</td>
<td>Post Installation Notification</td>
<td>The installation technician will leave a door hanger on the front door notifying the customer that the installation was complete or prompts the customer to call a toll-free number to schedule an installation appointment at a later point in time if the installation could not be completed.</td>
</tr>
</tbody>
</table>

### 7.5 General Installation Procedure – Gas Meter Exchange

<table>
<thead>
<tr>
<th>ID</th>
<th>Work Requirement For Gas Meter Exchange</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5.1</td>
<td>Park</td>
<td>Safely Park Work Vehicle.</td>
</tr>
<tr>
<td>7.5.2</td>
<td>Location and Verification</td>
<td>The installation technician will locate the gas meter and verify the premise and meter number</td>
</tr>
<tr>
<td>7.5.3</td>
<td>Notify Customer</td>
<td>The installation technician will attempt to notify customer prior to performing installation work.</td>
</tr>
<tr>
<td>7.5.4</td>
<td>Pre-installation Inspection</td>
<td>The installation technician will inspect the meter loop for any abnormal operating conditions, such as leaks, tamper or unsafe conditions. If abnormal operating conditions exist, the installation technician will escalate the issue to the respective Field Supervisor. The respective Field Supervisor will notify CITY.</td>
</tr>
<tr>
<td>7.5.5</td>
<td>Atmospheric Corrosion Survey</td>
<td>The installation technician will perform an atmospheric corrosion survey and record the results.</td>
</tr>
<tr>
<td>7.5.6</td>
<td>Pre-installation Photograph</td>
<td>The installation technician will take a pre-installation photograph.</td>
</tr>
<tr>
<td>7.5.7</td>
<td>Bypass the Meter</td>
<td>The installation technician will bypass the gas meter if possible.</td>
</tr>
<tr>
<td>7.5.8</td>
<td>Turn Gas Off</td>
<td>If the installation technician cannot bypass the gas meter, the installation technician will turn the utility-side gas valve to the off position.</td>
</tr>
<tr>
<td>7.5.9</td>
<td>Installation</td>
<td>The installation technician will perform the exchange of the gas meter and the regulator (if applicable) and the installation of the Module (if it was not pre-installed on the gas meter) in</td>
</tr>
</tbody>
</table>
accordance with the SOW and the manufacturer’s suggested installation specification.

7.2.10 Turn Gas On
If the installation technician could not bypass the gas meter, the installation technician will turn the utility-side gas valve back to the on position.

7.5.11 Soap Test
The installation technician will perform a soap test to ensure the gas meter is sealed.

7.5.12 Programming
The installation technician will program the new Module.

7.5.13 Post installation Photograph
The installation technician will take a post installation photograph and, where necessary, exception photos at each installation.

7.5.14 Work Order Data Capture
The installation technician will capture and validate work order data using the UPA’s DAS WOMS.

7.5.15 Clean Work Area
The installation technician will clean the work area and remove any debris associated with the SOW so that the work area is left in the as found condition or better.

7.5.16 Post Installation Notification
The installation technician will leave a door hanger on the front door notifying the customer that the installation was complete or prompts the customer to call a toll-free number to schedule an installation appointment at a later point in time if the installation could not be completed.

7.6 General Warehouse Procedure
Sensus’ installation pricing assumes that Sensus and subcontractor UPA will provide a facility for storage of the Meters and associated materials throughout the project, as well as parking and a small office space with high-speed internet for Sensus’ subcontractor installer’s crew. Sensus’ subcontractor installation technicians will report to the UPA facility each morning to load their trucks and will return to the same facility at the end of each day to return unused materials.

8. Exception Handling

8.1. Exceptions Due to Errant CIS/AMS Data or Data that Can Not be Verified
Exception events that result from errant CIS data will be handled in the following manner:

<table>
<thead>
<tr>
<th>ID</th>
<th>Exception Description</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1.1</td>
<td>Cannot locate or gain access to meter</td>
<td>CITY to dispatch crew or provide assistance via phone call to help UPA locate or gain access to meter, UPA to install a new meter following access or locate of meter or UIR if not located.</td>
</tr>
<tr>
<td>8.1.2</td>
<td>Incorrect meter on-site</td>
<td>UPA to record as-found meter information including discrepancy and proceed with a like for like installation</td>
</tr>
<tr>
<td>8.1.3</td>
<td>Can’t read meter or serial number</td>
<td>UPA to record exception and proceed with installation. These meters will be tagged and segregated from other used meters.</td>
</tr>
<tr>
<td>8.1.4</td>
<td>Reading out-of-range (high/low failure)</td>
<td>UPA to record as-found meter information and proceed with installation.</td>
</tr>
<tr>
<td>8.1.5</td>
<td>Crossed meters – incorrect address</td>
<td>UPA to notify field Utility for resolution or UIR.</td>
</tr>
<tr>
<td>8.1.6</td>
<td>Found Complete</td>
<td>UPA to RTU for Found Complete.</td>
</tr>
</tbody>
</table>

8.2. Exceptions Due to Abnormal Operating Conditions
Exception events that result from abnormal operating conditions will be handled in the following manner:

<table>
<thead>
<tr>
<th>ID</th>
<th>Exception Description</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.2.1</td>
<td>Unsafe condition</td>
<td>UPA to record exception, escalate to CITY, and remain on site if it is safe to do so until UPA is relieved by CITY employee. UPA will wait up to 30 minutes for relief by Utility.</td>
</tr>
</tbody>
</table>
After 30-minutes the Hourly T&M Rate for out of Scope Work outlined in the Schedule of Values will apply. If Sensus is not contracted to resolve condition, UPA to UIR work order.

<table>
<thead>
<tr>
<th>ID</th>
<th>Work Required</th>
<th>UPA to record exception, escalate to CITY and will wait up to 30 minutes for direction from CITY. After 30-minutes the Hourly T&amp;M Rate for out of scope work outlined in Exhibit C - Pricing will apply. If Sensus is not contracted to resolve condition, UPA to UIR work order.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.2.2</td>
<td>Obstructed meter</td>
<td>UPA to record exception. If obstruction is temporary, UPA to leave door hanger prompting customer to schedule and installation appointment after the obstruction is cleared. If permanent, UPA to UIR work order.</td>
</tr>
<tr>
<td>8.2.3</td>
<td>Diversion/Tampering</td>
<td>UPA will photograph and record exception, leave site and escalate to CITY and RTU the work order.</td>
</tr>
<tr>
<td>8.2.4</td>
<td>Opt out Program (if applicable)</td>
<td>UPA to record exception, refer customer to CITY for further information and RTU work order.</td>
</tr>
<tr>
<td>8.2.5</td>
<td>Customer Refusal</td>
<td>UPA to record exception and UIR work order.</td>
</tr>
<tr>
<td>8.2.6</td>
<td>Found Complete</td>
<td>UPA to record exception and RTU work order.</td>
</tr>
<tr>
<td>8.2.7</td>
<td>Water Meter Accounts with Valve “Off” and unlocked</td>
<td>UPA to record exception and UIR work order, unless alternate approach is mutually agreed to. (i.e., UPA installing temporary seal and documenting). UPA would then record exception and perform normal installation without leak check and flushing.</td>
</tr>
<tr>
<td>8.2.8</td>
<td>Water Meter Accounts with Valve “Off” and locked</td>
<td>UPA to record exception and perform normal installation without leak check and flushing.</td>
</tr>
</tbody>
</table>

9. Schedule/Milestones

The list below consists of tentative schedule milestone dates identified for Utility AMI Meter Exchange Project:

<table>
<thead>
<tr>
<th>ID</th>
<th>Contracting Phase</th>
<th>Milestone Dates</th>
<th>Pre-Deployment Activities</th>
<th>Milestone Dates</th>
<th>Full Deployment</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.2</td>
<td>Initial IT Setup, Project Planning</td>
<td>8/1/2022</td>
<td>6/1/2023</td>
<td>6/1/2023</td>
<td></td>
</tr>
<tr>
<td>9.3</td>
<td>Develop/approve call center script, postcards, door hangers</td>
<td>8/1/2022</td>
<td>6/1/2023</td>
<td>6/1/2023</td>
<td></td>
</tr>
<tr>
<td>9.4</td>
<td>CIS Integration/file exchange process tested &amp; complete</td>
<td>8/1/2022</td>
<td>6/1/2023</td>
<td>6/1/2023</td>
<td></td>
</tr>
<tr>
<td>9.5</td>
<td>Proof of Concept Installation Period</td>
<td>10/1/2022</td>
<td>6/1/2023</td>
<td>6/1/2023</td>
<td></td>
</tr>
<tr>
<td>9.6</td>
<td>UPA Project Manager Arrives On-Site</td>
<td>6/1/2023</td>
<td>6/1/2023</td>
<td>6/1/2023</td>
<td></td>
</tr>
<tr>
<td>9.7</td>
<td>Warehouse Facility Secured, Inventory System Set Up</td>
<td>6/1/2023</td>
<td>6/1/2023</td>
<td>6/1/2023</td>
<td></td>
</tr>
<tr>
<td>9.8</td>
<td>Receive Initial Meter Shipment</td>
<td>6/1/2023</td>
<td>6/1/2023</td>
<td>6/1/2023</td>
<td></td>
</tr>
<tr>
<td>9.9</td>
<td>Vehicle Fleet Received and Prepared for Deployment</td>
<td>6/1/2023</td>
<td>6/1/2023</td>
<td>6/1/2023</td>
<td></td>
</tr>
<tr>
<td>9.10</td>
<td>Meter Installations Begin (Ramp Up Period)</td>
<td>7/1/2023</td>
<td>6/1/2023</td>
<td>6/1/2023</td>
<td></td>
</tr>
<tr>
<td>9.11</td>
<td>Steady State Meter Installations Continue</td>
<td>9/1/2023</td>
<td>6/1/2023</td>
<td>6/1/2023</td>
<td></td>
</tr>
<tr>
<td>9.13</td>
<td>Meter Installations Complete</td>
<td>2/2/2025</td>
<td>6/1/2023</td>
<td>6/1/2023</td>
<td></td>
</tr>
<tr>
<td>9.14</td>
<td>Close Warehouse Facility, Demobilize</td>
<td>3/1/2025</td>
<td>3/30/2025</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# 1. AMI Requirements

Enumerated is a list of AMI requirements pursuant to the AMI system. These requirements are to be superseded by any requirements defined in Design workshops conducted by Sensus in the Planning Phase & Test Scripts 1-20 in this Exhibit.

<table>
<thead>
<tr>
<th>ID</th>
<th>Category</th>
<th>Requirement</th>
<th>Proposer Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>System Performance and Reliability</td>
<td>Meet all applicable Federal, State, and local regulatory requirements (including, but not limited to, Federal Communications Commission (FCC Title 47 C.F.R,Part 15 - Radio Frequency Devices), and applicable standards by the American National Standards Institute (ANSI)).</td>
<td>Current Base</td>
</tr>
<tr>
<td>3</td>
<td>System Performance and Reliability</td>
<td>Provide mechanisms to minimize or eliminate potential interfere with current Utility, SCADA, Public Safety or any other current communications system.</td>
<td>Current Base</td>
</tr>
<tr>
<td>4</td>
<td>System Performance and Reliability</td>
<td>Uniquely identify all endpoints and communication devices on the system.</td>
<td>Current Base</td>
</tr>
<tr>
<td>6</td>
<td>System Performance and Reliability</td>
<td>Provide network redundancy of n-2, such that any two network components (collectors, repeaters, etc.) can be lost while maintaining communication across all endpoints.</td>
<td>Current Base</td>
</tr>
<tr>
<td>7</td>
<td>System Performance and Reliability</td>
<td>Utilize secure communications with all authorized systems and devices, including access ports, wireless communications (such as Bluetooth), field servicing tools, and communications to any network infrastructure devices.</td>
<td>Current Base</td>
</tr>
<tr>
<td>8</td>
<td>System Performance and Reliability</td>
<td>Support the following backhaul communications on network infrastructure components: cellular; and fiber.</td>
<td>Current Base</td>
</tr>
<tr>
<td>9</td>
<td>System Performance and Reliability</td>
<td>Support multi-channel data transmission.</td>
<td>Current Base</td>
</tr>
<tr>
<td>10</td>
<td>System Performance and Reliability</td>
<td>Automatically select from redundant communications paths if available.</td>
<td>Current Base</td>
</tr>
<tr>
<td>11</td>
<td>System Performance and Reliability</td>
<td>Perform data flow control after a communication or power outage to prevent resources from being overloaded.</td>
<td>Current Base</td>
</tr>
<tr>
<td>12</td>
<td>Configuration</td>
<td>Display and Log configuration parameters.</td>
<td>Current Base</td>
</tr>
<tr>
<td>13</td>
<td>Configuration</td>
<td>Display and Log communications network check results on all installed interfaces.</td>
<td>Current Base</td>
</tr>
<tr>
<td>14</td>
<td>System Diagnostics</td>
<td>Detect, log, and report program or memory failure.</td>
<td>Current Base</td>
</tr>
<tr>
<td>ID</td>
<td>Category</td>
<td>Requirement</td>
<td>Proposer Response</td>
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<tr>
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</tr>
<tr>
<td>15</td>
<td>System Diagnostics</td>
<td>Detect, log and report communications link failure.</td>
<td>Current Base</td>
</tr>
<tr>
<td>16</td>
<td>System Diagnostics</td>
<td>Log the communication performance and report it regularly.</td>
<td>Current Base</td>
</tr>
<tr>
<td>17</td>
<td>System Diagnostics</td>
<td>Make diagnostic log information available either on-demand or by regular reporting.</td>
<td>Current Base</td>
</tr>
<tr>
<td>18</td>
<td>System Diagnostics</td>
<td>Support a remotely or locally initiated test for communications connection status. Local diagnostic will include the capability to perform “ping” and obtain network interface and link information, network association status, and signal level status.</td>
<td>Current Base</td>
</tr>
<tr>
<td>19</td>
<td>System Diagnostics</td>
<td>Provide managed services to Palo Alto from a vendor-operated remote Network Operations Center, for a hosted solution. Managed services will include, at a minimum, alerting to Palo Alto of network health issues and remote troubleshooting services for network components maintenance/repair.</td>
<td>Current Base</td>
</tr>
<tr>
<td>20</td>
<td>System Diagnostics</td>
<td>Remotely detect network communications problems, including loss of redundant communications pathways, diminishing signal strength, or poor performance.</td>
<td>Current Base</td>
</tr>
<tr>
<td>21</td>
<td>System Diagnostics</td>
<td>Provide mechanisms for remotely correcting system/component problems, which, at a minimum, shall include the ability to remotely recycle (or restart) a component.</td>
<td>Current Base</td>
</tr>
<tr>
<td>22</td>
<td>System Diagnostics</td>
<td>Log the results of all remote testing and diagnostics activities and any automatic actions taken based on those results.</td>
<td>Current Base</td>
</tr>
<tr>
<td>23</td>
<td>System Diagnostics</td>
<td>Provide on-demand reports that contain key diagnostics and statistics from endpoints, devices, and field communication network elements, including event/transaction status reports, trouble reports, and additions/removals.</td>
<td>Current Base</td>
</tr>
<tr>
<td>24</td>
<td>Other Applications</td>
<td>Support DNP3 communications protocol for interfacing other process automation systems components.</td>
<td>Current Base</td>
</tr>
<tr>
<td>25</td>
<td>Other Applications</td>
<td>Support Modbus communications protocol for interfacing other process automation systems components.</td>
<td>Current Base</td>
</tr>
<tr>
<td>26</td>
<td>Other Applications</td>
<td>Be capable of communicating with load control devices.</td>
<td>Current Base</td>
</tr>
<tr>
<td>27</td>
<td>Other Applications</td>
<td>Support a platform to provide connectivity (status) to distribution automation devices, such as reclosures, capacitors, breakers, transformers, fault indicators, line load sensors, relays &amp; power measurement devices, etc.</td>
<td>Current Base</td>
</tr>
<tr>
<td>28</td>
<td>Other Applications</td>
<td>Provide a platform to provide connectivity (status and control) to public streetlights and rentable private lighting.</td>
<td>Current Base</td>
</tr>
<tr>
<td>29</td>
<td>Other Applications</td>
<td>Be capable of transmitting data from water monitoring devices, such as for pressure, temperature, and quality.</td>
<td>Current Base</td>
</tr>
<tr>
<td>30</td>
<td>Other Applications</td>
<td>Be capable of transmitting data from leak detection devices.</td>
<td>Current Base</td>
</tr>
<tr>
<td>31</td>
<td>General</td>
<td>Provide both production and test environments for the AMI Head-end System.</td>
<td>Current Base</td>
</tr>
<tr>
<td>32</td>
<td>General</td>
<td>Provide context-sensitive system documentation for online user help.</td>
<td>Current Base</td>
</tr>
<tr>
<td>ID</td>
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</tr>
<tr>
<td>33</td>
<td>Systems Integration</td>
<td>Support real-time communication and protocols for integration to other enterprise IT systems.</td>
<td>Current Base</td>
</tr>
<tr>
<td>34</td>
<td>Systems Integration</td>
<td>Support common information model structures, commercial enterprise application infrastructure interfaces, and service oriented integration patterns for IT systems integration the utility's CIS and other enterprise IT systems.</td>
<td>Current Base</td>
</tr>
<tr>
<td>35</td>
<td>Systems Integration</td>
<td>Support scheduled batch loading of meter interval and register reads to other enterprise IT systems.</td>
<td>Current Base</td>
</tr>
<tr>
<td>36</td>
<td>Systems Integration</td>
<td>Support scheduled batch loading of meter events to other enterprise IT systems.</td>
<td>Current Base</td>
</tr>
<tr>
<td>37</td>
<td>General</td>
<td>Be capable of performing on-demand read requests to retrieve events, usage and register data for both electric meters and water endpoints.</td>
<td>Current Base</td>
</tr>
<tr>
<td>38</td>
<td>Systems Integration</td>
<td>Be able to initiate an on-demand read request through a real-time interface from another authorized system (i.e., MDMS, CIS, OMS).</td>
<td>Current Base</td>
</tr>
<tr>
<td>39</td>
<td>Systems Integration</td>
<td>Be capable of delivering the results of all received alarms, outages and remote testing and diagnostic results to other systems in near-real time (within 30 seconds of receipt to the AMI Head-end).</td>
<td>Current Base</td>
</tr>
<tr>
<td>40</td>
<td>Functionality</td>
<td>Be capable of securing and delivering interval data and logs from endpoints and communications network components at a configurable frequency, but at least 4 times per day.</td>
<td>Current Base</td>
</tr>
<tr>
<td>41</td>
<td>Functionality</td>
<td>Support electric interval data collection for measured product down to 15 minutes for commercial customers and down to 1 hour for residential customers. Data Collection for some commercial customers will be every 5 minutes.</td>
<td>Current Base</td>
</tr>
<tr>
<td>42</td>
<td>Functionality</td>
<td>Support water interval data collection for measured product down to 15 minutes for commercial customers and down to 1 hour for residential customers.</td>
<td>Current Base</td>
</tr>
<tr>
<td>43</td>
<td>Functionality</td>
<td>Support gas interval data collection for measured product down to 15 minutes for commercial customers and down to 1 hour for residential customers.</td>
<td>Current Base</td>
</tr>
<tr>
<td>44</td>
<td>Functionality</td>
<td>Be able to store 90 days of interval data in the AMI Head-end System.</td>
<td>Current Base</td>
</tr>
<tr>
<td>45</td>
<td>Functionality</td>
<td>Be able distinguish between a missing interval and zero consumption and provide reporting capability for missing data or gaps.</td>
<td>Current Base</td>
</tr>
<tr>
<td>46</td>
<td>Functionality</td>
<td>Track devices with missing data due to failed or incomplete communications and provide an automatic retry process to ensure several efforts are made to capture missing interval data for endpoints.</td>
<td>Current Base</td>
</tr>
<tr>
<td>47</td>
<td>Functionality</td>
<td>Log all messages sent to and received from all AMI components with the message date/time, event/message type identifier, and source/target(s) identifier.</td>
<td>Current Base</td>
</tr>
<tr>
<td>48</td>
<td>Functionality</td>
<td>Log each instance when an event message has been sent to an AMI component, but no acknowledgement is received within the configured time frame.</td>
<td>Current Base</td>
</tr>
<tr>
<td>49</td>
<td>Functionality</td>
<td>Process Daylight Savings time change.</td>
<td>Current Base</td>
</tr>
<tr>
<td>ID</td>
<td>Category</td>
<td>Requirement</td>
<td>Proposer Response</td>
</tr>
<tr>
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</tr>
<tr>
<td>50</td>
<td>Functionality</td>
<td>Have the capability to assign internal user-specific screen presentation criteria (i.e. personalized home dashboard) based on user sign-in (role-based presentation).</td>
<td>Current Base</td>
</tr>
<tr>
<td>51</td>
<td>Functionality</td>
<td>Support user capability to export report and query data in CSV, SQL, Excel, XML, TXT, or other flat-file formats.</td>
<td>Current Base</td>
</tr>
<tr>
<td>52</td>
<td>Functionality</td>
<td>Provide the capability to support a variety of number of dials that contain up to 9 digits on register read.</td>
<td>Current Base</td>
</tr>
<tr>
<td>53</td>
<td>Functionality</td>
<td>Provide the capability to support 12-digit length serial number for meter or endpoint.</td>
<td>Current Base</td>
</tr>
<tr>
<td>54</td>
<td>Functionality</td>
<td>Support basic outage management tools, including visual map showing location of endpoints with color-coded status.</td>
<td>Current Base</td>
</tr>
<tr>
<td>55</td>
<td>Events/Alarms</td>
<td>Detect and report all meter, endpoint and system alarms in near-real time (up to 30 seconds) to the AMI Head-end.</td>
<td>Current Base</td>
</tr>
<tr>
<td>56</td>
<td>Events/Alarms</td>
<td>Transport events with the next regularly scheduled readings.</td>
<td>Current Base</td>
</tr>
<tr>
<td>57</td>
<td>Events/Alarms</td>
<td>The AMI Head-end system shall automatically send all events and alarms received to the MDMS.</td>
<td>Current Base</td>
</tr>
<tr>
<td>58</td>
<td>Events/Alarms</td>
<td>Provide mechanism to automatically communicate a certain event and/or alarm to designated recipients via email and SMS text msg.</td>
<td>Current Base</td>
</tr>
<tr>
<td>59</td>
<td>Events/Alarms</td>
<td>Detect and report removal of endpoint (cut wire).</td>
<td>Current Base</td>
</tr>
<tr>
<td>60</td>
<td>Events/Alarms</td>
<td>Detect and report meter tilt/tamper.</td>
<td>Current Base</td>
</tr>
<tr>
<td>61</td>
<td>Events/Alarms</td>
<td>Detect and report stopped/dead/non-registering meters.</td>
<td>Current Base</td>
</tr>
<tr>
<td>62</td>
<td>Events/Alarms</td>
<td>Detect and report power quality excursions for a capable electric meter.</td>
<td>Current Base</td>
</tr>
<tr>
<td>63</td>
<td>Events/Alarms</td>
<td>Detect and report demand threshold reached for an electric meter.</td>
<td>Current Base</td>
</tr>
<tr>
<td>64</td>
<td>Events/Alarms</td>
<td>Detect and report load side voltage with service switch in OPEN state for an electric meter.</td>
<td>Current Base</td>
</tr>
<tr>
<td>65</td>
<td>Events/Alarms</td>
<td>For &quot;Last Gasp&quot; messages, configure a delay in transmission of message to an Outage Management System (OMS) or other external system.</td>
<td>Current Base</td>
</tr>
<tr>
<td>66</td>
<td>Events/Alarms</td>
<td>Detect and report loss of power on a single phase or all phases for an electric meter.</td>
<td>Current Base</td>
</tr>
<tr>
<td>67</td>
<td>Events/Alarms</td>
<td>Detect and report max amps for an electric meter has been reached.</td>
<td>Current Base</td>
</tr>
<tr>
<td>68</td>
<td>Events/Alarms</td>
<td>Detect and report min amps for an electric meter has been reached.</td>
<td>Current Base</td>
</tr>
<tr>
<td>69</td>
<td>Events/Alarms</td>
<td>Detect and report reverse power flow for non-Net electric meters or not programmed for kWh received.</td>
<td>Current Base</td>
</tr>
<tr>
<td>70</td>
<td>Events/Alarms</td>
<td>Detect and report restoration of power (&quot;power on&quot;) for an electric meter.</td>
<td>Current Base</td>
</tr>
<tr>
<td>71</td>
<td>Events/Alarms</td>
<td>Detect and log pulse over flow check for a meter.</td>
<td>Current Base</td>
</tr>
<tr>
<td>72</td>
<td>Events/Alarms</td>
<td>Detect and log test mode check for a meter.</td>
<td>Current Base</td>
</tr>
<tr>
<td>73</td>
<td>Events/Alarms</td>
<td>Perform and log on meter diagnostic check for a meter.</td>
<td>Current Base</td>
</tr>
<tr>
<td>ID</td>
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</tr>
<tr>
<td>75</td>
<td>Events/Alarms</td>
<td>Detect and log stopped meters.</td>
<td>Current Base</td>
</tr>
<tr>
<td>76</td>
<td>Events/Alarms</td>
<td>Detect and log access by any field device (e.g., optical port, Bluetooth connection, etc.).</td>
<td>Current Base</td>
</tr>
<tr>
<td>77</td>
<td>Events/Alarms</td>
<td>Detect and report as an alarm on a near real time basis a hot meter base or socket.</td>
<td>Current Base</td>
</tr>
<tr>
<td>79</td>
<td>Security</td>
<td>Not provide direct or indirect access to SCADA systems.</td>
<td>Current Base</td>
</tr>
<tr>
<td>80</td>
<td>Security</td>
<td>Receive and process data requests from other systems (e.g., MDMS, CIS, or OMS).</td>
<td>Current Base</td>
</tr>
<tr>
<td>81</td>
<td>Security</td>
<td>Not store personally-identifiable customer information.</td>
<td>Current Base</td>
</tr>
<tr>
<td>82</td>
<td>Security</td>
<td>Log invalid login attempts; retain 12 months of authentication logs success and failure.</td>
<td>Current Base</td>
</tr>
<tr>
<td>83</td>
<td>Security</td>
<td>Support a lockout for a configurable number (minimum 3) of failed login/access attempts. This applies to the AMI Head-end application, meter and endpoint configuration products, all field tool applications, meters and endpoints.</td>
<td>Current Base</td>
</tr>
<tr>
<td>84</td>
<td>Security</td>
<td>Support Advanced Encryption Standard (AES) for 256 bit encryption end-to-end.</td>
<td>Current Base</td>
</tr>
<tr>
<td>85</td>
<td>Security</td>
<td>Support rolling encryption keys on a configurable basis.</td>
<td>Current Base</td>
</tr>
<tr>
<td>86</td>
<td>Security</td>
<td>Support ANSI C12.19/C12.18/C12.22 cryptographic solutions including clear text, plain text and cipher text communication.</td>
<td>Current Base</td>
</tr>
<tr>
<td>87</td>
<td>Security</td>
<td>Support functions which allow for secure device authentication, registration, and revocation of registration.</td>
<td>Current Base</td>
</tr>
<tr>
<td>88</td>
<td>Security</td>
<td>Supply mechanisms which audit and store all security related events including all messages, access, and modification events within the system for 90 days.</td>
<td>Current Base</td>
</tr>
<tr>
<td>89</td>
<td>Security</td>
<td>Supply a security audit store which includes the date and time of the event, type of event, subject identity, and the outcome (success or failure) of the event.</td>
<td>Current Base</td>
</tr>
<tr>
<td>90</td>
<td>Security</td>
<td>Supply access control mechanisms (i.e., Identification &amp; Authentication mechanisms) which prevent unauthorized access of information and resource.</td>
<td>Current Base</td>
</tr>
<tr>
<td>91</td>
<td>Security</td>
<td>Log unauthorized access attempts.</td>
<td>Current Base</td>
</tr>
<tr>
<td>92</td>
<td>Security</td>
<td>Support 2-factor authentication for system access.</td>
<td>Current Base</td>
</tr>
<tr>
<td>93</td>
<td>Security</td>
<td>Restrict access to reconfiguration commands based upon user role.</td>
<td>Current Base</td>
</tr>
<tr>
<td>94</td>
<td>Security</td>
<td>Reject messages/requests that are received from unauthorized systems or devices.</td>
<td>Current Base</td>
</tr>
<tr>
<td>95</td>
<td>Security</td>
<td>Provide a configurable 'choke' to restrict the maximum number of disconnect operations allowed at once or on a daily basis including those disconnect requests transmitted via MDMS.</td>
<td>Current Base</td>
</tr>
<tr>
<td>96</td>
<td>Configuration</td>
<td>Be capable to change configuration settings of the endpoint shall be available via remote action without removing device.</td>
<td>Current Base</td>
</tr>
<tr>
<td>97</td>
<td>Configuration</td>
<td>Have full capability for reprogramming endpoint configurations via an over the air process.</td>
<td>Current Base</td>
</tr>
<tr>
<td>ID</td>
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</tr>
<tr>
<td>98</td>
<td>Configuration</td>
<td>Have capability to automatically perform a last read of interval and register data, before a configuration update is performed</td>
<td>Current Base</td>
</tr>
<tr>
<td>99</td>
<td>System Performance and Reliability</td>
<td>Be capable of securing a 98.5% success rate of reads transmitted within 72 hours of read timestamp, processed at the AMI Head-end and available for billing.</td>
<td>Current Base</td>
</tr>
<tr>
<td>100</td>
<td>System Performance and Reliability</td>
<td>The AMI Head-end shall be capable of receiving and processing incoming meter data on a continuous basis.</td>
<td>Current Base</td>
</tr>
<tr>
<td>101</td>
<td>System Performance and Reliability</td>
<td>Be able to report high priority messages in one minute 90 percent of the time.</td>
<td>Current Base</td>
</tr>
<tr>
<td>102</td>
<td>System Performance and Reliability</td>
<td>Be able to report medium priority messages in five minutes 90 percent of the time.</td>
<td>Current Base</td>
</tr>
<tr>
<td>103</td>
<td>System Performance and Reliability</td>
<td>Be able to report low priority messages in fifteen minutes 90 percent of the time.</td>
<td>Current Base</td>
</tr>
<tr>
<td>104</td>
<td>System Performance and Reliability</td>
<td>Transmit lower priority events to the AMI Head-end during the next available transmission cycle.</td>
<td>Current Base</td>
</tr>
<tr>
<td>105</td>
<td>System Performance and Reliability</td>
<td>Transmit and log the following information for each event: Event Timestamp, Event Type, AMI RF endpoint, and/or meter ID.</td>
<td>Current Base</td>
</tr>
<tr>
<td>106</td>
<td>System Performance and Reliability</td>
<td>Support user-defined prioritization of events to allow critical traffic to have priority.</td>
<td>Current Base</td>
</tr>
<tr>
<td>107</td>
<td>System Performance and Reliability</td>
<td>Automatically retry events when a message is not acknowledged.</td>
<td>Current Base</td>
</tr>
<tr>
<td>108</td>
<td>System Performance and Reliability</td>
<td>Record metrology data while communicating and during communication failures.</td>
<td>Current Base</td>
</tr>
<tr>
<td>109</td>
<td>System Performance and Reliability</td>
<td>Support remote configuration of all user-controllable endpoint parameters.</td>
<td>Current Base</td>
</tr>
<tr>
<td>110</td>
<td>System Performance and Reliability</td>
<td>Support remote configuration of multiple endpoints in a batched mode, via user-defined batching.</td>
<td>Current Base</td>
</tr>
<tr>
<td>111</td>
<td>System Performance and Reliability</td>
<td>Log all configuration commands and results for a minimum of 90 days.</td>
<td>Current Base</td>
</tr>
<tr>
<td>112</td>
<td>System Diagnostics</td>
<td>Exporting meter data upon request and provide capabilities to export log data.</td>
<td>Current Base</td>
</tr>
<tr>
<td>113</td>
<td>System Diagnostics</td>
<td>Send non-usage messages and alarms to the AMI Head-end that contain date/time stamp from internal meter clock, message code/type, and meter identifier.</td>
<td>Current Base</td>
</tr>
<tr>
<td>114</td>
<td>System Diagnostics</td>
<td>Support configurable alert levels and notifications based on the severity of a problem detected and the number of endpoints affected.</td>
<td>Current Base</td>
</tr>
<tr>
<td>ID</td>
<td>Category</td>
<td>Requirement</td>
<td>Proposer Response</td>
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</tr>
<tr>
<td>116</td>
<td>Software/Firmware Releases</td>
<td>Provide release notes prior to updates.</td>
<td>Current Base</td>
</tr>
<tr>
<td>117</td>
<td>Software/Firmware Releases</td>
<td>Allow for software releases to be able to be scheduled at Utility's discretion.</td>
<td>Current Base</td>
</tr>
<tr>
<td>118</td>
<td>Software/Firmware Releases</td>
<td>Have a rollback plan in place and be communicated to the Utility prior to any upgrades to the Software.</td>
<td>Current Base</td>
</tr>
<tr>
<td>119</td>
<td>Software/Firmware Releases</td>
<td>Retain all AMI Meter configuration and program settings, statuses, customer information, and event logs over a full Software/firmware upgrade.</td>
<td>Current Base</td>
</tr>
<tr>
<td>120</td>
<td>Software/Firmware Releases</td>
<td>Contain fail safe logic to preserve the current state of the service switch and load control/distributed generation features during full Software/firmware upgrades.</td>
<td>Current Base</td>
</tr>
<tr>
<td>121</td>
<td>Software/Firmware Releases</td>
<td>Accept and install firmware upgrades remotely (over-the-air) via the AMI system in a secure manner.</td>
<td>Current Base</td>
</tr>
<tr>
<td>122</td>
<td>Software/Firmware Releases</td>
<td>Shall provide a secure capability to perform meter program and firmware updates in the field without removing devices.</td>
<td>Current Base</td>
</tr>
<tr>
<td>123</td>
<td>Software/Firmware Releases</td>
<td>Allow for selective updating of meter program parameters such as events/alarms TOU schedules, DST tables of meters remotely (over-the-air) via the AMI system.</td>
<td>Current Base</td>
</tr>
<tr>
<td>124</td>
<td>Software/Firmware Releases</td>
<td>Continue normal operation while downloading Software/firmware upgrades until instructed to switch to the new version.</td>
<td>Current Base</td>
</tr>
<tr>
<td>125</td>
<td>Software/Firmware Releases</td>
<td>Log firmware download and upgrade attempts, failures, successes, reversions, etc. with timestamp.</td>
<td>Current Base</td>
</tr>
<tr>
<td>126</td>
<td>Software/Firmware Releases</td>
<td>Report firmware upgrade status (successful or unsuccessful) to the AMI Head-end.</td>
<td>Current Base</td>
</tr>
<tr>
<td>127</td>
<td>Software/Firmware Releases</td>
<td>Allow for firmware releases to be able to be scheduled at Utility's discretion.</td>
<td>Current Base</td>
</tr>
<tr>
<td>130</td>
<td>Security</td>
<td>Provide Network Layer IP filtering solution to allow access only from the City's IP address to the Vendor environment (especially hosted for the City).</td>
<td>Current Base</td>
</tr>
<tr>
<td>131</td>
<td>Security</td>
<td>Securely transfer/process data between the City and the Vendor's environment through SITE-TO-SITE VPN communication, enhanced with Multi-Factor Authentication (MFA).</td>
<td>Current Base</td>
</tr>
<tr>
<td>132</td>
<td>Security</td>
<td>Securely encrypt City’s data during the operational process, hosted at rest, and the backup stage, at the Vendor’s environment (including Vendor’s contracting organization’s environment)</td>
<td>Current Base</td>
</tr>
<tr>
<td>134</td>
<td>Security</td>
<td>Offer 99.99% up-time in the Service Level Agreement (SLA).</td>
<td>Current Base</td>
</tr>
<tr>
<td>135</td>
<td>Security</td>
<td>For systems hosted using third-party cloud services, such as AWS, offer a secured, logically separated IT environment in cloud consistent with the AWS_Security_Compute_Services_Whitepaper document (<a href="https://d1.awsstatic.com/whitepapers/Security/Security_Compute_Services_Whitepaper.pdf">https://d1.awsstatic.com/whitepapers/Security/Security_Compute_Services_Whitepaper.pdf</a>).</td>
<td>Current Base</td>
</tr>
<tr>
<td>136</td>
<td>Security</td>
<td>Allow for a minimum of 3 (three) authorized personnel from the City to have superuser/super admin access to the Vendor’s, and cloud-hosted environment with MFA authentication.</td>
<td>Current Base</td>
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<tr>
<td>ID</td>
<td>Category</td>
<td>Requirement</td>
<td>Proposer Response</td>
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</tr>
<tr>
<td>137</td>
<td>Security</td>
<td>Offer authentication and authorization from the “City’s environment to the Vendor’s environment” and “Vendor’s environment to the cloud-hosted environment” enhanced with SSO and MFA.</td>
<td>Current Base</td>
</tr>
<tr>
<td>138</td>
<td>Security</td>
<td>Offer IP filtering for all the applications and database access to the Vendor’s environment and to the cloud environment.</td>
<td>Current Base</td>
</tr>
<tr>
<td>139</td>
<td>General</td>
<td>Be supplied with a scannable manufacturer serial number bar code label, including the electric meter number affixed to the meter faceplate.</td>
<td>Current Base</td>
</tr>
<tr>
<td>140</td>
<td>General</td>
<td>Provide electronic vendor meter inventory file with meter deliveries.</td>
<td>Current Base</td>
</tr>
<tr>
<td>141</td>
<td>Functionality</td>
<td>Support configurable display registers with at least 6 (digits) plus 2 decimals.</td>
<td>Current Base</td>
</tr>
<tr>
<td>142</td>
<td>Functionality</td>
<td>Support bi-directional (net) electric flow metering.</td>
<td>Current Base</td>
</tr>
<tr>
<td>143</td>
<td>Functionality</td>
<td>Have sensors to detect hot socket/overvoltage and temperature.</td>
<td>Current Base</td>
</tr>
<tr>
<td>144</td>
<td>Functionality</td>
<td>Perform a diagnostic self-test upon start up and in the event of errors or warnings report the error on the meter display and provide notification back to the AMI Head-end.</td>
<td>Current Base</td>
</tr>
<tr>
<td>145</td>
<td>Functionality</td>
<td>Be able to accept and process a remote demand reset command from the AMI Head-end system &gt;99% of the time.</td>
<td>Current Base</td>
</tr>
<tr>
<td>146</td>
<td>Functionality</td>
<td>Send acknowledgement to AMI Head-end of demand reset function has been performed, along with time stamp of reset.</td>
<td>Current Base</td>
</tr>
<tr>
<td>147</td>
<td>Functionality</td>
<td>Be configurable to record 5-minute, 15-minute, 30-minute and 60-minute demand register readings based either on a clock time interval or a rolling basis.</td>
<td>Current Base</td>
</tr>
<tr>
<td>148</td>
<td>Functionality</td>
<td>Provide a time stamp with the peak demand recorded for the period set in the metrology of the meter, for demand-enabled meters.</td>
<td>Current Base</td>
</tr>
<tr>
<td>149</td>
<td>Functionality</td>
<td>Allow for auto-demand reset at a predefined time/interval period (e.g. tied to billing date), for demand-enabled meters.</td>
<td>Current Base</td>
</tr>
<tr>
<td>153</td>
<td>Functionality</td>
<td>Be available with an optional service disconnect switch capable of interrupting up to 200 amps, for residential meters (Form 2S class 320 meters excepted).</td>
<td>Current Base</td>
</tr>
<tr>
<td>154</td>
<td>Functionality</td>
<td>Log a date/time stamped event when an operation occurs, with a message to communicate success or failure, for meters with service disconnect switches.</td>
<td>Current Base</td>
</tr>
<tr>
<td>155</td>
<td>Functionality</td>
<td>Be capable of operating at its maximum rated load without overflowing the interval data counter, no matter the interval length selected.</td>
<td>Current Base</td>
</tr>
<tr>
<td>156</td>
<td>Functionality</td>
<td>Be able to support remote configuration of the kWh read interval.</td>
<td>Current Base</td>
</tr>
<tr>
<td>157</td>
<td>Functionality</td>
<td>Be able to support remote configuration of the kW and Voltage read interval.</td>
<td>Current Base</td>
</tr>
<tr>
<td>158</td>
<td>Functionality</td>
<td>Be able to support net metering functionality.</td>
<td>Current Base</td>
</tr>
<tr>
<td>159</td>
<td>Functionality</td>
<td>Be available to be retrofit with a KYZ pulse output board without limiting AMI functionality, for three-phase meters.</td>
<td>Current Base</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ID</th>
<th>Category</th>
<th>Requirement</th>
<th>Proposer Response</th>
</tr>
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<tr>
<td>5.a</td>
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</tr>
<tr>
<td>ID</td>
<td>Category</td>
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</tr>
<tr>
<td>160</td>
<td>Functionality</td>
<td>Be able to provide load profile register/interval data for the following units of measure in configurable 5, 15, 30 &amp; 60 minute intervals with time stamp: kWh delivered, kWh received, kW, kVARh delivered, kVARh received, time-of-use, and kVAh.</td>
<td>Current Base</td>
</tr>
<tr>
<td>161</td>
<td>Functionality</td>
<td>Provide voltage per phase.</td>
<td>Current Base</td>
</tr>
<tr>
<td>162</td>
<td>Functionality</td>
<td>Provide amperage per phase.</td>
<td>Current Base</td>
</tr>
<tr>
<td>163</td>
<td>Functionality</td>
<td>Be capable of identifying service type/form factor.</td>
<td>Current Base</td>
</tr>
<tr>
<td>164</td>
<td>Functionality</td>
<td>Provide a measurement of VAR or VA for billing interval, for three-phase meters.</td>
<td>Current Base</td>
</tr>
<tr>
<td>165</td>
<td>Functionality</td>
<td>Provide a phase angle measurement both positive (leading angle) and negative (lagging angle), for three-phase meters.</td>
<td>Current Base</td>
</tr>
<tr>
<td>166</td>
<td>Functionality</td>
<td>Provide an instantaneous amperage reading on demand, and maximum amperage for interval readings.</td>
<td>Current Base</td>
</tr>
<tr>
<td>167</td>
<td>Functionality</td>
<td>Provide an instantaneous voltage reading on demand, and max/min voltage reading for interval readings.</td>
<td>Current Base</td>
</tr>
<tr>
<td>168</td>
<td>Functionality</td>
<td>Provide an event denoting the date/time field access was performed or attempted.</td>
<td>Current Base</td>
</tr>
<tr>
<td>169</td>
<td>Functionality</td>
<td>Maintain a multi-year schedule for Daylight Savings Time changes.</td>
<td>Current Base</td>
</tr>
<tr>
<td>170</td>
<td>Functionality</td>
<td>Have storage capacity for 45 days of 15-minute interval electric meter reads and events data for purposes of disaster recovery.</td>
<td>Current Base</td>
</tr>
<tr>
<td>171</td>
<td>Functionality</td>
<td>Provide the capability to create and maintain Time of Use schedules (at least 10) for the purpose of enabling and updating TOU schedules in electric meters.</td>
<td>Current Base</td>
</tr>
<tr>
<td>172</td>
<td>Functionality</td>
<td>TOU schedules must support at least 4 separate daily time bands, i.e.; (On Peak, Off Peak, Mid Peak, Shoulder Peaks)</td>
<td>Current Base</td>
</tr>
<tr>
<td>173</td>
<td>Functionality</td>
<td>TOU schedules must support at least Off Peak 24 Holidays.</td>
<td>Current Base</td>
</tr>
<tr>
<td>174</td>
<td>Functionality</td>
<td>Be capable of implementing over the air updates of TOU schedules to electric meters belonging to specific program groups.</td>
<td>Current Base</td>
</tr>
<tr>
<td>175</td>
<td>Functionality</td>
<td>Be capable of retrieving and storing TOU registers.</td>
<td>Current Base</td>
</tr>
<tr>
<td>176</td>
<td>Functionality</td>
<td>Be capable of exporting TOU register readings along with interval data and other register readings.</td>
<td>Current Base</td>
</tr>
<tr>
<td>177</td>
<td>Functionality</td>
<td>Provide a field tool and related software for diagnostic purposes and to provide the capabilities to download register and interval data from the meters/endpoints as well as update the meter programs and firmware.</td>
<td>Current Base</td>
</tr>
<tr>
<td>178</td>
<td>Other Applications</td>
<td>Be available with an optional Zigbee radio for Personal Area Network (PAN) or Home Area Network (HAN), for residential meters.</td>
<td>Current Base</td>
</tr>
<tr>
<td>181</td>
<td>General</td>
<td>Be supplied with a scannable bar code label affixed to the endpoint.</td>
<td>Current Base</td>
</tr>
<tr>
<td>182</td>
<td>Functionality</td>
<td>Support local data exchange of all AMI meter and communications data and logs.</td>
<td>Current Base</td>
</tr>
<tr>
<td>ID</td>
<td>Category</td>
<td>Requirement</td>
<td>Proposer Response</td>
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</tr>
<tr>
<td>183</td>
<td>Functionality</td>
<td>Provide security / authentication for local AMI meter data exchange to ensure that data exchanges can only be executed by authorized Utility users or users authorized by the Utility with designated field tools.</td>
<td>Current Base</td>
</tr>
<tr>
<td>184</td>
<td>Functionality</td>
<td>Synchronize internal clock time for all field communications components with a recognized external time source at least once per day.</td>
<td>Current Base</td>
</tr>
<tr>
<td>185</td>
<td>Functionality</td>
<td>Prevent Time Synchronization during an interval boundary.</td>
<td>Current Base</td>
</tr>
<tr>
<td>186</td>
<td>Functionality</td>
<td>Have storage capacity for 45 days of hourly interval water meter reads and events data for purposes of disaster recovery.</td>
<td>Current Base</td>
</tr>
<tr>
<td>187</td>
<td>Functionality</td>
<td>Have storage capacity for 45 days of hourly interval gas meter reads and events data for purposes of disaster recovery.</td>
<td>Current Base</td>
</tr>
<tr>
<td>188</td>
<td>Functionality</td>
<td>Keep time even if there is no communication with the AMI system.</td>
<td>Current Base</td>
</tr>
<tr>
<td>189</td>
<td>Functionality</td>
<td>Provide a field tool and related software for diagnostic purposes and to provide the capabilities to download register and interval data from the meters/endpoints as well as update the meter programs and firmware.</td>
<td>Current Base</td>
</tr>
<tr>
<td>190</td>
<td>General</td>
<td>Be compliant to the dimensions outlined in specifications.</td>
<td>Current Base</td>
</tr>
<tr>
<td>191</td>
<td>General</td>
<td>Be concrete-gray in color.</td>
<td>Current Base</td>
</tr>
<tr>
<td>192</td>
<td>General</td>
<td>Be a reinforced polymer material.</td>
<td>Current Base</td>
</tr>
<tr>
<td>193</td>
<td>Functionality</td>
<td>Be able to transmit hourly interval reads to an AMI endpoint.</td>
<td>Current Base</td>
</tr>
<tr>
<td>194</td>
<td>Functionality</td>
<td>Have Radio Frequency (RF)-Transparency.</td>
<td>Current Base</td>
</tr>
<tr>
<td>195</td>
<td>Functionality</td>
<td>Be resistant to chemicals commonly found in soil or in the operating environment, in accordance with ASTM D-543.</td>
<td>Current Base</td>
</tr>
<tr>
<td>196</td>
<td>Functionality</td>
<td>Be resistant to any climatic conditions, tested in accordance with ASTM-756, procedure E.</td>
<td>Current Base</td>
</tr>
<tr>
<td>197</td>
<td>Functionality</td>
<td>Withstand a vertical test load of at least 1.5-times the designed load rating, over a 10&quot;x10&quot;x1&quot; thick steel plate centered on the cover area and backed with a 10&quot;x10&quot;x1/2&quot; rubber plate, for all lids with a designed load rating of up to and including 15 kip; the test loading shall not cause any failure to the lid.</td>
<td>Current Base</td>
</tr>
<tr>
<td>200</td>
<td>Functionality</td>
<td>Not have expected performance inhibited by prolonged periods of sunlight exposure or UV radiation and will retain at least 75% of stress and deflection values as a control.</td>
<td>Current Base</td>
</tr>
<tr>
<td>201</td>
<td>Functionality</td>
<td>Not have expected performance inhibited by inundation of water and will retain at least 75% of stress and deflection values as a control.</td>
<td>Current Base</td>
</tr>
<tr>
<td>202</td>
<td>Functionality</td>
<td>Be non-flammable or exhibit a burning rate of no more than 8 mm per minute for every 3mm of thickness of the lid.</td>
<td>Current Base</td>
</tr>
<tr>
<td>203</td>
<td>Functionality</td>
<td>Deflect no more than 13 mm under the design load specified.</td>
<td>Current Base</td>
</tr>
<tr>
<td>ID</td>
<td>Category</td>
<td>Requirement</td>
<td>Proposer Response</td>
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</tr>
<tr>
<td>204</td>
<td>Functionality</td>
<td>Withstand a 70 ft-lb. impact without puncturing, splitting, or exhibiting mechanical failure of any kind.</td>
<td>Current Base</td>
</tr>
<tr>
<td>205</td>
<td>Functionality</td>
<td>Have a static coefficient of friction of no less than 0.50, as tested in accordance with ASTM 1028-06 Section 8 to mitigate slipping hazard.</td>
<td>Current Base</td>
</tr>
<tr>
<td>206</td>
<td>Electric</td>
<td>Provide the capability to perform an electric meter remote connect/disconnect.</td>
<td>Current Base</td>
</tr>
<tr>
<td>207</td>
<td>Electric</td>
<td>Provide the capability to perform an electric meter remote connect/disconnect to be initiated at a specified time.</td>
<td>Current Base</td>
</tr>
<tr>
<td>208</td>
<td>Electric</td>
<td>Provide the capability to perform an electric remote connect/disconnect for meters in batch mode.</td>
<td>Current Base</td>
</tr>
<tr>
<td>209</td>
<td>Water</td>
<td>Provide the capability to perform a water meter remote connect/disconnect.</td>
<td>Current Base</td>
</tr>
<tr>
<td>211</td>
<td>Water</td>
<td>Provide the capability to perform a water meter remote connect/disconnect for meters in batch mode.</td>
<td>Current Base</td>
</tr>
<tr>
<td>212</td>
<td>Gas</td>
<td>Provide the capability to perform a gas meter remote disconnect.</td>
<td>Current Base</td>
</tr>
<tr>
<td>214</td>
<td>Gas</td>
<td>Provide the capability to perform a gas meter remote disconnect for meters in batch mode.</td>
<td>Current Base</td>
</tr>
<tr>
<td>215</td>
<td>Gas</td>
<td>Provide the capability to automatically disconnect a gas meter during a major leak.</td>
<td>Current Base</td>
</tr>
<tr>
<td>216</td>
<td>Functionality</td>
<td>Provide meter disconnect switch state (i.e. closed, open) and last read after remote connect/disconnect command is executed.</td>
<td>Current Base</td>
</tr>
<tr>
<td>217</td>
<td>Functionality</td>
<td>Be able to retry on a configurable basis failed remote connect/ disconnect operations.</td>
<td>Current Base</td>
</tr>
<tr>
<td>218</td>
<td>Functionality</td>
<td>Identify and report failed remote connect/disconnect operations.</td>
<td>Current Base</td>
</tr>
<tr>
<td>219</td>
<td>Functionality</td>
<td>Support the ability to identify emergency and critical needs customers to prevent remote meter disconnect.</td>
<td>Current Base</td>
</tr>
<tr>
<td>220</td>
<td>Systems</td>
<td>Integration Allow for remote connect/disconnects to be initiated based on commands by an authorized application other than the AMI Head-end (e.g., OMS, MDMS, CIS)</td>
<td>Current Base</td>
</tr>
</tbody>
</table>

2. SYSTEM ACCEPTANCE CRITERIA

The System Acceptance Testing Criteria herein will be used for CITY OF PALO ALTO to accept Planning, Alpha Proof of Concept, Beta Proof of Concept, and Full Deployment Phases, as outlined in Exhibit D. Successful completion for each these phases by Sensus will occur upon meeting the herein and obtaining the CITY OF PALO ALTO’s explicit written acceptance. Sensus is not authorized to proceed with a subsequent phase until the CITY OF PALO ALTO accepts the previous phase’s work or the CITY OF PALO ALTO authorizes Sensus in writing that they may proceed with a subsequent phase, prior to acceptance of the previous phase.

2.1 PLANNING (PROJECT INITIATION & DESIGN)

For the avoidance of doubt, Planning System Acceptance shall be synonymous with the successful completion this phase. To be deemed Accepted, CITY OF PALO ALTO will have confirmed the completion and of responsibilities and approved of the quality of deliverables provided by Sensus under the Planning (Project Initiation & Design) phase in Exhibit D.

2.2 ALPHA PROOF OF CONCEPT
For the avoidance of doubt, Alpha Proof of Concept System Acceptance shall be synonymous with the successful completion this phase. To be deemed Accepted, the following criteria must be met by the responsible party:

- Sensus configures RNI to AMI Requirements, as defined in Design documentation to be developed during the Planning phase
- CITY OF PALO ALTO to verify all Alpha meters and Alpha endpoints are registered in the RNI
- CITY OF PALO ALTO to verify meter and endpoint reads are accurately transmitting to RNI and displayed appropriately with the desired resolution
- CITY OF PALO ALTO to verify that at least one round of billing reads from all Alpha meters and endpoints are populated in RNI, and the read rate meets contracted performance guarantee criterion per Exhibit F
- CITY OF PALO ALTO to verify alerts/alarms are registering in RNI as designed.
- CITY OF PALO ALTO to verify lifecycle status of Alpha test meters (i.e., new meter install, meter removal, meter in inventory, etc.)
- Sensus has successfully integrated the RNI with the MDMS for all meter event data, reads, and initiation of remote commands
- CITY OF PALO ALTO has access to a functional WOMS for use in Beta Phase:
  - CITY OF PALO ALTO to verify that WOMS and CIS integration has been completed for mass meter uploads
    - Including Inventory file loading, meter removal and meter installation functionality.
- CITY OF PALO ALTO will have confirmed the completion of responsibilities and receipt of deliverables provided by Sensus under the Alpha Proof of Concept phase in Exhibit D

2.3 Beta Proof of Concept

For the avoidance of doubt, Beta Proof of Concept System Acceptance shall be synonymous with the successful completion this phase. To be deemed Accepted, the following criteria must be met by the responsible party:

- CITY OF PALO ALTO to verify successful execution and passing of all required test scripts 1-12, outlined in this Exhibit. Testing can start as soon as mutually agreed between both parties, and as long as the minimum number of meters are met as maybe defined in a specific test script.
- CITY OF PALO ALTO to verify that Sensus has completed all integration to upstream or 3rd party systems, including implementation, testing, and ensuring interfaces are operational
- CITY OF PALO ALTO will have confirmed the completion of responsibilities and receipt of deliverables provided by Sensus under the Beta Proof of Concept phase in Exhibit D

2.4 Full Deployment

For the avoidance of doubt, Full Deployment System Acceptance shall be synonymous with the successful completion of this phase. After Sensus has installed and commissioned at least 98.5% of the AMI electric meters, 98.5% of the AMI Water Modules, and 98.5% of the AMI Gas Modules, Sensus will confirm in writing that the installed population is ready for acceptance testing. CITY will in turn confirm in writing that Sensus can proceed with acceptance testing.

To be deemed Accepted, the following criteria must be met by the responsible party:

- Sensus to provide all completed installation work order data to CITY OF PALO ALTO’s CIS
- CITY OF PALO ALTO to verify that billing reads from at least 98.5% of available meters and endpoints within a 72 hour period, striving to meet 100% in collaboration between parties, are populated in RNI and are provided within the MDMS, and that the read rate meets Sensus’ contracted performance guarantee criterion, per Exhibit F
CITY OF PALO ALTO will have confirmed the completion of responsibilities and receipt of deliverables provided by Sensus under all other phases in Exhibit D

3. TEST SCRIPTS
This list of acceptance tests is not exhaustive and will be augmented, pending design workshop(s) to be conducted between parties; tests identified in these workshop(s) and enumerated below will validate the functional requirements included in the requirements traceability matrix as part of the Acceptance Testing Phase. Tests identified outside of design workshop(s) can be added if mutually agreed upon by both parties.
GENERAL INFORMATION

Introduction

The intent of the AMI project for CITY is to provide an opportunity for the utility to utilize Sensus FlexNet network for water, gas and power over the air meter information. The purpose of this document is to outline the process and procedures to be used to Acceptance Test the Sensus FlexNet system.

Acceptance testing will be conducted at the end of each project phase: Alpha Proof of Concept Phase, Beta Proof of Concept Phase and Full Deployment Phase.

SENSUS FLEXNET SYSTEM TEST PLAN

Purpose

This document describes Sensus plan for testing CITY’s FlexNet AMI System to assure the deployed AMI network is appropriately designed, is successfully installed and configured to receive data from FlexNet SmartPoint modules, and is functioning as intended and in compliance with design requirement. This FlexNet System Test Plan describes the System Acceptance Testing for the FlexNet System. The schedule (timing) for the execution of these tests will be determined by the AMI project team.

Alpha POC Testing will commence when a “to be determined” subset of the total meters and basestation installations and the integration of the RNI to the MDMS has occurred.

Beta POC Testing will commence after an additional “to be determined” subset of the total meters and the remaining basestation installations has occurred.

Full Deployment Testing will commence after the installation of at least 98.5% of the total meter population.

CITY OF PALO ALTO and Sensus will be responsible for general FlexNet System Test support as provided below:

Sensus General System Test Responsibilities

1. Sensus will test, validate and certify the system RF design and AMI network installation, including all necessary tests of network equipment hardware, software and firmware to meet the project Service Level Agreement (SLA) specified in the FlexNet agreement.

2. Sensus will configure and provide certifications that all FlexNet AMI Basestations are properly installed and functioning according to Sensus specifications and the SAT criteria outlined in Systems Acceptance Testing section below.

3. Upon Sensus validation of the FlexNet AMI network, Sensus shall provide the necessary resource (PM, AEM Technical Support) services to assist CITY OF PALO ALTO with Systems Acceptance Testing (SAT) of the FlexNet AMI network.

4. Sensus shall be responsible for connecting and testing the backhaul communications (provided by Sensus or CITY OF PALO ALTO) between the FlexNet AMI network Basestations and the Sensus RNI Head-end data collection system.

CITY OF PALO ALTO General System Test Responsibilities

| Page 73 of 133 |
1. CITY OF PALO ALTO shall perform all necessary testing of, and be responsible for the Internet connection and client computer hardware and software within the CITY OF PALO ALTO network used to access the FlexNet Regional Network Interface (RNI).

2. Upon Sensus verification of the FlexNet AMI network, CITY OF PALO ALTO (with Sensus support) will perform their own independent Systems Acceptance Testing (SAT) of the FlexNet AMI network.

3. Upon CITY OF PALO ALTO Systems Acceptance Testing (SAT) 100% success (or waiver of) specific test scripts, CITY OF PALO ALTO will approve of Sensus Systems Acceptance Testing (SAT) completion below.

**Systems Acceptance Test**

During each project phase, the project team shall deploy the Test Equipment and shall deploy a mutually agreed number of meters ("Test Meters"), all installed in mutually agreed locations within Customer’s Service Territory.

All Test Meters shall be Available Meters and shall be a subset of the total meter population such that the tests can be completed within a reasonable time and with the allocated resources.

Within fifteen (15) days of the notice of phase prerequisites, the testing team shall begin the Acceptance Test on the Test Meters. For purposes of clarity, the tests in this section shall only be conducted on Test Meters, and Test Meters shall only include installed Available Meters. CITY and Sensus will work diligently in good faith to undertake reasonable efforts to complete the Acceptance Test no later than forty-five (45) days after commencement of testing. The Acceptance Test for each phase shall consist only of the following subtests:

**Required Test Scripts – Necessary for moving to next phase of project.**

- EA-1: Communication: Registration Test: (e/w/g)
- EA-2: On-Demand Read - Measurement (Remote Read Accuracy & Timing) (e/w/g)
- EA-3: Communication: 72 hr Register Read Success (e/w/g)
- EA-4: Interval Read Success test (e/w/g)
- EA-5: Events and Alarms (e/w/g)
  - EA-4a: Events and Alarms (e)
  - EA-4b: Events and Alarms (w)
  - EA-4c: Events and Alarms (g)
- EA-6: Lifecycle Status (e/w/g)
- EA-7: Last Gasp Performance (e)
- EA-8: Restoration Performance (e)
- EA-9: Operational Data Collection Accuracy (e/w/g)
  - EA-8a: Operational Data Collection Accuracy (e)
  - EA-8b: Water/Gas Meter Operational Data Collection Accuracy (w/g)
- EA-10: Disconnect (if applicable) (e)
- EA-11: Reconnect (if applicable) (e)
- EA-12: Net Metering: Daily Net Metering Read Success (e)

**Optional Test Scripts – Not required for moving to next phase of project.**

- EA-14: Integrate HAN with Smartenit Cloud services and Phone App with voice control
- EA-15: Validate DR Events and Energy Management Savings, Load control devices
- EA-16: Sonix IQ Remote Disconnect
Upon satisfactory completion of each of the above tests, the AMI System will be deemed to have passed the Acceptance Test. Each test is described in detail below.

### Sub-Test Cases

**Test Script EA-1: Communication: Meter Registration**

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview:</td>
<td>This test will determine whether installed meters register in the RNI (HES) upon installation and activation.</td>
</tr>
<tr>
<td>Function:</td>
<td>All properly installed meters and endpoints will register themselves in the RNI within 24 hours of physical installation.</td>
</tr>
<tr>
<td>Goal in Context:</td>
<td>This test will ensure that all meter types will register themselves in the RNI when properly installed in the field.</td>
</tr>
<tr>
<td>Preconditions:</td>
<td>Phased Meter Deployment must be complete, water and gas endpoints must be properly programmed at installation.</td>
</tr>
</tbody>
</table>

**Results for EA-1**

<table>
<thead>
<tr>
<th>Post Condition Success:</th>
<th>Post Condition Failure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation reports confirm all electric, water and gas meters are in the Head End System.</td>
<td>Installation reports confirm all electric, water and gas meters are not registered in the Head End System.</td>
</tr>
</tbody>
</table>

**Calculation of Success Criteria:**

Using available Device Management reports within the RNI, validate that all meters installed in a previous 24 hr installation period are registered in the Head End System.

**Post Condition Result:**

### Test Script EA-2: On-Demand Read - Measurement (Remote Read Accuracy)

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview:</td>
<td>This test will compare the time stamp at the meter with the time received in the RNI software to confirm accuracy of time stamps being used during validation, and therefore for billing purposes. This test will also confirm the programmed resolution is displayed appropriately in the RNI &amp; the round trip turn around time is within specs.</td>
</tr>
<tr>
<td>Function:</td>
<td>The meter provides accurate time stamped reads that match the time data acquired from the meter LCD.</td>
</tr>
</tbody>
</table>
### Goal in Context:
The time on a manually read meter is compared to the time in a reading taken via an on-demand read and timed.

### Preconditions:
- The installation test meter(s) can be installed at a residence, commercial or labsetting.
- The manual read and the on-demand read must be obtained simultaneously.
- Test endpoints for water and gas should be in MOM communication mode.

### Results for EA-2

<table>
<thead>
<tr>
<th>Post Condition Success</th>
<th>Post Condition Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>The data acquired through a manual read of the LCD register differs from the data presented by an on-demand read taken at the same time by equal or less than +/-0.1%. The programmed resolution in the RNI matches what is read manually and in the CMEP file. Also confirm that On Demand Read happens in less than 180 seconds for water and gas, and 30 seconds for electric.</td>
<td>The data acquired through a manual read of the LCD register differs from the data presented by an on-demand read taken at the same time by greater than +/-0.1%. The programmed resolution does not match between the RNI and the manual read and in the CMEP file. Also confirm that On Demand Read happens in less than 180 seconds for water and gas, and 30 seconds for electric.</td>
</tr>
</tbody>
</table>

**Calculation of Success Criteria:** The read shown on the LCD display will match the on-demand read in the RNI within .1% & round trip time for water and gas is less than 180 seconds and round trip time for electric is 30 seconds or less.

**Post Condition Result:**

### Test Script EA-3: Communication: 72 hr Register Read Success

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview:</td>
<td>This test will determine the success rate for register readings obtained from the AMI System.</td>
</tr>
<tr>
<td>Function:</td>
<td>At a minimum, the system must allow for 98.5% of register readings to be captured over a 72 hr period and exported in the daily export file as defined in EA-1.</td>
</tr>
<tr>
<td>Goal in Context:</td>
<td>This test will determine the success rate for register readings obtained from the AMI System.</td>
</tr>
<tr>
<td>Preconditions:</td>
<td>Phased Meter Deployment must be complete.</td>
</tr>
</tbody>
</table>

### Results for EA-3

<table>
<thead>
<tr>
<th>Post Condition Success:</th>
<th>Post Condition Failure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Daily Register Read Success is equal to or greater than 98.5%</td>
<td>Average Daily Register Read Success is less than 98.5%.</td>
</tr>
</tbody>
</table>
Calculation of Success Criteria:

Average Daily Register Read Success = (the summation of the Daily Register Read Success for each of the thirty 72 hour periods) / 30 days

Able to read curb meters.

Daily Register Read Success = 100 x ((number of Available Registers read during a seventy two hour period + Unavailable Registers that reported a power failure or tamper alarm in the seventy hour period)/(Available Registers population + Unavailable Registers that reported a power fail or tamper alarm in the seventy two hour period)).

“Available Registers” mean registers that satisfy the requirements for AvailableMeters.

“Unavailable Registers” mean registers that satisfy the requirements for UnavailableMeters.

Note: A register that has reported a power failure or tamper during the seventy-two hour period shall be counted as successfully read since the register has properly communicated and does not have a network hardware coverage issue.

Post Condition Result:

Test Script EA-4: Communication: 72 Hour Interval Read Success

Test Performed On (AMI):

Overview: This test will determine proper performance of the Flexnet system by examining the read interval success (RIS) rate of a test population of electric, water and gas meters.

Function: At a minimum, the system must provide at least 98.5% average hourly Read Interval Success (RIS) for at least 98.5% of Available Meters in the test within a 72-hour billing window.

Goal in Context: This test will confirm the expected performance of the FlexNet network overall, as well as the performance of the individual FlexNet water, gas and electric modules and meters.

Preconditions: The FlexNet Base Stations must be installed and certified by Sensus, and the test population of FlexNet modules must be deployed and must meet the criteria established by Sensus for Available Meter.

Results for EA-4

<table>
<thead>
<tr>
<th>Post Condition Success:</th>
<th>Post Condition Failure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Read Interval Success is equal to or greater than 98.5% for at least 98.5% of meters tested.</td>
<td>Average Read Interval Success is equal to or greater than 98.5% for at least 98.5% of meters tested.</td>
</tr>
</tbody>
</table>
Calculation of Success Criteria:

Verification will be provided by examining the appropriate report in the FlexNet RNI for each meter in the test. The number of meters providing greater than 98.5% average of Read Intervals will be divided by the number of all meters in the test. This resulting value will be multiplied by 100 to determine the percentage of test meters that meet or exceed the Read Interval Success Criteria.

Post Condition Result:

Test Script EA-5a: Events and Alarms - Electric

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview: Ensure event and alarms are collected and stored by the RNI, &amp; those alarms can reset and flagged as ‘inactive’ in the RNI.</td>
<td></td>
</tr>
<tr>
<td>Function: Purpose is to confirm that the Regional Network Interface (RNI) database is receiving and storing meter data, and also by confirming that the CMEP reports are being generated with data in the appropriate directory within the Sensus Data Center to deliver alarms in a desired fashion.</td>
<td></td>
</tr>
<tr>
<td>Precondition: • Verify up to six meters (that adhere to the definition of available meters) are energized by performing an on-demand read. • Remove up to two meters for at least one hundred and twenty (120) seconds (exceeding the tamper threshold and the outage thresholds) then return meters to their sockets. Verify that tamper events (with date and time stamp) and outage events (with date and time stamp) are returned to the RNI upon occurrence. (Electric)</td>
<td></td>
</tr>
</tbody>
</table>

Results for EA-5: Events and Alarms

<table>
<thead>
<tr>
<th>Post Condition Success:</th>
<th>Post Condition Failure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>This test passes as soon as the test methodology is performed and validated for up to six selected meters in the test area that the above alarms were received &amp; those alarms can reset and flagged as ‘inactive’ in history of the device in the RNI.</td>
<td></td>
</tr>
</tbody>
</table>

Verification will be provided by examining the appropriate reports in the FlexNet Regional Network Interface (RNI) to confirm that the Regional Network Interface (RNI) database is receiving and storing meter data, and also by confirming that the CMEP reports are being generated with data in the appropriate directory within the Sensus Data Center.

Test Script EA-5b: Events and Alarms - Water
<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview:</td>
<td>Ensure event and alarms are collected and stored by the RNI, &amp; those alarms can reset and flagged as ‘inactive’ in the RNI.</td>
</tr>
<tr>
<td>Function:</td>
<td>Purpose is to confirm that the Regional Network Interface (RNI) database is receiving and storing meter data, and also by confirming that the CMEP reports are being generated with data in the appropriate directory within the Sensus Data Center to deliver alarms in a desired fashion.</td>
</tr>
</tbody>
</table>
| Precondition:           | • Water SmartPoint alarms shall be tested, including Meter Read Failure, Battery Life, Reverse Flow, Leak and High Flow. Test shall confirm that water SmartPoint alarms are received and displayed in the RNI. (Water)  
• Available, iPerl or Ally smart water meter alarms shall be tested, including leak, reverse flow, and empty pipe alarms. Test shall confirm that iPerl or Ally smart water meter alarms are received and displayed in the RNI. (Water) |

**Results for EA-5: Events and Alarms**

<table>
<thead>
<tr>
<th>Post Condition Success:</th>
<th>Post Condition Failure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>This test passes as soon as the test methodology is performed and validated for up to six selected meters in the test area that the above alarms were received &amp; those alarms can reset and flagged as ‘inactive’ in history of the device in the RNI.</td>
<td></td>
</tr>
</tbody>
</table>

Verification will be provided by examining the appropriate reports in the FlexNet Regional Network Interface (RNI) to confirm that the Regional Network Interface (RNI) database is receiving and storing meter data, and also by confirming that the CMEP reports are being generated with data in the appropriate directory within the Sensus Data Center.

**Test Script EA-5c: Events and Alarms - Gas**

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview:</td>
<td>Ensure event and alarms are collected and stored by the RNI, &amp; those alarms can reset and flagged as ‘inactive’ in the RNI.</td>
</tr>
<tr>
<td>Function:</td>
<td>Purpose is to confirm that the Regional Network Interface (RNI) database is receiving and storing meter data, and also by confirming that the CMEP reports are being generated with data in the appropriate directory within the Sensus Data Center to deliver alarms in a desired fashion.</td>
</tr>
<tr>
<td>Precondition:</td>
<td>• Available Gas alarms shall be tested, including Tilt, magnetic tamper, and reverse flow alarms. Test shall confirm that gas meter alarms are received and displayed in the RNI. (Gas)</td>
</tr>
</tbody>
</table>
### Results for EA-5 Events and Alarms

<table>
<thead>
<tr>
<th>Post Condition Success</th>
<th>Post Condition Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>This test passes as soon as the test methodology is performed and validated for up to six selected meters in the test area that the above alarms were received &amp; those alarms can reset and flagged as ‘inactive’ in history of the device in the RNI.</td>
<td></td>
</tr>
</tbody>
</table>

Verification will be provided by examining the appropriate reports in the FlexNet Regional Network Interface (RNI) to confirm that the Regional Network Interface (RNI) database is receiving and storing meter data, and also by confirming that the CMEP reports are being generated with data in the appropriate directory within the Sensus Data Center.

---

### Test Script EA-6: Lifecycle Status

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview:</td>
<td>This test will determine if the Lifecycle integration to the RNI from CIS has been properly configured and working when a state change is sent to the RNI.</td>
</tr>
<tr>
<td>Function:</td>
<td>The RNI will categorize meters are in Inventory, Installed, tested and retired in the system. Active meters can be removed from the RNI when told by CIS.</td>
</tr>
<tr>
<td>Goal in Context:</td>
<td>This test will determine the ability to systematically maintain the RNI and keep it in sync with CIS and the MDM.</td>
</tr>
<tr>
<td>Preconditions:</td>
<td>Phased Meter Deployment must be complete. The Lifecycle integration must be developed and deployed.</td>
</tr>
</tbody>
</table>

---

### Results for EA-6

<table>
<thead>
<tr>
<th>Post Condition Success</th>
<th>Post Condition Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifecycle State changes are accurately reflected in the RNI.</td>
<td>Lifecycle State changes are not reflected properly in the RNI.</td>
</tr>
</tbody>
</table>

**Calculation of Success Criteria:**

N/A

**Post Condition Result:**

---

### Test Script EA-7: Last Gasp Performance

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
</table>
**Overview:**
This test will determine the communication success rate of last gasp messages within the network and the latency of these messages being sent to the RNI. This test will be performed by evaluating planned outages throughout the Customer service territory of different severities. Alternatively, the test can be completed in a meter shop or test/sandbox environment due to the sensitive nature of planned outages.

**Function:**
The RNI should be able to identify power failure at the electricity endpoints.

**Goal in Context:**
This test will determine the success rate for “last gasp” messages obtained under a single FlexNet Base Station with a maximum of 20 meters experiencing the same event.

The below listed success rate is based on a 300 second latency after a programmable delay of 120 seconds (or selected OTT available in increments of 8 seconds) to filter out momentary outages:

Number of Available Meters affected by Power Failures (“Outage Event”) Under a Single FlexNet Base Station

<table>
<thead>
<tr>
<th>Expected Success Rate</th>
<th>90%</th>
</tr>
</thead>
</table>

Test Side by Side with Selected OMS Solution

**Preconditions:**
- Electricity Deployment must be complete or the test can be completed in a meter shop or test/sandbox environment.
- The Electricity Test Meters must be configured to transmit alarm messages in the priority channel only. No other devices shall be utilizing this channel or communications
- If the test is run using one to 20 meters, the test will be run 5 times.

**Results for EA-7**

<table>
<thead>
<tr>
<th>Post Condition Success:</th>
<th>Post Condition Failure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Outage Event Detection is equal or greater than: 90% if 1-20 meters experience an Outage Event</td>
<td>Average Outage Event Detection is less than: 90% if 1-20 meters experience an Outage Event</td>
</tr>
</tbody>
</table>

**Calculation of Success Criteria:**

Average Outage Event Detection = \( \frac{\text{the summation of the Outage Event Detection for each time the test is run}}{\text{number of times the test is run}} \)

Outage Event Detection = \( \frac{\text{(number of Confirmed Outage Meters that report an outage event to the RNI within 420 seconds after the occurrence of an outage event)}}{\text{(total number of Confirmed Outage Meters)}} \).

“Confirmed Outage Meters” means Electricity Test Meters that have been proven by the Customer to have experienced a power failure during the testing period.

**Post Condition Result:**
## Test Script EA-8: Restoration Performance

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview:</strong></td>
<td>This test will determine the communication success rate of restoration events within the network. This test will measure the restoration performance of meters that previously experienced an outage event. This test will be performed by evaluating planned restoration events throughout the Customer service territory. Alternatively, the test can be completed in a meter shop or test/sandbox environment due to the sensitive nature of planned outages.</td>
</tr>
</tbody>
</table>

| **Function:** | This system should be able to identify restoration events to the RNI. |

<table>
<thead>
<tr>
<th><strong>Goal in Context:</strong></th>
<th>This test will determine the success rate for power restoration messages obtained under a single FlexNet Base Station with a maximum of 20 meters. The below listed success rate is based on a 300 second latency after a programmable delay of 120 (or selected OTT available in increments of 8 seconds) seconds to filter out momentary restorations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of meters that experience a power restoration (&quot;Restoration Event&quot;) under a single FlexNet Base Station</td>
<td></td>
</tr>
<tr>
<td><strong>Expected Success Rate</strong></td>
<td>90%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Preconditions:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>● Electricity Deployment must be complete or the test can be completed in a meter shop or test/sandbox environment.</td>
</tr>
<tr>
<td>● The Electricity Test Meters must be configured to transmit alarm messages in the priority channel only. No other devices shall be utilizing this channel or communications (including, without limitation, no boost mode communication for water or gas SmartPoint Modules).</td>
</tr>
<tr>
<td>● If the test is run using one to twenty meters, the test will be run 5 times.</td>
</tr>
</tbody>
</table>

### Results for EA-8: Restoration Performance

<table>
<thead>
<tr>
<th>Post Condition Success:</th>
<th>Post Condition Failure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Outage Event Restoration is equal or greater than: 90% if 1-20 meters experience a Restoration Event</td>
<td>Average Outage Event Restoration is less than: 90% if 1-20 meters experience a Restoration Event</td>
</tr>
</tbody>
</table>

**Calculation of Success Criteria:**

Average Outage Event Restoration = ((the summation of the Outage Event Restoration for each time the test is run) / (number of times the test is run))

Outage Event Restoration = 100 x ((number of Confirmed Power Restoration Meters that report power restoration to the RNI within 420 seconds) / (total number of Confirmed Power Restoration Meters)).

“Confirmed Power Restoration Meters” means Electricity Test Meters that have been proven by the Customer to have their power restored during the testing period.
### Test Script EA-9a: Operational Data Collection Accuracy - Electric

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Overview:**
This test serves to document the ability of the network to collect accurate operational data from AMI electricity meters.

**Function:**
The AMI network should collect operational data from Available AMI electricity meters on a regular basis. This information should be accurate and collected on a regular basis to assist the Customer in managing various aspects of their distribution network.

**Goal in Context:**
Test the ability of the AMI network to collect accurate voltage information, voltage alarms, and tamper alarms from AMI electricity meters.

