



REGULAR MEETING OF THE MILPITAS CITY COUNCIL



AGENDA

TUESDAY, MARCH 18, 2025

CITY COUNCIL CHAMBER, 455 E. CALAVERAS BLVD, MILPITAS, CA

5:30 PM (CLOSED SESSION)

7:00 PM (PUBLIC BUSINESS)

For assistance in the following languages, you may call:

Đối với Việt Nam, gọi 408-586-2400

Para sa Tagalog, tumawag sa 408-586-3051

Para español, llame 408-586-3072

** To access written translation during the meeting, scan the QR Code.*

The City Council meeting is held in the City Council Chamber at City Hall, 455 E. Calaveras Blvd., Milpitas and via teleconference/Zoom webinar.

You may watch the Council meeting without providing public comment by accessing it via links here.

Meeting shall be livestreamed - Go to:

Facebook: <https://www.facebook.com/CityofMilpitas/>

YouTube: <https://www.milpitas.gov/youtube>

Web Streaming: <https://www.milpitas.gov/webstreaming>

PUBLIC COMMENT INSTRUCTIONS

Oral public comments may only be provided live during the City Council meeting in person, unless the City Council approves remote public comment. All comments provided shall be limited to three minutes or less as determined by the Mayor. All members of the public will be limited to one comment per agenda item, and one comment for non-agenda items. Members of the public may submit written comments by email to CityClerk@milpitas.gov

The meeting will be streamed via Zoom for viewing purposes only unless the City Council approves remote public comment. To watch via Zoom, please register at:

https://ci-milpitas-ca-gov.zoom.us/webinar/register/WN_IHvlofKNT1qY5GHh7A-jJw

NOTE: If a member of the public wishes to share any presentation materials for Council consideration, they must be submitted to the Clerk's Office by email to CityClerk@milpitas.gov by 12:00 p.m. on the day of the meeting. No presentations will be accepted in person in the Council Chambers.

MILPITAS CITY COUNCIL CODE OF CONDUCT

- Be respectful and courteous (words, tone, and body language).
- Model civility.
- Avoid surprises.
- Praise publicly and criticize privately.
- Focus on the issue, not the person.
- Refrain from using electronic devices while on the Council dais.
- Disclose conflicts of interest and affiliations related to agenda items.
- Separate governing from campaigning.
- The Council speaks with one voice after making policy on issues.
- Respect the line between policy and administration.
- Council will hold one another accountable to comply with this Code of Conduct.

CALL MEETING TO ORDER by Mayor and ROLL CALL by City Clerk (5:30 PM)

ADJOURN TO CLOSED SESSION

(a) CONFERENCE WITH LABOR NEGOTIATOR

Pursuant to Government Code Section 54957.6
Agency's Designated Representatives: Rick Bolanos, Liebert Cassidy Whitmore
Employee Organization(s): Professional and Technical Employees, Mid-Management and Confidential Employees, Milpitas Employees Association, Unrepresented Employees

(b) CONFERENCE WITH REAL PROPERTY NEGOTIATORS

Pursuant to Government Code Section 54956.8
Property: APN No. 086-37-018
Agency's Negotiator(s): City Engineer Michael Silveira
Negotiating Parties: City of Milpitas and Santa Clara Valley Water District
Under Negotiation: Price and terms of payment

(c) CONFERENCE WITH REAL PROPERTY NEGOTIATORS

Pursuant to Government Code Section 54956.8
Property: 1480-1488 South Main Street, Milpitas, CA 95035
Agency's Negotiator(s): Economic Development and Strategic Initiatives Director Alex Andrade
Negotiating Parties: City of Milpitas and Espana's Collision Repair DBA CARSTAR Espana's
Under Negotiation: Price and terms of payment

(d) CONFERENCE WITH REAL PROPERTY NEGOTIATORS

Pursuant to Government Code Section 54956.8
Property: APN Nos. 028-34-001 through 028-34-094
Agency's Negotiator(s): Economic Development and Strategic Initiatives Director Alex Andrade
Negotiating Parties: City of Milpitas and Milpitas Community Museum
Under Negotiation: Price and terms of payment

CLOSED SESSION ANNOUNCEMENT:

Report on action taken in Closed Session, if required per Government Code Section 54957.1, including the vote or abstention of each member present.

PLEDGE OF ALLEGIANCE

INVOCATION (Mayor Montano)

PRESENTATIONS (7:05 PM)

- Neighborhood Beautification Awards (Certificate)

PUBLIC FORUM (7:15 PM)

Members of the public are invited to speak on any item that does not appear on today's agenda. Comments will be limited to three minutes or less at the Mayor's discretion. When called to speak, you are encouraged to state your name for the record. As an item not listed on the agenda, no action can be taken, however the City Council may instruct the City Manager to place the item on a future meeting agenda.

ANNOUNCEMENT OF CONFLICT OF INTEREST AND CAMPAIGN CONTRIBUTIONS

READING OF THE CITY COUNCIL CODE OF CONDUCT

APPROVAL OF AGENDA

CONSENT CALENDAR (7:20 PM)

Consent calendar items are considered to be routine and will be considered for adoption by one motion. There will be no separate discussion of these items unless a City Councilmember, member of the audience or staff requests the Council to remove an item from (or be added to) the consent calendar. Any person desiring to speak on any item on the consent calendar should ask to have that item removed from the consent calendar.

- C1. Receive City Council Calendar of Meetings for March and April 2025 (Staff Contact: Suzanne Guzzetta, City Clerk, 408-586-3001)**

Recommendation: Receive City Council Calendar of Meetings for March and April 2025.

- C2. Approve City Council Meeting Minutes of March 4, 2025 (Staff Contact: Suzanne Guzzetta, City Clerk, 408-586-3001)**

Recommendation: Approve City Council Meeting minutes of March 4, 2025.

- C3. Receive the Preview List of Anticipated Items for the Next Regular City Council Meeting (Staff Contact: Suzanne Guzzetta, City Clerk, 408-586-3001)**

Recommendation: Receive the list of anticipated agenda items for the next regular City Council meeting.

- C4. Receive and Review the List of Agenda Items Requested by City Councilmembers (Staff Contact: Suzanne Guzzetta, City Clerk, 408-586-3001)**

Recommendation: Receive the list of items that have been requested by City Councilmembers and received consensus in previous meetings to date.

- C5. Authorize and Approve a Travel Request to the City of Milpitas Sister City Dagupan, Philippines, from April 25 to May 1, 2025 (Staff Contact: Matt Cano, Assistant City Manager, 408-586-3012)**

Recommendation: Authorize and approve travel to Dagupan, Philippines, by Vice Mayor Gary Barbadillo from April 25 to May 1, 2025, for a total estimated amount of \$3200, budgeted under the Individual Elected Official Allocation for Conferences/Meetings/Trainings.

- C6. Authorize the City Manager, or Designee, to Execute Purchase Orders with Pace Supply Corp. for Clow Fire Hydrants and Related Parts (Staff Contact: Luz Cofresí-Howe, Finance Director, 408-586-3111; and Christian Di Renzo, Public Works Director, 408-586-2602)**

Recommendation: (1) Authorize the City Manager, or designee, to issue purchase orders to PACE Supply Corp. for Clow fire hydrants and check valves in an amount not to exceed \$165,157; and (2) Authorize the City Manager, or designee, to issue additional purchase orders to PACE Supply Corp. for Clow fire hydrants and related parts as required for a period of up to five years, subject to existing contract authority and the appropriation of funds.

- C7. Authorize the Surplus of City Vehicles and Equipment (Staff Contact: Luz Cofresí-Howe, Finance Director, 408-586-3111)**

Recommendation: Authorize the surplus of City vehicles and equipment with JJ Kane Auctions.

- C8. Adopt a Resolution to Approve Project Plans, Award the Construction Contract to Cratus, Inc., and Authorize Contract Change Order(s) for the Dempsey Road Water Line Replacement (Staff:**

Christian Di Renzo, Public Works Director, 408-586-2602; and Michael Silveira, City Engineer, 408-586-3303)

Recommendation: (1) Adopt a resolution to approve project plans and specifications, (2) Award the construction contract to Cratus, Inc. in the amount of \$5,463,800, (3) Authorize the City Manager to execute the construction contract with Cratus, Inc., and (4) Authorize the Public Works Director to negotiate and execute contract change order(s) in an aggregate amount not to exceed \$1,093,000 for the Dempsey Road Water Line Replacement, Project Nos. 7110 and 7118.

C9. 2023 Community Project Funding for the Milpitas Carbon Neutral Homes Retrofit Program (Staff Contact: Christian Di Renzo, Public Works Director, 408-586-2602)

Recommendation: (1) Adopt a resolution to accept and authorize the City Manager or designee to execute the grant award and agreement from the U.S. Department of Energy for the Milpitas Carbon Neutral Homes Retrofit Program in the amount of \$3,000,000 and appropriating the respective revenue and expenditure , (2) Authorize the City Manager, or designee, to approve a subrecipient agreement with Silicon Valley Clean Energy in an amount not to exceed \$2,655,000 for the administration and issuance of additional rebates for Go Electric Milpitas program applicants; and (3) Approve a limited-term, grant-funded Administrative Analyst I/II position for the Public Works Department.

C10. Receive an Update on the Security Improvements at the McCarthy Ranch Sewer Lift Station (Main Lift) and Determine that the Condition Continues to Constitute an Emergency (Staff Contact: Christian Di Renzo, Public Works Director, 408-586-2602)

Recommendation: (1) Receive an update on the security improvements at the McCarthy Ranch Sewer Lift Station; and (2) Determine by a four-fifths vote that the condition continues to constitute an emergency.

C11. Approve Installation of Womanhood Project Marker at Delano Manongs Park (Staff Contact: Renee Lorentzen, Recreation and Community Services Director, 408-586-3409)

Recommendation: Approve installation of a Womanhood marker in commemoration of Dr. Dawn Mabalon at Delano Manongs Park from The Womanhood Project funded by the County of Santa Clara Office of Women's Policy.

COMMUNITY DEVELOPMENT (7:30 PM)

12. Receive Update on Milpitas Innovation District Branding Initiative and Logo Design Status (Staff Contact: Alex Andrade, Economic Development and Strategic Initiatives Director, 408-586-3046)

Recommendation: Receive update on the Milpitas Innovation District Branding Initiative and approve Logo Design Option #1 for final development by consultant Navajo Company.

COMMUNITY SERVICES AND SUSTAINABLE INFRASTRUCTURE (8:00 PM)

13. Approve Design for Historical Park Marker Project (Staff Contact: Renee Lorentzen, Recreation and Community Services Director, 408-586-3409)

Recommendation: (1) Approve the design for Historical Park Markers by Vickie Jo Sowell; and (2) Transfer \$10,000 from CP3489 Public Art Program to fully fund this project.

ANNOUNCEMENTS AND FUTURE AGENDA ITEMS (8:30 PM)

Members of the City Council or City Manager may make brief announcements at this time. Members of the City Council may also suggest future agenda items. For future agenda items, the City Council shall not debate the topic or engage in

discussion but shall simply state a “yes” or “no” as whether to move the item forward. If a majority of the City Council agrees to move the item forward, the City Manager shall place the item on a future agenda.

ADJOURNMENT (8:35 PM)

KNOW YOUR RIGHTS UNDER THE OPEN GOVERNMENT ORDINANCE

Government’s duty is to serve the public, reaching its decisions in full view of the public. Commissions and other City agencies exist to conduct the people’s business. This ordinance assures that deliberations are conducted before the people and City operations are open to the people’s review. For more information on your rights under the Open Government Ordinance or to report a violation, contact the City Attorney’s office at Milpitas City Hall, 455 E. Calaveras Blvd., Milpitas, CA 95035
e-mail: mmutalipassi@milpitas.gov / Phone: 408-586-3040

The Open Government Ordinance is codified in the Milpitas Municipal Code as Title I Chapter 310 and is available online at the City’s website www.milpitas.gov by selecting the Milpitas Municipal Code link.

Materials related to an item on this agenda submitted to the City Council after initial distribution of the agenda packet are available for public inspection at the City Clerk’s office at Milpitas City Hall, 3rd floor 455 E. Calaveras Blvd., Milpitas and on City website. City Council agendas and related materials can be viewed online: www.milpitas.gov/government/council/agenda_minutes.asp (select meeting date)

APPLY TO SERVE ON A CITY COMMISSION

Commission application forms are available online at www.milpitas.gov or at Milpitas City Hall. Contact the City Clerk’s Office at 408-586-3001 for more information.

If you need assistance, per the Americans with Disabilities Act, for any City of Milpitas public meeting, please call the City Clerk at 408-586-3001 or send an e-mail to CityClerk@milpitas.gov prior to the meeting. You may request a larger font agenda.

February 2025						
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2	3	4	5	6	7	8
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Milpitas City Council Calendar

March 2025

April 2025						
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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3 7:00 PM -Parks, Recreation & Cultural Resources Commission (EC)	4 6:00 PM -Closed Session 7:00 PM -City Council	5 12:00 PM -Santa Clara Valley Water District - Water Commission (CM) 1:00 PM -Santa Clara VTA Monthly Briefing - Northeast Group (CM) (Santa Clara)	6 5:30 PM -Santa Clara VTA Board of Directors (CM) 5:30 PM -Milpitas Chamber of Commerce Board (GB)	7	8
9	10 4:30 PM -Economic Development and Trade Commission (WL)	11 4:00 PM -Milpitas HOPE	12 4:30 PM -City Council Finance Subcommittee (CM/EC) 7:00 PM -Silicon Valley Clean Energy Board of Directors (GB) (Cupertino)	13 4:00 PM -Santa Clara VTA Policy Advisory Committee (EC) 4:00 PM -Treatment Plant Advisory Committee (CM) (San Jose) 6:00 PM -Youth Advisory Commission (HL) 7:00 PM -Cities Assoc of SCC (CM)	14	15
16	17 7:00 PM -Science, Technology, and Innovation Commission (WL) 7:00 PM -Library and Education Commission (HL) (Milpitas Public Library)	18 5:00 PM -Closed Session 7:00 PM -City Council	19 6:00 PM -Energy and Environmental Sustainability Commission (EC)	20 6:30 PM -Bay Area Water Supply Conserv Agency (CM) (Oak Room - San Mateo Main Library) 7:00 PM -Public Safety and Emergency Preparedness Commission (WL)	21	22
23	24 7:00 PM -Arts Commission (CM)	25	26 7:00 PM -Planning Commission	27 4:00 PM -Silicon Valley Regional Interoperability Authority (SVRIA) (GB)	28	29
30	31  Cesar Chavez Day City Hall Closed					

March 2025						
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Milpitas City Council Calendar

April 2025

May 2025						
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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 6:00 PM -Closed Session 7:00 PM -City Council	2 2:00 PM -Santa Clara VTA Monthly Briefing - Northeast Group (CM) (Santa Clara) 5:30 PM -Veterans Commission (GB) 7:00 PM -Community Housing Commission (EC)	3 5:30 PM -Milpitas Chamber of Commerce Board (GB) 5:30 PM -Santa Clara VTA Board of Directors (CM)	4	5
6	7 7:00 PM -Parks, Recreation & Cultural Resources Commission (EC)	8	9 4:30 PM -City Council Finance Subcommittee (CM/EC) 7:00 PM -Silicon Valley Clean Energy Board of Directors (GB) (Cupertino) 7:00 PM -Planning Commission	10 4:00 PM -Treatment Plant Advisory Committee (CM) (San Jose) 4:00 PM -Santa Clara VTA Policy Advisory Committee (EC) 6:00 PM -Youth Advisory Commission (HL) 7:00 PM -Cities Assoc of SCC (CM)	11	12
13	14 4:30 PM -Economic Development and Trade Commission (WL)	15 5:00 PM -Closed Session 7:00 PM -City Council	16 6:00 PM -Energy and Environmental Sustainability Commission (EC)	17	18	19
20	21 7:00 PM -Science, Technology, and Innovation Commission (WL)	22 1:30 PM -Senior Advisory Commission (HL)	23 5:30 PM -Cities Assoc. of SCC - Recycling and Waste Reduction Commission (CM) 7:00 PM -Planning Commission	24 12:00 PM -Santa Clara County Library JPA Board Meeting (CM) (Campbell, CA)	25	26
27	28	29	30			



REGULAR MEETING OF THE MILPITAS CITY COUNCIL

MINUTES
TUESDAY, MARCH 4, 2025

The City Council of the City of Milpitas convened in a Regular Meeting of the Milpitas City Council on March 4, 2025, in the City Council Chamber, 455 E. Calaveras Blvd, Milpitas, CA, and via teleconference/Zoom webinar.

CALL MEETING TO ORDER by Mayor and ROLL CALL by City Clerk

Mayor Montano called the Regular City Council meeting to order at 6:04 PM. Roll Call was taken by City Clerk Guzzetta.

PRESENT: Mayor Montano, Vice Mayor Barbadillo, Councilmember Chua, Councilmember Lam, Councilmember Lien

ABSENT:

Acting City Attorney Creech briefed the City Council on the Closed Session agenda. The City Council adjourned to Closed Session at 6:06 PM.

ADJOURN TO CLOSED SESSION

(a) PUBLIC EMPLOYEE APPOINTMENT AND HIRING

Pursuant to Government Code Section 54957(b)(1):
Employee Position: Interim City Manager.

CLOSED SESSION ANNOUNCEMENT:

The City Council reconvened at 7:17 PM. Acting City Attorney Creech had nothing to report out.

PLEDGE OF ALLEGIANCE

Mayor Montano led the pledge of allegiance.

INVOCATION

Mayor Montano provided the invocation.

PRESENTATIONS

Mayor Montano, joined by the City Council, presented a certificate to Bill Hare in recognition of his recent Grammy Award, a proclamation to Bernadette Salgarino in recognition of Youth Art Month, and a proclamation and certificate in recognition of Women's History Month to Lorinne Patterson and Noreen Kinoshi.

PUBLIC FORUM

There were the following public speakers:

1. Voltaire Montemayor

ANNOUNCEMENT OF CONFLICT OF INTEREST AND CAMPAIGN CONTRIBUTIONS

Acting City Attorney Creech asked the Mayor and City Councilmembers if they had any personal conflicts of interest. By roll call, there were no conflicts of interest. Acting City Attorney Creech asked the Mayor and City Councilmembers if they had any reportable campaign contributions. By roll call, there were no reportable campaign contributions.

READING OF THE CITY COUNCIL CODE OF CONDUCT

Councilmember Chua read the City Council Code of Conduct.

APPROVAL OF AGENDA

After discussion, motion: to approve the agenda.

Motion/Second: Councilmember Lien / Vice Mayor Barbadillo

Motion carried by the following:

AYES: Mayor Montano, Vice Mayor Barbadillo, Councilmember Chua, Councilmember Lam,
Councilmember Lien

NOES: None

CONSENT CALENDAR

There were no public speakers.

After discussion, motion: to approve the Consent Calendar.

Motion/Second: Councilmember Chua / Vice Mayor Barbadillo

by the following:

AYES: Mayor Montano, Vice Mayor Barbadillo, Councilmember Chua, Councilmember Lam,
Councilmember Lien

NOES: None

1. Receive City Council Calendar of Meetings for March 2025 (Staff Contact: Suzanne Guzzetta, City Clerk, 408-586-3001)

Received City Council Calendar of Meetings for March 2025.

2. Approve City Council Meeting Minutes of February 11 and 18, 2025 (Staff Contact: Suzanne Guzzetta, City Clerk, 408-586-3001)

Approved City Council Special Meeting minutes of February 11 and 18, 2025 and Regular Meeting minutes of February 18, 2025.

3. Receive the Preview List of Anticipated Items for the Next Regular City Council Meeting (Staff Contact: Suzanne Guzzetta, City Clerk, 408-586-3001)

Received the list of anticipated agenda items for the next regular City Council meeting.

4. Receive and Review the List of Agenda Items Requested by City Councilmembers (Staff Contact: Suzanne Guzzetta, City Clerk, 408-586-3001)

Received the list of items that have been requested by City Councilmembers and received consensus in previous meetings to date.

5. **Authorize and Approve Travel Requests to Sacramento, California, by Mayor Montano, Councilmember Chua, Councilmember Lien, and Councilmember Lam to Attend the League of California Cities 2025 City Leaders Summit from April 23 to 25, 2025 (Staff Contact: Matt Cano, Assistant City Manager, 408-586-3012)**

Authorized and approved travel to Sacramento, California, by Mayor Carmen Montano, Councilmember Evelyn Chua, Councilmember Hon Lien, and Councilmember William Lam to attend the League of California Cities 2025 City Leaders Summit from April 23 to 25, 2025, for a total estimated amount of \$6,621, budgeted under the Individual Elected Official Allocation for Conferences/Meetings/Trainings.

6. **Adopt a Resolution Expressing Support for the City of Milpitas to Fully Fund Metro Tango Subdistrict Park from TASP Impact Fees per the Outdoor Recreation Legacy Partnership Grant Application Requirement (Staff Contact: Christian Di Renzo, Public Works Director, 408-586-2602; and Michael Silveira, City Engineer, 408-586-3303)**

Adopted **Resolution No. 9388** expressing support by the City of Milpitas to fully fund Metro Tango Subdistrict Park, Project No. 2023, in the amount of \$10 million from TASP Impact Fees per the Outdoor Recreation Legacy Partnership Grant Application requirement.

7. **Adopt a Resolution Initiating Proceedings for the Annual Levy and Collection of Assessments and Ordering the Preparation of the Annual Engineer's Report for Landscaping and Lighting Maintenance Assessment District No. 95-1, McCarthy Ranch, for Fiscal Year 2025-26 (Staff Contact: Christian Di Renzo, Public Works Director, 408-586-2602; and Michael Silveira, City Engineer, 408-586-3303)**

Adopted **Resolution No. 9389** initiating proceedings for the annual levy and collection of assessments and ordering the preparation of the Annual Engineer's Report for Landscaping and Lighting Maintenance Assessment District No. 95-1, McCarthy Ranch, for Fiscal Year 2025-26.

8. **Adopt a Resolution Initiating Proceedings for the Annual Levy and Collection of Assessments and Ordering the Preparation of the Annual Engineer's Report for Landscaping and Lighting Maintenance Assessment District No. 98-1, Sinclair Horizon, for Fiscal Year 2025-26 (Staff Contact: Christian Di Renzo, Public Works Director, 408-586-2602; and Michael Silveira, City Engineer, 408-586-3303)**

Adopted **Resolution No. 9390** initiating proceedings for the annual levy and collection of assessments and ordering the preparation of the Annual Engineer's Report for Landscaping and Lighting Maintenance Assessment District No. 98-1, Sinclair Horizon, for Fiscal Year 2025-26.

9. **Receive an Update on the Security Improvements at the McCarthy Ranch Sewer Lift Station (Main Lift) and Determine that the Condition Continues to Constitute an Emergency (Staff Contact: Christian Di Renzo, Public Works Director, 408-586-2602)**

- (1) Received an update on the security improvements at the McCarthy Ranch Sewer Lift Station; and
(2) Determined by a four-fifths vote that the condition continues to constitute an emergency.

PUBLIC HEARINGS

10. **Adopt a Resolution Approving an Economic Development Incentive Agreement with Rivian, LLC for the Operation of an Industrial Facility Located at 755 Yosemite Drive (Staff Contact: Alex Andrade, Economic Development & Strategic Initiatives Director, 408-586-3046; and Luz Cofresí-Howe, Finance Director, 408-585-3111)**

Assistant City Manager Cano introduced the item. Economic Development and Strategic Initiatives Director Andrade presented the report.

Mayor Montano opened the public hearing.

There were the following public speakers:

1. Michael Tsai
2. Voltaire Montemayor

Mayor Montano closed the public hearing.

Councilmember Chua inquired about Rivian's tax-sharing agreements, performance in Eastvale, and competition from Chinese EV manufacturers. Representatives from Rivian noted that their agreements in other cities have exceeded expectations and stated they are not concerned about competition due to existing tariffs and data-sharing concerns.

Councilmember Lam asked about the facility's showroom, charging infrastructure, and battery disposal. Rivian described plans for a front-of-house display area, multiple charging stations, and a structured battery replacement process.

Vice Mayor Barbadillo raised questions about the financial aspects of the agreement and potential revenue sharing with Santa Clara County. Staff explained the sales tax-sharing mechanism and noted the challenges of county revenue sharing under existing tax structures.

Councilmember Lien asked about home charging times, and Rivian provided estimates based on charger type.

Councilmember Chua followed up on Rivian's dealership model and sales process. Rivian representatives confirmed they operate as a direct-to-consumer model with fixed pricing and varying delivery times.

Councilmember Lam asked about battery swapping and fire safety. Rivian stated they do not have battery swapping plans but outlined their fire safety protocols, including local firefighter training.

Councilmember Lien requested clarification on battery replacement, and Rivian reiterated their structured approach.

Vice Mayor Barbadillo sought additional financial details, and staff elaborated on the sales tax-sharing mechanism.

After discussion, motion: to (1) Conduct a public hearing as required by Government Code Section 53083 for the proposed Economic Development Subsidy Report; and (2) Adopt **Resolution No. 9391** approving an Economic Development Incentive Agreement by and between the City of Milpitas and Rivian, LLC for the operation of an industrial facility located at 755 Yosemite Drive and authorize the City Manager to execute the agreement.

Motion/Second: Councilmember Chua / Vice Mayor Barbadillo

Motion carried by the following:

AYES: Mayor Montano, Vice Mayor Barbadillo, Councilmember Chua, Councilmember Lam, Councilmember Lien

NOES: None

11. 2025 Weed Abatement Public Hearing and Resolution Adoption to Abate the Weeds (Staff Contact: Arthur Belton, Deputy Fire Chief/Fire Marshal, 408-586-3384)

Assistant City Manager Cano introduced the item. Deputy Fire Chief / Fire Marshal Belton presented the report.

Mayor Montano opened the public hearing.

There were the following public speakers:

1. Voltaire Montemayor

Mayor Montano closed the public hearing.

After discussion, motion: to adopt **Resolution No. 9392** directing the County of Santa Clara Consumer and Environmental Protection Agency Weed Abatement Program to abate the nuisance, keep an account of the cost, and embody such account in a report and assessment list to the City Council in accordance with the Milpitas Municipal Code.

Motion/Second: Vice Mayor Barbadillo / Councilmember Lien

Motion carried by the following:

AYES: Mayor Montano, Vice Mayor Barbadillo, Councilmember Chua, Councilmember Lam, Councilmember Lien

NOES: None

COMMUNITY DEVELOPMENT

12. Receive an Overview of the Public Review Draft of the Full Updated Zoning Ordinance (Phase 2 of the Comprehensive Zoning Ordinance Update) and Provide Comments to Staff (Staff Contact: Jay Lee, Planning Director, 408-586-3077; and Holly Pearson, Senior Special Projects Associate, 408-609-0072)

Assistant City Manager Cano introduced the item. Planning Director Lee, and Consultants Holly Pearson and Jen Murrillo presented the report.

There were the following public speakers:

1. Voltaire Montemayor

Mayor Montano inquired how the Housing Opportunity Districts (HODs) project aligns with the zoning ordinance update. Planning Director Lee clarified that while the two efforts were separate, any zoning changes from the HODs project would be integrated into the final ordinance, ensuring no conflicts.

Councilmember Chua asked whether proposed changes to Town Center and Neighborhood Commercial Mixed-Use zones reflected recent Planning Commission recommendations. The Planning Director confirmed that the zoning update primarily reorganizes and clarifies standards but ensured that all Planning Commission-approved amendments will be reflected in the final zoning ordinance.

Councilmember Barbadillo inquired about the impact of the zoning update on affordable housing development, asking whether the changes would help streamline approvals. Planning Director Lee confirmed that the update aims to simplify the process for all development types, including affordable housing, by reducing unnecessary procedural hurdles, such as Planning Commission approvals for minor projects. Staff was asked to highlight in the final zoning ordinance how the changes support affordable housing development.

Councilmember Hon Lien raised concerns about local business owners struggling with the permitting process. Planning Director Lee acknowledged these concerns and emphasized that the zoning update is designed to simplify permitting through clearer tables, graphics, and definitions, making it easier for businesses to determine what is required. She asked for staff to develop an outreach plan to help businesses understand the updated zoning ordinance and permitting process.

Councilmember Lam questioned the proposed reductions in parking requirements, asking whether developers would still have the flexibility to provide additional parking if needed. Consultant Jen Murillo confirmed that while minimum parking requirements are being reduced in some cases, developers will still have the option to provide more parking based on their project needs. He asked to clarify in the final zoning ordinance that developers may provide additional parking beyond the minimum requirements.

LEADERSHIP AND SUPPORT SERVICES

13. FY 2024-25 2nd Quarter Financial Status Report for the Quarter Ended December 31, 2024 (Staff Contact: Luz Cofresí-Howe, Finance Director, 408-586-3111)

Assistant City Manager Cano introduced the item. Finance Director Cofresí-Howe presented the report.

There were the following public speakers:

1. Voltaire Montemayor

Councilmember Lam asked if department expenses included salaries, to which Finance Director Cofresí-Howe confirmed that they did. He further inquired about overtime expenditures and whether a breakdown of regular and overtime salaries was available. Assistant City Manager Cano noted that overtime reports are provided biweekly, and offered to sit down with the Councilmember to provide additional information.

Vice Mayor Barbadillo sought clarification on the revenue sources and expenditure patterns, specifically regarding the city's reliance on property tax revenue. Finance Director Cofresí-Howe explained that property tax revenues are received primarily in December and April, creating fluctuations in reported revenue figures.

Councilmember Lam requested that staff pull up recent overtime reports for review. However, the finance team clarified that overtime data was not included in the agenda packet for the meeting and not agendaized for the meeting. Staff agreed to follow up with additional information on overtime expenditures.

Staff was directed to provide a separate breakdown of overtime expenditures and trends outside of the quarterly review presentation.

Following further discussion, the council noted receipt and file of the report, concluding the item.

14. Review Fiscal Year 2024-25 Mid-Year Report, Adopt a Resolution Approving FY2024-25 Mid-Year Budget Amendments, and Adopt a Resolution Amending Resolution No. 1626, the Classification Plan, to Approve and Adopt the Pay Schedule titled "New Job Classifications/Salary Table" (Staff Contact: Luz Cofresí-Howe, Finance Director, 408-586-3111)

Vice Mayor Barbadillo questioned the source of funds for a mid-year budget adjustment of \$503,000, asking for further clarification on the funding "buckets." Finance Director Cofresí-Howe explained that

the amount was sourced from two general fund reserves: the contingency reserve and the budget stabilization reserve. She elaborated that these reserves are typically replenished through the city's "waterfall" policy after the close of the annual financial audit, meaning the funds would likely be restored later in the calendar year.

Acting City Attorney Creech announced that the time had reached 11PM, and the City Council would require a motion to continue discussing the business at hand.

After discussion, motion: to continue discussing the item until 11:30 PM.

Motion/Second: Mayor Montano / Councilmember Lien

Motion carried by the following:

AYES: Mayor Montano, Vice Mayor Barbadillo, Councilmember Chua, Councilmember Lam, Councilmember Lien

NOES: None

Vice Mayor Barbadillo continued, expressing concerns about the reliance on reserves, particularly in light of the city's ongoing structural deficit. He asked whether additional expenditure reductions had been identified to offset the reliance on reserves. Finance Director Cofresí-Howe responded candidly, stating that while staff had not yet had time to conduct a full review for additional savings, they were working within a compressed timeline to develop recommendations for the upcoming budget cycle. The Vice Mayor suggested that the council consider directing staff to identify alternative funding sources to minimize the impact on reserves. Finance Director Cofresí-Howe acknowledged the request but reiterated that any structural adjustments would require additional analysis.

Councilmember Chua raised concerns about a budget line item related to a mobile stage replacement and requested that it be removed. She also recommended reducing a video-related budget request from \$10,000 to \$5,000 and requested a feasibility study on the After the Bell (ATB) student transportation program.

Mayor Montano asked whether the same reserve funds being used for the mid-year adjustment would also be tapped for the next budget cycle. Finance Director Cofresí-Howe confirmed that reserve replenishment would be considered alongside other mechanisms, such as expenditure reductions.

Vice Mayor Barbadillo reiterated concerns about the city's ability to forecast expenditures accurately, citing adjustments in the mid-year review but acknowledging that certain expenditures, such as actuarial cost changes for post-employment benefits, can be difficult to predict with full accuracy. Finance Director Cofresí-Howe assured the council that the finance team would continue refining forecasting methodologies.

There were the following public speakers:

1. Voltaire Montemayor

Councilmember Chua made a motion: to (1) Review Fiscal Year 2024-25 Mid-Year Report; (2) Adopt **Resolution No. 9393** approving FY2024-25 Mid-Year Budget Amendments, removing the mobile stage replacement and reducing the video project to \$5000.00; and (3) Adopt **Resolution No. 9394** amending Resolution No. 1626, the Classification Plan to approve and adopt the pay schedule titled "New Job Classifications/Salary Table," and amend budgeted allocated positions.

She also asked staff to return with further information regarding the After the Bell program.

Motion/Second: Councilmember Chua / Councilmember Lien

Motion carried by the following:

AYES: Mayor Montano, Vice Mayor Barbadillo, Councilmember Chua, Councilmember Lam,
Councilmember Lien

NOES: None

ANNOUNCEMENTS AND FUTURE AGENDA ITEMS

Assistant City Manager Cano announced the upcoming Women's History Month flag raising and Holi Festival.

Vice Mayor Barbadillo made the following requests:

1. Come back with hiring activity report. There was consensus to move the item forward (Noes: Lien).
2. Staff provide a detailed analysis of over time expenditures by department. There was consensus to move the item forward (Noes: Lien).

Mayor Montano asked to add an entertainment zone to Main Street. There was unanimous consensus to to move the item forward.

ADJOURNMENT

Mayor Montano adjourned the meeting at 11:20 PM.

Draft meeting minutes submitted by City Clerk, Suzanne Guzzetta

TENTATIVE CITY COUNCIL AGENDA ITEM LIST

as of 3/14/2025

April 1, 2025 – Regular Meeting (7:00 PM)

INVOCATION (Councilmember Chua)

PRESENTATION

- Fair Housing Month (Proclamation)
- National Autism Acceptance Month (Proclamation)
- Cesar Chavez Day – March 31 (Proclamation)

CONSENT CALENDAR

1. Receive City Council calendar for April 2025 (City Clerk)
2. Approve City Council meeting minutes of March 18, 2025 (City Clerk)
3. Preview list of items for April 15, 2025 (City Clerk)
4. Councilmember Request List (City Clerk)
5. Fire Station No. 1 Modular Building Replacement – Fire Service Project Acceptance (Public Works / Engineering)
6. Emergency Declaration Update - Main Sewer Lift Station Security Measures (Public Works)

PUBLIC HEARINGS

7. Bingo License for Senior Center (City Clerk)

LEADERSHIP AND SUPPORT SERVICES

8. Sales and Property Tax Mini Study Session (Finance)

**MILPITAS CITY COUNCIL
AGENDA ITEM REQUESTS**

OPEN ITEMS				
Request No.	Topic	Submitted by:	Date Requested	STATUS and/or DATE scheduled on City Council meeting agenda:
1	Look into adding an entertainment zone to Main Street.	Montano	3/4/2025	An update on this item is included in the quarterly prioritization update.
2	Staff provide a detailed analysis of overtime expenditures by department.	Barbadillo	3/4/2025	An update on this item will be included as part of the FY 25-26 Budget Process
3	Return with a hiring activity report.	Barbadillo	3/4/2025	An update on this item will be included as part of the FY 25-26 Budget Process
4	Look into a policy to require a Super Majority vote by Council for any deductions to budget reserves.	Chua	2/18/2025	An update on this item is included in the quarterly prioritization update.
5	Bring back a discussion regarding fentanyl-related issues	Barbadillo	2/18/2025	An update on this item is included in the quarterly prioritization update.
6	Feasibility study regarding a police satellite office.	Montano	2/18/2025	An update on this item is included in the quarterly prioritization update.

ACTIVE ITEMS				
Request No.	Topic	Submitted by:	Date Requested	STATUS and/or DATE scheduled on City Council meeting agenda:
7	Staff organize a job fair for City job openings	Chua	11/19/2024	An update on this item is included in the quarterly prioritization update.
8	Bring back a study or analysis of the permit process	Chua	11/19/2024	An update on this item is included in the quarterly prioritization update.
9	Invite the HR Director to a future meeting to present on hiring processes and vacancies	Lien	10/1/2024	An update on this item is included in the quarterly prioritization update.
10	Explore updating the city's business tax rate schedule	Chua	10/1/2024	An update on this item is included in the quarterly prioritization update.
11	Explore funding options for new signage following the decision to rename the Milpitas Library to the Milpitas Jose Esteves Library	Barbadillo	9/3/2024	An update on this item is included in the quarterly prioritization update.
12	Send a letter to Supervisory Otto Lee regarding the weeds on Montague Expressway	Montano	8/13/2024	An update on this item is included in the quarterly prioritization update.
13	Update the animal control ordinance to include other animals such as horses and cats	Chua	9/3/2024	An update on this item is included in the quarterly prioritization update.
14	Look into a property for sale on Main Street to investigate the cost and feasibility of creating a museum for downtown or Old Town Main Street as part of the revitalization efforts.	Montano	8/13/2024	An update on this item is included in the quarterly prioritization update.
15	Look into adopting an ordinance similar to San Jose allowing ADUs (Accessory Dwelling Units) to	Chua	8/13/2024	An update on this item is included in the quarterly prioritization update.
16	Conduct a traffic study on Escuela Parkway to address circulation concerns	Montano	5/7/2024	An update on this item is included in the quarterly prioritization update.
17	Explore the possibility of augmenting the Planning Commission stipend	Barbadillo	4/16/2024	An update on this item is included in the quarterly prioritization update.
18	Consideration of the 20% Low Income Below Market Rate Housing	Montano	12/5/2023	An update on this item is included in the quarterly prioritization update.
19	Bring back Bingo and the Tour at the Senior Center	Chua	11/7/2023	An update on this item is included in the quarterly prioritization update.
20	Referral for utility infrastructure cost on Main Street from Carlo to Corning Streets	Montano	10/17/2023	An update on this item is included in the quarterly prioritization update.
21	Main Street International Festival	Lien	10/3/2023	An update on this item is included in the quarterly prioritization update.
22	Pickleball Pilot Project	Chua	2/28/2023	An update on this item is included in the quarterly prioritization update.
23	Main Street Infrastructure Projects	Montano	2/28/2023	An update on this item is included in the quarterly prioritization update.
24	Main Street Flooding at Library	Chua	2/28/2023	An update on this item is included in the quarterly prioritization update.
25	Have the City look into the possibility of a Citywide Senior Discount	Barbadillo	2/7/2023	An update on this item is included in the quarterly prioritization update.

NOTE: Deferred and Completed Items are not listed

**MILPITAS CITY COUNCIL
AGENDA ITEM REQUESTS**

ACTIVE ITEMS				
Request No.	Topic	Submitted by:	Date Requested	STATUS and/or DATE scheduled on City Council meeting agenda:
26	City Manager to look into defining either a standalone teen center or updating information to indicate the Senior Center also functions as a Teen Center	Chua	9/20/2022	An update on this item is included in the quarterly prioritization update.
27	City Manager look into implementing a workshop for small businesses on the bidding process for projects in the city	Chua	8/9/2022	An update on this item is included in the quarterly prioritization update.
28	Quarterly or Monthly crime statistics on Homekey Project	Chua	6/7/2022	An update on this item is included in the quarterly prioritization update.
29	Memorial Plaque in honor of youth skateboarder that passed away	Montano	6/7/2022	An update on this item is included in the quarterly prioritization update.
30	Evaluate reopening the childcare center with a non-profit organization running the center	Montano	2/1/2022	An update on this item is included in the quarterly prioritization update.
31	Staff to look into mural Art on Great Mall Parkway on the VTA owned Light rail pillars	Montano	11/16/2021	An update on this item is included in the quarterly prioritization update.
32	Have a picture of Albert Vogel Sr. put up in the Senior Center	Montano	10/19/2021	An update on this item is included in the quarterly prioritization update.
33	Include a bust of Maria Lemire on the Mural in front of the Senior Center	Montano	8/17/2021	An update on this item is included in the quarterly prioritization update.
34	Consider Community Museum and Park on Main St.	Phan	8/20/2019	Discussions with the property owner of this site are ongoing.

NOTE: Deferred and Completed Items are not listed



CITY OF MILPITAS AGENDA REPORT (AR)

Item Title:	Authorize and Approve a Travel Request to the City of Milpitas Sister City Dagupan, Philippines, from April 25 to May 1, 2025 (Staff Contact: Matt Cano, Assistant City Manager, 408-586-3012)
Category:	Consent Calendar-Leadership and Support Services
Meeting Date:	3/18/2025
Recommendation:	Authorize and approve travel to Dagupan, Philippines, by Vice Mayor Gary Barbadillo from April 25 to May 1, 2025, for a total estimated amount of \$3,200, budgeted under the Individual Elected Official Allocation for Conferences/Meetings/Trainings.

BACKGROUND:

The City of Milpitas established a Sister Cities program on May 21, 1996. Through the years, the City maintained relationships with various international cities; currently, the City's only active relationship is with Dagupan, Philippines. Prior relationships with Huizhou, China, and Tsukuba, Japan have expired.

The City of Milpitas and the City of Dagupan, Philippines executed their first Memorandum of Understanding (MOU) on April 15, 2003, establishing a Sister City relationship to broaden cooperation and goodwill between the two cities, enrich cultural understanding, and create adult and student exchange opportunities. On December 17, 2019, the Milpitas City Council directed staff to approve a renewed MOU with the City of Dagupan, Philippines, continuing the Sister City relationship for a period of five years. On November 14, 2023, the Mayor and City Council approved a renewal of the Sister City relationship in perpetuity.

ANALYSIS:

In November 2023 and November 2024, delegations from Dagupan have visited Milpitas. During these visits, staff from the City of Milpitas, Milpitas Unified School District and Dagupan have met to discuss and share information on various methods of service delivery. This includes, but is not limited to, solid waste and recycling, workforce development, adult education, emergency response and senior services.

On February 12, 2025, the City of Dagupan invited the Mayor and City Council to Dagupan in late April 2025. This invitation and draft itinerary, dated January 6, 2025 but received on February 12, 2025, is included as Attachment 1.

The City of Milpitas Travel and Expense Policy (Attachment 3) requires the City Council to approve all travel for the elected officials and City Manager. City Council approval of the Dagupan travel request will allow Vice Mayor Gary Barbadillo to gain knowledge from our Sister City and bring it back to share with his colleagues. Vice Mayor Barbadillo will also have the opportunity to share information with the City of Dagupan regarding the City of Milpitas and continue to foster the strong relationship between our two cities.

POLICY ALTERNATIVE(S):

Not applicable

FISCAL IMPACT:

The estimated individual expenses for include lodging, meals, transportation, and incidental reimbursements, are \$3,200, however it could exceed this pending finalization of all travel expenses. If it does exceed the \$3,200 estimate, it will not exceed Vice Mayor Barbadillo's available travel expense budget.

Attachment 2 details the remaining travel budget allocations for each Councilmember for the current fiscal year. Vice Mayor Gary Barbadillo has sufficient funding in his travel budget for this Dagupan business trip.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA):

The action is an organizational or administrative activity of the City government that will not result in direct or indirect physical changes in the environment and is not a project pursuant to Cal. Code of Regs., tit. 14, § 15378.

RECOMMENDATION:

Authorize and approve travel to Dagupan, Philippines, by Vice Mayor Gary Barbadillo from April 25 to May 1, 2025, for a total estimated amount of \$3,200, budgeted under the Individual Elected Official Allocation for Conferences/Meetings/Trainings.

ATTACHMENT(S):

1. Invitation from City of Dagupan and Draft Itinerary for Trip
2. City Council Travel Budget Tracking
3. City Council Travel Policy



REPUBLIC OF THE PHILIPPINES
OFFICE OF THE CITY MAYOR
DAGUPAN CITY

January 6, 2025

The Honorable
MAYOR CARMEN MONTANO
City of Milpitas

Dear Mayor Montano,

It gives me great pleasure and honor to extend our humble invitation to you and the entire City Council of Milpitas to come visit the City of Dagupan on April 26 – 30, 2025 for the Bangus Festival.

The Bangus Festival is one of the major Philippine festivals that honors the city's milkfish industry. The festival is a mix of food, fun, and tradition which celebrates the city's milkfish harvest and the economic and cultural importance of the industry, highlights the city's culture and heritage and serves as a reminder of the importance of sustainable fishing practices and environmental conservation.

The annual festivities include street dancing competitions, grilling contests, cultural performances, cooking contests, trade fairs, beauty pageants, musical performances, and art exhibits.

As our valued special guests for this year, we have prepared a series of special events during the above dates, with special meetings with various government and business organizations. I have attached a copy of schedule of activities for your information and guidance.

On behalf of the City Government of Dagupan, we look forward to your coming visit to the Bangus Capital of the World this April.

For other additional information, our sister cities affairs director and city council secretary Ryan Ravanzo coordinate with you.

Very sincerely,


BELEN T. FERNANDEZ
City Mayor



ITINERARY FOR THE CITY OF MILPITAS DELEGATION

April 26-30, 2025

April 26, 2025	1100	Welcome Reception for the City of Milpitas delegation	TBA
	1400	Bangusine: Bangus Cuisine at the City Plaza	City Plaza
April 27, 2025	1000	Thanksgiving lunch for the City Indigents	TBA
	1800	Bangus Harvest activity	TBA
April 28, 2025	0700	Flag Ceremony and Courtesy Call with the City Mayor at the City Plaza	City Plaza
	0800	Breakfast Meeting at the City Hall	Dagupan City Hall
	1000	Heritage Tour (Macarthur Park, Tondaligan Beach)	
	1500	Gilon-Gilon Parade and Competition	City Streets and City Plaza
April 29, 2025	1800	Dinner-Fellowship Meeting with the Rotary Club of Dagupan	TBA
April 30, 2025	1700	Bangusan Street Party	New De Venecia Avenue

Council Conferences/Trainings FY 24-25 Budget Tracking Sheet

Mayor Montano				
	Training/Travel Event	FY24-25 Amount Expended/Estimates	Total \$ 11,659.59	Remaining Balance -\$ 1,659.59
1	Long Beach Annual Conference and Expo: Oct 16 - 18, 2024	\$ 2,685.65	estimates only estimates only	
2	Cities Association of SCC Annual Holiday Dinner: Dec 8, 2024	\$ 50.00		
3	League of Cal Cities 2025 New Mayors and Council Members Academy: Jan 21-23	\$ 1408.19		
4	USCM 93rd Winter Meeting: Jan 16 - 20, 2025	\$ 5,723.55		
5	2025 Peninsula Legislators Meeting Attendance Fee	\$ 126.80		
6	Cal Cities City Leaders Summit April 23-35	\$1,665.40		

Vice Mayor Barbadillo				
	Training/Travel Event	FY24-25 Amount Expended/Estimates	Total \$ 3275.00	Remaining Balance \$ 6,725.00
1	Cities Association of SCC Annual Holiday Dinner: Dec 8, 2024	\$ 75.00	estimates only	
2	Bangus Festival with the City of Dagupan, Philippines	\$3,200		

Councilmember Chua				
	Training/Travel Event	FY24-25 Amount Expended/Estimates	Total \$ 7468.95	Remaining Balance \$ 2,531.05
1	Long Beach Annual Conference and Expo: Oct 16 - 18, 2024 Cancellation fee only	\$ 75.00	estimates only	
2	USCM 93rd Winter Meeting: Jan 16 - 20, 2025-	\$ 5,653.55		
3	LoCC 2025 New Mayors and Council Members Academy-cancellation fee only	\$ 75.00		
4	Cal Cities City Leaders Summit April 23-35	\$1,665.40		

Councilmember Lien				
	Training/Travel Event	FY24-25 Amount Expended/Estimates	Total \$ 3,957.47	Remaining Balance \$ 6,042.53
1	Long Beach Annual Conference and Expo: Oct 16 - 18, 2024 Cancellation fee only	\$ 75.00	estimates only	
2	2025 NorCal Mayors and Council Members Academy Reg	\$ 1408.19		
3	USCM 93rd Winter Meeting: Jan 16 - 20, 2025-Flight cancellation fee	\$ 758.88		
4	Cities Association of SCC Annual Holiday Dinner: Dec 8, 2024	\$ 50.00		
5	Cal Cities City Leaders Summit April 23-35, 2025	\$1,665.40		

Councilmember Lam				
	Training/Travel Event	FY24-25 Amount Expended/Estimates	Total \$ 3504.05	Remaining Balance \$ 6,495.95
1	Cities Association of SCC Annual Holiday Dinner: Dec 8, 2024	\$ 50.00	estimates only	
2	2025 NorCal Mayors and Council Members Academy Reg	\$ 1498.20		
3	Sterling Hotel	\$ 290.45		
4	Cal Cities City Leaders Summit April 23-35	\$1,665.40		

No. 6-1
Effective: 8/1/75
Revised: 8/10/81
12/4/90*
7/16/91*
12/9/92
4/1/94
8/1/97
4/16/19
10/15/19

CITY OF MILPITAS, CALIFORNIA
STANDARD OPERATING PROCEDURE

SUBJECT: TRAVEL AND EXPENSE REIMBURSEMENT POLICY

I. PURPOSE

The purpose of this policy is to establish procedures and guidelines for business-related travel and training expenses of all City officials and employees, including Council, Commission and Committee members (hereafter “City officials”), in accordance with California Government Code Article 2.3 Section 53232.2 as well as Internal Revenue Service (IRS) *accountable plan* requirements. The referenced Government Code Section is applicable to elected officials only and requires that all reimbursement requests be substantiated with receipts. The IRS requirements help determine what types of allowances or reimbursements can be excluded from taxable wages. An allowance or reimbursement is not subject to income tax if all three of the following conditions are met:

- Expenses have a business connection,
- Expenses are substantiated, and
- Unspent excess amounts are returned.¹

It is also the purpose of this policy to identify standards governing the prudent use of City funds that safeguard integrity and promote public confidence in the efficient and effective use of limited resources. Therefore, expenses incurred in conjunction with approved travel and training must:

- Benefit the City and/or have a public purpose,
- Be reasonable, and
- Meet the City’s standards of ethical conduct.

II. POLICY

City officials may be required to travel and incur other business-related expenses in the course of their official duties and as representatives of the City.² This policy is issued to promote consistent and equitable practices and establishes:

- A. General conditions for travel expenses
- B. Travel request and authorization processes
- C. Criteria for use
- D. Reporting requirements
- E. Policy violations

¹ This provision does not apply to per diem meal allowances as further explained in Section II.C.8.

² This policy satisfies the requirements of Government Code sections 53232.2 and 53232.3 and supplements the definition of actual and necessary expenses for purposes of state laws relating to permissible uses of public resources.

A. General Conditions for Travel Expenses

1. Travel expenses include the registration, transportation and related costs incurred when attending or participating in out-of-town business or activities such as professional meetings, conferences and training sessions, whether for less than one day, overnight, in-state, out-of-state, or out of the country. All travel requires preapproval as specified throughout this policy.
2. Out-of-state travel and/or travel requiring an overnight stay requires prior approval of the City Manager unless such authority is delegated in writing. All international travel for staff requires prior approval of the City Council.
3. All travel for the Mayor, Councilmembers, and City Manager requires prior approval of the City Council.
4. Time associated with travel, training and conferences as specified in this policy shall be consistent with the provisions of applicable negotiated Memoranda of Understanding (MOUs).
5. Travel not requiring an overnight stay can be authorized by a Department Head based on appropriateness and/or importance, in accordance with expense reporting guidelines established by the City Manager.
6. City officials requiring air travel must use commercial airlines unless a waiver is approved by the City Attorney and Risk Manager.
7. City funds shall not be used for any personal costs, side-trips for personal reasons not related to the business expense (such as visiting a nearby family member or friend), accompanied guests or for the purchase of alcoholic beverages or products.
8. Prepayments of conference registration or other travel-related costs can be made when paid directly by the City with City funds. (City officials who wish to use their personal credit cards cannot be reimbursed before an event occurs.)
9. City officials should select options that meet travel needs at the lowest possible cost.
10. Reimbursement requests other than allowable per diem expenses must always be accompanied by itemized receipts and other justifiable documentation such as event registration and/or event programming information or meeting agendas.
11. In compliance with California Government Code Article 2.3 Section 53232.2, the City will reimburse elected officials for actual and necessary expenses incurred related to travel, rather than the per diem allowance. Itemized receipts, credit card statements and other documentation verifying expenses incurred are required to be submitted with reimbursement requests.
12. The use of a hotel is restricted to cities located beyond 75 miles from the Milpitas City Hall or the traveler's residence, whichever is a shorter distance. Exceptions can be made by the City Manager depending on business necessity or other justifiable circumstances such as early morning or evening meetings at the destination.
13. City departments shall designate travel coordinators to serve as primary points of contact for travel coordination and reimbursement processing in compliance with policy and procedure requirements.
14. Travel for less than one day will be reimbursed in accordance with Section II.C.7 for reasonable actual expenses.

15. With the exception of international travel for staff and all travel for the Mayor, Councilmembers, and City Manager, which must be approved by the City Council, the approval authorities granted herein can be delegated in writing by the City Manager to his/her designees for justifiable business necessities.

B. Travel Request and Authorization Process

1. Except in cases of emergency, all requests for travel authorization must be made in advance on Travel Authorization and Expense Report Form No. 32-11 (travel form). Estimated expenses shall be reviewed and authorized in advance by the City Manager.
2. To provide approvers with sufficient information to justify the travel request, appropriate documentation such as event brochures/agendas must be attached to the travel form.
3. Once approved, travel forms authorizing overnight travel must be sent to Accounts Payable for file documentation and to help ensure efficient reimbursement processing.
4. Advances of planned expenses are prohibited except in the case of pre-approved per diem allowances for meals in accordance with the provisions of II.C.5.
5. If requesting a per diem allowance or prepayment of conference registration, a complete, accurate and approved travel form should be submitted to Accounts Payable for processing at least 10 business days prior to date payments are requested.
6. Travel not involving an overnight stay does not require preauthorization through the preparation/submittal of the travel form (unless required by a Department Head), but any reimbursable expenses incurred must be submitted on the travel form in accordance with the reimbursement requirements established in Section II.C.7.
7. The Chiefs of Police and Fire may authorize out-of-state and/or overnight emergency-related travel for their respective personnel in the following instances requiring an immediate response:
 - a. Investigative travel
 - b. Prisoner extraditions
 - c. Mutual aid requests

C. Criteria for Use of City Funds

1. Registration

- a. Registration fees may be prepaid by the City or reimbursed to City officials in accordance with Section II.C.7.
- b. Federal travel regulations require that any meals included in the cost of registration be deducted from the per diem (Section II.C.5).
- c. Discounts offered for early registration or attendance by additional persons should be obtained whenever possible.
- d. To satisfy IRS accountable plan regulations, a copy of the registration materials must be submitted with the travel form.

2. Air Transportation

- a. Airfare costs to and from the travel destination shall not exceed the most economical advance purchase option available, unless such fare is unavailable and the expense is authorized by the City Manager. Upgrades of any kind will not be reimbursed.

- b. City officials who wish to take an alternative form of transportation to a destination may do so, but the City will cover the lowest cost option. A cost comparison must be submitted at the time of travel authorization and with the reimbursement request.
- c. City officials shall endeavor to acquire any government discount the airlines may provide.
- d. Costs to change or re-book a flight will not be paid by the City unless the flight change results from business necessity, is documented in writing and authorized by the City Manager.
- e. The City will cover the cost of one checked bag and will not reimburse for excess baggage charges.
- f. If airfare is paid directly by the City, and airfare credits are received by City officials as the result of a trip cancellation, such credits should be used for future business travel. Credits used for personal travel must be reimbursed to the City.
- g. City officials who use their personal frequent flyer miles for official business will not be reimbursed for the value of the foregone tickets.

3. Ground Transportation

- a. Every effort shall be made to rideshare when two or more City officials are traveling to the same destination. Use of public transit is encouraged when feasible.
- b. When using a privately owned vehicle, mileage reimbursement shall be at the rate set by the Internal Revenue Code and shall be reimbursed for the distance between home and the destination or work and the destination, whichever is less. Note: City officials receiving auto allowances will not be reimbursed for mileage unless the destination is beyond a 75-mile radius one way from the City or from the official's home, whichever is less; reimbursement is limited to mileage in excess of the 75-mile radius for each direction traveled.
- c. Transportation to and from airports shall be reimbursed for either actual mileage if a personal vehicle is used or for reasonable taxi fare, airport van, rideshare service, or public transportation, if available.
- d. Airport parking will be reimbursed at the long-term parking rates for more than one day, and at the short-term parking rates for up to one day only.
- e. Ground transportation at the travel destination should be accomplished to the best extent possible by hotel courtesy buses or other free shuttles, or public transportation. Taxi or rideshare service may be used when those options are either not available or will cause undue delays in arrival.
- f. The necessity for a rental car must be established and authorized in advance by the City Manager. Economy car rentals, i.e., the most cost effective and fuel-efficient vehicles, will be used whenever possible. Upgrades provided at no additional cost to the City can be considered if economy cars are unavailable. City officials must obtain the liability insurance coverage offered by the car rental company.

4. Lodging

- a. City officials are encouraged to plan for and stay at a designated conference hotel at the negotiated daily rate. If the designated conference hotel/rate is not available, City officials should obtain the most reasonable rate available and note the disparity on the travel form.

- b. If lodging is required for travel not associated with a conference or event with a predetermined rate, the City will pay for actual lodging expenses up to the U.S. General Services Administration (GSA) maximum daily rate (excluding taxes) allowed by location, available here: [GSA daily lodging rate](#). Based on market research, if the GSA rate for a particular region is inconsistent with rates found for reasonable business accommodations, the City Manager can preauthorize a higher rate based on business necessity.
 - c. Lodging expenses may be prepaid directly to the hotel or reimbursed to the employee in accordance with Section II.C.7. Lodging expenses for conference attendance will be limited to single occupant room rates and shall not exceed the negotiated conference daily rate.
 - d. Trips that bundle lodging, meals and/or other travel costs are not allowed, unless it can be demonstrated to the City Manager that the bundled cost does not exceed the total of component costs if each were booked separately.
 - e. In cases where breakfast is included in the room rate, this must be identified on the travel form and deducted from the per diem reimbursement.
 - f. Non-mandatory fees such as health club or resort fees are not reimbursable unless it is determined to the satisfaction of the City Manager that payment of such charges is critical to conducting City business.
 - g. If free wireless Internet service is unavailable and establishing a paid connection is a justifiable business necessity, reimbursement may be requested for reasonable fees charged by the hotel.
5. Per Diem for Meals
- a. Employees and City Officials except for Elected Officials will receive the federal per diem allowance for Meals and Incidental Expenses (M&IE) for *overnight travel only*, based on locality. Elected Officials receive reimbursement for meals up to the federal per diem allowance if substantiated by receipts. The federal per diem rates for the continental United States are published annually and can be accessed at the GSA website: Per Diem Rates. Rates for travel outside the continental United States will be obtained by the Finance Department when requested. *Note: If a destination city is not listed, then the rate for the county applies. If there is no rate for the city or county, a comparable nearby city should be identified and used.*
 - b. Meals and Incidental Expenses included in the per diem are meals, tips/fees for food and luggage handling services.
 - c. Meals and Incidentals that are not considered per diem expenses (but qualify for reimbursement) are cab/rideshare fare, fax, telephone, wireless Internet as previously specified, copy charges, room taxes, and energy surcharges. These expenses can be reimbursed based on properly documented reasonable actual cost.
 - d. Meals and allowable incidental expenses eligible for reimbursement in accordance with this section will be paid by the City strictly on a per diem basis (actual expenses for meals only apply in the case of non-overnight travel, see Section II.C.7, as well as for Elected Officials up to the federal per diem allowance).
 - e. For the first and last day of travel, reimbursement is limited to 75% of the applicable per diem rate. City officials may be eligible for 100% per diem on these days, subject to authorization by the City Manager, as follows:

- i. First day travel requires leaving the official's home before 9:00 a.m. in the morning; and/or
 - ii. Last day travel requires return to the official's home after 6:00 p.m.
- f. Per diem reimbursement is not allowed for any meals included as part of the registration cost of an event or included in the cost of a lodging rate and must be deducted from the per diem reimbursement. Event brochures must be submitted with requests for reimbursement so that meal costs can be verified.

If there is a justifiable business, medical or personal reason to not accept a meal provided at an event AND there is no available accommodation, written justification must be provided on the expense reimbursement form to request the each per diem for which this situation applies.

6. City Credit Cards

- a. After pre-approval of travel in accordance with this policy, City credit cards issued to travel coordinators and other officials should be used for payment of actual and necessary expenses as detailed within this policy (and in accordance with SOP 6.3, Credit Card Use).
- b. Copies of original itemized receipts, with appropriate coding, must accompany travel expense reports (original receipts are submitted with purchasing card statements).
- c. Personal charges should not be incurred on City-issued credit cards. Note: Hotels can accommodate requests for separate bills upon check-out. Personal charges must be reimbursed to the City or deducted from the reimbursement request.
- d. It is the credit card user's responsibility to provide an accurate accounting on the travel form and reimburse the City for pre-paid per diem expenses, if applicable.

7. Reimbursement and Substantiation Requirements

- a. All requests for reimbursement, including travel for less than one day, must be submitted on the travel form accompanied by supporting documentation including original itemized receipts or invoices, conference registration/event information, meeting agendas, etc. As noted, per diem reimbursements for employees and City Officials except for Elected Officials are not included in this requirement.
- b. Reimbursement requests submitted without the required documentation/justifications will be returned.
- c. Reimbursement requests submitted with missing receipts must include a written explanation of the purchase, subject to the approval of the City Manager.
- d. Reimbursement requests associated with City business that do not require an overnight stay will be reimbursed based on actual, reasonable and properly documented costs. Meal reimbursement is typically not allowed for planned travel with no overnight stay unless it can be determined to the satisfaction of Department Heads that such expense is justified, and that the meal meets the IRS requirements as discussed below.
- e. In order to meet IRS requirements for reimbursements that do not constitute taxable benefits, meal reimbursements for non-overnight travel must meet one of the following criteria:
 - i. to accommodate extended work hours, that is because travel necessitates an extension of the employee's normal work schedule;

- ii. to attend a meeting on City business in which a meal is served as part of the meeting itself. This is typically for group meetings such as a half-day information conference in the Bay Area; and
- iii. to allow for a City official to meet with another government official or business consultant to conduct official City business. An example would be that scheduling requires two officials to meet during lunch time to discuss official City business, and that the lunch meeting is the most convenient time to discuss City business.

Additional information can be obtained by linking to the federal fringe benefit guides referenced below or by contacting the Finance Department.

- f. If a personal credit card is used to pay the registration fee for a conference, training session, etc., City officials cannot request reimbursement until after the event has concluded.
 - g. Approved travel that must be canceled by a City official due to a bona fide emergency or situation completely outside of his/her control, and for which refunds cannot be obtained, will be reimbursed by the City upon approval of a properly documented travel form.
 - h. City officials must substantiate all expenses. The following constitutes “substantiate” for the purpose of this document:
 - i. Within 30 calendar days after the expense is incurred, the employee shall submit to the City all receipts and other documentary evidence substantiating the time, place, amount, and business connection of the expenditure.
8. Return of Excess Amounts
- a. Travel advances are not allowed under this policy unless it is determined by the City Manager that a business necessity exists. In such cases, City officials must return any amount of an advance that is in excess of the actual expense incurred within 30 calendar days upon return to work (or within 120 calendar days after the expense was incurred, whichever is less).
 - b. Per diem allowances for City Officials except for Elected Officials do not apply to this section, i.e., actual expenses less than the allowable per diem are not required to be returned so long as the appropriate business needs for the per diem have been established.

D. Reporting Requirements

- 1. Elected Officials or City Manager shall, at the first regular meeting following a meeting or conference attended at City expense, provide a brief oral or written report regarding the meeting or conference. If multiple elected or appointed officials attended, a joint report may be made.

E. Policy Violations

- 1. Use of public resources or falsifying expense reports in violation of this policy may result in any or all of the following:
 - a. Loss of reimbursement privileges;
 - b. Restitution to the City;
 - c. The reporting of expenses as income earned to state and federal tax authorities;

- d. Civil penalties of up to \$1,000 per day and three times the value of the resources used;
and
- e. Disciplinary actions, including termination of employment and/or prosecution for misuse
of public resources.

APPROVED:

City Manager

Attachments: Travel Authorization & Expense Report (Form 32-11)
Credit Card Missing Invoice Form

Reference Documents:

[IRS Fringe Benefit Guide - Publication 5137 \(January 2014\)](#)

[IRS Employer's Tax Guide to Fringe Benefits - Publication 15-B \(for use in 2019\)](#)



CITY OF MILPITAS AGENDA REPORT (AR)

Item Title:	Authorize the City Manager, or Designee, to Execute Purchase Orders with PACE Supply Corp. for Clow Fire Hydrants and Related Parts (Staff Contact: Luz Cofresi-Howe, Finance Director, 408-586-3111; and Christian Di Renzo, Public Works Director, 408-586-2602)
Category:	Consent Calendar-Community Services and Sustainable Infrastructure
Meeting Date:	3/18/2025
Recommendation:	(1) Authorize the City Manager, or designee, to issue purchase orders to PACE Supply Corp. for Clow fire hydrants and check valves in an amount not to exceed \$165,157; and (2) Authorize the City Manager, or designee, to issue additional purchase orders to PACE Supply Corp. for Clow fire hydrants and related parts as required for a period of up to five years, subject to existing contract authority and the appropriation of funds.

BACKGROUND:

The City of Milpitas currently maintains 2,906 fire hydrants, with each hydrant having a 30-year service life. Approximately half of the City's fire hydrants have exceeded their useful life and need rehabilitation and replacement. Per the California Fire Code, fire hydrant systems shall be maintained in an operative condition at all times, shall be repaired where defective, and shall comply with approved standards. In addition, hydrant replacement is a necessary safety maintenance measure that ensures the City not only meets firefighting requirements per the California Fire Code but also complies with water quality standards in conformance with California State Regulation, Title 22. In 2008, City Council approved CIP No. 7110, Hydrant Replacement Program to provide funding for the replacement of Greenberg fire hydrants in the Manor, Sunnyhills, and Milford neighborhoods and later expanded the project scope to include Citywide hydrants as recommended in the Water Supply Augmentation Feasibility Report dated March 2015.

The City Hydrant Replacement Program addresses the systematic, system-wide replacement of older, leaking, or damaged hydrants. Hydrants are typically replaced due to maintenance inspections, leak detection testing, and damage from vehicular accidents. The replacement program is designed to optimally maintain the integrity of the City fire protection system. Annual fire hydrant asset replacement was recommended per the Council-approved Water System Master Plan dated June 2022.

ANALYSIS:

On February 5, 2025, the Purchasing Division of the Finance Department released an Invitation for Bid (IFB) 25-1034 for the purchase of Clow fire hydrants and related parts and accessories. No "or equals" substitutions were allowed for the IFB as the City has an approved Standardization on file for Clow fire hydrants in accordance with [Municipal Code Section I-2-3.14 Standardization](#). The Standardization was approved by the City Procurement Agent on February 5, 2025 and is valid for a period of five years.

The IFB was publicly noticed on the [City's website](#) and [OpenGov](#), the City e-procurement platform, in accordance with [Municipal Code Section I-2-3.08 Formal Bid Procedures](#). Upon release, 6,834 firms received the bid notification, and 26 firms downloaded the IFB documents. Six vendors submitted responses by the published closing date of February 26, 2025. One vendor was found non-responsive and disqualified from further consideration.

Bid submittals were based on the City's immediate need for 30 Clow Model 960 3 port hydrants – Yellow, 20 Clow LBIW 400A tall check valves, and 10 Clow LP619 short check valves. Submitted total base bids, not including applicable sales tax, for the five responsive and responsible bidders were as follows:

Fire Hydrants and Related Parts and Accessories, IFB 25-1034	Total Base Bid
1. Pace Supply Corp.	\$151,000.00
2. CAPFLO	\$152,880.00
3. Hajoca Corporation	\$159,236.13
4. Underground Republic Water Works	\$176,750.00
5. Blue Angel International llc	\$185,585.00

Based on submitted total base bid amounts, Pace Supply Corp. was the lowest-priced responsive and responsible bidder. The IFB included a provision to leverage the results of the IFB for additional purchases as required for a period of up to five years. Pace Supply Corp. submitted a 45% discount off list prices for future purchases, including next generation equivalent Clow fire hydrants and related parts and accessories.

POLICY ALTERNATIVE(S):

Alternative 1: Do not approve purchase of Clow fire hydrant and related parts and accessories from Pace Supply Corp. based on the results of IFB No. 25-1034.

Pros: None.

Cons: If staff are unable to purchase Clow fire hydrants and related parts and accessories, the replacement of these assets will be delayed.

Reason not recommended: Delaying the replacement of fire hydrants would result in more fire hydrants exceeding their useful life and potentially falling out of compliance with applicable code requirements.

FISCAL IMPACT:

Sufficient funds for the initial purchase of \$165,157, based on the submitted bid pricing and including sales tax, are available in CIP 7110 – Hydrant Replacement Program. The funding source of this CIP is from Water Capital Surcharge fund and Water Line Extension fund. As of March 3, 2025, the uncommitted balance of this project is \$178,759.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA):

By the definition provided in the California Environmental Quality Act (CEQA) Guidelines Section 15378, this action does not qualify as a "project" for the purpose of CEQA as this action has no potential to result in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment.

RECOMMENDATION:

- (1) Authorize the City Manager, or designee, to issue purchase orders to PACE Supply Corp. for Clow fire hydrants and check valves in an amount not to exceed \$165,157.
- (2) Authorize the City Manager, or designee, to issue additional purchase orders to PACE Supply Corp. for Clow fire hydrants and related parts as required for a period of up to five years, subject to existing contract authority and the appropriation of funds.

ATTACHMENT(S):

- (a) Resolution

RESOLUTION NO. _____

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS AUTHORIZING
THE CITY MANAGER TO EXECUTE A PURCHASE ORDER WITH THE LOWEST
RESPONSIBLE BIDDER SUBMITTING A RESPONSIVE BID, PACE SUPPLY CORP, IN THE
AMOUNT OF \$165,157 FOR PURCHASE OF CLOW FIRE HYDRANTS AND RELATED
PARTS AND ACCESSORIES**

WHEREAS, the City of Milpitas maintains 2,906 fire hydrants, with each hydrant having a 30-year service life. Approximately half of the City's fire hydrants have exceeded their useful life and need rehabilitation and replacement; and

WHEREAS, per the California Fire Code, fire hydrant systems shall be maintained in an operative condition at all times, shall be repaired where defective, and shall comply with approved standards. In addition, hydrant replacement is a necessary safety maintenance measure that ensures that the City not only meets firefighting requirements per the California Fire Code but also complies with water quality standards in conformance with California State Regulation, Title 22; and

WHEREAS, in 2008, the City Council approved CIP No. 7110, Hydrant Replacement Program to provide funding for the replacement of Greenberg fire hydrants in the Manor, Sunnyhills, and Milfords neighborhoods and later expanded the project scope to include Citywide hydrants as recommended in the Water Supply Augmentation Feasibility Report dated March 2015; and

WHEREAS, on February 5, 2025, the City Purchasing Agent approved a standardization for Clow fire hydrants and related parts and accessories in accordance with Municipal Code Section 1-23.14 *Standardization*; and

WHEREAS, the Purchasing Division of the Finance Department released an Invitation for Bid (IFB) 25-1034 for the purchase of Clow fire hydrants and related parts and accessories which publicly noticed on the City website and OpenGov, the City e-procurement platform, in accordance with Municipal Code Section I-2-3.08 *Formal Bid Procedures*; and

WHEREAS, upon release, 6,834 firms received the bid notification, and 26 firms downloaded the IFB documents. Six vendors submitted responses by the published closing date of February 26, 2025; and

WHEREAS, bid submittals were based on the City's immediate need for 30 Clow Model 960s 3 port hydrants – Yellow, 20 Clow LBIW 400A tall check valves, and 10 Clow LP619 short check valves. Based on submitted total base bid amounts, Pace Supply Corp was the lowest-priced responsive and responsible bidder; and

WHEREAS, the IFB included a provision to leverage the results of the IFB for additional purchases as required for a period of up to five years and Pace Supply Corp. submitted a 45% discount off list prices for future purchases, including next generation equivalent Clow fire hydrants and related parts and accessories; and

NOW, THEREFORE, the City Council of the City of Milpitas hereby finds, determines, and resolves as follows:

1. The City Council has duly considered the full record before it, which may include but is not limited to such things as the City staff report, testimony by staff and the public, and

other materials and evidence submitted or provided to it. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

- 2. The City Council hereby authorizes the City Manager to issue a Purchase Order to Pace Supply Corp. to purchase Clow fire hydrants and check valves for an amount not to exceed \$165,157.00 and to authorize the City Manager to issue additional Purchase Orders to Pace Supply Corp. for a period of up to five years for the purchase of Clow fire hydrants and related parts and accessories as required, subject to existing contract authority and the appropriation of funds.

PASSED AND ADOPTED this day of , 2025, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

ATTEST:

APPROVED:

Suzanne Guzzetta, City Clerk

Carmen Montano, Mayor

APPROVED AS TO FORM:

Michael Multalipassi, City Attorney



CITY OF MILPITAS AGENDA REPORT (AR)

Item Title:	Authorize the Surplus of City Vehicles and Equipment (Staff Contact: Luz Cofresi-Howe, Finance Director, 408-586-3111)
Category:	Consent Calendar-Community Services and Sustainable Infrastructure
Meeting Date:	3/18/2025
Recommendation:	Authorize the surplus of City vehicles and equipment with JJ Kane Auctions.

BACKGROUND:

The City of Milpitas (City) is equipped with 270 vehicles and over 500 pieces of equipment to support City operations. A total of 21 vehicles and 22 pieces of equipment are scheduled for surplus as they have reached the end of their useful life. In accordance with City Purchasing Policy, Milpitas Municipal Code Section 1-2.7.03 – *Disposal of Property with an Estimated Value of More Than Five Thousand Dollars (\$5,000)*, staff is recommending City Council approval for the disposal of the vehicles and equipment through the City's selected auction house, JJ Kane Auctions.

ANALYSIS:

The vehicles and equipment scheduled to be disposed have reached the end of their useful life. Below is a chart with the year of the vehicle, asset/vehicle ID, make, model, functional use, assigned department or division, and useful life.

Year	Fleet ID	Make	Model	Functional Use	Department	Useful Life (in years)
2010	SP53	AMRCN SGNL	GP232-T	Sign board	Police	5
2007	SP54	WATTCO	ATS5	Sign board	Police	5
2012	SP57	AMRCN SGNL	GP232-T	Sign board	Police	5
2006	SP55	MOBTR	MTZ5900	Radar Trailer	Police	10
1997	F143	Chevrolet	Suburban	Fire Command	Fire	7
1999	U284	Ford	F250 Pick up	Maintenance	Utilities	7
1995	U471	Ford	Ranger XL 4x4	Maintenance	Utilities	7
2009	Z101	Toyota	Prius	Pool	Fleet	5
1998	SP02	Winnebago	Winnebago	PD Command	Police	7
2000	K490	Ford	Crown Victoria	Maintenance	Fleet	2
1997	B126	Ford	E150 Cargo Van	Maintenance	Facilities	7
2023	SP68	SpeedAlert	24-ATS5	Radar Trailer	Police	10
1993	SP03	Ford	E150 Econoline	PD Patrol	Police	5
2001	D008	Ford	Mustang GT	PD Patrol	Police	5
2003	Z474	Ford	Crown Victoria	Pool vehicle	Fleet	2
2000	D003	Ford	Taurus	Maintenance	Fleet	6
1993	Z401	Ford	F250	Maintenance	Fleet	7
1992	Z455	Ford	F250	Maintenance	Fleet	7
1995	Z470	Ford	F350	Maintenance	Fleet	7
1998	U274	Ford	F250	Maintenance	Fleet	7
2006	Z411	Ford	Crown Victoria	Pool	Fleet	3
2000	L370	Bandit	250XP	Chipper	Landscape	7
1997	L389	Vermeer	1250-B0	Chipper	Landscape	10
2000	L392	Vermeer	V2050	Root Pruner	Landscape	6
2000	L908	Vermeer	TLR20	Trailer	Landscape	10

Year	Fleet ID	Make	Model	Functional Use	Department	Useful Life (in years)
1996	L362	Vermeer	SC252	Stump Grinder	Landscape	8
1996	L930	Vermeer	TLR25	Trailer	Landscape	8
2000	S335	Hypac	C-747-B	Roller	Streets	5
1998	B6384	Northport	4650	Boat	Landscape	5
1988	B910	Skipper	GLT-14	Boat Trailer	Landscape	7
1997	L363	Vermeer	SC672A	Stump Grinder	Landscape	8
1995	M342	Mathew	880L	Flair Mower	Landscape	10
1997	B351	CheTech	GF104	Utility Cart	Facilities	8
1997	B349	CheTech	GF105	Utility Cart	Facilities	8
1986	U4343	Paco Pacific	Jaeger 10	Water Pump Trailer	Utilities	5
2006	L358	Toro	328-D	Riding Mower	Landscape	8
1986	U4347	John Deere	210C	Backhoe Tractor	Utilities	12
1998	S395	Layton	H-500-8	Asphalt Paver	Streets	10
1998	E385	Toro	5400HL	Turf Sweeper	Landscape	5
2006	S339	Crafco	BAX-250	Pavement Marker	Streets	10
1998	U368	Honda	M-2V	Sand Bagger	Utilities	7
2005	S399	Sase	Bull 65	Vacuum	Streets	7
2005	E681	New Gannon	HD4276LB	Scraper Attachment	Landscape	7

Section I-2-7.01 of the Municipal Code authorizes the Purchasing Agent to dispose of surplus City property with an estimated current market value of less than \$5,000 at public or private sale or by renting or destroying the same, with or without notice, competitive bid, or necessity of posting bid bonds. . Section I-2-7.03 states that the City Council may authorize the Purchasing Agent to dispose of property valued over \$5,000 upon the same terms, conditions, discretion, and limitations, which is requested here.

POLICY ALTERNATIVE(S):

Alternative 1: Do not approve the surplus of vehicles.

Pros: None

Cons: The inability to surplus the identified vehicles would not just cause storage constraints as the City has procured the replacement for many of these assets, but the City would also forego any revenue proceeds that would be generated from their sale.

Reason for Not Recommending: Staff is recommending the surplus of these assets as part of a standard practice carried out by municipal fleet operations. The surplus process occurs regularly as vehicles age and are replaced with new inventory.

FISCAL IMPACT:

The City would realize an undetermined amount of revenue by the auctioning of this inventory which would be deposited in Fund 500 – Equipment Replacement Fund to be expended for future vehicle and equipment purchases.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA):

By the definition provided in the CEQA Guidelines Section 15378, this action does not qualify as a “project” for the purpose of CEQA as this action has no potential to result in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.

RECOMMENDATION:

Authorize the surplus of City vehicles and equipment with JJ Kane Auctions.

ATTACHMENT(S):

None



CITY OF MILPITAS AGENDA REPORT (AR)

Item Title:	Adopt a Resolution to Approve Project Plans, Award the Construction Contract to Cratus, Inc., and Authorize Contract Change Order(s) for the Dempsey Road Water Line Replacement (Staff: Christian Di Renzo, Public Works Director, 408-586-2602; and Michael Silveira, City Engineer, 408-586-3303)
Category:	Consent Calendar-Community Services and Sustainable Infrastructure
Meeting Date:	3/18/2025
Recommendation:	(1) Adopt a resolution to approve project plans and specifications, (2) Award the construction contract to Cratus, Inc. in the amount of \$5,463,800, (3) Authorize the City Manager to execute the construction contract with Cratus, Inc.; and (4) Authorize the Public Works Director to negotiate and execute contract change order(s) in an aggregate amount not to exceed \$1,093,000 for the Dempsey Road Water Line Replacement, Project Nos. 7110 and 7118.

BACKGROUND:

The Dempsey Road Water Line Replacement, CIP Project Nos. 7100 and 7118 (Project), is in the FY 2025-2029 Adopted Capital Improvement Program (CIP). The Dempsey Project provides for design and construction to replace approximately 6,000 feet of 12-inch diameter asbestos cement or cast-iron pipe with polyvinyl chloride pipe (PVC) or ductile iron pipe along Dempsey Road from N. Park Victoria Drive to south of the Yosemite Drive intersection, and Yosemite Drive from N. Park Victoria Drive to east of the Interstate 680 overpass. The pipeline was installed in the early 1970s (with some segments installed in 1964) and has corroded extensively, resulting in multiple breaks over the last several years and adversely affecting the customers it serves.

In 2023, staff requested proposals from eight engineering consulting firms specializing in water systems design and received three proposals. The proposals were reviewed and evaluated based on the project team, project understanding, management approach, similar past project experiences and cost estimate of services. Staff deemed HydroScience Engineers to be the most qualified firm and entered into a Design Service Agreement in the fall of 2023 in an amount not-to-exceed \$695,175.

On November 19, 2024, the City Council awarded a construction contract to WestRock Engineering for the replacement of several valves that were not operating properly along E. Calaveras Boulevard, S. Park Victoria Drive, and Yosemite Drive. This work was essential to be completed prior to the start of the Dempsey Project so adequate isolation and sufficient system shutdown could occur during the construction. This work is currently underway and anticipated to be completed in May 2025.

ANALYSIS:

The Project was advertised on the City eProcurement system, OpenGov Procurement, digital construction trade publications on January 24, 2025, and in the Milpitas Post on January 24 and 31, 2025, in accordance with the bidding requirement of the Uniform Public Construction Cost Accounting Act. The Project was also posted at Milpitas City Hall, Sports Center, and Senior Center per City Council direction and Government Code section 36933. The bid opening was held on February 20, 2025, and five (5) sealed bids were received with the price ranging from \$5,463,800 to \$8,790,800. The lowest responsive bidder is Cratus, Inc., submitting a bid in the amount of \$5,463,800. A Bid Results Summary follows while detailed information about the bid results is included in the agenda packet. (**Attachment 3**).

Bidder	Location	Base Bid
Engineer's Construction Estimates	-	\$5,750,000
Cratus, Inc.	San Francisco, CA	\$5,463,800
K.J. Woods Construction, Inc.	San Francisco, CA	\$5,468,000
C2R Engineering, Inc.	Mountain View, CA	\$5,487,700
Mitchell Engineering, Inc.	San Francisco, CA	\$6,859,600
Garney Pacific, Inc.	Tracy, Ca	\$8,790,800

The bid prices submitted ranged from 5% below to 53% over the Engineer's Construction Estimate. The wide variation is likely due to bidders' ability to self-perform work rather than hiring a subcontractor(s), workload schedule, bidder overhead cost and profit margin thresholds, and material and labor markups.

Staff reviewed the bid proposal submitted by Cratus, Inc., the apparent lowest bidder, and found their bid proposal to be responsive. Staff recommends awarding a construction contract in the amount of \$5,463,800 to Cratus, Inc., the lowest responsive and responsible bidder. No bid protests were filed with the City. There is sufficient funding available in the Project budget to award this contract and no additional funding appropriation is required.

Despite the City's consultant's best effort to capture all relevant information in the drawings, a significant challenge in water pipeline construction is the potential discovery of unforeseen conditions that may create conflict with the proposed design. The construction contingency established for this project to address any unforeseen conditions that arise during construction is \$1,093,000 which is approximately 20% of the total contract value. As previously approved for the successful completion of recent projects with tight completion schedules, staff is requesting the use of the same change order policy used for previous projects (**Attachment 4**). This policy allows for a timely completion of the Project, while addressing the need to respond swiftly to unforeseen conditions, and approve necessary change orders to limit potential claims or risks to the City. The change order authority will not be exceeded without prior approval of the City Council.

The Project is anticipated to be completed by spring 2026, with the road to be resurfaced that summer. The Engineer's Construction Estimate for the Project's base bid is \$5,750,000. The Project plans and specifications (**Attachment 2**) are included in the Council's agenda packet.

POLICY ALTERNATIVE(S):

Alternative 1: Deny approval of the Project's plans and specifications and not award the construction contract to Cratus, Inc.

Pros: None.

Cons: Not replacing the water line will lead to continued deterioration and corrosion of the existing water main. As the condition worsens over time, the risk of water main breaks will increase, potentially causing frequent disruptions to residents and businesses along the affected area.

Reason not Recommended: It is essential the Project be completed prior to the resurfacing of Dempsey Road. Prolonging the Project schedule will continue to affect Public Works Department resources to address immediate water pipe repairs and pavement deterioration and affect the quality of life of the community.

FISCAL IMPACT:

Adequate funds are available in the Project budget and no additional funding appropriation is required. As of March 3, 2025, the uncommitted balance of the Project is as follows:

CIP 7100	\$ 3,209,840
CIP 7118	\$ 5,206,715
Total	\$ 8,464,195

Summary of Estimated Construction Expenditures

Construction Contract	\$ 5,463,800
20% Construction Contingency	\$ 1,093,000
TOTAL	\$ 6,556,800

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA):

The Project entails replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced and is exempt from CEQA pursuant to Cal. Code Regs., tit. 14, § 15302.

RECOMMENDATION:

- (1) Adopt a resolution to approve project plans and specifications.
- (2) Award the construction contract to Cratus, Inc. in the amount of \$5,463,800.
- (3) Authorize the City Manager to execute the construction contract with Cratus, Inc.
- (4) Authorize the Public Works Director to negotiate and execute contract change order(s) in an aggregate amount not to exceed \$1,093,000 for the Dempsey Road Water Line Replacement, Project Nos. 7110 and 7118.

ATTACHMENT(S):

- (a) Resolution
- (b) Plans and Specifications
- (c) Bid Summary
- (d) Change Order Policy

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS APPROVING PROJECT PLANS AND SPECIFICATIONS; AWARD THE CONSTRUCTION CONTRACT TO THE LOWEST RESPONSIBLE BIDDER SUBMITTING A RESPONSIVE BID, CRATUS, INC., IN A TOTAL AMOUNT OF \$5,463,800; AUTHORIZE THE CITY MANAGER TO EXECUTE THE CONSTRUCTION CONTRACT WITH CRATUS, INC.; AND AUTHORIZE THE PUBLIC WORKS DIRECTOR TO NEGOTIATE AND EXECUTE CONTRACT CHANGE ORDER(S) IN AN AGGREGATE AMOUNT NOT TO EXCEED \$1,093,000 FOR THE DEMPSEY ROAD WATER LINE REPLACEMENT, PROJECT NOS. 7110 AND 7118.

WHEREAS, the Dempsey Road Water Line Replacement Project, City Project Nos. 7110 and 7118 (“Project”), is in the FY2025-2029 Adopted Capital Improvement Program; and provides for the design and the replacement of the existing water main along Dempsey Road from N. Park Victoria Drive to south of Yosemite Drive intersection and Yosemite Drive from N. Park Victoria Drive to east of I-680 overpass; and

WHEREAS, the Project was advertised on City’s eProcurement system, OpenGov Procurement and digital construction trade publications on January 24, 2025, and in the Milpitas Post on January 24 and 31, 2025, in accordance with the bidding requirements of the Uniform Public Construction Cost Accounting Act; and posted at Milpitas City Hall, Sports Center, and Senior Center as per City Council direction and Government Code section 36933; and

WHEREAS, the Engineer’s Estimate for the Project is \$5,750,000; and

WHEREAS, on February 20, 2025, five (5) sealed bid proposals were received and the bid pricing ranged from \$5,463,800 to \$8,790,800; and

WHEREAS, no bid protest was filed with the City within five (5) calendar days of the bid opening as set forth in the Project specifications; and

WHEREAS, the lowest responsible bidder submitting a responsive bid is Cratus, Inc., in the base bid amount of \$5,463,800; and

WHEREAS, staff recommends the City Council to award the construction contract to Cratus, Inc., the lowest responsible bidder submitting a responsive bid for the Project, and authorize the City Manager to execute the construction contract in the amount of \$5,463,800 in accordance with State law; and

WHEREAS, staff recommends the City Council authorize the Public Works Director to negotiate and execute change order(s) in an amount not to exceed \$1,093,000; twenty percent (20%) of the total contract value, due to Project’s tight completion schedule and staff’s capability to respond swiftly to unanticipated construction conditions to limit potential claims or risk to the City; and

WHEREAS, sufficient funds are available in the Project budget to award the contract to Cratus, Inc. in the total amounts of \$5,463,800; and

NOW, THEREFORE, the City Council of the City of Milpitas hereby finds, determines, and resolves as follows:

1. The City Council has considered the full record before it, which may include but is not limited to such things as the staff report, testimony by staff and the public, and other

materials and evidence submitted or provided to it. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

- 2. The City Council hereby approves the Project Plans and Specifications.
- 3. The City Council hereby awards the construction contract to and authorizes the City Manager to execute the contract and related documents with the lowest responsible bidder submitting a responsive bid, Cratus, Inc., in the amount of \$5,463,800 for the Project.
- 4. The Public Works Director is hereby authorized to negotiate and execute contract change order(s) in an aggregate amount not to exceed \$1,093,000 for the Project.

PASSED AND ADOPTED this _____ day of _____, 2025, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

APPROVED:

Suzanne Guzzetta, City Clerk

Carmen Montano, Mayor

APPROVED AS TO FORM:

Christopher Creech, Acting City Attorney



CITY OF MILPITAS



VICINITY MAP
NTS

DEMPSEY ROAD WATER MAIN REPLACEMENT PROJECT NO. 7118 & 7110

HYDROSCIENCE PROJECT NO. 356-011

PROJECT DIRECTORY

CITY OF MILPITAS
455 E. CALAVERAS BLVD.
MILPITAS, CA 95035
LYHAK EAM
(408) 538-3500

HMH ENGINEERING (SURVEYING)
1570 OAKLAND ROAD
SAN JOSE, CA 95131
(408) 487-2200

HYDROSCIENCE ENGINEERS
741 ALLSTON WAY
BERKELEY, CA 94710
CURTIS LAM
(510) 540-7100



LOCATION MAP
NTS

PROJECT SUMMARY:

THIS PROJECT INCLUDES THE INSTALLATION OF APPROXIMATELY 6,000 LINEAR FEET OF NEW POTABLE WATER PIPELINES, TRENCHING, SHORING, MICROTUNNELING, WATER ABANDONMENT, TRAFFIC CONTROL, SIDEWALK RESTORATION, CURB & GUTTER RESTORATION, AND PAVEMENT RESTORATION ON DEMPSEY ROAD AND YOSEMITE DRIVE IN MILPITAS, CA.

