STORMWATER CONTROL PLAN

For

South Main Senior Lifestyles - Phase 1
City of Milpitas
Santa Clara County, California

Date: ~~December 6, 2016~~
Revised: ~~August 15, 2016~~
~~June 16, 2017~~
~~October 30, 2017~~
~~November 10, 2017~~
December 20, 2017

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Project No.: 092041

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References

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2. Geotechnical Investigation for the Phase 1 Assisted Living and Congregate Care – Milpitas, California. February 25, 2015
3. Natural Resources Conservation Service, *Web Soil Survey 2.0*, websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx
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FIGURE 1 - LOCATION MAP

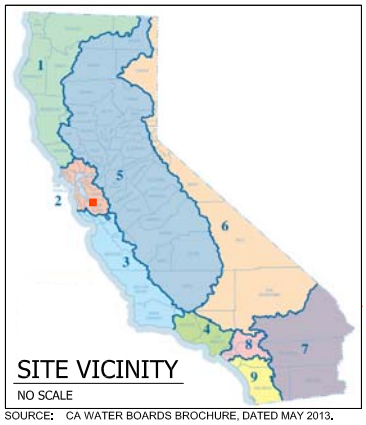
PRELIMINARY STORMWATER CONTROL PLAN

SOUTH MAIN SENIOR LIFESTYLES-PHASE 1

MILPITAS, CALIFORNIA

AUGUST 2016

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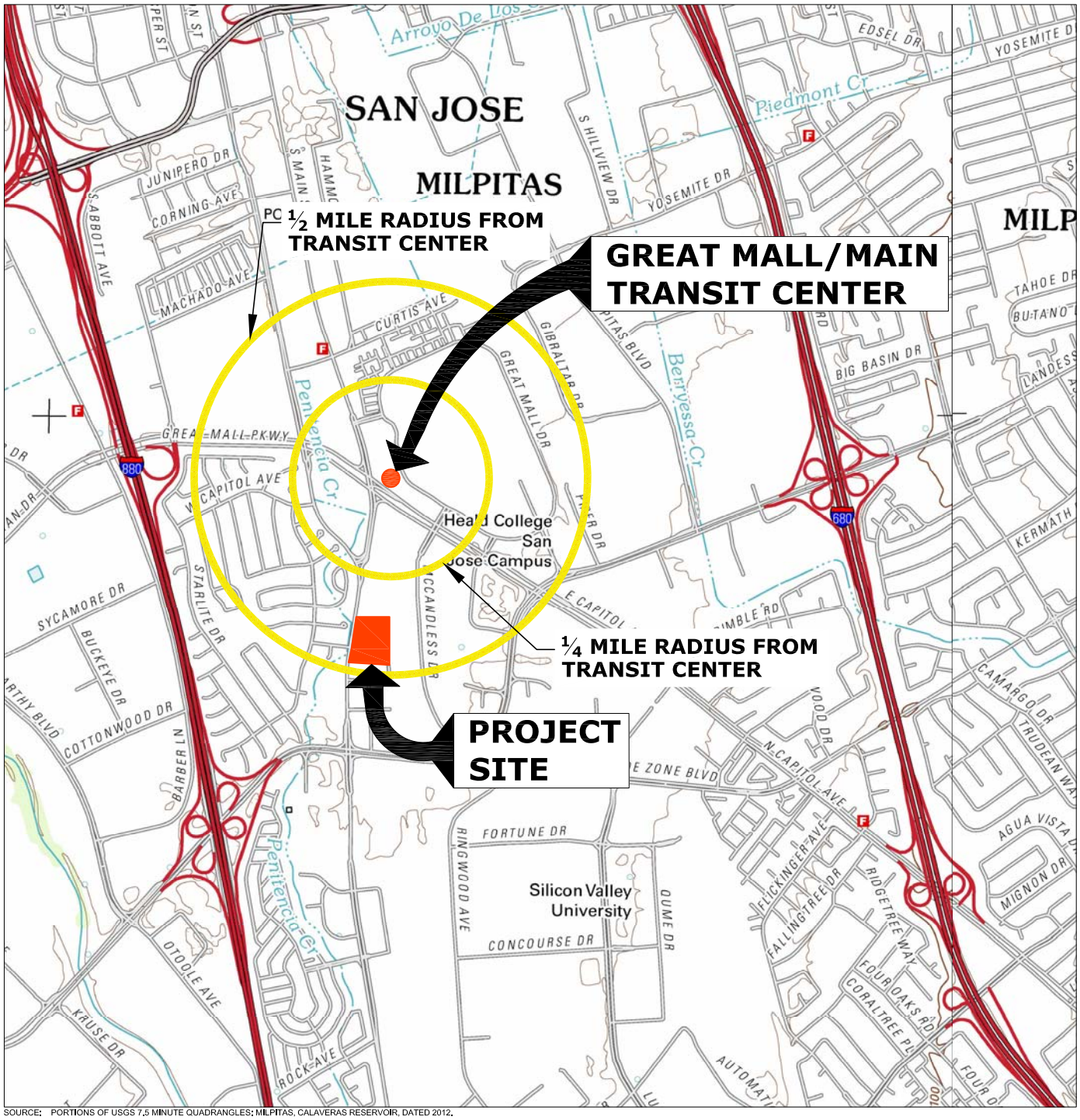


SOURCE: CA WATER BOARDS BROCHURE, DATED MAY 2013.

SCALE: 1"=2000'

JOB NUMBER: 092041

SHEET 1 OF 1 SHEETS



SOURCE: PORTIONS OF USGS 7.5 MINUTE QUADRANGLES: MILPITAS, CALAVERAS RESERVOIR, DATED 2012.

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FILE PATH: W:\Jobs 09\092041\Drawings\FinalStudies & Calculations\SWCP\Fig 1 - Location Map.dwg

1 Project Information

1.1 Purpose of the Report

The City of Milpitas requires all new projects, major developments, and redevelopment projects to comply with the "C.3 Stormwater Handbook" prepared by the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). The guidelines have been developed to comply with the current *National Pollutant Discharge Elimination System* (NPDES) *Stormwater Discharge Permit* (Permit) as issued by the San Francisco Regional Water Quality Control Board.

The guidelines require qualifying developments to apply Low Impact Development (LID) techniques to the maximum extent practicable to minimize the impacts of urban runoff on receiving waters and to promote healthy watersheds. These developments are also required to prepare a *Stormwater Control Plan* (SWCP) to detail how runoff and associated water quality impacts resulting from the development will be controlled or managed. The SWCP is, at a minimum, required to provide the following information:

- Project description and location
- Description of facility activity and pollutants of concern
- Topographic base map and site plan, including drainage areas and BMP locations
- BMP description and calculations
- Site specific soils information
- Post-construction BMP maintenance schedule

This Stormwater control Plan (SWCP) is prepared by Ruggeri-Jensen-Azar & Associates (Engineer) for Stone Rivard McGonigle(SRM) Development, LLC (Developer) for the South Main Senior Lifestyles project. This SWCP shall be used for the sole purpose of providing guidance in the preparation, implementation, and on-going maintenance of post-construction Stormwater Control BMP's.

1.2 Site Description

The Phase 1 South Main Senior Housing Project encompasses approximately 2.8-acres, and will include the construction of a 4-story podium building with 199 senior assisted living resident units with an underground parking garage, extensions of Cedar Way and Costa Street (public streets), courtyards, sidewalks, landscaping, and an emergency vehicle access road. For purposes of this report an area of 2.9-acres will be used given that the project unintentionally accepts a small amount of water from existing South Main Street.

The project will also involve sidewalk reconstruction along the frontage with South Main Street. Summary of the developed site (Phase 1):

Building: Approximately 1.5-acres, 199 units
Public Streets (Cedar Way, Costa Street): Approximately 0.8-acres
EVA and remaining landscaped and paved areas: Approximately 0.7-acres

1.3 Existing Site Conditions

The South Main Senior Housing project is located on the east side of South Main Street, at the intersection of South Main Street and Cedar Way. The site is bounded by commercial/industrial buildings to the north and south and the Union Pacific Railroad to the East. Improvements on the site were demolished in 2012 in preparation for the development of this project. Before 2012, the site was used as an auto related industrial/commercial facility, with the majority of the site developed as a paved parking lot and large building. Although recent demolition has returned the site to an undeveloped condition, for the purposes of this report, the term "existing site" refers to the pre-demolition condition as an auto related industrial/commercial facility.

1.4 Opportunities and Constraints for Stormwater Control

The following is a summary of opportunities for stormwater quality:

This project will decrease stormwater runoff from the site by reducing the area of impervious surface from the existing condition. Additionally, the redeveloped site will provide and implement stormwater BMPs, which are not present on the existing site. This results in an overall improvement to downstream receiving water quality.

The following is a summary of opportunities for storm water quality:

- This project will decrease stormwater runoff from the site by reducing the area of impervious surface from the existing condition. Additionally, the redeveloped site will provide and implement stormwater BMPs, which are not present on the existing site. This results in an overall improvement to downstream receiving water quality.

- The existing industrial site has 97% impervious coverage and a traditional collect and dispose storm drain system. Redevelopment will allow incorporation of LID site design strategies, source controls and stormwater treatment BMPs.

- A VTA light rail and bus transfer station are located at the intersection of Great Mall Parkway and South Main Street, within 0.5 miles of the project site. This, combined with the high-density nature of the site, may allow for "Special Project" status under the Regional Board C.3 permit.

- The project will be managed by a Home Owners Association (HOA) which allows for educational flyers and other materials managed under one agent to all residents. The HOA will also provide information and instructions to residents before paperwork is finalized on their homes, regarding water quality, and Best Management Practices.

- The project CC&R's will include provisions for storm drain maintenance activities, material use/housekeeping practices, and material disposal/recycling. These activities control the movement of pollutants and removal of them from the pavement through catch basin cleaning, storm drain flushing, street sweeping, and by regularly removing illegally dumped material from the project site.

- The project will meet parking requirements through the construction of an underground garage, allowing for more open space in the site plan and eliminating parking lot related pollutants from entering the storm drain system.

The following is a summary of constraints for stormwater quality:

- The project is located in a high density zoning location. This will require the project to have high building and parking coverage in order to meet zoning density requirements.

- The level topography of the site makes it difficult to achieve an adequate road design with overland release and surface flow, without compromising boundary conditions.

- The project is subject to United States Department of Housing and Urban Development (HUD) requirements. One requirement is to locate the building above the 0.2% chance (500-year) flood elevation. This will require the housing area to be raised, which may require significant conform slopes or retaining walls within landscape areas.

- The soil conditions of the site are not ideal for infiltration. NRCS soil data identifies the site soils as clay with a low infiltration rate. Available groundwater maps identify the groundwater in the site area as being 0-10 feet below ground surface.

- A PG&E large diameter gas main and corresponding 50' wide easement runs west to east through the project site. PG&E does not allow placement of utilities or stormwater management BMPs to be located within their easement.

1.5 Hydrograph Modification Management Requirements

The project is located in an area that is over 90% built-out with greater than 65% impervious area. Therefore, the project is not required to create a Hydrograph Modification Management Plan, per Appendix E-2 of the SCVURPPP Handbook.

1.6 Infiltration and Rainwater Harvesting Feasibility

The San Francisco Regional Water Quality Control Board (Board) places a high priority on infiltration, evapotranspiration, and rainwater harvesting as methods to manage stormwater as part of the recent NPDES Permit issued on October 14, 2009. In response to this permit, the Bay Area Storm water Management Agencies Association (BASMAA) submitted a "Harvest and Use, Infiltration and Evapotranspiration Feasibility/Infeasibility Criteria Report" to the Board in 2011. This report outlines criteria for when infiltration/evapotranspiration and rainwater harvesting are infeasible for a project. In the event that both infiltration/evapotranspiration and rainwater harvesting are infeasible, a project is only required to implement biotreatment while maximizing infiltration opportunities. The Board has accepted this report, and as a result, requires all agencies to track the feasibility through a worksheet/checklist method and submit all findings to the Board. The Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) has prepared worksheets and procedures for use in determining the feasibility of infiltration/evapotranspiration and rainwater harvesting on a project specific basis.

The City also has projects that will provide recycled water to portion of the city where the project is located. This project, as part of the development requirements, will be installing recycled water facilities that will connect to recycled water improvements to the project site.

Based on the project site characteristics and the above assumptions, rainwater harvesting and infiltration are considered infeasible for this project; therefore, the project is only required to implement biotreatment measures, such as appropriately designed bio-retention basins, while maximizing infiltration if site conditions allow. Refer to Appendix B for the completed feasibility worksheets.

1.7 Special Project Eligibility

The San Francisco Regional Water Quality Control Board (Board) allows LID credits for three categories of "Smart Growth" development, specifically urban infill, high-density, and transit oriented development projects, called "Special Projects". Special Projects were approved because, when considered at the watershed level, smart growth development projects can either reduce existing impervious surfaces, or create less "accessory" impervious areas and automobile-related pollutant impacts. The conclusion was that these types of projects were recognized by the Water Board as having inherent water quality and other environmental benefits.

Projects that receive LID treatment reduction credits are allowed to use specific types of non-LID treatment, if the use of LID treatment is first evaluated and determined to be infeasible, or partially infeasible. The LID Treatment Reduction Credit is applied to the project as a

percentage of total impervious surface area. The LID Treatment Reduction Credit is the percentage of the site allowed to be managed by non-LID treatment facilities.