**Preconditions:**
- The installation of Four (4) AMI electricity meters (“Operational Test Meter”) configured with required alarms enabled at residence or in labsetting.
- Customer will apply voltage to the meter of 110%, 100% and 90% of standard operating voltages.
- Customer will induce an excursion event that exceeds the configured voltage alarm setting (“Voltage Test”)
- Customer will induce a tamper event (meter removal from socket)

**Results for EA-9a**

<table>
<thead>
<tr>
<th>Post Condition Success:</th>
<th>Post Condition Failure:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>- Instantaneous voltage readings are equal or less than +/−5% of actual field measurement (using calibrated equipment)</td>
<td>- Instantaneous voltage readings are greater than +/−5% of actual field measurement (using calibrated equipment)</td>
</tr>
<tr>
<td>- Voltage Alarm received by the Operational Test Meter during the Voltage Test</td>
<td>- Voltage Alarm not received by the Operational Test Meter during the Voltage Test</td>
</tr>
<tr>
<td>- Tamper Alarm received by AMI system during induced tamper event</td>
<td>- Tamper Alarm not received by AMI system during induced tamper event</td>
</tr>
</tbody>
</table>

**Calculation of Success Criteria:** Not Applicable.

**Post Condition Result:**

---

---
## Test Script EA-9b: Water/Gas Operational Data Collection Accuracy – Water & Gas

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This test serves to document the ability of the network to collect accurate operational data from AMI battery-powered modules. The AMI network should collect operational data from available AMI Water and Gas modules on a regular basis to assist customer in managing various aspects of their distribution network.</td>
</tr>
<tr>
<td>Function:</td>
<td>Purpose is to confirm that the Regional Network Interface (RNI) database is receiving and storing meter data, and also by confirming that the CMEP reports are being generated with data in the appropriate directory within the Sensus Data Center to deliver alarms in a desired fashion.</td>
</tr>
</tbody>
</table>
| Precondition:            | • The installation of twenty (20) AMI Water and Gas meters (“Operational Test Meters”) at residence or in lab setting.  
                          | • This test should be started and completed within thirty (30) days after the Water Deployment is complete. |

### Results for EA-9b: Water/Gas Operational Data Collection Accuracy

<table>
<thead>
<tr>
<th>Post Condition Success:</th>
<th>Post Condition Failure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>-Meter Reads are stored within the RNI for the test period.</td>
<td>- Meter reads are not available in the RNI during the test period.</td>
</tr>
<tr>
<td>-Meter Reads are populated on CMEP reports for distribution.</td>
<td>- Meter Reads are not populated on CMEP reports.</td>
</tr>
</tbody>
</table>

## Test Script EA-10- Disconnect (if applicable)

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Disconnect test is used to determine if Sensus’ disconnect meters operate as designed. This test shall be performed on ten (10) meters that have disconnects that are Available Meters.</td>
</tr>
<tr>
<td>Function:</td>
<td>The AMI system can disconnect meters remotely.</td>
</tr>
<tr>
<td>Goal in Context:</td>
<td>Customer shall request a disconnect operation from each Disconnect Meter at times mutually agreed by the Parties. The remote Disconnect Meters shall return the position status (open or closed) in addition to actually operating the switch.</td>
</tr>
</tbody>
</table>
Preconditions:

- The installation of ten AMI electricity meters at residence or in labsetting (“Disconnect Meters”).
- This test is applicable only if the Customer has ordered meters with disconnect/reconnect switches. Switch will only close without meter level intervention if unconditional reconnect is issued.
- Execute a remote disconnect command for the ten Disconnect Meters via the RNI/FlexWare Software. Validate that disconnect switch has opened and that load side is de-energized. Validate that each Disconnect Meter indicates that the disconnect switch is in the open state. Validate that a message is sent to the RNI indicating successful execution of the remote disconnect for each Disconnect Meter.
- Validate that the RNI/FlexWare Software has incremented the switch cycle count by one through this test cycle for nine (or more) Disconnect Meters.
- Customer confirms that the power is off at nine (or more) Disconnect Meters (in the field or on the bench)

Results for EA-10

<table>
<thead>
<tr>
<th>Post Condition Success</th>
<th>Post Condition Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>The RNI/FlexWare Software has incremented the switch cycle count by one for nine (or more) Disconnect Meters, and it is confirmed that the power is off at nine (or more) Disconnect Meters.</td>
<td>The post-condition success criteria are not satisfied.</td>
</tr>
</tbody>
</table>

Calculation of Success Criteria: Not Applicable.

Post Condition Result:

Test Script EA-11: Reconnect (if applicable)

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Reconnect test is used to determine if Sensus’ disconnect meters operate as designed. This test shall be performed on the same ten (10) Disconnect Meters defined in the above Disconnect test. For purposes of this test, they shall be referred to as “Reconnect Meters”.</td>
<td></td>
</tr>
</tbody>
</table>

Function: The AMI system can reconnect meters remotely.

Goal in Context: Customer shall request a reconnect operation to each Reconnect Meter at times mutually agreed by the Parties. The remote Reconnect Meters shall return the position status (open or closed) in addition to actually operating the switch.
Preconditions:

- The installation of Disconnect Meters and completion of the above Disconnect test.
- This test is applicable only if the Customer has ordered meters with disconnect/reconnect switches. Switch will only close without meter level intervention if unconditional reconnect is issued.
- Prior to commencing the test, Customer shall confirm that no load is applied on the meter while in a disconnected state.
- Execute a remote reconnect command for up to Ten (10) meters via the RNI/FlexWare Software. Validate that the disconnect switch has closed and that the load side is reenergized. Validate that each Reconnect Meter indicates that the disconnect switch is in the closed state. Validate that a message is sent to the RNI indicating successful execution of the remote reconnect for each Reconnect Meter.
- Validate that the RNI/FlexWare Software has incremented the switch cycle count by one through this test cycle for nine (or more) Reconnect Meters.
- Customer confirms that the power is on at nine (or more) Reconnect Meters (in the field or on the bench).
- If requested by Customer, this test can be run a second time with the load sensing feature of the meter enabled and load applied while the meter is in a disconnected state. During this test, success is achieved if the reconnect request does not reconnect the meter while the load is applied.

Results for EA-11

<table>
<thead>
<tr>
<th>Post Condition Success</th>
<th>Post Condition Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>The RNI/FlexWare Software has incremented the switch cycle count by one for nine (or more) Reconnect Meters, and it is confirmed that the power is on at nine (or more) Reconnect Meters.</td>
<td>The post-condition success criteria are not satisfied.</td>
</tr>
</tbody>
</table>

Calculation of Success Criteria: Not Applicable.

Post Condition Result:

Test Script EA-12: Net Metering: Daily Net Metering Read Success

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview: This test will determine the success rate for register readings obtained from the AMI System for net metering.</td>
<td></td>
</tr>
<tr>
<td>Function: At a minimum, the system must allow for 98.5% of interval forward and reverse reads to be captured over a twenty-four (24) hour period. Also, register reads will be captured 98.5% over 30 days.</td>
<td></td>
</tr>
<tr>
<td>Goal in Context: This test will determine the success rate for register readings obtained from the AMI System for net metering.</td>
<td></td>
</tr>
</tbody>
</table>
**Preconditions:**
Electricity Deployment of a meter programmed for net metering must be complete.

**Results for EA-12**

<table>
<thead>
<tr>
<th>Post Condition Success:</th>
<th>Post Condition Failure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Daily Interval and Register Read Success is equal to or greater than 98.5% for Net Metering Forward and Reverse Reads.</td>
<td>Average Daily Interval and Register Read Success is less than 98.5% for Net Metering Forward and Reverse Reads.</td>
</tr>
</tbody>
</table>

**Calculation of Success Criteria:**

Average Daily Interval Read Success = \((\text{the summation of the Daily Interval Read Success for each of the interval reads over the last 3 day periods}) / \text{number of intervals over the last 3 days})

Average Daily Register Read Success = \((\text{the summation of the Daily Register Read Success for each of the thirty 24 hour periods}) / \text{30 days})

Daily Register Read Success = \(100 \times \left(\frac{\text{number of Available Registers read during a twenty-four hour period + Unavailable Registers that reported a power failure or tamper alarm in the twenty four hour period}}{\text{Available Registers population + Unavailable Registers that reported a power fail or tamper alarm in the twenty four hour period}}\right)\)

“Available Registers” mean registers that satisfy the requirements for Available Meters.

“Unavailable Registers” mean registers that satisfy the requirements for Unavailable Meters.

Note: A register that has reported a power failure or tamper during the twenty-four-hour period shall be counted as successfully read since the register has properly communicated and does not have a network hardware coverage issue.

**Post Condition Result:**

Optional Test Scripts – These test scripts 13-20 are not required to move to the next stage of the project, this is optional functionality that Sensus will work with CITY to support testing. CITY will be responsible for purchasing or acquiring all 3rd party equipment associated with these tests.

**Test Script EA-13: Add Smart Energy (SE) Home Area Network (HAN) devices to Meter – In Home Display (IHD), Load Control (LC), Gateway (GW), Level 2 Electric Vehicle Station Equipment (EVSE). Validate can remove devices.**

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview:</strong></td>
<td>This test will validate that Zigbee Smart Energy (SE) devices can be added to meter successfully and devices can be removed from meter. Must use a Zigbee qualified device, and qualified devices listed in RNI Database HANDeviceType table.</td>
</tr>
</tbody>
</table>
### Function:
- Validate SE devices in RNI Database HANDeviceType Table, if not add qualified device
- Validate import of HAN Devices into HAN inventory
- Validate SE Zigbee Devices join meter and show joined in RNI DM
- Validate can remove joined devices from meter in RNI DM

### Goal in Context:
- HAN Devices import successful in RNI DM System Intelligence
- Imported HAN devices show up in RNI DM Dashboard
- HAN Devices show as joined in RNI DM under meter ‘About this Device’ screen under HAN Devices
- When removed device in Meter ‘About this Device’ screen under HAN select X next to HAN device will be removed and no longer displayed under meter ‘About this Device’ screen under HAN Devices

### Preconditions:
- Deployment of a Zigbee meter programmed for 7 TOU pricing and metering tiers, Sensus engineering to provide DT96 (Device Type) meter configuration files to test 7 Tier and 8 switch points per day to manage two duck curve peaks

### Results for EA-13

<table>
<thead>
<tr>
<th>Post Condition Success</th>
<th>Post Condition Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Added HAN devices show up in RNI DM Dashboard</td>
<td>HAN Devices do not show up in dashboard when imported</td>
</tr>
<tr>
<td>Removed HAN devices show up in RNI DM Dashboard</td>
<td>HAN Devices do not show joined in RNI DM when commissioned to meter</td>
</tr>
<tr>
<td>Added HAN devices show up in RNI DM System Intelligence logs</td>
<td>HAN Devices do not show removed in RNI DM when removed.</td>
</tr>
<tr>
<td>Removed HAN Devices show up in RNI DM System Intelligence logs</td>
<td></td>
</tr>
<tr>
<td>HAN Devices joined to meters show up in meter ‘about this device’ screen</td>
<td></td>
</tr>
</tbody>
</table>

### Calculation of Success Criteria:
Can join and remove up to 20 SE HAN devices to Zigbee enable DT96 meters and can properly remove HAN devices. Verify the RNI DM Dashboard show imported HAN devices in inventory and “joined” in the HAN section in Meter about this device screen.

### Test Script EA-14: Validate DR Events and Energy Management Savings

**Test Performed On (AMI):**

**Date:**
### Overview:
- Send DR event from RNI DM to meter HAN devices for each device class, UEG, and DR event group
- Send DR events to location where smart meter with Zigbee not deployed using FlexNet LCM device – supports direct LC to base stations – such as an irrigation application

### Function:
- Validate DR events 10 minutes to 24 hours, with different duty cycles (0 to 99) that don’t exceed minimum ON/OFF times (10 minutes) to protect DR load equipment
- Validate emergency DR events to prevent brown out or Black out (no start randomization and duration randomization to slowly add load back to grid to prevent transients) sent 10 minutes prior to start time received by 95% of devices
- Validate single and re-occurring standard DR events with start randomization and all DR events on equal length for all DR subscribers – stop randomization follows start randomization to meet PUC requirements equal length events for all consumers

### Goal in Context:
- 95% DR success rate on DR events from meter to SE DR devices by analyzing DR logs in AMI/DM System Intelligence logs
- DR Pass though Smartenit GW to 3.0/HA devices

### Preconditions:
- Deployment of RNI, AMI. Electric Meters with Zigbee and HAN devices joined with meters
- Customer required to purchase Sensus qualified HAN LCs, gateway, and EVSE from Smartenit
- RNI release deployed must be 4.8.1 or later to support Smartenit qualified devices
- Customer required to purchase FlexNet LCM devices and joined to RNI DM

### Results for EA-14

<table>
<thead>
<tr>
<th>Post Condition Success</th>
<th>Post Condition Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirm RNI Device Manager (DM) shows event in “scheduled events” tab in the DM.</td>
<td>RNI device manager does not show event in System Intelligence “Event History” tab in the DM.</td>
</tr>
<tr>
<td>Confirm RNI Device Manager System Intelligence “Event History” tab shows Initiated Events Complete Status shows 95% or better DR success</td>
<td>RNI device manager does not show event in “scheduled events” tab in the DM.</td>
</tr>
<tr>
<td>DR event complete and devices go back to normal operation mode.</td>
<td>DR events do not occur correctly per DR events - correct device class, duration, randomization, etc.</td>
</tr>
<tr>
<td>In Meter ‘about this device’ screen Scheduled DR events show up at the bottom of the screen</td>
<td>DR events do not occur equal to or greater than 95% of the time</td>
</tr>
<tr>
<td></td>
<td>In Meter ‘about this device’ screen Scheduled DR events do not show up at the bottom of the screen</td>
</tr>
</tbody>
</table>
**Calculation of Success Criteria:**

- DR Events occur on correct devices based on devices class, UEG, and device group for correct duration 95 or greater percent of the time

**Post Condition Result:**

**Test Script EA-15: Validate 7 TOU Pricing and Metering to control price driven EV charging and display on HAN**

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
</table>

**Overview:**
- Demonstrate and Display 7 TOU pricing and metering on HAN In Home Display
- Setup meter to support 7 TOU Pricing and metering tiers per day to maximize successful controlling of duck curves two peak per day.
- Setup level 2 28A home EV charging to validate grid load and efficiency by using meter TOU pricing to control charging.

**Function:**
- Demonstrate and Display TOU tiers in the RNI and have them match the IHD
- Demonstrate EV charging can be communicated when prices are least expensive

**Goal in Context:**
- Shift load to off peak times to eliminate over voltage when excess energy production is available – wind and solar peak at Home using TOU pricing
- Maximize revenue of grid/AMI solution by managing load using TOU pricing

**Preconditions:**
- Deployment of RNI, AMI. Electric Meters with Zigbee and HAN devices joined with meters
- Customer required to purchase Sensus qualified HAN LCs, gateway, EVSE from Smartenit and In Home Display from Rainforest Automation
- RNI release deployed must me 4.8.1 or later to support Smartenit qualified devices

**Results for EA-15**

<table>
<thead>
<tr>
<th>Post Condition Success:</th>
<th>Post Condition Failure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate in home display price tiers match the price tiers displayed in the RNI</td>
<td>If in-home display price tiers don’t match the price tiers on the meters</td>
</tr>
</tbody>
</table>

**Calculation of Success Criteria:**

- HAN IHD correctly displays 7 tier TOU pricing
- Shift load to over production periods to address overvoltage
- Shift load to off peak times to reduce peak
### Test Script EA-16: Sonix IQ Remote Disconnect

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview:</td>
<td>This test serves to document the ability of the System to initiate a remote disconnection of a single meter</td>
</tr>
<tr>
<td>Function:</td>
<td>The System must allow for a utility user to login to the System (RNI or SA) and issue a command to close the valve on a field installed valve equipped Sonix IQ meter</td>
</tr>
<tr>
<td>Goal in Context:</td>
<td>Test the ability of the System to facilitate a remote disconnect, as well as measure temperature and pressure.</td>
</tr>
<tr>
<td>Preconditions:</td>
<td>Remote Sonix IQ meter with valve state open</td>
</tr>
</tbody>
</table>

### Results for EA-6

<table>
<thead>
<tr>
<th>Post Condition Success:</th>
<th>Post Condition Failure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote valve closes and System returns accurate status completed to the operator. In addition, the RNI will display pressure and temperature.</td>
<td>Success criteria not met</td>
</tr>
</tbody>
</table>

### Calculation of Success Criteria:

N/A

### Post Condition Result:

### Test Script EA-17: Ally Remote Disconnect

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview:</td>
<td>This test serves to document the ability of the System to initiate a remote disconnection of a single meter</td>
</tr>
<tr>
<td>Function:</td>
<td>The System must allow for a utility user to login to the System (RNI) and issue a command to close the valve on a field installed valve equipped Ally meter</td>
</tr>
<tr>
<td>Goal in Context:</td>
<td>Test the ability of the System to facilitate a remote disconnect, trickle flow, as well as measure temperature and pressure.</td>
</tr>
</tbody>
</table>
Preconditions: Remote Ally meter with valve state open

Results for EA-17

<table>
<thead>
<tr>
<th>Post Condition Success</th>
<th>Post Condition Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote valve closes and System returns accurate status completed to the operator (disconnect or trickle flow) In addition, the RNI will display pressure and temperature.</td>
<td>Success criteria not met</td>
</tr>
</tbody>
</table>

Calculation of Success Criteria:
N/A

Post Condition Result:

Test Script EA-18: Base Station Redundancy Test Script

Test Performed On (AMI): Date:

Overview: This test will determine the inbound route redundancy of the AMI Network.

Function: The AMI network should have more than one inbound route for the majority of meters within the network. This test will validate the inbound routes of a selected group of meters.

Goal in Context: Turn off the Backhaul to a single M400 site, reads and messages should still be heard by the RNI for at least 95% of the meters, reading to an alternate Base Station.

Preconditions:
- All base stations have been installed and certified.
- Beta test meter installations are completed and have been installed for at least 30 days to establish routes and performance metrics.

Results for EA-18

<table>
<thead>
<tr>
<th>Post Condition Success</th>
<th>Post Condition Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>At least 95% of tested meters will display successful communication through 2 or more base stations, following backhaul being disconnected.</td>
<td>At least 95% of tested meters will display successful communication through 2 or more base stations, following backhaul being disconnected.</td>
</tr>
</tbody>
</table>
**Calculation of Success Criteria:** 100 meters will be selected at random, these meters will be evaluated in the Network Metrics Application in the RNI. At least 95% of those meters will display successful communication through 2 or more base stations following the backhaul being disconnected.

**Post Condition Result:**

---

### Test Script EA-19: Mass Meter re-programming Over the Air (Electric)

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview:</strong></td>
<td>This test will prove out the ability to change meter programming attributes Over the Air (OTA).</td>
</tr>
<tr>
<td><strong>Function:</strong></td>
<td>The Head End System will have the ability to change programmed attributes of endpoints, and meters with over-the-air commands, reducing the need to roll a truck to a premise to make changes.</td>
</tr>
<tr>
<td><strong>Goal in Context:</strong></td>
<td>This test will show that a group of meters can be reprogrammed over the air.</td>
</tr>
</tbody>
</table>
| **Preconditions:**       | - All base stations have been installed and certified.  
                          - Beta test meter installations are completed. |

<table>
<thead>
<tr>
<th><strong>Results for EA-19</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Post Condition Success:</strong></td>
</tr>
<tr>
<td>Test meters will be grouped and a programming change will be scheduled within the RNI (HES). After 3 attempts, &gt;98.5% of meters in the group will have accepted and reported back the change.</td>
</tr>
</tbody>
</table>

**Calculation of Success Criteria:** RNI System Intelligence reports will show meters that have succeeded and failed reprogramming efforts.

**Post Condition Result:**
Test Script EA-20: Firmware Update for Base Stations

<table>
<thead>
<tr>
<th>Test Performed On (AMI):</th>
<th>Overview:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This test will validate the ability to update firmware on a FlexNet Base station.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Function:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A SaaS AMI Network will allow Sensus remote access to all certified Base stations. This test will show that a base station can be upgrades remotely without the need of a site visit or involvement from the utility-owner.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal in Context:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheduled firmware upgrades for security, performance or functionality can be performed to maintain the AMI network.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preconditions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• At least one base station has been installed and certified.</td>
</tr>
<tr>
<td>• A newer firmware version is available for use.</td>
</tr>
</tbody>
</table>

Results for EA-20

<table>
<thead>
<tr>
<th>Post Condition Success:</th>
</tr>
</thead>
<tbody>
<tr>
<td>For a test base station, the previous firmware version has been successfully upgraded remotely by Sensus.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Post Condition Failure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>For a test base station, the previous firmware version is unable to be successfully upgraded remotely by Sensus.</td>
</tr>
</tbody>
</table>

Post Condition Result:

(i) Completion of Acceptance Test

Each of the above tests shall be successfully completed or waived for the Acceptance Test to be satisfied. Upon successful completion of each of the above described tests, or waiver thereof, Customer shall promptly issue written notice to Sensus. Such notice shall state that Sensus has successfully completed the Acceptance Test and the notice shall state the date on which the Acceptance Test was completed.

If the tests are successfully passed, but such notice is not provided to Sensus within five business days after proof of successful completion is presented to CITY, then the Acceptance Test shall be deemed successfully completed.

If Sensus does not successfully complete any one of the above tests, Customer shall promptly (within five business days) issue written notice to Sensus, describing the reason for Sensus’ failure. Sensus shall have a reasonable time to cure such defects. Sensus shall provide notice to Customer when the defects are cured and the Parties shall re-perform the failed tests.
Exhibit F-1/FlexNet System Performance Warranty

1. **Agreement Terms.** Sensus warrants the performance of the FlexNet System to the Customer as set forth below. This warranty and all products and services sold or otherwise provided by Sensus directly to the Customer are pursuant to the terms of the Agreement.

2. **Performance Warranty.** The Performance Warranty is as follows:

   A. **Warranty.** Sensus warrants to Customer that the FlexNet System deployed for a particular Customer meets the performance test standards set forth below in section 3 ("Performance Test Standards") from the Effective Date until the Warranty End Date. If the Customer’s FlexNet System does not meet such Performance Test Standards, then as Sensus’ sole obligation and Customer’s sole remedy, Sensus shall take steps that Sensus deems necessary, in Sensus’ sole discretion, to cause the FlexNet System to satisfy the Performance Test Standards. Such steps may include Sensus’ delivery to the Customer (without charge to the Customer) the hardware for additional RF Field Equipment, provided that all RF Field Equipment shall be located and installed as directed by Sensus. Customer shall have title to all equipment provided pursuant to this subsection (A). Notwithstanding anything to the contrary, Customer shall pay for any Recurrent RF Field Equipment Fees and any Ongoing Fees for all equipment provided pursuant to this subsection (A).

   B. **Limitations.** The Performance Warranty shall only apply: (i) to the Meter Data; (ii) from the Effective Date until the Warranty End Date; (iii) if Sensus has completed a propagation study for the applicable Customer based on the Performance Test Standards, such propagation study has been approved in writing (including without limitation, by email) by Sensus, and such propagation study has been agreed to in writing (including without limitation, by email) by the Customer ("Certified Propagation Study") (for clarity, the Certified Propagation Study consists of all documents of the propagation study, including without limitation, the server map and the document describing the Required RF Field Equipment locations and antennae details); (iv) if the Customer is not in breach of the Spectrum Lease terms of this Agreement; (v) if all the Required RF Field Equipment identified in the Certified Propagation Study is installed; (vi) if the Required RF Field Equipment is installed as described in the Certified Propagation Study, including without limitation, in the locations and at the heights identified in the Certified Propagation Study; and (vii) if the Required RF Field Equipment is operating and has been maintained to Sensus’ specifications (collectively, the “Requirements”). If any Requirement is not satisfied, then: the Performance Warranty is void; Sensus has no obligation to remedy the FlexNet System performance; Sensus has no obligation to provide RF Field Equipment hardware at no cost; and Customer is responsible for purchasing such RF Field Equipment, even if it is necessary to meet the specifications set forth in the Performance Test Standards. Furthermore, if new and/or different RF Field Equipment locations are required as a result of not meeting any Requirements, Customer agrees to: pay Sensus for the completion of any additional propagation studies; pay Sensus for the additional RF Field Equipment hardware; perform the necessary site preparation; and pay for any Recurrent RF Field Equipment Fees and any Ongoing Fees for all equipment purchased pursuant to this subsection (B). Any equipment required pursuant to this subsection (B) is added to the definition of Required RF Field Equipment.

3. **Performance Test Standards.**

   i. **Generally.**

      (a) The parties shall mutually agree on specific reading routes (each a Route). Each Route will be separately tested with the intent to provide incremental acceptance of distinctly defined geographical areas and populations of meters. Each Route shall contain a statistical sample of Test Units ("Route Units"). Route Units only include the Test Units installed in the applicable Route. For Customers with any combination of water, gas, and electricity Endpoints, the water Endpoints, gas Endpoints, and electricity Endpoints will each be tested separately according to the procedure below. For clarity, a single Route will not have a combination of water, gas, and electricity meters, but it will consist of only water, gas, or electricity Test Units.

      (b) Before beginning the Performance Test Standards, all Route Units must be installed. Customer shall send written notice to Sensus once the Test Equipment and all Route Units are installed ("Route Deployment"). Such notice shall indicate the date on which the Route Deployment was completed ("Route Deployment Date").

      (c) Within thirty (30) days after the Route Deployment Date, the parties shall begin the Performance Test Standards on the Route. Customer, Customer, and Sensus shall work in good faith to complete the Performance Test Standards no later than thirty (30) days after commencement of testing.

   ii. **Route Read Success Test.**

      (a) The Route Read Success Test will measure the percentage of Route Units that deliver valid billable meter reads during the Billing Window. The Route Read Success Test only measures reads sent from the Route Units; it does not include on demand reads. The commencement date of the Billing Window shall be agreed by Customer and Sensus.

      \[
      \text{Route Read Success} = 100 \times \frac{\text{(# of Route Units that deliver a valid billable meter read during the Billing Window)}}{\text{(total # of Route Units in the applicable Route)}}
      \]

      (b) If Route Read Success is equal or greater than the Success Percentage during one Billing Window, the Performance Test Standards for that Route has passed. Customer shall promptly issue written notice to Sensus that either (a) Sensus has not successfully completed the Performance Test Standards for the applicable Route; or (b) Sensus has successfully completed the Performance Test Standards for the applicable Route and such notice shall specify the applicable Route and shall state the date on which the Route Read Success Test was successfully completed. If Customer does not issue such notice within five days of completion of the test, then the test is automatically deemed successfully passed. Sensus has no obligation to continue optimizing the system and meeting performance specifications upon successful completion of the Performance Test Standards for each Route. This process shall continue until all Routes have successfully completed the Performance Test Standards. If Sensus does not successfully complete the Performance Test Standards for the applicable Route, then upon receipt of notice, Sensus shall fulfill its obligations in Section 2 above, and the applicable Route shall be retested within a reasonable time.
Upon completion of the Performance Test Standards for all Routes, Customer shall promptly issue written notice to Sensus that either (a) Sensus has not successfully completed the Performance Test Standards for the FlexNet System; or (b) Sensus has successfully completed the Performance Test Standards for the FlexNet System and such notice shall state the date on which the Performance Test Standards was successfully completed.

If Customer does not issue such notice within five days of completion of the tests, then the Performance Test Standards for the FlexNet System is automatically deemed successfully passed. If Sensus does not successfully complete the Performance Test Standards, then upon receipt of notice, Sensus shall fulfill its obligations in Section 2 above, and the FlexNet System shall be retested within a reasonable time.

4. THE WARRANTY SET FORTH IN SECTION 2 OF THIS PERFORMANCE WARRANTY IS THE ONLY WARRANTY RELATED TO THE PERFORMANCE OF THE FLEXNET SYSTEM. SENSUS EXPRESSLY DISCLAIMS ANY AND ALL OTHER REPRESENTATIONS, WARRANTIES AND/OR CONDITIONS, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE, REGARDING ANY MATTER IN CONNECTION WITH THIS PERFORMANCE WARRANTY, INCLUDING WITHOUT LIMITATION, WARRANTIES AS TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, NON-INFRINGEMENT AND TITLE.

5. SENSUS ASSUMES NO LIABILITY FOR COSTS OR EXPENSES ASSOCIATED WITH LOST REVENUE OR WITH THE REMOVAL OR INSTALLATION OF EQUIPMENT. THE FOREGOING REMEDIES ARE CUSTOMER’S SOLE AND EXCLUSIVE REMEDIES FOR THE PERFORMANCE OF THE FLEXNET SYSTEM.

6. Definitions. Any terms used in this Performance Warranty as defined terms, and which are not defined herein, shall have the meanings given to those terms in the Agreement.

A. “Billing Window” for an Available Meter means the seventy-two (72) hour period commencing one day prior to the relevant billing day for such Available Meter and ending two days after such billing day.

B. Endpoints mean both (a) Sensus FlexNet meters (with a SmartPoint Module installed); and (b) Sensus SmartPoint Modules which have been installed on a third-party meter.

C. Meter Data means the specific metering information, including without limitation, locations and antenna heights, provided to Sensus by Customer in writing prior to the earlier of the; (i) Effective Date; and (ii) the date set forth on the propagation study (collectively, the “Data Date”). The parties recognize and agree that the RF Field Equipment site design and build is based on the specific Meter Data provided to Sensus. For clarity, the Meter Data only contains the information specifically provided to Sensus by the Customer in writing prior to the Data Date. By way of example only (and not as an exhaustive list), the Meter Data includes the latitudes and longitudes of each meter, the location of each module either inside or outside (outside is assumed), and, for meters in pits, whether the radio is installed through or under the lid (the assumption is through the lids). New or different metering locations and/or antenna heights provided after the Data Date are not included as part of the Meter Data.

D. Recurrent RF Field Equipment Fees means any and all costs, fees, and expenses required to; (i) warrant the RF Field Equipment; and (ii) install and keep the RF Field Equipment located in the field, including without limitation, site procurement and preparation fees, fees related to building poles or towers, tower lease fees, costs of electricity supply, and any local, state, or federal government taxes or charges.

E. The “Required RF Field Equipment” means the equipment, installed in the locations and at the heights described in the Certified Propagation Study.

F. Success Percentage means, of the covered meters in the propagation study, 98.5%.

G. Test Equipment means the number of RF Field Equipment and production RNIs set forth in the Certified Propagation Study. The Test Equipment specifically does not include test RNIs or backup RNIs; it only includes production RNIs.

H. Test Units means Endpoints that are both; (i) Available Meters throughout the entire test period; and (ii) are covered meters, as depicted on the Certified Propagation Study.

I. Warranty End Date means the earlier of; (i) the third anniversary of the Effective Date; (ii) successful completion of the applicable Performance Test Standards; or (iii) the termination or expiration of this Agreement between Customer and Sensus.
Exhibit F-2
Equipment Warranties

[SEE THE FOLLOWING PAGES.]
1. Terms of Sale. Sensus USA Inc. (“Sensus”) warrants its products and parts as set forth below. All products covered by this General Limited Warranty shall:

a) be new, unless otherwise agreed in advance by City;

b) have good marketable title

c) unless specified to the contrary on the face hereof, will be free from defects in material and workmanship and will be free of all liens and encumbrances and will conform to any affirmation of facts made on the container or label.

2. Electricity Meters and Electricity SmartPoint™ Modules. Sensus warrants the Sensus electricity meters and Sensus electricity SmartPoint Modules to be in compliance with their respective specifications under normal use and service, and to be free from material defects in materials and workmanship for a warranty period of twelve (12) months from the date of the installation or eighteen (18) months from the date of shipment, whichever occurs first. The warranty period for new spare parts and components sold by Sensus is twelve (12) months from the date of shipment. The warranty period for repaired or refurbished parts repaired by Sensus is ninety (90) days from the date of shipment, unless repaired pursuant to a warranty, in which case the repair is warranted for the time remaining of the original warranty period.


a. Except for the Sonix meters, Sensus warrants the Sensus gas products to be in compliance with their respective specifications under normal use and service, and to be free from material defects in materials and workmanship for a warranty period of twelve (12) months from the date of shipment. The warranty period for repaired or refurbished parts repaired by Sensus is ninety (90) days from the date of shipment, unless repaired pursuant to a warranty, in which case the repair is warranted for the time remaining of the original warranty period.

b. Sensus warrants the Sensus gas SmartPoint Modules as set forth in the “G500” warranty.

4. Water Meters and Water SmartPoint Modules. Sensus warrants the Sensus water meters and Sensus water SmartPoint Modules as set forth in the “G500” warranty.

5. VantagePoint® Lighting Control Module. Sensus warrants the Sensus VantagePoint® Lighting Control Module to be in compliance with their respective specifications under normal use and service, and to be free from material defects in materials and workmanship for a warranty period of ten (10) years from the date of shipment. The warranty period for new spare parts and components sold by Sensus is twelve (12) months from the date of shipment. The warranty period for repaired or refurbished parts repaired by Sensus is ninety (90) days from the date of shipment, unless repaired pursuant to a warranty, in which case the repair is warranted for the time remaining of the original warranty period.

6. DA Devices and HAN Devices. Sensus warrants the Sensus DA Devices and Sensus HAN Devices to be in compliance with their respective specifications under normal use and service, and to be free from material defects in materials and workmanship for a warranty period of twelve (12) months from the date of shipment. The warranty period for new spare parts and components sold by Sensus is twelve (12) months from the date of shipment. The warranty period for repaired or refurbished parts repaired by Sensus is ninety (90) days from the date of shipment, unless repaired pursuant to a warranty, in which case the repair is warranted for the time remaining of the original warranty period.

7. RF Field Equipment. Sensus warrants the Sensus RF Field Equipment to be in compliance with their respective specifications under normal use and service, and to be free from material defects in materials and workmanship for a warranty period of twelve (12) months from the date of shipment.


9. Third Party Goods. Notwithstanding anything to the contrary herein, Sensus does not warrant any goods manufactured or software supplied by third parties. For example, if Customer elects to buy meters from a third party, the Sensus SmartPoint Modules installed in such third party meters shall, subject to Section 11, below, be
shall be a matter directly between Customer and such third party meter supplier.

10. Services. Sensus warrants that its services shall, at the time of performance, materially conform to the contract requirements, and shall be performed in a professional and workmanlike manner, free from material defects in workmanship. Services shall be performed within the rules and regulations of the Occupational Safety and Health Act of 1970 (as amended).

11. Remedy.

a. If any Field Device or RF Field Equipment fails during the applicable warranty period (a “Failed Good”), Sensus’ obligation, and Customer’s exclusive remedy, is, at Sensus’ option, to either (i) repair or replace the Failed Good, provided the Customer (a) returns the product to the location designated by Sensus within the warranty period; and (b) prepays the freight costs both to and from such location; or (ii) deliver replacement components to the Customer, provided the Customer installs, at its cost, such components in or on the Failed Good (as instructed by Sensus). In all cases, Customer shall be responsible for returning the Failed Good to Sensus, and Sensus shall provide the City a prepaid freight manifest or UPS account to cover all costs associated with the return of the Failed Good, and Sensus shall be responsible for shipping the repaired or replaced good back to Customer’s warehouse. If Sensus determines that the returned good is not defective, Customer shall pay for and/or reimburse Sensus for all expenses incurred by Sensus in repairing or replacing the returned good.

b. Customer’s remedy under the warranty for services shall be, at Sensus’ sole cost and expense, to correct or re-perform any defective or non-conforming services to assure compliance with the contract requirements.

c. THIS SECTION 11 SETS FORTH CUSTOMER’S SOLE REMEDY WITH RESPECT TO A FAILED GOOD OR ANY DEFECTIVE OR NON-CONFORMING SERVICE.

12. Warranty Exceptions. This General Limited Warranty does not include costs for removal or installation of products, or costs for replacement labor or materials, which are the responsibility of the Customer. The warranties in this General Limited Warranty do not apply to, and Sensus has no liability for, goods that have been: installed improperly or in non-recommended installations (by parties other than Sensus or its installation subcontractor); installed to a socket that is not functional, or is not in safe operating condition, or is damaged, or is in need of repair; tampered with; modified or repaired with parts or assemblies not certified in writing by Sensus, including without limitation, communication parts and assemblies; improperly modified or repaired (including as a result of modifications required by Sensus); converted; altered; damaged; read by equipment not approved by Sensus; for water meters, used with substances other than water, used with non-potable water, or used with water that contains dirt, debris, deposits, or other impurities; subjected to misuse, improper storage, improper care, improper maintenance, or improper periodic testing (collectively, “Exceptions.”). If Sensus identifies any Exceptions during examination, troubleshooting or performing any type of support on behalf of Customer, then Customer shall pay for and/or reimburse Sensus for all expenses incurred by Sensus in repairing or replacing any Equipment that satisfies any of the Exceptions defined above. The above warranties do not apply in the event of Force Majeure, as defined in the Terms of Sale.

13. Definitions. Any terms used in this General Limited Warranty as defined terms, and which are not defined herein, shall have the meanings given to those terms in the Terms of Sale.

a. “Agreement” means this General Limited Warranty, Customer’s purchase order (except any Additional Terms), Sensus’ Acknowledgement Form (if any),

b. “DA Devices” means RTMs and RTUs.

c. “Echo Transceiver” (formerly “FlexNet Network Portal” and “FNP”) identifies the Sensus standalone, mounted relay device that takes the radio frequency readings from the SmartPoint Modules and relays them by radio frequency to the relevant FlexNet Base Station.

d. “End User” means any end user of electricity/water/gas that pays Customer for the consumption of electricity/water/gas, as applicable.

e. “Equipment” means the Field Devices, RF Field Equipment, Server Hardware, and any other goods sold hereunder.

f. “FlexNet Base Station” (formerly “Tower Gateway Base Station” and “TGB”) identifies the Sensus manufactured device consisting of one transceiver, to be located on a tower that receives readings from the SmartPoint Modules and relays them by radio frequency to the relevant FlexNet Base Station.

| Page 99 of 133 |
g. “Field Devices” means the meters, SmartPoint Modules, DA Devices and HAN Devices.

h. “Force Majeure” shall have the meaning set forth in the Terms of Sale.

i. “HAN Devices” means the PCTs, IHDs and LCMs.

j. “IHDs” means the in-home displays.

k. “In/Out Costs” means any costs and expenses incurred by Customer in transporting goods between its warehouse and its End User’s premises and any costs and expenses incurred by Customer in installing, uninstalling and removing goods.

l. “LCMs” means the load control modules.

m. “PCTs” means the programmable controllable thermostats.

n. “Remote Transceiver” (formerly “FlexNet Remote Portal” and “FRP”) identifies the Sensus standalone, mounted relay device that takes the radio frequency readings from the SmartPoint Modules and relays them directly to the RNI by TCP/IP backhaul communication.

o. “RNI” identifies the regional network interfaces consisting of hardware and software used to gather, store, and report data collected by the FlexNet Base Stations from the SmartPoint Modules.


q. “RTMs” means the telemetric remote telemetry modules.

r. “RTUs” means telemetric MicroRTU (T866).

s. “Server Hardware” means the RNI hardware and the FlexServer hardware.

t. “SmartPoint™ Modules” identifies the Sensus transmission devices installed on devices such as meters, distribution automation equipment and demand/response devices located at Customer’s End Users’ premises that take the readings of the meters and transmit those readings by radio frequency to the relevant FlexNet Base Station, Remote Transceiver or Echo Transceiver.
1. General Product Coverage. Unless otherwise provided herein, Sensus USA Inc. ("Sensus") warrants its products and parts to be free from defects in material and workmanship for one (1) year from the date of Sensus shipment and as set forth below.

   All products covered by this Sensus Limited Warranty shall:
   a) be new, unless otherwise agreed in advance by City;
   b) have good marketable title; and
c) unless specified to the contrary on the face hereof, will be free from defects in material and workmanship and will be free of all items and encumbrances and will conform to any affirmation of facts made on the container or label.

2. SR II and accuSTREAM™ 5/8", 3/4" & 1" Meters are warranted to perform to new meter accuracy level set forth in the SR II and accuSTREAM Data Sheets available at sensus.com for five (5) years from the date of Sensus shipment or until the registration shown below, whichever occurs first. Sensus further warrants that the SR II and accuSTREAM meters will perform to all AWWA Required Meter Accuracy Standards, for fifteen (15) years from the date of Sensus shipment or until the registration shown below, whichever occurs first.

<table>
<thead>
<tr>
<th>New Meter Accuracy</th>
<th>Repair Meter Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1500,000 gallons</td>
<td>1,500,000 gallons</td>
</tr>
<tr>
<td>750,000 gallons</td>
<td>2,250,000 gallons</td>
</tr>
<tr>
<td>1,000,000 gallons</td>
<td>3,000,000 gallons</td>
</tr>
</tbody>
</table>

3. ally™ Meters that register water flow are warranted to perform to the accuracy level set forth in the ally Data Sheet available at sensus.com for fifteen (15) years from the Date of Installation, but no longer than sixteen (16) years from date of manufacture, not including the meter's sensors, valves, and gear motor, which are warranted under different terms described below. As used herein, "Date of Installation" means the date after which the ally Meter has been out of empty pipe for seven (7) consecutive days, as these days are measured by the ally Meter and stored in the meter's nonvolatile memory.

4. IFPEL™ Meters that register water flow are warranted to perform to the accuracy levels set forth in the IFPEL Data Sheet available at sensus.com for twenty (20) years from the date of Sensus shipment. The IFPEL System Component warranty does not include the internal housing.

5. SR II maincases are warranted to be free from defects in material and workmanship for twenty-five (25) years from the date of Sensus shipment; ally™ maincases will be free from defects in material and workmanship for fifteen (15) years from the date of Sensus shipment.

   1. Sensus will repair or replace non-performing Gas SmartPoint Modules (configured to the factory setting of six transmissions per day under normal system operation of up to one demand read to each SmartPoint Module per month and up to five firmware downloads during the life of the product) and batteries.

   2. Sensus will repair or replace non-performing CP300 modules (configured at factory setting of four transmissions per day under normal system operation of up to one demand read per month and up to five firmware downloads) during the life of the product and batteries.

   3. Sensus will repair or replace non-performing:
      - IFPEL System Batteries, and/or the IFPEL System footer, the flow sensing and data processing assembly, and the register ("IFPEL System Components")
      - SmartPoint 510/M/220/M/510/M/224/2/4/6 Modules (configured to the factory setting of six transmissions per day under normal system operation of up to one demand read to each SmartPoint Module per month and up to five firmware downloads during the life of the product) and batteries, unless the SmartPoint 510/M/220/M/510/M/224/2/4/6 Module is ever paired with an ally Meter, which event immediately voids the warranty terms to those described in Section 11.

   at no cost for the first fifteen (15) years from the date of Sensus shipment, and for the remaining five (5) years at a prorated percentage, applied towards the published list price in effect for the year the product is accepted by Sensus under warranty conditions according to the following schedule:

<table>
<thead>
<tr>
<th>Years</th>
<th>Replacement Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0%</td>
</tr>
<tr>
<td>10</td>
<td>15%</td>
</tr>
<tr>
<td>15</td>
<td>40%</td>
</tr>
</tbody>
</table>

4. Sensus will repair or replace non-performing Sensus Electronic Register™ with hourly reads for the first ten (10) years from the date of Sensus shipment, and for the remaining ten (10) years, at a prorated percentage, applied towards the published list price in effect for the year the product is accepted by Sensus under warranty conditions according to the following schedule:

<table>
<thead>
<tr>
<th>Years</th>
<th>Replacement Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0%</td>
</tr>
<tr>
<td>10</td>
<td>15%</td>
</tr>
<tr>
<td>15</td>
<td>40%</td>
</tr>
</tbody>
</table>

5. Sensus Smart Gateway Sensor Interface warranty valid only for analog Meter Sample Rates of four times per hour with a Standard Tramped Rate of hourly or greater for the analog channel(s).
11. ally® Meter Batteries and Components, including SmartPoint 510M/520M Modules are warranted to be free from defects in material and workmanship from the Date of Installation, as defined in Section 3, for the period stated below:

<table>
<thead>
<tr>
<th>Batteries</th>
<th>15 years*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensea</td>
<td>5 years</td>
</tr>
<tr>
<td>Valve &amp; Gear Motor</td>
<td>5 years*</td>
</tr>
<tr>
<td>SmartPoint 510M/520M Modules and Batteries</td>
<td>15 years*</td>
</tr>
</tbody>
</table>

12. IPERL and ally Connectors and Cables are warranted to be free from defects in materials and workmanship, under normal use and service, for ten (10) years from the date of SenSus shipment. Noee or fan connectors included with a SenSus product are warranted according to the terms for Third-Party Devices in Section 13.

13. Third-Party Devices are warranted to be free from defects in materials and workmanship, under normal use and service, for one (1) year from the date of SenSus shipment. As used in this SenSus Limited Warranty, “Third Party Devices” means any product, device, or component part used with a SenSus product that is manufactured or sold by any party that is not SenSus. Failure of a Third Party Device which subsequently causes failure to a SenSus device shall be the responsibility of the manufacturer of the Third Party Device.

14. Software. Software supplied and/or licensed by SenSus is supported according to the terms of the applicable software license or usage agreement. SenSus warrants that any network and monitoring services shall be performed in a professional and workmanlike manner.

16. Returns. SenSus’s obligation, and Customer’s exclusive remedy, under this SenSus Limited Warranty is, at SenSus’s option, to either (i) repair or replace the product, provided the Customer (a) returns the product to the location designated by SenSus within the warranty period; and (b) prepaes the freight costs both to and from such location, or (ii) deliver replacement components to the Customer, provided the Customer installs, at its cost, such components in or on the product (as instructed by SenSus), provided that if SenSus requests, the Customer (a) returns the product to the location designated by SenSus within the warranty period; and (b) prepaes the freight costs both to and from such location. Notwithstanding the foregoing, if the product is returned to SEN SUS during the deployment period outlined in Exhibit D, SenSus will cover the freight costs both to and from the customer’s location. In all cases, if Customer does not return the product within the time period designated by SenSus, SenSus will invoice, and Customer will pay within thirty (30) days of the invoice date, for the cost of the replacement product and/or components.

The return of products for warranty claims must follow SenSus’s Returned Materials Authorization (RMA) procedures in Exhibit F.3. Water meter returns must include documentation of the Customer’s test results. Test results must be obtained according to AWWA standards and must specify the meter serial number. The test results will not be valid if the meter is found to contain foreign materials. If Customer chooses not to test a SenSus water meter prior to returning it to SenSus, SenSus will repair or replace the meter, at SenSus’s option, after the meter has been tested by SenSus. The Customer will be charged SenSus’s then current testing fee. All product must be returned in accordance with the RMA process. For all returns, SenSus reserves the right to request meter reading records by serial number to validate warranty claims.

For products that have become discontinued or obsolete (“Obsoleted Product”), SenSus may, at its discretion, replace such Obsolete Product with a different product model (“New Product”), provided that the New Product has substantially similar features as the Obsolete Product. The New Product shall be warranted as set forth in this SenSus Limited Warranty.

THIS SECTION 15 SETS FORTH CUSTOMER’S SOLE REMEDY FOR THE FAILURE OF THE PRODUCTS AND SERVICES TO CONFORM TO THEIR RESPECTIVE WARRANTIES.

<table>
<thead>
<tr>
<th>Years</th>
<th>Replacement Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10</td>
<td>0%</td>
</tr>
<tr>
<td>11</td>
<td>35%</td>
</tr>
<tr>
<td>12</td>
<td>45%</td>
</tr>
<tr>
<td>13</td>
<td>55%</td>
</tr>
</tbody>
</table>

7 Notwithstanding the foregoing, valve and gear motor components of ally Meters are not warranted beyond two thousand (2,000) Valve State Operations, even if the warranty period provided herein has not yet expired. As used herein, “Valve State Operations” means adjustments of the Meter to open, close, or reduce flow.
Return Material Authorization Process

Sensus has a well-documented process to manage the identification and resolution of defects in our products found by customers in the field. The Sensus Quality Management Process attempts to eliminate all field failures. Should the need arise, a Return Material Authorization (RMA) process, detailed in the following section, is used to resolve any failures, defects, or damages to products.

The following defines the RMA processes and requirements specific to Sensus’ North American products including but not limited to water meters, electric meters, gas meters, radios, SmartPoints, hand helds, and infrastructure (hereinafter referred to as “meter”). All of these products are applicable to material receipt, evaluation, replenishment, tracking, and reporting of material via the RMA process. This procedure applies to all nonconforming Sensus products or third-party OEM meters returned by customers or their subcontractors as a result of failure, defect, or damage.

Responsibilities

➢ The Sensus RMA Services department is responsible for the evaluation, testing, and analysis report for all products. They are also responsible for tracking, closure, and report consolidation of all RMAs.

➢ RMA Services is responsible for all product flow, test and repair, system data entry, and maintaining FIFO and deemed priority processing.

➢ Sensus Product Engineering defines, and in some cases performs, non-standard RMA testing and analysis. Product Engineering also coordinates corrective action for repetitive product-related failure modes.

➢ The Sensus RMA Services department and the Sensus Quality departments are responsible for monitoring system data and feedback, issuing corrective and preventative action, and tracking to complete these actions. The RMA Services department is also responsible for tracking and ensuring completeness of any special investigations, reports, and customer generated corrective actions.

➢ The customer’s meter shop manager (or responsible person, per contract terms) is responsible for initiating RMA requests (including documenting problems seen on each product) and properly shipping (at the customer’s expense) only material entered in the RMA tool under a system-generated Sensus RMA number.

RMA categories

RMA returns from the field are classified under the following two broad categories:

Routine RMA returns

The materials returned under this category are field removals affected due to typical failures in the field, commonly identified during routine maintenance or ongoing analysis.
Special Investigation RMA returns

The materials returned under this category are products that are identified by the customer and approved by Sensus to be removed from the field for special investigation. Two examples of Special Investigation RMA returns are unique high bill-complaint meters or five incidents of a new issue in a short time period. Special Investigations are initiated first with a call into Sensus Tech Services at 1-800-METER-IT or by emailing TechServices.Support@xyleminc.com.

It is essential to provide the supporting information to Sensus when a customer experiences a communication module failure in the field. The supporting data should consist of failed meter quantity, the failure mode, and specific failure data. Once this information is provided, upon evaluation, and when applicable, Sensus requests that the meters are returned under a Special Investigation RMA return.

RMA process steps

Common process steps for all RMA categories are as follows:

- The material should be clearly tagged with the reason for removal and the removal date. The customer is responsible for creating and printing reject tickets at the customer’s expense.
- The removed material should be handled with care. Physical damage due to handling can void the warranty coverage of a unit.
- The field team or installation subcontractor delivers these meters to the customer’s meter shop.
- The customer’s meter shop groups the respective meters based on category.
- If the failed material is clearly damaged such that performance testing cannot be reasonably conducted, such material shall not be returned to Sensus under the RMA program unless deemed a design defect.
  - Examples of this type of damage include cracked meters, module bases, or covers; fire damage not caused by the meter; water intrusion due to damage caused by external sources; tampered meters; and meters damaged due to improper installation.
- Material received at RMA with visible physical damage is identified as ‘customer-induced damage.’
- There are two ways to enter a return, (1) directly through the Sensus Portal, and (2) by contacting Sensus Customer Service. The meter IDs, serial numbers, and problem types (by meter) need to be available at the time of RMA creation at Sensus. After successful RMA creation, a unique RMA number, alongside shipping information, will be made available.
- Third-party meters that need to be returned require the customer to call our customer service line to have the RMA entered in both the Sensus online tool, as well as in the third party’s web tool.
- Shipments are not accepted in the Sensus RMA department without a unique RMA number. Any material shipped to an address other than what is stated on RMA-generated paperwork is subject to processing delays.
- All failed material must be packaged properly to avoid damage during transport.
Each customer will make a reasonable effort to ship the routine RMA failure material within five to seven days (or per contract terms) of field removal.

The RMA number issued is valid for 30 days from the day of issuance. Material received after 30 days may not be received at the Sensus RMA dock without prior authorization.

Process Flow:

- Contact Customer Service at 1-800-METER4 to NaN RMA
- RMA Case Created
- Customer downloads packing slip
- Product is shipped back to RMA facility
- RMA Evaluation: Materials deemed replace, repair, or return
- Replacement / Returns shipped back to customer

Sensus material receipt and replenishment steps

- Once meters are received by Sensus, they are logged in the web-based RMA system. The receipt date is used as a reference to track and report RMA backlog information.
- If material is damaged during transit, Sensus notifies the customer of the damage.
- Sensus evaluates the returned material and, if needed, repairs or replaces the materials. The target is to have meters triaged and replaced within 50 days of the receipt date.
- Root causes are documented, when applicable.
- Sensus provides monthly RMA status reports to the customer upon request.
- Unless requested to return to the customer, all material dispositioned as “do not replace under warranty” will be properly disposed of 30 days after the test report is issued. Test reports for “do not replace under warranty” products are uploaded into the case for customer review. Material will be shipped back at the customer’s expense.
- Additionally, any meter targeted for the repair line and determined irreparable is replaced. Any meter that is found to be repairable is repaired.

RMA process for network equipment

The RMA process for network equipment is the same as the previously described process for meters. Turnaround times are based on priority, and can be mitigated by stocking the recommended network spare parts. If a network component fails during the warranty period, Sensus makes the determination to repair the component or replace it with new equipment.
Return Material Authorization (RMA) process (short version)

The Sensus Quality Management Process attempts to eliminate all field failures. However, a Return Material Authorization process is used to resolve any failures, defects, or damages to products, should the need arise.

The location of material return varies by product, as we have RMA centers located in several locations in North America, including Morrisville, NC, Dubois, PA, and Uniontown, PA, among others. The RMA tool provides the required paperwork to ship materials back to the appropriate location based on the product serial number and product type.

Sensus has a well-documented process to manage the identification and resolution of defects in our products found by customers in the field. We are happy to provide additional details on the Sensus RMA process upon request.
Exhibit G – Certified Propagation Study
(FSR 11443)

Electric

Water

Gas
EXHIBIT H
DIR REGISTRATION FOR PUBLIC WORKS CONTRACTS

This Exhibit shall apply only to a contract for public works construction, alteration, demolition, repair or maintenance work. CITY will not accept a bid proposal from or enter into this Agreement with SENSUS without proof that SENSUS and its listed subcontractors are registered with the California Department of Industrial Relations ("DIR") to perform public work, subject to limited exceptions. City requires SENSUS and its listed subcontractors, if any, to comply with all applicable requirements of the California Labor Code including but not limited to Labor Code Sections 1720 through 1861, and all applicable related regulations, including but not limited to Subchapter 3, Title 8 of the California Code of Regulations Section 16000 et seq., as amended from time to time. This Exhibit H applies in addition to the provisions of Section 26 (Prevailing Wages and DIR Registration for Public Works Contracts) of the Agreement.

CITY provides notice to SENSUS of the requirements of California Labor Code Section 1771.1(a), which reads:

“A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.”

This Project is subject to compliance monitoring and enforcement by DIR. All contractors must be registered with DIR per Labor Code Section 1725.5 in order to submit a bid. All subcontractors must also be registered with DIR. No contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with DIR. Additional information regarding public works and prevailing wage requirements is available on the DIR web site (see e.g. http://www.dir.ca.gov) as amended from time to time.

CITY gives notice to SENSUS and its listed subcontractors that SENSUS is required to post all job site notices prescribed by law or regulation.

SENSUS shall furnish certified payroll records directly to the Labor Commissioner (DIR) in accordance with Subchapter 3, Title 8 of the California Code of Regulations Section 16461 (8 CCR Section 16461).

CITY requires SENSUS and its listed subcontractors to comply with the requirements of Labor Code Section 1776, including but not limited to:

Keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by, respectively, SENSUS and its listed subcontractors, in connection with the Project.

Professional Services
Rev. Dec. 15, 2020
The payroll records shall be verified as true and correct and shall be certified and made available for inspection at all reasonable hours at the principal office of SENSUS and its listed subcontractors, respectively.

At the request of CITY, acting by its Project Manager, SENSUS and its listed subcontractors shall make the certified payroll records available for inspection or furnished upon request to the CITY Project Manager within ten (10) days of receipt of CITY’s request.

☐ CITY requests SENSUS and its listed subcontractors to submit the certified payroll records to CITY’s Project Manager at the end of each week during the Project.

If the certified payroll records are not provided as required within the 10-day period, then SENSUS and its listed subcontractors shall be subject to a penalty of one hundred dollars ($100.00) per calendar day, or portion thereof, for each worker, and CITY shall withhold the sum total of penalties from the progress payment(s) then due and payable to SENSUS.

Inform CITY’s Project Manager of the location of SENSUS’s and its listed subcontractors’ payroll records (street address, city and county) at the commencement of the Project, and also provide notice to CITY’s Project Manager within five (5) business days of any change of location of those payroll records.

Eight (8) hours labor constitutes a legal day’s work. SENSUS shall forfeit as a penalty to CITY, $25.00 for each worker employed in the execution of the Agreement by SENSUS or any subcontractor for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day or forty (40) hours in any one calendar week in violation of the provisions of the Labor Code, and in particular, Sections 1810 through 1815 thereof, except that work performed by employees of SENSUS or any subcontractor in excess of eight (8) hours per day, or forty (40) hours during any one week, shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day, or forty (40) hours per week, at not less than one and one-half (1 1/2) times the basic rate of pay, as provided in Section 1813.

SENSUS shall secure the payment of workers’ compensation to its employees as provided in Labor Code Sections 1860 and 3700 (Labor Code 1861). SENSUS shall sign and file with the CITY a statutorily prescribed statement acknowledging its obligation to secure the payment of workers’ compensation to its employees before beginning work (Labor Code 1861). SENSUS shall post job site notices per regulation (Labor Code 1771.4(a)(2)).

SENSUS shall comply with the statutory requirements regarding employment of apprentices including without limitation Labor Code Section 1777.5. The statutory provisions will be enforced for penalties for failure to pay prevailing wages and for failure to comply with wage and hour laws.
Exhibit I
Claims for Public Contract Code Section 9204 Public Works Projects

The provisions of this Exhibit are provided in compliance with Public Contract Code Section 9204; they provide the exclusive procedures for any claims pursuant to Public Contract Code Section 9204 related to the Services performed under this Agreement.

1. **Claim Definition.** “Claim” means a separate demand by the Contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

   (A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by the City.
   (B) Payment by the City of money or damages arising from the Services performed by, or on behalf of, the Contractor pursuant to the Agreement and payment for which is not otherwise expressly provided or to which the Contractor is not otherwise entitled.
   (C) Payment of an amount that is disputed by the City.

2. **Claim Process.**

   (A) **Timing.** Any Claim must be submitted to City in compliance with the requirements of this Exhibit no later than fourteen (14) days following the event or occurrence giving rise to the Claim. This time requirement is mandatory; failure to submit a Claim within fourteen (14) days will result in its being deemed waived.

   (B) **Submission.** The Claim must be submitted to City in writing, clearly identified as a “Claim” submitted pursuant to this Exhibit, and must include reasonable documentation substantiating the Claim. The Claim must clearly identify and describe the dispute, including relevant references to applicable portions of the Agreement, and a chronology of relevant events. Any Claim for additional payment must include a complete, itemized breakdown of all labor, materials, taxes, insurance, and subcontract, or other costs. Substantiating documentation such as payroll records, receipts, invoices, or the like, must be submitted in support of each claimed cost. Any Claim for an extension of time or delay costs must be substantiated with schedule analysis and narrative depicting and explaining claimed time impacts.

   (C) **Review.** Upon receipt of a Claim in compliance with this Exhibit, the City shall conduct a reasonable review of the Claim and, within a period not to exceed 45 days from receipt, shall provide the Contractor a written statement identifying what portion of the Claim is disputed and what portion is undisputed. Upon receipt of a Claim, the City and Contractor may, by mutual agreement, extend the time period provided in this paragraph 2.

   (D) **If City Council Approval Required.** If the City needs approval from the City Council to provide the Contractor a written statement identifying the disputed portion and the undisputed portion of the Claim, and the City Council does not act within the 45 days or within the mutually agreed to extension of time following receipt of a Claim sent by registered mail or certified mail, return receipt requested, the City shall have up to three days following the next duly publicly noticed meeting of the City Council after the 45-day period, or extension, expires to provide the Contractor a written statement identifying the disputed portion and the undisputed portion.

   (E) **Payment.** Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the City issues its written statement. If the City fails to issue a written statement, paragraph 3, below, shall apply.
3. **Disputed Claims**

   (A) **Meet and Confer.** If the Contractor disputes the City’s written response, or if the City fails to respond to a Claim submitted pursuant to this Exhibit within the time prescribed, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the City shall schedule a meet and confer conference within 30 days for settlement of the dispute. Within 10 business days following the conclusion of the meet and confer conference, if the Claim or any portion of the Claim remains in dispute, the City shall provide the Contractor a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the City issues its written statement.

   (B) **Mediation.** Any remaining disputed portion of the Claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the City and the Contractor sharing the associated costs equally. The City and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the Claim has been identified in writing by the Contractor. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the Claim remaining in dispute shall be subject to any other remedies authorized by the Agreement and laws.

   (i) For purposes of this paragraph 3.B. mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

   (ii) Unless otherwise agreed to by the City and the Contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation, if any, under Public Contract Code Section 20104.4 to mediate after litigation has commenced.

4. **City’s Failure to Respond.** Failure by the City to respond to a Claim from the Contractor within the time periods described in this Exhibit or to otherwise meet the time requirements of this Exhibit shall result in the Claim being deemed rejected in its entirety. A Claim that is denied by reason of the City’s failure to have responded to a Claim, or its failure to otherwise meet the time requirements of this Exhibit, shall not constitute an adverse finding with regard to the merits of the Claim or the responsibility or qualifications of the Contractor.

5. **Interest.** Amounts not paid in a timely manner as required by this section shall bear interest at seven (7) percent per annum.

6. **Approved Subcontractor Claims.** If an approved subcontractor or a lower tier subcontractor lacks legal standing to assert a Claim against the City because privity of contract does not exist, the Contractor may present to the City a Claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the Contractor present a Claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the Claim be presented to the City shall furnish reasonable documentation to support the Claim. Within 45 days of receipt of this written request, the Contractor shall notify the subcontractor in writing as to whether the
Contractor presented the claim to the City and, if the Contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

7. **Waiver of Provisions:** A waiver of the rights granted by Public Contract Code Section 9204 is void and contrary to public policy, provided, however, that (1) upon receipt of a Claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable, and (2) the City may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of Public Contract Code Section 9204, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.
EXHIBIT "J"
INSURANCE REQUIREMENTS

CONTRACTORS TO THE CITY OF PALO ALTO (CITY), AT THEIR SOLE EXPENSE, SHALL FOR THE TERM OF THE CONTRACT OBTAIN AND MAINTAIN INSURANCE IN THE AMOUNTS FOR THE COVERAGE SPECIFIED BELOW, AFFORDED BY COMPANIES WITH AM BEST’S KEY RATING OF A-VIL OR HIGHER AUTHORIZED TO TRANSACT INSURANCE BUSINESS IN THE STATE OF CALIFORNIA.

AWARD IS CONTINGENT ON COMPLIANCE WITH CITY’S INSURANCE REQUIREMENTS, AS SPECIFIED, BELOW:

<table>
<thead>
<tr>
<th>REQUIRED</th>
<th>TYPE OF COVERAGE</th>
<th>REQUIREMENT</th>
<th>MINIMUM LIMITS</th>
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<tbody>
<tr>
<td>YES</td>
<td>WORKER’S COMPENSATION</td>
<td>STATEMENT STATUTORY</td>
<td>EACH OCCURRENCE $2,000,000</td>
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<tr>
<td>YES</td>
<td>EMPLOYER’S LIABILITY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>GENERAL LIABILITY, INCLUDING PERSONAL INJURY, BROAD FORM PROPERTY DAMAGE BLANKET CONTRACTUAL, AND FIRE LEGAL LIABILITY</td>
<td>BODILY INJURY</td>
<td>$2,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PROPERTY DAMAGE</td>
<td>$2,000,000</td>
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<td></td>
<td></td>
<td>BODILY INJURY &amp; PROPERTY DAMAGE COMBINED</td>
<td>$2,000,000</td>
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<tr>
<td>YES</td>
<td>AUTOMOBILE LIABILITY, INCLUDING ALL OWNED, HIRED, NON-OWNED</td>
<td>BODILY INJURY - EACH PERSON</td>
<td>$2,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- EACH OCCURRENCE</td>
<td>$2,000,000</td>
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<tr>
<td></td>
<td></td>
<td>PROPERTY DAMAGE</td>
<td>$2,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BODILY INJURY &amp; PROPERTY DAMAGE COMBINED</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>NO</td>
<td>PROFESSIONAL LIABILITY, INCLUDING ERRORS AND OMISSIONS, MALPRACTICE (WHEN APPLICABLE), AND NEGLIGENT PERFORMANCE</td>
<td>ALL DAMAGES</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>YES</td>
<td>POLLUTION LIABILITY</td>
<td>ALL DAMAGES</td>
<td>$5,000,000</td>
</tr>
</tbody>
</table>

YES THE CITY OF PALO ALTO IS TO BE NAMED AS AN ADDITIONAL INSURED: CONTRACTOR, AT ITS SOLE COST AND EXPENSE, SHALL OBTAIN AND MAINTAIN, IN FULL FORCE AND EFFECT THROUGHOUT THE ENTIRE TERM OF ANY RESULTANT AGREEMENT, THE INSURANCE COVERAGE HEREIN DESCRIBED, INSURING NOT ONLY CONTRACTOR AND ITS SUBCONTRACTORS, IF ANY, BUT ALSO, WITH THE EXCEPTION OF WORKER’S COMPENSATION, EMPLOYER’S LIABILITY AND PROFESSIONAL INSURANCE, NAMING AS ADDITIONAL INSURED: CITY, ITS COUNCIL MEMBERS, OFFICERS, AGENTS, AND EMPLOYEES.

I. INSURANCE COVERAGE MUST INCLUDE A PROVISION FOR A WRITTEN THIRTY-DAY ADVANCE NOTICE TO CITY OF CHANGE IN COVERAGE OR OF COVERAGE CANCELLATION.

II. CONTRACTOR MUST SUBMIT CERTIFICATE(S) OF INSURANCE EVIDENCING REQUIRED COVERAGE AT THE FOLLOWING URL: https://www.planetbids.com/portal/portal.cfm?CompantID=25589

Rev. 2020
EXHIBIT “J”
INSURANCE REQUIREMENTS

III. ENDORSEMENT PROVISIONS, WITH RESPECT TO THE INSURANCE AFFORDED TO ‘ADDITIONAL INSUREDS’

A. PRIMARY COVERAGE

WITH RESPECT TO CLAIMS ARISING OUT OF THE OPERATIONS OF THE NAMED INSURED, INSURANCE AS AFFORDED BY THIS POLICY IS PRIMARY AND IS NOT ADDITIONAL TO OR CONTRIBUTING WITH ANY OTHER INSURANCE CARRIED BY OR FOR THE BENEFIT OF THE ADDITIONAL INSUREDS.

B. CROSS LIABILITY

THE NAMING OF MORE THAN ONE PERSON, FIRM, OR CORPORATION AS INSUREDS UNDER THE POLICY SHALL NOT, FOR THAT REASON ALONE, EXTINGUISH ANY RIGHTS OF THE INSURED AGAINST ANOTHER, BUT THIS ENDORSEMENT, AND THE NAMING OF MULTIPLE INSUREDS, SHALL NOT INCREASE THE TOTAL LIABILITY OF THE COMPANY UNDER THIS POLICY.

C. NOTICE OF CANCELLATION

1. IF THE POLICY IS CANCELED BEFORE ITS EXPIRATION DATE FOR ANY REASON OTHER THAN THE NON-PAYMENT OF PREMIUM, THE CONTRACTOR SHALL PROVIDE CITY AT LEAST A THIRTY (30) DAY WRITTEN NOTICE BEFORE THE EFFECTIVE DATE OF CANCELLATION.

2. IF THE POLICY IS CANCELED BEFORE ITS EXPIRATION DATE FOR THE NON-PAYMENT OF PREMIUM, THE CONTRACTOR SHALL PROVIDE CITY AT LEAST A TEN (10) DAY WRITTEN NOTICE BEFORE THE EFFECTIVE DATE OF CANCELLATION.

Vendors are required to file their evidence of insurance and any other related notices with the City of Palo Alto at the following URL:

https://www.planetbids.com/portal/portal.cfm?CompanyId=25569
OR
http://www.cityofpaloalto.org/gov/depts/asd/planet_bids_how_to.asp

Rev. 2020
Xylem Privacy Statement

Thank you for visiting the Xylem website. Xylem and its operating divisions and subsidiaries (collectively “Xylem”, “We”, “Us”, or “The Company”) maintain and operate this and other websites (collectively, the “Xylem Sites” or “Sites”) and are committed to safeguarding your privacy.

This Privacy Statement is meant to help you understand what data we collect, how we use it, and what safeguards are in place to protect your data on the Sites. This Privacy Statement also applies to information collected offline through trade shows, seminars, conferences, or through other activities.

SUMMARY OF KEY POINTS

WHAT INFORMATION DOES XYLEM COLLECT?

Xylem collects the following types of information about you when you visit our Sites (collectively, “Personal Data”) or through the offline means described above:

- If you visit our sites, we automatically collect your domain name and/or IP address;
- If you communicate with us by email, we collect your email address;
- If you seek employment with us and provide us with information through offline means, we collect information in connection with employment opportunities, through our online recruiting tool;
- Otherwise, Personal Data is only collected on Xylem Sites or via offline means if you voluntarily choose to provide it. Such Personal Data includes your name and/or that of your employer, title, address, telephone number and email address as well as account or transaction information collected as part of our business relationship with you.

HOW THE COMPANY USES YOUR PERSONAL DATA

We collect your Personal Data in order to:

- Conduct our business, including providing you the products or services you requested;
- Send you marketing communications about new or updates to our existing products and services;
- Comply with our legal obligations;
- Maintain and improve our Sites and tailor the user experience;
- Protect the security of you and the Sites;
- Provide customer service and otherwise administer our business relationship with you.

As required by applicable law, we rely on several different legal bases to collect, use, and share your Personal Data:

- Necessity to Perform Contract with You - we need to process your Personal Data to provide our products and services, ensure products and services are working as they should, answer questions and requests from you, manage our business relationship with you and provide customer support;
- Compliance with Legal Obligations - we need to process your Personal Data to comply with relevant laws, regulatory requirements and to respond to lawful requests, court orders, and legal process;
- Consent for Direct Marketing Communications - we rely on your consent to send you direct marketing, which you can unsubscribe from at any time by clicking the unsubscribe link in the relevant communications or contact us as detailed below; and
- Based on Legitimate Interests - we process your Personal Data to protect your security and the security of the Sites; to detect and prevent fraud; to protect and defend the rights or property of others, or our own rights and interests; and to maintain and improve the user experience.
We do not use automated decision-making, or perform data profiling, that is, in a way that produces legal effects concerning you or significantly affects you.

You are not required to provide all Personal Data identified in this Privacy Statement to use our Sites or to interact with us offline, but certain functionality will not be available if you do not provide certain Personal Data. If you do not provide certain Personal Data, we may not be able to respond to your requests, perform a transaction with you, or provide you with marketing that we believe you would find valuable.

ARE COOKIES USED ON XYLEM SITES?

In addition to a domain name and/or IP address, Xylem collects information about you automatically when you visit our Sites. The information that is automatically collected does not include your name, address, telephone number, or email address. This information tells us such things as how many users visited our site and the pages they have accessed. By collecting this information, we learn how to best tailor our Sites for our current and future visitors. To collect this information, we use a number of different analytics, media optimization tools, analytics tags and pixel tracking activity through ‘cookie’ technology or with ‘web beacons,’ as explained below:

- **Cookies**
  
  A cookie is a small text file that is placed on your computer’s hard drive by your web browser when you first visit the Site. Xylem uses cookies to both ensure functioning of the site as well as record user-specific information on what pages you visited as well as record past activities on our site in order to provide better service when visitors return to our site. There are two kinds of cookies that Xylem uses:

  - **Session Cookies** - also called a transient cookie, a session cookie stores information about a user on its temporary memory so that it can remember something about you when you are visiting that site. Session cookies do not collect information from your computer and are erased when you close your Web browser.

  - **Persistent Cookies** - Also called a permanent cookie, or a stored cookie, a persistent cookie collects identifying information about the user including web-surfing behavior and user preferences for a specific website. Persistent cookies are set with an expiration date and stored on your hard drive until it expires or until you delete from your computer.

In some instances, cookies may enhance your online experience by saving your preferences while you are visiting a particular site. Most Internet browsers accept cookies automatically, but usually you can change the settings of your browser to erase cookies or prevent automatic acceptance altogether if you prefer. Please be advised that if you choose to not allow browser cookies, you may not be able to take full advantage of all the website features offered by Xylem.

- **Web Beacons**

  Certain pages on our website(s) contain ‘web beacons’ also known as internet tags, pixel tags and clear GIFs. A web beacon is a small graphic image placed on the web page designed to allow Xylem to monitor incoming traffic and obtain information such as the IP address of the computer that downloaded the page on which the beacon appears as well as the URL of the page, the time the page was viewed, the type of browser used to view the page, and the information in cookies set by the third party. We also use web beacons to recognize a unique cookie on your web browser, which enables us to learn which advertisements brought you to our website(s).

In order to help gather more information about site usage, all Xylem Sites use advertising, analytics, media cookies and tags powered by tools such as Yahoo, Google, Adobe, Omniture, Rubicon and others. Additionally, the Sites also use Google Analytics, a web analytics service provided by Google, Inc. (“Google”), which also uses cookies. The information generated by the cookie about your use of the website
xylem

(including your IP address) is transmitted to and stored by Google on servers in the United States. Google uses this information for the purpose of evaluation activity, compiling website reports and providing other services relating to website activity usage. Google may also transfer this information to third parties where required to do so by law, or where such third parties process the information on Google’s behalf.

The information collected by all cookies and web beacons includes general information about your computer settings, your connection to the Internet, the operating system and platform, IP address, your browsing patterns and timings of browsing on the site and geographical location. It does not contain your name, address, telephone number, or email address.

In order to help gather more information about site usage, xyleminc.com and its affiliated sites use advertising, analytics, media cookies and tags, including:

| Collection of data through Internet Service provider (ip address, time, location, browser, etc) |
|---|---|
| Cookies | contact form |
| transfer of personal data | Google Analytics |
| Facebook | Twitter |
| Google +1 | LinkedIn |
| Xing | YouTube |
| Google Adsense | Google Analytics Remarketing |
| Comments in a blog | Google AdWords and conversion tracking |
| BrightEdge | Lead Forensics |
To learn more about certain cookies used for interest based advertising by third parties, including through cross-device tracking, and to exercise certain choices regarding such cookies, please visit the Digital Advertising Alliance, Network Advertising Initiative, Digital Advertising Alliance-Canada, European Interactive Digital Advertisers Alliance or your device settings for if you have the DAA or other mobile app.

Do-Not Track: At this time, our Site is not configured to honor browsers' "Do Not Track" signals.

HOW THE COMPANY SHARES YOUR PERSONAL DATA WITH THIRD PARTIES

- If we are requested to disclose Personal Data by law, court of law, or as requested by a governmental or law enforcement authority, we may do so.
- We may pass your Personal Data or details of your use of the website to other companies within the Xylem group of companies.
- We may share information as necessary to prevent fraud or other illegal activities, such as willful attacks on Xylem's information technology systems, and as necessary to establish or preserve a legal claim or defense.
- Xylem does not sell to third parties any Personal Data derived from a visitor's visit to or use of a Xylem Site except as part of the sale of a subsidiary or of all or substantially all of the assets of an operating division, which subsidiary or division collected or uses such information in the ordinary course of business.
- Xylem takes appropriate steps to keep Personal Data confidential and only discloses this information to personnel in a Xylem firm or a third party that needs to have access to the information for legitimate business purposes. We may make your information available to our distributors, sales representatives or other business affiliates so that they may respond to a visitor's inquiry or provide information about our own or related goods or services that we believe support your business needs.

LINKS TO THIRD-PARTY WEBSITES

Occasionally, Xylem Sites may provide links to the web sites of our distributors, sales representatives or other business affiliates. In these situations, we are not responsible for the content or privacy practices they employ and encourage you to read their own privacy disclosures.

HOW THE COMPANY STORES, TRANSFERS, OR PROCESSES YOUR PERSONAL DATA ACROSS BORDER

As permitted by applicable law, Xylem may transmit the Personal Data we collect on Xylem Sites to representatives, global affiliates, and service providers in the United States or other countries where we do business that are outside your home country, and have different standards of data protection than your home country. We provide appropriate protections for cross-border transfers as required by law, including information transferred to third parties. With respect to such transfers from the European Economic Area ("EEA") to the United States and other non-EEA jurisdictions, we may rely on European Union ("EU") Model Clauses and Binding Corporate Rules and/or the need to process your information in order to provide the requested services (e.g., performance of a contract) to transfer your Personal Data. As permitted by applicable law, you may request details about the suitable safeguards we have in place by contacting us as described below.

YOUR RIGHTS
As permitted by applicable law, you may have the right to obtain confirmation of the existence of certain Personal Data relating to you, to verify its content, origin, and accuracy, as well as the right to access, review, port, delete, or to block or withdraw consent to the processing of certain Personal Data (without affecting the lawfulness of processing based on consent before its withdrawal), by contacting us at datasubject.requests@xyleminc.com. Please note that we may need to retain certain Personal Data as required or permitted by applicable law.

YOUR CHOICES

You have the following choices regarding our use and disclosure of your Personal Data:

- **Marketing Communications.** If you no longer wish to receive any marketing communications, remain on a mailing list to which you previously subscribed or receive any other communication from Xylem, please follow the unsubscribe link in the relevant communications or contact us using the link below.
- **Cookies and Similar Technologies.** Please review your browser or computer settings for certain cookies and see above to exercise certain choices regarding cookies.

HOW THE COMPANY RETAINS YOUR PERSONAL DATA

- Xylem only retains your Personal Data for the minimum amount of time necessary to accomplish the purpose for which it was collected.

HOW THE COMPANY PROTECTS THE SECURITY OF YOUR INFORMATION

Xylem uses industry-standard encryption technologies when transferring and receiving data exchanged with our site. We have appropriate security measures in place in our physical facilities to protect against loss, misuse or alteration of information that we have collected from you at our site. We also employ reasonable technologies to keep the Personal Data you provide on Xylem Sites secure. Xylem maintains a Data Security Incident Response Plan that would provide notification as required by applicable law in the event of an unlawful or unauthorized disclosure of personal data.