JANUARY 2025



HydroScience
741 ALLSTON WAY
BERKELEY, CA 94710
OFFICE: (510)540-7100 www.hydroscience.com

Designer Stamp 	Record Drawings	Revisions		CITY OF MILPITAS ENGINEERING DIVISION		PROJECT NO. 7118 & 7110
	Designer: _____ Date: _____ Public Works Inspector: _____ Date: _____ Utility/Facility Dept. Head: _____ Date: _____ Project Engineer: _____ Date: _____ Public Improvements Initially Accepted by the City Council on _____ Res. No. _____			Drawn By: MF/AP Date: 1/15/25 Checked By: MF Date: 1/15/25 Designed By: CML Date: 1/15/25	DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110	
				TITLE SHEET, VICINITY MAP AND LOCATION MAP		G001
				RECOMMENDED FOR BIDDING BY: <u>Lyhak Eam</u> DATE: <u>1/27/2025</u> LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING		SCALE: 1" = 10'-0"
				RECOMMENDED FOR APPROVAL FOR BIDDING BY: <u>Michael Silveira</u> DATE: <u>1/27/2025</u> MICHAEL SILVEIRA, P.E., CITY ENGINEER		SHEET <u>1</u> OF <u>33</u>

File Name: K:\Projects\356-City of Milpitas\011-DempseyRoad\04-Design\02_CAD\01_Water Main\Project\356-011-General.dwg Plotted By: MARC FERNANDEZ Plot Date: 1/20/2025 5:20 AM

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2	G002	DRAWING INDEX
3	G003	STANDARD SYMBOLS, LEGENDS AND ABBREVIATIONS
4	G004	GENERAL NOTES
5	G005	BLUEPRINT FOR A CLEAN BAY
6	G006	KEY MAP
CIVIL		
7	C101	PLAN & PROFILE - STA: 100+00 TO 103+47
8	C102	PLAN & PROFILE - STA: 103+47 TO 108+25
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21	C402	TIE-IN DETAILS - 2
22	C403	TIE-IN DETAILS - 3
23	C404	TIE-IN DETAILS - 4
24	C501	CITY STANDARD DETAILS - 1
25	C502	CITY STANDARD DETAILS - 2
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27	C504	CITY STANDARD DETAILS - 4
28	C505	CITY STANDARD DETAILS - 5
29	C506	CITY STANDARD DETAILS - 6
30	C507	CITY STANDARD DETAILS - 7
31	C508	CITY STANDARD DETAILS - 8
32	C601	CIVIL DETAILS - 1
33	C602	CIVIL DETAILS - 2

HydroScience

741 ALLSTON WAY
BERKELEY, CA 94710
OFFICE: (510)540-7100 www.hydroscience.com

Designer Stamp	Record Drawings Designer: _____ Date: _____ Public Works Inspector: _____ Date: _____ Utility/Facility Dept. Head: _____ Date: _____ Project Engineer: _____ Date: _____ Public Improvements Initially Accepted by the City Council on _____ Res. No. _____	Drawn By: MF/AP Date: 1/15/25 Checked By: MF Date: 1/15/25 Designed By: CML Date: 1/15/25	Revisions <table><thead><tr><th>Num.</th><th>Description</th><th>Engr. Aprv.</th><th>Date</th></tr></thead><tbody><tr><td>1</td><td></td><td></td><td></td></tr><tr><td> </td><td></td><td></td><td></td></tr><tr><td> </td><td></td><td></td><td></td></tr><tr><td> </td><td></td><td></td><td></td></tr><tr><td> </td><td></td><td></td><td></td></tr><tr><td> </td><td></td><td></td><td></td></tr><tr><td> </td><td></td><td></td><td></td></tr><tr><td> </td><td></td><td></td><td></td></tr></tbody></table>	Num.	Description	Engr. Aprv.	Date	1																																	CITY OF MILPITAS ENGINEERING DIVISION DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110 DRAWING INDEX RECOMMENDED FOR BIDDING BY: <u>Lyhak Eam</u> DATE: <u>1/27/2025</u> LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER – ENGINEERING	PROJECT NO. 7118 & 7110 Rec. Dwg No. 2-### G002 SCALE: 1" = 10'-0" SHEET <u>2</u> OF <u>33</u>
	Num.	Description	Engr. Aprv.	Date																																						
	1																																									

File Name: K:\Projects\336-City of Milpitas\011-Dempsey Road\04-Design\02_CADD\01_WaterMainProject\356-011-General.dwg Plot Date: 1/20/2025 5:20 AM Plotted By: MARC FERNANDEZ

LINE LEGENDS

GENERAL LEGEND

	CENTERLINE
	BUILDING
	CONCRETE
	EQUIPMENT
	EXISTING FEATURES, EQUIPMENT OR STRUCTURES
	PROPERTY LINE
	MATCH LINE
	RIGHT OF WAY
	FENCE
	HANDRAIL
	GRADE BREAK
	SWALES OR DITCH
	EDGE OF WATER
	MAJOR CONTOURS
	MINOR CONTOURS
	EXISTING GUARD RAIL
	DENSE BRUSH

CIVIL LEGEND

	PIPING TO BE ABANDONED OR REMOVED
	WATER MAIN PIPE
	EXISTING WATER MAIN PIPE
	SEWER FORCE MAIN
	EXISTING SEWER FORCE MAIN
	RECYCLED WATER PIPE
	EXISTING RECYCLED WATER PIPE
	SANITARY SEWER PIPE
	EXISTING SANITARY SEWER PIPE
	STORM DRAIN LINE
	EXISTING STORM DRAIN LINE
	OVER FLOW LINE
	EXISTING OVER FLOW LINE
	DRAIN LINE
	EXISTING DRAIN LINE
	ELECTRICAL CONDUIT
	EXISTING ELECTRICAL CONDUIT
	ELECTRICAL GROUND
	CULVERT
	EXISTING CULVERT
	EXISTING UNKNOWN PIPE
	EXISTING GAS LINE
	EXISTING NATURAL GAS LINE

GENERAL SYMBOLS

MISCELLANEOUS SYMBOLS

	SINGLE LINE CONTINUATION
	DOUBLE LINE CONTINUATION
	GENERAL CONTINUATION
	WATERLINE
	POT HOLE
	BORING HOLE
	NORTH ARROW
	INTERSTATE HIGHWAY
	HIGHWAY
	TREE
	UTILITY BOX
	POWER POLE

TYPICAL PIPING SYMBOLS

	SANITARY SEWER MANHOLE
	STORM DRAIN MANHOLE
	GATE VALVE
	BUTTERFLY VALVE
	PLUG VALVE
	CHECK VALVE
	REDUCER
	FLOW METER
	BACKFLOW PREVENTER
	DROP INLET
	FIRE HYDRANT
	CAP
	BLIND FLANGE
	HOSE BIBB
	CLEAN OUT
	BLOW OFF
	CARV

REFERENCE LABELS

VIEW TITLES, SECTION/DETAIL & PHOTO CALL-OUTS

(1) MAIN FEATURE TITLE	
(2) DETAIL/SECTION/ELEVATION TITLE:	
(3) SECTION/ELEVATION CALL OUT:	
(4) PHOTO CALL OUT: PHOTO 1 FROM DWG M001:	

ABBREVIATIONS

A AB ANCHOR BOLTI/AGGREGATE BASE A/C AIR CONDITIONER AC ASPHALT CONCRETE AFF ABOVE FINISHED FLOOR AI ANALOG INPUT AL ALUMINUM ALT ALTERNATE APPROX APPROXIMATE(LY) AUX AUXILIARY AVE AVENUE	B BF BLIND FLANGE BFC BOTTOM FACE OF CURB BFV BUTTERFLY VALVE BLDG BUILDING BM BEAM/BENCHMARK BTM BOTTOM BV BALL VALVE	C CIP CAST IN PLACE CJ CONSTRUCTION JOINT CONC CONCRETE CONT CONTAINMENT CPLG COUPLING CV CONTROL VALVE	D (D) DEMOLISH DI DRAIN DET DETAIL DI DROP INLET DIA DIAMETER DIP DUCTILE IRON PIPE DWG DRAWING	E (E) EXISTING E EAST EA EACH EG EXISTING GRADE EL ELEVATION ELL ELBOW EMBED EMBEDDED EMERG EMERGENCY EP EDGE OF PAVEMENT EQUIP EQUIPMENT EW EACH WAY EXIST EXISTING EW T&B EACH WAY/TOP AND BOTTOM EXP EXPANSION EXT EXTERIOR	F (F) FUTURE FA FOUL AIR FACP FIRE ALARM CONTROL PANEL FC FLEX COUPLING FCA FLANGE COUPLING ADAPTER FD FLOOR DRAIN/FIRE DAMPER FE FLOW-METER FF FINISHED FLOOR FG FINISHED GRADE FI FLOW INDICATOR FL FLOW LINE FLEX FLEXIBLE FLG FLANGE(D) FLR FLOOR FO FIBER OPTIC/FAIL OPEN FRP FIBERGLASS REINFORCED PIPE FS FIRE SERVICE/FLOW SWITCH FT FEET FTG FOOTING FTS FLOAT SWITCH	G G GAS GALV GALVANIZED GEN GENERAL GPM GALLONS PER MINUTE GRT GROUT/GRATE GSN GENERAL STRUCTURAL NOTES GSP GALVANIZED STEEL PIPE GV GATE VALVE	H HI HIGH HORIZ HORIZONTAL HP HIGH PRESSURE/HIGH POINT /HORSEPOWER HPS HIGH PRESSURE SODIUM HSS HOLLOW STRUCTURE STEEL HT HEIGHT/HIGH HWL HIGH WATER LEVEL HYD HYDRAULIC	I IE INVERT ELEVATION IN INCH INST INSTRUMENTATION INV INVERT IRR IRRIGATION	J JT JOINT	L L LENGTH	M MAX MAXIMUM MECH MECHANICAL MFR MANUFACTURER MGD MILLION GALLONS PER DAY MH MANHOLE MIN MINIMUM/MINUTE MINS MINUTES MISC MISCELLANEOUS MJ MECHANICAL JOINT MOV MOTOR OPERATED VALVE MTD MANUAL TRANSFER SWITCH MTR MOTOR	N (N) NEW N NEUTRAL/NORTH N/A NOT APPLICABLE NO NORMALLY OPEN NPW NON-POABLE WATER NTS NOT TO SCALE	O O OPEN OC ON CENTER OD OUTSIDE DIAMETER OF OUTSIDE FACE, OVERFLOW OFMH OVERFLOW MANHOLE	P PE PLAIN END PL/P PROPERTY LINE/PIPELINE/PLATE PMP PUMP PROVIDE FURNISH, INSTALL AND CONNECT	PSI PSI POUNDS PER SQUARE INCH PV PLUG VALVE PVC POLYVINYLCHLORIDE PVT PAVEMENT PW POTABLE WATER	Q Q RATE OF FLOW QCPLG QUICK COUPLING	R R RADIUS/RIGHT R/C REINFORCED CONCRETE RCP REINFORCED CONCRETE PIPE RD ROAD RED REDUCER REF REFERENCE REINF REINFORCE/REINFORCING REL RELAY RGS RIGID GALVANIZED STEEL RMS ROOT MEAN SQUARE RW RECYCLED WATER	S S SOUTH SBL SET BACK LINE SCH SCHEDULE SD STORM DRAIN SDMH STORM DRAIN MANHOLE SDR STANDARD DIMENSION RATIO SEC SECONDARY SECT SECTION SFM SEWER FORCE-MAIN SHT SHEET SPEC SPECIFICATION(S) SS SANITARY SEWER SSMH SANITARY SEWER MANHOLE SST STAINLESS STEEL ST STREET STA STATION STD STANDARD STL STEEL STL STRUCTURE SV SOLENOID VALVE	T T&B TOP AND BOTTOM T, TEL TELECOMMUNICATIONS TOP TOP OF PIPE T/B TOP OF BANK TB TERMINAL BLOCK TBC TOP BACK OF CURB TC TOP OF CURB/TOP OF CONCRETE TCDI TOP OF CURB DROP INLET TEMP TEMPERATURE TP TOP OF PAVEMENT TYP TYPICAL	U UB UTILITY BOX UG UNDERGROUND UN UNION UNKN UNKNOWN UON UNLESS OTHERWISE NOTED	V VERT VERTICAL VFD VARIABLE FREQUENCY DRIVE VLV VALVE	W W WATER/WEST W/ WITH W/O WITHOUT WL WATER LEVEL WS WATER SURFACE WSTP WATER-STOP WT WATERTIGHT/WEIGHT WW WATER VALVE WWV WASTEWATER WWF WELDED WIRE FABRIC WWTP WASTEWATER TREATMENT PLANT
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SERVICE IDENTIFICATION SYSTEM

SERVICE ABBREVIATIONS

SERVICE ABBREVIATION PIPE SIZE (NOMINAL)	C ELECTRICAL CONTROL D DRAIN EFF EFFLUENT E ELECTRICAL SERVICE FA FOUL AIR OF OVERFLOW NPW NON POTABLE WATER PW POTABLE WATER RW RECYCLED WATER/RAW WATER SD STORM DRAIN SMP SAMPLE SS SANITARY SEWER SSFM SANITARY SEWER FORCE MAIN V VENT W WATER SERVICE
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PATTERNS LEGEND

PATTERN LEGEND

NEW	EXISTING	
	N/A	DEMOLITION AREA
		AC W/ AB (SECTION VIEW)
		NATURAL GROUND OR GRADE
		COMPACTED BACKFILL
		AB (SECTION VIEW)
		CONCRETE
		CHECKER PLATE
		STEEL OR STAINLESS STEEL
		AC PAVEMENT (PLAN VIEW) OR GROUT (SECTION VIEW)
		GRATING
		MISCELLANEOUS MATERIAL
	N/A	HIGHLIGHTED AREA



Record Drawings

Designer: _____	Date: _____
Public Works Inspector: _____	Date: _____
Utility/Facility Dept. Head: _____	Date: _____
Project Engineer: _____	Date: _____
Public Improvements Initially Accepted by the City Council on: _____	Res. No. _____

Drawn By: MF/AP Date: 1/15/25
Checked By: MF Date: 1/15/25
Designed By: CML Date: 1/15/25

Revisions

Num.	Description	Engr. Aprv.	Date
1			
2			
3			
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CITY OF MILPITAS ENGINEERING DIVISION

DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110

STANDARD SYMBOLS, LEGENDS AND ABBREVIATIONS

RECOMMENDED FOR BIDDING BY: Lyhak Eam DATE: 1/27/2025
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING

PROJECT NO. 7118 & 7110
Rec. Dwg No. 2-####
G003
SCALE: 1" = 10'-0"
SHEET <u>3</u> OF <u>33</u>

File Name: K:\Projects\356-City of Milpitas\011-DempseyRoad\04-Design\02_CADD\01_Water Main\Project\356-011-General.dwg
Plotted By: MARC FERNANDEZ
Plot Date: 1/20/2025 5:20 AM

GENERAL NOTES

1. CONTRACTOR'S LICENSE REQUIREMENTS ARE NOTED IN THE CONTRACT DOCUMENTS.
2. AS REQUIRED BY THE CONTRACT DOCUMENTS, THE CONTRACTOR AGREES TO DEFEND, INDEMNIFY, AND HOLD THE CITY OF MILPITAS, ITS EMPLOYEES, OFFICERS, AND AUTHORIZED REPRESENTATIVES HARMLESS FROM ANY AND ALL CLAIMS AND LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK SPECIFIED IN THE CONTRACT DOCUMENTS.
3. CONTRACTOR SHALL SUBMIT A PROJECT CONSTRUCTION SCHEDULE TO THE CITY ENGINEER FOR REVIEW NO LATER THAN 21-DAYS AFTER ISSUANCE OF PROJECT NOTICE OF AWARD.
4. CONTRACTORS PROJECT CONSTRUCTION SCHEDULE SHALL MEET ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS.
5. THE PROJECT NOTICE TO PROCEED WILL NOT BE ISSUED UNLESS CONTRACTORS PROJECT CONSTRUCTION SCHEDULE HAS BEEN APPROVED BY THE CITY ENGINEER.
6. CONTRACTOR SHALL DISTRIBUTE A CITY APPROVED NOTICE OF CONSTRUCTION TO RESIDENTS AND BUSINESS ADJACENT TO AND WITHIN A MINIMUM OF 300-FEET OF THE PROJECT. NOTICE SHALL BE DISTRIBUTED TWO-WEEKS, ONE-WEEK, AND 24-HOURS PRIOR TO BEGINNING WORK AND SHALL COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND AS DIRECTED BY THE CITY ENGINEER.
7. CONTRACTORS MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE LATEST EDITION OF THE CITY STANDARDS DETAILS, STANDARD SPECIFICATIONS, ORDINANCES OF THE CITY OF MILPITAS, AND THE LATEST STATE STANDARD SPECIFICATIONS. CITY STANDARD DETAILS AND SPECIFICATIONS ARE AVAILABLE FROM THE CITY PUBLIC WORKS DEPARTMENT - ENGINEERING DIVISION, 408-586-3300: <https://www.ci.milpitas.ca.gov/milpitas/departments/engineering/standard-details-and-specifications/>
8. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND APPROVALS NECESSARY TO PERFORM THE WORK SHOWN ON THE DRAWINGS, AND SHALL COMPLY WITH FEDERAL, STATE AND LOCAL LAW.
9. CONTRACTOR SHALL CONTACT THE CITY INSPECTOR TO SCHEDULE A PRE-CONSTRUCTION MEETING BEFORE STARTING WORK. THEREAFTER, THE CONTRACTOR SHALL NOTIFY THE INSPECTOR DAILY PRIOR TO WORKING IN THE STREET OR RIGHT OF WAY. PRE-CONSTRUCTION MEETINGS AND INSPECTIONS MAY BE SCHEDULED BY CONTACTING: (408) 586-2797, OR PREFERRED METHOD: <https://app.auctiyscheduling.com/schedule.php?owner=18287911>
10. CONTRACTOR'S PROJECT MANAGER AND SUPERINTENDENT SHALL ATTEND PRE-CONSTRUCTION MEETING WITH CITY PROJECT ENGINEER AND INSPECTOR PRIOR TO STARTING WORK.
11. THE LOCATION OF MANHOLES, VALVE & UTILITY BOXES, MONUMENTS, TRAFFIC LOOPS, AND OTHER INFRASTRUCTURE AS SHOWN IN THE CONTRACT DOCUMENTS ARE APPROXIMATE AND SHALL BE FIELD LOCATED BY CONTRACTOR.
12. CONTRACTOR SHALL NOT PERFORM ANY WORK THAT DEVIATES FROM THAT SHOWN IN THE CONTRACT DOCUMENTS WITHOUT APPROVAL FROM THE CITY ENGINEER.
13. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, AND REQUIRED MATERIAL QUANTITIES PRIOR TO STARTING WORK. ANY CONFLICT WITH INFORMATION SHOWN IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE CITY ENGINEER.
14. CONTRACTOR IS RESPONSIBLE FOR VERIFYING QUANTITIES PRIOR TO STARTING WORK AND SHALL OBTAIN A CHANGE ORDER FROM THE CITY ENGINEER PRIOR TO EXCEEDING ESTIMATED QUANTITIES.
15. ALL QUANTITIES AND PAY ITEMS SHALL BE BASED ON ACTUAL FIELD MEASUREMENT BY THE CITY ENGINEER. THE CONTRACTOR SHALL MEET WITH PROJECT INSPECTOR AND AGREE ON QUANTITIES WITHIN 48-HOURS OF COMPLETING EACH SEGMENT WORK OR AS REQUIRED BY THE CONTRACT DOCUMENTS.
16. PROPERTY, INCLUDING UTILITIES, HARDSCAPE, LANDSCAPING, AND OTHER EXISTING INFRASTRUCTURE DAMAGED BY CONTRACTORS WORK SHALL BE RESTORED IN-KIND OR TO A BETTER CONDITION AT CONTRACTORS EXPENSE.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY AND CONDITIONS AT THE PROJECT JOB SITE AT ALL TIMES.
18. CONTRACTOR SHALL COMPLY WITH ALL OCCUPATIONAL SAFETY REQUIREMENTS, HEALTH AND SAFETY ORDERS, CITY, STATE, AND FEDERAL REGULATIONS.
19. SURVEY MONUMENTATION SHALL BE PROTECTED AND PERPETUATED IN PLACE AS REQUIRED BY THE STATE OF CALIFORNIA BUSINESS AND PROFESSIONS CODE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE RESET OF DISTURBED OR BURIED MONUMENTS.
20. CONTRACTOR SHALL USE A LICENSED LAND SURVEYOR TO LOCATE AND TIE-OUT ALL MONUMENTS WITHIN WORK AREA AND SUBMIT MONUMENT TIE-OUT RECORD TO THE CITY ENGINEER PRIOR TO STARTING WORK.
21. NO CONSTRUCTION OPERATIONS ARE PERMITTED ON THE FOLLOWING CITY HOLIDAYS IN ACCORDANCE WITH CITY ORDINANCE AND THE CONTRACT DOCUMENTS: NEW YEARS DAY, MARTIN LUTHER KING BIRTHDAY, CESAR CHAVEZ DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, VETERANS DAY, THANKSGIVING DAY, DAY AFTER THANKSGIVING, DAY BEFORE CHRISTMAS, AND CHRISTMAS DAY.
22. CONTRACTORS WORK HOURS, INCLUDING OFF HAUL AND DELIVERY OF MATERIALS SHALL BE LIMITED TO THE HOURS BETWEEN 7 A.M. TO 5 P.M. 7-DAYS PER WEEK EXCEPT CITY HOLIDAYS UNLESS A CHANGE IS APPROVED BY THE CITY ENGINEER. TRAFFIC CONTROL PLAN LANE CLOSURE RESTRICTIONS MAY BE MORE RESTRICTIVE DEPENDENT ON TRAFFIC CONDITIONS.
23. CONTRACTOR SHALL IMPLEMENT AND MAINTAIN CONSTRUCTION BEST MANAGEMENT PRACTICES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, STATE LAW, CITY ORDINANCE, AND THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
24. CONTRACTOR SHALL NOT ALLOW ANY DEBRIS OR DISCHARGE TO ENTER A STORM DRAIN CATCH BASIN OR WATER COURSE.
25. CONTRACTOR SHALL MAINTAIN PROJECT SITE AND ADJACENT AREAS IN A NEAT, CLEAN, AND PROFESSIONAL CONDITION AT ALL TIMES. CONTRACTOR SHALL PROVIDE GRAFFITI, TRASH, AND DEBRIS REMOVAL INCLUDING STREET/SIDEWALK SWEEPING OPERATIONS DAILY AT THE END OF THE DAYS WORK.
26. CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES AT PROJECT SITE AND DURING CONSTRUCTION OPERATIONS AT ALL TIMES.
27. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS OF AS-BUILT CONDITIONS WITH ANY REDLINE FIELD CHANGES FOR CITY REVIEW PRIOR TO REQUESTING FINAL INSPECTION. DRAWINGS SHALL BE PROVIDED IN HARDCOPY, ELECTRONIC PDF FORMAT, AND CADD FORMAT MEETING CITY REQUIREMENTS.
28. CONTRACTOR SHALL IMMEDIATELY STOP WORK WHEN ARCHAEOLOGICAL MATERIALS ARE UNCOVERED DURING CONSTRUCTION. CONTRACTOR SHALL ESTABLISH A 100-FOOT PERIMETER AROUND FOUND MATERIALS AND SHALL CONTACT A PROFESSIONAL ARCHAEOLOGIST CERTIFIED BY THE SOCIETY OF CALIFORNIA ARCHAEOLOGIST (SCA), OR THE SOCIETY OF PROFESSIONAL ARCHAEOLOGIST (SOPA) TO EVALUATE THE FOUND MATERIALS AND DIRECT APPROPRIATE MITIGATION.
29. CONTRACTOR SHALL NOT USE POTABLE WATER FOR CONSTRUCTION AND DUST CONTROL. REFER TO CITY OF MILPITAS ORDINANCE NO. 240.2. FOR DETAILS AND EXCEPTIONS. CONTACT THE CITY INSPECTOR FOR LOCATIONS OF RECYCLED WATER ACCESS POINTS FOR USE DURING CONSTRUCTION.
30. CONTRACTOR SHALL OBTAIN A CITY OF MILPITAS CONSTRUCTION WATER METER FOR POTABLE AND/OR RECYCLED WATER FOR USE DURING CONSTRUCTION AND SHALL PAY USAGE CHARGES. CONTRACTOR SHALL NOT OBTAIN WATER FROM ANY ON-SITE UTILITY SOURCES, FIRE HYDRANTS, OR ELSEWHERE UNLESS APPROVED BY INSPECTOR.

ROADWAY & TRAFFIC CONTROL

31. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN DESIGNED BY A CALIFORNIA LICENSED ENGINEER AND RECEIVE CITY APPROVAL OF PLAN PRIOR TO STARTING WORK IN THE STREET.
32. CONTRACTOR SHALL NOT COMPLETELY CLOSE ANY STREET AND SHALL PROVIDE FOR THROUGH TRAFFIC AND ACCESS TO ALL DRIVEWAYS UNLESS ALLOWED DIFFERENTLY BY THE CONTRACT DOCUMENTS, THE CITY APPROVED TRAFFIC CONTROL PLAN, OR AS DIRECTED BY THE CITY ENGINEER.
33. DETOUR OF THROUGH TRAFFIC TO NEARBY STREETS SHALL NOT BE PERMITTED. CONTRACTOR'S TRAFFIC CONTROL SHALL MAINTAIN AT LEAST A MINIMUM OF ONE 10-FOOT WIDE THROUGH TRAFFIC LANE PER TRAVEL DIRECTION AT ALL TIMES.
34. CONTRACTOR SHALL PROVIDE SAFE PEDESTRIAN AND BICYCLIST DETOURS COMPLIANT WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA) WHEN A SIDEWALK, CURB RAMP, OR BIKE LANE IS CLOSED OR OBSTRUCTED.
35. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE MILPITAS UNIFIED SCHOOL DISTRICT (MUSD); WASTE MANAGEMENT SERVICES; U.S. POSTAL SERVICE, TRANSPORTATION (TRANSIT) AGENCIES, AND EMERGENCY SERVICES PRIOR TO STARTING WORK WITHIN THE STREET AND SIDEWALKS.
36. CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN TRAFFIC FLAGGERS, WARNING SIGNAGE, SAFETY DEVICES, AND ALL TRAFFIC CONTROLS AT NO ADDITIONAL COST TO CITY WHEN WORKING IN STREET OR WHEN CONTRACTORS OPERATIONS CREATE A HAZARDOUS CONDITION AS DETERMINED BY THE CITY ENGINEER.
37. CONTRACTOR SHALL MAINTAIN SUFFICIENT STOCK OF TRAFFIC CONES, BARRICADES, WARNING SIGNAGE, AND SAFETY DEVICES AT THE JOB SITE AT ALL TIMES TO ALLOW FOR IMMEDIATE DEPLOYMENT TO ADDRESS A HAZARDOUS CONDITION.
38. CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY ROADWAY MARKINGS IMMEDIATELY AFTER STRIPING REMOVAL. TEMPORARY MARKINGS AND SAFETY DEVICES SHALL REMAIN IN PLACE UNTIL AFTER PERMANENT MARKINGS HAVE BEEN INSTALLED OR AS DIRECTED BY THE CITY ENGINEER.
39. TEMPORARY PAVEMENT SURFACE MATERIALS SHALL BE INSPECTED DAILY AND REPAIRED BY CONTRACTOR WHEN SETTLEMENT, UPLIFT, OR OTHER DEFECT IS PRESENT OR AS DIRECTED BY THE CITY ENGINEER.
40. CONTRACTOR SHALL INSTALL FINAL FINISHED STREET ASPHALT PAVEMENT SURFACE AND/OR SIDEWALK CONCRETE SURFACE MATERIALS WITHIN 14-DAYS FOLLOWING COMPLETION OF TRENCHING AND EXCAVATION OPERATIONS. TEMPORARY SURFACE MATERIALS SHALL NOT REMAIN IN PLACE LONGER THAN 14-DAYS UNLESS DIRECTED OTHERWISE BY CONTRACT DOCUMENTS AND/OR THE CITY ENGINEER.
41. CONTRACTOR SHALL RECEIVE INSPECTOR APPROVAL OF CAT-TRACKING OF ROADWAY STRIPING AND MARKINGS PRIOR TO INSTALLATION OF FINAL MARKINGS.
42. CONTRACTOR SHALL ONLY HAUL ON ROUTES AND STREETS AS DIRECTED IN THE CONTRACT DOCUMENTS OR AS PRE-APPROVED BY THE CITY ENGINEER.
43. CONTRACTOR SHALL ENSURE HAULING OPERATIONS DO NOT ALLOW MATERIAL TO BE BLOWN OR SPILLED UPON STREETS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CLEAN-UP AND DAMAGE AS A RESULT OF HAULING ACTIVITIES.
44. CONTRACTOR SHALL NOT STORE MATERIALS OR EQUIPMENT ON STREET OR RIGHT OF WAY UNLESS SPECIFICALLY APPROVED BY THE CITY ENGINEER.
45. CONTRACTOR SHALL OBTAIN APPROVALS FROM PRIVATE PROPERTY OWNERS PRIOR TO ACCESS OR USE OF PROPERTY.
46. CONTRACTOR SHALL POST "NO PARKING SIGNAGE" WITH SIGNAGE AVAILABLE FROM CITY AS REQUIRED TO SAFELY COMPLETE WORK IN THE STREET AND SIDEWALK 48-HOURS PRIOR TO STARTING WORK. CONTRACTOR SHALL NOTIFY THE INSPECTOR AND THE CITY'S EMERGENCY COMMUNICATION CENTER (408) 586-2400 OF STREETS WHERE SIGNAGE HAS BEEN POSTED.

UTILITIES & UNDERGROUND

47. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UNDERGROUND UTILITIES PRIOR TO STARTING WORK. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AT (800)-642-2444 AND OBTAIN A REFERENCE NUMBER PRIOR TO EXCAVATION WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH FEDERAL, STATE, AND REGULATORY SAFETY REQUIREMENTS FOR EXCAVATION. REFER TO: www.usanorth811.org
48. THE EXISTENCE OF UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL POTHOLE TO LOCATE ALL UTILITIES WITHIN CONSTRUCTION AREA WHICH MAY BE AFFECTED BY CONSTRUCTION. THE USE OF GROUND PENETRATION RADAR IN LIEU OF POTHOLE EXCAVATION SHALL NOT BE PERMITTED. CONTRACTOR SHALL SUBMIT THE POTHOLE REPORT WITH FOUND LOCATION AND DEPTH INFORMATION TO THE CITY ENGINEER FOR REVIEW PRIOR TO PROCEEDING WITH FURTHER EXCAVATION.
49. THE CONTRACTOR SHALL POTHOLE TO DETERMINE THE LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND STRUCTURES AND WHERE PROPOSED CROSSINGS OF NEW UTILITY WITH EXISTING IS SHOWN ON THE PLANS. THE USE OF GROUND PENETRATION RADAR IN LIEU OF POTHOLE EXCAVATION SHALL NOT BE PERMITTED. CONTRACTOR SHALL SUBMIT THE POTHOLE REPORT WITH FOUND LOCATION AND DEPTH INFORMATION TO THE CITY ENGINEER FOR REVIEW PRIOR TO PROCEEDING WITH FURTHER EXCAVATION.
50. ADDITIONAL COST ON THE PART OF THE CONTRACTOR TO DETERMINE THE LOCATION OR DEPTH OF EXISTING UTILITIES WHERE DIFFERENT FROM THAT SHOWN IN THE CONTRACT DOCUMENTS SHALL BE BORNE BY THE CONTRACTOR.
51. UTILITY BOXES, MANHOLE COVERS, AND OTHER INFRASTRUCTURE SHALL BE BROUGHT TO FINISHED GRADE BY CONTRACTOR NO LATER THAN 72-HOURS FOLLOWING FINAL PAVING OPERATIONS.
52. CONTRACTOR SHALL NOT OPERATE WATER VALVES WITHOUT PRIOR APPROVAL FROM PUBLIC WORKS INSPECTOR.
53. CONTRACTOR SHALL PROVIDE ADEQUATE SHEETING, SHORING, AND BRACING FOR ALL TRENCHING AND EXCAVATION WORK IN ACCORDANCE TO APPLICABLE SAFETY REGULATION, AND THE CALIFORNIA LABOR CODE.
54. TRENCH EXCAVATION BACKFILL OPERATIONS WITHIN STREETS AND SIDEWALKS THAT CAN NOT BE COMPLETED BY THE END OF WORKDAY SHALL BE SAFELY SHORED AND COVERED BY STEEL PLATE. PLATES SHALL BE RAMPED OR COUNTERSUNK FROM EXISTING SURFACE, PROVIDE A SMOOTH TRANSITION, OVERLAP EDGES OF EXCAVATION BY 6-INCHES MINIMUM. BE SECURED INPLACE TO PREVENT MOVEMENT, ROCKING AND BOUNCE, AND HAVE A NON-SKID SURFACE. CONTRACTOR SHALL INSPECT AND ADJUST INSTALLED PLATES DAILY.



Designer Stamp	Record Drawings		Drawn By: <u>MF/AP</u> Date: <u>1/15/25</u> Checked By: <u>MF</u> Date: <u>1/15/25</u> Designed By: <u>CML</u> Date: <u>1/15/25</u>	Revisions				CITY OF MILPITAS ENGINEERING DIVISION		PROJECT NO. 7118 & 7110		
	Designer: _____ Date: _____			Num.	Description	Engr.		Aprv.	Date	DEMPSEY ROAD WATERLINE REPLACEMENT		Rec. Dwg No. 2-####
	Public Works Inspector: _____ Date: _____									PROJECT NO. 7118 & 7110		G004
	Utility/Facility Dept. Head: _____ Date: _____									GENERAL NOTES		SCALE: 1" = 10'-0"
	Project Engineer: _____ Date: _____									RECOMMENDED FOR BIDDING BY: <u>Lyhak Eam</u> DATE: <u>1/27/2025</u>		SHEET <u>4</u> OF <u>33</u>
Public Improvements Initially Accepted by the City Council on _____ Res. No. _____							LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER – ENGINEERING					

Fresh Concrete and Mortar Application

Who should use this information?

- Masons and Bricklayers
- Sidewalk Construction Crews
- Patio Construction Workers
- Construction Inspectors
- General Contractors
- Home Builders
- Developers
- Concrete Delivery/Pumping Workers



Storm Drain Pollution from Fresh Concrete And Mortar Applications

Fresh concrete and cement-related mortars that wash into lakes, streams, or estuaries are toxic to fish and the aquatic environment. Disposing of these materials to the storm drains or creeks can block storm drains, causes serious problems, and is prohibited by law.

Doing the Job Right General Business Practices

- Wash out concrete mixers only in designated wash-out areas in your yard, away from storm drains and waterways, where the water will flow into a temporary waste pit in a dirt area. Let water percolate through soil and dispose of settled, hardened concrete as garbage. Whenever possible, recycle washout by pumping back into mixers for reuse.
- Wash out chutes onto dirt areas at site that do not flow to streets or drains.
- Always store both dry and wet materials under cover, protected from rainfall and runoff and away from storm drains or waterways. Protect dry materials from wind.
- Secure bags of cement after they are open. Be sure to keep wind-blown cement powder away from streets, gutters, storm drains, rainfall, and runoff.
- Do not use diesel fuel as a lubricant on concrete forms, tools, or trailers.

During Construction

- Don't mix up more fresh concrete or cement than you will use in a two-hour period.
- Set up and operate small mixers on tarps or heavy plastic drop cloths.
- When cleaning up after driveway or sidewalk construction, wash fines onto dirt areas, not down the driveway or into the street or storm drain.
- Protect applications of fresh concrete and mortar from rainfall and runoff until the material has dried.
- Wash down exposed aggregate concrete only when the wash water can (1) flow onto a dirt area; (2) drain onto a bermed surface from which it can be pumped and disposed of properly; or (3) be vacuumed from a catchment created by blocking a storm drain inlet. If necessary, divert runoff with temporary berms. Make sure runoff does not reach gutters or storm drains.
- When breaking up pavement, be sure to pick up all the pieces and dispose of properly. Recycle large chunks of broken concrete at a local recycling facility.
- Never bury waste material. Dispose of small amounts of excess dry concrete, grout, and mortar in the trash.
- Never dispose of washout into the street, storm drains, drainage ditches, or streams.

Heavy Equipment Operation

Who should use this information?

- Vehicle and Equipment Operators
- Site Supervisors
- General Contractors
- Home Builders
- Developers



Stormwater Pollution from Heavy Equipment on Construction Sites

Poorly maintained vehicles and heavy equipment that leak fuel, oil, antifreeze or other fluids on the construction site are common sources of storm drain pollution. Prevent spills and leaks by isolating equipment from runoff channels, and by watching for leaks and other maintenance problems. Remove construction equipment from the site as soon as possible.

Doing the Job Right Site Planning and Preventive Vehicle Maintenance

- Designate one area of the construction site, well away from streams or storm drain inlets, for auto and equipment parking, refueling, and routine vehicle and equipment maintenance. Contain the area with berms, sand bags, or other barriers.
- Maintain all vehicles and heavy equipment. Inspect frequently for and repair leaks.
- Perform major maintenance, repair jobs, and vehicle and equipment washing off site where cleanup is easier.
- If you must drain and replace motor oil, radiator coolant, or other fluids on site, use drip pans or drop cloth to catch drips and spills. Collect all spent fluids, store in separate containers. Recycle them whenever possible, otherwise, dispose of them as hazardous wastes.
- Do not use diesel oil to lubricate equipment parts, or clean equipment. Use only water for any onsite cleaning.
- Cover exposed fifth wheel hitches and other oily or greasy equipment during rain events.
- Use as little water as possible for dust control. Ensure water used doesn't leave silt or discharge to storm drains.

Spill Cleanup

- Clean up spills immediately when they happen.
- Never hose down "dirty" pavement or impermeable surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags) whenever possible and properly dispose of absorbent materials.
- Sweep up spilled dry materials immediately. Never attempt to "wash them away" with water, or bury them.
- Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- Report significant spills to the appropriate local spill response agencies immediately. In Milpitas, dial 9-1-1 if hazardous materials might enter the storm drain.

Earth-Moving and Dewatering Activities

Who should use this information?



- Bulldozer, Back Hoe, and Grading Machine Operators
- Dump Truck Drivers
- Site Supervisors
- General Contractors
- Home Builders
- Developers

Storm Drain Pollution from Earth-Moving Activities

Soil excavation and grading operations loosen large amounts of soil that can flow or blow into storm drains when handled improperly. Sediments in runoff can clog storm drains, smother aquatic life, and destroy habitats in creeks and the Bay. Effective erosion control practices reduce the amount of runoff crossing a site and slow the flow with check dams or roughened ground surfaces.

Contaminated groundwater is a common problem in the Santa Clara Valley. Depending on soil types and site history, groundwater pumped from construction sites may be contaminated with toxics (such as oil or solvents) or laden with sediments. Any of these pollutants can harm wildlife in creeks or the Bay, or interfere with wastewater treatment plant operation. Discharging sediment-laden water from a dewatering site into any water of the state without treatment is prohibited.

Doing the Job Right General Business Practices

- Schedule excavation and grading work during dry weather.
- Perform major equipment repairs away from the job site.
- When refueling or vehicle/equipment maintenance must be done on site, designate a location away from storm drains.
- Do not use diesel oil to lubricate equipment parts, or clean equipment.

Practices During Construction

- Remove existing vegetation only when absolutely necessary. Plant temporary vegetation for erosion control on slopes or where construction is not immediately planned.
- Protect developed drainage courses, streams, and storm drains with wattles, or temporary drainage swales. Use check dams or ditches to divert runoff around excavations. Refer to the Regional Water Quality Control Board's Erosion and Sediment Control

Field Manual for proper erosion and sediment control measures, and California Stormwater Quality Association Stormwater Best Management Practice Handbook (construction, 2003)

Dewatering Operations Check for Toxic Pollutants

- Check for odors, discoloration, or an oily sheen on groundwater.
- Call your local wastewater treatment agency and ask whether the groundwater must be tested.
- If contamination is suspected, have the water tested by a certified laboratory.
- Depending on the test results, you may be allowed to discharge pumped groundwater to the storm drain (if no sediments present) or sanitary sewer. OR, you may be required to collect and haul pumped groundwater offsite for treatment and disposal at an appropriate treatment facility.

Detected Contaminated Soil or Groundwater

Contaminated groundwater is a common problem in the Santa Clara Valley. It is essential that all contractors and subcontractors involved know what to look for in detecting contaminated soil or groundwater, and testing ponded groundwater before pumping. Watch for any of these conditions:

- Unusual soil conditions, discoloration or odor.
- Abandoned underground tanks.
- Abandoned wells.
- Buried barrels, debris or trash.

If any of these are found follow the procedures below.

Roadwork and Paving

Who should use this information?

- Road Crews
- Driveway/Sidewalk/Parking Lot Construction Crews
- Seal Coat Contractors
- Operators of Grading Equipment, Paving Machines, Dump Trucks, Concrete Mixers
- Construction Inspectors
- General Contractors
- Developers
- Home Builders



Storm Drain Pollution from Roadwork

Road paving, surfacing, and pavement removal happen right in the street, where there are numerous opportunities for spill, spill cut slurry, or excavated material to illegally enter storm drains. Extra planning is required to store and dispose of materials properly and guard against pollution of storm drains, creeks, and the Bay.

Doing the Job Right General Business Practices

- Develop and implement erosion/sediment control plans for roadway embankment.
- Schedule excavation and grading work during dry weather.
- Check for and repair leaking equipment.
- Perform major equipment repairs at designated areas in your maintenance yard, where cleanup is easier. Avoid performing equipment repairs at construction sites.
- When refueling or when vehicle/equipment maintenance must be done on site, designate a location away from storm drains and creeks.
- Do not use diesel oil to lubricate equipment parts or clean equipment.
- Recycle used oil, concrete, broken asphalt, etc. whenever possible, or dispose of properly.

During Construction

- Avoid paving and seal coating in wet weather, or when rain is forecast, to prevent fresh materials from contacting stormwater runoff.
- Cover and seal catch basins and manholes when applying seal coat, slurry seal, fog seal, or similar materials.
- Protect drainage ways by using earth dikes, sand bags, or other controls to divert or trap and filter runoff.
- Never wash excess material from exposed aggregate concrete or similar treatments into a street or storm drain. Collect and recycle, or dispose to dirt area.
- Cover stockpiles (asphalt, sand, etc.) and other construction materials with plastic tarps. Protect from rainfall and prevent runoff with temporary roofs or plastic sheets and berms.
- Park paving machines over drip pans or absorbent material (cloth, rags, etc.) to catch drips when not in use.
- Clean up all spills and leaks using "dry" methods (with absorbent materials and/or rags) Dig up, remove, and properly dispose of contaminated soil.

- Collect and recycle or appropriately dispose of excess abrasive gravel or sand.
- Avoid over-application by water trucks for dust control.

Asphalt/Concrete Removal

- Avoid creating excess dust when breaking asphalt or concrete.
- After breaking up old pavement, be sure to remove all chunks and pieces. Make sure broken pavement does not come in contact with rainfall or runoff.
- When making saw cuts, use as little water as possible. Shovel or vacuum saw-cut slurry and remove from the site. Cover or protect storm drain inlets during saw-cutting. Sweep up, and properly dispose of, all residues.
- Sweep, never hose down streets to clean up tracked dirt. Use a street sweeper or vacuum truck. Do not dump vacuumed liquor in storm drains.

Paint Removal

- Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury or tributyl tin must be disposed of as hazardous wastes. Lead based paint removal requires a state-certified contractor.
- When stripping or cleaning building exteriors with high-pressure water, block storm drains. Direct wash water onto a dirt area to find out if you can collect (mop or vacuum) building cleaning water and dispose to the sanitary sewer. Sampling of the water may be required to assist the wastewater treatment authority in making its decision.

Painting Cleanup

- Never clean brushes or rinse paint containers into a street, gutter, storm drain, French drain, or stream.
- For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain. Dispose of excess liquids and residue as hazardous waste.

sewer. Never pour paint down a storm drain. Dispose of excess liquids and residue as hazardous waste.

- For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids and residue as hazardous waste.
- When thoroughly dry, empty paint cans, used brushes, rags, and drop cloths may be disposed of as garbage in a sanitary landfill. Leave lids off paint cans so the refuse collector can see that they are empty. Empty, dry paint cans also may be recycled as metal.
- Dispose of empty aerosol paint cans as hazardous waste or at household hazardous waste collection events.

Recycle/Reuse Leftover Paints Whenever Possible

- Donate excess water-based (latex) paint for reuse.

- Reuse leftover oil-based paint. Dispose of non-recyclable thinners, sludge and unwanted paint, as hazardous waste.
- Unopened cans of paint may be able to be returned to the paint vendor. Check with the vendor regarding its "buy-back" policy.



BLUEPRINT FOR A CLEAN BAY

Best Management Practices for the Construction Industry

Remember: The property owner and the contractor share ultimate responsibility for the activities that occur on a construction site. You may be held responsible for any environmental damage caused by your subcontractors or employees.

Preventing Pollution: It's Up to Us

In the Santa Clara Valley, storm drains transport water directly to local creeks and San Francisco Bay without treatment. Stormwater pollution is a serious problem for wildlife dependent on our creeks and bays and for the people who live near polluted streams or bays. Common sources of this pollution include spilled oil, fuel, and fluids from vehicles and heavy equipment; construction debris; sediment caused by erosion; landscaping runoff containing pesticides or weed killers; and materials such as used motor oil, antifreeze, and paint products that people pour or spill into a street or storm drain.



Santa Clara Valley Urban Runoff Pollution Prevention Program

Thirteen valley municipalities have joined together with Santa Clara County and the Santa Clara Valley Water District to educate local residents and businesses and fight stormwater pollution. This "blueprint" summarizes "Best Management Practices" (BMPs) for stormwater pollution prevention.

General Construction and Site Supervision

Who should use this information?

- General Contractors
- Site Supervisors
- Inspectors
- Home Builders
- Developers
- Homeowners



Storm Drain Pollution from Construction Activities

Construction sites are common sources of storm water pollution. Materials and wastes that blow or wash into a storm drain, gutter, or street have a direct impact on local creeks and the Bay.

As a contractor, or site supervisor, owner or operator of a site, you may be responsible for any environmental damage caused by your subcontractors or employees.

Doing the Job Right General Principles

- Keep an orderly site and ensure good housekeeping practices are used.
- Maintain equipment properly.
- Cover materials when they are not in use.
- Keep materials away from streets, storm drains and drainage channels.
- Ensure dust control water doesn't leave site or discharge to storm drains.

Advance Planning To Prevent Pollution

- Schedule excavation and grading activities for dry weather periods. To reduce soil erosion, plant temporary vegetation or place other erosion controls before rain begins. Use the Erosion and Sediment Control Field Manual, available from the Regional Water Quality Control Board San Francisco Bay Region, as a reference.
- Control the amount of runoff crossing your site (especially during excavation) by using berms or temporary or permanent drainage ditches to divert water flow around the site. Reduce stormwater runoff velocities by constructing temporary check dams or berms where appropriate.
- Train your employees and subcontractors. Make these brochures available to everyone who works on the construction site. Inform subcontractors about the stormwater requirements and their own responsibilities.

Landscaping, Gardening, And Pool Maintenance

Who should use this information?

- Landscapers
- Gardeners
- Swimming Pool/Spa Service and Repair Workers
- General Contractors
- Home Builders
- Developers
- Homeowners



Storm Drain Pollution from Landscaping and Swimming Pool Maintenance

Many landscaping activities expose soils and increase the likelihood that earth and garden chemicals will run off into the storm drains during irrigation or when it rains. Swimming pool water containing chlorine and copper-based algaecides should never be discharged to storm drains. These chemicals are toxic to aquatic life.

Doing the Job Right General Business Practices

- Protect stockpiles (e.g. asphalt, sand, or soil) and landscaping materials from wind and rain by storing them under tarps or secured plastic sheeting.
- Store pesticides, fertilizers, and other chemicals indoors or in a shed or storage cabinet.
- Schedule grading and excavation projects during dry weather.
- Use temporary check dams or ditches to divert runoff away from storm drains.
- Protect storm drains with sandbags or other sediment controls.
- Revegetation is an excellent form of erosion control for any site. Replant as soon as possible with temporary vegetation such as grass seed.

Landscaping/Garden Maintenance

- Consider using Integrated Pest Management Techniques. Use pesticides sparingly, according to instructions on the label. Rinse empty containers, and use rinsewater as product. Dispose of rinsed, empty containers in the trash.
- Dispose of unused pesticides as hazardous waste.

Good Housekeeping Practices

- Designate one area of the site for auto parking, vehicle refueling, and routine equipment maintenance. The designated area should be well away from streams or storm drain inlets, bermed if necessary. Make major repairs off site.
- Keep materials out of the rain - prevent runoff contamination at the source. Cover exposed piles of soil or construction materials with plastic sheeting or temporary roofs. Before it rains, sweep and remove materials from surfaces that drain to storm drains, creeks, or channels.
- Keep pollutants off exposed surfaces. Place trash cans and recycling receptacles around the site to minimize litter.
- Clean up leaks, drips and other spills immediately so they do not contaminate soil or groundwater or leave residue on paved surfaces.
- Never hose down "dirty" pavement or surfaces where materials have spilled.
- Use dry cleanup methods whenever possible. If you must use water, use just enough to keep the dust down.
- Cover and maintain dumpsters. Check frequently for leaks. Place dumpsters under roofs or cover with tarps or plastic sheeting secured around the outside of the dumpster. Never clean out a dumpster by hosing it down on the construction site.

- Place portable toilets away from storm drains. Make sure portable toilets are in good working order. Check frequently for leaks.

Materials/Waste Handling

- Practice Source Reduction - minimize waste when you order materials. Order only the amount you need to finish the job.
- Use recyclable materials whenever possible. Arrange for pick-up of recyclable materials such as concrete, asphalt, scrap metal, solvents, degreasers, cleared vegetation, paper, rock, and vehicle maintenance materials such as used oil, antifreeze, batteries, and tires.
- Dispose of all wastes properly. Many construction materials and wastes, including solvents, water-based paints, vehicle fluids, broken asphalt and concrete, wood, and cleared vegetation can be recycled. Materials that cannot be recycled must be taken to an appropriate landfill or disposed of as hazardous waste. Never bury waste materials or leave them in the street or near a creek or stream bed.

Permits

- In addition to local grading and building permits, you will need to obtain coverage under the State General Construction Activity Stormwater Permit if your construction site's disturbed area totals 1 acre or more. Information on the General Permit can be obtained from the Regional Water Quality Control Board.

- San Jose/Santa Clara Water Pollution Control Plant (408) 945-5300. You may be able to discharge to the sanitary sewer by running the hose to a utility sink or sewer pipe clean-out.
- Do not use copper-based algaecides. Control algae with chlorine or other alternatives, such as sodium bromide.

Filter Cleaning

- Never clean a filter in the street or near a storm drain. Rinse cartridge and diatomaceous earth filters onto a dirt area, and spade filter residue into soil. Dispose of spent diatomaceous earth in the garbage.
- If there is no suitable dirt call San Jose/Santa Clara Water Pollution Control Plant (408) 945-5300 for instructions on discharging filter backwash or rinse water to the sanitary sewer.

Milpitas Municipal Code (MMC) 2017

XI-16-11 Accidental Discharge - Notification of Discharge

(a) All persons shall notify the City by telephone immediately by dialing 911 upon accidentally discharging any material other than an acceptable discharge into a storm drain or watercourse to enable countermeasures to be taken by the City to minimize damage to storm drains and the receiving waters. Prohibited discharges include but are not limited to:

- Sewage;
- Discharges of wash water resulting from the cleaning of exterior surfaces and pavement, or the equipment and other facilities of any commercial business, or any other public or private facility;
- Discharges of runoff from material storage areas, including containing chemicals, fuels, or other potentially polluting or hazardous materials;
- Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water;
- Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and
- Discharges of food-related wastes (e.g., grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.).

The City, at its sole option, may direct the person or persons responsible for the discharge to perform cleanup activities when it is deemed by the City that the person or persons have the capability to perform such activities. All violations shall be corrected in a timely manner before the next rain event, but no longer than ten (10) business days after the violations are discovered.

(b) The person deemed by the City responsible for the discharge shall, within five (5) days of the date of occurrence, provide a detailed written statement to the City Manager or his or her designee describing the causes of the accidental discharge and the measures being taken to prevent future occurrences.

Such notification will not relieve persons of liability for violations of this Chapter or for any fines imposed on the City on account thereof under Section 13350 of the California Water Code, or for violation of Section 5650 of the California Fish and Wildlife Code, or any other applicable provisions of State or federal law.

(c) Persons deemed by the City responsible for the discharge are responsible for all expenses resulting from the discharge, including, but not limited to, damages, fines, and costs of clean-up, whether performed by their own efforts, City efforts, or the efforts of a third party. Reimbursement of City efforts shall be determined by the number of personnel required and amount of time necessary for the coordination of City efforts and actual clean-up. All personnel costs shall be charged at their current fully-burdened rate, including overtime, plus any and all other direct costs.

XI-16-14 Enforcement and Penalties

(a) Criminal Penalties. Violations of the provisions of this Chapter shall be subject to criminal penalties as provided in Section 1-14.09-1 of this Code.

(b) Judicial Civil Penalties. Any person who intentionally or negligently violates any provision of this Chapter or any provision of any permit or certificate issued pursuant to this Chapter shall be civilly liable to the city in a sum not to exceed twenty-five thousand dollars per day for each day in which such violation occurs.

(c) Administrative Citations. When the City Manager and/or his or her designee determines that one or more violations of this Chapter have occurred an administrative citation may be issued pursuant to the procedures set forth in Sections V-500-8.00 through V-500-8.06. The schedule of fines for administrative citations issued for violations of this Chapter shall be set forth in the schedule of fines established by resolution of the City Council.

(d) Notice of Noncompliance. If the severity of the violation warrants immediate action, a Notice of Noncompliance or Stop Work Notice shall be issued, permits may be suspended or revoked, Stormwater Pollution Prevention Plans may be found in noncompliance, and corrective actions may be implemented in accordance with Section 11 of this Chapter. For all other cases, including those sites or projects where a stormwater pollution prevention plan is not required, the City Manager or his or her designee shall issue a Notice of Noncompliance that shall enumerate the violations found. The City Manager or his or her designee shall order compliance by a date or hour certain at his or her discretion. If the violations are not abated in the time period identified in the Notice of Noncompliance, the site shall be deemed to be in noncompliance with federal, State and local laws and the City Manager or his or her designee shall have the authority to issue a Stop Work Notice and/or deem the Stormwater Pollution Prevention Plan inadequate. If a Stop Work Notice is issued, corrective actions must be performed until the site has achieved compliance. Corrective actions may include revision and resubmission of any Plan, including, but not limited to, Stormwater Pollution Prevention Plan, Erosion Control Plan or Grading Plan. The City Manager or his or her designee may also require a discharger that has violated any discharge limits contained in this Chapter to install a temporary system for the capture, testing, and release of stormwater.

(e) Suspension of Utility Service. The City may, without prior notice, suspend water service, sanitary sewer service, and/or storm drain discharge access to a person discharging to the storm drain system when such suspension is necessary to stop an actual or threatened discharge which presents, or may present, imminent and substantial danger to the environment or to the health or welfare of persons; or presents, or may present, imminent and substantial danger to the storm drain system.

(f) For construction projects where a total of three or more Stop Work Notices and Notices of Noncompliance for urban runoff violations have been issued, the City Manager or his or her designee may require the contractor to hire a Qualified SWPPP Developer (QSD) or Qualified SWPPP Practitioner (QSP) within three business days. The QSD/QSP shall establish effective BMPs, provide guidance for improvement for the duration of the project, and certify compliance. A Stop Work Notice shall be issued for failure to comply.

(g) Remedies Cumulative. The remedies provided in this section are cumulative and not exclusive, and shall be in addition to any other penalty provided for in this Chapter and shall be in addition to all other remedies available to the City under State and Federal law.

HydroScience

741 ALLSTON WAY
BERKELEY, CA 94710
OFFICE: (510) 540-7100 www.hydroscience.com



Record Drawings

Designer: _____ Date: _____
Public Works Inspector: _____ Date: _____
Utility/Facility Dept. Head: _____ Date: _____
Project Engineer: _____ Date: _____
Public Improvements Initially Accepted by: _____
the City Council on _____ Res. No. _____

Drawn By: MF/AP Date: 1/15/25
Checked By: MF Date: 1/15/25
Designed By: CML Date: 1/15/25

Revisions

Num.	Description	Engr.	Appr.	Date
1				
2				
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8				
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CITY OF MILPITAS ENGINEERING DIVISION

DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110

BLUEPRINT FOR A CLEAN BAY

RECOMMENDED FOR BIDDING BY: Lyhak Eam DATE: 1/27/2025
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING

PROJECT NO.
7118 & 7110
Rec. Dwg No.
2-####
G005
SCALE:
1" = 10'-0"
SHEET 5_ OF 33

File Name: K:\Projects\356-City of Milpitas\011-Dempsey Road\04-Design\02_CAD\01_WaterMain\Project\356-011-General.dwg
Plotted By: MARC FERNANDEZ
Plot Date: 1/20/2025 5:21 AM



KEY MAP
NTS

TIE-IN INFORMATION

NORMAL WORKING HOURS: THE CONTRACTOR SHALL PERFORM WORK FROM MONDAY THROUGH FRIDAY, 7 AM TO 7 PM, EXCEPT DURING THE WATER SHUT-OFF THAT COULD IMPACT THE BUSINESSES, IN WHICH THE CONTRACTOR MAY WORK OUTSIDE BUSINESS HOURS. THE CONTRACTOR MUST NOTIFY CITY STAFF A MINIMUM OF 72 HOURS IN ADVANCE FOR ANY PLANNED WORK OUTSIDE OF NORMAL WORKING HOURS.

WATER SHUT OFF HOURS OUTSIDE OF BUSINESS HOURS ARE BETWEEN 11PM AND 7AM.

DEWATERING DURING THE EXCAVATION FOR THE WORK SHALL BE ANTICIPATED. SEE PROJECT SPECIFICATION, SPECIAL CONDITION FOR ADDITIONAL INFORMATION.

MICROTUNNELING WORK UNDER THE CREEK SHALL BE PERFORMED BETWEEN APRIL 15 AND OCTOBER 15.

OPEN CUT PIPELINE WORK SHALL BE SCHEDULED IN COORDINATION WITH THE CITY SUCH THAT TRAFFIC AND CONSTRUCTION IMPACTS TO RESIDENTS ARE MINIMIZED, AND CONSTRUCTION PROCEEDS IN A LINEAR MANNER TO AND FROM THE MICROTUNNELING PORTION OF THE PROJECT OUT TO THE PIPELINE CONNECTION TIE-INS.

CONTRACTOR SHALL POTHOLE AT ALL CROSSING BETWEEN NEW WATER LINE AND EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION. IF THE CONTRACTOR CHOOSE NOT TO POTHOLE IN ADVANCE, IT IS THE CONTRACTOR SOLE RESPONSIBILITY FOR ANY INCURRED CHANGES OR ADDITIONAL COST DUE TO THE MODIFICATION OF THE WATER MAIN ALIGNMENT TO AVOID CONFLICT.



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Drawn By: MF/AP Date: 1/15/25
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Designed By: CML Date: 1/15/25

Revisions

Num.	Description	Engr. Aprv.	Date
1			



CITY OF MILPITAS
ENGINEERING DIVISION

DEMPSEY ROAD WATERLINE REPLACEMENT
PROJECT NO. 7118 & 7110

KEY MAP

RECOMMENDED FOR BIDDING BY: *Lyhak Eam* DATE: 1/27/2025
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING

PROJECT NO.
7118 & 7110
Rec. Dwg No.
2-####
G006
SCALE:
1" = 10'-0"
SHEET 6 OF 33

File Name: K:\Projects\356-City of Milpitas\011-DempseyRoad\04-Design\02_CAD\01_WaterMain\Project356-011-Civil.dwg Plotted By: MARC FERNANDEZ Plot Date: 1/20/2025 5:25 AM



Record Drawings	
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Revisions			
Num.	Description	Engr. Aprv.	Date
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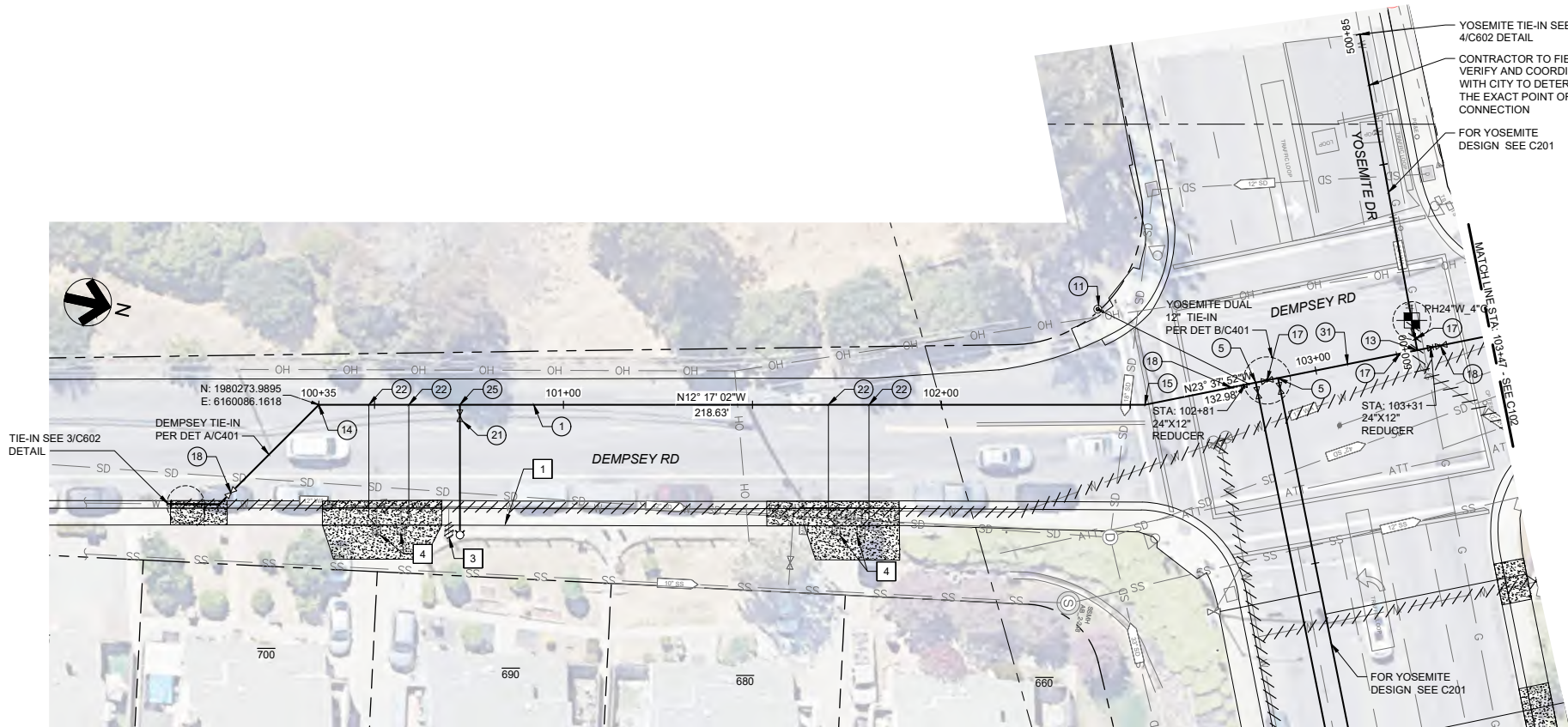


CITY OF MILPITAS ENGINEERING DIVISION		PROJECT NO. 7118 & 7110
DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110		Rec. Dwg No. 2-####
PLAN & PROFILE - STA: 100+00 TO 103+47		C101
RECOMMENDED FOR BIDDING BY: <u>Lyhak Eam</u> DATE: <u>1/27/2025</u>		SCALE: 1" = 20'-0"
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER – ENGINEERING		SHEET <u>7</u> OF <u>33</u>

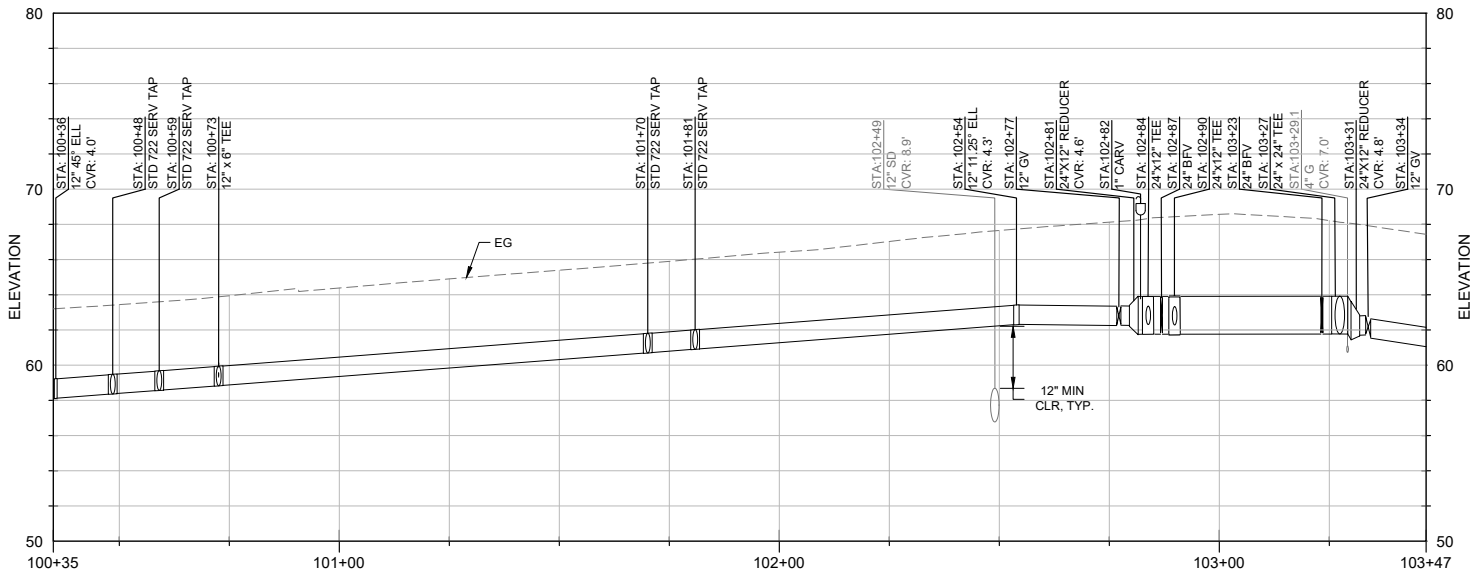


- CONSTRUCTION NOTES**
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 - 2 CONSTRUCT 10" PVC C-900 WATER MAIN
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 - 23 CONSTRUCT 8" SERVICE LATERAL AND CONNECT TO EXISTING BACKFLOW. SEE DETAIL 1/C508
 - 24 INSTALL BLOWOFF PER CITY OF MILPITAS STD NO. 738. SEE DET 3/C505
 - 25 CONSTRUCT FIRE HYDRANT SERVICE SIZE 6-INCH PER CITY OF MILPITAS STD NO. 742. SEE DET 1/C502
 - 26 CONSTRUCT 6" SERVICE LATERAL AND CONNECT TO EXISTING BACKFLOW. SEE DETAIL 1/C602
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 - 32 CONSTRUCT 4" WATER SERVICE LATERAL PER CITY OF MILPITAS STD. 728. SEE DET 1/C503
 - 33 CONSTRUCT 12" DIP WATER MAIN
 - 34 INSTALL 10" 45° ELBOW
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 - 36 CONSTRUCT 2" WATER SERVICE LATERAL. CONNECT TO EXISTING; CONTRACTOR TO VERIFY CONNECTION

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- GENERAL NOTES**
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 4. CONTRACTOR SHALL PROVIDE CITY WITH TIE-IN AND CONSTRUCTION SEQUENCING FOR REVIEW AND APPROVAL PRIOR TO STARTING CONSTRUCTION.
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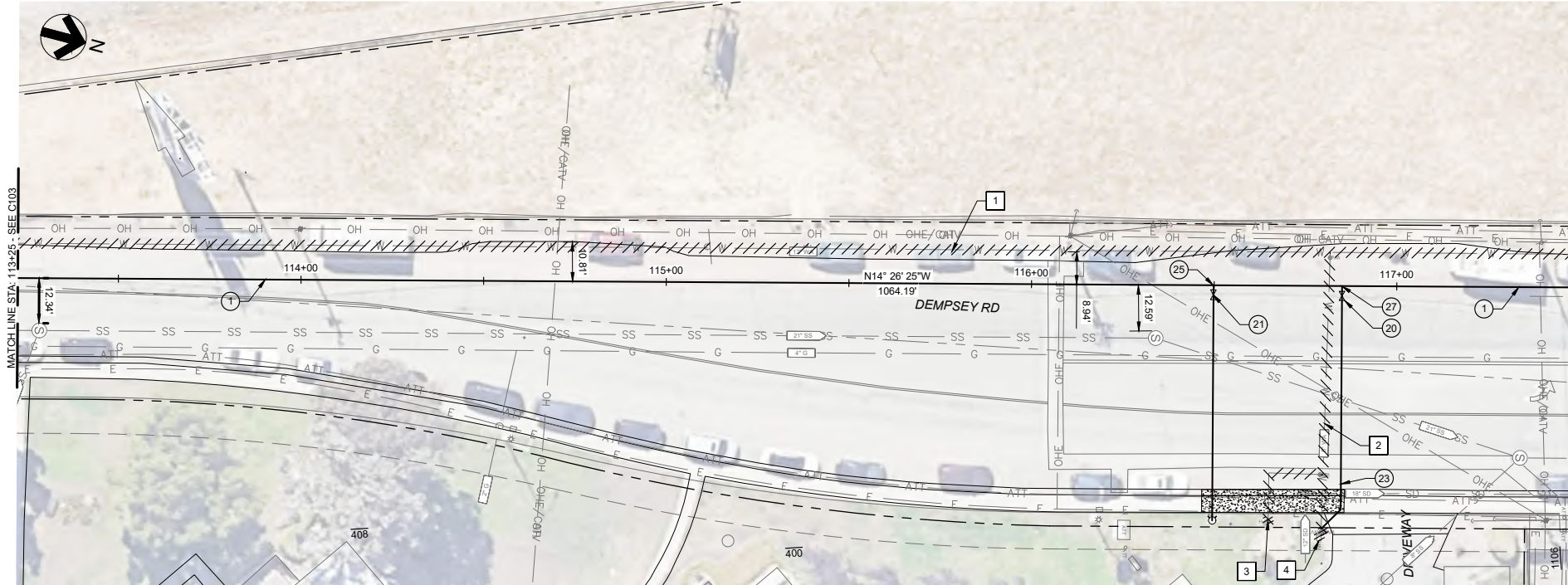


PLAN - STA 100+35 TO 103+47
SCALE: 1" = 20'-0"

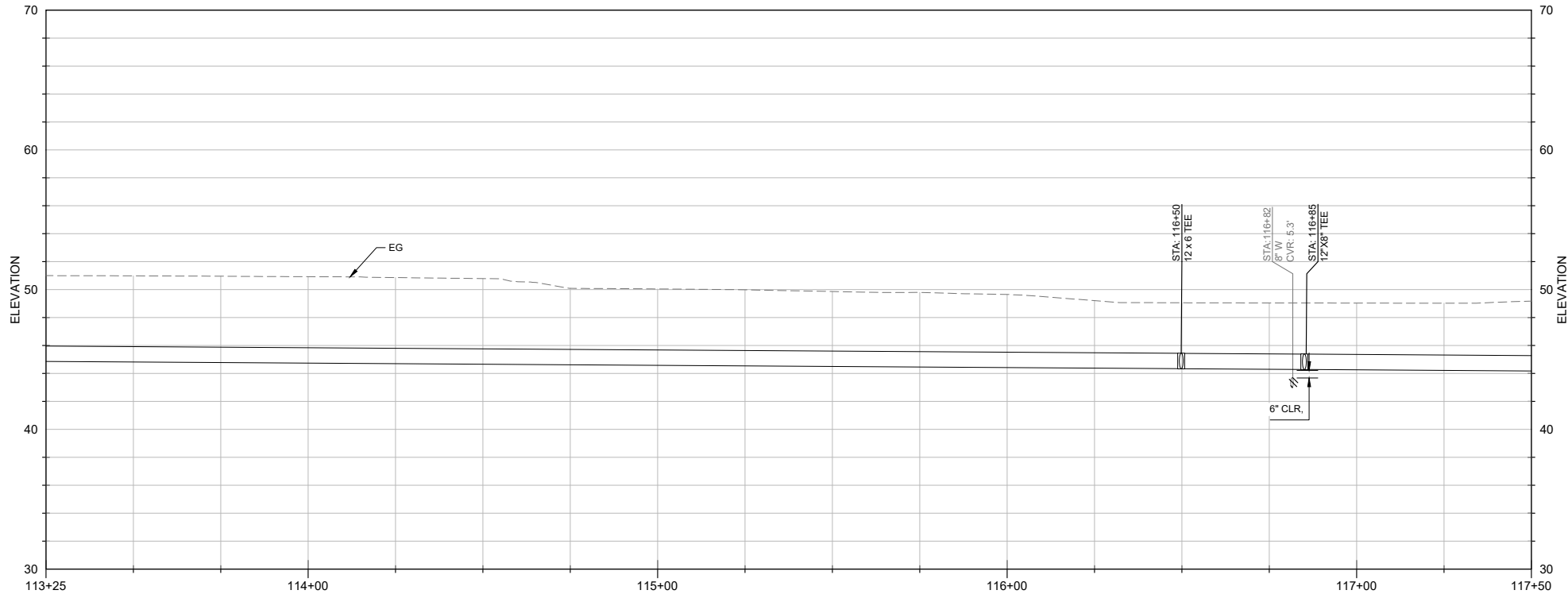


PROFILE - STA: 100+35 TO 103+47
HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 5'-0"

File Name: K:\Projects\356-City of Milpitas\011-DempseyRoad\04-Design\02_CAD\01_WaterMain\Project356-011-Civil.dwg Plotted By: MARC FERNANDEZ Plot Date: 1/20/2025 5:28 AM



PLAN - STA: 113+25 TO 117+50
SCALE: 1" = 20'-0"



PROFILE - STA: 113+25 TO 117+50
HORIZONTAL SCALE: 1" = 20'-0"
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Record Drawings

Designer: _____ Date: _____
Public Works Inspector: _____ Date: _____
Utility/Facility Dept. Head: _____ Date: _____
Project Engineer: _____ Date: _____
Public Improvements Initially Accepted by the City Council on: _____ Res. No. _____

Drawn By: AW/AP Date: 1/15/25
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Revisions

Num.	Description	Engr. Appr.	Date
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CITY OF MILPITAS
ENGINEERING DIVISION

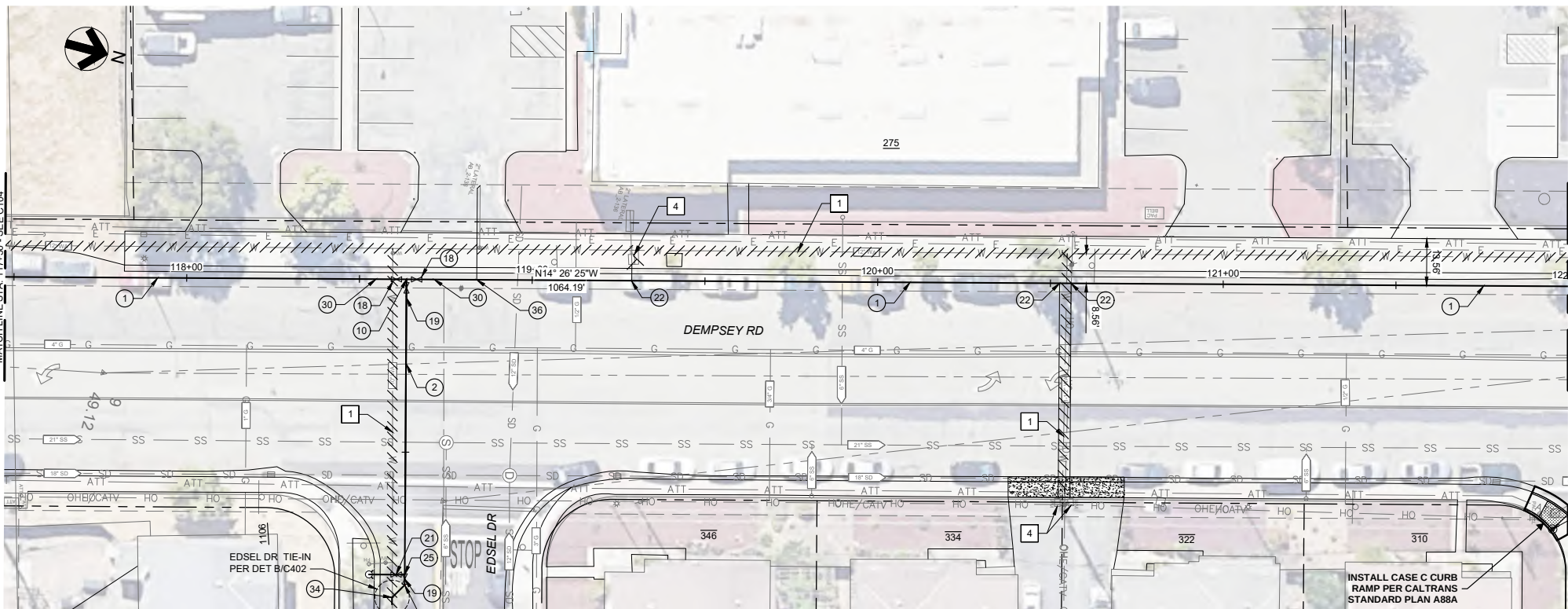
DEMPSEY ROAD WATERLINE REPLACEMENT
PROJECT NO. 7118 & 7110

PLAN & PROFILE - STA: 113+25 TO 117+50

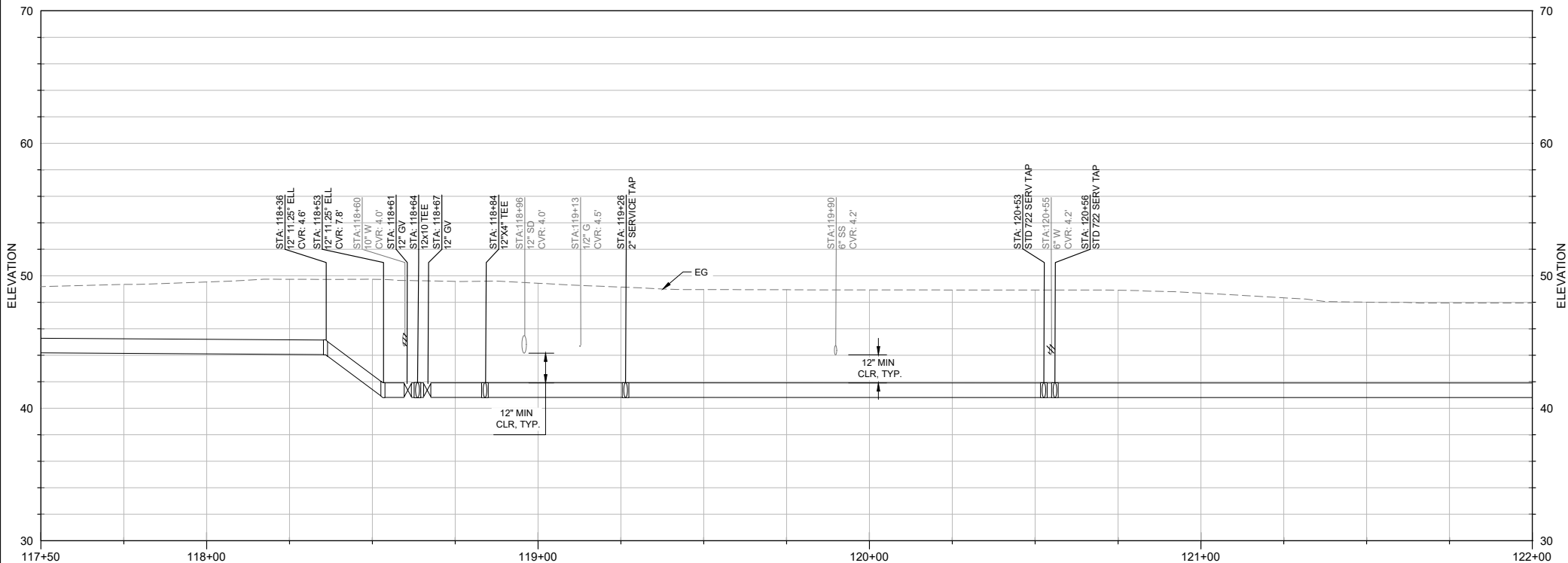
RECOMMENDED FOR BIDDING BY: Lyhak Eam DATE: 1/27/2025
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING

PROJECT NO.
7118 & 7110
Rec. Dwg No.
2-####
C104
SCALE:
1" = 20'-0"
SHEET 10 OF 33

File Name: K:\Projects\356-City of Milpitas\011-Dempsey Road\04-Design\02_CADD\01_WaterMain\Project\356-011-Civil.dwg Plotted By: MARC FERNANDEZ Plot Date: 1/20/2025 5:29 AM



PLAN - STA: 117+50 TO 122+00
SCALE: 1" = 20'-0"



PROFILE - STA: 117+50 TO 122+00
HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 5'-0"

CONSTRUCTION NOTES

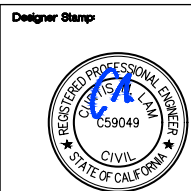
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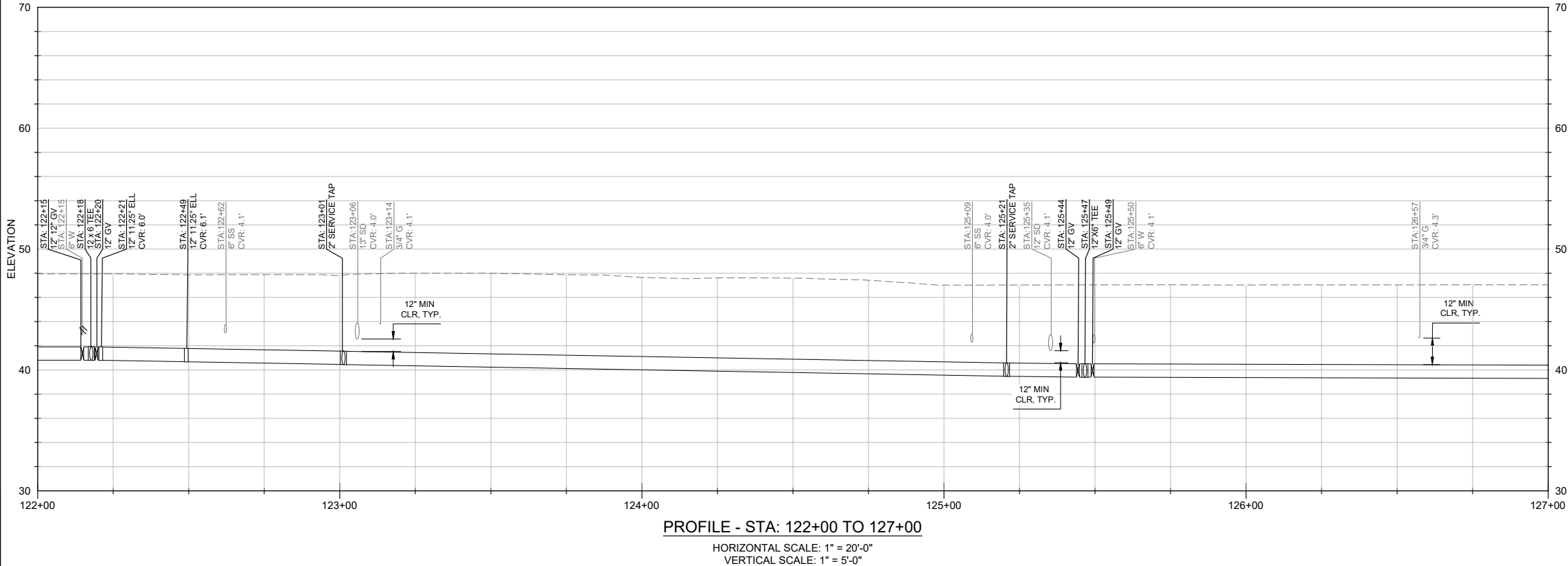
Revisions

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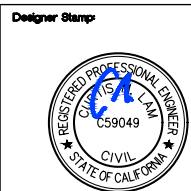


CITY OF MILPITAS ENGINEERING DIVISION		PROJECT NO. 7118 & 7110
DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110		Rec. Dwg No. 2-####
PLAN & PROFILE - STA: 117+50 TO 122+00		C105
RECOMMENDED FOR BIDDING BY: <i>Lyhak Eam</i> DATE: 1/27/2025 LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING		SCALE: 1" = 20'-0"
		SHEET 11 OF 33

File Name: K:\Projects\356-City of Milpitas\011-Dempsey Road\04-Design\02_CAD\01_Water Main\Project\356-011-Civil.dwg Plotted By: MARC FERNANDEZ Plot Date: 1/20/2025 5:30 AM



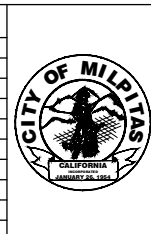
HydroScience
741 ALLSTON WAY
BERKELEY, CA 94710
OFFICE: (510)540-7100 www.hydroscience.com



Record Drawings	
Designer: _____	Date: _____
Public Works Inspector: _____	Date: _____
Utility/Facility Dept. Head: _____	Date: _____
Project Engineer: _____	Date: _____
Public Improvements Initially Accepted by the City Council on: _____	Res. No. _____

Drawn By: AW/AP Date: 1/15/25
Checked By: ME Date: 1/15/25
Designed By: CML Date: 1/15/25

Revisions			
Num.	Description	Engr. Aprv.	Date
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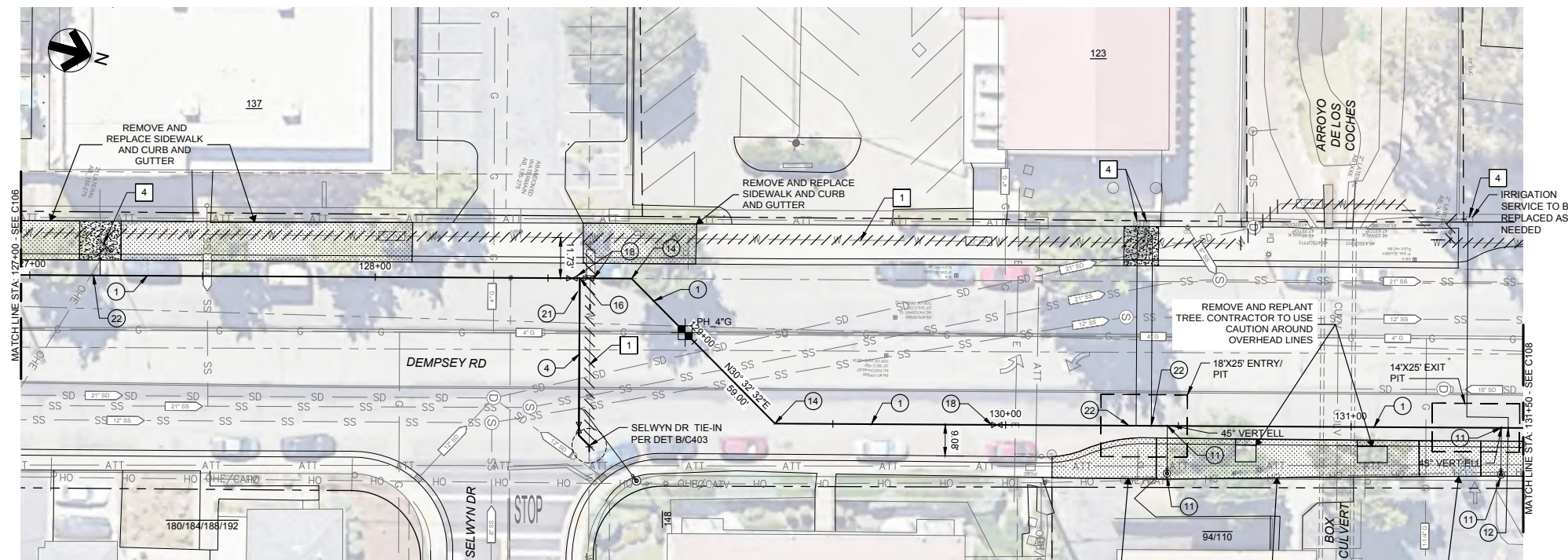


CITY OF MILPITAS ENGINEERING DIVISION		PROJECT NO. 7118 & 7110
DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110		Rec. Dwg No. 2-####
PLAN & PROFILE - STA: 122+00 TO 127+00		C106
RECOMMENDED FOR BIDDING BY: <u>Lyhak Eam</u> DATE: <u>1/27/2025</u>		SCALE: 1" = 10'-0"
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING		SHEET 12 OF 33

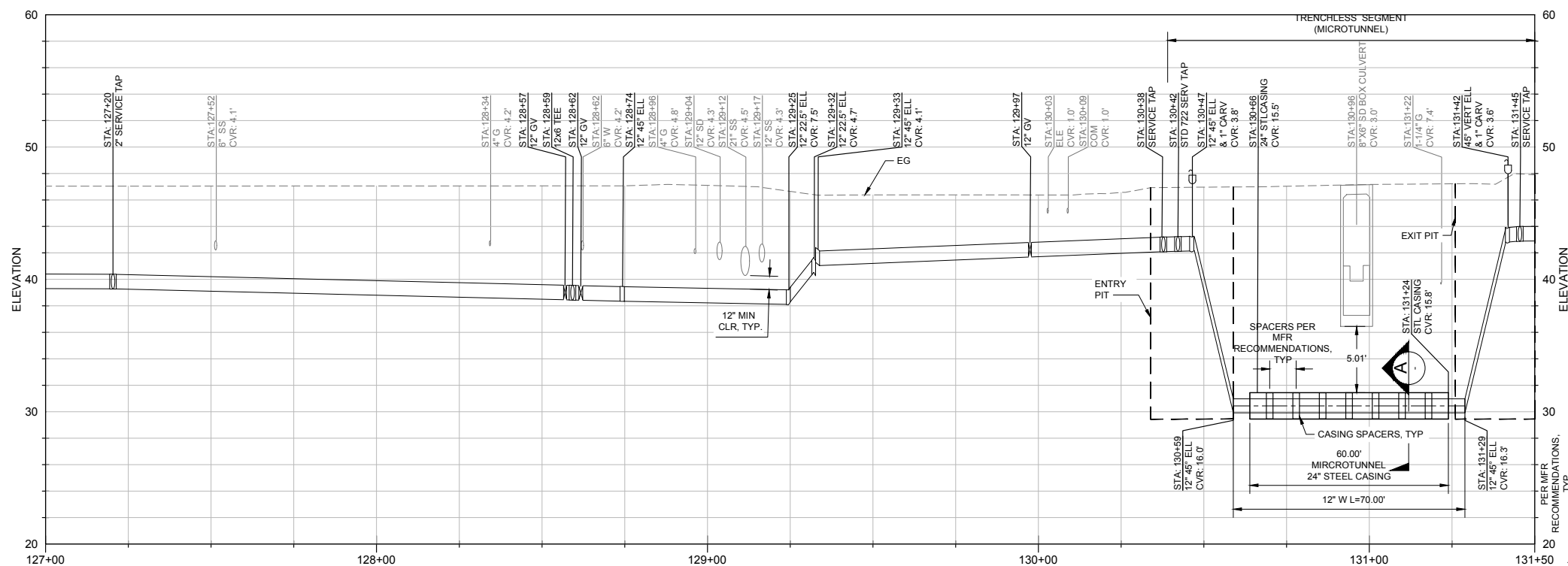
- CONSTRUCTION NOTES**
- 1 CONSTRUCT 12" PVC C-900 WATER MAIN
 - 2 CONSTRUCT 10" PVC C-900 WATER MAIN
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 - 4 CONSTRUCT 6" PVC C-900 WATER MAIN
 - 5 INSTALL 24"x24"x12" TEE PER CITY OF MILPITAS STD NO. 712. SEE DET 3/C502
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 - 10 INSTALL 12"x12"x10" TEE PER CITY STD OF MILPITAS STD NO. 712. SEE DET 3/C502
 - 11 INSTALL 1" ARV PER CITY STD OF MILPITAS STD NO. 738. SEE DET 1/C505
 - 12 INSTALL IRRIGATION WATER METER AND CONNECT TO NEW MAIN
 - 13 INSTALL 24"x24"x24" TEE PER THE CITY OF MILPITAS STD NO. 712. SEE DET 3/C502
 - 14 INSTALL 12" 45° ELBOW
 - 15 INSTALL 12" 11.25° ELBOW
 - 16 INSTALL 12"x12"x6" TEE PER CITY OF MILPITAS STD NO. 712. SEE DET 3/C502
 - 17 INSTALL 24" BUTTERFLY VALVE
 - 18 INSTALL 12" GATE VALVE PER CITY OF MILPITAS STD NO. 702. SEE DET 1/C501
 - 19 INSTALL 10" GATE VALVE PER CITY OF MILPITAS STD NO. 702. SEE DET 1/C501
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 - 21 INSTALL 6" GATE VALVE PER CITY OF MILPITAS STD NO. 702. SEE DET 1/C501
 - 22 INSTALL 2" WATER SERVICE LATERAL AND RECONNECT TO EXISTING METER PER CITY OF MILPITAS STD. NO 722. SEE DET 3/C506
 - 23 CONSTRUCT 8" SERVICE LATERAL AND CONNECT TO EXISTING BACKFLOW. SEE DETAIL 1/C508
 - 24 INSTALL BLOWOFF PER CITY OF MILPITAS STD NO. 738. SEE DET 3/C505
 - 25 CONSTRUCT FIRE HYDRANT SERVICE SIZE 6-INCH PER CITY OF MILPITAS STD NO. 742. SEE DET 1/C502
 - 26 CONSTRUCT 6" SERVICE LATERAL AND CONNECT TO EXISTING BACKFLOW. SEE DETAIL 1/C602
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 - 29 NOT USED
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 - 31 INSTALL 24" DIP WATER MAIN
 - 32 CONSTRUCT 4" WATER SERVICE LATERAL PER CITY OF MILPITAS STD. 728. SEE DET 1/C503
 - 33 CONSTRUCT 12" DIP WATER MAIN
 - 34 INSTALL 10" 45° ELBOW
 - 35 INSTALL 8" 45° ELBOW
 - 36 CONSTRUCT 2" WATER SERVICE LATERAL. CONNECT TO EXISTING; CONTRACTOR TO VERIFY CONNECTION

- DEMOLITION NOTES**
- 1 ABANDON EXISTING WATER MAIN
 - 2 NOT USED
 - 3 REMOVE AND DISPOSE OF EXISTING FIRE HYDRANT AND RESTORE SIDEWALK, CURB & GUTTER TO CITY STANDARDS. REFER TO SHEET C507 FOR SIDEWALK, CURB & GUTTER DETAILS.
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- GENERAL NOTES**
1. CONTRACTOR TO PROVIDE DRIVEWAY ACCESS AT ALL TIMES.
 2. REFER TO SHEET C504 FOR TRENCH RESTORATION DETAILS.
 3. REFER TO SHEET C601 FOR MINIMUM RESTRAINED JOINT LENGTHS.
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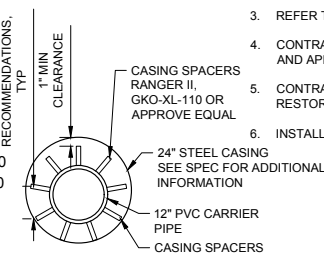




PLAN - STA: 127+00 TO 131+50
SCALE: 1" = 20'-0"



PROFILE - STA: 127+00 TO 131+50



STEEL CASING SECTION (A)

CONSTRUCTION NOTES

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- 24 INSTALL BLOWOFF PER CITY OF MILPITAS STD NO. 738. SEE DET 3/C505
- 25 CONSTRUCT FIRE HYDRANT SERVICE SIZE 6-INCH PER CITY OF MILPITAS STD NO. 742. SEE DET 1/C502
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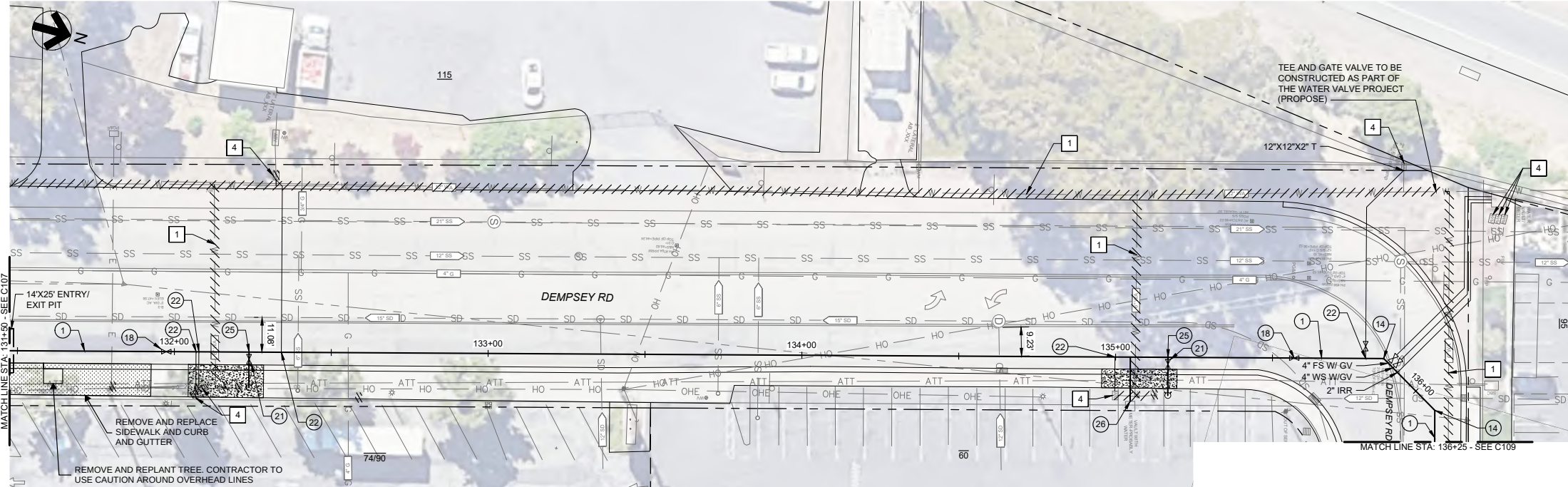
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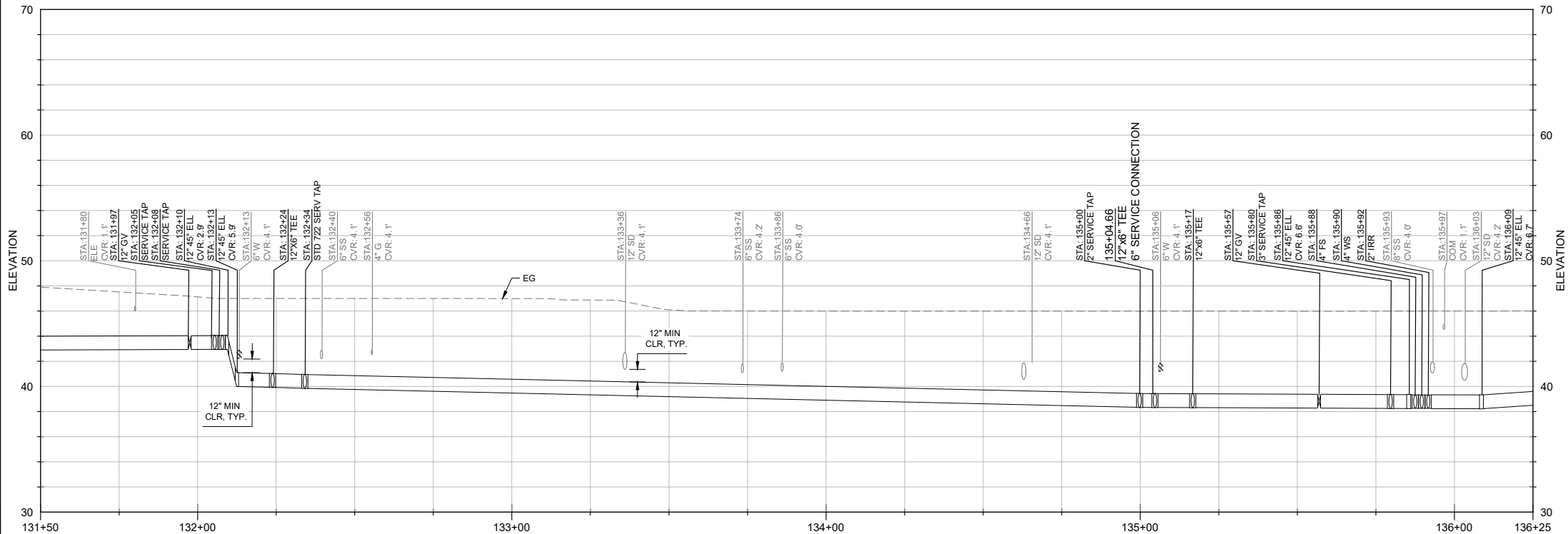
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Designer Stamp 	Record Drawings		Revisions					CITY OF MILPITAS ENGINEERING DIVISION		PROJECT NO. 7118 & 7110
	Designer: _____ Date: _____	Drawn By: <u>AW/AP</u> Date: <u>1/15/25</u>	Numb. △	Description	Engr. Aprv.	Date		DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110		Rec. Dwg No. 2-####
	Public Works Inspector: _____ Date: _____	Checked By: <u>MF</u> Date: <u>1/15/25</u>								C107
	Utility/Facility Dept. Head: _____ Date: _____									SCALE: 1" = 20'-0"
	Project Engineer: _____ Date: _____									SHEET 13 OF 33
	Public Improvements Initially Accepted by the City Council on: _____ Res. No. _____	Designed By: <u>CML</u> Date: <u>1/15/25</u>								
							RECOMMENDED FOR BIDDING BY: <u>Lyhak Eam</u> DATE: <u>1/27/2025</u>	LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER – ENGINEERING		



PLAN - STA: 131+50 TO 136+25
SCALE: 1" = 20'-0"



PROFILE - STA: 131+50 TO 136+25
HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 5'-0"

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Record Drawings

Designer: _____ Date: _____
Public Works Inspector: _____ Date: _____
Utility/Facility Dept. Head: _____ Date: _____
Project Engineer: _____ Date: _____
Public Improvements Initially Accepted by the City Council on: _____ Res. No. _____

Drawn By: AW/AP Date: 1/15/25
Checked By: ME Date: 1/15/25
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Revisions

Num.	Description	Engr. Aprv.	Date
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CITY OF MILPITAS
ENGINEERING DIVISION

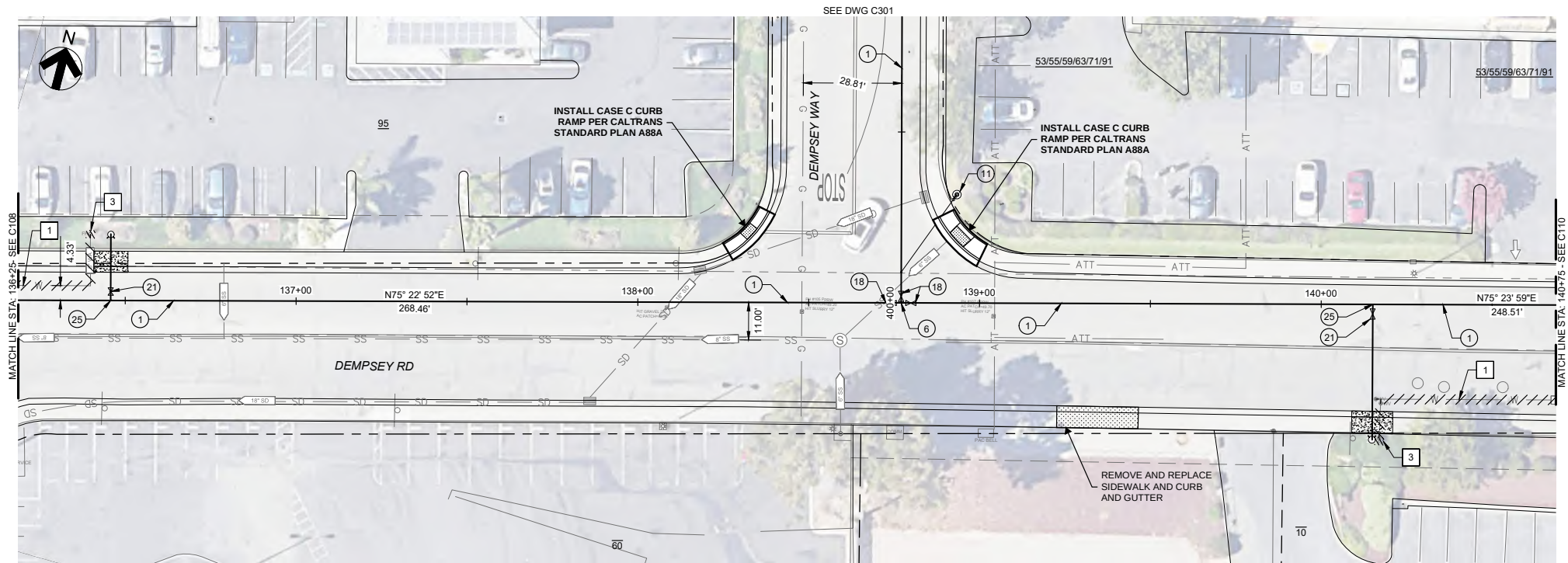
DEMPSEY ROAD WATERLINE REPLACEMENT
PROJECT NO. 7118 & 7110

PLAN & PROFILE - STA: 131+50 TO 136+25

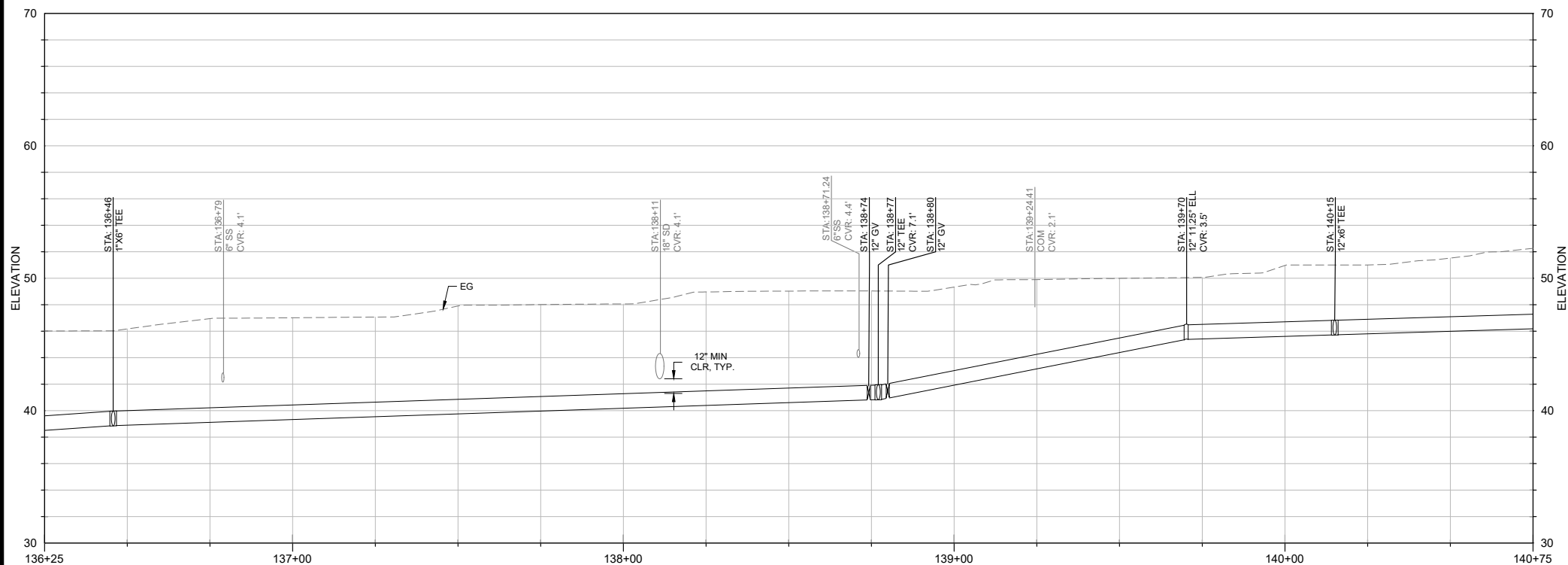
RECOMMENDED FOR BIDDING BY: Lyhak Eam DATE: 1/27/2025
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING

PROJECT NO.
7118 & 7110
Rec. Dwg No.
2-####
C108
SCALE:
1" = 20'-0"
SHEET 14 OF 33

File Name: K:\Projects\336-City of Milpitas\011-Dempsey Road\04-Design\02_CAD\01_Water Main\Project\336-011-Civil.dwg Plotted By: MARC FERNANDEZ Plot Date: 1/20/2025 5:32 AM



PLAN - STA: 136+25 TO 140+75
SCALE: 1" = 20'-0"



PROFILE - STA: 136+25 TO 140+75
HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 5'-0"

CONSTRUCTION NOTES

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Public Works Inspector: _____ Date: _____
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Revisions

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CITY OF MILPITAS
ENGINEERING DIVISION

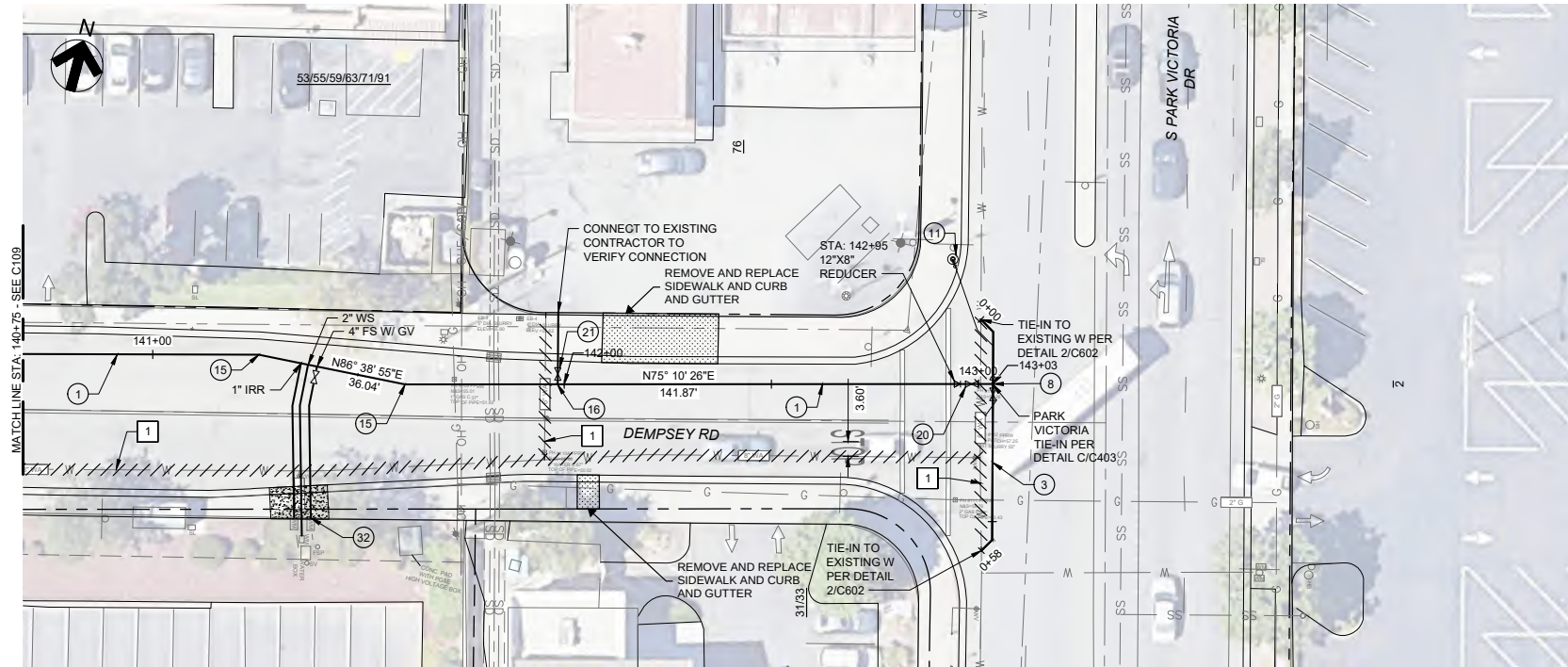
DEMPSEY ROAD WATERLINE REPLACEMENT
PROJECT NO. 7118 & 7110

PLAN & PROFILE - STA: 136+25 TO 140+75

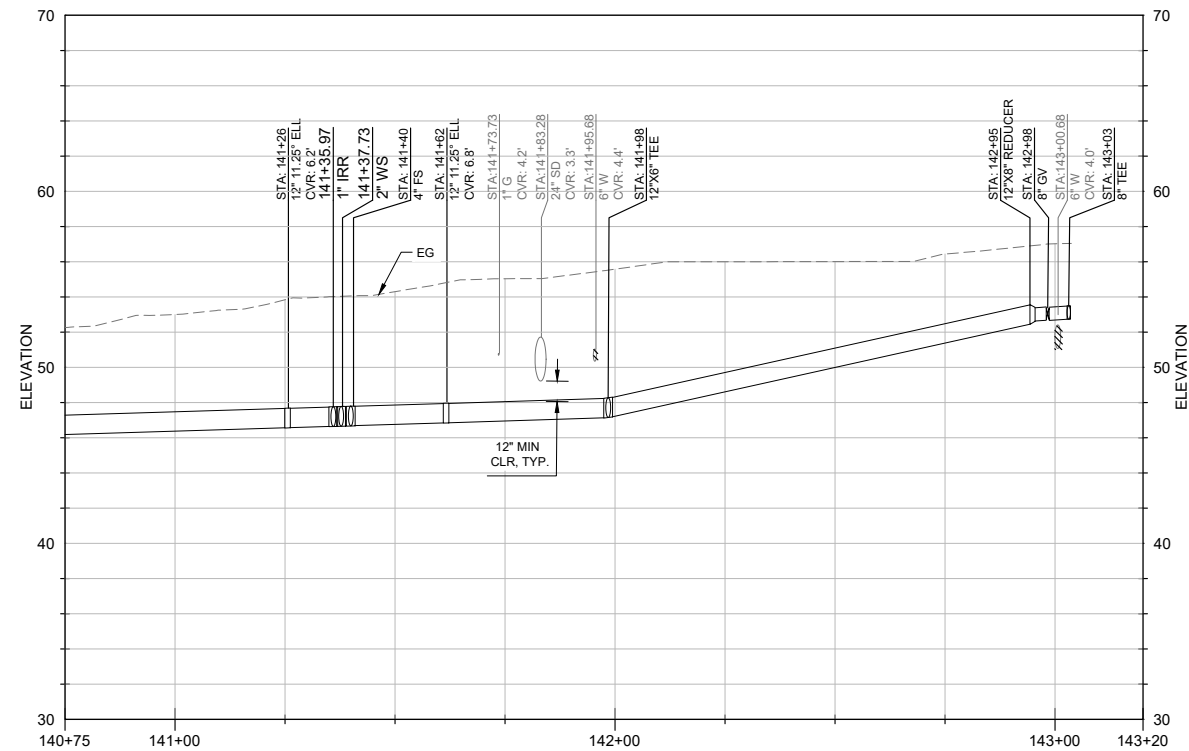
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PROJECT NO.
7118 & 7110
Rec. Dwg No.
2-####
C109
SCALE:
1" = 20'-0"
SHEET 15 OF 33

File Name: K:\Projects\356-City of Milpitas\011-DempseyRoad\04-Design\02_CADD\01_WaterMain\Project\356-011-Civil.dwg Plotted By: MARC FERNANDEZ Pld Date: 1/20/2025 5:33 AM



PLAN - STA: 140+75 TO 143+07
SCALE: 1" = 20'-0"



PROFILE - STA: 140+75 TO 143+20
HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 5'-0"

CONSTRUCTION NOTES

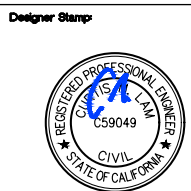
- 1 CONSTRUCT 12" PVC C-900 WATER MAIN
- 2 CONSTRUCT 10" PVC C-900 WATER MAIN
- 3 CONSTRUCT 8" PVC C-900 WATER MAIN
- 4 CONSTRUCT 6" PVC C-900 WATER MAIN
- 5 INSTALL 24"x24"x12" TEE PER CITY OF MILPITAS STD NO. 712. SEE DET 3/C502
- 6 INSTALL 12"x12"x12" TEE PER CITY OF MILPITAS STD NO. 712. SEE DET 3/C502
- 7 INSTALL 10"x10"x10" TEE PER CITY OF MILPITAS STD NO. 712. SEE DET 3/C502
- 8 INSTALL 8"x8"x8" TEE PER CITY STD OF MILPITAS STD NO. 712. SEE DET 3/C502
- 9 INSTALL 6"x6"x6" TEE PER CITY STD OF MILPITAS STD NO. 712. SEE DET 3/C502
- 10 INSTALL 12"x12"x10" TEE PER CITY STD OF MILPITAS STD NO. 712. SEE DET 3/C502
- 11 INSTALL 1" ARV PER CITY STD OF MILPITAS STD NO. 738. SEE DET 1/C505
- 12 INSTALL IRRIGATION WATER METER AND CONNECT TO NEW MAIN
- 13 INSTALL 24"x24"x24" TEE PER THE CITY OF MILPITAS STD NO. 712. SEE DET 3/C502
- 14 INSTALL 12" 45° ELBOW
- 15 INSTALL 12" 11.25° ELBOW
- 16 INSTALL 12"x12"x6" TEE PER CITY OF MILPITAS STD NO. 712. SEE DET 3/C502
- 17 INSTALL 24" BUTTERFLY VALVE
- 18 INSTALL 12" GATE VALVE PER CITY OF MILPITAS STD NO. 702. SEE DET 1/C501
- 19 INSTALL 10" GATE VALVE PER CITY OF MILPITAS STD NO. 702. SEE DET 1/C501
- 20 INSTALL 8" GATE VALVE PER CITY OF MILPITAS STD NO. 702. SEE DET 1/C501
- 21 INSTALL 6" GATE VALVE PER CITY OF MILPITAS STD NO. 702. SEE DET 1/C501
- 22 INSTALL 2" WATER SERVICE LATERAL AND RECONNECT TO EXISTING METER PER CITY OF MILPITAS STD. NO 722. SEE DET 3/C506
- 23 CONSTRUCT 8" SERVICE LATERAL AND CONNECT TO EXISTING BACKFLOW. SEE DETAIL 1/C508
- 24 INSTALL BLOWOFF PER CITY OF MILPITAS STD NO. 738. SEE DET 3/C505
- 25 CONSTRUCT FIRE HYDRANT SERVICE SIZE 6-INCH PER CITY OF MILPITAS STD NO. 742. SEE DET 1/C502
- 26 CONSTRUCT 6" SERVICE LATERAL AND CONNECT TO EXISTING BACKFLOW. SEE DETAIL 1/C602
- 27 INSTALL 12"x12"x8" TEE PER CITY OF MILPITAS STD NO. 712. SEE DET 3/C502
- 28 INSTALL 6" 45° ELBOW
- 29 NOT USED
- 30 INSTALL 12" 22.5° ELBOW
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- 33 CONSTRUCT 12" DIP WATER MAIN
- 34 INSTALL 10" 45° ELBOW
- 35 INSTALL 8" 45° ELBOW
- 36 CONSTRUCT 2" WATER SERVICE LATERAL. CONNECT TO EXISTING; CONTRACTOR TO VERIFY CONNECTION

DEMOLITION NOTES

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- 2 NOT USED
- 3 REMOVE AND DISPOSE OF EXISTING FIRE HYDRANT AND RESTORE SIDEWALK, CURB & GUTTER TO CITY STANDARDS. REFER TO SHEET C507 FOR SIDEWALK, CURB & GUTTER DETAILS.
- 4 RECONNECT TO EXISTING WATER AND ABANDON EXISTING WATER SERVICE LATERAL AND RESTORE SIDEWALK, CURB & GUTTER TO CITY STANDARDS. REFER TO SHEET C507 FOR SIDEWALK, CURB & GUTTER DETAILS.