This project qualifies as a Category C (Transit Oriented Development) "Special Project" due to its close proximity to the VTA light rail and bus transfer stations (within ½ mile) and its high unit density (68 DU/AC). See Appendix C for the completed "Special Project" worksheets. The project is eligible for an LID Treatment Reduction Credit of up to 55% based on site characteristics. This means the project is able to use non-LID treatment measures for up to 55% of the impervious surface runoff. Non-LID treatment measures include proprietary high flow-rate media filters and tree well filters.

The project site was first evaluated to determine all areas that could possibly contain LID treatment measures. The use of LID measures (bio-retention facilities) was the preferred method of treatment for the site's stormwater runoff. In addition to the areas being used in the design for LID treatment measures, the following opportunity areas and LID measures were considered:

A) Courtyard and roof areas within the building footprint – evaluated for raised, flow-through planters and/or Silva Cells;

B) Landscaped strips adjacent to the building – evaluated for bioswales, and;

C) The EVA area on the south side of the project site – evaluated for the use of pervious surface (i.e. pervious concrete/pavers).

Conclusions for the evaluated areas:

A) The courtyards are designed as functional, aesthetically pleasing areas for the use and therapy of the facility's senior residents. The use of raised, flow-through planters and pervious surfaces (i.e. pavers, concrete, etc.) would allow for adequate biotreatment of tributary stormwater from the roof and courtyard areas as well as provide a lush, enjoyable atmosphere for the residents and staff of the facility. Therefore, the use of both raised planters and pervious surfaces is feasible for the courtyard areas.

B) The landscape strips along the south side of the building are of minimal size, and thus cannot accommodate functional bioswales between neither the building foundation and structural section of the EVA nor the landscape strip between the EVA structural section and the project boundary. The west and east sides of the building also have limited functional treatment area due to the presence of various existing and proposed utilities along the west and the proposed locations of driveways/paved areas to the east. However, there is adequate space for bio-retention basins along the northern side of the building as well as on both Cedar Way and Costa Street. These basins are a feasible means to treat the stormwater tributary from the adjacent landscaped areas and paved streets and sidewalks.

C) The Fire Department requires that the EVA structural section be designed to withstand fire department truck loading. Biotreament methods in close proximity

could compromise the structural integrity of the EVA, as mentioned in point “B” above. Additionally, this area is intended to have a dual purpose as a pedestrian paseo for the elderly residents’ use. The use of pervious pavers/pavement with a sub-drain is proposed in order to fulfill both of these purposes while eliminating the need for treatment. Pervious pavers or pavements will allow moisture to reach the expansive soils, and may cause the surface to become uneven, thus making it unsafe for pedestrian travel. To mitigate this effect, a perforated sub-drain linked to the storm drain will be installed to allow water to discharge once it has permeated through the pervious surface.

The project is eligible, but is **NOT** requesting use of credits. All required stormwater treatment is being provided on-site.



LEGEND

PHASE 1 PROJECT BOUNDARY (±2.8–AC)

EXISTING STORM DRAIN

EXISTING IMPERVIOUS AREA
±2.7–AC
97%

N

0 60 120 180

SCALE IN FEET: 1"= 60'

FIGURE 2 - EXISTING CONDITIONS
STORMWATER CONTROL PLAN

SOUTH MAIN SENIOR LIFESTYLES

MILPITAS, CALIFORNIA

AUGUST 2016

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JOB NUMBER: 092041

PLOT DATE: August 15, 2016
FILE PATH: W:\Jobs 09\092041\Drawings\Final\Studies & Calculations\SWCP\Fig 2 – Existing Conditions.dwg

2 Stormwater Treatment Evaluation

This project is considered a regulated redevelopment project which replaces 10,000 SF or more of impervious surface as determined by the San Francisco Regional Water Quality Control Board Municipal Regional Stormwater NPDES Permit (Permit). The project is required to implement stormwater management criteria as defined in the Permit.

Stormwater Best Management Practices (BMPs) including Low Impact Development (LID) site design strategies, Integrated Management Practices, and source controls will be used to reduce runoff volume, peak flow, and pollutant loadings. All BMP's selected for the Project shall comply with the City's Guidelines.

2.1 LID Site Design Strategies

The project implements a "Start at the Source" design through the use of LID site planning and design techniques. The following LID strategies are being used to the maximum extent practicable (MEP) to comply with stormwater control requirements:

- The site design limits impervious surfaces and reduces parking count and area to the maximum extent allowed under City of Milpitas zoning requirements. An underground parking garage will be constructed to meet parking requirements. While limiting the footprint of the parking area, the covered structure will also limit the amount of parking lot related pollutants present in the stormwater runoff. Surface parking is kept to minimum levels as allowed by the City of Milpitas.

- The project uses minimum width streets and sidewalks as allowed by City of Milpitas street design guidelines.

- The project will disconnect impervious surfaces and direct runoff to LID based treatment facilities, such as bio-retention basins, to the maximum extent feasible.

- The project will incorporate efficient irrigation methods including use of drought resistant plants. Water reuse also occurs by allowing storm water to flow through vegetated areas and treatment areas where moisture to vegetation is achieved and ultimately reducing irrigation.

- Water Conservation – South Main Street is part of a street for a city wide plan to install recycled water networks throughout the city. A future 12-inch recycled water main in planned for South Main Street. The project will install recycled water services for use in supplying water for landscape irrigation and make the connection to the future recycled water line.

- Runoff from impervious surfaces are routed to bioretention basins, bioswales, or flow through planters designed with 18" minimum biotreatment soil mix meeting the specifications of Appendix C of the SCVURPPP C.3 Handbook, 12" minimum of rock section, and perforated underdrain. If site conditions allow, the perforated underdrain will be placed in the top of the rock section to maximize infiltration.

- The project will implement Source Control measures to reduce contact between stormwater runoff and pollutants through the use of Source Control measures (see Section 3.3).

2.2 Treatment Control BMPs

Due to the opportunities and constraints identified in Section 1.4 of this SWCP, the treatment control BMPs described in Table 2.1 has been selected for use in this project.

Table 2.1 – Selected Treatment Control BMPs

BMP	Description
Bioretention – Landscape Detention	A depressed vegetated area with porous engineered soils and subdrain system that captures, treats, and infiltrates stormwater runoff. They are suitable for removal of sediment, nutrients, trash, metals, bacteria, oil and grease, and organics. They will be used to capture and treat runoff from parking areas, building rooftops, courtyards, hardscape and landscaping.
Self-Treating Area	A broad shallow channel with a dense plating and vegetation covering the side loped and bottom.

2.3 Source Control Measures

The most effective way to reduce stormwater runoff pollution is to manage pollutants at the source as opposed to further downstream. The stormwater source control measures listed in Table 2.2 should be implemented with the Project.

Table 2.2 – Selected Source Control Measures

Potential Source	BMP Description
Education	Property management association is responsible to provide practical information materials to the employees on general practices that contribute to the protection of storm water quality. Materials shall include: ▪ Chemical use guidelines and restrictions on the property. ▪ The proper handling of material such as fertilizers, pesticides, and cleaning solutions. ▪ The environmental and legal impacts of illegal dumping of harmful substances into storm drains and sewers. ▪ Hazardous waste collection programs. ▪ Proper procedures for spill prevention and clean up. ▪ Proper storage of materials that pose pollution risks to local waters. ▪ Carpooling programs and public transportation alternatives to driving.
Landscape Management	Ongoing management consistent with the CASQA *Stormwater Best Management Practice Handbook: New Development and Redevelopment* BMPs SD-10 & SD-12, including limiting pesticide and fertilizer usage and minimizing irrigation and runoff.
BMP Maintenance	Property owner is responsible for the inspection and maintenance of structural BMPs consistent with the SWCP and the City of Gilroy ordinances. (See Section 5)
Litter Control	Litter should be routinely picked up and properly disposed. If necessary, signage should be installed in common areas to discourage littering.
Drain Inlet Inspection	All inlets should be marked with “No Dumping - Flows to Bay” or similar message. Property owner is responsible for inspection and maintenance of all privately owned drain inlets and storm drains.
Street Cleaning	Streets and parking areas should be clean and orderly, weather permitting, and prior to the rainy season.
Outdoor Pesticide Use	Where possible, pest resistant plants should be used. Planting for BMPs should be selected to be appropriate for the soil and moisture conditions. Landscaping should be maintained using integrated pest management principles with minimal or no use of pesticides.
Outdoor Trash Enclosures	Trash storage areas should be enclosed and shall contain a drain inlet connected to the sanitary sewer system.
Material Storage	Outdoor material storage should be prohibited on site or provided with a sufficient cover.
Pool	The pool shall be directly connected to the sanitary sewer.
Vehicle Maintenance and Washing	Vehicle Maintenance and washing shall be strictly prohibited onsite.

3 Selection and Design of Stormwater Treatment BMPs

3.1 Treatment Area Description

The Project is split into twenty-one (21) drainage areas based on the grading and drainage shown in the project improvement plans. A description of each drainage area and selected BMP is provided below. See Appendix G and H for specific treatment area details.

Areas A1 – A8

Description	Area consists of pedestrian walkways and streets. Runoff discharges via surface runoff to bio-retention treatment areas. Sub-drains and overflow inlets link basins to the storm drains.
Pollutants of Concern	Total Petroleum Hydrocarbons, Heavy Metals, PAHs, PCBs, pH, Surfactant, Oil, Sediment, Trash, Elevated Temperatures, Nitrogen, Phosphorus, Bacteria, Viruses, and Organics
BMP Type	Bio-retention Basin

Area R1 – R9

Description	Area consists of building rooftop. Runoff discharges via roof leaders into raised planters. Once treated storm water will discharge to storm drain pipes connected to the storm drain system in the streets.
Pollutants of Concern	Total Petroleum Hydrocarbons, Heavy Metals, PAHs, PCBs, pH, Surfactant, Oil, Sediment, Trash, Elevated Temperatures, Nitrogen, Phosphorus, Bacteria, Viruses, and Organics
BMP Type	Bio-retention facility (Raised Planter with bio-retention soil)

Area C1, C3

Description	Area consists of pervious pavers, pedestrian walkways, landscaping and raised planters. Runoff is collected via area drains and directed to a treatment area on South Main Street.
Pollutants of Concern	Total Petroleum Hydrocarbons, Heavy Metals, PAHs, PCBs, pH, Surfactant, Oil, Sediment, Trash, Elevated Temperatures
BMP Type	Bio-retention Basin

Area C2, D1

Description	Area consists pervious surfaces and other landscaping. Therefore, the area is considered self-treating.
BMP Type	No treatment required

3.2 BMP Sizing Calculations

All BMPs shall be sized according to the SCVURPPP Handbook. The complete BMP sizing calculations and details are provided in Appendix F.

3.3 Source Control Measures

The following stormwater source control measures are anticipated to be implemented with the Project:

Table 3.1 –Source Control Measures

Potential Sources	BMP Description
Education	Property owner is responsible to provide practical information materials to the employees on general practices that contribute to the protection of storm water quality. Materials shall include: ▪ Chemical use guidelines and restrictions on the property. ▪ The proper handling of material such as fertilizers, pesticides, and cleaning solutions. ▪ The environmental and legal impacts of illegal dumping of harmful substances into storm drains and sewers. ▪ Hazardous waste collection programs. ▪ Proper procedures for spill prevention and clean up. ▪ Proper storage of materials that pose pollution risks to local waters. ▪ Carpooling programs and public transportation alternatives to driving.
Landscape Management	Ongoing management consistent with the CASQA "Storm water Best Management Practice Handbook: New Development and Redevelopment" BMPs SD-10 & SD-12, including limiting pesticide and fertilizer usage and minimizing irrigation and runoff.
BMP Maintenance	Property owner is responsible for the inspection and maintenance of structural BMPs located on the property consistent with this Storm water Control Plan and the City of Milpitas "Storm water Development Standards".
Litter Control	All dumpsters shall be marked with "Do Not Dump Hazardous Materials Here" or similar message. Property owner is responsible for emptying trash receptacles in a timely fashion to avoid overflowing (once daily minimum), as well as, patrolling for trash disposal violations by the employees. Spills will be cleaned up using dry methods.

Table 3.1 –Source Control Measures	
Potential Sources	**BMP Description**
Employee Training	Property owner is responsible for training employees or hiring an outside consultant to properly implement this Storm water Control Plan.
Drain Inlet Inspection	All inlets shall be marked with "No Dumping Drains to Bay" or similar message. Property owner is responsible for inspection and maintenance of all privately owned and drain inlets. All drain inlets will be cleaned prior to the storm season, no later than October 1st each year.
Street Sweeping	Property owner is responsible to sweep private parking lots weekly, weather permitting, and prior to the storm season.
Vehicle Washing	Vehicle washing will be prohibited on the public streets. Vehicle washing on-site shall be limited to designated vehicle wash areas. Vehicle wash areas shall be covered, designed with a sand/oil separator, and drain to the sanitary sewer system.
Vehicle Fueling	Vehicle fueling shall be strictly prohibited on-site.
Outdoor Material Storage	Outdoor material storage shall be strictly prohibited on-site.
Fire Sprinklers	Sprinkler tests will drain to landscape treatment areas before entering the storm drain system. Sprinkler system shall be designed with a proposed method for discharge of any water.
Outdoor Pesticide Use	Where possible, pest resistant plants will be used. Planting for swales will be selected to be appropriate for the soil and moisture conditions. Landscaping is to be maintained using integrated pest management principles with minimal or no use of pesticides. Tenants will receive pest management information.

Table 3.1 –Source Control Measures	
Potential Sources	**BMP Description**
Garbage Compactor Areas	All dumpsters will be marked with "Do not dump hazardous materials here" or similar. Garbage areas to be graded to prevent run on to the garbage area. All drains must be connected to the sanitary sewer system. Adequately sized receptacles will be provided. Grounds keeping crew managed by the HOA will inspect and clean up regularly. Spills will be cleaned up using dry methods.
Patios and Walkways	All patio and walkway areas will drain to landscape treatment areas before entering the storm drain system.