CHANGES TO OUR PRIVACY STATEMENT

Xylem may update this Privacy Statement from time to time as our business (e.g. merger/acquisition) and services change, or as required by law. The effective date of our Privacy Statement is posted above, and we encourage you to visit our Sites periodically to stay informed about Xylem’s privacy practices. We will post the updated version of the Privacy Statement on our Site, and ask for your consent to the changes if legally required to do so.

HOW YOU CAN CONTACT US

- If you have any questions regarding this Privacy Statement or our privacy practices in general, please contact our Director of Global Trade and Data Privacy Compliance with any concerns or inquiries via phone at +1-914-323-5700 or via email at data.privacy@xyleminc.com.
- You may also have a right to lodge a complaint with a supervisory authority.

Rev 1 January 2, 2020
EXHIBIT “L”

CYBERSECURITY TERMS AND CONDITIONS

In order to assure the privacy and security of the personal information of the City's customers and people who do business with the City, including, without limitation, vendors, utility customers, library patrons, and other individuals and companies, who are required to share such information with the City, as a condition of receiving services from the City or selling goods and services to the City, including, without limitation, the Software as a Service services provider (the "Consultant") and its subcontractors, if any, including, without limitation, any Information Technology ("IT") infrastructure services provider, shall design, install, provide, and maintain a secure IT environment, described below, while it renders and performs the Services and furnishes goods, if any, described in the Statement of Work. Exhibit D, to the extent any scope of work implicates the confidentiality and privacy of the personal information of the City's customers. The Consultant shall fulfill the data and information security requirements (the "Requirements") set forth in Part A below.

A "secure IT environment" includes (a) the IT infrastructure, by which the Services are provided to the City, including connection to the City's IT systems; (b) the Consultant's operations and maintenance processes needed to support the environment, including disaster recovery and business continuity planning; and (c) the IT infrastructure performance monitoring services to ensure a secure and reliable environment and service availability to the City. "IT infrastructure" refers to the integrated framework, including, without limitation, data centers, computers, and database management devices, upon which digital networks operate.

In the event that, after the Effective Date, the Consultant reasonably determines that it cannot fulfill the Requirements, the Consultant shall promptly inform the City of its determination and submit, in writing, one or more alternate countermeasure options to the Requirements (the "Alternate Requirements" as set forth in Part B), which may be accepted or rejected in the reasonable satisfaction of the Information Security Manager (the "ISM").

Part A. Requirements:

The Consultant shall at all times during the term of any contract between the City and the Consultant:

(a) Appoint or designate an employee, preferably an executive officer, as the security liaison to the City with respect to the Services to be performed under this Agreement.
(b) Comply with the City's Information Privacy Policy.
(c) Have adopted and implemented information security and privacy policies that are documented, are accessible to the City, and conform to ISO 27001 – Information Security Management Systems (ISMS) Standards by end of Q1 2022.
(d) Conduct routine data and information security training of its personnel that is appropriate to their role.
(e) Develop and maintain detailed documentation of the IT infrastructure, including software versions and patch levels.
(f) Develop an independently verifiable process, consistent with industry standards, for performing professional and criminal background checks of its employees that (1) would permit verification of employees' personal identity and employment status, and (2) would enable the immediate denial of access to the City's confidential data and information by any of its employees who no longer would require access to that information or who are terminated.
(g) Provide a list of IT infrastructure components in order to verify whether the Consultant has met
or has failed to meet any objective terms and conditions.

(h) Implement access accountability (identification and authentication) architecture and support role-based access control ("RBAC") and segregation of duties ("SoD") mechanisms for all personnel, systems, and software used to provide the Services. "RBAC" refers to a computer systems security approach to restricting access only to authorized users. "SoD" is an approach that would require more than one individual to complete a security task in order to promote the detection and prevention of fraud and errors.

(i) Assist the City in undertaking annually an assessment to assure that: (1) all elements of the Services' environment design and deployment are known to the City, and (2) it has implemented measures in accordance with industry best practices applicable to secure coding and secure IT architecture.

(j) Provide and maintain secure intersystem communication paths that would ensure the confidentiality, integrity, and availability of the City's information.

(k) Deploy and maintain IT system upgrades, patches and configurations conforming to current patch and/or release levels by not later than one (1) month after its date of release. Emergency security patches must be installed promptly, in compliance with industry standards such as CVSS V3.1, or applicable industry standard equivalent.

(l) Provide for the timely detection of, response to, and the reporting of security incidents, including on-going incident monitoring with logging.

(m) Notify the City within twenty-four hours of detecting a security incident that results in the unauthorized access to or the misuse of the City's confidential data and information or high risk security event.

(n) Inform the City that any third party service provider(s) meet(s) all of the Requirements.

(o) Perform security self-audits on a regular basis and not less frequently than on a quarterly basis, and provide the required summary reports of those self-audits to the ISM on the annual anniversary date or any other date agreed to by the Parties. The audit report shall contain information reasonably similar to those found in SOC2, Type 2 audit control report, providing a high-level indication of conformity or identifying any discrepancies and summarizing all actions taken to address the issue(s).

(p) Accommodate, as practicable, and upon reasonable prior notice by the City, the City's performance of random site security audits at the Consultant's site(s), including the site(s) of a third-party service provider(s), as applicable. The scope of these audits will extend to the Consultant's and its third-party service provider(s) awareness of security policies and practices, systems configurations, access authentication and authorization, and incident detection and response.

(q) Cooperate with the City to ensure that to the extent required by applicable laws, rules and regulations, and the Confidential Information will be accessible only by the Consultant and any authorized third-party service provider's personnel.

(r) Perform regular, reliable secured backups of all data needed to maximize the availability of the Services. Adequately encrypt the City of Palo Alto's data, during the operational process, hosted at rest, and the backup stage at the Vendors' environment (including Vendors' contracting organization's environment).

(s) Maintain records relating to the Services for a period of three (3) years after the expiration or earlier termination of this Agreement and in a mutually agreeable storage medium. Within thirty (30) days after the effective date of expiration or earlier termination of this Agreement, all of those records relating to the performance of the Services shall be provided to the ISM.

(t) Maintain the Confidential Information in accordance with applicable federal, state, and local data and information privacy laws, rules, and regulations.

(u) Encrypt the Confidential Information before delivering the same by electronic mail to the City and or any authorized recipient.
(v) Provide Network Layer IP filtering services to allow access only from the City of Palo Alto’s IP address to the Vendor environment (primarily hosted for the City of Palo Alto).

(w) Offer a robust disaster recovery and business continuity (DR-BCP) solutions to the City for the systems and services the Vendor provides to the City.

(x) Provide and support Single Sign-on (SSO) and Multifactor Authentication (MFA) solutions for authentication and authorization services from the “City’s environment to the Vendor’s environment,” and Vendor’s environment to the Vendor’s cloud services/hosted environment.” The Vendor shall allow two employees of the City to have superuser and super-admin access to the Vendor’s IT environment, and a cloud-hosted IT environment belongs to the City.

(y) Unless otherwise addressed in the Agreement, shall not hold the City liable for any direct, indirect or punitive damages whatsoever including, without limitation, damages for loss of use, data or profits, arising out of or in any way connected with the City’s IT environment, including, without limitation, IT infrastructure communications.

(2) The Vendor must provide evidence of valid cyber liability insurance policy per the City’s EXHIBIT “J” INSURANCE REQUIREMENTS.

Part B. Alternate Requirements:
EXHIBIT M

CITY OF PALO ALTO
EXTENDED PRODUCER RESPONSIBILITY POLICY

POLICY STATEMENT
The City recognizes that it cannot achieve Zero Waste without Extended Producer Responsibility (EPR) and that many products and packaging received from vendors have substantial negative environmental and economic impacts at the end of their useful lives. EPR, or Product Stewardship, means whoever designs, produces, sells or uses a product takes responsibility, both financial and physical, for minimizing its environmental impact through all stages of the product’s life cycle. The producer, having the greatest ability to minimize impacts, has the most responsibility. This policy requires producers, or their agents (i.e., vendors) doing business with the City of Palo Alto, to practice EPR for certain products and packaging, from design through the end of product life. Therefore, effective April 22, 2010, it shall be the Policy of the City of Palo Alto to require vendors of designated products and packaging to take the following actions with respect to covered packaging and products:

1. PACKAGING: Minimize and reduce packaging and require convenient, responsible, timely vendor take-back of designated packaging at the point of delivery at nominal additional cost to the City of Palo Alto.

2. PRODUCTS: Require convenient, responsible, timely vendor take-back (for reuse, recycling or responsible disposal) of designated products at the point of delivery at nominal additional cost to the City of Palo Alto.

This policy shall be implemented to the extent feasible by the management of City contracts, purchase orders and agreements. Designated packaging and products, once identified for inclusion in the Policy, will be listed in the “Procedures” section below. Packaging and products will be added as practical alternatives and options are identified. Identified packaging and products will typically be those that are toxic, costly to manage, contribute to litter or marine debris, lack a convenient infrastructure to recycle and those that are banned from landfills (e.g., electronics, batteries, mercury-containing devices).

The first packaging being considered for designation is expanded plastic packaging. Expanded plastics include, but are not limited to, foam or cushion blocks, trays, and packing “peanuts.” Expanded plastics also include those made from polystyrene (aka Styrofoam™), polyethylene, polypropylene and polyurethane. Expanded plastics are found in creeks, San Francisco Bay, and the oceans of the world. Small pieces of plastic are building up in the plankton zone in oceans where they are ingested by marine animals. Expanded plastics are lightweight, break into small pieces, are extremely difficult to recycle, are of low value, and local recycling markets do not exist.

APPLICABILITY OF THIS POLICY
This policy shall apply to all City operations. This Policy will also be included in the Environmentally Preferable Purchasing Chapter of the Palo Alto Purchasing Manual and the City’s Policies and Procedures Manual and shall be implemented, to the extent feasible, via contracts, purchase orders and agreements.

PROCEDURES
City staff and lessees will all be responsible for adherence to the Policy. Purchasing staff shall assist in assuring that purchasing documents contain the requirement for EPR. Changes to this Policy must be coordinated through the City Managers Office. Questions and/or clarifications of this Policy should be directed to the Public Works Department.
Exhibit N - Network Performance Assurance Services

**Network Performance Assurance Service.** Network Performance Assurance Service, as provided by Sensus to Customer under this Agreement, means only the items listed in Section 1 below. If an item is not included in Section 1 below, it is specifically excluded from Managed Services and is subject to additional pricing.

1. **Sensus Responsibilities.** Sensus shall be responsible for providing the following services to the Customer for so long as Customer is current in its payments for the Network Performance Assurance Service.
   a) Ongoing RF Network Communications Management
      1. Identify, mitigate, and resolve any potential RF interference that may occur
      2. Perform network tuning to maximize RF Field Equipment infrastructure
      3. Network tuning includes reviewing stale meters, read interval success, RF channels, and overall network health, capacity, and performance. Meter configuration and channel configuration changes will be made to ensure optimal performance is being achieved on each channel and frequency
   b) Ongoing Maintenance of the FlexNet Network
      1. Provide ongoing warranty support of RF Field Equipment covered under the Sensus Extended Warranty. For clarity, this includes the components contained within the basestation enclosure, excluding consumable, protective parts such as surge arrestors and fuses. Coaxial cabling, antennas, polyphasers, and vertical assets are also excluded.

2. **Customer Responsibilities**
   a) Customer shall provide adequate internal IT network infrastructure and confirm that it will not affect Sensus’ ability to meet Service Level Objectives
   b) Customer shall be responsible for Field Devices, which includes maintenance and troubleshooting
   c) Customer shall provide and maintain the RF Field Equipment utilities, such as electric power, lighting, security fencing, drainage, vegetation management, etc. as required at each site
   d) Perform routine field preventative maintenance (physical maintenance and RF analysis) in accordance with RF Field Equipment preventative maintenance instructions, to include but not limited to:
      1. Visit RF Field Equipment once every twelve (12) months
      2. Store reports of visits and maintenance logs in a ticketing system
      3. Conduct tests of the voltage standing wave ratio (VSWR) and distance to fault (DTF) of the antenna system
      4. Inspect antenna system
      5. Inspect exterior and interior of cabinet including GPS system
      6. Power monitor and measurement
      7. Software inspection and confirmation
      8. Complete checklist and reporting package with update of site photos
   e) Monitor the RF Field Equipment, FlexNet communications infrastructure, and backhaul communications hardware, (collectively, the “FlexNet Network”) to identify and resolve anomalies within the FlexNet Network to not impact Sensus’ ability to assure meter reading data delivery
   f) Monitor and respond to system outages, trouble ticket generation, and other alerts regarding the FlexNet Network in a timely manner to not impact Sensus’ ability to assure meter reading data delivery
   g) Provide remote firmware maintenance, which includes Patches, Updates, and Upgrades for FlexNet Network software and firmware
   h) Support standard change management controls in accordance with Customer’s change management practices, policies, and procedures
   i) Provide the support, maintenance, and monitoring of the Customer’s dedicated Local Area Network (“LAN”) and or Wide Area Network (“WAN”). Sensus shall not be responsible for performance and availability of the LAN or WAN networks outside of Sensus’ control

3. **Service Level Objectives (“SLO”)**. All SLOs are measured by the calendar month. Sensus will report on the SLOs as defined below within ten (10) business days of the end of each month.
   a) **Network Performance Assurance**
      1. **Gas & Water Field Devices**
(i) For water and gas Field Devices, Sensus will assure the delivery of billing data from Available Meters covered by the FlexNet Network. Customer will be responsible to ensure Field Devices are in a status to ensure data delivery, such as ensuring the endpoints are installed and properly maintained. This will be measured by the number of Available Meters that deliver a register reading within their seventy-two (72) hour billing window in a calendar month out of the total number of Available Meters. Endpoints that fail to deliver a register read in the billing window due to data quality issues, RF Network Issues, Customer LAN issues, or due to meter level issues are excluded from this metric.

**Service Level Objective Target:** Network Performance Assurance of 98.5% of Available Meters delivering a register reading within their respective seventy-two (72) hour billing window.

(ii) For each month that the Network Performance Assurance fails to meet the SLO Target, Sensus will issue Customer the following Service Level Credits:

<table>
<thead>
<tr>
<th>Network Performance Assurance (Register Read in 72hr window) per calendar month</th>
<th>Service Level Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 98.5% but at least 97%</td>
<td>5% of the monthly NPA Fees in which the service level default occurred (Note: NPA fees are pre-paid monthly and for purposes of SLA Credits are computed on a monthly basis.)</td>
</tr>
<tr>
<td>Less than 97% but at least 95.0%</td>
<td>10% of the monthly NPA Fees in which the service level default occurred</td>
</tr>
<tr>
<td>Less than 95.0%</td>
<td>15% of the monthly NPA Fees in which the service level default occurred</td>
</tr>
</tbody>
</table>

2. **Electric**

(i) For electric Field Devices, Sensus will assure the delivery of the billing data from Available Meters covered by the FlexNet Network. Customer will be responsible to ensure endpoints are in a status to ensure data delivery, such as ensuring the endpoints are installed and properly maintained. This will be measured by the number of Available Meters that deliver a register reading within their seventy-two (72) hour billing window in a calendar month out of the total number of Available Meters. Endpoints that fail to deliver a register read in the billing window due to data quality issues, RF Network Issues, Customer LAN issues, or due to meter level issues are excluded from this metric.

**Service Level Objective Target:** Network Performance Assurance of 98.5% of Available Meters delivering a register reading within their respective seventy-two (72) hour billing window.

(ii) For each month that the Network Performance Assurance fails to meet the SLO Target, Sensus will issue Customer the following Service Level Credits:
4. **Service Level Credits.** Service Level Credits for any single month shall not exceed 15% of the Managed Services fee associated with the month in which the SLO default occurred. Sensus records and data will be the sole basis for all Service Level Credit calculations and determinations, provided that such records and data must be made available to Customer for review and agreement by Customer. To receive a Service Level Credit, Customer must issue a written request no later than ten (10) days after the Service Level Credit has accrued. Sensus will apply each valid Service Level Credit to the Customer’s invoice within 2 billing cycles after Sensus’ receipt of Customer’s request and confirmation of the failure to meet the applicable Service Level Credit. Service Level Credits will not be payable for failures to meet the SLO Targets caused by any Exceptions. No Service Level Credit will apply if Customer is not current in its undisputed payment obligations under the Agreement. Service Level Credits are exclusive of any applicable taxes charged to Customer or collected by Sensus. Sensus shall not refund an unused Service Level Credit or pay cash to Customer for any unused Service Level Credit. Any unused Service Level Credits at the time the Agreement terminates will be forever forfeited. THE SERVICE LEVEL CREDITS DESCRIBED IN THIS SECTION ARE THE SOLE AND EXCLUSIVE REMEDY FOR SENSUS’ FAILURE TO MEET THE MANAGED SERVICE SLO TARGETS. IN NO EVENT SHALL THE AGGREGATE AMOUNT OF SERVICE LEVEL CREDITS IN ANY ANNUAL PERIOD EXCEED 20% OF THE ANNUAL MANAGED SERVICES FEE.
PERFORMANCE BOND

WHEREAS, the City Council of the City of Palo Alto, State of California ("City") and ______________________________ ("Principal") have entered into an agreement dated ________________, and identified as ____________________, ("Agreement") which is hereby referred to and made a part hereof whereby Principal agrees to install and complete certain designated public improvements pursuant to Exhibit D of the Agreement (the “Services”); and

WHEREAS, Principal is required under the terms of the Agreement to furnish a surety bond for the faithful performance of the Services.

NOW, THEREFORE, Principal and __________________________________________, as Surety, incorporated under the Laws of the State of ______________, and duly authorized to transact business as an admitted surety, under the Laws of the State of California, are held and firmly bound unto City in the penal sum of ______________ dollars ($ __________), an amount equal to one hundred percent of the compensation payable to Principal for the Services, for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the Principal, Principal’s heirs, executors, administrators, successors, or assigns shall promptly and faithfully keep and perform the covenants, conditions, and provisions of the above-mentioned Agreement with respect to the Services and any alteration thereof, with or without notice to the Surety, and if Principal shall satisfy all claims and demands incurred under such Agreement with respect to the Services and shall fully protect, indemnify, defend, and hold harmless City, its officers, agents, and employees from all claims, demands, or liabilities which may arise by reason of Principal’s failure to do so, and shall reimburse and repay City all outlay and expenses which City may incur in making good any default, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

As part of the obligations secured hereto, and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorney’s fees incurred by City in successfully enforcing such obligations, all to be taxed as costs and included in any judgment rendered. Surety shall be liable for any liquidated damages for which the Principal may be liable under its Agreement with the City with respect to the Services, and such liquidated damages shall be part of the obligations secured hereto, and in addition to the face amount specified therefore.

The Surety hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Agreement or to the Services to be performed thereunder or the specifications accompanying the same, shall in any way affect its obligations on this security, and it
does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the agreement or to the work or to the specifications. Surety hereby waives the provisions of California Civil Code Section 2845 and 2849. The City is the principal beneficiary of this bond and has all rights of a party hereto.

IN WITNESS WHEREOF, this instrument has been duly executed by the Principal Surety above named on ______________, 20_____.

Name of Surety

Signature of Surety

By: ______________________________
   Typed or Printed Name

Phone Number: __________________

Its: ____________________________
   Title

Name of Contractor/Principal

Signature of Contractor/Principal

By: ______________________________
   Typed or Printed Name

Its: ____________________________
   Title
CERTIFICATE OF ACKNOWLEDGMENT
(Civil Code § 1189)

STATE OF ______________________ )
COUNTY OF ______________________ )

On ______________________, before me, ______
______________________________, a notary public in and for said County, personally
appeared ______________________, who
proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed
to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their
authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the
entity upon behalf of which the person(s) acted, executed the instrument.

I certify under penalty of perjury under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.

__________________________________________ (Seal)
PAYMENT BOND

WHEREAS, the City Council of the City of Palo Alto, State of California (“City”) and ________________________________, (“Principal”), have entered into an agreement dated _______ , and identified as _______ (“Agreement”), which is hereby referred to and made a part here of, whereby Principal agrees to install and complete certain designated public improvements pursuant to Exhibit D of the Agreement (the “Services”); and

WHEREAS, under the terms of the Agreement, Principal is required before entering upon the performance of the Services to file a good and sufficient payment surety bond with City to secure the claims to which reference is made in Titles 1 and 3 (commencing with Section 8000) of Part 6 of Division 4 of the Civil Code of the State of California with respect to the Services.

NOW, THEREFORE, Principal and ________________________________ , as Surety, incorporated under the laws of the State of _________________________, and duly authorized to transact business as an admitted surety, under the Laws of the State of California, are held and firmly bound unto City in the penal sum of $__________ , this amount being not less than one hundred percent of the total amount payable to Principal for the Services, for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

The condition of this obligation is such that with respect to the Services, if Principal, Principal’s subcontractors, heirs, executors, administrators, successors, or assigns shall fail to pay any of the persons, companies, or corporations, referred to in Section 9100 of the California Civil Code, as amended, with respect to any work of labor performed or materials supplied by any such persons, companies, or corporations, which work, labor, or materials are covered by the Agreement and any amendments, changes, change order, additions, alterations, or modifications thereof, or any amounts due under the California Unemployment Insurance Code with respect to such work or labor, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the Principal and its subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, as amended, with respect to such work and labor, the Surety will pay for the same, in an amount not exceeding the sum herein above specified, and also, in case suit is brought upon this bond, the Surety will pay reasonable attorney’s fees in an amount to be fixed by the court.

It is hereby expressly stipulated and agreed that this surety bond shall inure to the benefit of any and all persons, companies, and corporations entitled named in Section 9100 of the California Civil Code, as amended, so as to give a right of action to them or their assigns in any suit brought upon this surety bond.

The Surety hereby stipulates and agrees that no amendment, change, change order, addition, alteration, or modification to the terms of the Agreement or the Services to be performed thereunder or the specifications accompanying the same, shall in any way affect its obligations on this surety bond, and it does hereby waive notice of any such amendment, change, change order, addition, alteration, or

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modification to the terms of the Agreement or to the Services performed thereunder or to the specifications accompanying the same. Surety hereby waives the provisions of California Civil Code Sections 2845 and 2849.

IN WITNESS WHEREOF, this instrument has been duly executed by the Surety and Principal above named on ______________, 20__.

Name of Surety

______________________________
Signature of Surety

By: ____________________________
Typed or Printed Name

Its: ____________________________
Title

Name of Contractor/Principal

______________________________
Signature of Contractor/Principal

By: ____________________________
Typed or Printed Name

Its: ____________________________
Title
CERTIFICATE OF ACKNOWLEDGMENT
(Civil Code § 1189)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF ____________________________
COUNTY OF ____________________________

On ____________________________, before me, ______
______________________________, a notary public in and for said County, personally appeared ____________________________, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under penalty of perjury under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

______________________________
(Seal)
AMENDMENT NO. 2 TO CONTRACT NO. C17165774A
BETWEEN THE CITY OF PALO ALTO AND
E SOURCE COMPANIES, LLC.

This Amendment No. 2 (this “Amendment”) to Contract No. C17165774A (the “Contract” as defined below) is entered into as of October 4, 2021, by and between the CITY OF PALO ALTO, a California chartered municipal corporation (“CITY”), and E SOURCE COMPANIES, LLC, a Delaware Corporation, located at 1745 38th Street, Boulder, CO 80301 (“CONSULTANT”). CITY and CONSULTANT are referred to collectively as the “Parties” in this Amendment.

R E C I T A L S

A. The Contract (as defined below) was entered into on May 8, 2017 by and between the Parties hereto for the provision of consulting services for Phase 1 of a multi-phase Advanced Metering Infrastructure (AMI) system and associated smart grid technologies and programs to assist in developing a Strategic Technology Roadmap and Implementation Plan, in an amount not to exceed $174,735.

B. The Contract was amended by Amendment No. 1 on September 9, 2019 to extend the term and add services from Phase 2 to assist the CITY in procuring AMI and associated systems and services to implement smart grid systems, in an amount not to exceed $263,953 for Phase 2 services.

C. The Parties now wish to amend the Contract in order to extend the term and add services from Phase 3 for project management, system integration, and change management in an amount not to exceed $1,339,947 for Phase 3 services as specified in EXHIBIT “A” Scope of Services - Phase 3.

NOW, THEREFORE, in consideration of the covenants, terms, conditions, and provisions of this Amendment, the Parties agree:

SECTION 1. Definitions. The following definitions shall apply to this Amendment:

a. Contract. The term “Contract” shall mean Contract No. C17165774A between CONSULTANT and CITY, dated May 8, 2017, as amended by:

Amendment No.1, dated September 9, 2019

b. Other Terms. Capitalized terms used and not defined in this Amendment shall have the meanings assigned to such terms in the Contract.

SECTION 2. Section 2, “TERM” of the Contract is hereby amended to read as follows:

Vers.: Aug. 5, 2019

Page 1 of 22
The term of this Agreement shall be from May 9, 2017 through December 31, 2025 unless terminated earlier pursuant to Section 19 of this Agreement.”

SECTION 3. Section 4. “NOT TO EXCEED COMPENSATION” of the Contract is hereby amended to add the following:

“The compensation to be paid to CONSULTANT for performance of the Services described in Exhibit “A” (“Scope of Services – Phase 3”), and reimbursable expenses, shall not exceed One Million One Hundred Sixty-Nine Thousand Two Hundred Eighty Dollars ($1,169,280.00). CONSULTANT agrees to complete all Basic Services, including reimbursable expenses, within this amount. In the event Additional Services are authorized, the total compensation for Basic Services, Additional Services and reimbursable expenses shall not exceed One Million Three Hundred Thirty-Nine Thousand Nine Hundred Forty-Seven Dollars ($1,339,947.00). The applicable rates and schedule of payment are set out at Exhibit “C-1”, entitled “HOURLY RATE SCHEDULE – Phase 3,” which is attached to and made a part of this Agreement. Any work performed or expenses incurred for which payment would result in a total exceeding the maximum amount of compensation set forth herein shall be at no cost to the CITY.

Additional Services, if any, shall be authorized in accordance with and subject to the provisions of Exhibit “C”. CONSULTANT shall not receive any compensation for Additional Services performed without the prior written authorization of CITY. Additional Services shall mean any work that is determined by CITY to be necessary for the proper completion of the Project, but which is not included within the Scope of Services described at Exhibit “A”.”

SECTION 3. The following exhibit(s) to the Contract is/are hereby amended or added, as indicated below, to read as set forth in the attachment(s) to this Amendment, which is/are hereby incorporated in full into this Amendment and into the Contract by this reference:

a. Exhibit “A” entitled “SCOPE OF SERVICES – Phase 3”, added.


SECTION 4. Legal Effect. Except as modified by this Amendment, all other provisions of the Contract, including any exhibits thereto, shall remain in full force and effect.

SECTION 5. Incorporation of Recitals. The recitals set forth above are terms of this Amendment and are fully incorporated herein by this reference.

(SIGNATURE BLOCK FOLLOWS ON THE NEXT PAGE.)
SIGNATURES OF THE PARTIES

IN WITNESS WHEREOF, the Parties have by their duly authorized representatives executed this Amendment effective as of the date first above written.

CITY OF PALO ALTO

By: Dale Pennington
Name: Dale Pennington
Title: President

City Manager

APPROVED AS TO FORM:

By: Jim Ketchledge
Name: Jim Ketchledge
Title: Executive Vice President

City Attorney or designee

E SOURCE COMPANIES LLC.

Attachments:
EXHIBIT “A”: SCOPE OF SERVICES – Phase 3
EXHIBIT “B”: SCHEDULE OF PERFORMANCE – Phase 3
EXHIBIT “C”: COMPENSATION – Phase 3
EXHIBIT “C-1”: HOURLY RATE SCHEDULE – Phase 3
EXHIBIT “A”
SCOPE OF SERVICES – Phase 3

Statement of Purpose

This amended Statement of Work (SOW) specifies in detail services for E Source Companies, LLC to begin Phase 3 of the City’s advanced metering infrastructure system and associated smart grid technologies implementation. The consulting services would be provided in an integrated manner to accommodate the workstream tasks essential to ensure a successful technology implementation: project management, organizational alignment, technical solution architecture, and deployment oversight and quality assurance.

Scope of Work

In consultation with and under the direction of City staff, CONSULTANT will complete the following tasks:

Task 1: Project Management

Under this task, an E Source Project Manager (PM) works with the utility project manager to oversee project implementation. The PM shall have experience in using proven process, methodologies, and templates to produce a robust, flexible implementation approach. The PM and overall E Source team assigned to this task shall have experience in helping a combined vendor team execute successfully to the project baselines established in vendor contracts.

The E Source PM will support the City’s PM and jointly manage the project through all phases of the project lifecycle: Initiating, Planning, Executing, Controlling, and Closing. The E Source PM will manage the daily activities of the team, account for all deliverables produced by the team, and work in close partnership with CPAU and the AMI, MDMS, Meter Installation Vendor (MIV), CIS Integrator, and other vendors associated with the project to ensure successful service delivery by all parties.

The E Source PM will be responsible for supporting the activities listed in Table 1.

<table>
<thead>
<tr>
<th>PM ACTIVITY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope Management</td>
<td>Ensure that the project plans outline all of the work required to complete the project successfully. Scope management consists of initiation, scope planning, scope definition, scope verification, and scope change control.</td>
</tr>
<tr>
<td>Change Management</td>
<td>Ensure that a baseline project plan is established at project initiation, and that a formal change control process is in place to control changes to the baseline project plan throughout the project lifecycle.</td>
</tr>
<tr>
<td>Integration Management</td>
<td>Ensure that the various elements of the project are properly coordinated. Integration management consists of project plan development, project plan execution, and overall change control.</td>
</tr>
<tr>
<td>Cost Management</td>
<td>Ensure that the project is completed within the approved budget. Cost management consists of resource planning, cost estimating, cost budgeting, and cost control.</td>
</tr>
<tr>
<td>PM ACTIVITY</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Quality Management</td>
<td>Ensure that the project will satisfy the needs for which it was undertaken. Quality management consists of quality planning, quality assurance, quality control, and configuration management.</td>
</tr>
<tr>
<td>Reporting Management</td>
<td>Ensure timely and appropriate generation, collection, distribution, and storage of project information. The project manager also handles reporting and status information management consists of communications planning, information distribution, performance reporting, and administrative closure.</td>
</tr>
<tr>
<td>Time Management</td>
<td>Ensure the timely completion of the project. Time management consists of activity definition, activity sequencing, activity duration estimating, and schedule development and control.</td>
</tr>
<tr>
<td>Resource Management</td>
<td>Ensure that qualified resources are available to perform each task defined in this SOW in accordance with the baseline project schedule. As necessary, the project manager ensures that resources have been provided with training to establish particular expertise required to perform tasks within the SOW. The project manager reinforces the importance of establishing and maintaining professional working relationships among the City and vendor team members, as well as monitors these relationships.</td>
</tr>
<tr>
<td>Risk Management</td>
<td>Identify and analyze project risks and respond to those risks. The E Source approach to risk management has three components—identification, prioritization, and mitigation. Risks are identified at project inception and categorized based on probability and impact. A risk mitigation plan is defined to impacts should the risk occur. The risk mitigation plan is continuously re-evaluated during the project lifetime. Once a risk actually occurs, it is moved to the issue tracking process.</td>
</tr>
</tbody>
</table>

At project initiation, the E Source PM will perform appropriate team formation activities and develop a project master schedule as the team prepares for vendor kickoff. The kickoff meeting is used to introduce the team, review initial project plans, and start preparation for detailed requirements validation and refinement workshops. The team will work together to clarify purpose, align systems, and to bring forth the talent of the overall project team.

E Source will also work with CPAU to develop and execute the project charter that will outline project governance and communicate the high-level project implementation approach and the responsibilities of all project participants. E Source will work with CPAU and the selected vendor(s) to develop a comprehensive Project Execution Plan (PEP). The PEP will provide a set of guiding principles regarding philosophy, judgments, and actions to be taken over the lifecycle of the project.

The E Source PM will manage the project status cycle for the City. The PM will establish a regular cadence in which progress towards the plan, performance status, risk management, items of concern, and open action items are managed regularly and consistently. As shown in Figure 1, the status cycle is initiated with written project status reports completed by vendors and key project organizations—a sample of which is also shown.

E Source will lead the project team in developing the Proof of Concept Implementation Plan that will support CPAU’s Phase I AMI implementation vision. The objective of this task is to develop a comprehensive implementation plan that defines the logical sequence for the deployment strategy, project schedule, business process change requirements, support requirements, and business case justification. Implementation responsibilities will also be defined. The draft implementation plan will be reviewed with the AMI project team and finalized.
TASK 1 DELIVERABLES

- Project Charter
- Project Execution Plan (PEP)
- Proof of Concept Implementation Plan
- Project kickoff meeting
- Project workspace (SharePoint)
- Integrated Microsoft project schedule
- Project budget / cash flow tracking
- Periodic monthly status reports: monitoring progress, delays, upcoming critical paths/tasks, risks, etc.
- Periodic meetings with CPAU Project Manager (no less than monthly)
- Periodic meetings with the Project Team (no less than monthly)
- Periodic updates for executive management and applicable governing board stakeholders (quarterly and as needed)
- Meeting agenda and minutes
- End of Project Close Out/Summary Report

Task 2: Business Design and Change Management Services

Task 2.1: Business Process Design

Process modeling activities will help define a desired future state business design for CPAU. This task will further support the organization’s ability to realize benefits identified in CPAU’s feasibility study for the selected AMI solutions by streamlining and optimizing processes to align common needs and promote synergies across the City and Utilities value chains.

E Source’s application of business process management (BPM) methodology incorporates lean principles, tools, and methodologies to break down an organization’s functional silos—to then streamline and integrate value chain processes that create value for your customers.

There are three business process design stages to prepare the project team for the AMI and MIV design workshops and produce a high level end-to-end integrated business process model for the project and its impacted technologies and business process flows. The third stage produces related AMI technology-enabled deeper dive process models. These models are
refined based on design/build phase and development activities that occur as the vendor configuration decisions are finalized. This process framework is illustrated in Figure 3.

**Task 2.1.1: Conceptual Future State**

As E Source conducted the current state business process task with CPAU during the procurement phase, these materials will be leveraged to inform the conceptual future state and gap analysis activities.

E Source will conduct “to-be” workshops to document optimal business design process flows and decisions utilizing industry best practice process frameworks. These workshops will focus on the development of the desired future state for each value chain business process area utilizing the new business applications and interfaces that will be deployed.

This work will entail preparing for, conducting, and documenting business decisions and change impacts from two 2-day workshops: 1) the integrated process mapping workshop and 2) the deep dive process mapping workshop. The goal of the sessions is to assess the following:

- If the high-level integrated business processes accurately reflect the City’s goals and vision, and ensure alignment with the culture, organization, and any other applicable process constraints and enablers.

- At a high level, identify the major known gaps, benefits, and risk areas associated with the desired future state and technology-enabled, business processes.

In the first workshop, E Source will engage core team business process owners (BPOs) and identified subject matter experts (SMEs) as needed to streamline high-level business processes, examine process enablers and constraints, and develop RACI accountability in the context of the City’s cross-functional value chain. The intent of this workshop is to align those processes with organizational structure that clarifies roles and responsibilities to ensure the City can execute your business strategies and related value chain proposition, thereby removing the obstacles presented by organizational silos and inefficient or unclear processes. This workshop will result in an integrated value chain process map that illustrates the overall desired state operating model.
Following the Integrated Process Mapping workshop, E Source will support “deep dive process mapping” workshops in which the assembled team will drill down on approximately 4-6 strategic and prioritized meter-to-cash (MTC) process focus areas (see Figure 4) and related use cases that will require task and workflow improvement, as identified in the first workshop. These may be coordinated with vendor workshops to avoid gaps or overlaps.

Following on from the initial three (3) stages of business process work outlined in Figure 3, the core team business process owners will be aligned and prepared for AMI vendor design/requirements workshops. The previous effort was facilitated to explore and understand the state of business process change desired at a high level, then assess alignment across functional groups for fundamental MTC processes and related AMI-enabled business process tasks compared to the City’s existing standard operating procedures (SOPs).

**Task 2.1.2: Gap Analysis**

E Source’s process design activities include documenting process constraints and enablers to identify gaps as part of a change impact assessment. A baseline set of “to-be” conceptual future state business processes and related metrics will inform benefit realization planning as well. To accomplish this, E Source will use utility industry process framework best practices and experience working with utilities to validate business alignment and understanding of the scope of change and related change impacts to inform change management and operational transition plans. Project activities related to fluctuating workstreams (highlighted below in Figure 5) will be managed to ensure successful transformation occurs on time and within budget.
Task 2.1.3: As-Built Future State

To finalize the conceptual future state for business process activities and related tasks, E Source will refine and validate the baseline set of “to-be” future state, AMI-enabled business processes based on design/development work that occurs after the implementation is completed for each business/system release. E Source will ensure the updated “as-built” processes are a final documentation of what ultimately is implemented into the operational environment. This work typically occurs after the specific technology vendor(s) have conducted their workshops, in order to capture any nuances and changes required in the documented “to-be” business processes for their specific solutions.

E Source will use reference models, vendor information, and experience to facilitate these sessions and create new Business Process model flows and/or modify existing ones to support training and User Acceptance Testing (UAT) activities. An example of a CIS solution-enabled model workflow is shown in Figure 6.
**TASK 2.1 ASSUMPTIONS**
- Conceptual business process design activities should inform implementation planning and sequencing
- CPAU will designate business process owners leads with which E Source will work closely
- Two 2-day workshops (or broken down as four half days if virtual) within a 2- to 3-month timeline

**TASK 2.1 DELIVERABLES**
- Workshop preparation and session materials
- Conceptual deep dive MTC process maps
- Business process gap analysis change impact assessment and recommendations
- Final as-built future state process map documentation

**CPAU EFFORT TO SUPPORT TASK 2.1**
- Schedule BPOs and SMEs to participate in workshops and review of materials
- Respond to data and/or input requests
- Staff time necessary to attend workshop sessions and other meetings
- Review, comment, and validate conceptual and as-built future state process design documentation

**Task 2.2: Organizational Change Management (OCM)**
An AMI program requires that staff adjust work processes and routines to effectively use the systems and realize the significant benefits both internal and external to the City and CPAU Stakeholders. This change needs to be handled effectively, thereby reducing staff apprehension and providing the tools they need to succeed.

As shown in Figure 7, E Source’s OCM program approach to managing change impacts across people, process, technology workstreams can be divided into three stages: 1) Preparing for Change; 2) Managing Change; and 3) Reinforcing Change.
E Source will support and advise the City throughout the OCM effort, ensuring readiness so programs and projects can fully realize intended business value benefits. E Source’s OCM approach is centered on moving individuals, groups, divisions, and the entire organization from understanding through demonstration as efficiently and productively as possible. OCM elements include forming a clear strategy, communicating consistently, visibly engaging sponsors, providing effective training, recognizing performance, and closing accountability loops.

The E Source team will support the City’s project manager and AMI and MIV to incorporate change activities into the project plan/schedule. E Source will advise the City during its efforts to develop an OCM program approach that includes practical and effective activities designed to support the transition of people and processes to increase use and adoption of the new technologies. The resulting City-developed OCM plan will provide strategies and detailed tactics that maximize performance prior to, during, and after the technology implementation.

**Task 2.2.1: Awareness and Education Campaign (AEC)**

- E Source will advise CPAU in its efforts to develop the AEC/communications campaign with the Utilities’ Communications Manager. Activities will include participation in planning activities, workshops, and review of the AEC plan and materials produced for both internal and external stakeholders. This effort will enhance the internal project communications for all utility divisions and will foster proactive communications with utility customers and other external stakeholders.

E Source will work with the City to identify the key topics that will drive the content of the campaign. Topics may include:

- AMI project benefits and information sharing
- AMI opt-out
- Transitional change effecting the organization
- Theft detection and enforcement policies
- Green initiative concepts developed with AMI
- Areas of concern, including radio frequency (RF), privacy, cybersecurity, etc.

E Source will assist the City as it develops the content appropriate for internal staff that will be published at various stages of the project. The content may be published via an e-mail newsletter, printed flyers, or other formats as deemed appropriate by the utility. E Source will also support the City in its effort to present this information to staff and field questions accordingly, for example during informational “tailgates” and town hall meetings.

E Source will assist the City as it develops the content for a variety of customer-facing materials. E Source will advise the City on the timing of releasing the information pieces to the customer base. Customer outreach and education pieces may include:

- Door hangers
- Status letters
- Press releases
Task 2.2 Assumptions

- The City will provide E Source with adequate lead time to review City-produced materials and scheduling of workshops / meetings
- CPAU will designate OCM, and Communications leads with whom E Source will coordinate and advise
- E Source will assist in the development of communications content
- The list of customer education and outreach materials above in subtask 2.3.1 can be modified based on the outcome of the discovery workshop if the approximate level of effort is commensurate and the changes are agreed upon by CPAU and E Source
- CPAU will employ a graphic designer to assist with visual layouts and design
- The printing, shipment, and dissemination of communication materials will be managed by the City

Task 2.2 Deliverables

- Participation in bi-weekly and ad hoc OCM team meetings
- OCM strategy & directional advisory
- Review and editorial of City produced OCM Plan
- Review and editorial of City produced AEC communication strategy / tactical action plan
- Review and editorial of City produced operational transition plan
- Internal communications content
- External communications content
- Change leadership advisory and support

CPAU Effort to Support Task 2.2

- Schedule resources and attend meetings
- Background on existing OCM practices and related data (e.g., organizational structure, training, and performance management approach) will need to be shared, if available
- Designate an internal AMI OCM track lead
- Produce a OCM Plan
- Produce an AEC communication strategy / tactical action plan
- Produce an operational transition plan
- Review and comment on draft materials produced by E Source
- Utility marketing/communication support of internal communications and materials development
Task 3: Technical Services

E Source’s technical services track will direct the engineering, architecture, development, deployment, and testing of the City’s new AMI system. E Source will augment the Project Manager with a strong Project Engineer specializing in systems engineering to ensure successful delivery.

Task 3.1: Solutions Architecture

The Solutions Architecture task emphasizes the IT systems aspect of AMI planning and brings together all the technology initiatives that exist, are underway, or are planned to be completed in the near term, into a cohesive and logical plan. The track also ensures that the complete solution architecture that will be built is complete, robust, scalable, and extensible.

E Source will develop the AMI reference architecture based on the following:

► User data requirements
► User functional requirements
► User process flows
► Automation requirements
► Integration requirements
► Industry best practices
► E Source team experience
► Implementation considerations and constraints
► Current and near-term future capabilities of commercial AMI technologies
► CPAU standards and policies
► Capabilities of commercial vendor software
E Source will work with the City and the selected vendors during the initial vendor workshops and immediately thereafter to ensure that the project architectural, functional, performance, and integration specifications form the proper technical baseline for execution of the project. To address integration gaps in the vendor solution specification, E Source will document the as-is and to-be system architecture that will depict both the system context and system component diagrams. An example system context diagram is shown below in Figure 8.

**Figure 7. Example of a System Context Diagram in the Solution Architecture Document**

**TASK 3.1 DELIVERABLES**

- Vendor systems configuration/design workshop(s) participation, supplemented with additional workshops as necessary to define the system architecture.
- As-is and to-be system architecture including the system context diagram and the system component diagram

**CPAU EFFORT TO SUPPORT TASK 3.1**

- Provide subject matter experts in related process areas for functional requirements workshops.
- Gather and share existing/legacy system information, interface documentation, and data flows.
Task 3.2: System Engineering

The key to AMI system engineering is working to ensure the IT aspect of integration is conducted successfully. E Source will plan, guide, and help CPAU ensure a successful combined IT system.

E Source will work with CPAU and vendor to develop the requirements management plan (RMP) and requirements traceability matrix (RTM) that will collectively serve as the foundation throughout the design/develop/test phases of the software implementation and integration. The initial input for these requirements comes from the procurement requirements that the vendor has agreed to meet through contract negotiations. These are supplemented and further defined through the vendor design workshops and additional E Source workshops needed to assure documentation is complete. Ultimately, complete traceability is ensured so that a system-level requirement can be followed through its breakdown into smaller requirements, design elements and modules, and ultimately to the particular test case in which it is verified that the vendor successfully met the requirement.

E Source will oversee the vendors’ technology development and deployment. This oversight will include:

► Working with the AMI vendor to ensure that the designed meter configurations are understood and fulfilled in mass manufacturing.
► Overseeing the vendor patch and upgrade process to ensure the proper requirements, design, and development activities are followed, and that a firmware release plan does not negatively impact the system acceptance testing.
► Assigning requirements to specific head-end software modules and software design criteria, such as pre-conditions, flow of events, alternate flows, exception flows, and post events, specified for development.
► Design reviews will be held at the appropriate times to ensure the vendors are properly interpreting the requirements.
► Coordinating what will be included within the different business releases of software and the timing of those releases throughout the entire project.

Task 3.2 Deliverables

– Requirements Management Plan (RMP)
– Requirements Traceability Matrix (RTM)

CPAU Effort to Support Task 3.2

– Provide existing IT governance and data center Service Level Agreements (SLAs)
– Review measures of AMI technology performance

Task 3.3: Testing Support

E Source will work with the City and vendors to develop the integrated test plan that will provide high-level guidance for the execution of a graduated testing program. It will summarize the testing goals and objectives, as well as all known constraints (time, budget, resources, etc.); and verify the coordination mechanisms and timing with AMI infrastructure implementation, MDMS functionality, CIS modifications, and integration testing, meter and module installation, AMI technology,
communications, and information technology requirements to execute the plan. The integrated plan will be developed via interactive workshops with the City’s project team, the selected project vendors, and required and business support groups.

E Source’s approach to ensure thorough and effective testing for CPAU’s AMI deployment includes the following:

► **Factory or Off-Site Testing** – These are vendor-performed tests that verify functionality of the equipment or system and may involve standard integration checks with other systems.

► **First Article Testing (FAT)** – FAT is a familiar test conducted by the utility meter shop upon receipt of a new electric meter configuration.

► **Alpha Proof of Concept (POC) Acceptance Testing** – Utility-led testing on a cross section of meter types/forms/sizes on a test bench to confirm register read accuracy, interval read accuracy, read resolution, meter configuration, alert functionality, AMI system two-way communications, and other acceptance criteria as outlined in the POC Implementation Plan. This testing phase is critical to assure that the data produced by the meters and communicated by the endpoints and collectors is accurate.

► **Beta POC Field Acceptance Testing** – This testing verifies that the technical, functional and performance, and commercial specifications of the vendor Statement of Work (SOW) have been realized as expected for a subset of endpoints strategically deployed within the utility service territory.

► **System Integration Testing** – This testing brings all applicable systems together in testing to verify data sets are received and transformed properly, that data from a single source is properly routed to multiple destinations and that individual systems still perform as expected while integrated.

► **User Acceptance or Business Process Testing** – This testing verifies that the correct information flows through for a particular business process, including both mechanized and manual business processes. It is the final gate and ensures that the system functions and is aligned with requirements and processes that are used operationally. In this testing, a single trigger can initiate data transfers between multiple source and destination systems. It is the most comprehensive test of the complete set of business processes and maximizes to the extent possible the real-world use of the City’s integrated systems. Test cases are executed by City users of the systems on a day-by-day basis.

E Source’s phased testing approach minimizes the City’s risk by providing early validation of the technologies in steps, so that any problems are identified early and corrected. A test readiness review (TRR) will be held before each testing phase to ensure that the system and personnel are prepared for the test. All discovered defects will be formally logged, managed, and resolved as appropriate until acceptance is achieved.

Should issues be identified during the testing, E Source will work with applicable vendors and development teams to resolve those issues on behalf of the City. The clear documentation of the relationship between the requirement and test case included within the RTM makes it easier to
pinpoint the problem that needs to be addressed. Once identified, E Source will support a corrective action process that ensures the problem is documented, root-cause is determined, corrective and preventive actions are taken, and retesting is performed to verify that the problem has been corrected.

**TASK 3.3 ASSUMPTIONS**

- Vendors complete adequate and acceptable unit testing of their deliverables
- Vendors will support City-assigned testing
- The City will dedicate testing resources during testing events to complete testing as quickly as reasonably possible

**TASK 3.3 DELIVERABLES**

- Integrated Test Strategy and Plan
- Review of vendor test plans, procedures, and results documentation
- Review of vendor proposed test cases
- Review of utility proposed test cases

**Task 3.4: Training Support**

E Source will coordinate the timing and delivery of remote or on-site vendor training in accordance with the overall project schedule and coordinate with the CPAU PM regarding the availability, suitability, and readiness of a training environment and participants.

E Source will review each vendor’s training plan submittal for completeness, including course descriptions, course agenda, equipment/system requirements, participants, and proposed timing. E Source may recommend additional training and other forms of end user training to supplement vendor training. E Source will work with each respective vendor and the CPAU PM to coordinate each training session and align the training plan with a proposed training schedule over the course of each phase of the project.

**TASK 3.4 DELIVERABLES**

- Review/edit vendor training plan(s)
- Review/edit vendor training agenda(s)
- E Source SME participation in vendor training activities

**Task 4: Field Deployment Oversight and Quality Assurance**

The AMI project involves the installation of thousands of meters and devices, and the careful coordination of the materials, labor, and data. E Source will support deployment planning and oversight to ensure the AMI meters and communications equipment are installed efficiently and with minimal disruption to existing utility systems and business processes.

E Source will work with CPAU and the MIV to detail and document the numerous aspects of exchanging and/or retrofitting a utility’s meter population. E Source will conduct a series of discovery workshops with CPAU and MIV staff to develop the Field Deployment Plan. At a minimum, this plan will detail:

► Inventory management, warehouse logistics, and transfer of ownership
► Meter exchange and/or retrofit processes and procedures
Deployment schedule and installer targets
Customer communications
Field issue reporting and resolution
Management of Return to Utility meters (RTUs)
Field installation quality assurance and audit
Data quality assurance and audit

This planning exercise will occur during the Beta phase of the project to prepare all parties prior to the ramp-up of MIV staff and operations for the full deployment.

Once the overall deployment planning and logistics are established for the complete AMI system installation, the installation process will begin. Based on the final deployment plan approved by CPAU, E Source will monitor all subsequent work logistics and material planning and ordering to ensure a smooth roll out of the system.

E Source will conduct field inspections of a select number of meter/endpoint installations. E Source's field quality assurance experts will shadow the installer to actively observe and visit service locations post installation to confirm the installer(s) is following procedures.

E Source will also oversee endpoint installation vendor activities including daily route management; QA, controls, and validation of all newly installed meters; tracking and assessment of all meter and module related exceptions encountered during installation; review and continuous reporting to CPAU on the progress of installations; and reporting on revisits required for appointment setting.

**TASK 4 ASSUMPTIONS**
- CPAU will designate appropriate field staff to assist and advise on issues discovered in the field by E Source field quality assurance staff.
- E Source will work with CPAU to develop an agreed-upon field inspection percentage volume
- E Source support will be reduced over the deployment period as CPAU resources gain more confidence in their operational and oversight capabilities.

**TASK 4 DELIVERABLES**
- Field Deployment Plan
- Field Installation Quality Assurance Status Reports
- Lead weekly production status meetings
EXHIBIT “B”
SCHEDULE OF PERFORMANCE – Phase 3

CONSULTANT shall perform the Services so as to complete each milestone within the number of days/weeks specified below. The time to complete each milestone may be increased or decreased by mutual written agreement of the project managers for CONSULTANT and CITY so long as all work is completed within the term of the Agreement. CONSULTANT shall provide a detailed schedule of work consistent with the schedule below within 2 weeks of receipt of the notice to proceed. For clarity, milestones are shown below both by Task number and by expected completion date.

<table>
<thead>
<tr>
<th>Milestones by Task</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1.1: Project Management and Support</td>
<td>October, 2021</td>
<td>December, 2025</td>
</tr>
<tr>
<td>Task 2.1: Business Process Design</td>
<td>November, 2021</td>
<td>August, 2023</td>
</tr>
<tr>
<td>Task 2.2: Organizational Change Management</td>
<td>October, 2021</td>
<td>September, 2023</td>
</tr>
<tr>
<td>Task 3.1 &amp; 3.2: Solutions Architecture/Systems Engineering</td>
<td>January, 2022</td>
<td>September, 2023</td>
</tr>
<tr>
<td>Task 3.3: Testing Support</td>
<td>March, 2022</td>
<td>September, 2023</td>
</tr>
<tr>
<td>Task 3.4: Training Support</td>
<td>August, 2022</td>
<td>September, 2023</td>
</tr>
<tr>
<td>Task 4.1: Installation Oversight and Quality Assurance</td>
<td>June, 2023</td>
<td>March, 2025</td>
</tr>
</tbody>
</table>
EXHIBIT “C”
COMPENSATION – Phase 3

The CITY agrees to compensate the CONSULTANT for professional services performed in accordance with the terms and conditions of this Agreement, and as set forth in the budget schedule below. Compensation shall be calculated based on the hourly rate schedule attached as exhibit C-1 up to the not to exceed budget amount for each task set forth below.

CITY’s Project Manager may approve in writing the transfer of budget amounts between any of the tasks or categories listed below, provided that the total compensation for the Services, including any specified reimbursable expenses, and the total compensation for Additional Services (if any, per Section 4 of the Agreement) do not exceed the amounts set forth in Section 4 of this Agreement.

CONSULTANT agrees to complete all Services, any specified reimbursable expenses, and Additional Services (if any, per Section 4), within this/these amount(s). Any work performed or expenses incurred for which payment would result in a total exceeding the maximum amount of compensation set forth in this Agreement shall be at no cost to the CITY.

BUDGET SCHEDULE

<table>
<thead>
<tr>
<th>Task Description</th>
<th>NOT TO EXCEED AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Task 1.1: Project Management and Support</td>
<td>$569,840</td>
</tr>
<tr>
<td>B. Task 2.1: Business Process Design</td>
<td>$82,400</td>
</tr>
<tr>
<td>C. Task 2.2: Organizational Change Management</td>
<td>$96,550</td>
</tr>
<tr>
<td>D. Task 3.1 &amp; 3.2: Solutions Architecture / Systems Engineering</td>
<td>$181,280</td>
</tr>
<tr>
<td>E. Task 3.3: Testing Support</td>
<td>$103,950</td>
</tr>
<tr>
<td>F. Task 3.4: Training Support</td>
<td>$41,600</td>
</tr>
<tr>
<td>G. Task 4.1: Installation Oversight and Quality Assurance</td>
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<tr>
<td>Sub-total Basic Services</td>
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<tr>
<td>Reimbursable Expenses</td>
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</tr>
<tr>
<td><strong>Total Basic Services and Reimbursable Expenses</strong></td>
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</tr>
<tr>
<td>Additional Services (Not to Exceed)</td>
<td>$170,667</td>
</tr>
<tr>
<td>Maximum Total Compensation</td>
<td>$1,339,947</td>
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</tbody>
</table>

Vers.: Aug. 5, 2019
REIMBURSABLE EXPENSES

The administrative, overhead, secretarial time or secretarial overtime, word processing, photocopying, in-house printing, insurance, and other ordinary business expenses are included within the scope of payment for services and are not reimbursable expenses. CITY shall reimburse CONSULTANT for the following reimbursable expenses at cost. Expenses for which CONSULTANT shall be reimbursed are: Travel

A. Travel outside the San Francisco Bay area, including transportation and meals, will be reimbursed at actual cost subject to the City of Palo Alto’s policy for reimbursement of travel and meal expenses for City of Palo Alto employees.

All requests for payment of expenses shall be accompanied by appropriate backup information. All expenses shall be approved in advance by the CITY’s project manager.

ADDITIONAL SERVICES

The CONSULTANT shall provide additional services only by advanced, written authorization from the CITY. The CONSULTANT, at the CITY’s project manager’s request, shall submit a detailed written proposal including a description of the scope of services, schedule, level of effort, and CONSULTANT’s proposed maximum compensation, including reimbursable expense, for such services based on the rates set forth in Exhibit C-1. The additional services scope, schedule and maximum compensation shall be negotiated and agreed to in writing by the CITY’s Project Manager and CONSULTANT prior to commencement of the services. Payment for additional services is subject to all requirements and restrictions in this Agreement.
EXHIBIT “C-1”
HOURLY RATE SCHEDULE – Phase 3

Work for additional tasks not within the scope of services provided by this document shall be billed at an hourly basis (and invoiced on a monthly basis), per resource, per the following rate table.

<table>
<thead>
<tr>
<th>Title</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>$295.00</td>
</tr>
<tr>
<td>Executive Vice President</td>
<td>$260.00</td>
</tr>
<tr>
<td>Vice President</td>
<td>$220.00</td>
</tr>
<tr>
<td>Project Manager</td>
<td>$220.00</td>
</tr>
<tr>
<td>Senior Manager</td>
<td>$220.00</td>
</tr>
<tr>
<td>Principal Consultant</td>
<td>$220.00</td>
</tr>
<tr>
<td>Senior Consultant</td>
<td>$220.00</td>
</tr>
<tr>
<td>Consultant</td>
<td>$160.00</td>
</tr>
</tbody>
</table>
Resolution of the Council of the City of Palo Alto Authorizing the Commitment of Electric Special Project (ESP) Reserve funds for Advanced Meter Infrastructure Implementation-Related Expenditures via a Transfer of up to $8.4 million from the Electric Special Project (ESP) Reserve to the Smart Grid Technology Installation Project (EL-11014), and the Loan of up to $10.5 Million from the ESP Reserve to the Smart Grid Technology Installation Project (EL-11014)

A. In 2011 (Resolution 9206) Council established the Electric Special Projects (ESP) Reserve to fund projects that benefit electric ratepayers. The fund reserve was established in 1983 to defray costs associated with the Calaveras Hydroelectric Project, with contributions from a ratepayer surcharge assessed between 1997 and 1999 to cover the potential for electric assets exceeding their value under deregulation.

B. In 2015 (Resolution 9510), Council modified the guidelines for managing the ESP Reserve as follows:
   1. The purpose of the ESP Reserve is to fund projects that benefit electric ratepayers;
   2. ESP Reserve funds are to be used for projects of significant impact;
   3. Projects proposed for funding must demonstrate a need and/or value to electric ratepayers. The projects must have verifiable value and not be speculative, or risky in nature;
   4. Projects proposed for funding must be substantial in size, requiring funding of at least $1 million;
   5. Set a goal to commit funds by end of FY 2017; and
   6. Any uncommitted funds remaining at the end of FY 2022 will be transferred to the Electric Supply Operation Reserve and the ESP Reserve will be closed.

C. Staff anticipates seeking Council approval to modify and update the ESP Reserve guidelines in 2022 and approval to extend the life of the ESP Reserve through 2030.

D. As of June 30, 2021, the ESP Reserve balance is approximately $46.7 million, not including the interfund transfer and loan requested via this Resolution.

E. There are sufficient ESP Reserve funds available to fund the Advanced Metering Infrastructure (AMI) project (the Project)’s electric-related expenditures for the benefit of electric ratepayers, and to loan funds to the Project to cover the water- and gas-related expenditures which also will benefit water and natural gas ratepayers.

F. At the July 7, 2021 Utility Advisory Commission (UAC) meeting, UAC voted 5-1 (with Commissioner Metz voting against and Vice Chair Segal absent) to recommend using funds
from the ESP Reserve fund the AMI Project, through a commitment of ESP Reserve funds to cover the electric-related AMI expenses, and a loan of ESP Reserve funds to cover the water- and gas-related AMI expenditures.

The Council of the City of Palo Alto does hereby RESOLVE as follows:

SECTION 1. Transfer up to $18.9 million from the Electric Special Projects Reserve to the Smart Grid Technology Installation Project (EL-11014) for Advanced Meter Infrastructure implementation-related expenditures, as follows:

1. Transfer up to $8.4 million from the Electric Special Project (ESP) Reserve to the Smart Grid Technology Installation Project (EL-11014) for Electric AMI and smart grid-related expenditures;
2. Transfer up to $6.5 million from the ESP Reserve to the Smart Grid Technology Installation Project (EL-11014) for Water AMI and smart grid-related expenditures, structured as an inter-fund loan with a repayment term of 5 years with appropriate interest, with repayment to begin upon completion of the Project; and
3. Transfer up to $4.0 million from the ESP Reserve to the Smart Grid Technology Installation Project (EL-11014) for Gas AMI and smart grid-related expenditures as an inter-fund loan with a repayment term of 5 years with appropriate interest, with repayment to begin upon completion of the Project.
4. Individual fiscal year transfer amounts up to the totals listed in subsections 1-3 above will be determined based on annual CIP budgets, and are currently estimated to be $7 million in FY 2022, $7 million in FY 2023, and $4.9 million in FY 2024.

SECTION 2. The Council finds that the fund transfers described in Section 1 above meet Council’s guidelines for managing the Electric Special Project Reserve, described in Recital B above. Council approves the commitment of ESP funds to support the electric AMI Project expenses, and the loan of ESP funds to support the water and gas AMI Project expenses.
SECTION 3. The Council finds that the adoption of this resolution to transfer and loan funds from the ESP to fund the Smart Grid Technology Installation Project (EL-11014) for Advanced Metering Infrastructure (AMI) and smart grid-related expenditures is categorically exempt under California Environmental Quality Act (CEQA) Guidelines section 15301(b) as a Project involving minor alteration of existing public utilities facilities and equipment, with negligible or no expansion of existing or former use; therefore, CEQA review is not required.

INTRODUCED AND PASSED: October XX, 2021

AYES:

NOES:

ABSENT:

ABSTENTIONS:

ATTEST:                      APPROVED:

________________________________  ________________________________
City Clerk                    Mayor

________________________________  ________________________________
Deputy City Attorney          City Manager

________________________________
Director of Utilities
City of Palo Alto
City Council Staff Report

Report Type: Consent Calendar  Meeting Date: 10/4/2021

Title: Approval of Construction Contract Number C22181780 with Roofing Constructors, Inc. in the Amount Not-to-Exceed $362,713 to Replace the Existing F & FH Wing Roofs at Cubberley Community Center, Capital Improvement Program Project CB-16002; and Authorization of Contract Contingency in an Amount Not-to-Exceed $36,271 for Related, Additional but Unforeseen Work Which May Develop During the Project.

From: City Manager

Lead Department: Public Works

Recommendation
Staff recommends that the City Council:

1. Approve and authorize the City Manager or their designee to execute the attached construction contract with Roofing Constructors, Inc., Contract No. C22181780, in the amount not to exceed $362,713 for the replacement of roofs pursuant to the Cubberley Community Center F & FH Wing Re-Roof Project, Capital Improvement Program Project CB-16002; and

2. Authorize the City Manager or their designee to negotiate and execute one or more change orders to the above construction contract with Roofing Constructors, Inc., for related, additional but unforeseen work which may develop during the project, the total value of which shall not exceed $36,271.

Background
The existing Cubberley Community Center F & FH Wing roofs have been in service for 22 years and are exhibiting signs of severe wear, having already required several roof leak patches. To avoid the potential for larger leaks and structural damage to the building, staff has determined that the roofs are in need of a complete replacement. Cubberley Wings F and FH are on the portion of the Cubberley property owned by the City.

Discussion
Project Description
This project will provide an energy efficient bituminous roof replacement. The existing tar and gravel roof on F Wing and bituminous roof on FH Wing are at the end of their useful lives and need to be replaced. The application will meet current cool roofing codes to optimize energy
efficiency. The roofing manufacturer will provide the City of Palo Alto with a 20-year, no dollar limit warranty.

Bid Process
On June 22, 2021, a notice inviting formal bids for the Cubberley Community Center F & FH Wing Re-Roof Project was posted on the Planet Bids website. The bidding period was 36 days. Bids were received from six contractors on July 27, 2021. The bid details are listed on the attached Bid Summary (Attachment A).

Summary of Bid Process

<table>
<thead>
<tr>
<th>BID NAME/NUMBER</th>
<th>CUBBERLEY COMMUNITY CENTER F &amp; FH WING RE-ROOF PROJECT, CAPITAL IMPROVEMENT PROGRAM PROJECT CB-16002 /IFB #181780</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROPOSED LENGTH OF PROJECT</td>
<td>60 calendar days</td>
</tr>
<tr>
<td>NUMBER OF BIDS MAILED TO CONTRACTORS</td>
<td>0</td>
</tr>
<tr>
<td>NUMBER OF BIDS MAILED TO BUILDER’S EXCHANGES</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL DAYS TO RESPOND TO BID</td>
<td>36</td>
</tr>
<tr>
<td>MANDATORY PRE-BID MEETING</td>
<td>July 7, 2021 at 2:00 P.M.</td>
</tr>
<tr>
<td>NUMBER OF COMPANY ATTENDEES AT PRE-BID MEETING</td>
<td>16</td>
</tr>
<tr>
<td>NUMBER OF BIDS RECEIVED:</td>
<td>6</td>
</tr>
<tr>
<td>BID PRICE RANGE</td>
<td>$362,713- $546,802</td>
</tr>
</tbody>
</table>

Staff reviewed the six bids and deemed three of the bids as nonresponsive, due to the contractor either not submitting or not completing the bid form in accordance with the requirements of the invitation for bids. Those contractors were notified that their bids were nonresponsive, and no bid protests were received.

Of the three responsive bids submitted, staff recommends that the bid of $362,713 submitted by Roofing Constructors, Inc. be accepted and that Roofing Constructors, Inc. be declared the lowest responsible bidder. The low bid is 11 percent above the engineer’s estimate of $324,040. The change order amount not to exceed $36,271 (which equals 10 percent of the total contract) is requested for related, additional but unforeseen work which may develop during the project. Staff confirmed with the Contractor's State License Board that the contractor has an active license on file. Staff also contacted the listed references for Roofing Constructors, Inc. and found that they have performed satisfactorily on past construction projects for other clients.

This contract is on the City’s construction contract template, which permits the City to terminate without cause/for convenience by providing written notice to the contractor. In the event the City finds itself facing a challenging budget situation, and it is determined that City
resources need to be refocused elsewhere, the City can terminate for convenience. Other options include termination due to non-appropriation of funds or amending the contract to reduce the cost, for example, by reducing the scope of work.

**Resource Impact**
Funding for the contract recommended in this report is available in the FY 2022 Adopted Budget for the Cubberley Property Infrastructure Fund Capital Improvement Program Cubberley Roofing Replacements project CB-16002.

**Policy Implications**
The recommendation does not represent any changes to existing City policy.

**Stakeholder Engagement**
The Cubberley Community Center F & FH Wing Re-Roof Project has been coordinated with the Community Services Department and the Cubberley tenants/users. It does not conflict with any upcoming events.

**Environmental Review**
This project is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) under Section 15301 of the CEQA Guidelines as repair, maintenance and/or minor alteration of existing facilities and no further environmental review is necessary.

**Attachments:**
- **Attachment6.a:** Attachment A: Cubberley F-FH Wing Reroof Bid Tabulation
## ATTACHMENT B - BID TABULATION

BID RESULTS FOR CUBBERLEY COMMUNITY CENTER F AND FH WING RE-ROOF PROJECT (IFB 181780)

INVITATION FOR BID (IFB) ISSUED ON 06/22/2021

BID DUE ON 07/27/2021 3:00 PM PST

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Bid</td>
<td>Base Bid - A1</td>
<td>LS</td>
<td>1</td>
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<td>$0</td>
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<td><strong>Base Bid Totals</strong></td>
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<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$0</td>
<td><strong>296,800</strong></td>
<td><strong>289,706</strong></td>
<td><strong>362,713</strong></td>
<td><strong>434,197</strong></td>
</tr>
<tr>
<td><strong>REVISED Base Bid Totals</strong></td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$0</td>
<td>$10,000</td>
<td><strong>289,706</strong></td>
<td><strong>362,713</strong></td>
<td><strong>434,197</strong></td>
</tr>
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<td>Government Estimate</td>
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<td>LS</td>
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<td><strong>324,040</strong></td>
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<tr>
<td>Percent Difference</td>
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<td>-3140%</td>
<td>-12%</td>
<td>11%</td>
<td>25%</td>
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</tbody>
</table>

Nonresponsive Nonresponsive Nonresponsive Responsive Responsive
City of Palo Alto
City Council Staff Report

Report Type: Meeting Date: 10/4/2021

Title: Update from the Palo Alto Advisory Committee on Early Care & Education (PAACECE) on recent Assessment of Local Families, Effect of COVID on Child Care providers and plans to address identified needs, including the Approval of Budget Amendments in the General Fund and the Child Care Trust Fund to Implement the PAACECE's Annual Work Plan.

From: City Manager

Lead Department: Community Services

Recommendation
Staff recommends that the City Council review and discuss the 2019 Assessment of the Needs of Families with Young Children, the annual workplan of the Palo Alto Advisory Committee on Early Care and Education (PAACECE), and approve an amendment the Fiscal Year 2022 Budget Appropriation, by two-thirds approval, for:

a. The Child Care Trust Fund by:
   i. Increasing the expense appropriation transfer to the General Fund by $30,000; and
   ii. Decreasing the ending fund balance by $30,000;
b. The General Fund by:
   i. Increasing the revenue estimate transfer from the Child Care Trust Fund by $30,000; and
   ii. Increasing the Community Services Department expenditure appropriation by $30,000 to address the needs of Early Education Providers and local families as identified by the Palo Alto Early Care & Education Committee.

Executive Summary
This report serves as an update to the Council on the following:
- Needs of Early Childhood Education (ECE) providers and local families as identified by the results of the 2019 Assessment of the Needs of Families with Young Children (Assessment);
- Ongoing meetings with local child care administrators which have identified their challenges during the COVID pandemic;
• The annual workplan of the Palo Alto Advisory Committee on Early Care and Education (PAACECE), an advisory body to the City Manager on issues related to child care (ages 0 -12) and early learning; and
• A request for $30,000 transfer from the Child Care Trust Fund to implement PAACECE’s workplan.

The Assessment was completed in 2019 and included a thorough review of local data sources, interviews, surveys and focus groups aimed at assessing how families with young children and ECE providers were faring in our community. Post completion of the Assessment, the COVID pandemic struck and greatly affected our local ECE providers financially, first by closures (during lockdown) and then with diminishing use of their services due to parents working remotely and/or unwillingness to return to congregant care due to health concerns. Many of these conditions continue to persist and providers are struggling to survive. PAACECE has worked during the pandemic to understand and amplify the needs of ECE providers and the needs of local families. Staff and PAACECE are seeking a $30,000 investment from the Child Care Trust Fund to craft a workplan for the coming year to address these needs.

**Background**

*Child Care Trust Fund*

A Child Care Trust Fund (CCTF) was created in 1987 to house money raised by the Child Care Task Force for the purpose of implementing the goals of the Child Care Master Plan released in 1989. A $150,000 contribution was made to the trust fund in 1991 by a local developer as part of a density bonus agreement for a proposed downtown development project. Expenses to the CCTF were incurred to implement some of the goals of the 1989 master plan but the funds were not expended. The fund has increased over the years via interest income and the current unaudited fund balance is estimated at approximately $300,000.

**Assessment of the Needs of Families with Young Children (Assessment)**

An Assessment of the needs of families with young children had not been conducted since 1989. Recognizing that the needs of families has changed, including more women in the workforce, an exponential increase in non-traditional work schedules and modes, technological advances, coupled with the high cost of living, the Office of Human Services and PAACECE recommended an updated assessment to be funded by the Child Care Trust Fund ($75,000), which was approved by the City Council on September 11, 2017.

An Assessment of the resources, needs, and challenges of families with young children in Palo Alto was conducted by the research firm Analytic Insight in 2019. The intent was to conduct an Assessment that would collectively address the needs of families with young children in the community and could be shared with key stakeholders.
Four research questions formed the foundation of this work:

▪ **Quality of Life in Palo Alto:** How are families with children ages birth through 12 doing in Palo Alto, how secure do they feel financially, how much of their time is devoted to family life, and what stressors do they face in their daily lives?

▪ **The Early Care and Education (ECE) Landscape:** What challenges do early care and education professionals face in Palo Alto, how can the community support this work, and what are the best practices being implemented to recruit and retain quality teachers?

▪ **Access and Inclusion in the Palo Alto Community:** What are the unique stressors faced by low-income families, immigrant families, and families with children who have special needs; three groups who are historically underrepresented in planning and assessment processes?

▪ **Community Services, Resources and Supports:** What is the availability and accessibility of community resources, services and support?

Data gathering for the assessment included:

- 18 interviews with community leaders who worked with families and children
- 41 interviews with early childhood education providers
- 661 survey respondents from a quantitative mail survey sent to Palo Alto families with at least one child under the age of 13

To ensure the feedback of historically underrepresented families, three in-depth focus groups were also conducted with low-income families, immigrant families, and families with children who have special needs. Two other key data sources included the American Communities Survey (2017) and the National Citizen’s Survey (2018).

The assessment was completed in 2019 and here are links to the Full Report and Executive Summary.

The key learnings as linked to the Assessment’s four research questions are included below.

**Quality of Life in Palo Alto:**

- Survey respondents appreciate the education and recreation opportunities, safe neighborhoods, community involvement, connection to parents, time to spend with family, and access to parks, libraries, and community centers.

- Families are concerned about housing costs, work-related stress, lack of family support, and the accessibility of affordable, quality childcare. Additional stressors for low and middle-income families and families with children who have special needs.

...
needs, include accessing community resources, learning supports, after-school options, and recreational activities.

The Early Care and Education (ECE) Landscape:

- Survey respondents agree there are high-quality, convenient childcare options. Primary challenges include long waitlists, program limitations, cost, and parking.
- The biggest challenge facing ECE providers is recruitment and retention of teachers. ECE providers also struggle to expand their programs, meet the needs of diverse populations, and manage the high expectations and demands of parents.
- ECE providers identify best practices for recruiting and retaining teachers as offering higher pay and more benefits, mitigating commute time, and partnering with the community to address the high cost of living in Palo Alto and the surrounding cities.

Access and Inclusion in the Palo Alto Community:

- Low- and middle-income families report potentially earning too much to qualify for subsidies for housing, childcare, and recreational after-school and summer activities, but not enough to afford these services without a subsidy. Additional challenges include obtaining specialized equipment to participate in sports programs and accessing tutors.
- Immigrant families report struggling to integrate into the Palo Alto community due to language and cultural barriers. It may also be challenging to find culturally sensitive childcare options and join established parent and community networks.
- Families with children who have special needs report difficulties connecting with parents of typically developing children, finding childcare that can accommodate their child’s needs, and accessing specialized services.

Community Services, Resources and Supports:

- Survey respondents frequently access the beloved local parks, libraries, and community centers. They also appreciate the excellent schools and nonprofit services that exist in the community to support families and children.
- Finding information about community resources, services, and supports can be challenging for families, especially those seeking financially accessible services or programs that meet the language, cultural, or special needs of their child. Also, finding and accessing medical and mental health services can be prohibitive.

Once the Assessment was complete, PAACECE started the process of presenting the results with stakeholder groups in the community to seek out collaborations for action in the coming years, but this process ended with the COVID lockdown in March of 2019 when PAACECE’s efforts shifted to meeting the immediate needs of ECE providers which
is outlined below.

*The Effect of COVID on Child Care*

The onset of COVID was devastating to ECE providers nationwide and the local landscape was no different. Childcare, preschool, and afterschool care providers fill a critical role in our community. Whether organized as businesses or non-profit organizations, in centers or in one's home, these entities allow parents to work while ensuring their children receive quality care. Many are small to medium sized women-owned businesses. Like many business sectors, the ECE community quickly and successfully adapted to COVID-health and safety protocols and continued to provide high-quality services in a safe environment. However, low enrollment numbers, increased costs for cleaning and sanitation, the requirement to provide small stable class and teacher cohorts, and parental concerns about the health and safety of their children (or their comfort levels utilizing childcare services) have collectively had a severe and continuing financial impact on all Palo Alto childcare providers.

PAACECE looked for a way to assist local providers and started off by creating a thorough resource list covering the needs of the ECE community. This was followed in April 2020 by the convening of bi-weekly meetings with local ECE administrators via Zoom. These have been well attended forums for the providers to discuss the challenges they are facing and how to meet them. Providers have helped each other navigate the ever-changing local, state and federal mandates and recommendations, while providing support and guidance to one another. Many providers have commented that these opportunities to gather as an ECE community have been critical to surviving the pandemic. These meetings are still happening, and while some of the challenges had changed over the ensuing 1.5 years, many have remained the same. Most providers are struggling to fully enroll their centers, often operating at 60% or less. The stressors on their budgets and the many cutbacks needed to remain solvent and keep their doors open are ever present, knowing that they are providing an essential service to the community.

After a bright spot last spring and the hope of increased enrollment in the fall due to the beginning of the school year and return to in person work, the Delta variant is once again keeping many parents from enrolling their children in congregant care and looking for alternative options. Centers are struggling to find and hire staff due to low wages and the stressors of the position, especially due to added health concerns. While hiring was a struggle before COVID, it is even more difficult now. ECE educators have worked heroically during the pandemic through very difficult circumstances and were rarely mentioned as essential workers when accolades for those continuing to work in person during the early days of the pandemic were mentioned. In the beginning they found creative ways to interface with their children while their sites were still closed, kept the well-being of children as a priority when designing protocols and processes for welcoming them back in person, followed strict safety, masking, and cohort guidelines, and still provided creative programming and quality care. Many educators are tired,
and their resiliency is challenged daily.

Palo Alto has over 80 licensed centers and home-based ECE providers, several of which closed temporarily during COVID. In the last year, at least nine licensed providers, serving approximately 280 children have closed in Palo Alto (per list provided by the County of Santa Clara Office of Education of sites that contacted them); the reason for some of the closures are unknown but staff is aware of at least three long-time local providers who closed due to COVID-related low enrollment. While this may not seem like an issue now, one must remember that pre-pandemic many local providers had long waitlists for care, leaving families to look elsewhere or seek out other care options. The question as to whether local providers can continue to weather the financial toll, the effects of the ever changing local, county and state quarantine changes for cases of COVID positive participants and family members, and still be operational in the long run when families are ready to return to congregant care is unknown. This leads to a likely crisis of availability in the future. This will most directly affect a woman’s ability to participate in the workforce and this would have a rippling effect on the economy. Speakers and participants at the City’s recent Summit on Women and Girls (June 2021) heavily emphasized the need for quality, affordable and available child care as a tool to women’s economic empowerment and it ranked in the top four of local critical needs.