GENERAL NOTES

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2. REFER TO SHEET C504 FOR TRENCH RESTORATION DETAILS.
3. REFER TO SHEET C601 FOR MINIMUM RESTRAINED JOINT LENGTHS.
4. CONTRACTOR SHALL PROVIDE CITY WITH TIE-IN AND CONSTRUCTION SEQUENCING FOR REVIEW AND APPROVAL PRIOR TO STARTING CONSTRUCTION.
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6. INSTALL AIR RELEASE VALVE AT BACK OF WALK AND VERIFY WITHIN CITY RIGHT-OF-WAY.



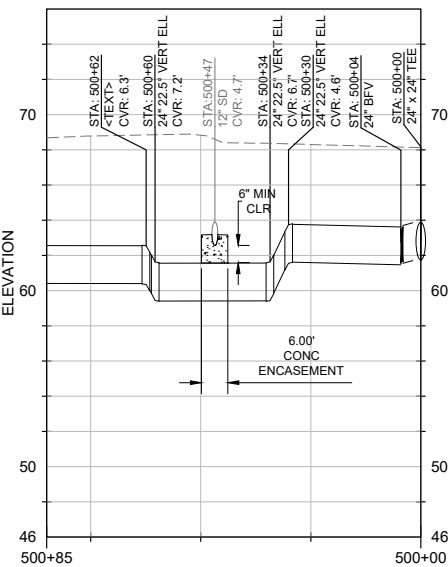
Record Drawings	
Designer: _____	Date: _____
Public Works Inspector: _____	Date: _____
Utility/Facility Dept. Head: _____	Date: _____
Project Engineer: _____	Date: _____
Public Improvements Initially Accepted by the City Council on: _____	Res. No. _____

Drawn By: <u>AW/AP</u> Date: <u>1/15/25</u>
Checked By: <u>MF</u> Date: <u>1/15/25</u>
Designed By: <u>CML</u> Date: <u>1/15/25</u>

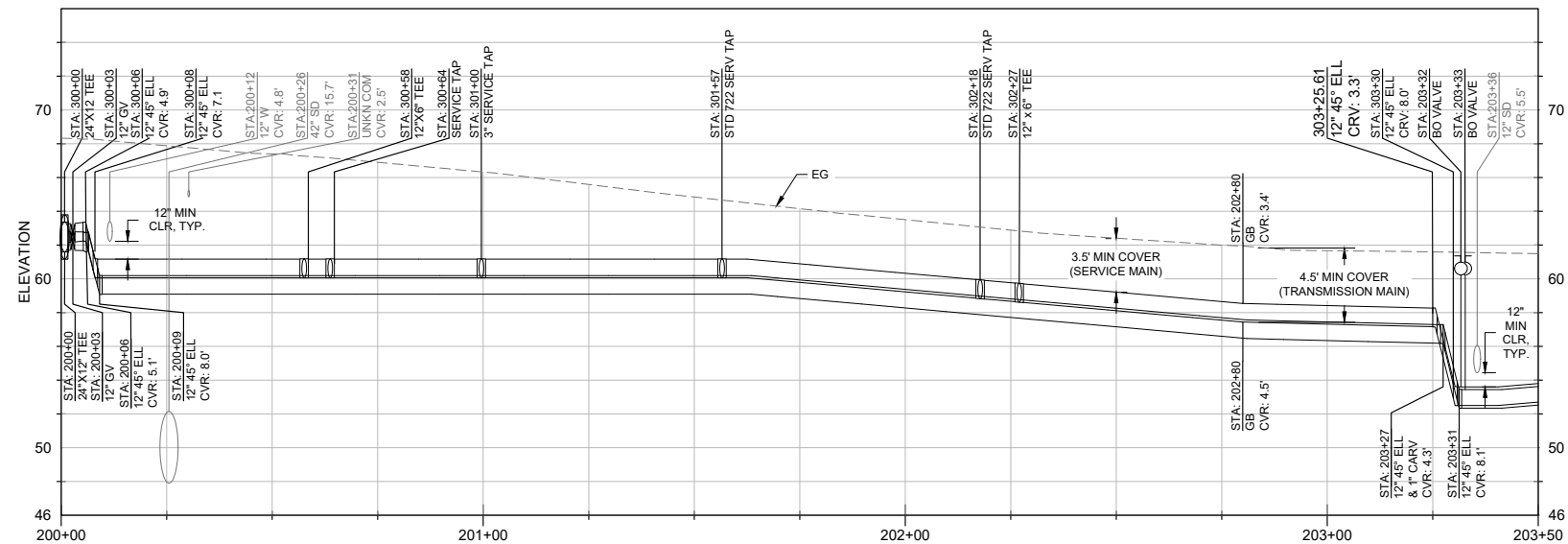
Revisions			
Num.	Description	Engr. Aprv.	Date
1			



CITY OF MILPITAS ENGINEERING DIVISION		PROJECT NO. 7118 & 7110
DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110		Rec. Dwg No. 2-####
PLAN & PROFILE - STA: 140+75 TO 143+07		C110
RECOMMENDED FOR BIDDING BY: <u>Lyhak Eam</u> DATE: <u>1/27/2025</u>		SCALE: 1" = 20'-0"
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING		SHEET 16 OF 33



HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 5'-0"



HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 5'-0"

- DEMOLITION NOTES**

 - 1 ABANDON EXISTING WATER MAIN
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 - 4 RECONNECT TO EXISTING WATER AND ABANDON EXISTING WATER SERVICE LATERAL AND RESTORE SIDEWALK, CURB & GUTTER TO CITY STANDARDS. REFER TO SHEET C507 FOR SIDEWALK, CURB & GUTTER DETAILS.

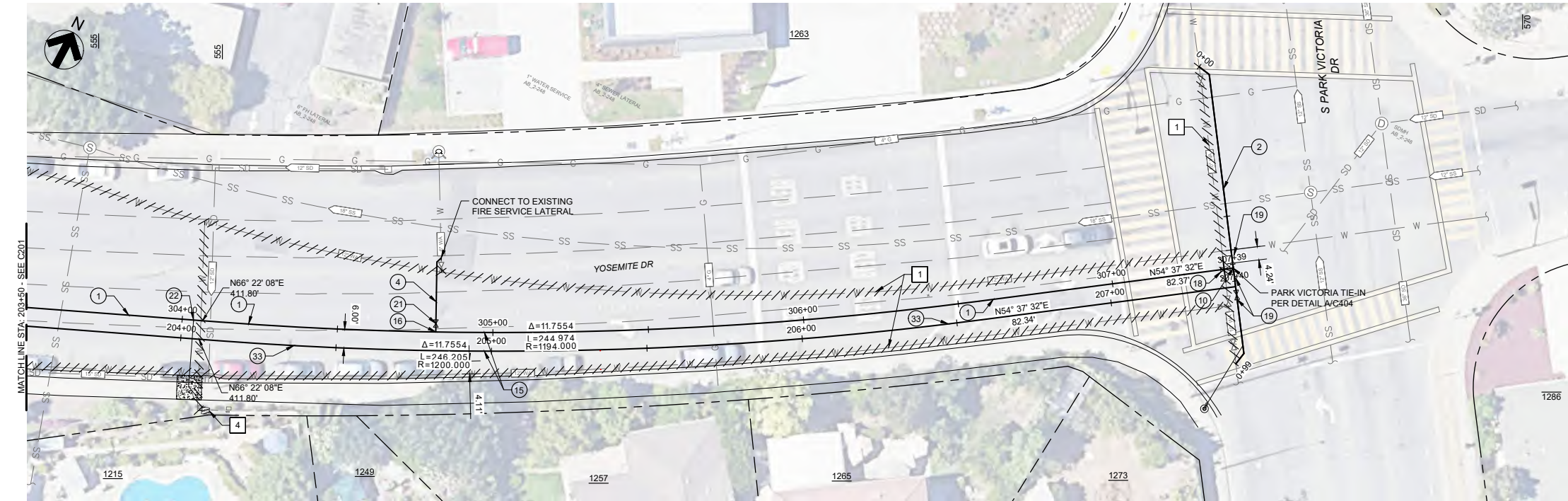
GENERAL NOTES

1. CONTRACTOR TO PROVIDE DRIVEWAY ACCESS AT ALL TIMES.
2. REFER TO SHEET C504 FOR TRENCH RESTORATION DETAILS.
3. REFER TO SHEET C601 FOR MINIMUM RESTRAINED JOINT LENGTHS.
4. CONTRACTOR SHALL PROVIDE CITY WITH TIE-IN AND CONSTRUCTION SEQUENCING FOR REVIEW AND APPROVAL PRIOR TO STARTING CONSTRUCTION.
5. CONTRACTOR SHALL SAW CUT A MINIMUM OF 12" FROM THE LIP OF GUTTER FOR ALL CONCRETE RESTORATION WORK INCLUDING SIDEWALK, DRIVEWAY, CURB AND GUTTER
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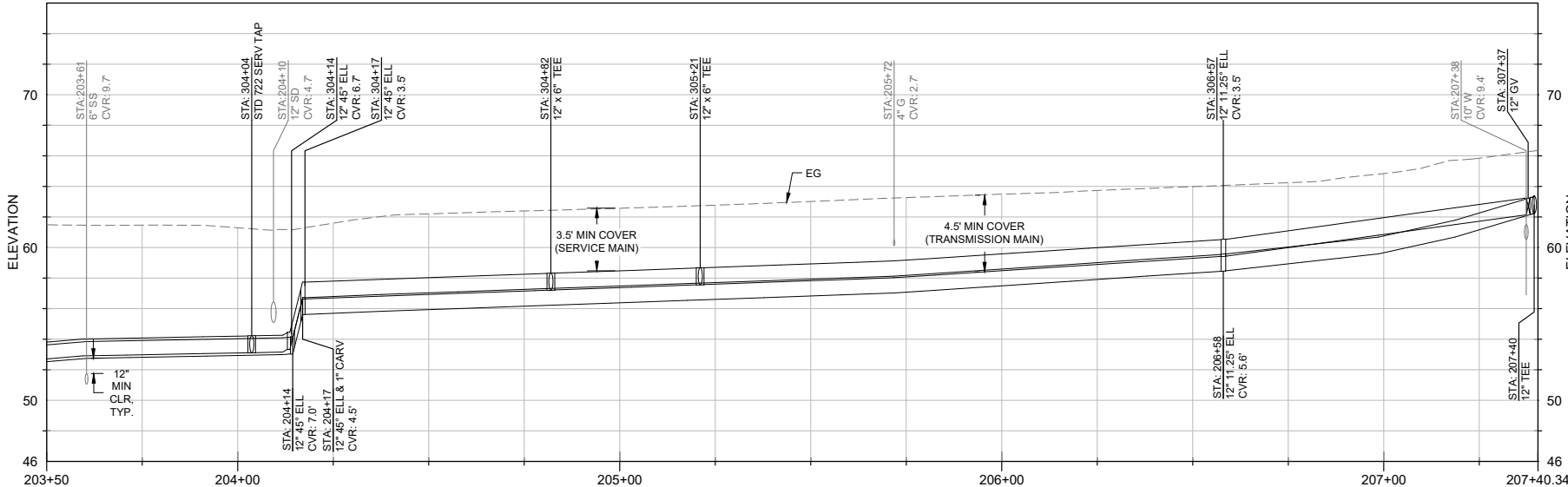


Designer Stamp 	Record Drawings		Revisions				CITY OF MILPITAS 	CITY OF MILPITAS ENGINEERING DIVISION		PROJECT NO. 7118 & 7110
	Designer: _____ Date: _____	Drawn By: <u>AW/AP</u> Date: <u>1/15/25</u>	Nurn.	Description	Engr. Aprv.	Date		DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110		Rec. Dwg No. 2-####
	Public Works Inspector: _____ Date: _____	Checked By: <u>MF</u> Date: <u>1/15/25</u>								C201
	Utility/Facility Dept. Head: _____ Date: _____	Designed By: <u>CML</u> Date: <u>1/15/25</u>						PLAN & PROFILE - STA 200+00 TO 203+50		SCALE: 1" = 20'-0"
	Project Engineer: _____ Date: _____							RECOMMENDED FOR BIDDING BY: <u>Lyhak Eam</u> DATE: <u>1/27/2025</u> LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER – ENGINEERING		SHEET <u>17</u> OF <u>33</u>
Public Improvements Initially Accepted by the City Council on: _____ Res. No. _____										

File Name: K:\Projects\356-City of Milpitas\011-Dempsey Road\04-Design\02_CAD\01_WaterMain\Project\356-011-Civil.dwg Plotted By: MARC FERNANDEZ Plot Date: 1/20/2025 5:35 AM



PLAN - STA: 203+50 TO 207+40
SCALE: 1" = 20'-0"



PROFILE - STA: 203+50 TO 207+40
HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 5'-0"

CONSTRUCTION NOTES

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Record Drawings	
Designer: _____	Date: _____
Public Works Inspector: _____	Date: _____
Utility/Facility Dept. Head: _____	Date: _____
Project Engineer: _____	Date: _____
Public Improvements Initially Accepted by the City Council on: _____	Res. No. _____

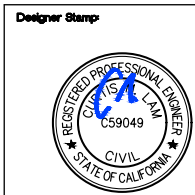
Drawn By: AW/AP Date: 1/15/25
Checked By: ME Date: 1/15/25
Designed By: CML Date: 1/15/25

Revisions			
Num.	Description	Engr. Aprv.	Date
1			



CITY OF MILPITAS ENGINEERING DIVISION		PROJECT NO. 7118 & 7110
DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110		Rec. Dwg No. 2-####
PLAN & PROFILE - STA: STA: 203+50 TO 207+40		C202
RECOMMENDED FOR BIDDING BY: <u>Lyhak Eam</u> DATE: <u>1/27/2025</u>		SCALE: 1" = 20'-0"
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER – ENGINEERING		SHEET 18 OF 33

File Name: K:\Projects\356-City of Milpitas\011-DempseyRoad\04-Design\02_CAD\01_WaterMain\Project\356-011-Civil.dwg Plotted By: MARC FERNANDEZ Plot Date: 1/20/2025 5:35 AM



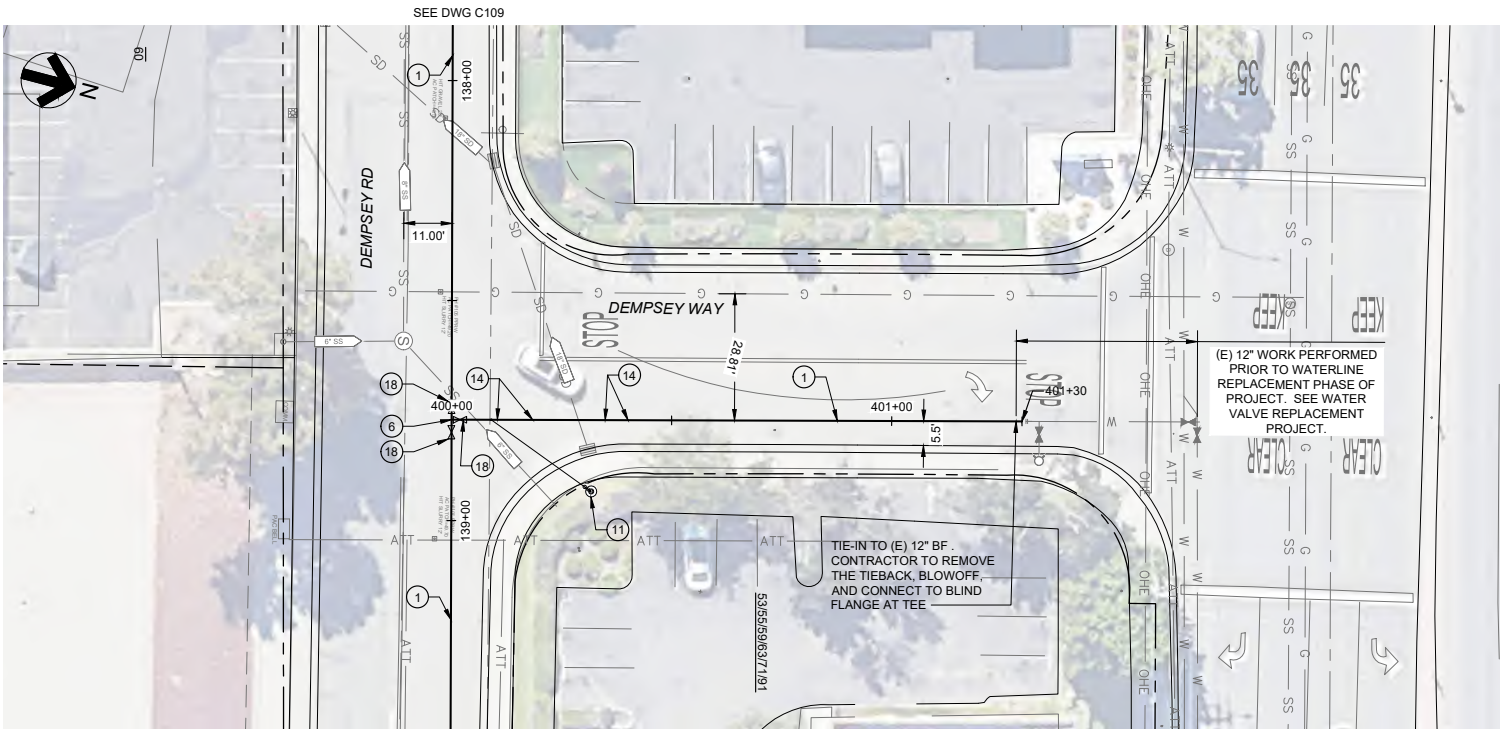
Record Drawings	
Designer: _____	Date: _____
Public Works Inspector: _____	Date: _____
Utility/Facility Dept. Head: _____	Date: _____
Project Engineer: _____	Date: _____
Public Improvements Initially Accepted by the City Council on _____ Res. No. _____	

Drawn By: AW/AP Date: 1/15/25
Checked By: MF Date: 1/15/25
Designed By: CML Date: 1/15/25

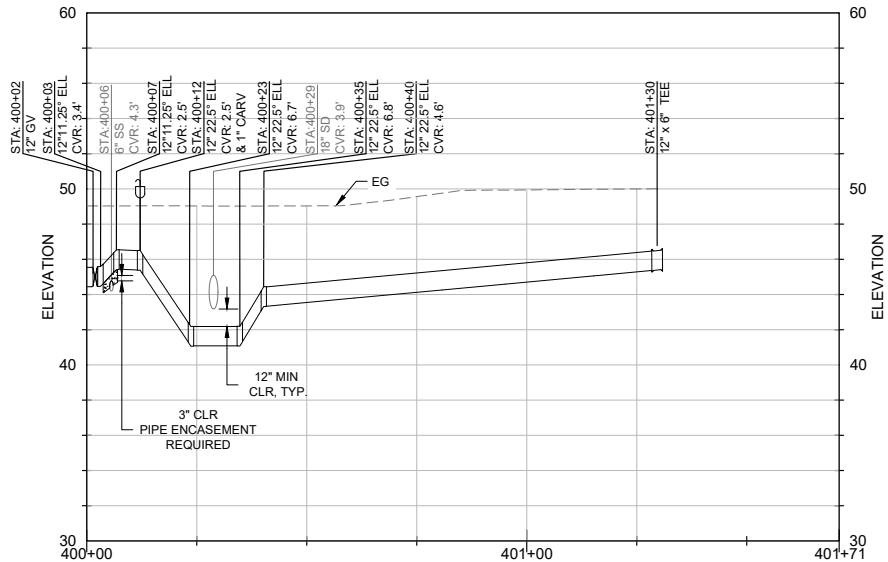
Revisions			
Num.	Description	Engr. Aprv.	Date
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CITY OF MILPITAS ENGINEERING DIVISION		PROJECT NO. 7118 & 7110
DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110		Rec. Dwg No. 2-####
PLAN & PROFILE - STA: 400+00 TO 401+37		C301
RECOMMENDED FOR BIDDING BY: <u>Lyhak Eam</u> DATE: <u>1/27/2025</u>		SCALE: 1" = 20'-0"
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER – ENGINEERING		SHEET 19 OF 33



PLAN - STA: 400+00 TO 401+37
SCALE: 1" = 20'-0"



PROFILE - STA: 400+00 TO 401+71
HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 5'-0"

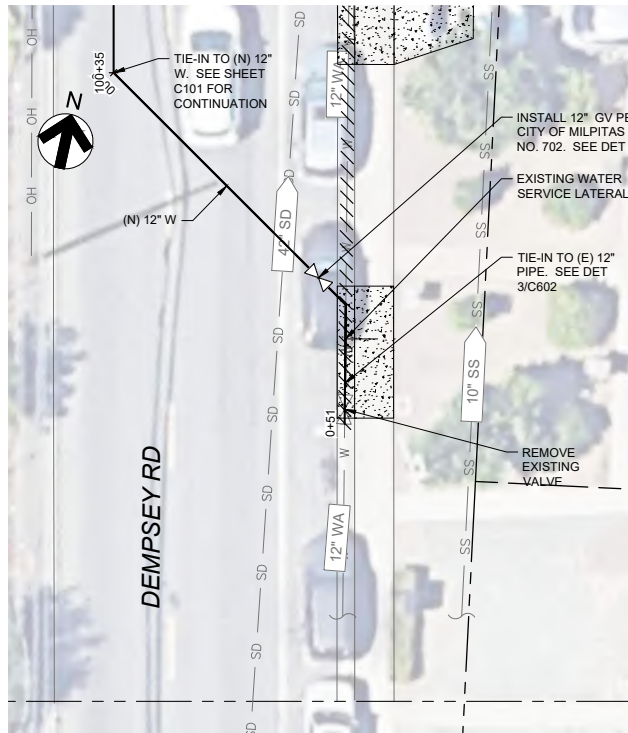
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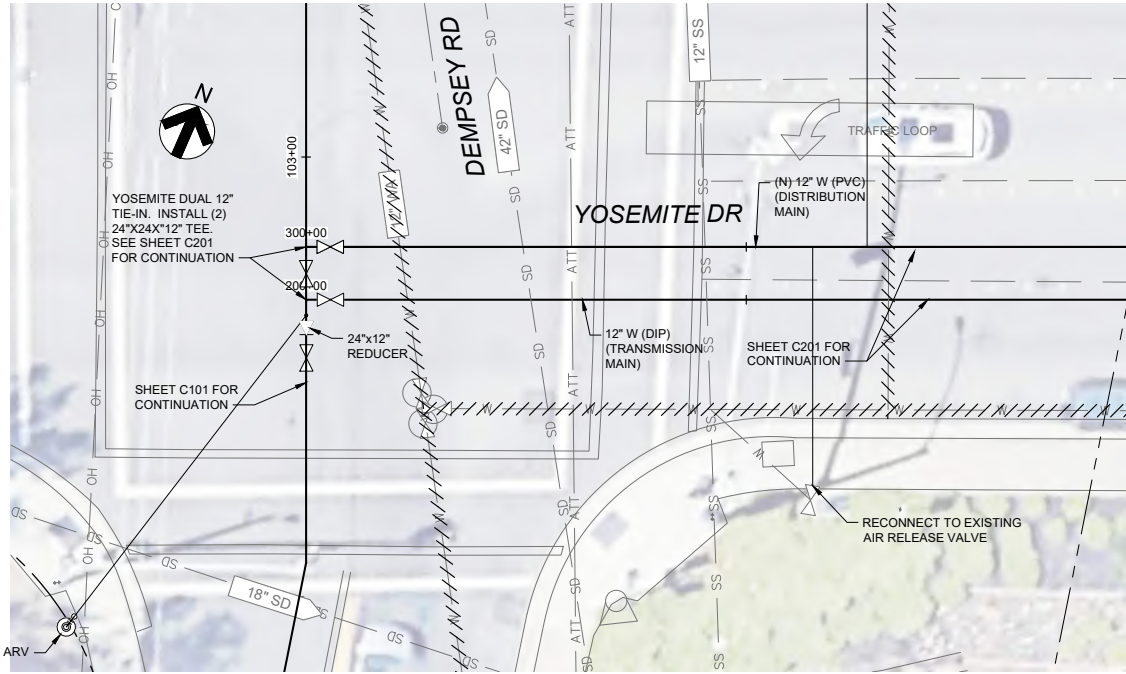


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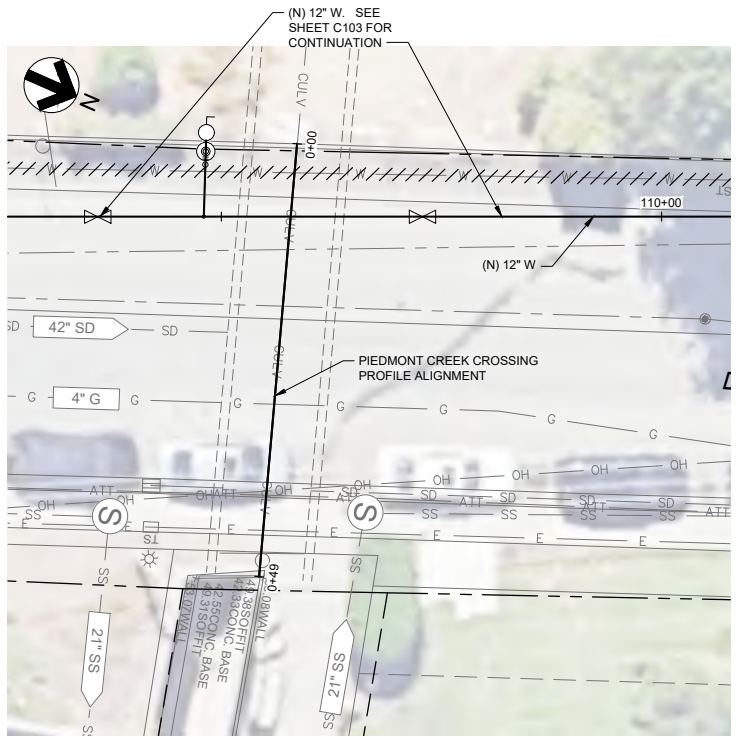
STA: 0+00 TO 0+27 DEMPSEY TIE-IN DETAIL
SCALE: NTS

A
C101



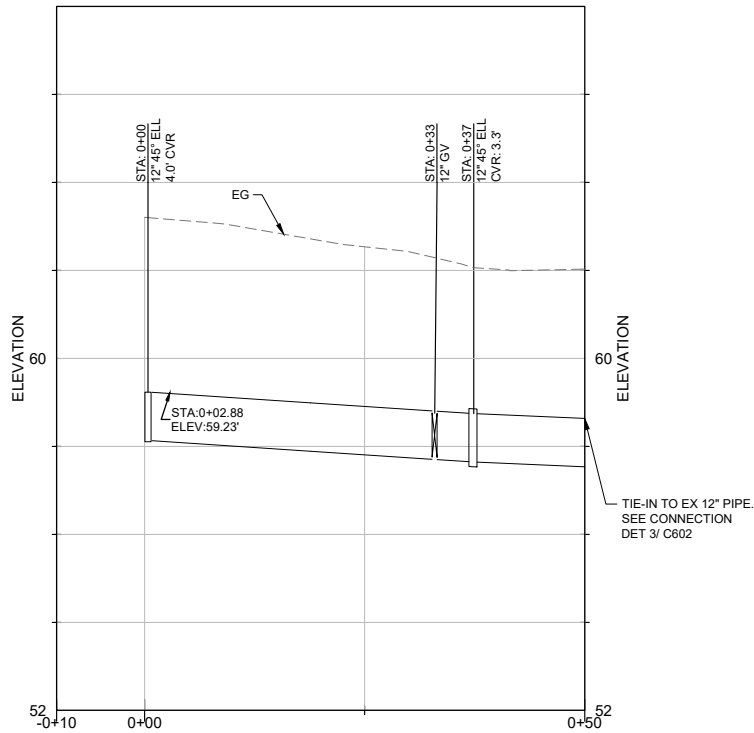
YOSEMITE DUAL 12" TIE-IN DETAIL
SCALE: NTS

B
C101

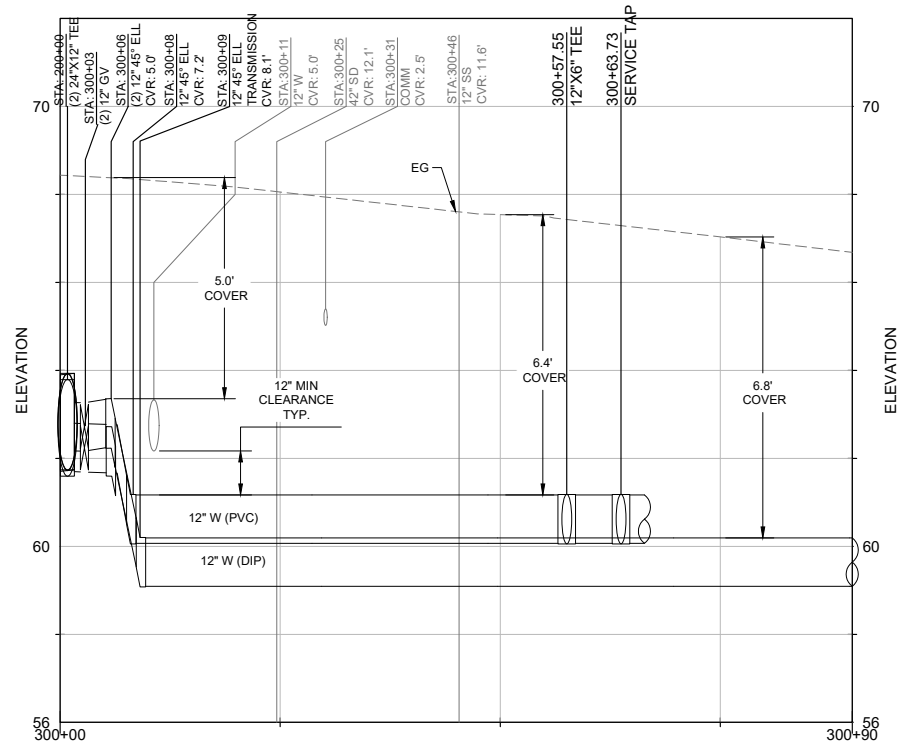


0+00 TO 0+50 PIEDMONT CREEK CROSSING DETAIL
SCALE: NTS

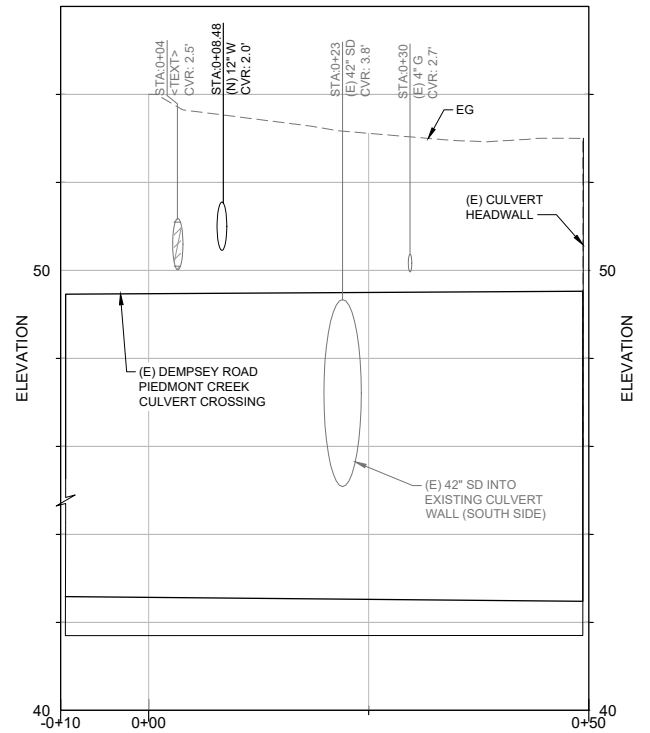
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C103



PROFILE - STA: -0+10 TO 0+50
HORIZONTAL SCALE: 1" = 10'-0"
VERTICAL SCALE: 1" = 2'-0"



PROFILE - STA: 300+00 TO 300+90
HORIZONTAL SCALE: 1" = 10'-0"
VERTICAL SCALE: 1" = 2'-0"



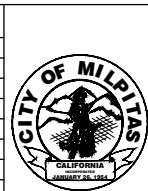
PROFILE - STA: -0+10 TO 0+50
HORIZONTAL SCALE: 1" = 10'-0"
VERTICAL SCALE: 1" = 2'-0"



Record Drawings	
Designer: _____	Date: _____
Public Works Inspector: _____	Date: _____
Utility/Facility Dept. Head: _____	Date: _____
Project Engineer: _____	Date: _____
Public Improvements Initially Accepted by the City Council on: _____	Res. No.: _____

Revisions	
Num.	Description
1	Drawn By: WZ/AP Date: 1/15/25
2	Checked By: WZ Date: 1/15/25
3	Designed By: CML Date: 1/15/25

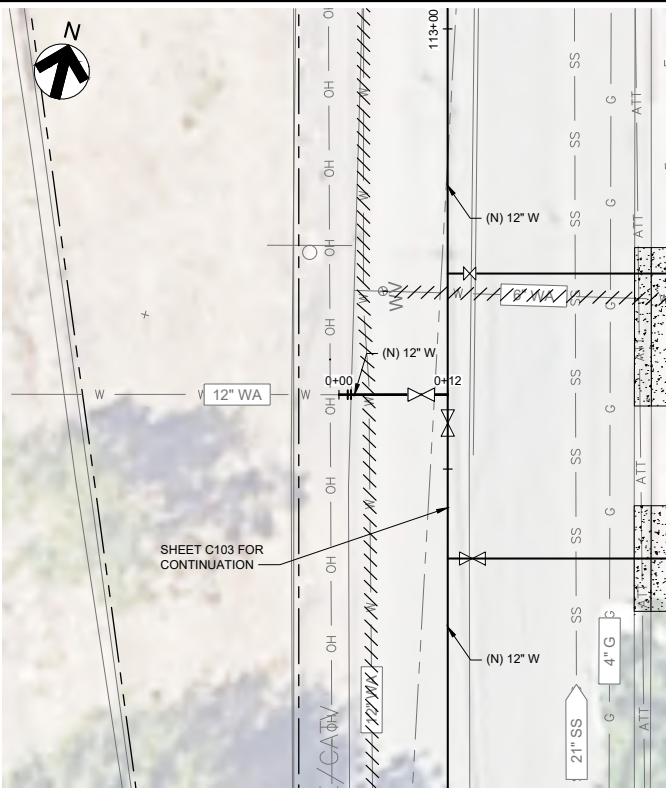
Revisions	
Num.	Description
1	Engr. Aprv. Date
2	
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10	



CITY OF MILPITAS ENGINEERING DIVISION	
DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110	
TIE-IN DETAILS - 1	
RECOMMENDED FOR BIDDING BY: <i>Lyhak Eam</i> DATE: 1/27/2025 LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING	

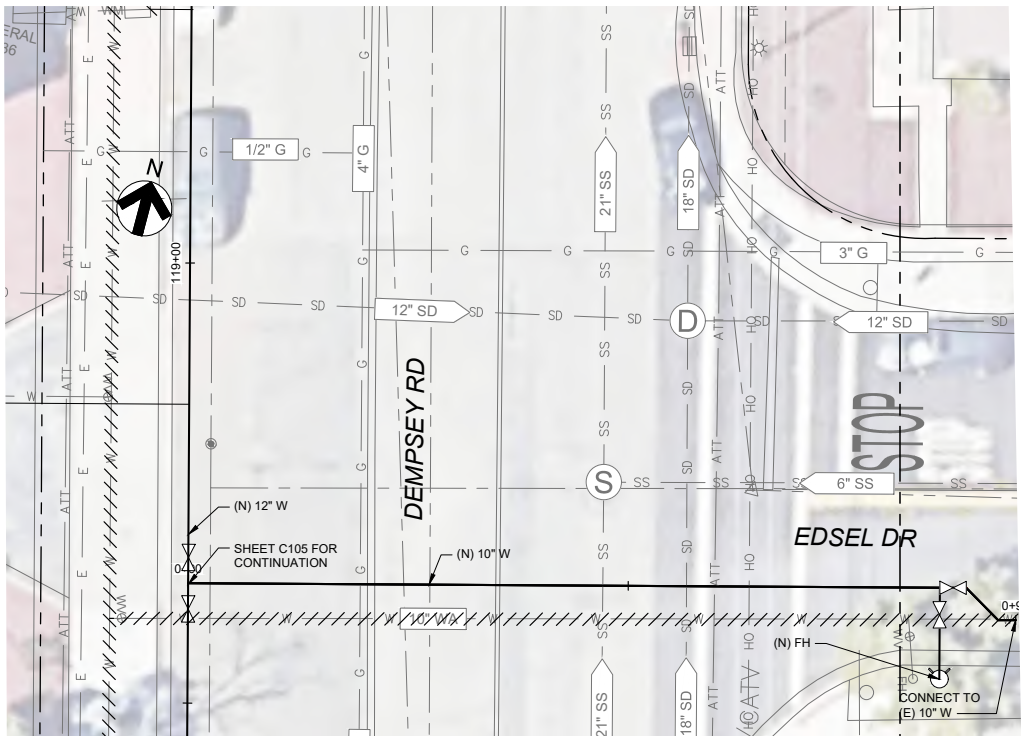
PROJECT NO. 7118 & 7110
Rec. Dwg No. 2-####
C401
SCALE: AS NOTED
SHEET 20 OF 33

File Name: K:\Projects\356-City of Milpitas\011-DempseyRoad\04-Design\02_CAD\01_WaterMainProject\356-011-Tie-In-Details_C401-C404.dwg Plotted By: MARC FERNANDEZ Plot Date: 1/20/2025 5:41 AM



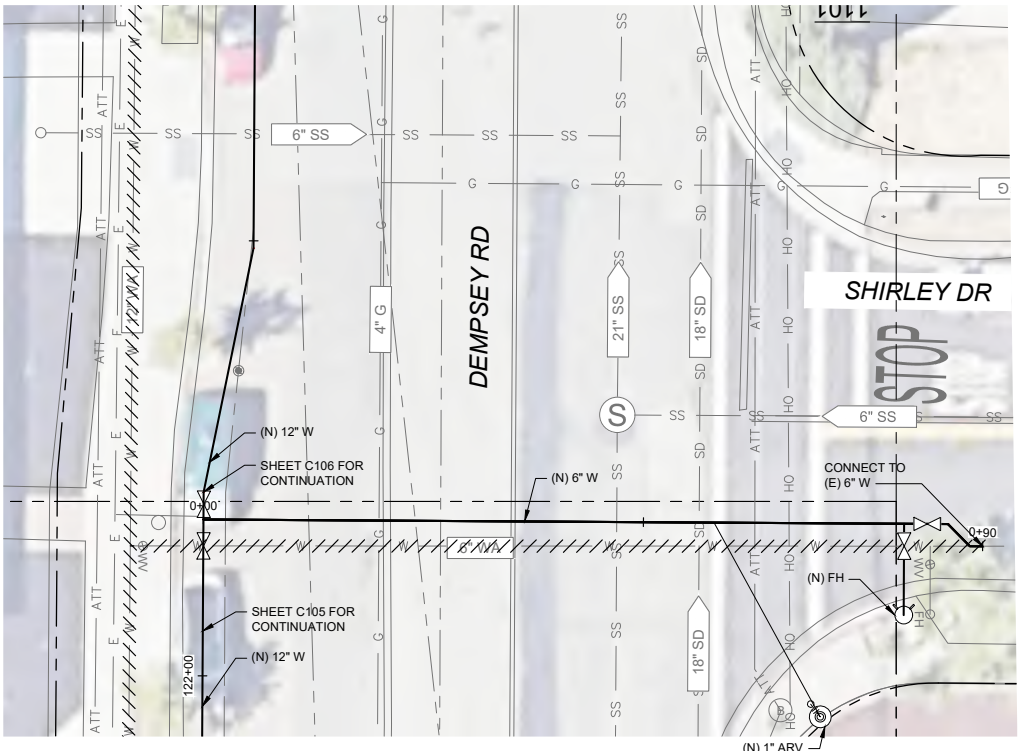
STA: 0+00 TO 0+11 12" TIE-IN DETAIL
SCALE: NTS

A
C103



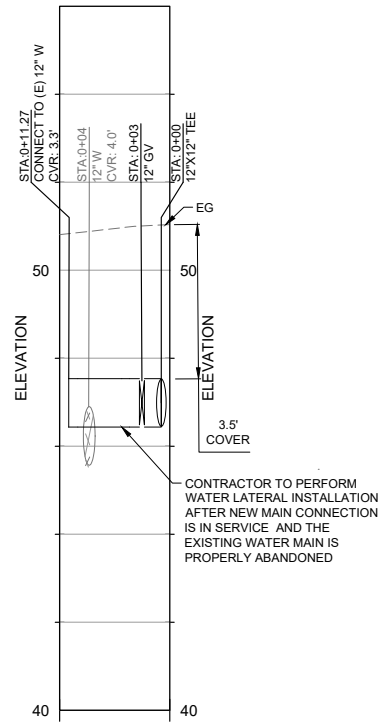
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SCALE: NTS

B
C105

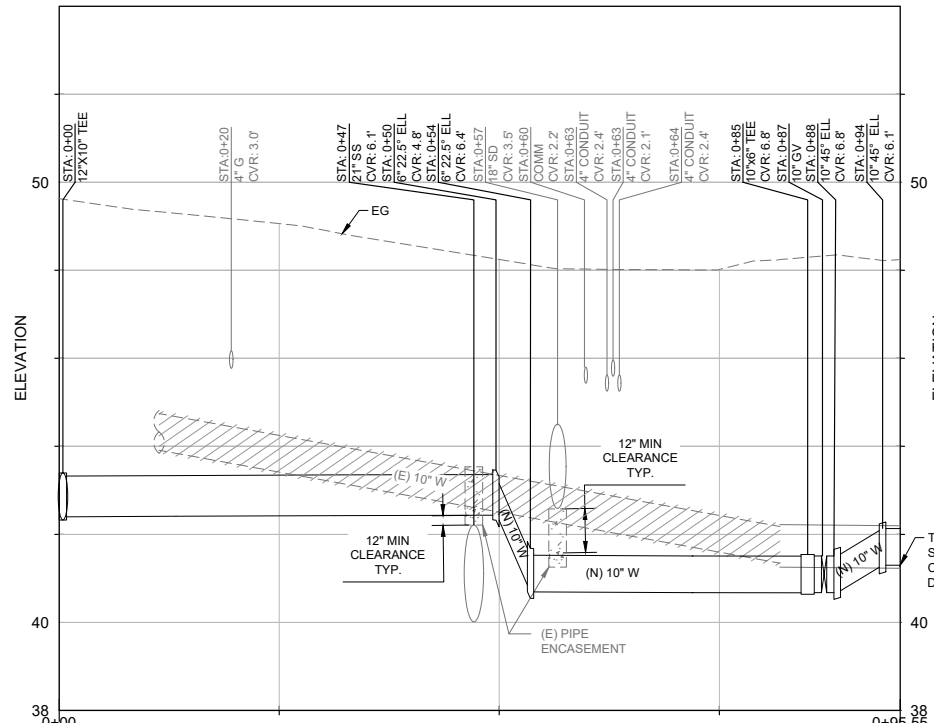


STA: 0+00 TO 0+73 SHIRLEY DR TIE-IN DETAIL
SCALE: NTS

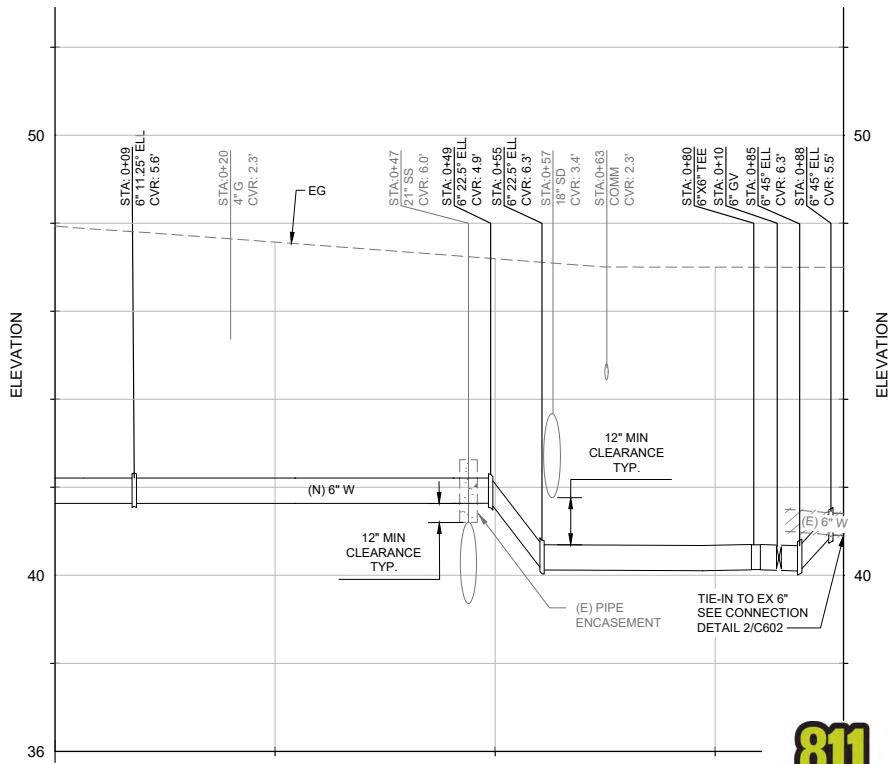
C
C105



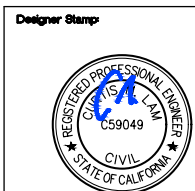
PROFILE - STA: 0+00 TO 0+12
HORIZONTAL SCALE: 1" = 10'-0"
VERTICAL SCALE: 1" = 2'-0"



PROFILE - STA: 0+00 TO 0+96
HORIZONTAL SCALE: 1" = 10'-0"
VERTICAL SCALE: 1" = 2'-0"



PROFILE - STA: 0+00 TO 0+90
HORIZONTAL SCALE: 1" = 10'-0"
VERTICAL SCALE: 1" = 2'-0"



Record Drawings	
Designer: _____	Date: _____
Public Works Inspector: _____	Date: _____
Utility/Facility Dept. Head: _____	Date: _____
Project Engineer: _____	Date: _____
Public Improvements Initially Accepted by the City Council on _____ Res. No. _____	

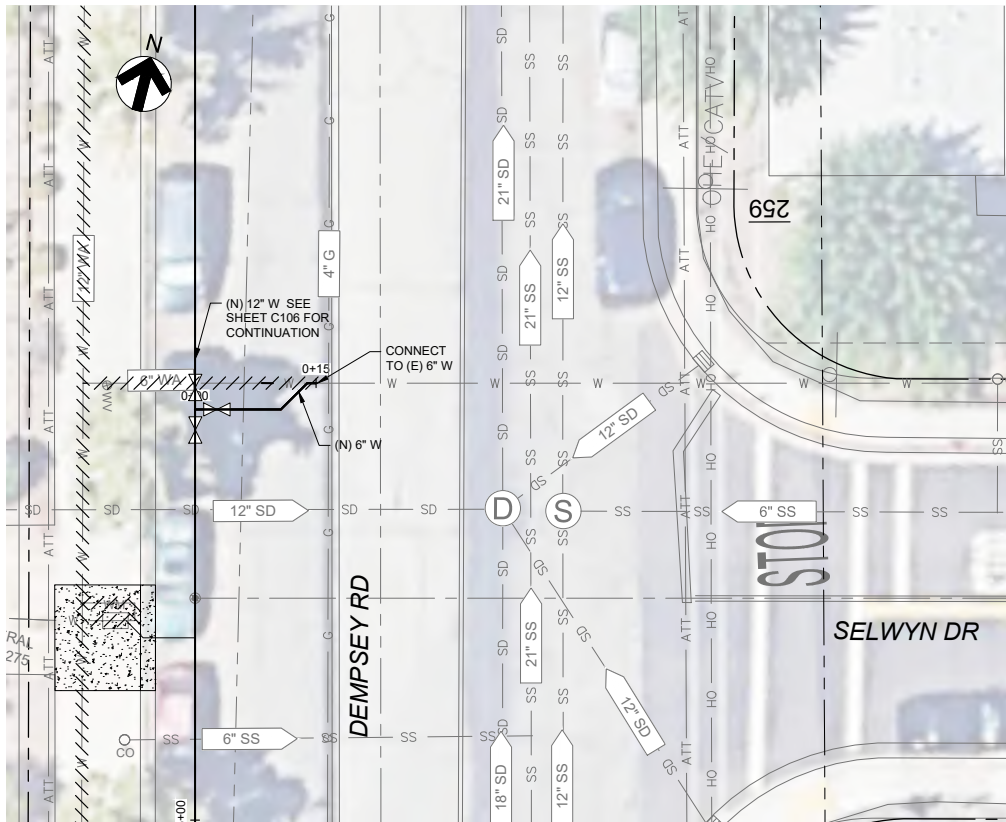
Drawn By: WZ/AP Date: 1/15/25
Checked By: WZ Date: 1/15/25
Designed By: CML Date: 1/15/25

Revisions			
Num.	Description	Engr. Aprv.	Date
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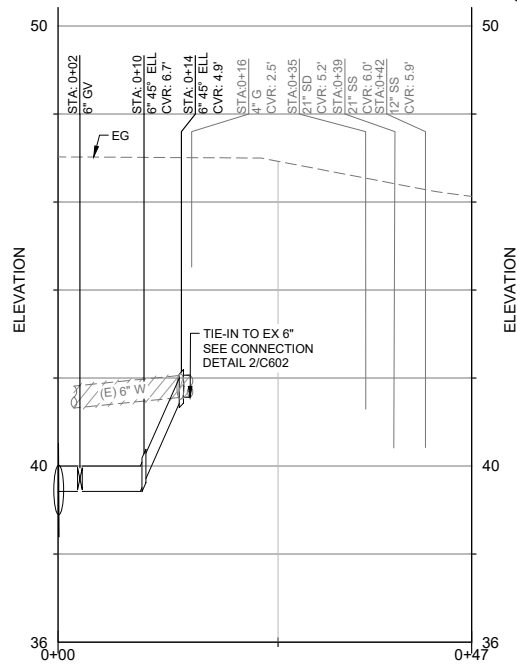


CITY OF MILPITAS ENGINEERING DIVISION		PROJECT NO. 7118 & 7110
DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110		Rec. Dwg No. 2-####
TIE-IN DETAILS - 2		C402
RECOMMENDED FOR BIDDING BY: <i>Lyhak Eam</i> DATE: 1/27/2025		SCALE: AS NOTED
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING		SHEET 21 OF 33

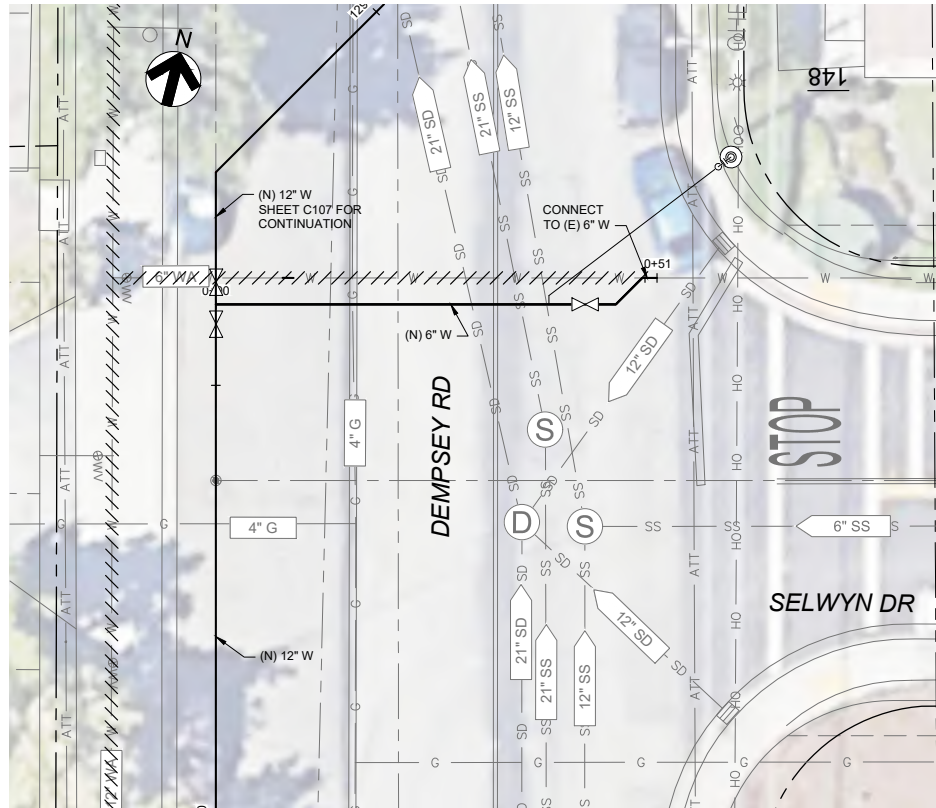
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Plotted By: MARC FERNANDEZ
Plot Date: 1/20/2025 5:42 AM



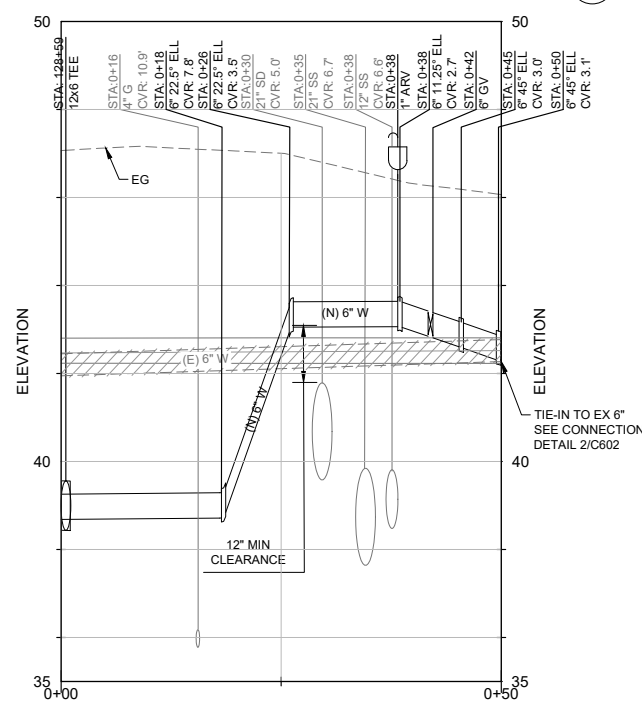
SRA: 0+00 TO 0+47 SELWYN DR SOUTH TIE-IN DETAIL
SCALE: NTS



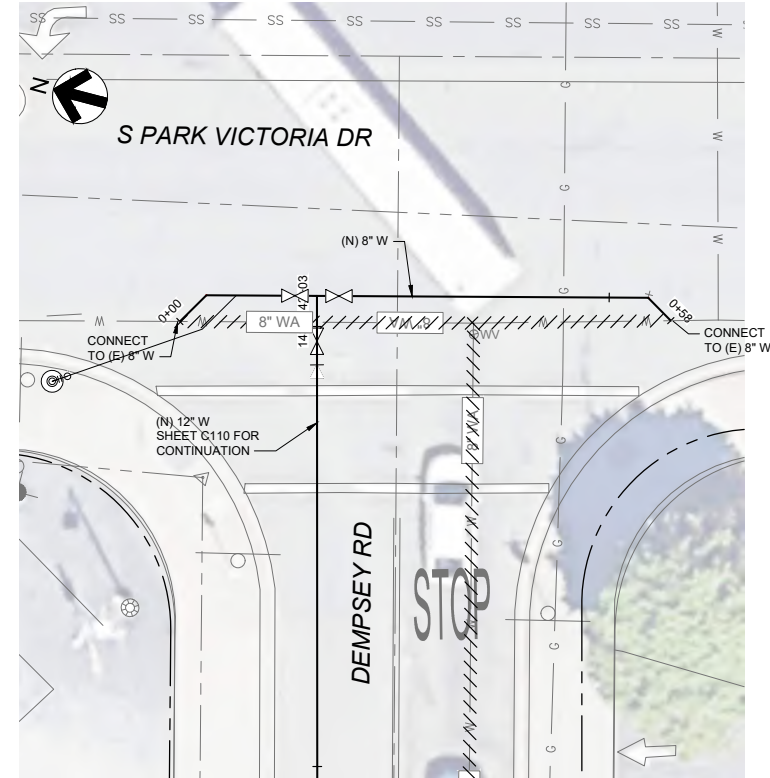
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HORIZONTAL SCALE: 1" = 10'-0"
VERTICAL SCALE: 1" = 2'-0"



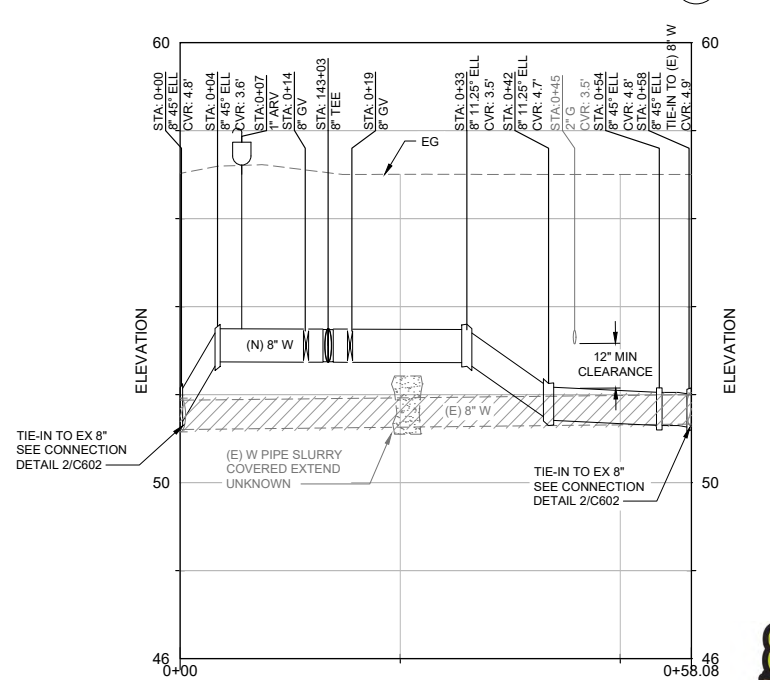
SRA: 0+00 TO 0+50 SELWYN DR NORTH TIE-IN DETAIL
SCALE: NTS



PROFILE - STA: 0+00 TO 0+50
HORIZONTAL SCALE: 1" = 10'-0"
VERTICAL SCALE: 1" = 2'-0"



SRA: 0+00 TO 0+58 PARK VICTORIA TIE-IN DETAIL
SCALE: NTS



PROFILE - STA: 0+00 TO 0+58
HORIZONTAL SCALE: 1" = 10'-0"
VERTICAL SCALE: 1" = 2'-0"



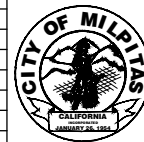
Record Drawings

Designer: _____ Date: _____
Public Works Inspector: _____ Date: _____
Utility/Facility Dept. Head: _____ Date: _____
Project Engineer: _____ Date: _____
Public Improvements Initially Accepted by the City Council on: _____ Res. No. _____

Drawn By: WZ/AP Date: 1/15/25
Checked By: WZ Date: 1/15/25
Designed By: CML Date: 1/15/25

Revisions

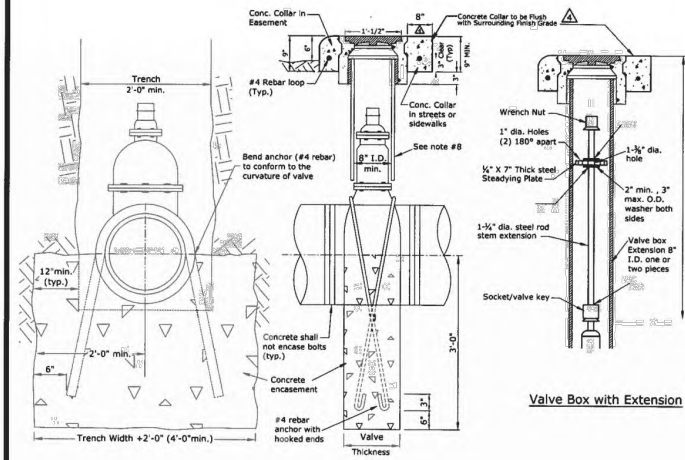
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CITY OF MILPITAS ENGINEERING DIVISION		PROJECT NO. 7118 & 7110
DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110		Rec. Dwg No. 2-####
TIE-IN DETAILS - 3		C403
RECOMMENDED FOR BIDDING BY: Lyhak Eam DATE: 1/27/2025 LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING		SCALE: AS NOTED
		SHEET 22 OF 33



File Name: K:\Projects\356-City of Milpitas\011-Dempsey Road\04-Design\02-CADD\01-Water Main Project\356-011-Civil Std-Details.dwg
Plotted By: MARCO FERNANDEZ
Plot Date: 1/20/2025 5:45 AM



Notes:
1. Refer to Sheet 2 for Additional Details and Notes.

NOT TO SCALE

CITY OF MILPITAS, ENGINEERING DIVISION			STANDARD DRAWING NO. 702
REVISION	DATE		
1	1997		
2	2001		
3	2010		
4	2021		
APPROVED BY: <i>Steven Erickson</i> June 21, 2021 ENGINEERING DIRECTOR / CITY ENGINEER RCE No. C57242			DATE: Rev. 5/12/21 SHEET 1 OF 3

TYPICAL VALVE INSTALLATION (1 OF 3)

SCALE: NTS

1
VAR

NOTES:

- Valves, valve boxes and risers shall be set plumb.
- Gate valve shall be Mueller A-2360-20 or A-2360-38 with non-rising stem and "O" ring seals or approved equal.
- For gate valve installed at the end of a water line, anchor block requirements shall conform to City Standard Drawing No. 706. In restraint water pipe system with restraint joints, thrust block is not required. The Engineer of record must assess that there is sufficient pipe length.
- Anchor block bearing area shall be measured against undisturbed ground.
- All concrete shall be Class A, with minimum compressive strength of 3,000 PSI at 28 days.
- For valve sizes greater than 12", special details shall be required and approved by the City Engineer.
- Valve box shall be Christy, with the following model & size or approved equal. The word "WATER" imprinted on top of the lid.

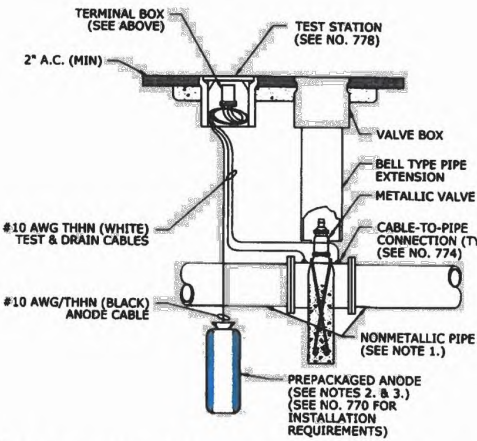
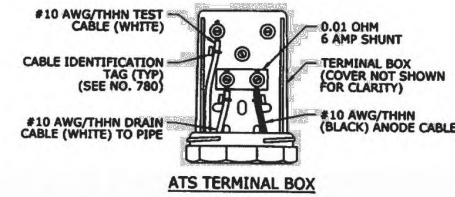
Valve Size	Christy Box	Water Source
Blue - 6" circular	G3	SCVWD
Black - 9" circular	G5	SFPUC
12" circular	G12	Isolation
- Use bell type pipe for extensions.
- All exposed steel shall be covered by two coats of mastic 15 mil poly wrap.
- Trace wire is required on all metallic water lines including Fire Hydrant lines.
- Trace wires shall be inter-connected at pipe tees and crosses and valves.
- All flanges, bolts and nuts shall be kept clear of concrete.
- Install marker post, Standard Drawing No. 204 in non-paved surface.
- In unpaved areas, concrete collar to be installed flush with valve box lid. The surface of the concrete collar shall slope away from the valve box lid with 2% slope on finished concrete surface. Grade of valve box lid to be determined by City.

CITY OF MILPITAS, ENGINEERING DIVISION			STANDARD DRAWING NO. 702
REVISION	DATE		
1	1997		
2	2001		
3	2010		
4	2021		
APPROVED BY: <i>Steven Erickson</i> June 21, 2021 ENGINEERING DIRECTOR / CITY ENGINEER RCE No. C57242			DATE: Rev. 5/12/21 SHEET 2 OF 3

TYPICAL VALVE INSTALLATION (2 OF 3)

SCALE: NTS

2
VAR



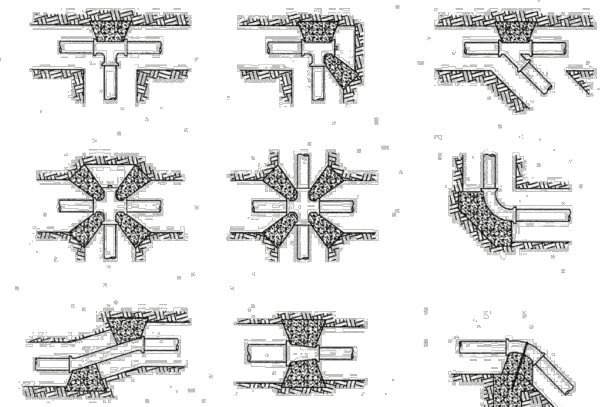
- NOTES:
- THE USE OF NONMETALLIC PIPE AS AN ALTERNATE MATERIAL TO DUCTILE IRON MUST BE APPROVED BY THE CITY OF MILPITAS WATER DIVISION PRIOR TO USE.
 - NUMBER AND SIZE OF ANODES SHALL BE DETERMINED BY DEVELOPER'S ENGINEER.
 - INSTALL ANODE A MINIMUM OF 3-Feet FROM VALVE.

CITY OF MILPITAS, ENGINEERING DIVISION			STANDARD DRAWING NO. 702
REVISION	DATE		
1	2021		
2	2022		
APPROVED BY: <i>Steven Erickson</i> DIRECTOR OF ENGINEERING / CITY ENGINEER RCE # C-57242			DATE: 6-2-2022 SHEET 3 OF 3

TYPICAL VALVE INSTALLATION (3 OF 3)

SCALE: NTS

3
VAR



REQUIRED BEARING AREA OF THRUST BLOCKS

PIPE SIZE	TEE & DEAD END	90° BEND	45° BEND	22-1/2° BEND
6"	8 SQ. FT.	12 SQ. FT.	6 SQ. FT.	3 SQ. FT.
8"	14 SQ. FT.	20 SQ. FT.	11 SQ. FT.	5 SQ. FT.
10"	23 SQ. FT.	32 SQ. FT.	17 SQ. FT.	9 SQ. FT.
12"	32 SQ. FT.	45 SQ. FT.	24 SQ. FT.	12 SQ. FT.

- Notes:
- ALL CONCRETE TO BE CLASS A, 3,000 PSI COMPRESSIVE STRENGTH.
 - CONCRETE THRUST BLOCKS SHALL BE INSTALLED AT ALL TEES, CROSSES, BENDS (HORIZONTAL OR VERTICAL), AT SIZE CHANGES, AND AT ALL FIRE HYDRANTS AND PLUGS. BEARING SURFACE OF BLOCKS TO EXTEND TO UNDISTURBED GROUND.
 - ANCHOR BLOCKS WITH TIE-DOWN ROD FOR VERTICAL BENDS SHALL BE INSTALLED WHERE REQUIRED BY THE ENGINEER. BLOCK MASS SHALL BE DESIGNED TO RESIST THRUST AND SHALL BE APPROVED BY THE CITY ENGINEER.
 - AREAS SHOWN ARE FOR EACH THRUST BLOCK.
 - CONCRETE THRUST BLOCKS SHALL NOT BE USED ON THE "BACKBONE" WATER SYSTEM. RESTRAIN JOINTS SHALL BE USED.

NOT TO SCALE

CITY OF MILPITAS, ENGINEERING DIVISION			STANDARD DRAWING NO. 704
REVISION	DATE		
1	1991		
2	2001		
3	2010		
APPROVED BY: <i>Steven Erickson</i> PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283			DATE: 6/15/10 SHEET 1 OF 1

CONCRETE ANCHOR BLOCK WITH CAPPED END ASSEMBLY

SCALE: NTS

4
VAR

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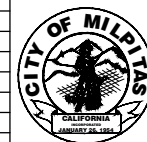
Record Drawings

Designer: _____ Date: _____
Public Works Inspector: _____ Date: _____
Utility/Facility Dept. Head: _____ Date: _____
Project Engineer: _____ Date: _____
Public Improvements Initially Accepted by
the City Council on: _____ Res. No. _____

Drawn By: WZ/AP Date: 1/15/25
Checked By: WZ Date: 1/15/25
Designed By: CML Date: 1/15/25

Revisions

Num.	Description	Engr. Aprv.	Date
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CITY OF MILPITAS
ENGINEERING DIVISION

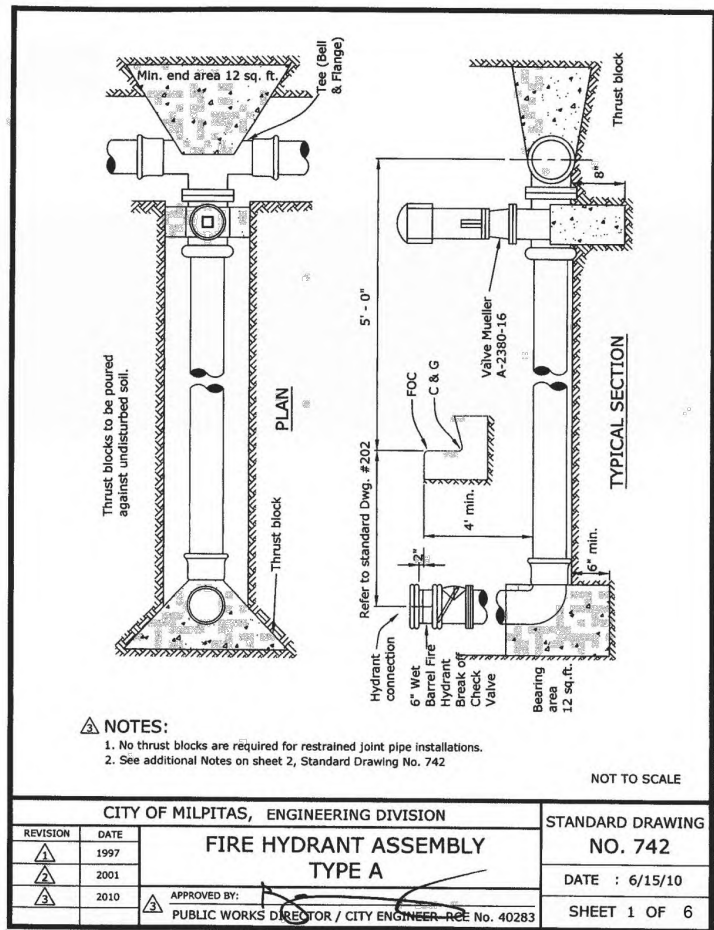
DEMPSEY ROAD WATERLINE REPLACEMENT
PROJECT NO. 7118 & 7110

CIVIL STANDARD DETAILS - 1

RECOMMENDED FOR BIDDING BY: *Lyhak Eam* DATE: 1/27/2025
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING

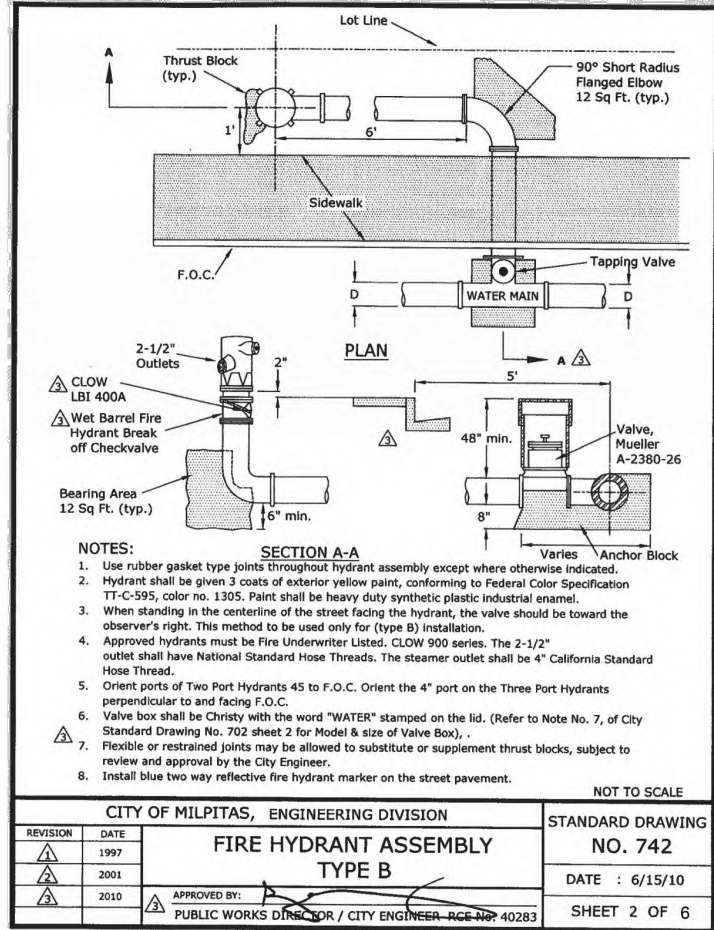
PROJECT NO.
7118 & 7110
Rec. Dwg No.
2-####
C501
SCALE:
AS NOTED
SHEET 24 OF 33

File Name: K:\Projects\356-City of Milpitas\011-Dempsey Road\04-Design\02_CADD\01_WaterMainProject\356-011-Civil-Std-Details.dwg
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Plot Date: 1/20/2025 5:46 AM



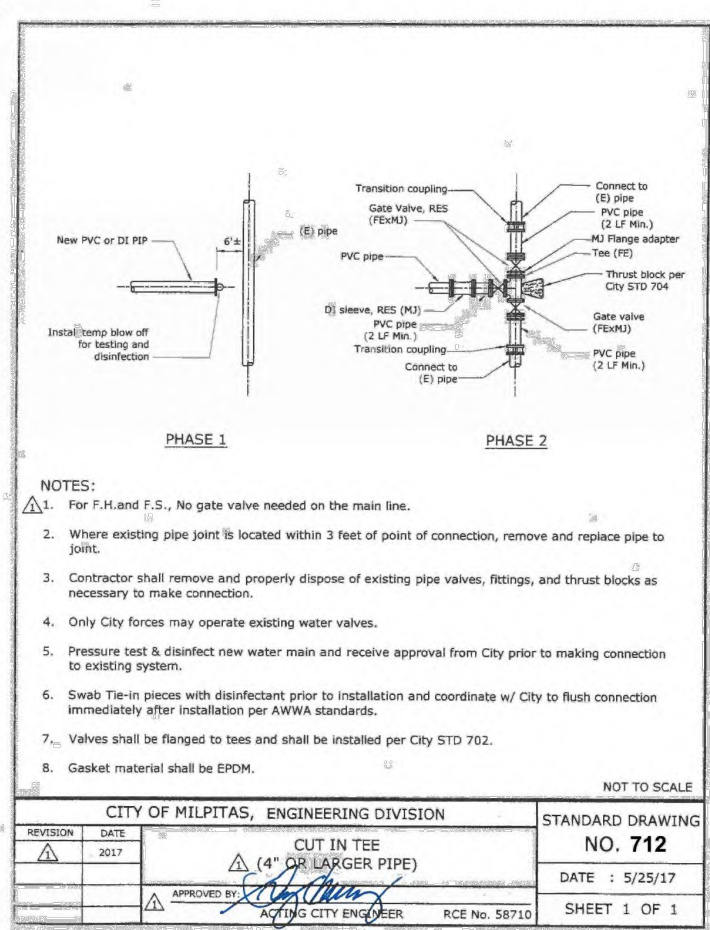
FIRE HYDRANT ASSEMBLY - TYPE A
SCALE: NTS

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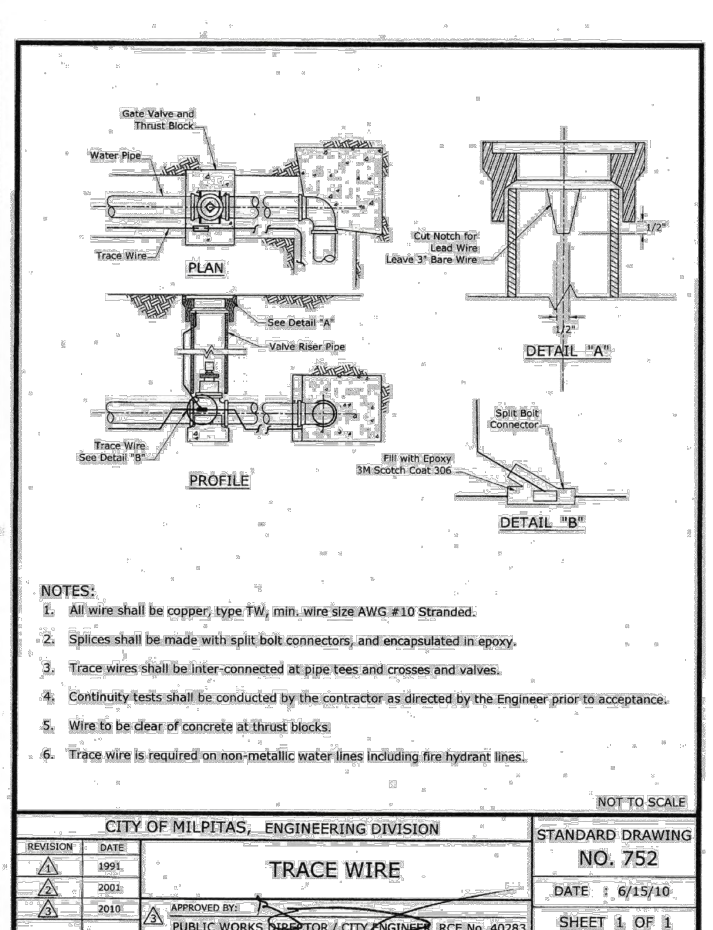
FIRE HYDRANT ASSEMBLY - TYPE B
SCALE: NTS

2
VAR



CUT IN TEE (4" OR LARGER PIPE)
SCALE: NTS

3
VAR



TRACE WIRE
SCALE: NTS

4
VAR



Record Drawings

Designer: _____ Date: _____
Public Works Inspector: _____ Date: _____
Utility/Facility Dept. Head: _____ Date: _____
Project Engineer: _____ Date: _____
Public Improvements Initially Accepted by the City Council on: _____ Res. No. _____

Drawn By: WZ/AP Date: 1/15/25
Checked By: WZ Date: 1/15/25
Designed By: CML Date: 1/15/25

Revisions

Num.	Description	Engr. Aprv.	Date
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CITY OF MILPITAS
ENGINEERING DIVISION

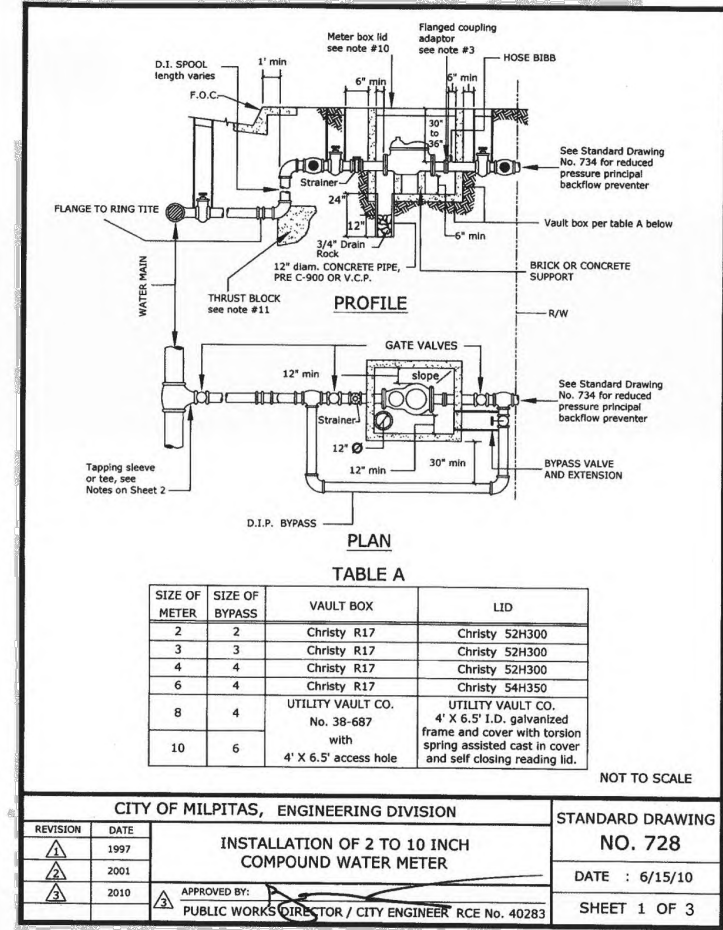
DEMPSEY ROAD WATERLINE REPLACEMENT
PROJECT NO. 7118 & 7110

CIVIL STANDARD DETAILS - 2

RECOMMENDED FOR BIDDING BY: *Lyhak Eam* DATE: 1/27/2025
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING

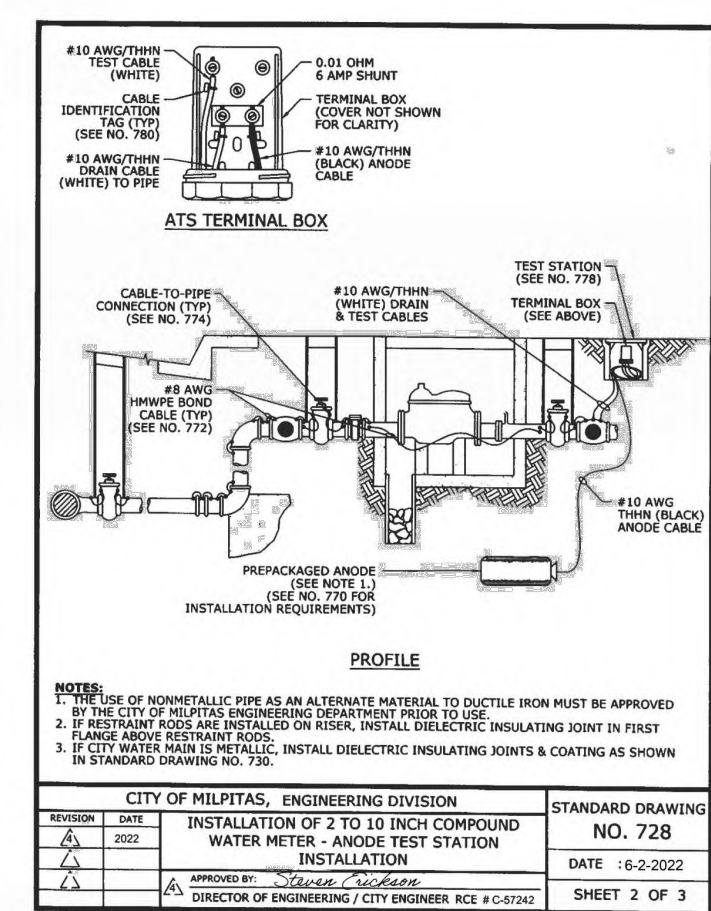
PROJECT NO. 7118 & 7110
Rec. Dwg No. 2-####
C502
SCALE: AS NOTED
SHEET 25 OF 33

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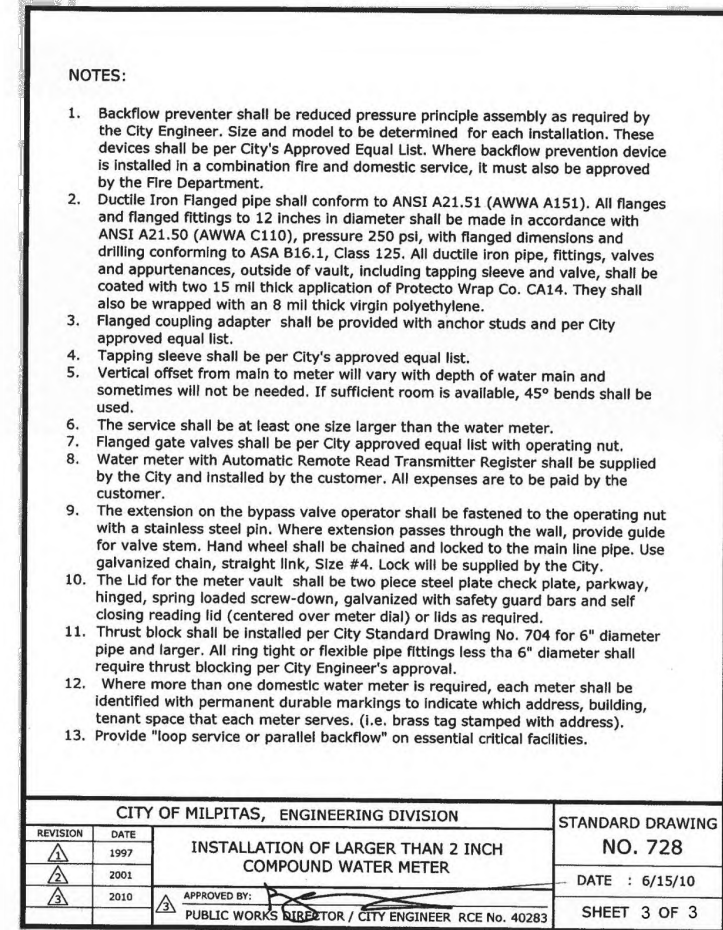
INSTALLATION OF 2 TO 10 INCH COMPUND WM (1 OF 3)
SCALE: NTS

1 VAR



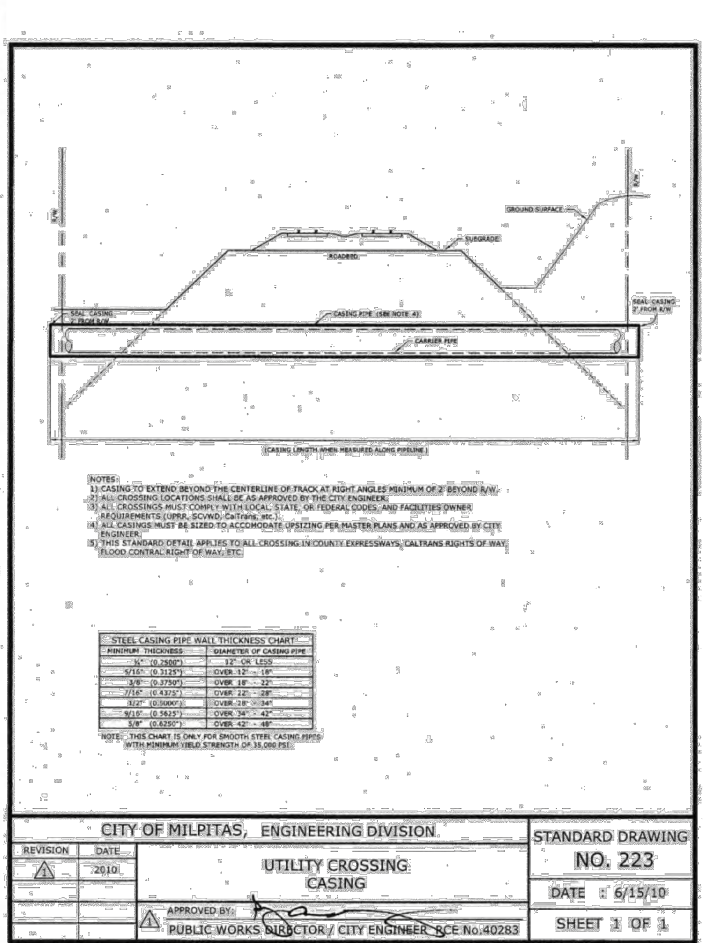
INSTALLATION OF 2 TO 10 INCH COMPUND WM (2 OF 3)
SCALE: NTS

2 VAR



INSTALLATION OF 2 TO 10 INCH COMPUND WM (3 OF 3)
SCALE: NTS

3 VAR



UTILITY CROSSING CASING
SCALE: NTS

4 VAR

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Record Drawings

Designer: _____ Date: _____
Public Works Inspector: _____ Date: _____
Utility/Facility Dept. Head: _____ Date: _____
Project Engineer: _____ Date: _____
Public Improvements Initially Accepted by the City Council on: _____ Res. No. _____

Drawn By: WZ/AP Date: 1/15/25
Checked By: WZ Date: 1/15/25
Designed By: CML Date: 1/15/25

Revisions

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CITY OF MILPITAS
ENGINEERING DIVISION

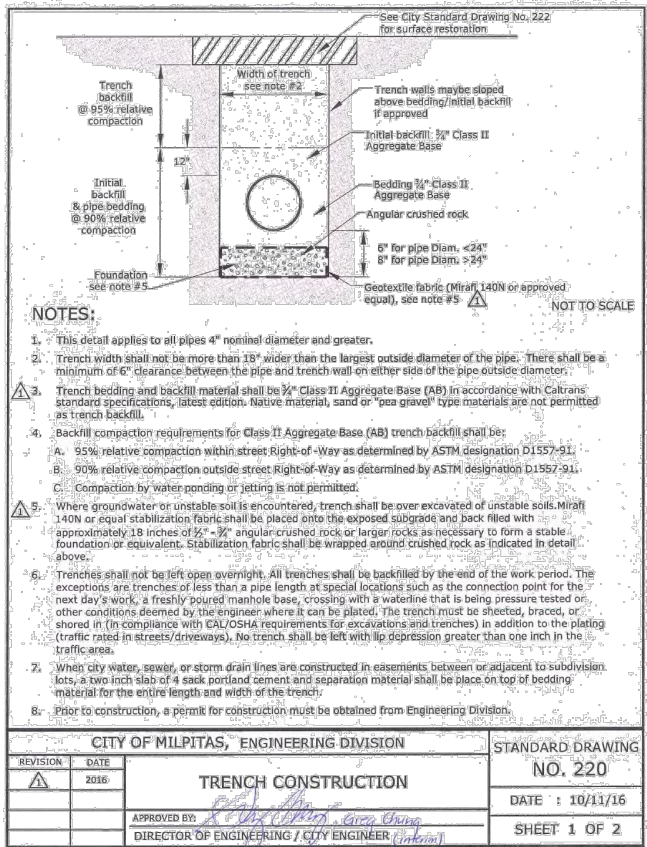
DEMPSEY ROAD WATERLINE REPLACEMENT
PROJECT NO. 7118 & 7110

CIVIL STANDARD DETAILS - 3

RECOMMENDED FOR BIDDING BY: *Lyhak Eam* DATE: 1/27/2025
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING

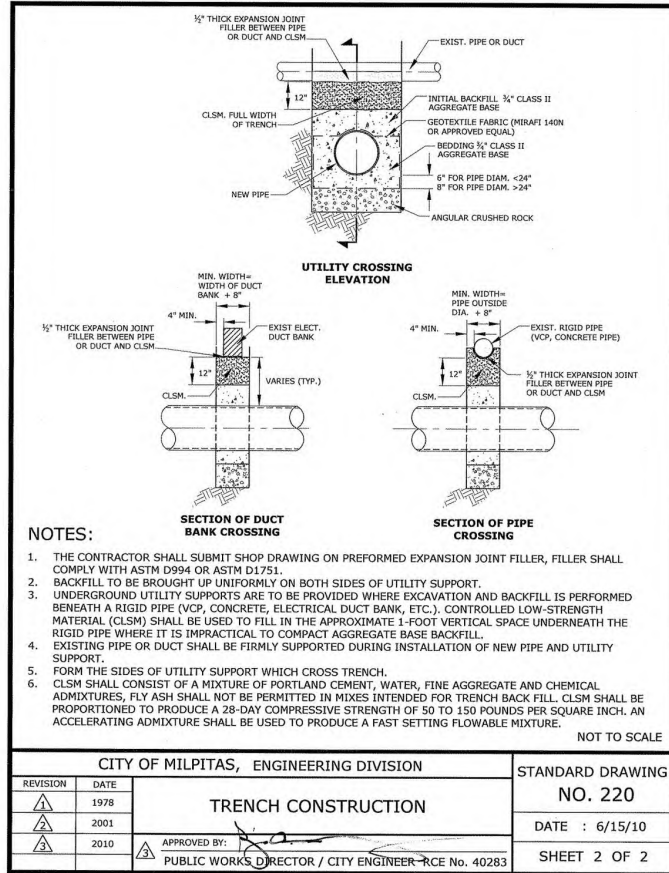
PROJECT NO.
7118 & 7110
Rec. Dwg No.
2-####
C503
SCALE:
AS NOTED
SHEET 26 OF 33

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Plot Date: 1/20/2025 5:51 AM