3.4 Permitting and Code Compliance

There are no known conflicts between this SWCP and the City of Milpitas ordinances or policies. If any conflicts are found, the City's ordinances and policies will take precedence.

3.5 BMP Operation and Maintenance Plan – See Appendix I

4 Certification

SWCP Certification

The selection, sizing, and design of Stormwater BMPs and other control measures in this Stormwater Control Plan meet the requirements of the Regional Water Quality Control Board Order R2-2009-0074, as amended.

James R. Burns II	10/30/17
Owner/Developer Signature	Date
James R. Burns II., Managing Member	510-339-8880
Owner/Developer Name and Title	Telephone Number
	10/30/17
Engineer Signature	Date
Jamie Platz, Sr. Engineer	408.848-0300
Engineer Name and Title	Telephone Number

Appendix A

Provision C.3 Data Form

City of Milpitas – Stormwater Requirements C.3 Data Form

Santa Clara Valley Urban Run-Off Pollution Prevention Program

Which Projects Must Comply with Stormwater Requirements?

All projects that create and/or replace **10,000 sq. ft.** or more of impervious surface on the project site must fill out this worksheet and submit it with the development project application.

All restaurants, auto service facilities, retail gasoline outlets, and uncovered parking lot projects (stand-alone or part of another development project, including the top uncovered portion of parking structures) that create and/or replace **5,000 sq. ft.** or more of impervious surface on the project site must also fill out this worksheet.

Interior remodeling projects, routine maintenance or repair projects such as re-roofing and re-paving, and single family homes that are not part of a larger plan of development are **NOT** required to complete this worksheet.

What is an Impervious Surface?

An impervious surface is a surface covering or pavement that prevents the land's natural ability to absorb and infiltrate rainfall/stormwater. Impervious surfaces include, but are not limited to rooftops, walkways, paved patios, driveways, parking lots, storage areas, impervious concrete and asphalt, and any other continuous watertight pavement or covering. Pervious pavement, underlain with pervious soil or pervious storage material (e.g., drain rock), that infiltrates rainfall at a rate equal to or greater than surrounding unpaved areas OR that stores and infiltrates the water quality design volume specified in Provision C.3.d of the Municipal Regional Stormwater Permit (MRP) is not considered an impervious surface.

For More Information

For more information regarding selection of Best Management Practices for stormwater pollution prevention or stormwater treatment in Santa Clara County: http://www.scvurppp-w2k.com/c3_handbook_2012.shtml

1. Project Information

Project Name: South Main Senior Lifestyles-Phase 1 **APN #** 086-22-027, 028, 033, 034, 041, 042

Project Address: 1504, 1556, 1602, 1618 & 1620 South Main Street, Milpitas CA

Cross Streets: South Main Street and Cedar Way

Applicant/Developer Name: South Main Senior Lifestyles LLC

Project Phase(s): 1 of 2 **Engineer:** Ruggeri-Jensen-Azar

Project Type (Check all that apply): ☐ New Development ☑ Redevelopment

☑ Residential ☐ Commercial ☐ Industrial ☐ Mixed Use ☐ Public ☐ Institutional

☐ Restaurant ☐ Uncovered Parking ☐ Retail Gas Outlet ☐ Auto Service (SIC code)_____
(5013-5014, 5541, 7532-7534, 7536-7539)

☐ Other _____

Project Description: Phase 1-Construction of 1 residential podium building for senior housing (199 units). Construction of associated streets, courtyards, emergency vehicle access, utilities, and open space.

Project Watershed/Receiving Water (creek, river, or bay): Penitencia Creek

2. Project Size

a. Total Site Area: 2.9 acre	b. Total Site Area Disturbed: 2.9 acre (including clearing, grading, or excavating)			
	Existing Area (ft^2)	Proposed Area (ft^2)		Total Post-Project Area (ft^2)
		Replaced	New	
Impervious Area				
Roof	116,670*	97,170*	0	97,170
Parking	0	0	0	0
Sidewalks and Streets	0	0	0	0
c. Total Impervious Area	116,670	97,170	0	97,170
d. Total new and replaced impervious area		97,170		
Pervious Area				
Landscaping	10,365	10,365	6,660	17,025
Pervious Paving	0	0	12,410	12,410
Other (e.g. Green Roof)	0	0	430	430
e. Total Pervious Area	10,365	10,365	19,500	29,865
f. Percent Replacement of Impervious Area in Redevelopment Projects (Replaced Total Impervious Area ÷ Existing Total Impervious Area) x 100% = 76 %				

*Replaced Impervious Area uses both ex. roof and parking area and applies it to the roof to more accurately represent the replaced impervious area.

3. State Construction General Permit Applicability:

a. Is #2.b. equal to one acre or more?

☑ Yes, applicant must obtain coverage under the State Construction General Permit (i.e., file a Notice of Intent and prepare a Stormwater Pollution Prevention Plan) (see www.swrcb.ca.gov/water_issues/programs/stormwater/construction.shtml for details).

☐ No, applicant does not need coverage under the State Construction General Permit.

4. MRP Provision C.3 Applicability:

a. Is #2.d. equal to **10,000** sq. ft. or more, or **5,000** sq. ft. or more for restaurants, auto service facilities, retail gas outlets, and uncovered parking?

☑ Yes, C.3. source control, site design, and treatment requirements apply.

☐ No, C.3. source control and site design requirements may apply – check with local agency

b. Is #2.f. equal to 50% or more?

☑ Yes, C.3. requirements (site design, source control, as appropriate, and stormwater treatment) apply to entire site.

☐ No, C.3. requirements only apply to impervious area created and/or replaced.

5. Hydromodification Management (HM) Applicability:

a. Does project create and/or replace one acre or more of impervious surface AND is the total post-project impervious area greater than the pre-project (existing) impervious area?

☐ Yes (continue) ☑ No – exempt from HM, go to page 3

b. Is the project located in an area of HM applicability (green area) on the HM Applicability Map? (www.scvurppp-w2k.com/hmp_maps.htm)

☐ Yes, project must implement HM requirements

☐ No, project is exempt from HM requirements

6. Selection of Specific Stormwater Control Measures:

Site Design Measures

- ☐ Minimize land disturbed
- ☑ Minimize impervious surfaces
- ☑ Minimum-impact street or parking lot design
- ☐ Cluster structures/ pavement
- ☑ Disconnected downspouts
- ☑ Pervious pavement
- ☐ Green roof
- ☑ Microdetention in landscape
- ☐ Other self-treating area
- ☑ Self-retaining area
- ☐ Rainwater harvesting and use (e.g., rain barrel, cistern connected to roof drains) [1]
- ☐ Preserved open space: _____ ac. or sq. ft .(circle one)
- ☐ Protected riparian and wetland areas/buffers (Setback from top of bank: _____ft.)
- ☐ Other _____

Source Control Measures

- ☑ Alternative building materials
- ☑ Wash area/racks, drain to sanitary sewer[2]
- ☑ Covered dumpster area, drain to sanitary sewer[2]
- ☑ Sanitary sewer connection or accessible cleanout for swimming pool/spa/fountain[2]
- ☑ Beneficial landscaping (minimize irrigation, runoff, pesticides and fertilizers; promotes treatment)
- ☐ Outdoor material storage protection
- ☐ Covers, drains for loading docks, maintenance bays, fueling areas
- ☑ Maintenance (pavement sweeping, catch basin cleaning, good housekeeping)
- ☑ Storm drain labeling
- ☐ Other _____

Treatment Systems

- ☐ None (all impervious surface drains to self-retaining areas)

LID Treatment

- ☐ Rainwater harvest and use (e.g., cistern or rain barrel sized for C.3.d treatment)
- ☐ Infiltration basin
- ☐ Infiltration trench
- ☐ Exfiltration trench
- ☐ Underground detention and infiltration system (e.g. pervious pavement drain rock, large diameter conduit)

Biotreatment [3]

- ☑ Bioretention area
- ☑ Flow-through planter
- ☐ Tree box with bioretention soils
- ☑ Other _____ -Load-bearing modular grid products

Other Treatment Methods

- ☐ Proprietary tree box filter[4]
- ☐ Media filter (sand, compost, or proprietary media)[4]
- ☐ Vegetated filter strip[5]
- ☐ Dry detention basin[5]
- ☐ Other _____

Flow Duration Controls for Hydromodification Management (HM)

☐ Detention basin ☐ Underground tank or vault ☐ Bioretention with outlet control ☐ Other _____

[1] Optional site design measure; does not have to be sized to comply with Provision C.3.d treatment requirements.
[2] Subject to sanitary sewer authority requirements.
[3] Biotreatment measures are allowed only with completed feasibility analysis showing that infiltration and rainwater harvest and use are infeasible.
[4] These treatment measures are only allowed if the project qualifies as a "Special Project".
[5] These treatment measures are only allowed as part of a multi-step treatment process.

7. Treatment System Sizing for Projects with Treatment Requirements

Indicate the hydraulic sizing criteria used and provide the calculated design flow or volume:

Treatment System Component	Hydraulic Sizing Criteria Used[3]	Design Flow or Volume (cfs or cu.ft.)
Bioretention Basins & Raised Planters	3	-
Pervious Pvmt, Pavers & Synethic Turf	1b	-

[3]Key: 1a: Volume – WEF Method
1b: Volume – CASQA BMP Handbook Method
2a: Flow – Factored Flood Flow Method
2b: Flow – CASQA BMP Handbook Method
2c: Flow – Uniform Intensity Method
3: Combination Flow and Volume Design Basis

8. Alternative Certification: Was the treatment system sizing and design reviewed by a qualified third-party professional that is not a member of the project team or agency staff?

☑ Yes ☐ No Name of Reviewer: Rupeet Malhotra, Schaaf & Wheeler

9. Operation & Maintenance Information

A. Property Owner's Name: South Main Senior Lifestyles

B. Responsible Party for Stormwater Treatment/Hydromodification Control O&M:

a. Name: South Main Senior Lifestyles (James Burns)
b. Address: 5674 Stoneridge Drive #212 Pleasanton, CA 94588
c. Phone/E-mail: 415-339-8880x1091/ jrburns@cda-sf-architects.com

This section to be completed by City of Milpitas staff.

O&M Responsibility Mechanism

Indicate how responsibility for O&M is assured. Check all that apply:

☐ O&M Agreement

☐ Other mechanism that assigns responsibility (describe below):

_____

_____

Reviewed:

Planning Department	**Public Works Department**
Planning Division: _____	Land Development: _____
Other (Specify): _____	Other (Specify): _____

Appendix B

Infiltration/Harvesting infeasibility worksheet

Infiltration/Harvesting and Use Feasibility Screening Worksheet

Apply these screening criteria for C.3 Regulated Projects required to implement Provision C.3 stormwater treatment requirements. See the Glossary (Attachment 1) for definitions of terms marked with an asterisk (*). Contact municipal staff to determine whether the project meets Special Project* criteria. If the project meets Special Project criteria, it may receive LID treatment reduction credits.*

1. Applicant Info

Site Address: 1504,1556,1602,1618 & 1620 South Main Street, Milpitas , CA APN: 086-22-027, 028, 033, 034, 041, 042

Applicant Name: South Main Senior Lifestyles, LLC Phone No.: 925-463-9205

Mailing Address: 5674 Stoneride Drive #212, Pleasanton, CA 94588

2. Feasibility Screening for Infiltration

Do site soils either (a) have a saturated hydraulic conductivity* (Ksat) that will NOT allow infiltration of 80% of the annual runoff (that is, the Ksat is LESS than 1.6 inches/hour), or, if the Ksat rate is not available, (b) consist of Type C or D soils?[1]

☒ Yes (continue) ☐ No – complete the Infiltration Feasibility Worksheet. If infiltration of the C.3.d amount of runoff is found to be feasible, there is no need to complete the rest of this screening worksheet.

3. Recycled Water Use

Check the box if the project is installing and using a recycled water plumbing system for non-potable water use.

☒ The project is installing a recycled water plumbing system, and installation of a second non-potable water system for harvested rainwater is impractical, and considered infeasible due to cost considerations. Skip to Section 6.

*Recycled water is not currently available at the project. However, the City of Milpitas has indicated the recycled water will be extended to the project site within the next five years. The project will install the irrigation in manner to allow future connection.

4. Calculate the Potential Rainwater Capture Area* for Screening of Harvesting and Use

Complete this section for the entire project area. If rainwater harvesting and use is infeasible for the entire site, and the project includes one or more buildings that each have an individual roof area of 10,000 sq. ft. or more, then complete Sections 4 and 5 of this form for each of these buildings.

4.1 Table 1 for (check one): ☐ The whole project ☐ Area of 1 building roof (10,000 sq.ft. min.)

Table 1: Calculation of the Potential Rainwater Capture Area*

The Potential Rainwater Capture Area may consist of either the entire project area or one building with a roof area of 10,000 sq. ft. or more.

	1	2	3	4
	Pre-Project Impervious surface[2] (sq.ft.), if applicable	Proposed Impervious Surface[2] (IS), in sq. ft.		Post-project landscaping (sq.ft.), if applicable
		Replaced[3] IS	Created[4] IS	
a. Enter the totals for the area to be evaluated:	127,035	97,170	0	29,865
b. Sum of replaced and created impervious surface:	N/A	97,170		N/A
c. Area of existing impervious surface that will NOT be replaced by the project.	0	N/A		N/A

[1] Base this response on the site-specific soil report, if available. If this is not available, consult soil hydraulic conductivity maps in Attachment 3.