This pandemic is also having far-reaching effects on the social and emotional health of our youngest citizens. For children who are at home, parents may be working remotely and unable to provide the stimulation needed for healthy child development. Children in group care learn valuable skills such as how to self-regulate their strong emotions, how to navigate conflict with a peer, and how to trust and build relationships with other caring adults in their lives. For babies and toddlers, being in group care allows them to explore the world around them in safe ways that stimulate their imagination, while being cared for by adults who respond reflectively to their needs in a social setting. For children aged three to five years old, group care offers plenty of opportunities to learn critical social skills and become an integral part of a classroom community. Access to affordable, quality childcare and preschool is as essential for parental employment and economic recovery as it is for a child's healthy cognitive, physical, social, and emotional growth.

The pandemic has affected all local families, but especially those with low incomes and essential workers (lower and middle income) who are struggling financially due to high housing costs and other larger expenses such as child care. While the city supports a generous child care subsidy program, there is still a substantial waitlist for subsidized care.

**Discussion**

PAACECE members met for a retreat last spring with the goal of creating an annual workplan that was responsive to the needs of parents and educators. Looking back to the findings of the Assessment through the lense of impact of a pandemic experience
as well as the issues/challenges expressed by ECE administrators during the bi-weekly meetings, they drafted a one year work plan focusing on the education and mental health needs of parents and educators.

Workplan items include:
1) Continue the current ECE bi-weekly provider meetings as they provide great connection and support for ECE administrators and enhance their ability to support the classroom educators in their programs.

2) Create a pilot program for classroom educators (similar to the one for administrators listed above), that provides opportunity for connection and support which will enhance their ability to support the children in their programs.

3) Create a series of professional development opportunities that meet educators needs.

4) Review and improve current mechanisms of communicating resources to families in the community including:
   - City of Palo Alto website
   - Resources for Families & Educators of Young Children website (the website will be reviewed with an effort to provide additional and relevant resources for low income families, immigrant families and families with children with special needs)
   - Consider the role of social media in getting out the word on PAACECE and services/resources for families and educators of young children

5) Explore setting up an educational series for parents using Palo Alto Unified School District’s 21-day racial equity challenge as a model.

6) Conduct outreach at larger City events to educate residents on community resources and the work of PAACECE.

Given the goals listed above, staff is requesting a $30,000 allocation from the Child Care Trust Fund to be used as follows:

**Community of Practice Cohort** –$20,000 – Community of Practice is a six-month training session geared for skilled educators in the Palo Alto community to develop practices in their schools that will support reflective early childhood teaching. It will allow educators time to build a community of support and collaboration with other Early Childhood Professionals. Expenses include the cost of meeting facilitation for two professionals and small participant stipends for 14 educators. PAACECE hosted a successful COP series in 2014. Participants credit the series for reinvigorating their love of the profession and giving them the training and the tools to transform their teaching and their sites.
**Scholarship Fund** - $5,000. Given the budget limitations that most ECE sites are facing, funding to support individual educators to attend outside professional training and continuing education is being cut or eliminated. While PAACECE will be planning a series of general interest workshops, this would allow educators to apply for a small grant to attend education classes of their own choosing and/or need as provided by professional Child Care organizations or local colleges.

**Mini Grants** - $5,000 – Budget limitations have also reduced the capacity of ECE administrators to seek out needed onsite assistance from professionals who provide classroom observations, behavioral and mental health support. This is especially important due to the stressors that the pandemic has had on children, their families and educators and how this shows up in the ECE setting. This funding would allow an ECE site to apply for a mini grant to secure professional consultations. Staff would like to retain the ability to move funds between the scholarship and the mini grant if the need presents itself and as approved by PAACECE.

PAACECE is committed to assisting the ECE community and Palo Alto parents in the ways listed above in the coming year. They acknowledge that this is just a start to the long-term work that is needed and are committed to building a network of additional community wide support.

**Resource Impact**
Additional appropriation of $30,000 from the unappropriated fund balance of the Child Care Trust Fund (CCTF) is requested to execute the recommendations in this report. The CCTF fund balance of $300,000 is sufficient to support this transfer and appropriation request.

**Policy Implications**
The following Goals and Policies from the Comprehensive Plan are directly related to this discussion:

Policy C-1.12 Maintain an effective, collaborative relationship with the PAUSD to optimize the use of school services and facilities for public benefit, particularly for children, youth, teens, seniors and people with disabilities.

- Program C1.12.1 In cooperation with public and private businesses, nonprofit organizations and PAUSD, develop a service program that will coordinate the efforts of agencies providing services to families and youth in Palo Alto.

Policy C-1.14 Actively work with the PAUSD and private, nonprofit, faith-based and public community service organizations to define roles, avoid duplication, and to coordinate the delivery of services like childcare, language education and recreation.
Policy C-1.15 Continue strong support for and coordinate delivery of childcare services, addressing the needs of infants, toddlers and pre-kindergarten, as well as school-aged children.

- Program C1.15.1 Support and promote the provision of comprehensive childcare services in Palo Alto by public and private providers, including employers

- Program C1.15.2 Utilize the Early Care and Education Committee to develop and update the Child Care Master Plan, and to connect providers and professionals working with families with young children, explore challenges and opportunities to programs and services for young children, and support early education programs in the community in their efforts to enhance quality.

- Program C1.15.3 Collaborate with Palo Alto Community Child Care (PACCC) to identify, develop and promote high quality early learning environments to serve all families in our community.

Stakeholder Engagement
There were several avenues by which staff utilized to engage with stakeholders regarding the results of the Assessment of the Needs of Families with Young Children and the current need of Early Education providers in the community. Staff and PAACECE members presented the results of the Assessment via a “Listening Tour” to several organizations. This effort was cut short by the COVID pandemic, however; engagement with local early education administrators was intensified by the hosting of a bi-weekly meetings via Zoom starting in April of 2020 and continues to the present.

Environmental Review
The proposed budget transfer and workplan described in this report are not a “project” under CEQA.
Summary Title: 922 College Avenue: Parcel Map with Exceptions

Title: 922 College Avenue [20PLN-00104]: Request for Review of a Parcel Map with Exceptions to Adjust Lot Lines for Two Substandard Parcels to Facilitate the Redevelopment and Sale of Two Homes. Environmental Assessment: Exempt. Zoning District: R-1 (Single Family Residential)

From: City Manager

Lead Department: Planning and Development Services

Recommendation
Staff recommends City Council take the following action(s):
1. Find the project exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15303, and 15061(b)(3), and
2. Find that the subject parcel map with exceptions substantially conforms to the approved preliminary parcel map with exceptions and approve the subject parcel map with exceptions on the consent calendar pursuant to Palo Alto Municipal Code (PAMC) Chapter 21.16 and the Subdivision Map Act.

Executive Summary
The requested action is approval of a parcel map with exception for recordation. The applicant/owner proposes to adjust lot lines on an R-1 zoned property with two underlying lots to better align the lots with existing residences and assessor’s parcels at 922 College Avenue and 2160 Cornell Street. This action follows the Preliminary Parcel Map with Exceptions application that was reviewed and approved by the City Council earlier this year; this action simply confirms that the parcel map is consistent with the previously approved preliminary parcel map and that any conditions have been satisfied.

Background
The proposed project is a Parcel Map with Exceptions to redistribute lot area from two existing substandard underlying lots, consistent with the Council-approved action. The result is two
substandard lots which align with the existing Assessor’s Parcel Number (APN) boundaries assigned to 922 College Avenue and 2160 Cornell Street.

This project is at “step two” of the City’s subdivision process. This follows step one, where the preliminary parcel map with exceptions was recommended for approval by the Planning and Transportation Commission on November 18, 2020 and approved by City Council on January 25, 2021. The previously approved Record of Land Use Action (RLUA) is included as Attachment B. At this stage in the process, the Council’s role is simply to confirm that the parcel map is consistent with the preliminary parcel map approved last year. Upon approval, staff will direct the applicant’s title company to record the Parcel Map with Exceptions with the County of Santa Clara.

**Discussion**

On January 25, 2021, the City approved a Preliminary Parcel Map with Exceptions for 922 College Avenue and 2160 Cornell Street. The Preliminary Parcel Map with Exceptions will expire on January 25, 2022 unless the City Council acts on the Parcel Map with Exceptions, as recommended.

The parcel map application includes a request for an Exception following the requirements of PAMC Chapter 21.32, for minimum lot size.

This property would be subdivided as follows, as per the Preliminary Parcel Map with Exceptions:

- **Parcel 1**: 922 College Avenue would be 65 feet wide (along the Cornell St. frontage) and 74.99 feet deep (along the College Ave. frontage); total area would be 4,874 square feet (sf).
- **Parcel 2**: 2160 Cornell Street would be 50 feet wide, 74.99 feet deep; total area would be 3,750 sf.

The Parcel Map with Exceptions is the official, legal document to be recorded with the County to allow for separate ownership of the two parcels. The Parcel Map with Exceptions is prepared under the direction of a registered civil engineer and is based on a survey.

As required by the Subdivision Map Act, City staff reviewed and confirmed that the Parcel Map with Exceptions presented substantially conforms to the approved Preliminary Parcel Map with Exceptions. Approval of a Parcel Map with Exceptions is ministerial if the Parcel Map with Exceptions is in substantial conformance with the approved Preliminary Parcel Map with

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Exceptions. While many cities delegate approval of the Parcel Map with Exceptions to the City Engineer, under PAMC Chapter 21.16, the City Council is responsible for this approval.

Environmental Review
The subject project has been assessed in accordance with the authority and criteria contained in the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and the environmental regulations of the City. A Notice of Categorical Exemption was filed and recorded with the County of Santa Clara on March 30, 2021, Attachment D. The project is exempt per CEQA Guideline Sections 15301 and 15061(b)(3).

Attachments:
Attachment8.a: Attachment A: Location Map (PDF)
Attachment8.b: Attachment B: Signed RLUA for Preliminary Parcel Map (PDF)
Attachment8.c: Attachment C: Project Plans (DOCX)
Attachment8.d: Attachment D: Recorded CEQA Notice of Exemption (PDF)
Legend

- Assessment Parcel Palo Alto
- Assessment Parcel Palo Alto
- Assessment Parcel Outside Palo Alto
- Road Centerline Small Text (TC)
- Curb Face (RF)
- Pavement Edge (RF)
- Address Label (AP)
- Highlighted Features
- Current Features

Attachment A
Vicinity Map
922 College Ave and 1026 Cornell St

This map is a product of the City of Palo Alto GIS.

The City of Palo Alto assumes no responsibility for any errors.

©1989 to 2016 City of Palo Alto
ACTION NO. 2021-01
DRAFT RECORD OF THE COUNCIL OF THE CITY OF PALO ALTO LAND USE ACTION FOR
922 COLLEGE AVENUE: PRELIMINARY PARCEL MAP 20PLN-00104
(STANFORD UNIVERSITY, APPLICANTS)

At its meeting on January 25, 2021, the City Council approved the Preliminary Parcel Map for a two-lot subdivision project with exceptions, making the following findings, determinations and declarations:

SECTION 1. Background. The City Council of the City of Palo Alto (“City Council”) finds, determines, and declares as follows:

A. On June 10, 2020, Eoin Buckley, on behalf of Stanford University, applied for a Preliminary Parcel Map with exceptions for the development of a Two-lot subdivision project (“The Project”).

B. The project site is comprised of two narrow substandard lots (APN No. 137-03-029, 137-03-030) of approximately 8,624 square feet total. The site contains two residential structures and single-family residential land uses are located adjacent to the lots.

SECTION 2. Environmental Review. The subject project has been assessed in accordance with the authority and criteria contained in the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and the environmental regulations of the City. Specifically, the project is categorically exempt per CEQA Guideline Section 15301 (Existing Facilities).

SECTION 3. Preliminary Parcel Map Findings.
A legislative body of a city shall deny approval of a Parcel Map, if it makes any of the following findings (California Government Code Section 66474):

1. That the proposed map is not consistent with applicable general and specific plans as specified in Section 65451:

   The site does not lie within a specific plan area and is consistent with the provisions of the Comprehensive Plan.

2. That the design or improvement of the proposed subdivision is not consistent with applicable general and specific plans:

   The map is consistent with the following Comprehensive Plan policies:
   a. Policy L-6.1: Promote high-quality design and site planning that is compatible with surrounding development and public spaces.
b. Policy L-6.5: In areas of the City having a historic or consistent design character, encourage the design of new development to maintain and support the existing character.

3. That the site is not physically suitable for the type of development:

The site currently contains two single-family houses, in a residential neighborhood. The proposed parcel map does not propose to change this.

4. That the site is not physically suitable for the proposed density of development:

The proposal for the site creates two substandard R-1 lots, however the site is currently comprised of two narrow substandard R-1 lots. The proposed project will result in two lots which are more in compliance with the Zoning Code than the existing, which is allowed under PAMC 21.04.030(b)(17). This project does not propose to change the current density of two single-family houses.

5. That the design of the subdivision or the proposed improvements are likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat:

The minor subdivision will not cause environmental damage or injure fish, wildlife, or their habitat. The project site has been fully urbanized and developed and is centrally located within the College Terrace area. There is no recognized sensitive wildlife or habitat in the project vicinity.

6. That the design of the subdivision or type of improvements is likely to cause serious public health problems:

The creation of two individual parcels will not cause serious public health problems, as it does not substantially affect the existing conditions and overall function of the properties as a site for two single-family residences.

7. That the design of the subdivision or the type of improvements will conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision. In this connection, the governing body may approve a map if it finds that alternate easements, for access or for use, will be provided, and that these will be substantially equivalent to ones previously acquired by the public. This subsection shall apply only to easements of record or to easements established by judgment of a court of competent jurisdiction and no authority is hereby granted to a legislative body to determine that the public at large has acquired easements for access through or use of property within the proposed subdivision.
The parcel map does not propose nor require any easements.

SECTION 4. Exception Findings

1. There are special circumstances or conditions affecting the property.

The division of the property as proposed was approved by the City in 1952, but the record of survey (or parcel map) was not recorded. The property was subsequently developed with the second single-family house as if the division of the property had been properly completed. There are currently two underlying legal lots on the property, which are also substandard, but are asymmetrical and completely unaligned with the existing improvements. The new lots will be more in compliance in the sense that the lot lines will not go through the existing buildings, and the lots will each meet the R-1 development density of one primary unit per lot.

2. The exception is necessary for the preservation and enjoyment of a substantial property right of the petitioner.

The property is currently developed and used as two single family homes with distinct addresses. This has been the case since at least 1954. The proposed subdivision will ensure that only one existing home is located on each new parcel.

3. The granting of the exception will not be detrimental to the public welfare or injurious to other property in the territory in which the property is situated.

The subdivision of the property will confirm the existing conditions. The proposed lot sizes, while substandard, are in keeping with other lots in the College Terrace neighborhood.

4. The granting of the exception will not violate the requirements, goals, policies, or spirit of the law.

Granting this exception is found to be consistent with the Subdivision Map Act, Zoning Code, and Comprehensive Plan.

SECTION 6. Parcel Map Approval.

The Parcel Map submitted for review and approval by the City Council shall be in substantial conformance with the Preliminary Parcel Map prepared by MacLeod and Associates titled “Preliminary Parcel Map With Exceptions for Subdivision Purposes (2 Lots)”, consisting of one (1) page, uploaded to Accela Citizen Access on January 4, 2021 except as modified to
incorporate the conditions of approval in Section 7. A copy of this plan is on file in the Department of Planning and Development Services.

SECTION 7. Conditions of Approval.

Planning Division

1. PROJECT PLANS. The Parcel Map submitted for review and approval by the Director shall be in substantial conformance with the Preliminary Parcel Map noted in Section 6.

2. PARCEL MAP COVER PAGE. At such time as the Parcel Map is filed, the cover page shall include the name and title of the Director of Planning and Development Services.

3. PARCEL MAP. A Parcel Map, in conformance with the approved Preliminary Parcel Map, all requirements of the Subdivision Ordinance (PAMC Section 21.16), and to the satisfaction of the City Engineer, shall be filed with the Planning Division and the Public Works Engineering Division. The resultant parcel map must be recorded prior to any building permit issuance.

4. INDEMNITY. To the extent permitted by law, the Applicant shall indemnify and hold harmless the City, its City Council, its officers, employees and agents (the “indemnified parties”) from and against any claim, action, or proceeding brought by a third party against the indemnified parties and the applicant to attack, set aside or void, any permit or approval authorized hereby for the Project, including (without limitation) reimbursing the City for its actual attorneys’ fees and costs incurred in defense of the litigation. The City may, in its sole discretion, elect to defend any such action with attorneys of its own choice.

Building Division

1. Underlying lot lines shall be removed at time of building permit application.

Public Works Engineering Department

2. Applicant shall provide a preliminary title report including copies of all referenced documents. The report shall be dated within 3 months of Parcel Map submittal.

3. The applicant agrees that the City of Palo Alto will employ the services of Siegfried Engineering who will function as the City Surveyor and will review, sign, and stamp the Parcel Map associated with this project.

In an effort to employ the services of Siegfried Engineering, and as part of the City’s cost recovery measures, the applicant is required to provide payment to cover the cost of
Siegfried Engineering's review. The map and associated documents will be forwarded to Siegfried Engineering for an initial review to establish the overall review cost. This will be based on the complexity of the project and the information shown on the document. This information will be shared with the applicant who will then provide written acknowledgement of the amount. The applicant may then provide payment for the review. Payment shall be provided prior to beginning the formal review process. Scope and Fee Letter from Siegfried Engineering will be provided separately.

Utilities Water Gas Wastewater Department

4. Show each parcel has one electric, water, gas, service, and one wastewater lateral connection connected to City of Palo Alto Utilities.

5. The applicant shall submit a completed water-gas-wastewater service connection application – load sheet for each home to City of Palo Alto Utilities. The applicant must provide all the information requested for utility service demands. The applicant shall provide the new total loads.

6. Please amend the Site Plan or Utility Map to include: the size and location of all underground utilities within the development and the public right of way including electric, water, gas, mains and meters, backflow prevents, fire sprinkler riser, sewer/storm mains, sewer cleanouts, catch basins and any other required utilities. Include topographic features in the sidewalk like vaults, curb & gutter, sidewalk, planting strips, driveway approach, trees, etc.

7. Add to the Site Plan or Deconstruction Plan the following note: UNUSED UTILITIES SERVICES REQUIREMENTS: ALL EXISTING WATER, GAS AND WASTEWATER SERVICES THAT WILL NOT BE REUSED SHALL BE ABANDOED AT THE MAIN PER WGW UTILITIES PROCEDURES.

SECTION 8. Term of Approval

1. Preliminary Parcel Map. All conditions of approval of the Preliminary Parcel Map shall be fulfilled prior to approval of a Parcel Map (PAMC Section 21.16.010[c]). Unless a Parcel Map is filed, and all conditions of approval are fulfilled within a two-year period from the date of Preliminary Parcel Map approval, or such extension as may be granted, the Preliminary Parcel Map shall expire and all proceedings shall terminate. The Director of Planning and Development Services may approve one extension prior to expiration of the Preliminary Parcel Map, consistent with the provisions of PAMC Title 21.

PASSED: 6 – 0 Tanaka recused
AYES:
NOES:
ABSENT:
ABSTENTIONS: Tanaka

ATTEST:

_________________________
City Clerk

APPROVED AS TO FORM:

_________________________
Senior Asst. City Attorney

APPROVED:

_________________________
Director of Planning and Development Services

PLANS AND DRAWINGS REFERENCED:

Those plans prepared by MacLeod Associates titled “Preliminary Parcel Map with Exceptions for Subdivision (2 Lots)”, consisting of one page, dated January 4, 2021.
Attachment E

Project Plans

During the ongoing Shelter-in-Place, project plans are only available online.

Directions to review Project plans online:

1. Go to: bit.ly/PAPendingprojects
2. Scroll down to find “922 College Ave. and 2160 Cornell St.” and click the address link
3. On this project specific webpage you will find a link to the project plans and other important information

Direct Link to Project Webpage:

https://www.cityofpaloalto.org/News-Articles/Planning-and-Development-Services/922-College-Avenue-and-2160-Cornell-Street
March 30, 2021

City of Palo Alto
Community Services Department
250 Hamilton Avenue
Palo Alto, CA 94301

Re: CALIFORNIA ENVIRONMENTAL QUALITY ACT POSTINGS

Dear Lead Agency:

Enclosed please find the public copy posted in Santa Clara County Clerk-Recorder's Office for 30 days per CALIFORNIA CODES PUBLIC RESOURCES CODE SECTION 21152 (c)

Sincerely,
REGINA ALCOMENDRAS, Santa Clara County Clerk-Recorder

By: Laura Luna, Deputy Clerk-Recorder
County of Santa Clara
Office of the County Clerk-Recorder
Business Division
County Government Center
70 West Hedding Street, E. Wing, 1st Floor
San Jose, California 95110 (408) 299-5688

CEQA DOCUMENT FILING FEE DECLARATION
ENVIRONMENTAL FILING RECEIPT
PLEASE COMPLETE THE FOLLOWING:
1. LEAD AGENCY: City of Palo Alto

2. PROJECT TITLE: 622 College Preliminary Parcel Map

3. APPLICANT NAME: Edn Buckley

4. APPLICANT ADDRESS: 340 Bonair Sidng, Stanford, CA 94305

5. PROJECT APPLICANT IS A: ☐ Local Public Agency ☐ School District ☐ Other Special District ☐ State Agency ☐ Private Entity

6. NOTICE TO BE POSTED FOR ___30___ DAYS.

7. CLASSIFICATION OF ENVIRONMENTAL DOCUMENT
   a. PROJECTS THAT ARE SUBJECT TO DFG FEES
      ☐ 1. ENVIRONMENTAL IMPACT REPORT (PUBLIC RESOURCES CODE §21152) $3,445.25 $0.00
      ☐ 2. NEGATIVE DECLARATION, (PUBLIC RESOURCES CODE §21080(C)) $2,480.25 $0.00
      ☐ 3. APPLICATION FEE WATER DIVERSION (STATE WATER RESOURCES CONTROL BOARD ONLY) $850.00 $0.00
      ☐ 4. PROJECTS SUBJECT TO CERTIFIED REGULATORY PROGRAMS $1,171.25 $0.00
      ☐ 5. COUNTY ADMINISTRATIVE FEE (REQUIRED FOR a-1 THROUGH a-4 ABOVE) $50.00 $0.00
   b. PROJECTS THAT ARE EXEMPT FROM DFG FEES
      ☐ 1. NOTICE OF EXEMPTION ($50.00 COUNTY ADMINISTRATIVE FEE REQUIRED) $50.00 $50.00
      ☐ 2. A COMPLETED "CEQA FILING FEE NO EFFECT DETERMINATION FORM" FROM THE DEPARTMENT OF FISH & GAME, DOCUMENTING THE DFG'S DETERMINATION THAT THE PROJECT WILL HAVE NO EFFECT ON FISH, WILDLIFE AND HABITAT, OR AN OFFICIAL, DATED RECEIPT / PROOF OF PAYMENT SHOWING PREVIOUS PAYMENT OF THE DFG FILING FEE FOR THE SAME PROJECT IS ATTACHED ($50.00 COUNTY ADMINISTRATIVE FEE REQUIRED) $50.00 $0.00
   c. NOTICES THAT ARE NOT SUBJECT TO DFG FEES OR COUNTY ADMINISTRATIVE FEES
      ☐ NOTICE OF PREPARATION ☐ NOTICE OF INTENT NO FEE $0.00

8. OTHER: ____________________________________________ FEE (IF APPLICABLE): $50.00

9. TOTAL RECEIVED: ____________________________________________ $50.00

*NOTE: "SAME PROJECT" MEANS NO CHANGES. IF THE DOCUMENT SUBMITTED IS NOT THE SAME (OTHER THAN DATES), A "NO EFFECT DETERMINATION" LETTER FROM THE DEPARTMENT OF FISH AND GAME FOR THE SUBSEQUENT FILING OR THE APPROPRIATE FEES ARE REQUIRED.

THIS FORM MUST BE COMPLETED AND ATTACHED TO THE FRONT OF ALL CEQA DOCUMENTS LISTED ABOVE (INCLUDING COPIES) SUBMITTED FOR FILING. WE WILL NEED AN ORIGINAL (WET SIGNATURE) AND TWO (2) COPIES. IF THERE ARE ATTACHMENTS, PLEASE PROVIDE THREE (3) SETS OF ATTACHMENTS FOR SUBMISSION. (YOUR ORIGINAL WILL BE RETURNED TO YOU AT THE TIME OF FILING.)

CHECKS FOR ALL FEES SHOULD BE MADE PAYABLE TO: SANTA CLARA COUNTY CLERK-RECORDER

PLEASE NOTE: FEES ARE ANNUALLY ADJUSTED (Fish & Game Code §711.4(b)); PLEASE CHECK WITH THIS OFFICE AND THE DEPARTMENT OF FISH AND GAME FOR THE LATEST FEE INFORMATION.

"... NO PROJECT SHALL BE OPERATIVE, VESTED, OR FINAL, NOR SHALL LOCAL GOVERNMENT PERMITS FOR THE PROJECT BE VALID, UNTIL THE FILING FEES REQUIRED PURSUANT TO THIS SECTION ARE PAID." Fish & Game Code §711.4(f)

(Fees Effective 01-01-2021)
NOTICE OF EXEMPTION

PROJECT TITLE: 922 College Preliminary Parcel Map

PROJECT LOCATION: 922 College Avenue, 2160 Cornell Street

PROJECT DESCRIPTION: Request for Review of a Preliminary Parcel Map with Exceptions to Adjust Lot Lines for Two Substandard Parcels.

The proposed project is a Preliminary Parcel Map with Exceptions to redistribute lot area from two existing substandard underlying lots, to two substandard lots which align with the existing Assessor’s Parcel Number (APN) boundaries assigned to 922 College Avenue and 2160 Cornell Street. In 1952 the City approved an application to subdivide the property and construct the house now addressed 2160 Cornell Street. However, that map was never recorded with the County, so the subdivision was never made effective. Two residences currently exist on the property and two APNs were assigned for tax purposes.

NAME OF PUBLIC AGENCY APPROVING THE PROJECT: City of Palo Alto, Planning and Development Services

NAME OF PERSON OR GROUP CARRYING OUT PROJECT: The Board of Trustees of Leland Stanford Junior University
340 Bonair Siding Road
Stanford, CA 94305

EXEMPT STATUS

(check one)

☐ Ministerial (Sec. 21080(b)(1); 15268)
☐ Declared Emergency (Sec. 21080(b)(3); 15269(a))
☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c))
☒ Categorical Exemption: 15301 Existing Facilities.
☐ Statutory Exemptions.
**REASONS WHY PROJECT IS EXEMPT:**

The lot contains two underlying lots, and two existing single-family residences. The project adjusts the lot lines to respect the existing uses.

The exemption 15301 states “Class 1 consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use. The types of “existing facilities” itemized below are not intended to be all-inclusive of the types of projects which might fall within Class 1. The key consideration is whether the project involves negligible or no expansion of use.

Examples include but are not limited to:

...(k) Division of existing multiple family or single-family residences into common-interest ownership and subdivision of existing commercial or industrial buildings, where no physical changes occur which are not otherwise exempt;...

As noted above, these examples are not intended to be all-inclusive of the types of projects which might fall within Class 1. The key consideration is whether "the project involves negligible or no expansion of use".

The project is most similar to exemption 15301(k): division of existing multi-family or single-family residences into common-interest ownership and subdivision of existing commercial or industrial buildings, where no physical changes occur which are not otherwise exempt. The project is "single-family residences" that includes a subdivision "where no physical changes occur which are not otherwise exempt".

This project is also covered under CEQA Section 15061(b)(3), the “common sense exemption that CEQA applies only to projects which have the potential for causing a significant effect on the environment”. Since there is no change of use, residential density, major grading, or construction, and the existing homes are not historic resources, there is no potential for a significant effect on the environment.

This project does not create an impact under CEQA because the property contains and will continue to be two single-family residences. Any future construction will be limited to replacement or minor expansion of the existing single-family residences, in a manner consistent with the Zoning Code and CEQA exemption 15302 and/or 15303.

In order to qualify as an exempt project, the project must also not fall under an exception. The project does not as follows:

(a) Location. This project occurs in a developed residential neighborhood, and not in a sensitive environment. The site is surrounded by other single-family development.

(b) Cumulative Impact. There are several minor projects currently proposed, or under construction, within 500 feet of the project site:

<table>
<thead>
<tr>
<th>Address</th>
<th>Project description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>855 College Ave.</td>
<td>Demo of an existing one-story single-family house and construction of a two-story single-family house</td>
<td>Under Construction</td>
</tr>
<tr>
<td>1080 College</td>
<td>converting the existing one-story house into a ADU and construction of a two-Story single-family house</td>
<td>Under review</td>
</tr>
</tbody>
</table>
2080 Cornell St: Demo of an existing one-story single-family house and construction of a two-story single-family house

All projects listed above are exempt under CEQA 15303(a), and adhere to all Palo Alto Municipal Code regulations such as noise regulations, and will be consistent with a construction logistics plan approved by the City as a standard condition for all projects. This list also does not include any ministerial permits issued in the area. The projects are replacement of existing structures in an urbanized area and do not anticipate any cumulative environmental impacts.

(c) Significant effect. As stated above, this project does not propose any significant effects on the environment.

(d) Scenic highways. This project is not within a scenic highway.

(e) Hazardous waste sites. This project is not located on a hazardous waste site.

(f) Historical resources. The existing house at 922 College was designated to be “Not CRHR Eligible” in 2019 by consultants Page & Turnbull. It is not listed as a City historic resource. This status was confirmed by the City’s Historic Planner as a part of the project review.

PROJECT PLANNER: Emily Foley, AICP, Associate Planner, City of Palo Alto

IF FILED BY APPLICANT:
1. Attach certified document of exemption finding.
2. Declare if a Notice of Exemption has been filed by the public agency approving the project □ Yes □ N/A
Santa Clara County - Clerk-Recorder Office  
State of California  

File Number: ENV23189  
ENVIRONMENTAL FILING  
No. of Pages: 3  
Total Fees: $50.00  
File Date: 03/09/2021  
Expires: 03/28/2021  
REGINA ALCOMENDRAS, Clerk-Recorder  
By: Nina Khamphilath, Deputy Clerk-Recorder  

CEQA DOCUMENT FILING FEE DECLARATION  
ENVIRONMENTAL FILING FEE RECEIPT  
PLEASE COMPLETE THE FOLLOWING:  

1. LEAD AGENCY: City of Palo Alto, Community Services Department  
2. PROJECT TITLE: Ordinance to Add Vehicle Entrance Fees for Foothills Park and to Limit Maximum Park Attendance  
3. APPLICANT NAME: Daren Anderson, City of Palo Alto Community Services Department  
4. APPLICANT ADDRESS: 250 Hamilton Avenue Palo Alto, CA 94301 Attn: Daren Anderson  
5. PROJECT APPLICANT IS A: □ Local Public Agency □ School District □ Other Special District □ State Agency □ Private Entity  
6. NOTICE TO BE POSTED FOR _____ 20 _____ DAYS.  
7. CLASSIFICATION OF ENVIRONMENTAL DOCUMENT  
   a. PROJECTS THAT ARE SUBJECT TO DFG FEES  
      □ 1. ENVIRONMENTAL IMPACT REPORT (PUBLIC RESOURCES CODE §21152) $ 3,445.25 $ 0.00  
      □ 2. NEGATIVE DECLARATION, (PUBLIC RESOURCES CODE §21080(C) $ 2,480.25 $ 0.00  
      □ 3. APPLICATION FEE WATER DIVERSION (STATE WATERS RESOURCES CONTROL BOARD ONLY) $ 850.00 $ 0.00  
      □ 4. PROJECTS SUBJECT TO CERTIFIED REGULATORY PROGRAMS $ 1,171.25 $ 0.00  
      □ 5. COUNTY ADMINISTRATIVE FEE (REQUIRED FOR a-1 THROUGH a-4 ABOVE) $ 50.00 $ 0.00  
   b. PROJECTS THAT ARE EXEMPT FROM DFG FEES  
      □ 1. NOTICE OF EXEMPTION ($50.00 COUNTY ADMINISTRATIVE FEE REQUIRED) $ 50.00 $ 50.00  
      □ 2. A COMPLETED "CEQA FILING FEE NO EFFECT DETERMINATION FORM" FROM THE DEPARTMENT OF FISH & GAME, DOCUMENTING THE DFG'S DETERMINATION THAT THE PROJECT WILL HAVE NO EFFECT ON FISH, WILDLIFE AND HABITAT, OR AN OFFICIAL, DATED RECEIPT / PROOF OF PAYMENT SHOWING PREVIOUS PAYMENT OF THE DFG FILING FEE FOR THE "SAME PROJECT IS ATTACHED ($50.00 COUNTY ADMINISTRATIVE FEE REQUIRED)  
          DOCUMENT TYPE: □ ENVIRONMENTAL IMPACT REPORT □ NEGATIVE DECLARATION $ 50.00 $ 0.00  
   c. NOTICES THAT ARE NOT SUBJECT TO DFG FEES OR COUNTY ADMINISTRATIVE FEES  
      □ NOTICE OF PREPARATION □ NOTICE OF INTENT NO FEE $ ______ NO FEE  
8. OTHER:  
9. TOTAL RECEIVED: $ ______  $ 50.00  

*NOTE: "SAME PROJECT" MEANS NO CHANGES. IF THE DOCUMENT SUBMITTED IS NOT THE SAME (OTHER THAN DATES), A "NO EFFECT DETERMINATION" LETTER FROM THE DEPARTMENT OF FISH AND GAME FOR THE SUBSEQUENT FILING OR THE APPROPRIATE FEES ARE REQUIRED.  
This form must be completed and attached to the front of all CEQA Documents listed above (including copies) submitted for filing. We will need an original (wet signature) and two (2) copies. If there are attachments, please provide three (3) sets of attachments for submission. (Your original will be returned to you at the time of filing.)  

CHECKS FOR ALL FEES SHOULD BE MADE PAYABLE TO: SANTA CLARA COUNTY CLERK-RECORDER  
 PLEASE NOTE: FEES ARE ANNUALLY ADJUSTED (Fish & Game Code §711.4(b)); PLEASE CHECK WITH THIS OFFICE AND THE DEPARTMENT OF FISH AND GAME FOR THE LATEST FEE INFORMATION.  

"...NO PROJECT SHALL BE OPERATIVE, VESTED, OR FINAL, NOR SHALL LOCAL GOVERNMENT PERMITS FOR THE PROJECT BE VALID, UNTIL THE FILING FEES REQUIRED PURSUANT TO THIS SECTION ARE PAID." Fish & Game Code §711.4(c)(3)  
(Feves Effective 01-01-2021)
PROJECT TITLE: Ordinance to Add Vehicle Entrance Fees for Foothills Park and to Limit Maximum Park Attendance

PROJECT LOCATION: Foothills Park, in Palo Alto, Santa Clara County, California on [APN 182-46-006].

PROJECT DESCRIPTION: The Project includes adoption of an ordinance to amend the Fiscal Year 2021 Municipal Fee Schedule to add vehicle entrance fees for foothills park. The ordinance also amends Palo Alto Municipal Code Section 22.04.150(k) to provide the City Manager with the authority to limit maximum park attendance.

NAME OF PUBLIC AGENCY APPROVING THE PROJECT: City of Palo Alto

NAME OF PERSON OR GROUP CARRYING OUT PROJECT: City of Palo Alto, Community Services Division
250 Hamilton Avenue
Palo Alto, CA 94301

EXEMPT STATUS (check one)

☐ Ministerial (Sec. 21080(b)(1); 15268)
☐ Declared Emergency (Sec. 21080(b)(3); 15269(a))
☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c))
☒ Categorical Exemption: CEQA Guidelines §15301 (existing facilities); 15323 (Normal Operations of Facilities for Public Gatherings); and Class 8 (Actions by Regulatory Agencies for the Protection of the Environment)
☐ Statutory Exemptions.
The project includes modifications to Foothills Park that do not include any physical improvements to this existing facility, including any improvements that would expand the use (15301). Adoption of the ordinance provides the City Manager with the authority to reduce the total capacity at the park at a given time in order to protect the health, safety, and welfare of park users, to protect the natural resources in the park, and/or due to limits in parking, facilities, or staff availability. Adoption of the entry fee will serve as a revenue source to help offset park maintenance costs and as a way to keep visitation at a manageable level. The project, therefore would only serve to limit visitation to this existing facility (15308). The site would not affect the normal operations of this facility (15323) except in that the total capacity at the park may be reduced at times, as deemed necessary by the City.

PROJECT CONTACT:
Daren Anderson
Assistant Director Open Space, Parks, Golf, and Animal Services
Community Services Department
(650) 496-6950

IF FILED BY APPLICANT:
1. Attach certified document of exemption finding.
2. Declare if a Notice of Exemption has been filed by the public agency approving the project

☐ Yes
☐ No
N/A

Signature (Public Agency)  
Community Services Supervisor  
Title  
Date  
2/23/21
Title: Adopt an Ordinance Amending Palo Alto Municipal Code Title 10 (Parking) to Allow Virtual Parking Permits and Update Definitions and Procedures; and Direct Staff to Implement Virtual Parking Permits in a Phased Approach

Recommendation:
Staff recommends City Council adopt the attached ordinance amending Palo Alto Municipal Code (PAMC) Title 10 (Parking) to allow virtual parking permits and update definitions and procedures; and approve modifications to the City’s various on-street parking permit policies to implement virtual permits.

Executive Summary:
The proposed changes are part of the Office of Transportation’s work program as adopted by the City Council. Recommended programmatic updates to the parking permit programs and updates to the PAMC support the City’s Transportation Operations and Planning Priorities (Staff Report 10464) including:
- Implement Automated License Plate Reader (ALPR) enforcement
- Establish parking availability rates in the RPP districts (and now expanded to commercial districts)
- Develop virtual permit options for residential parking permit (RPP) customers
- Offer monthly renewal options and guest permit options tailored to customer needs

Additionally, the items for consideration support the following recommendations adopted in the Parking Work Plan and furthered by the Parking Action Plan in development, which PTC reviewed March 31, 2021.

<table>
<thead>
<tr>
<th>Recommendations in Progress Related to Transitioning to Virtual Permits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Improve Parking Permit Management System</td>
</tr>
<tr>
<td>6. Update Codes and Guidelines</td>
</tr>
<tr>
<td>16. Improve Process to Purchase Daily Permits</td>
</tr>
<tr>
<td>29. Provide Automatic Renewal for Employee Parking Permits</td>
</tr>
</tbody>
</table>
Background and Context:
The City’s existing permit policies have made the management of the permit program difficult for permit holders and staff due to outdated business practices defined within the municipal code. As the City works to update its permit issuance practices with the adoption of Automated License Plate Recognition enforcement and plans to move to a more dynamic parking permit management system, the City's Municipal code policies must be updated in parallel to match the more streamlined, dynamic and customer-friendly practices the City is pursuing.

Towards this end, in July 2019, Palo Alto procured a new parking citation and permit management system in cooperation with contract company Duncan Solutions (Duncan). The contract with Duncan, and the contract amendment to adopt automated license plate reader (ALPR) enforcement and regular parking occupancy data collection (Staff Report 11492) provides the City the opportunity to begin to optimize the permit program via operational updates the new systems will be capable of achieving. Through ALPR, the City’s parking permit program can provide more flexibility, access, and convenience to our residents, visitors, and the community, and streamline operations for staff, enabling positive movement on the Parking Work Plan items listed above.

Discussion:

Virtual Permits
The City’s adoption of ALPR enforcement enables the City’s parking management vendor to implement best practices and efficiencies prioritized by Council in May 2020 (May 13, 2020 At Places Memo), including virtual permitting, a key strategy to realizing efficiencies available due to the implementation of ALPR. Council adopted this strategy, along with regular parking occupancy data collection, in February 2021 (Staff Report 11492).

The City intends to replace existing physical employee, residential, and guest permits with virtual permits over the next several fiscal years, beginning as soon as this Fiscal Year 2021-2022. The permit is “virtual” because there is no longer a physical permit decal or hangtag, and instead the license plate number is the unique identifier associated with the permitted vehicle. Virtual permits are more convenient than physical hangtags or decals and enable vehicle license plate numbers to verify parking session validity automatically. Additionally, the use of virtual permits allow permit holders to more simply update vehicle or guest vehicle information online, eliminating the need for replacements or waiting for them to arrive in the mail. Residents and employees/employers will be able to use the online web portal to process and manage their permit requests. The transition to virtual permits will be phased in over time, based on the
permit sales cycles, timeline for enforcement technology, and anticipated education and outreach efforts.

Virtual permits have a variety of benefits for both permit holders and City operations. Virtual permits are an eco-friendly and cost-efficient option since they eliminate the need for producing and mailing physical permits. Instead, virtual permits become active as soon as the online application is reviewed and approved. The use of virtual permits streamlines parking management by reducing the amount of staff time needed to verify valid permits. License plates can be automatically verified in the field using ALPR, allowing for permit zones to be monitored more effectively and consistently, securing parking availability for permit holders.

The issuance of residential guest permits is of considerable interest to RPP customers. Staff plan to phase in virtual permit options over the next two fiscal years to ensure the guest permit program meets customers’ parking needs.

**Municipal Code – Virtual Permits, Paid Parking, and General Clean Up**

The proposed PAMC updates will allow the City to implement recommended changes to the permit program policies in phases. These will allow the City to effectively operate, administer, and enforce its programs. Permit policies will be documented in separate parking permit administrative guidelines, while the municipal codes necessary to manage and enforce the permit program will be retained within the PAMC.

The following PAMC updates are proposed for Council adoption:

**General**
- Update code language related to loading/unloading to include the word “active” to reduce abuse and ensure maximum efficiency of loading/unloading zones.
- Remove specific times for curb/sign regulations and refer to “as designated by posted signage” to provide City flexibility in the management of the curb.
- Define and add language for Transportation Network Company (TNC) violations for parking or standing upon any public highway or street for any period of time longer than is necessary to discharge or receive passengers.
- Update job titles to reflect that the Office of Transportation is separate from the Department of Planning and Development Services.

**Permits**
- Amend language for how permits are to be displayed to allow for any permit type, including virtual permits.

**Paid Parking (Postponed)** - To be developed and finalized in conjunction with a planned Commercial Pilot
- Provide permit framework for City to designate new paid parking zones, permit types, operating hours and rates, and target parking availability standards.
- Determine how revenues will be used
- Cost of operation/equipment
- Allocation of any surplus
- Codify paid parking violations including: requiring payment, use of slugs, tampering with devices, and prohibiting extra time.

**Resource Impact:**
The recommendations to amend the City’s Municipal Code regarding on-street parking permit policies, virtual parking permits and paid parking allow staff to more effectively and efficiently manage the parking program; therefore, no budgetary impact or additional funding is required at this time. These code changes must be in place prior making any further improvements in the parking districts.

Virtual permitting and Automated License Plate Recognition (ALPR) implementation services are already funded and under contract with Professional Account Management (aka Duncan). The commercial parking pilot program (paid parking) revenues and expenses will be developed and presented to Council at a future time for consideration and approval. Revenues would include permit purchases (non-employee permits) and citation proceeds while expenses would involve signage and mobile payment platform costs.

Direction from the City Council regarding further changes to the parking program, outside those recommended in this report, may lead to future resource impacts. As City Council direction is provided, corresponding budget adjustments will be brought forward for approval as appropriate. Parking program changes are funded by the University Avenue Parking Fund, California Avenue Parking Fund, and the Residential Preferential Parking Fund.

**Stakeholder Engagement:**
Staff have been in regular communication with both permit customers and neighborhood parking leaders about these proposed changes. The proposed phasing will allow staff to continue to conduct business, community, and stakeholder engagement throughout the implementation of improvements to the parking permit programs. In addition, staff continues to engage with both the Planning and Transportation Committee and Finance Committee in these efforts.

**Environmental Impact:**
The proposed ordinance is categorically exempt from CEQA per Section 15301 in that the proposed changes will have a minor impact on existing facilities.

**Attachments:**
- **Attachment9.a:** Attachment A: Ordinance Amending Title 10 (Parking)
Ordinance No. ______

Ordinance of the Council of the City of Palo Alto Amending Various Chapters of Title 10 (Parking) of the Palo Alto Municipal Code to Allow Virtual Parking Permits, Update Definitions and Processes, and Limit “Loading and Unloading” to “Active Loading and Unloading”

The Council of the City of Palo Alto ORDAINS as follows:

SECTION 1. Findings and declarations. The City Council finds and declares as follows:

A. The City Council desires to allow virtual permits for the City’s various permit parking programs.
B. The City Council desires to update various sections of Title 10 to update job titles, definitions, and processes to reflect current practices.
C. The City Council desires to clarify that “loading or unloading” be limited to “active loading or unloading” when permitted by various sections of Title 10.
D. The City Council hereby amends Title 10 to implement these changes as specifically described in this Ordinance.

SECTION 2. The following sections of Chapter 10.04 (Definitions) of Title 10 (Vehicles and Traffic) are hereby amended as follows (new text is underlined, deletions are in strikethrough):

10.04.060 Loading zone.
"Loading zone" means that space adjacent to a curb reserved for the exclusive use of vehicles during the active loading or unloading of passengers or materials.

10.04.080 Park.
"Park" means the standing of a vehicle, whether occupied or not, otherwise than temporarily for a period of less than thirty seconds for the purpose of and while actually engaged in active loading or unloading passengers or materials.

10.04.100 Passenger loading zone.
"Passenger loading zone" means the space adjacent to a curb reserved for the exclusive use of vehicles during the active loading or unloading of passengers.

SECTION 3. Chapter 10.04 (Definitions) is hereby amended to add new section 10.04.185 as follows:

10.04.185 Transportation Network Company.
"Transportation Network Company” means an organization, including, but not limited to, a corporation, limited liability company, partnership, sole proprietor, or any other entity.
operating in California that provides prearranged transportation services for compensation using an online-enabled application or platform to connect passengers with drivers using a personal vehicle.

SECTION 4. Section 10.36.050 (Parallel Parking) of Chapter 10.36 (Stopping, Standing and Parking - Generally) is hereby amended as follows:

10.36.050 Parallel parking.
(a) Subject to other and more restrictive limitations, a vehicle may be stopped or parked within eighteen inches of the left-hand curb facing in the direction of traffic movement upon any one-way street unless the city manager has caused signs to be erected prohibiting such stopping or standing.
(b) In the event a highway includes two or more separate roadways and traffic is restricted to one direction upon any such roadway, no person shall stand or park a vehicle upon the left-hand side of such one-way roadway unless the city manager has caused signs to be erected permitting such standing or parking.
(c) The city manager is authorized to determine when standing or parking shall be prohibited upon the left-hand side of any one-way street or alley or when standing or parking may be permitted upon the left-hand side of any one-way roadway of a highway having two or more separate roadways and shall erect signs giving notice thereof.
(d) The requirement of parallel parking in this section shall not apply in the event any commercial vehicle is actually engaged in the process of actively loading or unloading freight or goods, in which case that vehicle may be backed up to the curb, provided that such vehicle does not extend beyond the center line of the street and does not block traffic thereby; however, pursuant to Section 10.40.040 commercial vehicles may not stop, park, or stand in business districts between the hours of 11 a.m. and 6 p.m. unless they are legally parallel parked or are legally parked in any angle parking space.

SECTION 5. The following sections of Chapter 10.40 (Stopping, Standing and Parking - Loading And Unloading) are hereby amended as follows:

10.40.020 Signs or curb markings to indicate no stopping and parking regulations.
(a) The city manager is authorized, subject to the provisions and limitations of this title, to place signs or the following curb markings on any street, alley, or public parking facility to indicate parking or standing regulations, and curb markings shall have the meaning as herein set forth:
(1) Red shall mean no stopping, standing or parking at any time whether the vehicle is attended or unattended except that a bus may stop in a red zone marked or signed as a bus zone.
(2) Yellow shall mean no stopping, standing or parking at during any period of time between six a.m. and six p.m. of any day except Sundays and holidays designated by posted signage for any purpose other than the active loading or unloading of passengers or materials; provided that the loading or unloading of passengers shall not consume more than three minutes nor the loading or unloading of materials more than twenty minutes by commercial
vehicles during which the operator must be in attendance, under any circumstances during times when parking is restricted at a yellow zone.

(3) White shall mean no stopping, standing or parking at any time, unless limited to specific hours and/or days by posted signs, for any purpose other than the active loading or unloading of passengers which shall not exceed three minutes.

(4) Green shall mean no standing or parking for a period of time longer than thirty minutes at any time between eight a.m. and five p.m. of any day except Saturdays, Sundays and holidays, the specified time limit and on the days indicated by the posted signs.

(5) Blue shall mean no stopping, standing or parking except for vehicles that lawfully display a disabled placard or disabled license plate while transporting a disabled person. Such restrictions shall apply at all times.

(b) When the city manager, as authorized under this chapter, has caused signs or curb markings to be placed, no person shall stop, stand or park a vehicle adjacent to any such legible sign or curb marking in violation of any of the provisions of this title except as specifically authorized by law.

10.40.030 Effect of permission to load or unload.

(a) Permission herein granted to stop or stand a vehicle for purposes of active loading or unloading of materials shall apply only to commercial vehicles and shall not extend beyond the time necessary therefor and in no event for more than twenty minutes.

(b) The loading or unloading of materials shall apply only to commercial deliveries including the delivery or pickup of express and parcel post packages and United States mail.

(c) Permission herein granted to stop or park for purposes of active loading or unloading passengers shall include the loading or unloading of personal baggage but shall not extend beyond the time necessary therefor and in no event for more than three minutes.

(d) The provisions of this section shall be enforced so as to accommodate necessary and reasonable loading or unloading but without permitting abuse of the privileges hereby granted. (Ord. 4558 § 4 (part), 1999)

10.40.045 Special parking permit for construction or maintenance work.

(a) The chief transportation official may issue a permit for the temporary use of any parking space in a public street or in a public parking facility upon a showing that the applicant will be moving property or conducting construction and/or maintenance work in the immediate area and that no alternative off-street site for the parking of vehicles or for the temporary storage of equipment and/or materials is available reasonably near the work site. Such permit shall entitle the holder temporarily to use a designated parking space or spaces in a public street or a public parking facility as specified in the permit without regard to time limits otherwise imposed, but shall not permit illegal parking or use and parking or use of unauthorized places.

(b) A permit, when issued for the use of a vehicle, shall contain the name of the permittee, the make and type of vehicle, the license number, and the location where and time when the permit shall be in effect. A permit, when issued for the temporary storage of equipment and/or materials, shall contain the name of permittee, the specific type of equipment and/or materials to be stored and the location where and the time when the permit shall be in effect. When a single permit is issued for both parking and storage, the information required for both parking
and storage permits, as set forth in this chapter, shall be contained therein.

(c) When issued for parking or storage, the permit shall be placed on the windshield of the vehicle and, when issued for storage, the permit shall be posted in a conspicuous place on the equipment or materials displayed as directed by the City.

(d) No permit shall be issued for any initial period greater than thirty working days, but the chief transportation official may renew the permit for additional periods not to exceed thirty working days each. The fee for such permit shall be established in the municipal fee schedule. No permit shall be issued until said fee has been paid to the supervisor of revenue collections.

(e) In addition to the permits described in this section, the chief transportation official may issue permits authorizing the temporary use by commercial vehicles of any parking space in a public street or in a public parking facility upon a showing that the applicant provides emergency repair work. Such permit shall entitle the holder to use a parking space in a public street or a public parking facility without regard to the limits otherwise imposed, but shall not permit illegal parking or parking in unauthorized places; the permit shall authorize parking for the duration of the emergency only. Each use of the permit shall be recorded with the date, time, place, and nature of the emergency, as well as with other information required by the forms provided for reporting purposes. The completed form shall be submitted to the chief transportation official on a monthly basis for verification.

A permit shall be effective for one year and shall contain the name of the permittee, the make and type of vehicles, the license numbers and the effective dates of the permit. The original permit shall be placed on the vehicle windshield so as to be visible from outside the vehicle and shall include an indication as to the specific location of the emergency displayed as directed by the City. No person shall reproduce a permit. The annual fee for such permit shall be established in the municipal fee schedule. No permit shall be issued until said fee has been paid to the supervisor of revenue collections.

It is unlawful and an infraction for any person:

(1) To use an emergency repair parking permit for other than parking for emergency repair work;

(2) To use an emergency repair parking permit for other than commercial vehicles;

(3) To use an expired or revoked emergency repair parking permit; or

(4) To reproduce an emergency repair parking permit. Two violations in any calendar year shall automatically revoke privileges for the next succeeding twelve months.

For purposes of this subsection, "emergency repair work" means repair work done to a structure or to mechanical, electrical, or plumbing devices where there exists a threat to life or property.

10.40.050 Standing for loading or unloading only.

No person shall stop, stand or park a vehicle in any yellow loading zone for any purpose other than active loading or unloading passengers or materials for such time as is permitted in Section 10.40.030.

10.40.060 Standing in passenger loading zone.

No person shall stop, stand or park a vehicle in any passenger loading zone for any purpose other than the active loading or unloading of passengers for such time as is specified in Section
10.40.030.

**10.40.070 Standing in any alley.**
When official signs prohibiting such parking are in place, no person shall stop, stand or park a vehicle for any purpose other than the active loading or unloading of materials in any alley. Such parking shall not exceed twenty minutes. In no event shall the driver of such vehicle leave less than one traffic lane for unobstructed passage. When an alley is designated as a one-way alley, such parking by vehicles shall be permitted on the right side only.

**SECTION 6.** Chapter 10.40 (Stopping, Standing and Parking - Loading and Unloading) is hereby amended to add new section 10.40.110 as follows:

**10.40.110 Transportation Network Company (TNC) Vehicles.**
No owner or driver of a TNC vehicle shall park or stand the same upon any public highway or street for any period of time longer than is necessary to discharge or receive passengers.

**SECTION 7.** The following sections of Chapter 10.46 (College Terrace Residential Parking Permit Program (RPPP)) are hereby amended as follows:

**10.46.010 Definitions.**
As used in this chapter:
(a) “Address” means and includes any residential address. Each dwelling unit within an apartment building that is distinguished by an apartment number shall be considered an address.
(b) “Block” means any street segment intersected by two other streets. Blocks include the following:

**North-South Blocks**
1) Yale Street from Stanford Avenue to Oxford Avenue
2) Yale Street from Oxford Avenue to College Avenue
3) Yale Street from College Avenue to Cambridge Avenue
4) Yale Street from Cambridge Avenue to California Avenue
5) Williams Street from Stanford Avenue to College Avenue
6) Williams Street from College Avenue to California Avenue
7) Wellesley Street from Stanford Avenue to Oxford Avenue
8) Wellesley Street from Oxford Avenue to College Avenue
9) Wellesley Street from College Avenue to Library
10) Wellesley Street from Library to California Avenue
11) Cornell Street from Stanford Avenue to College Avenue
12) Cornell Street from College Avenue to California Avenue
13) Princeton Street from Stanford Avenue to College Avenue
14) Princeton Street from College Avenue to California Avenue
15) Oberlin Street from Stanford Avenue to College Avenue
16) Oberlin Street from College Avenue to California Avenue
17) Harvard Street from Stanford Avenue to College Avenue
18) Harvard Street from College Avenue to California Avenue
19) Hanover Street from Stanford Avenue to College Avenue
20) Hanover Street from College Avenue to California Avenue
21) Dartmouth Street from Stanford Avenue to Werry Park
22) Dartmouth Street from Werry Park to College Avenue
23) Dartmouth Street from College Avenue to Weisshaar Park
24) Dartmouth Street from Weisshaar Park to California Avenue
25) Columbia Street from Stanford Avenue to College Avenue
26) Columbia Street from College Avenue to California Avenue
27) Bowdoin Street from Stanford Avenue to College Avenue
28) Bowdoin Street from College Avenue to California Avenue
29) Amherst Street from Stanford Avenue to College Avenue
30) Amherst Street from College Avenue to California Avenue
31) Staunton Court from Oxford Avenue to College Avenue

**East-West Blocks**

1) Stanford Avenue from El Camino Real to Yale Street
2) Stanford Avenue from Yale Street to Williams Street
3) Stanford Avenue from Williams Street to Wellesley Street
4) Stanford Avenue from Wellesley Street to Cornell Street
5) Stanford Avenue from Cornell Street to Princeton Street
6) Stanford Avenue from Princeton Street to Oberlin Street
7) Stanford Avenue from Oberlin Street to Harvard Street
8) Stanford Avenue from Harvard Street to Escondido Street
9) Stanford Avenue from Escondido Street to Hanover Street
10) Stanford Avenue from Hanover Street to Dartmouth Street
11) Stanford Avenue from Dartmouth Street to Columbia Street
12) Stanford Avenue from Columbia Street to Bowdoin Street
13) Stanford Avenue from Bowdoin Street to Amherst Street
14) College Avenue from Yale Street to Williams Street
15) College Avenue from Williams Street to Wellesley Street
16) College Avenue from Wellesley Street to Cornell Street
17) College Avenue from Cornell Street to Princeton Street
18) College Avenue from Princeton Street to Oberlin Street
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29) California Avenue from Princeton Street to Oberlin Street
30) California Avenue from Oberlin Street to Harvard Street
31) California Avenue from Harvard Street to Hanover Street
32) California Avenue from Hanover Street to Dartmouth Street
33) California Avenue from Dartmouth Street to Columbia Street
34) California Avenue from Columbia Street to Bowdoin Street
35) California Avenue from Bowdoin Street to Amherst Street
36) Oxford Avenue from Stanton Court to Yale Street
37) Cambridge Avenue from El Camino Real to Yale Street

(c) “College Terrace” means the area bounded by El Camino Real on the east, Amherst Street on the west, California Avenue on the south, and Stanford Avenue on the north. The residential portion of the CN zone on the east side of Yale Street, the north side of Cambridge Avenue, the west side of Stanton Court and Oxford Avenue from Staunton Court to Yale, is also included in the boundary of College Terrace. Areas, including block faces on the north side of Stanford Avenue and on the south side of California Avenue are excluded.

(d) “Day care center” means and includes any state-licensed day care center with five or more employees.

(e) “Designated residential parking area,” sometimes referred to as “residential permit parking area,” means any block upon which the Council imposes parking limitations pursuant to the authority granted by this chapter.

(f) “Guest parking permit” means a parking permit issued pursuant to this chapter or an ordinance or resolution enacted pursuant to authority granted herein, which when displayed upon a motor vehicle as directed by the City, as described herein, shall exempt the motor vehicle from parking time restrictions established pursuant to this chapter.

(g) “Guest” means an individual who calls upon a resident in the designated residential permit parking area with specific intent to spend time in or about that resident’s residence for the purpose of social intercourse or to provide a service.

(h) “Motor vehicle” means and includes automobile, truck, motorcycle or other motor driven form of transportation.

(i) “Neighborhood-serving establishment” means all libraries, schools, day care centers, and nonprofit public service organizations.

(j) “Nonresident vehicle” means a motor vehicle not eligible to be issued a residential parking permit, pursuant to the terms and conditions of this chapter, for the specific area in which it is parked.

(k) “One-day guest parking permit” means a parking permit issued pursuant to this chapter which when displayed upon a motor vehicle, as described herein, as directed by the City, shall exempt the motor vehicle from parking time restrictions established pursuant to this chapter or an ordinance or resolution enacted pursuant to authority granted herein, for the date indicated upon the face of said permit or as authorized by a virtual permit.

(l) “Residential parking permit” means a permit issued under this chapter which, when displayed upon a motor vehicle, as described herein, as directed by the City, shall exempt said motor vehicle from parking time restrictions established pursuant to this chapter.

(m) “Residence” means a legal residential address and shall exclude business addresses.

(n) “Resident” means any person sixteen (16) years of age or older whose legal residential address is in the designated residential permit parking area.
(o) “RPPP” means residential parking permit program.
(p) “RPPP year” means and includes the days between September 1 and August 31 of the following year.
(q) “School” means and includes any state-licensed preschool, elementary, middle, junior high, or high school with five or more employees.
(r) “Virtual permit” allows the holder to park according to the type of permit purchased without displaying a physical permit affixed to or displayed in a vehicle. A virtual permit relies on cross-referencing a vehicle’s license plate or other vehicle-specific identifier with the City’s parking permit database to identify any valid parking permits for that vehicle.

10.46.060 Issuance of residential parking permits.
(a) Residential parking permits shall be issued by the Administrative Services Department’s Revenue Collections Division in accordance with requirements set forth in this chapter. Each such permit shall be designed to state or reflect thereon the identification of the particular residential permit parking area (i.e. College Terrace) as well as the license number of the motor vehicle for which it is issued. The City may also issue virtual permits in combination with or instead of physical permits. No more than one residential parking permit shall be issued to each motor vehicle owned or leased for which application is made.
(b) The City shall issue residential parking permits with a term of one year from September 1 to August 31 regardless of when during the year a resident purchases the parking permit, to motor vehicles which comply with the requirements set forth in this chapter. Purchase of permits will be available starting thirty days prior to the beginning of the next RPPP year. A grace period will be recognized from September 1 to September 30 for residents with a permit from the previous year. Vehicles displaying a permit from the previous year will not be cited during the grace period.
(c) Residents applying for a permit will be required to provide proof of vehicle ownership and residency. A vehicle registration form as well as one of the following shall be required at the time of registration showing College Terrace residency:
   • Driver’s license – indicating College Terrace Address
   • Rental agreement – with name of resident
   • Current (i.e., not more than sixty days old) utility bill with street address noted
(d) One residential parking permit may be issued for each vehicle owned, leased or any person who can demonstrate that they are currently a resident of the area for which the permit is to be issued.
(e) A residential parking permit may be issued for any vehicle owned, leased or any person who is employed by or a representative of a neighborhood-serving establishment located within the particular residential permit parking area. Each employee or representative of a neighborhood-serving establishment will be allowed to obtain one permit for each vehicle they own or lease subject to the following criteria which shall be used to establish the eligibility of a neighborhood-serving establishment and the maximum number of permits to be issued:
   (1) An establishment for which there is no off-street parking and no financially feasible way of creating adequate off-street parking on the site of the establishment;
   (2) In areas where it appears that the number of permits sold per block would exceed the number of legal on-street parking spaces per block the initial sale would be limited to two or
possibly one permit per neighborhood-serving establishment;

(3) Distribution of permits shall be through a designated representative of the establishment who will be responsible for allocation of the permits to employees.

 (f) Renewal of residential parking permits shall be subject to the same conditions imposed on new permits.

(g) The residential parking permit shall consist of a bumper sticker that is to be affixed to the left side of the rear bumper or on the outside of the rear window on the lower left hand corner. It shall be displayed as directed by the City. The City may issue a residential parking permit in any form, including as a virtual permit.

(h) The Director of the Office of Transportation is authorized to issue such rules and regulations, not inconsistent with this chapter, governing the issuance and display of residential parking permits.

(i) Any person to whom a residential parking permit has been issued pursuant to this section shall be deemed a parking permit holder.

10.46.070 Guest permits.

(a) The City shall issue guest parking permits in accordance with this section. A guest parking permit shall be of limited duration, but shall otherwise grant to the holder thereof all the rights and privileges of a regular residential parking permit. Guest parking permit shall be of two types:

(1) One-day guest parking permits; and

(2) Annual guest parking permits.

(b) A one-day guest parking permit shall clearly display the date upon which it becomes effective, and shall designate the particular residential permit parking area for which it applies (i.e., College Terrace). A one-day guest parking permit shall, during the date indicated upon the face of said permit, exempt the applicable vehicle from parking time restrictions established pursuant to this chapter. The City may also issue virtual permits in combination with or instead of physical permits.

(c) An annual guest parking permit shall, for the period between September 1 and August 31 of the following year exempt the applicable vehicle from parking time restrictions established pursuant to this chapter.

(d) Guest passes parking permits shall hang from the rear view mirror and must be clearly displayed in this fashion. The permit shall be displayed as directed by the City. The City may issue guest parking permits in any form, including as a virtual permit.

(e) The City is authorized to establish rules and regulations, not inconsistent with this chapter, concerning the issuance and display of guest parking permits to permit holders.

(f) An eligible applicant for a guest parking permit shall be any person having obtained a residential parking permit pursuant to criteria set forth in this chapter, but no more than two annual guest parking permits per address shall be issued during a single RPPP year.

(g) The total number of one-day guest permits issued will be limited to twenty permits in a three-month calendar quarter.

(h) The use of guest permits is restricted to visitors to the permit parking area. Holders of residential parking permits are prohibited from displaying guest permits in the permit parking area.
10.46.080 Parking permit fees.
   (a) The initial purchase of a residential parking permit for a vehicle owned or leased of a resident and registered at a qualifying residence in addition to vehicles owned, leased of an owner or employee of a qualifying neighborhood serving center shall be assessed the corresponding fees set forth in the city Municipal Fee Schedule.
   (b) Renewal of residential parking permits shall be subject to the fees set forth in the city Municipal Fee Schedule.
   (c) Replacement of stolen, lost, or damaged residential parking permits shall be subject to the fees set forth in the city Municipal Fee Schedule.
   (d) Lost or stolen guest permits will be subjected to a higher replacement fee as set forth in the City Municipal Fee Schedule.
   (e) The fee for each guest parking permit (one-day and annual) will be as set forth in the city Municipal Fee Schedule.
   (f) Residential parking permit fees will be pro-rated for half year increments. Thus permits applied for between September 1 and the last day of February pay full price. Permits applied for between March 1 and August 31 pay half price.
   (g) One-day guest permits pay full price.
   (h) No partial or full refund will be administered for any resident or guest permit.
   (i) Residents will be required to complete their initial application for the resident permit and guest passes in person at the Revenue Collections office at the City of Palo Alto City Hall located at 250 Hamilton Avenue, Palo Alto, CA 94301. Subsequent renewal of the resident permit and guest passes will also be required to be completed in person at the Revenue Collections office.

SECTION 8. The following sections of Chapter 10.50 (Residential Preferential Parking Districts) are hereby amended as follows:

10.50.020 Definitions.
The following words and phrases shall have the following meanings:
   (a) "Director" shall mean the director of planning and community environment in the office of transportation.
   (b) "Dwelling unit" shall mean a self-contained house, apartment, stock cooperative unit, or condominium unit occupied by a single household exclusively for residential purposes. These residential purposes may include lawful home occupations.
   (c) "Employee permit" shall mean a permit issued to an employee working at a business located within an RPP District or as defined in an RPP district specific resolution.
   (d) "Guest permit" shall mean a permit issued to a resident on an for use by a person visiting a residence in an RPP District or for workers providing services such as caregiving, gardening, repair maintenance and construction, to the resident. The number of guest permits issued to residents shall be specified in administrative regulations adopted by the director. Guest permits shall be valid for no more than one year based on the permit renewal cycle.
   (e) "Non-resident vehicle" shall mean a vehicle operated by a person whose destination is not to a residence within the Residential Preferential Parking District.
   (f) "Resident" shall mean a natural person living in a dwelling unit in an RPP District.
(g) "Residential Preferential Parking District" or "RPP District" shall mean a geographical area in which the city council has established a preferential parking permit system pursuant to California Vehicle Code section 22507.

(h) "Visitor permit" shall mean a temporary 24-hour permit issued to a resident for use by a person visiting a residence in an RPP District.

10.50.050 Initiation by neighborhood petition.
Resident may request the formation of an RPP District in their neighborhood. The request shall be made, and considered, in the following manner:

(a) Form of Application.
(1) The director shall establish a standard form for the application for the formation of a new RPP District, as well as a list of submittal requirements for use by interested residents. These requirements shall include a narrative describing the nature and perceived source of non-residential parking impact, as well as suggested district boundaries. The director shall also approve a standard form for use in demonstrating resident support for the application.

(2) Residents shall initiate a request for establishment of an RPP District by neighborhood petition by completing the official application form.

(3) Residents are encouraged to consult with the employers and employees thought to be the source of the parking impact as they develop their proposals.

(b) Timing and Review of Applications. Each calendar year, the director of planning and community environment shall review all applications received prior to March 31st of that year to determine whether the RPP District criteria established in this Chapter and the administrative guidelines are met.

(c) Prioritization of Applications. Applications determined by the director to meet the criteria in paragraph (b) above shall be presented to the planning and transportation commission. The commission shall review the requests and recommend to the director which proposal or proposals should be given priority for review and possible implementation in the current calendar year. In making its recommendations, the commission shall consider the severity of non-residential parking impact, the demonstrated level of neighborhood support, and the staff resources needed to process requests.

(d) Staff Review of Applications and Community Outreach. Once an application has been selected for council consideration during the current calendar year, staff shall promptly review the application, gather additional information and conduct a community outreach program. At a minimum the review process shall include the following:

(1) The city shall complete parking occupancy studies to quantify the nature of the problem identified in the petition. Data shall be collected when schools in the Palo Alto Unified School District and Stanford University are in session, unless these institutions are irrelevant to the problem to be addressed.

(2) Upon completion of the consultation and outreach process, the city attorney shall prepare a draft resolution containing the proposed boundaries and hours of enforcement. Staff shall undertake a survey of resident support within the RPP District. The results of this survey shall be included in and reported to the planning and transportation commission and the city council.

(e) Planning and Transportation Commission Review. Staff shall bring the proposed RPP
District to the planning and transportation commission no later than September of the calendar year in which consideration began. The commission shall review the draft resolution at a noticed public hearing and make a recommendation to the city council regarding the RPP District. This recommendation may include proposed modifications of the boundaries. The commission’s recommendation shall be forwarded to the city council no later than September 30th.

10.50.070 Administration of districts.

(a) Issuance and Fees.
(1) No permit will be issued to any applicant until that applicant has paid all of his or her outstanding parking citations, including all civil penalties and related fees.
(2) A residential parking permit may be issued for a motor vehicle if the following requirements are met:
   (A) The applicant demonstrates that he or she is currently a resident of the area for which the permit is to be issued.
   (B) The applicant demonstrates that he or she has ownership or continuing custody of the motor vehicle for which the permit is to be issued.
   (C) Any motor vehicle to be issued a permit must have a vehicle registration indicating registration within the area for which the permit is to be issued.
(3) Visitor or guest parking permits may be issued for those vehicles or to those individuals or households that qualify for those permits under the resolution establishing the RPP District.
(4) Employee parking permits may be issued to those individuals and for those vehicles that qualify for such permits under the resolution establishing the RPP District.
(b) All permits shall be displayed as directed by the City.
   (bc) No Guarantee of Availability of Parking. A parking permit shall not guarantee or reserve to the permit holder an on-street parking space within the designated residential preferential parking zone.
   (ed) Restrictions and Conditions. Each permit issued pursuant to this Section shall be subject to each and every condition and restriction set forth in this Chapter and as provided for in the resolution establishing the specific RPP District, as may be amended from time to time. The issuance of such permit shall not be construed to waive compliance with any other applicable parking law, regulation or ordinance.
   (de) Exemptions. The following vehicles are exempt from RPP District parking restrictions in this Chapter:
      (1) A vehicle owned or operated by a public or private utility, when used in the course of business.
      (2) A vehicle owned or operated by a governmental agency, when used in the course of official government business.
      (3) A vehicle for which an authorized emergency vehicle permit has been issued by the Commissioner of the California Highway Patrol, when used in the course of business.
      (4) A vehicle parked or standing while actively delivering materials or freight.
      (5) A vehicle displaying an authorized exemption permit issued by the City of Palo Alto.
      (6) A vehicle displaying a State of California or military-issued disabled person placard or license plates.
(7) A vehicle parked for the purpose of attending or participating in an event taking place at a school within the Palo Alto Unified School District or another event venue within the RPP District, provided that the vehicle is parked within two blocks of the venue, the venue has requested and received approval from the city at least fourteen days before the event date, and the venue distributes notices to all addresses within a two-block radius of the venue. The RPP District resolution shall specify the covered venues and number of permitted events per year.

(8) All vehicles are exempt from parking restrictions pursuant to this Chapter on the following holidays: January 1, July 4, Thanksgiving Day, and December 25.

(ef) Authority of Staff.

(a) The director is authorized to adopt administrative regulations that are consistent with the purposes of this Chapter. Prior to adoption the director shall conduct a noticed public meeting soliciting input on such guidelines.

(b) The police department or private parking enforcement contractor as approved by the chief of police City shall have the authority to enforce this Chapter and the administrative regulations established pursuant to this Chapter.

10.50.090 Modification or termination of districts.

(a) Opting out. After final adoption of an RPP District, Residents may file an application with the director to opt out of the RPP District. The minimum number of blocks and percentage of units supporting the opt-out shall be specified by the director in the administrative guidelines. Applications for opting out shall be made in the form and manner prescribed by the director and shall be acted up on by the director.

(b) Timing and Review of Opt Out Applications. Each calendar year, the director of planning and community environment shall review all opt out applications received prior to March 31st of the year to determine whether the opt out criteria established in the administrative guidelines are met.

(c) Dissolution. The city council following a noticed public hearing may adopt a resolution dissolving the RPP District:

1. Upon receipt and verification of a petition signed by 50% or more of all the households within an approved RPP District boundary; or
2. Upon findings by the city council that the criteria for designating the RPP District are no longer satisfied.

10.50.100 Violations and Penalties.

(a) No person shall park a vehicle adjacent to any curb in a residential preferential parking zone in violation of any posted or noticed prohibition or restriction, unless the person has a valid and current residential preferential parking permit, visitor permit, guest permit or employee permit for that vehicle, or is otherwise exempt. Use of any permit issued under this Chapter shall be subject to the provisions of this Chapter and the administrative regulations. Violations of this subsection shall be punishable by a civil penalty under Chapter 10.60.010.

(b) In RPP Districts with a time limit for non-permitted vehicles, vehicles not displaying a valid permit may park up to the posted time limit during the period designated by posted signage. After the maximum time limit period, vehicles will be prohibited from re-parking within the
same district.
(bc) No person shall sell, rent, or lease, or cause to be sold, rented, or leased for any value or consideration any RPP District parking permit, visitor permit or guest permit. Upon violation of this subsection, all permits issued to for the benefit of the dwelling unit or business establishment for which the sold, rented, or leased permit was authorized shall be void. Violation of this subsection (b) shall be punishable as an infraction.
(c) No person shall buy or otherwise acquire for value or use any RPP District parking permit, guest permit or visitor permit except as provided for in this chapter. Violation of this subsection (c) shall be punishable as an infraction.

SECTION 9. Chapter 10.50 (Residential Preferential Parking Districts) is hereby amended to add new section 10.50.110 as follows:

10.50.110 Revocation of permit.
In addition to all other remedies, the City may temporarily revoke (for a period of time not to exceed ten working days) a parking permit issued under this Chapter of any person found to be in violation of this chapter by providing written notice of the temporary revocation to the permittee. Such written notice shall include a statement outlining the grounds for revoking the permit as well as the date, time, and place set for a hearing before the Hearing Officer or their representative to determine if the revocation shall be in effect until the expiration of the permit. Written notice of the date, time and place of such hearing shall be served upon the permittee five days prior to the date set for such hearing.
At the hearing before the Hearing Officer or their representative, the permittee shall have the right to present evidence and a written or oral argument, or both.
No decision shall be invalidated because of the admission into the record and the use of any proof of any fact in dispute of any evidence not admissible under the common law or statutory rules of evidence.
Within five working days after close of hearing, the Hearing Officer or their representative shall enter their decision based upon the record presented and notify the permittee in writing of such decision. The decision of the Hearing Officer shall be final. Failure, when so requested, to surrender a parking permit so revoked shall constitute a violation of this section. There will be no refunds for revoked permits.

SECTION 10. The following sections of Chapter 10.51 (Crescent Park No Overnight Parking Program) of Title 10 (Parking) are hereby amended as follows:

10.51.020 Definitions.
The following words and phrases as used in this chapter shall have the following meanings.
(a) "Crescent Park" means the area bound by Edgewood Drive on the northeast, Channing Avenue on the south, Lincoln Avenue on the west, University Avenue on the northwest and including the entirety of Crescent Drive.
(b) "Director" shall mean the chief transportation official.
(c) "Dwelling unit" shall mean any self-contained house, apartment, stock cooperative, or condominium occupied solely for residential purposes.
(d) "Restricted parking area" shall mean a residential area upon which the council imposes overnight parking limitations pursuant to the authority granted by this chapter.

(e) "Resident" shall mean any person who lives in a dwelling unit located in a residential restricted parking area.

(f) "Overnight residential parking permit" shall mean a permit issued under this chapter which, when displayed upon a motor vehicle, as described herein as directed by the City, shall exempt said motor vehicle from parking time restrictions established pursuant to this chapter.

(g) "Guest" shall mean a person visiting residents living in a residential preferential parking zone.

(h) "Guest parking permit" shall mean a parking permit issued pursuant to this chapter or an ordinance or resolution enacted pursuant to authority granted herein, which when displayed upon a motor vehicle, as described herein as directed by the City, shall exempt the motor vehicle from parking time restrictions established pursuant to this chapter.

10.51.040 Inclusion of approved parking areas.

(a) Eligibility for inclusion. Residents of any street or street segment tentatively approved for inclusion may petition the director for inclusion into the Crescent Park no overnight parking area. If the petition meets the criteria established in Section 10.51.040(b) and the administrative regulations adopted by the director, parking restrictions will be implemented on that block.

(b) City staff shall consider for designation any proposed street or street segment in Crescent Park which satisfies the following enumerated requirements:

(1) Residents submit a petition, prepared for residents by city staff and signed by at least one member of fifty percent of the parcels on the street.

(2) Upon receipt of a completed petition, city staff shall issue a postal survey to verify participation and interest of all residents in the proposed restricted parking area.

(3) At least seventy percent of responses to the survey received by city staff shall be in support of participation in the restricted overnight parking program.

(c) Following validation of majority support, city staff shall implement signs within the newly designated restricted parking area and notify residents of eligibility to purchase parking permits at city hall.

10.51.060 Administration of restricted parking area.

(a) Issuance and fees.

(1) No permit will be issued to any applicant until that applicant has paid all of his or her outstanding parking citations, including all civil penalties and related fees.

(2) An overnight residential parking permit may be issued for a dwelling if the following requirements are met:

(A) The applicant demonstrates that he or she is currently a resident of the restricted parking area for which the permit is to be issued.

(B) The applicant demonstrates that he or she has ownership or continuing custody of the motor vehicle for which the permit is to be issued.

(C) Any dwelling to be issued a permit must have a vehicle registration indicating registration within the area for which the permit is to be issued.
Visitor or guest parking permits may be issued for those individuals or dwellings that qualify for those permits under the resolution establishing the restricted parking area.

(b) No guarantee of availability of parking. An overnight residential parking permit shall not guarantee or reserve to the permit holder an on-street parking space within the designated residential preferential parking zone.