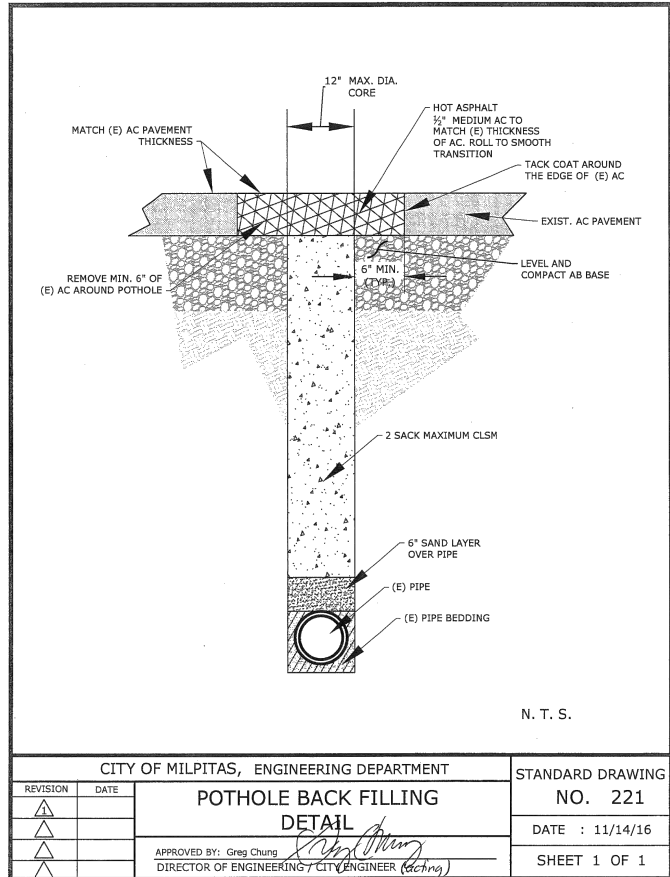
TRENCH CONSTRUCTION (1 OF 2)
SCALE: NTS

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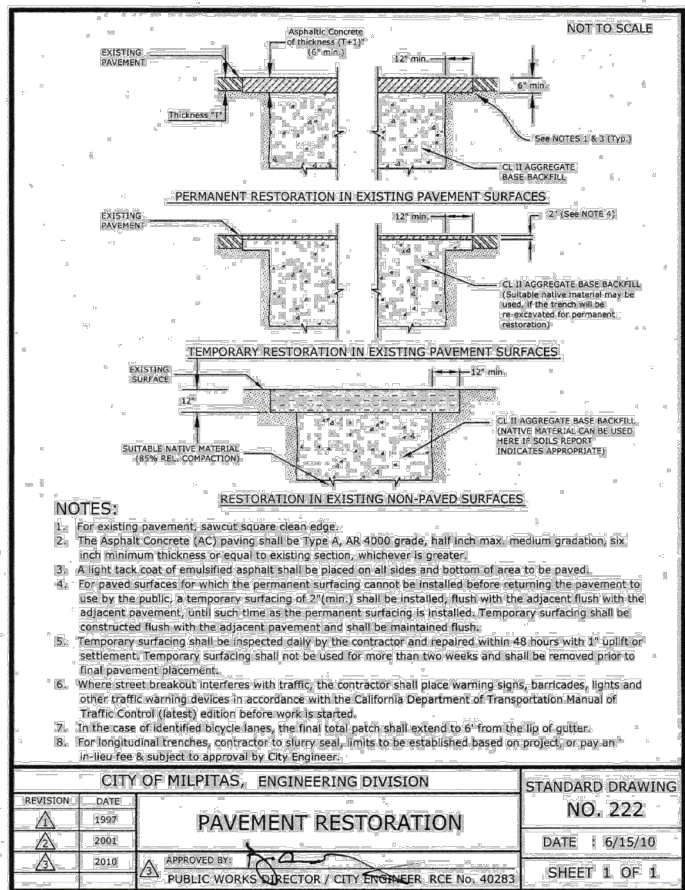
TRENCH CONSTRUCTION (2 OF 2)
SCALE: NTS

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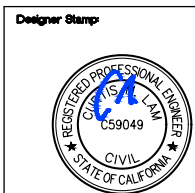
POTHOLE BACK FILLING DETAIL
SCALE: NTS

3
VAR



PAVEMENT RESTORATION
SCALE: NTS

4
VAR



Record Drawings	
Designer: _____	Date: _____
Public Works Inspector: _____	Date: _____
Utility/Facility Dept. Head: _____	Date: _____
Project Engineer: _____	Date: _____
Public Improvements Initially Accepted by the City Council on _____ Res. No. _____	

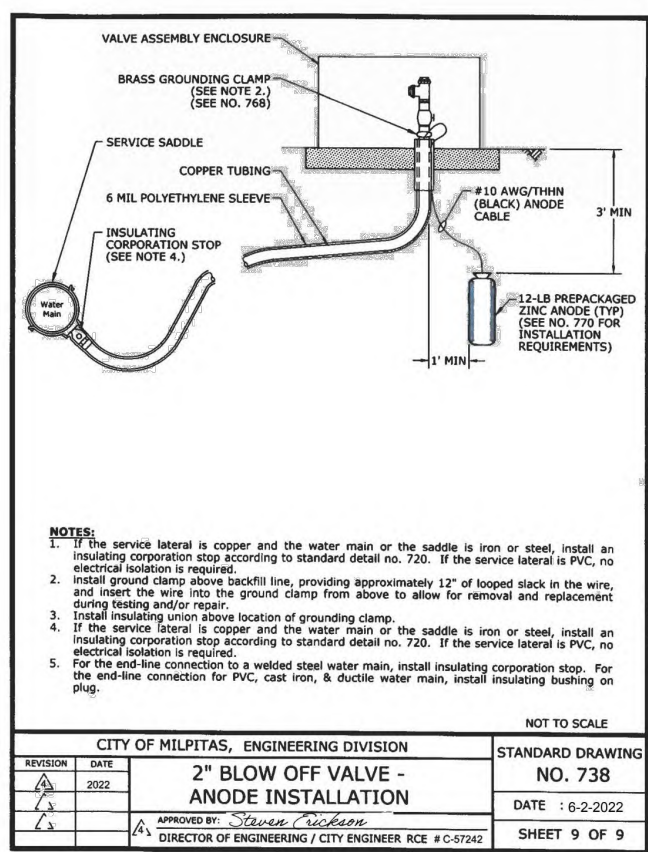
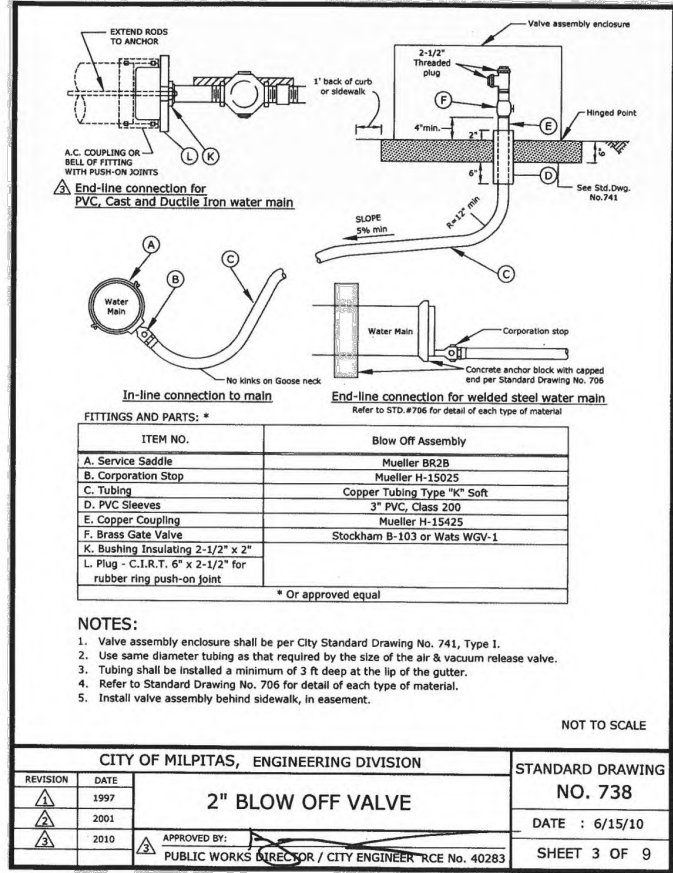
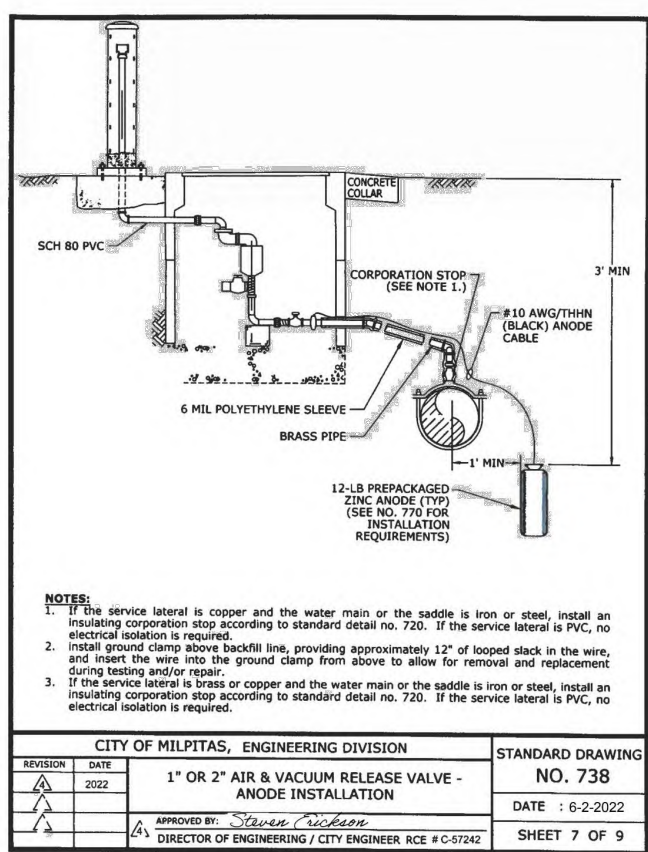
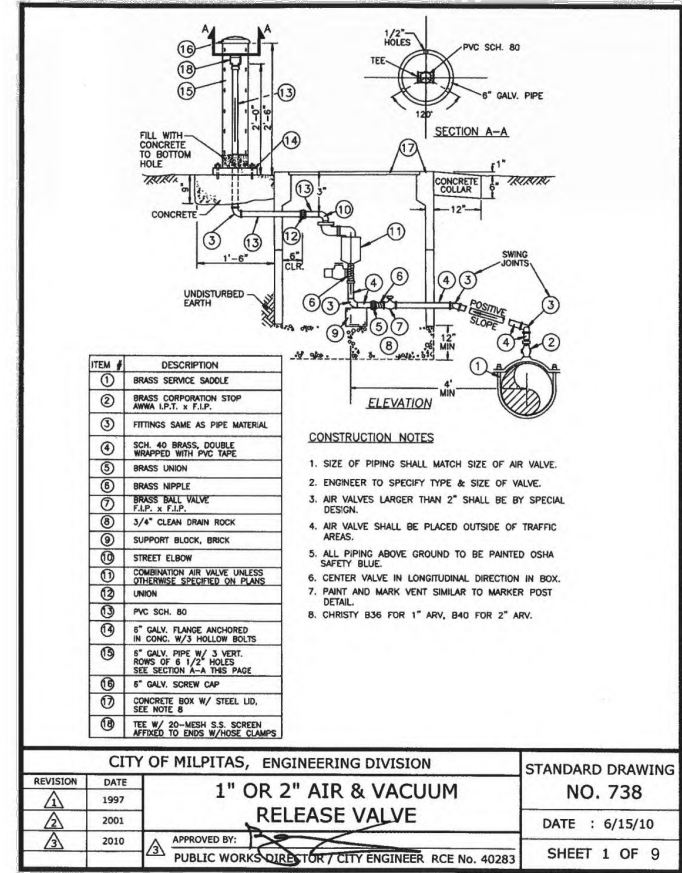
Drawn By: WZ/AP Date: 1/15/25
Checked By: WZ Date: 1/15/25
Designed By: CML Date: 1/15/25

Revisions			
Num.	Description	Engr. Aprv.	Date
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CITY OF MILPITAS ENGINEERING DIVISION		PROJECT NO. 7118 & 7110
DEMPSEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110		Rec. Dwg No. 2-####
CIVIL STANDARD DETAILS - 4		C504
RECOMMENDED FOR BIDDING BY: <u>Lyhak Eam</u> DATE: <u>1/27/2025</u>		SCALE: AS NOTED
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING		SHEET 27 OF 33

File Name: K:\Projects\356-City of Milpitas\011-Dempsey Road\04-Design\02-CADD\01-WaterMain\Project\356-011-Civil-Std-Details.dwg
Plotted By: MARC FERNANDEZ
Plot Date: 1/20/2025 5:54 AM



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BERKELEY, CA 94710
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Record Drawings

Designer: _____ Date: _____
Public Works Inspector: _____ Date: _____
Utility/Facility Dept. Head: _____ Date: _____
Project Engineer: _____ Date: _____
Public Improvements Initially Accepted by the City Council on: _____ Res. No. _____

Drawn By: WZ/AP Date: 1/15/25
Checked By: WZ Date: 1/15/25
Designed By: CML Date: 1/15/25

Revisions

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CITY OF MILPITAS
ENGINEERING DIVISION

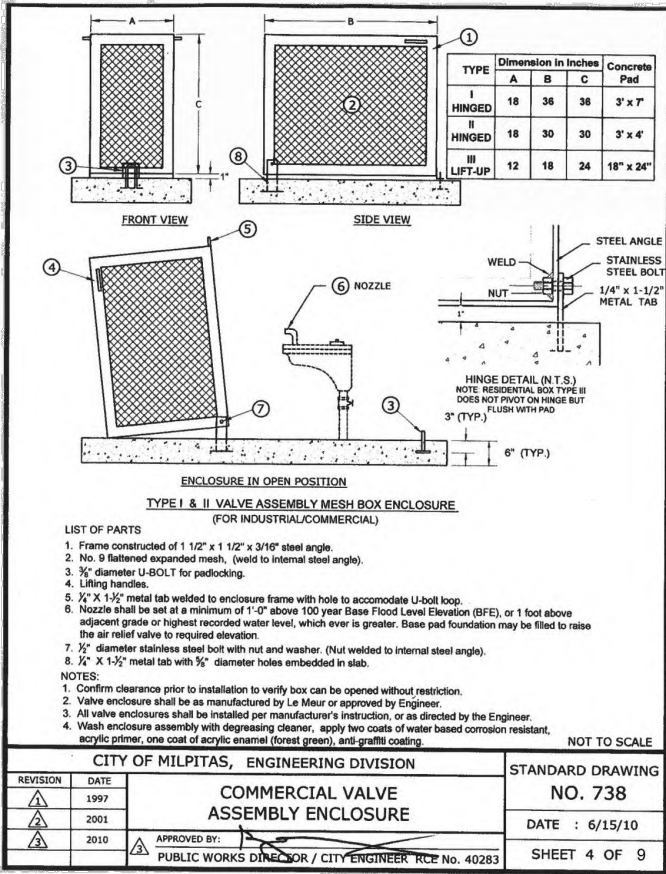
DEMPSEY ROAD WATERLINE REPLACEMENT
PROJECT NO. 7118 & 7110

CIVIL STANDARD DETAILS - 5

RECOMMENDED FOR BIDDING BY: Lyhak Eam DATE: 1/27/2025
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING

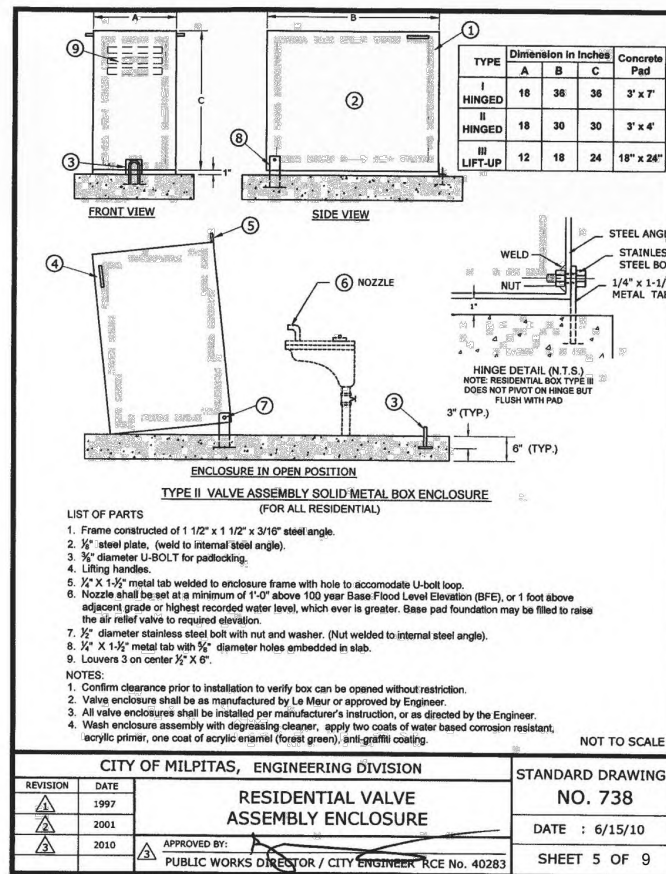
PROJECT NO.
7118 & 7110
Rec. Dwg No.
2-####
C505
SCALE:
AS NOTED
SHEET 28 OF 33

File Name: K:\Projects\356-City of Milpitas\011-Dempsey Road\04-Design\02-CADD\01-Water Main\Project\356-011-CivilStd-Details.dwg
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Plot Date: 1/20/2025 5:57 AM



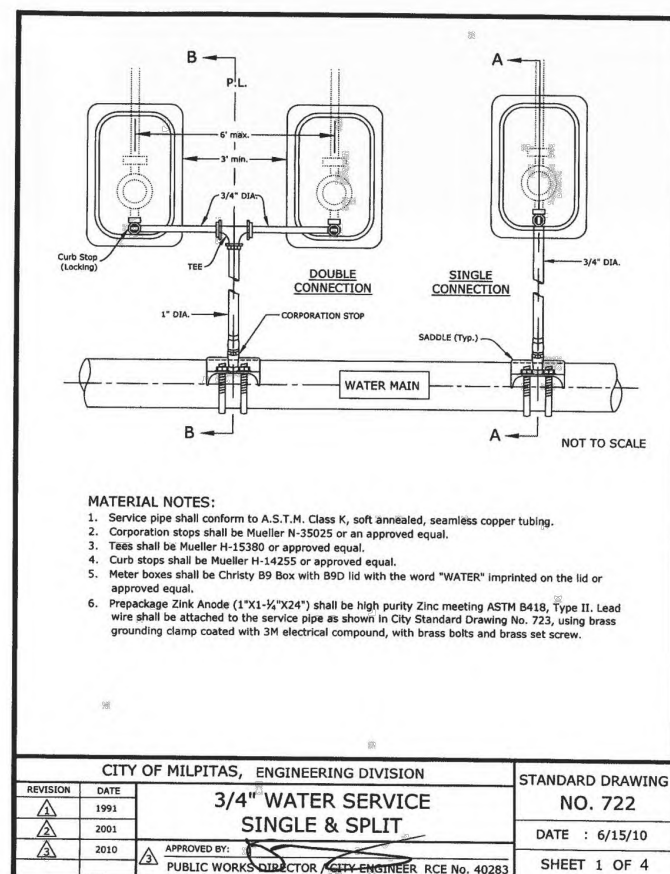
COMMERCIAL VALVE ASSEMBLY ENCLOSURE
SCALE: NTS

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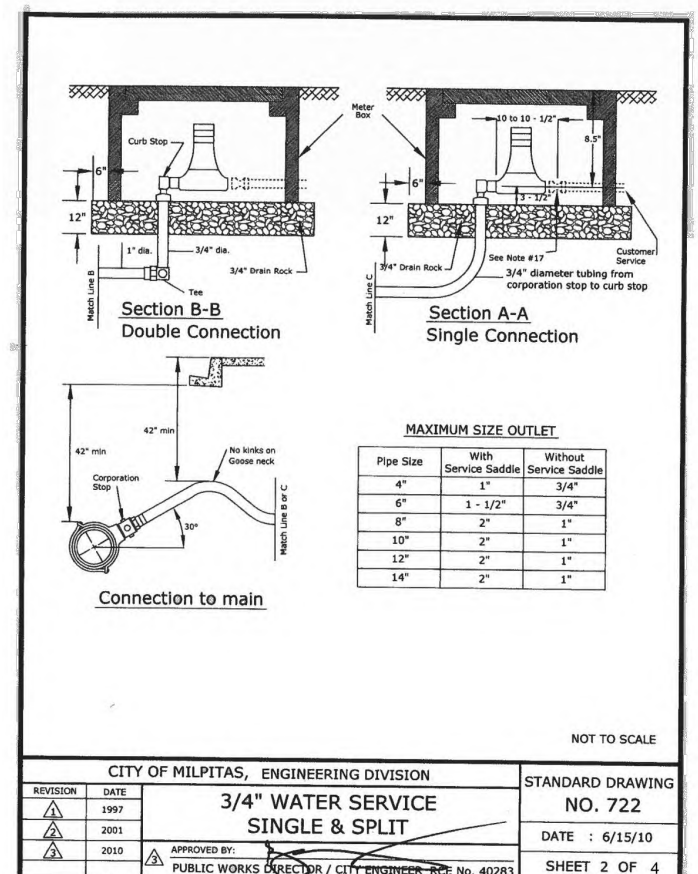
RESIDENTIAL VALVE ASSEMBLY ENCLOSURE
SCALE: NTS

2
VAR



3/4" WATER SERVICE SINGLE & SPLIT (1 OF 4)
SCALE: NTS

3
VAR



3/4" WATER SERVICE SINGLE & SPLIT (2 OF 4)
SCALE: NTS

4
VAR

Record Drawings

Designer: _____ Date: _____
Public Works Inspector: _____ Date: _____
Utility/Facility Dept. Head: _____ Date: _____
Project Engineer: _____ Date: _____
Public Improvements Initially Accepted by the City Council on: _____ Res. No. _____

Drawn By: WZ/AP Date: 1/15/25
Checked By: WZ Date: 1/15/25
Designed By: CML Date: 1/15/25

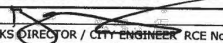
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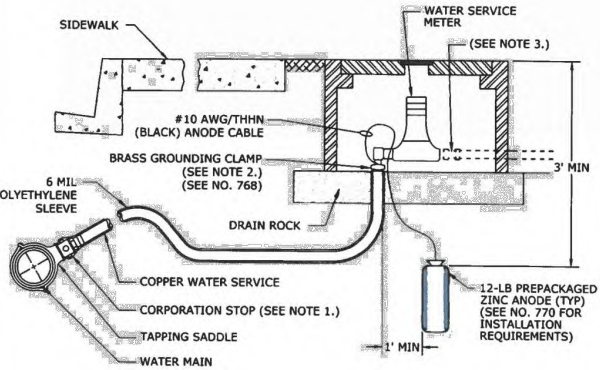
- NOTES:
- Where curb and sidewalk are contiguous, box shall be set 6" back of walk.
 - Where the curb and the sidewalk are separated, box shall be set 6" back of curb.
 - Where meter box is located in driveway, box shall be furnished with steel traffic covers, Christy B9-61D or an approved equal.
 - Service Saddle shall be Mueller BR2B.
 - House service lines shall not be connected until after the service lines have been tested and disinfected.
 - A brass plug shall be inserted in the curb stop after the line has been tested and disinfected.
 - Water meter with Automatic Remote Read Transmitter Register shall be furnished and installed by the City at the expense of the customer.
 - Meter boxes shall be set as detailed at the time the services are installed unless otherwise specified by the City Engineer.
 - House services shall be installed a minimum of 3' deep at the lip of gutter.
 - Adequate space shall be provided to allow installation and removal of water meter, brass coupling on house side, curb stop, etc.
 - Install anode lead wire from a prepackage Zink anode to the copper pipe with a brass grounding clamp as shown on City Standard Drawing No. 723.
 - Install reduced pressure principle backflow preventer as shown on City Standard Drawing No. 734 when any of the following conditions exist.

- When serving more than two (2) dwelling units.
 - To separate potable water supply from irrigation system.
 - When Recycled water connection serves the site.
 - When Recycled water irrigation system has permanent plumbing connection to chemical feed.
 - When any potable water service has permanent plumbing connection to pumps, injectors and tanks.
- Service Saddle will be required on all wet taps. No Service Saddle shall be used for ductile iron main dry taps.
 - This note is provided as information only and is not subject to public facilities inspection. Insulated coupling Mueller H-10871 or equivalent shall be installed on customer service side of meter.
 - Where more than one domestic meter is required, each meter shall be identified with permanent, durable markings to indicate which address, building or tenant space each meter serves, (i.e. brass tag stamped with address).
 - Meter box side openings shall be grouted.

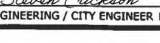
CITY OF MILPITAS, ENGINEERING DIVISION		STANDARD DRAWING NO. 722
REVISION	DATE	
1	1991	3/4" WATER SERVICE SINGLE & SPLIT
2	2001	
3	2010	
APPROVED BY: 		DATE : 6/15/10
PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283		SHEET 3 OF 4

3/4" WATER SERVICE SINGLE & SPLIT (3 OF 4)
SCALE: NTS

1
VAR

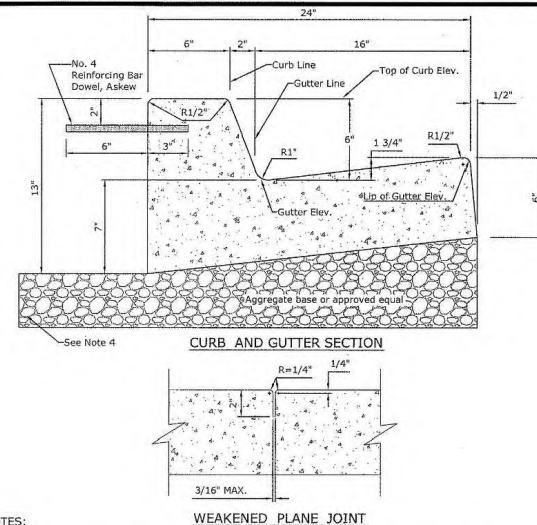


- NOTES:
- IF THE SERVICE LATERAL IS COPPER AND THE WATER MAIN OR THE SADDLE IS IRON OR STEEL, INSTALL AN INSULATING CORPORATION STOP ACCORDING TO STANDARD DETAIL NO. 720. IF THE SERVICE LATERAL IS PVC, NO ELECTRICAL ISOLATION IS REQUIRED.
 - INSTALL GROUND CLAMP ABOVE BACKFILL LINE, PROVIDING APPROXIMATELY 12" OF LOOPED SLACK IN THE WIRE, AND INSERT THE WIRE INTO THE GROUND CLAMP FROM ABOVE TO ALLOW FOR REMOVAL AND REPLACEMENT DURING TESTING AND/OR REPAIR.
 - INSTALL INSULATING UNION (SEE NO. 766) OR MUELLER H-10871 INSULATING METER TAILPIECE, OR APPROVED EQUAL.

CITY OF MILPITAS, ENGINEERING DIVISION		STANDARD DRAWING NO. 722
REVISION	DATE	
1	2022	3/4" WATER SERVICE SINGLE & SPLIT - ANODE INSTALLATION
2		
3		
APPROVED BY: 		DATE : 6-2-2022
DIRECTOR OF ENGINEERING / CITY ENGINEER RCE # C-57242		SHEET 4 OF 4

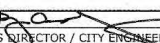
3/4" WATER SERVICE SINGLE & SPLIT (4 OF 4)
SCALE: NTS

2
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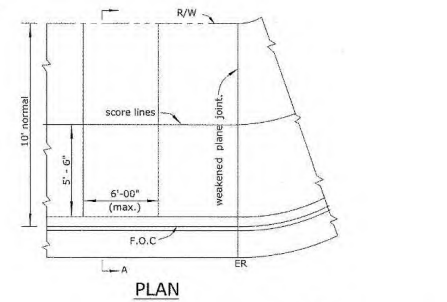
- NOTES:
- Use Portland Cement Concrete containing not less than 564 lbs. of Type I or I/II Portland Cement per cubic yard with a compressive strength of not less than 3000 psi. at 28 days, with a medium broom finish.
 - Dowels shall be used only when the curb is constructed before the contiguous sidewalk (Std. Drawing No's. 425, 426, and 427) and when jointing new curb and gutter to existing concrete curb. Bar spacing shall be 1' each side of the weakened plane joint and on 5' 6" max. centers.
 - Weakened Plane Joints shall be constructed at ends of curb returns, curb inlets, other structures and at 12' intervals except in driveway sections. Joints shall match adjacent improvements.
 - Aggregate base thickness shall be 6" or shall be determined by the extension of the subbase line under the curb, whichever is greater.
 - For curb & gutter replacement; A 1'x1' wedge-cut

NOT TO SCALE

CITY OF MILPITAS, ENGINEERING DIVISION		STANDARD DRAWING NO. 410
REVISION	DATE	
1	1991	CURB AND GUTTER
2	2001	
3	2010	
APPROVED BY: 		DATE : 6/15/10
PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283		SHEET 1 OF 1

CURB AND GUTTER
SCALE: NTS

3
VAR

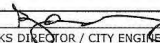


WEAKENED PLANE JOINT
SIDEWALK REPLACEMENT SHALL
BE FROM JOINT TO JOINT

NOTES:

- Weakened plane joints shall be constructed at ends of curbs returns, curb inlets, other structures and at 12' intervals except in driveway sections. Joints shall match adjacent improvements.
- Use Portland Cement Concrete containing not less than 564 lbs. of Type I or I/II Portland Cement per cubic yard with a compressive strength of not less than 3000 psi. at 28 days, with a medium broom finish.
- Score lines shall be 1/4" deep.
- Use 4-#4 X 9" dowels at the expansion joints or when jointing new sidewalk to existing.
- Dowels connecting new sidewalk to an existing concrete curb shall be 6" from ends and 5'-6" max. from center of 12' curb and gutter sections.
- Commercial sidewalk shall be constructed on both sides of the street.

NOT TO SCALE

CITY OF MILPITAS, ENGINEERING DIVISION		STANDARD DRAWING NO. 426
REVISION	DATE	
1	1975	COMMERCIAL SIDEWALK
2	2001	
3	2010	
APPROVED BY: 		DATE : 6/15/10
PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283		SHEET 1 OF 1

COMMERCIAL SIDEWALK
SCALE: NTS

4
VAR



741 ALLSTON WAY
BERKELEY, CA 94710
OFFICE: (510) 540-7100 www.hydroscience.com



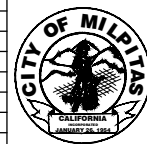
Record Drawings

Designer: _____ Date: _____
Public Works Inspector: _____ Date: _____
Utility/Facility Dept. Head: _____ Date: _____
Project Engineer: _____ Date: _____
Public Improvements Initially Accepted by
the City Council on: _____ Res. No. _____

Drawn By: WZ/AP Date: 1/15/25
Checked By: WZ Date: 1/15/25
Designed By: CML Date: 1/15/25

Revisions

Num.	Description	Engr. Appr.	Date
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CITY OF MILPITAS
ENGINEERING DIVISION

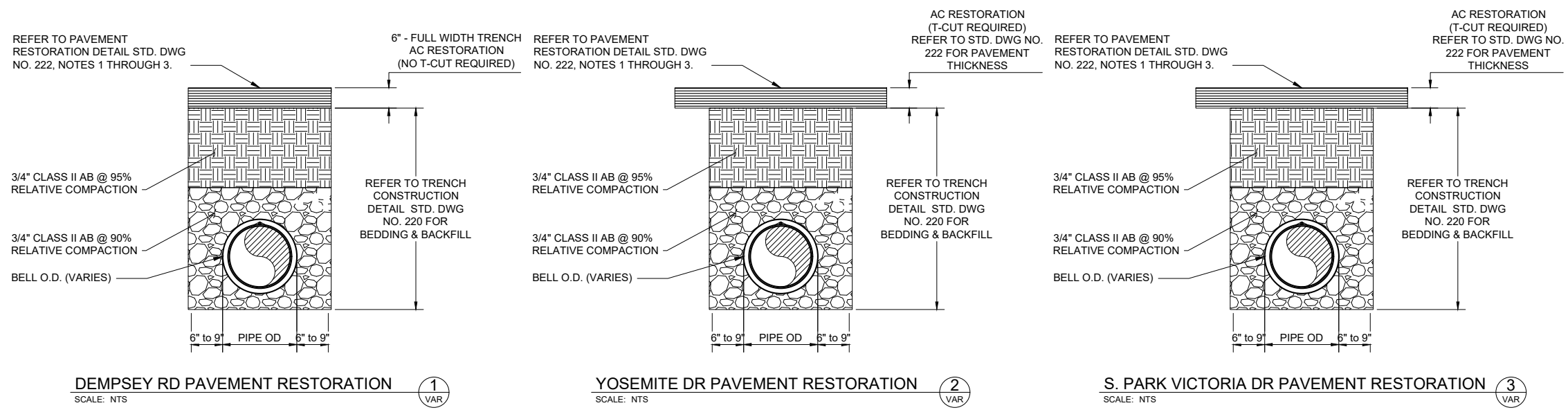
DEMPSEY ROAD WATERLINE REPLACEMENT
PROJECT NO. 7118 & 7110

CIVIL STANDARD DETAILS - 7

RECOMMENDED FOR BIDDING BY: Lyhak Eam DATE: 1/27/2025
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING

PROJECT NO.
7118 & 7110
Rec. Dwg No.
2-####
C507
SCALE:
AS NOTED
SHEET 30 OF 33

File Name: K:\Projects\356-City of Milpitas\011-Dempsey Road\04-Design\02_CADD\01_Water Main\Project\356-011-Civil\Std-Details.dwg Plotted By: MARC FERNANDEZ Plot Date: 1/20/2025 6:00 AM



741 ALLSTON WAY
BERKELEY, CA 94710
OFFICE: (510)540-7100 www.hydroscience.com



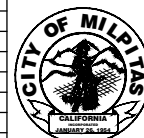
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Public Works Inspector: _____ Date: _____
Utility/Facility Dept. Head: _____ Date: _____
Project Engineer: _____ Date: _____
Public Improvements Initially Accepted by
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Drawn By: WZ/AP Date: 1/15/25
Checked By: WZ Date: 1/15/25
Designed By: CML Date: 1/15/25

Revisions

Num.	Description	Engr. Aprv.	Date
1			



CITY OF MILPITAS
ENGINEERING DIVISION

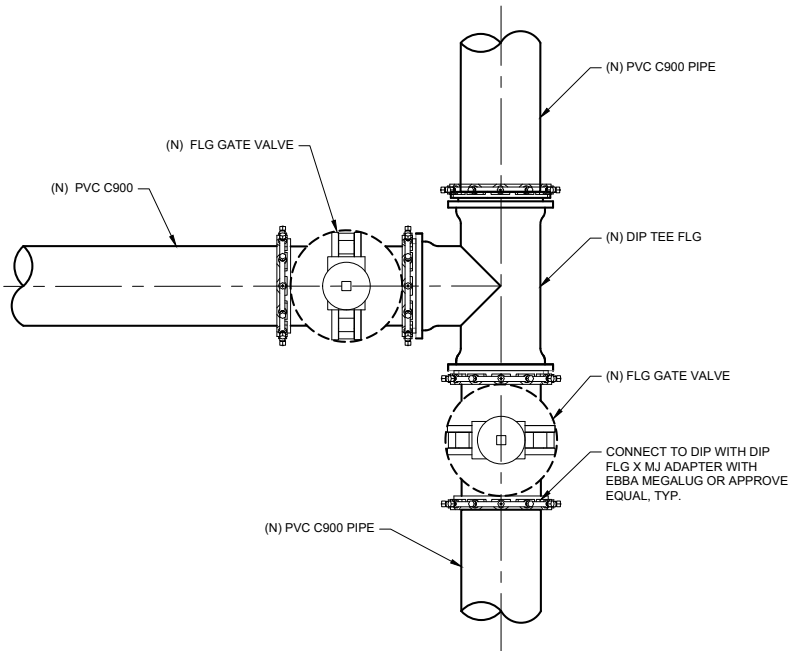
DEMPSEY ROAD WATERLINE REPLACEMENT
PROJECT NO. 7118 & 7110

CIVIL STANDARD DETAILS - 8

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LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING

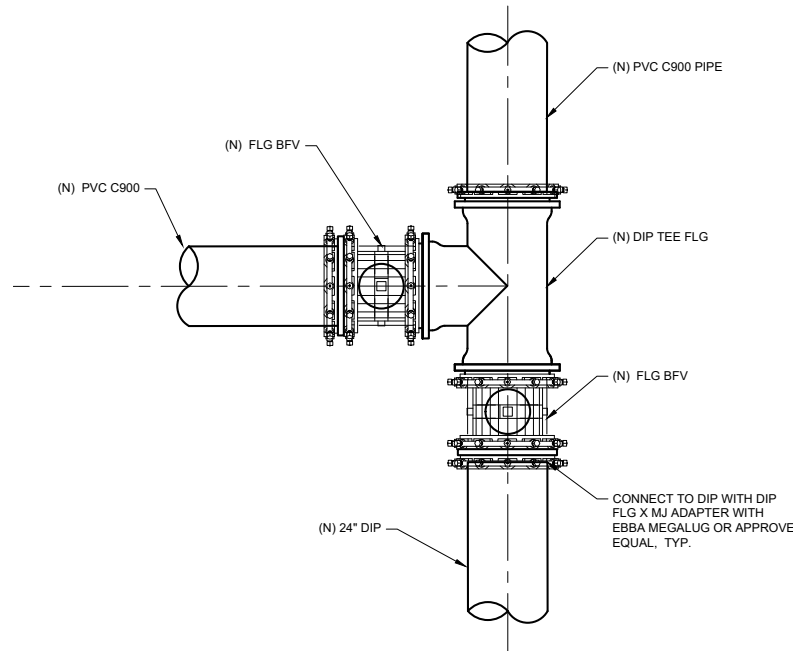
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7118 & 7110
Rec. Dwg No.
2-####
C508
SCALE:
AS NOTED
SHEET 31 OF 33

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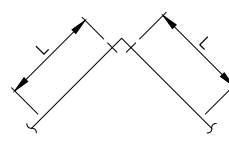
TYPICAL (N) GATE VALVE INSTALLATION
SCALE: NTS

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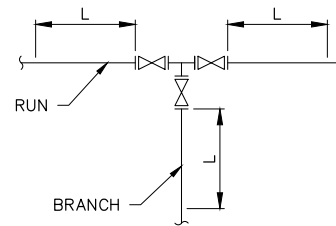


TYPICAL (N) BUTTERFLY VALVE INSTALLATION
SCALE: NTS

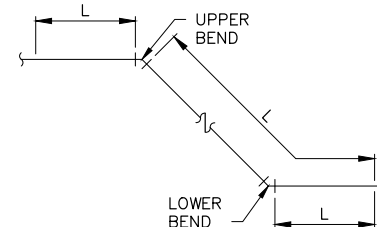
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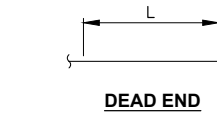
HORIZONTAL BENDS



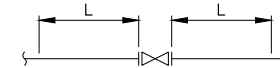
TEE WITH VALVE ON "RUN"



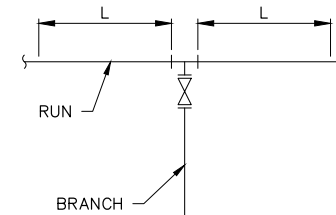
VERTICAL 45° BEND



DEAD END



IN-LINE VALVE



TEE WITHOUT VALVE ON "RUN"

MINIMUM PIPE RESTRAINED JOINT LENGTHS AT EACH FITTING (FEET)											
PIPE SIZE (IN)	90°	45°	22-1/2"	11-1/4"	BRANCH	RUN W/VALVE	RUN W/O VALVE	DEAD END	IN-LINE VALVE	UPPER 45° BEND	LOWER 45° BEND
24					94	208	20				
12	23	17	9	4	60	114	10	114	114	47	11
10		15			43	96	10			40	9
8		13			28	80	10			34	8
6		10			10	61	10			26	6

RESTRAINED JOINT LENGTHS AT FITTINGS
SCALE: NO SCALE

3
VAR

NOTES

1. CONTRACTOR TO SUBMIT CALCULATIONS FOR SPECIAL CONDITIONS.
2. EXTEND RESTRAINED PIPE LENGTH BEYOND ADJACENT FITTINGS AS NECESSARY.
3. FACTOR OD SAFETY: 1.5
4. MINIMUM DEPTH: 3.6 FEET
5. TEST PRESSURE: 200 PSI
6. ALL BENDS, TEES, CROSSES, REDUCERS, DEAD ENDS, AND FIRE HYDRANTS SHALL BE RESTRAINED MECHANICALLY, INCLUDING RESTRAINING PIPE JOINTS AS NECESSARY TO RESIST THE THRUST REACTION FORCES OF THE BENDS, FITTINGS, AND INTERNAL WORKING PRESSURES. CONTRACTOR SHALL SUBMIT DETAILS OF THE RESTRAINT SYSTEM MINIMUM



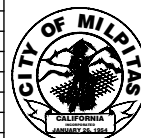
Record Drawings

Designer: _____ Date: _____
Public Works Inspector: _____ Date: _____
Utility/Facility Dept. Head: _____ Date: _____
Project Engineer: _____ Date: _____
Public Improvements Initially Accepted by the City Council on: _____ Res. No. _____

Drawn By: WZ/AP Date: 1/15/25
Checked By: WZ Date: 1/15/25
Designed By: CML Date: 1/15/25

Revisions

Num.	Description	Engr. Aprv.	Date
1			



CITY OF MILPITAS
ENGINEERING DIVISION

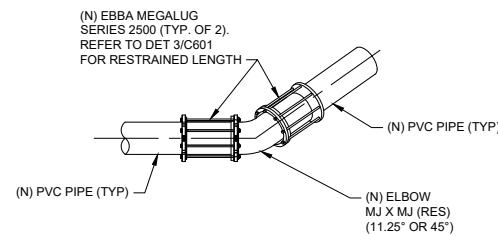
DEMPSEY ROAD WATERLINE REPLACEMENT
PROJECT NO. 7118 & 7110

CIVIL DETAILS

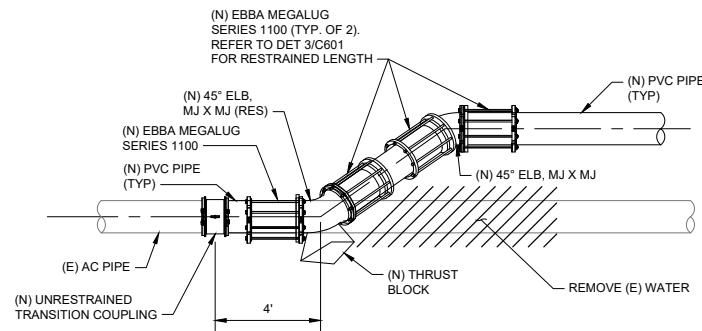
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LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER - ENGINEERING

PROJECT NO. 7118 & 7110
Rec. Dwg No. 2-####
C601
SCALE: AS NOTED
SHEET 32 OF 33

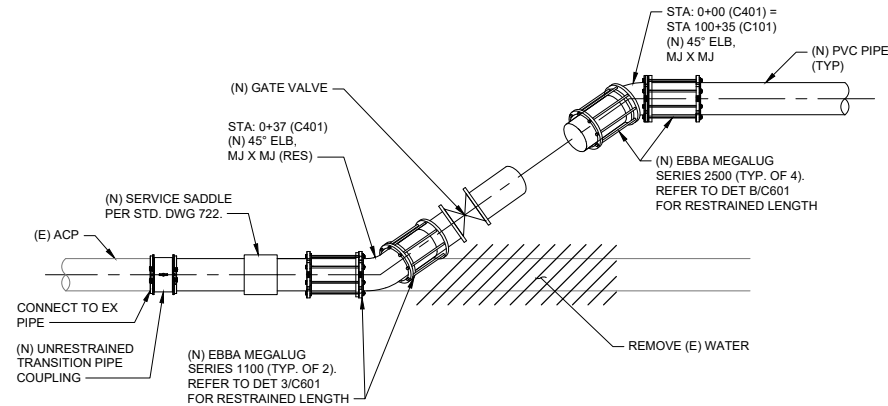
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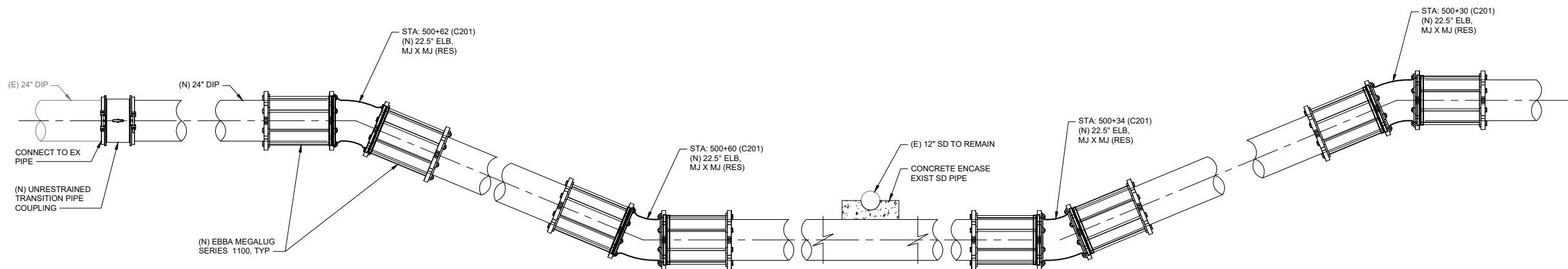
TYPICAL (N) ELBOW INSTALLATION (11.25° OR 45°) 1
SCALE: NTS VAR



TYPICAL (N) 45° ELBOW CONNECTION TO EXISTING WATER 2
SCALE: NTS VAR



DEMPEY RD TIE-IN DETAIL (STA: 100+35) 3
SCALE: NTS VAR



TYPICAL (N) 24" PIPE INSTALLATION 4
SCALE: NTS VAR



Record Drawings	
Designer: _____	Date: _____
Public Works Inspector: _____	Date: _____
Utility/Facility Dept. Head: _____	Date: _____
Project Engineer: _____	Date: _____
Public Improvements Initially Accepted by the City Council on: _____	Res. No. _____

Drawn By: WZ/AP Date: 1/15/25
Checked By: WZ Date: 1/15/25
Designed By: CML Date: 1/15/25

Revisions			
Num.	Description	Engr. Appr.	Date
1			



CITY OF MILPITAS ENGINEERING DIVISION		PROJECT NO. 7118 & 7110
DEMPEY ROAD WATERLINE REPLACEMENT PROJECT NO. 7118 & 7110		Rec. Dwg No. 2-####
CIVIL DETAILS		C602
RECOMMENDED FOR BIDDING BY: <u>Lyhak Eam</u> DATE: <u>1/27/2025</u>		SCALE: AS NOTED
LYHAK EAM, P.E., PUBLIC WORKS DIVISION MANAGER – ENGINEERING		SHEET 33 OF 33

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01 22 00 UNIT PRICES
01 32 13 SCHEDULING OF WORK
01 33 00 SUBMITTAL PROCEDURES
01 50 00 TEMPORARY FACILITIES AND CONTROLS
01 51 37 TEMPORARY WATER MAIN
01 55 26 TRAFFIC CONTROL
01 78 23 OPERATION AND MAINTENANCE DATA

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33 05 09.23 ADAPTERS FOR UTILITY PIPING
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DIVISION 40 – PROCESS INTERCONNECTIONS

40 05 61.23 RESILIENT-SEATED GATE VALVES
40 05 64.16 AWWA RESILIENT-SEATED BUTTERFLY VALVES

****END OF SECTION****

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**SECTION 00 01 05
CERTIFICATIONS PAGE**

ENGINEER'S CERTIFICATIONS :

These Technical Specifications have been prepared for **City of Milpitas**, for the following project:

Dempsey Road Waterline Replacement Project No. 7118 & 7110

The documents have been prepared by, or under the direct supervision of the following design Professional Engineer(s), licensed in the State of California:

Curtis M. Lam, P.E.
HydroScience Engineers
741 Allston Way
Berkeley, CA 94710



January 14, 2024

*** END OF SECTION ****

SECTION 01 11 00
SUMMARY OF WORK

PART 1 GENERAL

1.1 SUMMARY

- A. The work to be done consists of furnishing all labor, materials, equipment, and services for the **City of Milpitas Dempsey Road Waterline Replacement Project No. 7118**, including all trenching and backfilling; all piping; all paving, retaining walls and at-grade improvements; all structural facilities, all geotechnical work, all site work and grading; and all miscellaneous work as shown on the Contract Drawings, specified or required for a complete, operational installation.

1.2 LOCATION

- A. The project is located in the City of Milpitas, California along Dempsey Rd between Calaveras Blvd and just south of Yosemite Dr, and along Yosemite Dr between Dempsey Rd and S Park Victoria Dr.

1.3 CONTRACTOR SCOPE OF WORK:

- A. The work to be performed under this contract comprises furnishing all labor, materials, and equipment (unless otherwise excluded under "City Pre-purchases") required to, but not limited to, perform the following items:
1. Install approximately 6,000 linear feet of replacement 12-inch and 24-inch PVC water main pipeline, including all of the following:
 - (a) Pipe, angles, couplings, and other appurtenances
 - (b) Isolation valves and appurtenances
 - (c) Blowoffs and/or fire hydrants
 - (d) Combination Air/vacuum release valves
 - (e) Pipe bedding and backfill
 2. Provide water main crossing under Los Coches Creek by Microtunnelling
 3. Constructing new tie-ins to existing water lines as shown on plans
 4. Constructing new service laterals and connections to existing water meters
 5. Constructing new fire service laterals, fire hydrants, and fire hydrant runs
 6. Demolish and remove existing 12-inch water mains, fittings and appurtenances
 7. Provide traffic control per traffic control plans and per Caltrans' requirements
 8. Replace curb and gutter, medians, and landscaping as removed for completion of work

9. Replacing asphalt paving to Caltrans and City of Milpitas requirements
10. Replacing traffic striping and pavement markings removed for completion of work

1.4 CITY SCOPE OF SERVICES

- A. The City will not furnish labor, materials, equipment or services. All required services to construct the proposed potable water pumping and conveyance facilities shall be included in the Contractor's scope of services and directly reflected in the Contractor's final bid.

1.5 CITY PRE-PURCHASED EQUIPMENT

- A. No pre-purchased materials or equipment will be provided by the City.

1.6 WORK INCLUDED

- A. The Contractor shall furnish all labor, superintendence, materials, power, light, heat, fuel, water, tools, appliances, equipment, supplies, services, and other means of construction necessary or proper for performing and completing the work.
- B. The Contractor shall obtain and pay for all required permits.
- C. Contractor shall perform and complete the work in the manner best calculated to promote rapid construction consistent with safety of life and property, to the satisfaction of the City's Representative and in strict accordance with the Contract Documents.
- D. The Contractor shall clean up the work site and maintain it during and after construction, until accepted, and shall do all of the work and pay all costs incidental thereto.
- E. The Contractor shall repair all structures, pavement, and property, in kind, that may be damaged or disturbed during performance of the work.
- F. The Contractor shall provide and maintain such modern plant, tools, and equipment as may be necessary to perform in a satisfactory and acceptable manner all the work required by this Contract. Only equipment of established reputation and proven efficiency shall be used. The Contractor shall be solely responsible for the adequacy of his equipment.

1.7 COORDINATION WITH OPERATIONS OF EXISTING FACILITIES

- A. The Contractor shall coordinate all work with City of Milpitas. Contact Tony Cao, Associate Civil Engineer, 408-586-3321
- B. The water system is to remain in service through the project. Interruptions to the service shall be minimized and shall be coordinated with the City.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01 22 00 UNIT PRICES

PART 1 GENERAL

1.1 GENERAL

Payment for the various items of the Bid Schedule, as further specified herein, shall include full compensation to be received by the Contractor for furnishing all labor, materials, equipment and services, and do all work for the construction, maintenance, dewatering, testing, and placing in trouble-free operation all items of work being described, including all appurtenances thereto and including the costs of all permits and the cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the California Division of Industrial Safety and the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA). No separate payment will be made for any item that is not specifically set forth in the Bid Schedule, and all costs therefor shall be included in the prices named in the Bid Schedule for the various items of work.

1.2 BID SCHEDULE UNIT PRICES

BID ITEM NO. 1: MOBILIZATION/DEMobilIZATION

The contract lump sum price paid for Mobilization/Demobilization shall include full compensation for furnishing all transportation, labor, materials, equipment, and incidentals necessary to prepare the site in accordance with the project plans, the technical specifications, and as directed by the Engineer. Work shall consist of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; obtaining bonds and insurance; preparation, submission, and re-submission of submittals and record drawings; schedule preparation, public notification, cleaning and site maintenance; survey layout; all construction facilities and temporary controls described in Section 01 50 00, and fees and permits. The bid price for mobilization and demobilization shall not exceed ten percent (10%) of the total bid amount.

BID ITEM NO. 2: STORM WATER POLLUTION PREVENTION PLAN

The contract lump sum price paid for Storm Water Pollution Prevention Plan shall include full compensation for preparation, submission, and re-submission of a Storm Water Pollution Prevention Plan (SWPPP) for approval by the Engineer prior to commencing any field work. The SWPPP shall be prepared in accordance with any requirements set forth in Section 01 50 00. The lump sum price shall also include full compensation for furnishing of all transportation, labor, materials, tools, equipment, and all incidental work for implementing the SWPPP for the project.

BID ITEM NO. 3: TRAFFIC CONTROL

The contract lump sum price paid for Traffic Control during construction shall include full compensation for furnishing all materials, equipment, labor, permits, and incidentals required to prepare traffic control plans and provide traffic control for worker and public safety as specified in Section 01 55 26 and as shown on the Drawings. Payment for traffic control during construction shall only be made for work where excavations are to be made in traffic areas, as identified on the Drawings. Traffic control that is necessary to protect the work or the public at sites where excavation is not required in traffic areas shall be considered a part of the rest of the work at those sites, and no additional compensation shall be made therefore.

BID ITEM NO. 4: SHEETING, SHORING AND BRACING

The lump sum price paid for Sheeting, Shoring and Bracing shall include full compensation for furnishing of all materials, equipment, labor and incidentals required to provide sheeting, shoring, bracing and other measures, complete, and as described in Section 31 41 00.

BID ITEM NO. 5: SURVEY MONUMENT PERPETUATION & REPLACEMENT

The lump sum price paid for Survey Monument Perpetuation & Replacement shall include full compensation for furnishing of all materials, equipment, labor to replace all disturbed Monuments as part of this work per City requirements, as described in Section 02 21 13.13.

BID ITEM NO. 6: ASBESTOS COMPLIANCE PLAN, HANDLING, AND DISPOSAL

The lump sum price paid for the preparation of a detailed job-specific plan of work to comply with regulations as described in Section 02 82 33 – Removal and Disposal of Asbestos Containing Materials. The cost to excavate, remove, transport, and dispose of ACP in accordance with the Asbestos Compliance Plan shall be included in this bid item.

BID ITEM NO. 7: TEMPORARY WATER MAIN BYPASS

Contractor shall provide a temporary water main and prepare a Temporary Bypass Plan in accordance with Section 01 51 37. The line item cost for the temporary water main bypass work shall include all labor, materials, equipment, and all other incidental work to provide water to isolated services during the course of the work

BID ITEM NO. 8: CURB/GUTTER/SIDEWALK RECONSTRUCTION

The lump sum price paid for Curb/Gutter/Sidewalk Reconstruction shall include full compensation for furnishing of all materials, equipment, and labor required to reconstruct existing curbs, gutters, and sidewalks that were removed and/or damaged as part of the pipe installation. Reconstruction of curbs, gutters, and sidewalks shall be completed as specified in City Standard Specifications and Drawings.

BID ITEM NO. 9: 6-INCH PVC C900 WATER PIPELINE – OPEN CUT

The contract unit price paid per linear foot for 6-inch PVC Water Pipeline – Open Cut shall include full compensation for furnishing of all materials, equipment, labor and incidentals required to install new pipeline as shown and as specified, including locating and protecting utilities, potholing prior to construction, excavation, new pipe, restraint, thrust blocks, concrete caps, connections to existing pipelines, flushing, disinfection, testing, corrosion protection, tracer wire and warning tape, bedding, backfill, surface & pavement restoration, transport and disposal of materials in accordance with applicable State and Federal regulations, and striping.

BID ITEM NO. 10: 8-INCH PVC C900 WATER PIPELINE – OPEN CUT

The contract unit price paid per linear foot for 8-inch PVC Water Pipeline – Open Cut shall include full compensation for furnishing of all materials, equipment, labor and incidentals required to install new pipeline as shown and as specified, including locating and protecting utilities, potholing prior to construction, excavation, new pipe, restraint, thrust blocks, concrete caps, connections to existing pipelines, flushing, disinfection, testing, corrosion protection, tracer wire and warning tape, bedding, backfill, surface & pavement restoration, transport and disposal of materials in accordance with applicable State and Federal regulations, and striping.

BID ITEM NO. 11: 10-INCH PVC C900 WATER PIPELINE – OPEN CUT

The contract unit price paid per linear foot for 10-inch PVC Water Pipeline – Open Cut shall include full compensation for furnishing of all materials, equipment, labor and incidentals required to install new pipeline as shown and as specified, including locating and protecting utilities, potholing prior to construction, excavation, new pipe, restraint, thrust blocks, concrete caps, connections to existing pipelines, flushing, disinfection, testing, corrosion protection, tracer wire and warning tape, bedding, backfill, surface & pavement restoration transport and disposal of materials in accordance with applicable State and Federal regulations, and striping.

BID ITEM NO. 12: 12-INCH PVC C900 WATER PIPELINE – OPEN CUT

The contract unit price paid per linear foot for 12-inch PVC Water Pipeline – Open Cut shall include full compensation for furnishing of all materials, equipment, labor and incidentals required to install new pipeline as shown and as specified, including locating and protecting utilities, potholing prior to construction, excavation, new pipe, restraint, thrust blocks, concrete caps, connections to existing pipelines, flushing, disinfection, testing, corrosion protection, tracer wire and warning tape, bedding, backfill, surface & pavement restoration, transport and disposal of materials in accordance with applicable State and Federal regulations, and striping.

BID ITEM NO. 13: 24-INCH PVC C900 WATER PIPELINE – OPEN CUT

The contract unit price paid per linear foot for 24-inch PVC Water Pipeline – Open Cut shall include full compensation for furnishing of all materials, equipment, labor and incidentals required to install new pipeline as shown and as specified, including locating and protecting utilities, potholing prior to construction, excavation, new pipe, restraint, thrust blocks, concrete caps, connections to existing pipelines, flushing, disinfection, testing, corrosion protection, tracer wire and warning tape, bedding, backfill, surface & pavement restoration, transport and disposal of materials in accordance with applicable State and Federal regulations, and striping.

BID ITEM NO. 14: 6-INCH GATE VALVE

The contract unit price paid per each for 6-inch Gate Valve & Box shall include full compensation for furnishing all materials, equipment, labor, and incidentals required to install a new valve on the potable water main as shown in the drawings and as specified, including excavation, valve, fittings, restraints, cathodic protection system, riser and valve box, connection to new pipeline, testing, backfill, surface restoration, and striping.

BID ITEM NO. 15: 8-INCH GATE VALVE

The contract unit price paid per each for 8-inch Gate Valve & Box shall include full compensation for furnishing all materials, equipment, labor, and incidentals required to install a new valve on the potable water main as shown in the drawings and as specified, including excavation, valve, fittings, restraints, cathodic protection system, riser and valve box, connection to new pipeline, testing, backfill, surface restoration, and striping.

BID ITEM NO. 16: 10-INCH GATE VALVE

The contract unit price paid per each for 10-inch Gate Valve & Box shall include full compensation for furnishing all materials, equipment, labor, and incidentals required to install a new valve on the potable water main as shown in the drawings and as specified, including excavation, valve, fittings, restraints, cathodic protection system, riser and valve box, connection to new pipeline, testing, backfill, surface restoration, and striping.

BID ITEM NO. 17: 12-INCH GATE VALVE

The contract unit price paid per each for 12-inch Gate Valve & Box shall include full compensation for furnishing all materials, equipment, labor, and incidentals required to install a new valve on the potable water main as shown in the drawings and as specified, including excavation, valve, fittings, restraints, cathodic protection system, riser and valve box, connection to new pipeline, testing, backfill, surface restoration, and striping.

BID ITEM NO. 18: 24-INCH BUTTERFLY VALVE

The contract unit price paid per each for 24 inch Butterfly Valve shall include full compensation for furnishing all materials, equipment, labor, and incidentals required to install a new valve on the potable water main as shown in the drawings and as specified, including excavation, valve, fittings, restraints, cathodic protection system, riser and valve box, connection to new pipeline, testing, backfill, surface restoration, and striping.

BID ITEM NO. 19: 12-INCH WATER MAIN MICROTUNNEL CROSSING – LOS COCHES CREEK

The contract unit price paid per linear foot of 12-inch Water Main Microtunnel Crossing – Los Cochess Creek shall include full compensation for furnishing all materials, equipment, labor, and incidentals required to construction the 12-inch water main line under Los Cochess Creek, including excavation of entry and exit pits, pit backfill, pavement restoration, and installation of casing pipes.

BID ITEM NO. 20: NEW WATER SERVICE LATERAL – 2-INCH AND SMALLER

The contract price paid for each New Water Service Lateral (2-inches and smaller) to existing meters shall include full compensation for furnishing all materials, equipment, and labor to install new domestic, commercial, and irrigation lines, including the pipes and service lines, fittings, valves, appurtenances, service saddles, connection to new water mains, connection to existing meters, reconnection of existing backflow preventers, service abandonments at existing potable water pipeline; testing, disinfection, and associated flushing; restoration of pavement sections; and all coordination and planning required with the City's Representative, City O&M staff, and incidentals. Compensation also includes locating existing utilities; potholing utilities; clearing and grubbing; minor site demolition; trenching; hauling; disposal; pipe materials; corrosion protection; thrust blocks; pipe bedding; backfill and associated compaction and compaction testing; restoration of roadway or parking area subgrade material (AB); concrete curb, gutters and surfaces; restoration of landscaping; and any roadway or parking area surface paving restoration and striping.

BID ITEM NO. 21: NEW 6-INCH FIRE SERVICE LATERAL

The contract unit price paid per each New 6-inch Fire Service Lateral shall include full compensation for furnishing all materials, equipment, labor, and incidentals to install new fire service laterals as shown in the drawings and as specified, including demolition/removal of the existing fire service lateral and isolation valves; connection of the new service lateral to the replacement water main; installation of isolation gate valve; piping and fire service lateral installation; testing and disinfection; and, restoration of pavement sections disturbed during service lateral installation.

BID ITEM NO. 22: NEW FIRE HYDRANT ASSEMBLY

The contract unit price paid per each New Fire Hydrant Assembly shall include full compensation for furnishing all materials, equipment, labor, and incidentals to install new fire hydrant assemblies as shown in the drawings and as specified, including demolition/removal of the existing fire hydrants and appurtenances; testing and disinfection.

BID ITEM NO. 23: 6" FITTINGS (INCLUDES ELBOW, TEES AND REDUCERS)

The contract lump sum price paid for 6" Fittings (Includes elbow, tees and reducers) shall include full compensation for furnishing all materials, equipment, labor, and incidentals to install 6" Fittings as shown in the drawings and as specified, including excavation, valve, cathodic protection system, connection to new pipeline, testing, backfill, surface restoration, and striping.

BID ITEM NO. 24: 8" FITTINGS (INCLUDES ELBOW, TEES AND REDUCERS)

The contract lump sum price paid for 8" Fittings (Includes elbow, tees and reducers) shall include full compensation for furnishing all materials, equipment, labor, and incidentals to install 8" Fittings as shown in the drawings and as specified, including excavation, valve, cathodic protection system, connection to new pipeline, testing, backfill, surface restoration, and striping.

BID ITEM NO. 25: 10" FITTINGS (INCLUDES ELBOW, TEES AND REDUCERS)

The contract lump sum price paid for 10" Fittings (Includes elbow, tees and reducers) shall include full compensation for furnishing all materials, equipment, labor, and incidentals to install 10" Fittings as shown in the drawings and as specified, including excavation, valve, cathodic protection system, connection to new pipeline, testing, backfill, surface restoration, and striping.

BID ITEM NO. 26: 12" FITTINGS (INCLUDES ELBOW, TEES AND REDUCERS)

The contract lump sum price paid for 12" Fittings (Includes elbow, tees and reducers) shall include full compensation for furnishing all materials, equipment, labor, and incidentals to install 12" Fittings as shown in the drawings and as specified, including excavation, valve, cathodic protection system, connection to new pipeline, testing, backfill, surface restoration, and striping.

BID ITEM NO. 27: 24" FITTINGS (INCLUDES ELBOW, TEES AND REDUCERS)

The contract lump sum price paid for 24" Fittings (Includes elbow, tees and reducers) shall include full compensation for furnishing all materials, equipment, labor, and incidentals to install 24" Fittings as shown in the drawings and as specified, including excavation, valve, cathodic protection system, connection to new pipeline, testing, backfill, surface restoration, and striping.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

****END OF SECTION****

SECTION 01 32 13 SCHEDULING OF WORK

PART 1 GENERAL

1.1 GENERAL

- A. The scheduling of the work under the Contract shall be performed in accordance with the requirements of this Section.
- B. The development of the schedule, the cost loading of the schedule, monthly payment requisitions and project status reporting requirements of the Contract shall employ computerized Critical Path Method (CPM) or bar chart scheduling.

1.2 DEFINITIONS AND REQUIREMENTS

- A. Critical Path Method (CPM): CPM, as required by this Section, shall be interpreted to be generally as outlined in the Association of General Contractors (AGC) publication, "The Use of CPM in Construction." except that either "i-j" arrow diagrams or precedence diagramming format may be utilized. In the case of conflicts between this specification and the AGC Document, this specification shall govern.
- B. Construction Schedules: Construction schedules shall include a graphic network diagram and computerized construction schedule reports.
- C. Networks: The CPM network shall be in a form of a time scaled "i-j" activity-on-arrow or precedence type diagram and may be divided into a number of separate sheets with suitable match lines relating the interface points among the sheets.
 - 1. Individual sheets shall not exceed 36-inch by 60-inch.
- D. All construction activities and procurement shall be indicated in a time-scaled format and a calendar timeline shall be shown along the entire sheet length.
 - 1. Each activity arrow or node shall be plotted so that the beginning and completion dates of each activity are accurately represented along the calendar timeline.
 - 2. All activities shall be shown using the symbols that clearly distinguish between critical path activities, non-critical activities and free float for each non-critical activity.
 - 3. All activity items shall be identified by their respective Activity Number, Responsibility Code, Work Duration, and their Dollar Value.
 - 4. All non-critical path activities shall show their total float time in scale form by utilizing a dotted line or some other graphical means.
- E. Duration Estimates: The duration estimate indicated for each activity shall be computed in calendar days and shall represent the single best estimate considering the scope of the activity work and resources planned for the activity. Except for certain non-labor activities, such as curing of concrete or delivery of materials, activity duration

shall not exceed 10 calendar days nor be less than one calendar day unless otherwise accepted by the City's Representative.

F. Float Time: Float time shall be as follows:

1. Definition: Unless otherwise provided herein, float as referenced in these documents, is total float. Total float is the period of time measured by the number of calendar days each non-critical path activity may be delayed before it and its succeeding activities become part of the critical path. If a non-critical path activity is delayed beyond its float period, that activity then becomes part of the critical path and controls the end date of the project. Thus, the delay of the non-critical path activity beyond its float period will cause delay to the project itself.
2. Float Ownership: Neither the City nor the Contractor owns the float time. The project owns the float time. As such, liability for delay of the project completion date rests with the party actually causing delay to the project completion date. For example, if Party A uses some, but not all of the float time and Party B later uses the remainder of the float time as well as additional time beyond the float time, Party B shall be liable for the costs associated with the time that represents a delay to the project's completion date. Party A would not be responsible for any costs since it did not consume all of the float time and additional float time remained, therefore, the project's completion date was unaffected.

1.3 SUBMITTALS

- A. Submit schedules per requirements of Specification Section 01 33 00 – Submittal Procedures.
- B. Preliminary Schedule
 1. The Contractor shall submit a preliminary schedule document at the Preconstruction Conference, to identify the manner in which the Contractor intends to complete all work within the Contract Time.
- C. Original Schedule
 1. The Contractor shall submit an original schedule document within 21 days following the Preconstruction Conference.
- D. Revised or Updated Schedules
 1. Submit when required to reflect changes to original schedule.

1.4 CONSTRUCTION SCHEDULE

- A. The schedule shall indicate the major components of the project work and the sequence relations between major components and subdivisions of major components.
- B. The schedule shall be cost loaded based on the schedule of values as approved by the City's Representative.

- C. Sufficient detail shall be included for the identification of subdivisions of major components into such activities as:
 - 1. All work tasks requiring a partial of existing facilities and roadways.
 - 2. Trenching and backfilling.
 - 3. Piping
 - 4. Manhole construction.
 - 5. Finished pavement.
 - 6. Site work.
 - 7. Other important work within the overall project scope.
- D. Planned durations and start dates shall be indicated for each work item subdivision. Each major component and subdivision component shall be accurately plotted on time scale sheets not to exceed 36-inch by 60-inch in size. Not more than one sheet shall be employed to represent this information.

1.5 SCHEDULE REVIEW

- A. The City's Representative and the Contractor shall meet to review and discuss the preliminary schedule within 14 days after it has been submitted to the City's Representative.
 - 1. The City's Representative's review and comment on the schedules shall be limited to Contract conformance with the sequencing and milestone requirements as stated in other sections of the specifications.
 - 2. The Contractor shall make corrections to the schedules necessary to comply with the Contract requirements and shall adjust the schedules to incorporate any missing information requested by the City's Representative.

1.6 ACCEPTANCE

- A. The acceptance of the Contractor's schedule by the City's Representative and City will be based solely upon the schedule's compliance with the Contract requirements.
- B. By way of the Contractor assigning activity durations and proposing the sequence of the Work, the Contractor agrees to utilize sufficient and necessary management and other resources to perform the work in accordance with the schedule.
- C. Upon submittal of a schedule update, the updated schedule shall be considered the "current" project schedule.
- D. Submission of the Contractor's progress schedule to the City or City's Representative shall not relieve the Contractor of the Contractor's total responsibility for scheduling, sequencing, and pursuing the Work to comply with the requirements of the Contract Documents, including adverse effects such as delays resulting from ill-timed work.

1.7 MONTHLY UPDATES AND PERIODIC SCHEDULE SUBMITTALS

- A. Following the acceptance of the Contractor's Original Construction Schedule, the Contractor shall monitor the progress of the Work and adjust the schedule each month to reflect actual progress and any changes in planned future activities.
1. Each schedule update submitted must be complete including all information requested in the original schedule submittal.
 2. Each update shall continue to show all work activities including those already completed.
 3. These completed activities shall accurately reflect the "as built" information by indicating when the work was actually started and completed.
- B. Neither the submission nor the updating of the Contractor's original schedule submittal nor the submission, updating, change or revision of any other report, curve, schedule or narrative submitted to the City's Representative by the Contractor under this Contract, nor the City's Representative's review or acceptance of any such report, curve, schedule or narrative shall have the effect of amending or modifying, in any way, the Contract completion date or milestone dates or of modifying or limiting, in any way, the Contractor's obligations under this Contract. Only a signed, fully executed change order can modify these contractual obligations.
- C. The monthly schedule update submittal will be reviewed with the Contractor during a construction progress meeting held on a month end date to be determined. The goal of these meetings is to enable the Contractor and the City's Representative to initiate appropriate remedial action to minimize any known or foreseen delay in completion of the Work and to determine the amount of Work completed since the last month's schedule update.
1. The status of the Work will be determined by the percent complete of each activity shown in the Network Diagram.
 2. These meetings are considered a critical component of the overall monthly schedule update submittal and the Contractor shall have appropriate personnel attend.
 3. As a minimum, these meetings shall be attended by the Contractor's Project Manager and General Superintendent.
 4. Within seven (7) calendar days after the progress meeting, the Contractor shall submit the revised schedule.
 5. Within five (5) calendar days of receipt of the above noted revised submittals, the City's Representative will either accept or reject the monthly schedule update submittal.
 6. If accepted, the percent complete shown in the monthly update will be the basis for the Application for Payment to be submitted by the Contractor.
 7. If rejected, the update shall be corrected and resubmitted by the Contractor before the Application for Payment for the update period can be processed.

- D. Schedule Revisions: The Contractor shall highlight or otherwise identify all changes from the previous schedule. The Contractor shall modify any portions of the schedule that become infeasible because of activities behind-schedule or for any other valid reason.

1.8 CHANGE ORDERS

- A. Upon approval of a change order, or upon receipt by the Contractor of authorization to proceed with additional work, the change shall be reflected in the next submittal of the schedule by the Contractor.
- B. The Contractor shall utilize a sub-network in the schedule depicting the changed work and its effect on other activities.
- C. This sub-network shall be tied to the main network with the appropriate logic so that a true analysis of the Critical Path can be made.

1.9 PROJECT STATUS REPORTING

- A. In addition to the submittal requirements for the scheduling identified in this Section, the Contractor shall provide monthly project status reports.
- B. The Contractor shall prepare monthly written narrative reports of the status of the project for submission to the City's Representative. Written status reports shall include:
 - 1. The status of major project components (Percent Complete, amount of time ahead or behind schedule) and an explanation of how the project will be brought back on schedule if delays have occurred.
 - 2. The progress made on critical activities indicated on the schedule.
 - 3. Explanations for any lack of work on critical path activities planned to be performed during the last month.
 - 4. Explanations for any schedule changes, including changes to the logic or to activity durations.
 - 5. A list of the critical activities scheduled to be performed in the next two-month period.
 - 6. The status of major material and equipment procurement.
 - 7. The value of materials and equipment properly stored at the site, but not yet incorporated into the work-in-place.
 - 8. Any delays encountered during the reporting period.
 - 9. An assessment of inclement weather delays and impacts to the progress of the Work.

- C. The Contractor may include any other information pertinent to the status of the project. The Contractor shall include additional status information requested by the City's Representative.

1.10 INCLEMENT WEATHER PROVISIONS OF THE SCHEDULE

- A. The Contractor's construction schedule shall include lost days on the CPM schedule's critical path due to inclement weather typical for the area of construction based on the average rain days for the past five (5) years.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01 33 00 SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Description of general requirements for project Submittals.

1.2 SUBMITTALS

A. Where required by the Specifications, the Contractor shall submit descriptive information which will enable the Engineer to advise the City whether the Contractor's proposed materials, equipment or methods of work are in general conformance with the design concept and are in compliance with the drawings and specifications. The information to be submitted shall consist of drawings, specifications, descriptive data, certificates, samples, test results and other such information, all as specifically required in the Specifications.

B. The Contractor shall submit the following items:

1. Schedule of Submittals and Shop Drawings
2. List of Submittals, Shop Drawings, Product Data and Materials
3. Contractor's Safety Program
4. Designated Safety Supervisor
5. Designated "Competent Person(s)"
6. Schedule of Values
7. Construction Schedule
8. Substitutions List
9. Shop Drawings
10. Product Data
11. Samples
12. Material Safety Data Sheets
13. Operation and Maintenance Manuals
14. Project Closeout Information
15. Warranty Data
16. Others as Specified in the Technical Specifications

17. Manufacturer's Instructions
 18. Manufacturer's Certifications and Test Reports
- C. Quantity of Submittals:
1. Submit one (1) digital PDF format of all submittals.
 - (a) PDF submittal shall be clear and readable.
 - (b) Provide searchable PDF file.
 - (c) Annotate or mark submittal to clearly show the item or model being submitted.
 - (d) Organization and Binding of Submittals: The initial and subsequent submittals of drawings and data for review shall be organized and bound with a Table of Contents so that eventually they may be used as guides for preparing the required maintenance manuals. PDF files shall have active links in the Table of Contents, or they shall have bookmarks per the Table of Contents.
 2. If paper copies are submitted:
 - (a) Provide three (3) copies to the City's Representative and a scanned electronic copy where feasible. The Contractor shall state the number of copies the Contractor wants to be returned where necessary.
- D. Where the Contractor is required by these Specifications to submit samples of products, the Contractor shall provide a sufficient number of physical samples to allow three (3) to be retained by the City's Representative of all structural and architectural products involving color, finish, texture, or the like.
- E. List of Submittals:
1. Within thirty-five (35) days after the Notice to Proceed, the Contractor shall submit a List of Submittals to the City's Representative for review.
 2. The List shall include all items of equipment and materials for necessary project disciplines (Civil, Electrical, Mechanical etc) and the names of manufacturers with whom purchase orders have been or will be placed.
 3. The List shall be arranged in the same order as the Specifications and shall contain sufficient data to identify all items of material and equipment the Contractor proposes to furnish. The List shall include Specification and/or Drawing references.
 4. After the submission is favorably reviewed and returned to the Contractor by the City's Representative, it shall become the basis for the submission of detailed manufacturer's drawings, catalog cuts, curves, diagrams, schematics, data, and information on each separate item for review as set forth in the Specifications.

- F. The Contractor shall be responsible for the accuracy and completeness of the information contained in each submittal and shall ensure that the material, equipment or method of work shall be as described in the submittal.
1. Submittals shall contain all required information, including satisfactory identification of items, units and assemblies in relation to the contract drawings and specifications.
 2. The Contractor shall verify that the material and equipment described in each submittal conforms to the requirements of the specifications and drawings.
 3. Unless otherwise approved by the Engineer, submittals shall be made only by the Contractor, who shall indicate by a signed stamp on the submittals that the Contractor has checked the submittals and that the work shown conforms to contract requirements and has been checked for dimensions and relationship with work of all other trades involved.
 4. If the information shows deviations from the specifications or drawings, the Contractor, by statement in writing accompanying the information, shall identify the deviations and state the reason(s) therefore.
 5. The Contractor shall ensure that there is no conflict with other submittals and shall notify the Engineer in each case where the Contractor's submittal may affect the work of another contractor or the City.
 6. The Contractor shall ensure coordination of submittals among the related crafts and subcontractors.

1.3 SUBMITTAL TRANSMITTAL PROCEDURE

- A. General: Submittals regarding material and equipment shall be accompanied by a transmittal form from the Contractor. A separate form shall be used for each specific item, class of material, equipment, and items specified in separate, discrete specification sections for which a submittal is required. However, submittals for various items shall be made with a single form only when the items taken together constitute a manufacturer's package or are so functionally related that expediency indicates checking or review of the group or package as a whole.
- B. Submittal Identification: Each set of submittals or samples shall be attached to the submittal transmittal form.
1. The submittal number shall be made up of two parts: XXX-ZZ. The XXX shall be sequential number 001 for the first item submitted, 002 for the second, etc. The ZZ shall be the sequential number of a specific submittal or resubmittal (01 for the first submittal, 02 for the first resubmittal, etc.).
 2. All submittals shall show the contract title, shall indicate the name of the vendor, and shall indicate when the equipment and/or material will be required by the construction schedule.
 3. The submittal must be adequate to permit a comprehensive review without further reference to the Contractor. The documents submitted must be separately identifiable on the Contractor's submittal transmittal form.

- C. Deviation from Contract: If the Contractor proposes to provide material or equipment which does not conform to the specifications and drawings, this shall be indicated under "deviations" on the submittal transmittal form accompanying the submittal copies.
 - 1. If the City accepts such deviation, the City shall issue an appropriate Contract Change Order, except that, if the deviation is minor, or does not involve a change in price or in time of performance, a Change Order need not be issued.
 - 2. If any deviations from the Contract requirements are not noted on the submittal, the review of the shop drawing shall not constitute acceptance of such deviations.
- D. Submittal Completeness: Submittals which do not have all the information required to be submitted, including deviations, shall be considered as not complying with the intent of the contract and are not acceptable and will be returned without review.
 - 1. A complete submittal shall contain sufficient data to demonstrate that the items comply with the Specifications, shall meet the minimum requirements for submissions cited in the technical specifications, shall include materials and equipment data and seismic anchorage certifications where required, and shall include any necessary revisions required for equipment other than first named.
- E. Review of Subsequent Resubmittals: It is considered reasonable that the Contractor shall make a complete and acceptable submittal to the City's Representative at least by the second submission of data. At the discretion of the Engineer costs associated with the review of any subsequent resubmittals may be borne by the Contractor. The Contractor will be billed for these costs by the City. Costs due may be deducted from progress payments due the Contractor by the City.

1.4 SUBMITTAL REVIEW

- A. The Contractor shall provide all submittals to the City's representative at the earliest feasible time possible to facilitate a comprehensive review that does not impact construction related progress.
- B. Within 14 calendar days after receipt of the submittal by the Engineer, the submittal will be reviewed by the Engineer and the Engineer will return the marked-up submittal. On complex drawings and equipment, the Engineer shall acknowledge receipt within 30 days and advise the Contractor when the submittal will be returned. The returned submittal shall indicate one of the following actions.
 - 1. If the review indicates that the material, equipment or work method is in general conformance with the design concept and complies with the drawings and specifications, submittal copies will be marked "NO EXCEPTIONS TAKEN". In this event, the Contractor may begin to implement the work method or incorporate the material or equipment covered by the submittal.
 - 2. If the review indicates limited corrections are required, copies will be marked "MAKE CORRECTIONS NOTED". The Contractor may begin implementing the work method or incorporating the material and equipment covered by the submittal in accordance with the noted corrections. Where submittal information will be incorporated in operation and maintenance data, a corrected copy shall be provided. Otherwise, no resubmittal will be required.

3. If the review reveals that the submittal is insufficient or contains incorrect data, copies will be marked "AMEND AND RESUBMIT". The Contractor shall not undertake work covered by this submittal until the submittal has been revised, resubmitted and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED".
 4. If the review indicates that the material, equipment or work method is not in general conformance with the design concept or in compliance with the drawings and specifications, copies of the submittal will be marked "REJECTED - SEE REMARKS". Submittal with deviations which have not been identified clearly may be rejected. The Contractor shall not undertake work covered by such submittal until a new submittal is made and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED".
- C. Review of drawings, methods of work, or information regarding materials or equipment the Contractor proposes to provide shall not relieve the Contractor of responsibility for errors therein and shall not be regarded as an assumption of risks or liability by the Engineer, the City's Representative or the City, or by any officer, employee or subcontractor thereof, and the Contractor shall have no claim under the contract on account of the failure or partial failure of the method of work, material, or equipment so reviewed.
1. A mark of "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED" shall mean that the City has no objection to the Contractor, upon its own responsibility, using the plan or method of work proposed, or providing the materials or equipment proposed.
 2. Favorable review of submittals does not constitute a change order to the Contract requirements.
 3. The favorable review of all submittals by the Engineer shall apply in general design only and shall in no way relieve the Contractor from responsibility for errors or omissions contained therein.
 4. Favorable review by the Engineer shall not relieve the Contractor of its obligation to meet safety requirements and all other requirements of laws, nor constitute a Contract Change Order.
 5. Favorable review by the Engineer will not constitute acceptance by the Engineer of any responsibility for the accuracy, coordination, and completeness of the submittals or the items of equipment represented on the submittals.
 6. The favorable review of shop drawings shall be obtained prior to the fabrication, delivery and construction of items requiring shop drawing submittal.

****END OF SECTION****

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SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SUMMARY

- A. The Contractor shall provide all temporary facilities and utilities required for execution of the work, protection of employees and the public, protection of the work from damage by fire, weather or vandalism, and such other facilities as may be specified or required by any legally applicable law, ordinance, rule, or regulation.
- B. Temporary facilities utilized on the project shall be in complete accordance with requirements set forth in the Caltrans Standard Specifications.
- C. The Contractor shall keep the work site clean and free from rubbish and debris. Materials and equipment shall be removed from the site when they are no longer necessary on a daily basis as directed by the City's Representative. All cables, slings and other materials used to set the pipe and equipment shall be removed from the project site. Upon completion of the work and before final acceptance, the work site shall be cleared of equipment, unused materials, and rubbish to present a clean and neat appearance.

1.2 TEMPORARY FACILITIES

- A. Electrical Service
 - 1. The Contractor shall arrange, at its own cost, with the local utility to provide adequate temporary electrical service at a mutually agreeable location.
 - 2. The Contractor shall then provide adequate jobsite distribution facilities conforming to applicable codes and safety regulations.
 - 3. The Contractor shall provide, at its own cost, all electric power required for construction, testing, general and security lighting, and all other purposes whether supplied through temporary or permanent facilities.
- B. Water
 - 1. The Contractor shall pay for and shall construct all facilities necessary to furnish water for its use during construction.
 - 2. Water used for human consumption shall be kept free from contamination and shall conform to the requirements of the State and local authorities for potable water.
 - 3. The Contractor shall pay for all water used for the Contractor's operations prior to final acceptance.
- C. Sanitary Conveniences
 - 1. The Contractor shall provide suitable and adequate sanitary conveniences for the use of all persons at the site of the Work.

2. Such conveniences shall include chemical toilets or water closets and shall be located at appropriate locations at the site of the Work.
3. All sanitary conveniences shall conform to the regulations of the public authority having jurisdiction over such matters.
4. At the completion of the Work, all such sanitary conveniences shall be removed, and the site left in a sanitary condition.

D. Telephone/Internet

1. The Contractor shall arrange, at its own cost, with the local utility to provide adequate temporary telephone or internet services for its use during construction.
2. Contractor shall pay for all required services required for its own use as necessary.

1.3 CONSTRUCTION FACILITIES

A. Construction hoists, elevators, scaffolds, stages, shoring, and similar temporary facilities shall be of ample size and capacity to adequately support and move the loads to which they will be subjected. Railings, enclosures, safety devices, and controls required by law or for adequate protection of life and property shall be provided.

B. Staging and Falsework

1. Temporary supports shall be designed by a professional registered engineer with an adequate safety factor to assure adequate load bearing capability. If requested by the City's Representative, the Contractor shall submit design calculations for staging and shoring prior to application of loads.
2. Excavation support shall be in accordance with applicable codes and regulations.

C. Temporary Enclosures

1. When sandblasting, spray painting, spraying of insulation, or other activities inconveniencing or dangerous to property or the health of employees or the public are in progress, the area of activity shall be enclosed adequately to contain the dust, over-spray, or other hazard.
2. In the event there are no permanent enclosures of the area, or such enclosures are incomplete or inadequate, the Contractor shall provide suitable temporary enclosures.

D. Warning Devices and Barricades

1. The Contractor shall adequately identify and guard all hazardous areas and conditions by visual warning devices and, where necessary, physical barriers.
2. Such devices shall, as a minimum, conform to the requirements of Cal/OSHA.

E. Culvert Bypassing and Protection

1. The Contractor shall provide bypass and pumping facilities for any flowing culverts that encroach upon project trenching activities.
 - (a) Bypassing facilities will only be required in high risk situations to prevent flooding the trench. Culvert bypassing risk shall be at the sole discretion of the Contractor.
2. Culvert bypassing systems shall be submitted to the Engineer for review prior to construction activities. Culvert bypassing plans shall provide, but not be limited to, the following information:
 - (a) Means of protecting culverts during trench construction activities.
 - (b) Construction means and methods describing culvert plugging, bypassing, and relocation of flowing water.
 - (c) List all equipment necessary to perform bypassing and culvert protection undertakings.
 - (d) Detail the bypass system's receiving stream crossing or drainage channel and the existing condition of the structure.
3. Culvert crossings damaged during construction activities identified by the project Inspector shall be restored in kind by the Contractor at no additional cost to the City unless otherwise negotiated.

1.4 PROTECTION AND RESTORATION OF EXISTING IMPROVEMENTS

- A. The Contractor shall be responsible for the protection of public and private property at and adjacent to the Work and shall exercise due caution to avoid damage to such property.
- B. The Contractor shall repair or replace all existing improvements which are not designated for removal (e.g., curbs, sidewalks, survey points, fences, walls, signs, utility installations, pavements, structures, etc.) and are damaged or removed as a result of its operations. Repairs and replacements shall be at least equal to existing improvements and shall match them in finish and dimension.
- C. Trees, lawns, and shrubbery that are not to be removed shall be protected from damage or injury. If damaged or removed because of the Contractor's operations, they shall be restored or replaced in as nearly the original conditions and location as is reasonably possible. Lawns shall be re-seeded and covered with suitable mulch.
- D. The Contractor shall give reasonable notice to occupants or owners of adjacent property to permit them to salvage or relocate plants, trees, fences, sprinklers, and other improvements within the right-of-way which are designated for removal or would be destroyed because of the Work.

1.5 ACCESS ROADS

- A. Access roads shall be maintained to all storage areas and other areas to which frequent access is required. Similar roads shall be maintained to all existing facilities on the site of the Work to provide access for delivery of material and for maintenance and operation. Where such temporary roads cross buried utilities that might be injured

by the loads likely to be imposed, such utilities shall be adequately protected by steel plates or wood planking, or bridges shall be provided so that no loads shall discharge on such buried utilities.

1.6 AIR POLLUTION AND DUST CONTROL

- A. The Contractor at its expense shall take whatever steps, procedures, or means as are required to prevent abnormal dust conditions being caused by its operations in connection with the execution of the Work; and on any unpaved road which the Contractor or any of its subcontractors are using, excavation or fill areas, demolition operations, or other activities.
 - 1. Control shall be by sprinkling, use of dust palliatives, modification of operations, or any other means acceptable to agencies having jurisdiction.
 - 2. Haul routes shall be kept visibly wet during excavation and hauling operations.
 - 3. Exposed stockpiles of soil and other backfill material shall be enclosed, have silt fencing, be covered, be watered regularly or have soil binders added to minimize erosion.
 - 4. Dust-producing activities shall be suspended when high winds create construction-induced visible dust plumes moving beyond the project site, in spite of dust control measures.
- B. Unless the construction dictates otherwise, and unless otherwise approved by the City's Representative, the Contractor shall furnish and operate a self-loading motor sweeper with spray nozzle at least once each working day to keep paved areas acceptably clean whenever construction, including restoration, is incomplete.
 - 1. If visible soil material is carried onto adjacent public streets, such streets shall be swept with water sweepers.

1.7 NOISE ABATEMENT

- A. Operations at the Worksite shall be performed so as to minimize unnecessary noise.
- B. Special measures shall be taken to suppress noise during night hours.
- C. Noise levels due to construction activity shall not exceed the levels specified by local ordinance.
- D. Internal combustion engines used on the Work shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated without said muffler.

1.8 WORKING HOURS

- A. Construction shall be allowed only between the hours of 7:00 a.m. and 5:00 p.m. on weekdays Monday through Friday unless otherwise approved in writing by the City's Representative. Work areas may be further limited in the Caltrans right-of-way based on the requirements of the Caltrans encroachment permit.

- B. The Contractor shall be responsible for any inspection and additional administration costs incurred by the City, or its agents and representatives, for work by the Contractor outside the hours defined above on weekdays, or any work on weekends or holidays recognized by the City. Such costs shall be withheld from the succeeding monthly progress payment. Any work specifically required to be performed outside the normal working hours is excluded from the provisions of this paragraph.
- C. The Contractor shall notify the City's Representative at least one working day prior to any work outside the normal working hours defined above, on weekends or holidays.

1.9 DRAINAGE CONTROL

- 1. In all construction operations, care shall be taken not to disturb the existing drainage pattern whenever possible.
- 2. Particular care shall be taken not to direct drainage water onto private property. Drainage water shall not be diverted to streets or drainage ways inadequate for the increased flow.
- 3. Drainage means shall be provided to protect the Work and adjacent facilities from damage due to water from the site or due to altered drainage patterns from construction operations.
- 4. Temporary provisions shall be made by the Contractor to insure the proper functioning of gutters, storm drain inlets, drainage ditches, culverts, irrigation ditches, and natural water courses.

1.10 STORMWATER POLLUTION PREVENTION

- A. The Contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the State Water Resources Control Board.
 - 1. One (1) copy of the SWPPP submitted to the Regional Board will also be submitted to the City's Representative.
 - 2. The Contractor shall file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) to comply with the terms of the Construction General Permit.
- B. Erosion & Dust Control
 - 1. To reduce potential water-borne erosion impacts, the Contractor shall incorporate the following best management practices into the project:
 - (a) Erosion control measures to reduce post-construction erosion, such as re-vegetation with local native plant species and installation of appropriate slope protection.
 - (b) Provide and maintain all necessary erosion and sediment control measures throughout the construction period as required to minimize stormwater pollution control from the Contractor's work area. Erosion and sediment control measures may include, but are not limited to, straw bale dikes, sand bag dikes, silt fences, drainage swales, pipe drains, sediment traps, protective sheets, jute matting, hydro-seeding,

and appropriate surface contouring. The Contractor shall notify the City's Representative if erosion and sediment control measures do not operate properly and shall take all necessary protective action.

- (c) The Contractor shall secure erosion control devices at the end of each work shift during the period from November 1 to April 30, or when rain is forecast prior to the next workday.
- (d) Grading activities shall be prohibited during the period when rain is falling, and runoff is observed at the site. The Contractor shall immediately secure the site for erosion control and storm water runoff.
- (e) Prepare drainage ways that handle concentrated or increased runoff from disturbed areas by using riprap or other lining materials to control erosion.
- (f) Reduce erosion by limiting the area and time of exposure, and by the provision of diversion channels.
- (g) Use temporary plant cover, mulching, and/or structures to control runoff and protect areas subject to erosion during construction.
- (h) Minimize soil exposure during the rainy season by proper timing of grading and construction and be prepared to shut down all earthwork if heavy precipitation occurs.
- (i) Have erosion control equipment and materials on site if needed in an emergency to quickly construct temporary collectors, diversion channels, intercept drains, berms, dikes or filters.

- 2. Grading and permits and the appropriate environmental clearances shall be obtained by the Contractor prior to any export of materials off site.

1.11 CONSTRUCTION CLEANING

- A. The Contractor shall, at all times, keep property on which work is in progress and the adjacent property free from accumulations of waste material or rubbish caused by employees or by the Work. All surplus material shall be removed from the site immediately after completion of the work causing the surplus materials. Upon completion of the construction, the Contractor shall remove all temporary structures, rubbish, and waste materials resulting from its operations.

1.12 DISPOSAL OF MATERIAL

- A. The Contractor shall make arrangements for disposing of materials outside the Site and the Contractor shall pay all costs involved.
 - 1. The Contractor shall first obtain permission from the property owner on whose property the disposal is to be made and absolve the City from any and all responsibility in connection with the disposal of material on said property.
 - 2. When material is disposed of as above provided, the Contractor shall conform to all required codes pertaining to grading, hauling, and filling of earth.

1.13 PARKING AND STORAGE AREAS

- A. All stockpiled materials and parked equipment at the job site shall be located to avoid interference with private property and to prevent hazards to the public.
- B. Locations of stockpiles, parking areas, and equipment storage must be approved by the City's Representative.

1.14 CULTURAL RESOURCES PROTECTION

- A. If historical, archeological or paleontological artifacts are discovered, all work must stop in the immediate vicinity. The Contractor shall protect the discovered items, notify the City's Representative, and comply with applicable law.
- B. If human remains are discovered, all work must stop in the immediate vicinity of the find, and the County Coroner must be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code.
- C. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.

1.15 PROJECT SIGN

- A. The Contractor shall provide, install and maintain for the duration of the project a project sign as designated below. The sign shall be installed within seven (14) days of Notice to Proceed and shall be installed where directed by the City's Representative.
 - 1. 8'x4' exterior grade plywood, minimum 3/4" thick
 - 2. Two coats exterior quality paint for background, one coat exterior quality paint for lettering.
 - 3. Erect supports and framing on secure foundation, rigidly braced and framed to resist loadings. Install sign surface plumb and level; anchor securely.
 - 4. Colors of sign shall be as designated by the City's Representative.
 - 5. Remove sign at the end of the project.
- B. Contents of Project ID Sign

Project Name: Dempsey Road Waterline Replacement Project No. 7118
Utility Owner: City of Milpitas
Engineer: HydroScience Engineers, Inc.
City's Representative: City of Milpitas, Tony Cao, Associate Civil Engineer
Construction Cost: \$\$\$\$\$\$
Start Date: xx/xx/20xx
Estimated End Date: xx/20xx

1.16 PROJECT OFFICE

- A. The Contractor shall maintain on the project site a suitable office or other protected area in which shall be kept project copies of the Contract Documents, project progress records, project schedule, shop drawings, and other relevant documents which shall be accessible to the City and City's Representative during normal working hours.

**** END OF SECTION ****

SECTION 01 51 37
TEMPORARY WATER MAIN

PART 1 GENERAL

1.1 SUMMARY

- A. The Contractor shall provide all the necessary labor, materials, equipment, tools, and supplies necessary to install a complete temporary water main bypass system along portions of the system to be bypassed.

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials (AASHTO)
- B. American National Standards Institute (ANSI)
- C. American Society of Mechanical Engineers (ASME)
- D. ASTM International (ASTM)
- E. American Water Works Association (AWWA)
- F. Cast-Iron Soil Pipe Institute
- G. NSF/ANSI Standard 61 Drinking Water System Components (NSF 61)

1.3 SUBMITTALS

- A. Contractor shall submit in accordance with Section 01 33 00.
- B. Temporary Bypass Plan:
 - 1. Submit a Temporary Bypass Plan outlining all provisions and precautions the Contractor shall take to provide temporary water to all service connections and hydrants.
 - 2. Temporary Bypass Plan shall be submitted to the City Engineer for review and approval fourteen (14) days prior to commencing work on any portion of the system to be bypassed.
 - 3. The plan must be specific and shall include, but not be limited to, the following details:
 - (a) Schedule for installation and maintenance of bypass system.
 - (b) Pedestrian and vehicular traffic crossing details.
 - (c) Protection against main breaks.
 - (d) Size, length, material, locations, and method of installation for temporary water mains.
 - (e) Location of temporary hydrants, if used.

- (f) Shop drawings for temporary connections to existing or new water mains.
- (g) Methods for thrust restraint of temporary water mains.
- (h) Methods for pressure and leakage testing.
- (i) Methods for disinfection, flushing, and sampling of temporary water mains.
- (j) Contractor must designate and provide a 24-hour contact person who has adequate parts and equipment on hand to make necessary repairs to the temporary water main bypass system in a timely manner.

PART 2 PRODUCTS

2.1 GENERAL

- A. Temporary water main bypass pipe and associated appurtenances that may come into contact with water shall be certified for use in water systems. Submit proof of NSF certification for each item submitted.

PART 3 EXECUTION

3.1 GENERAL

- A. The temporary water main bypass system shall be designed to be in place for no more than ten (10) working days.
- B. All work in this section shall be completed in accordance with Sections 01 11 00 and the City of Milpitas Standard Specifications and Drawings.

3.2 FIELD QUALITY CONTROL

- A. The City will perform bacteriological analysis for pipelines to be disinfected.
- B. Factory Quality Control: The Contractor shall test all products as required herein and by the reference specifications.
- C. The Contractor shall:
 - 1. Clean all pipelines by flushing. Flushing of temporary water mains shall achieve a velocity of at least 3 feet per second. The Contractor shall install temporary strainers, temporarily disconnect equipment or take other appropriate measures to protect the existing water mains while cleaning piping.
 - 2. Perform leakage tests.
 - 3. Be responsible for the costs of additional inspection and retesting by the City resulting from non-compliance.

****END OF SECTION****

SECTION 01 55 26 TRAFFIC CONTROL

PART 1 GENERAL

1.1 DESCRIPTION

- A. The Contractor shall furnish all labor, materials, equipment, tools, and services necessary to provide access to the motoring and pedestrian public; and adequately safeguard the workers and public from construction hazards with a minimum of inconvenience.
- B. Work includes but is not limited to the following:
 - 1. Preparation of Traffic Control Plans and obtaining approval of Traffic Control Plans from the Caltrans and City.
 - 2. Masking and restoring permanent signs and striping.
 - 3. Erections and removal of temporary construction signs.
 - 4. Installation and removal of temporary traffic control devices, including barriers, barricades, changeable message boards.
 - 5. Coordinating work with all agencies having jurisdiction.

1.2 REFERENCE STANDARDS

- A. The Contractor shall comply with guidelines excluding payment sections of the latest editions of the following reference standards:
 - 1. California Manual of Uniform Traffic Control Devices.
 - 2. Caltrans Standard Specifications
 - 3. Caltrans Standard Plans
 - 4. CAL/OSHA, State of California Construction Safety Orders.
 - (a) Section 1599, Traffic Control for Public Streets and Highways.
 - (b) Section 1599, Flaggers
 - 5. OSHA, Code of Federal Regulations.
 - (a) Title 19, Part 1926, Construction Safety Health Regulations
 - (b) Title 29, Part 1910, Occupational Safety and Health Standards
- B. In case of conflict between the above reference standards and the specifications contained herein, these specifications shall take precedence and be used in lieu of such conflicting portions.

1.3 SUBMITTALS

- A. The Contractor shall provide submittals in accordance with Section 01 33 00, SUBMITTAL PROCEDURES.
- B. The Contractor shall at minimum submit the following:
 - 1. Traffic Control Plans shall conform to Standard Specification Section 12-4.02, TRAFFIC CONTROL PLANS (TCP), and Section 6-10, PERMITS, AND LICENSES, AND CERTIFICATIONS, and be submitted for review and approval at least twenty-one (21) calendar days prior to work.
 - 2. Traffic Control Plans shall contain, but not be limited to, location, placement, duration, monitoring schedule and movement of all traffic control devices and bypass piping including, but not limited to, signs, signals, pedestrian and vehicle ramps, barricades, k-rails, and lighting.
- C. The Contractor shall submit traffic control plans for each phase of work within a City right-of-way or easements along with an Encroachment Permit. The Contractor will allow for a 15-day review period.

1.4 QUALITY ASSURANCE

- A. Traffic Control Plans shall be prepared by a California licensed Civil or Traffic Engineer. The Traffic Engineer who prepared the Traffic Control Plans shall be available at any time during the life of the contract to modify the Traffic Control Plans if and as required by the agency having jurisdiction.
- B. No changes or deviations from the approved Traffic Control Plans shall be made, except temporary changes in emergency situations, with prior approval of the Traffic Engineer, the Engineer, and all agencies having jurisdiction.
- C. Immediately notify the Traffic Engineer, the Engineer, and the agencies having jurisdiction of occurrences that necessitate modification of the approved Traffic Control Plans.

1.5 TRAFFIC CONTROL

- A. Nothing herein shall be construed to entitle the Contractor to the exclusive use of any public street, alleyway, or parking area during the performance of the work hereunder, and the Contractor shall conduct its operations so as not to interfere unnecessarily with the authorized work of utility companies or other agencies in such streets, alleyways, or parking areas.
- B. No streets or lane closures of any duration (temporary or permanent) shall occur without first obtaining permission of the Engineer and agency (or agencies) having jurisdiction.
- C. Where excavation is being performed in primary streets or highways, one lane in each direction shall be kept open to traffic at all times unless otherwise provided or shown. Toe boards shall be provided to retain excavated material if required by the Engineer or the agency having jurisdiction over the street or highway. Fire hydrants on or adjacent to the work shall be kept accessible to firefighting equipment at all times. Temporary provisions shall be made by the Contractor to assure the use of sidewalks and the proper functioning of all gutters, storm sewer inlets and other drainage facilities.