[2], Enter the total of all impervious surfaces, including the building footprint, driveway(s), patio(s), impervious deck(s), unroofed porch(es), uncovered parking lot (including top deck of parking structure), impervious trails, miscellaneous paving or structures, and off-lot impervious surface (new, contiguous impervious surface created from road projects, including sidewalks and/or bike lanes built as part of new street). Impervious surfaces do NOT include vegetated roofs or pervious pavement that stores and infiltrates rainfall at a rate equal to immediately surrounding, unpaved landscaped areas, or that stores and infiltrates the C.3.d amount of runoff*.

[3] "Replaced" means that the project will install impervious surface where existing impervious surface is removed.

[4] "Created" means the project will install new impervious surface where there is currently no impervious surface.

* For definitions, see Glossary (Attachment 1).

4.2 Answer this question ONLY if you are completing this section for the entire project area. If existing impervious surface will be replaced by the project, does the area to be replaced equal 50% or more of the existing area of impervious surface? *(Refer to Table 1, Row "a". Is the area in Column 2 > 50% of Column 1?)*

☒ Yes, C.3. stormwater treatment requirements apply to areas of impervious surface that will remain in place as well as the area created and/or replaced. This is known as the 50% rule.

☐ No, C.3. requirements apply only to the impervious area created and/or replaced.

4.3 Enter the square footage of the Potential Rainwater Capture Area*. If you are evaluating only the roof area of a building, or you answered "no" to Question 4.2, this amount is from Row "b" in Table 1. If you answered "yes" to Question 4.2, this amount is the sum of Rows "b" and "c" in Table 1.:

97,170 square feet.

4.4 Convert the measurement of the Potential Rainwater Capture Area* from square feet to acres (divide the amount in Item 4.3 by 43,560):

2.23 acres.

5. Feasibility Screening for Rainwater Harvesting and Use

5.1 Use of harvested rainwater for landscape irrigation:

Is the onsite landscaping LESS than 2.5 times the size of the Potential Rainwater Capture Area* (Item 4.3)? (Note that the landscape area(s) would have to be contiguous and within the same Drainage Management Area to use harvested rainwater for irrigation via gravity flow.)

☒ Yes (continue) ☐ No – Direct runoff from impervious areas to self-retaining areas* OR refer to Table 11 and the curves in Appendix F of the LID Feasibility Report to evaluate feasibility of harvesting and using the C.3.d amount of runoff for irrigation.

5.2 Use of harvested rainwater for toilet flushing or non-potable industrial use:

a. Residential Projects: Proposed number of dwelling units: 199
Calculate the dwelling units per impervious acre by dividing the number of dwelling units by the acres of the Potential Rainwater Capture Area* in Item 4.4. Enter the result here:

89.21 DU/AC)

Is the number of dwelling units per impervious acre LESS than 100 (assuming 2.7 occupants/unit)?

☒ Yes (continue) ☐ No – complete the Harvest/Use Feasibility Worksheet.

b. Commercial/Industrial Projects: Proposed interior floor area: _____ (sq. ft.)

Calculate the proposed interior floor area (sq.ft.) per acre of impervious surface by *dividing the interior floor area (sq.ft.) by the acres of the Potential Rainwater Capture Area* in Item 4.4. Enter the result here:*

_____

Is the square footage of the interior floor space per impervious acre LESS than 70,000 sq. ft.?

☐ Yes (continue) ☐ No – complete the Harvest/Use Feasibility Worksheet

c. School Projects: Proposed interior floor area: _____ (sq. ft.)

Calculate the proposed interior floor area per acre of impervious surface by *dividing the interior floor area (sq.ft.) by the acres of the Potential Rainwater Capture Area* in Item 4.4 . Enter the result here:*

_____.

Is the square footage of the interior floor space per impervious acre LESS than 21,000 sq. ft.?

☐ Yes (continue) ☐ No – complete the Harvest/Use Feasibility Worksheet

* For definitions, see Glossary (Attachment 1).

d. Mixed Commercial and Residential Use Projects

- Evaluate the residential toilet flushing demand based on the dwelling units per impervious acre for the residential portion of the project, following the instructions in Item 5.2.a, except you will use a prorated acreage of impervious surface, based on the percentage of the project dedicated to residential use.
- Evaluate the commercial toilet flushing demand per impervious acre for the commercial portion of the project, following the instructions in Item 5.2.a, except you will use a prorated acreage of impervious surface, based on the percentage of the project dedicated to commercial use.

e. Industrial Projects: Estimated non-potable water demand (gal/day): _____

Is the non-potable demand LESS than 2,400 gal/day per acre of the Potential Rainwater Capture Area?

☐ Yes (continue) ☐ No – refer to the curves in Appendix F of the LID Feasibility Report to evaluate feasibility of harvesting and using the C.3.d amount of runoff for industrial use.

6. Use of Biotreatment

If only the "Yes" boxes were checked for all questions in Sections 2 and 5, or the project will have a recycled water system for non-potable use (Section 3), then the applicant may use appropriately designed bioretention facilities for compliance with C.3 treatment requirements. The applicant is encouraged to maximize infiltration of stormwater if site conditions allow.

7. Results of Screening Analysis

Based on this screening analysis, the following steps will be taken for the project (check all that apply):

☒ Implement biotreatment measures (such as an appropriately designed bioretention area).

☐ Conduct further analysis of infiltration feasibility by completing the Infiltration Feasibility Worksheet.

☐ Conduct further analysis of rainwater harvesting and use (check one):

- ☐ Complete the Rainwater Harvesting and Use Feasibility Worksheet for:
  - ☐ The entire project
  - ☐ Individual building(s), if applicable, describe:_____
- ☐ Evaluate the feasibility of harvesting and using the C.3.d amount of runoff for irrigation, based on Table 11 and the curves in Appendix F of the LID Feasibility Report
- ☐ Evaluate the feasibility of harvesting and using the C.3.d amount of runoff for non-potable industrial use, based on the curves in Appendix F of the LID Feasibility Report.

* For definitions, see Glossary (Attachment 1).

LID Feasibility Worksheet
Attachment 1: Glossary

Biotreatment

A type of low impact development treatment allowed under Provision C.3.c of the *MRP**, if infiltration, evapotranspiration and rainwater harvesting and use are infeasible. As required by Provision C.3.c.i(2)(vi), biotreatment systems shall be designed to have a surface area no smaller than what is required to accommodate a 5 inches/hour stormwater runoff surface loading rate and shall use biotreatment soil as specified in the biotreatment soil specifications submitted by the MRP co-permittees to the Regional Water Quality Control Board on May 1, 2011, or equivalent.

C.3 Regulated Projects:

Development projects as defined by Provision C.3.b.ii of the *MRP**. This includes public and private projects that create and/or replace 10,000 square feet or more of impervious surface, and restaurants, retail gasoline outlets, auto service facilities, and uncovered parking lots (stand-alone or part of another use) that create and/or replace 5,000 square feet or more of impervious surface. Single family homes that are not part of a larger plan of development are specifically excluded.

C.3.d Amount of Runoff

The amount of stormwater runoff from C.3 Regulated Projects that must receive stormwater treatment, as described by hydraulic sizing criteria in Provision C.3.d of the *MRP**.

Heritage Tree

An individual tree of any size or species given the 'heritage tree' designation as defined by the municipality's tree ordinance or other section of the municipal code.

Infiltration Devices

Infiltration facilities that are deeper that they are wide and designed to infiltrate stormwater runoff into the subsurface and, as designed, bypass the natural groundwater protection afforded by surface soil. These devices include dry wells, injection wells and infiltration trenches (includes French drains).

Infiltration Facilities

A term that refers to both infiltration devices and measures.

Infiltration Measures

Infiltration facilities that are wider than they are deep (e.g., bioinfiltration, infiltration basins and shallow wide infiltration trenches and dry wells).

Low Impact Development (LID) Treatment

Removal of pollutants from stormwater runoff using the following types of stormwater treatment measures: rainwater harvesting and use, infiltration, evapotranspiration, or, where these are infeasible, biotreatment.

Municipal Regional Stormwater Permit (MRP)

The municipal stormwater NPDES permit under which discharges are permitted from municipal separate storm sewer systems throughout the NPDES Phase I jurisdictions within the San Francisco Bay Region.

Potential Rainwater Capture Area

The impervious area from which rainwater may be potentially be captured, if rainwater harvesting and use were implemented for a project. If the entire site is evaluated for rainwater harvesting and use feasibility, this consists of the impervious area of the proposed project; for redevelopment projects that replace 50% or more of the existing impervious surface, it also includes the areas of existing impervious surface that are not modified by the project. If only a roof area or designated impervious area is evaluated for rainwater harvesting and use feasibility, the potential rainwater capture area consists only of the applicable impervious area.

Screening Density

A threshold of density (e.g., number of units or interior floor area) per acre of impervious surface, associated with a certain potential demand for non-potable water, for C.3 regulated projects. The screening density varies by municipality, according to location (see Attachment 2.) If the screening density is met or exceeded, the Rainwater Harvesting and Use Feasibility Worksheet must be completed for the project.

Self-Retaining Area

A portion of a development site designed to retain the first one inch of rainfall (by ponding and infiltration and/or evapotranspiration) without producing stormwater runoff. Self-retaining areas must have at least a 2:1 ratio of contributing area to a self-retaining area and a 3" ponding depth. Self-retaining areas may include graded depressions with landscaping or pervious pavement.

Areas that Contribute Runoff to Self-Retaining Areas are impervious or partially pervious areas that drain to self-retaining areas.

Self-Treating Area

A portion of a development site in which infiltration, evapotranspiration and other natural processes remove pollutants from stormwater. Self-treating areas may include conserved natural open areas, areas of landscaping, green roofs and pervious pavement. Self-treating areas treat only the rain falling on them and do not receive stormwater runoff from other areas.

Special Projects

Certain types of smart growth, high density and transit oriented development projects that are allowed, under Provision C.3.e.ii of the MRP, to receive LID treatment reductions. The specific development project types will be described in an amendment to the MRP, anticipated in Fall 2011.

Total Project Cost

Total project cost includes the construction (labor) and materials cost of the physical improvements proposed; however, it does not include land, transactions, financing, permitting, demolition, or off-site mitigation costs.

LID Feasibility Worksheet
Attachment 2: Toilet-Flushing Demand for Harvested Rainwater[1] Required for Rainwater Harvesting Feasibility per Impervious Acre (IA) [2]

Table 1 - Alameda County:

Rain Gauge[3]	Required Demand (gal/day/IA)[4]	Residential		Office/Retail[5]		Schools[6]	
		No. of residents per IA[7]	Dwelling Units per IA[8]	Employees per IA[9]	Interior Floor Area (sq.ft./IA)[10]	Employees[11] per IA	Interior Floor Area (sq.ft./IA)[12]
Berkeley	5,900	690	255	860	172,000	170	51,000
Dublin	4,100	480	177	590	118,000	120	36,000
Hayward	4,800	560	207	700	140,000	140	42,000
Palo Alto	2,900	340	125	420	84,000	90	27,000
San Jose	2,400	280	103	350	70,000	70	21,000

Table 2 - Santa Clara County:

Rain Gauge[3]	Required Demand (gal/day/IA)[4]	Residential		Office/Retail[5]		Schools[6]	
		No. of residents per IA[7]	Dwelling Units per IA[8]	Employees per IA[9]	Interior Floor Area (sq.ft./IA)[10]	Employees[11] per IA	Interior Floor Area (sq.ft./IA)[12]
Morgan Hill	6,500	760	260	940	188,000	190	57,000
Palo Alto	2,900	340	116	420	84,000	90	27,000
San Jose	2,400	280	96	350	70,000	70	21,000

Table 3 – San Mateo County:

Rain Gauge[3]	Required Demand (gal/day/IA)[4]	Residential		Office/Retail[5]		Schools[6]	
		No. of residents per IA[7]	Dwelling Units per IA[8]	Employees per IA[9]	Interior Floor Area (sq.ft./IA)[10]	Employees[11] per IA	Interior Floor Area (sq.ft./IA)[12]
Palo Alto	2,900	340	124	420	84,000	90	27,000
San Francisco	4,600	530	193	670	134,000	140	42,000
SF Oceanside	4,300	500	182	620	124,000	130	39,000

Table 4 – Contra Costa County:

Rain Gauge[3]	Required Demand (gal/day/IA)[4]	Residential		Office/Retail[5]		Schools[6]	
		No. of residents per IA[7]	Dwelling Units per IA[8]	Employees per IA[9]	Interior Floor Area (sq.ft./IA)[10]	Employees[11] per IA	Interior Floor Area (sq.ft./IA)[12]
Berkeley	5,900	690	254	860	172,000	170	51,000
Brentwood	4,200	490	180	610	122,000	120	36,000
Dublin	4,100	480	176	590	118,000	120	36,000
Martinez	5,900	690	254	860	172,000	170	51,000

Table 5 – Solano County:

Rain Gauge[3]	Required Demand (gal/day/IA)[4]	Residential		Office/Retail[5]		Schools[6]	
		No. of residents per IA[7]	Dwelling Units per IA[8]	Employees per IA[9]	Interior Floor Area (sq.ft./IA)[10]	Employees[11] per IA	Interior Floor Area (sq.ft./IA)[12]
Lake Solano	9,000	1,050	362	1,300	260,000	270	81,000
Martinez	5,900	690	238	860	172,000	170	51,000

Notes:

1. Demand thresholds obtained from the "Harvest and Use, Infiltration and Evapotranspiration Feasibility/Infeasibility Criteria Report" (LID Feasibility Report) submitted to the Regional Water Board on May 1, 2011.
2. Toilet flushing demands assume use of low flow toilets per the California Green Building Code.
3. See Attachment 3 to identify the rain gauge that corresponds to the project site.
4. Required demand per acre of impervious area to achieve 80% capture of the C.3.d runoff volume with the maximum allowable drawdown time for cistern of 50,000 gallons or less, from Table 9 of the LID Feasibility Report.
5. "Office/Retail" includes the following land uses: office or public buildings, hospitals, health care facilities, retail or wholesale stores, and congregate residences.
6. "Schools" includes day care, elementary and secondary schools, colleges, universities, and adult centers.
7. Residential toilet flushing demand identified in Table 10 of the LID Feasibility Report.
8. Residential toilet flushing demand divided by the countywide average number of persons per household (US Census data reported on www.abag.org), as follows: Alameda County: 2.71 persons per household; Santa Clara County: 2.92; San Mateo County: 2.74; Contra Costa County: 2.72; Solano County: 2.90.
9. Office/retail employee toilet flushing demand identified in Table 10 of the LID Feasibility Report.
10. Interior floor area required for rainwater harvest and use feasibility per acre of impervious area is based on the number of employees in Column 5 multiplied by an occupant load factor of 200 square feet per employee (reference: 2010 California Plumbing Code, Chapter 4, Plumbing Fixtures and Fitting Fixtures, Table A, page 62.)
11. School employee toilet flushing demand identified in Table 10 of the LID Feasibility Report. Each school employee represents 1 employee and 5 "visitors" (students and others).
12. Interior floor area required for rainwater harvest and use feasibility per acre of impervious area is based on the number of employees in Column 7 multiplied by 6 to account for visitors, then multiplied by an occupant load factor of 50 square feet per employee (reference: 2010 California Plumbing Code).