(c) Restrictions and conditions. Each permit issued pursuant to this section shall be subject to each and every condition and restriction set forth in this chapter and as provided for in the resolution establishing the specific restricted parking area, as may be amended from time to time. The issuance of such permit shall not be construed to waive compliance with any other applicable parking law, regulation or ordinance.

(d) Exemptions. The following vehicles are exempt from the Crescent Park overnight parking restrictions in this chapter:

1. A vehicle owned or operated by a public or private utility, when used in the course of business.
2. A vehicle owned or operated by a governmental agency, when used in the course of official government business.
3. A vehicle for which an authorized emergency vehicle permit has been issued by the commissioner of the California Highway Patrol, when used in the course of business.
4. A vehicle parked or standing while actively delivering materials or freight.
5. A vehicle displaying an authorized exemption permit issued by the City of Palo Alto.
6. A vehicle displaying a State of California or military-issued disabled person placard or license plates.
7. A vehicle parked for the purpose of attending or participating in an event taking place at a school within the Palo Alto unified school district or another event venue within the restricted parking area, provided that the vehicle is parked within two blocks of the venue, the venue has requested and received approval from the city at least fourteen days before the event date, and the venue distributes notices to all addresses within a two-block radius of the venue. The restricted parking area resolution shall specify the covered venues and number of permitted events per year.
8. All vehicles are exempt from parking restrictions pursuant to this chapter on the following holidays: January 1, July 4, Thanksgiving Day, and December 25.

(e) Authority of staff.

1. The director is authorized to adopt administrative regulations that are consistent with the purposes of this chapter.
2. The director has the discretion to grant the issuance of any additional permits to a dwelling for which the maximum residential parking permits has previously been issued. Any permit approved by the director that is in addition to the two overnight residential parking permits issued pursuant to this chapter may be subject to additional fees and limitations as designated by the director.
3. The police department or private parking enforcement contractor as approved by the chief of police City shall have the authority to enforce this Chapter and the administrative regulations established pursuant to this chapter.
**SECTION 11.** Section 10.60.070 (Permit parking in city lots) of Chapter 10.60 (Parking violations) is hereby amended as follows:

**10.60.070 Permit parking in city lots.**
(a) The city manager or designee is authorized to set aside any portion or all of any city-owned parking lot for permit parking and to issue permits therefor as provided in this section.
(b) The city manager or designee may issue parking permits upon application therefor and upon the payment of a fee in an amount to be determined by the city manager or municipal fee schedule. Such permit shall designate the parking lot for which it is issued and shall be affixed at or near the left side of the rear window or left side of the rear bumper in such a manner that it can be readily identified from the rear of the vehicle for which it is issued and displayed as directed by the City. Such permit may contain such instructions as to its use as may be deemed appropriate by the city manager. The city manager or designee may issue virtual parking permits instead of, or in combination with, physical parking permits.
(c) The city manager or designee shall install signs in the permit parking areas indicating that they are reserved for permit parking only, and the holder of such a permit properly displayed may park in any such space on the lot, but only in such space.
(d) A vehicle with a permit shall not park for more than seventy-two consecutive hours in the same city-owned public parking facility. This subsection shall not apply to official city vehicles.
(e) No person who owns or has possession, custody or control of a vehicle shall park that vehicle or allow it to be parked in any permit parking space in a permit area where sign indicating that such space is reserved for permit parking only without displaying a valid permit therefor. This prohibition shall not only apply to the use of such spaces during the period from five p.m. to eight a.m. or on Saturdays, Sundays and holidays as indicated on the posted signage.

**SECTION 12.** If any section, subsection, sentence, clause, or phrase of this Ordinance is for any reason held to be invalid or unconstitutional by a decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have passed this Ordinance and each and every section, subsection, sentence, clause, or phrase not declared invalid or unconstitutional without regard to whether any portion of the Ordinance would be subsequently declared invalid or unconstitutional.

**SECTION 13.** The Council finds that adoption of this Ordinance is exempt from the California Environmental Quality Act pursuant to CEQA Guidelines Section 15301 (Existing Facilities).
SECTION 14. This Ordinance shall be effective on the thirty-first date after the date of its adoption.

INTRODUCED:

PASSED:

AYES:

NOES:

ABSENT:

ABSTENTIONS:

NOT PARTICIPATING:

ATTEST:

____________________________  _________________________
City Clerk                              Mayor

APPROVED AS TO FORM:

____________________________  APPROVED:
Deputy City Attorney                  City Manager

____________________________
Chief Transportation Official

____________________________
Director of Administrative Services
Title: Information Report Transmits the Affordable Housing Commercial Impact Fee Feasibility Study Prepared by Strategic Economics and Will be Used in the City Council's Deliberation of an Ordinance Amending the City's Municipal Fee Scheduled on October 18, 2021

From: City Manager

Recommendation
Staff recommends that the City Council review the attached impact fee feasibility analysis in preparation of the October 18, 2021 public hearing when the City Council will consider an ordinance amending the City's municipal fee schedule to adjust affordable housing commercial impact fee.

Background
The City Council directed staff to prepare an updated feasibility study to consider a possible change to the City's affordable housing commercial impact fee. The City's consultant studied the feasibility of different fee levels based on three different prototype designs (buildout potential). The results show smaller office projects are unlikely to be developed even at the current fee, while more moderate projects may be able to support an increase up to $50 per square foot of office development, and larger projects on sites with a commercial floor area ratio of 2.0:1 could support a significant increase up to $150 per square foot. The current commercial impact fee of $39.70 is based on the more moderate analysis that assumes a development potential with a floor area ratio of 1.0:1.

The feasibility study also includes information related to life science / biotech Research & Development (R&D) space and hotel development. This analysis is provided in the event the Council wants to make policy changes for these land uses, though the study suggests any increase in the impact fee for these land uses may make such projects either infeasible or less likely to be built.

The City Council has discretion in how it chooses to adjust the affordable housing commercial impact fee or how that fee is applied to different land uses and building sizes. A fee that makes development less likely to be built is permissible, but it may negatively impact the amount of fees collected not only for the affordable housing fund but other City services supported by
commercial development. This may include both direct impact fees and economic benefits such as visitors or business generating revenues such as sales taxes or hotel taxes (Transient Occupancy Tax). The Council in its deliberation should consider how these various interests are balanced.

The City Council will also want to discuss how this fee applies to pipeline projects.

On October 18, 2021, the City Council will conduct a public hearing and consider an ordinance amending the City’s municipal fee schedule to adjust the affordable housing commercial impact fee. In the interim, staff will reach out to stakeholders to advise them of this study and the upcoming public hearing.

**Environmental Review**
The recommendation in this report does not result in a City action and does not qualify as a project in accordance with the California Environmental Quality Act (CEQA).

**Attachments:**
- **Attachment10.a:** Attachment A: Commercial Linkage Fee (CLF) Feasibility Report (September 2021)
COMMERCIAL LINKAGE FEE UPDATE
FINANCIAL FEASIBILITY ANALYSIS

Prepared for:
City of Palo Alto

September 20, 2021
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I. INTRODUCTION

The City of Palo Alto is considering updating its commercial linkage fees on new office, R&D, and hotel development projects. Commercial linkage fees are used to mitigate the impacts of an increase in housing demand from employee households that require below-market-rate housing. Revenues from linkage fees are deposited into a housing trust fund for the construction of affordable housing. Commercial linkage fees are one of several funding sources that jurisdictions can use to help meet affordable housing needs of new workers.

In 2015, Strategic Economics and Vernazza Wolfe Associates completed a nexus study that established maximum commercial linkage fees for office/R&D and hotel uses. The study also included an analysis of the financial feasibility of updated commercial linkage fees and other policy considerations that led to the recommended fees, which are significantly lower than the maximum fees justified by the nexus study. Figure 1 below summarizes the maximum commercial linkage fees justified by the 2015 nexus study, the recommended fees based on the policy analysis, and the current (2021) commercial linkage fees on office/R&D/medical office and hotel uses.

**Figure 1: Maximum Commercial Linkage Fees, Previously Recommended Commercial Linkage Fees, and Existing Commercial Linkage Fees**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Maximum Justified Commercial Linkage Fee from Nexus Study, 2015</th>
<th>Previously Recommended Commercial Linkage Fees, 2015</th>
<th>Existing Commercial Linkage Fee, 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office / R&amp;D</td>
<td>$264</td>
<td>$35</td>
<td>$39.70</td>
</tr>
<tr>
<td>Hotel</td>
<td>$177</td>
<td>$30</td>
<td>$23.11</td>
</tr>
</tbody>
</table>

Source: City of Palo Alto, 2021; Strategic Economics, 2021.

Since the previous nexus and feasibility studies, the value of commercial real estate and the cost of development in Palo Alto and the greater Bay Area have changed. The City of Palo Alto has commissioned Strategic Economics to provide an updated financial feasibility assessment and policy analysis to analyze how an increase in fee levels for office/R&D and hotel uses would affect the probability of development.

This memo report summarizes the results of the analysis.
II. APPROACH

The analysis is based on four office and hotel development prototypes summarized in Figure 3. Strategic Economics built a static pro forma model for each prototype that measures the profitability of a project for the developer or investor.

It is important to note that investors consider a wide range of factors to determine if a development project makes financial sense, and some investors may have different levels of risk tolerance than others. However, this study relies on broadly accepted indicators to establish the likely expectations for a typical development project in the Palo Alto market.

In this case, the return is calculated as yield on cost (YOC), a common indicator for measuring the profitability of a commercial project from the perspective of a long-term property owner or investor. The pro forma model tallies all development costs, including land, direct construction costs, indirect costs (including financing), and developer fees. Revenues from lease rates or hotel room rates are the basis for calculating annual income from the new development. The total operating costs are subtracted from the total revenues to calculate the annual net operating income. The YOC is then calculated by dividing the annual net operating income by the total development costs. The fee levels were then added as an additional development cost to measure the resulting change in the YOC.

- **Office/R&D** – In order to attract new investment, the expected YOC for new Class A office/R&D developments would be 125 basis points higher than the published capitalization rate (cap rate) for similar Class A products, which is currently 5.5 percent. Therefore, the analysis assumes that office/R&D projects that exceed a YOC of 6.75 percent are highly likely to be developed. Projects that achieve a YOC of less than 6.75 percent, but still have a positive net value are less likely to be built. Projects that have negative net values (the cost of development exceeds the value from rental income) are infeasible.

- **Hotel** – In order to attract new investment, the expected YOC for new hotel project would need to be 100 basis points higher than the published capitalization rate (cap rate). Cap rates for hotel properties are currently approximately between 8.0 and 8.25 percent. Therefore, the analysis assumes that hotel projects that exceed a YOC of at least 9.25 percent are highly likely to be developed. Projects that achieve a YOC of less than 9.25 percent, but still have a positive net value are less likely to be built. Projects that have negative net values (the cost of development exceeds the capitalized value of the net operating income at a stabilized year) are infeasible.

### FIGURE 2: EXPECTED YIELD ON COST FOR DEVELOPMENT PROJECTS

<table>
<thead>
<tr>
<th>Prototype</th>
<th>Published Cap Rate</th>
<th>High Likelihood of Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office/R&amp;D (Class AA)</td>
<td>5.5%</td>
<td>6.75%</td>
</tr>
<tr>
<td>Hotel (Limited Service/Boutique)</td>
<td>8.0% - 8.25%</td>
<td>9.25%</td>
</tr>
</tbody>
</table>

Source: CBRE Cap Rate Survey, H2 2018; HVS, 2019; Developer interviews.
Development Prototypes

The analysis estimates the feasibility of potential linkage fees for three land uses: R&D, office, and hotel. Because there are a variety of different types of office and R&D development projects in Palo Alto and the Peninsula, the analysis examined four different building prototypes. The building characteristics of each development prototype, including size, density (floor-area-ratio), and parking assumptions are based on a review of projects that were recently built or currently in planning stages in Palo Alto.

The following summarizes the prototypes:

- **Prototype 1: R&D Lab with FAR of 0.4.** This maximum FAR for medical research R&D projects applies in ROLM and RP districts, and is typical of recently built and proposed R&D projects. This building type is assumed to include lab space for research and development, and used primarily by biotech firms.

- **Prototype 2-A: Professional Office with FAR of 0.4.** This maximum FAR for commercial office/R&D projects applies in CS and CN zoning districts of Palo Alto, even when part of a mixed-use development. This prototype is similar to recently built and proposed office projects. It is assumed that the tenants would be professional office businesses, including software R&D.

- **Prototype 2-B: Professional Office with FAR of 1.0.** This maximum FAR would be possible in the CD-C zoning district, even when part of a mixed-use development. It is assumed that the tenants would be professional office businesses, including software R&D.

- **Prototype 2-C: Professional Office with FAR of 2.0.** This maximum FAR would apply to the CC(2) zoning district, even when part of a mixed-use development. It is assumed that the tenants would be professional office businesses, including software R&D.

- **Prototype 3: Limited Service or Boutique Hotel with FAR of 2.0.** Hotels are allowed at a 2.0 FAR in the CC(2), CS, and CD-C zones. This building type is typical of recently built and proposed hotel projects in Palo Alto.

The details regarding the size, density (floor-area ratio), parking, and other key assumptions for each prototype are summarized in Figure 3 below.
### Development Prototypes

#### Assumptions

<table>
<thead>
<tr>
<th></th>
<th>Prototype 1</th>
<th>Prototype 2-A</th>
<th>Prototype 2-B</th>
<th>Prototype 2-C</th>
<th>Prototype 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>R&amp;D Labs</td>
<td>Professional</td>
<td>Professional</td>
<td>Professional</td>
<td>Boutique or Limited</td>
</tr>
<tr>
<td></td>
<td>Parcel Size (Sq. Ft.)</td>
<td>Offices</td>
<td>Offices</td>
<td>Offices</td>
<td>Service Hotel</td>
</tr>
<tr>
<td></td>
<td>130,680</td>
<td>43,560</td>
<td>43,560</td>
<td>43,560</td>
<td>43,560</td>
</tr>
<tr>
<td>Parcel Size (acres)</td>
<td>3.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

#### Building Height and FAR

<table>
<thead>
<tr>
<th></th>
<th>Prototype 1</th>
<th>Prototype 2-A</th>
<th>Prototype 2-B</th>
<th>Prototype 2-C</th>
<th>Prototype 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAR (without parking) [a]</td>
<td>0.40</td>
<td>0.40</td>
<td>1.00</td>
<td>2.00</td>
<td>2.00</td>
</tr>
</tbody>
</table>

#### Building area

<table>
<thead>
<tr>
<th></th>
<th>Prototype 1</th>
<th>Prototype 2-A</th>
<th>Prototype 2-B</th>
<th>Prototype 2-C</th>
<th>Prototype 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross area (gsf)</td>
<td>52,272</td>
<td>17,424</td>
<td>43,560</td>
<td>87,120</td>
<td>87,120</td>
</tr>
<tr>
<td>Efficiency Ratio [b]</td>
<td>90%</td>
<td>90%</td>
<td>90%</td>
<td>90%</td>
<td>n/a</td>
</tr>
<tr>
<td>Net leasable area (nsf)</td>
<td>47,045</td>
<td>15,682</td>
<td>39,204</td>
<td>78,408</td>
<td>n/a</td>
</tr>
<tr>
<td>Number of rooms</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>120</td>
</tr>
</tbody>
</table>

#### Parking

<table>
<thead>
<tr>
<th></th>
<th>Prototype 1</th>
<th>Prototype 2-A</th>
<th>Prototype 2-B</th>
<th>Prototype 2-C</th>
<th>Prototype 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Underground</td>
<td>40%</td>
<td>70%</td>
<td>90%</td>
<td>90%</td>
<td>90%</td>
</tr>
<tr>
<td>Surface</td>
<td>103.0</td>
<td>17.0</td>
<td>14.0</td>
<td>29.0</td>
<td>10.0</td>
</tr>
<tr>
<td>Underground</td>
<td>69.0</td>
<td>40.0</td>
<td>130.0</td>
<td>258.0</td>
<td>86.0</td>
</tr>
<tr>
<td>Total Spaces</td>
<td>172.0</td>
<td>57.0</td>
<td>144.0</td>
<td>287.0</td>
<td>96.0</td>
</tr>
<tr>
<td>Parking Ratio (per room)</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>0.80</td>
</tr>
<tr>
<td>Parking Ratio (per gross 1,000 SF)</td>
<td>3.3</td>
<td>3.3</td>
<td>3.3</td>
<td>3.3</td>
<td>1.10</td>
</tr>
</tbody>
</table>

Source: City of Palo Alto, 2021; Strategic Economics, 2021.

Notes:

[a] The Floor-Area Ratio (FAR) is often used as a measure of density. In this analysis, it is calculated as the gross building area, not including parking, divided by the parcel size.

[b] The Efficiency Ratio refers to the ratio of gross building area to net leasable area. An efficiency ratio of 90% means that 90% of the gross building area is leasable space. In hotels, revenue is informed by room count, rather than square footage, and therefore the net area is omitted.
**Key Assumptions**

**DEVELOPMENT COSTS**

The development costs incorporated into the pro forma analysis include hard costs (construction materials and labor), land costs, soft costs (indirect costs), and financing costs.

**HARD COSTS**

Hard costs, or construction costs, include labor and materials. The hard cost assumptions are based on Strategic Economics’ review of pro formas for similar development projects, industry publications, and interviews with developers with projects in Palo Alto and nearby jurisdictions. It is important to note that construction costs are currently at an all-time high due to COVID-19, which has caused disruptions in the labor market and supply chain throughout the United States. For the purposes of this analysis, it is assumed that hard costs return to pre-pandemic conditions.

As shown in Figure 4, hard costs include building construction, parking and the tenant improvements typically required for professional offices and R&D labs. For hotels, there is an assumption for the cost of Furniture, Fixtures, and Equipment (FF&E).

**Figure 4. Hard Costs Assumptions by Prototype**

<table>
<thead>
<tr>
<th>Cost</th>
<th>Unit of measure</th>
<th>Prototype 1 R&amp;D Lab 0.4 FAR</th>
<th>Prototype 2 -A Professional Office 0.4 FAR</th>
<th>Prototype 2 -B Professional Office 1.0 FAR</th>
<th>Prototype 2 -C Professional Office 2.0 FAR</th>
<th>Prototype 3 Hotel 2.0 FAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site and Building Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>per gross building SF</td>
<td>$350</td>
<td>$300</td>
<td>$300</td>
<td>$300</td>
<td>$225</td>
</tr>
<tr>
<td></td>
<td>per room</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$163,350</td>
</tr>
<tr>
<td>FF&amp;E</td>
<td>per room</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$20,000</td>
</tr>
<tr>
<td>Parking Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface</td>
<td>Cost per Space</td>
<td>$7,500</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underground</td>
<td></td>
<td>$100,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entitled land</td>
<td>per site SF</td>
<td>$300</td>
<td>$300</td>
<td>$425</td>
<td>$650</td>
<td>$300</td>
</tr>
<tr>
<td></td>
<td>per acre</td>
<td>$13,068,000</td>
<td>$13,068,000</td>
<td>$18,513,000</td>
<td>$28,314,000</td>
<td>$13,068,000</td>
</tr>
<tr>
<td></td>
<td>per FAR</td>
<td>$5,227,200</td>
<td>$5,227,200</td>
<td>$18,513,000</td>
<td>$56,628,000</td>
<td></td>
</tr>
<tr>
<td>Tenant Improvements (PLSF)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenant Improvement Allowance</td>
<td>per lsf</td>
<td>$150</td>
<td>$80</td>
<td>$80</td>
<td>$80</td>
<td>$0</td>
</tr>
</tbody>
</table>

Source: Strategic Economics, 2021.
LAND COSTS

One of the critical cost factors for a non-residential development project is land cost. To determine the land value of sites zoned for commercial and mixed-use, Strategic Economics analyzed recent sales transactions for properties in Palo Alto and interviewed property owners and developers. As shown, there is a wide range in value for mixed-use and commercial properties in Palo Alto. Generally, properties in Downtown Palo Alto tend to command higher prices than properties on commercial corridors.

FIGURE 5. SALES PRICES FOR VACANT MIXED-USE AND COMMERCIAL SITES SOLD 2016-2021

<table>
<thead>
<tr>
<th>Property</th>
<th>Site Area SF</th>
<th>Sale Price</th>
<th>Sale Price per SF</th>
</tr>
</thead>
<tbody>
<tr>
<td>630 Cowper St</td>
<td>15,520</td>
<td>$10,000,000</td>
<td>$644.33</td>
</tr>
<tr>
<td>4115 El Camino Real</td>
<td>15,969</td>
<td>$7,650,000</td>
<td>$479.05</td>
</tr>
<tr>
<td>2755 El Camino Real</td>
<td>19,602</td>
<td>$7,500,000</td>
<td>$382.61</td>
</tr>
<tr>
<td>796 San Antonio Rd (Part of Multi-Property Sale)</td>
<td>30,491</td>
<td>$7,712,762</td>
<td>$252.95</td>
</tr>
<tr>
<td>788 San Antonio Rd (Part of Multi-Property Sale)</td>
<td>22,651</td>
<td>$3,837,238</td>
<td>$169.41</td>
</tr>
<tr>
<td>2515 El Camino Real</td>
<td>41,382</td>
<td>$23,000,000</td>
<td>$555.80</td>
</tr>
</tbody>
</table>


For the purposes of this analysis, it is assumed that sites zoned for 0.4 FAR office and 2.0 FAR hotel uses would have a value of $300 per square foot ($13 million per acre). Sites zoned for 1.0 FAR would have a higher value of $425 per square foot ($18.5 million per acre). Sites zoned for 2.0 FAR office uses would have the highest value of $650 per square foot ($28 million per acre).
SOFT COSTS

Soft costs (often referred to as indirect costs) include items such as architectural fees, engineering fees, insurance, taxes, legal fees, accounting fees, city fees, and marketing costs. Major impact fees were calculated based on the City’s Development Impact Fee schedule for 2021, and inflated to 2022. Palo Alto’s Traffic Impact Fee and other permits and fees were calculated by City staff for 2022. Soft costs were estimated as a percentage of hard costs based on standard industry ratios. These assumptions are shown in Figure 6.

FIGURE 6. SOFT COST ASSUMPTIONS BY LAND USE

<table>
<thead>
<tr>
<th>Cost</th>
<th>Unit of measure</th>
<th>Office/R&amp;D</th>
<th>Hotel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact Fees (Inflated to 2022)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parks Impact Fee</td>
<td>per sq. ft.</td>
<td>$16.84</td>
<td>$2.87</td>
</tr>
<tr>
<td>Community Centers Impact Fee</td>
<td>per sq. ft.</td>
<td>$1.30</td>
<td>$0.22</td>
</tr>
<tr>
<td>Public Safety Facilities Impact Fee</td>
<td>per sq. ft.</td>
<td>$0.66</td>
<td>$0.66</td>
</tr>
<tr>
<td>General Govt Facilities Impact Fee</td>
<td>per sq. ft.</td>
<td>$0.83</td>
<td>$0.83</td>
</tr>
<tr>
<td>Libraries Impact Fee</td>
<td>per sq. ft.</td>
<td>$0.78</td>
<td>$0.13</td>
</tr>
<tr>
<td>Citywide Traffic Impact Fee</td>
<td>per sq. ft.</td>
<td>$11.89</td>
<td>$3.64</td>
</tr>
<tr>
<td>Planning Fees</td>
<td>per sq. ft.</td>
<td>$0.79</td>
<td>$0.53</td>
</tr>
<tr>
<td>Building Fees</td>
<td>per sq. ft.</td>
<td>$8.66</td>
<td>$6.91</td>
</tr>
<tr>
<td>Subtotal City Permits and Fees</td>
<td>per sq. ft.</td>
<td>$41.73</td>
<td>$15.78</td>
</tr>
</tbody>
</table>

Other Soft Costs

<table>
<thead>
<tr>
<th>Cost</th>
<th>% of hard costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arch, Eng &amp; Consulting</td>
<td>4.0% 4.0%</td>
</tr>
<tr>
<td>Taxes, Insurance, Legal, Accounting</td>
<td>3.0% 3.0%</td>
</tr>
<tr>
<td>Contingencies</td>
<td>4.0% 4.0%</td>
</tr>
<tr>
<td>Developer Overhead</td>
<td>3.0% 3.0%</td>
</tr>
<tr>
<td>Other Soft Costs (Excluding Fees)</td>
<td>14.0% 14.0%</td>
</tr>
<tr>
<td>Construction Financing</td>
<td>% of hard + soft costs 6.0% 6.0%</td>
</tr>
</tbody>
</table>

Source: City of Palo Alto, 2021; Strategic Economics, 2021.
REVENUES

The commercial real estate market has been greatly affected by the COVID-19 pandemic, with declining occupancy rates for hotel and office properties, and declining room rates and lease rates. Because of the historical strength of the office and hotel markets in Palo Alto and the greater Silicon Valley economy, this analysis assumes that market conditions will be healthy within the next few years. The revenue assumptions are based on market values for office, R&D, and hotel uses prior to the onset of the pandemic. The data sources include commercial broker reports, hospitality industry reports, and CoStar, as well as from interviews with developers and brokers active in Palo Alto and Santa Clara County.

Professional Office: For professional office rents, Strategic Economics reviewed data for Class A office buildings in Palo Alto that are tenanted by professional firms, summarized in Figure 7 below. The rental rates vary significantly by building, but at the higher end of the range, the median monthly triple-net (NNN)1 rent is $6.71 per square foot. The top quartile rents are $9.58 per month. For the purposes of this analysis, Strategic Economics assumed a rental rate of $9.50 per square foot NNN, which is at the higher range for a new, multi-tenant tech office building in Palo Alto.

Figure 7. Lease Rates at Comparable Class A Office Buildings with Professional Office Tenants

<table>
<thead>
<tr>
<th>Property Address</th>
<th>Year Built</th>
<th>Tenant</th>
<th>Submarket</th>
<th>Mid-Point Monthly Rent/SF NNN</th>
</tr>
</thead>
<tbody>
<tr>
<td>3223 Hanover St</td>
<td>2021</td>
<td>JP Morgan Tech HQ</td>
<td>Stanford</td>
<td>$6.71</td>
</tr>
<tr>
<td>2747 Park Blvd</td>
<td>2019</td>
<td>Tencent</td>
<td>Other</td>
<td>$6.58</td>
</tr>
<tr>
<td>3421 Hillview Ave</td>
<td>2018</td>
<td>VMware</td>
<td>Other</td>
<td>$7.04</td>
</tr>
<tr>
<td>2555 Park Blvd</td>
<td>2018</td>
<td>Globality Inc</td>
<td>California Avenue</td>
<td>$9.54</td>
</tr>
<tr>
<td>500-508 University Ave</td>
<td>2017</td>
<td>Accel</td>
<td>Downtown Palo Alto</td>
<td>$6.42</td>
</tr>
<tr>
<td>550 High St</td>
<td>2016</td>
<td>EY</td>
<td>Downtown Palo Alto</td>
<td>$13.88</td>
</tr>
<tr>
<td>385 Sherman Ave</td>
<td>2016</td>
<td>VISA Research</td>
<td>California Avenue</td>
<td>$6.46</td>
</tr>
<tr>
<td>611 Cowper St</td>
<td>2015</td>
<td>Amazon</td>
<td>Downtown Palo Alto</td>
<td>$9.63</td>
</tr>
<tr>
<td>3305 Hillview Ave</td>
<td>2002</td>
<td>Amazon</td>
<td>Other</td>
<td>$5.71</td>
</tr>
<tr>
<td>3307 Hillview Ave</td>
<td>2002</td>
<td>Tibco</td>
<td>Other</td>
<td>$4.17</td>
</tr>
<tr>
<td>435 Tasso St</td>
<td>1984</td>
<td>Formation Group</td>
<td>Downtown Palo Alto</td>
<td>$10.07</td>
</tr>
</tbody>
</table>

Median $6.71
Top Quartile $9.58

Notes: Mid-point of the rental ranges estimated by CoStar are based on historical lease transactions, historical asking rents, market trends, and more. Tenants listed are based on the most recent data available online. Buildings may host more than one tenant at an address, and tenants listed may no longer be the current tenants.

1 A triple net lease (triple-Net or NNN) is a lease agreement on a property whereby the tenant or lessee promises to pay all the expenses of the property including real estate taxes, building insurance, and maintenance.
**R&D/Labs:** For R&D rents, Strategic Economics reviewed data for comparable buildings in Palo Alto that are occupied by R&D firms, summarized in Figure 8 below. The rental rates range from $3.71 to $9 per square foot, with a median monthly triple-net rent of $7.37. For the purposes of this analysis, Strategic Economics assumed that the monthly rent for a new R&D building would be $7.50 per square foot NNN.

**Figure 8: Lease Rates at Comparable Class A R&D Buildings**

<table>
<thead>
<tr>
<th>Property Address</th>
<th>Year Built</th>
<th>Tenant</th>
<th>Submarket</th>
<th>Mid-Point Monthly Rent/SF NNN</th>
</tr>
</thead>
<tbody>
<tr>
<td>3181 Porter Dr</td>
<td>2018</td>
<td>Stanford Research Park</td>
<td>Stanford</td>
<td>$6.50</td>
</tr>
<tr>
<td>900-908 Arastradero Rd</td>
<td>2018</td>
<td>Stanford Research Park</td>
<td>Stanford</td>
<td>$9.00</td>
</tr>
<tr>
<td>1450 Page Mill Rd</td>
<td>2017</td>
<td>Argo AI</td>
<td>Stanford</td>
<td>$6.95</td>
</tr>
<tr>
<td>278 University Ave</td>
<td>2013</td>
<td>Invitae</td>
<td>Downtown Palo Alto</td>
<td>$7.79</td>
</tr>
<tr>
<td>3301 Hillview Ave</td>
<td>2002</td>
<td>Docomo Innovations</td>
<td>Stanford</td>
<td>$3.71</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>$7.37</strong></td>
</tr>
</tbody>
</table>


Notes: Mid-point of the rental ranges estimated by CoStar are based on historical lease transactions, historical asking rents, market trends, and more. Tenants listed are based on the most recent data available online. Buildings may host more than one tenant at an address, and tenants listed may no longer be the current tenants.

**Hotel:** The assumptions of hotel revenues are based on a combination of data sources, including interviews with hotel developers in Palo Alto, and data from STR, a hotel research firm that tracks hotel room rates, vacancy rates, and revenues per available room for properties in Palo Alto (see Figure 9).
## Figure 9. Revenue Assumptions by Prototype

### R&D

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly Rent per Sq. Ft. (NNN)</td>
<td>$7.50</td>
</tr>
<tr>
<td>Annual Rent per Sq. Ft. (NNN)</td>
<td>$90.00</td>
</tr>
<tr>
<td>Vacancy</td>
<td>5%</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>7.5%</td>
</tr>
<tr>
<td>Net Operating Income per Sq. Ft.</td>
<td>$78.75</td>
</tr>
<tr>
<td>Cap Rate</td>
<td>5.50%</td>
</tr>
<tr>
<td>Capitalized Value/Sq. Ft.</td>
<td>$1,431.82</td>
</tr>
</tbody>
</table>

### Office

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly Rent per Sq. Ft. (NNN)</td>
<td>$9.50</td>
</tr>
<tr>
<td>Annual Rent per Sq. Ft. (NNN)</td>
<td>$114.00</td>
</tr>
<tr>
<td>Vacancy</td>
<td>5%</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>7.5%</td>
</tr>
<tr>
<td>Net Operating Income per Sq. Ft.</td>
<td>$99.75</td>
</tr>
<tr>
<td>Cap Rate</td>
<td>5.50%</td>
</tr>
<tr>
<td>Capitalized Value/Sq. Ft.</td>
<td>$1,813.64</td>
</tr>
</tbody>
</table>

### Hotel

<table>
<thead>
<tr>
<th>Component</th>
<th>Daily/room</th>
<th>Annual/room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Room Income (RevPAR) [a]</td>
<td>$250</td>
<td>$91,250</td>
</tr>
<tr>
<td>Gross Other Revenue [b]</td>
<td>$88</td>
<td>$31,938</td>
</tr>
<tr>
<td>Gross Revenue</td>
<td>$338</td>
<td>$123,188</td>
</tr>
<tr>
<td>Less: Vacancy [c]</td>
<td></td>
<td>$0</td>
</tr>
<tr>
<td>Less: Operating Expenses</td>
<td>70%</td>
<td>($86,231)</td>
</tr>
<tr>
<td>Annual Net Operating Income</td>
<td></td>
<td>$36,956</td>
</tr>
<tr>
<td>Cap Rate</td>
<td>8.25%</td>
<td></td>
</tr>
<tr>
<td>Capitalized Value per Room</td>
<td></td>
<td>$447,955</td>
</tr>
</tbody>
</table>

Source: Costar, 2021; Smith Travel Research, 2021.
Host Almanac, 2018; Strategic Economics, 2021.

Notes:
[a] RevPAR is a measure of revenue per room, calculated as occupancy percentage times average daily rate.
[b] Other Revenue for hotels based on data from STR Consulting, and from hotel developer interviews.
[c] Vacancy is already reflected in RevPAR estimate.
III. RESULTS

The financial feasibility of development is assessed using two metrics described below:

1. Yield on Cost

As described in the Approach section of the report, the pro forma analysis estimates the profitability of a development project using the yield on cost (YOC) metric. Projects that achieve the target YOC for feasibility are much more likely to be built. Projects that achieve a lower YOC but still have a positive net value are less likely to be built. The target YOC thresholds for office/R&D and hotel projects are shown in Figure 10 below.

**Figure 10: Expected Yield on Cost for Development Projects**

<table>
<thead>
<tr>
<th>Prototype</th>
<th>Published Cap Rate</th>
<th>Target YOC for Feasibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office/R&amp;D (Class AA)</td>
<td>5.5%</td>
<td>6.75%</td>
</tr>
<tr>
<td>Hotel (Limited Service/Boutique)</td>
<td>8.0% - 8.25%</td>
<td>9.25%</td>
</tr>
</tbody>
</table>

Source: CBRE Cap Rate Survey, H2 2018; HVS, 2019; Developer interviews.

2. Return on Cost

In addition to the YOC metric, Strategic Economics also calculated the return on cost. This is the net capitalized value of the project divided by the total development cost. Some of the projects produce a negative net value and a negative return on cost. Projects with a negative return on cost are infeasible because the cost of development is greater than the value generated from rents or room rates.

Using the metrics defined above, the following summarizes the results of the financial feasibility of different commercial linkage fee levels for each prototype. The fee scenarios tested in the analysis are summarized below.

**Figure 11: Fee Levels Tested in Pro Forma Analysis**

<table>
<thead>
<tr>
<th>Office and R&amp;D Fee Levels Tested</th>
<th>Hotel Fee Levels Tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Linkage Fee</td>
<td>No Linkage Fee</td>
</tr>
<tr>
<td>$40 Existing Linkage Fee</td>
<td>$23 Existing Linkage Fee</td>
</tr>
<tr>
<td>$50</td>
<td>$30</td>
</tr>
<tr>
<td>$60</td>
<td>$50</td>
</tr>
<tr>
<td>$70</td>
<td>$177 - Maximum Nexus Fee</td>
</tr>
<tr>
<td>$150</td>
<td></td>
</tr>
<tr>
<td>$160</td>
<td></td>
</tr>
<tr>
<td>$264 Maximum Nexus Fee</td>
<td></td>
</tr>
</tbody>
</table>
R&D Lab/BioTech (Prototype 1) None of the commercial linkage fee levels tested for the R&D lab projects with a 0.4 FAR are financially feasible based on current market conditions. Even without a linkage fee, the prototype does not meet the target YOC as shown in Figure 12. The R&D lab spaces have extremely high construction costs. This, combined with the high value of land in Palo Alto, render this prototype infeasible. The development costs for the R&D prototype are greater than the value generated from the development, resulting in a negative net value and a negative return on cost. It is possible that a higher intensity R&D project would be more likely to be feasible. Most new R&D projects built recently in the Peninsula have allowable FAR of 1.0 or higher.

As shown in Figure 13, the existing linkage fee (inflated to 2022) accounts for approximately 2.6 percent of total development costs. Increasing the fee to $70 would raise the burden to 4.5 percent of total development costs. The maximum nexus fee of $264 would be a much higher cost burden on projects, accounting for 17 percent of total development costs.

The detailed pro forma for the R&D prototype is shown in Figure 14.

**Figure 12. Summary of Financial Feasibility of Prototype 1 R&D with 0.4 FAR**

<table>
<thead>
<tr>
<th>Linkage Fee per Sq. Ft.</th>
<th>Yield on Cost</th>
<th>Return on Cost</th>
<th>Feasibility of Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Linkage Fee</td>
<td>4.57%</td>
<td>-16.86%</td>
<td>Infeasible</td>
</tr>
<tr>
<td>$40 - Existing Linkage Fee</td>
<td>4.46%</td>
<td>-19.42%</td>
<td>Infeasible</td>
</tr>
<tr>
<td>$50</td>
<td>4.43%</td>
<td>-20.08%</td>
<td>Infeasible</td>
</tr>
<tr>
<td>$60</td>
<td>4.40%</td>
<td>-20.73%</td>
<td>Infeasible</td>
</tr>
<tr>
<td>$70</td>
<td>4.38%</td>
<td>-21.37%</td>
<td>Infeasible</td>
</tr>
<tr>
<td>$150</td>
<td>4.17%</td>
<td>-26.53%</td>
<td>Infeasible</td>
</tr>
<tr>
<td>$160</td>
<td>4.15%</td>
<td>-27.18%</td>
<td>Infeasible</td>
</tr>
<tr>
<td>$264 - Maximum Linkage Fee</td>
<td>3.91%</td>
<td>-33.89%</td>
<td>Infeasible</td>
</tr>
</tbody>
</table>

Source: Strategic Economics

**Figure 13. Prototype 1 R&D with 0.4 FAR Linkage Fees as % of Total Development Cost**

<table>
<thead>
<tr>
<th>Linkage Fees as % of Total Development Cost</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$40 - Existing Linkage Fee</td>
<td>2.6%</td>
</tr>
<tr>
<td>$50</td>
<td>3.2%</td>
</tr>
<tr>
<td>$60</td>
<td>3.9%</td>
</tr>
<tr>
<td>$70</td>
<td>4.5%</td>
</tr>
<tr>
<td>$150</td>
<td>9.7%</td>
</tr>
<tr>
<td>$160</td>
<td>10.3%</td>
</tr>
<tr>
<td>$264 - Maximum Linkage Fee</td>
<td>17.0%</td>
</tr>
</tbody>
</table>

Source: Strategic Economics, 2021.
### Figure 14. Prototype 1 R&D with 0.4 FAR Pro Forma Results

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Prototype 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parcel Size (acres)</td>
<td>3.00</td>
</tr>
<tr>
<td>Gross Building Area (square feet)</td>
<td>52,272</td>
</tr>
<tr>
<td>Net Building Area (square feet)</td>
<td>47,045</td>
</tr>
<tr>
<td>FAR (without parking garage)</td>
<td>0.40</td>
</tr>
</tbody>
</table>

#### Revenues
- Gross Revenue: $4,234,032
- Net Operating Income: $3,704,778
- Capitalization Rate: 5.50%
- Capitalized Value: $67,359,600

#### Costs
- Land Costs: $39,204,000

**Direct Costs**
- Gross Building Area: $18,295,200
- FF&E: n/a
- Tenant Improvement Allowance: $7,056,720
- Parking: $7,672,500
- Subtotal Direct Costs: $33,024,420
  - per net square ft: $701.98
  - per gross square ft: $631.78

**Indirect Costs**
- Soft Costs: $4,623,419
- City Permits and Fees (excl. commercial linkage): $2,181,525
- Subtotal Indirect Costs: $6,804,943

Financing Costs: $1,981,465

**Total Development Cost (TDC)**
- $81,014,829
  - per net square ft: $1,722

#### Profit (Net Value - TDC)
- No Linkage Fee: $0
- Existing Linkage Fee - Office/R&D:
  - $40: ($13,655,229)
  - $50: ($14,863,042)
  - $60: ($16,268,829)
  - $70: ($16,791,549)
  - $150: ($21,496,029)
  - $160: ($22,018,749)
- Maximum Nexus Fee - Office/R&D: $264
  - ($27,455,037)

#### Yield on Cost (NOI/TDC)
- No Linkage Fee: $0
- Existing Linkage Fee - Office/R&D:
  - $40: 4.46%
  - $50: 4.43%
  - $60: 4.40%
  - $70: 4.38%
  - $150: 4.17%
  - $160: 4.15%
- Maximum Nexus Fee - Office/R&D: $264
  - 3.91%

Source: Strategic Economics, 2021.
Professional Office (Prototype 2-A) Professional office projects with a 0.4 FAR are unlikely to be able to support a higher commercial linkage fee. As shown in Figure 15, the 0.4 FAR professional office development prototype does not achieve the target YOC with the existing and higher commercial linkage fee levels. It is unlikely that a development project would move forward with a higher cost of development. The maximum fee level of $264 per square foot would be infeasible because it creates a negative net value and negative return on cost.

**Figure 15. Summary of Financial Feasibility of Prototype 2-A Office with 0.4 FAR**

<table>
<thead>
<tr>
<th>Fee per Sq. Ft.</th>
<th>Yield on Cost</th>
<th>Return on Cost</th>
<th>Likelihood of Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Linkage Fee</td>
<td>5.90%</td>
<td>7.22%</td>
<td>Unlikely</td>
</tr>
<tr>
<td>Existing Linkage Fee - $40</td>
<td>5.75%</td>
<td>4.61%</td>
<td>Unlikely</td>
</tr>
<tr>
<td>$50</td>
<td>5.71%</td>
<td>3.93%</td>
<td>Unlikely</td>
</tr>
<tr>
<td>$60</td>
<td>5.67%</td>
<td>3.28%</td>
<td>Unlikely</td>
</tr>
<tr>
<td>$70</td>
<td>5.64%</td>
<td>2.62%</td>
<td>Unlikely</td>
</tr>
<tr>
<td>$150</td>
<td>5.28%</td>
<td>-2.64%</td>
<td>Infeasible</td>
</tr>
<tr>
<td>$160</td>
<td>5.28%</td>
<td>-3.29%</td>
<td>Infeasible</td>
</tr>
<tr>
<td>Maximum Nexus Fee - $264</td>
<td>5.03%</td>
<td>-10.12%</td>
<td>Infeasible</td>
</tr>
</tbody>
</table>

Source: Strategic Economics, 2021.

Professional Office (Prototype 2-B) A professional office development with a 1.0 FAR can support a commercial linkage fee of up to $50 per square foot. There are limited locations in Palo Alto where this prototype would be allowed under the existing land use regulations. However, as shown in Figure 16, the 1.0 FAR professional office project can support a linkage fee of $50, with a YOC of 6.77%. At higher fee levels, the development prototype becomes less likely to be built because it does not meet the target YOC, although it remains close. The impact of each fee level on total development costs is shown in Figure 18.

**Figure 16. Summary of Financial Feasibility of Prototype 2-B Office with 1.0 FAR**

<table>
<thead>
<tr>
<th>Fee per Sq. Ft.</th>
<th>Yield on Cost</th>
<th>Return on Cost</th>
<th>Likelihood of Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Linkage Fee</td>
<td>7.05%</td>
<td>28.11%</td>
<td>Highly likely</td>
</tr>
<tr>
<td>Existing Linkage Fee - $40</td>
<td>6.83%</td>
<td>24.99%</td>
<td>Highly likely</td>
</tr>
<tr>
<td>$50</td>
<td>6.78%</td>
<td>24.18%</td>
<td>Highly likely</td>
</tr>
<tr>
<td>$60</td>
<td>6.73%</td>
<td>23.40%</td>
<td>Unlikely</td>
</tr>
<tr>
<td>$70</td>
<td>6.68%</td>
<td>22.61%</td>
<td>Unlikely</td>
</tr>
<tr>
<td>$150</td>
<td>6.30%</td>
<td>16.33%</td>
<td>Unlikely</td>
</tr>
<tr>
<td>$160</td>
<td>6.26%</td>
<td>15.55%</td>
<td>Unlikely</td>
</tr>
<tr>
<td>Maximum Nexus Fee - $264</td>
<td>5.84%</td>
<td>7.39%</td>
<td>Unlikely</td>
</tr>
</tbody>
</table>

Source: Strategic Economics, 2021.

Professional Office (Prototype 2-C) A professional office development with a 2.0 FAR can support a commercial linkage fee of between $70 and $150 per square foot. There are a small number of sites in Palo Alto where a 2.0 FAR for office development would be allowed. As shown in Figure 17, the 2.0 FAR professional office project can support a linkage fee of up to $70, with all of the fee levels tested resulting in a YOC of more than 6.75%. The development prototype is not likely to support the maximum nexus fee of $264, which does not meet the target YOC. As summarized in Figure 18 fee of $70 would increase the cost burden to 6.1 percent of total development costs. A fee of $150 would represent 13 percent of total development costs. The maximum nexus fee would account for 23
percent of total development costs. The detailed pro forma for the professional office prototypes is shown in Figure 19.

**FIGURE 17. SUMMARY OF FINANCIAL FEASIBILITY OF PROTOTYPE 2-C OFFICE WITH 2.0 FAR**

<table>
<thead>
<tr>
<th>Fee per Sq. Ft.</th>
<th>Yield on Cost</th>
<th>Return on Cost</th>
<th>Likelihood of Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Linkage Fee</td>
<td>7.66%</td>
<td>39.33%</td>
<td>Highly likely</td>
</tr>
<tr>
<td>Existing Linkage Fee - $40</td>
<td>7.41%</td>
<td>35.94%</td>
<td>Highly likely</td>
</tr>
<tr>
<td>$50</td>
<td>7.35%</td>
<td>35.06%</td>
<td>Highly likely</td>
</tr>
<tr>
<td>$60</td>
<td>7.29%</td>
<td>34.21%</td>
<td>Highly likely</td>
</tr>
<tr>
<td>$70</td>
<td>7.23%</td>
<td>33.36%</td>
<td>Highly likely</td>
</tr>
<tr>
<td>$150</td>
<td>6.79%</td>
<td>26.53%</td>
<td>Highly likely</td>
</tr>
<tr>
<td>$160</td>
<td>6.74%</td>
<td>25.67%</td>
<td>Unlikely</td>
</tr>
<tr>
<td>Maximum Nexus Fee - $264</td>
<td>6.25%</td>
<td>16.80%</td>
<td>Unlikely</td>
</tr>
</tbody>
</table>

Source: Strategic Economics, 2021.

**FIGURE 18. PROFESSIONAL OFFICE LINKAGE FEES AS % OF TOTAL DEVELOPMENT COST**

<table>
<thead>
<tr>
<th>Linkage Fees as % of Total Development Cost</th>
<th>Prototype 2-A 0.4 FAR</th>
<th>Prototype 2-B 1.0 FAR</th>
<th>Prototype 2-C 2.0 FAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Linkage Fee - $40</td>
<td>2.6%</td>
<td>3.1%</td>
<td>3.4%</td>
</tr>
<tr>
<td>$50</td>
<td>3.3%</td>
<td>3.9%</td>
<td>4.3%</td>
</tr>
<tr>
<td>$60</td>
<td>3.9%</td>
<td>4.7%</td>
<td>5.1%</td>
</tr>
<tr>
<td>$70</td>
<td>4.6%</td>
<td>5.5%</td>
<td>6.0%</td>
</tr>
<tr>
<td>$150</td>
<td>9.9%</td>
<td>11.8%</td>
<td>12.8%</td>
</tr>
<tr>
<td>$160</td>
<td>10.5%</td>
<td>12.6%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Maximum Nexus Fee - $264</td>
<td>17.3%</td>
<td>20.7%</td>
<td>22.5%</td>
</tr>
</tbody>
</table>

Source: Strategic Economics, 2021.
### Figure 19. Prototype 2-A, 2-B, 2-C Professional Office Pro Forma Results

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Prototype 2-A Professional Office 0.4 FAR</th>
<th>Prototype 2-B Professional Office 1.0 FAR</th>
<th>Prototype 2-C Professional Office 2.0 FAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parcel Size</td>
<td>acres 1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Gross Building Area</td>
<td>square feet 17,424</td>
<td>43,560</td>
<td>87,120</td>
</tr>
<tr>
<td>Net Building Area</td>
<td>square feet 15,682</td>
<td>39,204</td>
<td>78,408</td>
</tr>
<tr>
<td>FAR</td>
<td>0.40</td>
<td>1.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Revenues</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Revenue</td>
<td>$1,787,702</td>
<td>$4,469,256</td>
<td>$8,938,512</td>
</tr>
<tr>
<td>Net Operating Income</td>
<td>$1,564,240</td>
<td>$3,910,599</td>
<td>$7,821,198</td>
</tr>
<tr>
<td>Capitalization Rate</td>
<td>5.50%</td>
<td>5.50%</td>
<td>5.50%</td>
</tr>
<tr>
<td>Capitalized Value</td>
<td>$28,440,720</td>
<td>$71,101,800</td>
<td>$142,203,600</td>
</tr>
<tr>
<td>Costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land Costs</td>
<td>$13,068,000</td>
<td>$18,513,000</td>
<td>$28,314,000</td>
</tr>
<tr>
<td>Direct Costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Building Area</td>
<td>$5,227,200</td>
<td>$13,068,000</td>
<td>$26,136,000</td>
</tr>
<tr>
<td>FF&amp;E</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Tenant Improvement Allowance</td>
<td>$1,254,528</td>
<td>$3,136,320</td>
<td>$6,272,640</td>
</tr>
<tr>
<td>Parking</td>
<td>$4,127,500</td>
<td>$13,105,000</td>
<td>$26,017,500</td>
</tr>
<tr>
<td>Subtotal Direct Costs</td>
<td>$10,609,228</td>
<td>$29,309,320</td>
<td>$58,426,140</td>
</tr>
<tr>
<td>Indirect Costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soft Costs</td>
<td>$1,485,292</td>
<td>$4,103,305</td>
<td>$8,179,660</td>
</tr>
<tr>
<td>City Permits and Fees (excl. commercial linkage)</td>
<td>$727,175</td>
<td>$1,817,937</td>
<td>$3,635,874</td>
</tr>
<tr>
<td>Subtotal Indirect Costs</td>
<td>$2,212,467</td>
<td>$5,921,242</td>
<td>$11,815,534</td>
</tr>
<tr>
<td>Financing Costs</td>
<td>$636,554</td>
<td>$1,758,559</td>
<td>$3,505,568</td>
</tr>
<tr>
<td>Total Development Cost (TDC)</td>
<td>$26,526,248</td>
<td>$55,502,121</td>
<td>$102,061,242</td>
</tr>
<tr>
<td>Profit (Net Value - TDC)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Linkage Fee</td>
<td>$0</td>
<td>$1,914,472</td>
<td>$15,599,679</td>
</tr>
<tr>
<td>Existing Linkage Fee - Office/R&amp;D</td>
<td>$40</td>
<td>$1,222,726</td>
<td>$13,870,315</td>
</tr>
<tr>
<td>$50</td>
<td>$1,043,272</td>
<td>$13,421,679</td>
<td>$36,683,631</td>
</tr>
<tr>
<td>$60</td>
<td>$869,032</td>
<td>$12,986,079</td>
<td>$35,786,358</td>
</tr>
<tr>
<td>$70</td>
<td>$694,792</td>
<td>$12,550,479</td>
<td>$34,915,158</td>
</tr>
<tr>
<td>$150</td>
<td>($699,128)</td>
<td>$9,065,679</td>
<td>$27,074,358</td>
</tr>
<tr>
<td>$160</td>
<td>($873,368)</td>
<td>$8,630,079</td>
<td>$26,203,158</td>
</tr>
<tr>
<td>Maximum Nexus</td>
<td>$264</td>
<td>($2,685,464)</td>
<td>$4,099,839</td>
</tr>
<tr>
<td>Yield on Cost (NOI/TDC)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Linkage Fee</td>
<td>$0</td>
<td>5.90%</td>
<td>7.05%</td>
</tr>
<tr>
<td>Existing Linkage Fee - Office/R&amp;D</td>
<td>$40</td>
<td>5.75%</td>
<td>6.83%</td>
</tr>
<tr>
<td>$50</td>
<td>5.71%</td>
<td>6.78%</td>
<td>7.35%</td>
</tr>
<tr>
<td>$60</td>
<td>5.67%</td>
<td>6.73%</td>
<td>7.29%</td>
</tr>
<tr>
<td>$70</td>
<td>5.64%</td>
<td>6.68%</td>
<td>7.23%</td>
</tr>
<tr>
<td>$150</td>
<td>5.28%</td>
<td>6.30%</td>
<td>6.79%</td>
</tr>
<tr>
<td>$160</td>
<td>5.28%</td>
<td>6.26%</td>
<td>6.74%</td>
</tr>
<tr>
<td>Maximum Nexus Fee - Office/R&amp;D</td>
<td>$264</td>
<td>5.03%</td>
<td>5.84%</td>
</tr>
</tbody>
</table>

Source: Strategic Economics, 2021.
Hotel

As summarized in Figure 20 for hotel projects, the existing linkage fee of $24 per square foot is challenging for hotel projects, with a yield of cost of 8.31%. The threshold for feasibility is 9.25%. At higher fee levels, the prototype becomes infeasible, with total development costs exceeding the net value of the project. The existing linkage fee represents 4.0% of total development costs (see Figure 21). A higher fee of $30 per square foot would increase the burden to 5.1% of total development costs.

The current market for hotels is exceptionally challenging due to the impacts of COVID-19 on business travel and tourism. The results of the feasibility analysis indicate that further increases in the cost of development are likely to inhibit future development projects.

The detailed pro forma for the hotel prototype is shown in Figure 22.

**Figure 20. Summary of Financial Feasibility of Prototype 3 Hotel**

<table>
<thead>
<tr>
<th>Fee per Sq. Ft.</th>
<th>Yield on Cost</th>
<th>Return on Cost</th>
<th>Likelihood of Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Linkage Fee</td>
<td>8.65%</td>
<td>4.88%</td>
<td>Unlikely</td>
</tr>
<tr>
<td>Existing Linkage Fee - $23</td>
<td>8.33%</td>
<td>0.95%</td>
<td>Unlikely</td>
</tr>
<tr>
<td>$30</td>
<td>8.23%</td>
<td>-0.22%</td>
<td>Infeasible</td>
</tr>
<tr>
<td>$50</td>
<td>7.97%</td>
<td>-3.62%</td>
<td>Infeasible</td>
</tr>
<tr>
<td>Maximum Nexus Fee - $177</td>
<td>6.65%</td>
<td>-25.21%</td>
<td>Infeasible</td>
</tr>
</tbody>
</table>

Source: Strategic Economics, 2021.

**Figure 21. Prototype 3 Hotel Linkage Fees as % of Total Development Cost**

<table>
<thead>
<tr>
<th>Linkage Fees as % of Total Development Cost</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Linkage Fee - $23</td>
<td>3.9%</td>
</tr>
<tr>
<td>$30</td>
<td>5.1%</td>
</tr>
<tr>
<td>$50</td>
<td>8.5%</td>
</tr>
<tr>
<td>Maximum Nexus Fee - $177</td>
<td>30.1%</td>
</tr>
</tbody>
</table>

Source: Strategic Economics, 2021.
### Figure 22. Prototype 3 Hotel Pro Forma Results

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Prototype 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parcel Size</td>
<td>acres</td>
</tr>
<tr>
<td>Gross Building Area</td>
<td>square feet</td>
</tr>
<tr>
<td>Net Building Area</td>
<td>square feet</td>
</tr>
<tr>
<td>FAR (without parking garage)</td>
<td>2.00</td>
</tr>
</tbody>
</table>

**Revenues**

- Gross Revenue: $14,782,500
- Net Operating Income: $4,434,750
- Capitalization Rate: 8.25%
- Capitalized Value: $53,754,545

**Costs**

- Land Costs: $13,068,000
- Direct Costs:
  - Gross Building Area: $19,602,000
  - FF&E: $2,400,000
  - Tenant Improvement Allowance: $0
  - Parking: $8,675,000
  - Subtotal Direct Costs: $30,677,000
    - per net SF/room: $255,641.67
    - per gross SF: $352.12
- Indirect Costs:
  - Soft Costs: $4,294,780
  - City Permits and Fees (excl. commercial linkage): $1,375,125
  - Subtotal Indirect Costs: $5,670,905
- Financing Costs: $1,840,620
- **Total Development Cost (TDC)**: $51,255,525
  - per room: $427,129

**Profit (Net Value - TDC)**

- No Linkage Fee: $0
- Existing Linkage Fee - Hotel:
  - $23: $485,999
  - $30: ($114,579)
  - $50: ($1,856,979)
- Maximum Nexus Fee - Hotel: $177

**Yield on Cost (NOI/TDC)**

- No Linkage Fee: $0
- Existing Linkage Fee - Hotel:
  - $23: 8.33%
  - $30: 8.23%
  - $50: 7.97%
- Maximum Nexus Fee - Hotel: $177: 6.65%

Source: Strategic Economics, 2021.
IV. PEER CITIES

A large share of municipalities in the Bay Area have adopted commercial linkage fees. Figure 23 summarizes commercial linkage fees for office and R&D, and Figure 24 shows linkage fees for hotel uses in peer cities.

For office and R&D uses, most cities have set their linkage fees within the range of $15 to $30 per square foot, well below Palo Alto’s current fee. Some jurisdictions, including Mountain View and San Francisco, have set lower fees for R&D than professional office uses. Burlingame, Mountain View, Santa Clara, and Sunnyvale have set lower fees for smaller-scale office projects.

San Francisco charges significantly higher fees on office and R&D than most other cities. San Francisco increased its commercial linkage fees to $46 per square foot for R&D and nearly $70 for office uses in December 2019. It is important to note that a feasibility analysis and an economic impact study conducted for San Francisco found that the increased fee for office uses would likely postpone or halt the construction of development projects, and would likely have a negative impact on jobs in the city.2 Santa Clara County charges all non-residential space on Stanford University land (in unincorporated Santa Clara County) a commercial linkage fee of $68.50 per square foot. Strategic Economics is not aware if Santa Clara County conducted a financial feasibility assessment for the fee.

Commercial linkage fees for hotel uses in the Bay Area range from $5 to $23 per square foot with most fees around $10 per square foot. The cities of Palo Alto and San Francisco have the highest linkage fees on hotels. These cities also have higher average hotel room rates than other Bay Area locations.

Many municipalities provide exemptions or fee reductions for certain types of projects, including:

- Smaller projects. For example, commercial linkage fees do not apply to projects adding less than 5,000 gross square feet in Redwood City, San Carlos, San Mateo City, or Burlingame. Projects adding less than 3,500 gross square feet in unincorporated land in San Mateo County, and less than 10,000 gross square feet in Menlo Park or East Palo Alto are also exempt. Some cities also tie their fee to building size on a sliding scale. Mountain View offers a 50% fee reduction for office projects under 10,000 square feet and hotel projects under 25,000 square feet. Sunnyvale also offers a 50% fee discount for the first 25,000 square feet of any project.

- Prevailing wage. Multiple jurisdictions, including Redwood City, San Carlos, San Mateo City, and San Mateo County, provide 25% fee reductions for projects that pay prevailing wage.

- Community-serving facilities. Most cities exempt projects such as hospitals/clinics, childcare, public, educational, religious, and/or non-profit uses. Additionally, projects that are replacing property damaged from natural disasters are also often exempted.

It is common for jurisdictions to allow alternative means of complying with commercial linkage fee requirements. Developers can typically satisfy the requirement by providing affordable housing either on or off-site, or by dedicating land for affordable housing. In most cases, the applicant must first prove that an alternative is necessary.

---

Many cities have either enacted or updated their fees in the last four years, and fees are typically adjusted annually, based on either ENR’s Construction Cost Index for the San Francisco Bay area, or on the national Consumer Price Index.

### Figure 23. Office and R&D Linkage Fees (per Gross sq. ft. of net new space) in Nearby Cities

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Base Office and R&amp;D Fee</th>
<th>Reduced Office and R&amp;D Fee</th>
<th>Date Fee Was Adopted or Updated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burlingame</td>
<td>$25</td>
<td>$18 (a)</td>
<td>2017</td>
</tr>
<tr>
<td>Cupertino</td>
<td>$23.76</td>
<td></td>
<td>2015</td>
</tr>
<tr>
<td>Los Altos</td>
<td>$25</td>
<td></td>
<td>2018</td>
</tr>
<tr>
<td>Menlo Park</td>
<td>$17.79</td>
<td></td>
<td>2018</td>
</tr>
<tr>
<td>Mountain View</td>
<td>$29.62</td>
<td>$14.81 (a)</td>
<td>2021</td>
</tr>
<tr>
<td>Palo Alto</td>
<td>$40</td>
<td>$26.22 (b)</td>
<td></td>
</tr>
<tr>
<td>Redwood City</td>
<td>$20</td>
<td></td>
<td>2015</td>
</tr>
<tr>
<td>San Carlos</td>
<td>$20</td>
<td></td>
<td>2017</td>
</tr>
<tr>
<td>San Francisco</td>
<td>$69.60</td>
<td>$48.98 (a)</td>
<td>2019</td>
</tr>
<tr>
<td>San Mateo City</td>
<td>$25</td>
<td>$38.37 (b)</td>
<td>2016</td>
</tr>
<tr>
<td>San Mateo County</td>
<td>$25</td>
<td></td>
<td>2016</td>
</tr>
<tr>
<td>Santa Clara City</td>
<td>$20</td>
<td>$10 (a)</td>
<td>2017</td>
</tr>
<tr>
<td>Stanford University Properties in Santa Clara County (c)</td>
<td>$68.50</td>
<td></td>
<td>2018</td>
</tr>
<tr>
<td>South San Francisco</td>
<td>$15</td>
<td></td>
<td>2018</td>
</tr>
<tr>
<td>Sunnyvale</td>
<td>$16.50</td>
<td>$8.25 (a)</td>
<td>2015</td>
</tr>
</tbody>
</table>

Source: City Ordinances and Fee Schedules; 21 Elements, 2019; Silicon Valley at Home, 2019; Strategic Economics, 2021.

Notes:
(a) Fees vary based on project size in four cities: In Burlingame, Mountain View, Santa Clara, and Sunnyvale, office projects under 50,000 sq. ft., 10,000 sq. ft., 20,000 sq. ft. and 25,000 sq. ft. respectively pay the lower fee.
(b) Fees vary based on a differentiation between Professional/High-Tech Office and R&D in two cities. The lower fees are for R&D.
(c) Santa Clara County’s fee is specific to Stanford University’s academic space. Academic space is defined in the Code of Ordinances as all building uses, except building uses for housing and parking facilities, within the Stanford University Community Plan Area.
## Figure 24. Hotel Linkage Fees (per Gross Sq. Ft. of Net New Space) in Nearby Cities

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Hotel Fee</th>
<th>Date Fee Was Adopted or Updated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burlingame</td>
<td>$12</td>
<td>2017</td>
</tr>
<tr>
<td>Cupertino</td>
<td>$11.88</td>
<td>2015</td>
</tr>
<tr>
<td>Los Altos</td>
<td>$15</td>
<td>2018</td>
</tr>
<tr>
<td>Menlo Park</td>
<td>$9.66</td>
<td>2018</td>
</tr>
<tr>
<td>Mountain View (a)</td>
<td>$1.60 - $3.17</td>
<td>2021</td>
</tr>
<tr>
<td>Palo Alto</td>
<td>$24</td>
<td>2017</td>
</tr>
<tr>
<td>Redwood City</td>
<td>$5</td>
<td>2015</td>
</tr>
<tr>
<td>San Carlos</td>
<td>$10</td>
<td>2017</td>
</tr>
<tr>
<td>San Francisco</td>
<td>$23.36</td>
<td>2019</td>
</tr>
<tr>
<td>San Mateo City</td>
<td>$10</td>
<td>2016</td>
</tr>
<tr>
<td>San Mateo County</td>
<td>$10</td>
<td>2016</td>
</tr>
<tr>
<td>Santa Clara City</td>
<td>$5</td>
<td>2017</td>
</tr>
<tr>
<td>South San Francisco</td>
<td>$5</td>
<td>2018</td>
</tr>
<tr>
<td>Sunnyvale</td>
<td>$8.25</td>
<td>2015</td>
</tr>
</tbody>
</table>

Source: City Ordinances and Fee Schedules; 21 Elements, 2019; Silicon Valley at Home, 2019; Strategic Economics, 2021.

Notes:
(a) Fees vary based on project size in Mountain View. For hotels under 25,000 sq. ft., the fee is $1.60 per square foot. The fee increases to $3.17 for hotels over 25,000 sq. ft.
Summary Title: Council Review of Objective Standards

Title: Public Hearing: Adoption of Two Ordinances Implementing the Objective Standards Project, Including: 1) New Chapter 18.24, Objective Design Standards, to Replace Existing Context-Based Design Criteria; 2) Modifications to Affordable Housing (AH) and Workforce Housing (WH) Overlay Districts to Eliminate the Legislative Process; 3) Expansion of Affordable Housing (AH) and Housing Incentive Program (HIP) to PTOD- Eligible Properties; 4) Changes to Remove Inconsistencies and Redundancies, and Streamline Project Review Throughout Title 18 Chapters (7:55 PM - 9:45 PM)

From: City Manager

Lead Department: Planning and Development Services

Recommendation:
Staff recommends that Council consider the proposed objective design standards (Attachment A) and Code changes (Attachment B), take public comment, and provide feedback and recommend changes to the proposed policy and ordinance(s).

Staff will return to Council at a future hearing, having incorporated modifications, as directed by Council. Ultimately, these documents would modify Title 18 (Zoning) of the Palo Alto Municipal Code (PAMC).

Executive Summary:
Since the 2018 Housing Work Plan, the City has had an interest in converting many subjective housing development criteria into objective standards. While subjective criteria provide more design flexibility and give local jurisdictions more design control, this approach can add to the cost of a development, increase application processing time and risk to the developer because the process can be less predictable. The State legislature has long declared housing as a
Statewide interest and has made several significant changes to State housing laws in recent years to streamline housing approvals by eliminating the use of subjective criteria.

This ordinance attempts to translate many of the City’s subjective criteria found throughout the code in the form of performance standards, context-based design criteria and application findings into clear, objective standards. This effort, guided by the Architectural Review Board and Planning and Transportation Commission, preserves the City’s interests to advance good building design that is contextually appropriate in a streamlined application process that is consistent with State law.

This ordinance amends many different code sections of the municipal code and represents a notable change in the City’s approach toward land use regulation for housing and mixed use developments. Accordingly, staff recommends the City Council conduct the hearing over two meetings, enabling staff to return with Council directed refinements before acting on the attached ordinances.

This report contains two main discussion topics related to the objective design standards and various other supporting amendments as summarized below:

1. **Objective Design Standards**: Objective design standards in Attachment A represent the transformation of existing subjective, context-based design criteria into a new Chapter 18.24 in Title 18. The standards encompass site design and building design topics and include graphics to illustrate key standards. The standards were reviewed and refined over a series of 13 meetings with the Architectural Review Board (ARB) and an ARB Ad Hoc Committee and reviewed over three (3) hearings with the Planning & Transportation Commission (PTC). The process culminated in a recommendation for adoption at the ARB’s April 1, 2021 meeting and by the PTC at their June 9, 2021 meeting.

2. **Other Code Updates to Support Objective Standards**: Additionally, City staff recommend changes to other sections of Title 18. These changes would develop objective standards, remove inconsistencies and redundancies, eliminate sections replaced by the new Chapter 18.24, and streamline project review. Explanatory comments were included in the margins of the attachments to the PTC staff reports and are summarized in this report. Changes include both minor and substantive edits to the following code sections:
   - 18.04: Definitions
   - 18.08: Designation and Establishment of Districts
   - 18.13: Multiple Family Residential (RM-20, RM-30 and RM-40) Districts
• 18.16: Neighborhood, Community, and Service Commercial (CN, CC, and CS) Districts
• 18.18: Downtown Commercial (CD) District
• 18.20: Office, Research, and Manufacturing (MOR, ROLM, RP and GM) Districts
• 18.23: Performance Criteria for Multiple Family Commercial, Manufacturing and Planned Community Districts
• 18.30(J): Affordable Housing (AH) Overlay District
• 18.30(K): Workforce Housing (WH) Overlay District
• 18.34: Pedestrian and Transit Oriented Development (PTOD) Combining District
• 18.40: General Standards and Exceptions
• 18.42: Standards for Special Uses
• 18.52: Parking and Loading Requirements
• 18.54: Parking Facility Design Standards
• 18.76: Permits and Approvals
• 18.77: Processing of Permits and Approvals

Of particular note are changes to remove the requirement for a zoning map amendment to access relaxed development standards for affordable and market rate housing projects. Specifically, proposed changes to the AH and WH Overlay Districts, and the expansion of the Housing Incentive Program as an alternative to the PTOD overlay, would reduce PTC and City Council’s involvement in these projects.

The attached ordinances do not include any proposed changes to clarify the wording of transitional height standards. The previously proposed text modifications generated significant comment on building heights during the PTC meeting and community meeting.

**Background:**

**SB2 Funding and Project Purpose**

This project, development of objective standards, is funded by Senate Bill 2 (SB2). SB2 provides local governments with grants and technical assistance to prepare plans and process improvements that:

- streamline housing approvals;
- facilitate housing affordability; and/or
- accelerate housing production.

The City of Palo Alto developed a grant proposal to streamline housing approvals through process improvements, namely the development of objective standards. The project is to amend Title 18 to clarify standards and guidelines for staff, decision-makers, and applicants.
**Relationship to State Housing Laws**

Several State housing laws rely upon objective standards and emphasize the need for this SB2 project. The following paragraphs summarize the laws, which, when layered together, create the policy context within which Palo Alto must develop its objective standards. A more complete description of each State law is provided in Attachment C.

**Housing Accountability Act**

The Housing Accountability Act (HAA) (Government Code Section 65589.5) applies to "housing development projects" which are defined as:

- multifamily housing projects
- mixed-use developments (with at least two-thirds residential square footage), or
- transitional or supportive housing

The HAA states that a city cannot deny a project, reduce its density, or otherwise make a project infeasible, when the project complies with existing objective standards. There is a narrow exception when the City makes findings—based on a preponderance of evidence—that specific adverse health or safety impacts exist and there is no feasible method to mitigate or avoid impacts.

**SB35 Project Streamlining**

Under SB35 (Government Code Section 65913.4), projects meeting certain physical and affordability criteria are eligible for a streamlined review process. Under SB35, the review process would be limited to 90 days for projects containing 150 or fewer housing units and 180 days for larger projects. An SB35 project is not subject to discretionary review and therefore, is not subject to review under the California Environmental Quality Act (CEQA). Currently, in Palo Alto, an SB35 project must include at least 50% of the units as affordable to low-income households. To date, no applicants have applied for review under this program.

**SB330 Permit Review**

Effective January 1, 2020, SB330 made several changes to existing State housing law, including the Housing Accountability Act and Permit Streamlining Act. Most notably, this bill prohibits jurisdictions from imposing subjective design standards established after January 1, 2020 and from lessening the intensity of housing. It also provides a streamlined path for “housing development projects,” limiting review of such projects to five (5) meetings. In Palo Alto, to date, SB330 formal applications have been submitted for two projects: 200 Portage (21PLN-00108) and 2850 West Bayshore (21PLN-00177).

**Summary**

State law relies more and more on projects’ compliance with objective standards to streamline housing project approvals. Currently, the City has objective standards in the form of
development standards (e.g., height, setback, floor area ratio), but few objective design standards. This project aims to strengthen the City’s objective standards to identify the City’s design and development priorities and ensure applicants’ compliance with these priorities on housing development projects, for which subjective architectural review findings cannot be a basis for denial. Furthermore, this project helps the City to comply with State legislation that allows projects meeting objective standards to undergo a streamlined approval process.

The City’s proposed new review process will only apply to multi-family projects with three or more units (not including ADUs). The review process for single-family homes (with or without ADUs) and two-family (duplexes) uses would remain the same.

Summary of Public Hearings
This section summarizes meetings with the ARB and PTC. Chart 1 illustrates the project timeline. Additionally, records from previous meetings described below can be found on the project webpage: bit.ly/ObjectiveStandards

Chart 1: Project Timeline

ARB Study Sessions & Hearings (8 Meetings), ARB Ad Hoc Committee (5 Meetings)
In December 2019 and February 2020, staff and consultants provided an overview of the project to the ARB. Staff presented a description of key issues and discussed options and recommendations for how to implement the project goals and requirements of State law with respect to objective standards.

The ARB formed an Ad Hoc Committee to workshop the draft standards, reviewing and providing written comments on preliminary versions of the standards. The committee met with staff and consultants over a series of four video meetings to discuss and provide feedback on the format, organization, intent statements, graphics, and specific language of the draft standards.

The full ARB met in October and November 2020, and February 18 and March 18, 2021 to review and refine the draft objective design standards. The ARB contributed general and
specific feedback to the format and structure of the ordinance; refined the applicability to different types of residential versus commercial projects; debated design details, menu of options’ ideas, and specific measurements for individual design topics; and weighed in on graphics. Several board members expressed concerns about the implications that State law is having on the City’s architectural review process, standards, and guidelines, including space for creativity and discretion by architects and reviewers.

At its April 1, 2021, meeting, the ARB voted to recommend City Council approval of the objective design standards in Attachment A in a 4-1 vote. The ARB also voted to have the Ad Hoc Committee continue to work with City staff and consultants on revisions to graphics, which have now been completed and are included in Attachment A.

Additionally, the ARB discussed two aspects of height transition requirements between lower and higher density zoning districts during a study session on April 15th. First, the proposed text modifications recommended by City staff (and later the PTC, see below). Second, a more holistic discussion of height transitions, focused on the best ways to regulate height and massing across districts in order to mitigate potential impacts while maintaining architectural quality and development feasibility. This issue is discussed further in the height transitions section below. However, potential amendments to height transition standards are no longer included in the draft ordinances.

**PTC Study Sessions and Hearings (3 Meetings)**

Staff and consultants met with the PTC in May 2020 to provide an overview of the project, key issues, policy options, and the ARB’s recommendations. The PTC held another study session on March 10, 2021, to review the draft objective design standards, including the ARB’s recommendations, and proposed changes to other sections of Title 18. At its June 9, 2021 meeting, the PTC made a motion to recommend that the City Council adopt the objective design standards on a 4-1-1 vote. The PTC unanimously supported the objective design standards (new Chapter 18.24). However, several Commissioners had concerns about the issue of height transitions between lower and higher density districts. This issue is discussed further in the height transitions section below, though not included in the draft ordinance.

**Discussion**

This section is divided into two parts:

1. **Objective Design Standards**: The transformation of existing context-based design criteria into objective standards.
2. **Other Updates to Title 18 to Strengthen Objective Standards**: Related changes to development standards, performance standards, application processing, and legislative
actions/overlays to strengthen objective standards, remove redundancies, clarify intent, and streamline review.

1. **Objective Design Standards: Transformation of Existing Context-Based Design Criteria into a New Chapter, 18.24: Objective Design Standards**

Attachment A contains the draft objective design standards the ARB has recommended, and related graphics. It represents the transformation of Context-Based Design Criteria into a stand-alone set of objective standards which would be codified as Chapter 18.24. With approval of this ordinance, the Context-Based Design Criteria would be removed from the four chapters of the Code where they are repeated (Chapters 18.13, 18.16, 18.18, and 18.34). The Architectural Review (AR) approval findings would remain in Title 18.76. The ARB would continue to use these AR findings to evaluate projects that are undergoing discretionary review (e.g., 100% commercial projects, projects that do not comply with the Housing Accountability Act and/or do not comply with all of the Objective Design Standards). The remainder of this section describes the structure, contents, and applicability of the objective design standards.

**Applicability**

The subject ordinance principally addresses multi-family housing and residential mixed-use projects and districts. Ground-floor commercial guidelines and standards are addressed insofar as retail and other commercial uses are required as part of a mixed-use residential project. Notably, this ordinance does not apply to the South of Forest Area coordinated area plan, which will require a separate effort to change subjective criteria to objective standards.

As shown in Table 1, the objective design standards would apply to zoning districts where the existing Context-Based Design Criteria currently apply. Within these districts, the objective standards would apply to “housing development projects” as defined in the Housing Accountability Act. Discretionary residential and non-residential projects would only be subject to the subjective “intent statements” (see details below). Additionally, objective standards would apply to housing development projects in other zoning districts—not currently subject to the Context-Based Design Criteria—that allow multifamily housing (e.g., ROLM, PF). This provides an opportunity for streamlining and clear standards wherever multifamily housing is permitted.

<table>
<thead>
<tr>
<th>Uses</th>
<th>Context-Based Design Criteria (Existing)</th>
<th>Objective Design Standards (Proposed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18.16: CN, CC, CC(2), CS</td>
<td>18.16: CN, CC, CC(2), CS</td>
</tr>
<tr>
<td></td>
<td>18.34: PTOD combining district</td>
<td>18.34: PTOD combining district</td>
</tr>
</tbody>
</table>
Design Standards Ordinance Structure & Contents

Table 2 identifies the topics included in the new Chapter 18.24. These topics can generally be categorized into three areas:

1. **Administration**: Describes the purpose and applicability of the design standards, including the relevant zoning districts, and defines terms that are specific to the chapter.

2. **Site Design**: Identifies standards related to the interface between the building and public realm, including sidewalks, driveways, access, entries, and building orientation.

3. **Building Design**: Identifies standards related to the building itself, including bulk/massing, facades, entries, on-site open space, and materials.

<table>
<thead>
<tr>
<th>Category</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>18.24.010: Purpose and Applicability</td>
</tr>
<tr>
<td>Site Design</td>
<td>18.24.020: Public Realm/Sidewalk Character</td>
</tr>
<tr>
<td></td>
<td>18.24.030: Site Access</td>
</tr>
<tr>
<td></td>
<td>18.24.040: Building Orientation and Setbacks</td>
</tr>
<tr>
<td>Building Design</td>
<td>18.24.050: Building Massing</td>
</tr>
<tr>
<td></td>
<td>18.24.060: Façade Design</td>
</tr>
<tr>
<td></td>
<td>18.24.070: Residential Entries</td>
</tr>
<tr>
<td></td>
<td>18.24.080: Open Space</td>
</tr>
<tr>
<td></td>
<td>18.24.090: Materials</td>
</tr>
<tr>
<td></td>
<td>18.24.100: Sustainability and Green Building</td>
</tr>
</tbody>
</table>

Each of the design topics above is then broken into two sections:

1. **Intent statements** represent overarching guidelines for each topic. They are subjective and often include verbatim language from the Context-Based Design Criteria and ARB findings.