- D. For the protection of traffic in public or private streets and ways, the Contractor shall provide, place and maintain all necessary barricades, traffic cones, warning signs, lights and other safety devices in accordance with requirements of the agency having jurisdiction or the California Manual of Uniform Traffic Control Devices whichever is more strict.
- E. Contractor shall take all necessary precautions for the protection of the work and the safety of the public. All barricades and obstructions shall be illuminated at night, and all lights shall be turned on from sunset until sunrise. The Contractor shall station such guards or flaggers and shall conform to such special safety regulations relating to traffic control as may be required by the public authorities within their respective jurisdiction.
- F. No work will be allowed in public right-of-way until the Contractor obtains written approval of the proposed Traffic Control Plans from agencies having jurisdiction.

1.6 STREET CLOSURE REQUIRED NOTIFICATION

- A. When street closure is required or permitted for the construction of facilities on or under the street, the Contractor shall notify in writing, the occupants of all homes and businesses with access to that street of the proposed closure at least ten (10) Working Days prior to road closures and at least three (3) Working Days prior to disruption of ingress and egress.
- B. The notice provided to the residences or businesses shall include, at a minimum, schedule of closures and/or parking restrictions with estimated closure and/or parking restriction times, closure and/or parking restriction location, alternate route or detour, and name and twenty-four (24) hour phone number of a contact person employed by the Contractor.
- C. The Contractor shall be prepared to make access available at any time during the day to emergency type vehicles or pre-arrange alternative locations for non-emergency vehicles and operations. At a minimum the following agencies must be notified.
 - 1. Fire Department
 - 2. Police Department
 - 3. Sheriff Department
 - 4. Emergency ambulance companies
 - 5. Waste Management and Recycling
- D. Unless otherwise specifically approved by the Engineer all street closures and/or parking restrictions shall be adequately restored to allow all marked lanes of traffic to be open on all major streets in each direction during the peak traffic hours of 7:00 a.m. to 8:00 a.m. and 3:30 p.m. to 6:00 p.m.
- E. During the first Friday after Thanksgiving and the last twenty-four (24) Calendar Days of December, the Contractor shall not close any traffic lanes on a major street except for an emergency and when the Contractor submits a written request two (2) Working Days in advance, and the Contractor receives written permission from the Engineer.

- F. If, for an emergency, the Contractor is required to close a lane on a major street during peak traffic hours or during the last twenty-four (24) of December, the Contractor shall immediately notify the City Construction Inspection office.

PART 2 PRODUCTS

2.1 TRAFFIC CONTROL DEVICES

- A. All traffic control devices shall conform to the provisions in the California Manual of Traffic Control Devices and the agency having jurisdiction.
- B. Included, but not limited to, are flag units, construction signs, channelizing devices, barricades, delineators, and lighting devices.
- C. A high-level warning device is required for use on major streets at the direction of the Engineer, when a lane is closed or work encroaches in a lane of traffic or when barricades are placed in a moving lane of traffic. A single barricade shall not be placed alone in the traveled way.
- D. Use of flashing arrow signs is required on major (four or more lanes) streets for lane closures during hours of darkness and for all lane closures lasting more than two (2) hours.
- E. All signs which are to convey their messages during darkness shall be reflectorized or illuminated.
- F. No signs or supports shall bear any commercial advertising.

PART 3 EXECUTION

3.1 ACCESS TO ADJACENT PROPERTIES

- A. Provide and maintain access to adjacent properties at all times. The Contractor shall notify homeowners/occupants along the proposed construction route.

3.2 STREET OR PERMANENT LANE CLOSURE

- A. If closure of any street is required during construction, a formal application for a street closure shall be made to the authority having jurisdiction at least thirty (30) calendar days prior to the required street or permanent lane closure for approval and to determine necessary sign and detour requirements.

3.3 TRAFFIC COORDINATION WITH OTHER CONTRACTORS

- A. The Contractor shall coordinate the traffic routing work with that of other forces working in the same or adjacent areas.

3.4 CONSTRUCTION PARKING CONTROL

- A. Curb parking shall be removed in accordance with the Traffic Control Plan. Removal of curb parking shall be minimized.
- B. The Contractor shall make arrangements directly with local authorities to keep the working area clear of parked vehicles.

- C. The Contractor may prohibit stopping in parking lanes where and when necessary in order to gain access to the work to provide the required traffic lanes in city streets and parking areas.
- D. The Contractor shall coordinate with the agency having jurisdiction and Sacramento County Sheriff for the location of “No Stopping” and “No Parking” signs.
- E. At least one (1) week in advance of construction, the Contractor shall furnish and place, where approved by the City and the Engineer, portable “TOW AWAY – NO STOPPING” signs. The dates and times of parking removal shall be posted on the signs.
- F. The Contractor shall notify the policing agency having jurisdiction of all parking violators who require tow away from construction areas.
- G. Construction equipment not actively engaged in the work and employee vehicles shall not be parked in the vicinity of the work in such a manner as to further restrict or obstruct traffic flow. Vehicles and equipment in continuous or frequent use may be operated or parked in the same traffic lane as the work obstruction.

3.5 CONSTRUCTION SIGNAGE

- A. All construction area signs shall conform to Section 10.06(F), Construction Signs, of the City General Provisions.
- B. Sign spacing shall conform to the California Manual of Traffic Control Devices.
- C. Signs normally shall be installed 14 calendar days before work is to commence and must be removed immediately after work is complete. If at any time a sign is not required, it shall be covered or removed.
- D. The Contractor shall be responsible for the placement of advisory signs to inform the public of any street closure, detour, or construction affecting traffic at least 7 days before the closure or other significant disruption of normal traffic flow.
- E. Existing roadside signs conflicting with the construction area signs shall be either removed and reset upon completion of work or securely covered.

3.6 ILLUMINATION

- A. Provide sufficient visibility on a 24-hour basis to approaching traffic whenever a street is closed partially or completely. Ensure that sufficient illumination is provided by means of portable flashing beacons, floodlights, or other similar devices. Mount all lighting fixtures in a manner which precludes glare to approaching traffic.
- B. Arrow boards or other traffic control devices and lighting which will operate outside of the normal working hours shall be battery-operated. The use of gas-fired generators during nonworking hours will not be allowed.

3.7 FLAGGING

- A. Flaggers shall be required:
 - 1. When workers or equipment intermittently block a traffic lane

2. When trucks or equipment enter or leave the work site from an adjacent traffic lane.
 3. Where Plans or permits allow the use of one lane for two directions of traffic.
 4. Wherever the safety of the public and/or workers determine there is a need.
- B. Flagging shall be carried out in accordance with California Manual of Uniform Traffic Control Devices. All flagging costs shall be considered as included in pay items for traffic control.

3.8 PEDESTRIAN SAFETY

- A. The Contractor shall maintain safe and adequate pedestrian zones and public transportation stops as well as provide pedestrian crossings at intervals not to exceed 300 feet within the work zone.
- B. When the construction area crosses a crosswalk, the crosswalk shall be barricaded and signed accordingly.

3.9 TRAFFIC HANDLING AT SPECIFIC LOCATIONS

- A. The Contractor shall maintain the full visibility and function of all school safety signing and striping within the work area. Additional temporary safety striping and signage shall be installed if deemed necessary by the agency having jurisdiction.

3.10 VEHICULAR AND PEDESTRIAN RAMPS

- A. The Contractor shall provide and maintain ramps as shown on Plans or required by the Resident Engineer. Pedestrian ramps shall meet Americans with Disabilities Act requirements.

3.11 BARRICADING OPEN TRENCHES

- A. Any excavation permitted by the City to be left open shall be barricaded with Type II or Type III barricades with flashers. Signs stating "OPEN TRENCH" shall be posted when requested by the City. All open excavated areas shall be barricaded with at least two (2) Type III barricades at the end of the excavation that faces oncoming traffic.
- B. Any excavation within four (4) feet of the traveled way, not protected by K-rail or a similar traffic control barrier approved by the City, shall be backfilled at the end of the work shift or plated.

**** END OF SECTION ****

SECTION 01 78 23 OPERATING AND MAINTENANCE DATA

PART 1 GENERAL

1.1 SUMMARY

- A. Contractor shall supply Operations and Maintenance (O&M) Manuals for equipment as specified in other parts of the Project Documents.

1.2 DESCRIPTION

- A. The Contractor shall provide four (4) sets of operating and maintenance instructions for all equipment and devices furnished under this contract and one (1) pdf set. The operating and maintenance material supplied shall be original printed copies of manufacturer's brochures and/or manuals. Photocopied material will not be acceptable. Operating and maintenance instructions for each item of equipment and each equipment assembly shall consist of:

1. Names and addresses of manufacturer, nearest representative of manufacturer, and nearest supplier of manufacturer's equipment and parts
2. For equipment requiring lubrication, the manufacturer's recommended lubricants and lubrication schedule.
3. For equipment containing integral electrical controls, diagrams showing internal and connection wiring.
4. Specified operating and maintenance information. This information shall include, but not necessarily be limited to, the following items:
 - (a) Equipment data: The Contractor shall provide a good quality photocopy of the Equipment Maintenance Summary sheets for review and shall make corrections to the originals as noted in the submittal review comments. Sufficient copies of the blank forms will be furnished by the City.
 - (b) Start-up procedures: These instructions shall include equipment manufacturer's recommendations regarding installation, adjustment, calibration and trouble-shooting.
 - (c) Operating procedures: These instructions shall include the equipment manufacturer's recommended step-by-step procedures for starting, operating and stopping the equipment under all modes of operation.
 - (d) Preventive maintenance procedures: These instructions shall include the equipment manufacturer's recommendations regarding the steps and schedules to be followed in maintaining the equipment.
 - (e) Parts list: This list shall include generic title and identification number of each component part of the equipment.
 - (f) Exploded views: These shall be provided where appropriate.

- (g) Spare parts list: This list shall include the manufacturer's recommendations of number of parts that should be stored by the City.
- (h) Overhaul instructions: These instructions shall consist of the manufacturer's directions for the disassembly, repair and reassembly of the equipment.

1.3 SUBMITTAL PROCEDURE

- A. Operating and maintenance (O&M) instructions shall be submitted to the City's Representative accompanied by the submittal transmittal form described in Section 01 33 00 – Submittal Procedures.
- B. Required submittals:
 - 1. Initial Submittal: One (1) copy of O & M Manual shall be submitted for approval. Initial O&M submittal may be hard copy or PDF format.
 - 2. Intermediate Submittal: One (1) copy of revised O & M Manual shall be submitted for approval. Intermediate O&M may be hard copy or PDF format.
 - 3. Final Submittal: Once approved, submit four (4) paper copies and one (1) PDF.
 - 4. The submitted O&M Manuals shall have a separate submittal numbering system from the general equipment and material submittals required to confirm conformance with the design specifications.
- C. PDF Format shall be manufacturer's data converted directly to PDF. Scanned PDF information is not acceptable unless approved by the City's Representative.
 - 1. PDF documents shall be bookmarked, indexed and in searchable format.
- D. For ease of identification, each manufacturer's brochure and manual shall be appropriately labeled with the equipment name, equipment number and specification number, as it appears in the contract documents.
- E. The information shall be organized in binders in numerical order by the specification section numbers assigned in the contract documents. The binders shall be provided with a table of contents and tab sheets to permit easy location of desired information. Each numerical section shall contain a complete itemized data list with equipment name and equipment number for the information contained in that section. Binders shall be three-ring with clear vinyl pockets on the front and spine. The binder title shall be clearly visible on the spine and the front cover.
- F. The following procedures shall be used:
 - 1. Contractor shall include in each O&M submittal a good quality photocopy of associated Equipment Maintenance Summary sheets, for each specification section for review.
 - 2. Submittals will be returned with a review sheet and comments.
 - 3. Contractor shall resubmit, if requested by the City's Representative, and retain all copies of approved submittals until all sections have been approved.

4. When all sections have been approved, Contractor shall organize and bind the manuals for all the sections of the contract specifications according to the above instructions and submit one complete set of O&M Manuals for final review. Contractor shall submit separately and unbound the completed original Equipment Maintenance Summary sheets.
 5. Final review will be for the organization and binding of a complete set of manuals as specified and will not include review of previously approved material.
 6. When the complete set is approved, the Contractor shall submit four (4) complete sets to the City's Representative as approved and specified.
- G. If the manufacturer's standard brochures and manuals are used to describe operating and maintenance procedures, such brochures and manuals shall be modified to reflect only the model or series of equipment used on this project.
1. Clearly mark or annotate the actual model supplied for the project.
 2. Extraneous material shall be crossed out neatly or otherwise annotated or eliminated.

1.4 FIELD CHANGES

- A. Following the acceptable installation and operation of an equipment item, the item's operating and maintenance instructions, including drawings, shall be modified and supplemented by the Contractor to reflect any as-built conditions, field changes or information required by field conditions.

PART 2 MATERIALS (NOT USED)

PART 3 EXECUTION (NOT USED)

****END OF SECTION****

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SECTION 02 21 13.13 BOUNDARY AND SURVEY MARKERS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Survey Monument Perpetuation includes any monuments shown on the plans and/or found within the Project Limits subject to disturbance or destruction.
- B. Survey Monument Replacement including re-establishing/re-setting any survey monuments that are damaged or destroyed as a result of the Contractor's operation.

1.2 REFERENCES

- A. Specifications of the Survey Monument Perpetuation and Replacement shall conform with City Standard Construction Specifications, Standard Detail Drawings and Design Standards.
 - 1. New or replacement monuments shall be installed or constructed in accordance with City Standard Detail Drawing 446.

1.3 REQUIREMENTS

- A. Survey monumentation, markers and/or benchmarks (monuments) exist throughout the Project area.
- B. The Contractor shall be responsible for protecting and perpetuating monuments that may be affected by construction.
- C. The Contractor shall be responsible to arrange and pay for all surveys for the Project, including monuments.
- D. The Contractor shall arrange for a diligent, thorough search for survey monuments
 - 1. The search for survey monuments shall be performed by and under the direction of a California Licensed Land Surveyor or a California Registered Civil Engineer authorized to practice land surveying in accordance with Business and Professions Code Section 8771.
 - 2. The search for survey monuments shall occur prior to the beginning of construction work that could disturb or destroy a survey monument.
 - 3. Any monuments found shall be referenced and, if damaged or disturbed, reset by or under the direction of a California Licensed Land Surveyor or a California Registered Civil Engineer authorized to practice land surveying in accordance with Business and Professions Code Section 8771.
- E. A corner record or record of survey, as appropriate, shall be filed by the licensed land surveyor or civil engineer. Such points shall be referenced for use in replacement of monuments that are disturbed or removed during construction.

1.4 MEASUREMENT AND PAYMENT

- A. Measurement and Payment terms are provided in Section 01 22 00 Unit Prices found elsewhere in these Specifications.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 02 41 00 DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

- A. Demolition and site preparation includes all clearing, grubbing, facility abandonment, and demolition Work.

1.2 JOB CONDITIONS

- A. The Contractor shall determine the actual condition of the site as it affects the Work.

1.3 QUALITY ASSURANCE

- A. General: All work shall be performed in accordance with the local building codes, State Industrial Safety Orders and requirements of the Occupational Safety and Health Act requirements.
- B. Schedule: Demolition must be scheduled to allow all existing roadways and utilities to remain in continuous operation. No interruption in operation will be permitted without previous authorization from the City's Representative.
- C. Protection
 - 1. Demolition shall be performed in such a manner as to not harm adjacent structures, equipment, existing landscaping or natural vegetation.
 - (a) The Contractor shall assume full responsibility for such disturbance.
 - (b) All costs of any such repair, rehabilitation, or modifications shall be borne by the Contractor.
 - 2. The Contractor shall provide such protection as may be required to transfer material to the ground.
 - (a) Throwing, dropping or permitting the free fall of material and debris from heights which would cause damage to other work, existing structures, or equipment; undue noise or nuisance; or excessive dust will be expressly prohibited.

PART 2 PRODUCTS

2.1 MATERIAL FOR FACILITY ABANDONMENT

- A. Controlled Low Strength Material (CLSM) for abandonments shall be 1 ½ - 90 pound sack of Portland Cement per cubic yard of sand slurry. CLSM shall have an unconfined compressive strength of 100 psi or less.

PART 3 EXECUTION

3.1 GENERAL

- A. Coordinate with City to properly remove or abandon in place unused existing City utility service lines discovered that were left in place by others.
- B. Contact utility companies for removal, abandonment, adjustment or relocation of their facilities.
- C. See Contract Drawing for abandonment and removal of water facilities.
- D. Contractor is responsible for verifying the location of any existing utilities.
- E. Maintain and provide redline improvement plans to the engineer of record to identify all facilities that have been abandoned in place or removed for record drawings.
- F. The Contractor shall adhere to all demolition and site preparation requirements set forth in the City Standard Specifications.
- G. The Contractor shall notify the City's Representative when demolition of existing is completed and dispose of refuse materials in an appropriate manner.

3.2 PERFORMANCE

- A. Clearing and Grubbing
 - 1. The site of all open-cut excavations and areas to be cleared as indicated on the Plans shall be cleared and grubbed prior to excavation.
- B. Equipment and Piping Removal
 - 1. All equipment and piping to be removed shall be properly disconnected from structures, piping, electrical, and instrumentation systems.
 - 2. The Contractor shall do all resurfacing and other work as necessary to comply with the above requirements.
 - 3. Removal of any existing and operational culverts shall be restored in kind at the Contractor's expense unless proven that the culverts condition was previously compromised by age, corrosion or other cause unrelated to construction activities. The City's Representative or Inspector shall be present during excavation and trenching or all culvert crossings.
- C. Water Main Abandonment
 - 1. Excavate to expose water mains and/or service lines as needed for work to be performed by the City. City crews to perform City water mains operation of isolating necessary valves. Coordinate with Public Works Inspector in advance to schedule City's work.
 - 2. Remove the valve can and riser pipe to valve top. If the valve operating nut is less than the 18-inches below grade then the valve bonnet must be removed to acquire the necessary clearance for proper abandonment.

3. Backfill and restore the roadway in accordance with City Standards and the Contract Documents when work on the water main, valve or service is complete.
4. For fire hydrant abandonment: remove the hydrant bury, breakoff rise, and any other spools or pipe 24-inches below grade. The bury is to be capped or plugged. Fire Hydrant shall be returned to the City Corp Yard.
5. Fill all water mains and Fire Hydrant laterals to be abandoned-in-place with CLSM/concrete mix within the public right-of-way.
6. For service lines less than 4" diameter: Remove or abandon unused existing water service lines in place. Any portion of the service line that is less than 3 feet' below grade shall be removed to the city's satisfaction.
7. Ensure that all pipelines to be abandoned have a minimum of a three foot separation from the live portion of the water main (a section removed) line for pipes 4 inches" and larger in diameter. The end of the pipe shall be securely sealed at the pipe ends by installing a watertight plug of concrete not less than one foot thick.
8. Coordinate with Public Works Inspector to ensure all domestic, fire and irrigation meters are removed and salvaged EXCLUSIVELY by the City and protected in place until City crews have removed them. After City removes the meters, remove entire box/vault and properly complete the backfill in accordance with City standards and requirements.

D. Pavement Removal

1. All pavements and concrete pads shall be saw-cut on a neat line at right angles to the curb or concrete face.

E. Utility Interference

1. Where existing utilities interfere with the prosecution of the work, the Contractor shall temporarily relocate the utilities out of the construction project's right of way and restore in kind prior to final backfilling efforts.

3.3 SALVAGE

- A. The City has the right to salvage any items identified within the project vicinity.
- B. The Contractor shall notify the City's Representative five days prior to any salvage or demolition work.
 1. The City's Representative will mark items to be salvaged.
 2. The Contractor shall be responsible for properly disconnecting, removal from their foundations, cleaning and storing salvaged items. Salvaged items shall be delivered by the Contractor to a storage location designated by the City.
 3. All drop offs must be coordinated with the City.

3.4 REMOVED MATERIAL AND DEBRIS

- A. Where Contractor is directed on the Drawings to “Demolish” or “Remove” material or facilities it is understood that the material will be removed and disposed of offsite unless specifically stated otherwise or directed by the City’s Representative.
- B. All removed material not designated for salvage and all debris shall become the property of the Contractor and shall be removed from the site.
- C. Materials and debris generated by demolition activities shall not be allowed to accumulate. Debris shall be removed daily and disposed of in a manner allowed by law.

3.5 BACKFILL

- A. Holes or depressions in the ground remaining after demolition of structures, pipelines, or equipment shall be filled with compacted backfill materials as specified in Section 31 23 00 – Excavation and Fill.

3.6 RESTORATION

- A. Restore adjacent structures and facilities damaged during demolition or other construction to original or better condition.

**** END OF SECTION ****

SECTION 02 82 33

REMOVAL AND DISPOSAL OF ASBESTOS-CONTAINING MATERIALS

PART 1 GENERAL

1.1 SUMMARY

- A. This specification section includes:
1. Safe exposure and removal of buried asbestos cement pipe (ACP, commonly referred to as "transite) where encountered; the asbestos is not anticipated to be friable.
 2. Handling and storage of ACP (or ACM, "asbestos-containing material")
 3. Transport and disposal of ACP
 4. Decontamination of equipment
 5. Confirmation sampling and report.

1.2 CODE COMPLIANCE AND REGULATIONS

- A. The Contractor will assume full responsibility and liability for compliance with all applicable Federal, State, and Local regulations. Specifically, regulations pertaining to work practices, protection of workers, visitors to the site, persons occupying areas adjacent to the site, hauling, and disposal. As required by all applicable Federal, State and local regulations, the Contractor is responsible for providing medical examinations, and maintaining medical records of personnel. shall determine the actual condition of the site as it affects the Work.
- B. The Contractor shall comply with all pertinent laws, rules, and regulations existing at the time of the work including, but not limited to the following:
1. Federal Regulations
 - (a) United States Environmental Protection Agency (EPA), Title 40, Code of Federal Regulations (CFR), Part 61, National Emission Standards for Hazardous Air Pollutants (NESHAP), National Emission Standard for Asbestos (40 CFR, Part 61, Subpart A & M).
 - (b) 40 CFR 268, Land Disposal Restrictions
 - (c) 40 CFR 763 including all Appendices, Asbestos Hazard Emergency Response Act (AHERA)
 - (d) 49 CFR Parts 171 through 180 – Department of Transportation (DOT), Hazardous Substances
 - (e) 29 CFR 1926.1101 and 29 CFR 1910.1001 - Occupational Exposure to Asbestos
 - (f) 29 CFR 1910.134 and 42 CFR Part 84, Respiratory Protection

- (g) 29 CFR 1910.1200, Hazard Communication
- (h) 29 CFR 1910.145, Accident Prevention Signs and Tags
- (i) 29 CFR 1910, Subpart I, Personal Protective Equipment
- (j) 29 CFR 1910.1020, Access of Employee Exposure/Medical Records

2. State and Local Regulations

- (a) The State of California, Business and Professions Code, § 7058.5 (Asbestos Certification) and other corresponding regulations in the California CONTRACTORS State License Board, Title 16, California Code of Regulations, Division 8 (16 CCR Division 8).
- (b) Title 8 CCR, Section 1529, Asbestos in Construction
- (c) Title 8 CCR, Section 341.6, Registration, Asbestos-Related Work
- (d) Title 8, Division 1, Chapter 4, Division of Industrial Safety
 - (1) Title 8 CCR 3203, Injury and Illness Prevention Program
- (e) Title 8 CCR 5194, Hazard Communication
- (f) Title 22 CCR 66699, Persistent and Bio-accumulative Toxic Substance
- (g) Title 22 CCR, Hazardous Waste Handling
 - (1) Health and Safety Code, Section 25249.5 and 25249.6
- (h) California Labor Code, Sections 6501.5, 6501.7, 6501.8, and 6501.9.
- (i) Bay Area Air Quality Management District (BAAQMD): Regulation 11 Rule 2
- (j) City of Milpitas or Santa Clara County, Fire Code, whichever is applicable,

3. Miscellaneous Standards and References

- (a) Underwriters Laboratories (UL) Standard 586, 2009 High Efficiency, Particulate, Air Filter Units.
- (b) ANSI/ASSP Z88.2-2015, Practice for Respiratory Protection.
- (c) National Fire Protection Association (NFPA), Standard 10, Standard for Portable Fire Extinguishers.

1.3 SUBMITTALS

A. Contractor shall submit the following documentation prior to the start of work:

1. A detailed job-specific plan of the work procedures to be used for the work to be completed. The plan shall be compliant with this specification and regulations. (Contractor's ACM Work Plan)
2. A copy of the State Contractor's Licensing Board Asbestos Certification in accordance with the California Business and Professional Code, § 7058.5.
3. Proof that the Contractor possesses a current California Class C Asbestos Removal License.
4. A copy of the Contractor's current California DOSH registration to conduct asbestos-related work.
5. Proof of asbestos supervisor and worker training. Include a copy of the most current refresher training certificate as issued by a DOSH-approved training provider.
6. Physician's written medical opinion, current to within one year that contractor's employees can wear respiratory protection.
7. Documentation of respirator fit-testing for all contractor's employees and agents who are required to wear a respirator. Fit-testing shall be current within one year.
8. Documentation of medical surveillance required in CCR Title 8, Sections 1529 (m) and 1532.1 (j).
9. If rental equipment is to be used during asbestos handling and disposal, a copy of the written notification concerning the intended use of the equipment that was furnished to the rental agency.
10. Submit any current and valid licenses, permits, and notices required by federal/state/local regulations and proof of timely transmittal of notices to the respective agency requiring the notices including, but not limited to:
 - (a) California Division of Occupational Safety and Health in accordance with Title 8, Sections 1529 and 1532.1 (p).
 - (b) Bay Area Air Quality Management District (BAAQMD) in accordance with Regulation 11 Rule 2.
 - (c) Proof of BAAQMD permits for HEPA-filtered air filtration machines.
11. An emergency preparedness plan as specified in Paragraph 1.7 below.
12. Safety Data Sheets (SDS) for solvents, caustic stripping agents, paints, encapsulants, adhesives, detergents, and replacement materials, as necessary.

B. Contractor shall submit the following information on a daily basis during progression of the work or as requested:

1. Copies of daily project site entry logbooks with information on worker and visitor access.
 2. Logs documenting filter changes on respirators, HEPA vacuums, differential pressure air filtration devices, and other engineering controls.
- C. Contractor shall submit the following close-out information following completion of the Project:
1. Any documentation listed in Paragraphs 1.3.A or 1.3.B above not collected during the Project.

1.4 QUALITY ASSURANCE

A. Qualifications:

1. Qualifications of Contractor (or Subcontractor as applicable):
 - (a) Work performed under this Section shall be by a single Contractor.
 - (b) The Contractor shall have a minimum of five (5) years' experience as an approved asbestos abatement contractor unless approved by the Engineer to have less than five (5) years' experience. If requested, the Contractor shall provide the names and locations of 5 projects of similar size and scope that he has completed within the previous five years.
 - (c) Contractor must hold a current and valid asbestos license issued by the California Contractor's State Licensing Board (CSLB).
 - (d) Contractor must hold a current and valid Certificate of Registration for Asbestos-Related Work issued by the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA).
 - (e) Contractor must hold all insurance and bonds as required by other sections of this specification and maintain as valid and current for the duration of the project.
2. Qualifications of Asbestos Abatement Personnel:
 - (a) All work shall be completed utilizing fully qualified persons who are trained, experienced, and knowledgeable in the proper techniques and procedures for asbestos abatement activities covered by this Section.
 - (b) Asbestos Workers: All workers performing asbestos related work shall be currently certified as AHERA asbestos workers.
 - (c) Asbestos in Construction Contractor Supervisor: The Contractor's Supervisor shall be identified in writing and currently certified as an AHERA Asbestos Contractor Supervisor.

1.5 NOTICES

- A. Post a list containing the names, addresses, and telephone numbers of Contractor, and emergency medical services.
- B. Additional postings shall include:
 - 1. Visitor Entry and Exit Log.
 - 2. Employee Daily Sign in Log.
 - 3. Entry and Exit Procedures

1.6 SITE SECURITY

- A. Access to the work areas shall be limited to authorized, trained and properly equipped personnel, including Contractor, Subcontractors, Contractor's employees, and regulatory agency inspectors.
- B. Entry into the work area by unauthorized individuals shall be reported immediately.
- C. Contractor shall be responsible for Project site security during abatement operations in order to protect work efforts and equipment.

1.7 EMERGENCY PLANNING

- A. Emergency planning and procedures shall be developed by Contractor prior to abatement initiation.
- B. Emergency procedures shall be in written form and prominently posted. Contractor shall ensure that all persons entering the work area read these procedures and understand the Project site layout, location of emergency exits and emergency procedures.
- C. Emergency planning shall include considerations of fire, explosion, electrical hazards, slips, trips and falls, confined spaces, and heat related injury. Written procedures shall be developed and employee training in procedures shall be furnished by Contractor.
- D. Employees shall be trained in evacuation procedures in the event of work place emergencies.
 - 1. For minor injuries and illness, employees injured or otherwise incapacitated shall decontaminate following normal procedures with assistance from fellow workers, if necessary, before exiting the work area to obtain proper medical treatment.
 - 2. For serious injury or illness, worker decontamination shall take least priority. After stabilizing the injured worker, remove him from the work area and seek proper medical treatment.
 - 3. Telephone numbers of all emergency response personnel shall be prominently posted in the clean and equipment rooms.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Contractor must supply abatement materials and equipment that are undamaged, and in serviceable condition. Only materials and equipment that are recognized as being suitable for the intended use, by compliance with appropriate standards, will be utilized.
- B. All plastic, spray-on strippable coatings and structural materials used shall be UL certified as fire retardant or non-combustible. SDS for fire retardant materials shall be made available upon request.
- C. Polyethylene sheeting utilized for worker decontamination units and barriers shall be black in color and shall be a minimum of six mils thick.
- D. For disposal of asbestos waste, Contractor shall furnish EPA and OSHA labeled 6- mil polyethylene disposal bags.
- E. Stick-on hazardous waste labels as per EPA or Cal-OSHA regulations.
- F. Contractor shall supply, and post warning signs as required by applicable Cal-OSHA regulations. Signs should be printed in English and Spanish.
- G. All replacement materials shall be delivered in the original packages, containers, or bundles bearing the name of the manufacturer and brand name.
- H. Damaged, deteriorating or previously used materials shall not be used and shall be removed from the Project site.

2.2 EQUIPMENT

- A. General:
 - 1. CONTRACTOR shall provide first aid supplies that comply with governing regulations, and recognized recommendations within the construction industry. In addition, the Contractor Supervisor shall have current first aid training, including Cardiopulmonary Resuscitation (CPR).
 - 2. Respirators shall be furnished to the abatement workers by CONTRACTOR. The type of respirator to be furnished shall be determined by air sampling CCR Title 8, Sections 1529 and 1532.1. The respirators shall have been tested and approved by National Institute of Occupational Safety and Health (NIOSH) for use in contaminated atmospheres.
 - 3. Full body disposable protective clothing, including head, body, and foot coverings shall be furnished to workers and visitors in sizes adequate to accommodate movement without tearing.
 - 4. Additional safety equipment (e.g. hard hats meeting the requirements of ANSI Standard Z89.1-1997 or later, eye protection meeting the requirements of ANSI Standard Z87.1-1989, safety shoes meeting the requirements of ANSI Standard Z41.1-2005, disposable gloves), as necessary, shall be furnished to all workers and authorized visitors.

5. Non-skid footwear shall be furnished to all abatement workers. Disposable clothing shall be adequately sealed to the footwear to prevent body contamination
6. Provide NIOSH-approved disposable respirator cartridges capable of filtering dusts, mists, and radionuclides.

B. Removal:

1. Filters on vacuums and exhaust equipment shall be HEPA filters and UL 586 labeled.
2. Sprayers are required with pumps capable of providing 500 pounds per square inch (PSI) at the nozzle tip at a flow rate of 2 gallons per minute for spraying amended water.
3. A sufficient supply of HEPA filtered vacuum cleaning systems shall be furnished during cleanup.

PART 3 EXECUTION

3.1 PREPARATION

A. General:

1. Secure the Work Area:
 - (a) Provide and maintain temporary partitions to prevent spread of dust, fumes, and odors.
 - (b) Demarcate the regulated work area, as required by OSHA regulation 29 CFR 1926.1101, by posting warning signs
 - (c) Provide labels affixed to all asbestos waste containers, as required by OSHA regulation 29 CFR 1926.1101
 - (d) Do not block, or reduce width, of egress to exits.
 - (e) Conduct operations with minimum interference to corridors, exits, and public thoroughfares.
 - (f) Path of travel for debris removal shall be maintained dust free and clean at all times.
 - (g) Water used during this project shall be collected and prevented from entering storm water drains.
 - (h) Eating, drinking, smoking, chewing tobacco or gum, or applying cosmetics is prohibited in the work area.

3.2 PERFORMANCE

A. Clearing and Grubbing

1. The site of all open-cut excavations and areas to be cleared as indicated on the Plans shall be cleared and grubbed prior to excavation.

B. Piping Excavation

1. Contractor shall carefully excavate to locate buried ACP using methods that will not destroy the pipe and potentially make asbestos friable. Methods such as vacuum excavation, use of tools, or other means shall be chosen as appropriate.
2. Upon exposure, qualified personnel shall assess the pipe to determine if it might be in a condition that could contain friable asbestos.
3. Fully expose the portions of ACP to be removed.
4. Where possible, do not break pipe, fittings, or couplers. Breakage of couplings is preferred should no other viable option exist to remove pipe.
5. When pipe is removed, removed entire lengths of pipe to the next joint necessary to achieve the work. Except as noted on drawings or as directed by Engineer, only remove ACP necessary to accomplish the work.
6. Where bells exist on ACP that must be removed to connect CP to remain in service with new PVC pipe or ductile iron fittings, use a snap tool or least destructive method to leave a clean surface and minimize potential for release of friable material.
7. Upon removing asbestos-containing coupling, pipe, or other materials, immediately separate, place in appropriate double bag with 6-mil polyethylene sheeting to yield a total of at least 12-mil, the asbestos pipe in the trench or immediately when it comes out of the trench. Seal and label as required by EPA Regulation 40 CFR 61.150 (a)(1)(iv) or OSHA requirement 29 CFR 1926.1101(k)(8), and remove from site in a protected area.
8. City shall sign all manifests as generator of the waste.

C. Storage

1. Store all ACP and other asbestos-containing materials in accordance with all state and federal regulations.
2. Removed ACP shall be stored in a clearly-marked area protected from accidental breakage of the pipe with substantial barriers such as k-rail or within conex-type boxes.

D. Transport and Disposal

1. ACP shall be transported for disposal in accordance with all state and federal regulations. Transporting company shall have any required licenses and use appropriate equipment to load, transport, and dispose of ACP.

2. Dispose of ACM at a California disposal facility operating under a RWQCB permit to accept asbestos waste. Notify the facility at least 5 business days before the delivery of ACM.
 - (a) Generate manifests at the time of transfer that include the name of the transporter, asbestos transporter license number, and the name of the permitted landfill where the AC pipe and ACM will be buried.
3. City shall sign each disposal manifest.
4. District will pay for all disposal "tipping fees" charged by landfill accepting the waste
 - (a) Provide all associated paperwork from the landfill within 48 working hours of disposal.

E. Field Quality Control

1. In addition to having appropriately trained personnel, Contractor at all times shall have a Competent Person for ACP on site whenever potential to encounter ACP exists.

F. Abandonment of AC Pipes

1. The Contractor is responsible for isolating any existing mains/laterals to remain in place by capping, plugging, and blocking as necessary. The opening of an abandoned AC pipe shall be blocked off by manually forcing cement grout or concrete into and around the openings in sufficient quantity to provide a permanent watertight seal. Abandonment of AC pipes are considered subsidiary to the work required and no direct payment will be made.

G. Decontamination

1. If required, the Contractor shall decontaminate equipment and personnel impacted by removal of asbestos contaminated particles. The Contractor will be responsible for proper decontamination of all materials which may have been contaminated. It is the responsibility of the Contractor to dispose of all incident residuals and materials used for decontamination in accordance with all regulations.

**** END OF SECTION ****

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SECTION 31 11 00 CLEARING AND GRUBBING

PART 1 GENERAL

1.1 WORK INCLUDED

- A. Clearing and grubbing consists of furnishing transportation, labor, materials, and equipment to:
 - 1. Remove and dispose of all rubbish, debris, and other objectionable material from within the limits of the project as specified.
 - 2. Strip the entire area within the limits of work of trees, shrubs, weeds, and other vegetative growth of any nature, unless otherwise shown as Protect In Place, and disposal of same.
 - 3. Grub the entire area within the limits of work of all roots and vegetative material to the full depth of the root system, and disposal of same.
 - 4. Remove existing pavement markers, pavement markings, traffic lines, pavement legends and weeds along cracks, joints, and gutter lip.
 - 5. Provide dust alleviation and control during the course of the work.
 - 6. Comply with any required abandonment of system facilities, including cutting, capping and slurry filling of abandoned pipelines.
 - 7. Provision of all materials, equipment and apparatus not specifically mentioned herein or noted on the plans, but which are obviously necessary to complete the work specified.
 - 8. Comply with any required salvage of existing facilities.
- B. Implementing measures to prevent air pollution during clearing, grubbing and during construction activities in accordance with Federal, State, and local regulations.

1.2 REFERENCES

- A. State of California Department of Transportation Standard Specifications (SS):
- B. California Air Resources Board, CARB 2003a. California Ambient Air Quality Standards

PART 2 PRODUCTS

- A. Water shall be available to the Contractor for dust control as specified herein. Dust suppressants other than water shall not be utilized.
- B. Temporary fencing shall be heavy-duty, four (4) foot high orange plastic safety fencing as produced by Uline, Model No. S22226, or approved equal.

PART 3 EXECUTION

3.1 PERFORMANCE

- A. Clearing and grubbing shall be in accordance with all applicable state and local requirements.
- B. Clearing
 - 1. Remove and dispose of shrubs, brush, limbs, and other vegetative growth. Remove all evidence of their presence from the surface, including sticks and branches greater than two (2) inches in diameter or thickness. Remove and dispose of trash piles, rubbish, and fencing.
 - 2. Protect trees, shrubs, vegetative growth, and fencing not designated for removal.
- C. Grubbing
 - 1. Remove and dispose of wood or root matter below the ground surface remaining after clearing, including stumps, trunks, roots, or root systems greater than 2 inches in diameter or thickness, to a depth of 12 inches. Weed removal shall be accomplished by method(s) that result in complete removal of the weed. Method used must be approved by the Engineer. Surface and crack cleaning shall be accomplished by sweeping, and not by air blowers.
- D. Stripping
 - 1. Remove and dispose of all organic sod, topsoil, ash, grass and grass roots, and other structurally unsound material remaining after clearing and grubbing from the areas designated to be stripped. The site shall be stripped to such greater depth, as the Engineer or the project geotechnical engineer may consider necessary to remove materials that, in their opinion, are unsatisfactory. The stripped material shall either be removed from the site or stockpiled for reuse later as topsoil where approved by the Engineer, but none of the stripped material may be used for engineered fill.
 - 2. Remove and dispose of all asphalt, aggregate, concrete and other inorganic materials within the limits of construction. Remove all evidence of their presence from the project site.
- E. Trees and Shrubbery
 - 1. Preserve all trees to the maximum extent possible except those that are specifically designated for removal on the Plans.
 - 2. It is possible that existing trees, shrubbery, and other vegetative material are not shown on the Plans. Inspect the site to determine the nature, location, size, and extent of vegetative material to be removed or preserved, as specified herein. Coordinate with City Arborist to determine the necessary plan for protection or removal for all trees not shown on the Plans.
 - 3. The Contractor shall be responsible for the placing, maintaining, and removal of any orange, temporary construction fencing as shown on the Plans or that may be necessary along the line of work or around all trees to preserve and protect all trees to the maximum extent possible and delineate the construction area.

4. If work will be continued within one foot (1') of any tree dripline, Contractor must contact City Arborist and continue work under their supervision which may include conducting only hand tool work within their driplines.
 5. Contractor shall trim overhanging limbs that may be in conflict with trenching and other construction activities. Tree, roots, and bush pruning shall be performed by a certified arborist and in accordance with "Pruning Standards," published by the Western Chapter of the International Society of Arboriculture. The certified arborist shall be approved in advance by the Engineer, and all pruning shall be done as directed by and in the presence of the City Arborist and Engineer. Tree limbs damaged by Contractor activities shall be trimmed by certified arborist as described above.
 6. Where trees are removed, the soils loosened by the roots shall be over-excavated at least to the bottom of the disturbed zone and to the width of the equipment.
- F. Spoil resulting from clearing, grubbing, and stripping operations shall be removed from the entire limits of work and properly disposed of by the Contractor. Materials resulting from clearing, grubbing, and stripping operations shall become the property of the Contractor, to be properly removed from the work site and disposed of from the project site in a lawful manner, at no additional expense to the contract.
- G. Furnish, install, maintain, and operate necessary control measures and other equipment necessary to prevent dust. Temporary measures shall be to Contractor's own design and Contractor shall be solely responsible for risks related to the management of dust control during construction.

****END OF SECTION****

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SECTION 31 23 00 EXCAVATION AND FILL

PART 1 GENERAL

1.1 SUMMARY

- A. This section specifies all operations necessary to the excavation, loosening, filling, grading, hauling, compacting, removal, and control of earth, rock or other unspecified material for the construction of project facilities. This section also includes the quality assurance and placement requirements for all related backfill materials and their respective standards.

1.2 REFERENCES

- A. The following documents are a part of this section insofar as they are specified and modified herein. In case of conflict between the requirements of this Section, and the following documents, the requirements of this section shall prevail.

<u>Reference</u>	<u>Title</u>
California Test Method 217	Method of Test for Sand Equivalent
ASTM C136	Method of Test for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM D420	Standard Recommended Practice for Investigating and Sampling Soil and Rock for Construction Purposes
ASTM D1556	Method of Test for Density of Soil in Place by the Sand-Cone Method
ASTM D1557-12	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³ (2,700 kN-m/m ³))
ASTM D2049	Standard Test Method for Relative Density of Cohesionless Soils
ASTM D6938-17ae1	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
Caltrans	2023 Standard Specifications

- B. The Contractor shall also utilize the City Standard Specifications for construction requirements not listed herein.

1.3 DEFINITIONS

- A. Compaction: The degree of compaction is specified as percent of relative compaction. The relative compactions refer to the maximum relative densities of dry soil obtainable at optimum moisture content.
 - (a) In-place density of compacted materials determined in accordance with ASTM D 6938.
 - (b) Maximum density obtained in laboratory when tested in accordance with ASTM D 1557-12.
- B. Excavation Slope: Excavation slope shall be defined as an inclined surface formed by removing material from below existing grade.
- C. Embankment Slope: Embankment slope shall be defined as an inclined surface formed by placement of material above existing grade.

1.4 NOT USED

1.5 PERFORMANCE REQUIREMENTS

- A. Where mud or other soft or unstable material is encountered, remove such material, and refill space with stabilization material approved for use by the Engineer.
- B. The Contractor shall obtain acceptable import material from other sources if surplus or borrow materials obtained within project easements do not conform to specified requirements or are not sufficient in quantity.
- C. No extra compensation will be made for hauling, fill materials, nor for water required for sufficient compaction.

1.6 SUBMITTALS

- A. Submit current technical data for each type of material specified to prove compliance with the specifications in accordance with the requirements of Specification Section 01 33 00 – Submittal Procedures.
- B. Contractor shall submit an excavation and backfill plan detailing hauling truck staging and routes, expected traffic impacts, proposed equipment and machinery, anticipated construction durations per section, temporary excavation stockpiling areas, and backfilling process. Excavation and backfilling plan shall be separate but consistent with statements provided in the Contractor's shoring plan.
- C. Mix Designs for all fill materials indicating referenced testing standards, gradations, Atterberg limits, specific gravity, sand equivalent, R-value, durability, moisture content.
- D. Submit documentation related to Contractor's proposed testing laboratory, capabilities, and equipment.
- E. Submit certified test reports of all specified tests performed by the Contractor.
 - 1. Test reports shall be signed and sealed by a registered Geotechnical Engineer who practices geotechnical engineering in the State of California.

1.7 QUALITY ASSURANCE

- A. All soils testing will be done by a testing laboratory of the City's choice and expense except as otherwise noted.
- B. The City's Representative will take samples and perform tests for compliance with the specifications including Atterberg limits, specific gravity, sand equivalent, R-value, durability, moisture content, gradation, compaction, and density tests during placement of backfill materials to check compliance with these specifications.
- C. The Contractor shall remove surface material at locations designated by the City's Representative and provide such assistance as necessary for sampling and testing.
- D. The City's Representative may direct the Contractor to construct inspection trenches in compacted or consolidated backfill to determine that the Contractor has complied with these specifications.
- E. The City will bear the costs for sampling and testing specified in this Paragraph. The Contractor shall pay costs associated with retesting due to the Contractor's failure to comply with the specifications.
- F. Sequencing and Scheduling
 - 1. If necessary, stockpile excavated material in order to utilize it in separate locations. The Contractor shall not stockpile excavation spoils in an active roadway at any time during the project.
 - 2. Perform excavation and backfilling in a manner that encourages drainage at all times.

PART 2 PRODUCTS

2.1 FILL MATERIALS

- A. Water for earthwork compaction and dust control shall be imported, or from City approved water source.
- B. Unless noted herein, fill materials shall be utilized in accordance with requirements shown on the Contract drawings and detailed in the City Standard Specifications. Minimum trenching dimensions and elevations are reflected in the Contract documents.
- C. The Contractor shall not repurpose excavation spoils at any time during the utility trench backfilling process unless otherwise approved by the Engineer of Record and designated as a select fill.
- D. Classification of Excavated Materials:
 - 1. Rock:
 - (a) Earth encountered during the course of excavation which is sufficiently hard to cause refusal to equipment specified below shall be deemed inexcavatable and therefore classified as 'rock'. Earth deemed inexcavatable shall be removed by substantial means such as reciprocating hydraulic hammers and shall conform to this specification.

- (b) Refusal to be considered as the inability of the following equipment to excavate material as caused by the hardness of the earth: Tractor mounted excavator, with minimum operating weight of 85,000 lbs and using a single ripper tooth. Refusal shall be demonstrated to Engineer prior to earth being deemed inexcavatable and therefore defined as rock subject to this rock clause and unit price compensation.
- (c) All rock excavation shall be under one classification. This classification shall include solid ledge rock in its natural location that requires systematic quarrying or drilling, and also boulders that exceed 0.25 CY in volume.
- (d) When rock is encountered, strip free of earth. After verification by a representative of the City and/or Engineer that the material encountered is rock (as defined above), employ an independent surveyor to determine rock quantities before removal operation begins. In computing the volumetric content of rock excavation for payment, the pay lines shall be taken as follows:
 - (1) For structures (including foundations, manholes wet well, emergency storage vaults, etc.): 24 Inches outside the exterior limits of foundations and from rock surface to 12 Inches below bottom of foundations or unless otherwise noted in the project Geotechnical Report.
 - (2) For piping and utilities: A width 24 Inches wider than the outside diameter of the pipe or conduit and from rock surface to 12 Inches below bottom exterior surface of the pipe or conduit.
 - (3) Rock removed for benching, sloping excavations and other activities that are subject to the Contractor's means and methods shall not be included in the pay quantity.
- (e) Hydraulic Hammer: Hydraulic hammering or alternative means approved by the Engineer shall be employed where refusal has been demonstrated and normal excavation procedures are not feasible.
- (f) Remove and handle excavated materials regardless of its type, character, composition, condition, or depth.
- (g) Blasting shall only be allowed under specified circumstances and performed in a method that limits the amount of public impacts. All blasting activities shall be under the discretion of the Engineer, City and City representatives. The contractor shall bear the responsibility for obtaining all required permits and notifications associated with any blasting activities.

E. Pipe Bedding, Initial Backfill, and Trench Backfill for Utilities:

- 1. Trench Backfill, Initial Backfill, and Pipe Bedding materials shall be in accordance with City Standard Details 220 and 222 unless otherwise Approved by the Engineer. The Pipe Bedding, Initial Backfill, and Trench Backfill sections for utilities and pipelines shall be defined as indicated on the plans.

F. Pervious Backfill Material

1. Material shall be in accordance with the following gradation requirements, or as defined in the latest Caltrans Standard Specification edition.

Sieve Size	Percentage Passing
2"	100
No. 50	0-100
No. 100	0-8
No. 200	0-4

PART 3 EXECUTION

3.1 GENERAL

A. Overexcavation

1. At the direction of the City's Representative: Where the undisturbed condition of natural soils is inadequate for support of planned construction, the City's Representative will direct the Contractor to overexcavate to adequate supporting soils. The excavated space shall be backfilled and compacted to the specified elevation with Pervious Backfill Material, wrapped in filter fabric.
2. Due to Contractor's Operations: Should the excavation be carried below the lines and grades specified on the drawings or should the bottom of the excavation be disturbed because of the Contractor's operations and require overexcavation and backfill, the Contractor shall backfill such excavated space with a compacted material in accordance with fill requirements of this Section. Backfill and compaction shall be at Contractor's expense.

B. Removal of Obstructions

1. The Contractor shall remove all brush, trees, logs, stumps, roots, heavy sods, heavy growth of grass, all decayed vegetative matter, fences, and all structures where the proper construction and completion of the Work require their removal. The Contractor shall also remove all rocks, stones, broken concrete and pavement, debris and all obstructions of whatsoever kind or character, whether natural or artificial, encountered in the Work.
2. Material that is removed as hereinbefore specified, and is not to be incorporated in the Work, shall be properly disposed of off the site.

C. Surplus Material

1. Unless otherwise specified, surplus excavated material shall be disposed of in accordance with applicable ordinances and environmental requirements.
2. No excavated material shall be deposited on private property unless written permission from the City thereof is secured by the Contractor. Before the City will accept the work as being completed, the Contractor shall file a written

release signed by all property owners with whom the Contractor has entered into agreements for disposal of excess excavated material absolving the City from any liability connected therewith.

3. The Contractor shall satisfy himself that there is sufficient material available for the completion of the required earthwork before disposing of any material inside or outside the site. The Contractor shall replace shortage of material, caused by premature disposal of any material by the Contractor.
4. Material shall not be stockpiled to a depth greater than five (5) feet above finished grade within 25 feet of any excavation or structure except for those areas designated to be preconsolidated. For these areas, the depth of stockpiled material shall be as specified. The Contractor shall maintain stability of the soil adjacent to any excavation.

D. Hauling

1. When hauling is done over highways and/or private streets, the loads shall be trimmed and the vehicle shelf areas shall be cleaned after each loading. The loads shall be watered after trimming to eliminate dust.

E. Control of Erosion

1. The Contractor shall maintain earthwork surface true and smooth and protected from erosion. Where erosion occurs, the Contractor shall provide fill or shall excavate as necessary to return earthwork surfaces to the grade and finish specified.

3.2 NOT USED

3.3 EXCAVATION AND BACKFILL FOR PIPELINES AND CONDUITS

A. Trench Excavation

1. General Requirements:

- (a) Unless otherwise specified or indicated, excavation for pipelines and conduits shall be open cut. Trenching machines may be used except where their use will result in damage to existing facilities.
- (b) Where, in the opinion of the City's Representative, the undisturbed condition of the natural soils below the excavation grades indicated or specified is inadequate for the support of the planned pipeline, the City's Representative will direct the Contractor to overexcavate to adequate supporting soils and backfill the excavated space to the proper elevation. The bottom of the trench excavation shall be firm and dry.
- (c) The trench may be excavated by machinery to the grade indicated on the Drawings provided that the soil material remaining in the bottom of the trench is no more than slightly disturbed.
- (d) Open Trench:

- (1) Trench Excavation shall proceed in advance of pipe installation only so far as can be backfilled the same day.
- (2) Trench Stability:
 1. Where necessary to prevent caving, trench excavations in unstable soils shall be adequately supported with steel sheeting or trench boxes. Before sheeting is withdrawn, or trench boxes moved forward, they shall be raised, in place, just above the pipe crown to safely allow the constructor to completely fill any voids left in the pipe zone.

B. Grading of Pipe Trench Bedding:

1. Bell or coupling holes:
 - (a) Dig holes after trench bottom has been graded.
 - (b) Provide holes of sufficient width to provide ample room for grouting, banding, or welding of Welded Steel Piping.
 - (c) Excavate holes only as necessary for making joints and to ensure that pipe rests upon prepared trench bottom and not supported by any portion of the joint.
2. Depressions for joints, other than bell-and-spigot:
 - (a) Make in accordance with recommendations of joint manufacturer for particular joint used.

C. Initial Backfill & Pipe Bedding

1. After the pipe has been properly installed on the consolidated bedding and inspected, initial backfill shall be placed around the pipe to a depth over the pipe as shown in the Drawings. The backfill material shall be placed in horizontal layers and compacted by power-operated tampers, rollers, or vibratory equipment. Jetting of bedding or initial backfill is not allowed.
2. After the pipe is laid, place bedding and backfill material in lifts:
 - (a) First Lift: Place and compact the bedding material in a single lift, even with the spring line of the pipe.
 - (b) Subsequent Lifts: Place and compact bedding material in lifts not exceeding eight (8) inches in uncompacted depth.
 - (c) Each layer shall be compacted to the specified relative compaction prior to placing subsequent layers. The thickness of the loose layer may be increased when in-place compaction tests satisfactory to the City's Representative show that the specified relative compaction can be obtained. No further backfilling will be permitted until the City's Representative has accepted the initial backfill.

D. Trench Backfill

1. Above the level of pipe bedding and initial backfill, the trench shall be filled with material as specified unless otherwise indicated on the Drawings. The backfill material shall be placed in horizontal layers and shall have a moisture content such that the required degree of compaction may be obtained. Each layer shall be compacted by power-operated tampers, rollers or other suitable equipment. Each layer shall be compacted to the specified relative compaction prior to placing subsequent layers.

3.4 FIELD QUALITY CONTROL

A. Confirmation tests:

1. Contractor's responsibilities:
 - (a) Accomplish specified compaction of trench backfill.
 - (b) Control operations by confirmation tests to verify and confirm that compaction work complies, and is complying at all times, with requirements specified in this Section concerning compaction, control, and testing.
 - (c) Qualifications of Contractor's testing laboratory: Acceptable to Engineer. Provide lab certification.
 - (d) Copies of confirmation test reports: Submit promptly to the Engineer.
2. Frequency of confirmation testing:
 - (a) Perform testing not less than as follows:
 - (1) For trenches: At each test location include tests for each type or class of backfill from bedding to finish grade.
 - (2) For each valve replacement site: At least one test per two lifts

B. Compliance tests:

1. Frequency of testing: Periodic compliance tests will be made by the Engineer to verify that compaction is meeting requirements previously specified.
2. If compaction fails to meet specified requirements: Perform remedial work by one of the following methods:
 - (a) Remove and replace backfill at proper density.
 - (b) Bring density up to specified level by other means acceptable to the Engineer.

C. Retesting:

1. Costs of retesting: Contractor is responsible for the costs of retesting required to confirm and verify that remedial work has brought compaction within specified requirements.
2. Contractor's confirmation tests during performance of remedial work:
 - (a) Performance: Perform tests in manner acceptable to the Engineer.
 - (b) Frequency: Double amount specified for initial confirmation tests.

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SECTION 31 23 19 DEWATERING

PART 1 GENERAL

1.1 SUMMARY

- A. Scope: The work of this Section includes dewatering necessary to lower and control groundwater levels and hydrostatic pressures to permit excavation and construction to be performed properly under dry conditions.
- B. Contractors Responsibility: Dewatering operations shall be adequate to assure the integrity of the finished project. The responsibility for conducting the dewatering operation in a manner that will protect adjacent structures and facilities rests solely with the Contractor. The cost of repairing any damage to adjacent structures and restoration of facilities shall be the responsibility of the Contractor. Contractor shall secure all necessary permits to complete the requirements of this Section of the Specifications.

1.2 REFERENCES

- A. Work shall be performed in accordance with the City Standard Construction Specifications Section W – Standard Specifications for Water Mains and Services.

1.3 SUBMITTALS

- A. The following shall be submitted in compliance with Section 01 33 00 – Submittal Procedures:
 - 1. Prior to commencement of excavation, a detailed plan and schedule for dewatering activities of excavations.
 - 2. Demonstration of proposed dewatering system and verification that adequate personnel, materials and equipment are readily available for all dewatering activities.
 - 3. Copy of any permit or discharge requirements.
 - 4. Compliance with SWPPP requirements.

1.4 CONTROL AND OBSERVATION

- A. Adequate control shall be maintained to ensure that the stability of excavated and constructed slopes are not adversely affected by water, that erosion is controlled and that flooding of excavation or damage to structures do not occur.
- B. It shall be the sole responsibility of the Contractor to control the rate and effect of the dewatering in such a manner as to avoid all objectionable settlement and subsidence.
- C. Where critical structures or facilities exist immediately adjacent to areas of proposed dewatering, reference points shall be established and observed at frequent intervals to detect any settlement that may develop.
- D. A daily report shall be maintained. The following shall be recorded:

1. Elevation of ground water and piezometric water levels in observation wells (if any).
2. Change in elevation of reference points established.

PART 2 PRODUCTS

2.1 EQUIPMENT

- A. Dewatering system shall include well points, sump pumps, temporary pipelines for water disposal, rock or gravel placement, and other means including standby pumping equipment maintained on the job site continuously.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

- A. An adequate dewatering system shall be maintained to lower and control the groundwater to permit excavation, construction of structures, placement of piping, and placement of fill materials to be performed under dry conditions.
- B. Sufficient dewatering equipment shall be installed to predrain the water-bearing strata below the bottom of foundations, drains, sewers, pipelines and other excavations.
- C. The Contractor shall maintain the water level below the bottom of excavation in all work areas where groundwater occurs during excavation construction, backfilling, and up to acceptance.
- D. The hydrostatic head in water-bearing strata below foundations, drains, sewers, pipelines and other excavations shall be reduced to ensure that the water level and piezometric water levels are below the excavation surface at all times.
 1. The piezometric water level shall be maintained a minimum of 3-feet below the excavation surface all times.
- E. The dewatering system shall be placed into operation prior to excavation below ground water level to lower the ground water level and shall be operated continuously 24 hours a day, 7 days a week until drains, sewers, pipelines and structures have been constructed and leak tested and fill materials have been placed and dewatering is no longer required.
- F. The site shall be graded to facilitate drainage. Surface runoff shall be diverted from excavations. Water entering the excavation from surface runoff shall be collected in shallow ditches around the perimeter of the excavation, drained to sumps, and be pumped or drained by gravity away from the excavation.
- G. Dewatering shall at all times be conducted in such a manner as to preserve the undisturbed bearing capacity of the subgrade soils at proposed bottom of excavation.
- H. If foundation soils are disturbed or loosened by the upward seepage of water or an uncontrolled flow of water, the affected areas shall be excavated and replaced with drain rock at no additional cost to the City.

- I. Flotation shall be prevented by the Contractor by maintaining a positive and continuous removal of water. The Contractor shall be fully responsible and liable for all damages which may result from failure to adequately keep excavations dewatered.
- J. If well points or wells are used, they shall be adequately spaced to provide the necessary dewatering and shall be sandpacked and/or other means shall be used to prevent pumping of fine sands or silts from the subsurface. A continual check shall be maintained to ensure that the subsurface soil is not being removed by the dewatering operation.
- K. Water and debris shall be disposed of in a suitable manner in compliance with local and State regulations and without damage to adjacent property. No water shall be drained into the installed or under construction facilities. Water shall be filtered to remove sand and fine-sized soil particles and further treated if required by regulatory agencies before disposal into any drainage system
- L. Necessary permits for disposal of water, if applicable, shall be obtained by the Contractor from the appropriate regulatory agencies.
- M. The release of groundwater to its original level shall be performed in such manner to prevent disturbance of natural foundation soils, prevent disturbance of compacted backfill and prevent flotation or movement of structures, pipelines, and sewers.
- N. Dewatering of trenches and other excavations shall be considered as incidental to the construction of the Work and all costs thereof shall be included in the various contract prices in the Bid Forms, unless a separate bid item has been established for dewatering.
- O. Contractor shall comply with all discharge permit and SWPPP requirements.

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SECTION 31 41 00 SHORING

PART 1 GENERAL

1.1 SCOPE

- A. This Section provides specifications for sheeting, shoring, bracing, or other excavation supports.

1.2 REFERENCES

- A. This section references the following documents. They are part of this section as specified and modified. In case of conflict between the requirements of this section and those of the listed documents, the most stringent requirement shall prevail.

<u>Reference</u>	<u>Title</u>
ASCE	Guidelines of Engineering Practice and Tied Back Excavations
Caltrans	Caltrans California Trenching and Shoring Manual
OSHA	Occupation Safety and Health Act, US Department of Health
CAL OSHA	State of California Construction Safety Orders – California State Labor Code
CCR	California Code of Regulations – Title 8
CLC	California Labor Code – Sections 6705 to 6707
NAVFAC	Department of the Navy Naval Facilities Engineering Command
USS	United States Steel Corp – Steel Sheet Piling Design Manual

1.3 DEFINITIONS

- A. Shoring: A temporary structural system designed to support vertical faces, or nearly vertical faces, of soil or rock for purposes of excavation. Shoring includes cantilevered sheet piling, internally braced sheet piling, slurry walls, soldier piles and lagging, trench plates and vertical shoring, slide rail, and other similar shoring systems. Sloping (Benching) of the soil is not considered shoring as described herein however, sloping (benching) is considered an appropriate means of constructing a safe trench and may be considered for the use of project excavation.
- B. Shielding: A temporary structural system designed to protect workers from trench failure. A shield is not considered to be a temporary structural system designed to support vertical trench faces, or nearly vertical faces, of soil or rock for purposes of excavation and maintain trench wall consolidation. A shield may be used in conjunction with an active shoring system but shall not be substituted as an or equal.

1.4 QUALITY ASSURANCE

- A. Protection and Trench Safety

1. Pursuant to Section 6705 of the State Labor Code, all open excavations greater than 5 feet in depth shall be constructed with bracing, sheeting, shoring, or other equivalent method designed for the protection of life and limb.
2. The trench excavation and support system shall comply in all respects with the requirements of Article 6 of the Construction Safety Orders of the Division of Industrial Safety.
3. The Contractor's attention is directed to the provisions of Subarticle 1540 (4), Article 6 of the California Construction Safety Orders for alternative shoring and sloping system. It shall be the Contractor's responsibility to provide the additional strength required to support the sides of the excavation against loads which may exceed those employed to derive the criteria set forth in the Industrial Safety Orders.
4. The Contractor shall submit to the City's Representative a detailed plan showing the design of sheeting, shoring, bracing, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. The plan shall be prepared and stamped by a California registered Civil Engineer.
5. It shall be understood that the above-stipulated requirements are the minimum to be provided. The Contractor shall be solely responsible for all liabilities that may arise from the Contractor's failure to provide adequate shoring, bracing or sheeting as necessary to support the excavation under any or all of the conditions of loading which may exist, or which may arise during the construction of the project.

B. Excavation for structures

1. All excavations shall be properly shored, sheeted and braced to prevent shifting of material, to prevent damage to structures or other work, and to avoid delay to the Work, all in accordance with applicable safety and health regulations.
2. Before starting excavation for structures, the Contractor shall submit, for record purposes, complete design calculations and working drawings of proposed sheeting and bracing arrangements which have been prepared, signed and sealed by a California registered Civil Engineer. Shoring system means and methods are the sole responsibility of the Contractor however, the proposed shoring system shall be applicable to working excavation conditions, existing soils, groundwater tables, and required constructability. The shoring system should be consistent with recommendations provided by the Geotechnical Engineer. If the Inspector or City's representative determines that the Contractor's shoring system means and methods are producing an unsafe environment or do not adequately account for the existing work environment, the Inspector may shut down construction until the shoring system is deemed safe by a licensed Civil Engineer.
3. Bracing shall be arranged so as not to place any strain on portions of completed work until the general construction has proceeded far enough to provide ample strength. If the City's Representative is of the opinion that, at any point, the sheeting or supports are inadequate or unsuited for the purpose, the City's Representative may order the Contractor to resubmit design

calculations and working drawings for that point, taking into consideration the observed field conditions.

4. If the new calculations show the need for additional sheeting and bracing, the Contractor shall immediately install facilities necessary to meet or exceed identified requirements.
5. The sole responsibility for the design, methods of installation, and adequacy of the sheeting and supports shall be and shall remain that of the Contractor.
6. The working drawings for shoring, sheeting and bracing will not be checked by the City's Representative.

C. Submittals

1. The following shall be submitted in compliance with Specification Section 01 33 00 – Submittal Procedures.

2. Trench Support Shop Drawings and Calculations:

(a) In accordance with the requirements of Section 6705 of the Labor Code of the State of California, the Contractor shall submit detailed drawings and supporting calculations to the City's Representative before excavation, showing the design of sheeting, shoring, bracing, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of any trench or trenches 5 feet or more in depth.

(1) Where such drawings vary from excavation support standards set forth in California Code of Regulations Title 8 - Construction Safety Orders, submit design calculations pursuant to general engineering design practice.

(2) Provide means for safe and stable excavations that are not less effective than required in CCR Title 8 - Construction Safety Orders.

(3) For excavations other than trenches, submit, in advance of excavation work, design calculations as performed pursuant to general engineering design practice, as specified in this Section, and detail drawing showing means for safe and stable excavations. In design calculations and detail drawing, cover, as a minimum:

1. Excavations adjacent to structures and other improvements, and
2. Excavations 5 feet or more in depth, or less than five (5) feet in depth when there is potential for cave-in, at other locations.

(b) The Contractor's Sheeting, Shoring and Bracing design submittal shall include the following items:

- (1) Provide calculations for the different load, support, and other conditions that occur during the sequence of installation of shoring, construction of facilities protected by the shoring, and sequence of removal of shoring. Provide design calculations that clearly disclose assumptions made, criteria followed, and stress values used for the materials being used.
 - (2) Provide sketches showing the condition at various stages of installation and removal of shoring.
 - (3) Show structures, pipelines, and other improvements located near the shoring, and the shoring on a plan.
 - (4) When utilities penetrate the shoring, submit an elevation of all sides of the shoring showing the locations of the penetrations. Submit details on ground support and sealing around utility penetrations.
- (c) The design shall be signed and stamped by a California registered Professional Civil Engineer. The drawings and calculations will be for record purposes only and will not be checked by the City's Representative. Responsible charge of the submitted sheeting, shoring and bracing drawings and calculations will remain under the sole responsibility of the California registered Professional Civil Engineer of record whom signed and stamped the sheeting, shoring, and bracing design.
- (d) The sheeting, shoring and bracing design shall take the geotechnical data, soil characteristics, and sheeting, shoring, and bracing recommendations into consideration reported in the project specific geotechnical report. Please note discrepancies between the submitted design and recommendations listed in the geotechnical report.
- (e) In accordance with the requirements of CalTrans Standard Specifications, protective plans not requiring a signature shall be submitted at least 5 days before the Contractor intends to begin excavation. If the protective plan requires a signature, the plan shall be submitted at least 20 days before the Contractor intends to begin excavation.
- (f) Detailed Sequence of Installation and Removal of Shoring:
- (1) Consider effects of ground settlement in the sequence of installation and removal of shoring.
 - (2) Provide individual drawings/details illustrating the conditions at various stages in the sequence of installation and removal of shoring.

3. Certification

- (a) The minimum required protection will be that described in the Cal/OSHA Construction Safety Orders of the California Division of Industrial Safety.

- (b) If the Contractor presents excavation plans that vary from the shoring system standards established by the Construction Safety Orders, the Plans shall be prepared, stamped, and signed by a California registered Civil Engineer.

1.5 SCHEDULING AND SEQUENCING

- A. Do not begin work on excavations, trenches, and means for providing stability of excavation and trenches until submittals have been accepted by Engineer and until materials necessary for installation are on site.
- B. Submit submittals a minimum of twenty (20) days prior to the scheduled date to begin excavation work.
- C. The Contractor shall sequence the installation and removal of the shoring system in strict accordance with the signed and stamped Sheeting, Shoring, and Bracing design. In soils deemed unstable, the Contractor shall only construct trenching that can be open and closed in one (1) business day. The Contractor shall coordinate closely with the geotechnical engineer to determine the quality of existing soils and the potential for allowing open cut trenches to remain un-backfilled for multiple days.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 GENERAL

- A. The design, planning, installation and removal of all lagging, sheeting, shoring, sheet piling, and bracing shall be accomplished in such a manner as to maintain the undisturbed state of the soils adjacent to the trench and at and below the excavation bottom.
- B. The use of horizontal strutting below the barrel of a pipe or the use of a pipe as a support will not be permitted.
- C. Sheet piling and timbers in trench excavations shall be withdrawn in a manner so as to prevent subsequent settlement of the pipe or additional backfill loadings that might overload the pipe.
- D. Where measurements and observations indicate possibility of failure or excessive movement of excavation support, determined in accordance with general engineering design practice, take appropriate action immediately.
- E. In the event of an unknown utility line or obstruction is encountered during trenching activities, the contractor shall discontinue construction progress and notify the Engineer. The Contractor will coordinate with the Civil Engineer of record responsible for the Sheeting, Shoring, and Bracing design and adjust the shoring system design as necessary to accommodate the avoidance of the existing.
- F. Installation and Removal
 - 1. The Contractor shall select a shoring system and method of removal which will minimize soil that sticks to shoring from creating large voids and causing settlement. To prevent settlement caused by pulling shoring, the Contractor

shall fill voids with sand, pea gravel, pressure inject grout or an approved controlled density fill.

3.2 PERFORMANCE REQUIREMENTS:

A. General:

1. Support faces of excavations and protect structures and improvements in vicinity of excavations from damage and loss of function due to settlement or movement of soils, alterations in ground water level caused by such excavations, and related operations.
2. Herein Specified Provisions:
 - (a) Complement, but do not substitute or diminish, obligations of Contractor for the furnishing of a safe place of work pursuant to provisions of the Occupational Safety and Health Act of 1970 and its subsequent amendments and regulations and for protection of the Work, structures, and other improvements.
 - (b) Represent minimum requirement for:
 - (1) Number and types of means needed to maintain soil stability.
 - (2) Strength of such required means.
 - (3) Methods and frequency of maintenance and observation of means used for maintaining soil stability.

B. Provide safe and stable excavations by means of sheeting, shoring, bracing, sloping, and other means and procedures, such as draining and recharging groundwater and routing and disposing of surface runoff, required to maintain the stability of soils and rock.

C. Provide support for trench excavations for protection of workers from hazard of caving ground.

D. Provide Shoring:

1. Where, as result of excavation work and analysis performed pursuant to general engineering design practice, as defined in this Section:
 - (a) Excavated face or surrounding soil mass may be subject to slides, caving, or other types of failures.
 - (b) Stability and integrity of structures and other improvements may be compromised by settlement or movement of soils, or changes in soil load on structures and other improvements.
2. For trenches five (5) feet and deeper.
3. For trenches less than five (5) feet in depth, when there is a potential for cave-in.

4. Where indicated on the Drawings.
5. For safe and stable excavations, use appropriate design and procedures for construction and maintenance to minimize settlement of supported ground and to prevent damage to structures and other improvements, including:
 - (a) Using stiff support systems.
 - (b) Following appropriate construction sequence.
 - (c) Preventing Soil Loss Through or Under Support System:
 - (1) Provide support system that is tight enough to prevent loss of soil and extend deep enough to prevent heave or flow of soils from supported soil mass into the excavation.
 - (d) Providing surface runoff routing and discharge away from excavations.
 - (e) Where dewatering is necessary, recharge groundwater as necessary to prevent settlement in area surrounding excavation.
 - (f) Where sheet piling is used, use interlocking type sheets. The sheet piles shall be continuous and driven in interlock. If the bottom of the excavation is located below the water table, use "thumb and finger" type interlock.
 - (g) Not applying shoring loads to existing structures and other improvements.
 - (h) Not changing existing soil loading on existing structures and other improvements.
 - (i) Provide welded steel packing between soil retaining members such as sheet piles and wales and similar members when the gap exceeds 1/2 inch before the wales are loaded.

3.3 DESIGN

A. General

1. Design means for safe and stable excavations in accordance with general engineering design practice.
2. Design steel members in accordance with CBC (most recent edition) and the AISC Manual of Steel Design.
3. Design shoring involving materials other than steel in accordance with CBC (most recent edition).
4. Perform design in accordance with soil characteristics and design recommendations contained in the project geotechnical report referenced in Section 02 22 13, Movement and Vibration Assessment and provided in Appendix A.

5. When electing to design with material stresses for temporary construction higher than allowable stresses prescribed in the Manual of Steel Construction and the applicable building codes, increase in such stresses shall not exceed ten (10) percent of value of prescribed stresses.
 6. Minimum safety factor used for design shall not be less than 1.5.
 7. The calculated minimum depth of penetration of shoring below the bottom of the excavation shall be increased not less than 30 percent if the full value of passive pressure is used in the design.
 8. The maximum height of cantilever shoring above the bottom of excavation shall not exceed fifteen (15) feet. Use braced shoring when the height of shoring above the bottom of excavation exceeds fifteen (15) feet.
 9. The location of the point of fixity for shoring shall not be less than half the calculated minimum embedment depth below the bottom of the excavation.
 10. Generally acceptable references for the design of shoring and excavations are as follows:
 - (a) Caltrans California Trenching and Shoring Manual.
 - (b) NAVFAC Design Manual 7.2 - Foundations and Earth Design.
 - (c) NAVFAC Design Manual 7.3 - Soil Dynamics Deep Stabilization and Special Geotechnical Construction.
 - (d) USS Steel Sheet Piling Design Manual.
 - (e) Guidelines of Engineering Practice for Braced and Tied-Back Excavations published by American Society of Civil Engineers.
- B. Shoring design shall be performed by a Shoring Design Engineer meeting the following qualifications:
1. Shall be registered as a civil or structural engineer in the State of California.
 2. Shall have not less than 5 years experience in the design of shoring.
 3. The shoring design firm shall obtain errors and omissions insurance for the Project for an amount of not less than \$500,000.
- C. Soldier Piles and Lagging:
1. Provide lagging over the full face of the excavation. Joints between pieces of lagging shall be tight to prevent loss of soil.
 2. Provide full face lagging all around penetrations through the lagging.
 3. If the soldier piles are installed in predrilled holes, the predrilled holes shall be filled with controlled density backfill after the soldier piles are installed.

4. The effective width of driven soldier piles for passive soil resistance shall not exceed 2 times the width of the pile. The effective width of concrete encased soldier piles for passive soil resistance shall not exceed two (2) times the width of the concrete encasement.
5. Fill voids behind lagging with gravel or other material acceptable to the Engineer.
6. Apply loads from tie back soil, rock, or deadman anchors concentrically to soldier piles or wales spanning between soldier piles. Wales shall be back-to-back double channels or other members acceptable to the Engineer. Eccentrically loaded with section soldier piles or wales are not acceptable.
7. Design soldier piles for downward loads including vertical loads from tie back anchors.

D. Soil Anchors, Rock Anchors, and Deadmen Anchors:

1. Design tie back anchors for a safety factor of not less than two (2) times the calculated load from the shoring.
2. Proof load all production anchors to not less than 125 percent of the calculated load from the shoring. Lock off anchors at the calculated anchor load.
3. The length of soil anchors used to calculate resistance to load from the shoring, shall not include any length within the potential active pressure soil failure zone behind the face of shoring.
4. Design tie rods for anchors for 130 percent of the calculated load from the shoring.
5. Design tie rods for anchors for 150 percent of the calculated load from the shoring when tie rod couplers are used and for other conditions where stress concentrations can develop.

E. Steel Plating and Vertical Shoring

1. Steel plating shall be required for all excavations greater than 5-feet in depth.
2. Steel plates utilized for the design shall be nonskid finishes.
 - (a) If excavations are to be left open for five (5) days or less, steel plates may be placed over the excavation.
 - (b) In existing AC Pavement, the Contractor shall place cold mix Asphalt "Cutback" around the perimeter of the plates for a smooth transition. If the excavation will be left open longer than five (5) days, the Contractor shall saw cut/grind a key into edges of the pavement around the perimeter of the excavation to support the plates.
 - (1) These keys shall be cut/ground to a depth equal to the thickness of the plates used to span the excavation.

3. Hydraulic Vertical shores may be Aluminum and shall be sized in accordance with the horizontal loading calculated in the Sheeting, Shoring and Bracing system design.
4. When excavating in less stable soils requiring close or intermittent sheeting, the Contractor may utilize an Aluminum Waler & Hydraulic Shore System for trench wall support.

3.4 SEQUENCING

- A. The Contractor shall not start excavation until the trench support drawings have been returned to the Contractor.
- B. When the construction sequence of structures requires the transfer of bracing to the completed portions of any structure, the Contractor shall secure the written acceptance of the City's Representative prior to the installation of such bracing.

**** END OF SECTION ****

SECTION 32 12 16 ASPHALT PAVING

PART 1 GENERAL

1.1 SUMMARY

- A. This section provides specifications for asphalt concrete pavement for prepared subgrade or aggregate base course.

1.2 REFERENCES

- A. State of California Department of Transportation Standard Specifications, latest edition (Caltrans Standard Specifications)
- B. Caltrans Standard Test Methods:
 - 1. Calif Test 202 - Sieve Analysis of Fine and Coarse Aggregates.
 - 2. Calif Test 304 - Preparation of Bituminous Mixtures for Testing.
 - 3. Calif Test 362 - Determining Asphalt Content in Bituminous Mixtures by Vacuum Extraction.
 - 4. Calif Test 375 - Determining the In-Place Density and Relative Compaction of AC Pavement.
 - 5. Calif Test 379 - Determining Asphalt Content in Bituminous Mixtures (Troxler Nuclear Gauge Model 3241).
- C. ASTM International (ASTM):
 - 1. D 1557-12 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³))
 - 2. D 1561 - Standard Practice for Preparation of Bituminous Mixture Test Specimens by Means of California Kneading Compactor.

1.3 SUBMITTALS

- A. Contractor shall submit product data showing that all paving materials conform to the requirements of this section, Caltrans Standard Specifications & Drawings and applicable requirements set forth in the City Standard Specifications & Drawings.
- B. Submittals shall be in accordance with Specification Section 01 33 00 – Submittal Procedures.
- C. Contractor shall submit the following information for review and approval by the Engineer:
 - 1. Mix Design as described in Section 39-2.01A(3)(b).
 - 2. Shop Drawings.

3. Product Data of proposed Materials:
 - (a) Aggregate Base
 - (b) Asphalt Binder
 4. Contractor shall submit copies of Quality Control testing laboratory reports verifying that the aggregate material conforms to the specified gradations or characteristics.
 5. Certificates of Compliance and Competence by the Contractor performing the work.
- D. Delivery & Storage
1. Asphalt pavement delivery:
 - (a) Transport the mixture from the mixing plant to the point of use in vehicles having tight bodies previously cleaned of all foreign materials.
 - (b) Treat bodies as necessary to prevent material from sticking to the bodies.
 - (c) Cover each load with canvas or other suitable material of sufficient size and thickness to protect the asphalt mixture from the weather.
- E. Project Conditions
1. Environmental requirements:
 - (a) Asphalt concrete:
 - (1) Place asphalt concrete only when surface is dry, when atmospheric temperature in the shade is 40 degrees Fahrenheit and rising, or above 50 degrees Fahrenheit if falling.
 - (2) Do not place asphalt concrete when weather is foggy or rainy nor when base on which material is to be placed is in wet or frozen conditions or when, in the opinion of the Engineer, weather conditions will prevent proper handling, finishing, compaction of the mixtures.

PART 2 PRODUCTS

2.1 ASPHALT CONCRETE MATERIALS

- A. All materials shall be in conformance with the following requirements of the latest Caltrans Standard Specification:

Material**Requirements**

Asphalt Aggregate

Section 39-2.02B(4), 3/4-inch Aggregate as specified in 39-2.02B(4)(b)

Asphalt Concrete

Section 39-2.02B(2), Type A Hot Mixed Asphalt (HMA)

Asphalt Binder

Section 92, PG 64-10

Tack coat

Asphalt Binder specified herein

- B. A minimum of 6 inches of aggregate base or as shown on the Drawings, whichever is thicker, will be placed below all new asphalt paving.

2.2 EQUIPMENT

- A. Spreading and compacting equipment shall comply with Section 39-2.01C(2)
- B. Tack Coat Application Equipment shall comply with Section 37-1.03B

PART 3 EXECUTION**3.1 EXAMINATION**

- A. Verification of conditions: Verify surfaces and site conditions are ready to receive work. If unsatisfactory conditions exist, do not commence installation until such conditions have been corrected. Beginning application means acceptance of existing conditions.

3.2 PREPARATION**A. Protection**

1. Protect concrete pavements and walks, curbs and bases, and other improvements adjacent to the operations with suitable materials.
2. Building and other surfaces shall be covered with paper or other protection, when required.
3. Contractor shall be responsible for any damage caused by Contractor's employees. All damage caused by the Contractor's operations shall be repaired to the satisfaction of the Engineer at no additional cost to City.

B. Asphalt Concrete Removal

1. All asphalt concrete pavement surface that has been removed, broken or damaged shall be completely re-paved in accordance with the requirements stated herein unless otherwise noted in the Contract Documents.
2. Existing pavement shall be saw cut and removed clean in accordance with City Standard Specifications & Drawings, and Caltrans Standard Specifications. The Contractor shall coordinate with the Engineer to determine the full extent of pavement restoration/removal.
3. All asphalt paving shall be cut to a neat, straight line and the exposed edge shall be tacked with emulsion prior to paving. The exposed base material shall

be graded, recompact, and resealed prior to paving. Reference the Contract Drawings or City Standard Specifications & Drawings for compaction requirements.

4. Removed asphalt shall be disposed from the work site at the Contractor's expense. Removed asphalt shall not be used as backfill material on-site.
5. Reclaimed asphalt material may be used on the Work site only with written approval from the City's Representative/Engineer. Reclaimed asphalt is asphalt that has been removed with a "grinding machine" and mixed with aggregate material to meet pre-approved requirements.

C. Preparation of Subgrade

1. Subgrade shall be prepared in accordance with the Contract Drawings.
2. Shape subgrade to line, grade, and cross section shown in the drawings.
3. Scarify subgrade to 6 inches depth below the finished subgrade elevation. Compact to 95 percent relative compaction.
4. Immediately prior to applying tack coat, or immediately prior to placing the asphalt pavement when tack coat is not required, the subgrade to receive asphalt pavement shall conform to the compaction requirement and elevation tolerances specified for the material involved and shall be cleaned to remove any loose or extraneous material.
5. If the asphalt pavement is placed on an existing base or pavement which was not constructed as part of the contract, the Contractor shall clean the surface by sweeping, flushing, or other means to remove all loose particles of paving, all dirt and all other extraneous material immediately before applying the tack coat.
6. The finished subgrade shall be within a tolerance of 0.05 of a foot of the grade and cross section shown and shall be smooth and free from irregularities and at the specified relative compaction.

D. Placement of Aggregate Base Course

1. Place aggregate base course to a minimum thickness as shown on the Contract Drawings. Compact to 95% relative compaction and install in accordance with Caltrans Standard Specification Section 26.

3.3 TACK COAT APPLICATION

- A. A tack coat of asphaltic binder shall be applied to all vertical surfaces of existing pavement, curbs, gutters, and construction joints in the surfacing against which new asphalt concrete is to be placed, or as otherwise specified in this Section.
- B. Tack coat shall be applied in one application at a rate of 0.1 gallons per square yard of surface covered.
- C. Tack coat application rates for HMA shall be applied as shown in the table below.

HMA over:	Minimum Residual Rate for Asphalt Binder (gal/ sq yd)
New HMA (between layers)	0.02
Concrete pavement and existing asphalt concrete surfacing	0.03

- D. Apply tack coat on surfaces to receive finish pavement per Caltrans Standard Specifications 39-2.01C(3)(f). Apply tack to metal or concrete surfaces that will be in contact with the asphalt concrete paving.

3.4 ASPHALT PAVEMENT INSTALLATION

1.

- A. Construction of asphalt pavement must comply with Caltrans Specification Section 39-2.02C.
- B. Segregation shall be avoided and the surfacing shall be free of pockets of coarse or fine material. Asphalt pavement containing hardened lumps shall not be used:
1. In areas inaccessible to paving and compacting equipment where spreading is done by hand, minimize the amount of segregation.
- C. Location of longitudinal joints in the top layer will be determined by the Engineer and shall not adversely affect the quality of the finished product.
- D. At all locations, or as directed by the Engineer, the asphalt concrete shall be square. Tapering or feathering is not allowed.

3.5 SURFACE TOLERANCE

- A. Finished grade shall not deviate more than 0.02 foot in elevation from the grade indicated in the drawings. Slopes shall not vary more than ¼ inch in 10 feet from the slopes shown in the drawings.

3.6 TRAFFIC AND PARKING LOT STRIPING AND MARKING PAINT APPLICATION (IF REQUIRED AND IF INDICATED ON THE DRAWINGS)

- A. Apply in accordance with Caltrans Standard Specification Section 84.

3.7 FIELD QUALITY CONTROL

- A. The Contractor shall control the quality of Work and shall provide adequate testing to assure compliance with these Specifications.
- B. See Section 39-2.02A(4)(e) for in place testing requirements for acceptance.
- C. Cracks, settling of surface, improper drainage, improper compaction, and sloppy connection to previously laid surfaces will be construed as improper workmanship and will not be accepted.

**** END OF SECTION ****

SECTION 32 16 00
CONCRETE CURBS, GUTTERS, SIDEWALKS AND DRIVEWAYS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Concrete curbs, gutters, sidewalks, driveways, and access ramps as new installations and to replace those demolished or damaged during construction.
- B. All work within the public rights-of-way shall conform to City of Milpitas Standard Specifications.

1.2 SUBMITTALS

- A. Submittals shall be in accordance with Specification Section 01 33 00 – Submittal Procedures.
- B. Product Data: Submit data completely describing all products to be used.

1.3 PROJECT CONDITIONS

- A. Any concrete flatwork damaged during the course of construction, including transportation and delivery, shall be replaced to that flatwork's pre-existing condition or better.
- B. Contractor shall be responsible for all field measurements necessary to meet these specifications.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Concrete:
 - 1. Shall contain five hundred sixty-four (564) pounds (6 sacks) of Type I or I/II Portland Cement per cubic yard. Contractor shall provide the City Engineer with certified delivery tickets stating the weight of the separate aggregate and water content of each individual load of concrete used. Curb shall be dipped for driveway entrances where indicated by the Engineer in the field.
 - 2. In lieu of above, the contractor may furnish at his option concrete as follows:
 - a. Concrete shall be proportioned and mixed to develop strength of 3,000 pounds per square inch at 28 days, as tested in accordance with California Test 521, with cylinders molded and initially field cured under the California Test 540. Concrete should be sampled under California Test 539.
 - b. Mix Design shall be designed by an approved laboratory employee and paid for by the contractor. The basic proportions of the mix shall be determined by weight of loose dry material, and all proportioning of the ingredients for each batch shall be done by weighing the fine and

coarse aggregate separately. Water and cement shall be separately measured and introduced to the mix by such methods that the proportions thereof can be accurately controlled and easily checked at any time.

- c. Approval of the mix shall be by the City Engineer, who shall determine accuracy by making tests.
 - d. Batch tickets to be provided to the City Engineer with each load.
- B. Form Release Material: Light oil or other releasing agent of concrete type that does not discolor concrete or interfere with the application of finishing mortar to curb tops and faces.
- C. Dowels: #4 rebar conforming to ASTM A615, Grade 40.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions:
- 1. Verify field conditions, including subgrade condition and interferences, before beginning construction.

3.02 PREPARATION

- A. Surface Preparation:
- 1. Subgrade:
 - a. Curb and gutter shall be placed over a minimum of six inches (6") of base or over a base the lower surface of which is a continuation of the subgrade line, whichever is greater.
 - b. The base shall be constructed true to grade and cross-section as shown on the Contract Drawings. It shall be rolled and watered or hand tamped to 95% relative compaction before placing concrete. The complete base shall be tested for grade and cross-section by means of a template extending the full depth of the curb and gutter and supported between side forms. The base and forms shall be thoroughly watered in Forms and Subgrade: Water immediately in advance of placing concrete. Sidewalks shall be placed on a minimum of 4" of compacted base rock or sand-gravel material as shown on Standard Drawings.

3.03 INSTALLATION

- A. Forms:
- 1. The depth of forms shall be equal to the full depth of curbs or gutters. Timber forms shall be surfaced top and bottom and on the side which is placed next to the concrete and shall not be less than one and five-eighths (1-5/8") inches thick after being surfaced. Warped forms and forms not having a smooth, straight

upper edge shall not be used.

2. Sidewalk Forms: (Concrete) Forms shall be set with the upper edge true to line End grade and shall be held rigidly in place by stakes placed on the outside of the forms and set flush with the top edge of the form. The side forms shall not be removed in less than twelve (12) hours after the finishing has been completed.
 3. Curb Forms: Rigid forms shall be provided for all curbs, except that benders or thin plank forms, rigidly placed may be used for curbs or curb returns with a radius of thirty (30') feet or more where there are grade changes in the returns, or where the central angle is such that a rigid form with a central angle of ninety degrees (DOG) cannot be used. Back forms for curb-returns may be of one-half inch (1/2") benders for the full height of the curb cleated together. Curb forms shall be carefully set to alignment and grade and to conform to the dimensions of the curb. Forms shall be held rigidly in place by use of pairs of iron stakes placed at intervals not to exceed four feet (4'). Clamps, spreaders and braces shall be used where required to insure rigidity in the forms. The form on the front of the curbs shall not be removed in less than one (1) hour after the concrete has been placed. In no event, shall the forms be removed while the concrete is sufficiently plastic to slump upon removal of the form.
 4. Outside Forms and Temporary Forms: Outside forms and temporary forms contiguous to curbs shall be set with the upper edges true to line and grade, and shall be held rigidly in place by stakes placed on the outside of the forms and set flush with the top edge of the forms. Temporary forms shall be removed immediately after striking off and tamping the surface of the gutter and the space left thereby immediately filled and finished true to grade and cross-section. Outside forms shall remain in place not less than four (4) hours after the finishing has been completed.
 5. Thoroughly clean prior to each use and coat with form releasing material.
- B. Score marks and weakened plain joints shall conform to requirements of Contract Drawings or as directed.
- C. Concrete:
1. Placing:
 - a. Thoroughly spade concrete away from forms so that no rock pockets exist next to forms and so that no coarse aggregate will show when forms are removed.
 2. Finished Concrete:
 - a. Concrete walks and curbs shall be brought true to grade with a trowel, scored and brush finished and ramps roughened, as directed by the City Engineer
 3. Curing Concrete: Unless otherwise specified on the plans, concrete shall be cured by means of the impervious membrane method, or by water cure.

- a. Water Curing: The surface of the concrete and forms shall be kept continuously moist for a period of 72 hours.
- b. Membrane Curing: The concrete pavement shall be cured with an approved coating of approved emulsions of paraffin or silicone applied in quantities to insure a uniform protective coating on all surfaces and exposed edges. The application shall be made immediately upon the completion of the concrete pour and disappearance of the free surface moisture. In the event the application of the curing membrane is delayed, the concrete surface shall be moistened and kept damp, but care shall be taken that free surface moisture is not present when the curing compound is applied.
 - i. After the membrane has been applied, care shall be taken that the surface film is kept intact and undamaged, and any section of the concrete surface damaged by rain or otherwise during the curing period (7 days) shall be retreated.

D. Backfilling:

- 1. Unless otherwise specified, match existing backfill behind curbs, gutters, or sidewalks with soil native to area.

3.04 FIELD QUALITY CONTROL

A. Tests:

- 1. All concrete shall be tested in accordance with California Test 521, with cylinders molded and initially field cured under the California Test 540. Concrete should be sampled under California Test 539.
- 2. Curbs and Gutters:
 - a. Test face, top, back, and flow line with 10-foot straightedge or curve template longitudinally along surface.
 - b. Correct deviations in excess of 1/4 inch.
- 3. Gutters:
 - a. Frequency of Testing: When required by the City Engineer, where gutters have slope of 0.8 foot per hundred feet or less, or where unusual or special conditions cast doubt on capability of gutters to drain.
 - b. Test Method: Establish flow in length of gutter to be tested by supplying water from hydrant, tank truck, or other source.
 - c. Required Results:
 - i. 1 hour after supply of water is shut off, inspect gutter for evidence of ponding or improper shape.
 - ii. In event water is found ponded in gutter to depth greater than 1/2-

inch or on adjacent asphalt pavement, correct defect or defects in manner acceptable to the City Engineer without additional cost to the Contract.

3.05 ADJUSTING

- A. Repair portions of concrete damaged while stripping forms or, when damage is severe, replace such work at no additional cost to the Contract. Evidence of repairs shall not be noticeable in the finished product.
- B. Remove and replace sections of work deficient in depth or not conforming to requirements indicated herein at no additional cost to the Contract. Removal and replacement shall be the complete section between 2 joints.

*****END OF SECTION*****

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SECTION 33 05 07.36 MICROTUNNELING

PART 1 GENERAL

1.1 SUMMARY

- A. The Contractor shall furnish all labor, equipment, and materials necessary for microtunneling pipe installation, and other associated work.
- B. Refer to Section 21 23 00, Excavation and Fill.

1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. The publications listed below form a part of this Specification to the extent referenced. Where conflicts between these Specifications and the referenced specification, code, or standard occur, the more restrictive specification shall govern. The publications are referenced in the text by basic designation only. Where a date is given for referenced standards, that edition shall be used. Where no date is given for referenced standards, the latest edition available on the date of issue of Contract Documents shall be used.

- 1. Safety Codes:

- a. Cal/OSHA, State of California Administrative Code, Title 8, Industrial Relations, Chapter 4, Division of Industrial Safety, Subchapter 20, Tunnel Safety Orders.
 - b. Occupational Safety and Health Administration (OSHA) Regulations and Standards for Underground Construction, 29 CFR Part 1926, Subpart S, Underground Construction, and Subpart P, Excavations.

1.3 SUBMITTALS

- A. Submittals shall be made in accordance with Section 01300, Submittals.

- A. Qualifications: Submit the name of the Contractor that will perform the microtunneling work and the key personnel that will perform these duties onsite. In addition, submit names and training/qualifications of the Project superintendent, all proposed Microtunnel Boring Machine (MTBM) operators, personnel that will perform air quality monitoring, the site safety representative, and the licensed surveyor.

- B. Microtunneling Equipment: Submit the following describing the microtunneling equipment and construction methods to be employed:

- 1. A detailed description of the methods and equipment to be used in completing each microtunnel drive.

- 1. Manufacturer's literature describing the microtunneling system including the machine and all ancillary equipment. Provide descriptions of projects on which this system has been successfully used including names, addresses, and telephone numbers of owner's representatives for these projects as well as length, diameter, and pipe material used. If a used or refurbished MTBM is

proposed, list previous usage, modifications made and dates of modifications, and detailed description of the extent and dates of refurbishment.

2. A description of the alignment control systems including manufacturer's literature and drawings showing setup, support provisions, and other details for the laser or theodolite system. Submit a description of surveying methods to set guidance system positions and a description of procedures to check and reset or realign guidance system during construction. Submit a description of methods to ensure that thrust block, entry seal, and jacking frame are installed on proper line and grade. Submit results of line and grade survey to ensure that the thrust block, jacking frame, guide rails, entry seal, and exit seals are installed properly prior to launch of each drive. Confirm that these systems can achieve the required pipeline line and grade within the specified tolerances.
 3. Capacity, number, and arrangement of main jacks including details of the thrust ring, thrust block, jacking frame, jacking controls, pressure gages, and jack calibration data (pressure vs. force relationship for each stage of the jacks).
 4. Submit drawings and details of microtunneling entry and exit seals in the shafts including materials, dimensions, arrangement, and installation procedures.
 5. Details of pipe lubrication injection system and pipe lubricants to be used during microtunneling, including manufacturer's literature and Material Safety Data Sheets (MSDS) sheets. Include a description of proposed lubrication procedures during jacking, including estimated volumes of lubricant that will be pumped. Confirm that sufficient volume of lubricant will be pumped at all times to completely fill the annular space outside the jacking pipe.
 6. Details of spoil and slurry handling, separation, transport, and disposal equipment and procedures including details of slurry additives, slurry separation plant, and the location of slurry and spoil disposal sites. Confirm that slurry and spoils shall be contained at all times and shall not be stockpiled or dumped on site or allowed to spill and collect around slurry separation plant. Provide manufacturers description for slurry additives and MSDS. Provide written documentation from the disposal site(s) indicating that they will accept the spoil or slurry and are in compliance with applicable regulations.
- C. Shaft Layout Drawings: The Contractor shall submit shaft layout drawings detailing dimensions and locations of all equipment, including overall work area boundaries. Shaft layout drawings will be required for jacking and receiving shaft locations and shall be to scale, or show correct dimensions. The Contractor's layout drawings shall show that all equipment and operations shall be completely contained within the allowable work areas shown on the Drawings.
- D. Intermediate Jacking Stations: Drawings and design details for intermediate jacking stations including shell materials, measures for corrosion protection, proposed spacing, criteria for installing, method of operation, and number of stations.
- E. Pre- and Post-Construction Surveys: Submit pre- and post-construction surveys including photographs, videotapes, field notes, and sketches.
- F. Settlement Points: Layout of all surface and subsurface settlement points, provisions for protecting adjacent utilities and structures, and monitoring provisions.

- G. Safety Plan: A Safety Plan for the microtunneling operations including air monitoring equipment and procedures, and provisions for lighting, ventilation, and electrical system safeguards.
- H. Calculations: Calculations shall be submitted in a neat, legible format. Assumptions used in calculations shall be consistent with information provided in the Geotechnical Report. All calculations shall be prepared by professional engineer licensed in State of California, who shall stamp and sign calculations.
 - 1. Calculations demonstrating that the soils behind the thrust block can transfer the maximum planned jacking forces exerted by the main jacks to the ground during pipe installation with a factor of safety of at least 2.0, without excessive deflection or displacement.
 - 1. Calculations that present planned minimum and maximum active face pressure at each 20-foot length of each drive and at each critical feature crossing to prevent settlement and heave or frac-out.
- I. Schedule: Provide a schedule for all microtunneling work, identifying all major construction activities as independent items. The schedule shall include, as a minimum, the following activities: mobilization, groundwater control at jacking and receiving shafts, shaft excavation and support, working slab construction, thrust wall construction, jacking equipment setup, ground improvement and contact grouting around the shaft at the entry and exit seal locations, entry ring installation for launch of machine, microtunneling, retrieval of the MTBM, contact grouting, installation of the carrier pipe inside jacked casing, backfill grouting, shaft backfill, site restoration, cleanup, and demobilization. The schedule shall also include the work hours and workdays for each activity, and a written description of the construction activities. The schedule will be reviewed by the Engineer and shall be updated and resubmitted by the Contractor every 2 weeks or more frequently if requested by the Engineer.
- J. Daily Records: The following daily records shall be submitted to the onsite Engineer by noon on the day following the shift for which the data or records were taken.
 - 1. Jacking Records: The Contractor shall provide complete jacking records to the Engineer. These records shall include, at a minimum: date, time, name of operator, tunnel drive identification, installed pipe number and corresponding tunnel length, rate of advance, jacking forces, soils encountered, cutterhead speed and torque, slurry flow rates and pressures, bypass valve position, use of any cutting or high-pressure nozzles, face pressure, steering jack positions, line and grade offsets, any movement of the guidance system, machine inclination and roll, intermediate jacking station use and jacking forces, pressure, volume, and location of any lubricant pumped, problems encountered with the tunneling machine or other components or equipment, and durations and reasons for delays. Computer-recorded data should be referenced to time and distance and should be recorded at time intervals of one minute or less. Manually recorded observations should be made at intervals of not less than three times per pipe, as conditions change, and as directed by the Engineer. At least 7 days prior to the launch of the machine, the Contractor shall submit samples of the automated and manual jacking records. Samples shall include electronic data and any necessary programs to interpret data, and the manual logs or records to be used.

1. Lubrication Records: The Contractor shall provide lubrication records to the Engineer. These records shall include the injection locations along the pipe string and amount, in gallons, of lubricant pumped throughout a drive. The record will also include the type of additive used and date, time, and drive distance when used.
 2. Slurry Additives: The Contractor shall provide records of all slurry additives including any bentonite and polymers. The time and volume, or weight, of the additive shall be noted. Measurements of mud weights, specific gravity and viscosity will be made at the beginning, middle, and end of each shift, and submitted with the daily logs. Measurements will be made on slurry samples taken from the slurry tanks and noted accordingly.
 3. Survey Measurements: Survey measurements of pipe alignment and all settlement monitoring points.
- K. Contingency Plans: The following list includes problem scenarios that may be encountered during the microtunneling operations. The Contractor shall submit contingency plans for dealing with each problem scenario while satisfying the specifications. These plans shall include the observations and measurements required to clearly identify the cause of the problems.
1. Machine unable to advance:
 - a. Possible obstructions (including boulders, old foundations, metallic debris, or reinforced concrete).
 - b. Insufficient jacking capacity.
 - c. Machine malfunction.
 1. Slurry separation problems:
 - d. Cuttings are not separated using the slurry separation plant.
 - e. Cuttings settle out in the slurry lines before reaching the separation plant.
 2. Strong hydrocarbon smell is detected in the slurry returns or in the shaft.
 3. Laser distorted by heat, humidity, or physical disturbance.
 4. Jacking Forces:
 - f. Jacking forces increase dramatically or suddenly.
 - g. Jacking forces reach design capacity of pipe, jacking frame, or thrust wall (treat these scenarios as separate incidents).
 5. Settlement and Subsidence:

- h. Survey measurements indicate deformations exceed allowable limits.
- i. Excavated volumes significantly exceed pipe volume installed.
- j. Slurry face pressures and/or torque on head decrease suddenly and significantly.
 - 6. Groundwater inflows to shaft increase significantly and/or transport fines into shaft in measurable quantities.
 - 7. Steering difficulties result in line and grade tolerances being exceeded.
 - 8. Pipe has been damaged or has been found to be out of compliance with specifications:
- k. Before installation.
- l. During, or after installation.
 - 9. Thrust block deforms excessively under jacking loads or provides insufficient capacity to advance pipe.
 - 10. Control signal is lost. Cannot monitor position, torque, thrust, steering jack position, or other performance parameters
- L. Frac-Out and Surface Spill Contingency Plan: The Contractor shall prepare a Spill Contingency Plan, a Frac-Out Prevention and Response Plan, and an Abandonment Contingency Plan. The Contractor shall follow all provisions of the approved Drawings.
- M. Traffic Control Contingency Plan: The Contractor shall prepare a Contingency Traffic Control Plan for the highway crossings. Drawings should address the scenario where one lane in either direction must be closed to traffic because of excessive settlement. Traffic plan shall be prepared by a specialty firm qualified to prepare plans for Caltrans. Plan shall also include procedures, contacts, and equipment required to implement the Plan.