Appendix C

Special Projects Worksheet

Special Projects Worksheet

Project Name: South Main Senior Lifestyles

Project Address: 1504, 1556, 1602, 1618 & 1620 South Main Street, Milpitas CA

Applicant/Developer Name: South Main Senior Lifestyles

1. "Special Project" Determination:

Special Project Category "A"

Does the project have ALL of the following characteristics?

- ☐ Located in a municipality's designated central business district, downtown core area or downtown core zoning district, neighborhood business district or comparable pedestrian-oriented commercial district, or historic preservation site and/or district[1];
- ☐ Creates and/or replaces 0.5 acres or less of impervious surface;
- ☐ Includes no surface parking, except for incidental parking for emergency vehicle access, ADA access, and passenger or freight loading zones;
- ☐ Has at least 85% coverage of the entire site by permanent structures. The remaining 15% portion of the site may be used for safety access, parking structure entrances, trash and recycling service, utility access, pedestrian connections, public uses, landscaping and stormwater treatment.

☒ No (continue) ☐ Yes – complete Section 2 of the Special Project Worksheet

Special Project Category "B"

Does the project have ALL of the following characteristics?

- ☐ Located in a municipality's designated central business district, downtown core area or downtown core zoning district, neighborhood business district or comparable pedestrian-oriented commercial district, or historic preservation site and/or district[1];
- ☐ Creates and/or replaces an area of impervious surface that is greater than 0.5 acres, and no more than 2.0 acres;
- ☐ Includes no surface parking, except for incidental parking for emergency access, ADA access, and passenger or freight loading zones;
- ☐ Has at least 85% coverage of the entire site by permanent structures. The remaining 15% portion of the site may be used for safety access, parking structure entrances, trash and recycling service, utility access, pedestrian connections, public uses, landscaping and stormwater treatment;
- ☐ Minimum density of either 50 dwelling units per acre (for residential projects) or a Floor Area Ratio (FAR) of 2:1 (for commercial or mixed use projects)

☒ No (continue) ☐ Yes – complete Section 2 of the Special Project Worksheet

Special Project Category "C"

Does the project have ALL of the following characteristics?

- ☒ At least 50% of the project area is within 1/2 mile of an existing or planned transit hub[2] or 100% within a planned Priority Development Area[3];
- ☒ The project is characterized as a non-auto-related use[4]; and
- ☒ Minimum density of either 25 dwelling units per acre (for residential projects) or a Floor Area Ratio (FAR) of 2:1 (for commercial or mixed use projects)

☐ No ☒ Yes – complete Section 2 of the Special Project Worksheet

*Density = 199-DU/2.9-acres = 68 DU/acre

[1] And built as part of a municipality's stated objective to preserve/enhance a pedestrian-oriented type of urban design.

[2] "Transit hub" is defined as a rail, light rail, or commuter rail station, ferry terminal, or bus transfer station served by three or more bus routes. (A bus stop with no supporting services does not qualify.)

[3] A "planned Priority Development Area" is an infill development area formally designated by the Association of Bay Area Government's / Metropolitan Transportation Commission's FOCUS regional planning program.

[4] Category C specifically excludes stand-alone surface parking lots; car dealerships; auto and truck rental facilities with onsite surface storage; fast-food restaurants, banks or pharmacies with drive-through lanes; gas stations; car washes; auto repair and service facilities; or other auto-related project unrelated to the concept of transit oriented development.

2. LID Treatment Reduction Credit Calculation:

Category	Impervious Area Created/Replaced (acres)	Site Coverage (%)	Project Density or FAR	Density/Criteria	Allowable Credit (%)	Applied Credit (%)
A			N.A.	N.A.	100%	
B				Res ≥ 50 DU/ac or FAR ≥ 2:1	50%	
				Res ≥ 75 DU/ac or FAR ≥ 3:1	75%	
				Res ≥ 100 DU/ac or FAR ≥ 4:1	100%	
C	2.33 acres (101,540-sf)	80%		**Location credit (select one)[5]:**		
			< 1/2 mile	Within ¼ mile of transit hub	50%	
				Within ½ mile of transit hub	25%	25%
				Within a planned PDA	25%	
				Density credit (select one):		
			68 DU/ac	Res ≥ 30 DU/ac or FAR ≥ 2:1	10%	
				Res ≥ 60 DU/ac or FAR ≥ 4:1	20%	20%
				Res ≥ 100 DU/ac or FAR ≥ 6:1	30%	
				Parking credit (select one):		
			3,200-sf = ±3%	≥ 10% at-grade surface parking[6]	10%	10%
				No surface parking	20%	
				TOTAL TOD CREDIT =		55%

=55,845-sf

No credits used

[5] To qualify for the location credit, at least 50% of the project's site must be located within the ¼ mile or ½ mile radius of an existing or planned transit hub, as defined on page 1, footnote 2. A planned transit hub is a station on the MTC's Regional Transit Expansion Program list, per MTC's Resolution 3434 (revised April 2006), which is a regional priority funding plan for future transit stations in the San Francisco Bay Area. To qualify for the PDA location credit, 100% of the project site must be located within a PDA, as defined on page 1, footnote 3.

[6] The at-grade surface parking must be treated with LID treatment measures.

Appendix D

Soil Classification Information

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*
131—Urban land-Elpaloalto complex, 0 to 2 percent slopes							
Urban land	—	—	—	—	—	—	—
Elpaloalto	0-8	—	—	—	—	—	—
	8-17	-29-	-44-	20-27- 35	1.35-1.45	1.40-14.00	0.15-0.21
	17-26	- 3-	-59-	27-38- 40	1.35-1.45	1.40-4.00	0.17-0.21
	26-35	- 1-	-59-	27-40- 40	1.35-1.45	1.40-4.00	0.17-0.21
	35-47	- 4-	-56-	27-40- 40	1.35-1.45	1.40-4.00	0.17-0.21
	47-71	-10-	-51-	27-39- 40	1.35-1.45	1.40-4.00	0.17-0.21
	71-94	-17-	-50-	25-33- 40	1.35-1.45	1.40-4.00	0.17-0.21
180—Urbanland-Newpark complex, 0 to 2 percent slopes							
Urban land	—	—	—	—	—	—	—
Newpark	0-8	- 7-	-63-	25-30- 35	1.35-1.45	1.40-4.00	0.17-0.21
	8-18	- 6-	-62-	25-32- 35	1.35-1.45	1.40-4.00	0.17-0.21
	18-27	- 6-	-62-	25-32- 35	1.35-1.45	1.40-4.00	0.17-0.21
	27-36	- 7-	-65-	27-28- 35	1.35-1.45	1.40-4.00	0.17-0.21
	36-52	- 7-	-65-	27-28- 35	1.35-1.45	1.40-4.00	0.17-0.21
	52-63	-69-	-16-	15-15- 30	1.40-1.55	1.40-14.00	0.13-0.21
	63-79	-68-	-16-	15-16- 30	1.40-1.50	1.40-14.00	0.13-0.21

FIGURE 3 - NRCS SOIL CLASSIFICATION
PRELIMINARY STORWATER CONTROL PLAN

SOUTH MAIN SENIOR LIFESTYLES-PHASE 1

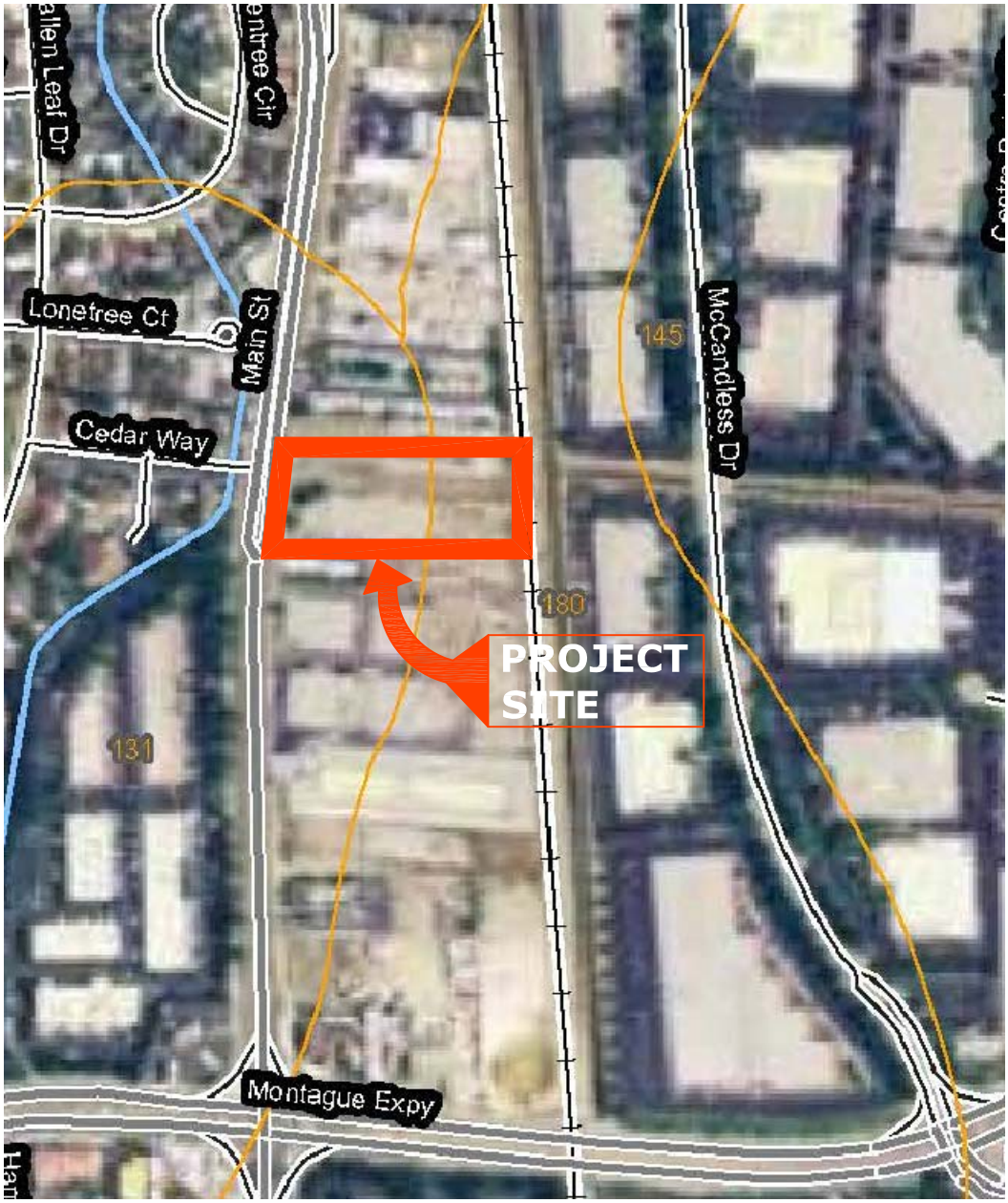
MILPITAS, CALIFORNIA

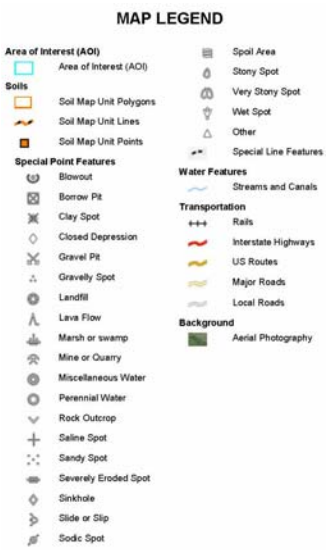
AUGUST 2016

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JOB NUMBER: 092041

SHEET 1 OF 1 SHEETS





SOURCE: NATURAL RESOURCES CONSERVATION SERVICE, WEBSOILSURVEY.NRCS.USDA.GOV/APP/WEBSOILSURVEY.ASPX

PLOT DATE: 8/14/2016 3:44 PM
FILE PATH: W:\Jobs 09\092041\Drawings\FinalStudies & Calculations\SWCP\Fig 3 - NRCS Soil Map.dwg

Appendix E

MRP Calculations Worksheet

Section II. Sizing for Volume-Based Treatment Measures, continued

Section II.B. — Sizing Volume-Based Treatment Measures based on the Adapted CASQA Stormwater BMP Handbook Approach

The equation that will be used to size the BMP is:

*Calculation for area 2.