2. **Objective design standards** are ratios, measurements, percentages, or otherwise clear criteria. Some standards are written as a menu of options, providing choices for how they may be met.

The design standards aim to strike a balance between prescriptiveness and flexibility. They are intended to lead to buildings that implement good design principles and that exhibit an acceptable level of articulation and detail. However, because these standards are objective,
they cannot anticipate all different types of buildings and design choices. Therefore, the draft ordinance includes an alternate path for compliance, as described below.

**Review Process**
The new Chapter 18.24 and Revisions to Chapters 18.76 and 18.77 identify two paths which are illustrated in Chart 2 and detailed below:

1. A new review process for housing development projects that propose to meet all objective standards, and
2. The standard compliance path for projects that want or need to pursue discretionary review.

**Chart 2: Two Paths of Compliance: Objective and Discretionary**

In the new objective standards process, City staff would review housing development projects for compliance with objective standards, just as they do today for all projects. The ARB would review such projects during one study session to provide advisory design comments. Members of the public would also have an opportunity to review and provide comments on the project during this study session. Current AR findings would not be used. Rather, this proposed review path acknowledges that State Law applies a different threshold for review and approval of Housing Accountability Act projects (i.e., denial is based on State law thresholds as opposed to the City’s findings).

If a proposed project does not meet one or more objective standards—for whatever reason—the applicant may instead choose to meet the intent statements of the new Chapter 18.24. In choosing this path, the applicant would be choosing to undergo discretionary review. In that case, the process would be the same as ARB’s role today and staff would review the project against the AR findings and intent statements, along with other relevant Code Sections.

Notably, if an applicant chooses the discretionary path, the project is no longer meeting objective standards and therefore would not be covered by the Housing Accountability Act.
2. Other Code Updates to Support Objective Standards

In addition to design standards, the draft ordinance proposes other updates to Title 18 to strengthen objective standards and streamline housing approvals, consistent with the goals of SB2 funding. Key changes are categorized and summarized below and detailed in Attachment B. Table 5 further summarizes changes by zoning district.

Development Standards
Within each zoning district that allows multi-family housing, City staff recommend modifications. These changes would transform subjective development standards and district regulations into objective standards, remove redundancies, and clarify standards that have been historically confusing to staff, applicants, and decision-makers. Proposed changes do not have a substantive effect on the buildable area and do not address height transition standards.

Performance Standards
Performance criteria in Chapter 18.23 were originally conceived to address potential colocation impacts when non-residential uses were located within 150 feet of residential districts. However, this code section has been revised over time and has been interpreted to apply to all types of projects, regardless of adjacency. To remove ambiguity, clarify applicability, and streamline requirements, City staff propose to eliminate the catch-all 18.23 Performance Standards chapter and move those standards into more relevant code locations, as summarized in Table 3.

Additionally, City staff propose to bring these up to date with current zero waste and stormwater management practices, and to strengthen objective standards for lighting and screening.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Existing Location</th>
<th>Proposed Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refuse Disposal Areas</td>
<td>18.23.020 Refuse Disposal Areas</td>
<td>18.40 (General Standard and Exceptions)</td>
</tr>
<tr>
<td>Lighting</td>
<td>18.23.030 Lighting</td>
<td>18.40 (General Standard and Exceptions)</td>
</tr>
<tr>
<td>Late Night Uses &amp; Activities</td>
<td>18.23.040 Late Night Uses and Activities</td>
<td>18.42 (Standards for Special Uses)</td>
</tr>
<tr>
<td>Visual, Screening and Landscaping</td>
<td>18.23.050 Visual, Screening and Landscaping</td>
<td>18.40 (General Standard and Exceptions)</td>
</tr>
<tr>
<td>Noise and Vibration</td>
<td>18.23.060 Noise and Vibration</td>
<td>18.42 (Standards for Special Uses)</td>
</tr>
<tr>
<td>Parking</td>
<td>18.23.070 Parking</td>
<td>18.54 (Parking Facility Design Standards)</td>
</tr>
<tr>
<td>Vehicular, Pedestrian, and Bicycle Site Access</td>
<td>18.23.080 Vehicular, Pedestrian, and Bicycle Site Access</td>
<td>18.54 (Parking Facility Design Standards)</td>
</tr>
<tr>
<td>Air Quality</td>
<td>18.23.090 Air Quality</td>
<td>18.42 (Standards for Special Uses)</td>
</tr>
<tr>
<td>Hazardous Materials</td>
<td>18.23.100 Hazardous Materials</td>
<td>18.42 (Standards for Special Uses)</td>
</tr>
</tbody>
</table>
Legislative Actions
Title 18 offers flexible development standards to facilitate multi-family residential and affordable housing projects but requires legislative action in order for projects to access these standards. The legislative action adds time, expense, and uncertainty to the development process. Specifically, the Workforce Housing (WH), Affordable Housing (AH), and Pedestrian Transit Oriented Development (PTOD) combining overlays require action by the PTC and City Council prior to architectural review of development proposed for a specific site. These overlays have been used infrequently:

- The AH overlay has been used once since its inception in 2018.¹
- The WH overlay has been used once since its inception in 2018.²
- The PTOD overlay has been used twice since its inception in 2006, resulting in 12 units, and has not been used since 2012.³

In contrast, the Housing Incentive Program (HIP) process allows more density/FAR without rezoning. Housing achievable under these overlays represent the very types of uses—housing affordable to low- and moderate-income households, and housing near transit—the City has expressed a desire to facilitate in the Housing Work Plan and other policy documents. The HIP has been requested twice since its inception in 2018 and resulted in over 100 units.⁴

The draft ordinance in Attachment B would modify the overlay districts from legislative actions to objective criteria. This would result in the following changes to each of the relevant combining districts:

- **AH Overlay**: Allow projects that meet existing affordability thresholds to automatically qualify for flexible development standards (see existing standards in Table 4). Architectural Review by the ARB would continue to be required.
- **WH Overlay**: Allow projects that meet existing affordability thresholds to automatically qualify for flexible development standards (see existing standards in Table 4). Architectural Review by the ARB would continue to be required. Use of the WH overlay may be rare since its applicability is limited to combine with sites in the Public Facilities (PF) district that are located within 1/2-mile of fixed rail transit.
- **PTOD Overlay and HIP**

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¹ 3703-3709 El Camino Real (Wilton Ct.): 65 low-income units.
² 2755 El Camino Real (Windy Hill): 57 moderate income units.
³ 420 Cambridge Avenue: 4 units; 2650 Birch Avenue: 8 units, including 1 BMR unit.
⁴ 788 San Antonio Road (102 units, including 16 BMR) and 3585 El Camino Real (3 units, including 0.45 BMR in-lieu fee)
(1) Retain the PTOD overlay district in Title 18, as written (in the event there are property owners who may be considering taking advantage of it) until such time as the City is ready to consider its revision or removal.

(2) Expand the HIP to apply to the remaining sites within the PTOD overlay area (namely CC, RM-30, and RM-40 zoned sites shown in Attachment D) to allow for a more streamlined review path for housing projects within this transit-oriented district. Apply the HIP only to sites north of Page Mill Road (i.e., exclude sites within the North Ventura Coordinated Plan Area, to allow that in-progress plan to determine the relevant standards). Allow projects that meet existing affordability thresholds to automatically qualify for flexible development standards by right (see existing HIP standards for the CC(2) district in Table 4).

<table>
<thead>
<tr>
<th>Standard</th>
<th>Affordable Housing (AH)</th>
<th>Workforce Housing (WH)</th>
<th>Cal Ave. CC (2) HIP Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affordability Threshold</td>
<td>Rental project, with 100% of units for households with incomes up to 120% of AMI</td>
<td>Rental project, with at least 20% of units for households earning 120-150% of AMI</td>
<td>Typical 15% Inclusionary requirement</td>
</tr>
<tr>
<td>Maximum FAR</td>
<td>2.4</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Residential</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Non-Residential</td>
<td>0.4</td>
<td>n/a</td>
<td>0.35</td>
</tr>
<tr>
<td>Maximum Height</td>
<td>50</td>
<td>50</td>
<td>37</td>
</tr>
<tr>
<td>Usable Open Space</td>
<td>50 sf/unit</td>
<td>75 sf/unit</td>
<td>150 sf/unit</td>
</tr>
<tr>
<td>Parking</td>
<td>0.75 space/unit</td>
<td>Greater of 1 space/unit or bed</td>
<td>1 sp/1 bd unit</td>
</tr>
<tr>
<td>Applicable Zones/Locations</td>
<td>CD, CN, CS, and CC</td>
<td>PF within ¼-mile of fixed rail transit</td>
<td>PF, RM-30, and RM-40</td>
</tr>
</tbody>
</table>

Notably, based on the affordability criteria in the existing Zoning Ordinance, streamlining the overlay districts may generate more moderate-income units. Deeper levels of affordability would continue to be generated through the City’s 15% inclusionary housing requirement (either on-site or with a payment in-lieu). The City Council has expressed a desire for deeper levels of affordability in the Housing Work Plan. The issue of affordability levels, including the use of these overlays, should be further analyzed during the Housing Element update process.

Streamlined Process
Attachment B also creates a new, streamlined review process for housing development projects that meet all existing objective standards, including the new objective design standards proposed in Attachment A. Under State law, such projects cannot be denied or reduced in density based on their failure to comply with subjective design review standards such as the City’s current Architectural Review findings. Accordingly, staff have proposed to exempt such projects from the typical Architectural Review process and instead institute a streamlined process in which the ARB would provide design guidance at a single meeting (study session) rather than evaluating the project against each of the findings. In place of Architectural Review findings, a housing development project would require basic findings that the project complies with all applicable objective standards and will not create a specific, adverse, impact, as defined in State law.

This alternative process sets expectations for the ARB and community that better align with State law. At the same time, it offers members of the community an opportunity to still provide feedback on proposed projects. Staff believe appropriate design feedback and public comment can be achieved in a single meeting through this new process.

Alternatively, the City could retain the existing Architectural Review process in name, but in practice, the ARB’s role and discretion would still be significantly limited. Because the City would not be able to deny a project that didn’t meet the AR findings, at most, the City could condition approval on changes in design. Depending on the type of housing project proposed, the City may be constrained in its ability to impose any conditions.

Summary
Table 5 summarizes key changes to zoning districts and other code sections, as described in this report and redlined/annotated in Attachment B.

<table>
<thead>
<tr>
<th>Ch. #</th>
<th>Chapter Title</th>
<th>Summary of Proposed Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.04</td>
<td>Definitions</td>
<td>• Multiple-family Residential: a single- or two-family property is not a multiple-family use</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Clarify distinction between usable open space and open space coverage</td>
</tr>
<tr>
<td>18.13</td>
<td>Multiple Family Residential (RM-20, RM-30 and RM-40) Districts</td>
<td>• Replace discretionary setbacks with objective setback standard</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Relocate open space design standards to new 18.24 Design Standards; include cross-reference</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Replace Context-Based Design Criteria with new 18.24 Design Standards; include cross-reference</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Expand the Housing Incentive Program to RM-30 and RM-40 sites in the PTOD area</td>
</tr>
</tbody>
</table>
### Table 5: Summary of Proposed Zoning Changes, by Chapter

<table>
<thead>
<tr>
<th>Ch. #</th>
<th>Chapter Title</th>
<th>Summary of Proposed Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.16</td>
<td>Neighborhood, Community, and Service Commercial (CN, CC, and CS) Districts</td>
<td>• Relocate open space design standards to new 18.24 Design Standards; include cross-reference</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Consolidate recycling storage standards with 18.23.020: Refuse Disposal Areas and move to new section in 18.40: General Standards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Replace Context-Based Design Criteria with new 18.24 Design Standards; include cross-reference</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Expand the Housing Incentive Program to CC sites in the PTOD area</td>
</tr>
<tr>
<td>18.18</td>
<td>Downtown Commercial (CD) District</td>
<td>• Relocate open space design standards to new 18.24 Design Standards; include cross-reference</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Consolidate recycling storage standards with 18.23.020: Refuse Disposal Areas and move to new section in 18.40: General Standards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Replace Context-Based Design Criteria with new 18.24 Design Standards; include cross-reference</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Remove redundant parking and loading section; keep parking standards in 18.52</td>
</tr>
<tr>
<td>18.20</td>
<td>Office, Research, and Manufacturing (MOR, ROLM, RP and GM) Districts</td>
<td>• Consolidate recycling storage standards with 18.23.020: Refuse Disposal Areas and move to new section in 18.40: General Standards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Apply objective design standards to multifamily and residential mixed use projects in the MOR, ROLM, and RP districts</td>
</tr>
<tr>
<td>18.23</td>
<td>Performance Criteria for Multiple Family Commercial, Manufacturing and Planned Community Districts</td>
<td>• Strengthen objective standards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Apply performance criteria to all projects, regardless of use or adjacency to residential</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Relocate standards, as shown in Table 3</td>
</tr>
<tr>
<td>18.28</td>
<td>Special Purpose (PF,OS, and AC) Districts</td>
<td>• Apply objective design standards to multifamily and residential mixed use projects in the PF district</td>
</tr>
<tr>
<td>18.30(J)</td>
<td>Affordable Housing (AH) Overlay District</td>
<td>• Revise combining district into by-right overlay for projects consistent with objective standards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Architectural review by the ARB, but no legislative approval by the PTC or Council</td>
</tr>
<tr>
<td>18.30(K)</td>
<td>Workforce Housing (WH) Overlay District</td>
<td>• Revise combining district into by-right overlay for projects consistent with objective standards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Architectural review by the ARB, but not legislative approval by the PTC or Council</td>
</tr>
</tbody>
</table>
Table 5: Summary of Proposed Zoning Changes, by Chapter

<table>
<thead>
<tr>
<th>Ch. #</th>
<th>Chapter Title</th>
<th>Summary of Proposed Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.34</td>
<td>Pedestrian and Transit Oriented Development (PTOD) Combining District</td>
<td>• Allow remaining sites north of Page Mill to be eligible for the HIP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Replace Context-Based Design Criteria with new 18.24 Design Standards; include cross-reference</td>
</tr>
<tr>
<td>18.40</td>
<td>General Standards and Exceptions</td>
<td>• Relocate 18.23 performance standards to this chapter</td>
</tr>
<tr>
<td>18.52</td>
<td>Parking and Loading Requirements</td>
<td>• Remove inconsistencies and redundancies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Add objective standard for off-site parking distance</td>
</tr>
<tr>
<td>18.54</td>
<td>Parking Facility Design Standards</td>
<td>• Strengthen objective standards for parking and loading in site planning to avoid conflicts and push parking to rear of sites</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Allow mechanical parking lifts by right (instead of by approval of the City Council or Planning Director) to streamline review and acknowledge their prevalence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Remove inconsistencies and redundancies</td>
</tr>
<tr>
<td>18.76</td>
<td>Permits and Approvals</td>
<td>• Clarify that housing development projects are exempt from the architectural review process</td>
</tr>
<tr>
<td>18.77</td>
<td>Processing of Permits and Approvals</td>
<td>• Create a new process for housing development projects: one study session with the ARB (and any other required board/commission, such as Public Art Commission or Historic Resources Board)</td>
</tr>
</tbody>
</table>

Topic Not Addressed in the Draft Ordinance

Height Transitions. The development standards in many zone districts include a transitional height standard that provides a reduced maximum height for properties that are near a lower density residential zone. Staff initially identified a few issues with these standards:

1. Each district expresses the requirement in a slightly different way.
2. Some of the language is confusing, especially in the CN, CC, CC (2), and CS districts.
This makes the regulations difficult for City staff and decision-makers to implement and creates a problem for property owners and developers who are considering whether to make significant investments in Palo Alto.

As a result, earlier drafts of Attachment B included staff proposals to clarify the text of this development standard. These clarifications were meant to be non-substantive, although they did align the text in the CN, CC, CC(2), and CS districts with staff’s application of the code, requiring reduced height within 50 feet of a lower density residential district. Because the proposed changes generated significant concern at the April 2021 PTC hearing and a subsequent community webinar, however, staff has elected to remove any proposed changes and retain the existing language in the ordinance before the City Council.

Given the public interest in this topic, staff proposes to maintain the status quo and revisit the issue as a substantive policy discussion in the near future. The Housing Element update process presents an opportunity for such a discussion. The Housing Element Update looks at the entire city, asking where housing may be located and the standards of that housing (height, bulk, etc.). The Housing Element Update serves as a more appropriate venue to consider any changes to height transition standards.

**Stakeholder Engagement**

As with all citywide projects, the eight (8) ARB hearings and the three (3) PTC hearings were noticed in the Daily Post. On January 22nd, March 23rd, May 10th, July 22nd, and September 15th, 2021, staff sent an email to a wide range of architect and consultants that have worked with the City in the recent past on development projects to solicit comments on the draft objective standards; six out of 30 stakeholders provided feedback. These comments are summarized below and included in their entirety in Attachment E.

1. Elaine Uang provided detailed comments, including recommendations to provide more flexibility for different sized lots and lot configurations, and different locations.
2. Ken Hayes provided a link to a journal entry he prepared regarding how municipalities regulate and apply design standards.
3. Rick Gosalvez, SV@Home, asked to be added to our project mailing list.
4. Heather Young expressed concern that the objective standards do not account for context and site conditions, that dimensional requirements would not work in certain instances, and that the resulting designs may not be desirable.
5. Elaine Breeze, SummerHill, questioned the applicability of the proposed standards to lower density housing types, specifically townhomes, and expressed a desire for alternative compliance, if standards cannot be met.
Chris Wuthmann (from Stanford University Real Estate) addressed the ARB on February 18th the PTC on March 10th regarding the objective standards, with the following comments:

1. the relationship of the standards to subdivisions (to enable the creation of new contextual references),
2. recognizing the differences in costs and needs between rental and for-sale products,
3. a need to create an option within alternative compliance for demonstrable cost saving elements, including prefabricated and modular construction, as a legitimate consideration where the affordability of a project exceeds inclusionary requirements, and
4. recognition that new ways of living (post Covid) create a need for adapting building and site plan standards to create necessary areas for safe workspaces in outdoor environments and drop offs located outside of the public rights of way.

In addition to stakeholder comments, several members of the public addressed the PTC at its June 9, 2021 hearing. Public comments focused on concerns about modifications to the height transition language across several of district regulations’ chapters. Specifically, community members expressed concern that reductions in height are not required when commercial districts are adjacent to RM-40 districts. They were concerned about privacy, light, and air impacts. As described in the analysis above, height transitions are not currently required for projects adjacent to RM-40 zoned sites. Therefore, modifications in the draft ordinance did not make changes that would impact the RM-40 district.

On July 19, 2021, staff held a webinar to discuss the topic of height transitions. Approximately 27 residents attended the online discussion. Through this discussion and correspondence received, it became clear the issue needs a more robust platform, such as the Housing Element Update. As noted, the ordinance for Council review no longer contains any text amendments related to height transitions.

**Environmental Review**

The ordinance revisions represent implementation of adopted plans and policy. Therefore, the revisions are exempt under CEQA and covered by the CEQA documents prepared for the Comprehensive Plan. The project aims to facilitate implementation of State law. The project does not propose to increase development beyond what was analyzed in the Comprehensive Plan.

**Attachments:**

Attachment A: Ordinance Adding Ch. 18.24 of Title 18 of PAMC to Adopt Building Design Intent Statements and Objective Design Standards  (PDF)
Attachment B: Ordinance Amending Title 18 (Zoning) to Implement Objective Standards, Streamline Processing of Housing Development Applications, and Otherwise Clarify Zoning Code   (PDF)
Ordinance No. ____

Ordinance of the Council of the City of Palo Alto Adding Chapter 18.24 of Title 18 (Zoning) of the Palo Alto Municipal Code to Adopt Building Design Intent Statements and Objective Standards

The Council of the City of Palo Alto does ORDAIN as follows:

SECTION 2. Chapter 18.24 (Objective Design Standards) of Title 18 (Zoning) of the Palo Alto Municipal Code is added as follows:

Sections:

18.24.010 Purpose and Applicability
18.24.020 Public Realm/Sidewalk Character
18.24.030 Site Access
18.24.040 Building Orientation and Setbacks
18.24.050 Building Massing
18.24.060 Façade Design
18.24.070 Residential Entries
18.24.080 Open Space
18.24.090 Materials
18.24.100 Sustainability and Green Building Design

18.24.010 Purpose and Applicability
(a) Purpose.
The purpose of this Chapter is to provide guidance for good design in the form of “intent statements” for all project types and to provide objective design standards for multifamily and residential mixed-use development projects that qualify as Housing Development Projects under the Housing Accountability Act. Diagrams are provided for illustrative purposes only and are not intended to convey required architectural style. Rather, the objective design standards aim to accommodate a variety of styles, construction types (e.g., wood frame, modular) and housing types including townhomes, apartments, condos, and mixed-use buildings.

(b) Applicability of Regulations
Within the following zones and combining districts, the intent statements apply to all project types (including non-residential projects), new construction, and renovations in the zoning districts identified below. Additionally, objective design standards apply to new multifamily housing with three or more units (see definition in 18.04.030), supportive and transitional housing, and residential mixed-use projects with at least two-thirds residential square footage:

(1) Chapter 18.13: RM-20, RM-30, RM-40
(2) Chapter 18.16: CN, CC, CC(2), CS
(3) Chapter 18.18: CD-C, CD-S, CD-N
(4) Chapter 18.20: MOR, ROLM, ROLM(E), RP, RP(S), GM – residential and residential mixed-use only; regulations do not apply to non-residential projects
(5) Chapter 18.28: PF – residential and residential mixed-use only; regulations do not apply to non-residential projects
(6) Chapter 18.34: PTOD combining district

(c) Process and Alternative Compliance
Each section of this chapter includes an intent statement that gives guidance for all applicable projects, regardless of use.

(1) Housing development projects are required to comply with objective standards; however, applicants may choose to forgo one or more objective standards, in which case the housing development project will be evaluated to the spirit of the relevant intent statements and be subject to architectural review as set forth in Sections 18.76.020 and 18.77.070.

(2) Non-Housing development projects and non-residential projects shall adhere to the spirit of the intent statements and be subject to architectural review as set forth in Section 18.76.020 and 18.77.070.

(d) Definitions
In addition to definitions provided in Chapter 18.04, the following definitions are specific to this Chapter.

(1) “Primary Building Frontage” means the front lot line or frontage along the public right-of-way. In the case of a through-lot, the primary building frontage could be on either public right-of-way.

(2) “Primary Building Entry” means the entrance leading to a lobby and accessed from the primary building frontage.

(3) “Pedestrian Walkway” means a sidewalk or path that is publicly-accessible and connects from a public right-of-way to another public right-of-way or publicly accessible open space.

(4) “Façade Modulation” means a change in building plane, either a recess or a projection, that changes the shape of the exterior massing of the building.

18.24.020 Public Realm/Sidewalk Character
(a) Intent Statement
To create an attractive and safe public realm and sidewalk space for pedestrians and cyclists through the implementation of design, landscaping, and infrastructure. Publicly accessible spaces and sidewalks should:

(1) Design the transition between the public and private realm through the coordination of amenities and materials, such as accent paving, tree wells, lighting and street furniture (e.g., benches, bicycle racks, trash receptacles, news racks).

(2) Complement or match accent paving to existing designs in the Downtown and California Avenue business district.

(3) Provide sidewalk widths that accommodate landscaping, street trees, furniture, and pedestrian amenities; create a pleasant, desirable place to walk; provide shade; and enable comfortable pedestrian passage.

(4) Provide amenities, such as parking and repair equipment, for micromobility, such as bicycles and scooters.
(b) Objective Standards

(1) Sidewalk Widths

(A) Public sidewalks abutting a development parcel in any commercial mixed-use district (CN, CS, CC, CC(2), CD-C, CD-S, CD-N, PTOD) shall have a minimum sidewalk width (curb to back of walk) of at least 10 feet. This standard may be met with a combination of pedestrian clear path and landscape and furniture strip (see Figure 1), as long as the pedestrian clear path is no less than 8 feet. If the existing public sidewalk does not meet the minimum standard, a publicly accessible extension of the sidewalk, with corresponding public access easement, shall be provided. Notwithstanding the total dimensions required herein, the following streets/locations shall have a minimum sidewalk width as noted:

(i) El Camino Real: 12 ft
(ii) San Antonio Road, from Middlefield Road to East Charleston Road: 12 ft

(B) Publicly accessible sidewalks or walkways connecting through a development parcel (e.g., on a through lot) shall have a minimum six-foot width.

(C) Pedestrian walkways that are designed to provide access to bicycles shall have a minimum width of eight feet, with two feet of clear space on either side.

Figure 1: Illustrative Sidewalk Section and Description of Zones
(2) Street Trees
Sidewalks shall include at least one street tree, within six feet of the sidewalk, for every 30 feet of linear feet of sidewalk length. Rights of way under control of the County of Santa Clara or State of California, supersede this requirement if they have conflicting regulations.

(3) Accent Paving
On University and California Avenues, new construction projects shall install accent paving along the project frontage(s) (e.g., at intersections, sidewalks and/or other publicly-accessible areas), as indicated in the table below.

<table>
<thead>
<tr>
<th>Street Segment</th>
<th>Paving Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Avenue from Alma Street to Webster Street</td>
<td>Brick at corners, Brick trim at mid-block</td>
</tr>
<tr>
<td>California Avenue from El Camino Real to Park Boulevard</td>
<td>Decorative Glass</td>
</tr>
</tbody>
</table>

(4) Mobility Infrastructure

(A) Micromobility infrastructure, such as locations to lock bicycles and scooters, shall be located within 30 feet of the primary building entry and/or a path leading to the primary building entry. This standard may be satisfied by existing infrastructure already located within 50 feet of the project site and located in the public right-of-way.

(B) Primary building entries shall provide at least one seating area or bench within 30 feet of building entry and/or path leading to building entry. This standard may be satisfied by existing seating area or benches located in public right-of-way within 50 feet of the building entry. On arterials—except Downtown—seating areas or benches shall not be located between the sidewalk and curb. Arterial roadways are identified in Map T-5 of the Comprehensive Plan and do not include residential arterials.
18.24.030 Site Access
(a) Intent Statement
To provide facilities and accommodations for pedestrians, vehicles, cyclists, and transit users to safely and efficiently access and circulate both within individual sites and in the site’s surrounding context. Site access should include the following elements:

(1) Site circulation and access that presents a clear hierarchy and connectivity pattern both within a project and to adjacent sidewalks and transit stops. This hierarchy should prioritize pedestrians, bikes, vehicles, and utility/loading access in the order listed. This hierarchy may provide separate access for vehicles and other modes, or demonstrate how all modes are accommodated in shared access points.

(2) Connections to side streets, open spaces, mews, alleys, and paseos

(3) Vehicle, loading and service access that is integrated into building and landscape design and located to prevent conflicts with pedestrians and cyclists, while also providing convenient access to building entries.

(b) Objective Standards

(1) Through-Lot Connections.
Through lots located more than 300 feet from an intersecting street or pedestrian walkway shall provide a publicly accessible sidewalk or pedestrian walkway connecting the two streets.

(2) Building Entries.
Entries to Primary Building Entries shall be located from a public right-of-way or, if not possible, a publicly accessible Pedestrian Walkway.

(3) Vehicle Access.
(A) Vehicle access shall be located on alleys or side streets where available.
(B) Except for driveway access, off-street parking, off-street vehicle loading, and vehicular circulation areas are prohibited between the building and the primary building frontage.

(4) Loading Docks and Service Areas.
Loading and service areas shall be integrated into building and landscape design and located to minimize impact on the pedestrian experience as follows:
(A) Loading docks and service areas shall be located on facades other than the primary building frontage: on alleys, from parking areas, and/or at the rear or side of building if building includes these frontages. When only primary building frontage is available, loading docks and service areas shall be recessed a minimum five feet from the primary façade and shall be screened in accordance with Chapter 18.23.050.
(B) Loading dock and service areas located within setback areas shall be screened in accordance with Chapter 18.23.050 and separated from pedestrian access to the primary building entry to avoid impeding pedestrian movement and safety.

18.24.040 Building Orientation and Setbacks
(a) Intent Statement
To create a coherent and active interface between private development and the public realm that contributes to the sense of place and structure of the neighborhood and enhances the...
public’s experience. Site design that responds to the orientation of adjacent uses and creates opportunities for landscaping and usable open space. Buildings and site design should meet the following criteria:

1. Buildings that create a street frontage that are compatible with nearby buildings and land uses.
2. Placement and orientation of doorways, windows, stoops, and landscape elements to create a direct relationship with the street.
3. Ground floor residential units that have direct entry and presence on the street, and maintain privacy.
4. Transitional spaces and buffer areas between buildings, parcels, and sites through building setbacks that distinguish private and public spaces.
5. Buildings that provide side and rear setbacks and/or upper story step backs to create a compatible relationship with adjacent lower density residential development.
6. Landscaped or usable areas that contain a balance between landscape and hardscape.
7. Optimized building orientation for thermal comfort, shading, daylighting, and natural ventilation and other forms of passive design.

(b) Objective Standards

1. Treatment of Corner Buildings (less than 40 feet)
   Corner buildings less than 40 feet in height and end units of townhouses or other attached housing products that face the street shall include the following features on their secondary building frontage:
   (A) A height to width ratio greater than 1.2:1
   (B) A minimum of 15 percent fenestration area.
   (C) At least one facade modulation with a minimum depth of 18 inches and a minimum width of two feet. Examples: Wrap around front porch, bay window.

2. Treatment of Corner Buildings (40 feet and higher)
   Corner buildings 40 feet or taller in height shall include at least one of the following special features:
   (A) Street wall shall be located at the minimum front yard setback or build-to line for a minimum aggregated length of 40 feet in length on both facades meeting at the corner and shall include one or more of the following building features:
(i) An entry to ground floor retail or primary building entrance located within 25 feet of the corner of the building
(ii) A different material application and/or fenestration pattern from the rest of the façade.

(iii) A change in height of at least 4 feet greater or less than the height of the abutting primary façade.

(B) An open space with a minimum dimension of 20 feet and minimum area of 450 square feet. The open space shall be at least one of the following:

(i) A publicly accessible open space/plaza
(ii) A space used for outdoor seating for public dining
(iii) A residential Common Open Space adjacent to a common interior space and less than two feet above adjacent sidewalk grade. Fences and railing shall be a minimum 50% transparent.

(3) Primary Building Entry
The primary building entry shall meet at least one of the following standards:
(A) Face a public right-of-way.
(B) Face a publicly accessible pedestrian walkway.
(C) Be visible from a public right-of-way through a forecourt or front porch that meets the following standards:
   (i) For residential buildings with fewer than seven units, building entry forecourts or front porches shall be a minimum area of 36 square feet and minimum dimension of six feet.
   (ii) For commercial buildings or residential buildings with seven or more units, building entry forecourts or front porches shall be a minimum of 100 square feet and a minimum width of 8 feet.

(4) Ground Floor Residential Units
(A) The finished floor of ground floor residential units, when adjacent to a public right-of-way, shall be within the minimum and maximum heights according to setback distance from back of walk identified in Figure 2. On sites with a cross slope greater than 2% along a building facade, the average height of the finished floor and back of walk shall be used. In flood zones, the minimum floor height shall be defined by the Federal Emergency Management Agency (FEMA) flood zone elevation.
(B) Ground floor units with a setback greater than 15 feet shall have at minimum an average of one tree per 40 linear feet of façade located in the building set back.
(C) Ground floor residential entries shall be setback a minimum of 10 feet from the back of sidewalk.

(D) Where no minimum building set back is required, all residential units shall be set back a minimum 5 feet from back of walk.

(E) A minimum of 80% of the ground floor residential units that face a public right-of-way or publicly accessible path, or open space shall have a unit entry with direct access to the sidewalk, path, or open space. (Senior units or other deed-restricted units for special populations are exempt)

**Figure 2a: Finished Floor heights for ground floor residential units, calculation.**

Formula: \[ y = \left( -\frac{4}{15} \right) x + \frac{16}{3} \]

where \( y \) = ground floor finished floor height, in feet

and \( x \) = setback distance from back of walk, in feet

<table>
<thead>
<tr>
<th>Setback Length</th>
<th>Ground Floor Finished Floor Height (minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 ft*</td>
<td>4 ft</td>
</tr>
<tr>
<td>7.5 ft</td>
<td>3 ft 4 in</td>
</tr>
<tr>
<td>10 ft</td>
<td>2 ft 8 in</td>
</tr>
<tr>
<td>12.5 ft</td>
<td>2 ft</td>
</tr>
<tr>
<td>15 ft</td>
<td>1 ft 4 in</td>
</tr>
<tr>
<td>17.5 ft</td>
<td>8 in</td>
</tr>
<tr>
<td>20 ft</td>
<td>0 ft (grade)</td>
</tr>
</tbody>
</table>

*Per 18.24.040.(b)(4)(D), ground-floor residential units shall be set back a minimum 5 feet from back of walk.*
Figure 2b: Finished Floor range for ground floor residential units.

- A: Maximum height of finished floor
- B: Minimum height of finished floor

Legend:
- Green: Sidewalk area
- Purple: Front setback
Example 1: Finished floor height greater than 4 feet above sidewalk grade with minimum 5 feet setback.

Example 2: Finished floor height in the middle of the range.
Example 3: Finished floor height at sidewalk grade.

(5) Front Yard Setback Character
Required setbacks shall provide a hardscape and/or landscaped area to create a transition between public and private space. The following standards apply, based on intended use and exclusive of areas devoted to outdoor seating, front porches, door swing of building entries, and publicly accessible open space:

(A) Ground-floor retail or retail-like uses shall have a minimum of 10% of the required setback as landscaped area or planters.
(B) Ground-floor residential uses shall have a minimum of 60% landscaped area in the required setback area.

18.24.050 Building Massing
(a) Intent Statement
To create buildings that are compatible with and enhance the surrounding area through the consideration of building scale, massing, and bulk. Massing should create a human-scale environment that is of high aesthetic quality and accommodates a variety of uses and design features. Building massing should include elements that:

(1) Break down large building facades and massing to create a human-scaled building that enhances the context of the site
(2) Are consistent in scale, mass and character to adjacent land uses and land use designations
(3) Reinforce the definition and importance of the street
(4) Provide rooflines and massing that emphasize and accentuate significant elements of the building such as entries, bays, and balconies, and shading elements where appropriate.

(5) Provide harmonious transitions between adjacent properties

(b) Objective Standards

(1) Upper Floor Step Backs

(A) When the height of the subject building is more than 20 feet above the average height (i.e., average of low and high roof elevations) of an adjacent building, an upper floor step back shall start within 2 vertical feet of the height of the adjacent building. The step back shall be a minimum depth of 6 feet along the primary building frontage, and the step shall occur for a minimum of 70% of the façade length.

(B) Notwithstanding, subsection (a), when adjacent to a single-story building, the upper floor step back shall occur between 33 and 37 feet in height.

(2) Transition to Lower Density Building Types

When a building abuts a side and/or rear property line with a RE, RMD, R-1, or R-2 zoned parcel or a village residential or existing single-family residential use, the building shall break down the abutting façade by meeting all of the following standards:

(A) A landscape screen that includes a row of trees with a minimum 1 tree per 25 linear feet and continuous shrubbery planting. This screening plant material shall be a minimum 72 inches (6 feet) in height when planted. Required trees shall be minimum 24” box size.
(B) A minimum façade break of four feet in width, two feet in depth, and 32 square feet of area for every 36 to 40 feet of façade length.

(C) Within 40 feet of an abutting structure, no more than 15% of the confronting façade area shall be windows or other glazing. Additional windows are allowed in order to maintain light, if they are fixed and fully obscured.

(3) Maximum Façade Length.
For portions of a building facade facing a public street, right-of-way, or publicly accessible path, any building greater than 25 feet in height and 70 feet in length shall not have a continuous façade plane greater than 70% of the façade length without an upper floor modulation, which can include bay windows. Upper floor façade modulations shall be a minimum 2 feet in depth, which can be a recess or a projection.
(A) Buildings 250 feet in length or greater, which face a public street, right-of-way, or publicly accessible path, shall have at least one vertical façade break with a minimum area greater than 400 square feet and a width greater than or equal to two times the depth.
(B) Buildings 150 to 250 feet in length, which face a public street, right-of-way, or publicly accessible path, shall have at least one vertical façade break with a minimum area greater than 64 square feet and a minimum width of 8 feet and minimum depth of 4 feet.

(4) Special Conditions - Railroad Frontages
All parcels with lot lines abutting railroad rights-of-way shall meet the following standards on the railroad-abutting facade:
(A) A minimum facade break of at least 10 feet in width and six feet in depth for every 60 feet of façade length.
(B) For portion of a building 20 feet or greater in height, a maximum continuous façade length shall not exceed 60 feet.

18.24.060 Façade Design
(a) Intent Statement
To create cohesive and well-crafted building facades with human-scaled details that incorporate textures, colors, and other details that are compatible with and enhance the surrounding area. Facades should include the following elements:
(1) Human-scaled detail, articulation, and craftsmanship
(2) Quality of construction, craftsmanship, and design to create long lasting buildings
(3) Expression of a human-scaled façade rhythm and pattern that reflects the building’s use
(4) Fenestration that enhances the architectural character of the building
(5) Defined building entry that is proportional to the building and number of people served
(6) Articulation of the building shall break down the scale of the building via building modulation, façade articulation, and variation of fenestration and material patterns.
(b) Application
   (1) All facades shall meet all the required design standards and guidelines to ensure the 
       same level of care and integrity throughout the building design.
   (2) Façade sidewalls located along a zero-lot line where, at time of approval are not visible 
       from a right-of-way, are exempt.
   (3) Façade sidewalls located along a zero-lot line, where at time of approval are visible from 
       a right-of-way, shall continue color, material, and pattern of the main façade.

(c) Objective Standards
   (1) Base/Middle/Top
      (A) Buildings three stories or taller and on lots wider than 50 feet shall be designed to 
          differentiate a defined base or ground floor, a middle or body, and a top, cornice, or 
          parapet cap. Each of these elements shall be distinguished from one another for a 
          minimum of 80% of the façade length through use of two or more of the following 
          four techniques:
          (i) Variation in building modulation (minimum of one, if option selected)
              a. Horizontal shifts. Changes in floor plates that protrude and/or recess with a 
                 minimum dimension of two feet from the primary facade.
              b. Upper floor step backs. A horizontal step back of upper-floor façades with a 
                 minimum five-foot step back from the primary façade for a minimum of 80% 
                 of the length of the façade.
c. Ground floor step back. A horizontal shift of the ground floor facade with a minimum depth of two feet for a minimum 80% of the length of the façade. Ground floor step backs shall not exceed the maximum setback requirements, where stated.

(ii) Variation in facade articulation (minimum of one, if option selected)
   a. Variation in horizontal and/or vertical recesses or projections such as a pattern of recessed grouping of windows, recessed panels, bay windows or similar strategies as approved by the Director of Planning and Development
Services. The recess or projection shall be a minimum four inches in depth.

b. *Variation in* horizontal and/or vertical projections such as shading and weather protection devices, decorative architectural details, or similar

c. Datum lines that continue the length of the building, such as parapets or cornices, with a minimum four inches in height or a minimum two inches in depth and include a change in material;
(iii) Variation in at least two of the following: fenestration size, proportions, pattern, and depth or projection.
(iv) Variation in two of the following: façade material, material size, texture and pattern, or color.

(2) Façade Composition
Building facades shall use a variety of strategies including building modulation, fenestration, and façade articulation to create visual interest and express a variety of scales through a variety of strategies. All facades shall include a minimum of two of the following façade articulation strategies to create visual interest:

(i) Vertical and horizontal recesses such as a pattern of recessed grouping of windows, recessed panels, or similar strategies as approved by the Director of Planning and Development Services. The recess shall be a minimum four inches in depth.

(ii) Vertical and horizontal projections such as shading and weather protection devices, decorative architectural details, or similar strategies as approved by the Director of Planning and Development Services. Projections shall be a minimum four inches in depth.

(iii) Datum lines that continue the length of the building, such as cornices, with a minimum four inches in depth, or a minimum two inches in depth and include a change in material;

(iv) Balconies, habitable projections, or Juliet balconies (every 20 to 40 feet) with a minimum four inches in depth;

(v) Screening devices such as lattices, louvers, shading devices, perforated metal screens, or similar strategies as approved by the Director of Planning and Development Services; or

(vi) Use of fine-grained building materials, such as brick or wood shingles, not to exceed eight inches in either height or width.

(3) Compatible Rhythm and Pattern
(A) Buildings shall express a vertical rhythm and pattern that reflects the size and scale of a housing unit and/or individual rooms and spaces. This may be achieved with building modulation to create vertically oriented facades (height greater than the width of the façade), façade articulation and fenestration repetitive vertically...
oriented patterns. Depending on the length of the façade, the following standards apply:

(i) For continuous facades less than 100 feet in length, the façade shall have vertically oriented patterns of vertical recesses or projections, façade articulation, and/or fenestration.

(ii) For continuous facades 100 feet or greater in length, the façade shall include either:
   a. A vertical recess or change in façade plane with a minimum 2 feet deep vertical shift modulation for a minimum 4 feet in width to establish a vertical rhythm or a unit between 20 to 50 feet in width; or
b. A vertical recess or projection with a minimum depth of 2 feet that establishes the vertical rhythm housing units or individual rooms between 10 to 16 feet in width.

(B) Residential mixed-use buildings shall express a vertical rhythm and pattern by meeting at least one of the following standards:

(i) Vertical Patterns and Modulation: Facades shall use vertical patterns of building modulation, façade articulation, and fenestration.

(ii) Horizontal Patterns and Modulation: Facades that use horizontal articulation and fenestration patterns shall use a vertical massing strategy with a minimum four feet wide and two feet deep vertical shift in modulation at least once every 50 feet of façade length.
(C) Storefront uses shall express a vertical rhythm not to exceed 30 to 50 feet in width.

(4) Emphasize Building Elements and Massing

(A) Building Entries Within Façade Design

(i) Primary building entries shall be scaled proportionally to the number of people served (amount of floor-area or number of units accessed). Building entries inclusive of doorway and facade plane shall meet the following minimum dimensions:
   a. Individual residential entries: five feet in width
   b. Shared residential entry, such as mixed-use buildings: 8 feet in width
   c. Commercial building entry: 20 feet in width
   d. Storefront entry: six feet in width

(ii) Primary building entries (not inclusive of individual residential entries) shall include a façade modulation that includes at least one of the following:
   a. A recess or projection from the primary façade plane with a minimum depth of two feet.

(B) Primary entries shall include weather protection that is a minimum 4 feet wide and 4 feet deep by recessing the entry, providing an awning or using a combination of these methods.

(5) Storefront/Retail Ground Floors

(A) Ground floor height shall be a minimum 14 feet floor-to-floor or shall maintain a 2nd floor datum line of an abutting building.

(B) Transparency shall include a minimum 60 percent transparent glazing between 2 and 10 feet in height from sidewalk, providing unobstructed views into the commercial space.
(C) Bulkheads and solid base walls: If provided, shall measure between 12 and 30 inches from finished grade.

(D) Primary entries shall include weather protection that is a minimum 6 feet wide and 4 feet deep by recessing the entry, providing an awning or using a combination of these methods.

(E) Awnings, canopies and weather protection:
   (i) When transom windows are above display windows, awnings, canopies and similar, weather protection elements shall be installed between transom and display windows. These elements should allow for light to enter the storefront through the transom windows and allow the weather protection feature to shade the display window.
   (ii) Awnings may be fixed or retractable.

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(6) Other Non-residential Ground Floors
   (A) Ground floor height shall be a minimum 14 feet floor-to-floor or shall match the 2nd floor datum line of an abutting building.
   (B) Transparency shall include a minimum 50 percent transparent glazing between 4 and 10 feet in height from sidewalk or terrace grade.
   (C) Primary entries shall include weather protection that is a minimum 6 feet wide and 4 feet deep by recessing the entry, providing an awning or using a combination of these methods.
(7) Parking/Loading/Utilities
   (A) Entry Size: No more than 25% of the site frontage facing a street should be devoted to garage openings, carports, surface parking, loading entries, or utilities access (on sites with less than 100 feet of frontage, no more than 25 feet)
   (B) Above grade structured parking levels facing a public right-of-way or publicly accessible open space/path, with the exception of vehicular alleys, shall be lined with commercial or habitable uses with a minimum depth of 20 feet.
   (C) Partially sub-grade parking shall not have an exposed façade that exceeds five feet in height above abutting grade at back of sidewalk.
   (D) Partially sub-grade parking shall be screened with continuous landscaping and shrubbery with minimum height of 3 feet and be within 10 feet of the sub-grade parking.

18.24.070 Residential Entries
(a) Intent Statement
Private entries into ground floor residential units shall be designed to provide:
   (1) human-scaled detailing
   (2) enhanced pedestrian experience
   (3) transition between public and private space
   (4) spaces for residents to gather and spend time outdoors
   (5) resident privacy

(b) Objective Standards
   (1) Ground Floor Unit Entries: Where ground floor residential unit entries are required, one or more of the following entry types shall be provided:
      (A) Stoop:
         (i) Stoops shall provide entry access for a maximum of two units; and
         (ii) Stoop heights shall be within 1 step of finished floor height of adjacent unit; and
(iii) Stoop entry landings shall be a minimum 5 feet in depth; and
(iv) The maximum stoop height from the back of sidewalk grade shall be 5 feet.

(B) Porch:
(i) Porches shall provide entry access for a maximum of one unit; and
(ii) Porch heights shall be within 1 step of finished floor height of adjacent unit; and
(iii) Porches shall be large enough so a 6-foot by 6-foot square can fit inside of a porch for each unit; and
(iv) The maximum porch floor height from the back of sidewalk grade shall be 5 feet.

(C) Patio Entry
(i) Patio entries may serve up to two units; and
(ii) Patios shall be large enough so a 5-foot by 5-foot square can fit inside of the patio for each unit; and
(iii) The Patio shall include at least one of the following features to define the transition between public and private space:
   a. A row of shrubs not exceeding 42 inches in height located between the sidewalk and the patio that assists with defining the edge between public and private space. Shrubs shall be at least one gallon in size and be planted a maximum of three feet on center; or
   b. A fence not to exceed 36 inches in height located between the sidewalk and the patio that assists with defining the edge between public and private space, with a gate or fence opening to provide access to the pedestrian route between the pedestrian way and the front door; or
   c. A metal, wood or stone wall not to exceed 36 inches in height located between the sidewalk and the patio that assists with defining the edge between public and private space with a gate or wall opening to provide access to the pedestrian route between the pedestrian way and the front door. A minimum 18-inch landscape strip shall be located between the wall and the abutting pedestrian way and entirely landscaped with ground cover, shrubs or other landscape living plant material.

(D) Terrace:
   (i) A Terrace may serve multiple unit entries; and
   (ii) The maximum Terrace height shall be 30 inches above the grade of the back of the adjacent sidewalk or accessway; and
   (iii) Walls, fences and hedges on Terraces shall be a maximum of 42 inches tall and have a minimum transparency of 40 percent.
(E) Frontage Court:
   (i) A Frontage Court may serve multiple unit entries; and
   (ii) The minimum Frontage Court width along a primary frontage shall be 25 feet; and
   (iii) The maximum Frontage Court width along a primary frontage shall be 50 percent of the facade length or 80 feet, whichever is less; and
   (iv) The minimum Frontage Court depth shall be 25 feet; and
   (v) The maximum Frontage Court depth shall be 50 feet or a ratio not to exceed 2:1 depth to width.
18.24.080 Open Space

(a) Intent
To ensure that residents and visitors have access to usable open space and common facilities that provide recreational opportunities, promote a healthy environment, and enhance the experience of living in Palo Alto. Common and private open spaces should include the following characteristics:

1. Be integrated into the site access and building circulation strategy
2. Be generous in dimension to provide usable space
3. Provide landscape elements that will support the health of the plants and enhance the character of place
4. Promote public health
5. Be located to provide easy access to private and common building areas, protected from the activities of commercial areas, and balance privacy and noise impacts to neighboring uses
6. Promote sustainable practices and opportunities for green infrastructure
7. Promote community safety through eyes on the street

(b) Objective Standards

1. Private Open Space
   If Private Open Spaces is provided, it shall meet the following standards:
   (A) Floor area shall include a clear space with a minimum dimension of a circle with a six-foot diameter.
   (B) Minimum clear height dimension of 8’-6” feet
   (C) Be accessed directly from a residential unit
   (D) Balconies shall not be located within the daylight plane
   (E) Notwithstanding subsection (a), ground floor patios shall meet the following minimum requirements:
      (i) RM-20 and RM-30 districts: Minimum 100 square feet of area, the least dimension of which is eight feet for at least 75% of the area
      (ii) RM-40 districts: Minimum 80 square feet of area, the least dimension of which is six feet for at least 75% of the area
      (iii) Street facing private open space on the ground floor shall meet the finished floor height for ground floor residential standards in section 18.24.040(b)(4)

2. If Common Open Space is provided, it shall meet the following standards:
   (A) Minimum size of 200 square feet
   (B) Area shall include a space with a minimum dimension of a circle with a 10-foot diameter.
   (C) A minimum of 60% of the area shall be open to the sky and free of permanent weather protection or encroachments. Trellises and similar open-air features are permitted.
   (D) Notwithstanding subsection (1), courtyards enclosed on four sides shall have a minimum dimension of 40 feet and have a minimum courtyard width to building height ratio of 1:1.25
(E) Include places to sit
(F) A minimum 20% of landscaping
(G) Soil Depth: Planting in above grade courtyards shall have a minimum soil depth of 12 inches for ground cover, 20 inches for shrubs, and 36 inches for trees.

(H) Rooftop Open Space:
   (i) In order to qualify as usable open space, a rooftop garden shall meet the requirements set forth in Section 18.40.230.
   (ii) Rooftop open spaces may fulfill usable open space requirements in the following districts:
      a. CD-C sites that do not abut a single- or two-family residential use or zoning district, rooftop gardens may qualify as usable open space and may count as up to 75% of the required usable open space for the residential component of a project.
      a. For CN and CS sites on El Camino Real and CC(2) sites that do not abut a single- or two-family residential use or zoning district, rooftop gardens may qualify as usable open space and may count as up to 60% of the required usable open space for the residential component of a project.

18.24.090 Materials
(a) Intent Statement
To promote the use of high quality, durable, sustainable, and attractive materials that exhibit a sense of permanence and contribute to the aesthetic quality of the development and to the urban design fabric of the community.
(b) Objective Standards
   (1) Façade Materials.
      Primary, secondary, and accent materials are allowed or prohibited as in the Residential and Residential Mixed-use Material List, which may be updated from time to time by the Director of Planning with a recommendation by the ARB.
List provided for informational purposes; will be posted to City’s website and not codified by ordinance.

**Residential and Residential Mixed-use Material List**

<table>
<thead>
<tr>
<th>Material</th>
<th>Maximum Usage % of façade area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brick (full dimensional)</td>
<td>100%</td>
</tr>
<tr>
<td>Stone/masonry</td>
<td>100%</td>
</tr>
<tr>
<td>Stucco/Cement Plaster</td>
<td>100%</td>
</tr>
<tr>
<td>Glass (transparent, spandrel)</td>
<td>100%</td>
</tr>
<tr>
<td>Finished wood, wood veneer, engineered wood, and wood siding</td>
<td>100%</td>
</tr>
<tr>
<td>Factory or naturally finished flat, profiled, fluted, or ribbed metal panels</td>
<td>100%</td>
</tr>
<tr>
<td>Fiber reinforced cement siding and panels</td>
<td>100%</td>
</tr>
<tr>
<td>Terracotta</td>
<td>100%</td>
</tr>
<tr>
<td>Concrete (poured in place or precast)</td>
<td>35%</td>
</tr>
<tr>
<td>Concrete blocks with integral color (ground, polished, or glazed finishes)</td>
<td>35%</td>
</tr>
<tr>
<td>Concrete blocks with integral color (split face finish)</td>
<td>35%</td>
</tr>
<tr>
<td>Ceramic tile</td>
<td>35%</td>
</tr>
<tr>
<td>Standing seam metal</td>
<td>35%</td>
</tr>
<tr>
<td>Three Dimensional Glass</td>
<td>5%</td>
</tr>
<tr>
<td>Corrugated metal</td>
<td>5%</td>
</tr>
<tr>
<td>Vegetated wall panels or trellises</td>
<td>5%</td>
</tr>
<tr>
<td>Vinyl siding</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>T-111 Plywood</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>Exterior Insulation Finishing System (EIFS)</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>Plastic or vinyl fencing</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>Chain link fencing</td>
<td>Not Permitted</td>
</tr>
</tbody>
</table>
18.24.100 Sustainability and Green Building Design

(a) Intent Statement
To incorporate sustainability, green building, and environmental considerations into the project design and construction. Green building design aims for compatibility with the local environment: to protect, respect and benefit from it. In general, sustainable buildings are energy efficient, water conserving, durable and nontoxic, with high-quality spaces and high recycled content materials. The following considerations should be included in site and building design:

1. Optimize building orientation for thermal comfort, shading, daylighting, and natural ventilation, including operable windows
2. Design landscaping to create comfortable micro-climates and reduce heat island effects
3. Design landscaping with native species
4. Maximize onsite stormwater management through landscaping and permeable pavement
5. Use sustainable building materials
6. Design lighting, plumbing and equipment for efficient energy use
7. Create healthy indoor environments
8. Use creativity and innovation to build more sustainable environments. One example is establishing gardens with edible fruits, vegetables or other plants to satisfy a portion of project open space requirements

(b) Objective Standards
See Chapter 16.14: California Green Building Standards additional requirements for green building and sustainable design. Notwithstanding Section 18.24.010(c), these regulations may not be modified through alternative compliance.

SECTION 3. If any section, subsection, sentence, clause, or phrase of this Ordinance is for any reason held to be invalid or unconstitutional by a decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have passed this Ordinance and each and every section, subsection, sentence, clause, or phrase not declared invalid or unconstitutional without regard to whether any portion of the Ordinance would be subsequently declared invalid or unconstitutional.

SECTION 4. The Council finds that this Ordinance represents the implementation of adopted plans and policy. Therefore, the Ordinance are exempt under the California Environmental Quality Act (CEQA) and/or covered by the CEQA documents prepared for the City of Palo Alto Comprehensive Plan 2030. The project aims to facilitate implementation of State law. The project does not propose to increase development beyond what was analyzed in the Comprehensive Plan.
SECTION 5. This Ordinance shall be effective on the thirty-first date after the date of its adoption.

PASSED:

AYES:

NOES:

ABSENT:

ABSTENTION:

ATTEST:

_________________________ ______________________________
City Clerk Mayor

APPROVED AS TO FORM: APPROVED:

_________________________ ______________________________
Assistant City Attorney Director of Planning and Development Services
Ordinance No. ____

Ordinance of the Council of the City of Palo Alto Amending Various Chapters of Title 18 (Zoning) to Implement Objective Standards, Streamline Processing of Housing Development Applications, and Otherwise Clarify the Zoning Code.

The Council of the City of Palo Alto ORDAINS as follows:

SECTION 1. Subdivisions (a)(102) and (a)(142) of Section 18.04.030 (Definitions) of Chapter 18.04 (Definitions) of Title 18 (Zoning) are amended and a new Subdivision (a)(75.5) is added as follows:

18.04.030 Definitions

(a) Throughout this title the following words and phrases shall have the meanings ascribed in this section.

[...]

(102) “Multiple-family (residential) use” means the use of a site for three or more dwelling units, which may be in the same building or in separate buildings on the same site. A single-family or two-family use with one or more Accessory Dwelling Units shall not be considered a multiple-family use.

[...]

(75.5) “Landscape/Open Space Coverage” means permanently maintained open space that includes all Usable Open Space (see subsection 142), landscape, and other uncovered areas, but excluding parking facilities, driveways, utility or service areas, or areas with mechanical equipment.

[...]

(142) “Usable open space” means outdoor or unenclosed area on the ground, or on a roof, balcony, deck, porch, patio or terrace, designed and accessible for outdoor living, recreation, or pedestrian access, or landscaping, but excluding parking facilities, driveways, utility or service areas, or areas with mechanical equipment. Usable open space includes common open spaces, such as courtyards and park spaces, and/or private open spaces, such as balconies and patios, depending on the requirements of the zoning district.

Usable open space may be covered if at least 50% open on the sides. Usable open space shall be sited and designed to accommodate all groups including children, seniors, and other adults, different activities including active and passive recreation and uses, and should be located
convenient to the intended users (e.g., residents, employees, or public). Any usable open space that is not landscaped shall be developed to encourage outdoor recreational use and shall include elements such as decks, seating, decorative paved areas and walkways which do not serve as an entrance walkway. Usable open space shall be screened from utility or service areas, and areas with mechanical equipment. Parking, driveways and required parking lot landscaping shall not be counted as usable open space.

**SECTION 2.** Section 18.08.030 (References to Districts) of Chapter 18.08 (Designation and Establishment of Districts) of Title 18 (Zoning) is amended as follows:

### 18.08.030 References to Districts

Reference within this title to residential districts generally and as a grouping, includes all districts identified in this section. Where references are made to more restrictive or less restrictive residential districts, such references shall apply sequentially between the most restrictive and the least restrictive.

<table>
<thead>
<tr>
<th>Residential District</th>
<th>Restrictive Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>RE</td>
<td>Most Restrictive</td>
</tr>
<tr>
<td>R-1 (20,000)</td>
<td></td>
</tr>
<tr>
<td>R-1 10,000)</td>
<td></td>
</tr>
<tr>
<td>R-1 (8,000)</td>
<td></td>
</tr>
<tr>
<td>R-1 (7,000)</td>
<td></td>
</tr>
<tr>
<td>R-1</td>
<td></td>
</tr>
<tr>
<td>R-2</td>
<td></td>
</tr>
<tr>
<td>RMD</td>
<td></td>
</tr>
<tr>
<td>RM-20</td>
<td></td>
</tr>
<tr>
<td>RM-30</td>
<td></td>
</tr>
<tr>
<td>RM-40</td>
<td>Least Restrictive</td>
</tr>
</tbody>
</table>

**SECTION 3.** Subsections (a), (b), (e), (f), (g), and (h) of Section 18.13.040 (Development Standards) of Chapter 18.13 (Multiple Family Residential (RM-20, RM-30 and RM-40) Districts) of Title 18 (Zoning) are amended as follows:

### 18.13.040 Development Standards

(a) Site Specifications, Building Size and Bulk, and Residential Density

The site development regulations in Table 2 shall apply in the multiple-family residence districts, provided that more restrictive regulations may be recommended by the Architectural Review Board and approved by the Director of Planning and Development Services, pursuant to

Table 2
Multiple Family Residential Development Table

<table>
<thead>
<tr>
<th></th>
<th>RM-20</th>
<th>RM-30</th>
<th>RM-40</th>
<th>Subject to regulations in:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimum Site Specifications</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Area (ft²)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Width (ft)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Depth (ft)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Substandard Lot Specifications</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Area (ft²)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Width (ft)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Minimum Setbacks</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Front Yard (ft)</td>
<td>20</td>
<td>20</td>
<td>0-25</td>
<td></td>
</tr>
<tr>
<td>On arterial roadways, expressways, and freeways</td>
<td>0-2025</td>
<td>0-2025</td>
<td>0-25</td>
<td></td>
</tr>
<tr>
<td>Interior Side Yards (ft)</td>
<td></td>
<td></td>
<td></td>
<td>18.13.040(b)</td>
</tr>
<tr>
<td>For lots with width of 70 feet or greater</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>For lots with width of less than 70 feet</td>
<td>6 feet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Rear Yards (ft)</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Street Side and Street Rear Yards (ft)</td>
<td>16</td>
<td>16</td>
<td>0-16</td>
<td>(2)</td>
</tr>
<tr>
<td><strong>Maximum Height (ft)</strong></td>
<td>30</td>
<td>35</td>
<td>40</td>
<td>18.08.030</td>
</tr>
<tr>
<td>Maximum height for those portions of a site</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>within 50 feet of a more restrictive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>residential district or a site containing a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>residential use in a nonresidential district</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Daylight Planes(7)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daylight Plane for side and rear lot lines</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>for sites abutting any R-1, R-2, RMD, or RM-20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>district or abutting a site containing a single-family or two-family residential use in a nonresidential district:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Height (ft)</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angle (degrees)</td>
<td></td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daylight Plane for side and rear lot lines for sites abutting a RM-30, RM-40, Planned Community, or nonresidential district that does not contain a single-family or two-family residential use:</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For lots with width of 70 feet or greater</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For lots with width of less than 70 feet, limited to the first 10 feet from the property line (no daylight plane beyond 10 feet):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Height (ft)</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angle (degrees)</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Maximum Site Coverage:

| Base | 35% | 40% | 45% |
| Additional area permitted to be covered by covered patios or overhangs otherwise in compliance with all applicable laws | 5% | 5% | 5% |

### Maximum Floor Area Ratio (FAR) (4)

| 0.5:1 | 0.6:1 | 1.0:1 |

### Residential Density (units)

| Maximum number of units per acre (3) | 20 | 30 | 40 |
| Minimum number of units per acre (8) | 11 | 16 | 21 |

### Minimum Site Landscape/Open Space Coverage (5) (percent)

| 35 | 30 | 20 |

### Minimum Usable Open Space (sf per unit) (5)

| 150 | 150 | 150 |

### Minimum common open space (sf per unit)

| 75 | 75 | 75 |

### Minimum private open space (sf per unit)

| 50 | 50 | 50 |

### Performance Criteria

See provisions of Chapter 18.23 Ch. 18.23

### Landscape Requirements

18.40.130

### Parking (6)

See provisions of Chapters 18.52 and 18.54 Ch. 18.52

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**Footnotes:**

1. Minimum front setbacks shall be determined by the Architectural Review Board upon review pursuant to criteria set forth in Chapter 18.76 and the context-based criteria outlined in Section 18.13.060. Arterial roadways, expressways, and freeways are identified in Map T-5 of the Comprehensive Plan and do not include residential arterials. Lesser setbacks may be allowed by the Planning Director, upon recommendation by the Architectural Review Board pursuant to criteria set forth in Chapter 18.76. Special setbacks of greater than 25 feet may not be reduced except upon approval of a design enhancement exception or variance.

2. Lesser setbacks may be allowed by the Planning Director, upon recommendation Minimum street side setbacks in the RM-40 zone may be from 0 to 16 feet and shall be determined by the Architectural Review Board upon review pursuant to criteria set forth in Chapter 18.76 and the context-based criteria outlined in Section.
18.13.060.
(3) Provided that, for any lot of 5,000 square feet or greater, two units are allowed, subject to compliance with all other development regulations.
(4) Covered parking is not included as floor area in multi-family development, up to a maximum of 230 square feet per required parking space that is covered. Covered parking spaces in excess of required parking spaces count as floor area.
(5) Subject to the limitations of Section 18.13.040(e). Usable open space is included as part of the minimum site landscape/open space coverage; required usable open space in excess of the minimum required for common and private open space may be used as either common or private usable open space; landscaping may count towards total site landscape/open space coverage after usable open space requirements are met.
(6) Tandem parking is allowed for any unit requiring two parking spaces, provided that both spaces in tandem are intended for use by the same residential unit. For projects with more than four (4) units, not more than 25% of the required parking spaces shall be in a tandem configuration.
(6) Each daylight plane applies specifically and separately to each property line according to the adjacent use.
(7) The minimum density for a site may be reduced by the Director if, after the proposal is reviewed by the Architectural Review Board, the Director finds that existing site improvements or other parcel constraints, preclude the development from meeting the minimum density. A site with an existing single-family use or two-family use may be redeveloped at the existing density, either single-family or two-family as applicable. An existing or replaced single-family or two-family residence shall not be considered a nonconforming use, and the provisions of Chapter 18.70 shall not apply, solely based on the minimum density requirement.

(b) Setbacks, Daylight Planes and Height - Additional Requirements and Exceptions

(1) Setbacks
   (A) Setbacks for lots lines adjacent to an arterial street, expressway or freeway, as designated in the Palo Alto Comprehensive Plan, shall be a minimum of twenty-five feet (25'), except that lesser setbacks may be allowed or required by the Planning Director, upon recommendation by the Architectural Review Board, where prescribed by the context-based criteria outlined in Section 18.13.060. Special setbacks of greater than 25 feet may not be reduced except upon approval of a design enhancement exception or variance.
   (B) Required parking spaces shall not be located in a required front yard, nor in the first ten feet (10') adjoining the street property line of a required street side yard.
   (C) Projections into yards are permitted only to the extent allowed by Section 18.40.070 of this code.

(2) Height and Daylight Planes
   (A) Exceptions to maximum height limitations are permitted only to the extent allowed by Section 18.40.090 of this code.
   (B) The following features may extend beyond the daylight plane established by the applicable district, provided that such features do not exceed the height limit for the district unless permitted to by Section 18.40.090 of this code:
      i. Television and radio antennas;
      ii. Chimneys and flues that do not exceed 5 feet in width, provided that chimneys do not extend past the required daylight plane a distance exceeding the minimum allowed pursuant to Chapter 16.04 of this code.
      iii. Cornices and eaves, excluding flat or continuous walls or enclosures of
usable interior space, provided such features do not extend past the daylight plane more than 4 feet, and so long as they do not encroach into the side setback greater than 2 feet.

[...]  

(e) Usable Open Space
The following usable open space regulations shall apply:
1. Required Minimum Site Open Space. Each site shall, at a minimum, have a portion of the site, as prescribed in Table 2, developed into permanently maintained open space. Site open space includes all usable open space plus landscape or other uncovered areas not used for driveways, parking, or walkways.
2. Usable Open Space (Private and Common). Each project shall, at a minimum, have a portion of the site, as prescribed in Table 2, developed into permanently maintained usable open space, including private and common usable open space areas. Usable open space shall be located protected from the activities of commercial areas and adjacent public streets and shall provide noise buffering from surrounding uses where feasible.
3. Private Usable Open Space. Each dwelling unit shall have at least one private usable open space area contiguous to the unit that allows the occupants of the unit the personal use of the outdoor space. The minimum size of such areas shall be as follows:
   (a) Balconies (above ground level): 50 square feet, the least dimension of which shall be 6 feet.
   (b) Patios or yards in the RM-20 and RM-30 districts: 100 square feet, the least dimension of which is 8 feet for at least 75% of the area.
   (c) Patios or yards in the RM-40 district: 80 square feet, the least dimension of which is 6 feet for at least 75% of the area.
4. Common Usable Open Space. The minimum-designated common open space area on the site shall be 10 feet wide and each such-designated area shall comprise a minimum of 200 square feet. In the RM-30 and RM-40 districts, part or all of the required private usable open space areas may be added to the required common usable open space in a development, for purposes of improved design, privacy, protection and increased play area for children, upon a recommendation of the Architectural Review Board and approval of the Director.

(e) Housing Incentive Program
(1) For a project on a site north of Page Mill Road and eligible for the PTOD overlay, the Director may waive the floor area ratio (FAR) limit and the maximum site coverage requirement after the project with the proposed waiver or waivers is reviewed by the Architectural Review Board, if the Director finds that a project exceeding these standards is consistent with the required architectural review findings. In no event shall the Director approve a non-residential FAR that exceeds the base standard in Table 2 or a total FAR (including both residential and non-residential FAR) in excess of 2.0.
(2) For a 100% affordable housing project on a site north of Page Mill Road and
eligible for the PTOD overlay, the Director may waive any development standard including parking after the project with the proposed waiver or waivers is reviewed by the Architectural Review Board, if the Director finds that a project with such waiver or waivers is consistent with the required architectural review findings. In no event shall the Director approve development standards more permissive than the standards applicable to the Affordable Housing (AH) Incentive Program in Chapter 18.32. A "100% affordable housing project" as used herein means a multiple-family housing or mixed-use project in which the residential component consists entirely of affordable units, as defined in Section 16.65.020 of this code, available only to households with income levels at or below 120% of the area median income, as defined in Section 16.65.020, and where the average household income does not exceed 60% of the area median income level, except for a building manager's unit.

(3) This program is a local alternative to the state density bonus law, and therefore, a project utilizing this program shall not be eligible for a density bonus under Chapter 18.15 (Residential Density Bonus).

(f) Personal Services, Retail Services, and Eating and Drinking Services in the RM-30 and RM-40 Districts
Within a single residential development containing not less than 40 dwelling units, personal services, retail services, and eating and drinking services solely of a neighborhood-serving nature to residents in the development or in the general vicinity of the project may be allowed upon approval of a conditional use permit, subject to the following limitations and to such additional conditions as may be established by the conditional use permit:

(1) Total gross floor area of all such uses shall not exceed 5,000 square feet or three percent of the gross residential floor area within the development, whichever is smaller, and may not occupy any level other than the ground level or below grade levels.

(2) A maximum of 2,500 square feet of retail and/or service and/or eating and drinking uses shall be allowed per establishment.

(3) Personal services, retail services, and eating and drinking services provided in accordance with this section shall not be included in the gross floor area for the site.

(4) The conditional use permit for the project may preclude certain uses and shall include conditions that are appropriate to limit impacts of noise, lighting, odors, parking and trash disposal from the operation of the commercial establishment. The hours of operation shall be limited to assure compatibility with the residential use and surrounding residential uses.

(5) Allowable Neighborhood-Serving Uses. A neighborhood-serving use primarily serves individual consumers and households, not businesses, is generally pedestrian oriented in design, and does not generate noise, fumes or truck traffic greater than that typically expected for uses with a local customer base. A neighborhood-serving use is also one to which a significant number of local customers and clients can walk, bicycle or travel short distances, rather than relying primarily on automobile access or the provider of the goods or services traveling off-site. Allowable neighborhood-serving personal services, retail services and eating and drinking services may include, but are not limited
to, "agent" dry cleaners, flower shops, convenience grocery stores (excluding liquor stores), delicatessens, cafes, fitness facilities, day care facilities, and similar uses found by the Planning Director to be compatible with the intent of this provision.

(6) Sign programs, including size, number, color, placement, etc. shall be permitted only as specified in the conditional use permit and by the Planning Director upon recommendation of the Architectural Review Board.

(7) Off-street parking and bicycle facilities, in addition to facilities required for residential uses, shall be provided as may be specified by the conditional use permit. However, there shall not be less than one parking space for each employee working or expected to be working at the same time.

(8) For any project, other than a 100% affordable housing project, containing forty (40) or greater units and located more than 500 feet from neighborhood commercial services, as determined by the Director, a minimum of 1,500 square feet of neighborhood serving retail, personal service, and/or eating or drinking uses shall be provided, subject to the above limitations. No conditional use permit is required, but the commercial use shall be reviewed by the Architectural Review Board as part of the architectural review approval. A minimum of one parking space for each employee working or expected to be working at the same time shall be provided. A "100% affordable housing project" as used herein means a multiple-family housing project consisting entirely of affordable units, as defined in Section 16.65.020 of this code, available only to households with income levels at or below 120% of the area median income for Santa Clara County, as defined in Chapter 16.65, and where the average household income does not exceed 80% of the area median income level, except for a building manager's unit.

(g) Redevelopment of Sites with Non-complying Density
For a parcel with a residential use that exceeds the maximum unit density of the applicable zoning district, the Director may grant an exception to the maximum unit density standard and allow the parcel to be redeveloped to replace the legally established residential units at the existing density, subject to all of the following:

1. The applicant must make the request for exception under this provision at the time of project application;
2. The project is a residential rental project;
3. The project complies with all other applicable development standards; and
4. The project shall not be eligible for a density bonus under Chapter 18.15 (Residential Density Bonus). The applicant must elect whether to utilize state density bonus law or the exception described herein as an alternative to state density bonus law.

(h) General Standards, Exceptions, and Performance Criteria
In addition to all other provisions of this chapter, all multi-family development shall comply with applicable provisions of Chapter 18.2340 (Performance Criteria for Multiple Family, Commercial, Manufacturing and Planned Community Districts) (General Standards and Exceptions).
**SECTION 4.** Subsection (c) of Section 18.13.050 (Village Residential Development) of Chapter 18.13 (Multiple Family Residential (RM-20, RM-30 and RM-40) Districts) of Title 18 (Zoning) is amended and Subsection (f) is added as follows:

18.13.050 Village Residential Development

[...]

(c) Development Standards

Table 3 specifies the development standards for new Village Residential developments that provide for individual lots established for sale of one housing unit on a lot. These developments shall be designed and constructed in compliance with the following requirements and the objective design standards in Chapter 18.24 context-based design criteria outlined in Section 18.13.060, provided that more restrictive regulations may be recommended by the architectural review board and approved by the director of planning and community environment, pursuant to Section 18.76.020:

<table>
<thead>
<tr>
<th>Table 3 Village Residential Development Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Village Residential</td>
</tr>
<tr>
<td>Subject to regulations in:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Minimum Site Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Area (ft²)</td>
</tr>
<tr>
<td>Site Area (ft²)</td>
</tr>
<tr>
<td>Site Area (ft²)</td>
</tr>
<tr>
<td>Site Area (ft²)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Minimum Lot Specifications (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot Area (ft²), Attached Units</td>
</tr>
<tr>
<td>Lot Area (ft²), Detached Units</td>
</tr>
<tr>
<td>Maximum Lot Area (ft²)</td>
</tr>
<tr>
<td>Front lot setback (ft)</td>
</tr>
<tr>
<td>Rear lot setback (ft)</td>
</tr>
<tr>
<td>Side lot setback (ft)</td>
</tr>
<tr>
<td>Distance between detached units (ft)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum House Size (ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,500 (2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum Height (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Daylight Planes</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM-20 development standards apply to perimeter of site</td>
</tr>
</tbody>
</table>
### Footnotes:

1. Individual lots are created by subdividing the development site to create one for-sale lot per dwelling unit. Overall development intensity (FAR, site coverage, landscape/open space) shall be calculated across the entire site to comply with RM-20 zone standards, and setbacks and daylight planes at the perimeter of the site shall comply with RM-20 setbacks and daylight planes. For common-ownership developments such as condominiums and apartments, the underlying multiple-family zone district development standards shall apply.

2. Covered parking that is attached to the residence shall be included in the maximum house size.

3. Covered parking is not included as floor area in multi-family development, up to a maximum of 230 square feet per required parking space that is covered. Covered parking spaces in excess of required parking spaces count as floor area.

4. Subject to the limitations of Section 18.13.040(e). Usable open space is included as part of the minimum site landscape/open space coverage; required usable open space in excess of the minimum required for common and private open space may be used as either common or private usable open space; landscaping may count towards total site landscape/open space coverage after usable open space requirements are met.

5. Tandem parking is allowed for any unit requiring two parking spaces, provided that both spaces in tandem are intended for use by the same residential unit. For projects with more than four (4) units, not more than 25% of the required parking spaces shall be in a tandem configuration.

---

(f) General Standards, Exceptions, and Performance Criteria

In addition to all other provisions of this chapter, all multi-family development shall comply with applicable provisions of Chapter 18.40 General Standards and Exceptions).
**SECTION 5.** Section 18.13.060 (Multiple Family Context-Based Design Criteria) of Chapter 18.13 (Multiple Family Residential (RM-20, RM-30 and RM-40) Districts) of Title 18 (Zoning) is deleted in its entirety and restated to read as follows:

18.13.060  **Multiple Family Context-Based Objective Design Criteria Standards**

In addition to the standards for development prescribed above, all development in the RM districts shall comply with applicable standards and/or intent statements outlined in Chapter 18.24, as defined therein.

**SECTION 6.** Subsections (a), (b), (f), (i) and (k) of Section 18.16.060 (Development Standards) of Chapter 18.16 (Neighborhood, Community, And Service Commercial (CN, CC And CS) Districts) of Title 18 (Zoning) are amended as follows:

18.16.060  **Development Standards**

(a) Exclusively Non-Residential Uses

Table 3 specifies the development standards for exclusively non-residential uses and alterations to non-residential uses or structures in the CN, CC, CC(2) and CS districts. These developments shall be designed and constructed in compliance with the following requirements and the objective design standards in Chapter 18.24 context-based design criteria outlined in Section 18.16.090, provided that more restrictive regulations may be recommended by the architectural review board and approved by the director of planning and community environment, pursuant to Section 18.76.020.

**Table 3**

**Exclusively Non-residential Development Standards**

<table>
<thead>
<tr>
<th>Subject to regulations in Section</th>
<th>CN</th>
<th>CC</th>
<th>CC(2)</th>
<th>CS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimum Site Specifications</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Area (ft²)</td>
<td>None Required</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Width (ft)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Depth (ft)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Minimum Setbacks</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Front Yard (ft)</td>
<td>0 - 10' to create an 8' - 12' effective sidewalk width (1), (2), (8)</td>
<td>None Required (8)</td>
<td>0 - 10' to create an 8' - 12' effective sidewalk width (1), (2), (8)</td>
<td>0 - 10' to create an 8' - 12' effective sidewalk width (1), (2), (8)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td></td>
</tr>
<tr>
<td>Rear Yard (ft)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Side Yard (ft)</td>
<td>None required</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Street Side Yard (ft)</td>
<td>20' (2)</td>
<td>None required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum Yard (ft) for lot lines abutting or opposite residential districts or residential PC districts</td>
<td>10' (2)</td>
<td>10' (2)</td>
<td>10' (2)</td>
<td>10' (2)</td>
</tr>
<tr>
<td>Build-To-Lines</td>
<td>50% of frontage built to setback (7)</td>
<td>33% of side street built to setback (7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum setbacks from alleys for structures other than public parking garages (ft)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corner lots, from rear lot line on the alley</td>
<td>Not applicable</td>
<td>8'</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Corner lots, from side lot line on the alley</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All lots other than corner lots</td>
<td>20'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Site Coverage</td>
<td>50%</td>
<td>None Required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Height (ft)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Height (ft)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within 150 ft. of a residential district (other than an RM-40 or PC zone) abutting or located within 50 feet of the site</td>
<td>25' and 2 stories</td>
<td>50'</td>
<td>37' (4)</td>
<td>50'</td>
</tr>
<tr>
<td>50'</td>
<td>35'</td>
<td>35'</td>
<td>35'</td>
<td>18.08.030</td>
</tr>
<tr>
<td>Maximum Floor Area Ratio (FAR)</td>
<td>0.4:1</td>
<td>2.0:1</td>
<td>0.4:1</td>
<td>18.18.060(e)</td>
</tr>
<tr>
<td>Maximum Floor Area Ratio (FAR) for Hotels</td>
<td>N/A</td>
<td>- (5)</td>
<td>2.0:1</td>
<td>2.0:1</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>-----</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Daylight Plane for lot lines abutting one or more residential zone districts other than an RM-40 or PC zone</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Height at side or rear lot line (ft)</td>
<td>- (6)</td>
<td>- (6)</td>
<td>- (6)</td>
<td>- (6)</td>
</tr>
<tr>
<td>Slope</td>
<td>- (6)</td>
<td>- (6)</td>
<td>- (6)</td>
<td>- (6)</td>
</tr>
</tbody>
</table>

Footnotes:
1. No parking or loading space, whether required or optional, shall be located in the first 10 feet adjoining the street property line of any required yard.
2. Any minimum front, street side, or interior yard shall be planted and maintained as a landscaped screen excluding areas required for access to the site. A solid wall or fence between 5 and 8 feet in height shall be constructed along any common interior lot line.
3. No setback from an alley is required for a public parking garage.
4. As measured to the peak of the roof or the top of a parapet; penthouses and equipment enclosures may exceed this height limit by a maximum of five feet, but shall be limited to an area equal to no more than ten percent of the site area and shall not intrude into the daylight plane.
5. See additional regulations in subsection (e) of this Section 18.16.050.
6. The initial height and slope shall be identical to those of the most restrictive residential zone abutting the site line in question.
7. Twenty-five-foot driveway access permitted regardless of frontage; build-to requirement does not apply to CC district.
8. A 12-foot sidewalk width is required along El Camino Real frontage.