1.4 DEFINITIONS

A. Geotechnical Reports:

- 1. Geotechnical Desktop Study
- 1. Geotechnical Design Report
- B. Microtunneling: A remotely controlled, guided, pipe jacking process that provides continuous support to the excavation face and uses a pressurized slurry spoil removal system. The microtunneling process does not require routine personnel entry into the tunnel. A key element of microtunneling is the ability to control the stability of the face by applying fluid and mechanical pressure to balance the earth and groundwater pressures.
- C. Microtunnel Boring Machine (MTBM): Remote-controlled, guided slurry shield that can provide continuous support to the excavation face. The MTBM is operated from a control

container located on the ground surface. Soil excavation is achieved by a rotating cutter-wheel. Excavated soil enters a slurry chamber where it is mixed with water to form a slurry. Pumps cycle the slurry to the surface where a separation plant removes the solids from the slurry. The recycled slurry is then returned to the face in a closed-system of pumps and hoses. Because of the remote-control operation and the closed spoil-removal system, routine personnel entry into the MTBM is not required. Slurry used to convey spoil may be water; however, it often contains additives such as bentonite that thicken the slurry, allowing it to carry more solids and providing gel strength to prevent the slurry from permeating the soils at the heading. The guidance system consists of a laser or theodolite and EDM device mounted in the jacking shaft communicating a reference line to a target mounted in the MTBM's articulated steering head. The target in an MTBM provides the operator with information about machine attitude and pitch, and can allow for accurate steering control.

- D. Jacking Pipe: Pipe jacked behind the microtunneling machine. The jacking pipe shall be the casing pipe, specifically designed to be installed by pipejacking using microtunneling equipment.
- E. Carrier Pipe: Permanent pipe for operational use that is used to convey flows.
- F. Casing: A pipe installed by microtunneling that supports the ground and provides a stable underground excavation for the installation of a carrier pipe.
- G. Intermediate Jacking Station (IJS): A fabricated steel cylinder fitted with hydraulic jacks spaced around the circumference which is incorporated into the pipeline between two specially fabricated pipe sections. The function of an intermediate jacking station is to distribute the jacking load along the pipe string during pipe installation. The hydraulic jacks are removed at the completion of a drive and the gap between adjacent pipe sections is fully closed by pushing the pipes together with the main shaft jacks or another IJS. The steel cylinder remains as an extended sleeve or coupling. The steel cylinder should be protected from corrosion, consistent with corrosion protection used for the jacking pipe and joints.
- H. Launch/Retrieval Seal or Entry/Exit Seal: A mechanical seal usually comprised of one or more rubber flanges attached to a steel housing that is mounted to the wall of the jacking/receiving shaft. The microtunneling machine distends the flange seal as it passes through, creating a seal to reduce water, slurry, or lubrication inflows into the shaft during microtunneling operations.
- I. Lubrication/Grout Port: A port located within the MTBM or in the jacking pipe fitted with a one-way valve for injection of lubrication material or grout into the annular space between the pipe and the ground.
- J. Jacking Record: A computer-generated or manually recorded report that contains information on microtunneling operations and may include: date, time, name of operator, tunnel drive identification, installed tunnel length, rate of advance, jacking forces, cutterhead speed and torque, slurry inflow and outflow rates and pressures, bypass valve position, use of any cutting or high-pressure nozzles, face pressure, steering jack positions, line and grade offsets, any movement of the guidance system, machine inclination and roll, intermediate jacking station use and jacking forces, pressure, volume, and location of any lubricant pumped, problems encountered with the tunneling machine or other components or equipment, and durations and reasons for delays.

- K. Settlement Monitoring Point: A point with elevation and spatial location established by survey prior to construction. The point is re-surveyed periodically to monitor ground movements. The point may be a nail, pin, subsurface settlement rod, borehole extensometer, or other device that can be readily located and surveyed.
- L. Obstruction: Objects located wholly or partially within the cross-sectional area excavated by the microtunneling machine that prevent the forward movement of the microtunneling machine after all diligent efforts to advance past the object by the Contractor have failed.

1.5 DESIGN CRITERIA

A. Microtunneling Equipment:

1. Only pressurized, closed-face, remotely operated microtunneling equipment using slurry spoil removal, shall be used for all microtunneling work required for this project as defined in this Section. The microtunneling machine shall be manufactured by Akkerman, Herrenknecht, Iseki, Lovat, Soltau, or approved alternate company that specializes in the design and fabrication of this type of equipment. The machine shall be capable of fully supporting the face during both excavation and shutdown periods, and shall have the capability of exerting a continuous, measurable, controllable stabilizing pressure at the face as required to prevent loss of ground and groundwater inflows. The system shall be capable of adjustment required to counterbalance the groundwater and soil pressures at the tunnel face to an accuracy of plus or minus 1 foot of equivalent hydrostatic pressure (i.e., plus or minus 62.4 psf). A pressure gage shall be provided so the operator can monitor the pressure exerted at the heading.
1. Microtunneling equipment selected for the project shall be suitable for and capable of efficiently advancing through the geologic conditions described in the GBR and the geologic conditions anticipated by the Contractor. The microtunneling machine shall be capable of crushing or excavating boulders or other objects up to 30 percent of the outside diameter of the MTBM and up to an unconfined compressive strength of 30,000 psi.
2. The machine shall have a watertight articulation joint between two segments of the shield. The shield shall be steerable in both the vertical and horizontal directions to allow the operator to maintain line and grade within the specified tolerances. The guidance system shall be designed to function at the maximum required drive length without loss of accuracy or reliability of function. A display showing the position of the machine in relation to design line-and-grade shall be provided at the control panel to allow the operator to continuously monitor line and grade deviations.
3. The cutterhead shall have a reversible drive system so that it can rotate in either direction or other suitable provisions to minimize rotation or roll of the machine or pipe during installation.
4. The maximum radial overcut for each crossing is 1.0 inch. Maximum allowable radial overcut has been selected to minimize potential settlements of the ground and subsurface facilities. The radial overcut will be determined as the difference between the maximum diameter created by the cutting teeth or overcut band on the machine (whichever is greater) and the outer diameter of the pipeline or casing, divided by two.

5. A lubrication injection system shall be provided to inject pipe lubricant around the MTBM and jacking pipe to decrease frictional resistance. Lubrication materials may include a mixture of bentonite and/or polymers and water. Lubrication ports shall be provided in the MTBM and jacking pipe to allow for lubrication along the pipe string at intervals of not more than 8 feet. The lubrication ports shall be subsequently used for contact grouting.
 6. The machine shall be equipped with a computerized data acquisition system for collecting information for the jacking record. An onsite printer and disk drive will also be required for production of a printed daily jacking record and an electronic copy of the data. As a supplement to the computerized data acquisition system, the Contractor shall use manual data acquisition for collecting information for the jacking record. The Engineer and/or City's Representative shall have access to all areas of the work, including the operations control container, the slurry separation plant, and shafts, for inspection and collection of data, measurements, and observations at all times, without restriction.
 7. The machine shall have an automatic shutoff switch and provisions for continuous gas monitoring.
- B. Methods and equipment shall control surface settlement and heave above the pipeline to prevent damage to existing utilities, facilities, and improvements. Any ground movements (settlement/heave) shall be limited to values that do not cause damage or distress to surface features, utilities, or improvements. The Contractor shall be responsible for any damage to existing features, improvements, or utilities, and shall repair any damage to the satisfaction of the Engineer, at no additional cost to the Owner, and without schedule extension.
- C. The slurry separation plant shall be designed to achieve the rates of spoil separation and slurry cleaning required for planned production rates. The Contractor is advised that along portions of the project, the ground conditions include silt and clay-rich soil that could present delays if a gravity separation method is used alone. Shaker screens, hydrocyclones and centrifuges may be required for efficient separation of spoils. The separation plant must fit within the allowable work areas shown on the Drawings. Excavated slurry pits or ponds will not be allowed. Additionally, all excavated materials and slurry must be discharged into, and completely contained within, tanks, trucks, or other containers at all times. Onsite stockpiling or disposal shall not be permitted.
- D. Intermediate jacking stations for steel casing shall be fabricated of the same materials as the casing. The Contractor shall install the IJS if jacking forces reach or exceed 70 percent of the safe jacking capacity of the casing, jacking frame, or thrust block, whichever is lowest. The Contractor may elect to use the IJS before jacking forces reach the threshold values.
- E. A thrust block shall be used to transfer jacking loads to the soil behind the jacking shaft. The thrust block face shall be constructed perpendicular to the proposed pipe alignment. The thrust block shall be designed to withstand the maximum jacking forces developed by the main jacks, without excessive deflection or displacement. Forces applied to the soil shall not exceed the allowable passive earth pressure calculated based on the subsurface conditions identified in the geotechnical reports, with a minimum factor of safety of 2.0. The Contractor shall structurally connect shaft support components to achieve required thrust reaction capacity, and/or shall use grouting behind shaft walls to achieve sufficient thrust reaction capacity.

- F. Provide launch and retrieval seals at all shaft exit and entry locations. Provide ground improvement to prevent loss of ground and uncontrolled inflows at entry and exit seal locations.

1.6 QUALITY ASSURANCE

- A. All microtunneling work shall be performed by a contractor prequalified for microtunneling work, as defined in the Instructions to Bidders. The Project superintendent shall have at least 5 years of experience supervising microtunneling construction. The microtunneling machine operator(s) shall have technical training in the operation of the proposed microtunneling equipment and shall have completed, as a primary operator, at least three similar microtunneling projects involving at least 500 feet of microtunneling in similar soil and groundwater conditions on each project. At least one of the projects shall have an individual drive equal to or greater in length than the longest drive on this project. The site safety representative and personnel responsible for air quality monitoring shall be experienced in tunnel construction and shall have current certification by Cal-OSHA.
 - A. The Contractor's surveyor responsible for line-and-grade control shall be a Licensed Surveyor registered in the State of California who has prior experience in similar projects.
 - B. The Contractor shall provide at least 72 hours advance written notice to Engineer of the planned launch of the MTBM. The Contractor shall immediately notify the Engineer, in writing, when any problems are encountered with equipment or materials, or if the Contractor believes the conditions encountered are materially and significantly different than those represented within the Contract Documents. All work by the Contractor shall be done in the presence of the Engineer unless the Engineer grants prior written approval to perform such work in Engineer's absence.
 - C. The Contractor shall allow access to the Engineer and shall furnish necessary assistance and cooperation to aid the Engineer in observations, measurements, data, and sample collection, including, but not limited to the following:
 - 1. The Owner and/or Engineer shall have full access to the operator control container prior to, during, and following all microtunneling operations. This shall include, but not be limited to, providing visual access to real-time operator control screens, gauges, and indicators.
 - 1. The Owner and/or Engineer shall have full access to the jacking and reception shafts prior to, during, and following all jacking operations. This shall include, but not be limited to, visual inspection of installed pipes, launch and retrieval seals, and verification of line and grade. The Contractor shall provide safe access in accordance with all safety regulations.
 - 2. The Owner and/or Engineer shall have full access to the slurry separation plant prior to, during, and following all microtunneling operations. This shall include, but not be limited to, full access to shaker screens, hydrocyclones, conveyor belts, centrifuge equipment, and slurry and spoil holding tanks. The Engineer shall be allowed to collect soil samples from the shaker screens and/or spoil holding tanks on the slurry separation plant a minimum of once per installed pipe section, or every 10 feet, whichever is more often, and at any time when changes in soil conditions or obstructions are apparent or suspected.

3. The Owner and/or Engineer shall have full access to the bentonite lubrication plant prior to, during, and following all jacking operations. This shall include, but not be limited to, full access to visually inspect storage and mixing tanks, lubricant pressures and pumping rates, and amount and type of lubricants on site.

1.7 SAFETY

- A. The Contractor is responsible for safety on the job site. Methods of construction shall be such as to ensure the safety of the work, Contractor's and other employees on site, and the public. Perform all Work in accordance with all current applicable regulations and safety requirements of the federal, state, and local agencies. Comply with all applicable provisions of Tunnel Safety Orders of the State of California and 29 CFR Part 1926, Subpart S, Underground Construction and Subpart P, Excavations, by OSHA. In the event of conflict, comply with the more stringent requirements.
 - A. No gasoline powered equipment shall be permitted in jacking and receiving shafts. Diesel, electrical, hydraulic, and air powered equipment is acceptable, subject to applicable local, State, and Federal regulations.
 - B. Furnish and operate a temporary ventilation system in accordance with applicable safety requirements when personnel are in the shaft or in the pipe. Perform all required air and gas monitoring. Ventilation system shall provide a sufficient supply of fresh air and maintain an atmosphere free of toxic or flammable gasses in all underground work areas.

PART 2 PART 2 -PRODUCTS

2.1 MATERIALS

- B. Steel Casing Pipe: Steel pipe to be installed by direct pipejacking to serve as continuous casing for carrier pipe shall conform to Section 02445, Boring and Jacking.

PART 3 PART 3 -EXECUTION

3.1 GENERAL REQUIREMENTS

- A. Microtunneling shall not begin until the following tasks have been completed:
 1. All required submittals have been provided, reviewed, and approved.
 2. Jacking shaft and receiving shaft excavations and support systems for the anticipated drive have been completed in accordance with approved submittals. Locations and elevations of shafts shall have been surveyed to confirm that work can be completed in accordance with alignment and grade shown on the Drawings.
 3. The location, orientation and grade of the jacking frame or guide rails and entry/exit seals have been surveyed to ensure they are on the proper line and grade and to verify that they are properly supported. Special care shall be taken when setting the guide rails or jacking frame in the jacking shaft to ensure stability

and accuracy of the alignment and grade. Guide rails or jacking frame shall be securely attached to the concrete working slab, with supplementary concrete or grout if necessary, to prevent movement or shifting during the work.

4. A start-up inspection of all mechanical and hydraulic systems associated with the microtunneling operations has been completed. The system shall be tested on the surface to ensure that the microtunneling machine and supporting equipment is functioning properly. The Engineer shall be notified at least 72 hours prior to the start-up inspection and a site inspector representing the Owner will be present during the start-up inspection. Key machine performance data will be measured and recorded by the Contractor during this inspection, including cutterhead rotational torque, functionality of main and steering jacks, laser and target, and other components. The records of the start-up inspection shall be submitted to the Engineer within 24 hours of the completed inspection.
 5. Site safety representative has prepared a code of safe practices and an emergency plan in accordance with Cal/OSHA and other applicable requirements. Provide the Engineer and Owner with a copy of each prior to starting microtunneling. Hold safety meetings and provide safety instruction for new employees as required by Cal/OSHA. Conduct a pre-construction safety conference in accordance with Cal/OSHA requirements. Arrange this conference and inform the Engineer of the time and place of the conference at least 7 days in advance.
- B. The Contractor shall properly manage and dispose of groundwater inflows to the shafts. The Contractor shall not discharge groundwater inflows into storm sewers, sanitary sewers, water bodies, or streets. The Contractor may use temporary infiltration basins, consistent with notes on the Drawings and permit requirements.
 - C. Conduct all operations such that trucks and other vehicles do not interfere with traffic or create a mud, dust, or noise nuisance in the streets and to adjacent properties. Promptly clean up, remove, and dispose of mud, spoils and slurry spillage, and any slurry discharges.
 - D. All work shall be done so as not to disturb roadways, railroads, canal channels, adjacent structures, landscaped areas, or existing utilities. Any damage shall be immediately repaired to original or better condition and to the satisfaction of Engineer at no additional cost to the Owner.
 - E. Whenever there is a condition that is likely to endanger the stability of the excavation or adjacent structures, the Contractor shall operate with a full crew 24 hours a day, including weekends and holidays, without interruption, until those conditions no longer jeopardize stability.

3.2 JACKING OPERATIONS

- A. Provide a suitable jacking frame and thrust block to carry out the work. Provide intermediate jacking stations to complete the microtunneling drives indicated on the Drawings. At least one IJS and two specially fabricated IJS pipes shall be on site prior to commencing microtunneling. The intermediate jacking station shall be installed and used if the total jacking force during a drive exceeds 70 percent of the capacity of the main jacks, the safe design capacity of the pipe or IJS pipe, or the maximum allowable jacking force on the thrust block, whichever is less. IJS's shall be installed and operated in accordance with approved Submittals.

- C. Transport the jacking pipe from storage to the jacking shaft without damage. Transport methods shall be acceptable to pipe manufacturer. Damaged jacking pipe shall not be used in the work, unless permitted in writing by the Engineer. Set the pipe to be jacked on properly braced and supported guide rails or jacking frame.
- D. The axial forces from the thrust jacks shall be distributed to the jacking pipe uniformly through a thrust ring and cushion material to prevent damage to the ends of the pipe. Jacking forces applied to the pipe shall not exceed the specified allowable compressive stresses.
- E. Jacking pipe sections shall be jacked into position following the design line and grade without damaging the pipe. In the event a section of pipe is damaged during the jacking operation, the Contractor, with written approval from the Engineer, shall make temporary repairs to the pipe and shall jack the pipe through to the next shaft for removal. Other methods of repairing the damaged pipe may be used if approved in writing by the Engineer.

3.3 MICROTUNNELING

- A. Microtunneling shall be completed in accordance with approved Submittals, and all applicable permit conditions.
 - A. Microtunneling operations shall control surface settlement and heave above the pipeline to prevent damage to existing utilities, facilities, and improvements. The Contractor shall repair any damage resulting from construction activities, at no additional cost to Owner and without extension of schedule for completion. The Contractor shall pressure grout any voids caused by or encountered during the shaft construction or microtunneling. The Contractor shall modify equipment and procedures as required to avoid recurrence of excessive settlements or damage.
 - B. Provide a lubrication system and inject pipe lubricants through injection ports at the rear of the microtunneling machine and ports in the jacking pipe, to minimize pipe friction. Pipe lubricants shall be injected continuously as the pipe is advanced and shall, at a minimum, be equal in volume to the annular space outside the casing.
 - C. Pressure shall be applied at the tunnel face to maintain face stability and shall be monitored continuously.
 - D. The microtunneling machine shall be operated to restrict the excavation of the materials to a volume equal to the MTBM and pipe jacked, to prevent loss of ground and settlement or possible damage to overlying structures. Control the advance rate and monitor the volume of material excavated and adjust advance rate, as required, to avoid loss of ground, over-excavation, or surface heave.
 - E. Control slurry pressure and avoid excessive pumping pressures to prevent the discharge of slurry at the ground surface or into any water body. Contain and clean up any slurry discharges immediately. Wash any paved areas with water to avoid the tracking of slurry away from the discharge area.
 - F. Completely contain, transport, and dispose of all excavated materials, waste slurry, and drilling fluids away from the construction site. All spoils and slurry must be contained in trucks, tanks, or other containers at all times. Dumping of spoil or slurry on the ground, discharge into sewers, or discharge into the shafts is not permitted. Slurry shall be

pumped into tanker trucks and disposed of at acceptable facilities in accordance with current State regulations for disposal of these materials. Only use the disposal sites identified in approved submittals for muck and slurry disposal.

- G. Contact Grouting: After jacking pipe installation is complete, fill the annular space created by the overcut of the machine with contact grout.

3.4 CONTROL OF LINE AND GRADE

- A. The Project survey control is indicated on the Drawings. The Contractor shall establish benchmarks by survey prior to the start of construction and shall confirm positions or report any errors or discrepancies in writing to the Engineer.

- A. After confirming all established benchmarks, use these benchmarks to furnish and maintain all reference lines and grades for microtunneling. The Contractor shall use these lines and grades to establish the exact location of the jacking pipe using a laser or theodolite guidance system. Submit to Engineer copies of field notes used to establish all lines and grades and allow Engineer to check guidance system setup prior to beginning each microtunneling drive. Provide access for Engineer to perform survey checks of guidance system and line-and-grade of jacking pipe on a daily basis during microtunneling operations. The Contractor is fully responsible for the accuracy of the work and the correction of it, as required.

- B. The jacking pipe shall be installed in accordance with the following tolerances:

- 1. Variations from design line: 2 inches maximum.
 - 2. Variations from design grade: 2 inches maximum.

- C. The machine shall be steered to maintain line and grade within the tolerances specified. This shall be achieved by continuously monitoring and adjusting line, grade, machine inclination, roll, and steering attitude during the operation. If the installation is off line or grade, make the necessary corrections, and return to the design alignment and grade at a rate of not more than 1 inch per 25 feet.

- D. The guidance system shall be mounted independently from the thrust block and jacking frame to maintain alignment if there is movement of equipment during jacking. Stop microtunneling operations and reset guidance system if its alignment shifts or is moved off design alignment and grade for any reason. Check guidance system setup at least once per shift. Guidance system should only be reset by experienced, competent surveying personnel in accordance with approved procedures outlined in the submittals.

- E. Monitor line and grade continuously during microtunneling operations. Record deviation with respect to design line and grade at least once per foot and submit records to Engineer as requested. Control line and grade of the jacking pipe to within the specified tolerances.

- F. If the pipe installation does not meet the specified tolerance, the Contractor shall correct the installation including any necessary redesign of the pipeline or structures and acquisition of necessary easements. All corrective work shall be performed by the Contractor at no additional cost to the Owner and without schedule extension, and is subject to the written approval of the Engineer.

3.5 OBSTRUCTIONS

- A. If the microtunneling operations should encounter an object or condition that impedes the forward progress of the machine, the Contractor shall notify the Engineer immediately. The Contractor shall submit a plan to correct the condition, and remove, clear, or otherwise make it possible for the microtunneling machine and jacked pipe to advance past any and all objects or obstructions that impede forward progress of the machine. Upon written notification of the Engineer the Contractor shall immediately proceed with removal of the object or obstruction by means of an obstruction removal shaft or by other approved methods, as submitted by the Contractor, and as approved by the Engineer. Shafts must meet the project same specified requirements. An obstruction removal shaft shall consist of a small excavation for the purpose of removing the obstruction. The Contractor will receive compensation for removal of obstructions, which consist of metallic debris, reinforced concrete, whole trees, rocks and other hard objects larger than 30 percent of the outer diameter of the shield or cutter head, which cannot be broken up by the cutting tools with diligent effort, and that are partially or wholly within the cross-sectional area of the bore. Payment will be negotiated with the Contractor by the Owner on a case-by-case basis. However, any removal process that does not allow direct inspection of the nature and position of the obstruction will not be considered for payment. The Contractor will receive no additional compensation for removing, clearing, or otherwise making it possible for the microtunneling machine to advance past objects consisting of cobbles, boulders, wood, non-reinforced concrete, and other nonmetallic objects or debris with maximum lateral dimensions less than one-third the outer diameter of the shield or cutterhead, whichever is larger.

3.6 CLEANUP

- A. After completion of microtunneling and force main installation, all construction debris, slurry, oil, grease, and other materials will be removed from the microtunneled pipe, jacking and receiving shafts, and all Contractor work areas. Cleaning shall be incidental to the construction. No separate payment shall be made for cleanup.

****END OF SECTION****

SECTION 33 05 09.23
ADAPTERS FOR UTILITY PIPING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes: Furnish and install coupling adapters as shown and specified on the Contract Documents.

1.2 REFERENCES

- A. This section contains references to some or all of the following documents, most recent edition. They are a part of this section as specified and modified. In case of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.
 - 1. American Association of State Highway and Transportation Officials (AASHTO)
 - 2. American National Standards Institute (ANSI)
 - 3. American Society of Mechanical Engineers (ASME)
 - 4. ASTM International (ASTM)
 - 5. American Water Works Association (AWWA)
 - 6. City of Milpitas Standard Specifications
 - 7. NSF/ANSI Standard 61 Drinking Water System Components (NSF 61)

1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 00.
- B. Shop Drawings:
 - 1. Layouts and Schematics: Submit certified drawings showing all details of pipe coupling adapters. The drawings shall include all details of construction, coupling size, adapter sizes, materials of construction, weld sizes, mounting dimensions, and overall space requirements.
 - 2. Submit materials list, catalog data, and cutsheets naming each product to be used identified by manufacturer and type number.
- C. Manuals: The Contractor shall furnish manufacturer's installation, operation and maintenance manual, bulletins, and spare parts lists for each item
- D. Affidavits and Certificates of Compliance:
 - 1. Submit affidavits from the manufacturer for the following items, attesting that the products are manufactured and tested according to the specified standards:

- E. All items that are submitted for use in potable water systems including, but not limited to, pipe, valves, linings, solvent cements, welding materials, and gaskets and gasket lubricants shall (in accordance with Section 64591 of the California Water Works Standards) be NSF 61 certified for use in potable water systems and must be in compliance with State of California Assembly Bill (AB) 1953 and contain less than 0.25 percent (0.25%) lead by average weight. Submit proof of NSF 61 and lead-free certifications for each item submitted.

PART 2 PRODUCTS

2.1 TRANSITION COUPLINGS

- A. General: For typical pipe joints, refer to the City of Milpitas Standard Specifications and Drawings. Other joint devices shall be furnished where called for on the Contract Documents.
- B. Unless otherwise indicated on the Contract Documents or directed by the Construction Manager, transition couplings shall be restrained, bolted, sleeve-type steel or ductile iron couplings conforming to AWWA C219 with fusion bonded epoxy (FBE) coating, and stainless steel hardware; designed and rated for use on the intended pipe materials and sizes. Couplings designed and rated for use as insulating couplings shall be used for insulated connections. Minimum body length for transition couplings shall be twelve inches (12"). Any new style transition coupling must be approved by the City prior to installation.
- C. Transition Couplings and Flange Coupling Adaptors:
1. Sleeve Bolts: Type 304 stainless steel.
 2. Pressure Rating: 250 psi minimum.
 3. Performance: Longitudinal movement and angular deflection capabilities shall meet AWWA C219.
 4. Flanged Coupling Adaptors: Match mating flanges. If required by connecting valves or other devices, provide flanges with inside diameter equal to nominal pipe diameter. Shall be restrained, rated for the two adjoining pipe materials. FBE coated. Stainless steel hardware. Minimum 4.0 degrees of allowable joint deflection at each connection.
 5. Manufacturers:
 - (a) Romac
 - (b) EBAA Iron
 - (c) Dresser
 - (d) Baker
 - (e) Or approved equal.
- D. Gaskets: SBR rubber.

- E. Fusion Epoxy Coating: Materials and application shall be in accordance with AWWA C213, except application shall be by fluid bed method only unless the greatest dimension of the article to be coated exceeds 10 feet, in which case electrostatic spray method may be used.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install per manufacturer instructions where shown on Drawings and where required for ease of installation or removal of pipe, subject to approval of Engineer.
- B. Use transition couplings to connect pipes with small differences in outside diameter.

3.2 FIELD QUALITY CONTROL

- A. Factory Quality Control: The manufacturer shall test all products as required herein and by the reference specifications.
- B. The Contractor shall:
 - 1. Perform leakage tests.
 - 2. Be responsible for the costs of additional inspection and retesting by the City resulting from non-compliance.

****END OF SECTION****

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SECTION 33 14 00
WATER UTILITY TRANSMISSION AND DISTRIBUTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes: installation, disinfection, and testing of all portions of the potable water transmission and distribution piping system, including any portion of the existing system that is introduced to a source of contamination during construction activities.

1.2 REFERENCES

- A. This section contains references to some or all of the following documents, most recent edition. They are a part of this section as specified and modified. In case of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.
 - 1. American National Standards Institute (ANSI)
 - 2. American Water Works Association (AWWA)
 - 3. City of Milpitas Standard Specifications

1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 00.
- B. All items that are submitted for use in potable water systems including, but not limited to, pipe, valves, linings, solvent cements, welding materials, and gaskets and gasket lubricants shall (in accordance with Section 64591 of the California Water Works Standards) be NSF 61 certified for use in potable water systems and must be in compliance with State of California Assembly Bill (AB) 1953 and contain less than 0.25 percent (0.25%) lead by average weight. Submit proof of NSF 61 and lead-free certifications for each item submitted.
- C. Disinfection: the Contractor shall submit, disinfection schedule and procedures including:
 - 1. "Normal" disinfection procedure.
 - 2. Emergency disinfection procedure for mains and services which must be returned to service immediately.
 - 3. Disinfection schedule including number and type of services and length of disruption of service.
 - 4. Disinfecting agent(s).
 - 5. Method of disposal of chlorinated water.
- D. Testing: The Contractor shall prepare and submit to the Engineer schedules and procedures for testing of all parts of the water main installed in accordance with these Contract Documents. The schedule shall be submitted seven days prior to any testing.

PART 2 PRODUCTS

2.1 CONTRACTOR'S RESPONSIBILITY FOR MATERIAL

- A. The Contractor shall carefully examine all material for defects. Material which is known, or thought, to be defective shall not be installed.
- B. The Engineer reserves the right to inspect all material and to reject all defective material shipped to the job site or stored on the site. Failure of the Engineer to detect damaged material shall not relieve the Contractor from his total responsibility for the completed work if it leaks or breaks after installation. Lay all defective material aside for final inspection by the Engineer to determine if corrective repairs may be made, or if the material is to be rejected. The Engineer shall determine the extent of the repairs.
- C. Contractor to classify defective pipe prior to Engineer 's inspection as follows:
 - 1. Damage to interior and/or exterior paint seal coats.
 - 2. Damage to interior cement-mortar lining.
 - 3. Insufficient cement-mortar lining thickness.
 - 4. Poor quality interior paint seal coat.
 - 5. Pipe out of round.
 - 6. Damaged pipe barrel area to a point where pipe class thickness is reduced.
 - 7. Denting or gouges in plain end of pipe.
- D. The Contractor shall be responsible for all material, equipment, fixtures and devices furnished and such materials, equipment, fixtures and devices shall comply with the requirements and standards of all Federal, State and local laws, ordinances, codes, rules and regulations governing safety and health.
- E. The Contractor shall be solely responsible for the safe storage of all material furnished to or by him until it has been incorporated in the completed project and accepted by the Engineer.
- F. Pipe, fittings, valves, hydrants and accessories shall be loaded and unloaded by lifting with hoists or skidding so as to avoid shock or damage. Under no circumstances shall such materials be dropped. Pipe handled on skidways shall not be skidded or rolled against other pipe. Handling of this material is to be in accordance with AWWA C600 for ductile iron pipe and C605 for PVC pipe.
- G. Keep fittings and valves drained and stored before installation

2.2 POLYVINYL CHLORIDE WATER PIPE

- A. No fusible PVC pipe allowed.
- B. Pipe: Polyvinyl chloride pressure pipe, cast iron pipe outside dimensions. Pipe shall be UL listed or Factory Mutual Approved.

1. 4-inch through 16-inch: AWWA C900-22.

C. Pressure Class 235, DR 18.

D. Pipe joints: Bell and spigot (push-on) gasketed.

E. Gaskets: As supplied by manufacturer for PVC pipe in compliance with ASTM F477.

2.3 FITTINGS

A. Standard fittings shall be ductile iron conforming to ANSI/AWWA C110/A21.10.

B. Working Pressures: Fittings shall be pressure class 250 psi.

C. The fittings shall be coated with a bituminous coating in accordance with ANSI/AWWA C110/A21.10 and lined inside with cement mortar and seal coated in accordance with ANSI/AWWA C104/A21.4.

D. All fittings shall be covered by two coats of 15 mil mastic and encased with two wraps of 8 mil polywrap and 10 mils polywrap tape.

E. Mechanical joints including accessories shall conform to ANSI/AWWA C111/A21.11.

F. Flanged joints shall meet the requirements of ANSI/AWWA C115/A21.15 or ANSI B16.1. Flanged joints shall not be used in underground installations except where shown on the Contract Drawings.

G. All flanged joints shall be furnished with a minimum 1/8-inch, thick red rubber or styrene butadiene full face rubber gasket. The bolts shall have American Standard heavy unfinished hexagonal head and nut dimensions all as specified in ANSI B18.2. For bolts of 1-3/4-inches in diameter and larger, bolt studs with a nut on each end are recommended. Material for bolts and nuts within structures shall conform to ASTM A107. Material for flange bolts and nuts which will be buried shall be ASTM A304 stainless steel, Grade B, with a minimum yield strength of 35,000 psi. Stainless steel bolts shall be furnished with grade stamp and markings.

H. Each fitting shall have marked plainly:

1. Pipe Class
2. Date of Manufacture
3. Manufacturer's name or trademark
4. On bends, the angle turned thereby
5. Manufacturer's identification number

2.4 RETAINING GLANDS

A. All retaining glands for connection to PVC pipe shall be Series 2000PV Megalug gland as manufactured by EBBA Iron; equivalent by Uni-Flange; or approved equal. Pressure ratings shall be 250 psi.

2.5 MASTIC COATING

- A. This protective coating is a coal tar synthetic resin solvent release, cold applied coating. The mastic coating may be applied with spray equipment or by hand with brush or rubber gloves. A two coat system shall be applied. The metal surfaces shall first be cleaned of all loose scale, dirt and other foreign matter. No primer is required before application. Each coat shall be applied to produce a minimum wet film thickness of 15 mils with a minimum of two hours allowed between application of coatings. The second coat shall be allowed to dry a minimum of three hours before the backfilling operation begins.

2.6 TAPE COATING

- A. Apply tape coating over a clean surface (no loose rust, scale, dirt, oil or grease). Apply two layers, each layer lapped 1/2 inch, or half lapped if the tape is less than one inch wide. Apply the tape immediately on the wet primer and pull tight enough to conform to the surface being coated. Tape coating shall be Protecto Wrap No. 200, 46 mils thickness applied with Protecto Wrap No. 1170 primer, or approved equal.

2.7 POLYWRAP

- A. Polyethylene protective wrapping shall consist of two wraps of 8 mils thick sheets and 10 mils polywrap tape. The material shall be wrapped completely and the edges shall extend 6" beyond area to be protected. The edges shall be secured with 10 mils thick, one inch wide Scotchwrap as manufactured by Minnesota Mining and Manufacturing Co., or approved equal.

2.8 DISINFECTION

- A. The Contractor shall furnish all material and equipment as needed to complete the disinfection of all pipelines.
- B. All materials and equipment shall be in accordance with AWWA C651 and AWWA B300.

2.9 TESTING

- A. The Contractor shall furnish all labor, materials and equipment for performing these tests in the presence of the Engineer, including pump, pipe connections, calibrated pressure gauges, test bulkheads, filling, draining, and air release connections and valves.

PART 3 EXECUTION

3.1 INSTALLATION – GENERAL REQUIREMENTS

- A. All pipe shall be laid true to line and grade as specified on the plans, or as directed by the Engineer to pass existing obstructions. Before any length of pipe is laid, it shall be carefully inspected for damage or defects. No pipe, or other material, which shows damage or defects shall be placed. Fittings, valves and hydrants shall be at the required locations with joints centered, spigots home and all valve and hydrant stems plumb and otherwise in strict accordance with the City Standard Specifications for Water Mains and Services.
- B. All ferrous metal items shall be protected from corrosion and polyethylene encased as detailed in the City Standard Specifications for Water Mains and Services and as shown in these and Contract Plans.

- C. No deviation shall be made from the required alignment, depth or grade except with the written consent of the Engineer.
- D. All pipe shall be laid to the depth specified. The depth shall be measured from the final surface grade to the top of the pipe barrel. The minimum pipe cover shall be as shown on the Drawings or as specified in the Specifications.
- E. Pipes, valves and fittings must be carefully wiped out and cleaned, as they are being laid so that no earth or rubbish may become lodged inside and this material shall be kept clean until the acceptance of the completed work. All ends, fittings or other openings shall be plugged to prevent entry of any foreign matter or water during construction.
- F. Pipe shall be laid with the bell ends facing the direction of laying, except when reverse laying is specifically authorized by the Engineer. Maximum pipe laying length shall be 20 feet. Exercise care to ensure that each length abuts against the next in such manner that no shoulder or unevenness of any kind occurs in the pipe line.
- G. No wedging or blocking is permitted in laying pipe unless otherwise noted or by written order of the Engineer.
- H. Pipe shall be protected from lateral displacement by placing the specified pipe embedment material. Under no circumstances shall pipe be laid in water, and no pipe shall be laid under unsuitable weather or trench conditions. Before joints are made, bed each section of pipe the full length of the barrel with recesses excavated so pipe invert forms continuous grade with invert of pipe previously laid. Do not bring succeeding pipe into position until the preceding length is embedded and securely in place.
- I. Dig bell holes sufficiently large to permit proper joint making and to ensure pipe is firmly bedded full length of its barrel.
- J. Walking or working on completed pipeline, except as necessary in tamping and back-filling, is not permitted until trench is backfilled one-foot deep over top of pipes.
- K. Take up and relay pipe that is out of alignment or grade, or pipe having disturbed joints after laying.
- L. Take up and replace with new, such in-place pipe sections found to be defective. Replacement work at Contractor's expense.
- M. Take necessary precautions to prevent the floating of the pipeline by the accumulation of water in the trench, or the collapse of the pipeline from any cause. Place enough backfill over the center sections of the pipe to prevent floating. Should floating or collapse occur, restoration will be at the Contractor 's expense.
- N. Bedding materials for the pipe bedding shall be as specified in Section 31 23 00 Excavation and Fill and as detailed in City Standard Drawing No. 220 as shown per the Contract Drawings.
- O. Take every precaution to prevent foreign material from entering the pipe while it is being placed. During laying operations, do not place debris, tools, clothing, or other materials in the pipe.
- P. Carry out the cutting of pipe only with equipment specifically designed for that purpose such as an abrasive wheel, rotary wheel cutter, a guillotine pipe saw or a milling wheel

saw. The use of chisels or hand saws will not be permitted. Cut ends and rough edges should be ground smooth and for push-on connections, the cut end should be beveled slightly. See Section 02 82 33 Removal and Disposal of Asbestos Containing Materials for further details on cutting of asbestos cement pipe.

- Q. In distributing material at the site of the Work, each piece shall be unloaded opposite or near the place where it is to be laid in the trench.
- R. If the pipe is to be strung out, it shall be done so in a straight line or in a line conforming to the curvature of the street. Each length of pipe shall be adequately blocked to prevent movement. Stockpiled pipe shall be adequately blocked to prevent movement. No pipe, material, or any other object shall be placed on private property, obstruct walkways or driveways, or in any manner interfere with the normal flow of traffic.
- S. Special care shall be exercised, during handling temporary storage or construction to avoid damage to the bells, spigots or flanged ends. If damaged pipe cannot be repaired to the Engineer's satisfaction, it shall be replaced at the Contractor's expense.
- T. The Contractor shall remove all existing pipe, fittings, valves, pipe supports and blocking and all other items necessary to provide space for making connections to existing pipe and installing all piping which is to be done under this Contract.
- U. The Contractor shall be responsible for maintaining the minimum required distance between the water line and other utility lines in strict accordance with all Federal, State and local requirements and all right-of-way limitations.
- V. Deflections will be permitted up to 75% of the maximum allowed by the manufacturer's recommendation.
- W. Where shown on the Drawings, the Contractor shall furnish air relief valve assemblies in accordance with the details shown on the Contract Drawings. Particular care shall be exercised to ensure that no high points are established where air can accumulate. In the event that unforeseen field conditions necessitate a change in the pipe profile and, in the opinion of the Engineer, the resulting change requires the installation of an air release valve and manhole, the Contractor shall obtain written approval of the Engineer to install the same as extra work to the Contract. If the Contractor requests a change in the pipe profile solely for ease of construction, and the requested change requires the installation of an air release valve and manhole as determined by the Engineer, then the cost of furnishing and installing the air release valve and manhole will be at the expense of the Contractor.
- X. Rubber ring joints shall be installed in complete compliance with the recommendations of the manufacturer.
- Y. Place metallic tracing wire on all non-metallic water lines per City Standard Drawing No. 752.

3.2 EXCAVATION

- A. Excavations shall be done in accordance with Section 31 23 00 Excavation and Fill and City Standard Drawing No. 220 as shown per the Contract Drawings.
- B. Trenches shall be excavated, either by hand or by machine. All trenches shall be excavated vertically and shall be of open construction. Tunneling will not be permitted,

except where permission is given by the Engineer and the dimensions and methods of construction and backfilling have been definitely approved by the Engineer.

- C. All trenches shall be of sufficient width to provide free working space on each side of the pipe, but in no case shall it be wider than 1-1/2 times diameter + 12", except that 6-inch pipe may be laid in a 2-foot trench. Where bracing and shoring is necessary, an additional width, as directed by the Engineer, will be allowed. In all cases, there shall be a 6" space between pipe and the sides of the trench to allow for backfill and compaction around the pipe.
- D. If any trench is excavated below the bottom grade as required by the plans, it shall be refilled to grade, at the Contractor's expense for all labor and material, with approved bedding material.
- E. Material excavated in streets or roadways shall be laid alongside of the trench and kept trimmed up so as to cause as little inconvenience as possible to public travel.
- F. At street crossings, or where existing driveways occur on a street, the Contractor shall make provisions for ditch crossings at these points, either by means of backfill or temporary bridges as the Engineer may direct.
- G. Free access must be provided to all fire hydrants, water gate valves, and private drives and means shall be provided whereby all storm and waste water can flow uninterrupted

3.3 BRACING AND SHORING

- A. Bracing and shoring shall be done in accordance with Section 31 41 00 Shoring.

3.4 REMOVAL OF WATER AND/OR UNSTABLE MATERIAL FROM TRENCHES

- A. Removal of water and/or unstable material from trenches shall be done in accordance with City Standard Specifications for Water Mains and Services and City Standard Drawing No. 220 as shown per the Contract Drawings.

3.5 CONSTRUCTION METHODS TO AVOID CONTAMINATION

- A. Heavy particulates generally contain bacteria and prevent even very high chlorine concentrations from contacting and killing such organisms. It is essential that the procedures of this section be observed to assure that a water main and its appurtenances are thoroughly clean for the final disinfection by chlorination.
- B. Precautions shall be taken to protect the interiors of pipes, fittings, and valves against contamination. Pipe delivered for construction shall be strung so as to minimize entrance of foreign material. All openings in the pipeline shall be closed with watertight plugs when pipe laying is stopped at the close of the day's work or for other reasons, such as rest breaks or meal periods. Rodent-proof plugs may be used where it is determined that watertight plugs are not practical and where thorough cleaning will be performed.
- C. Delay in placement of delivered pipe invites contamination. The more closely the rate of delivery is correlated to the rate of pipe laying, the less likelihood of contamination.
- D. Joints of all pipe in the trench shall be completed before work is stopped. If water accumulates in the trench, the plugs shall remain in place until the trench is dry.

- E. No contaminated material or any material capable of supporting prolific growth of microorganisms shall be used for sealing joints. Sealing material or gaskets shall be handled in a manner that avoids contamination. The lubricant used in the installation of sealing gaskets shall be suitable for use in potable water. It shall be delivered to the job in closed containers and shall be kept clean.
- F. If it is not possible to keep the pipe and fittings dry during installation, every effort shall be made to assure that any of the water that may enter the pipe joint spaces contains an available chlorine concentration of approximately 25 mg/L. This may be accomplished by adding calcium hypochlorite granules or tablets to each length of pipe before it is lowered into a wet trench, or by treating the trench water with hypochlorite tablets.
- G. If the main is flooded during construction, it shall be cleared of the flood water by draining and flushing with potable water until the main is clean. The section exposed to the flood water shall then be filled with a chlorinated potable water that, at the end of a 24 hour holding period, will have a free chlorine residual of not less than 25 mg/L. The chlorinated water may then be drained or flushed from the main.

3.6 THRUST RESTRAINT

- A. Provide all plugs, caps, tees, and bends (both horizontal and vertical) with concrete thrust blocks or restraints. Tie rods and/or restrained joint pipe shall be provided where indicated on the Contract Drawings. Thrust blocks and anchor blocks shall conform to City Standard Drawings 702, 704, 706 and 742 as detailed on the Contract Drawings or as directed by the Engineer. Valves shall be provided with concrete encasement or joint restraint as detailed on the Contract Drawings.
- B. Temporary thrust restraint at temporary caps or plugs shall be the responsibility of the Contractor. Submit details of temporary restraint to the Engineer for approval.

3.7 CONNECTIONS TO EXISTING PIPELINES

- A. General: The new pipeline shall be connected to existing pipelines as indicated on the Contract Drawings and these Technical provisions. Connections shall be made by the Contractor only after inspector's approval of complete and satisfactory preparation for such work. The water released by cutting or opening existing pipelines shall be removed and the excavation kept dry at all times.
- B. Where existing mains are provided with fittings for the purpose of connecting to the new main, the Contractor shall remove the plugs or bulkheads, clean the ends, prepare them for connection to the new main, and make the new joints. Where existing mains are not provided with fittings for the purpose of connecting to the existing main which is to be abandoned, the Contractor shall remove the required amount of existing main and make the connection by means of fittings and sections of pipe, as shown on the drawings or as directed by the Engineer.
- C. Shutdowns of existing in-service pipelines will be made as required to complete pipeline connections. A shutdown shall be for as short a period as possible and will be scheduled at such a time during a regular working day that interference with the use of water by the City's customers will be minimized, except as provided below. While an existing pipeline is shut down, the connection work shall be performed without interruption, continuing after regular working hours if necessary, until completed. All costs of making connections

to existing pipelines at the time specified shall be as described in the Bid Item Description Section.

- D. Prevention of Contamination: All waterline components, including stubs, shall be provided with a permanent capped-physical separation. Specifically, all water main stubs shall be capped per Standard Drawing No. 706.
- E. Control of Shutdowns: In all cases, shutdowns will be made in cooperation with and under the direction of the Engineer. The City will close all valves in making a shutdown and open all valves in restoring pressure to an existing main. All valves required for initiating pressure in the new installation shall be under the direct supervision of the Engineer.
- F. Schedule: The schedule of shutdown and connection operations shall be agreed to jointly between the Contractor and the Engineer. The schedule shall be subject to adjustment by the Engineer as necessary to maintain water service to the customers of the City.
- G. Advance Notice: The Contractor shall give the Engineer three week written notice before any connection operations are to be performed so that advance preparation on the part of the City can be made.

3.8 PRESSURE AND LEAKAGE TEST

A. General

- 1. After the pipe has been laid, thrust backing cured (min. 5 days) and the trench completely or partially backfilled, the entire pipeline, or any section thereof, shall be subjected to hydrostatic pressure and leak tests in accordance with ANSI/AWWA C600, Section 5.2 Hydrostatic Testing.
- 2. Test pressure to be 225 pounds per square inch, measured at the lowest point in the section of pipe line undergoing test.

B. Filling and Testing

- 1. Perform leakage tests on all pipe installed in this project. Furnish all equipment, material, personnel, test media and supplies to perform the tests and make all taps and other necessary temporary connections. The test pressure, allowable leakage and test medium shall be as specified. Perform leakage tests on all piping at a time agreed upon and in the presence of the City.
- 2. The completed section of the line shall be slowly filled with water with adequate provision for the release of air in the test section. When the line has been completely filled with water, a test pump of adequate capacity shall be attached to the line and operated to provide the specified test pressure. Water from a container of known capacity shall then be supplied to the line through the test pump to maintain this pressure during the test period. Maximum allowable leakage shall be as specified in AWWA C600.
- 3. Newly constructed pipe shall be isolated from existing pipe and shall satisfactorily pass the tests specified herein prior to connection of that pipe to any existing piping or valves.

4. Measurement of leakage shall not be attempted until all trapped air has been vented and a constant test pressure has been established. After the pressure has stabilized, piping leakage shall be measured with a suitable water meter installed in the pressure piping on the discharge side of the force pump.
- C. Perform the leakage test for buried piping after all pipe is installed and backfilled.
- D. It is the responsibility of the Contractor to block off or remove equipment, valves, gauges, etc., which are not designed to withstand the full test pressure.
- E. Provide pipe taps, nozzles and connections as necessary in piping to permit testing, addition of test media, and draining lines and disposal of water, as is necessary. Plug these openings in a manner favorably reviewed by the Engineer after use. Provide all required temporary bulkheads.
- F. If leakage exceeds the allowable, repair or replace the installation and repeat leakage tests as necessary until conformance to the leakage test requirements specified herein have been fulfilled. All visible leaks shall be repaired even if the pipeline passes the allowable leakage test. All costs of repairs and retests shall be borne by the Contractor.
- G. Keep records of each piping test, including:
 1. Description and identification of piping tested.
 2. Test pressure.
 3. Date of test.
 4. Witnessing by Contractor and City.
 5. Test evaluation.
 - (a) Method: AWWA C600, as modified herein.
 - (b) Duration: Two hours.
 - (c) Medium: Potable water.
 - (d) Allowable Leakage: Leakage shall be defined as the quantity of test medium that must be added to the section of pipeline being tested to maintain the specified test pressure for the specified test duration. Maximum allowable leakage shall be as specified in AWWA C600.
 6. Remarks, to include such items as:
 - (a) Leaks (type, location).
 - (b) Repairs made on leaks.
 - (c) Submit test reports to the City.
- H. Where not shown on the Contract Drawings, the Contractor may install corporation stops with saddles at high points on piping to permit venting of air. Venting appurtenances

shall be capped after successful completion of filling and air expulsion, but prior to testing.

3.9 DISINFECTION

A. Preparation

1. All pipelines shall be pressure and leak tested, flushed, and cleaned of debris and dirt prior to application of the disinfectant. The pipeline is to be kept completely clean and dry during construction.
2. Chlorination and pressure tests may be accomplished concurrently, unless inability to pass the pressure test makes it necessary to repair the line and to disinfect it at a later date.
3. The Contractor is required to submit a procedural Work Plan for flushing, disinfecting and disposal of chlorinated water to the Engineer for approval.

B. Sterilizing and Flushing Water Lines

1. Contractor shall flush and disinfect all new water lines in accordance with AWWA C651.
2. Dechlorinate and dispose of disinfection solution in accordance with applicable regulations. Take care to assure that chlorinated water is not spilled in drains.
3. Sterilizing of the completed work, including pipelines, valves, and fittings, shall be performed by the Contractor, who will supply all materials, equipment, supplies and labor required by the operation. All sterilization shall be performed under the supervision of the Engineer.
4. After completion of hydrostatic testing, the pipelines and appurtenances shall be thoroughly flushed until, in the opinion of the Engineer, all dirt and foreign matter have been removed from the system. The system shall then be disinfected with a hypochlorite solution containing a residual chlorine content of one hundred (100) parts per million. The solution shall be allowed to remain in the pipe for at least 24 hours. A chlorine residual of at least 10 ppm must remain in all parts of the line after 24 hours. The lines shall then be thoroughly flushed until a maximum residual chlorine content of 0.2 ppm is obtained in all parts of the system.
5. Extreme care shall be exercised to prevent backflow water from an unsterilized or super-chlorinated system into existing mains.
6. Disinfectant may be made by the use of calcium hypochlorite tablets attached by means of gasket cement to the inside top of the lengths of pipe as they are being laid. The amount of adhesive shall be limited to the smallest practicable amount applied to one side of the tablet only. The tablets shall have an average weight of 0.009 of a pound each and shall contain not less than seventy percent (70%) of available chlorine.
7. Chlorination and pressure tests may be accomplished concurrently, unless inability to pass the pressure test makes it necessary to repair the line and to disinfect it at a later date.

8. The following table shows the number of tablets to be used per one hundred linear feet of pipe of various sizes:

Inside Diameter of Pipe	Number of Hypochlorite Tablets per 100 Feet
4"	8
6"	20
8"	36
10"	54
12"	78
16"	138

9. Total coliform test shall be performed by a City-approved laboratory upon completion of sterilization of the water line. If test fails, water line shall be re-sterilized until the total coliform test successfully passes.
10. Flushing at 2.5 feet per second (fps) velocity will be required. Contractor shall confirm if hydrants and/or blow offs are available to develop adequate velocity. The Contractor shall provide adapters, hoses and other items needed for flushing at adequate velocity. The length and size of hose and the location of disposal of water from the flushing operation will be as directed by the Engineer.
11. Disinfect potable water lines using general procedures and material conforming to AWWA C651 and the directions listed below.
- (a) Notify the City's representative a minimum of 48 hours before beginning any chlorination operation. Contractor must submit a disinfection plan to the City for approval.
 - (b) Before starting chlorination operations, open the blow off valve at the discharge point and verify the test mains are not under pressure. The City's representative shall be present during this verification.
 - (c) Verify that all cross-connection valves are closed. Verification shall be made with the City's representative present.
 - (d) Adequate person-to-person communications shall be maintained between the Contractor's personnel during chlorination operations, so that the operation can be immediately shut down at the sign of a problem anywhere along the test main.
 - (e) Before operations begin, any additional valves shall be closed at the direction of the Engineer.
 - (f) Under the direction of the Engineer, fire hydrants shall be monitored continuously during the operation for possible chlorine contamination

3.10 FIELD QUALITY CONTROL

- A. Factory Quality Control: The manufacturer shall test all products as required herein and by the reference specifications.
- B. The Contractor shall:
 - 1. Perform leakage tests.

2. Be responsible for the costs of additional inspection and retesting by the City resulting from non-compliance.

****END OF SECTION****

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SECTION 40 05 61.23
RESILIENT-SEATED GATE VALVES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes: Furnish and install all gate valves and incidentals as shown and specified on the Contract Documents.

1.2 REFERENCES

- A. This section contains references to some or all of the following documents, most recent edition. They are a part of this section as specified and modified. In case of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.

1. American Association of State Highway and Transportation Officials (AASHTO)
2. American National Standards Institute (ANSI)
3. American Society of Mechanical Engineers (ASME)
4. ASTM International (ASTM)
5. American Water Works Association (AWWA)
6. City of Milpitas Standard Specifications
7. NSF/ANSI Standard 61 Drinking Water System Components (NSF 61)

1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 00.
- B. Shop Drawings:
 1. Layouts and Schematics: Submit detailed installation drawings of all piping and connected equipment. The drawings shall include each pipe, all fittings, valves, and other appurtenances.
 2. Submit materials list, catalog data, and cutsheets naming each product to be used identified by manufacturer and type number.
 3. Submit certified test reports as required herein and by the referenced standard specifications.
- C. Manuals: The Contractor shall furnish manufacturer's installation, operation and maintenance manual, bulletins, and spare parts lists for each item.
- D. Affidavits and Certificates of Compliance:
 1. Submit affidavits from the manufacturer for the gate valves, attesting that the products are manufactured and tested according to the specified standards.

- E. All items that are submitted for use in potable water systems including, but not limited to, pipe, valves, linings, solvent cements, welding materials, and gaskets and gasket lubricants shall (in accordance with Section 64591 of the California Water Works Standards) be NSF 61 certified for use in potable water systems and must be in compliance with State of California Assembly Bill (AB) 1953 and contain less than 0.25 percent (0.25%) lead by average weight. Submit proof of NSF 61 and lead-free certifications for each item submitted.

PART 2 PRODUCTS

2.1 GATE VALVES

- A. All valves shall be the product of one manufacturer.
 - 1. All gate valves shall be non-rising stem, resilient edge valves with a 2-inch square operating nut that conform to the requirements of AWWA C509 and Mueller A-2362, Mueller A-2361, or approved equal.
- B. All valves shall be furnished with control assembly and operators, as specified herein or as shown on the Contract Documents.
- C. All valve stem operators shall open by turning the valve stem counter-clockwise.
- D. Valve sizes are nominal inside diameter unless otherwise noted.
- E. All materials delivered to the project site shall be new, free from defects, and marked to identify the material, class, and other appropriate data.
- F. End Connections:
 - 1. Provide the type of end connections for valves as required in the Contract Drawings.
 - 2. Comply with the following standards:
 - (a) Flanged: ASME B16.1, Class 150 unless otherwise noted or AWWA C207.
 - (b) Bell and spigot or mechanical (gland) type: AWWA/ANSI C111/A21.11
- G. Bolts, Nuts, and Hardware: Unless specified otherwise herein, flange bolts and nuts, coupling bolts and nuts, tie rods, and other hardware shall be as follows:
 - 1. Exposed: Type 316 stainless steel, minimum tensile strength: 60,000 psi.
 - 2. Buried: Type 316 stainless steel, minimum tensile strength: 60,000 psi.
 - 3. Type 316 stainless steel bolts and nuts hardware shall be used one time per application. Reusing Type 316 stainless steel hardware will not be permitted.
 - 4. Mechanical joint hardware shall be high strength, low alloy steel.
 - 5. Apply an anti-seize compound to all bolt threads.
 - 6. All bolts shall be torqued to manufacturer's recommendations.

- H. Gaskets: shall be one-eighth (1/8) inch thick, full-faced type, made of EPDM.
- I. Fusion Epoxy Coating: Materials and application shall be in accordance with AWWA C213, except application shall be by fluid bed method only unless the greatest dimension of the article to be coated exceeds ten (10) feet, in which case electrostatic spray method may be used.

2.2 VALVE BOXES

- A. Valve boxes shall be specified as defined in the City of Milpitas Standard Specifications and Drawings.

PART 3 EXECUTION

3.1 INSTALLATION OF GATE VALVES

- A. All valves shall be installed as defined in the City of Milpitas Standard Specifications and Drawings, as well as in accordance with manufacturer's recommendations.
- B. General Valve Installation:
 - 1. Valves shall be carefully installed in their respective positions, free from all distortion and strain, with joints made as specified, and shall be left in satisfactory operating condition.
 - 2. Prior to installation, all valves and appurtenances shall be thoroughly cleaned of all foreign material, and shall be inspected for proper operation, both opening and closing and to verify that the valves seat properly. Valves shall be installed so that the stems are vertical.
 - 3. All valves shall be tested in place so far as practicable under the conditions specified and any defects revealed in valves or connections tested shall be corrected.
- C. Installation of Valve and Meter Boxes:
 - 1. Valve boxes shall be centered and set plumb over the square operating nut for each valve. Valve boxes shall be installed so they do not transmit shock or stress to the valve or pipe. Valve covers shall be set flush with the surrounding grade, or as directed by the City's Representative. Backfill shall be placed around the valve boxes and thoroughly compacted to a 95% relative compaction in such a manner that will not damage or displace the valve box from proper alignment, or grade.
- D. Use reducing fittings where any change in pipe size occurs between valves or accessories and the attached pipeline. Bushings shall not be used, unless specifically noted on the Contract Documents. Use eccentric reducing fittings wherever necessary to provide free drainage of lines.

3.2 FIELD QUALITY CONTROL

- A. Factory Quality Control: The manufacturer shall test all products as required herein and by the reference specifications.

B. The Contractor shall:

1. Perform leakage tests.
2. Be responsible for the costs of additional inspection and retesting by the City resulting from non-compliance.

****END OF SECTION****

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SECTION 40 05 64.16
AWWA RESILIENT-SEATED BUTTERFLY VALVES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes: Metal body resilient-seated butterfly valves.

1.2 REFERENCES

- A. This section contains references to some or all of the following documents, most recent edition. They are a part of this section as specified and modified. In case of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.

1. American Association of State Highway and Transportation Officials (AASHTO)
2. American National Standards Institute (ANSI)
3. American Society of Mechanical Engineers (ASME)
4. ASTM International (ASTM)
5. American Water Works Association (AWWA)
6. City of Milpitas Standard Specifications
7. NSF/ANSI Standard 61 Drinking Water System Components (NSF 61)

1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 00.

- B. Shop drawings.

1. Layouts and Schematics: Submit detailed installation drawings of all piping and connected equipment. The drawings shall include each pipe, all fittings, valves, and other appurtenances.
2. Submit materials list, catalog data, and cutsheets naming each product to be used identified by manufacturer and type number.

- A. Manuals: The Contractor shall furnish manufacturer's installation, operation and maintenance manual, bulletins, and spare parts lists for each item.

- C. Certificates:

1. General purpose AWWA butterfly valves:
 - (a) Proof-of-design tests: Certified statement that proof-of-design tests were performed and all requirements were successfully met.

- (b) Affidavit of compliance attesting valves provided comply with all provisions in accordance with AWWA C504.
- 2. Interior epoxy coatings: Affidavit of compliance attesting that epoxy coatings applied to interior surfaces of butterfly valves comply with application and all provisions in accordance with AWWA C550.
- 3. Certification, for all valves and coatings in contact with potable water, that the products used are suitable for contact with drinking water in accordance with NSF Standard 61.

PART 2 PRODUCTS

2.1 GENERAL PURPOSE RESILIENT SEATED BUTTERFLY VALVES

- A. All valves shall be the product of one manufacturer.
- B. Manufacturers: One of the following or equal:
 - 1. Mueller Company, Lineseal III
 - 2. Henry Pratt Company, Model 2FII.
 - 3. DeZurik/Sartell Model BAW.
- C. Valves shall be rubber seated, tight closing type. Butterfly valves and all accessories, including operators, shall meet the requirements of AWWA C504, except as otherwise specified. Valve bodies shall be short- or long-body flanged type, lug type with drilled and tapped bolt holes, or mechanical joint-end type, as shown or specified. Wafer body type valves without lugs are not acceptable.
- D. Description:
 - 1. Comply with Class 150B or greater as required.
 - 2. Minimum Pressure Rating:
 - (a) 12-inch (300-mm) Diameter and Smaller: 200 psig.
 - (b) 16-inch (400-mm) Diameter and Larger: 150 psig.
 - 3. End Connections:
 - (a) Standard mechanical joint ends comply with ANSI/AWWA C111.
 - (b) Flanged end dimensions and drilling comply with ANSI/ASME B16.1, class 125, unless shown otherwise. Comply with AWWA C115 & ASME 16.5.
 - (1) The Contractor shall coordinate with pipe, valve and fitting suppliers to make certain pipe, valve and fitting flanges match in bolt pattern.
 - 4. Gear Actuators: Conforming to AWWA C504 for manual valves.

5. Linings and Coatings:
 - (a) Corrosion-resistant fusion bonded epoxy conforming to AWWA C550.
 - (b) All internal and external ferrous surfaces.
 - (c) Do not coat flange faces of valves.
 6. Bubble-tight at the rated pressure for bi-directional flow.
 7. Style: Wafer.
 8. Shaft: Self-lubricating, sleeve-type bearings. One-piece, through-shaft construction.
 - (a) Valve shafts shall be full size for that portion of the shaft extending through the valve bearings, valve disc and shaft seal.
 - (b) Any portion of the shaft turned down for any reason shall have fillets with radii equal to the offset to minimize stress concentrations at the junction of the different shaft diameters. The turned down portion of the shaft shall be capable of transmitting the maximum operator torque without exceeding a torsional steel stress of 11,500 psi.
 9. Seats: Mounted on body for valves 24 inches and smaller; field replaceable (mechanically retained in a machined groove) for valves larger than 24 inches.
 10. Packing: Replaceable without dismantling valve.
- E. If stub shafts are furnished, the shafts shall extend a minimum of 1-1/2 diameters into the discs and the clearance between the shaft and the discs shall not exceed the following:

<u>Shaft Diameter, inches</u>	<u>Maximum Radial Clearance, inches</u>
1/2 to 1-1/2	0.002
2 to 4	0.0025

- F. Operation:
1. Open counterclockwise, unless otherwise required.
 2. Operators shall be of the traveling nut, self- locking type and shall be designed to hold the valve in any intermediate position between full open and fully closed without creeping or fluttering.
 3. Buried Valves: All buried valves shall be provided with 2-inch square operating nuts.
- G. Materials:

1. Body: ASTM A126, cast iron or ASTM A536, ductile iron. Integrally cast flanged or mechanical end joints.
2. Shaft: Stainless steel.
3. Disc: ASTM A126, cast iron, ASTM A436 Type 1, Alloy Cast Iron or ASTM A536, ductile iron.
4. Seats: Resilient, replaceable, Rubber or Buna-N.
5. Seating Surfaces: Type 316 stainless steel.
6. Bearings:
 - (a) Sleeve: Corrosion-resistant and self-lubricating.
7. Or Approved Equal

PART 3 EXECUTION

3.1 INSTALLATION

- A. All valves shall be installed as defined in the City of Milpitas Standard Specifications and Drawings, as well as in accordance with manufacturer's recommendations.
- B. General Valve Installation:
 1. Valves shall be carefully installed in their respective positions, free from all distortion and strain, with joints made as specified, and shall be left in satisfactory operating condition.
 2. Prior to installation, all valves and appurtenances shall be thoroughly cleaned of all foreign material, and shall be inspected for proper operation, both opening and closing and to verify that the valves seat properly. Valves shall be installed so that the stems are vertical.
 3. All valves shall be tested in place so far as practicable under the conditions specified and any defects revealed in valves or connections tested shall be corrected.
- C. Installation of Valve and Meter Boxes:
 1. Valve boxes shall be centered and set plumb over the square operating nut for each valve. Valve boxes shall be installed so they do not transmit shock or stress to the valve or pipe. Valve covers shall be set flush with the surrounding grade, or as directed by the Construction Manager. Backfill shall be placed around the valve boxes and thoroughly compacted to a 95% relative compaction in such a manner that will not damage or displace the valve box from proper alignment, or grade.
- D. Use reducing fittings where any change in pipe size occurs between valves or accessories and the attached pipeline. Bushings shall not be used, unless specifically noted on the Contract Documents. Use eccentric reducing fittings wherever necessary to provide free drainage of lines.

3.2 FIELD QUALITY CONTROL

- A. Factory Quality Control: The manufacturer shall test all products as required herein and by the reference specifications.
- B. The Contractor shall:
 - 1. Perform leakage tests.
 - 2. Be responsible for the costs of additional inspection and retesting by the City resulting from non-compliance.

****END OF SECTION****

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ATTACHMENT 3



CITY OF MILPITAS PUBLIC WORKS DEPARTMENT BID SUMMARY

Project Name: Dempsey Road Water Line Replacement
Project No.: 7118, 7110
Bid Date: 2/20/2025

			Apparent Low Bidder				
Item	DESCRIPTION	Engineer's Estimate	Cratus	KJ Woods Engineering	C2R Engineering	Mitchell Engineering	Garney Pacific
1	Mobilization/Demobilization (5%)	\$204,995.00	\$200,000.00	\$255,000.00	\$250,000.00	\$325,000.00	\$430,000.00
2	Storm Water Pollution Control	\$10,000.00	\$20,000.00	\$45,000.00	\$50,000.00	\$80,000.00	\$200,000.00
3	Traffic Control	\$819,980.00	\$100,000.00	\$235,000.00	\$260,000.00	\$300,000.00	\$612,000.00
4	Sheeting, Shoring, and Bracing or Equivalent Method	\$204,995.00	\$300,000.00	\$100,000.00	\$160,000.00	\$400,000.00	\$404,000.00
5	Dewatering	\$204,995.00	\$22,000.00	\$37,200.00	\$75,000.00	\$100,000.00	\$200,000.00
6	Potholing	\$122,997.00	\$30,000.00	\$80,000.00	\$50,000.00	\$400,000.00	\$300,000.00
7	Survey Monument Perpetuation & Replacement	\$60,000.00	\$16,000.00	\$25,000.00	\$50,000.00	\$30,000.00	\$50,000.00
8	Asbestos Compliance Plan, Handling, and Disposal	\$30,000.00	\$10,000.00	\$5,000.00	\$35,000.00	\$20,000.00	\$30,000.00
9	Tree Removal and Tree Planting	\$1,000.00	\$13,800.00	\$12,000.00	\$15,000.00	\$13,800.00	\$30,000.00
10	Concrete Curb & Gutter Replacement	\$100,000.00	\$143,850.00	\$141,750.00	\$115,500.00	\$105,000.00	\$44,100.00
11	Concrete Sidewalk Replacement	\$270,000.00	\$149,600.00	\$149,600.00	\$190,400.00	\$129,200.00	\$88,400.00
12	Concrete Driveway Replacement	\$35,000.00	\$82,150.00	\$74,200.00	\$90,100.00	\$53,000.00	\$37,100.00
13	Concrete Curb Ramp Installation	\$30,000.00	\$21,000.00	\$19,500.00	\$24,000.00	\$22,500.00	\$13,200.00
14	6-inch PVC Water Main and Fittings	\$105,000.00	\$136,000.00	\$238,000.00	\$129,200.00	\$103,700.00	\$408,000.00
15	8-inch PVC Water Main and Fittings	\$20,000.00	\$25,200.00	\$48,000.00	\$24,000.00	\$20,400.00	\$90,000.00
16	10-inch PVC Water Main and Fittings	\$30,000.00	\$35,200.00	\$56,000.00	\$40,000.00	\$28,000.00	\$160,000.00
17	12-inch PVC Water Main and Fittings	\$1,834,000.00	\$2,600,000.00	\$2,080,000.00	\$2,210,000.00	\$2,080,000.00	\$2,340,000.00
18	12-inch DIP Water Main and Fittings	\$300,000.00	\$390,000.00	\$375,000.00	\$525,000.00	\$300,000.00	\$375,000.00
19	24-inch DIP Water Main and Fittings	\$115,000.00	\$180,000.00	\$300,000.00	\$150,000.00	\$150,000.00	\$300,000.00
20	Abandonment of Existing Water Main and Services	\$120,000.00	\$35,000.00	\$80,000.00	\$56,000.00	\$80,000.00	\$201,000.00
21	6-inch Gate Valve	\$37,000.00	\$48,600.00	\$54,000.00	\$72,000.00	\$54,000.00	\$90,000.00
22	8-inch Gate Valve	\$27,200.00	\$14,000.00	\$15,000.00	\$20,000.00	\$16,000.00	\$24,000.00
23	10-inch Gate Valve	\$59,000.00	\$23,000.00	\$26,250.00	\$30,000.00	\$25,000.00	\$35,000.00
24	12-inch Gate Valve	\$410,800.00	\$122,400.00	\$156,000.00	\$150,000.00	\$144,000.00	\$240,000.00
25	24-inch Butterfly Valve	\$114,000.00	\$66,000.00	\$52,500.00	\$61,500.00	\$45,000.00	\$75,000.00
26	12-inch PVC Water Main Microtunneling Crossing - Los Coches Creek with 24" Steel Casing	\$105,000.00	\$310,000.00	\$325,000.00	\$300,000.00	\$1,100,000.00	\$664,000.00
27	New Water Service Lateral (2-inch or smaller)	\$108,000.00	\$120,000.00	\$210,000.00	\$130,000.00	\$300,000.00	\$400,000.00
28	New Water/Fire Service Lateral (larger than 2-inch)	\$36,900.00	\$70,000.00	\$75,000.00	\$90,000.00	\$300,000.00	\$500,000.00
29	New Fire Hydrant Assembly	\$242,000.00	\$180,000.00	\$198,000.00	\$135,000.00	\$135,000.00	\$450,000.00
	BASE BID	\$5,757,862.00	\$5,463,800.00	\$5,468,000.00	\$5,487,700.00	\$6,859,600.00	\$8,790,800.00

List of Sub-Contractors					
Description	Cratus	KJ Woods Engineering	C2R Engineering	Mitchell Engineering	Garney Pacific
Pipe Abandonment	Cell-Crete Corporation, Inc.		Cellcrete		
Concrete	RK Engineering Inc.		G Bortolotto & Company	On The Level Concrete	
Survey	Mike O'Dell Surveys		Mike O'Dell Survey		
Boring	West Coast Boring, Inc.	West Coast Boring	Pheonix Boring Construction LLC.	Nada Pacific Corporation	

Attachment 4

Construction Change Order Policy for the Dempsey Road Water Line Replacement Project Nos. 7118 & 7100

2021 City Council Approved Construction Change Order Policy

Construction Award <u>Award Amount</u>	Individual Administrative <u>Change Order Authority</u>	Cumulative <u>Change Order Authority</u>
Less than \$100,000	\$10,000	\$15,000
Over \$100,000	10% of Award or \$20,000 whichever is less	15% of Award or \$40,000 whichever is smaller

Dempsey Road Water Line Replacement Project Nos. 7118 & 7100 Change Order Policy

Construction Award <u>Award Amount</u>	Individual Administrative <u>Change Order Authority</u>	Cumulative <u>Change Order Authority</u>
\$5,463,800	N/A	\$1,093,000



CITY OF MILPITAS AGENDA REPORT (AR)

Item Title:	2023 Community Project Funding for the Milpitas Carbon Neutral Homes Retrofit Program (Staff Contact: Christian Di Renzo, Public Works Director, 408-586-2602; and Elaine Marshall, Deputy Public Works Director, 408-586-2603)
Category:	Consent Calendar-Community Services and Sustainable Infrastructure
Meeting Date:	3/18/2025
Recommendation:	(1) Adopt a resolution to accept, and authorize the City Manager or designee to execute, the grant award and agreement from the U.S. Department of Energy for the Milpitas Carbon Neutral Homes Retrofit Program in the amount of \$3,000,000 and appropriate the respective revenue and expenditure , (2) Authorize the City Manager, or designee, to approve a subrecipient agreement with Silicon Valley Clean Energy in an amount not to exceed \$2,655,000 for the administration and issuance of additional rebates for Go Electric Milpitas program applicants; and (3) Approve a limited-term, grant-funded Administrative Analyst I/II position for the Public Works Department.

BACKGROUND:

In April 2022, the City of Milpitas submitted a Community Project Funding request to the Office of Congressman Ro Khanna (District 17) for federal funding from the FY 2023 federal budget for the Carbon Neutral Homes Retrofit Program (Program). [On April 19, 2022](#), the City Council adopted a resolution supporting the submittal of this project, along with two other transportation projects, for federal community project funding. This project was accepted for advancement by District 17 office and was ultimately included in the federal budget appropriation approved by Congress for the FY 2023 Federal Budget in the amount of \$3,000,000.

[In August 2022](#), the City Council adopted an update to the City's Climate Action Plan (CAP). The 2022 CAP aligned the City's efforts to meet long-term State greenhouse gas (GHG) emissions targets and sets the path for the City to achieve carbon neutrality by 2045. In developing the 2022 CAP, the City consultant conducted a community GHG inventory (Figure 1 below) and showed communitywide emissions had decreased 19 percent below 2005 baseline levels.

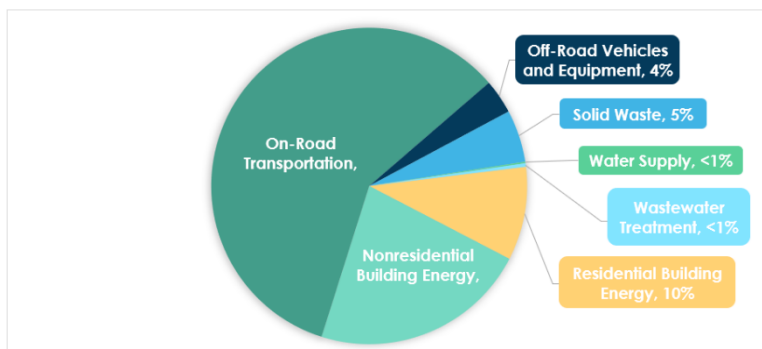


Figure 1. Milpitas 2019 Community Greenhouse Gas Emissions Inventory (Source: Ascent Environmental 2021)

According to the City's Climate Action Plan Update, GHG emissions from Residential Building Energy use makes up close to 10% of the overall community wide GHG emissions and is mainly comprised of natural gas use. This program directly implements two of the eleven key 2022 CAP strategies include "Shifting to Clean and Reliable Energy" and "Maximizing Building Electrification and Efficiency." Silicon Valley Clean Energy (SVCE) has been providing electricity that is close to carbon free to power homes and businesses in Milpitas

since 2018. As a result, moving away from natural gas-powered appliances will accelerate reductions in communitywide GHG emissions.

This grant-funded Program will put the cost of single-family home electrification projects within closer reach of Milpitas homeowners by complementing the financial incentives package currently offered by SVCE and increasing the total financial incentive package by up to \$3,000 on average. This will significantly drive down the costs of retrofitting and create greater access to carbon neutral homes for up to 1,000 Milpitas single-family homeowners, supporting accelerated decarbonization and reduced GHG emissions from the community. Staff have received feedback about the initial project name and will henceforth be marketing this Program as the Go Electric Milpitas Program. Acceptance of the grant award necessarily requires authorization of the City Manager, or designee, to sign and accept the terms and conditions of the grant specified in the DOE Assistance Agreement (Attachment A).

ANALYSIS:

Since April 2023, staff have been working with US Department of Energy (DOE) to secure the funding award. In October 2024, DOE’s State and Community Energy Programs Office issued the grant award assistance agreement for the Milpitas Carbon Neutral Homes Retrofit Program in the amount of \$3,000,000 for the term of October 1, 2024 through September 30, 2026. There is no local match requirement associated with this grant award. Staff have since been working on project start-up activities including finalizing the subrecipient agreement with Silicon Valley Clean Energy.

The funding award is a reimbursable grant from DOE and will cover the following Program-related costs:

Cost Category	Estimated Budget
Rebates to Milpitas Participants via SVCE (subrecipient agreement)	\$2,655,000
Limited-Term Project Coordinator (Admin Analyst I/II working as a Sustainability Coordinator)	\$244,200
Supplies, Outreach, and Program Marketing	\$100,800
Total	\$3,000,000

The initial term of the grant is from October 1, 2024 through September 30, 2026. Staff will be working with DOE to include regular progress reports. DOE staff have stated they will consider an extension to the term, should that be needed.

SVCE Subrecipient Agreement

SVCE is a key partner in the Project as they already operate an effective rebate program. By partnering with SVCE and offering these rebates as an add-on to their existing program, the City can benefit from operational efficiencies and minimize administrative costs which enables more than 85% of the funding to go to Milpitas participants. Through the SVCE subrecipient agreement, the Program will be administered alongside the SVCE existing rebate program utilizing a single streamlined application process. Milpitas applications will be automatically flagged for the Go Electric Milpitas add-on rebates and thereby eliminating the need that participants submit a separate application.

SVCE’s program will provide up to \$8,750 in rebates for upgrading to new electric appliances for heat pump water heaters, heat pump HVAC, electrical panel upgrades, and/or electric ranges/stoves. Lower income residents can receive an extra \$4,250 if they meet SVCE’s income-qualified criteria (e.g., enrolled in CARE or FERA program, meet other qualifying conditions). The Go Electric Milpitas add-on rebates will provide these program participants with up to an additional \$3,000 on average depending on which upgrades are completed. City and SVCE staff have agreed to revisit and adjust the incentive amounts based on program participation and potential changes in availability of state and federal incentives.

Prospective participants must first apply to reserve their rebates, complete their projects, and then submit a claim for reimbursement. Once SVCE has paid out the rebate claims, SVCE will invoice the City for reimbursement under this subrecipient agreement.

SVCE does not anticipate any substantial additional administrative costs but will monitor for administrative impacts during the first few months of implementation. SVCE and the City have agreed to negotiate the administrative costs and return with an amendment of the subrecipient agreement to allow for administrative costs up to \$100,000, if needed. The subrecipient agreement was approved by the SVCE Board of Directors at their March 12, 2025 board meeting.

Limited Term Program Coordinator

The federal funding will also cover the costs for a grant-funded Project/Sustainability Coordinator (Administrative Analyst I/II) who will be responsible for the following:

- Grant administration
- Grant reporting to DOE
- Coordination with SVCE
- Coordination with City's Energy and Environmental Sustainability Commission and community groups to support Program outreach
- Development of Program materials and outreach plan
- Conducting program promotions and community engagement and outreach

Staff anticipates the need for an ongoing Sustainability Coordinator to continue with climate action plan implementation beyond this grant term and may bring forward a proposal to request continued funding of this position in the Public Works Department during a future budget cycle.

POLICY ALTERNATIVE(S):

Alternative 1: Do not accept the grant award or approve any of the grant related actions.

Pros: None

Cons: This grant brings a substantial amount of federal dollars to support local climate action efforts and lower costs of electrification retrofits for Milpitas homeowners. This Program will help Milpitas make substantial progress toward carbon neutrality while making Milpitas homes healthier and safer.

Reason for Not Recommending: Seeking grant funding for climate action initiatives was a key funding strategy when the City Council adopted the Climate Action Plan Update. Absent grant funding, the City would have limited resources dedicated to climate action and be unable to make any significant progress to reduce community GHG emissions.

FISCAL IMPACT:

By accepting this staff recommendation, the City will appropriate respective revenue and expenditure in the amount of \$3,000,000. This grant award has no local match requirement and all costs of administration and for financial incentives are fully covered.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA):

Staff prepared the California Environmental Quality Act (CEQA) Environmental Impact Report (EIR) Addendum (Addendum) to the Milpitas General Plan Update EIR (Milpitas GP EIR; State Clearinghouse No. 2020070348) for the 2022 CAP. According to this Addendum, the 2022 CAP would not change any of the conclusions of the General Plan 2040 EIR. The analysis demonstrated that implementation of the 2022 CAP would not result in new significant effects or a substantial increase in the severity of previously identified significant effects. Further, no new information of substantial importance has been identified that suggests the potential for the 2022 CAP to result in significant or substantially more severe effects not discussed in the General Plan 2040 EIR. This action supports the implementation of the 2022 CAP. Accordingly, no further environmental review is required pursuant to Cal. Code Regs., tit. 14, §§ 15162, 15164 as the present action presents no substantial changes to that prior environmental analysis or the circumstances under which it would be undertaken and no new information of substantial importance has arisen.

Additionally, and alternatively, the proposed activity of accepting a grant is not a project pursuant to the California Environmental Quality Act (CEQA) Guidelines Section 15378(b). The remaining action is an organizational, administrative, or fiscal activity of the City government that has no potential for resulting in direct or indirect physical changes in the environment and is not a project pursuant to Cal. Code of Regs., tit. 14, § 15378.

RECOMMENDATION:

- (1) Adopt a resolution to accept, and authorize the City Manager or designee to execute, the grant award and agreement from the U.S. Department of Energy for the Milpitas Carbon Neutral Homes Retrofit Program in the amount of \$3,000,000 and appropriate the respective revenue and expenditure,
- (2) Authorize the City Manager, or designee, to approve a subrecipient agreement with Silicon Valley Clean Energy in an amount not to exceed \$2,655,000 for the administration and issuance of additional rebates for Go Electric Milpitas program applicants; and
- (3) Approve a limited-term, grant-funded Administrative Analyst I/II position for the Public Works Department.

ATTACHMENT(S):

- (a) U.S. Department of Energy (DOE) Assistance Agreement
- (b) Silicon Valley Clean Energy (SVCE) Subrecipient Agreement
- (c) Resolution

ASSISTANCE AGREEMENT

1. Award No. DE-SE0000736		2. Modification No.		3. Effective Date 10/01/2024		4. CFDA No. 81.041	
5. Awarded To CITY OF MILPITAS Attn: Fenny Lei 455 E CALAVERAS BLVD MILPITAS CA 950355411			6. Sponsoring Office State and Community Energy Programs U.S. Department of Energy 1000 Independence Ave, SW Washington DC 20585			7. Period of Performance 10/01/2024 through 09/30/2026	
8. Type of Agreement ☒ Grant ☐ Cooperative Agreement ☐ Other		9. Authority Energy Act of 2020			10. Purchase Request or Funding Document No. 24SE000478		
11. Remittance Address CITY OF MILPITAS Attn: CITY OF MILPITAS ACCOUNTING/GRANTS 455 EAST CALAVERAS BLVD. MILPITAS CA 950355411			12. Total Amount Govt. Share: \$3,000,000.00 Cost Share : \$0.00 Total : \$3,000,000.00		13. Funds Obligated This action: \$3,000,000.00 Total : \$3,000,000.00		
14. Principal Investigator		15. Program Manager Jay Nathwani Phone: 202-510-0854			16. Administrator Golden Field Office U.S. Department of Energy Golden Field Office 15013 Denver West Parkway Golden CO 80401		
17. Submit Payment Requests To VIPERS https://vipers.doe.gov Any questions, please contact by call/email 855-384-7377 or VipersSupport@hq.doe.gov			18. Paying Office OR for Golden U.S. Department of Energy Oak Ridge Financial Service Center P.O. Box 6017 Oak Ridge TN 37831			19. Submit Reports To See Attachment 2	
20. Accounting and Appropriation Data 07950-2023-31-200835-41020-1800038-0000000-0000000-0610607							
21. Research Title and/or Description of Project MILPITAS CARBON NEUTRAL HOMES RETROFIT PROGRAM							
For the Recipient				For the United States of America			
22. Signature of Person Authorized to Sign				25. Signature of Grants/Agreements Officer Signature on File			
23. Name and Title		24. Date Signed		26. Name of Officer Geoffrey I. Walker			27. Date Signed 09/26/2024

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED DE-SE0000736	PAGE 2 OF 3
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NAME OF OFFEROR OR CONTRACTOR
CITY OF MILPITAS

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	UEI: EZ77RK2NWK8 In addition to this Assistance Agreement, this award consists of the items listed on the Cover Page of the Special Terms and Conditions. The Project Period for this award is 10/01/2024 through 09/30/2026, consisting of the following Budget Period: Budget Period 1: 10/01/2024 to 09/30/2026 In Block 7 of the Assistance Agreement, the Period of Performance reflects the beginning of the Project Period through the end of the current Budget Period. Additional future DOE funding and additional budget periods are not contemplated under this award. Funding for all awards and future budget periods is contingent upon the availability of funds appropriated by Congress for the purpose of this program and the availability of future-year budget authority. DOE Award Administrator: Charles D'Angelo E-mail: charles.d'angelo@ee.doe.gov Phone: 240-562-1856 DOE Project Officer: Jay Nathwani E-mail: jay.nathwani@hq.doe.gov Phone: 202-510-0854 Recipient Business Officer: Matt Cano E-mail: mcano@ci.milpitas.ca.gov Phone: 408-586-2603 Recipient Principal Investigator: Elaine Marshall E-mail: emarshall@ci.milpitas.ca.gov Phone: 408-586-2603 "Electronic signature or signatures as used in this document means a method of signing an electronic message that-- (A) Identifies and authenticates a particular person as the source of the electronic message; (B) Indicates such person's approval of the information contained in the electronic message; and, (C) Submission via FedConnect constitutes electronically signed documents." Continued ...				

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	DE-SE0000736	3	3

NAME OF OFFEROR OR CONTRACTOR
CITY OF MILPITAS

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	ASAP: NO: STD IMMEDIATE Extent Competed: NOT COMPETED Davis-Bacon Act: NO PI: MARSHALL, ELAINE Fund: 07950 Appr Year: 2023 Allottee: 31 Report Entity: 200835 Object Class: 41020 Program: 1800038 Project: 0000000 WFO: 0000000 Local Use: 0610607				

Special Terms and Conditions

City of Milpitas, which is identified in Block 5 of the Assistance Agreement, and the State and Community Energy Program (“SCEP”), an office within the United States Department of Energy (“DOE”), enter into this Award, referenced above, to achieve the project objectives and the technical milestones and deliverables stated in the Attachments to this Award.

This Award consists of the following documents, including all terms and conditions therein:

	Assistance Agreement
	Special Terms and Conditions
Attachment 1	Statement of Project Objectives and Milestone Summary Table
Attachment 2	Federal Assistance Reporting Checklist and Instructions
Attachment 3	Budget Information SF-424A
Attachment 4	Intellectual Property Provisions
Attachment 5	NEPA Determination

The following are incorporated into this Award by reference:

- DOE Assistance Regulations, 2 CFR Part 200 as amended by 2 CFR Part 910 at <http://www.eCFR.gov>.
- National Policy Requirements (November 12, 2020) at <http://www.nsf.gov/awards/managing/rtc.jsp>.
- The Recipient’s application/proposal as approved by SCEP.

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Subpart A. General Provisions

Term 1. Legal Authority and Effect

A DOE financial assistance award is valid only if it is in writing and is signed, either in writing or electronically, by a DOE Contracting Officer.

The Recipient may accept or reject the Award. A request to draw down DOE funds or acknowledgement of award documents by the Recipient's authorized representative through electronic systems used by DOE, specifically FedConnect, constitutes the Recipient's acceptance of the terms and conditions of this Award. Acknowledgement via FedConnect by the Recipient's authorized representative constitutes the Recipient's electronic signature.

Term 2. Flow Down Requirement

The Recipient agrees to apply the terms and conditions of this Award, including the Intellectual Property Provisions, to all subrecipients (and contractors, as appropriate). See, 2 CFR 200.101(b)(2), 2 CFR 200.327, and 2 CFR 200.332.

Term 3. Compliance with Federal, State, and Municipal Law

The Recipient is required to comply with applicable federal, state, and local laws and regulations for all work performed under this Award. The Recipient is required to obtain all necessary federal, state, and local permits, authorizations, and approvals for all work performed under this Award.

Term 4. Inconsistency with Federal Law

Any apparent inconsistency between federal statutes and regulations and the terms and conditions contained in this Award must be referred to the DOE Award Administrator for guidance.

Term 5. Federal Stewardship

SCEP will exercise normal federal stewardship in overseeing the project activities performed under this Award. Stewardship activities include, but are not limited to, conducting site visits; reviewing performance and financial reports; providing technical assistance and/or temporary intervention in unusual circumstances to address deficiencies that develop during the project; assuring compliance with terms and conditions; and reviewing technical performance after project completion to ensure that the project objectives have been accomplished.

Term 6. Federal Involvement

A. Review Meetings

The Recipient, including but not limited to, the principal investigator (or, if applicable, co-principal investigators), is required to participate in periodic review meetings with SCEP. Review meetings enable SCEP to assess the work performed under this Award and determine whether

the Recipient has timely achieved the technical milestones and deliverables stated in Attachment 1 to this Award.

SCEP shall determine the frequency of review meetings and select the day, time, and location of each review meeting and shall do so in a reasonable and good faith manner. SCEP will provide the Recipient with reasonable notice of the review meetings.

For each review meeting, the Recipient is required to provide a comprehensive overview of the project, including:

- The Recipient's technical progress compared to the Milestone Summary Table stated in Attachment 1 to this Award.
- The Recipient's actual expenditures compared to the approved budget in Attachment 3 to this Award.
- Other subject matter specified by the DOE Technology Manager/Project Officer.

B. Project Meetings

The Recipient is required to notify SCEP in advance of scheduled tests and internal project meetings that would entail discussion of topics that could result in major changes to the baseline project technical scope/approach, cost, or schedule. Upon request by SCEP, the Recipient is required to provide SCEP with reasonable access (by telephone, webinar, or otherwise) to the tests and project meetings. The Recipient is not expected to delay any work under this Award for the purpose of government insight.

C. Site Visits

SCEP's authorized representatives have the right to make site visits at reasonable times to review project accomplishments and management control systems and to provide technical assistance, if required. The Recipient must provide, and must require subrecipients to provide, reasonable access to facilities, office space, resources, and assistance for the safety and convenience of the government representatives in the performance of their duties. All site visits and evaluations must be performed in a manner that does not unduly interfere with or delay the work.

D. Technical Milestones and Deliverables

Attachment 1 to this Award establishes technical milestones and deliverables. If the Recipient fails to achieve two or more technical milestones and deliverables, SCEP may renegotiate the Statement of Project Objectives and/or Milestone Summary Table in Attachment 1 to this Award. In the alternative, SCEP may deem the Recipient's failure to achieve these technical milestones and deliverables to be material noncompliance with the terms and conditions of this Award and take action to suspend or terminate the Award.

E. SCEP Access

The Recipient must provide any information, documents, site access, or other assistance requested by SCEP for the purpose of its federal stewardship or substantial involvement.

Term 7. Foreign National Participation

A “foreign national” is defined as any person who is not a U.S. citizen by birth or naturalization.

If the Recipient (including any of its subrecipients and contractors) anticipates involving foreign nationals in the performance of the Award, the Recipient must, upon DOE’s request, provide DOE with specific information about each foreign national to ensure compliance with the requirements for participation and access approval. The volume and type of information required may depend on various factors associated with the Award. The DOE Contracting Officer will notify the Recipient if this information is required.

DOE may elect to deny a foreign national’s participation in the Award. Likewise, DOE may elect to deny a foreign national’s access to a DOE sites, information, technologies, equipment, programs, or personnel. DOE’s determination to deny participation or access is not appealable.

Term 8. Post-Award Due Diligence Reviews

During the period of performance of the Award, DOE may conduct ongoing due diligence reviews, through Government resources, to identify potential risks of undue foreign influence. In the event a risk is identified, DOE may require risk mitigation measures, including but not limited to, requiring an individual or entity not participate in the Award.

Term 9. NEPA Requirements

DOE must comply with the National Environmental Policy Act (NEPA) prior to authorizing the use of federal funds. Based on all information provided by the Recipient, SCEP has made a NEPA determination by issuing a categorical exclusion (CX) for all activities listed in the Statement of Project Objectives (SOPO) approved by the Contracting Officer and the DOE NEPA Determination. The Recipient is thereby authorized to use federal funds for the defined project activities, except where such activity is subject to a restriction set forth elsewhere in this Award.

This authorization is specific to the project activities and locations as described in the SOPO approved by the Contracting Officer and the DOE NEPA Determination.

If the Recipient later intends to add to or modify the activities or locations as described in the approved SOPO and the DOE NEPA Determination, those new activities/locations or modified activities/locations are subject to additional NEPA review and are not authorized for federal funding until the Contracting Officer provides written authorization on those additions or modifications. Should the Recipient elect to undertake activities or change locations prior to written authorization from the Contracting Officer, the Recipient does so at risk of not receiving federal funding for those activities, and such costs may not be recognized as allowable cost share.

DOE must consider the effects on historic properties, pursuant to Section 106 of the National Historic Preservation Act (NHPA). Section 106 applies to historic properties that are listed in or eligible for listing in the National Register of Historic Places. DOE and recipients selected for an

award must consider the effects of project activities on historic properties, pursuant to Section 106 of the NHPA

Awardees in States or Territories with a DOE-executed Programmatic Agreement (PA) must adhere to all the Stipulations outlined in the PA, including reporting requirements. Executed PAs are available on this website: <https://www.energy.gov/scep/historic-preservation-executed-programmatic-agreements>. So long as the proposed project/undertaking is within a State or Territory that has executed a Programmatic Agreement, the terms of the Programmatic Agreement will apply to all SCEP Recipients and subrecipients within the applicable state, and their activities. Applicants that do NOT have a PA which includes Guam and tribal governments, must follow the added restrictions in a NEPA determination to ensure Section 106 compliance.

Term 10. Performance of Work in United States

A. Requirement

All work performed under this Award must be performed in the United States unless the Contracting Officer provides a waiver. This requirement does not apply to the purchase of supplies and equipment; however, the Recipient should make every effort to purchase supplies and equipment within the United States. The Recipient must flow down this requirement to its subrecipients.

B. Failure to Comply

If the Recipient fails to comply with the Performance of Work in the United States requirement, the Contracting Officer may deny reimbursement for the work conducted outside the United States and such costs may not be recognized as allowable Recipient cost share of if the work is performed by the Recipient, subrecipients, contractors or other project partners.

C. Waiver for Work Outside the U.S.

All work performed under this Award must be performed in the United States. However, the Contracting Officer may approve the Recipient to perform a portion of the work outside the United States under limited circumstances. The Recipient must obtain a waiver from the Contracting Officer prior to conducting any work outside the U.S. To request a waiver, the Recipient must submit a written waiver request to the Contracting Officer, which includes the information as required in the FOA that the Award was selected under.

For the rationale, the Recipient must demonstrate to the satisfaction of the Contracting Officer that the performance of work outside the United States would further the purposes of the FOA that the Award was selected under and is in the economic interests of the United States. The Contracting Officer may require additional information before considering such request.

Term 11. Notice Regarding the Purchase of American-Made Equipment and Products – Sense of Congress

It is the sense of the Congress that, to the greatest extent practicable, all equipment and products purchased with funds made available under this Award should be American-made.

Term 12. Reporting Requirements

A. Requirements

The reporting requirements for this Award are identified on the Federal Assistance Reporting Checklist, attached to this Award. Failure to comply with these reporting requirements is considered a material noncompliance with the terms of the Award. Noncompliance may result in withholding of future payments, suspension, or termination of the current award, and withholding of future awards. A willful failure to perform, a history of failure to perform, or unsatisfactory performance of this and/or other financial assistance awards, may also result in a debarment action to preclude future awards by federal agencies.

B. Dissemination of Scientific and Technical Information

Scientific and Technical Information (STI) generated under this Award will be submitted to DOE via the Office of Scientific and Technical Information's Energy Link ([E-Link](#)) system. STI submitted under this Award will be disseminated via DOE's [OSTI.gov](#) website subject to approved access limitations. Citations for journal articles produced under the Award will appear on the [DOE PAGES](#) website.

C. Restrictions

Scientific and Technical Information submitted to E-Link must not contain any Protected Personal Identifiable Information (PII), limited rights data (proprietary data), classified information, information subject to export control classification, or other information not subject to release.

Term 13. Lobbying

By accepting funds under this Award, the Recipient agrees that none of the funds obligated on the Award shall be expended, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. § 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

Term 14. Publications

The Recipient is required to include the following acknowledgement in publications arising out of, or relating to, work performed under this Award, whether copyrighted or not:

- *Acknowledgment:* "This material is based upon work supported by the U.S. Department of Energy's State and Community Energy Program (SCEP) Award Number DE-

SE0000736.”

- *Full Legal Disclaimer:* “This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.”

Abridged Legal Disclaimer: “The views expressed herein do not necessarily represent the views of the U.S. Department of Energy or the United States Government.”

Recipients should make every effort to include the full Legal Disclaimer. However, in the event that recipients are constrained by formatting and/or page limitations set by the publisher, the abridged Legal Disclaimer is an acceptable alternative.

The Award may be subject to a Data Management Plan as part of the Intellectual Property clause set that explains how data generated in the course of the work performed under this Award will be shared or preserved or, when justified, explains why data sharing or preservation is not possible or scientifically appropriate.

Term 15. No-Cost Extension

As provided in 2 CFR 200.308, the Recipient must provide the Contracting Officer with notice in advance if it intends to utilize a one-time, no-cost extension of this Award. The notification must include the supporting reasons and the revised period of performance. The Recipient must submit this notification in writing to the Contracting Officer and DOE Technology Manager/Project Officer at least 30 days before the end of the current budget period.

Any no-cost extension will not alter the project scope, milestones, deliverables, or budget of this Award.

Term 16. Property Standards

The complete text of the Property Standards can be found at 2 CFR 200.310 through 200.316. Also see 2 CFR 910.360 for additional requirements for real property and equipment for for-profit recipients.

Term 17. Insurance Coverage

See 2 CFR 200.310 for insurance requirements for real property and equipment acquired or improved with federal funds. Also see 2 CFR 910.360(d) for additional requirements for real property and equipment for for-profit recipients.

Term 18. Real Property

Subject to the conditions set forth in 2 CFR 200.311, title to real property acquired or improved under a federal award will conditionally vest upon acquisition in the non-federal entity. The non-federal entity cannot encumber this property and must follow the requirements of 2 CFR 200.311 before disposing of the property.

Except as otherwise provided by federal statutes or by the federal awarding agency, real property will be used for the originally authorized purpose as long as needed for that purpose. When real property is no longer needed for the originally authorized purpose, the non-federal entity must obtain disposition instructions from DOE or pass-through entity.

See 2 CFR 200.311 for additional requirements pertaining to real property acquired or improved under a federal award. Also see 2 CFR 910.360 for additional requirements for real property for for-profit recipients.

Term 19. Supplies

See 2 CFR 200.314 for requirements pertaining to supplies acquired under a federal award. See also 2 CFR 200.453 Materials and supplies costs, including costs of computing devices.

Term 20. Property Trust Relationship

Real property, equipment, and intangible property, that are acquired or improved with a federal award must be held in trust by the non-federal entity as trustee for the beneficiaries of the project or program under which the property was acquired or improved. See 2 CFR 200.316 for additional requirements pertaining to real property, equipment, and intangible property acquired or improved under a federal award.

Term 21. Record Retention

Consistent with 2 CFR 200.334 through 200.338, the Recipient is required to retain records relating to this Award.

Term 22. Audits

A. Government-Initiated Audits

The Recipient must provide any information, documents, site access, or other assistance requested by SCEP, DOE or federal auditing agencies (e.g., DOE Inspector General, Government Accountability Office) for the purpose of audits and investigations. Such assistance may include, but is not limited to, reasonable access to the Recipient's records relating to this Award.

Consistent with 2 CFR part 200 as amended by 2 CFR part 910, DOE may audit or review the Recipient's financial records or administrative records relating to this Award at any time. Audits or reviews may be performed to determine if the Recipient has an adequate financial management system to estimate, bill, and record federal government expenditures in accordance with the criteria in 2 CFR 200.302, Generally Accepted Accounting Principles (GAAP), Generally Accepted Government Accounting Standards (GAGAS), and Standard Form 1408. Government-initiated audits are generally paid for by DOE.

DOE may conduct a final audit at the end of the project period (or the termination of the Award, if applicable). Upon completion of the audit, the Recipient is required to refund to DOE any payments for costs that were determined to be unallowable. If the audit has not been performed or completed prior to the closeout of the award, DOE retains the right to recover an appropriate amount after fully considering the recommendations on disallowed costs resulting from the final audit.

DOE will provide reasonable advance notice of audits and will minimize interference with ongoing work, to the maximum extent practicable.