BMP Volume = (Correction Factor) × (Unit Storage) × (Drainage Area to the BMP)

Step 1. Determine the drainage area for the BMP, A = 0.10 acres

Step 2. Determine percent imperviousness of the drainage area:

a. Estimate the amount of impervious surface (rooftops, hardscape, streets, and sidewalks, etc.) in the area draining to the BMP: 0.08 acres

b. % impervious area=(amount of impervious area/drainage area for the BMP) × 100
% impervious area= **(Step 2.a/Step 1)** × 100
% impervious area= 81 %

Step 3. Find the mean annual precipitation at the site (MAP_{site}). To do so, estimate where the site is on Figure B-1 and estimate the mean annual precipitation in inches from the rain line (isopleth) nearest to the project site.[6] Interpolate between isopleths if necessary.

MAP_{site} = 14.5 inches

Step 4. Identify the reference rain gage closest to the project site from Table B-2b and record the MAP_{gage}:

MAP_{gage} = 13.9 inches

Table B-2b: Precipitation Data for Three Reference Gages

Reference Rain Gages	Mean Annual Precipitation (MAP_{gage}) (in)
San Jose Airport	13.9
Palo Alto	13.7
Morgan Hill	19.5

[6] Check with the local municipality to determine if more detailed maps are available for locating the site and estimating MAP.

III. Sizing for Flow-based Treatment Measures, continued

Section III.B.—Sizing Flow-Based Treatment Measures based on the CASQA Stormwater BMP Handbook Flow Approach

This method uses the Rational Method equation to determine the design flow:

$$Q=CIA$$ *Calculation for area 6

Where:

Q = the design flow in cubic feet per second (cfs),
C = the drainage area runoff coefficient,
I = the design intensity (in/hr), and
A = the drainage area for the BMP (acres)

Step 1. Determine the drainage area for the BMP, A = 1.14 acres

Step 2. Determine the runoff coefficient, C = 0.88 from Table B-3 or B-4.

It is more accurate to compute an area-weighted "C-factor" based on the surfaces in the drainage area (Table B-3), if possible, than to assume a composite "C-factor" such as those in Table B-4, especially for small drainage areas.

Step 3. Find the mean annual precipitation at the site (MAP_{site}). To do so, estimate where the site is on Figure B-1 and estimate the mean annual precipitation in inches from the rain line (isopleth) nearest to the project site.[8] Interpolate between isopleths if necessary.

MAP_{site} = 14.5 inches

Step 4. Identify the reference rain gage closest to the project site from Table B-2b and record the MAP_{gage}:

MAP_{gage} = 13.9 inches

Table B-2b: Precipitation Data for Three Reference Gages

Reference Rain Gages	Mean Annual Precipitation (MAP_{gage}) (in)
San Jose Airport	13.9
Palo Alto	13.7
Morgan Hill	19.5

[8] Check with the local municipality to determine if more detailed maps are available for locating the site and estimating MAP.

Appendix F

Stormwater BMP Calculations and Details

Project Name: South Main Senior Lifestyles Phase 1
Project Location: Milpitas, CA
Date: 10/10/2017

Project Information

Area =	125,850	ft^2	*Total project area*
Ex Impervious Area =	116,670	ft^2	*Total existing project impervious area*
	93%		*Percent existing impervious area*
Ex Imperv Area To Remain =	0	ft^2	*Total existing impervious surface to remain*
Replaced Imperv Area =	96,740	ft^2	*Total existing impervious surface to be replaced as part of project*
New Imperv Area =	0	ft^2	*Total new impervious surface to be installed as part of project*
Total Impervious Area =	96,740	ft^2	*Total project impervious area*
	77%		*Percent impervious area*

Site Design Requirements

1. Project creates or replaces greater than 10,000-sf of impervious surface.
   Project shall implement C.3 source control, site design, and treatment requirements
2. Post-project impervious surface is less than pre-project impervious surface.
   Hydromodification and flood control management is not required.

Rainfall Design Information

Reference Rain Guage = San Jose Airport

MAP_{guage} =	13.9	in	*Reference Rain Guage closest to the project site*
MAP_{site} =	14.5	in	*Mean Annual Precipitation at project site*
CF =	1.04		*Rain Guage correction factor*
$P_{6\ gauge}$ =	0.512	in	*Mean storm event precipitation at reference rain gauge*
$I_{85\ gauge}$ =	0.087	in/hr	*85th percentile hourly rainfall intensity at reference rain gauge*
$P_{6\ site}$ =	0.54	in	*Project mean storm event precipitation for volume based design*
$I_{WQ\ site}$ =	0.19	in/hr	*Two times the project 85th percentile hourly rainfall intensity for flow based desig*

Soil Type Design Information

Groundwater Depth =	0-10	ft	*Based on SCVWD seasonal high groundwater maps*
Site HSG =	D		*NRCS Hydrologic Soil Group Classification*
Infiltration Rate =	0.2	in/hr	*NRCS documented low hydraulic conductitivity*
Safety Factor =	1		
Design Infiltration Rate* =	5.0	in/hr	

**Infiltration is deemed infeasible due to slow infiltrating soils and high expansion potential. Site shall implement biotreatment measures such as bioretention basins with a filtration rate of 5-10 in/hr. A design infiltration rate of 5.0 in/hr will be used for design.*

3.5 gal/min
area

Project Name: South Main Senior Lifestyles
Project Location: Milpitas, CA
Date: 12/13/2017

BMP Volume Calculations - CASQA BMP Handbook Method

Drainage Area ID	Area (SF)	Imperv Area (SF)	% Imperv	Soil Type	Average Slope (%)	Unit Basin Storage (in) 1%	Unit Basin Storage (in) Drainage Area Specific	Design WQ_v (ft^3)
A1	7,260	6,440	89%	Clay (D)	1%	0.54	0.56	341
A2	4,360	3,545	81%	Clay (D)	1%	0.50	0.52	190
A3	4,490	3,610	80%	Clay (D)	1%	0.50	0.52	195
A4	6,235	4,555	73%	Clay (D)	1%	0.48	0.50	260
A5	5,665	4,505	80%	Clay (D)	1%	0.5	0.52	246
A6	6,260	4,090	65%	Clay (D)	1%	0.44	0.46	239
A7	7,840	6,570	84%	Clay (D)	1%	0.52	0.54	354
A8	7,875	6,755	86%	Clay (D)	1%	0.54	0.56	370
R1	4,315	4,315	100%	Clay (D)	1%	0.58	0.61	218
R2	5,930	5,930	100%	Clay (D)	1%	0.58	0.61	299
R3	4,420	4,420	100%	Clay (D)	1%	0.58	0.61	223
R4	5,895	5,895	100%	Clay (D)	1%	0.58	0.61	297
R5	5,670	5,670	100%	Clay (D)	1%	0.58	0.61	286
R6	8,820	8,820	100%	Clay (D)	1%	0.58	0.61	445
R7	4,290	4,290	100%	Clay (D)	1%	0.58	0.61	216
R8	5,485	5,485	100%	Clay (D)	1%	0.58	0.61	277
R9	5,985	5,985	100%	Clay (D)	1%	0.58	0.61	302
C1	6,575	4,290	65%	Clay (D)	1%	0.58	0.61	332
C2[3]	16,695	0	0%	Clay (D)	1%	0.30	0.31	431
C3	3,070	2,353	77%	Clay (D)	1%	0.58	0.61	155
Total	***127,135***	***97,523***	***77%***					***5,675***

BMP Sizing Calculation - Combination Flow & Volume Based Method

SCM Description	Rain Event Duration @ I_{WQ} (hr)	BMP Surface Area (ft^2)	WQ_v Filterd During T_D (ft^3)	WQ_v Remaing Volume (ft^3)	Surface Ponding Depth (in)	BSM Depth (in)	Porosity 0.25 Gravel Layer Depth (in)	Porosity 0.35 Required BMP Area (ft^2)	Drawdown Time (hr)
Bioretention	2.82	**180**	211	130	9	0	0	**173**	5
Bioretention	2.61	**125**	136	54	6	0	0	**107**	4
Bioretention	2.61	**130**	141	54	6	0	0	**108**	4
Bioretention	2.50	**140**	146	114	10	0	0	**137**	4
Bioretention	2.61	**135**	147	100	9	0	0	**133**	4
Bioretention	2.29	**160**	153	86	7	0	0	**148**	4
Bioretention	2.71	**185**	209	145	10	0	0	**174**	5
Bioretention	2.82	**190**	223	147	10	0	0	**176**	5
Bioretention	3.03	**125**	158	60	6	0	0	**120**	4
Bioretention	3.03	**170**	214	85	6	0	0	**169**	4
Bioretention	3.03	**130**	164	59	6	0	0	**118**	4
Bioretention	3.03	**170**	214	83	6	0	0	**166**	4
Bioretention	3.03	**165**	208	78	6	0	0	**156**	4
Bioretention	3.03	**260**	328	117	6	0	0	**234**	4
Bioretention	3.03	**125**	158	59	6	0	0	**117**	4
Bioretention	3.03	**160**	202	75	6	0	0	**150**	4
Bioretention	3.03	**175**	221	81	6	0	0	**162**	4
Bioretention	3.03	**160**	202	130	10	0	0	**156**	5
Self-Treating	See Table Below		------	------	------	------	------	------	------
Bioretention	3.03	**90**	113	41	6	0	0	**83**	4
		2,975						***2,787***	

Notes:

1. Unit basin storage factors are based on Appendix B of the SCVURPPP C.3 Manual dated June 2016.
2. BMP sizing is based on Flow & Volume based method described in Chapter 5 and Appendix B of the SCVURPPP C.3 Manual dated June 2016.
3. Drainage area C2 BMP Sizing calculations are provided in table below.

Governing Equations:

$WQ_v = \frac{(CF)SA}{12}$ acre-ft

CF = *Rain gauage correction factor*
S = *Unit Basin Storage (in)*
A = *drainage area (ft^2)*
WQ_v = *Water quality design volume (ft^3)*

$T_{WQ} = \frac{S}{I_{WQ}}$

T_{WQ} = *Rain event duration (hr)*
I_{WQ} = *0.2 in/hr*

$WQ_{VF} = \frac{Area * T_{WQ} * I}{12}$

WQ_{VF} = *Water qaulity volume filtered during T_D (ft^3)*
T_{WQ} = *Rain event duration (hr)*
Area = *BMP surface area (ft^2)*
I = 5.0 *Design Infiltration Rate (in/hr)*

$\text{Required BMP Area} = \frac{WQ_v * 12}{D_P + D_{BSM} * R_{BSM} + D_G * R_G}$

Area = *BMP surface area (ft^2)*
D = *BMP Layer depth (in)*
R = *BMP Layer porosity (in)*

$T_D = \frac{WQ_v * 12}{I * Area}$

T_D = *Drawdown time (hr)*
Area = *BMP surface area (ft^2)*
I = 5.0 *Design Infiltration Rate (in/hr)*

BMP Volume Calculations - CASQA BMP Handbook Method -Self-Treating Areas (Area C-2)

Drainage Area ID	Area (SF)	Imperv Area (SF)	% Imperv	Soil Type	Average Slope (%)	Storage (in) 1%	Storage (in) Drainage Area Specific	Design WQ_v (ft^3)
C2 - EVA	8,720	8,720	100%	Clay (D)	1%	0.58	0.61	440
C2 - Courtyard	3,785	3,785	100%	Clay (D)	1%	0.58	0.61	191
C2 - Courtyard	1,125	1,125	100%	Clay (D)	1%	0.58	0.61	57
Total	***13,630***	***13,630***	***100%***				***1.8***	

BMP Sizing Calculation - Combination Flow & Volume Based Method

SCM Description	Rain Event Duration @ I_{WQ} (hr)	Surface Area (ft^2)	Gravel Depth (in)	Porosity 0.35 Provided Gravel Vol (ft^3)	Required Gravel Vol (ft^3)
Perv Pvmt	3.03	8,720	12	**3,052**	**440**
Perm. Paver	3.03	3,785	6	**662**	**191**
Synthic Turf	3.03	1,125	4	**131**	**57**

Project Name: South Main Senior Lifestyles
Project Location: Milpitas, CA
Date: 12/13/2017

TA-C2 (Pervious Concrete)

Storage Volume

Required Volume =	440	cf
Surface Area =	8720	sf
Min Base Depth=	0.17	ft
Actual Base Depth=	1.00	ft
Base Void Ratio	0.35	
Min Required Volume =	**509**	**cf**
Total Provided Volume =	**3052**	**cf**

Drawdown

Soil Infiltration Rate =	0.15	in/hr
=	0.0125	ft/hr
Duration =	72	hr
Infiltration in 72 hrs=	0.90	ft
Infiltration Area =	8720.0	sf

Infiltration Volume Capacity (cf) in 72 hrs = 7848 cf >440 cf OK

FUNCTIONS AS SELF-RETAINING AREA

TA-C2 (Pavers)

Storage Volume

Required Volume =	191	cf
Surface Area =	3785	sf
Min Base Depth=	0.17	ft
Actual Base Depth=	0.5	ft
Base Void Ratio	0.35	
Min Required Volume =	**221**	**cf**
Total Provided Volume =	**662**	**cf**