(b) Mixed Use and Residential
Table 4 specifies the development standards for new residential mixed use developments and residential developments. These developments shall be designed and constructed in compliance with the following requirements and the objective design standards in Chapter 18.24, and the context-based design criteria outlined in Section 18.16.090, provided that more restrictive regulations may be recommended by the architectural review board and approved by the director of planning and community environment, pursuant to Section 18.76.020.
### Table 4
**Mixed Use and Residential Development Standards**

<table>
<thead>
<tr>
<th></th>
<th>CN</th>
<th>CC</th>
<th>CC(2)</th>
<th>CS</th>
<th>Subject to regulations in:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Site Specifications</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Area (ft²)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Width (ft)</td>
<td>None required</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Depth (ft)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum Setbacks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Front Yard (ft)</td>
<td>0' - 10' to create an 8'-12' effective sidewalk width (8)</td>
<td>None Required (8)</td>
<td>0' - 10' to create an 8' - 12' effective sidewalk width (8)</td>
<td>0' - 10' to create an 8' - 12' effective sidewalk width (8)</td>
<td>Setback lines imposed by a special setback map pursuant to Chapter 20.08 of this code may apply</td>
</tr>
<tr>
<td>Rear Yard (ft)</td>
<td>10' for residential portion; no requirement for commercial portion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rear Yard abutting residential zone district (ft)</td>
<td>10'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Side Yard if abutting residential zone district (ft)</td>
<td>10'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Street Side Yard (ft)</td>
<td>5'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Build-to-Lines</td>
<td>50% of frontage built to setback (1) 33% of side street built to setback (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permitted Setback Encroachments</td>
<td>Balconies, awnings, porches, stairways, and similar elements may extend up to 6' into the setback. Cornices, eaves, fireplaces, and similar architectural features (excluding flat or continuous walls or enclosures of interior space) may extend up to 4' into the front and rear setbacks and up to 3' into interior side setbacks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Site Coverage</td>
<td>50%</td>
<td>50%</td>
<td>100%</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Minimum Landscape/Open Space Coverage</td>
<td>35%</td>
<td>30%</td>
<td>20%</td>
<td>30%</td>
<td></td>
</tr>
</tbody>
</table>
### Usable Open Space (Private and/or Common)  
<table>
<thead>
<tr>
<th>Maximum Height (ft)</th>
<th></th>
<th></th>
<th></th>
<th>150 sq ft per unit (2)</th>
<th>18.24.040</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standard</td>
<td>35' (4)</td>
<td>50'</td>
<td>37'</td>
<td>50'</td>
</tr>
<tr>
<td></td>
<td>Within 150 ft. of a residential zone (other than an RM-40 or PC zone) abutting or located within 50 feet of the side</td>
<td>35'</td>
<td>35' (5)</td>
<td>35' (5)</td>
<td>35' (5)</td>
</tr>
</tbody>
</table>

### Daylight Plane for lot lines abutting one or more residential zoning districts

Daylight plane height and slope shall be identical to those of the most restrictive residential zoning district abutting the lot line.

### Residential Density (net) (3)

<table>
<thead>
<tr>
<th>Sites on El Camino Real</th>
<th>No maximum</th>
<th>See subsection (e) below</th>
<th>No maximum</th>
<th>30</th>
<th>18.16.060(i)</th>
</tr>
</thead>
</table>

### Maximum Residential Floor Area Ratio (FAR)

<table>
<thead>
<tr>
<th>Max (4)</th>
<th>0.5:1</th>
<th>0.6:1</th>
<th>0.6:1</th>
</tr>
</thead>
</table>

### Maximum Nonresidential Floor Area Ratio (FAR)

<table>
<thead>
<tr>
<th>Max</th>
<th>0.4:1</th>
<th>2.0:1</th>
<th>0.4:1</th>
</tr>
</thead>
</table>

### Total Mixed Use Floor Area Ratio (FAR)

<table>
<thead>
<tr>
<th>Max</th>
<th>0.9:1</th>
<th>2.0:1</th>
<th>1.0:1</th>
</tr>
</thead>
</table>

### Minimum Mixed Use Ground Floor Commercial FAR (6)

<table>
<thead>
<tr>
<th>Min</th>
<th>0.15:1 (10)</th>
<th>0.15:1 (10)</th>
<th>0.15:1 (10)</th>
</tr>
</thead>
</table>

### Parking

See Chapters 18.52 and 18.54 (Parking) 18.52, 18.54

**Footnotes:**

1. Twenty-five-foot driveway access permitted regardless of frontage; build-to requirement does not apply to CC district.
2. **Reserved.** Required usable open space: (1) may be any combination of private and common open spaces; (2) does not need to be located on the ground (but rooftop gardens are not included as open space except as provided below); (3) minimum private open space dimension six feet; and (4) minimum common open space dimension twelve feet.
3. For CN and CS sites on El Camino Real and CC(2) sites that do not abut a single- or two-family residential use or zoning district, rooftop gardens may qualify as usable open space and may count as up to 60% of the required usable open space for the residential component of a project. In order to qualify as usable open space, the rooftop garden shall meet the requirements set forth in Section 18.40.230.
4. Residential density shall be computed based upon the total site area, irrespective of the percent of the site devoted to commercial use.
5. For CN sites on El Camino Real, height may increase to a maximum of 40 feet and the FAR may increase to a maximum of 1.0:1 (0.5:1 for nonresidential, 0.5:1 for residential).
6. For sites abutting an RM-40 zoned residential district or a residential Planned Community (PC) district, maximum height may be increased to 50 feet.
7. Ground floor commercial uses generally include retail, personal services, hotels and eating and drinking establishments. Office uses may be included only to the extent they are permitted in ground floor regulations.
(7) If located in the California Avenue Parking Assessment District.
(8) A 12-foot sidewalk width is required along El Camino Real frontage.
(9) Residential densities up to 20 units/acre are allowed on CN zoned housing inventory sites identified in the Housing Element. Other CN zoned sites not located on El Camino Real are subject to a maximum residential density of up to 15 units/acre.
(10) In the CC(2) zone and on CN and CS zoned sites on El Camino Real, there shall be no minimum mixed use ground floor commercial FAR for a residential project, except to the extent that the retail preservation requirements of Section 18.40.180 or the retail shopping (R) combining district (Chapter 18.30(A)) applies.

(1) Nonresidential uses that involve the use or storage of hazardous materials in excess of the exempt quantities prescribed in Title 15 of the Municipal Code, including but not limited to dry cleaning plants and auto repair, are prohibited in a mixed use development with residential uses.
(2) Residential mixed use development is prohibited on any site designated with an Automobile Dealership (AD) Combining District overlay.

[...]

(f) Size of Establishments in the CN District
In the CN district, permitted commercial uses shall not exceed the floor area per individual use or business establishment shown in Table 5. Such uses may be allowed to exceed the maximum establishment size, subject to issuance of a conditional use permit in accord with Section 18.76.010. The maximum establishment size for any conditional use shall be established by the director and specified in the conditional use permit for such use.

**Table 5**

<table>
<thead>
<tr>
<th>Type of Establishment</th>
<th>Maximum Size (ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Services</td>
<td>2,500</td>
</tr>
<tr>
<td>Retail services, except grocery stores</td>
<td>15,000</td>
</tr>
<tr>
<td>Grocery stores</td>
<td>20,000</td>
</tr>
<tr>
<td>Eating and drinking services</td>
<td>5,000</td>
</tr>
<tr>
<td>Neighborhood business services</td>
<td>2,500</td>
</tr>
</tbody>
</table>

[...]

(i) Reserved Recycling Storage
All new development, including approved modifications that add thirty percent or more floor area to existing uses, shall provide adequate and accessible interior areas or exterior enclosures for the storage of recyclable materials in appropriate containers. The design, construction and accessibility of recycling areas and enclosures shall be subject to approval by the architectural review board, in accordance with design guidelines adopted by that board and approved by the city council pursuant to Section 18.76.020.
(k) Housing Incentive Program

a. For an exclusively residential or residential mixed-use project in the CC(2) zone, on a CC zoned site north of Page Mill Road and eligible for the PTOD overlay, or on CN or CS zoned sites on El Camino Real, the Director may waive the residential floor area ratio (FAR) limit and the maximum site coverage requirement after the project with the proposed waiver or waivers is reviewed by the Architectural Review Board, if the Director finds that a project exceeding these standards is consistent with the required architectural review findings. In no event shall the Director approve a commercial FAR that exceeds the standard in Table 4 of Section 18.16.060(b) or a total FAR (including both residential and commercial FAR) in excess of 2.0 in the CC(2) zone or 1.5 in the CN or CS zone.

b. For a 100% affordable housing project in the CC(2) zone, on a CC zoned site north of Page Mill Road and eligible for the PTOD overlay, or on CN or CS zoned sites on El Camino Real, the Director may waive any development standard including parking after the project with the proposed waiver or waivers is reviewed by the Architectural Review Board, if the Director finds that a project with such waiver or waivers is consistent with the required architectural review findings. In no event shall the Director approve development standards more permissive than the standards applicable to the Affordable Housing (AH) Combining District Incentive Program in Chapter 18.3230(f). A "100% affordable housing project" as used herein means a multiple-family housing or mixed-use project in which the residential component consists entirely of affordable units, as defined in Section 16.65.020 of this code, available only to households with income levels at or below 120% of the area median income, as defined in Section 16.65.020, and where the average household income does not exceed 60% of the area median income level, except for a building manager's unit.

c. This program is a local alternative to the state density bonus law, and therefore, a project utilizing this program shall not be eligible for a density bonus under Chapter 18.15 (Residential Density Bonus).

[...]
SECTION 8. Section 18.16.090 (Context-Based Design Criteria) of Chapter 18.16 (Neighborhood, Community, And Service Commercial (CN, CC And CS) Districts) of Title 18 (Zoning) is deleted in its entirety and restated to read as follows:

18.16.090 Context-Based Objective Design Standards-Criteria

In addition to the standards for development prescribed above, all development in the CN, CS, CC, and CC(2) districts shall comply with applicable standards and/or intent statements outlined in Chapter 18.24, as defined therein.

SECTION 9. Subsections (a), (b), and (k) of Section 18.18.060 (Development Standards) of Chapter 18.18 (Downtown Commercial (CD) District) of Title 18 (Zoning) are amended as follows:

18.18.060 Development Standards

(a) Exclusively Non-Residential Use

Table 2 specifies the development standards for new exclusively non-residential uses and alterations to non-residential uses or structures in the CD district, including the CD-C, CD-S, and CD-N subdistricts. These developments shall be designed and constructed in compliance with the following requirements and the objective design standards in Chapter 18.24 context-based design criteria outlined in Section 18.18.110, provided that more restrictive regulations may be recommended by the architectural review board and approved by the director of planning and community environment, pursuant to Section 18.76.020:

<table>
<thead>
<tr>
<th>Minimum Setbacks</th>
<th>CD-C</th>
<th>CD-S</th>
<th>CD-N</th>
<th>Subject to regulations in Section:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Yard (ft)</td>
<td>None required</td>
<td>None required</td>
<td>10 (1)</td>
<td>Setback lines imposed by a special setback map pursuant to Chapter 20.08 of this code may apply</td>
</tr>
<tr>
<td>Rear Yard (ft)</td>
<td>None required</td>
<td>None required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Side Yard (ft)</td>
<td>None required</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Street Side Yard (ft)</td>
<td>None required</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum street setback for sites sharing a common block face with any abutting residential zone district</td>
<td>- (4)</td>
<td>- (4)</td>
<td>- (4)</td>
<td></td>
</tr>
</tbody>
</table>
### Table 3

<table>
<thead>
<tr>
<th>Requirement</th>
<th>10' (1)</th>
<th>10' (1)</th>
<th>10' (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum yard (ft) for lot lines abutting or opposite residential zone districts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Site Coverage</td>
<td>None required</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Maximum Height (ft)</td>
<td>50</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>Within 150 ft. of an abutting residential zone district</td>
<td>18.08.030</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Floor Area Ratio (FAR)</td>
<td>1.0:1 (5)</td>
<td>0.4:1 (5)</td>
<td>0.4:1 (5)</td>
</tr>
<tr>
<td>Maximum Floor Area Ratio (FAR) for Hotels</td>
<td>2.0:1</td>
<td>2.0:1</td>
<td>N/A</td>
</tr>
<tr>
<td>Maximum Size of New Non-Residential Construction or Expansion Projects</td>
<td>25,000 square feet of gross floor area or 15,000 square feet above the existing floor area, whichever is greater, provided the floor area limits set forth elsewhere in this chapter are not exceeded</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daylight Plane for lot lines abutting one or more residential zone districts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Height at side or rear lot line</td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Slope</td>
<td>1:2</td>
<td>1:2</td>
<td></td>
</tr>
</tbody>
</table>

**Footnotes:**

1. The yard shall be planted and maintained as a landscaped screen, excluding area required for site access.
2. The initial height and slope shall be identical to those of the residential zone abutting the site line in question.
3. The maximum height within 150 feet of any abutting residential zone district shall not exceed the height limit of the abutting residential district.
4. The minimum street setback shall be equal to the residentially zoned setback for 150 feet from the abutting single-family or multiple family development.
5. FAR may be increased with transfers of development and/or bonuses for seismic and historic rehabilitation upgrades, not to exceed a total site FAR of 3.0:1 in the CD-C subdistrict or 2.0:1 in the CD-S or CD-N subdistricts.

(b) Mixed Use and Residential

Table 3 specifies the development standards for new residential mixed use developments and residential developments. These developments shall be designed and constructed in compliance with the following requirements and the objective design standards in Chapter 18.24 context-based design criteria outlines in Section 18.18.110, provided that more restrictive regulations may be recommended by the architectural review board and approved by the director of planning and community environment, pursuant to Section 18.76.020.
### TABLE 3
**MIXED USE AND RESIDENTIAL DEVELOPMENT STANDARDS**

<table>
<thead>
<tr>
<th>Subject to regulations in Section:</th>
<th>Minimum Setbacks</th>
<th>Front Yard (ft)</th>
<th>Rear Yard (ft)</th>
<th>Interior Side Yard (ft)</th>
<th>Street Side Yard (ft)</th>
<th>Permitted Setback Encroachments</th>
<th>Maximum Site Coverage</th>
<th>Landscape/Open Space Coverage</th>
<th>Usable Open Space (Private and/or Common)</th>
<th>Maximum Height (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CD-C</td>
<td>CD-S</td>
<td>CD-N</td>
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<tr>
<td>Setback lines imposed by a special setback map pursuant to Chapter 20.08 of this code may apply</td>
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</tr>
</tbody>
</table>

#### Notes:
- Front Yard: None required.
- Rear Yard: 10' for residential portion; no requirement for commercial portion.
- Interior Side Yard: No requirement. 10' if abutting residential zone. 10' if abutting residential zone.
- Street Side Yard: No requirement. 5'.
- Maximum Height Standard: 50'.
- Usable Open Space: 150 sq ft per unit (1). 18.24.040

#### Permitted Setback Encroachments:
- Balconies, awnings, porches, stairways, and similar elements may extend up to 6' into the setback.
- Cornices, eaves, fireplaces, and similar architectural features (excluding flat or continuous walls or enclosures of interior space) may extend up to 4' into the front and rear setbacks and up to 3' into interior side setbacks.

#### Landscape Coverage:
- 20%.
- 30%.
- 35%.

#### Maximum Site Coverage:
- No requirement.
- 50%.
- 50%.

#### Maximum Height (ft):
- Standard: 50', 50', 35'.
- Within 150 ft. of an abutting residential zone: 40'(4) (3), 40'(4) (3), 35'(4) (3).
<table>
<thead>
<tr>
<th>Daylight Plane for lot lines abutting one or more residential zoning districts or a residential PC district</th>
<th>Daylight plane height and slope identical to those of the most restrictive residential zone abutting the lot line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Density (net)(^{(21)})</td>
<td>No maximum</td>
</tr>
<tr>
<td>Maximum Weighted Average Residential Unit Size(^{(54)})</td>
<td>1,500 sq ft per unit</td>
</tr>
<tr>
<td>Maximum Residential Floor Area Ratio (FAR)</td>
<td>1.0:1(^{(32)})</td>
</tr>
<tr>
<td>Maximum Nonresidential Floor Area Ratio (FAR)</td>
<td>1.0:1(^{(32)})</td>
</tr>
<tr>
<td>Total Floor Area Ratio (FAR)(^{(2)})</td>
<td>2.0:1(^{(32)})</td>
</tr>
<tr>
<td>Parking Requirement</td>
<td>See Chapters 18.52 and 18.54</td>
</tr>
</tbody>
</table>

Footnotes:

(1) Required usable open space: (1) may be any combination of private and common open spaces; (2) does not need to be located on the ground (but rooftop gardens are not included as open space except as provided below); (3) minimum private open space dimension 6; and (4) minimum common open space dimension 12.

For CD-C sites that do not abut a single- or two-family residential use or zoning district, rooftop gardens may qualify as usable open space and may count as up to 75% of the required usable open space for the residential component of a project. In order to qualify as usable open space, the rooftop garden shall meet the requirements set forth in Section 18.40.230.

(2)\(^{(2)}\) Residential density shall be computed based upon the total site area, irrespective of the percent of the site devoted to commercial use. There shall be no deduction for that portion of the site area in nonresidential use.

(3)\(^{(3)}\) FAR may be increased with transfers of development and/or bonuses for seismic and historic rehabilitation upgrades, not to exceed a total site FAR of 3.0:1 in the CD-C subdistrict or 2.0:1 in the CD-S or CD-N subdistrict.

(4)\(^{(4)}\) For sites abutting an RM-40 zoned residential district or a residential Planned Community (PC) district, maximum height may be increased to 50 feet.

(5)\(^{(5)}\) The weighted average residential unit size shall be calculated by dividing the sum of the square footage of all units by the number of units. For example, a project with ten 800-square foot 1-bedroom units, eight 1,200-square foot 2-bedroom units, and two 1,800-square foot 3-bedroom units would have a weighted average residential unit size of \(((10 \times 800) + (8 \times 1200) + (2 \times 1800)) \div (10 + 8 + 2) = 1,060\) square feet.
(1) Nonresidential uses that involve the use or storage of hazardous materials in excess of the exempt quantities prescribed in Title 15 of the Municipal Code, including but not limited to dry cleaning plants and auto repair, are prohibited in a mixed use development with residential uses.

[. . .]

(k) Reserved Recycling Storage
All new development, including approved modifications that add thirty percent or more floor area to existing uses, shall provide adequate and accessible interior areas or exterior enclosures for the storage of recyclable materials in appropriate containers. The design, construction and accessibility of recycling areas and enclosures shall be subject to approval by the architectural review board, in accordance with design guidelines adopted by that board and approved by the city council pursuant to Section 16.48.070.

[. . .]

SECTION 10. Subsection (b) (Restrictions on Floor Area Bonuses) of Section 18.18.070 (Floor Area Bonuses) of Chapter 18.18 (Downtown Commercial (CD) District) of Title 18 (Zoning) is amended as follows:

18.18.070 Floor Area Bonuses

[. . .]

(a) Restrictions on Floor Area Bonuses
The floor area bonuses in subsection (a) shall be subject to the following restrictions:

1. All bonus square footage shall be counted as square footage for the purposes of the 350,000 annual square foot limit on office development specified in Section 18.40.210.18.18.040.
2. All bonus square footage shall be counted as square footage for the purposes of the project size limit specified in Section 18.18.060(a).
3. In no event shall a building expand beyond a FAR of 3.0:1 in the CD-C subdistrict or a FAR of 2.0:1 in the CD-S or CD-N subdistrict.
4. The bonus shall be allowed on a site only once.
5. For sites in Seismic Category I, II, or III, seismic rehabilitation shall conform to the analysis standards referenced in Chapter 16.42 of this code.
6. For sites in Historic Category 1 or 2, historic rehabilitation shall conform to the Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (36 CFR §67,7).
7. For sites in both Seismic Category I, II, or III and Historic Category 1 or 2, no bonus shall be granted unless the project includes both seismic and historic rehabilitation conforming to the standards in subsections (5) and (6).
For sites in both Seismic Category I, II, or III and Historic Category 1 or 2, a bonus granted under this section that will be used on-site is subject to the following requirements:

(A) The city council must approve on-site use of such a FAR bonus. Such approval is discretionary, and may be granted only upon making both of the following findings:
   (i) The exterior modifications for the entire project comply with the U.S. Secretary of the Interior’s *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (36 CFR §67,7); and
   (ii) The on-site use of the FAR bonus would not otherwise be inconsistent with the historic character of the interior and exterior of the building and site.

(B) The applicant for on-site use of a cumulative floor area bonus shall have the burden of demonstrating the facts necessary to support the findings required for council approval.

[...]
**SECTION 12.** Section 18.18.100 (Performance Standards) of Chapter 18.18 (Downtown Commercial (CD) District) of Title 18 (Zoning) is amended as follows:

18.18.100 **General Standards, Exceptions, and Performance Standards**

In addition to the standards for development prescribed above, all development shall comply with the performance criteria, general standards, and exceptions outlined in Chapter 18.2340 of the Zoning Ordinance. All mixed use development shall also comply with the applicable provisions of Chapter 18.2340 of the Zoning Ordinance.

**SECTION 13.** Section 18.18.110 (Context-Based Design Criteria) of Chapter 18.18 (Downtown Commercial (CD) District) of Title 18 (Zoning) is deleted in its entirety and restated to read as follows:

18.18.110 **Context-Based Objective Design Standards Criteria**

In addition to the standards for development prescribed above, all development in the CD district shall comply with applicable standards and/or intent statements outlined in Chapter 18.24, as defined therein.

**SECTION 14.** Subsections (a), (i), and (j) of Section 18.20.040 (Site Development Standards) of Chapter 18.20 (Office, Research, And Manufacturing (MOR, ROLM, RP And GM) Districts) of Title 18 (Zoning) are amended as follows:

18.20.040 **Site Development Standards**

Development in the office research, industrial, and manufacturing districts is subject to the following development standards, provided that more restrictive regulations may be required as part of design review under Chapter 18.76 of the Palo Alto Municipal Code.

(a) Development Standards for Non-Residential Uses

Table 2 shows the site development standards for exclusively non-residential uses in the industrial and manufacturing districts.

**TABLE 2**

<table>
<thead>
<tr>
<th>INDUSTRIAL/MANUFACTURING NON-RESIDENTIAL SITE DEVELOPMENT STANDARDS</th>
<th>MOR</th>
<th>ROLM</th>
<th>ROLM(E)</th>
<th>RP</th>
<th>RP(5)</th>
<th>GM</th>
<th>Subject to Regulations in Chapter:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimum Site Specifications</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Area (sq. ft.)</td>
<td>25,000</td>
<td>1 acre</td>
<td>1 acre</td>
<td>5 acres</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Width (ft.)</td>
<td>150</td>
<td>100</td>
<td>100</td>
<td>250</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Depth (ft.)</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>250</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Minimum Setbacks

Setback lines imposed by a special setback map pursuant to Chapter 20.08 of this code may apply.

<table>
<thead>
<tr>
<th>Yard Type</th>
<th>Minimum Setback (ft)</th>
<th>First Line setback (ft)</th>
<th>Maximum Setback (ft)</th>
<th>Year Published</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Yard (ft)</td>
<td>50(3)</td>
<td>20</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>Rear Yard (ft)</td>
<td>10(3)</td>
<td>20</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Interior Side Yard (ft)</td>
<td>10</td>
<td>20</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Street Side Yard (ft)</td>
<td>20(3)</td>
<td>20</td>
<td>20</td>
<td>70</td>
</tr>
<tr>
<td><strong>Minimum Yard (ft) for site lines abutting or opposite residential districts</strong></td>
<td>10(3)</td>
<td>20</td>
<td>20</td>
<td>10(1)</td>
</tr>
</tbody>
</table>

#### Footnotes:

1. For any property designated GM and fronting on East Bayshore Road a minimum setback of 20 feet along that frontage is established.
2. Daylight plane requirements shall be identical to the daylight plane requirements of the most restrictive residential district abutting the side or rear site line. Such daylight planes shall begin at the applicable site lines and increase at the specified slope until intersecting the height limit otherwise established for the MOR district.
3. In the MOR district, no required parking or loading space shall be located in the first 10 feet adjoining the street property line of any required yard.
4. See subsection 18.20.040(e) below for exceptions to height and floor area limitations in the ROLM and RP zoning districts.
5. Residential zones include R-1, R-2, RE, RMD, RM-20, RM-30, RM-40 and residential Planned Community (PC) zones.
(b) Development Standards for Exclusively Residential Uses
Residential uses shall be permitted in the MOR, RP, RP(5), ROLM, ROLM(E), and GM zoning districts, subject to the following criteria, in addition to the design standards set forth in Chapter 18.24.

(1) It is the intent of these provisions that a compatible transition be provided from lower density residential zones to higher density residential or non-residential zones. The Village Residential development type should be evaluated for use in transition areas and will provide the greatest flexibility to provide a mix of residence types compatible with adjacent neighborhoods.

(2) No new single-family or two-family residential development is permitted in any of the office, research and manufacturing districts, and no new residential development is permitted within 300 feet of an existing Hazardous Materials Tier 2 use. Existing single-family and two-family uses and existing residential development within 300 feet of an existing Hazardous Materials Tier 2 use shall be permitted to remain, consistent with the provisions of Chapter 18.70 (Nonconforming Uses and Noncomplying Facilities).

(3) MOR District. All multi-family development in the MOR zoning district shall be permitted subject to approval of a conditional use permit and compliance with the development standards prescribed for the RM-30 zoning district.

(4) RP and RP(5) Districts. All multi-family development in the RP, and RP(5) zoning districts that is located within 150 feet of an R-E, R-1, R-2, RMD, or similar density residential PC zone shall be permitted subject to the provisions above in 18.20.040(b)(2), approval of a conditional use permit, and compliance with the development standards prescribed for the RM-20 zoning district, including Village Residential development types. Multi-family development in the MOR, RP, and RP(5) zoning districts that is located greater than 150 feet from an R-E, R-1, R-2, RMD, or low density residential PC shall be permitted subject to the provisions above in 18.20.040(b)(2), approval of a conditional use permit, and compliance with the development standards prescribed for the RM-30 zoning district.

(5) ROLM (E) District. All multi-family development in the ROLM(E) zoning district shall be permitted subject to the provisions above in 18.20.040(b)(2), approval of a conditional use permit, and compliance with the development standards prescribed for the RM-20 zoning district.

(6) ROLM District. All multi-family development in the ROLM zoning district shall be permitted subject to the provisions above in 18.20.040(b)(2), approval of a conditional use permit, and compliance with the development standards prescribed for the RM-30 zoning district.

(7) GM District. All residential development is prohibited in the GM zoning district.

c) Development Standards for Mixed (Residential and Nonresidential) Uses in the MOR, ROLM, ROLM(E), RP, and RP(5) zoning Districts
Mixed (residential and nonresidential) uses shall be permitted in the MOR, ROLM, ROLM(E), RP, and RP(5) zoning districts, subject to the following criteria, in addition to the objective design standards set forth in Chapter 18.24:
(1) It is the intent of these provisions that a compatible transition be provided from lower density residential zones to higher density residential, non-residential, or mixed use zones. The Village Residential development type should be evaluated for use in transition areas and will provide the greatest flexibility to provide a mix of residence types compatible with adjacent neighborhoods.

(2) New sensitive receptor land uses shall not be permitted within 300 feet of a Hazardous Materials Tier 2 or Tier 3 use. Existing sensitive receptors shall be permitted to remain, consistent with the provisions of Chapter 18.70 (Nonconforming Uses and Noncomplying Facilities).

(3) ROLM(E) District. Mixed (residential and nonresidential) development in the ROLM(E) zoning district shall be permitted, subject to the provisions above in 18.20.040(c)(2), approval of a conditional use permit, determination that the nonresidential use is allowable in the district and that the residential component of the development complies with the development standards prescribed for the ROLM-20 zoning district. The maximum floor area ratio (FAR) for mixed use development is 0.3 to 1.

(4) ROLM District. Mixed (residential and nonresidential) development in the ROLM zoning district shall be permitted, subject to the provisions above in 18.20.040(c)(2), approval of a conditional use permit, determination that the nonresidential use is allowable in the district and that the residential component of the development complies with the development standards prescribed for the RM-30 zoning district. The maximum floor area ratio (FAR) for mixed use development is 0.4 to 1.

(5) GM District. Mixed use (residential and nonresidential) development is prohibited in the GM zoning district.

In computing residential densities for mixed (residential and nonresidential) uses, the density calculation for the residential use shall be based on the entire site, including the nonresidential portion of the site.

[. . .]

(i) Reserved Recycling Storage

All new development, including approved modifications that add thirty percent or more floor area to existing uses, shall provide adequate and accessible interior areas or exterior enclosures for the storage of recyclable materials in appropriate containers. The design, construction and accessibility of recycling areas and enclosures shall be subject to approval by the architectural review board, in accordance with design guidelines adopted by that board and approved by the city council pursuant to Chapter 18.76.

(j) Designated Sites

Notwithstanding any other provisions of this Section 18.20.040, on those sites that are Designated Sites under the Development Agreement between the City of Palo Alto and Stanford University approved and adopted by Ordinance No. 4870, the maximum floor area ratio shall be 0.5 to 1 as provided in that Agreement.
**SECTION 15.** Section 18.20.050 (Performance Criteria) of Chapter 18.20 (Office, Research, And Manufacturing (MOR, ROLM, RP And GM) Districts) of Title 18 (Zoning) is amended as follows:

18.20.050 General Standards, Exceptions, and Performance Criteria

All development in the Office/Research/Manufacturing zoning districts shall comply with the applicable requirements and guidelines outlined in Chapter 18.2340, including performance criteria. Such requirements and guidelines are intended to reduce the impacts of these non-residential uses on surrounding residential districts and other sensitive receptors.

**SECTION 16.** Section 18.23.010 (Purpose and Applicability) of Chapter 18.23 (Performance Criteria for Multiple Family, Commercial, Manufacturing and Planned Community Districts) of Title 18 (Zoning) is deleted in its entirety.

**SECTION 17.** Section 18.23.020 (Refuse Disposal Areas) of Chapter 18.23 (Performance Criteria for Multiple Family, Commercial, Manufacturing and Planned Community Districts) of Title 18 (Zoning) is deleted in its entirety and a new Section 18.40.240 (Refuse Disposal Areas) of Chapter 18.40 (General Standards and Exceptions) of Title 18 (Zoning) is added as follows:

18.40.240 Refuse Disposal Areas

(a) Purpose
Assure that development provides adequate and accessible interior areas or covered exterior enclosures for the storage of refuse in appropriate containers with storage capacity for a maximum of one week, and that refuse disposal structures and enclosures are located as far from abutting residences as is reasonably possible. The following requirements apply to new construction, change of use, additional uses, and/or renovating thirty (30) percent or more existing floor area.

(b) Requirements
Location and Capacity
(i) Capacity shall meet or exceed standards pursuant to Chapter 5.20: Collection, Removal, and Disposal of Refuse and current refuse enclosure regulations identified in the “City of Palo Alto Trash Enclosure Area Guidelines for New Construction and Redevelopment Projects” and the “Trash Enclosure Design Guide” maintained by the Public Works Department.
(ii) Refuse disposal and structures and enclosures shall be accessible to all residents or users of the property.
(iii) Mixed use development shall have separate enclosures for each use classification (example: residential and commercial)
(iv) Compostable materials and recyclable materials facilities shall be located adjacent to solid waste receptacles, sized, and designed to encourage and facilitate convenient use.
(v) Refuse enclosures shall be no closer than 20 feet from any dwelling unit (including those on abutting properties). No minimum distance from dwellings is required if containers are located within a fully enclosed utility room.

(vi) Individual garage containers may be used to serve residential projects with one or two dwelling units. Shared containers or dumpsters shall service residential projects with three or more units, unless otherwise approved by the Public Works Director or any designee.

Screening and Enclosures

(i) Enclosures shall be design pursuant to the current refuse enclosure regulations found in the “City of Trash Enclosure Area Guidelines for New Construction and Redevelopment Projects” and “Trash Enclosure Design Guide” standards maintained by the Public Works Department.

(ii) (iii) Refuse disposal areas shall be screened from public view by masonry, wood, or other opaque and durable material, and shall be enclosed and covered or located within a building or covered enclosure.

(iii) Enclosures shall have a roof, walls, and be at least 6 feet tall. Enclosures shall include wheel stops or curbs to prevent dumpsters from damaging enclosure walls.

(iv) Gates or other controlled access shall be provided where feasible.

(v) Chain link enclosures are strongly discouraged and prohibited.

(vi) (iv) Refuse disposal structures and enclosures shall be architecturally compatible with the design of the project.

(vii) Notwithstanding, subsections ii and iii above, in lower density residential districts (RE, R-1, R-2, and RMD), containers may be stored under extended eaves at least 3 feet deep, without full enclosures.

(viii) (v) The design, construction and accessibility of refuse disposal areas and enclosures shall be subject to approval by the Architectural Review Board, in accordance with design guidelines adopted by that Board and approved by the Council pursuant to Section 18.76.020.

SECTION 18. Section 18.23.030 (Lighting) of Chapter 18.23 (Performance Criteria for Multiple Family, Commercial, Manufacturing and Planned Community Districts) of Title 18 (Zoning) is deleted in its entirety and a new Section 18.40.250 (Lighting) of Chapter 18.40 (General Standards and Exceptions) of Title 18 (Zoning) is added as follows:

18.40.250 Lighting

(A) Purpose: Intent:

Exterior lighting of parking areas, pathways, and common open spaces, including fixtures on building facades and free-standing lighting should aim to:

- Minimize the visual impacts of lighting on abutting or nearby properties
- Residential sites and from adjacent roadways.
- Provide for safe and secure access on a site and adjacent pedestrian routes
- Achieve maximum energy efficiency
- Complement the architectural design of the project
Guidelines:

- Lighting of the building exterior, parking areas and pedestrian ways should be of the lowest intensity and energy use adequate for its purpose, and be designed to focus illumination downward to avoid excessive illumination above the light fixture.
- Interior lighting shall be designed to minimize nighttime glow visible from and/or intruding into nearby properties.
- Unnecessary continued illumination, such as illuminated signs or back-lit awnings, should be avoided. Internal illumination of signs, where allowed, should be limited to letters and graphic elements, with the surrounding background opaque. Illumination should be by low intensity lamps.
- Timing devices and dimmers should be used for exterior and interior lights in order to minimize light glare at night and control lighting levels. At the time of project approval, the project applicant should demonstrate how interior and exterior lighting sources will be reduced after operating hours or when the use of the facility is reduced.

(a) Requirements

(i) Exterior lighting in parking areas, pathways and common open space shall be designed to achieve the following: (1) provide for safe and secure access on the site, (2) achieve maximum energy efficiency, and (3) reduce impacts or visual intrusions on abutting or nearby properties from spillover and architectural lighting that projects upward.

1. The use of high pressure sodium and metal halide are permitted light sources. Low pressure sodium is not allowed.
2. Exterior lighting fixtures shall be mounted less than or equal to 15 feet from grade to top of fixture in low activity or residential parking lots and 20 feet in medium or high activity parking lots.
3. Levels of exterior illumination for most uses range from 0.5 to 5 footcandles. Areas of higher or lower levels of illumination should be indicated on project plans.

4. Where the light source is visible from outside the property boundaries on an abutting residential use, such lighting shall not exceed 0.5 foot-candle as measured at the abutting residential property line.
5. Interior lighting shall be designed to minimize nighttime glow visible from and/or intruding into nearby properties and shall be shielded to eliminate glare and light spillover beyond the perimeter property line of the development.
6. Light fixtures shall not be located at least 3 feet from curbs and 10 feet from next to driveways or intersections, which to avoid obstructing clear sight distance triangles.
7. Lighting of the building exterior, parking areas and pedestrian ways should be of the lowest intensity and energy use adequate for its purpose, and be designed to focus illumination downward to avoid excessive illumination above the light fixture.

8. Pedestrian and security lighting fixtures shall be directed downward fully shielded. Architectural lighting that projects upward from the ground as used in landscaping, courtyards, or building accent should be directed so as not to affect
abutting land uses onto the building face.

(viii) Non-residential projects, adjacent to residential zoning districts or residential uses, shall use timing devices, dimmers, and/or window shades with timers in order to minimize light glare at night and control lighting levels from exterior and interior lights.

(C) Guidelines

(vii) Unnecessary continued illumination, such as illuminated signs or back-lit awnings, should be avoided. Internal illumination of signs, where allowed, should be limited to letters and graphic elements, with the surrounding background opaque. Illumination should be by low intensity lamps.

(ii) Timing devices should be considered for exterior and interior lights in order to minimize light glare at night without jeopardizing security of employees. At the time of project approval the project applicant must demonstrate how interior and exterior lighting sources will be reduced after operating hours or when the use of the facility is reduced.

SECTION 19. Section 18.23.040 (Late Night Uses and Activities) of Chapter 18.23 (Performance Criteria for Multiple Family, Commercial, Manufacturing and Planned Community Districts) of Title 18 (Zoning) is deleted in its entirety and a new Section 18.42.040 (Lighting) of Chapter 18.42 (Standards for Special Uses) of Title 18 (Zoning) is added as follows:

18.42.040 Late Night Uses and Activities

(A) Purpose

The purpose is to restrict retail or service commercial businesses abutting (either directly or across the street) or within 50 feet of residentially zoned properties or properties with existing residential uses located within nonresidential zones, with operations or activities between the hours of 10:00 p.m. and 6:00 a.m. Operations subject to this code may include, but are not limited to, deliveries, parking lot and sidewalk cleaning, and/or clean up or set up operations, but does not include garbage pick up.

(B) Requirements

(i) Retail (including restaurants) or service commercial businesses abutting or within 50 feet of residentially zoned properties or properties with existing residential uses located within nonresidential zones, that are open or with operations or activities between the hours of 10:00 p.m. and 6:00 a.m. shall be operated in a manner to protect residential properties from excessive noise, odors, lighting or other nuisances from any sources during those hours.

(ii) Where planning or building permits are required or for a change in use that results in any such commercial business in the CN or CS zone districts, operating or with activities between the hours of 10:00 p.m. and 6:00 a.m., a conditional use permit shall be obtained and conditions of approval shall be applied as deemed necessary to ensure the operation is compatible with the abutting (or within 50 feet of) residential property. Said use permit shall be limited to operations or activities occurring between 10:00 p.m. and 6:00 a.m.

(iii) Truck deliveries shall not occur before 6:00 a.m. or after 10:00 p.m., except
pursuant to the provisions of a conditional use permit.

SECTION 20. Section 18.23.050 (Visual, Screening and Landscaping) of Chapter 18.23 (Performance Criteria for Multiple Family, Commercial, Manufacturing and Planned Community Districts) of Title 18 (Zoning) is deleted in its entirety and a new Section 18.40.260 (Visual Screening and Landscaping) of Chapter 18.40 (General Standards and Exceptions) of Title 18 (Zoning) is added as follows:

18.40.260 Visual Screening and Landscaping

(a) Purpose
Utilities, mechanical equipment, service areas, and other site fixtures should be:

(1) Integrated into the site planning and architectural design of a project and surrounding uses
(2) Visually screened from public view and from adjacent properties through architectural design, landscaping and screening devices

Privacy of abutting residential properties or properties with existing residential uses located within nonresidential zones (residential properties) should be protected by screening from public view all mechanical equipment and service areas. Landscaping should be used to integrate a project design into the surrounding neighborhood, and to provide privacy screening between properties where appropriate.

(b) Requirements

(1) For non-residential properties abutting residential uses:
   (i) A solid wall or fence between five and eight feet in height shall be constructed and maintained along the residential property line.
   (ii) Walls facing residential properties shall incorporate architectural design features and landscaping in order to reduce apparent mass and bulk.
   (iii) Loading docks and exterior storage of materials or equipment shall be screened from view from residential properties by fencing, walls or landscape buffers.
   (iv) All required interior yards (setbacks) abutting residential properties shall be planted and maintained as a landscaped screen.

(2) For all project types:
   (i) All areas not covered by structures, service yards, walkways, driveways, and parking spaces shall be landscaped with ground cover, shrubs, and/or trees.
   (ii) Rooftop equipment shall be screened by a parapet or enclosure. Rooftop equipment or rooftop equipment enclosures shall not extend above a height of 15 feet above the roof, and any enclosed rooftop equipment nearest residential property shall be set back at least 20 feet from the building edge closest to the residential property or a minimum of 100 feet from the residential property line, whichever is closer. Roof vents, flues and other protrusions through the roof of any building or structure shall be obscured from ground-level public view (when viewed from the sidewalk on the opposite
side of a street), by a roof screen or proper placement. See Section 18.40.090 (height limit exceptions) for further restrictions.

(iii) For sites abutting residential properties, a solid wall or fence between five and eight feet in height shall be constructed and maintained along the residential property line where privacy or visual impacts are an issue. A minimum 10-foot planting and screening strip shall be provided adjacent to any façade abutting a low density residential district (R-1, R-2, or RMD) or abutting railroad tracks.

(iv) All exterior mechanical and other types of equipment, whether installed on the ground or attached to a building roof or walls, shall be screened-obsured from public view, when viewed from the abutting opposite sidewalk, if visible and feasible, from overhead view.

(v) Windows, balconies or similar openings above the first story should be offset so as not to have a direct line-of-sight into the interior living areas of adjacent units within the project or into units on abutting residential property.

(c) Guidelines

(1) For landscape buffers to provide a visual screen, trees and shrubs in the buffer area shall be installed in a manner that provides maximum visual separation of residential uses from the commercial or industrial use, taking into consideration topography and sight lines from residences.

(2) Size and density of plant materials shall be in proportion to the size of planting areas and the mass of the structure.

(3) Plant material selection shall take into consideration solar orientation, drought tolerance, maintenance requirements and privacy screening.

(4) Plant material species and container sizes shall allow for a mature appearance within five years.

(5) Roof vents, flues and other protrusions through the roof of any building or structure should be clustered where feasible and where visual impacts would thereby be minimized.

(6) Windows, balconies or similar openings above the first story should be offset so as not to have a direct line-of-sight into the interior living areas of adjacent units within the project or into units on abutting residential property.

(7) Building elevations facing residential property should not have highly reflective surfaces, such as reflective metal skin and highly reflective glazing. The paint colors should be in subdued hues.

(8) Increased setbacks or more restrictive daylight planes may be proposed by the applicant, or recommended by the architectural review board, as mitigation for the visual impacts of massive buildings.

(9) Appropriate landscaping should be used to aid in privacy screening.

(10) Planting strips and street trees should be included in the project.

(11) Textured and permeable paving materials should be used, where feasible, in pedestrian, driveway and parking areas in order to visually reduce paved areas and to allow for retention and/or infiltration of storm water to reduce
pollutants in site runoff.

(11) Landscaping material associated with screening should have adequate room to grow and be protected from damage by cars and pedestrian traffic.

(12) Where rooftops are visible from offsite, they should be treated to minimize aesthetic impacts, including the use of rooftop gardens or other green spaces, where feasible.

SECTION 21.  Section 18.23.060 (Noise and Vibration) of Chapter 18.23 (Performance Criteria for Multiple Family, Commercial, Manufacturing and Planned Community Districts) of Title 18 (Zoning) is renumbered without changes to a new Section 18.42.190 (Noise and Vibration) of Chapter 18.42 (Standards for Special Uses) of Title 18 (Zoning).

SECTION 22.  Sections 18.23.070 (Parking) and 18.23.080 (Vehicular, Pedestrian, and Bicycle Site) of Chapter 18.23 (Performance Criteria for Multiple Family, Commercial, Manufacturing and Planned Community Districts) of Title 18 (Zoning) are deleted in their entirety.

SECTION 23.  Section 18.23.090 (Air Quality) of Chapter 18.23 (Performance Criteria for Multiple Family, Commercial, Manufacturing and Planned Community Districts) of Title 18 (Zoning) is renumbered without changes to a new Section 18.40.270 (Air Quality) of Chapter 18.42 (Standards for Special Uses) of Title 18 (Zoning).

SECTION 24.  Section 18.23.100 (Hazardous Materials) of Chapter 18.23 (Performance Criteria for Multiple Family, Commercial, Manufacturing and Planned Community Districts) of Title 18 (Zoning) is renumbered without changes to a new Section 18.42.200 (Hazardous Materials) of Chapter 18.42 (Standards for Special Uses) of Title 18 (Zoning).

SECTION 25.  Section 18.28.060 (Additional PF District Design Requirements) of Chapter 18.28 (Special Purpose (PF, OS, and AC) Districts) of Title 18 (Zoning) is amended as follows:

18.28.060  Additional PF District Design Requirements

The following additional regulations shall apply in the PF district:

(a) Recycling Storage

[. . .]

(f) Objective Design Standards
In addition to the standards for development prescribed above, all multi-family residential and mixed use development in the PF District shall comply with applicable standards and/or intent statements outlined in Chapter 18.24, as defined therein.
SECTION 26. Subchapter 18.30(J) (Affordable Housing (AH) Combining District Regulations) of Chapter 18.30 (Combining Districts) of Title 18 (Zoning) is deleted in its entirety and a new Section 18.32 (Affordable Housing Bonus Incentive Program) is created to read as follows:

Sections:
18.32.010 Specific Purpose
18.32.020 Applicability of Regulations and Affordable Housing Requirement
18.32.030 Definitions
18.32.040 Zoning Map Designation Reserved
18.32.050 Site Development Review Process
18.32.060 Conformance to Other Combining Districts and Retail Preservation
18.32.070 Permitted Uses
18.32.080 Conditional Uses
18.32.090 Development Standards

18.32.010 Specific Purpose

The affordable housing combining district incentive program is intended to promote the development of 100% affordable rental housing projects located within one-half mile of a major transit stop or one-quarter mile of a high-quality transit corridor, as defined in subdivision (b) of Section 21155 of the Public Resources Code, by providing flexible development standards and modifying the uses allowed in the commercial districts and subdistricts.

18.32.020 Applicability of Regulations and Affordable Housing Requirement

(a) The affordable housing incentive program combining district may be combined with the shall apply to properties zoned CD, CN, CS, and CC-districts, set forth in Chapters 18.16 and 18.18 of this Title, in accord with Chapter 18.08 and Chapter 18.80, but excluding the Town and Country Village Shopping Center, Midtown Shopping Center, and Charleston Shopping Center. The affordable housing incentive program shall also apply to all sites eligible for the PTOD overlay and located north of Page Mill Road. Where so combined, the regulations established by this chapter shall apply for 100% affordable housing projects in lieu of the uses allowed and development standards and procedures applied in the underlying district. A property owner may elect to use the site consistent with the underlying district, in which case the applicable regulations in Chapters 18.16 and 18.18 for the commercial districts shall apply. The Town and Country Village Shopping Center, Midtown Shopping Center, and Charleston Shopping Center shall not be considered eligible for the application of the affordable housing combining district.

(b) The affordable housing combining district incentive program provides flexibility in development standards that allow for a density increase that would in most cases exceed density bonuses under state law, Government Code Section 65915. Therefore, a project applicant may utilize the affordable housing combining district incentive program and the
provisions of this chapter as an alternative to use of the state density bonus law implemented through Chapter 18.15 (Residential Density Bonus) of this Title, but may not utilize both the affordable housing combining district incentive program and density bonuses. If an applicant utilizes state density bonus law, the regulations in Chapters 18.16 or 18.18 for the applicable underlying commercial district shall apply.

18.32.030 Definitions

For purposes of this chapter, the following definitions shall apply. (a) "100% affordable housing project" means a multiple-family housing project consisting entirely of for-rent affordable units, as defined in Section 16.65.020 of this code, except for a building manager's unit, and available only to households with income levels at or below 120% of the area median income for Santa Clara County, as defined in Chapter 16.65.

18.32.040 Zoning Map Designation Reserved

The affordable housing combining district shall apply to properties designated on the zoning map by the symbol "AH" within parentheses, following the commercial designation with which it is combined.

18.32.050 Site Development Review Process

All projects shall be subject to architectural review as provided in Section 18.76.020. Projects and shall not be subject to the requirements of site and design review in Chapter 18.30(G). Projects shall not be subject to any other discretionary action, unless the applicant requests amendment to the zoning map or zoning regulations, pursuant to Chapter 18.80 or other modifications or variances that trigger review by the Planning & Transportation Commission and/or City Council.

18.32.060 Conformance to Other Combining Districts and Retail Preservation

The following requirements shall apply to projects in the AH affordable housing combining district-incentive program:
(a) Where applicable, the requirements of Chapter 18.30(A) (Retail Shopping (R) Combining District Regulations), Chapter 18.30(B) (Pedestrian Shopping (P) Combining District Regulations), and Chapter 18.30(C) (Ground Floor (GF) Combining District Regulations), and Pedestrian Shopping (P) Combining Districts shall apply.
(b) Where applicable, the retail preservation requirements of Section 18.40.180 shall apply except as provided below.
(1) Waivers and adjustments
   a. Except in the R or GF combining districts, the City Council shall have the authority to reduce or waive the amount of retail or retail like gross floor area required in Section 18.40.180 for any 100% affordable housing project if the City Council determines that it would be in the public interest. Any such reduction or waiver shall not be subject to the
waiver and adjustments requirements in Section 18.40.180(c). In the R and GF combining districts, any reduction or waiver in retail or retail like gross floor area shall remain subject to the requirements of Section 18.40.180(c) or the combining district as applicable.

b. The City Council shall have the authority to modify retail parking requirements associated with a 100% affordable housing project that also requires ground floor retail.

18.32.070 Permitted Uses

The following uses shall be permitted in the AH affordable housing combining district incentive program:

(a) 100% affordable housing projects;
(b) In conjunction with a 100% affordable housing project, any uses permitted in the underlying district, provided the uses are limited to the ground floor.

18.32.080 Conditional Uses

The following uses may be permitted in the AH affordable housing combining district incentive program in conjunction with an 100% affordable housing project, subject to issuance of a conditional use permit in accord with Chapter 18.76 (Permits and Approvals), provided that the uses are limited to the ground floor:

(a) Business or trade school.
(b) Adult day care home.
(c) Office less than 5,000 square feet when deed-restricted for use by a not-for-profit organization.
(d) All other uses conditionally permitted in the applicable underlying zoning district.

18.32.090 Development Standards

The following development standards shall apply to projects subject to the AH affordable housing combining district incentive program in lieu of the development standards for the underlying zoning district, except where noted below:

Table 1
Development Standards

<table>
<thead>
<tr>
<th>Minimum Site Specifications</th>
<th>AH Combining District (1)</th>
<th>Subject to regulations in:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Area (ft²)</td>
<td>None required</td>
<td></td>
</tr>
<tr>
<td>Site Width (ft)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Depth (ft)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum Setbacks</td>
<td></td>
<td>Setback lines imposed by a special setback map pursuant to Chapter 20.08 of this code may apply</td>
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<td></td>
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<tr>
<td>--------------------------------</td>
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<td></td>
</tr>
<tr>
<td>Front Yard (ft)</td>
<td>Same as underlying district</td>
<td></td>
</tr>
<tr>
<td>Rear Yard (ft)</td>
<td>Same as underlying district</td>
<td></td>
</tr>
<tr>
<td>Rear Yard abutting residential zoning district (ft)</td>
<td>Same as underlying district</td>
<td></td>
</tr>
<tr>
<td>Interior Side Yard if abutting residential zoning district (ft)</td>
<td>Same as underlying district</td>
<td></td>
</tr>
<tr>
<td>Street Side Yard (ft)</td>
<td>Same as underlying district</td>
<td></td>
</tr>
<tr>
<td>Build-to-Lines</td>
<td>Same as underlying district</td>
<td></td>
</tr>
<tr>
<td>Permitted Setback Encroachments</td>
<td>Same as underlying district</td>
<td></td>
</tr>
</tbody>
</table>

**Maximum Site Coverage**

None Required

**Landscape/Open Space Coverage**

20% (2)

**Usable Open Space**

25 sq ft per unit for 5 or fewer units(2), 50 sq ft per unit for 6 units or more(2)

**Maximum Height (ft)**

50'

Within 50 ft of a R1, R-2, RMD, RM-20, or RM-30 zoned property

35'(3)

**Daylight Plane for lot lines abutting one or more residential zoning districts**

Daylight plane height and slope shall be identical to those of the most restrictive residential zoning district abutting the lot line

**Maximum Residential Density (net)**

None Required

**Maximum Residential Floor Area Ratio (FAR)**

Residential Portion of a Project

2.0:1

**Maximum Non-Residential FAR**

0.4:1
| **Vehicle Parking** | 0.75 per unit. The Director may modify this standard based on findings from a parking study that show fewer spaces are needed for the project. The required parking ratio for special needs housing units, as defined in Section 51312 of the Health and Safety Code shall not exceed 0.3 spaces per unit. | Adjustments to the required ratios shall be considered per Chapter 18.52 (Parking). For Commercial Uses, See Chapters 18.52 and 18.54 (Parking). |
| **TDM Plan** | A transportation demand management (TDM) plan shall be required pursuant to Section 18.52.050(d) and associated administrative guidelines | 18.52.050(d) |

Notes:
(1) These developments shall be designed and constructed in compliance with the performance criteria outlined in Chapter 18.23, as well as the context-based design criteria outlined in Section 18.13.060 for residential only projects, Section 18.16.090 for mixed use projects in the CN, CC, and CS districts, and Section 18.18.110 for mixed use projects in the CD district objective design standards in Section 18.24. For projects undergoing discretionary review, provided that more restrictive regulations may be recommended by the architectural review board and approved by the director of planning and community environment, pursuant to Section 18.76.020.
(2) Landscape coverage is the total area of the site covered with landscaping as defined in Chapter 18.04. For the purposes of this Chapter 18.3230(h), areas provided for usable open space may be counted towards the landscape site coverage requirement. Landscape and open space areas may be located on or above the ground level, and may include balconies, terraces, and rooftop gardens.
(3) The Planning Director may recommend a waiver from the transitional height standard.

**SECTION 27.** Subchapter 18.30(K) (Workforce Housing (WH) Combining District Regulations) of Chapter 18.30 (Combining Districts) of Title 18 (Zoning) is deleted in its entirety and a new Chapter 18.33 (Workforce Housing Incentive Program) is created to read as follows:

Sections:
18.33.010 Specific purpose
18.33.020 Applicability of Regulations and Affordable Housing Requirement
**18.33.010 Specific Purpose**

The purpose of the workforce housing combining district is to incentivize development of new housing that is affordable to the local workforce. This combining district promotes the development of such housing projects located within one-half mile radius of a major fixed-rail transit stop by providing flexible development standards and modifying the uses allowed in the public facilities (PF) district.

**18.33.020 Applicability of Regulations and Affordable Housing Requirement**

The workforce housing incentive program combining district may be combined with shall apply to properties in the public facilities (PF) zoning district set forth in Chapter 18.28 of this title, in accord with Chapter 18.08 and Chapter 18.80, which are located on any parcel that is located within one-half mile radius of a major fixed-rail transit station platform with the exception of sites in park use or being used for outdoor recreational purpose or within 25 feet of such a use at the time of adoption of this chapter. Where so combined, the regulations established by this chapter shall apply for workforce housing projects in lieu of the uses allowed and development standards and procedures applied in the underlying PF district. A property owner may elect to use the parcel consistent with the underlying district, in which case the regulations in Chapter 18.28 for the PF district shall apply.

**18.33.030 Definitions**

For purposes of this chapter, the following definitions shall apply:
(a) "Workforce housing" means a multi-family rental housing project in which at least 20% of the units, excluding any required below-market-rate units, are affordable to households earning more than 120% of area median income (AMI) up to and including 150% of AMI.

**18.33.040 Zoning Map Designation Reserved**

The workforce housing combining district shall apply to properties designated on the zoning map by the symbol "WH" within parentheses, following the public facilities (PF) district designation with which it is combined.
18.33.050 Site Development Review Process

All projects shall be subject to architectural review as provided in Section 18.76.020, except that Projects proposing nine units or more shall not be subject to site and design review under Chapter 18.30(G). Projects shall not be subject to any other discretionary action, unless the applicant requests amendment to the zoning map or zoning regulations, pursuant to Chapter 18.80 or other modifications or variances that trigger review by the Planning & Transportation Commission and/or City Council.

18.33.060 Permitted Uses

(a) The following uses shall be permitted in the WH combining district incentive program:
   (1) Workforce housing;
   (2) Incidental retail and/or community center space on the ground floor only when provided in conjunction with workforce housing and not to exceed 10% of the total gross floor area of the site;
   (3) All other uses permitted in the underlying district, subject to the development standards for the underlying district.

(b) The uses in subsections (a)(1) and (a)(2) above shall not be used in combination with (a)(3).

18.33.070 Development Standards

(a) Where the WH combining district is combined with the public facilities district incentive program applies, the following development standards shall apply for workforce housing projects, including permitted incidental uses, in lieu of the development standards for the underlying PF zoning district:

Table 1
Development Standards

<table>
<thead>
<tr>
<th>WH Combining District</th>
<th>Minimum Site Specifications</th>
<th>Subject to regulations in:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Site Area (ft)</td>
<td>None required</td>
</tr>
<tr>
<td></td>
<td>Site Width (ft)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Site Depth (ft)</td>
<td></td>
</tr>
<tr>
<td><strong>Minimum Setbacks</strong></td>
<td></td>
<td>Setback lines imposed by a special setback map pursuant to Chapter 20.08 of this code may apply</td>
</tr>
<tr>
<td>Front Yard (ft)</td>
<td>10 feet; may be increased to 20 feet by decisionmaking body (1)</td>
<td></td>
</tr>
</tbody>
</table>
**NOT YET ADOPTED**

<table>
<thead>
<tr>
<th><strong>Rear Yard (ft)</strong></th>
<th><strong>10'(2)</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Interior Side Yard</strong></td>
<td><strong>5'(2)</strong></td>
</tr>
<tr>
<td><strong>Interior Side Yard if abutting residential zoning district (ft) (other than an RM-40 or PC zone)</strong></td>
<td><strong>10'(2)</strong></td>
</tr>
<tr>
<td><strong>Street Side Yard (ft)</strong></td>
<td><strong>5 feet; may be increased to 10 feet by decisionmaking body (1)</strong></td>
</tr>
</tbody>
</table>

| **Maximum Site Coverage** | **None Required** |
| **Landscape/Open Space Coverage** | **20%(3)** |
| **Usable Open Space(4)** | **75 square feet (sf) per unit 18.24.040** |

| **Maximum Height (ft)** | **Standard 50'** |
| **Within 150 ft. of a residential district (other than an RM-40 or PC zone) abutting or located within 50 feet of the site** | **35', except as limited by applicable daylight plane requirements 18.08.030** |

| **Daylight Plane for lot lines abutting one or more residential zoning districts** | **Daylight plane height and slope shall be identical to those of the most restrictive residential zoning district abutting the lot line** |
| **Maximum Residential Density (net)** | **None Required** |
| **Maximum Residential Floor Area Ratio (FAR) - Residential-Only or Mixed Use Projects** | **2.0:1** |
| **Maximum Unit Size** | **750 sf** |

| **Vehicle Parking** | Parking requirements shall be no less than one space per unit or bedroom, whichever is greater. The decisionmaking body may reduce this standard based on a parking study. Any incidental retail or community center space shall be subject to the parking requirements outlined in Chapter 18.52. |

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### 18.33.080 Additional WH Combining District Regulations

(a) Affordability requirement. At least 20% of the units in a workforce housing project, excluding any required below-market-rate units, shall be affordable to households earning up to and including 150% of area median income (AMI).

(b) BMR provisions applicable. The below market rate housing requirements set forth in Chapter 16.65 of Title 16 of this code shall apply to workforce housing projects. Any BMR units provided will not be counted toward the total number of units in a workforce housing project for purposes of calculating the number of workforce affordable units required under subsection (a) above.

(c) Continued affordability. All workforce housing units provided under subsection (a) above shall be subject to a deed of trust or regulatory agreement recorded against the property for execution by the City Manager in a form approved by the City Attorney, to ensure the continued affordability of the workforce housing units. All workforce housing units shall remain affordable to the targeted income group for 99 years.

(d) Local workforce preference. All residential units within a workforce housing project shall be offered first to eligible households with at least one household member who currently lives or whose place of employment is within a three mile radius of the project or within the City of Palo Alto. If units remain unoccupied after offers are made to this first

### Bicycle Parking

<table>
<thead>
<tr>
<th>Bicycle parking requirements shall be in accordance with Section 18.52.040.</th>
</tr>
</thead>
</table>

### TDM Plan

| A transportation demand management (TDM) plan shall be required and shall comply with the TDM pursuant to Section 18.52.050(d), associated administrative guidelines, and the decisionmaking body. |

**Notes:**

1. A 12-foot sidewalk width is required along El Camino Real frontage.
2. In order to encourage below-grade parking, garage ramps and subterranean structures may encroach into the required setback provided that sufficient landscaping is still provided between the project site and adjacent properties.
3. Landscape/open space may be any combination of landscaping or private and common open spaces.
4. Useable open space includes a combination of common and private open space.

(b) These developments shall be subject to objective design standards in Section 18.24. For projects undergoing discretionary review, the performance criteria outlined in Chapter 18.23, as well as the context-based design criteria outlined in Section 18.13.090 for residential projects, provided that more restrictive regulations may be recommended by the architectural review board and approved by the director, pursuant to Section 18.76.020.
category, those units shall be offered to eligible households with at least one household member whose place of employment is within one-half mile of a major fixed-rail transit stop.

SECTION 28. Section 18.34.040 (Pedestrian and Transit Oriented Development (PTOD) Combining District Regulations) of Chapter 18.34 (Pedestrian and Transit Oriented Development (PTOD) Combining District Regulations) of Title 18 (Zoning) is amended as follows:

18.34.040 Pedestrian and Transit Oriented Development (PTOD) Combining District Regulations

(a) Properties in the PTOD combining district are subject to the following regulations:

<table>
<thead>
<tr>
<th>TABLE 2</th>
<th>DEVELOPMENT STANDARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standards</td>
<td>PTOD - California Avenue</td>
</tr>
<tr>
<td>Max. Dwelling Units:</td>
<td>40 DU/AC 2</td>
</tr>
<tr>
<td>Max. FAR:</td>
<td></td>
</tr>
<tr>
<td>100% Residential FAR</td>
<td>1.0:1 2</td>
</tr>
<tr>
<td>Mixed Use FAR</td>
<td>1.25:1 23</td>
</tr>
<tr>
<td>Mixed Use Non-Residential FAR Cap</td>
<td>Total: 0.35 4 Office and research and development uses: 0.25 FAR</td>
</tr>
<tr>
<td>Hotels</td>
<td>2.0</td>
</tr>
<tr>
<td>Height:</td>
<td>40 feet</td>
</tr>
<tr>
<td>Open Space:</td>
<td></td>
</tr>
<tr>
<td>Minimum area required</td>
<td>5 or fewer units: 200 s.f. per unit 6 or more units: 100 s.f. per unit</td>
</tr>
<tr>
<td>Minimum dimensions</td>
<td>Private open space: 6 feet Common open space: 12 feet</td>
</tr>
<tr>
<td>Parking:</td>
<td>Rates established by use, per Chs. 18.52 and 18.54</td>
</tr>
<tr>
<td>Parking Adjustments:</td>
<td>See Section 18.34.040(d)</td>
</tr>
<tr>
<td>Setbacks and daylight plane requirements for properties adjacent to R-1 and R-2 zones:</td>
<td></td>
</tr>
<tr>
<td>Setbacks</td>
<td>On portion of site that abuts: 1. Interior side yard: 6 feet 2. Rear yard: 20 feet</td>
</tr>
</tbody>
</table>
Daylight Plane

<table>
<thead>
<tr>
<th>Setbacks and daylight and daylight plane requirements for properties adjacent to Caltrain Right-of-Way:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Setbacks</strong></td>
</tr>
<tr>
<td><strong>Daylight Plane</strong></td>
</tr>
</tbody>
</table>

**Footnotes:**

1. Non-residential development that is not consistent with the mixed-use limitations set forth above, with the exception of hotels, must be developed per the underlying zoning district regulations.
2. See Section 18.34.040 (e) for Below Market Rate (BMR) bonus provisions.
3. The residential component of the mixed use may not exceed 1.0:1.
4. The non-residential component of a mixed use project shall not exceed 50% of the total square-footage of the project.

(b) Live/Work Units

1. A live/work unit, for the purposes of this chapter, is defined as a rental or ownership unit comprised of both living space and work area, with the living space occupying a minimum of 60% of the total gross floor area of the unit, and such that the resident of the living space is the owner/operator of the work area.
2. The work area shall be located on the ground level, oriented to the street and provide for at least one external entrance/exit separate from the living space. The work area may be used for office, retail, personal services, or handcrafted goods (unless otherwise limited by this chapter), but shall not be used for restaurants or cafes or for any business involving the storage or use of hazardous materials in excess of the quantities allowed by Title 15 of the Municipal Code (Section 105.8 of the Fire Code).
3. The maximum number of employees who do not reside within the unit is two.
4. The signage shall not exceed the requirements of the City of Palo Alto Municipal Code and shall require approval and recommendation by the architectural review process prior to approval by the director.
5. The parking requirements shall include a maximum total of two spaces for the residential unit, plus one space per 200 square feet for the gross square footage of the work area.
area, less one space from the total (to reflect the overlap of the resident and one employee).

(6) The live/work units are subject to the development standards of the PTOD zone outlined in Table 2 for a 100% residential development, except that the maximum non-residential FAR is limited to 0.40.

(7) The maximum size of a live/work unit shall be limited to 2,500 square feet.

(8) The design of street frontage of a live/work unit shall be consistent with the context-based criteria outlined for street frontage in Section 18.34.050 below.

(8) (9) A live/work unit may be converted to an entirely residential unit where residential use on the ground floor is not otherwise prohibited.

(c) Hotels

(1) Hotels for the purpose of this section are defined as hotels, motels, or other lodging for which City of Palo Alto transient occupancy tax is collected, consistent with the provisions and limitations outlined in Section 18.16.060(d) for hotels in commercial zoning districts.

(2) Hotels may be constructed to a maximum FAR of 2.0 and a maximum height of 50 feet.

(3) All hotels are subject to the objective design standards in Chapter 18.24 context-based design criteria outlined in Section 18.34.050 below.

(d) Parking Adjustments

Adjustments to the required parking standards may be allowed with the director's approval pursuant to the provisions outlined in Section 18.52.050, with the following additional allowances and requirements:

(1) For multi-family residential or mixed use projects on sites rezoned to the PTOD combining district, the director may waive a portion of or all guest parking requirements, and may waive any requirement to provide a landscape reserve for parking, subject to the following conditions:

(A) The project includes a minimum of four residential units;
(B) The average residential unit size is 1,250 square feet or less; and
(C) Not more than one parking space per residential unit shall be assigned or secured, such that other required parking spaces are available to other residents and guests.

(2) Projects providing more than 50% of the project residential units at low or very-low income housing rates may further reduce parking requirements by an additional 20%.

(3) In no case, however, shall total parking requirements for the site be reduced by greater than 30% from the standard requirements, or by greater than 40% for an affordable housing project consistent with subdivision (2) above, or by more than 50% if housing for the elderly is proposed pursuant to Section 18.52.050(d) of the Zoning Ordinance.

(4) For any request for parking adjustments, the project applicant shall indicate parking and traffic demand measures to be implemented to reduce parking need and trip generation. Measures may include, but are not limited to: limiting "assigned" parking to one space per residential unit, providing for Caltrain and/or other transit passes, or other...
measures to encourage transit use or to reduce parking needs. The program shall be proposed to the satisfaction of the director, shall include proposed performance targets for parking and/or trip reduction, and shall designate a single entity (property owner, homeowners association, etc.) to implement the proposed measures. Monitoring reports shall be submitted to the director not later than two years after building occupancy and again not later than five years after building occupancy, noting the effectiveness of the proposed measures as compared to the initial performance targets and suggestions for modifications if necessary to enhance parking and/or trip reductions.

(e) Density, FAR, and Height Bonus Provisions
The following provisions are intended to allow for increased density, FAR, height, and other development bonuses upon construction of additional below market rate (BMR) housing units. The bonus allowances shall be allowed subject to the following limitations:

1. Bonuses are only applicable where below market rate (BMR) units are provided in excess of those required by Palo Alto’s BMR program as set forth in Section 18.14.030(a) and Program H-3.1.2 of the Housing Element. Key elements of the BMR Program include:
   - A: Five or more units: Minimum 15% of units must be BMR units;
   - B: Five or more acres being developed: Minimum 20% of units must be BMR units; and
   - C: BMR units shall meet the affordability and other requirements of Program H-3.1.2 and the city’s BMR Program policies and procedures.

2. The following BMR bonuses shall be considered and may be approved upon rezoning to the PTOD district:
   - A: Density Increase: Density may be increased above the maximum base density allowed (40 units per acre), such that at least one additional BMR unit is provided for every three additional market rate units constructed. The resultant density may not exceed fifty units per acre. Density shall be calculated based on the gross area of the site prior to development.
   - B: FAR Increase: For projects with a residential density greater than thirty units per acre, the allowable residential FAR may be increased. The FAR increase shall be equivalent to 0.05 for each additional 5% (in excess of the city requirements) of the total number of units that are proposed as BMR units, but may not exceed 50% of the residential FAR prior to the bonus, and may not exceed a total FAR of 1.5.
   - C: Height Increase: For projects with a residential density greater than 30 units per acre, the allowable project height may be increased. The height increase shall be equivalent to one foot above the maximum for each additional 5% (in excess of the city requirements) of the total number of units that are proposed as BMR units, but may not exceed a maximum height (50 feet).
   - D: Other incentives for development of BMR units, such as reduced setbacks and reduced open space, may be approved where at least 25% of the total units constructed are BMR units and subject to approval by the architectural review board.

3. The provisions of this section are intended to address the density bonus requirements of state law within the PTOD District. The maximum bonus density available
under this section shall be the greater of the bonus density allowed under this chapter or under the city’s density bonus provisions contained in Chapter 18.15.

**SECTION 29.** Section 18.34.050 (Pedestrian and Transit Oriented Development (PTOD) Combining District Context-Based Design Criteria) of Chapter 18.34 (Pedestrian and Transit Oriented Development (PTOD) Combining District Regulations) of Title 18 (Zoning) is deleted in its entirety and restated to read as follows:

18.34.110 Pedestrian and Transit Oriented Development (PTOD) Combining District Context-Based Objective Design Standards Criteria

In addition to the standards for development prescribed above, all development in the PTOD combining district shall comply with applicable standards and/or intent statements outlined in Chapter 18.24, as defined therein.

**SECTION 30.** Section 18.40.130 (Landscaping) of Chapter 18.40 (General Standards and Exceptions) of Title 18 (Zoning) is amended as follows:

18.40.130 Landscaping

(a) Purpose

The purpose of this section is to encourage creative and sustainable landscape design that enhances structures, open space areas, streetscapes and parking areas. Sustainable landscape design preserves native plant species to the maximum extent feasible, consumes less water and provides permeable surfaces for storm water management and groundwater recharge. Tree shading and appropriate landscape design can contribute to economic vitality and public health, and can reduce the need for frequent infrastructure repair.

Landscaping provides recreation areas, cleans the air and water, prevents erosion, offers fire protection, replaces ecosystems displaced by development, and is water efficient.

(b) General Regulations

In addition to the provisions of this section, all projects shall adhere to the landscape requirements cited elsewhere in Title 18 (Zoning Ordinance), including but not limited to:

1. Design Standards - General Parking Facilities (Section 18.54.020).
2. Design Standards - Landscaping in Parking Facilities and Required Landscape Areas (Section 18.54.040).
3. Architectural Review Findings (Section 18.76.020).

(c) Natural Areas (Open Space District, Hillside Lands, Baylands, Creek and Riparian Areas) Landscaping should retain or enhance native vegetation in hillside, baylands or other natural open spaces areas or adjacent to such areas. The existing natural vegetation and land formations should remain in a natural state unless modification is found to be necessary or appropriate for a specific use allowed through architectural or site design review.
(1) In the selection of new landscaping, preference shall be given to natural, indigenous and drought resistant plants and materials. Non-indigenous landscaping should be limited to the immediate area around a structure or structures.

(2) Site development plans shall, to the maximum extent feasible, provide for the retention of existing vegetation and land formations, and shall include an erosion and sediment control element setting forth reasonable mitigation measures in accord with the grading and subdivision ordinances of the city.

(3) Landscaping shall, to the maximum extent feasible, integrate and accommodate existing trees and vegetation to be preserved; make use of water-conserving plants, materials and irrigation systems; and be clustered in natural appearing groups, as opposed to being placed in rows or regularly spaced.

(4) Colors of roofing materials shall blend with the natural landscape and be nonreflective. All roof mounted equipment shall be screened in a manner that protects the viewshed from adjacent properties, including from views from above.

(5) Planting of invasive plant species shall not be permitted and removal of invasive species may be required as part of landscape plan requirements.

(6) To the maximum extent feasible, existing vegetation shall be retained or enhanced to maintain contiguous wildlife habitat.

(7) Riparian vegetation shall be retained or enhanced within natural stream corridors, and best practices for development shall be used to protect riparian habitat and water quality of adjacent streams.

(d) Low-Density Residential Landscaping Design Standards

(1) In the R-1, R-2, and RMD zones, a minimum of 50% of the required front setback area shall be landscaped, subject to the limitations of Section 18.12.040(h). Planted in the right-of-way shall not count towards fulfillment of the required landscape area.

(2) Street trees may be required to be planted in the right-of-way frontage of any residential structure subject to individual review for a new second story or addition to a second story, or for other discretionary review in the R-1, R-2, or RMD zones.

(3) Trees planted near public bicycle trails or curbs shall be of a species and installed in a manner that prevents physical damage to sidewalks, curbs, gutters and other public improvements.

(4) Trees and shrubs shall be planted so that at maturity they do not interfere with service lines (a minimum of five feet from water lines and ten feet from sanitary sewer lines) and traffic safety visibility areas.

(5) All proposed light wells and below-grade basements shall be screened to minimize visibility from public rights-of-way or other public properties.

(e) Special Design and Landscaping Standards for All Zoning Districts

Requirements:

(1) Utilities (e.g., transformer cabinets, pads, fiber optic trenching and above ground cabinets, large water check valves) and underground utilities shall not be placed within required landscaped areas, except where they will not preclude appropriate
planting of trees and will be predominantly screened from public view.

(2) All landscaping within multi-family, commercial, and industrial zoning districts shall be equipped with automatic irrigation systems. Backflow preventers shall be located in the rear or side yard and screened from public view by landscaping. If backflow preventers must be located in the front yard for access purposes, they should be located near the main structure to the maximum extent feasible, and shall be predominantly screened from public view.

(3) For all development within commercial and industrial zoning districts, lawn areas shall not exceed 15 percent of the planting area on a property. Required common areas, active recreation areas, and areas located within the public right-of-way between the curb and public sidewalk shall not count against such lawn area.

(4) Landscaping within surface parking areas shall include tree plantings designed to result in 50 percent shading of parking lot surface areas within 15 years.

(4) All required perimeter yards shall be landscaped. The landscaping of these yards shall, at a minimum, consist of a combination of living vegetation, such as trees, shrubs, grasses or ground cover materials. The director may, however, allow a combination of hardscape and landscape to satisfy landscape requirements where the visual quality and screening functions of the hardscape/landscape area are maintained. Landscape buffering and screening shall be designed to create compatible relationships of scale and appearance with neighboring properties.

(5) Plant material shall be maintained in a healthy, disease-free, growing condition at all times. All required planting areas shall be maintained free of weeds, debris, and litter. The planning director may specify conditions of approval to assure that dead or diseased plantings are replaced in a timely manner and with adequate replacement plantings.

(f) Guidelines:

(1) Rooftop gardens, edible gardens, and other sustainable agricultural landscaping alternatives are encouraged for multi-family, commercial, industrial, and multi-family developments. See supplementary standards in Chapter 18.40.230: Rooftop Gardens. Rooftop gardens are particularly encouraged where the rooftop is highly visible from neighboring properties.

(2) Structural soils, as specified by the director of planning and community environment, shall be preferred where planting in compacted soil areas, such as parking lots and sidewalks.

(3) Landscape swales, permeable pervious paving and other landscape features should be incorporated into site design to the maximum extent feasible to accommodate filtration of storm water runoff from impervious areas, particularly from parking lots.

(4) All projects requiring discretionary review within the multi-family, commercial, or industrial zoning districts should, where feasible, pursuant to Section 16.12: Recycled Water, and include the following:

(a) Incorporation of recycled water usage into the design of landscape and irrigation systems.
(b) Consideration of plants suitable for irrigation with recycled water.

c) The installation of the infrastructure necessary to connect the irrigation system to the city's recycled water supply, if available in the foreseeable future.

(5) The director may allow a combination of hardscape and landscape to satisfy landscape requirements where permeable surface materials are used and where the visual quality and screening functions of the hardscape/landscape area are maintained, as specified in the conditions of approval.