B. Annual Independent Audits (Single Audit or Compliance Audit)

The Recipient must comply with the annual independent audit requirements in 2 CFR 200.500 through .521 for institutions of higher education, nonprofit organizations, and state and local governments (Single audit), and 2 CFR 910.500 through .521 for for-profit entities (Compliance audit).

The annual independent audits are separate from Government-initiated audits discussed in part A. of this Term and must be paid for by the Recipient. To minimize expense, the Recipient may have a Compliance audit in conjunction with its annual audit of financial statements. The financial statement audit is **not** a substitute for the Compliance audit. If the audit (Single audit or Compliance audit, depending on Recipient entity type) has not been performed or completed prior to the closeout of the award, DOE may impose one or more of the actions outlined in 2 CFR 200.339, Remedies for Noncompliance.

Term 23. Site Visits and Recipient Administrative Organizational Reviews

SCEP's authorized representatives have the right to make site visits and conduct Recipient Administrative Organizational Reviews to review the project and management control systems and to provide technical assistance, as appropriate. The Recipient must provide, and must require its subrecipients and contractors to provide, reasonable access to facilities, office space, resources, and assistance for the safety and convenience of the government representatives in the performance of their duties. SCEP will make reasonable efforts to ensure these site visits do not interfere with or unduly delay project work.

Subpart B. Financial Provisions

Term 24. Maximum Obligation

The maximum obligation of DOE for this Award is the total “Funds Obligated” stated in Block 13 of the Assistance Agreement to this Award.

Term 25. Refund Obligation

The Recipient must refund any excess payments received from SCEP, including any costs determined unallowable by the Contracting Officer. At the end of the project period (or the termination of the Award, if applicable), the Recipient must refund to SCEP the difference between (1) the total payments received from SCEP, and (2) the federal share of the costs incurred. Refund obligations under this Term do not supersede the annual reconciliation or true up process if specified under the Indirect Cost Term.

Term 26. Allowable Costs

SCEP determines the allowability of costs in accordance with 2 CFR Part 200 as amended by 2 CFR Part 910. All project costs must be allowable, allocable, and reasonable. The Recipient must document and maintain records of all project costs, including, but not limited to, the costs paid by federal funds, costs claimed by its subrecipients and project costs that the Recipient claims as cost sharing, including in-kind contributions. The Recipient is responsible for maintaining records adequate to demonstrate that costs claimed have been incurred, are reasonable, allowable, and allocable, and comply with the appropriate cost principles. Upon request, the Recipient is required to provide such records to SCEP. Such records are subject to audit. Failure to provide SCEP adequate supporting documentation may result in a determination by the Contracting Officer that those costs are unallowable.

The Recipient is required to obtain the prior written approval of the Contracting Officer for any foreign travel costs.

Term 27. Use of Program Income

If the Recipient earns program income during the project period as a result of this Award, the Recipient must add the program income to the funds committed to the Award and used to further eligible project objectives.

Term 28. Payment Procedures

A. Method of Payment

Payment will be made by reimbursement through ACH.

B. Requesting Reimbursement

Requests for reimbursements must be made electronically through Department of Energy’s Oak Ridge Financial Service Center (ORFSC) VIPERS. To access and use

VIPERS, the Recipient must enroll at <https://vipers.doe.gov>. Detailed instructions on how to enroll are provided on the web site.

C. Timing of Submittals

Submittal of the SF-270 or SF-271 should coincide with the Recipient's normal billing pattern, but not more frequently than every two weeks. Requests for reimbursement must be limited to the amount of disbursements made during the billing period for the federal share of direct project costs and the proportionate share of any allowable indirect costs incurred during that billing period.

D. Adjusting Payment Requests for Available Cash

The Recipient must disburse any funds that are available from repayments to and interest earned on a revolving fund, program income, rebates, refunds, contract settlements, audit recoveries, credits, discounts, and interest earned on any of those funds before requesting additional cash payments from SCEP.

E. Payments

The SCEP approving official will approve the invoice as soon as practical, but not later than 30 days after the Recipient's request is received, unless the billing is improper. Upon receipt of an invoice payment authorization from the SCEP approving official, the ORFSC will disburse payment to the Recipient. The Recipient may check the status of payments at the VIPERS web site. All payments are made by electronic funds transfer to the bank account specified on the Bank Information Form that the Recipient filed with the U.S. Department of Treasury.

F. Supporting Documents for Agency Approval of Payments

For non-construction awards, the Recipient must submit a Standard Form SF-270, "Request for Advance or Reimbursement," at <https://vipers.doe.gov> and attach a file containing appropriate supporting documentation.

The following additional items are required:

- Summary cost data, for the billing period and cumulative cost data, showing all categories listed in the SF-424A and identifying federal, non-federal, and total amounts.
- If there are unauthorized phases and/or tasks for the current budget period in the NEPA Requirements term in these Special Terms and Conditions, a statement affirming that no invoiced costs are related to tasks or activities prohibited by the NEPA Requirements term.
- *Applicable to for-profit recipients and subrecipients* UCC filing proof for all equipment acquired with project funds (i.e., federal share or Recipient share) and equipment offered as cost share.

The SCEP payment authorizing official may request additional information from the Recipient to support the payment requests prior to release of funds, as deemed

necessary. The Recipient is required to comply with these requests. Supporting documents include invoices, copies of contracts, contractor quotes, and other expenditure explanations that justify the reimbursement requests.

G. Unauthorized Drawdown of Federal Funds

For each budget period, the Recipient may not spend more than the federal share authorized to that particular budget period, without specific written approval from the Contracting Officer. The Recipient must immediately refund SCEP any amounts spent or drawn down in excess of the authorized amount for a budget period. The Recipient and subrecipients shall promptly, but at least quarterly, remit to DOE interest earned on advances drawn in excess of disbursement needs and shall comply with the procedure for remitting interest earned to the federal government per 2 CFR 200.305, as applicable.

Term 29. Budget Changes

A. Budget Changes Generally

The Contracting Officer has reviewed and approved the SF-424A in Attachment 3 to this Award.

Any increase in the total project cost, whether DOE share or Cost Share, which is stated as "Total" in Block 12 to the Assistance Agreement of this Award, must be approved in advance and in writing by the Contracting Officer.

Any change that alters the project scope, milestones or deliverables requires prior written approval of the Contracting Officer. SCEP may deny reimbursement for any failure to comply with the requirements in this term.

B. Transfers of Funds Among Direct Cost Categories

The Recipient is required to obtain the prior written approval of the Contracting Officer for any transfer of funds among direct cost categories where the cumulative amount of such transfers exceeds or is expected to exceed 10 percent of the total project cost, which is stated as "Total" in Block 12 to the Assistance Agreement of this Award.

The Recipient is required to notify the DOE Technology Manager/Project Officer of any transfer of funds among direct cost categories where the cumulative amount of such transfers is equal to or below 10 percent of the total project cost, which is stated as "Total" in Block 12 to the Assistance Agreement of this Award.

C. Transfer of Funds Between Direct and Indirect Cost Categories

The Recipient is required to obtain the prior written approval of the Contracting Officer for any transfer of funds between direct and indirect cost categories. If the Recipient's actual allowable indirect costs are less than those budgeted in

Attachment 3 to this Award, the Recipient may use the difference to pay additional allowable direct costs during the project period so long as the total difference is less than 10% of total project costs and the difference is reflected in actual requests for reimbursement to DOE.

Subpart C. Miscellaneous Provisions

Term 30. Environmental, Safety and Health Performance of Work at DOE Facilities

With respect to the performance of any portion of the work under this Award which is performed at a DOE-owned or controlled site, the Recipient agrees to comply with all State and Federal Environmental, Safety and Health (ES&H) regulations and with all other ES&H requirements of the operator of such site.

Prior to the performance on any work at a DOE-owned or controlled site, the Recipient shall contact the site facility manager for information on DOE and site-specific ES&H requirements.

The Recipient is required apply this provision to its subrecipients and contractors.

Term 31. Insolvency, Bankruptcy or Receivership

The Recipient shall immediately, but no later than five days, notify SCEP of the occurrence of any of the following events: (1) the Recipient or the Recipient's parent's filing of a voluntary case seeking liquidation or reorganization under the Bankruptcy Act; (2) the Recipient's consent to the institution of an involuntary case under the Bankruptcy Act against the Recipient or the Recipient's parent; (3) the filing of any similar proceeding for or against the Recipient or the Recipient's parent, or the Recipient's consent to the dissolution, winding-up or readjustment of its debts, appointment of a receiver, conservator, trustee, or other officer with similar powers over the Recipient, under any other applicable state or federal law; or (4) the Recipient's insolvency due to its inability to pay debts generally as they become due.

Such notification shall be in writing and shall: (1) specifically set out the details of the occurrence of an event referenced in paragraph A; (2) provide the facts surrounding that event; and (3) provide the impact such event will have on the project being funded by this Award.

Upon the occurrence of any of the four events described in paragraph A. of this term, SCEP reserves the right to conduct a review of the Recipient's Award to determine the Recipient's compliance with the required elements of the Award (including such items as cost share, progress towards technical project objectives, and submission of required reports). If the SCEP review determines that there are significant deficiencies or concerns with the Recipient's performance under the Award, SCEP reserves the right to impose additional requirements, as needed, including (1) change of payment method; or (2) institute payment controls.

Failure of the Recipient to comply with this term may be considered a material noncompliance of this Award by the Contracting Officer.

Term 32. Reporting Subawards and Executive Compensation

A. Reporting of first-tier subawards

- i. *Applicability.* Unless the Recipient is exempt as provided in paragraph D. of this award term, the Recipient must report each action that equals or exceeds \$30,000 in federal funds for a subaward to an entity (see definitions in paragraph E. of this award term).
- ii. *Where and when to report.*
 1. The Recipient must report each obligating action described in paragraph A.i. of this award term to <https://www.fsrs.gov>.
 2. For subaward information, report no later than the end of the month following the month in which the obligation was made. (For example, if the obligation was made on November 7 the obligation must be reported no later than December 31.)
- iii. *What to report.* The Recipient must report the information about each obligating action that the submission instructions posted at <https://www.fsrs.gov> specify.

B. Reporting Total Compensation of Recipient Executives

- i. *Applicability and what to report.* The Recipient must report total compensation for each of its five most highly compensated executives for the preceding completed fiscal year, if:
 1. The total federal funding authorized to date under this Award equals or exceeds \$30,000 as defined in 2 CFR 170.320;
 2. In the preceding fiscal year, the Recipient received;
 - a. 80 percent or more of the Recipient's annual gross revenues from federal procurement contracts (and subcontracts) and federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
 - b. \$25,000,000 or more in annual gross revenues from federal procurement contracts (and subcontracts) and federal financial assistance subject to the Transparency Act, as

defined at 2 CFR 170.320 (and subawards).

3. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>).
- ii. *Where and when to report.* The Recipient must report executive total compensation described in paragraph B.i. of this award term:
 1. As part of the Recipient's registration profile at <https://www.sam.gov>.
 2. By the end of the month following the month in which this award is made, and annually thereafter.

C. Reporting of Total Compensation of Subrecipient Executives

- i. *Applicability and what to report.* Unless the Recipient is exempt as provided in paragraph D. of this award term, for each first-tier subrecipient under this award, the Recipient shall report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if:
 1. In the subrecipient's preceding fiscal year, the subrecipient received:
 - a. 80 percent or more of its annual gross revenues from federal procurement contracts (and subcontracts) and federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
 - b. \$25,000,000 or more in annual gross revenues from federal procurement contracts (and subcontracts), and federal financial assistance subject to the Transparency Act (and subawards).
 2. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total

compensation filings at <http://www.sec.gov/answers/execomp.htm>).

- ii. *Where and when to report.* The Recipient must report subrecipient executive total compensation described in paragraph C.i. of this award term:
 - 1. To the recipient.
 - 2. By the end of the month following the month during which the Recipient makes the subaward. For example, if a subaward is obligated on any date during the month of October of a given year (*i.e.*, between October 1 and 31), the Recipient must report any required compensation information of the subrecipient by November 30 of that year.

D. Exemptions

If, in the previous tax year, the Recipient had gross income, from all sources, under \$300,000, it is exempt from the requirements to report:

- i. Subawards; and
- ii. The total compensation of the five most highly compensated executives of any subrecipient.

E. Definitions

For purposes of this Award term:

- i. Entity means all of the following, as defined in 2 CFR Part 25:
 - 1. A Governmental organization, which is a State, local government, or Indian tribe.
 - 2. A foreign public entity.
 - 3. A domestic or foreign nonprofit organization.
 - 4. A domestic or foreign for-profit organization.
 - 5. A federal agency, but only as a subrecipient under an award or subaward to a non-federal entity.
- ii. Executive means officers, managing partners, or any other employees in management positions.
- iii. Subaward:
 - 1. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which the Recipient received this award and that the recipient awards

to an eligible subrecipient.

2. The term does not include the Recipient's procurement of property and services needed to carry out the project or program (for further explanation, see 2 CFR 200.501 Audit requirements, (f) *Subrecipients and Contractors* and/or 2 CFR 910.501 Audit requirements, (f) *Subrecipients and Contractors*).
 3. A subaward may be provided through any legal agreement, including an agreement that the Recipient or a subrecipient considers a contract.
- iv. Subrecipient means an entity that:
1. Receives a subaward from the Recipient under this award; and
 2. Is accountable to the Recipient for the use of the federal funds provided by the subaward.
- v. Total compensation means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see 17 CFR 229.402(c)(2)):
1. Salary and bonus.
 2. Awards of stock, stock options, and stock appreciation rights. Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.
 3. Earnings for services under non-equity incentive plans. This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives and are available generally to all salaried employees.
 4. Change in pension value. This is the change in present value of defined benefit and actuarial pension plans.
 5. Above-market earnings on deferred compensation which is not tax-qualified.
 6. Other compensation, if the aggregate value of all such other compensation (*e.g.*, severance, termination payments, value of life

insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.

Term 33. System for Award Management and Universal Identifier Requirements

A. Requirement for Registration in the System for Award Management (SAM)

Unless the Recipient is exempted from this requirement under 2 CFR 25.110, the Recipient must maintain the currency of its information in SAM until the Recipient submits the final financial report required under this Award or receive the final payment, whichever is later. This requires that the Recipient reviews and updates the information at least annually after the initial registration, and more frequently if required by changes in its information or another award term.

B. Unique Entity Identifier (UEI)

SAM automatically assigns a UEI to all active SAM.gov registered entities. Entities no longer have to go to a third-party website to obtain their identifier. This information is displayed on SAM.gov.

If the Recipient is authorized to make subawards under this Award, the Recipient:

- i. Must notify potential subrecipients that no entity (see definition in paragraph C of this award term) may receive a subaward from the Recipient unless the entity has provided its UEI number to the Recipient.
- ii. May not make a subaward to an entity unless the entity has provided its UEI number to the Recipient.

C. Definitions

For purposes of this award term:

- i. System for Award Management (SAM) means the federal repository into which an entity must provide information required for the conduct of business as a recipient. Additional information about registration procedures may be found at the SAM Internet site (currently at <https://www.sam.gov>).
- ii. Unique Entity Identifier (UEI) is the 12-character, alpha-numeric identifier that will be assigned by SAM.gov upon registration.
- iii. Entity, as it is used in this award term, means all of the following, as defined at 2 CFR Part 25, subpart C:
 1. A Governmental organization, which is a State, local government, or Indian Tribe.

2. A foreign public entity.
3. A domestic or foreign nonprofit organization.
4. A domestic or foreign for-profit organization.
5. A federal agency, but only as a subrecipient under an award or subaward to a non-federal entity.

iv. Subaward:

1. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which the Recipient received this Award and that the Recipient awards to an eligible subrecipient.
2. The term does not include the Recipient's procurement of property and services needed to carry out the project or program (for further explanation, see 2 CFR 200.501 Audit requirements, (f) *Subrecipients and Contractors* and/or 2 CFR 910.501 Audit requirements, (f) *Subrecipients and Contractors*).
3. A subaward may be provided through any legal agreement, including an agreement that the Recipient considers a contract.

v. Subrecipient means an entity that:

1. Receives a subaward from the Recipient under this Award; and
2. Is accountable to the Recipient for the use of the federal funds provided by the subaward.

Term 34. Nondisclosure and Confidentiality Agreements Assurances

- A. By entering into this agreement, the Recipient attests that it **does not and will not** require its employees or contractors to sign internal nondisclosure or confidentiality agreements or statements prohibiting or otherwise restricting its employees or contractors from lawfully reporting waste, fraud, or abuse to a designated investigative or law enforcement representative of a federal department or agency authorized to receive such information.
- B. The Recipient further attests that it **does not and will not** use any federal funds to implement or enforce any nondisclosure and/or confidentiality policy, form, or agreement it uses unless it contains the following provisions:
 - i. *"These provisions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by existing statute or Executive order relating to (1) classified information, (2)*

communications to Congress, (3) the reporting to an Inspector General of a violation of any law, rule, or regulation, or mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety, or (4) any other whistleblower protection. The definitions, requirements, obligations, rights, sanctions, and liabilities created by controlling Executive orders and statutory provisions are incorporated into this agreement and are controlling.”

- ii. The limitation above shall not contravene requirements applicable to Standard Form 312, Form 4414, or any other form issued by a federal department or agency governing the nondisclosure of classified information.
- iii. Notwithstanding provision listed in paragraph (a), a nondisclosure or confidentiality policy form or agreement that is to be executed by a person connected with the conduct of an intelligence or intelligence-related activity, other than an employee or officer of the United States Government, may contain provisions appropriate to the particular activity for which such document is to be used. Such form or agreement shall, at a minimum, require that the person will not disclose any classified information received in the course of such activity unless specifically authorized to do so by the United States Government. Such nondisclosure or confidentiality forms shall also make it clear that they do not bar disclosures to Congress, or to an authorized official of an executive agency or the Department of Justice, that are essential to reporting a substantial violation of law.

Term 35. Subrecipient and Contractor Approvals

A. *At Risk Notice.* The Recipient must obtain written approval by the Contracting Officer for reimbursement of costs associated with subrecipients/activities/contractor listed in paragraph B. below. The Recipient is restricted from expending project funds (i.e., federal share and Recipient share) on the subrecipients’ and/or contractors’ supporting the tasks identified in paragraph B. below unless and until the Contracting Officer provides written approval. At its discretion, SCEP may not reimburse costs incurred prior to the date of any such written approval by the Contracting Officer.

B. Contracting Officer approval as set out above is required for the following:

<u>Task #</u>	<u>Activity and Subrecipients / Contractor</u>	<u>Total Amount (\$)</u>
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The Contracting Officer may require additional information concerning these tasks prior to providing written approval.

C. Upon written approval by the Contracting Officer, the Recipient may then receive

payment for the tasks identified in paragraph B. above for allowable costs incurred, or SCEP will recognize costs incurred toward cost share requirements, if any, in accordance with the payment provisions contained in the Special Terms and Conditions of this agreement.

Term 36. Subrecipient Change Notification

Except for subrecipients specifically proposed as part of the Recipient's Application for award, the Recipient must notify the Contracting Officer and Project Manager in writing 30 days prior to the execution of new or modified subrecipient agreements, including naming any To Be Determined subrecipients. This notification does not constitute a waiver of the prior approval requirements outlined in 2 CFR Part 200 as amended by 2 CFR Part 910, nor does it relieve the Recipient from its obligation to comply with applicable federal statutes, regulations, and executive orders.

In order to satisfy this notification requirement, the Recipient documentation must, at a minimum, include the following:

- A description of the research to be performed, the service to be provided, or the equipment to be purchased.
- Cost share commitment letter if the subrecipient is providing cost share to the Award.
- An assurance that the process undertaken by the Recipient to solicit the subrecipient complies with their written procurement procedures as outlined in 2 CFR 200.317 through 200.327.
- An assurance that no planned, actual or apparent conflict of interest exists between the Recipient and the selected subrecipient and that the Recipient's written standards of conduct were followed.¹
- A completed Environmental Questionnaire, if applicable.
- An assurance that the subrecipient is not a debarred or suspended entity.
- An assurance that all required award provisions will be flowed down in the resulting subrecipient agreement.

The Recipient is responsible for making a final determination to award or modify subrecipient agreements under this agreement, but the Recipient may not proceed with the subrecipient agreement until the Contracting Officer determines, and provides the Recipient written notification, that the information provided is adequate.

¹ It is DOE's position that the existence of a "covered relationship" as defined in 5 CFR 2635.502(a)&(b) between a member of the Recipient's owners or senior management and a member of a subrecipient's owners or senior management creates at a minimum an apparent conflict of interest that would require the Recipient to notify the Contracting Officer and provide detailed information and justification (including, for example, mitigation measures) as to why the subrecipient agreement does not create an actual conflict of interest. The Recipient must also notify the Contracting Officer of any new subrecipient agreement with: (1) an entity that is owned or otherwise controlled by the Recipient; or (2) an entity that is owned or otherwise controlled by another entity that also owns or otherwise controls the Recipient, as it is DOE's position that these situations also create at a minimum an apparent conflict of interest.

Should the Recipient not receive a written notification of adequacy from the Contracting Officer within 30 days of the submission of the subrecipient documentation stipulated above, the Recipient may proceed to award or modify the proposed subrecipient agreement.

Term 37. Conference Spending

The Recipient shall not expend any funds on a conference not directly and programmatically related to the purpose for which the grant or cooperative agreement was awarded that would defray the cost to the United States Government of a conference held by any Executive branch department, agency, board, commission, or office for which the cost to the United States Government would otherwise exceed \$20,000, thereby circumventing the required notification by the head of any such Executive Branch department, agency, board, commission, or office to the Inspector General (or senior ethics official for any entity without an Inspector General), of the date, location, and number of employees attending such conference.

Term 38. Recipient Integrity and Performance Matters

A. General Reporting Requirement

If the total value of your currently active Financial Assistance awards, cooperative agreements, and procurement contracts from all federal awarding agencies exceeds \$10,000,000 for any period of time during the period of performance of this federal award, then you as the recipient during that period of time must maintain the currency of information reported to the System for Award Management (SAM) that is made available in the designated integrity and performance system (currently the Federal Awardee Performance and Integrity Information System (FAPIS)) about civil, criminal, or administrative proceedings described in paragraph 2 of this term. This is a statutory requirement under section 872 of Public Law 110-417, as amended (41 U.S.C. 2313). As required by section 3010 of Public Law 111-212, all information posted in the designated integrity and performance system on or after April 15, 2011, except past performance reviews required for federal procurement contracts, will be publicly available.

B. Proceedings About Which You Must Report

Submit the information required about each proceeding that:

- i. Is in connection with the award or performance of a Financial Assistance, cooperative agreement, or procurement contract from the federal government;
- ii. Reached its final disposition during the most recent five-year period; and
- iii. Is one of the following:
 1. A criminal proceeding that resulted in a conviction, as defined in paragraph E of this award term and condition;
 2. A civil proceeding that resulted in a finding of fault and liability and payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more;

3. An administrative proceeding, as defined in paragraph E of this term, that resulted in a finding of fault and liability and your payment of either a monetary fine or penalty of \$5,000 or more or reimbursement, restitution, or damages in excess of \$100,000; or
4. Any other criminal, civil, or administrative proceeding if:
 - a. It could have led to an outcome described in paragraph B.iii.1, 2, or 3 of this term;
 - b. It had a different disposition arrived at by consent or compromise with an acknowledgment of fault on your part; and
 - c. The requirement in this term to disclose information about the proceeding does not conflict with applicable laws and regulations.

C. Reporting Procedures

Enter in the SAM Entity Management area the information that SAM requires about each proceeding described in paragraph B of this term. You do not need to submit the information a second time under assistance awards that you received if you already provided the information through SAM because you were required to do so under federal procurement contracts that you were awarded.

D. Reporting Frequency

During any period of time when you are subject to the requirement in paragraph A of this term, you must report proceedings information through SAM for the most recent five-year period, either to report new information about any proceeding(s) that you have not reported previously or affirm that there is no new information to report. Recipients that have federal contract, Financial Assistance awards, (including cooperative agreement awards) with a cumulative total value greater than \$10,000,000, must disclose semiannually any information about the criminal, civil, and administrative proceedings.

E. Definitions

For purposes of this term:

- i. Administrative proceeding means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (e.g., Securities and Exchange Commission Administrative proceedings, Civilian Board of Contract Appeals proceedings, and Armed Services Board of Contract Appeals proceedings). This includes proceedings at the federal and state level but only in connection with performance of a federal contract or Financial Assistance awards. It does not include audits, site visits, corrective plans, or inspection of deliverables.
- ii. Conviction means a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or a plea, and includes a conviction entered upon a plea of *nolo contendere*.

- iii. Total value of currently active Financial Assistance awards, cooperative agreements and procurement contracts includes:
 - 1. Only the Federal share of the funding under any Federal award with a recipient cost share or match; and
 - 2. The value of all expected funding increments under a federal award and options, even if not yet exercised.

Term 39. Export Control

The United States government regulates the transfer of information, commodities, technology, and software considered to be strategically important to the U.S. to protect national security, foreign policy, and economic interests without imposing undue regulatory burdens on legitimate international trade. There is a network of federal agencies and regulations that govern exports that are collectively referred to as “Export Controls.”

The Recipient is responsible for ensuring compliance with all applicable United States Export Control laws and regulations relating to any work performed under a resulting award.

The Recipient must immediately report to DOE any export control violations related to the project funded under this Award, at the recipient or subrecipient level, and provide the corrective action(s) to prevent future violations.

Term 40. Current and Pending Support

A. Definitions

For purposes of this term, the following definitions are applicable:

- i. **Current and pending support** – (a) All resources made available, or expected to be made available, to an individual in support of the individual’s RD&D efforts, regardless of (i) whether the source is foreign or domestic; (ii) whether the resource is made available through the entity applying for an award or directly to the individual; or (iii) whether the resource has monetary value; and (b) includes in-kind contributions requiring a commitment of time and directly supporting the individual’s RD&D efforts, such as the provision of office or laboratory space, equipment, supplies, employees, or students. This term has the same meaning as the term Other Support as applied to researchers in NSPM-33: For researchers, Other Support includes all resources made available to a researcher in support of and/or related to all of their professional RD&D efforts, including resources provided directly to the individual or through the organization, and regardless of whether or not they have monetary value (e.g., even if the support received is only in-kind, such as office/laboratory space, equipment, supplies, or employees). This includes resource and/or financial support from all foreign and domestic entities, including but not limited to, gifts provided with terms or conditions, financial support for laboratory personnel, and

participation of student and visiting researchers supported by other sources of funding.

- ii. **Foreign Government-Sponsored Talent Recruitment Program** – An effort directly or indirectly organized, managed, or funded by a foreign government, or a foreign government instrumentality or entity, to recruit science and technology professionals or students (regardless of citizenship or national origin, or whether having a full-time or part-time position). Some foreign government-sponsored talent recruitment programs operate with the intent to import or otherwise acquire from abroad, sometimes through illicit means, proprietary technology or software, unpublished data and methods, and intellectual property to further the military modernization goals and/or economic goals of a foreign government. Many, but not all, programs aim to incentivize the targeted individual to relocate physically to the foreign state for the above purpose. Some programs allow for or encourage continued employment at United States research facilities or receipt of federal research funds while concurrently working at and/or receiving compensation from a foreign institution, and some direct participants not to disclose their participation to United States entities. Compensation could take many forms including cash, research funding, complimentary foreign travel, honorific titles, career advancement opportunities, promised future compensation, or other types of remuneration or consideration, including in-kind compensation.
- iii. **Senior/key personnel** – an individual who contributes in a substantive, meaningful way to the scientific development or execution of a research, development, and demonstration (RD&D) project proposed to be carried out with DOE award.²

B. Disclosure Requirements

Prior to award, the Recipient was required to provide current and pending support disclosure statements and a Curriculum Vitae (CV) or Biosketch for each principal investigator (PI) and senior/key personnel, at the recipient and subrecipient level, regardless of funding source. In accordance with the Federal Assistance Reporting Checklist, throughout the life of the award, the Recipient must submit current and pending support disclosure statements and a CV or Biosketch for any new PI and senior/key personnel at the recipient and subrecipient level, added to the project funded under this Award within thirty (30) calendar days of the individual joining the project. In addition, if there are any changes to current and pending support disclosure

² Typically, these individuals have doctoral or other professional degrees, although individuals at the masters or baccalaureate level may be considered senior/key personnel if their involvement meets this definition. Consultants, graduate students, and those with a postdoctoral role also may be considered senior/key personnel if they meet this definition.

statements previously submitted to DOE, the Recipient must submit updated current and pending disclosure statements within thirty (30) calendar days of the change. The Recipient must ensure all PIs and senior/key personnel at the recipient and subrecipient level, are aware of the requirement to submit updated current and pending support disclosure statements to DOE.

Current and pending support is intended to allow the identification of potential duplication, overcommitment, potential conflicts of interest or commitment, and all other sources of support. All PIs and senior/key personnel at the recipient and subrecipient level must provide a list of all sponsored activities, awards, and appointments, whether paid or unpaid; provided as a gift with terms or conditions or provided as a gift without terms or conditions; full-time, part-time, or voluntary; faculty, visiting, adjunct, or honorary; cash or in-kind; foreign or domestic; governmental or private-sector; directly supporting the individual's research or indirectly supporting the individual by supporting students, research staff, space, equipment, or other research expenses. All involvement with foreign government-sponsored talent recruitment programs must be identified in current and pending support.

For every activity, list the following items:

- The sponsor of the activity or the source of funding.
- The award or other identifying number.
- The title of the award or activity. If the title of the award or activity is not descriptive, add a brief description of the research being performed that would identify any overlaps or synergies with the proposed research.
- The total cost or value of the award or activity, including direct and indirect costs and cost share. For pending proposals, provide the total amount of requested funding.
- The award period (start date – end date).
- The person-months of effort per year being dedicated to the award or activity.

To identify overlap, duplication of effort, or synergistic efforts, append a description of the other award or activity to the current and pending support.

Details of any obligations, contractual or otherwise, to any program, entity, or organization sponsored by a foreign government must be provided to DOE upon request to either the applicant institution or DOE. Supporting documents of any identified source of support must be provided to DOE on request, including certified translations of any document.

The information may be provided in the format approved by the National Science Foundation (NSF), which may be generated by the Science Experts Network Curriculum Vita (SciENCv), a cooperative venture maintained at <https://www.ncbi.nlm.nih.gov/sciencv/>, and is also available at <https://www.nsf.gov/bfa/dias/policy/nsfapprovedformats/cps.pdf>. The use of a format

required by another agency is intended to reduce the administrative burden to researchers by promoting the use of common formats. Currently, the federal research agencies, including DOE, are working on a common disclosure form for current and pending support. At such time that the common disclosure form is published for use, the information may be provided in the common form.

Each PI and senior/key personnel must provide a separate disclosure statement listing the required information above regarding current and pending support. The individual must sign and date their respective disclosure statement and include the following certification statement:

I, [Full Name and Title], certify to the best of my knowledge and belief that the information contained in this Current and Pending Support Disclosure Statement is true, complete and accurate. I understand that any false, fictitious, or fraudulent information, misrepresentations, half-truths, or omissions of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise. (18 U.S.C. §§ 1001 and 287, and 31 U.S.C. 3729-3733 and 3801-3812). I further understand and agree that (1) the statements and representations made herein are material to DOE's funding decision, and (2) I have a responsibility to update the disclosures during the period of performance of the award should circumstances change which impact the responses provided above.

If the NSF format is used, the individual must still include a signature, date, and a certification statement using the language included in the paragraph above. If the online version is used in SciENcv, a signature, date, and a certification statement must be attached until the SciENcv website automatically attaches a certification statement.

Term 41. Interim Conflict of Interest Policy for Financial Assistance

The DOE interim Conflict of Interest Policy for Financial Assistance (COI Policy) can be found at <https://www.energy.gov/management/departments-energy-interim-conflict-interest-policy-requirements-financial-assistance>. This policy is applicable to all non-federal entities applying for, or that receive, DOE funding by means of a financial assistance award (e.g., a grant, cooperative agreement, or technology investment agreement) and, through the implementation of this policy by the entity, to each Investigator who is planning to participate in, or is participating in, the project funded wholly or in part under this Award. The term "Investigator" means the PI and any other person, regardless of title or position, who is responsible for the purpose, design, conduct, or reporting of a project funded by DOE or proposed for funding by DOE.

The Recipient must flow down the requirements of the interim COI Policy to any subrecipient non-federal entities, with the exception of DOE National Laboratories. Further, the Recipient

must identify all financial conflicts of interests (FCOI), i.e., managed and unmanaged/unmanageable, in its initial and ongoing FCOI reports.

Prior to award, the Recipient was required to: 1) ensure all Investigators on this Award completed their significant financial disclosures; 2) review the disclosures; 3) determine whether a FCOI exists; 4) develop and implement a management plan for FCOIs; and 5) provide DOE with an initial FCOI report that includes all FCOIs (i.e., managed and unmanaged/unmanageable). Within 180 days of the date of the Award, the Recipient must be in full compliance with the other requirements set forth in DOE's interim COI Policy.

Term 42. Organizational Conflict of Interest

Organizational conflicts of interest are those where, because of relationships with a parent company, affiliate, or subsidiary organization, the Recipient is unable or appears to be unable to be impartial in conducting procurement action involving a related organization (2 CFR 200.318(c)(2)).

The Recipient must disclose in writing any potential or actual organizational conflict of interest to the DOE Contracting Officer. The Recipient must provide the disclosure prior to engaging in a procurement or transaction using project funds with a parent, affiliate, or subsidiary organization that is not a state, local government, or Indian tribe. For a list of the information that must be included the disclosure, see Section VI. of the DOE interim Conflict of Interest Policy for Financial Assistance at <https://www.energy.gov/management/departments-energy-interim-conflict-interest-policy-requirements-financial-assistance>.

If the effects of the potential or actual organizational conflict of interest cannot be avoided, neutralized, or mitigated, the Recipient must procure goods and services from other sources when using project funds. Otherwise, DOE may terminate the Award in accordance with 2 CFR 200.340 unless continued performance is determined to be in the best interest of the federal government.

The Recipient must flow down the requirements of the interim COI Policy to any subrecipient non-federal entities, with the exception of DOE National Laboratories. The Recipient is responsible for ensuring subrecipient compliance with this term.

If the Recipient has a parent, affiliate, or subsidiary organization that is not a state, local government, or Indian tribe, the Recipient must maintain written standards of conduct covering organizational conflicts of interest.

Term 43. Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment

As set forth in 2 CFR 200.216, recipients and subrecipients are prohibited from obligating or expending project funds (federal and non-federal funds) to:

- (1) Procure or obtain;

(2) Extend or renew a contract to procure or obtain; or

(3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

See Public Law 115-232, section 889 for additional information.

Term 44. Participants and Other Collaborating Organizations

Prior to award, the Recipient was required to provide the following information on participants and other collaborating organizations. If there are any changes to Participants and Collaborating Organizations information previously submitted to DOE, the Recipient must submit updated information within thirty (30) calendar days after the end of the quarterly reporting period in which the change occurred:

A. What individuals have worked on the project

Provide the following information for individuals at the prime recipient and subrecipient level: (1) all senior and key personnel; and (2) each person who has worked or is expected to work at least one person month per year on the project regardless of the source of compensation (a person month equals approximately 160 hours of effort).

- i. Name
- ii. Organization
- iii. Job Title
- iv. Role in the project
- v. Start and end date (month and year) working on the project

- vi. State, U.S. territory, and/or country of residence
- vii. Whether this person collaborated with an individual or entity located in a foreign country in connection with the scope of this Award, and
- viii. If yes to vii, whether the person traveled to the foreign country as part of that collaboration, and, if so, where and what the duration of stay was.

B. Organizations

Identify all subrecipients, contractors, U.S. National Laboratories, partners, and collaborating organizations. Recipients must also include all foreign collaborators as outlined in the Foreign Collaboration Considerations term of the award Terms and Conditions. For each, provide name, UEI, zip code or latitude/longitude, role in the project, contribution to the project, and start and end date.

Term 45. Human Subjects Research

Research involving human subjects, biospecimens, or identifiable private information conducted with Department of Energy (DOE) funding is subject to the requirements of DOE Order 443.1C, *Protection of Human Research Subjects*, 45 CFR Part 46, *Protection of Human Subjects (subpart A which is referred to as the "Common Rule")*, and 10 CFR Part 745, *Protection of Human Subjects*.

Federal regulation and the DOE Order require review by an Institutional Review Board (IRB) of all proposed human subjects research projects. The IRB is an interdisciplinary ethics board responsible for ensuring that the proposed research is sound and justifies the use of human subjects or their data; the potential risks to human subjects have been minimized; participation is voluntary; and clear and accurate information about the study, the benefits and risks of participating, and how individuals' data/specimens will be protected/used, is provided to potential participants for their use in determining whether or not to participate.

The Recipient shall provide the Federal Wide Assurance number identified in item 1 below and the certification identified in item 2 below to DOE prior to initiation of any project that will involve interactions with humans in some way (e.g., through surveys); analysis of their identifiable data (e.g., demographic data and energy use over time); asking individuals to test devices, products, or materials developed through research; and/or testing of commercially available devices in buildings/homes in which humans will be present. *Note:* This list of examples is illustrative and not all inclusive.

No DOE funded research activity involving human subjects, biospecimens, or identifiable private information shall be conducted without:

- 1) A registration and a Federal Wide Assurance of compliance accepted by the Office of Human Research Protection (OHRP) in the Department of Health and Human Services; and
- 2) Certification that the research has been reviewed and approved by an Institutional Review Board (IRB) provided for in the assurance. IRB review may be accomplished by

the awardee's institutional IRB; by the Central DOE IRB; or if collaborating with one of the DOE national laboratories, by the DOE national laboratory IRB.

The Recipient is responsible for ensuring all subrecipients comply and for reporting information on the project annually to the DOE Human Subjects Research Database (HSRD) at <https://science.osti.gov/HumanSubjects/Human-Subjects-Database/home>. Note: If a DOE IRB is used, no end of year reporting will be needed.

Additional information on the DOE Human Subjects Research Program can be found at: <https://science.osti.gov/ber/human-subjects>.

Term 46. Fraud, Waste and Abuse

The mission of the DOE Office of Inspector General (OIG) is to strengthen the integrity, economy and efficiency of DOE's programs and operations including deterring and detecting fraud, waste, abuse, and mismanagement. The OIG accomplishes this mission primarily through investigations, audits, and inspections of Department of Energy activities to include grants, cooperative agreements, loans, and contracts. The OIG maintains a Hotline for reporting allegations of fraud, waste, abuse, or mismanagement. To report such allegations, please visit <https://www.energy.gov/ig/ig-hotline>.

Additionally, the Recipient must be cognizant of the requirements of 2 CFR 200.113 Mandatory disclosures, which states:

The non-federal entity or applicant for a federal award must disclose, in a timely manner, in writing to the federal awarding agency or pass-through entity all violations of federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the federal award. Non-federal entities that have received a federal award including the term and condition outlined in appendix XII of 2 CFR Part 200 are required to report certain civil, criminal, or administrative proceedings to SAM (currently FAPIIS). Failure to make required disclosures can result in any of the remedies described in § 200.339. (See also 2 CFR part 180, 31 U.S.C. 3321, and 41 U.S.C. 2313.)

Term 47. Buy America Requirement for Infrastructure Projects

A. Definitions

Components See 2 CFR 184.3 "Definitions."

Construction Materials See 2 CFR 184.3 "Definitions."

Buy America Preference, Buy America Requirement, or Domestic Content Procurement Preference Requirement means a requirement that no amount of funds made available

through a program for federal financial assistance may be obligated for an infrastructure project unless—

- (A) all iron and steel used in the project are produced in the United States;
- (B) the manufactured products used in the project are produced in the United States;
- or
- (C) the construction materials used in the project are produced in the United States.

Infrastructure See 2 CFR 184.4 (c) and (d).

Manufactured Products See 2 CFR 184.3 “Definitions.”

Predominantly of iron or steel See 2 CFR 184.3 “Definitions.”

Infrastructure project See 2 CFR 184.3 Definitions

Public- The Buy America Requirement does not apply to non-public infrastructure. For purposes of this guidance, infrastructure should be considered “public” if it is: (1) publicly owned or (2) privately owned but utilized primarily for a public purpose. Infrastructure should be considered to be “utilized primarily for a public purpose” if it is privately operated on behalf of the public or is a place of public accommodation.

B. Buy America Requirement

None of the funds provided under this award (federal share or recipient cost-share) may be used for a project for infrastructure unless:

1. All iron and steel used in the project is produced in the United States—this means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States;
2. All manufactured products used in the project are produced in the United States—this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation. See 2 CFR 184.5 for determining the cost of components for manufactured products; and
3. All construction materials are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States. See 2 CFR 184.6 for construction material standards.

The Buy America Requirement only applies to those articles, materials, and supplies that are consumed in, incorporated into, or permanently affixed to the infrastructure in the project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought into the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America Requirement apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project but are not an integral part of the structure or permanently affixed to the infrastructure project.

The Buy America Requirement only applies to an article, material, or supply classified into one of the following categories* based on its status at the time it is brought to the work site for incorporation into an infrastructure project:

- (i) Iron or steel products;
- (ii) Manufactured products; or
- (iii) Construction materials;

The Buy America Requirement only applies to the iron or steel products, manufactured products, and construction materials used for the construction, alteration, maintenance, or repair of public infrastructure in the United States when those items are consumed in, incorporated into, or permanently affixed to the infrastructure. An article, material, or supply incorporated into an infrastructure project should not be considered to fall into multiple categories, but rather must meet the Buy America Preference Requirement for only the single category in which it is classified.

All iron and steel, manufactured products, and construction materials used in the infrastructure project must be produced in the United States.

* Section 70917(c) of the Build America, Buy America Act states that “construction materials” do not include cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives. Section 70917(c) materials are excluded from Construction materials. Asphalt concrete pavement mixes are typically composed of asphalt cement (a binding agent) and aggregates such as stone, sand, and gravel. Accordingly, asphalt is also excluded from the definition of Construction materials.

Section 70917(c) materials, on their own, are not manufactured products. Further, Section 70917(c) materials should not be considered manufactured products when they are used at or combined proximate to the work site—such as is the case with wet concrete or hot mix asphalt brought to the work site for incorporation. However, when certain Section 70917(c) materials (such as stone, sand, and gravel) are used to produce a manufactured product, such as is precast concrete processed into a specific shape or form, and is in such state when brought to the work site, then that product is subject to the BABA requirements.

Further clarification is provided in 2 CFR 184 on the circumstances under which a determination is made that Section 70917(c) materials should be treated as components of a manufactured product. That determination is based on consideration of: (i) the revised definition of the “manufactured products” at 2 CFR 184.3; (ii) a new definition of “section 70917(c) materials” at 2 CFR 184.3; (iii) new instructions at 2 CFR 184.4(e) on how and when to categorize articles, materials, and supplies; and (iv) new instructions at 2 CFR 184.4(f) on how to apply the Buy America preference by category.

Recipients are responsible for administering their award in accordance with the terms and conditions, including the Buy America Requirement. The recipient must ensure that the Buy America Requirement flows down to all subawards and that the subawardees and subrecipients comply with the Buy America Requirement. The Buy America Requirement term and condition must be included all sub-awards, contracts, subcontracts, and purchase orders for work performed under the infrastructure project.

C. Certification of Compliance

Recipients must certify or provide equivalent documentation for proof of compliance that a good faith effort was made to solicit bids for domestic products used in the infrastructure project under this award.

Recipients must also maintain certifications or equivalent documentation for proof of compliance that those articles, materials, and supplies that are consumed in, incorporated into, affixed to, or otherwise used in the infrastructure project, not covered by a waiver or exemption, are produced in the United States. The certification or proof of compliance must be provided by the suppliers or manufacturers of the iron, steel, manufactured products and construction materials and flow up from all subawardees, contractors and vendors to the recipient. Recipients must keep these certifications with the award/project files and be able to produce them upon request from DOE, auditors or Office of Inspector General.

D. Waivers

When necessary, recipients may apply for, and DOE may grant, a waiver from the Buy America Requirement. Requests to waive the application of the Buy America Requirement must be in writing to the CO. Waiver requests are subject to review by DOE and the Office of Management and Budget, as well as a public comment period of no less than 15 calendar days.

1. Waivers must be based on one of the following justifications:
 - a) Public Interest- Applying the Buy America Requirement would be inconsistent with the public interest;
 - b) Non-Availability- The types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; or
 - c) Unreasonable Cost- The inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent.

2. Requests to waive the Buy America Requirement must include the following:
 - Waiver type (Public Interest, Non-Availability, or Unreasonable Cost);
 - Recipient name and Unique Entity Identifier (UEI);
 - Award information (Federal Award Identification Number, Assistance Listing number);
 - A brief description of the project, its location, and the specific infrastructure involved;
 - Total estimated project cost, with estimated federal share and recipient cost share breakdowns;
 - Total estimated infrastructure costs, with estimated federal share and recipient cost share breakdowns;
 - List and description of iron or steel item(s), manufactured goods, and/or construction material(s) the recipient seeks to waive from the Buy America Preference, including name, cost, quantity(ies), country(ies) of origin, and relevant Product Service Codes (PSC) and North American Industry Classification System (NAICS) codes for each;
 - A detailed justification as to how the non-domestic item(s) is/are essential the project;
 - A certification that the recipient made a good faith effort to solicit bids for domestic products supported by terms included in requests for proposals, contracts, and non-proprietary communications with potential suppliers;
 - A justification statement—based on one of the applicable justifications outlined above—as to why the listed items cannot be procured domestically, including the due diligence performed (e.g., market research, industry outreach, cost analysis, cost-benefit analysis) by the recipient to attempt to avoid the need for a waiver. This justification may cite, if applicable, the absence of any Buy America-compliant bids received for domestic products in response to a solicitation;
 - A description of the market research conducted that includes who conducted the market research, when it was conducted, sources that were used, and the methods used to conduct the research; and
3. How to submit a waiver
Requests to waive the application of the Buy America Requirement must be in writing to the CO.

DOE may request, and the recipient must provide, additional information for consideration of this waiver. DOE may reject or grant waivers in whole or in part depending on its review, analysis, and/or feedback from OMB or the public. DOE's final determination regarding approval or rejection of the waiver request may not be appealed. Waiver requests may take up to 90 calendar days to process.

Term 48. Prohibition related to Foreign Government-Sponsored Talent Recruitment Programs

a. Prohibition

Persons participating in a *Foreign Government-Sponsored Talent Recruitment Program of a Foreign Country of Risk* are prohibited from participating in this Award.

The recipient must exercise ongoing due diligence to reasonably ensure that no individuals participating on the DOE-funded project are participating in a *Foreign Government-Sponsored Talent Recruitment Program of a Foreign Country of Risk*. Consequences for violations of this prohibition will be determined according to applicable law, regulations, and policy. Further, the recipient must notify DOE within five (5) business days upon learning that an owner of the recipient or subrecipient or individual on the project team is or is believed to be participating in a *Foreign Government-Sponsored Talent Recruitment Program of a Foreign Country of Risk*. DOE may modify and add requirements related to this prohibition to the extent required by law.

b. Definitions

1. Foreign Government-Sponsored Talent Recruitment Program.

An effort directly or indirectly organized, managed, or funded by a foreign government, or a foreign government instrumentality or entity, to recruit science and technology professionals or students (regardless of citizenship or national origin, or whether having a full-time or part-time position). Some foreign government-sponsored talent recruitment programs operate with the intent to import or otherwise acquire from abroad, sometimes through illicit means, proprietary technology or software, unpublished data and methods, and intellectual property to further the military modernization goals and/or economic goals of a foreign government. Many, but not all, programs aim to incentivize the targeted individual to relocate physically to the foreign state for the above purpose. Some programs allow for or encourage continued employment at United States research facilities or receipt of federal research funds while concurrently working at and/or receiving compensation from a foreign institution, and some direct participants not to disclose their participation to U.S. entities. Compensation could take many forms including cash, research funding, complimentary foreign travel, honorific titles, career advancement opportunities, promised future compensation, or other types of remuneration or consideration, including in-kind compensation.

2. Foreign Country of Risk.

DOE has designated the following countries as foreign countries of risk: Iran, North Korea, Russia, and China. This list is subject to change.

Term 49. Affirmative Action and Pay Transparency Requirements

All federally assisted construction contracts exceeding \$10,000 annually will be subject to the requirements of Executive Order 11246:

1. Recipients, subrecipients, and contractors are prohibited from discriminating in employment decisions on the basis of race, color, religion, sex, sexual orientation, gender identity or national origin.
2. Recipients and Contractors are required to take affirmative action to ensure that equal opportunity is provided in all aspects of their employment. This includes flowing down the appropriate language to all subrecipients, contractors and subcontractors.
3. Recipients, subrecipients, contractors and subcontractors are prohibited from taking adverse employment actions against applicants and employees for asking about, discussing, or sharing information about their pay or, under certain circumstances, the pay of their co-workers.

The Department of Labor's (DOL) Office of Federal Contractor Compliance Programs (OFCCP) uses a neutral process to schedule contractors for compliance evaluations. OFCCP's Technical Assistance Guide should be consulted to gain an understanding of the requirements and possible actions the recipients, subrecipients, contractors, and subcontractors must take. See OFCCP's Technical Assistance Guide at:

<https://www.dol.gov/sites/dolgov/files/ofccp/Construction/files/ConstructionTAG.pdf?msclkid=9e397d68c4b111ec9d8e6fecb6c710ec>.

Term 50. Potentially Duplicative Funding Notice

If the recipient or subrecipients have or receive any other award of federal funds for activities that potentially overlap with the activities funded under this Award, the recipient must promptly notify DOE in writing of the potential overlap and state whether project funds (i.e., recipient cost share and federal funds) from any of those other federal awards have been, are being, or are to be used (in whole or in part) for one or more of the identical cost items under this Award. If there are identical cost items, the recipient must promptly notify the DOE Grants Officer in writing of the potential duplication and eliminate any inappropriate duplication of funding.

Term 51. Transparency of Foreign Connections

The recipient must notify the DOE Grants Officer within fifteen (15) business days of learning of the circumstances listed below in relation to the recipient and subrecipients.

U.S. National Laboratories, domestic government entities, and institutions of higher education are only required to report on items 5 and 7. For subrecipient reporting requirements, applicability is determined by the subrecipient entity type, regardless of whether the prime recipient was exempt.

1. Any current or pending subsidiary, foreign business entity, or offshore entity that is based in or funded by any foreign country of risk or foreign entity based in a country of risk;
2. Any current or pending contractual or financial obligation or other agreement specific to a business arrangement, or joint venture-like arrangement with an entity owned by a country of risk or foreign entity based in a country of risk;
3. Any current or pending change in ownership structure of the recipient or subrecipients that increases foreign ownership related to a country of risk. Each notification shall be accompanied by a complete and up-to-date capitalization table showing all equity interests held including limited liability company (LLC) and partnership interests, as well as derivative securities. Include both the number of shares issued to each equity holder, as well as the percentage of that series and of all equity on fully diluted basis. For each equity holder, provide the place of incorporation and the principal place of business, as applicable. If the equity holder is a natural person, identify the citizenship(s);
4. Any current or pending venture capital or institutional investment by an entity that has a general partner or individual holding a leadership role in such entity who has a foreign affiliation with any foreign country of risk;
5. Any current or pending technology licensing or intellectual property sales to a foreign country of risk;
6. Any changes to the recipient or the subrecipients' board of directors, including additions to the number of directors, the identity of new directors, as well as each new director's citizenship, shareholder affiliation (if applicable); each notification shall include a complete up-to-date list of all directors (and board observers), including their full name, citizenship and shareholder affiliation, date of appointment, duration of term, as well as a description of observer rights as applicable; and
7. Any of the following changes to the equipment proposed for use on the project:
 - a. Unmanned aircraft, control, and communication components originally made or manufactured in a foreign country of risk (including relabeled or rebranded equipment).
 - b. Coded equipment where the source code is written in a foreign country of risk.
 - c. Equipment from a foreign country of risk that will be connected to the internet or other remote communication system.
 - d. Any companies from a foreign country of risk that will have physical or remote access to any part of the equipment used on the project after delivery.

Should DOE determine the connection poses a risk to economic or national security, DOE will require measures to mitigate or eliminate the risk.

DOE has designated the following countries as foreign countries of risk: Iran, North Korea, Russia, and China. This list is subject to change.

Recognizing the disclosures may contain business confidential information, subrecipients may submit their disclosures directly to DOE.

Term 52. Foreign Collaboration Considerations

- a. Consideration of new collaborations with foreign entities, organizations, and governments. The recipient must provide DOE with advanced written notification of any potential collaboration with foreign entities, organizations, or governments in connection with its DOE-funded award scope. The recipient must await further guidance from DOE prior to contacting the proposed foreign entity, organization or government regarding the potential collaboration or negotiating the terms of any potential agreement.
- b. Existing collaborations with foreign entities, organizations, and governments. The recipient must provide DOE with a written list of all existing foreign collaborations, organizations, and governments in which has entered in connection with its DOE-funded award scope.
- c. In general, a collaboration will involve some provision of a thing of value to, or from, the recipient. A thing of value includes but may not be limited to all resources made available to, or from, the recipient in support of and/or related to the Award, regardless of whether or not they have monetary value. Things of value also may include in-kind contributions (such as office/laboratory space, data, equipment, supplies, employees, students). In-kind contributions not intended for direct use on the Award but resulting in provision of a thing of value from or to the Award must also be reported. Collaborations do not include routine workshops, conferences, use of the recipient's services and facilities by foreign investigators resulting from its standard published process for evaluating requests for access, or the routine use of foreign facilities by awardee staff in accordance with the recipient's standard policies and procedures.

Term 53. Impacted Indian Tribes

If any activities anticipated to take place under this agreement could potentially impact the resources or reserved rights of Indian Tribe(s), as defined in 25 U.S.C. § 5304 (e), then the recipient/awardee agrees to develop and maintain active and open communications with the potentially impacted Indian Tribe(s), during the period of performance of the agreement, and, if necessary, after the end of the agreement. Approval by DOE must be obtained before any activities take place that could impact Tribal resources or reserved rights, including but not limited to lands, cultural sites, sacred sites, water rights, mineral rights, fishing rights, and hunting rights. The recipient/awardee must coordinate with DOE on all Tribal interactions. DOE will determine if formal government-to-government consultation is needed, and DOE will conduct that consultation accordingly.

- Tribal lands is as defined in 25 U.S.C. §§ 3501(2), (3), (4)(A) and (13).
- Indian Tribe is as defined in 25 U.S.C. § 5304 (e).

**REIMBURSEMENT AGREEMENT
BETWEEN SILICON VALLEY CLEAN ENERGY
AND
CITY OF MILPITAS**

THIS AGREEMENT is made and entered into as of _____, 202_, (“Effective Date”) between Silicon Valley Clean Energy (“SVCE”) and City of Milpitas (“City”). SVCE and City are referred to below individually as a “Party” and collectively as the “Parties”. In consideration of the mutual promises and covenants contained herein, the Parties hereto mutually agree as follows:

1. Purpose of the Agreement. The City was awarded funding by Department of Energy’s State and Community Energy Program’s (SCEP) Award No. DE-SE0000736.0000 and it desires to use \$2,655,000 of grant funds to provide rebates (“City Rebates”) to City residents who purchase electric heat pump water heaters (HPWH), electric heat pump heating ventilation and air conditioning (HVAC) systems, electric range/cooktops and/or electrical service panels. The Parties have determined that it will be mutually beneficial for SVCE and City to include the City Rebates with the rebates SVCE provides to its customers (“SVCE Rebates”) residing within the City’s jurisdiction through its Home Rebates Program (“SVCE Program”). The Parties desire to take advantage of the economies to the Parties and convenience to SVCE customers of providing both City Rebates and SVCE Rebates to SVCE customers in one transaction. The purpose of this Agreement is to set forth the terms by which SVCE will provide the City Rebate to its customers, and by which City will reimburse SVCE for the payment of the City Rebate to the customers.

2. Term and Termination. This Agreement shall commence on the Effective Date and terminate on January 31, 2027, unless earlier terminated (“Term”). Either Party may terminate the Agreement without cause upon 30 days’ written notice to the other Party. The Date of Termination shall be the 31st day after this written notice is issued. City shall remit payment to SVCE for any Reimbursable Expenses (defined below) incurred by SVCE for City Rebate claims submitted prior to the Date of Termination. SVCE shall complete and provide City Rebates for all rebate claims submitted after project completion by customers before the Date of Termination. On the Date of Termination, SVCE shall provide the City with all documentation for all rebate applications for City Rebates that have not yet submitted rebate claims after project completion. SVCE shall communicate and coordinate with the City regarding each organizations’ responsibilities for all rebate applications and claims to ensure rebates and claims are properly handled.

3. Administrative Fee. The Parties do not anticipate that there will be a measurable cost to SVCE to administer the City Reimbursements. SVCE agrees to charge no fee to the City for administering the City Rebates (“Administrative Fee”) for at least the first 120 days of the Term. At the conclusion of the 120 days, or any time thereafter, SVCE may by written notice to the City request a written Amendment to this Agreement allowing SVCE to charge an Administrative Fee to the City. SVCE shall submit documentation with this request supporting the proposed Administrative Fee. Such Amendment may require approval by the Milpitas City Council. Nothing contained herein obligates the City to approve any requested Amendment. Any Amendment shall be in writing and signed by both Parties. In no event will the total Administrative Fees charged exceed (NTE) \$100,000 over the Term of this Agreement. SVCE accepts the risk that under the terms of this Agreement it may not be able to fully recover its actual cost in administering the City Rebates.

4. SVCE Responsibilities. SVCE shall provide City Rebates to its customers who receive SVCE Rebates through the SVCE Program and are also eligible for City Rebates. Wherever practical, SVCE shall indicate the City Rebate amount it is providing to its customers and attribute that rebate to the City’s program. The amount of the City Rebates a customer is eligible for shall be set forth in Exhibit A, attached hereto and incorporated by this reference (“City Rebate Schedule”). The City Rebate Schedule may be updated no more than once every 180 days by mutual agreement of City and SVCE, without amending this Agreement. SVCE shall use the most recent City Rebates Schedule provided by the City to issue City Rebates to customers. SVCE shall not provide any rebates that exceed the total individual project cost for

a customer. If the sum of the SVCE Rebate and City Rebate exceeds the customer's total project cost, the SVCE Rebates will be provided in full and the City Rebate will be discounted accordingly, such that the maximum rebate amount provided does not exceed the total individual project cost of the customer. SVCE shall provide an invoice to the City in a monthly basis, which documents the City Rebates paid in the previous month and any Administrative Fee. SVCE shall at all times, at its sole cost, comply with all applicable laws in administering City Rebates. SVCE will work with the City to comply with any applicable contractor flow-down terms and conditions, set forth in Exhibit B, which are required under the City's grant agreement with the U.S. Department of Energy.

5. Reimbursement by City. City agrees to reimburse SVCE for any Administrative Fees, if approved, and the City Rebates paid by SVCE, ("Reimbursable Expenses") within thirty (30) days of receipt of invoice by City. SVCE will incur the Reimbursable Expenses in reliance on City's representation that it will reimburse SVCE for such Reimbursable Expenses as set forth in this Agreement.

6. Indemnification. SVCE shall defend, indemnify and hold harmless the City (including its officers, employees and agents) against any claim, loss or liability arising out of SVCE's negligence or misconduct in the performance of this Agreement. SVCE's obligation to indemnify the City shall not apply to any claim, loss or liability arising out of City's negligence or misconduct in City's administration of City Rebates outside of this Agreement.

7. Miscellaneous.

A. Notices. Any notices which either Party may desire to give to the other Party under this Agreement must be in writing and may be given either by (i) personal service with return receipt or affidavit of delivery, (ii) delivery by a reputable document delivery service, such as, but not limited to, FedEx, that provides a receipt showing date and time of delivery, or (iii) mailing in the United States Mail, certified mail, postage prepaid, return receipt requested, addressed to the address of the Party as set forth below or at any other address as that Party may later designate by a written notice provided in accordance with this Section. Notice shall be effective upon delivery to the addresses specified below or on the third business day following deposit with the document delivery service or United States Mail as provided above.

SVCE: Silicon Valley Clean Energy
333 W. El Camino Real, Suite 330
Sunnyvale, CA 94087
Attn:
Nupur Hiremath, Manager of Decarbonization Programs
Nupur.hiremath@svcleanenergy.org

City: City of Milpitas
1265 N Milpitas Blvd.
Milpitas, CA 95035
Attn: Elaine Marshall, Deputy Public Works Director
408-586-2600
emarshall@milpitas.gov

Either Party may change its address for notices by notifying the other Party.

B. Applicable Law/Venue. This Agreement shall be deemed to have been entered into and shall, in all respects, be interpreted, construed, enforced and governed by and under the laws of the State of California. The venue of any legal action relating to this Agreement shall be the Superior Court of California, County of Santa Clara.

C. Entire Agreement, Modifications. This Agreement and the documents referenced herein contain the complete expression of the whole agreement between the Parties with respect to the obligations set forth herein, and there are no promises, representations, agreements, warranties or inducements, either

expressed verbally or implied, except as are fully set forth herein. No alteration, supplement, modification or amendment of this Agreement shall be binding unless executed in writing by both Parties.

D. Independent Advice of Legal Counsel. Each Party acknowledges that it has retained independent legal counsel of its own choice to review this Agreement and that prior to the execution hereof each Party has had the opportunity to review the terms of this Agreement with its counsel and is entering into this Agreement after such review.

E. Authority to Execute Agreement. The person or persons executing this Agreement on behalf of a Party warrants and represents that he or she has the authority to execute this Agreement on behalf of the Party and has the authority to bind that Party to the performance of its obligations hereunder.

F. Validity of Agreement. All Parties agree that this Agreement is legal, valid and binding on each Party and enforceable in accordance with its terms.

G. Binding on Successors. Except as further provided in this paragraph, this Agreement shall be binding on and inure to the benefit of the Parties hereto and their respective heirs, legal representatives, successors, assigns, executors and administrators.

H. No Third-Party Rights. This Agreement shall not create or be construed to create any rights in, or inure to the benefit of, any third party.

I. Ambiguity. This Agreement is deemed to have been prepared by all of the Parties hereto, and any uncertainty or ambiguity herein shall not be interpreted against the drafter, but rather, if such ambiguity or uncertainty exists, shall be interpreted according to applicable rules of interpretation of contracts under the laws of the State of California.

J. Assignment. This Agreement shall not be assignable by either Party in whole or in part without the prior written consent of the other Party. The assigning Party shall provide to the other Party thirty (30) days' advanced notice of any such proposed assignment.

K. Severability. If any provision or portion of this Agreement shall be adjudged invalid or unenforceable by a court or tribunal of competent jurisdiction or by operation of any applicable laws, such provision or portion of this Agreement shall be deemed omitted and the remaining provisions and portions shall remain in full force and effect.

L. Counterparts/Signatures. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same Agreement. Moreover, electronic, scanned or facsimile copies of signatures shall be accepted as valid and binding.

M. Waiver. No term or provision hereof will be considered waived by either Party, and no breach is excused or consented to by either Party, unless such waiver or consent is in writing and signed on behalf of the Party against whom the waiver is asserted. No express or implied consent by either Party to, waiver of, or failure of a Party to enforce its rights with respect to a breach by the other Party shall constitute consent to or, waiver of any subsequent or other breach by the other Party.

IN WITNESS WHEREOF, the Parties have executed this Agreement below on the date first written above.

SILICON VALLEY CLEAN ENERGY

RECOMMENDED FOR APPROVAL:

By: _____
Justin Zagunis, Director of Customer Success

Date: _____

By: _____
Monica Padilla, Chief Executive Officer

Date: _____

APPROVED AS TO FORM BY COUNSEL FOR SVCE:

By: _____
Michael Callahan, General Counsel

Date: _____

CITY OF MILPITAS

By: _____
Luz Cofresi-Howe, Finance Director

Date: _____

By: _____
Ned Thomas, City Manager

Date: _____

APPROVED AS TO FORM BY COUNSEL FOR CITY OF MILPITAS:

By: _____
Christopher Creech, Acting City Attorney

Date: _____

EXHIBIT A CITY REBATE SCHEDULE

SVCE will provide City Rebates to SVCE customers who are residents of the City in the following amounts:

Customer Category	Appliance Type		Value of City Rebate (per appliance)
Market-rate and Income-qualified ¹ customers	Heat Pump Water Heater (HPWH)	Replacing gas water heater	\$850
		Replacing electric resistance water heater	\$0
	Heat Pump Heating Ventilation, and Air Conditioning (HP HVAC)	Replacing gas furnace	\$2,000
	Induction Cooktop/Range	Replacing gas cooktop/range	\$500
	Electrical panel upgrade ²		\$250

This exhibit may be updated no more than once every 180 days by mutual agreement of City and SVCE, without amending this Agreement.

¹ Latest income-qualifications from May 2024 (https://svcleanenergy.org/wp-content/uploads/FFH_Income_Qualifications_May2024.pdf).

² As specified in SVCE's Electrical Infrastructure Upgrade specifications: <https://svcleanenergy.org/wp-content/uploads/6-Appliance-Specifications-Jun-2024-English.pdf>

EXHIBIT B
UNITED STATES DEPARTMENT OF ENERGY GRANT AGREEMENT
TERMS AND CONDITIONS

Terms and Conditions begin on next page.

Special Terms and Conditions

City of Milpitas, which is identified in Block 5 of the Assistance Agreement, and the State and Community Energy Program (“SCEP”), an office within the United States Department of Energy (“DOE”), enter into this Award, referenced above, to achieve the project objectives and the technical milestones and deliverables stated in the Attachments to this Award.

This Award consists of the following documents, including all terms and conditions therein:

	Assistance Agreement
	Special Terms and Conditions
Attachment 1	Statement of Project Objectives and Milestone Summary Table
Attachment 2	Federal Assistance Reporting Checklist and Instructions
Attachment 3	Budget Information SF-424A
Attachment 4	Intellectual Property Provisions
Attachment 5	NEPA Determination

The following are incorporated into this Award by reference:

- DOE Assistance Regulations, 2 CFR Part 200 as amended by 2 CFR Part 910 at <http://www.eCFR.gov>.
- National Policy Requirements (November 12, 2020) at <http://www.nsf.gov/awards/managing/rtc.jsp>.
- The Recipient’s application/proposal as approved by SCEP.

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Subpart A. General Provisions

Term 1. Legal Authority and Effect

A DOE financial assistance award is valid only if it is in writing and is signed, either in writing or electronically, by a DOE Contracting Officer.

The Recipient may accept or reject the Award. A request to draw down DOE funds or acknowledgement of award documents by the Recipient's authorized representative through electronic systems used by DOE, specifically FedConnect, constitutes the Recipient's acceptance of the terms and conditions of this Award. Acknowledgement via FedConnect by the Recipient's authorized representative constitutes the Recipient's electronic signature.

Term 2. Flow Down Requirement

The Recipient agrees to apply the terms and conditions of this Award, including the Intellectual Property Provisions, to all subrecipients (and contractors, as appropriate). See, 2 CFR 200.101(b)(2), 2 CFR 200.327, and 2 CFR 200.332.

Term 3. Compliance with Federal, State, and Municipal Law

The Recipient is required to comply with applicable federal, state, and local laws and regulations for all work performed under this Award. The Recipient is required to obtain all necessary federal, state, and local permits, authorizations, and approvals for all work performed under this Award.

Term 4. Inconsistency with Federal Law

Any apparent inconsistency between federal statutes and regulations and the terms and conditions contained in this Award must be referred to the DOE Award Administrator for guidance.

Term 5. Federal Stewardship

SCEP will exercise normal federal stewardship in overseeing the project activities performed under this Award. Stewardship activities include, but are not limited to, conducting site visits; reviewing performance and financial reports; providing technical assistance and/or temporary intervention in unusual circumstances to address deficiencies that develop during the project; assuring compliance with terms and conditions; and reviewing technical performance after project completion to ensure that the project objectives have been accomplished.

Term 6. Federal Involvement

A. Review Meetings

The Recipient, including but not limited to, the principal investigator (or, if applicable, co-principal investigators), is required to participate in periodic review meetings with SCEP. Review meetings enable SCEP to assess the work performed under this Award and determine whether

the Recipient has timely achieved the technical milestones and deliverables stated in Attachment 1 to this Award.

SCEP shall determine the frequency of review meetings and select the day, time, and location of each review meeting and shall do so in a reasonable and good faith manner. SCEP will provide the Recipient with reasonable notice of the review meetings.

For each review meeting, the Recipient is required to provide a comprehensive overview of the project, including:

- The Recipient's technical progress compared to the Milestone Summary Table stated in Attachment 1 to this Award.
- The Recipient's actual expenditures compared to the approved budget in Attachment 3 to this Award.
- Other subject matter specified by the DOE Technology Manager/Project Officer.

B. Project Meetings

The Recipient is required to notify SCEP in advance of scheduled tests and internal project meetings that would entail discussion of topics that could result in major changes to the baseline project technical scope/approach, cost, or schedule. Upon request by SCEP, the Recipient is required to provide SCEP with reasonable access (by telephone, webinar, or otherwise) to the tests and project meetings. The Recipient is not expected to delay any work under this Award for the purpose of government insight.

C. Site Visits

SCEP's authorized representatives have the right to make site visits at reasonable times to review project accomplishments and management control systems and to provide technical assistance, if required. The Recipient must provide, and must require subrecipients to provide, reasonable access to facilities, office space, resources, and assistance for the safety and convenience of the government representatives in the performance of their duties. All site visits and evaluations must be performed in a manner that does not unduly interfere with or delay the work.

D. Technical Milestones and Deliverables

Attachment 1 to this Award establishes technical milestones and deliverables. If the Recipient fails to achieve two or more technical milestones and deliverables, SCEP may renegotiate the Statement of Project Objectives and/or Milestone Summary Table in Attachment 1 to this Award. In the alternative, SCEP may deem the Recipient's failure to achieve these technical milestones and deliverables to be material noncompliance with the terms and conditions of this Award and take action to suspend or terminate the Award.

E. SCEP Access

The Recipient must provide any information, documents, site access, or other assistance requested by SCEP for the purpose of its federal stewardship or substantial involvement.

Term 7. Foreign National Participation

A “foreign national” is defined as any person who is not a U.S. citizen by birth or naturalization.

If the Recipient (including any of its subrecipients and contractors) anticipates involving foreign nationals in the performance of the Award, the Recipient must, upon DOE’s request, provide DOE with specific information about each foreign national to ensure compliance with the requirements for participation and access approval. The volume and type of information required may depend on various factors associated with the Award. The DOE Contracting Officer will notify the Recipient if this information is required.

DOE may elect to deny a foreign national’s participation in the Award. Likewise, DOE may elect to deny a foreign national’s access to a DOE sites, information, technologies, equipment, programs, or personnel. DOE’s determination to deny participation or access is not appealable.

Term 8. Post-Award Due Diligence Reviews

During the period of performance of the Award, DOE may conduct ongoing due diligence reviews, through Government resources, to identify potential risks of undue foreign influence. In the event a risk is identified, DOE may require risk mitigation measures, including but not limited to, requiring an individual or entity not participate in the Award.

Term 9. NEPA Requirements

DOE must comply with the National Environmental Policy Act (NEPA) prior to authorizing the use of federal funds. Based on all information provided by the Recipient, SCEP has made a NEPA determination by issuing a categorical exclusion (CX) for all activities listed in the Statement of Project Objectives (SOPO) approved by the Contracting Officer and the DOE NEPA Determination. The Recipient is thereby authorized to use federal funds for the defined project activities, except where such activity is subject to a restriction set forth elsewhere in this Award.

This authorization is specific to the project activities and locations as described in the SOPO approved by the Contracting Officer and the DOE NEPA Determination.

If the Recipient later intends to add to or modify the activities or locations as described in the approved SOPO and the DOE NEPA Determination, those new activities/locations or modified activities/locations are subject to additional NEPA review and are not authorized for federal funding until the Contracting Officer provides written authorization on those additions or modifications. Should the Recipient elect to undertake activities or change locations prior to written authorization from the Contracting Officer, the Recipient does so at risk of not receiving federal funding for those activities, and such costs may not be recognized as allowable cost share.

DOE must consider the effects on historic properties, pursuant to Section 106 of the National Historic Preservation Act (NHPA). Section 106 applies to historic properties that are listed in or eligible for listing in the National Register of Historic Places. DOE and recipients selected for an

award must consider the effects of project activities on historic properties, pursuant to Section 106 of the NHPA

Awardees in States or Territories with a DOE-executed Programmatic Agreement (PA) must adhere to all the Stipulations outlined in the PA, including reporting requirements. Executed PAs are available on this website: <https://www.energy.gov/scep/historic-preservation-executed-programmatic-agreements>. So long as the proposed project/undertaking is within a State or Territory that has executed a Programmatic Agreement, the terms of the Programmatic Agreement will apply to all SCEP Recipients and subrecipients within the applicable state, and their activities. Applicants that do NOT have a PA which includes Guam and tribal governments, must follow the added restrictions in a NEPA determination to ensure Section 106 compliance.

Term 10. Performance of Work in United States

A. Requirement

All work performed under this Award must be performed in the United States unless the Contracting Officer provides a waiver. This requirement does not apply to the purchase of supplies and equipment; however, the Recipient should make every effort to purchase supplies and equipment within the United States. The Recipient must flow down this requirement to its subrecipients.

B. Failure to Comply

If the Recipient fails to comply with the Performance of Work in the United States requirement, the Contracting Officer may deny reimbursement for the work conducted outside the United States and such costs may not be recognized as allowable Recipient cost share of if the work is performed by the Recipient, subrecipients, contractors or other project partners.

C. Waiver for Work Outside the U.S.

All work performed under this Award must be performed in the United States. However, the Contracting Officer may approve the Recipient to perform a portion of the work outside the United States under limited circumstances. The Recipient must obtain a waiver from the Contracting Officer prior to conducting any work outside the U.S. To request a waiver, the Recipient must submit a written waiver request to the Contracting Officer, which includes the information as required in the FOA that the Award was selected under.

For the rationale, the Recipient must demonstrate to the satisfaction of the Contracting Officer that the performance of work outside the United States would further the purposes of the FOA that the Award was selected under and is in the economic interests of the United States. The Contracting Officer may require additional information before considering such request.

Term 11. Notice Regarding the Purchase of American-Made Equipment and Products – Sense of Congress

It is the sense of the Congress that, to the greatest extent practicable, all equipment and products purchased with funds made available under this Award should be American-made.

Term 12. Reporting Requirements

A. Requirements

The reporting requirements for this Award are identified on the Federal Assistance Reporting Checklist, attached to this Award. Failure to comply with these reporting requirements is considered a material noncompliance with the terms of the Award. Noncompliance may result in withholding of future payments, suspension, or termination of the current award, and withholding of future awards. A willful failure to perform, a history of failure to perform, or unsatisfactory performance of this and/or other financial assistance awards, may also result in a debarment action to preclude future awards by federal agencies.

B. Dissemination of Scientific and Technical Information

Scientific and Technical Information (STI) generated under this Award will be submitted to DOE via the Office of Scientific and Technical Information's Energy Link ([E-Link](#)) system. STI submitted under this Award will be disseminated via DOE's [OSTI.gov](#) website subject to approved access limitations. Citations for journal articles produced under the Award will appear on the [DOE PAGES](#) website.

C. Restrictions

Scientific and Technical Information submitted to E-Link must not contain any Protected Personal Identifiable Information (PII), limited rights data (proprietary data), classified information, information subject to export control classification, or other information not subject to release.

Term 13. Lobbying

By accepting funds under this Award, the Recipient agrees that none of the funds obligated on the Award shall be expended, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. § 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

Term 14. Publications

The Recipient is required to include the following acknowledgement in publications arising out of, or relating to, work performed under this Award, whether copyrighted or not:

- *Acknowledgment:* "This material is based upon work supported by the U.S. Department of Energy's State and Community Energy Program (SCEP) Award Number DE-

SE0000736.”

- *Full Legal Disclaimer:* “This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.”

Abridged Legal Disclaimer: “The views expressed herein do not necessarily represent the views of the U.S. Department of Energy or the United States Government.”

Recipients should make every effort to include the full Legal Disclaimer. However, in the event that recipients are constrained by formatting and/or page limitations set by the publisher, the abridged Legal Disclaimer is an acceptable alternative.

The Award may be subject to a Data Management Plan as part of the Intellectual Property clause set that explains how data generated in the course of the work performed under this Award will be shared or preserved or, when justified, explains why data sharing or preservation is not possible or scientifically appropriate.

Term 15. No-Cost Extension

As provided in 2 CFR 200.308, the Recipient must provide the Contracting Officer with notice in advance if it intends to utilize a one-time, no-cost extension of this Award. The notification must include the supporting reasons and the revised period of performance. The Recipient must submit this notification in writing to the Contracting Officer and DOE Technology Manager/Project Officer at least 30 days before the end of the current budget period.

Any no-cost extension will not alter the project scope, milestones, deliverables, or budget of this Award.

Term 16. Property Standards

The complete text of the Property Standards can be found at 2 CFR 200.310 through 200.316. Also see 2 CFR 910.360 for additional requirements for real property and equipment for for-profit recipients.

Term 17. Insurance Coverage

See 2 CFR 200.310 for insurance requirements for real property and equipment acquired or improved with federal funds. Also see 2 CFR 910.360(d) for additional requirements for real property and equipment for for-profit recipients.

Term 18. Real Property

Subject to the conditions set forth in 2 CFR 200.311, title to real property acquired or improved under a federal award will conditionally vest upon acquisition in the non-federal entity. The non-federal entity cannot encumber this property and must follow the requirements of 2 CFR 200.311 before disposing of the property.

Except as otherwise provided by federal statutes or by the federal awarding agency, real property will be used for the originally authorized purpose as long as needed for that purpose. When real property is no longer needed for the originally authorized purpose, the non-federal entity must obtain disposition instructions from DOE or pass-through entity.

See 2 CFR 200.311 for additional requirements pertaining to real property acquired or improved under a federal award. Also see 2 CFR 910.360 for additional requirements for real property for for-profit recipients.

Term 19. Supplies

See 2 CFR 200.314 for requirements pertaining to supplies acquired under a federal award. See also 2 CFR 200.453 Materials and supplies costs, including costs of computing devices.

Term 20. Property Trust Relationship

Real property, equipment, and intangible property, that are acquired or improved with a federal award must be held in trust by the non-federal entity as trustee for the beneficiaries of the project or program under which the property was acquired or improved. See 2 CFR 200.316 for additional requirements pertaining to real property, equipment, and intangible property acquired or improved under a federal award.

Term 21. Record Retention

Consistent with 2 CFR 200.334 through 200.338, the Recipient is required to retain records relating to this Award.

Term 22. Audits

A. Government-Initiated Audits

The Recipient must provide any information, documents, site access, or other assistance requested by SCEP, DOE or federal auditing agencies (e.g., DOE Inspector General, Government Accountability Office) for the purpose of audits and investigations. Such assistance may include, but is not limited to, reasonable access to the Recipient's records relating to this Award.

Consistent with 2 CFR part 200 as amended by 2 CFR part 910, DOE may audit or review the Recipient's financial records or administrative records relating to this Award at any time. Audits or reviews may be performed to determine if the Recipient has an adequate financial management system to estimate, bill, and record federal government expenditures in accordance with the criteria in 2 CFR 200.302, Generally Accepted Accounting Principles (GAAP), Generally Accepted Government Accounting Standards (GAGAS), and Standard Form 1408. Government-initiated audits are generally paid for by DOE.

DOE may conduct a final audit at the end of the project period (or the termination of the Award, if applicable). Upon completion of the audit, the Recipient is required to refund to DOE any payments for costs that were determined to be unallowable. If the audit has not been performed or completed prior to the closeout of the award, DOE retains the right to recover an appropriate amount after fully considering the recommendations on disallowed costs resulting from the final audit.

DOE will provide reasonable advance notice of audits and will minimize interference with ongoing work, to the maximum extent practicable.

B. Annual Independent Audits (Single Audit or Compliance Audit)

The Recipient must comply with the annual independent audit requirements in 2 CFR 200.500 through .521 for institutions of higher education, nonprofit organizations, and state and local governments (Single audit), and 2 CFR 910.500 through .521 for for-profit entities (Compliance audit).

The annual independent audits are separate from Government-initiated audits discussed in part A. of this Term and must be paid for by the Recipient. To minimize expense, the Recipient may have a Compliance audit in conjunction with its annual audit of financial statements. The financial statement audit is **not** a substitute for the Compliance audit. If the audit (Single audit or Compliance audit, depending on Recipient entity type) has not been performed or completed prior to the closeout of the award, DOE may impose one or more of the actions outlined in 2 CFR 200.339, Remedies for Noncompliance.

Term 23. Site Visits and Recipient Administrative Organizational Reviews

SCEP's authorized representatives have the right to make site visits and conduct Recipient Administrative Organizational Reviews to review the project and management control systems and to provide technical assistance, as appropriate. The Recipient must provide, and must require its subrecipients and contractors to provide, reasonable access to facilities, office space, resources, and assistance for the safety and convenience of the government representatives in the performance of their duties. SCEP will make reasonable efforts to ensure these site visits do not interfere with or unduly delay project work.

Subpart B. Financial Provisions

Term 24. Maximum Obligation

The maximum obligation of DOE for this Award is the total “Funds Obligated” stated in Block 13 of the Assistance Agreement to this Award.

Term 25. Refund Obligation

The Recipient must refund any excess payments received from SCEP, including any costs determined unallowable by the Contracting Officer. At the end of the project period (or the termination of the Award, if applicable), the Recipient must refund to SCEP the difference between (1) the total payments received from SCEP, and (2) the federal share of the costs incurred. Refund obligations under this Term do not supersede the annual reconciliation or true up process if specified under the Indirect Cost Term.

Term 26. Allowable Costs

SCEP determines the allowability of costs in accordance with 2 CFR Part 200 as amended by 2 CFR Part 910. All project costs must be allowable, allocable, and reasonable. The Recipient must document and maintain records of all project costs, including, but not limited to, the costs paid by federal funds, costs claimed by its subrecipients and project costs that the Recipient claims as cost sharing, including in-kind contributions. The Recipient is responsible for maintaining records adequate to demonstrate that costs claimed have been incurred, are reasonable, allowable, and allocable, and comply with the appropriate cost principles. Upon request, the Recipient is required to provide such records to SCEP. Such records are subject to audit. Failure to provide SCEP adequate supporting documentation may result in a determination by the Contracting Officer that those costs are unallowable.

The Recipient is required to obtain the prior written approval of the Contracting Officer for any foreign travel costs.

Term 27. Use of Program Income

If the Recipient earns program income during the project period as a result of this Award, the Recipient must add the program income to the funds committed to the Award and used to further eligible project objectives.

Term 28. Payment Procedures

A. Method of Payment

Payment will be made by reimbursement through ACH.

B. Requesting Reimbursement

Requests for reimbursements must be made electronically through Department of Energy’s Oak Ridge Financial Service Center (ORFSC) VIPERS. To access and use

VIPERS, the Recipient must enroll at <https://vipers.doe.gov>. Detailed instructions on how to enroll are provided on the web site.

C. Timing of Submittals

Submittal of the SF-270 or SF-271 should coincide with the Recipient's normal billing pattern, but not more frequently than every two weeks. Requests for reimbursement must be limited to the amount of disbursements made during the billing period for the federal share of direct project costs and the proportionate share of any allowable indirect costs incurred during that billing period.

D. Adjusting Payment Requests for Available Cash

The Recipient must disburse any funds that are available from repayments to and interest earned on a revolving fund, program income, rebates, refunds, contract settlements, audit recoveries, credits, discounts, and interest earned on any of those funds before requesting additional cash payments from SCEP.

E. Payments

The SCEP approving official will approve the invoice as soon as practical, but not later than 30 days after the Recipient's request is received, unless the billing is improper. Upon receipt of an invoice payment authorization from the SCEP approving official, the ORFSC will disburse payment to the Recipient. The Recipient may check the status of payments at the VIPERS web site. All payments are made by electronic funds transfer to the bank account specified on the Bank Information Form that the Recipient filed with the U.S. Department of Treasury.

F. Supporting Documents for Agency Approval of Payments

For non-construction awards, the Recipient must submit a Standard Form SF-270, "Request for Advance or Reimbursement," at <https://vipers.doe.gov> and attach a file containing appropriate supporting documentation.

The following additional items are required:

- Summary cost data, for the billing period and cumulative cost data, showing all categories listed in the SF-424A and identifying federal, non-federal, and total amounts.
- If there are unauthorized phases and/or tasks for the current budget period in the NEPA Requirements term in these Special Terms and Conditions, a statement affirming that no invoiced costs are related to tasks or activities prohibited by the NEPA Requirements term.
- *Applicable to for-profit recipients and subrecipients* UCC filing proof for all equipment acquired with project funds (i.e., federal share or Recipient share) and equipment offered as cost share.

The SCEP payment authorizing official may request additional information from the Recipient to support the payment requests prior to release of funds, as deemed

necessary. The Recipient is required to comply with these requests. Supporting documents include invoices, copies of contracts, contractor quotes, and other expenditure explanations that justify the reimbursement requests.

G. Unauthorized Drawdown of Federal Funds

For each budget period, the Recipient may not spend more than the federal share authorized to that particular budget period, without specific written approval from the Contracting Officer. The Recipient must immediately refund SCEP any amounts spent or drawn down in excess of the authorized amount for a budget period. The Recipient and subrecipients shall promptly, but at least quarterly, remit to DOE interest earned on advances drawn in excess of disbursement needs and shall comply with the procedure for remitting interest earned to the federal government per 2 CFR 200.305, as applicable.

Term 29. Budget Changes

A. Budget Changes Generally

The Contracting Officer has reviewed and approved the SF-424A in Attachment 3 to this Award.

Any increase in the total project cost, whether DOE share or Cost Share, which is stated as “Total” in Block 12 to the Assistance Agreement of this Award, must be approved in advance and in writing by the Contracting Officer.

Any change that alters the project scope, milestones or deliverables requires prior written approval of the Contracting Officer. SCEP may deny reimbursement for any failure to comply with the requirements in this term.

B. Transfers of Funds Among Direct Cost Categories

The Recipient is required to obtain the prior written approval of the Contracting Officer for any transfer of funds among direct cost categories where the cumulative amount of such transfers exceeds or is expected to exceed 10 percent of the total project cost, which is stated as “Total” in Block 12 to the Assistance Agreement of this Award.

The Recipient is required to notify the DOE Technology Manager/Project Officer of any transfer of funds among direct cost categories where the cumulative amount of such transfers is equal to or below 10 percent of the total project cost, which is stated as “Total” in Block 12 to the Assistance Agreement of this Award.

C. Transfer of Funds Between Direct and Indirect Cost Categories

The Recipient is required to obtain the prior written approval of the Contracting Officer for any transfer of funds between direct and indirect cost categories. If the Recipient’s actual allowable indirect costs are less than those budgeted in

Attachment 3 to this Award, the Recipient may use the difference to pay additional allowable direct costs during the project period so long as the total difference is less than 10% of total project costs and the difference is reflected in actual requests for reimbursement to DOE.

Subpart C. Miscellaneous Provisions

Term 30. Environmental, Safety and Health Performance of Work at DOE Facilities

With respect to the performance of any portion of the work under this Award which is performed at a DOE-owned or controlled site, the Recipient agrees to comply with all State and Federal Environmental, Safety and Health (ES&H) regulations and with all other ES&H requirements of the operator of such site.

Prior to the performance on any work at a DOE-owned or controlled site, the Recipient shall contact the site facility manager for information on DOE and site-specific ES&H requirements.

The Recipient is required apply this provision to its subrecipients and contractors.

Term 31. Insolvency, Bankruptcy or Receivership

The Recipient shall immediately, but no later than five days, notify SCEP of the occurrence of any of the following events: (1) the Recipient or the Recipient's parent's filing of a voluntary case seeking liquidation or reorganization under the Bankruptcy Act; (2) the Recipient's consent to the institution of an involuntary case under the Bankruptcy Act against the Recipient or the Recipient's parent; (3) the filing of any similar proceeding for or against the Recipient or the Recipient's parent, or the Recipient's consent to the dissolution, winding-up or readjustment of its debts, appointment of a receiver, conservator, trustee, or other officer with similar powers over the Recipient, under any other applicable state or federal law; or (4) the Recipient's insolvency due to its inability to pay debts generally as they become due.

Such notification shall be in writing and shall: (1) specifically set out the details of the occurrence of an event referenced in paragraph A; (2) provide the facts surrounding that event; and (3) provide the impact such event will have on the project being funded by this Award.

Upon the occurrence of any of the four events described in paragraph A. of this term, SCEP reserves the right to conduct a review of the Recipient's Award to determine the Recipient's compliance with the required elements of the Award (including such items as cost share, progress towards technical project objectives, and submission of required reports). If the SCEP review determines that there are significant deficiencies or concerns with the Recipient's performance under the Award, SCEP reserves the right to impose additional requirements, as needed, including (1) change of payment method; or (2) institute payment controls.

Failure of the Recipient to comply with this term may be considered a material noncompliance of this Award by the Contracting Officer.

Term 32. Reporting Subawards and Executive Compensation

A. Reporting of first-tier subawards

- i. *Applicability.* Unless the Recipient is exempt as provided in paragraph D. of this award term, the Recipient must report each action that equals or exceeds \$30,000 in federal funds for a subaward to an entity (see definitions in paragraph E. of this award term).
- ii. *Where and when to report.*
 1. The Recipient must report each obligating action described in paragraph A.i. of this award term to <https://www.fsrs.gov>.
 2. For subaward information, report no later than the end of the month following the month in which the obligation was made. (For example, if the obligation was made on November 7 the obligation must be reported no later than December 31.)
- iii. *What to report.* The Recipient must report the information about each obligating action that the submission instructions posted at <https://www.fsrs.gov> specify.

B. Reporting Total Compensation of Recipient Executives

- i. *Applicability and what to report.* The Recipient must report total compensation for each of its five most highly compensated executives for the preceding completed fiscal year, if:
 1. The total federal funding authorized to date under this Award equals or exceeds \$30,000 as defined in 2 CFR 170.320;
 2. In the preceding fiscal year, the Recipient received;
 - a. 80 percent or more of the Recipient's annual gross revenues from federal procurement contracts (and subcontracts) and federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
 - b. \$25,000,000 or more in annual gross revenues from federal procurement contracts (and subcontracts) and federal financial assistance subject to the Transparency Act, as

defined at 2 CFR 170.320 (and subawards).

3. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>).
- ii. *Where and when to report.* The Recipient must report executive total compensation described in paragraph B.i. of this award term:
 1. As part of the Recipient's registration profile at <https://www.sam.gov>.
 2. By the end of the month following the month in which this award is made, and annually thereafter.

C. Reporting of Total Compensation of Subrecipient Executives

- i. *Applicability and what to report.* Unless the Recipient is exempt as provided in paragraph D. of this award term, for each first-tier subrecipient under this award, the Recipient shall report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if:
 1. In the subrecipient's preceding fiscal year, the subrecipient received:
 - a. 80 percent or more of its annual gross revenues from federal procurement contracts (and subcontracts) and federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
 - b. \$25,000,000 or more in annual gross revenues from federal procurement contracts (and subcontracts), and federal financial assistance subject to the Transparency Act (and subawards).
 2. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total

compensation filings at <http://www.sec.gov/answers/execomp.htm>).

- ii. *Where and when to report.* The Recipient must report subrecipient executive total compensation described in paragraph C.i. of this award term:
 - 1. To the recipient.
 - 2. By the end of the month following the month during which the Recipient makes the subaward. For example, if a subaward is obligated on any date during the month of October of a given year (*i.e.*, between October 1 and 31), the Recipient must report any required compensation information of the subrecipient by November 30 of that year.

D. Exemptions

If, in the previous tax year, the Recipient had gross income, from all sources, under \$300,000, it is exempt from the requirements to report:

- i. Subawards; and
- ii. The total compensation of the five most highly compensated executives of any subrecipient.

E. Definitions

For purposes of this Award term:

- i. Entity means all of the following, as defined in 2 CFR Part 25:
 - 1. A Governmental organization, which is a State, local government, or Indian tribe.
 - 2. A foreign public entity.
 - 3. A domestic or foreign nonprofit organization.
 - 4. A domestic or foreign for-profit organization.
 - 5. A federal agency, but only as a subrecipient under an award or subaward to a non-federal entity.
- ii. Executive means officers, managing partners, or any other employees in management positions.
- iii. Subaward:
 - 1. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which the Recipient received this award and that the recipient awards

to an eligible subrecipient.

2. The term does not include the Recipient's procurement of property and services needed to carry out the project or program (for further explanation, see 2 CFR 200.501 Audit requirements, (f) *Subrecipients and Contractors* and/or 2 CFR 910.501 Audit requirements, (f) *Subrecipients and Contractors*).
 3. A subaward may be provided through any legal agreement, including an agreement that the Recipient or a subrecipient considers a contract.
- iv. Subrecipient means an entity that:
1. Receives a subaward from the Recipient under this award; and
 2. Is accountable to the Recipient for the use of the federal funds provided by the subaward.
- v. Total compensation means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see 17 CFR 229.402(c)(2)):
1. Salary and bonus.
 2. Awards of stock, stock options, and stock appreciation rights. Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.
 3. Earnings for services under non-equity incentive plans. This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives and are available generally to all salaried employees.
 4. Change in pension value. This is the change in present value of defined benefit and actuarial pension plans.
 5. Above-market earnings on deferred compensation which is not tax-qualified.
 6. Other compensation, if the aggregate value of all such other compensation (*e.g.*, severance, termination payments, value of life

insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.

Term 33. System for Award Management and Universal Identifier Requirements

A. Requirement for Registration in the System for Award Management (SAM)

Unless the Recipient is exempted from this requirement under 2 CFR 25.110, the Recipient must maintain the currency of its information in SAM until the Recipient submits the final financial report required under this Award or receive the final payment, whichever is later. This requires that the Recipient reviews and updates the information at least annually after the initial registration, and more frequently if required by changes in its information or another award term.

B. Unique Entity Identifier (UEI)

SAM automatically assigns a UEI to all active SAM.gov registered entities. Entities no longer have to go to a third-party website to obtain their identifier. This information is displayed on SAM.gov.

If the Recipient is authorized to make subawards under this Award, the Recipient:

- i. Must notify potential subrecipients that no entity (see definition in paragraph C of this award term) may receive a subaward from the Recipient unless the entity has provided its UEI number to the Recipient.
- ii. May not make a subaward to an entity unless the entity has provided its UEI number to the Recipient.

C. Definitions

For purposes of this award term:

- i. System for Award Management (SAM) means the federal repository into which an entity must provide information required for the conduct of business as a recipient. Additional information about registration procedures may be found at the SAM Internet site (currently at <https://www.sam.gov>).
- ii. Unique Entity Identifier (UEI) is the 12-character, alpha-numeric identifier that will be assigned by SAM.gov upon registration.
- iii. Entity, as it is used in this award term, means all of the following, as defined at 2 CFR Part 25, subpart C:
 1. A Governmental organization, which is a State, local government, or Indian Tribe.

2. A foreign public entity.
3. A domestic or foreign nonprofit organization.
4. A domestic or foreign for-profit organization.
5. A federal agency, but only as a subrecipient under an award or subaward to a non-federal entity.

iv. Subaward:

1. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which the Recipient received this Award and that the Recipient awards to an eligible subrecipient.
2. The term does not include the Recipient's procurement of property and services needed to carry out the project or program (for further explanation, see 2 CFR 200.501 Audit requirements, (f) *Subrecipients and Contractors* and/or 2 CFR 910.501 Audit requirements, (f) *Subrecipients and Contractors*).
3. A subaward may be provided through any legal agreement, including an agreement that the Recipient considers a contract.

v. Subrecipient means an entity that:

1. Receives a subaward from the Recipient under this Award; and
2. Is accountable to the Recipient for the use of the federal funds provided by the subaward.

Term 34. Nondisclosure and Confidentiality Agreements Assurances

- A. By entering into this agreement, the Recipient attests that it **does not and will not** require its employees or contractors to sign internal nondisclosure or confidentiality agreements or statements prohibiting or otherwise restricting its employees or contractors from lawfully reporting waste, fraud, or abuse to a designated investigative or law enforcement representative of a federal department or agency authorized to receive such information.
- B. The Recipient further attests that it **does not and will not** use any federal funds to implement or enforce any nondisclosure and/or confidentiality policy, form, or agreement it uses unless it contains the following provisions:
 - i. *"These provisions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by existing statute or Executive order relating to (1) classified information, (2)*

communications to Congress, (3) the reporting to an Inspector General of a violation of any law, rule, or regulation, or mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety, or (4) any other whistleblower protection. The definitions, requirements, obligations, rights, sanctions, and liabilities created by controlling Executive orders and statutory provisions are incorporated into this agreement and are controlling.”

- ii. The limitation above shall not contravene requirements applicable to Standard Form 312, Form 4414, or any other form issued by a federal department or agency governing the nondisclosure of classified information.
- iii. Notwithstanding provision listed in paragraph (a), a nondisclosure or confidentiality policy form or agreement that is to be executed by a person connected with the conduct of an intelligence or intelligence-related activity, other than an employee or officer of the United States Government, may contain provisions appropriate to the particular activity for which such document is to be used. Such form or agreement shall, at a minimum, require that the person will not disclose any classified information received in the course of such activity unless specifically authorized to do so by the United States Government. Such nondisclosure or confidentiality forms shall also make it clear that they do not bar disclosures to Congress, or to an authorized official of an executive agency or the Department of Justice, that are essential to reporting a substantial violation of law.

Term 35. Subrecipient and Contractor Approvals

A. *At Risk Notice.* The Recipient must obtain written approval by the Contracting Officer for reimbursement of costs associated with subrecipients/activities/contractor listed in paragraph B. below. The Recipient is restricted from expending project funds (i.e., federal share and Recipient share) on the subrecipients’ and/or contractors’ supporting the tasks identified in paragraph B. below unless and until the Contracting Officer provides written approval. At its discretion, SCEP may not reimburse costs incurred prior to the date of any such written approval by the Contracting Officer.

B. Contracting Officer approval as set out above is required for the following:

<u>Task #</u>	<u>Activity and Subrecipients / Contractor</u>	<u>Total Amount (\$)</u>
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The Contracting Officer may require additional information concerning these tasks prior to providing written approval.

C. Upon written approval by the Contracting Officer, the Recipient may then receive

payment for the tasks identified in paragraph B. above for allowable costs incurred, or SCEP will recognize costs incurred toward cost share requirements, if any, in accordance with the payment provisions contained in the Special Terms and Conditions of this agreement.

Term 36. Subrecipient Change Notification

Except for subrecipients specifically proposed as part of the Recipient's Application for award, the Recipient must notify the Contracting Officer and Project Manager in writing 30 days prior to the execution of new or modified subrecipient agreements, including naming any To Be Determined subrecipients. This notification does not constitute a waiver of the prior approval requirements outlined in 2 CFR Part 200 as amended by 2 CFR Part 910, nor does it relieve the Recipient from its obligation to comply with applicable federal statutes, regulations, and executive orders.

In order to satisfy this notification requirement, the Recipient documentation must, at a minimum, include the following:

- A description of the research to be performed, the service to be provided, or the equipment to be purchased.
- Cost share commitment letter if the subrecipient is providing cost share to the Award.
- An assurance that the process undertaken by the Recipient to solicit the subrecipient complies with their written procurement procedures as outlined in 2 CFR 200.317 through 200.327.
- An assurance that no planned, actual or apparent conflict of interest exists between the Recipient and the selected subrecipient and that the Recipient's written standards of conduct were followed.¹
- A completed Environmental Questionnaire, if applicable.
- An assurance that the subrecipient is not a debarred or suspended entity.
- An assurance that all required award provisions will be flowed down in the resulting subrecipient agreement.

The Recipient is responsible for making a final determination to award or modify subrecipient agreements under this agreement, but the Recipient may not proceed with the subrecipient agreement until the Contracting Officer determines, and provides the Recipient written notification, that the information provided is adequate.

¹ It is DOE's position that the existence of a "covered relationship" as defined in 5 CFR 2635.502(a)&(b) between a member of the Recipient's owners or senior management and a member of a subrecipient's owners or senior management creates at a minimum an apparent conflict of interest that would require the Recipient to notify the Contracting Officer and provide detailed information and justification (including, for example, mitigation measures) as to why the subrecipient agreement does not create an actual conflict of interest. The Recipient must also notify the Contracting Officer of any new subrecipient agreement with: (1) an entity that is owned or otherwise controlled by the Recipient; or (2) an entity that is owned or otherwise controlled by another entity that also owns or otherwise controls the Recipient, as it is DOE's position that these situations also create at a minimum an apparent conflict of interest.

Should the Recipient not receive a written notification of adequacy from the Contracting Officer within 30 days of the submission of the subrecipient documentation stipulated above, the Recipient may proceed to award or modify the proposed subrecipient agreement.

Term 37. Conference Spending

The Recipient shall not expend any funds on a conference not directly and programmatically related to the purpose for which the grant or cooperative agreement was awarded that would defray the cost to the United States Government of a conference held by any Executive branch department, agency, board, commission, or office for which the cost to the United States Government would otherwise exceed \$20,000, thereby circumventing the required notification by the head of any such Executive Branch department, agency, board, commission, or office to the Inspector General (or senior ethics official for any entity without an Inspector General), of the date, location, and number of employees attending such conference.

Term 38. Recipient Integrity and Performance Matters

A. General Reporting Requirement

If the total value of your currently active Financial Assistance awards, cooperative agreements, and procurement contracts from all federal awarding agencies exceeds \$10,000,000 for any period of time during the period of performance of this federal award, then you as the recipient during that period of time must maintain the currency of information reported to the System for Award Management (SAM) that is made available in the designated integrity and performance system (currently the Federal Awardee Performance and Integrity Information System (FAPIS)) about civil, criminal, or administrative proceedings described in paragraph 2 of this term. This is a statutory requirement under section 872 of Public Law 110-417, as amended (41 U.S.C. 2313). As required by section 3010 of Public Law 111-212, all information posted in the designated integrity and performance system on or after April 15, 2011, except past performance reviews required for federal procurement contracts, will be publicly available.