Drawdown

Soil Infiltration Rate =	0.15	in/hr
=	0.0125	ft/hr
Duration =	72	hr
Infiltration in 72 hrs=	0.90	ft
Infiltration Area =	3785.0	sf

Infiltration Volume Capacity (cf) in 72 hrs = 3407 cf >191 cf OK

FUNCTIONS AS SELF-RETAINING AREA

TA-C2 (Synthetic Turf)

Storage Volume

Required Volume =	57	cf
Surface Area =	1125	sf
Min Base Depth=	0.17	ft
Actual Base Depth=	0.3	ft
Base Void Ratio	0.35	
Min Required Volume =	**66**	**cf**
Total Provided Volume =	**131**	**cf**

Drawdown

Soil Infiltration Rate =	0.15	in/hr
=	0.0125	ft/hr
Duration =	72	hr
Infiltration in 72 hrs=	0.90	ft
Infiltration Area =	1125.0	sf

Infiltration Volume Capacity (cf) in 72 hrs = 1013 cf >57 cf OK

FUNCTIONS AS SELF-RETAINING AREA

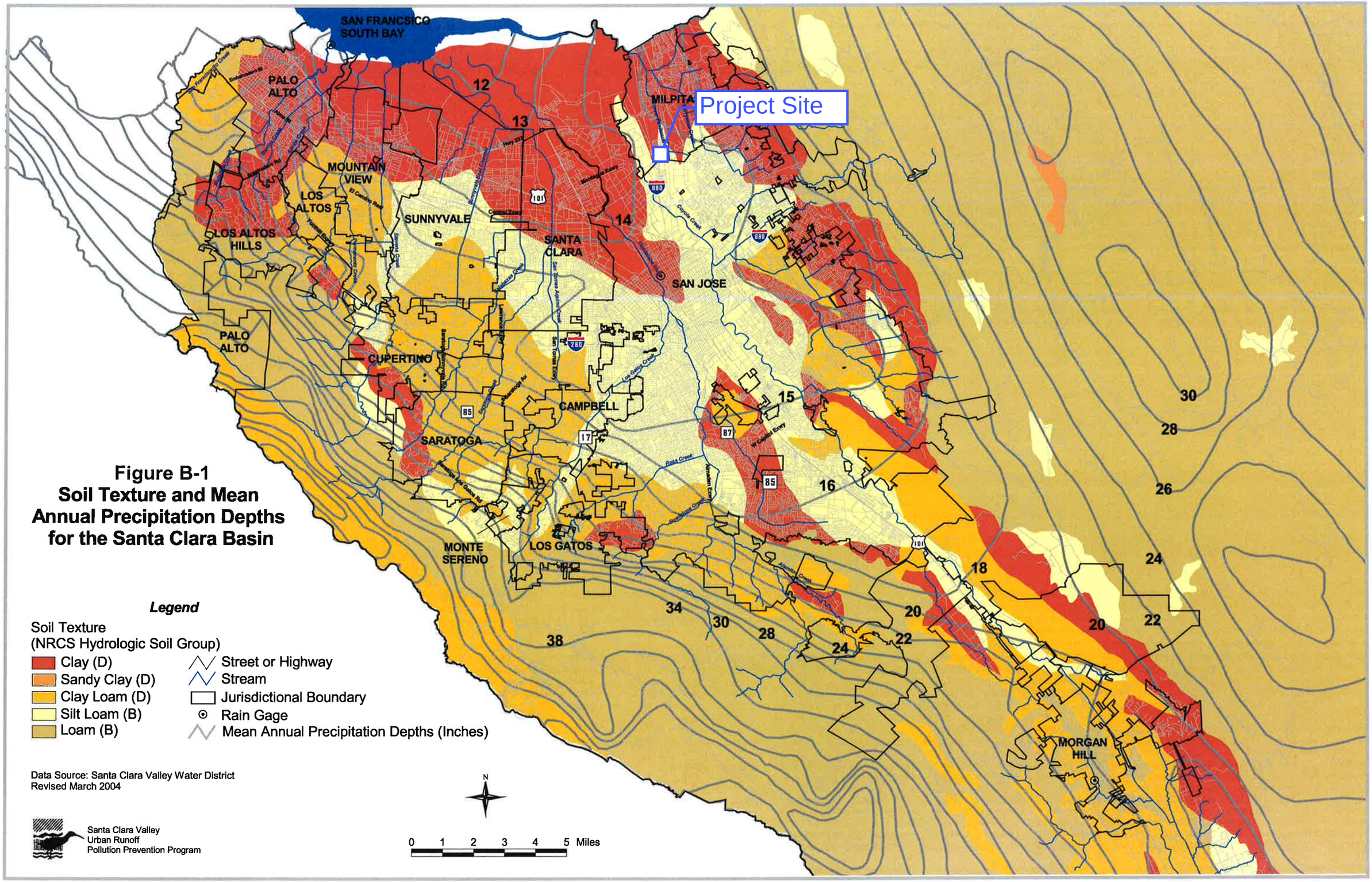


Figure B-1
Soil Texture and Mean Annual Precipitation Depths for the Santa Clara Basin

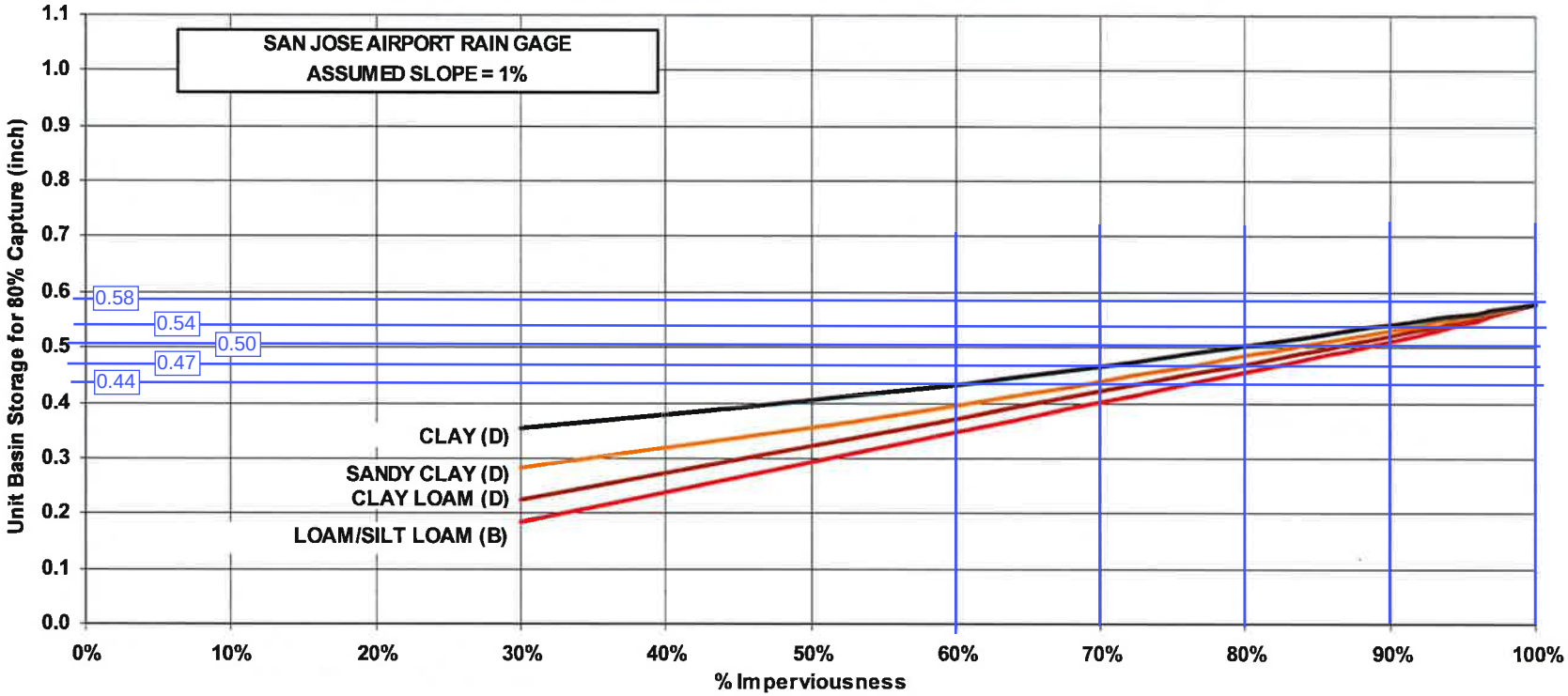


Figure B-2 Unit Basin Volume for 80% Capture - San Jose Airport Rain Gage

Appendix G

Site Plan

TRIBUTARY AREA ID	TRIBUTARY AREA (SF)	IMPERVIOUS AREA (SF)	LANDSCAPE/PERV AREA (SF)	TREATMENT AREA REQUIRED (SF)	TREATMENT AREA PROVIDED (SF)
A1	7,260	6,440	820	173	180
A2	4,360	3,545	815	107	125
A3	4,490	3,610	880	108	130
A4	6,235	4,555	1,680	137	140
A5	5,665	4,505	1,160	133	135
A6	6,260	4,090	2,170	148	160
A7	7,840	6,570	1,270	174	185
A8	7,875	6,755	1,120	176	190
R1[1]	4,315	4,315	0	120	125
R2[1]	5,930	5,930	0	169	170
R3[1]	4,420	4,420	0	118	130
R4[1]	5,895	5,895	0	166	170
R5[1]	5,670	5,670	0	156	165
R6[1]	8,820	8,820	0	234	260
R7[1]	4,290	4,290	0	117	125
R8[1]	5,485	5,485	0	150	160
R9[1]	5,985	5,985	0	162	175
C1	6,575	4,290	2,285	156	160
C2[2]	16,695	0	16,695	Self-Treating	
C3	3,070	2,353	717	83	90

SEE PUBLIC IMP. PLANS

JUNCTION BOX (TYP)
FIELD INLET (TYP)
SIDEWALK DRAIN (TYP)
STORM DRAIN CLEAN OUT (TYP)
FIELD INLET (TYP)
SIDEWALK DRAIN (TYP)
CEDAR WAY (PUBLIC)
SIDEWALK DRAIN (TYP)
SIDEWALK DRAIN (TYP)
SOUTH MAIN STREET (PUBLIC)
FIELD INLET (TYP)
CURB CUT (TYP)
FIELD INLET (TYP)
CURB CUT (TYP)
ROOF DRAIN (TYP)
ROOF DRAIN (TYP)
ROOF DRAIN (TYP)
ROOF DRAIN (TYP)
ROOF DRAIN (TYP)
GREASE INTERCEPTOR (SEE NOTE 4)
COVERED DUMPSTER AREA
SS LAT
INDOOR SWIMMING POOL (SEE NOTE 3)
SELF-TREATING AREA
SELF-TREATING AREA
COSTA STREET (PUBLIC)
CURB CUT (TYP)
CURB CUT (TYP)
SDJB (TYP)
SDJB (TYP)
EVA
FIELD INLET (TYP)
PERVIOUS/SELF-TREATING SURFACE (TYP)
TA 1
TA 2
TA 3
TA 4
TA 5
TA 6
TA C3
TA 7
TA 8
TA C1
TA R1
TA R2
TA R3
TA R4
TA R5
TA R6
TA R7
TA R8
TA R9
A1
A2
A3
A4
A5
A6
A7
A8
R1
R2
R3
R4
R5
R6
R7
R8
R9
C1
C2
C3
HP
LP

LEGEND

- BUILDING ROOF AREA
- BMP AREA
- CONCRETE
- DRAINAGE AREA
- XX — DRAINAGE AREA NUMBER
- TA(X) — BMP DESCRIPTION
- DRAINAGE FLOW LINES
- HP — HIGH POINT
- LP — LOW POINT

NOTES:

1. ROOF AREAS WILL BE TREATED IN RAISED PLANTERS WHICH WILL INCLUDE BIO-RETENTION SOIL MIX. SEE LANDSCAPE PLANS AND DETAIL 4 ON SHEET C4.
2. AREA C2 IS A SELF-TREATING AREA CONSISTING OF PERVIOUS CONCRETE PAVING IN EVA AND PERVIOUS PAVERS AND SYNTHETIC TURF IN COURTYARD.
3. INDOOR SWIMMING POOL, CONNECT TO THE SANITARY SEWER SYSTEM WITHIN THE BUILDING.
4. RESTAURANT / KITCHEN FACILITIES INCLUDING WASH AREA/RACK, DRAIN TO THE GREASE INTERCEPTOR / SANITARY SEWER.