SECTION 31. Subdivision (d) of Section 18.52.040 (Off-Street Parking, Loading and Bicycle Facility Requirements) of Chapter 18.52 (Parking and Loading Requirements) of Title 18 (Zoning) is amended as follows:

18.52.040 Off-Street Parking, Loading and Bicycle Facility Requirements

[. . .]

(d) Residential and mixed use structures with fifty (50) or more dwelling units shall provide at least one (1) on-site, short-term loading space for passenger vehicles, to be used by taxicabs and similar transportation and delivery services.

SECTION 32. Section 18.54.015 (Definitions) of Chapter 18.54 (Parking Facility Design Standards) of Title 18 (Zoning) is added as follows:

18.54.015 Definitions

The definitions provided in Section 18.52.020 shall apply to this Chapter 18.54.

SECTION 33. Subsection (c) of Section 18.54.070 (Parking Tables and Figures) of Chapter 18.54 (Parking Facility Design Standards) of Title 18 (Zoning) is amended as follows:

[. . .]

(c) Off-Site Parking

Parking required by this chapter may be provided by off-site parking, provided that such off-site parking is within 500 feet of the site, within a reasonable distance of the assessment district, within a reasonable distance of the assessment district boundary, and approved in writing by the director of planning and community environment. The director shall assure that sufficient covenants and guarantees are provided to ensure use and maintenance of such parking facilities, including an enforceable agreement that any development occurring on the site where parking is provided shall not result in a net reduction of parking spaces provided, considering both the parking previously provided and the parking required by the proposed use.

[. . .]
SECTION 34. Subdivisions (a) and (b) of Section 18.54.020 (Vehicle Parking Facilities) of Chapter 18.54 (Parking Facility Design Standards) of Title 18 (Zoning) is amended as follows:

18.54.020  Vehicle Parking Facilities

(a) Parking Facility Design
Parking facilities shall be designed in accordance with the following regulations:

1. Requirements for dimensions of parking facilities at, above, and below grade are contained in this section and in Figures 1-6 and Tables 3-6 of Section 18.54.070.

2. Stalls and aisles shall be designed such that columns, walls, or other obstructions do not interfere with normal vehicle parking maneuvers. All required stall and aisle widths shall be designed to be clear of such obstructions.

3. The required stall widths shown in Table 3 of Section 18.54.070 shall be increased by 0.5 foot for any stall located immediately adjacent to a wall, whether on one or both sides. The director may require that the required stall widths be increased by 0.5 foot for any stall located immediately adjacent to a wall, where such post limits turning movements into or out of the stall.

4. For property owners or tenants seeking to install EVSE, the required stall widths shown in Table 3 of Section 18.54.070 may be reduced by no more than eighteen inches below the code required minimum dimensions in order to accommodate EVSE or associated electrical utility equipment. This reduction may be applied to 10% of the total required parking stalls, or two stalls, whichever is greater. The director may approve a reduction in width for a greater number of stalls through a director’s adjustment pursuant to Section 18.52.050.

5. Dead-end aisles shall be avoided to the greatest extent feasible.

6. Except for at-grade parking facilities serving a maximum of two dwelling units, all parking facilities shall be set back a sufficient distance from the street so that vehicles need not back out into or over a public street (not including an alley) or sidewalk.

7. Surface parking areas shall be located so that garages or carports are not predominantly facing the street; parking locations behind the building(s) are preferable.

8. Carport structures shall be architecturally compatible with the main structures in the project and should utilize substantial support posts. Landscaping material associated with the carport shall have adequate room to grow and be protected from damage by cars and pedestrian traffic.

9. Except for single-family uses, parking should be underground, semi-depressed, enclosed or concealed for all projects to the extent feasible.

10. Where feasible, parking shall be broken into smaller groupings of spaces to avoid large expanses of parking and to provide for more opportunities to intercept and filter drainage from the parking areas.

11. Proximity of underground parking garages to residentially zoned properties should take into consideration the need for landscaping along the perimeter of the site. In instances where substantial planting is necessary, the placement of parking garages should be adequately setback from the property line to provide for the landscaping.
(b) Off-Street Parking Stalls

(1) Each off-street parking stall shall consist of a rectangular area not less than eight and one-half (8.5) feet wide by seventeen and one-half (17.5) feet long (uni-class stall), or as otherwise prescribed for angled parking by Table 1 in Section 18.54.070.

(2) Garages and carports for single-family and two-family development shall provide a minimum interior clearance of ten (10) feet wide by twenty (20) feet long for a single car and a minimum of twenty (20) feet wide by twenty (20) feet long for two cars to allow sufficient clearance.

(3) Dimensions of parking stalls for parallel parking shall be as follows. The minimum dimensions of such a stall located adjacent to a wall shall be ten feet wide and twenty feet long. The minimum dimensions of such a stall located adjacent to a curb with a minimum two-foot clearance to a wall shall be eight feet wide and twenty feet long. These required stall widths are in addition to the required width of the access driveway or aisle.

(4) Mechanical lifts may be used to satisfy off-street parking requirements, subject to approval by the director or city council, as applicable, and in accordance with the following provisions:

A. The regulations in this section apply to mechanical lifts, elevators and turn-around devices specified for vehicle use, and other mechanical devices that facilitate vehicle parking;

B. Mechanical vehicle lifts may be used for multi-family residential, office, hotel, automotive, industrial or institutional uses. Other uses may use mechanical vehicle lifts subject to approval from the Director of Planning and Community Development and may be required to provide dedicated on-site valet assistance for no fee to the user.

C. The location of mechanical lifts shall be located within an enclosed parking facility. All lifts and associated equipment shall be screened from public views and the screening shall be architecturally compatible with the site conditions;

D. Applicant shall submit an analysis and report, prepared by a qualified professional, for review and approval by the Director of Planning and Community Environment that demonstrates the effectiveness of the proposed parking lift system; operational details; schematic or technical drawings; regular and emergency maintenance schedule, procedures and backup systems; vehicle queuing, access and retrieval efficiency; and potential impacts, delays, or inconveniences to all of the following:

i. site residents, workers, and visitors

ii. pedestrian and bicycle movement and safety on and nearby the site

iii. vehicular movement and safety on and nearby the site

E. Mechanical car lifts shall not be used for accessible parking spaces or loading spaces;

F. Mechanical car lifts shall accommodate mid-size sport utility vehicles and full-size cars.

G. For all non-residential uses, a minimum of two spaces or 10% of the total number of parking spaces provided, whichever is greater, shall be provided as standard
non-mechanical parking spaces. The required accessible spaces shall not be counted as one of the standard spaces for this requirement;

H. Additional information, reports and analysis may be required and conditions may be imposed to ensure the use, operation and function of the lift system is not detrimental to the public welfare, property, land uses and users of the property, other properties, or the public right of way, in the general vicinity.

I. Lift design must allow for removal of any single vehicle without necessitating the temporary removal of any other vehicle

J. The Director shall have authority to adopt regulations to implement this provision.

(5) Each off-street motorcycle parking stall shall consist of a rectangular area not less than five feet wide by ten feet long, as illustrated in Figure 7 of Section 18.54.070.

[...]

SECTION 35. Subdivision (c) of Section 18.54.050 (Miscellaneous Design Standards) of Chapter 18.54 (Parking Facility Design Standards) of Title 18 (Zoning) is amended as follows:

18.54.050 Miscellaneous Design Standards

[...]

(c) Additional Parking Facility Design Requirements

(1) Site design shall assure that connections to adjacent existing or planned bicycle or pedestrian facilities (sidewalks, bike paths or lanes, etc.) allow for ready access for residents and other users of the site.

(2) The location of driveways, shipping and receiving areas, and loading docks should be sited as far away from residentially zoned properties or properties with existing residential uses located within nonresidential zones as is reasonably feasible while recognizing site constraints and traffic safety issues.

(3) Employee ingress and egress to a site should be located to avoid the use of residential streets wherever feasible.

(4) Late hour and early morning truck traffic to a site located in or near a residential area should be discouraged.

(5) Vehicular access points should not conflict with pedestrian and bicycle walkways and facilities.

(6) Pedestrian and bicycle facilities (sidewalks, bike paths, etc.) should, where feasible, be provided through sites to provide connections to other pedestrian and bicycle routes and to allow for safe access to schools, recreation facilities and services.

(7) Additional requirements for parking facility design, internal layout, acceptable turning radii and pavement slope, vehicular and pedestrian circulation, and other design features may be adopted by the director when deemed appropriate.

[...]
SECTION 36. Subsection (b) of Section 18.76.020 (Architectural Review) of Chapter 18.76 (Permits and Approvals) of Title 18 (Zoning) is amended as follows:

18.76.020 Architectural Review

[...]

(b) Applicability
No permit required under Title 2, Title 12 or Title 16 shall be issued for a major or minor project, as set forth in this section, unless an application for architectural review is reviewed, acted upon, and approved or approved with conditions as set forth in Section 18.77.070.

(1) Exempt Projects. The following projects do not require architectural review:

(A) Single-family and two-family residences, except as provided under subsections (b)(2)(C) and (b)(2)(D).

(B) Projects determined by the director of planning and development services to be substantially minor in nature and have inconsequential visual impacts to the adjacent properties and public streets. These exempt projects are referred to as "over the counter projects". The director shall have the authority to promulgate a list of such exempt projects under this subsection.

(C) Housing development projects, as defined in Government Code Section 65589.5(h)(2) (the Housing Accountability Act), but only to the extent such projects comply with all objective standards in this code and thereby qualify for streamlining under Government Code sections 65589.5, 65913.4, or 65905.5. Such projects shall be subject to the process set forth in Section 18.77.073.

(2) Major Projects. The following are "major projects" for the purposes of the architectural review process set forth in Section 18.77.070, and are subject to review by the architectural review board:

(A) New construction, including private and public projects, that:

(i) Includes a new building or building addition of five thousand square feet or more; or

(ii) Is not exempt under the California Environmental Quality Act (CEQA) (Section 21000 et seq. of the California Public Resources Code); or

(iii) Requires one or more variances or use permits and, in the judgment of the director, will have a significant effect upon the aesthetic character of the city or the surrounding area;

(B) Any multiple-family residential construction project that contains three or more units;

(C) Construction of three or more adjacent single-family homes or duplexes;

(D) In the Neighborhood Preservation Combining District (NP), properties on which two or more residential units are developed or modified, except when one of those units is an “accessory dwelling unit,” as described in Section 18.10.140(d);

(E) Any project using transferred development rights, as described in Chapter 18.18;

(F) A master sign program, pursuant to Chapter 16.20;
(G) Signs that do not meet all applicable design guidelines adopted by the city council or do not conform to a previously approved master sign program;

(H) Signs requiring a sign exception pursuant to Chapter 16.20;

(I) Any minor project, as defined in subsection (3), that the director determines will significantly alter the character or appearance of a building or site.

(3) Minor Projects. The following are "minor projects" for the purposes of the architectural review process set forth in Section 18.77.070, except when determined to be major pursuant to subsection (2)(I) or exempt pursuant to subsection (1)(B):

(A) New construction, including private and public projects, that involves a new building or building addition of fewer than 5,000 square feet, and which is exempt under the California Environmental Quality Act (CEQA) (division 13 of the Public Resources Code, commencing with section 21000);

(B) Signs that meet all applicable guidelines and conform to any previously approved master sign program;

(C) Landscape plans, fences, exterior remodeling, and design of parking areas, when not part of a major project;

(D) Any project relating to the installation of cabinets containing communications service equipment or facilities, pursuant to any service subject to Chapter 2.11, Chapter 12.04, Chapter 12.08, Chapter 12.09, Chapter 12.10, or Chapter 12.13.

(E) Minor changes to the following:

(i) Plans that have previously received architectural review approval;

(ii) Previously approved planned community district development plans;

(iii) Plans that have previously received site and design approval;

(iv) Previously approved plans for projects requiring council approval pursuant to a contractual agreement, resolution, motion, action or uncodified ordinance;

(v) Existing structures requiring council site and design approval or approval pursuant to a contractual agreement, resolution, motion, action, or uncodified ordinance.

As used in this subsection (b)(3)(E), the term "minor" means a change that is of little visual significance, does not materially alter the appearance of previously approved improvements, is not proposed for the use of the land in question, and does not alter the character of the structure involved. If the cumulative effect of multiple minor changes would result in a major change, a new application for Architectural Review approval of a major project, Site and Design approval, Planned Community District approval, or other applicable approval is required.

(F) Any changes to previously approved plans requiring architectural review as a minor project as part of the conditions of a permit or approval.

[...]
**SECTION 37.** Section 18.77.073 (Housing Development Project Review Process) of Chapter 18.77 (Processing of Permits and Approvals) of Title 18 (Zoning) is added as follows:

18.77.073 Streamlined Housing Development Project Review Process

(a) Applicability
This section shall apply to applications for residential mixed-use and multifamily housing development projects, as defined in Government Code Section 65589.5(h)(2), that comply with all objective standards in this code and thereby qualify for streamlining under Government Code sections 65589.5 or 65905.5.

(b) Public Study Session
(1) Prior to preparing a written decision, the Director may, in his or her sole discretion, refer the application to the Architectural Review Board or to other advisory boards or committees. An application should normally not be considered at more than one meeting of the Architectural Review Board.
(2) Notice of a public meeting to consider the application shall be given at least 7 days prior to the meeting by mailing to the applicant and all residents and owners of property within 600 feet of the project. Notice shall include the address of the property, a brief description of the proposed project, and the date and time of the hearing.

(c) Decision by the Director
(1) The Director shall prepare a written decision to approve the application, approve it with conditions, or deny it.
(2) Neither the Director, nor the City Council on appeal, shall approve an application unless it is found that:
   (A) The application complies with all applicable and objective standards in the Comprehensive Plan, the Palo Alto Municipal Code, and any adopted plans or policies.
   (B) Approving the application will not result in a specific, adverse, impact upon the public health or safety, which cannot feasibly be mitigated or avoided in a satisfactory manner. As used in this Section, a “specific, adverse impact” means a significant, quantifiable, direct, and unavoidable impact, based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete.
(3) Notice of the proposed director’s decision shall be given by mail to owners and residents of property within 600 feet of the property, and by posting in a public place. The notice shall include the address of the property, a brief description of the proposed project, a brief description of the proposed director’s decision, the date the decision will be final if it is not appealed, and a description of how to file an appeal.
(4) The Director’s decision shall become final 10 days after the date notice is mailed unless an appeal is filed.
(d) Appeals
   (1) Any party, including the applicant, may file an appeal of the Director’s decision in
       written form in a manner prescribed by the director.
   (2) An appeal seeking disapproval of a project or a reduction in density shall be limited
       to the grounds that both of the following exist:
       (A) The project would have a specific, adverse impact upon the public health or
           safety unless the project is disapproved or approved upon the condition that the
           project be developed at a lower density. And
       (B) There is no feasible method to satisfactorily mitigate or avoid the adverse
           impact identified pursuant to subsection (c)(2)(B)(i), other than the disapproval
           of the housing development project or the approval of the project upon the
           condition that it be developed at a lower density.

(e) Decision by the City Council
   At the Director’s discretion, an appeal may be set for hearing before the City Council or may be
   placed on the Council's consent calendar, within 45 days. The city council may:
   (1) Adopt the findings and decision of the director; or
   (2) If the item is on the consent calendar, city council may remove the appeal from the
       consent calendar, which shall require three votes, and direct that the appeal be set for a new
       noticed hearing before the city council, following which the city council shall adopt findings and
       take action on the application.

(f) Final Decision by the Council
   The decision of the council on the appeal is final.

SECTION 38. Any provision of the Palo Alto Municipal Code or appendices thereto
inconsistent with the provisions of this Ordinance, to the extent of such inconsistencies and no
further, is hereby repealed or modified to that extent necessary to effect the provisions of this
Ordinance.

SECTION 39. If any section, subsection, sentence, clause, or phrase of this Ordinance is for any
reason held to be invalid or unconstitutional by a decision of any court of competent
jurisdiction, such decision shall not affect the validity of the remaining portions of this
Ordinance. The City Council hereby declares that it would have passed this Ordinance and each
and every section, subsection, sentence, clause, or phrase not declared invalid or
unconstitutional without regard to whether any portion of the ordinance would be
subsequently declared invalid or unconstitutional.

SECTION 40. The Council finds that the Ordinance is within the scope of and in furtherance of
the Comprehensive Plan 2030 which was evaluated in that certain Final Environmental Impact
Report certified and for which findings were adopted by Council Resolution Nos. 9720 and 9721
on November 13, 2017, all in accordance with the California Environmental Quality Act. The
Ordinance does not propose to increase development beyond what was analyzed in the
Comprehensive Plan. Pursuant to Section 15168 of the State CEQA Guidelines, the City has
determined that no new effects would occur from and no new mitigation measures would be required for the adoption of this Ordinance.

**SECTION 41.** This ordinance shall be effective on the thirty-first date after the date of its adoption.

INTRODUCED:

PASSED:

AYES:

NOES:

ABSENT:

ABSTENTIONS:

NOT PARTICIPATING:

ATTEST:

________________________________________  __________________________________________
City Clerk                                      Mayor

APPROVED AS TO FORM:

________________________________________  __________________________________________
Assistant City Attorney                        City Manager

____________________________                  Director of Planning & Development
APPROVED:

Services
Attachment C: Summary of Relevant State Housing Laws

**Housing Accountability Act**
Originally passed in 1982, the Housing Accountability Act (HAA) (Government Code Section 65589.5) acknowledges the lack of housing as a critical problem in California. The HAA applies to "housing development projects" that meet objective standards. Housing development projects are defined as one or more of the following:

- multifamily housing projects
- mixed-use developments (with at least two-thirds residential square footage), or
- transitional or supportive housing

The HAA applies to projects with **two or more** residential units.

The HAA states that a city cannot deny a project, reduce its density, or otherwise make a project infeasible, when the project complies with objective standards. The exception is when the City makes findings—based on a preponderance of evidence—that specific adverse health or safety impacts exist and there is no feasible method to mitigate or avoid impacts. While the City may make suggestions using subjective criteria, it must approve the project even if the applicant refuses to make any changes. However, if an applicant seeks an exception to an objective standard, the project is no longer covered by the HAA. Decision-makers may then rely on the findings required or criteria for approval of that specific modification. In such a case, subjective standards and design guidelines can be used to evaluate the project.

**SB35 Project Streamlining**
Under SB35 (Government Code Section 65913.4), projects meeting all of the following requirements are eligible for a streamlined review process:

- The development is on a legal parcel or parcels zoned for residential uses or have a Comprehensive Plan designation that allows residential or mixed-uses;
- A site in which at least 75 percent of the perimeter of the site adjoins parcels that are developed with urban uses;
- The development contains two or more residential units;
- Projects with at least two-thirds of the square footage designated for residential use;
- The project does not demolish a historic structure that is on a national, state, or local historic register;
- The project does not demolish any housing units that have been occupied by tenants in the last 10 years;
- The site is not within certain high-risk areas such as a very high fire hazard severity zone, a hazardous waste site, or a floodway;
- Projects which meet certain affordability requirements, such as, at present at least 50% of the proposed residential units must be dedicated as affordable to households at 80% of Area Median Income (AMI);
- All construction workers employed in the execution of the development must be paid at least the general prevailing rate; and
The project must meet all objective planning standards at the time of application submittal.

Under SB35, the review process would be limited to 90 days for projects containing 150 or fewer housing units and 180 days for larger projects. An SB35 project is not subject to discretionary review (e.g., Architectural Review, Site and Design Review, requiring review by the ARB, PTC, or Council), and therefore, is not subject to review under the California Environmental Quality Act (CEQA). The creation and changes to objective standards would ensure the City has standards that can be applied to these types of ministerial projects.

Currently in Palo Alto—based on the City’s progress toward meeting the Regional Housing Needs Assessment (RHNA)—an SB35 project must include at least 50% of the units as affordable to low-income households. Therefore, SB35 applies to a limited number of projects and to date, no applicants have applied for review under this program.

**SB330 Permit Review**

Effective January 1, 2020, SB330 made several changes to existing State housing law, including the HAA and Permit Streamlining Act. For the purposes of the work described herein, the important elements are as follows:

- Provides a streamlined path for “housing development project” (see definition under HAA);
- Creates a preliminary application process that freezes many development standards, by requiring that jurisdictions only subject a housing development project to review pursuant to the ordinances, policies, and standards adopted and in effect when a preliminary application is submitted (vs. when a full application is deemed complete);
- Provides applicant 180 days from the submittal of the preliminary application to submit a formal development application;
- Limits jurisdictions to five public hearings, including appeals;
- Reduces the Permit Streamlining Act timeline for action following completion of any applicable CEQA review;
- Prohibits jurisdictions from imposing subjective design standards established after January 1, 2020;
- Prohibits jurisdictions from enacting development policies, standards or conditions that would change current zoning and land use designations where housing is an allowable use. In such cases, jurisdictions cannot lessen the intensity of housing—such as reducing height, density, or floor area ratio, requiring new or increased open space, lot size, setbacks, or frontage, or limiting maximum lot coverage; (effectively, this clause prohibits downzoning, though the City may rebalance density between districts); and
- Requires the replacement of existing/demolished residential units.

In Palo Alto, to date, SB330 preliminary applications have been submitted for two projects: 200 Portage and 2850 West Bayshore.
This map is a product of the City of Palo Alto GIS.

The City of Palo Alto assumes no responsibility for any errors. ©1989 to 2016 City of Palo Alto.

Legend
- Zone Districts
- PTOD Eligible Area
- CC2 Zoning District
- CS and CN Zoning Districts along ECR
- NVCAP Boundary
- City Jurisdictional Limits
- Zone District Labels

Packet Pg. 406
March 5, 2021

Jodie Gerhardt  
Manager of Current Planning  
PDS Department, City of Palo Alto  
250 Hamilton Avenue  
Palo Alto, CA 94301

Dear Jodie and Amy,

Thank you for the conversation yesterday on the objective Design Standards. We think this is a valuable effort and thank you for the opportunity to comment. The following bullet points recap the comments that we raised today:

Non-residential properties:

- We expressed concern that the intent statements may be problematic for non-residential buildings and properties with distinctly different uses and contexts than the infill settings that inspire the Draft Standards. You clarified for us that this Chapter is not meant to apply to zoning districts that do not currently have Context-Based Design Criteria, such as the MOR, ROLM, RP and GM Districts, except to the extent to which housing or mixed-use including housing is developed within these districts.
- You clarified that the current Context-Based Design Criteria of the CC zoning district will be replaced by these new Design Standards. We committed to get back to you with any detailed comments about compliance with the intent statements by Stanford Shopping Center, which is in the CC zoning district.

Affordability:

- We expressed concern that aspects of the Design Standards may not have sufficiently considered cost impacts and their effect on housing affordability, which is a major impetus of this project. You replied that consideration of affordability was one reason for the inclusion of compliance options, such as within the Façade Design section. We discussed and agreed that it would be worthwhile to consider additional options for all of the sections that have been adopted by other cities developing similar Standards.
- We mentioned the possibility of including language that the intent is to allow, to the extent possible, adaptive application of the Standards by cost-effective construction methodologies such as pre-fabricated and modular construction.

Accommodating current and future trends:

- Trends that we’re seeing in residents’ modes of living include a greater need for package drop-offs and deliveries, ever-changing mobility options, and more work-from-home spaces. These trends will benefit from any flexibility that is in the Objective Standards to accommodate them.
- The work-from-home space may be a direct trade-off with balconies, which do not seem to be frequently used (except for storage) in many projects around the Bay Area. As an option under façade articulation, we suggest clarifying that “habitable projections” could include interior spaces as well.
• It is possible that residents will desire more outdoor and indoor community spaces in the future designed to enhance their ability to work from home. We suggest ensuring that the Open Space section, which presently focuses on recreational use, not preclude these. You noted that this would be dependent on updated definitional and quantitative provisions in the multifamily Development Standards section of the Code.

Sincerely yours,

Chris Wuthmann

Snr. Director Project Design & Construction

Stanford University Real Estate

415 Broadway – Academy Hall

Redwood City, CA 94063-3133

cwuthmann@stanford.edu

(650) 889-0403
Hello Jodie,

We have been working with Claire on a Preliminary ARB Application submitted for a proposed 48-unit townhome project at 2850 W. Bayshore Road (thank you, Claire!). We are following up on our conversation with her today to let you know we will be submitting a SB 330 application for the project in the near future, prior to the City’s adoption of its Objective Design Standards.

We did have the opportunity to review the draft standards and noticed that they appear directed and applicable to higher density multifamily residential. In some cases, the standards would be potentially problematic for townhome style for-sale housing if there was no exception or alternative standard provided. We recognize that the City does not see a lot of townhome residential these days but we wanted to bring this observation to your attention and are happy to schedule a zoom call to discuss further and answer any questions you might have.

Thank you for your consideration and we are excited to have the opportunity to work in Palo Alto again.

Best Regards,

Elaine Breeze  
Senior Vice President of Development  
SummerHill Apartment Communities | SummerHill Homes  
777 S. California Avenue, Palo Alto, CA 94304  
Tel (650) 842-2404 • Mobile (415) 971-0660 • Fax (650) 857-1077  
ebreeze@shapartments.com  
shapartments.com | shhousinggroup.com
Eisberg, Jean

From: Heather Young <heather@hyarchs.com>
Sent: Tuesday, February 16, 2021 7:00 PM
To: Gerhardt, Jodie; French, Amy; Raybould, Claire; Eisberg, Jean; Lait, Jonathan;
Architectural Review Board
Cc: jgracelee; Lew, Alex
Subject: ARB Review of Objective Standards - comments

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Jonathan, Jodie, Amy, Claire, Jean, and members of the ARB

It's clear that city staff, the ARB, and consultant team have worked diligently to develop Objective Standards over the last 15 months to both further the existing design standards within the Municipal Ordinance and prepare for the potential of accelerated review applications under state law. I applaud you for taking on this complex and demanding challenge. Much of the development outlined in the draft Objective Standards clarifies existing design intent and supports positive urban planning practice. That said, as an architect who works with the PAMC, local clients, local sites, and constructability challenges, many of the dimensioned requirements in these sections are disconnected from those realities.

The idea that good or even acceptable design results from the overlay of one-size-fits-all fixed dimensional requirements on all projects regardless of site, use, context, or style is an illusion that completely misses the opportunity and nuance that take our cities from rote need fulfillment to delight. I'm happy to see that extensive comments have been added to the Feb 18 meeting packet by Elaine Uang (pages 65-88) questioning the set dimension and square footage requirements and inclusion of the Ken Hayes essay on Form based design, another name for Objective Standards. Please take both of these to heart and look closer at the language to provide dimensional ranges or clarify intent. Menlo Park has implemented a similar set of Standards as part of their Downtown Specific Plan and the result is already looking very forced and very vanilla. Given no leeway, staff is required to enforce these requirements even when they make no sense. When I pointed out to a planner that the required 10' sideyard setback would significantly reduce the available building width of a 50' lot on El Camino Real creating an awkward and unappealing massing, the response was, "why don't you buy another lot?". Comprehension that the Specific Plan requirements could and should not be taken without any contextual consideration was unimaginable but apparently the ready availability of adjacent property was. Tempting as the game of Monopoly is, acquisition of multiple parcels is a slow game at best, particularly when the development standards are so modest. Much of Menlo Park and Palo Alto parcel sizes are the result of early subdivisions into 50' wide lots and that infrastructure is very much alive and present today and yet the MP Specific Plan was developed around properties more easily obtained in the Central Valley.

Like the Standards proposed in Palo Alto, Menlo Park has set dimensions for breaks in the facade or for material changes and upper floor setbacks. Unfortunately the standards seem to have less to do with the natural rhythms of apartment units, office plans, retail frontage, and building structure, or even building code, and more to do with a pat urban wish list. Upper floor setbacks are deadly to multi-family stacked-core construction and livable floor plans; there are other ways to develop a "base-middle-top" parte. Parking access on facades is about more than a 25% opening requirement; although relatively flat, many sites have multiple feet of grade change along a facade impacting parking, accessibility, floor levels and max building heights. What's the magic of a 4' wide by 2' deep vertical modulation every 50' min - the list goes on and on. Until exterior facade and massing Objective Standards are integrated with building interiors and the realities of how buildings of a variety
of types are designed and function, our cities will be forced to endure uninspiring crop of vanilla held to the
lowest common denominator for generations to come.

Thank you for your time. I respectfully ask that you find a way to support the goals of good urban design
without the lockstep checklist of the proposed objective standards. If not, the approval rate may accelerate but
we'll all be left enjoying the wrong results.

Regards -
Heather

Heather Young, Partner

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D  650-459-3203
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Requesting Input on the City of Palo Alto's DRAFT Objective Standards

Hi Jody,

This is something I wrote a while back regarding the various city's design standards. I'll take a look at what the city is proposing but this can be a slippery slope.

https://www.thehayesgroup.com/another-journal-title/

Thanks for including me.

Ken Hayes, AIA

President

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MEMBER, THE AMERICAN INSTITUTE OF ARCHITECTS

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The Shape of Three Cities

Nearly every community, if not all, in the San Francisco Bay Area have adopted development standards codified in their municipal codes as site development regulations and guidelines, precise plans or specific plans. Typically drafted by a team of design consultants, city boards and community stakeholders, these development standards are viewed as the map or blueprint for the shape of the community's built environment and vary from community to community.

On the Peninsula, three contiguous city's have very different development standards based either on building form, architectural style or design compatibility. Each commercial planning application is evaluated in terms of the specific requirements of these different standards. City planning staff, planning commissions and architectural review boards apply these standards to determine if a proposed project is compliant. Some standards are more objective, formulaic and easier to use than others that require a deeper understanding of the subjective nature of architecture.

Form based development standards take a measured, objective approach to design evaluation. The building must be no taller than the height limit, it must setback from the property line a prescribed distance and step back from the street above a certain height; it must be punctuated by rhythms of minor and major building modulations with precise widths and depths that extend to the sky, as well as, building breaks that create open space between building mass. Ground floors must have windows set back a defined number of inches from the exterior wall surface, not be longer than a certain dimension and comprise a certain percentage of the wall area or the project is non-compliant. The architectural style is not dictated thus allowing for many architectural expressions, provided all criteria in the form based standards are satisfied and checked off by planning staff.

Style based development standards take a formulaic, controlled approach to design evaluation. This method dictates not only some form based standards discussed above like height, setback and open space but go even further to determine the architectural style and execution of the proposed building. Depending on the area of the community where the building is located, the designer has the option of three architectural styles for instance: Neo-classical, Mediterranean or Art Deco. Once the style is selected, the height of the building's base, building's middle (body) and cornice size and projection are all predetermined. The location, depth, proportion and pattern of the windows is dictated by the standard. How colors are applied to the building and what architectural details can be used are also not left to chance, all predetermined for the designer. Is there any design subjectivity or personal expression left? Not really, but this makes it easier for the planning staff, planning commissions and architectural review boards to evaluate the proposals and not disrupt the community.

Compatibility based development standards are more subjective but take into consideration how well the proposed building responds to the community's goals, how it addresses the sidewalk, how the building creates active pedestrian areas and how it defines or reinforces open spaces. Architectural compatibility is measured by considering the building's context, the rhythm of the street wall, the alignment of roof lines, canopies and cornices and the size, shape, proportion and location of windows and building entries. Compatibility also addresses our time, considering the market needs for certain kinds of space and the environmental and sustainability demands of our world. Compatibility does not address architectural style since different styles have co-existed since our cities began and can be mutually compatible. Evaluating a building based on a compatibility standard is much more difficult since there is no checklist of prescriptions or styles to check off, it is subjective and left up to the designer to present his or her project and demonstrate that it satisfies the standard of compatibility.

Quality design that responds to the goals, issues and problems of today is not about style based or form based site development requirements but rather compatibility should be the standard and within this framework buildings should be reviewed. It is more subjective and can take more time but the discussion that ensues between planning staff, commissions, review boards and the designers will make our communities a better place.
FW: Draft Objective Standards - Comments for ARB

Gerhardt, Jodie <Jodie.Gerhardt@cityofpaloalto.org>
To: Jean Eisberg <jean@lexingtonplanning.com>

FYI

The City of Palo Alto is doing its part to reduce the spread of COVID-19. We have successfully transitioned most of our employees to a remote work environment. We remain available to you via email, phone, and virtual meetings during our normal business hours.

From: Elaine Uang <elaine.uang@gmail.com>
Sent: Monday, January 18, 2021 9:08 AM
To: Gerhardt, Jodie <Jodie.Gerhardt@CityofPaloAlto.org>
Cc: Grace Lee <jgracelee@gmail.com>
Subject: Re: Draft Objective Standards - Comments for ARB

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

Oops, attaching my comments here.

On Mon, Jan 18, 2021 at 9:07 AM Elaine Uang <elaine.uang@gmail.com> wrote:

Dear Jodie,

Grace Lee from the ARB reached out and suggested I may be interested in providing comments for the Draft Objective Standards that the ARB is developing. I have had a chance to review, and wanted to offer the following comments in-document. Due to some other work commitments and time constraints, I regret I will not be able to draft an overriding summary. But it would be easier to understand my comments in context with the text. I have tried to highlight areas that are unclear, or inconsistent with other document sections. I've also tried to point out standards that may constrain sites or preclude good design or development feasibility. In general, I would encourage graduated standards as smaller sites (100'-150' deep or < 20,000 sf) need more flexibility and should not be subject to the exact the same dimensional standards as larger sites (200'+ widths with 30,000sf or more).

Thank you,
Elaine Uang
Palo Alto Resident, Kipling St
Multifamily Architect

Palo Alto Objective Design Standards_EU Comments.pdf
Chapter 18.24 Context-Based Design Standards

18.24.010 Purpose and Applicability

(A) Purpose

(i) The purpose of the Context-Based Design Standards is to provide design guidance and objective design standards development projects.

(B) Applicability of regulations

(i) Within the following zones, the intent statements apply to all project types, new construction, and renovation; design standards apply to new construction:

(a) RM-20, RM-30, RM-40
(b) CN, CS, CD, CC
(c) PTOD
(d) MOR, ROLM, RP
(e) PC

Public art in residential and residential mixed-use projects is subject to Chapter 16.61 and exempt from these requirements.

(C) Alternative compliance

Each section of this chapter includes an intent statement that gives guidance for all applicable projects, regardless of use.

Residential and mixed-use residential projects may choose to forgo one or more objective standards and instead meet the spirit of the relevant intent statements, as determined by the Director or the Architectural Review Board, depending on the level of review required by Chapter 18.75.

Commercial-only projects or other non-residential projects should meet relevant standards; they are not required to adhere irrelevant standards related to residential uses. Depending on the level of review required by Chapter 18.75, the Director or the Architectural Review Board will determine compliance with the relevant intent statements.

(D) Definitions

In addition to definitions identified in Chapter 18.04, the following definitions are specific to this chapter.

(i) Primary Building Frontage: The front lot line or frontage along the public right-of-way. In the case of a through-lot, the primary building frontage could be on either public right-of-way.

(ii) Primary Building Entry: The entrance leading to a lobby and/or accessed from the primary building frontage.

(iii) Pedestrian Walkway: A sidewalk or path that is publicly-accessible and connects from a public right-of-way to another public right-of-way or publicly accessible open space.

(iv) Façade Modulation: A change in building plane, either a recess or a projection, that changes shape of the interior space.
Number: 1  Author: elaine  Subject: Text Box  Date: 1/18/2021 8:51:45 AM

Cite relevant chapters: a) 18.13 Multiple Family Residentialb) 18.16 CN, CC, CS & 18.18 CDc) 18.34 PTOD d) MOR, ROLM, RP e) PC - what about PHZ?

Number: 2  Author: elaine  Subject: Highlight  Date: 12/5/2020 1:26:02 PM

regardless of use.

Number: 3  Author: elaine  Subject: Highlight  Date: 12/5/2020 1:38:19 PM

d instead meet the spirit of the relevant intent statements
18.24.020 Public Realm/Sidewalk Character

(A) Intent

To create an attractive and safe public realm and sidewalk space for pedestrians and cyclists through the implementation of design, landscaping, and infrastructure. Publicly accessible spaces and sidewalks should:

- Design the transition between the public and private realm through the coordination of amenities and materials, such as accent paving, tree wells, lighting and street furniture (e.g., benches, bicycle racks, trash receptacles, and news racks).
- Complement or match accent paving to existing designs in downtown and Cal Ave areas.
- Provide sidewalk widths that accommodate landscaping, street trees, furniture, and pedestrian amenities; create a pleasant, desirable place to walk; provides shade; and enable comfortable pedestrian passage.
- Provide amenities, such as parking and repair equipment, for micromobility, such as bicycles and scooters.

(B) Streetscape

(i) Sidewalk Widths

(a) Public sidewalks abutting a development parcel shall have a minimum sidewalk width (curb to back of walk) of XXX feet [TBD in consultation with Public Works]. If the existing public sidewalk does not meet the minimum standard, a publicly accessible extension of the sidewalk, with corresponding public access easement, shall be provided.

1. Notwithstanding subsection (a), the following streets/locations shall have a minimum sidewalk width of:
   a. Park Boulevard (South of Caltrain to Ventura): TBD, per NVCAP
   b. El Camino Real and San Antonio Avenue: 12 ft
   c. Other Corridors in Commercial Zones (CN, CS, CC, CC(2)) : 8ft
   d. CD Districts and SOFA: 10 ft

(b) Publicly accessible sidewalks or walkways connecting through a development parcel (e.g., on a through lot) shall have a minimum six-foot width. Pedestrian walkways that are designed to provide access to bicycles shall have a minimum width of eight feet.

(ii) Street Trees

(a) Sidewalks shall include at least one street tree, within six feet of the sidewalk, for every 30 feet of linear feet of sidewalk length. WHERE POSSIBLE.
To create an attractive and safe public realm and sidewalk space for pedestrians and cyclists through the implementation of design, landscaping, and infrastructure. Publicly accessible spaces and sidewalks should:

- Design the transition between the public and private realm through the coordination of amenities and materials, such as accent paving, tree wells, lighting and street furniture (e.g., benches, bicycle racks, trash receptacles, and news racks).
- Complement or match accent paving to existing designs in downtown and Cal Ave areas.
- Provide sidewalk widths that accommodate landscaping, street trees, furniture, and pedestrian amenities; create a pleasant, desirable place to walk; provides shade; and enable comfortable pedestrian passage.
- Provide amenities, such as parking and repair equipment, for micromobility, such as bicycles and scooters.

, a publicly accessible extension of the sidewalk, with corresponding public access easement, shall be provided.

COVID ERA SUGGESTION, WITH 6' SIDEWALKS, CONSIDER WAITING/PASSING ZONES IN LANDSCAPE AREA, TO ALLOW FOR PHYSICALLY DISTANCED PASSING

WHERE POSSIBLE.
LABELS THESE DIAGRAMS (MIXED USE VS RESIDENTIAL?) AND EXPLAIN THE DIFFERENCES IN USE AND DIMENSIONAL REQUIREMENTS

<table>
<thead>
<tr>
<th>Frontage</th>
<th>Sidewalk</th>
<th>Street</th>
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<tbody>
<tr>
<td>Building Setback</td>
<td>Frontage Area</td>
<td>Pedestrian Clear Zone</td>
</tr>
<tr>
<td>Property Line Varies</td>
<td>Landscape/Furniture Area</td>
<td>Edge Zone 18” typ. Curb + Step Out Area</td>
</tr>
</tbody>
</table>

**Mixed-Use**
- Sidewalk Dining
- Outdoor Displays
- Public Art
- Seating
- Planting

**Residential**
- Stoops
- Porches
- Front Yards
- Utilities
- Planting

- Street Trees/Planting
- Street Lighting
- Seating
- Mobility Infrastructure
- Bike Parking
- Public Art
- Outdoor Dining

- Street Parking
- Bike Lanes
- Drop-off Zones
- Parklets

**(iii) Accent Paving**
(a) Sidewalks and publicly accessible areas fronting University Avenue and California Avenue shall match existing accent paving design and materials, such as mosaic tile and bricks.

**(iv) Mobility Infrastructure**
(a) Micromobility infrastructure, such as locations to lock bicycles and scooters, shall be located within 20 feet of the primary building entry and/or a path leading to the primary building entry. This standard may be satisfied by existing...
LABELS THESE DIAGRAMS (MIXED USE VS RESIDENTIAL?) AND EXPLAIN THE DIFFERENCES IN USE AND DIMENSIONAL REQUIREMENTS

ALLOW FOR FLEXIBILITY AND BETTER DESIGN CHOICES. WHAT IF EXISTING PAVING IS NOT IDEAL? FOR EXAMPLE, THE RECYCLED GLASS ALONG CAL AVE IS KIND OF DANGEROUS FOR LITTLE KIDS, AND UNEVEN AND SUBOPTIMAL FROM AN ACCESSIBILITY STANDPOINT

) Sidewalks and publicly accessible areas fronting University Avenue and California Avenue shall match existing accent paving design and materials, such a mosaic tile and bricks.
infrastructure already located within 50 feet of the project site and located in the public right-of-way.

(b) Primary building entries shall provide at least one seating area or bench within 20 feet of building entry and/or path leading to building entry. This standard may be satisfied by existing seating area or benches located in public right-of-way within 50 feet of the building entry.

18.24.030 Site Access

(A) Intent

To provide facilities and accommodations for pedestrians, vehicles, cyclists, and transit users to safely and efficiently access and circulate both within individual sites and in the site’s surrounding context. Site access should include the following elements:

- Site circulation and access that presents a clear hierarchy and connectivity pattern for all travel modes both within a project and to adjacent sidewalks and transit stops. This hierarchy may provide separate access for vehicles and other modes, or demonstrate how all modes are accommodated in shared access points.
- Connections to side streets, open spaces, mews, alleys, and paseos
- Vehicle, loading and service access that is integrated into building and landscape design and located to prevent conflicts with pedestrians and cyclists, while also provided convenient access to building entries.

(B) Circulation Hierarchy

(i) Sites shall clearly identify a hierarchy of connectivity in a circulation plan that identifies a priority for pedestrian, bike, private vehicles, and utility/loading access in the order listed. [see comment in text box below]

(ii) Through lots located more than 300 feet from an intersecting street or pedestrian walkway shall provide a publicly accessible sidewalk or pedestrian walkway connecting the two streets. UNDER CIRCULATION HIERARCHY, PLEASE INCLUDE AND REFERENCE ACCESS/INFRASTRUCTURE FOR MICROMOBILITY VEHICLES. ALLOW FLEXIBILITY FOR FUTURE TRANSPORT Modes

(C) Building Entries

(i) Entries to Primary Building Entries shall be located from a public right-of-way or if not possible a publicly accessible Pedestrian Walkway.

Circulation Plan: Some topics are inherently difficult to create clear and objective standards to meet the intent of the guidelines while providing flexibility that is needed for each project. One way to create an objective standard for these performance criteria is to have a requirement that a developer submit a plan to meet these criteria. The review of the plan material, description of how the project will meet the intent of the guidelines, and the implementation will not be objective and thus not applicable to deny a project for not meeting the City’s expectations of the guidelines, but the act of having to write the report/plan may provide enough guidance and design thinking to get most of the way there in most cases.
(A) Intent
To provide facilities and accommodations for pedestrians, vehicles, cyclists, and transit users to safely and efficiently access and circulate both within individual sites and in the site's surrounding context. Site access should include the following elements:
Site circulation and access that presents a clear hierarchy and connectivity pattern for all travel modes both within a project and to adjacent sidewalks and transit stops. This hierarchy may provide separate access for vehicles and other modes, or demonstrate how all modes are accommodated in shared access points.
Connections to side streets, open spaces, mews, alleys, and paseos
Vehicle, loading and service access that is integrated into building and landscape design and located to prevent conflicts with pedestrians and cyclists, while also provided convenient access to building entries.

UNDER CIRCULATION HIERARCHY, PLEASE INCLUDE AND REFERENCE ACCESS/INFRASTRUCTURE FOR MICROMOBILITY VEHICLES. ALLOW FLEXIBILITY FOR FUTURE TRANSPORT MODES
DOES VEHICLE ACCESS MEAN CARS/TRUCKS/MOTORCYCLES? 
MICROMOBILITY VEHICLES SHOULD HAVE A SEPARATE CATEGORY. 
THEIR USE CASES AND TRAVEL ZONES ARE DIFFERENT

(D) Vehicle Access

(i) Vehicle access shall be located on alleys or side streets where available.
(ii) Vehicle access, vehicle loading, and off-street parking shall follow the following standards:
   (a) Except for driveway access, off-street parking, off-street vehicle loading, and vehicular circulation areas are prohibited between the building and the primary building frontage.

(iii) Special Conditions
   (b) California Avenue: Vehicular access to CC(2) zoned sites on California Avenue which requires vehicular movement across the sidewalk on California Avenue shall be prohibited, except where required by law and as applied to parcels owned, leased or controlled by the City.
   (c) University Avenue: Vehicular access to CD-C zoned sites on University Avenue which requires vehicular movement across the sidewalk on University Avenue shall be prohibited, except where required by law and as applied to parcels owned, leased or controlled by the City.

(E) Loading Docks and Service Areas

(iii) Loading and service areas shall be integrated into building and landscape design and located to minimize impact on the pedestrian experience as follows:
   (a) Loading docks and service areas shall be located on facades other than the primary building frontage, on alleys, from parking areas, and/or at the rear or side of building if building includes these frontages. When only primary building frontage is available, loading docks and service areas shall be recessed a minimum five feet from the primary façade and shall be screened in accordance with Chapter 18.23.050.
   (b) Loading dock and service areas located within setback areas shall be screened in accordance with Chapter 18.23.050 and separated from pedestrian access to the primary building entry to avoid impeding pedestrian movement and safety.

ON SITES WITH ONLY ONE FRONTAGE, YOU'LL NEED FLEXIBILITY DUE TO COMPETING DEMANDS OF OTHER INFRASTRUCTURE ALONG THE STREET FRONTAGE. RECOMMEND ALLOWING SERVICE AREAS TO BE WITHIN THE SETBACK, NOT A FORCED RECESS FROM THE PRIMARY FACADE. SCREENING WILL BE IMPORTANT, BUT THERE SHOULD BE FLEXIBILITY WITHIN THE SCREENING TYPE.

18.24.040 Building Orientation and Setbacks

(A) Intent

To create a coherent and active interface between private development and the public realm that contributes to the sense of place and structure of the neighborhood and enhances the public’s experience. Site design that responds to the orientation of adjacent uses and creates opportunities for landscaping and usable open space. Buildings and site design should meet the following criteria:

- Buildings that create a contiguous street wall that are compatible with nearby buildings and land uses.
- Placement and orientation of doorways, windows, stoops, and landscape elements to create a direct relationship with the street.
DOES VEHICLE ACCESS MEAN CARS/TRUCKS/MOTORCYCLES? MICROMOBILITY VEHICLES SHOULD HAVE A SEPARATE CATEGORY. THEIR USE CASES AND TRAVEL ZONES ARE DIFFERENT.

Loading docks and service areas shall be recessed a minimum five feet within setback areas shall be screened in accordance with Chapter 18.23.050.

ON SITES WITH ONLY ONE FRONTAGE, YOU'LL NEED FLEXIBILITY DUE TO COMPETING DEMANDS OF OTHER INFRASTRUCTURE ALONG THE STREET FRONTAGE. RECOMMEND ALLOWING SERVICE AREAS TO BE WITHIN THE SETBACK, NOT A FORCED RECESS FROM THE PRIMARY FACADE. SCREENING WILL BE IMPORTANT, BUT THERE SHOULD BE FLEXIBILITY ON THE SCREENING TYPE.

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To create a coherent and active interface between private development and the public realm that contributes to the sense of place and structure of the neighborhood and enhances the public's experience. Site design that responds to the orientation of adjacent uses and creates opportunities for landscaping and usable open space. Buildings and site design should meet the following criteria:

- Buildings that create a contiguous street wall that are compatible with nearby buildings and land uses.
- Placement and orientation of doorways, windows, stoops, and landscape elements to create a direct relationship with the street.
- Ground floor residential units that have direct entry and presence on the street
- Transitional spaces and buffer areas between buildings, parcels, and sites through building setbacks that distinguish private and public spaces.
- Buildings that provide side and rear setbacks and/or upper story stepbacks to create separation between adjacent lower density residential development.
- Landscaped or usable areas that contain open space or hardscaped areas.
- Optimized building orientation for heat gain, shading, daylighting, and natural ventilation and other forms of passive design.

(B) Building Orientation

(i) Treatment of Corner Buildings

(a) Corner buildings shall include one of the following special features:
1. Street wall shall be located at the minimum front yard setback or build-to line or a minimum aggregated length of 60 feet in length on both facades meeting at the corner and shall include one or more of the following building features:
   a. A corner entry to ground floor retail or primary building entrance
   b. A different material application and fenestration pattern from the rest of the façade
   c. A change in height of at least 8 feet greater or less than the height of the abutting façade.
IS THERE A SECTION FOR MID-BLOCK BUILDINGS, WITH NEIGHBORS ON ON 2 SIDES?

60 feet

WHY 60'? THE HISTORIC BUILDING AT RAMONA AND UNIVERSITY AVE - ONE OF PALO ALTO'S MOST ICONIC BUILDINGS - PROBABLY WOULD NOT MEET THIS STANDARD

CORNER TREATMENTS MAY HAVE DIFFERENT CONSIDERATIONS ALONG ECR OR SAN ANTONIO VS UNIVERSITY AVE. EVEN A CORNER BLDG ON A SMALLER STREET LIKE LYTTON AVE OR COLLEGE AVE MAY NEED DIFFERENT STANDARDS
2. A publicly accessible open space with a minimum dimension of 20 feet and minimum area of 1,000 square feet.

   NARROW DEPTH SITES MAY NEED AN EXEMPTION. A LOT OF GOOD PUBLIC ACTIVITY CAN HAPPEN IN A 12-15' DEPTH. 1000SF OVERALL SEEMS HIGH (20'X50'!), ESPECIALLY ON SMALLER SITES. RECOMMEND 500 SF MIN OR A GRADUATED MINIMUM BASED ON MINIMUM LOT SIZE (IE 500 SF FOR SITES < 1/4 ACRE, 750 FOR SITES <1/2 ACRE AND 1000 SF FOR SITES OVER 1/2 ACRE.

3. A common open space that is no more than six feet above the back of walk grade at the corner, is located adjacent to indoor common spaces, with direct access, has areas for seating, has a minimum dimension of 20 feet and minimum area of 1,000 square feet, and has a fence or railing that is no less than 50 percent open or transparent.

   AGAIN THESE DIMENSIONS FOR AN INTERIOR COMMON SPACE SEEM HIGH, ESPECIALLY FOR SMALLER SITES, OR BLDGS WITH COMPLEX PROGRAMS AND INFRASTRUCTURE REQUIREMENTS WHERE EVERY SQUARE FOOT ON GROUND FLOOR IS PRECIOUS. THINK ABOUT GRADUATED STANDARDS BASED ON LOT SIZE.

(ii) Primary Building Entry
(a) The primary building entry shall meet one of the following standards:
   1. Face a public right-of-way. Be visible from a public right-of-way through a forecourt or front porch that meets the following standards:
      a. For residential buildings with fewer than seven units, building entry forecourts or front porches shall be a minimum area of 36 square feet and minimum dimension of five feet.
      b. For commercial buildings or residential buildings with more than six units, building entry forecourts or front porches shall be a minimum of 100 square feet and a minimum width of 8 feet.
20 feet

NARROW DEPTH SITES MAY NEED AN EXEMPTION. A LOT OF GOOD PUBLIC ACTIVITY CAN HAPPEN IN A 12-15' DEPTH. 1000SF OVERALL SEEMS HIGH (20'X50'), ESPECIALLY ON SMALLER SITES. RECOMMEND 500 SF MIN OR A GRADUATED MINIMUM BASED ON MINIMUM LOT SIZE (IE 500 SF FOR SITES < 1/4 ACRE, 750 FOR SITES <1/2 ACRE AND 1000 SF FOR SITES OVER 1/2 ACRE.

20 feet and minimum area of 1,000 square feet,

AGAIN THESE DIMENSIONS FOR AN INTERIOR COMMON SPACE SEEM HIGH, ESPECIALLY FOR SMALLER SITES, OR BLDGS WITH COMPLEX PROGRAMS AND INFRASTRUCTURE REQUIREMENTS WHERE EVERY SQUARE FOOT ON GROUND FLOOR IS PRECIOUS. THINK ABOUT GRADUATED STANDARDS BASED ON LOT SIZE

minimum dimension of five feet.
(iii) **Ground Floor Residential Units**

(a) A minimum of 80% of ground floor residential units facing a public right-of-way or publicly accessible path or open space shall have a unit entry with direct access to the sidewalk, path, or open space. (Senior units or other deed-restricted units for special populations are exempt)

(b) Entries to ground floor residential units shall face a public right-of-way or publicly accessible path/open space or be visible from a public right-of-way through a forecourt or front porch that is a minimum of 30 square feet.

(c) Ground floor residential units shall be setback a minimum 15 feet from the back of sidewalk. CONSIDER VARIANCES FOR NARROW DEPTH SITES. MOST PRE-WW2 STRUCTURES DON'T HAVE 15' SETBACKS AND WORK, ESP FOR SMALL MULTIFAMILY LIKE RM-20 THRU RM-50 "MISSING MIDDLE" TYPE HOUSING

(C) **Front Yard Setback Character**

(i) Required setbacks shall provide an extension of the sidewalk as a hardscape and/or landscaped area to create a transition between public and private space. The following standards apply, based on intended use and exclusive of areas devoted to outdoor seating, front porches, door swing of building entries, and publicly accessible open space:

(a) Ground-floor retail or retail-like uses = Minimum of 20% of the required setback

(b) Other ground-floor non-residential uses. A minimum of 40% of the required setback area Ground-floor residential uses. A minimum of 60% of the required setback area NOT CLEAR.

18.24.050 **Building Massing**

(A) **Intent**

To create buildings that are compatible with and enhance the surrounding area through the consideration of building scale, massing, and bulk. Massing should create a human-scale environment that is of high aesthetic quality and accommodates a variety of uses and design features. Building massing should include elements that:

- Break down large building facades and massing to create a human-scaled building that enhances the context of the site
- Are consistent in scale, mass and character to adjacent land uses and land use designations
- Reinforce the definition and importance of the street
- Provide rooflines and massing that emphasize and accentuate significant elements of the building such as entries, bays, and balconies, and shading elements where appropriate.
- Provide harmonious transitions between adjacent properties

(B) **Contextual Massing**

(i) **Upper Floor Step Backs**

(c) When the average height of the building is greater than 20 feet above the average height of an adjacent building, an upper floor step back shall start within 2 vertical feet, plus or minus, of the height of the adjacent building, be a minimum depth of six feet along the primary building frontage, and the step should shall occur for a minimum of 70% of the facade length.
Ground floor residential units shall be setback a minimum 15 feet from the back of sidewalk.

CONSIDER VARIANCES FOR NARROW DEPTH SITES. MOST PRE-WW2 STRUCTURES DON'T HAVE 15’ SETBACKS AND WORK, ESP FOR SMALL MULTIFAMILY LIKE RM-20 THRU RM-50 "MISSING MIDDLE" TYPE HOUSING.

NOT CLEAR.

(A) Intent
To create buildings that are compatible with and enhance the surrounding area through the consideration of building scale, massing, and bulk. Massing should create a human-scale environment that is of high aesthetic quality and accommodates a variety of uses and design features. Building massing should include elements that:

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- Are consistent in scale, mass and character to adjacent land uses and land use designations
- Reinforce the definition and importance of the street
- Provide rooflines and massing that emphasize and accentuate significant elements of the building such as entries, bays, and balconies, and shading elements

Appropriate.

Provide harmonious transitions between adjacent properties

MOST PEOPLE NEVER EXPERIENCE BUILDINGS AT THIS HEIGHT AND NEVER NOTICE SETBACKS.
(ii) Transition to Lower Density Building Types

(d) When a building abuts a side and/or rear property line with a RE, RMD, R-1, or R-2 zoned parcel or a village residential or existing single-family residential use, the building shall break down the abutting façade by meeting the following standards:

1. A reduction in mass through one of the following:
   a. A minimum 15-foot building setback and an upper floor step back above 35 feet in height for a minimum depth of 25 feet.
   b. Jodie - to add IR privacy type Guidelines that are objective
      (i) Frosted windows
      (ii) Staggered window placement
IN PALO ALTO, LEFT SIDE DIAGRAM CURRENTLY NOT ALLOWED BUT IT SHOULD BE! SIX STORY STRUCTURES ARE NOT FEASIBLE - SINCE THEY ARE OVER 50'! :)

RIGHT SIDE DIAGRAM OF THIS BLDG IS THE TALLEST ALLOWABLE IN PALO ALTO RIGHT NOW! YOU MAY WANT TO EDIT TO SHOW RELATIONSHIP BETWEEN 2 STORY AND 4 STORY STRUCTURE
c. A minimum 20-foot building side yard setback, a minimum 10-foot step back above 30 feet in height, and a landscape screen that includes a double row of trees with a minimum 1 tree per 30 linear feet plus continuous shrubbery planting 72 inches (6 feet) in height [NOTE: Alternative is to maintain existing daylight plane]

2. A minimum façade break of six feet in width and six feet in depth for every 36 to 40 feet of façade length.

3. A maximum 15% window coverage of facades within 30 feet of abutting property line.
20-foot building side yard setback, a minimum 10-foot step back above 30 feet in height

THIS WILL BE TOUGH TO ACHIEVE ON SMALLER OR NARROW DEPTH SITES (<60’). IN ADDITION TO MAINTAINING EXISTING DAYLIGHT PLANE AS AN ALTERNATE OR OPTION, PLEASE CONSIDER APPROACH - DIFFERENT CRITERIA FOR SITES:

A) <60' MIGHT HAVE A 8' LANDSCAPE BUFFER
B) 60-100' MIGHT HAVE A 10'-12 BUFFER
C) >100' COULD ACCOMODATE 15'-20'

6' DEPTH IS A LOT ESPECIALLY ON SMALLER SITES, <100' IN ONE DIRECTION. 2-3' IS BETTER AND STRUCTURALLY EASIER/ CHEAPER TO CONSTRUCT.
(C) Maximum Façade Length

(i) Significant Breaks

(a) For portions of a building façade facing a public street, right-of-way, or publicly accessible path, any building greater than 25 feet in height shall not have a continuous façade greater than 70% of the façade length. Upper floor façade modulation shall be a minimum 2 feet in depth.

(b) Buildings greater than 100 feet in length, which face a public street, right-of-way, or publicly accessible path, shall have at least one vertical façade break with a minimum area greater than 600 square feet and a width less than or equal to two times the depth.

A MINIMUM 600 SF VERTICAL BREAK IS A LOT, THIS SHOULD NOT BE MORE THAN 0-100 SF. ON A TYPICAL DOWNTOWN SITE, 150' WIDE X 150' SITE THIS STANDARD WOULD REQUIRE A 20' X 30' BREAK SOMEWHERE? IT'S FINE TO HAVE AN OBJECTIVE STANDARD THAT REQUIRES AN OPEN SPACE, BUT ALLOW THE APPLICANT FLEXIBILITY ON HOW TO REDUCE OR MODULATE BUILDING MASS AND OPEN SPACE. THIS STANDARDS DESCRIBED HERE ARE TOO ONEROUS AND CAN CONSTRAIN GOOD DESIGN ALTERNATIVES OR MAKE DEVELOPMENT INFEASIBLE.

A 100' LONG SITES ARE NOT THAT LONG/WIDE, INSTEAD OF MANDATING THIS HUGE BREAK, USE MASSING TO CONTROL VARIATION ALONG A FACADE, ALTERNATIVE: CHANGE 100' TO BLDGS OVER 200' IN LENGTH
minimum 2 feet in dept

100' LONG SITES ARE NOT THAT LONG/WIDE, INSTEAD OF MANDATING THIS HUGE BREAK, USE MASSING TO CONTROL VARIATION ALONG A FACADE, ALTERNATIVE: CHANGE 100' TO BLDGS OVER 200' IN LENGTH

100 feet

A MINIMUM 600 SF VERTICAL BREAK IS A LOT, THIS SHOULD NOT BE MORE THAN 0-100 SF. ON A TYPICAL DOWNTOWN SITE, 150' WIDE X 150' SITE THIS STANDARD WOULD REQUIRE A 20' X 30' BREAK SOMEWHERE? IT'S FINE TO HAVE AN OBJECTIVE STANDARD THAT REQUIRES AN OPEN SPACE, BUT ALLOW THE APPLICANT FLEXIBILITY ON HOW TO REDUCE OR MODULATE BUILDING MASS AND OPEN SPACE. THIS STANDARDS DESCRIBED HERE ARE TOO ONEROUS AND CAN CONSTRAIN GOOD DESIGN ALTERNATIVES OR MAKE DEVELOPMENT INFEASIBLE.
(D) Special Conditions

(i) Railroad Frontages

(a) All parcels with lot lines abutting railroad rights-of-way shall meet the following standards on the railroad-abutting facade:
   1. A minimum facade break of at least 10 feet in width and six feet in depth for every 60 feet of façade length.
   2. For portion of a building greater that is 20 feet or greater in height, a maximum continuous façade length shall not exceed 60 feet.
   3. A daylight setback plane starting 10 feet in height from grade at the property line and extending at a 1:1 ratio.

18.24.060 Façade Design

(A) Intent Statement:

To create cohesive and well-crafted building facades with human-scaled details that incorporate textures, colors, and other details that are compatible with and enhance the surrounding area. Facades should include the following elements:

- Human-scaled detail, articulation, and craftsmanship
- Quality of construction, craftsmanship, and design to create long lasting buildings
- Articulation of the building base or ground floor, body or middle, and top, cornice or parapet edge
- Expression of a human-scaled façade rhythm and pattern that reflects the building’s use
- Fenestration that enhances the architectural character of the building
- Defined building entry that is proportional to the building and number of people served

(B) Application

(i) All facades shall meet all the required design standards and guidelines to ensure the same level of care and integrity throughout the building design.
(ii) Façade sidewalls located along a zero-lot line where, at time of approval are not visible from a right-of-way, are exempt.
(iii) Façade sidewalls located along a zero-lot line, where at time of approval are visible from a right-of-way, shall continue color, material, and pattern of the main façade.

(C) Human Scaled Architecture

(i) Base/Middle/Top

(a) Buildings three stories or taller shall be designed to differentiate a defined base or ground floor, a middle or body, and a top, cornice, or parapet cap. Buildings two stories or less shall include a defined base and top. Each of these elements shall be distinguished from one another through use of two or more of the following four techniques:
(A) Intent Statement:
To create cohesive and well-crafted building facades with human-scaled details that incorporate textures, colors, and other details that are compatible with and enhance the surrounding area. Facades should include the following elements:
1. Variation in building modulation (select a minimum of one)
   a. Horizontal shifts. Changes in floor plates that protrude and/or recess with a minimum dimension of two feet from the primary facade.

   LOVES THESE DIAGRAMS, BUT THEY ILLUSTRATE BUILDINGS TALLER THAN PALO ALTO’S CURRENT 50’ HEIGHT LIMIT (WE SHOULD ALLOW STRUCTURES THIS TALL THOUGH!)

   b. Upper floor step backs. A horizontal step back of upper-floor façades with a minimum five-foot step back from the primary façade for a minimum of 80% of the length of the façade.

   THIS MASSING IS GOOD, ESSENTIALLY A DIAGRAM OF THE BELoved BUILDING AT RAMONA & UNIVERSITY, BUT IT MIGHT NOT MEET 60’ COMbINED CORNER LENGTHS DESCRIBED IN 18.10.040(B)(a)(a)

   c. Ground floor step back. A horizontal shift of the ground floor facade with a minimum depth of two feet for a minimum 80% of the length of the façade. Ground floor step backs shall not exceed the maximum setback requirements, where stated.
LOVE THESE DIAGRAMS, BUT THEY ILLUSTRATE BUILDINGS TALLER THAN PALO ALTO'S CURRENT 50' HEIGHT LIMIT (WE SHOULD ALLOW STRUCTURES THIS TALL THOUGH!)

THIS MASSING IS GOOD, ESSENTIALLY A DIAGRAM OF THE BELOVED BUILDING AT RAMONA & UNIVERSITY, BUT IT MIGHT NOT MEET 60' COMBINED CORNER LENGTHS DESCRIBED IN 18.10.040(B)(a)1
2. For continuous facades greater than 100 feet in length, the façade shall include a vertical recess or projection with a minimum four feet wide and two feet deep vertical shift modulation to establish a rhythm between 20 to 50 feet in width for housing units or 12 to 16 feet in width for individual rooms and spaces.
THIS IS A BETTER STANDARD THAN 18.24.050(C). AS LONG AS THIS IS INCLUDED, THE OTHER SHOULD NOT EXIST. AS CURRENTLY WRITTEN, THEY CONTRADICT EACH OTHER.

For continuous facades greater than 100 feet in length
(b) Residential mixed-use and non-residential buildings shall express a vertical rhythm and pattern by using one of the following options:
   1. Facades shall use vertical patterns of building modulation, façade articulation, and fenestration;

2. Facades that use horizontal articulation and fenestration patterns shall use a vertical massing strategy with a minimum four feet wide and two feet deep vertical shift in modulation at least once every 50 feet of façade length.

(c) Storefront uses shall express a vertical rhythm not to exceed 30 to 50 feet in width.
Facades that use horizontal articulation and fenestration patterns shall use a vertical massing strategy with a minimum four feet wide and two feet deep vertical shift in modulation at least once every 50 feet of façade length.

THIS STANDARD IS ALSO BETTER THAN 18.24.050(C)
(D) Ground Floor Character

(i) Storefront/Retail Ground Floors

(a) Ground floor height shall be a minimum 14 feet floor-to-floor or shall maintain a 2nd floor datum line of an abutting building.

(b) Transparency shall include a minimum 60 percent transparent glazing between 2 and 10 feet in height from sidewalk, providing unobstructed views into the commercial space.

(c) Bulkheads and solid base walls: If provided, shall measure between 12 and 30 inches from finished grade

(d) Primary entries shall include weather protection that is a minimum 6 feet wide and 4 feet deep by recessing the entry, providing an awning or using a combination of these methods.

(e) Awnings, canopies and weather protection:

1. When transom windows are above display windows, awnings, canopies and similar weather protection elements shall be installed between transom and display windows. These elements should allow for light to enter the storefront through the transom windows and allow the weather protection feature to shade the display window.

2. Awnings may be fixed or retractable.

3. Awnings, canopies and other weather protection elements shall not extend across the entire facade. Instead, individual segments shall be installed over each storefront entry or set of storefront windows and shall not extend across wall sections, across multiple windows or over columns.

(ii) Other Non-residential Ground Floors

(a) Ground floor height shall be a minimum 14 feet floor-to-floor or shall match the 2nd floor datum line of an abutting building.

(b) Transparency shall include a minimum 50 percent transparent glazing between 4 and 10 feet in height from sidewalk or terrace grade.

THERE SHOULD BE SOME FLEXIBILITY FOR PROGRAM NEEDS OR NAVIGATING GRADE CHANGES FRONT TO BACK. CONSIDER A RANGE, (IE 12'-15' FLOOR TO FLOOR) RATHER THAN A STRICT MINIMUM.
minimum 14 feet floor-to-floor

6 feet wide and 4 feet

a minimum 14 feet floor-to-floor

THERE SHOULD BE SOME FLEXIBILITY FOR PROGRAM NEEDS OR NAVIGATING GRADE CHANGES FRONT TO BACK. CONSIDER A RANGE, (IE 12'-15' FLOOR TO FLOOR) RATHER THAN A STRICT MINIMUM.
(c) Primary entries shall include weather protection that is a minimum of 10 feet wide and 8 feet deep by recessing the entry, providing an awning or using a combination of these methods.

(iii) Residential Ground Floors
(a) Finished Floor Height: Units on ground floors shall have a finished floor height at a minimum two feet above average back of sidewalk height for the associated façade.
(b) Primary entries shall include weather protection that is a minimum 4 feet wide and 4 feet deep by recessing the entry, providing an awning or using a combination of these methods.

(E) Parking>Loading>Utilities
(i) Entry Size: No more than 25% of the site frontage facing a street should be devoted to garage openings, carports, surface parking, loading entries, or utilities access (on sites with less than 100 feet of frontage, no more than 25 feet).
(ii) Above grade structured parking levels facing a public right-of-way or publicly accessible open space/path shall be lined with commercial or habitable uses with a minimum depth of 20 feet.
(iii) Partially sub-grade parking not exceeding six feet in height above abutting grade at back of sidewalk shall be screened with features meeting the standards of section 18.24.110 Visual, Screening, and Landscaping.
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<td>80 SF SEEMS LARGE FOR SMALL SITES, MAKE SURE THIS IS CONSISTENT WITH 18.24.040(B)ii PRIMARY BUILDING ENTRY</td>
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<td>THE 25% ON NARROW 100' SITES MAY BE IMPOSSIBLE TO MEET, GARAGES ARE TYPICALLY 20' WIDE FOR INGRESS AND EGRESS, THERE MAY ALSO BE UTILITY ACCESS (ELECTRICAL ROOMS, TRASH ROOMS, BACKFLOW PREVENTERS,) IN ADDITION TO GARAGE ACCESS,</td>
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<td>25% of the site frontage facing a street should be devoted to garage openings, carports, surface parking, loading entries, or utilities access (on sites with less than 100 feet of frontage, no more than 25 feet)</td>
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18.24.070 Residential Entries

(A) Intent

Private entries into ground floor residential units shall be designed to provide:

- human-scaled detailing
- enhanced pedestrian experience
- transition between public and private space
- spaces for residents to gather and spend time outdoors
- resident privacy

(B) Ground floor unit entries

(i) Where ground floor residential unit entries are required, one or more of the following entry types shall be provided:

(a) Stoop:
1. Stoops shall provide entry access for a maximum of two units.; and
2. Stoop entry landings shall be a minimum 4 feet in depth; and
3. The maximum stoop height from the back of sidewalk grade shall be 5 feet.

(b) Porch:
1. Porches shall provide entry access for a maximum of one unit; and
2. Porches shall be large enough so a 6-foot by 6-foot square can fit inside of a porch for each unit; and
3. The maximum porch floor height from the back of sidewalk grade shall be 5 feet.

BE CONSISTENT WITH 18.10.024.(C)ii WHICH SAYS 36 SF AND MIN 5' DIMENSION

6-foot by 6-foot square can fit inside of a porch for each unit; and

 Packet Pg. 449
Private entries into ground floor residential units shall be designed to provide:
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BE CONSISTENT WITH 18.10.024.(C)ii WHICH SAYS 36 SF AND MIN 5' DIMENSION

6-foot by 6-foot square can fit inside of a porch for each unit
(c) **Terrace:**
1. A Terrace may serve multiple unit entries; and
2. The maximum Terrace height shall be 30 inches above the grade of the back of the adjacent sidewalk or accessway; and
3. Walls, fences and hedges on Terraces shall be a maximum of 42 inches tall and have a minimum transparency of 40 percent.

(d) **Frontage Court:**
1. A Frontage Court may serve multiple unit entries; and
2. The minimum Frontage Court width along a primary frontage shall be 25 feet; and
3. The maximum Frontage Court width along a primary frontage shall be 50 percent of the facade length or 80 feet, whichever is less; and
4. The minimum Frontage Court depth shall be 25 feet; and
5. The maximum Frontage Court depth shall be 50 feet or a ratio not to exceed 2:1 depth to width.
18.24.080 Open Space

(A) Intent

To ensure that residents and visitors have access to usable open space and common facilities that provide recreational opportunities, promote a healthy environment, and enhance the experience of living in Palo Alto. Common and private open spaces should include the following characteristics:

- Be integrated into the site access and building circulation strategy
- Be generous in dimension to provide usable space
- Provide landscape elements that will support the health of the plants and enhance the character of place
- Promote public health
- Be located to provide easy access to private and common building areas
- Promote sustainable practices and opportunities for green infrastructure
- Promote community safety through eyes on the street

(B) Private Open Space

Private Open Spaces shall be immediately accessible from each residential unit, provide direct visible access to the sky, protect from weather, and take advantage of possible views. Private Open Spaces shall meet the following standards:

(a) Minimum dimension of six feet by six feet.

(b) Minimum clear height dimension of 8'-6" feet.

(c) Be accessed directly from a residential unit

(d) Balconies shall not be located within the daylight plane

(e) Notwithstanding subsection (a), ground floor patios shall meet the following minimum requirements:

1. RM-20 and RM-30 districts, Minimum dimension of eight feet by eight feet and 80 square feet of area for at least 75% of the area

2. RM-40 districts, Minimum dimension of six feet by six feet and 80 square feet of area for at least 75% of the area

3. [TO COME: Regulating height above the ground-floor/setback from the street to ensure privacy/usability]

(C) Common Open Space

Common Open Space shall meet the following standards:

1. Minimum dimension of 12 feet.

2. Minimum of 60% of area open to the sky free of permanent weather protection or encroachments

3. Notwithstanding subsection (1), courtyards enclosed on four sides shall have a minimum dimension of 40 feet and have a minimum courtyard width to building height ratio of 1:1.25

4. Include places to sit

5. A minimum 20% of landscaping
(A) Intent

To ensure that residents and visitors have access to usable open space and common facilities that provide recreational opportunities, promote a healthy environment, and enhance the experience of living in Palo Alto. Common and private open spaces should include the following characteristics:

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- Be located to provide easy access to private and common building areas
- Promote sustainable practices and opportunities for green infrastructure
- Promote community safety through eyes on the street

THIS MAKES NO SENSE. IS THERE A DIAGRAM?

100 square feet of area for at least 75% of the area

80 square feet of area for at least 75% of the area
TO: HONORABLE CITY COUNCIL

FROM: CITY MANAGER

DEPARTMENT: PLANNING & DEVELOPMENT SERVICES

DATE: SEPTEMBER 27, 2021

ID# 12180

SUBJECT: PUBLIC HEARING: ADOPTION OF TWO ORDINANCES IMPLEMENTING THE OBJECTIVE STANDARDS PROJECT, INCLUDING: 1) NEW CHAPTER 18.24, OBJECTIVE DESIGN STANDARDS, TO REPLACE EXISTING CONTEXT-BASED DESIGN CRITERIA; 2) MODIFICATIONS TO AFFORDABLE HOUSING (AH) AND WORKFORCE HOUSING (WH) OVERLAY DISTRICTS TO ELIMINATE THE LEGISLATIVE PROCESS; 3) EXPANSION OF AFFORDABLE HOUSING (AH) AND HOUSING INCENTIVE PROGRAM (HIP) TO PRODELEGIBLE PROPERTIES; 4) CHANGES TO REMOVE INCONSISTENCIES AND REDUNDANCIES, AND STREAMLINE PROJECT REVIEW THROUGHOUT TITLE 18 CHAPTERS

This memo summarizes staff’s anticipated approach to present information contained in the subject ordinance to Council and opportunities for public input.

The ordinance proposes a number of changes to the municipal code intended to preserve the City’s local land use authority by converting subjective developments standards to objective criteria. This is relevant for certain development projects, including qualifying SB 330 and SB 35 housing and mixed used projects that, in accordance with State law, can only be reviewed for compliance with objective criteria.

While staff have worked with the ARB and PTC over several meetings to ensure the intent of the subjective standards have been appropriately converted to objective criteria, this will be the first time the City Council will have had an opportunity to review the changes.

Accordingly, from a process perspective, staff anticipates the public hearing will occur over at least three days/meetings.
On September 27th, staff will provide a presentation on the proposed ordinance changes. It is anticipated the Council will hear from one representative each from the ARB and PTC, then open the hearing for public comments. Staff proposes the City Council initially focus on the context based design criteria and other administrative changes proposed in the ordinance (these sections are listed on the agenda title as items 1 and 4) and ask questions or provide comments, including direction on possible changes.

On October 25th the public hearing will resume with a brief staff presentation summarizing information previously presented and included in the record. This presentation will serve to refresh the City Council’s understanding of the proposed changes to certain combining districts and expansion of the housing incentive program and affordable housing overlay to PTOD-eligible properties (these sections are listed on the agenda title as items 2 and 3). Since no new information is being introduced at this meeting, it is not anticipated that the Council will receive additional public input at this time.

A third meeting, date to be determined, will follow and introduce an updated ordinance, if necessary, that responds to the Council’s prior direction. Following a staff presentation, another opportunity for public comment will be provided before the City Council concludes its deliberation on the ordinance. If the Council requires more time, additional meetings may be scheduled.

The above schedule outlines staff’s intended approach and is subject to the City Council’s endorsement.

JONATHAN LAIT
Planning & Development Services Director

ED SHIKADA
City Manager
Schedule of Meetings
Published September 23, 2021

This is a courtesy notice only. Meeting dates, times, and locations are subject to change. Almost all Palo Alto Council and some Standing Committee meetings are cablecast live on Channel 26. If there happens to be concurrent meetings, one meeting will be broadcast on Channel 29.

Until further notice, all meetings will be held by virtual teleconference via Zoom and streamed on YouTube.

THURSDAY, SEPTEMBER 23
Historic Resources Board Meeting, 8:30 a.m. (CANCELLED)
Sp. Human Relations Commission Meeting, 6 p.m.

MONDAY, SEPTEMBER 27
Sp. City Council Meeting, 5 p.m.

TUESDAY, SEPTEMBER 28
Parks & Recreation Committee Meeting, 7 p.m.

WEDNESDAY, SEPTEMBER 29
Planning & Transportation Commission Meeting, 6 p.m. (CANCELLED)

MONDAY, OCTOBER 4
Sp. City Council Meeting, 5 p.m.

TUESDAY, OCTOBER 5
Sp. Finance Committee Meeting, 6 p.m.

WEDNESDAY, OCTOBER 6
Sp. Utilities Advisory Committee Meeting, 5 p.m.

THURSDAY, OCTOBER 7
Architectural Review Board, 8:30 a.m.

MONDAY, OCTOBER 11
City Council Meeting, 6 p.m. (CANCELLED DUE TO HOLIDAY)

TUESDAY, OCTOBER 12
Policy & Services Committee Meeting, 7 p.m.

WEDNESDAY, OCTOBER 13
Planning & Transportation Commission Meeting, 6 p.m.

THURSDAY, OCTOBER 14
Historic Resources Board Meeting, 8:30 a.m.
Sp. Human Relations Commission Meeting, 6 p.m.

MONDAY, OCTOBER 18
Sp. City Council Meeting, 5 p.m.

TUESDAY, OCTOBER 19
Sp. Finance Committee Meeting, 6 p.m.