B. Proceedings About Which You Must Report

Submit the information required about each proceeding that:

- i. Is in connection with the award or performance of a Financial Assistance, cooperative agreement, or procurement contract from the federal government;
- ii. Reached its final disposition during the most recent five-year period; and
- iii. Is one of the following:
 1. A criminal proceeding that resulted in a conviction, as defined in paragraph E of this award term and condition;
 2. A civil proceeding that resulted in a finding of fault and liability and payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more;

3. An administrative proceeding, as defined in paragraph E of this term, that resulted in a finding of fault and liability and your payment of either a monetary fine or penalty of \$5,000 or more or reimbursement, restitution, or damages in excess of \$100,000; or
4. Any other criminal, civil, or administrative proceeding if:
 - a. It could have led to an outcome described in paragraph B.iii.1, 2, or 3 of this term;
 - b. It had a different disposition arrived at by consent or compromise with an acknowledgment of fault on your part; and
 - c. The requirement in this term to disclose information about the proceeding does not conflict with applicable laws and regulations.

C. Reporting Procedures

Enter in the SAM Entity Management area the information that SAM requires about each proceeding described in paragraph B of this term. You do not need to submit the information a second time under assistance awards that you received if you already provided the information through SAM because you were required to do so under federal procurement contracts that you were awarded.

D. Reporting Frequency

During any period of time when you are subject to the requirement in paragraph A of this term, you must report proceedings information through SAM for the most recent five-year period, either to report new information about any proceeding(s) that you have not reported previously or affirm that there is no new information to report. Recipients that have federal contract, Financial Assistance awards, (including cooperative agreement awards) with a cumulative total value greater than \$10,000,000, must disclose semiannually any information about the criminal, civil, and administrative proceedings.

E. Definitions

For purposes of this term:

- i. Administrative proceeding means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (e.g., Securities and Exchange Commission Administrative proceedings, Civilian Board of Contract Appeals proceedings, and Armed Services Board of Contract Appeals proceedings). This includes proceedings at the federal and state level but only in connection with performance of a federal contract or Financial Assistance awards. It does not include audits, site visits, corrective plans, or inspection of deliverables.
- ii. Conviction means a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or a plea, and includes a conviction entered upon a plea of *nolo contendere*.

- iii. Total value of currently active Financial Assistance awards, cooperative agreements and procurement contracts includes:
 - 1. Only the Federal share of the funding under any Federal award with a recipient cost share or match; and
 - 2. The value of all expected funding increments under a federal award and options, even if not yet exercised.

Term 39. Export Control

The United States government regulates the transfer of information, commodities, technology, and software considered to be strategically important to the U.S. to protect national security, foreign policy, and economic interests without imposing undue regulatory burdens on legitimate international trade. There is a network of federal agencies and regulations that govern exports that are collectively referred to as “Export Controls.”

The Recipient is responsible for ensuring compliance with all applicable United States Export Control laws and regulations relating to any work performed under a resulting award.

The Recipient must immediately report to DOE any export control violations related to the project funded under this Award, at the recipient or subrecipient level, and provide the corrective action(s) to prevent future violations.

Term 40. Current and Pending Support

A. Definitions

For purposes of this term, the following definitions are applicable:

- i. **Current and pending support** – (a) All resources made available, or expected to be made available, to an individual in support of the individual’s RD&D efforts, regardless of (i) whether the source is foreign or domestic; (ii) whether the resource is made available through the entity applying for an award or directly to the individual; or (iii) whether the resource has monetary value; and (b) includes in-kind contributions requiring a commitment of time and directly supporting the individual’s RD&D efforts, such as the provision of office or laboratory space, equipment, supplies, employees, or students. This term has the same meaning as the term Other Support as applied to researchers in NSPM-33: For researchers, Other Support includes all resources made available to a researcher in support of and/or related to all of their professional RD&D efforts, including resources provided directly to the individual or through the organization, and regardless of whether or not they have monetary value (e.g., even if the support received is only in-kind, such as office/laboratory space, equipment, supplies, or employees). This includes resource and/or financial support from all foreign and domestic entities, including but not limited to, gifts provided with terms or conditions, financial support for laboratory personnel, and

participation of student and visiting researchers supported by other sources of funding.

- ii. **Foreign Government-Sponsored Talent Recruitment Program** – An effort directly or indirectly organized, managed, or funded by a foreign government, or a foreign government instrumentality or entity, to recruit science and technology professionals or students (regardless of citizenship or national origin, or whether having a full-time or part-time position). Some foreign government-sponsored talent recruitment programs operate with the intent to import or otherwise acquire from abroad, sometimes through illicit means, proprietary technology or software, unpublished data and methods, and intellectual property to further the military modernization goals and/or economic goals of a foreign government. Many, but not all, programs aim to incentivize the targeted individual to relocate physically to the foreign state for the above purpose. Some programs allow for or encourage continued employment at United States research facilities or receipt of federal research funds while concurrently working at and/or receiving compensation from a foreign institution, and some direct participants not to disclose their participation to United States entities. Compensation could take many forms including cash, research funding, complimentary foreign travel, honorific titles, career advancement opportunities, promised future compensation, or other types of remuneration or consideration, including in-kind compensation.
- iii. **Senior/key personnel** – an individual who contributes in a substantive, meaningful way to the scientific development or execution of a research, development, and demonstration (RD&D) project proposed to be carried out with DOE award.²

B. Disclosure Requirements

Prior to award, the Recipient was required to provide current and pending support disclosure statements and a Curriculum Vitae (CV) or Biosketch for each principal investigator (PI) and senior/key personnel, at the recipient and subrecipient level, regardless of funding source. In accordance with the Federal Assistance Reporting Checklist, throughout the life of the award, the Recipient must submit current and pending support disclosure statements and a CV or Biosketch for any new PI and senior/key personnel at the recipient and subrecipient level, added to the project funded under this Award within thirty (30) calendar days of the individual joining the project. In addition, if there are any changes to current and pending support disclosure

² Typically, these individuals have doctoral or other professional degrees, although individuals at the masters or baccalaureate level may be considered senior/key personnel if their involvement meets this definition. Consultants, graduate students, and those with a postdoctoral role also may be considered senior/key personnel if they meet this definition.

statements previously submitted to DOE, the Recipient must submit updated current and pending disclosure statements within thirty (30) calendar days of the change. The Recipient must ensure all PIs and senior/key personnel at the recipient and subrecipient level, are aware of the requirement to submit updated current and pending support disclosure statements to DOE.

Current and pending support is intended to allow the identification of potential duplication, overcommitment, potential conflicts of interest or commitment, and all other sources of support. All PIs and senior/key personnel at the recipient and subrecipient level must provide a list of all sponsored activities, awards, and appointments, whether paid or unpaid; provided as a gift with terms or conditions or provided as a gift without terms or conditions; full-time, part-time, or voluntary; faculty, visiting, adjunct, or honorary; cash or in-kind; foreign or domestic; governmental or private-sector; directly supporting the individual's research or indirectly supporting the individual by supporting students, research staff, space, equipment, or other research expenses. All involvement with foreign government-sponsored talent recruitment programs must be identified in current and pending support.

For every activity, list the following items:

- The sponsor of the activity or the source of funding.
- The award or other identifying number.
- The title of the award or activity. If the title of the award or activity is not descriptive, add a brief description of the research being performed that would identify any overlaps or synergies with the proposed research.
- The total cost or value of the award or activity, including direct and indirect costs and cost share. For pending proposals, provide the total amount of requested funding.
- The award period (start date – end date).
- The person-months of effort per year being dedicated to the award or activity.

To identify overlap, duplication of effort, or synergistic efforts, append a description of the other award or activity to the current and pending support.

Details of any obligations, contractual or otherwise, to any program, entity, or organization sponsored by a foreign government must be provided to DOE upon request to either the applicant institution or DOE. Supporting documents of any identified source of support must be provided to DOE on request, including certified translations of any document.

The information may be provided in the format approved by the National Science Foundation (NSF), which may be generated by the Science Experts Network Curriculum Vita (SciENCv), a cooperative venture maintained at <https://www.ncbi.nlm.nih.gov/sciencv/>, and is also available at <https://www.nsf.gov/bfa/dias/policy/nsfapprovedformats/cps.pdf>. The use of a format

required by another agency is intended to reduce the administrative burden to researchers by promoting the use of common formats. Currently, the federal research agencies, including DOE, are working on a common disclosure form for current and pending support. At such time that the common disclosure form is published for use, the information may be provided in the common form.

Each PI and senior/key personnel must provide a separate disclosure statement listing the required information above regarding current and pending support. The individual must sign and date their respective disclosure statement and include the following certification statement:

I, [Full Name and Title], certify to the best of my knowledge and belief that the information contained in this Current and Pending Support Disclosure Statement is true, complete and accurate. I understand that any false, fictitious, or fraudulent information, misrepresentations, half-truths, or omissions of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise. (18 U.S.C. §§ 1001 and 287, and 31 U.S.C. 3729-3733 and 3801-3812). I further understand and agree that (1) the statements and representations made herein are material to DOE's funding decision, and (2) I have a responsibility to update the disclosures during the period of performance of the award should circumstances change which impact the responses provided above.

If the NSF format is used, the individual must still include a signature, date, and a certification statement using the language included in the paragraph above. If the online version is used in SciENcv, a signature, date, and a certification statement must be attached until the SciENcv website automatically attaches a certification statement.

Term 41. Interim Conflict of Interest Policy for Financial Assistance

The DOE interim Conflict of Interest Policy for Financial Assistance (COI Policy) can be found at <https://www.energy.gov/management/departments-energy-interim-conflict-interest-policy-requirements-financial-assistance>. This policy is applicable to all non-federal entities applying for, or that receive, DOE funding by means of a financial assistance award (e.g., a grant, cooperative agreement, or technology investment agreement) and, through the implementation of this policy by the entity, to each Investigator who is planning to participate in, or is participating in, the project funded wholly or in part under this Award. The term "Investigator" means the PI and any other person, regardless of title or position, who is responsible for the purpose, design, conduct, or reporting of a project funded by DOE or proposed for funding by DOE.

The Recipient must flow down the requirements of the interim COI Policy to any subrecipient non-federal entities, with the exception of DOE National Laboratories. Further, the Recipient

must identify all financial conflicts of interests (FCOI), i.e., managed and unmanaged/unmanageable, in its initial and ongoing FCOI reports.

Prior to award, the Recipient was required to: 1) ensure all Investigators on this Award completed their significant financial disclosures; 2) review the disclosures; 3) determine whether a FCOI exists; 4) develop and implement a management plan for FCOIs; and 5) provide DOE with an initial FCOI report that includes all FCOIs (i.e., managed and unmanaged/unmanageable). Within 180 days of the date of the Award, the Recipient must be in full compliance with the other requirements set forth in DOE's interim COI Policy.

Term 42. Organizational Conflict of Interest

Organizational conflicts of interest are those where, because of relationships with a parent company, affiliate, or subsidiary organization, the Recipient is unable or appears to be unable to be impartial in conducting procurement action involving a related organization (2 CFR 200.318(c)(2)).

The Recipient must disclose in writing any potential or actual organizational conflict of interest to the DOE Contracting Officer. The Recipient must provide the disclosure prior to engaging in a procurement or transaction using project funds with a parent, affiliate, or subsidiary organization that is not a state, local government, or Indian tribe. For a list of the information that must be included the disclosure, see Section VI. of the DOE interim Conflict of Interest Policy for Financial Assistance at <https://www.energy.gov/management/departments-energy-interim-conflict-interest-policy-requirements-financial-assistance>.

If the effects of the potential or actual organizational conflict of interest cannot be avoided, neutralized, or mitigated, the Recipient must procure goods and services from other sources when using project funds. Otherwise, DOE may terminate the Award in accordance with 2 CFR 200.340 unless continued performance is determined to be in the best interest of the federal government.

The Recipient must flow down the requirements of the interim COI Policy to any subrecipient non-federal entities, with the exception of DOE National Laboratories. The Recipient is responsible for ensuring subrecipient compliance with this term.

If the Recipient has a parent, affiliate, or subsidiary organization that is not a state, local government, or Indian tribe, the Recipient must maintain written standards of conduct covering organizational conflicts of interest.

Term 43. Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment

As set forth in 2 CFR 200.216, recipients and subrecipients are prohibited from obligating or expending project funds (federal and non-federal funds) to:

- (1) Procure or obtain;

(2) Extend or renew a contract to procure or obtain; or

(3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

See Public Law 115-232, section 889 for additional information.

Term 44. Participants and Other Collaborating Organizations

Prior to award, the Recipient was required to provide the following information on participants and other collaborating organizations. If there are any changes to Participants and Collaborating Organizations information previously submitted to DOE, the Recipient must submit updated information within thirty (30) calendar days after the end of the quarterly reporting period in which the change occurred:

A. What individuals have worked on the project

Provide the following information for individuals at the prime recipient and subrecipient level: (1) all senior and key personnel; and (2) each person who has worked or is expected to work at least one person month per year on the project regardless of the source of compensation (a person month equals approximately 160 hours of effort).

- i. Name
- ii. Organization
- iii. Job Title
- iv. Role in the project
- v. Start and end date (month and year) working on the project

- vi. State, U.S. territory, and/or country of residence
- vii. Whether this person collaborated with an individual or entity located in a foreign country in connection with the scope of this Award, and
- viii. If yes to vii, whether the person traveled to the foreign country as part of that collaboration, and, if so, where and what the duration of stay was.

B. Organizations

Identify all subrecipients, contractors, U.S. National Laboratories, partners, and collaborating organizations. Recipients must also include all foreign collaborators as outlined in the Foreign Collaboration Considerations term of the award Terms and Conditions. For each, provide name, UEI, zip code or latitude/longitude, role in the project, contribution to the project, and start and end date.

Term 45. Human Subjects Research

Research involving human subjects, biospecimens, or identifiable private information conducted with Department of Energy (DOE) funding is subject to the requirements of DOE Order 443.1C, *Protection of Human Research Subjects*, 45 CFR Part 46, *Protection of Human Subjects (subpart A which is referred to as the "Common Rule")*, and 10 CFR Part 745, *Protection of Human Subjects*.

Federal regulation and the DOE Order require review by an Institutional Review Board (IRB) of all proposed human subjects research projects. The IRB is an interdisciplinary ethics board responsible for ensuring that the proposed research is sound and justifies the use of human subjects or their data; the potential risks to human subjects have been minimized; participation is voluntary; and clear and accurate information about the study, the benefits and risks of participating, and how individuals' data/specimens will be protected/used, is provided to potential participants for their use in determining whether or not to participate.

The Recipient shall provide the Federal Wide Assurance number identified in item 1 below and the certification identified in item 2 below to DOE prior to initiation of any project that will involve interactions with humans in some way (e.g., through surveys); analysis of their identifiable data (e.g., demographic data and energy use over time); asking individuals to test devices, products, or materials developed through research; and/or testing of commercially available devices in buildings/homes in which humans will be present. *Note:* This list of examples is illustrative and not all inclusive.

No DOE funded research activity involving human subjects, biospecimens, or identifiable private information shall be conducted without:

- 1) A registration and a Federal Wide Assurance of compliance accepted by the Office of Human Research Protection (OHRP) in the Department of Health and Human Services; and
- 2) Certification that the research has been reviewed and approved by an Institutional Review Board (IRB) provided for in the assurance. IRB review may be accomplished by

the awardee's institutional IRB; by the Central DOE IRB; or if collaborating with one of the DOE national laboratories, by the DOE national laboratory IRB.

The Recipient is responsible for ensuring all subrecipients comply and for reporting information on the project annually to the DOE Human Subjects Research Database (HSRD) at <https://science.osti.gov/HumanSubjects/Human-Subjects-Database/home>. *Note:* If a DOE IRB is used, no end of year reporting will be needed.

Additional information on the DOE Human Subjects Research Program can be found at: <https://science.osti.gov/ber/human-subjects>.

Term 46. Fraud, Waste and Abuse

The mission of the DOE Office of Inspector General (OIG) is to strengthen the integrity, economy and efficiency of DOE's programs and operations including deterring and detecting fraud, waste, abuse, and mismanagement. The OIG accomplishes this mission primarily through investigations, audits, and inspections of Department of Energy activities to include grants, cooperative agreements, loans, and contracts. The OIG maintains a Hotline for reporting allegations of fraud, waste, abuse, or mismanagement. To report such allegations, please visit <https://www.energy.gov/ig/ig-hotline>.

Additionally, the Recipient must be cognizant of the requirements of 2 CFR 200.113 Mandatory disclosures, which states:

The non-federal entity or applicant for a federal award must disclose, in a timely manner, in writing to the federal awarding agency or pass-through entity all violations of federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the federal award. Non-federal entities that have received a federal award including the term and condition outlined in appendix XII of 2 CFR Part 200 are required to report certain civil, criminal, or administrative proceedings to SAM (currently FAPIIS). Failure to make required disclosures can result in any of the remedies described in § 200.339. (See also 2 CFR part 180, 31 U.S.C. 3321, and 41 U.S.C. 2313.)

Term 47. Buy America Requirement for Infrastructure Projects

A. Definitions

Components See 2 CFR 184.3 "Definitions."

Construction Materials See 2 CFR 184.3 "Definitions."

Buy America Preference, Buy America Requirement, or Domestic Content Procurement Preference Requirement means a requirement that no amount of funds made available

through a program for federal financial assistance may be obligated for an infrastructure project unless—

- (A) all iron and steel used in the project are produced in the United States;
- (B) the manufactured products used in the project are produced in the United States;
- or
- (C) the construction materials used in the project are produced in the United States.

Infrastructure See 2 CFR 184.4 (c) and (d).

Manufactured Products See 2 CFR 184.3 “Definitions.”

Predominantly of iron or steel See 2 CFR 184.3 “Definitions.”

Infrastructure project See 2 CFR 184.3 Definitions

Public- The Buy America Requirement does not apply to non-public infrastructure. For purposes of this guidance, infrastructure should be considered “public” if it is: (1) publicly owned or (2) privately owned but utilized primarily for a public purpose. Infrastructure should be considered to be “utilized primarily for a public purpose” if it is privately operated on behalf of the public or is a place of public accommodation.

B. Buy America Requirement

None of the funds provided under this award (federal share or recipient cost-share) may be used for a project for infrastructure unless:

1. All iron and steel used in the project is produced in the United States—this means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States;
2. All manufactured products used in the project are produced in the United States—this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation. See 2 CFR 184.5 for determining the cost of components for manufactured products; and
3. All construction materials are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States. See 2 CFR 184.6 for construction material standards.

The Buy America Requirement only applies to those articles, materials, and supplies that are consumed in, incorporated into, or permanently affixed to the infrastructure in the project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought into the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America Requirement apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project but are not an integral part of the structure or permanently affixed to the infrastructure project.

The Buy America Requirement only applies to an article, material, or supply classified into one of the following categories* based on its status at the time it is brought to the work site for incorporation into an infrastructure project:

- (i) Iron or steel products;
- (ii) Manufactured products; or
- (iii) Construction materials;

The Buy America Requirement only applies to the iron or steel products, manufactured products, and construction materials used for the construction, alteration, maintenance, or repair of public infrastructure in the United States when those items are consumed in, incorporated into, or permanently affixed to the infrastructure. An article, material, or supply incorporated into an infrastructure project should not be considered to fall into multiple categories, but rather must meet the Buy America Preference Requirement for only the single category in which it is classified.

All iron and steel, manufactured products, and construction materials used in the infrastructure project must be produced in the United States.

* Section 70917(c) of the Build America, Buy America Act states that “construction materials” do not include cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives. Section 70917(c) materials are excluded from Construction materials. Asphalt concrete pavement mixes are typically composed of asphalt cement (a binding agent) and aggregates such as stone, sand, and gravel. Accordingly, asphalt is also excluded from the definition of Construction materials.

Section 70917(c) materials, on their own, are not manufactured products. Further, Section 70917(c) materials should not be considered manufactured products when they are used at or combined proximate to the work site—such as is the case with wet concrete or hot mix asphalt brought to the work site for incorporation. However, when certain Section 70917(c) materials (such as stone, sand, and gravel) are used to produce a manufactured product, such as is precast concrete processed into a specific shape or form, and is in such state when brought to the work site, then that product is subject to the BABA requirements.

Further clarification is provided in 2 CFR 184 on the circumstances under which a determination is made that Section 70917(c) materials should be treated as components of a manufactured product. That determination is based on consideration of: (i) the revised definition of the “manufactured products” at 2 CFR 184.3; (ii) a new definition of “section 70917(c) materials” at 2 CFR 184.3; (iii) new instructions at 2 CFR 184.4(e) on how and when to categorize articles, materials, and supplies; and (iv) new instructions at 2 CFR 184.4(f) on how to apply the Buy America preference by category.

Recipients are responsible for administering their award in accordance with the terms and conditions, including the Buy America Requirement. The recipient must ensure that the Buy America Requirement flows down to all subawards and that the subawardees and subrecipients comply with the Buy America Requirement. The Buy America Requirement term and condition must be included all sub-awards, contracts, subcontracts, and purchase orders for work performed under the infrastructure project.

C. Certification of Compliance

Recipients must certify or provide equivalent documentation for proof of compliance that a good faith effort was made to solicit bids for domestic products used in the infrastructure project under this award.

Recipients must also maintain certifications or equivalent documentation for proof of compliance that those articles, materials, and supplies that are consumed in, incorporated into, affixed to, or otherwise used in the infrastructure project, not covered by a waiver or exemption, are produced in the United States. The certification or proof of compliance must be provided by the suppliers or manufacturers of the iron, steel, manufactured products and construction materials and flow up from all subawardees, contractors and vendors to the recipient. Recipients must keep these certifications with the award/project files and be able to produce them upon request from DOE, auditors or Office of Inspector General.

D. Waivers

When necessary, recipients may apply for, and DOE may grant, a waiver from the Buy America Requirement. Requests to waive the application of the Buy America Requirement must be in writing to the CO. Waiver requests are subject to review by DOE and the Office of Management and Budget, as well as a public comment period of no less than 15 calendar days.

1. Waivers must be based on one of the following justifications:
 - a) Public Interest- Applying the Buy America Requirement would be inconsistent with the public interest;
 - b) Non-Availability- The types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; or
 - c) Unreasonable Cost- The inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent.

2. Requests to waive the Buy America Requirement must include the following:
 - Waiver type (Public Interest, Non-Availability, or Unreasonable Cost);
 - Recipient name and Unique Entity Identifier (UEI);
 - Award information (Federal Award Identification Number, Assistance Listing number);
 - A brief description of the project, its location, and the specific infrastructure involved;
 - Total estimated project cost, with estimated federal share and recipient cost share breakdowns;
 - Total estimated infrastructure costs, with estimated federal share and recipient cost share breakdowns;
 - List and description of iron or steel item(s), manufactured goods, and/or construction material(s) the recipient seeks to waive from the Buy America Preference, including name, cost, quantity(ies), country(ies) of origin, and relevant Product Service Codes (PSC) and North American Industry Classification System (NAICS) codes for each;
 - A detailed justification as to how the non-domestic item(s) is/are essential the project;
 - A certification that the recipient made a good faith effort to solicit bids for domestic products supported by terms included in requests for proposals, contracts, and non-proprietary communications with potential suppliers;
 - A justification statement—based on one of the applicable justifications outlined above—as to why the listed items cannot be procured domestically, including the due diligence performed (e.g., market research, industry outreach, cost analysis, cost-benefit analysis) by the recipient to attempt to avoid the need for a waiver. This justification may cite, if applicable, the absence of any Buy America-compliant bids received for domestic products in response to a solicitation;
 - A description of the market research conducted that includes who conducted the market research, when it was conducted, sources that were used, and the methods used to conduct the research; and
3. How to submit a waiver

Requests to waive the application of the Buy America Requirement must be in writing to the CO.

DOE may request, and the recipient must provide, additional information for consideration of this waiver. DOE may reject or grant waivers in whole or in part depending on its review, analysis, and/or feedback from OMB or the public. DOE's final determination regarding approval or rejection of the waiver request may not be appealed. Waiver requests may take up to 90 calendar days to process.

Term 48. Prohibition related to Foreign Government-Sponsored Talent Recruitment Programs

a. Prohibition

Persons participating in a *Foreign Government-Sponsored Talent Recruitment Program of a Foreign Country of Risk* are prohibited from participating in this Award.

The recipient must exercise ongoing due diligence to reasonably ensure that no individuals participating on the DOE-funded project are participating in a *Foreign Government-Sponsored Talent Recruitment Program of a Foreign Country of Risk*. Consequences for violations of this prohibition will be determined according to applicable law, regulations, and policy. Further, the recipient must notify DOE within five (5) business days upon learning that an owner of the recipient or subrecipient or individual on the project team is or is believed to be participating in a *Foreign Government-Sponsored Talent Recruitment Program of a Foreign Country of Risk*. DOE may modify and add requirements related to this prohibition to the extent required by law.

b. Definitions

1. Foreign Government-Sponsored Talent Recruitment Program.

An effort directly or indirectly organized, managed, or funded by a foreign government, or a foreign government instrumentality or entity, to recruit science and technology professionals or students (regardless of citizenship or national origin, or whether having a full-time or part-time position). Some foreign government-sponsored talent recruitment programs operate with the intent to import or otherwise acquire from abroad, sometimes through illicit means, proprietary technology or software, unpublished data and methods, and intellectual property to further the military modernization goals and/or economic goals of a foreign government. Many, but not all, programs aim to incentivize the targeted individual to relocate physically to the foreign state for the above purpose. Some programs allow for or encourage continued employment at United States research facilities or receipt of federal research funds while concurrently working at and/or receiving compensation from a foreign institution, and some direct participants not to disclose their participation to U.S. entities. Compensation could take many forms including cash, research funding, complimentary foreign travel, honorific titles, career advancement opportunities, promised future compensation, or other types of remuneration or consideration, including in-kind compensation.

2. Foreign Country of Risk.

DOE has designated the following countries as foreign countries of risk: Iran, North Korea, Russia, and China. This list is subject to change.

Term 49. Affirmative Action and Pay Transparency Requirements

All federally assisted construction contracts exceeding \$10,000 annually will be subject to the requirements of Executive Order 11246:

1. Recipients, subrecipients, and contractors are prohibited from discriminating in employment decisions on the basis of race, color, religion, sex, sexual orientation, gender identity or national origin.
2. Recipients and Contractors are required to take affirmative action to ensure that equal opportunity is provided in all aspects of their employment. This includes flowing down the appropriate language to all subrecipients, contractors and subcontractors.
3. Recipients, subrecipients, contractors and subcontractors are prohibited from taking adverse employment actions against applicants and employees for asking about, discussing, or sharing information about their pay or, under certain circumstances, the pay of their co-workers.

The Department of Labor's (DOL) Office of Federal Contractor Compliance Programs (OFCCP) uses a neutral process to schedule contractors for compliance evaluations. OFCCP's Technical Assistance Guide should be consulted to gain an understanding of the requirements and possible actions the recipients, subrecipients, contractors, and subcontractors must take. See OFCCP's Technical Assistance Guide at:

<https://www.dol.gov/sites/dolgov/files/ofccp/Construction/files/ConstructionTAG.pdf?msclkid=9e397d68c4b111ec9d8e6fecb6c710ec>.

Term 50. Potentially Duplicative Funding Notice

If the recipient or subrecipients have or receive any other award of federal funds for activities that potentially overlap with the activities funded under this Award, the recipient must promptly notify DOE in writing of the potential overlap and state whether project funds (i.e., recipient cost share and federal funds) from any of those other federal awards have been, are being, or are to be used (in whole or in part) for one or more of the identical cost items under this Award. If there are identical cost items, the recipient must promptly notify the DOE Grants Officer in writing of the potential duplication and eliminate any inappropriate duplication of funding.

Term 51. Transparency of Foreign Connections

The recipient must notify the DOE Grants Officer within fifteen (15) business days of learning of the circumstances listed below in relation to the recipient and subrecipients.

U.S. National Laboratories, domestic government entities, and institutions of higher education are only required to report on items 5 and 7. For subrecipient reporting requirements, applicability is determined by the subrecipient entity type, regardless of whether the prime recipient was exempt.

1. Any current or pending subsidiary, foreign business entity, or offshore entity that is based in or funded by any foreign country of risk or foreign entity based in a country of risk;
2. Any current or pending contractual or financial obligation or other agreement specific to a business arrangement, or joint venture-like arrangement with an entity owned by a country of risk or foreign entity based in a country of risk;
3. Any current or pending change in ownership structure of the recipient or subrecipients that increases foreign ownership related to a country of risk. Each notification shall be accompanied by a complete and up-to-date capitalization table showing all equity interests held including limited liability company (LLC) and partnership interests, as well as derivative securities. Include both the number of shares issued to each equity holder, as well as the percentage of that series and of all equity on fully diluted basis. For each equity holder, provide the place of incorporation and the principal place of business, as applicable. If the equity holder is a natural person, identify the citizenship(s);
4. Any current or pending venture capital or institutional investment by an entity that has a general partner or individual holding a leadership role in such entity who has a foreign affiliation with any foreign country of risk;
5. Any current or pending technology licensing or intellectual property sales to a foreign country of risk;
6. Any changes to the recipient or the subrecipients' board of directors, including additions to the number of directors, the identity of new directors, as well as each new director's citizenship, shareholder affiliation (if applicable); each notification shall include a complete up-to-date list of all directors (and board observers), including their full name, citizenship and shareholder affiliation, date of appointment, duration of term, as well as a description of observer rights as applicable; and
7. Any of the following changes to the equipment proposed for use on the project:
 - a. Unmanned aircraft, control, and communication components originally made or manufactured in a foreign country of risk (including relabeled or rebranded equipment).
 - b. Coded equipment where the source code is written in a foreign country of risk.
 - c. Equipment from a foreign country of risk that will be connected to the internet or other remote communication system.
 - d. Any companies from a foreign country of risk that will have physical or remote access to any part of the equipment used on the project after delivery.

Should DOE determine the connection poses a risk to economic or national security, DOE will require measures to mitigate or eliminate the risk.

DOE has designated the following countries as foreign countries of risk: Iran, North Korea, Russia, and China. This list is subject to change.

Recognizing the disclosures may contain business confidential information, subrecipients may submit their disclosures directly to DOE.

Term 52. Foreign Collaboration Considerations

- a. Consideration of new collaborations with foreign entities, organizations, and governments. The recipient must provide DOE with advanced written notification of any potential collaboration with foreign entities, organizations, or governments in connection with its DOE-funded award scope. The recipient must await further guidance from DOE prior to contacting the proposed foreign entity, organization or government regarding the potential collaboration or negotiating the terms of any potential agreement.
- b. Existing collaborations with foreign entities, organizations, and governments. The recipient must provide DOE with a written list of all existing foreign collaborations, organizations, and governments in which has entered in connection with its DOE-funded award scope.
- c. In general, a collaboration will involve some provision of a thing of value to, or from, the recipient. A thing of value includes but may not be limited to all resources made available to, or from, the recipient in support of and/or related to the Award, regardless of whether or not they have monetary value. Things of value also may include in-kind contributions (such as office/laboratory space, data, equipment, supplies, employees, students). In-kind contributions not intended for direct use on the Award but resulting in provision of a thing of value from or to the Award must also be reported. Collaborations do not include routine workshops, conferences, use of the recipient's services and facilities by foreign investigators resulting from its standard published process for evaluating requests for access, or the routine use of foreign facilities by awardee staff in accordance with the recipient's standard policies and procedures.

Term 53. Impacted Indian Tribes

If any activities anticipated to take place under this agreement could potentially impact the resources or reserved rights of Indian Tribe(s), as defined in 25 U.S.C. § 5304 (e), then the recipient/awardee agrees to develop and maintain active and open communications with the potentially impacted Indian Tribe(s), during the period of performance of the agreement, and, if necessary, after the end of the agreement. Approval by DOE must be obtained before any activities take place that could impact Tribal resources or reserved rights, including but not limited to lands, cultural sites, sacred sites, water rights, mineral rights, fishing rights, and hunting rights. The recipient/awardee must coordinate with DOE on all Tribal interactions. DOE will determine if formal government-to-government consultation is needed, and DOE will conduct that consultation accordingly.

- Tribal lands is as defined in 25 U.S.C. §§ 3501(2), (3), (4)(A) and (13).
- Indian Tribe is as defined in 25 U.S.C. § 5304 (e).

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF MILPITAS ACCEPTING THE DEPARTMENT OF ENERGY GRANT AWARD FOR THE CARBON NEUTRAL HOMES INCENTIVE PROGRAM

WHEREAS, the United States Congress Appropriations Committee accepted projects from each Committee Representative for review and consideration for federal Community Project Funding (CPF) for the Fiscal Year 2023; and

WHEREAS, the City of Milpitas is within Congressional District 17 represented by Ro Kanna, who is a member of the Appropriations Committee; and

WHEREAS, on April 19, 2022, City of Milpitas adopted Resolution No. 9140 in support of submitting the Carbon Neutral Homes Incentives Project as one of the City's three projects submitted for CPF consideration; and

WHEREAS, the City Council adopted the an update to the City's Climate Action Plan on August 9, 2022 which included substantive community engagement and set the goal of achieving carbon neutrality by 2045; and

WHEREAS, a key strategy for reducing carbon emissions is by Maximizing Building Decarbonization and Efficiency through electrification and shifting from natural gas to clean, all-electric appliances and equipment; and

WHEREAS, the local Community Choice Energy provider (Silicon Valley Clean Energy) offers an incentive package for home electrification; and

WHEREAS, the Carbon Neutral Homes Incentives Program will complement Silicon Valley Clean Energy's program and support the electrification of up to 1,000 single-family homes in Milpitas; and

WHEREAS, the Carbon Neutral Homes Incentives Program was included in the Fiscal Year 2023 Federal Budget appropriation package that was approved by the U.S. Congress and signed by President Biden;

WHEREAS, the U.S. Department of Energy has awarded the Fiscal Year 2023 Congressionally Directed Spending for the Carbon Neutral Homes Incentive Program (Award No. DE-SE000736) to the City of Milpitas;

AND WHEREAS, the City's Carbon Neutral Homes Incentives Program would complement our local Community Choice Energy provider's (Silicon Valley Clean Energy) incentive package by providing up to \$3,000 on average more per participant to significantly drive down the costs of retrofit and create greater access to carbon neutral homes for up to 1,000 Milpitas homes.

NOW, THEREFORE the City Council of the City of Milpitas, hereby find, determine, and resolve as follows:

1. The City Council has considered the full record before it, which may include but is not limited to such things as the staff report, testimony by staff and the public, and other materials and evidence submitted or provided to it. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.
2. The City accepts the award of the Fiscal Year 2023 Congressionally Directed Spending (Award No. DE-SE000736) from the US Department of Energy for the Carbon Neutral Homes Incentive Program.
3. The City Council authorizes the City Manager or their designee to execute the Assistance Agreement with the US Department of Energy for the Milpitas Carbon Neutral Homes Retrofit Program.

4. The City Council approves and authorizes the City Manager or their designee to appropriate the respective revenue and expenditures in the amount of \$3,000,000 as indicated in the staff report contingent upon formal acceptance of the grant.

PASSED AND ADOPTED by the City Council of the City of Milpitas, State of California this _____ day of _____, 2025, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

APPROVED:

Suzanne Guzzetta, City Clerk

Carmen Montano, Mayor

APPROVED AS TO FORM:

Christopher Creech, Acting City Attorney



CITY OF MILPITAS AGENDA REPORT (AR)

Item Title:	Receive an Update on the Security Improvements at the McCarthy Ranch Sewer Lift Station (Main Lift) and Determine that the Condition Continues to Constitute an Emergency (Staff Contact: Christian Di Renzo, Public Works Director, 408-586-2602)
Category:	Consent Calendar-Community Services and Sustainable Infrastructure
Meeting Date:	3/18/2025
Recommendation:	(1) Receive an update on the security improvements at the McCarthy Ranch Sewer Lift Station; and (2) Determine by a four-fifths vote that the condition continues to constitute an emergency.

BACKGROUND:

Pursuant to Public Contract Code section 22050 and the attached Council Resolution No. 9134, the Director of Public Works, in the case of emergency, may authorize a repair of a public facility and procure the work without giving notice for bids. An emergency is defined as “a sudden, unexpected occurrence that poses a clear and imminent danger, requiring immediate action to prevent or mitigate the loss or impairment of life, health, property, or essential public services.” Additionally, State law requires the Public Works Director, as the City official with delegated authority to take emergency action, to report any emergency authorization and the reason(s) for the authorization to the City Council not later than seven days after the action, or at its next regularly scheduled meeting if that meeting will occur not later than 14 days after the action. Further, the Public Works Director is required to report why the emergency would not permit a delay resulting from a competitive solicitation for bids and the City Council is required to review the emergency action at every regularly scheduled meeting thereafter until the emergency repair is completed. The City Council shall continue to review the emergency action at every regularly scheduled meeting thereafter until the action is terminated. At each review, the City Council shall determine, by a four-fifths vote, whether there is a need to continue the action.

Consistent with applicable State law and Council Resolution, on July 30, 2024, the Public Works Director declared an emergency and authorized the City to contract with Trofholz Technologies and Diamond Fencing to implement various security and access control improvements to the McCarthy Ranch Sewer Lift Station (Main Lift). Further, within the required timeframe the Public Works Director informed the City Council via [Information Memorandum](#) on July 31, 2024, regarding the emergency authorization, the reasons for the authorization, and the cost for repair in a not to exceed amount of \$700,000.

PROJECT/STATUS UPDATE:

On January 25, 2025, the Main Lift station experienced another burglary resulting in additional property damage and theft of City vehicles. Three Ford-F250 heavy-duty pickup trucks were stolen and at least one of them was used to forcibly drive through the wrought-iron gate. The vehicles have since been recovered, although staff is assessing the full extent of the damage. Property damage to Main Lift was limited to the two wrought-iron gates. The impacted gates are located at the main entry gate into the Main Lift station, and between the Main Lift station and Corporation Yard. Trofholz is updating the security network connection service with the IT Department. New gates have been ordered and will be delivered by March 21, 2025. Estimated installation completion date is the first week of April. The perimeter fence installation is completed and awaiting the gates installation for final completion.

The budgeted project contingency should be sufficient to cover the replacement of the recently damaged gates. The contractor will be installing a high fence with security wire and mesh at the main entry for added security while the replacement gate is being fabricated and shipped.

The installation of security enhancements by Trofholz Technologies, Inc. were also not compromised. Information Technology staff is working on establishing the network connectivity to operate the security cameras, card readers, and motion sensors at the Main Lift facility. Cameras on the electrical building are operational and provide coverage/recording of the main gate as well as the sewer pump station buildings. Access control readers and motions sensors have been installed and are active. Several other cameras throughout the property are currently undergoing testing and verification in coordination with the Information Technology and Police departments.

FISCAL IMPACT:

Funding for these repairs is available in the City's Capital Improvement Program (CIP) budget. CIP Project 6124 – Sewer Pump Station Rehabilitation Project will fund the installation of security cameras, card readers, and motion sensors. The funding source of this CIP project is Sewer Infrastructure Fund. The available balance as of 01/07/2025 is \$1,277,987.

CIP 6130 – Main Lift Odor Emission Control Project will fund the removal and replacement of the perimeter fencing. The funding source of this CIP Project are Sewer Infrastructure Fund, and Sewer Treatment Fund. The available balance as of 01/07/2025 is \$14,852.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA):

The emergency repair work is exempt from CEQA, per CEQA Guidelines Section 15301, Existing Facilities and 15302, Replacement or Reconstruction.

RECOMMENDATION:

- (1) Receive an update on the security improvements at the McCarthy Ranch Sewer Lift Station.
- (2) Determine by a four-fifths vote that the condition continues to constitute an emergency.

ATTACHMENT(S):

None.



CITY OF MILPITAS AGENDA REPORT (AR)

Item Title:	Approve Installation of Womanhood Project Marker at Delano Manongs Park (Staff Contact: Renee Lorentzen, Recreation and Community Services Director, 408-586-3409; and Tegan McLane, Assistant Recreation and Community Services Director, 408-586-3212)
Category:	Consent Calendar-Community Services and Sustainable Infrastructure
Meeting Date:	3/4/2025
Recommendation:	Approve installation of a Womanhood marker in commemoration of Dr. Dawn Mabalon at Delano Manongs Park from The Womanhood Project funded by the County of Santa Clara Office of Women's Policy.

BACKGROUND:

The City of Milpitas has been asked to participate in a Santa Clara Countywide public art project honoring contributions of local women. The specific request is to allow installation of a sign honoring Dr. Dawn Mabalon at Milpitas' Delano Manongs Park.

ANALYSIS:

The Santa Clara County Office of Women's Policy has funded a Countywide public art project that will install markers in public spaces around the County commemorating local women who have made important contributions in a number of fields. These markers are metal signs bearing an artist-designed visual code that the public can scan with a phone application, as they might a QR code, to access artwork, poetry and storytelling about the woman being honored.

The project coordinator, Art Builds Community, has approached Milpitas requesting permission to place a marker for Dr. Dawn Mabalon in Delano Manongs Park. Dr. Mabalon was born in Stockton and was a poet, journalist, historian, and activist. She was third generation Pinay, and the first Pinay to earn a Ph.D. in American History from Stanford University. Her academic research focus was Filipino American history, including work on the life of Larry Itliong and the Delano Manongs. Her poetry, articles and curriculum in Filipina/o American history and studies are published widely in books, anthologies, and journals including *Tomorrow's Memories: The Diary of Angeles Monrayo* (2003), *Coming Home to a Landscape: Writings by Filipinas* (2003), *Pinay Power: Pilipina Feminist Theory* (2006), and *AAPI Nexus* (2016). She is a co-author of several articles and books, which were in press the year she died (2018), including works on Filipina women and foodways, and a historic book for youth entitled *Journey for Justice: The Life of Larry Itliong*, co-written with Gayle Romasanta and illustrator Andre Sibayan. This is the first illustrated children's book on Filipino American history and the first about Larry Itliong, the co-founder of the United Farm Workers.

Dr. Mabalon was named one of the 100 Most Influential Filipinas in the world by the Filipino Women's Network. In 2014, her book *Little Manila is in the Heart* won Honorable Mention for the Frederick Jackson Turner Award. She also received the Community Service Award from Asians and Pacific Islanders in Historic Preservation in 2016 and the Mid-Career Award from the Filipino Section of the Asian American Studies Association in 2018.

Dr. Mabalon's marker features work by South Bay women creatives Arlene Biala, Jayann Bella, and Frances Mendoza.

The sign (Attachment A) will be 24" wide x 15" tall and is fabricated from weather and UV resistant aluminum with a protective coating. The lifespan of the sign is expected to be 5 years. City Public Works and Recreation and Community Services staff will determine the exact location within the park, but the request is that the sign

be mounted on an existing fence with accessibility so sight-impaired people who read braille may read the contents.

With the County's publicity of the project beginning in March 2025 and including a map of the sign locations throughout the County, it is expected the sign will draw visitors who are "following the trail" of County womanhood markers. The other markers are being installed in museums, libraries, universities and parks in San José, Palo Alto, Santa Clara, Mountain View, Gilroy and unincorporated Santa Clara County.

As the proposal is to install a form of public art in a Milpitas park, it was presented to a joint meeting of the Arts Commission and Parks Recreation and Cultural Resources Commission on January 6, 2025. Both commissions unanimously voted to recommend that the City Council approve participation in the project by allowing installation of the marker at Delano Manongs.

POLICY ALTERNATIVE(S):

Alternative 1: Do not approve installation of the Womanhood marker at Delano Manongs Park.

Pros: Minimally saves staff implementation time and resources.

Cons: By not approving, Milpitas would not be participating in this Countywide project. The other markers are being installed in museums, libraries, universities and parks in San José, Palo Alto, Santa Clara, Mountain View, Gilroy and unincorporated Santa Clara County.

Reason for Not Recommending: This no cost project aligns with and demonstrates the City's commitment to diversity and public art. This is a thoughtful installation that is relevant and beneficial both to the park itself and its integration and connectivity to the local community and the wider public facilities that this program connects.

FISCAL IMPACT:

No fiscal impact is anticipated with this item. Design and installation of the marker is funded by Santa Clara County Office of Women's Policy and sponsors of the project. Any repairs or replacement of the marker is the responsibility of Santa Clara County.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA):

The project has no potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment and is not a project pursuant to Pub. Resources Code, § 21065 and Cal. Code Regs., tit. 14, § 15378.

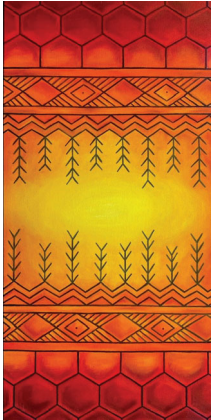
RECOMMENDATION:

Approve installation of a Womanhood marker in commemoration of Dr. Dawn Mabalon at Delano Manongs Park from The Womanhood Project funded by the County of Santa Clara Office of Women's Policy.

ATTACHMENT(S):

- (a) Proposed Womanhood Marker featuring Dr. Dawn Mabalon
- (b) Womanhood Marker Proposal

**AUGMENTED
REALITY**
Experience



Scan QR code
to download
the Kinfolk app.

1. Download and open the KinFolk app.
2. Select the Scan mode.
3. Tap the green scan button.
4. Point your camera at the image above.
5. Your AR experience will begin.



WOMANHOOD

In Honor Of:

Dr. Dawn Mabalon

Poet, Historian, Journalist, & Activist

1972 – 2018 | Palo Alto, CA

Journey through Womanhood is a series of immersive and temporary public art monuments that explore the untold stories of women who have made significant contributions to the County of Santa Clara.



Dr. Dawn Mabalon is honored at Delano Manongs Park for her pivotal work in preserving Filipino American history and the legacy of Filipino farmworkers who championed labor rights.



Scan QR Code to
access content through
a screenreader

2024
ARTIST

**Arlene Biala
Jayann Bella
Frances Mendoza**

Learn more about this honored woman:
WomanhoodProject.Org

ART BUILDS
COMMUNITY

kinfolk



!LIGHTHOUSE:
FOR THE BLIND AND VISUALLY IMPAIRED



WOMANHOOD

Journey Through Womanhood - 2024 Presentation



WOMANHOOD TEAM

ART BUILDS COMMUNITY



Amanda Rawson

*Research Director, Project Manager,
Partner*



Quynh-Mai Nguyen

Creative Director, Partner



Barbara Goldstein

Public Art Management, Partner



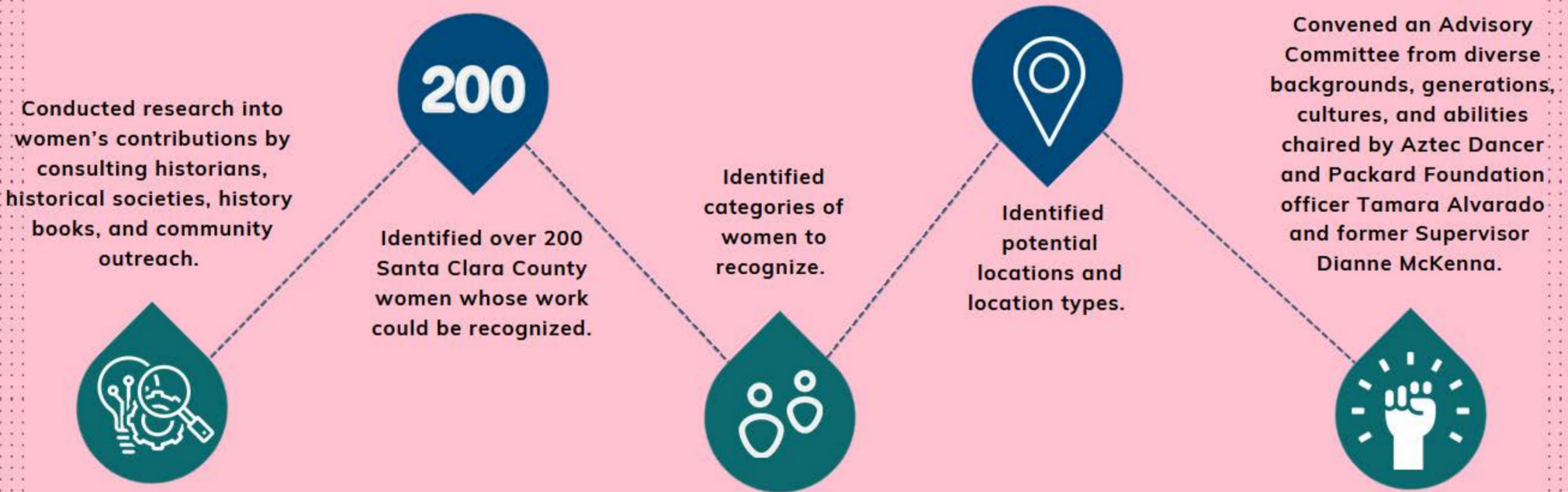
Cassandra Staff

*Manager, County of Santa Clara
Office of Women's Policy*



OVERVIEW OF PROJECT TO DATE

PLANNING: Developed a framework for a long-term project



MARKETING CAMPAIGN:

Reached out to community members for ideas and feedback.



Launched social media
for project via Facebook,
Instagram, and Twitter



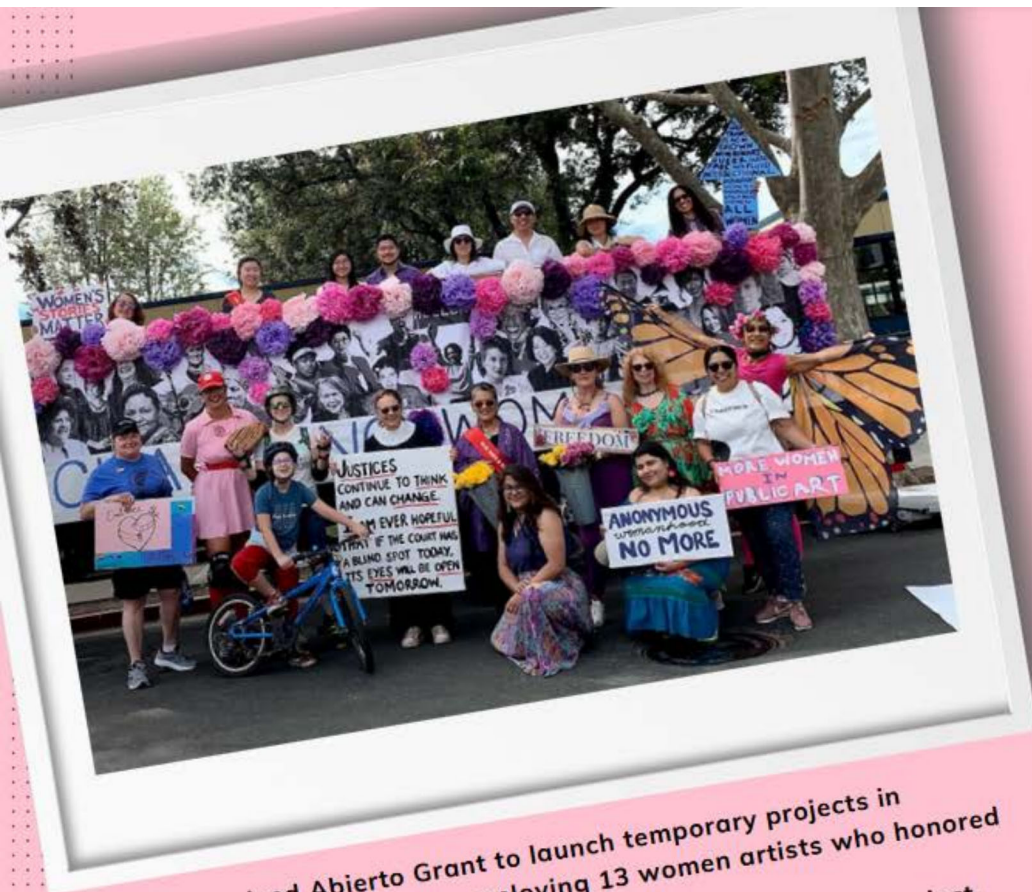
Published 20
online newsletters.



Conducted 22 focus
groups and popup
events.



Produced 14 online
webinars explaining project
and highlighting women
artists honoring women.



- Received Abierto Grant to launch temporary projects in downtown San Jose employing 13 women artists who honored 20 women.
- Created videos of artists discussing each temporary project.
- Received Abierto Grant to create banners honoring immigrant women. These are currently installed on Alum Rock Avenue in East San Jose opposite the School of Arts and Culture.
- Honored as Community Leadership Marshalls for RWB Parade



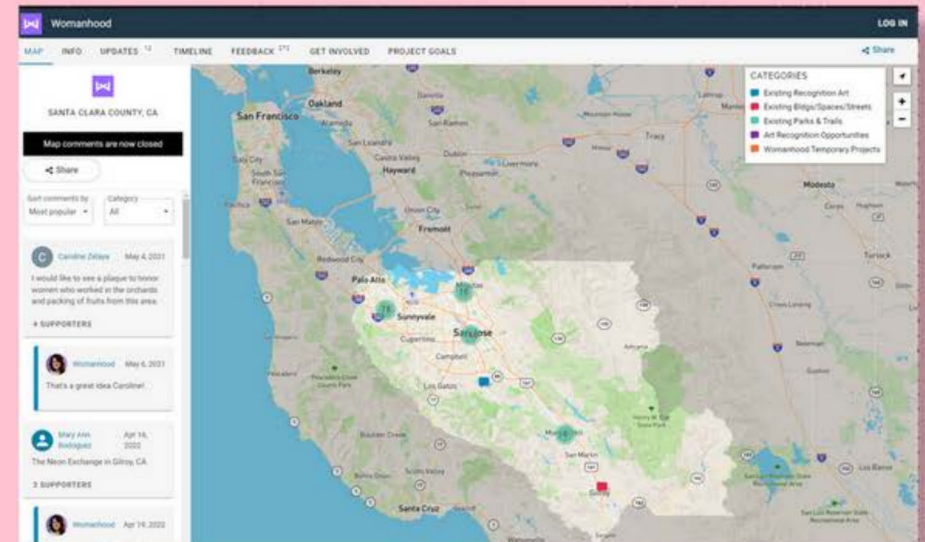
WEBSITE:

Created two robust websites that inform and seek feedback about the project



Honored Women Database

- Individual pages of honored women including bio, facts, and public artwork
- Created as a resource for educators and students, later phases will include a curriculum.



Community Engagement Site

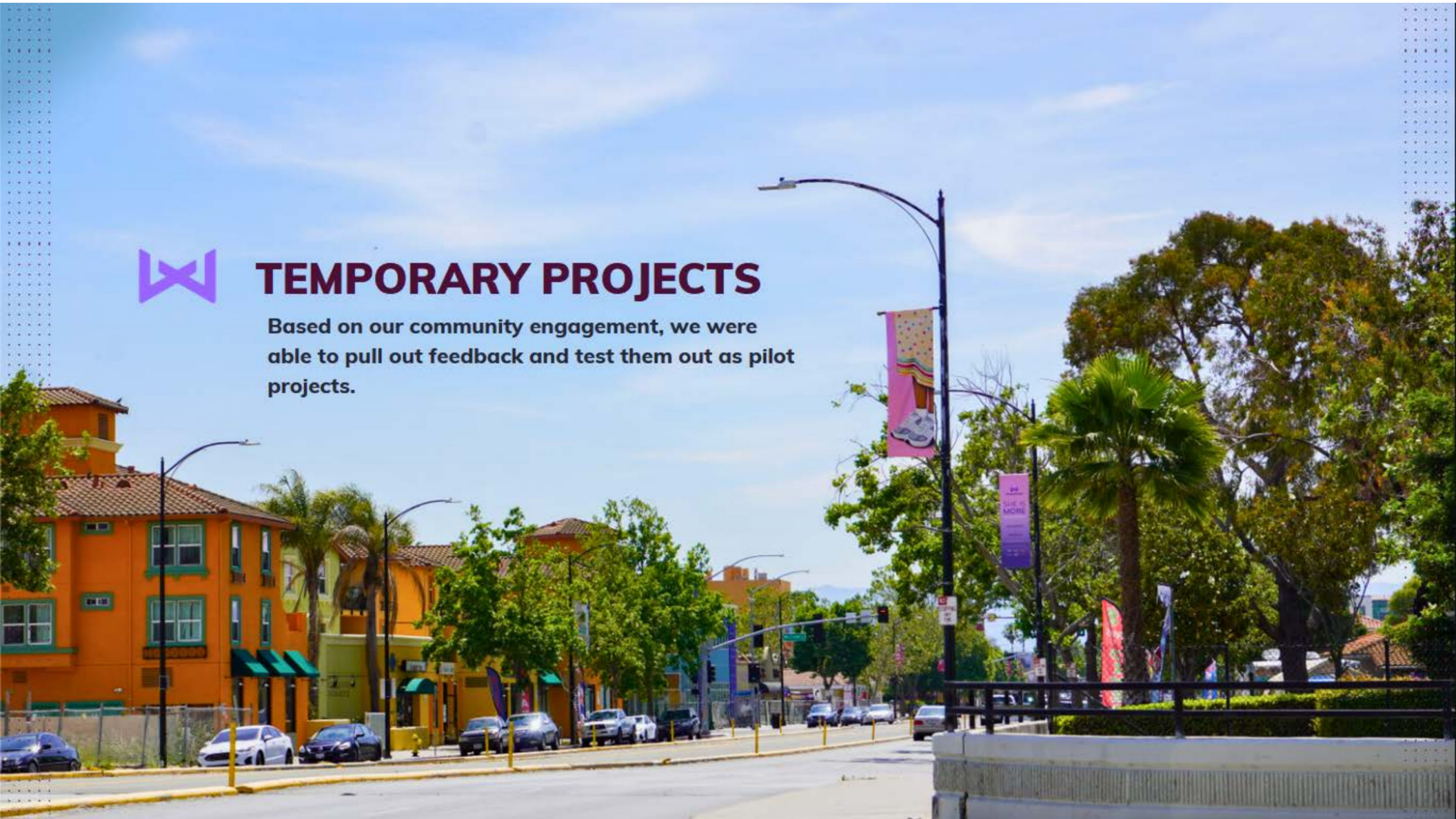
- Mapping site that allows people to pin their comments on a map of the County.
- 5 Phone numbers linked to each County District for people to text/leave a voicemail in English or another language to be translated as a pin on the online map.





TEMPORARY PROJECTS

Based on our community engagement, we were able to pull out feedback and test them out as pilot projects.





ANONYMOUS NO MORE BANNERS SERIES: HISTORIC BUILDINGS

Downtown San Jose Artist Residency honoring women suffragists through window illustrations and projection.





ANONYMOUS NO MORE BANNERS SERIES: EMPTY STORE FRONTS

Downtown San Jose Artist Residency honoring women in the arts and culture. Artwork like the quilts pictured here were photographed and turned into vinyl wraps to be placed on empty storefront windows.





ANONYMOUS NO MORE BANNERS SERIES: WALKWAYS & PASEOS

Downtown San Jose Artist Residency honoring women within arts and culture. Currently exhibiting off The Alameda in downtown San Jose.



How do we honor groups and archetypes?



“SHE IS MORE” BANNER SERIES IN EAST SAN JOSE

Celebrating immigrant women in Santa Clara County | East Side San Jose Artist Residency

In another life,
we are the sisters we always wanted,
and the friends we dreamed of having.

from *En Otra Vida*, by Ruby Morales





WOMEN OF THE CANNERIES MINI DOC



Women of the Canneries: Anonymous No More



Watch later



Share



Watch on  YouTube

A pilot project created based on community engagement feedback. We commissioned a local filmmaker to work with History San Jose and their archives on Cannery Workers. A mini doc was created with collected stories and images that were told through voice actors.

Filmmaker:
Tricia Creason-Valencia



JOURNEY THROUGH WOMANHOOD: Exploring Women's Contributions Through Art, Storytelling, and Augmented Reality

100 Artist designed immersive markers that can be displayed in-person and online, mapping of existing locations named for women.



Marker mock-up >>



WOMANHOOD

Womanhood is a women's recognition public art project that preserves the historical contributions of women across all intergenerational identities to the County of Santa Clara. This project is led by Art Builds Community and made possible through the support of the County of Santa Clara Office of Women's Policy.

2024

Artene Biola
Jayann Bella
Frances Mendoza

WomanhoodProject.org

Welcome Explorer!

Journey through Womanhood is a series of immersive and temporary public art monuments that explore the untold stories of women who have made significant contributions to the County of Santa Clara.

Through storytelling and augmented reality, explorers can locate these interactive markers placed at significant sites across the County to activate these portals into the past. We invite you to explore the accomplishments of these women and bring their stories to life.

In Honor Of:

Dr. Dawn Mabalon
Poet, Journalist, Historian, & Activist
1972 - 2018 | Palo Alto, CA

1. Open the Kinfalk app.
2. Select the Scan mode.
3. Tap the green scan button.
4. Point your camera at the image above.
5. Your AR experience will begin.

** Make sure your phone is not blocked and volume is turned up.

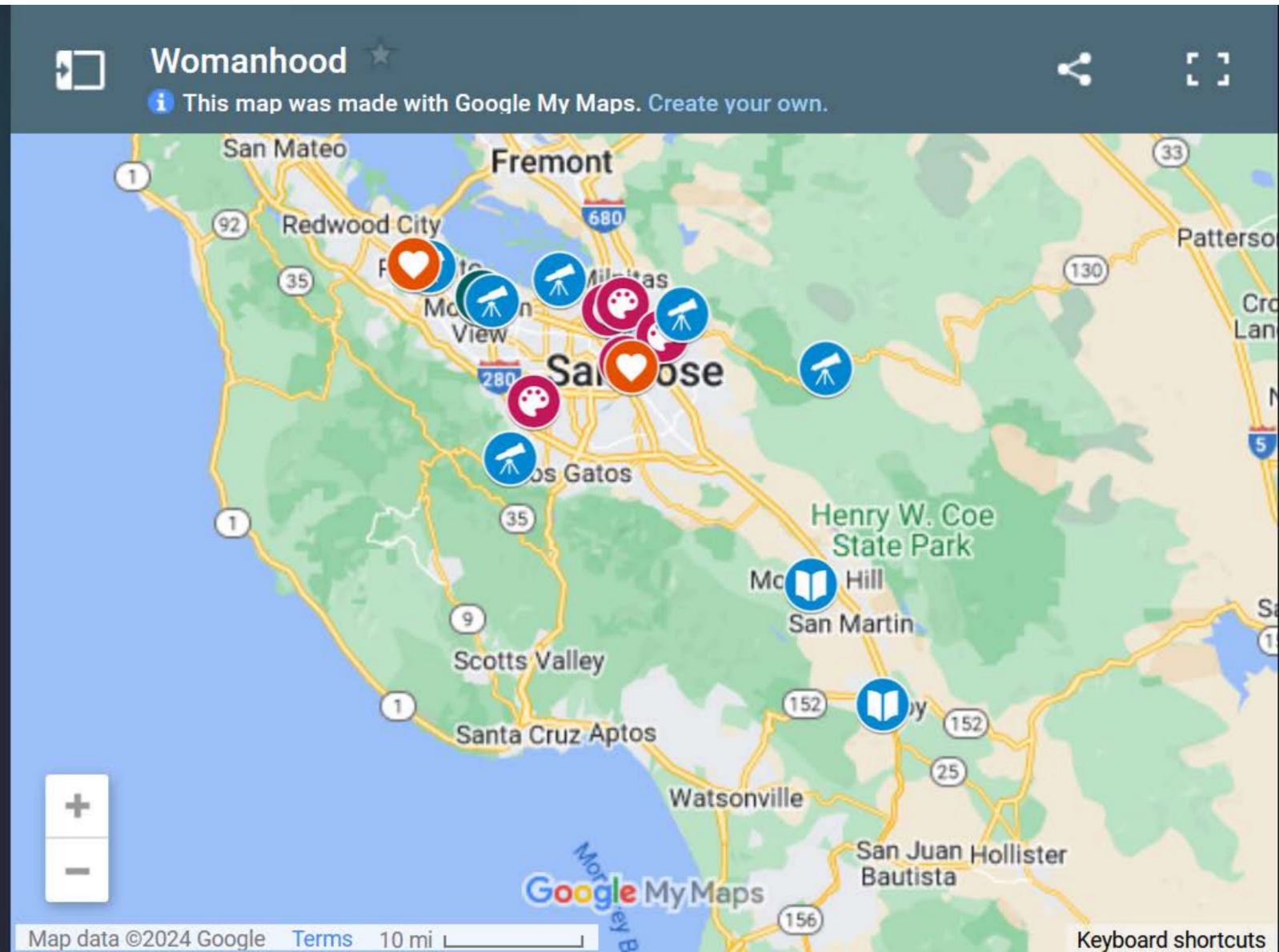
Experience the Augmented Reality (AR)

Scan QR code to download the Kinfalk app.





**WOMEN
UNRECOGNIZED
& RECOGNIZED
BUT NO
CONTEXT**





MARKERS TO IDENTIFY PUBLIC ART PROJECTS AND TIE WOMEN'S CONTRIBUTION TO PLACE

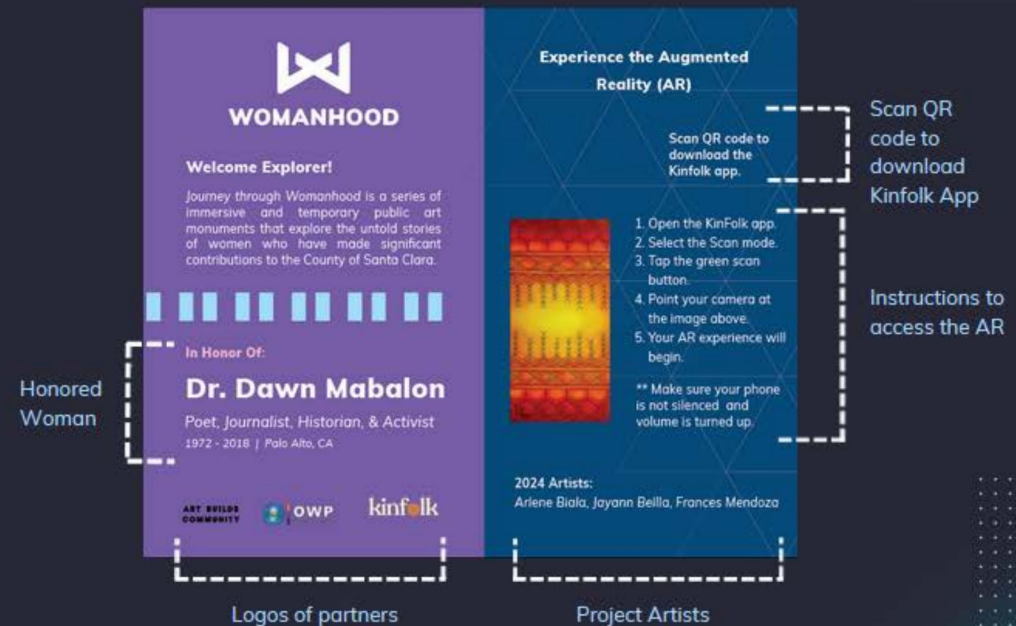
Immersive:

- Artist Designed Augmented Reality (AR) Experiences
- Accessible w/ braille + audio
- Audio with artists describing artwork
- Curriculum to be developed in later phase in accessible online.

Size Options:

- 18"x12"
- 10"x12" smallest

Ex. mock-up of 10"x12" design (w/out braille):



!LIGHTHOUSE!
FOR THE BLIND AND VISUALLY IMPAIRED

kinfolk



.012" Aluminum
Facers with
Mirrored Surface

Solid Polyethylene Core

Dibond 3mm Benefits

- Rigid & Lightweight
- Weather & UV Resistant
- Recyclable
- Non-Corrosive
- Easily Cleaned
- Fire Proof

Maintenance

- Protective Coating
- Soap & Water Cleaning
- 2-3 x / year

Marker Duration

- minimum 5 years



Mock-up of marker to be installed directly on the wall of the Inez Jackson Library in San Jose, CA



Does your site have design guidelines for installation?



TIMELINE 2024 - 2025

December 2024

- Connect with committee members
- Secure marker locations for first 20
- Design marker mock up

February 2025

- Markers designed and fabricated
- Troubleshoot AR Projects
- Marker Installation
- Womanhood Project Campaign

January 2025

- Final design of markers
- Fabricate markers
- Start Womanhood Project Campaign

March 2025

- Continue Installation / Troubleshooting
- Womanhood Campaign
- Womanhood Unveiling Party - THU, March 20, 2025
- Programming/Tours

April 2025 +

- Continued Womanhood Programming



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WOMEN IN TECH



Kiana Honarmand
interdisciplinary artist

WOMEN IN SOCIAL JUSTICE



Kathy Aoki
*multidisciplinary visual artist,
educator*

WOMEN IN SPORTS



Elba Raquel
*multidisciplinary artist,
educator*

WOMEN IN SPACE & SCIENCE



Pantea Karimi
*multidisciplinary artist,
researcher, and educator*

WOMEN IN THE ARTS



Jayann Bella
*visual artist, educator,
curator*



Frances Mendoza
*visual artist, interdisciplinary
performance artist*



Arlene Biala
*poet, interdisciplinary
performance artist*



HONORED WOMEN

Arts

- **Placita Todt** - singer, entertainer, community activist
- **Iris Chang** - journalist, author, political activist
- **Dr. Dawn Mabalon** - poet, journalist, historian, activist
- **Ann Woo** - co-founded Chinese Performing Arts of America (CPAA)

Sports

- **1896 Stanford Women's Basket Ball Team** - introducing basketball to the west coast and into the Cal-Stanford rivalry
- **Cathy Jamison** - SCC's First Female Olympian - Swimming
- **Margaret Jenkins** - SCC's First Female Olympian - Discus
- **Sharon Chatman** - former SJSU basketball coach, lawyer, judge

Space & Science

- **Anne Estelle Glancy** - Astronomer, computer and lens designer
- **Edith Cummings** - Astronomer
- **Harriet Blanchard Mundy** - Environmentalist
- **Mary E Pulsifer Ames** - Botanist
- **Phoebe Waterman Haas** - Astronomer, made observations at Lick Observatory

Tech

- **Elizabeth J Feinler** - pioneering information scientist, former Director of the Network Information Systems Center
- **Joanna Hoffman** - original member of both the Apple Computer Macintosh team and the NeXT team.
- **Nomi Trapnell** - pioneer in software engineering and product management
- **Sandra Kurtzig** - businesswoman, tech entrepreneur

Social Justice & Community

- **Artemas Ginzton** - founder of Women's Regional Workshop for Parks and Trails
- **Asencion Solorsano** - medicine woman
- **Elinor Valley Cogswell** - news writer, editor in chief
- **Inez Jackson** - activist, teacher, postal worker



LOCATIONS FOR MARKERS

CONFIRMED

- Computer History Museum
- James Lick Observatory
- Museum of American Heritage

PENDING

- Santa Clara County Branch Libraries
- Stanford University
- San Jose State University
- Gilroy
- Delano Manong Park
- Iris Chang Park
- Japantown
- Alviso Marina County Park



ANN WOO





ARTEMAS GINZTON





**NOMI
TRAPNELL**





ASCENCION SOLARSANO



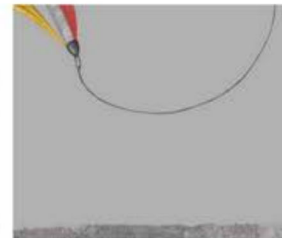


HARRIET BLANCHARD MUNDY



Harriet Mundy Marsh in Palo Alto Baylands,
named after Harriet Mundy

Margaret Jenkins



Margaret Jenkins was Santa Clara County's first female Olympian. She competed in the discus at the 1928 and 1932 Summer Olympics, the first two Games to include women. In 1928, the javelin was not included in women's Olympic competition, but it was Jenkins' true talent: she set the world record in San Jose with a throw of 129 feet, 1 1/2 inches. Jenkins was also exceptionally accomplished in track, tennis and volleyball. Plus, she had her pilot's license, was a Naval officer in WAVES (Women Accepted for Volunteer Emergency Service) and became a founding member of the Santa Clara County Parks and Recreation Committee. A graduate of Santa Clara High and San Jose Teachers College, Jenkins taught in the Santa Clara school district for 31 years. Jenkins was inducted posthumously into the San Jose Sports Hall of Fame in 2008. Additionally, Jenkins practiced fly fishing and did so into retirement in her Lake Tahoe home.



MARGARET JENKINS





SUPPORT

Can a marker be installed at your location?

- Confirm locations by December 31st
- Fabricate markers in January 2025
- Install markers in February - Early March 2025
- Unveil in March 2025 during Women's History Month

Benefits to hosting a marker:

- Being a part of a County-wide women's recognition public art project.
- Celebrating this woman's contribution to the County at your location.
- Activating your space with immersive public art.
- Low-impact installation.
- Potential opportunity for programming with the artist (ex. artist talks, tours, etc)
- Collaborative Marketing Campaign
- Presence online in the Womanhood and AR App.

For more information:

- Contact:
 - Amanda Rawson, amanda@artbuildscommunity.com
 - Quynh-Mai Nguyen, quynh-mai@artbuildscommunity.com
- Website:
 - www.womanhoodproject.org
 - www.artbuildscommunity.com



CITY OF MILPITAS AGENDA REPORT (AR)

Item Title:	Receive Update on Milpitas Innovation District Branding Initiative and Logo Design Status (Staff Contact: Alex Andrade, Economic Development and Strategic Initiatives Director, 408-586-3046)
Category:	Community Development
Meeting Date:	3/18/2025
Recommendation:	Receive update on Milpitas Innovation District Branding Initiative and approve Logo Design Option #1 for final development by consultant Navajo Company.

BACKGROUND:

The Milpitas Innovation District (MID) is a 74-acre area located within the Milpitas Metro Specific Plan (MMSP) approximate 510-acre area. Specifically, the Milpitas Innovation District is located on the southern end of Milpitas, where Montague Expressway and South Milpitas Boulevard converge along with four parcels adjacent to the south end of the Great Mall of Milpitas. Innovation Districts are geographic areas that include a mix of small and medium-sized businesses, startups, and academic institutions operating in physically compact, transit-accessible, and technically-wired areas that offer a mix of commercial and residential uses. Innovation Districts typically include a combination of the following features: advanced research institutions and medical campuses, real estate investors/developers and landowners, anchor companies, and incubators, accelerators, and other economic cultivators.

The [Fiscal Benefits of Employment Lands Final Report's Innovation District Action Plan](#) is a two-phased report. Phase I consists of the Fiscal Impact Analysis, Occupation and Wage Analysis, Innovation District Development Scenarios Analysis, and Residual Land Value Analysis. Phase II includes a Milpitas Innovation District Assessment, Innovation District Case Studies, and the Innovation District Action Plan. On [April 19, 2022](#), the City Council received the Innovation District Implementation Action Plan presentation. The Innovation District Implementation Action Plan includes fourteen actions that are divided into three categories: (1) Incentivizing New Development; (2) Funding and Investing; and (3) City Leadership, Outreach, and Partnerships. The Innovation District Branding Initiative falls under the City Leadership, Outreach, & Partnerships category.

The Innovation District's Branding Initiative commenced with a public bid process through a Request for Proposal (RFP) issued on June 2, 2023. Following a competitive RFP process, Milpitas-based marketing agency [Navajo Company](#) was selected as the branding consultant. Navajo Company is a full-service marketing agency that works to fulfill leading technology companies' marketing needs. The City of Milpitas and Navajo Company executed a Professional Services Agreement on October 4, 2023, for the Innovation District brand strategy that encompasses brand guidelines through brand identity, purpose and messaging. The scope of work also includes a business attraction campaign that incorporates website design and development, and assets such as "welcome" packets for investors, businesses and developers, as well as branded content articles, and presentations for future investment.

ANALYSIS:

Fiscal Benefits of Employment Lands Study

[Adopted in 2022](#), Fiscal Benefits of Employment Lands Final Report Innovation District Action Plan is a two-phased report. Completed in October 2021, Phase I identified potential benefits of successfully implementing the Innovation District including:

- Substantial net revenues to the City's General Fund to help cover public service costs;
- A range of new professional, scientific, and technology businesses attracting thousands of high-quality jobs; and
- Transforming the Metro Specific Plan Area into a vital mixed-use transit-oriented area.

Challenges identified in the study include:

- Area transformation occurs incrementally over time;
- Lack of large vacant sites requiring parcel assemblage and willing property owners supporting redevelopment; and
- Construction costs.

Completed in June 2022, Phase II culminated in a final report combining contextual information and data concerning development opportunity sites and costs of commercial, industrial, and mixed-use parcels within and around the Innovation District, case studies of other Innovation Districts, and a broad range of options and action items suitable for creating an Innovation District Action Plan. The report noted the economics of commercial development in the Innovation District are challenging due to small parcels, construction costs and project financing, making the City's actions to incentivize and support Innovation District development important. The three principal categories of the Innovation District Action Plan are:

1. Incentivizing new development;
2. Funding and investing; and
3. City leadership, outreach, and partnerships.

The Milpitas Innovation District (MID) is envisioned as a thriving employment destination featuring emerging technologies in artificial intelligence, machine learning, automotive technology, biosciences and robotics operating in creative flex, light industrial and research and development (R&D) buildings. To align with principles of the Metro Specific Plan, the MID was rezoned from Light Industrial to Business Park Research and Development (BPRD-Metro) following City Council adoption of Phase I of the Comprehensive Zoning Ordinance Update on June 18, 2024. The purpose of the BPRD-Metro Zoning District is to designate specific areas of the city as important employment centers, especially for jobs in the high-tech industry. The BPRD-Metro Zone is intended to accommodate business parks, high-intensity office buildings, advanced manufacturing, and other light industrial uses, and enable the integration and growth of research and development, office, and light manufacturing uses on consolidated sites with supportive ancillary uses, typically on the ground floor, such as restaurants, health and fitness centers, limited retail, and childcare facilities to serve workers. The BPRD-Metro zone implements the BPRD land use designation as described in the Metro Specific Plan, which the City Council adopted [in February 2023](#), and realized [General Plan Action ED-3i](#) to create an "Innovation District" in the Metro Specific Plan Area.

Besides being envisioned as an employment destination, the Innovation District is also envisioned as a flexible space for people to interact through a well-connected network of public infrastructure including bike paths, pedestrian-scale sidewalks, social gathering places, and high-speed fiber with proximity to public transit via the Milpitas Transit Center. Metro Specific Plan principles include pedestrian-oriented streets, public space activation, and information technology infrastructure and utilities to support a technologically connected community. The vision includes shaping Milpitas urban development practices to build a culture of creativity, innovation, inclusivity, equity, and agility to help advance opportunities for innovation.

The Innovation District Branding Initiative's project scope of work includes multiple deliverables with brand strategy being the foundation of the initiative. A brand strategy is a long-term plan to differentiate a brand (i.e., the Innovation District) from competitors (i.e., other Silicon Valley communities) to build loyalty with customers

(i.e., employers, residents, landowners, and real estate investors and developers). A brand strategy helps businesses – in this case the City of Milpitas – communicate their value and connect with their customers. The brand strategy centerpiece is the brand’s most identifiable elements of name, tagline and logo. These three elements evolved from an iterative process among staff, the consultant, and the Economic Development and Trade Commission (EDTC) between May and November 2024.

The brand strategy comprises the following elements, which informs the development of the brand name, tagline and logo:

- **Brand Identity:** A distinct personality, tone of voice, and visual elements that represent the brand consistently across all touchpoints.
- **Brand Purpose:** Adapt the vision, benefits, and principles described in the Milpitas Innovation District Action Plan to guide all messaging and marketing activities.
- **Target Audience:** Articulate the primary needs and drivers for target audiences.
- **Brand Messaging:** Create a tagline, a brand story, and positioning statements for each defined target audience.
- **Brand Core:** The brand’s core elements of vision, mission, values, themes, and positioning statements to target audiences which are defined in the table below and influenced the district’s name and tagline.

Brand Core Element	Description
Vision	This community is envisioned as a highly desirable employment destination for STEM professionals. Environmentally sustaining, easily accessible, and integrated with the surrounding residential, retail, and open space environments to optimize employee well-being and productivity, increasing value to employers and property owners.
Mission	Create a flexible space for commercial real estate developments supporting research, product development, education, and related activities within Milpitas built environment and transportation infrastructure.
Values	• People-centric • Business friendly • Environmental sustainability • Plan for resilience
Themes	• Employee life balance • Mobility and connectivity • Family and community • Thriving and business-friendly city
Target Audiences	• Employers • Residents • Landowners • Real estate investors and developers

District Name and Tagline

Following an iterative process involving Navajo Company, City staff and the Economic Development and Trade Commission, the name and tagline of “*Milpitas Innovation District: Reimagining Work, Connection, and Community*” was selected. The name is clear, simple, and easy to understand as the name clarifies that the brand represents a distinct location that is a connected hub in which to live, work, and gather. The tagline represents a people-focused approach as there is a growing consensus that Innovation Districts today must be designed for the humans who inhabit them. Audiences that respond to people-focused branding consider the needs of the employees at the Innovation District tenant companies. Leveraging the potential cachet of the well-developed Milpitas Metro Specific Plan, this brand name positions the Innovation District as the area’s tech center while the tagline references impactful innovation that makes life work better in the district.

Logo Development

After the name and tagline were selected, Navajo Company provided first draft logo designs of three logo marks and three letter marks, as well as fonts and color palettes in September 2024. A logo mark is an image or icon, while a letter mark is a logo made up of letters, usually the initials of the brand. Examples of logo marks include Apple, Nike and Target while examples of letter marks include CNN, IBM and RCA. While staff preferred most of the color palettes and font options, staff requested revised drafts of the logo and letter mark designs the consultant provided in October that were integrated with the fonts and color palettes selected in the first draft.

The revised draft logo marks took inspiration from features in Milpitas' natural and built environment such as the nearby hills and architectural features in contemporary buildings like the multi-modal Valley Transportation Authority (VTA) and Bay Area Rapid Transit (BART) Station. The letter mark took inspiration from design features in Milpitas' infrastructure and built environment such as architectural design features. These draft designs are extensions of the brand identity that was influenced by the brand core elements of brand vision, mission, values and themes, and target audiences.

The sans serif font is clean, simple, and contemporary. The color palette reflects both contemporary, technology-themed hues, as well as primary and secondary colors of the City's community mark that include hues in the natural environment. Logo design options and color palettes are provided in Attachment A.

In November, City staff review of revised logo designs was performed by the City Manager's Office, Recreation and Community Services, Public Information, and Office of Economic Development with a preference for Logo Design Option #1. This design reflects metro connectivity and wayfinding influenced by Milpitas's multi-modal transit station and upward momentum symbolizing innovation. At its special meeting on November 18, the Economic Development and Trade Commission (EDTC) reviewed the six revised logo designs and expressed that Logo Design #1 as most appealing because it is clean, clear and recognizable.

While Logo Design Option #1 was preferred, it could benefit from enhancement into a dynamic logo. A dynamic logos is appealing because it is recognizable and memorable to a target audience. A memorable and dynamic logo supports the brand's essence and tells a good story, and in the case of the Innovation District conveys innovation, transformation, co-creation and growth. Dynamic enhancements can include color and design that aligns with context. Examples of dynamic brand logos include Apple, FedEx and Google along with innovation districts in other communities. After review by staff and the EDTC, consensus was not reached on the three letter mark design options and have been removed from further consideration. Following City Council direction on logo design, the consultant may proceed with developing the final logo design which will then inform the development of the remaining deliverables.

Logo Design Option #1



Project Deliverables

To date, most of the project work has been devoted to name, tagline and logo development with the first two elements completed and the third pending City Council direction . Following completion of logo development, consultant and staff will move forward on remaining deliverables summarized in Attachment B.

POLICY ALTERNATIVE(S):

Alternative: Approve another logo for further development.

Pro: Create a new logo for further development that meets City Council vision.

Con: Revisions would result in additional costs with limited resources related to the Brand Identity deliverable. Creating a new logo could result in other project deliverables and contingency funds being reduced or eliminated. If this alternative is pursued, additional funding may be required, and the delivery schedule will be negatively affected.

Recommendation: Staff recommends proceeding with Logo Design Option #1 because City staff and the EDTC reached consensus on this design option. Also, staff and consultant are close to completing the Brand Identity deliverable, and delaying this deliverable will delay implementation of the remaining project deliverables and business attraction efforts.

FISCAL IMPACT:

In the FY 2022-23 Operating Budget process, the City Council allocated \$74,590 in general fund dollars to the Office of Economic Development and Strategic Initiatives to fund the Innovation District's branding initiative scope of work. To date, \$17,191 has been expended towards deliverables in the scope of work, mostly for brand identity development, with a remaining balance of \$57,399, which includes \$4,619 for contingency costs.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The action is an organizational or administrative activity of the City government that will not result in direct or indirect physical changes in the environment and is not a project pursuant to Cal. Code of Regs., tit. 14, § 15378.

RECOMMENDATION:

Receive update on Milpitas Innovation District Branding Initiative and approve Logo Design Option #1 for final development by consultant Navajo Company.

ATTACHMENT(S):

- (a) Logo Designs and Color Palettes
- (b) Project Deliverables

Attachment A

Milpitas Innovation District Logo Design Options and Color Palettes

Logo Design Influences

Nature & Infrastructure



Curvy cuts



Mainstructure



Color Palettes

Sunrise	HEX #F59D4C	CMYK 000/087/079/000	RGB 257/161/078
Spring	HEX #EED334	CMYK 09/000/041/000	RGB 107/214/160
Tailwind	HEX #0002B	CMYK 085/000/095/000	RGB 000/02/235
Off White	HEX #F6F6F4	CMYK 000/000/000/000	RGB 244/244/244
Steel	HEX #838387	CMYK 049/041/041/000	RGB 133/133/133
Midnight	HEX #424243	CMYK 019/036/064/072	RGB 68/68/105
Sunset	HEX #F7704	CMYK 000/094/079/000	RGB 255/112/66
Rain	HEX #95959E	CMYK 040/000/020/000	RGB 151/151/158
Ink	HEX #E0E0E0	CMYK 077/066/066/075	RGB 224/224/224
Metal	HEX #404040	CMYK 000/000/000/048	RGB 64/64/64
Platino	HEX #505050	CMYK 031/042/042/006	RGB 80/80/80
Chalk	HEX #D3D3D3	CMYK 000/000/000/000	RGB 211/211/211

Logo Design Options

A logo mark is an image or icon depicting a brand.

Logo Design Option #1

Description: Metro connectivity, wayfinding and upward momentum.



Logo Design Option #2

Description: Unique sun rising over the hills representing newness and a new day.



Logo Design Option #3

Description: Connection, ideas coming together; different, but welcoming and recognizable.



Attachment B: Innovation District Branding Initiative Project Deliverables

Deliverable	Description	Cost
Brand Guidelines Document	A document that includes the following components: Brand identity: Logo, typography, colors, imagery, and overall brand aesthetics. A minimum of three distinct creative options will be presented. Brand purpose: A succinct statement of the brand's core values, mission, and vision that will guide all messaging and marketing activities Target audience: Descriptions of the primary needs and drivers for the stated target audiences Brand messaging: Tagline, brand story, and positioning statements for each target audience	\$14,850
City of Milpitas Innovation District Lead Generation	Develop a lead generation contact list targeting the following industries: AI, Auto Technologies and Bioscience for purposes of raising interest in the City's Innovation District. The project scope will include the following: 1. Obtain user license on behalf of the City of Milpitas for Dun & Bradstreet Hoovers Explore industry database. License will allow for maximum of 5,000 contact credits. 2. Develop list querying criteria. 3. Review list query results with client and adjust as necessary. 4. Select candidates from list for follow-up. 5. Produce email content for list distribution. 6. Execute email blast via the client's Constant Contact user license 7. Follow-up with a single telephone outreach call perfor up to 5,000 contact credits.	\$12,081
Prospect welcome packet	Creation of a welcome packet for prospective investors, developers, and businesses. Includes design of packet folder and individual packet collateral pieces, written content, and photos	\$6,280
Branded articles	Creation of twelve (12) branded content articles promoting Milpitas economic development for online and print advertising. Includes interviews and/or editorial meetings for each article, writing, editing, and obtaining stakeholder approvals.	\$14,160
Pitch deck PowerPoint template	Create PowerPoint template City staff to use when pitching Milpitas Innovation District investment opportunities to businesses, real estate development professionals, and investors.	\$2,950
Milpitas Innovation District website: design and development	This website will function as the main online presence of the Milpitas Innovation District. Number of web pages TBD, but estimated to be between five and eight. Website creation includes planning and requirements gathering, wireframes, mockups, coding, and testing. Website deployment, maintenance, and updating services are available.	\$19,650
Contingency		\$4,619
Total		\$74,590



CITY OF MILPITAS AGENDA REPORT (AR)

Item Title:	Approve Design for Historical Park Marker Project (Staff Contact: Renee Lorentzen, Recreation and Community Services Director, 408-586-3409)
Category:	Consent Calendar-Community Services and Sustainable Infrastructure
Meeting Date:	3/18/2025
Recommendation:	(1) Approve the design for Historical Park Markers by Vicki Jo Sowell; and (2) transfer \$10,000 from CP3489 Public Art Program to fully fund this project.

BACKGROUND:

As part of their respective City Council-approved FY2020-21 Workplans, the Arts Commission and Parks Recreation and Cultural Resources Commission (PRCRC) were directed to collaborate on a project to develop historical park markers that would be public art pieces, honoring park namesakes. With the recent addition of Delano Manongs Park, Milpitas has 20 parks named for people and/or cultural groups.

A joint subcommittee of the Arts Commission and PRCRC was convened in May 2021 to develop a plan for a Historical Park Marker Project. The Park Marker Subcommittee (Subcommittee) consisted of two Arts Commissioners and three PRCRC Commissioners, one of whom also represented the Milpitas Historical Society.

The Subcommittee developed a concept of a unique-to-Milpitas, artist-designed kiosk which would contain interpretive signage about the park's namesake, community-designed artwork and, depending on space, possibly interpretive signage about the parkland's former use, or native floral/fauna

On [September 19, 2023](#), City Council approved the concept and funding for phase one projects, which will be Bob McGuire Park, Creighton Park, Delano Manongs Park, Gill Park, José Higuera Adobe Park, Murphy Park, and Sunnyhills Albert Augustine Jr. Memorial Park.

ANALYSIS:

A Call for Artists for the Historical Park Marker Project was issued in January 2024, with 14 artists responding. The Subcommittee selected its top four finalists to create Milpitas-specific designs. Three of those submitted full design proposals, and the Subcommittee opted to invite the fifth ranked finalist to submit, so that there would be four Milpitas-specific designs to consider.

The Subcommittee unanimously selected the design by Emeryville artist Vickie Jo Sowell as its overwhelming first choice, with KD Workshop's design as a second choice.

Ms. Sowell's design, "Natives," is a tri-fold steel screen featuring cutouts of flora and fauna native to Milpitas. It could be painted the same color for all parks or different colors for each park. The screen has room for four panels of printed material per park. Several versions were presented; the committee liked the proposal with the interpretive panels separated by a screen with no interpretive panels, so people could be spaced apart reading them.

Comments in favor included the fact that it had an obvious connection to Milpitas (flora and fauna), was artistic, simple, outdoorsy, and will fit well in both historic parks and more modern designs. The cut-outs allowed for the

park behind to be visible. The artist's resume adequately demonstrated her ability to complete the project. Ms. Sowell is the creator of the Legends of Milpitas pillars in Murphy Park.

The Arts Commission and Parks, Recreation and Cultural Resources Commission considered Ms. Sowell's design at a Special Meeting on January 6, 2025, and both Commissions unanimously recommended this design be forwarded to City Council for approval

POLICY ALTERNATIVE(S):

Alternative 1: Do not approve Vicki Jo Sowell's design for the historical park makers.

Pros: There are no pros to this alternative.

Cons: By not approving, this project would likely need to issue a new Call for Artists, as there was not a close second choice for consideration. This would likely delay the project by about a year.

Reason for Not Recommending: This design meets all the selection criteria and was the unanimous choice of the Public Art Selection Committee and two City Commissions.

FISCAL IMPACT:

This project is included in the CP3489 Public Art Program in the [FY 2025-29 Adopted Capital Improvement Program](#). The project is estimated at \$100,000. In its September 19, 2023 action, the City Council appropriated \$90,000 for this project from the Public Art Fund. As of March 13, 2025, there remains approximately \$563k of uncommitted funds in CP3489. Staff recommends the transfer of an additional \$10,000 from the already appropriated CP3489 Public Art Program to complete the funding for this project.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA):

The project has no potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment and is not a project pursuant to Pub. Resources Code, § 21065 and Cal. Code Regs., tit. 14, § 15378. The project entails the operation and minor alteration of existing public structures, facilities, or topographical features, involving negligible or no expansion of existing or former use and is exempt from CEQA pursuant to Cal. Code Regs., tit. 14, § 15301.

RECOMMENDATION:

- (1) Approve the design for Historical Park Markers by Vicki Jo Sowell; and
- (2) Transfer \$10,000 from CP3489 Public Art Program to fully fund this project.

ATTACHMENT(S):

- (a) Vickie Jo Sowell's Design Proposal for Historical Park Markers

Design Proposal Narrative
Milpitas Historical Park Markers
“Natives”

Vickie Jo Sowell, Sculptor

<http://unrulyimages.com>



Artist Statement

The Milpitas Historical Park Marker project offers the City an opportunity to establish a consistent identity for its parks across all locations. For this project I’ve chosen the theme of “Natives,” using imagery drawn from the flora and fauna native to the Milpitas region, live oak and sycamore leaves, as well as critical pollinator species, the bees, monarch butterfly, and Anna’s hummingbird. These will be rendered as multiple machine-driven cutouts in steel. As the drawings and renderings on the following pages show, the cutout panels will be joined to form a structurally strong zig-zag shaped kiosk, secured to ground-level concrete pads. On two of the three sections of the kiosk, space is provided for back-to-back waterproof outdoor display cases. The maquette I’ve provided illustrates two options, one in which two display cases are mounted side by side, the other where they are separate.

Proposed Materials and Dimensions

Each kiosk will be constructed of three 72” x 35” rectangular frames built from 2.5” square steel tubing, hinged at approximately 120 degree angles to each other. Within these structural frames, thematic art panels waterjet cut from ¼” Sheet Steel are welded, one the full height, and the other two panels half high, 36” x 35”, providing space on front and back to mount four off-the-shelf Swansea Outdoor Lockable Display Cases. At the bottom of each rectangular frame the square tube will extend two legs 8” long, terminating in steel mounting plates that will be bolted to a concrete pad. For sections in which display cases are inset, overhanging roof elements will be added, to provide additional protection for the waterproof, lockable cases.

The use of computer-driven water-jet cutting allows replacement of any severely damaged panels, as well as for easy scaling of the images for other applications in other signage in the parks, if desired. Their angled arrangement can be adjusted to fit larger and smaller park locations. The suggested golden tan color RA1007 is just one of many choices available from Prismatic Powders, see the attached sample sheet. The commercially available Swansea outdoor display cases I propose can be easily replaced if damaged.

Because the seven kiosks will be constructed of interchangeable, reproducible parts, the longevity of the kiosks is indefinite. Many of the similar powder-baked surfaces I’ve installed have been in place for over twenty years. The cutout artwork panels are unattractive to graffiti placement, but the budget includes matching spray paint for touch-up if this should prove necessary.

Timeline

Following Contract Award, a 50% materials advance (\$50,000) must be available to begin work.

CAD design 4 weeks from award

Stephen Bailey

Waterjet cutting 4 weeks total, 8 weeks from award

Shane's Watercutting

Assembly of panels, 4 weeks total, 12 weeks from award

Artist Vickie Jo Sowell and Assistant Keith Harker at artist studio in Emeryville

Powder-baking panels and structure, 4 weeks total, 16 weeks from award

Melrose Powder-baking

Test assembly, 2 weeks, 18 weeks from award

Transportation and Delivery, 2 weeks, 20 weeks from award

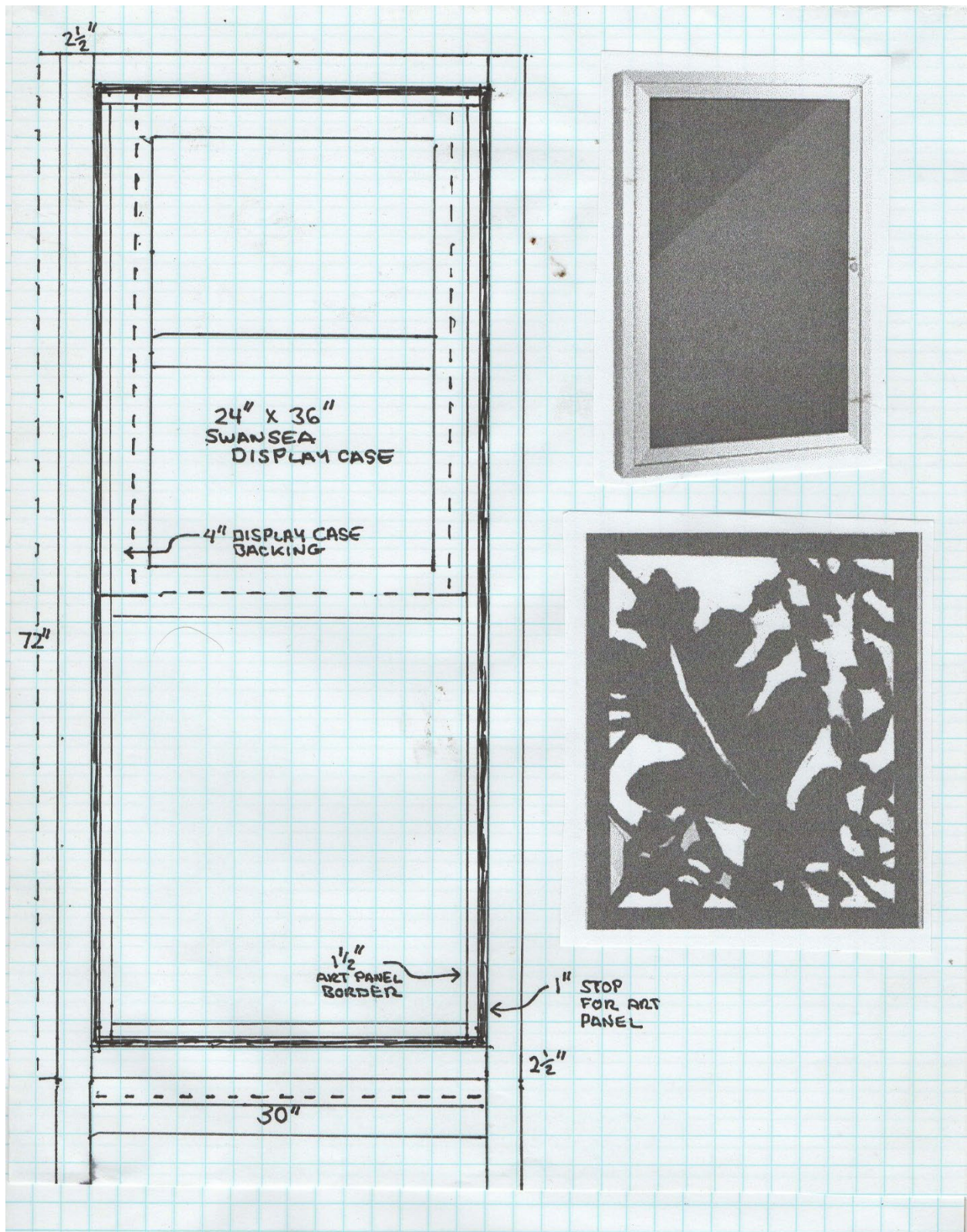
Artist Vickie Jo Sowell and Assistant Keith Harker

Installation, 2 weeks, 22 weeks from award

Project Budget

Artist Fee	24,000
Studio Assistant	
Welding	7,000
Shop Fee	3,000
Contractor services	
CAD	6,000
WaterJet cutting	18,000
Powder-baking	14,000
Materials and supplies	
Steel stock	1,500
Display Cabinets (28)	5,500
Spray Paint for Maintenance	1,000
Transportation	
Between vendors	1,000
To Milpitas Park sites	2,000
Field coordination (site visit)	4,000
Insurance and Permits	3,000
Installation*	<u>10,000</u>
TOTAL	\$100,000

*Prefer fresh concrete pads with embedded bolts, for which I'll supply template. Otherwise, securing bolts will be drilled into existing concrete.



Kiosk Panel and Display Cabinet, structural detail



Kiosk Design 1



Kiosk Design 2



Kiosk Design 3

Kiosk Maquettes (Physical items available if desired)



Configuration A



Configuration B



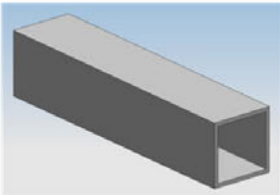
Configuration C



2-1/2" SQ {A} x 2.334" ID {B} x .083" Wall {C} Square Steel Tubing

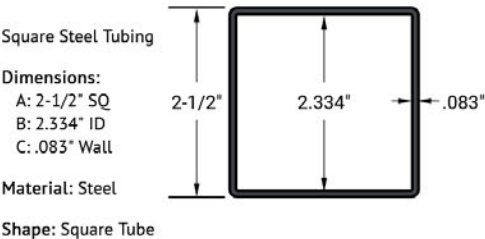
 [E-mail this product to a friend](#)

[Click here for material description, specification sheets and typical uses.](#)



 [Show Larger](#)

Click [here](#) for important information about telescoping.





Sample installation at Jose Higuera Adobe Park

CONCEPT PROPOSAL COVERSHEET:

Historical Park Markers Project
Design Proposals will not be accepted after June 20, 2024, at 5:00 p.m.

Artist: VICKIE JO SOWELL

Co-Artist, if applicable: _____

Co-Artist, if applicable: _____



Signature of Artist: Vickie Jo Sowell Date: 6/20/2024

Signature of Co-Artist, if applicable: _____ Date: _____

Signature of Co-Artist, if applicable: _____ Date: _____