N

0 20 40 60

SCALE IN FEET: 1"= 20'

PLOT DATE: December 4, 2017
FILE PATH: W:\Jobs 09\092041\Drawings\Final\Improvement Plans\ONSITE\C12 STORMWATER CONTROL PLAN.dwg

RJA
RUGGERI-JENSEN-AZAR
ENGINEERS ▪ PLANNERS ▪ SURVEYORS
8055 CAMINO ARROYO GILROY, CA 95020
PHONE: (408) 848-0300 FAX: (408) 848-0302

LICENSED PROFESSIONAL ENGINEER — WILLIAM SAMUEL SCHEA — C79665 — EXP. ____ — CIVIL — STATE OF CALIFORNIA

Record Drawings
To be completed prior to acceptance of work by the City

Signature & Seal Date
P.E. No. _____ Exp. _____
Public Works Inspector: _____
Public Improvements initially Accepted by the City Council on: _____

REVISIONS

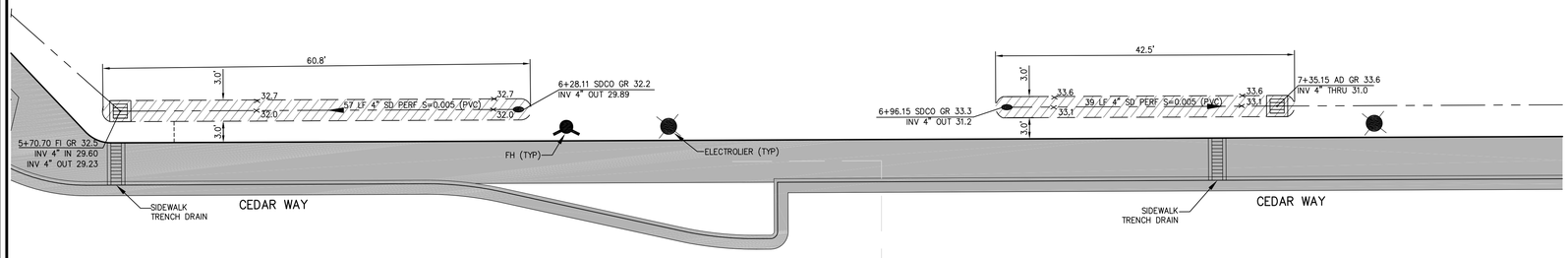
Num.	Date	By	Description	City Engr. Aprv.	Date

CITY OF MILPITAS
ENGINEERING DIVISION

APPROVED: _____
CITY ENGINEER DATE
ANY CHANGES TO PUBLIC IMPROVEMENTS SHALL BE APPROVED BY THE CITY ENGINEER
RECOMMENDED FOR APPROVAL:
FIRE DEPT. _____ DATE: _____
ENGINEERING _____ DATE: _____

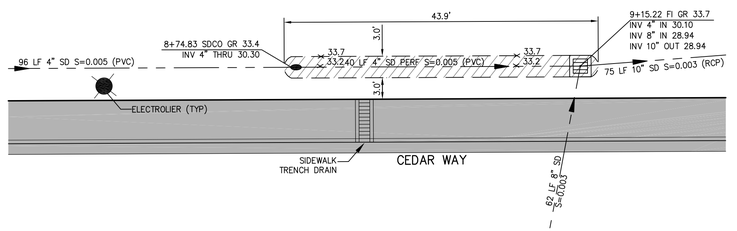
SOUTH MAIN SENIOR LIFESTYLES – ONSITE
IMPROVEMENT PLANS
STORMWATER CONTROL PLAN
MILPITAS, CALIFORNIA
FOR: SRM DEVELOPMENT, LLC DECEMBER 2017

JOB NO. 092041
PLAN NO.
SCALE: 1"=20'
SHEET C12
OF 21 SHEETS

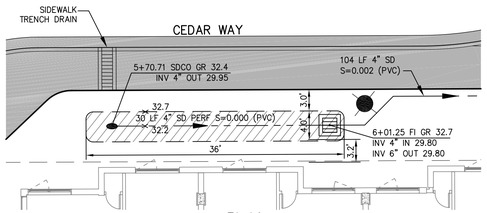


TA A1
TREATS DRAINAGE A1
TREATMENT AREA PROVIDED = 180 SF

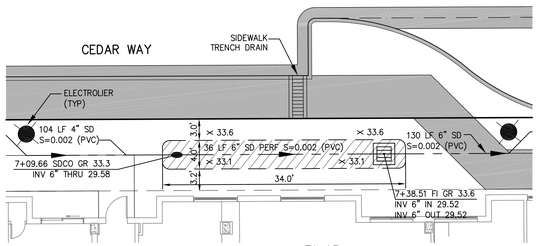
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TREATS DRAINAGE A2
TREATMENT AREA PROVIDED = 125 SF



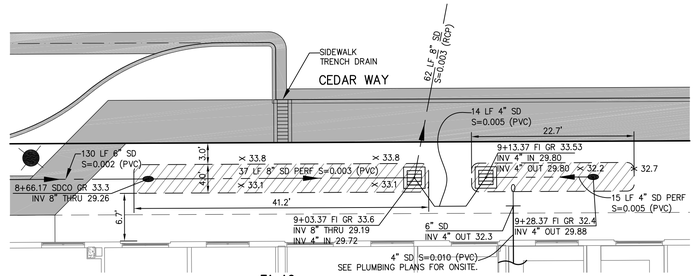
TA A3
TREATS DRAINAGE A3
TREATMENT AREA PROVIDED = 130 SF



TA A4
TREATS DRAINAGE A4
TREATMENT AREA PROVIDED = 140 SF

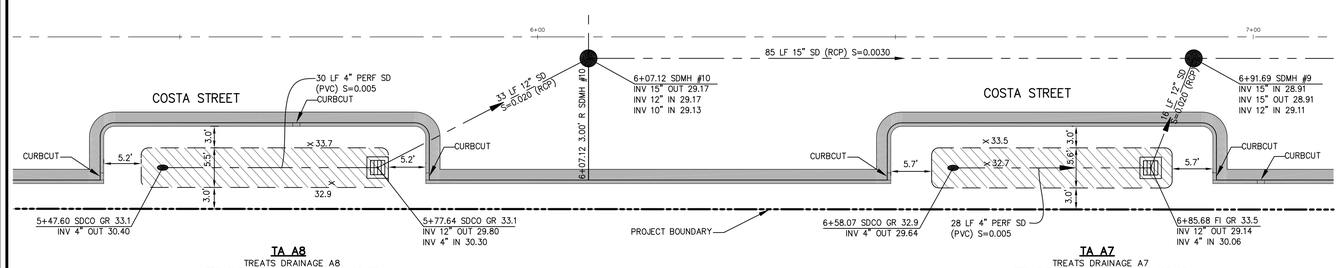


TA A5
TREATS DRAINAGE A5
TREATMENT AREA PROVIDED = 135 SF



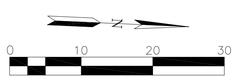
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TREATS DRAINAGE A6
TREATMENT AREA PROVIDED = 160 SF

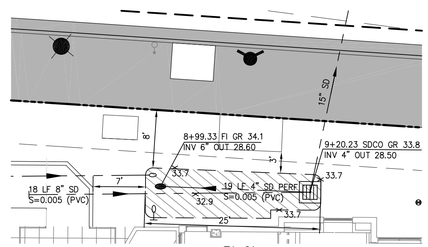




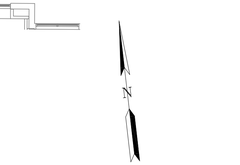
TA A8
TREATS DRAINAGE A8
TREATMENT AREA PROVIDED = 190 SF

TA A7
TREATS DRAINAGE A7
TREATMENT AREA PROVIDED = 185 SF





TA C1
TREATS DRAINAGE C4
TREATMENT AREA PROVIDED = 160 SF



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LICENSED PROFESSIONAL ENGINEER
LUIS SANTIAGO-SUAREZ
C79665
EXP.
CIVIL
STATE OF CALIFORNIA

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SOUTH MAIN SENIOR LIFESTYLES – PUBLIC
PUBLIC IMPROVEMENTS FOR – PHASE 1
BIOTREATMENT BLOW UP DETAILS

FOR: SRM DEVELOPMENT, LLC MILPITAS, CALIFORNIA DECEMBER 2017

PROJECT NO. 092041
PLAN NO.
SCALE: 1"=10'
SHEET
19
OF 22 SHEETS

PROJECT NOTES

1. Developer: SRM Development, LLC
111 N. Post Street, Suite 200
Spokane, WA 99201
Contact: Ryan Leong
(206) 769-4910

City of Milpitas: Engineering Department
455 E. Calaveras Blvd.
Milpitas, California 95035
(408) 586-3329
Fax (408) 586-3316
Contact: Keyvan Irranajed

Civil Engineer: Ruggeri-Jensen-Azar & Associates
8055 Camino Arroyo
Gilroy, California 95020
(408) 848-0300
Fax (408) 848-0302
Contact: Luis Santiago-Sotelo

Geotechnical Engineer: Berlogar Stevens & Associates
5587 Sunol Boulevard
Pleasanton, CA 94566
(945) 484-0220
Fax (925) 846-9645
Contact: Frank Verlogar

2. The Contractor shall notify Ruggeri-Jensen-Azar & Associates two working days prior to the need for construction survey stakes. Cut sheets are to be supplied to the Public Works Department or Engineering Department 24 hours prior to construction relating to the cut sheets.

3. The Contractor shall be held responsible for any field changes made without written authorization from the City Engineer.

4. Benchmark:
The southerly disk in monument well at the intersection of Abel Street and Corning Avenue, Elevation=17.124' NGVD29 (19.864' NAVD88). Project elevations are based on NGVD 29.

5. The Contractor is responsible for matching existing streets, surrounding landscape, and other improvements with a smooth transition in paving, curbs, gutters, sidewalks, and grading. Abrupt or apparent changes in grades or cross slopes shall be avoided.

6. Contractor shall replace all existing traffic control devices which include traffic signs, lines, markings, legends, markers, and signal loops that are damaged or destroyed during the course of construction and as directed by the City Engineer. See traffic signal plans by TJKM for more information.

7. The Contractor shall replace any street or sidewalk improvements or utility services that are removed or damaged during the construction process and as determined by the City Engineer.

8. The location, depth and existence of underground improvements are shown in their approximate positions based upon information available to the engineer. The contractor shall excavate inspection holes "pot holes" and determine the location and depth of all underground structures and utilities that are in the vicinity of and/or may be affected by the proposed improvement work prior to any construction work which could damage or conflict with said structures and/or utilities.

9. The contractor is responsible for performing locate services for those facilities installed by the contractor until such time as the work has been officially accepted by the City of Milpitas. The marking, labeling, and timing of such locates shall be in conformance with the requirements of Underground Service Alert.

10. All stubbed utilities shall be capped per the pipe manufacturers recommendation. Stubs shall be clearly marked with a stake indicating the stub location and depth.

RJA STANDARD GENERAL NOTES

1. The Contractor agrees that, in accordance with generally accepted construction practices, the Contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property. This requirement shall apply continuously and not be limited to normal working hours. The Contractor further agrees to defend, indemnify and hold owner, City, and Engineer harmless from any and all liability, real or alleged, in connection with the performance of work on this project, exempting liability arising from the sole negligence of the Engineer.

2. Excavation shall be adequately shored, braced and sheeted so that the earth will not slide or settle and so that all existing improvements of any kind will be fully protected from damage. Any damage resulting from a lack of adequate shoring, bracing, and sheeting, shall be the responsibility of the Contractor, and he shall effect necessary repairs or reconstruction at his own expense. Where the excavation for a conduit, trench, and/or structure is five feet or more in depth, the Contractor shall provide adequate sheeting, shoring and bracing or equivalent method, for the protection of life, or limb, which shall conform to the applicable construction safety orders of the Division of Industrial Safety of the State of California. The Contractor shall always comply with OSHA requirements.

3. It is the responsibility of the Contractor to obtain permits necessary to perform the work shown in these plans from the appropriate agencies.

4. The Contractor shall take effective action to prevent the formation of any airborne dust nuisance and shall be responsible for any damage resulting from his failure to do so.

5. The Contractor shall provide for ingress and egress for private property adjacent to work throughout the period of construction.

6. The Contractor shall provide all lights, signs, barricades, flagmen or other devices necessary to provide for safety.

7. The Contractor shall post emergency telephone numbers for police, fire, ambulance, and those agencies responsible for the maintenance of utilities in the vicinity of the job site.

8. Any extra construction staking necessitated solely by the Contractor's negligence will be charged to the Contractor on a time and material basis, and paid for by the Contractor.

9. Stationing hereon is along street centerline unless otherwise shown or indicated.

10. All return radii and curb data are to face of curb.

11. All quantities and pay items are and will be based on horizontal measurements.

12. Lengths of sanitary sewers and storm drains are horizontal distances from center to center of structures, rounded off to the nearest foot.

13. Existing underground utilities and improvements are shown in their approximate locations based upon record information available to the Engineer at the time of the preparation of these plans. Locations may not have been verified in the field and no guarantee is made as to the accuracy or completeness of the information shown. The Contractor shall notify utility companies at least 2 working days in advance of Construction to field locate utilities. Call Underground Service Alert (USA) at 1-800-642-2444. It shall be the responsibility of the Contractor to determine the existence and location of utilities shown on these plans, indicated in the field by locating services, or evidenced by facilities visible at or adjacent to the job site. Any additional cost incurred as a result of the Contractor's failure to verify locations of existing utilities prior to beginning construction shall be borne by the Contractor and is deemed included and merged in the contract unit price.

14. All existing utilities and improvements that become damaged during construction shall be completely restored to the satisfaction of the City Engineer at the Contractor's sole expense.

15. Any relocation of public utilities shall be conducted in accordance with any and all requirements of the utility company, including fees, bonds, permits, and working conditions, etc. This work shall be done at no expense to the utility company. The owner shall pay the cost of all such relocation work including fees, bonds, permits, etc.

RJA STANDARD GENERAL NOTES (Cont.)

16. If archaeological resources or human remains are discovered during construction, work shall be halted at a minimum of 200 feet from the find and the area shall be staked off. The project developer shall notify a qualified professional archaeologist. If the find is determined to be significant, appropriate mitigation measures shall be formulated and implemented. If human remains are found during construction there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the coroner of Santa Clara County is contacted to determine that no investigation of the cause of death is required. If the coroner determines the remains to be Native American the coroner shall contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendent from the deceased Native American. The most likely descendent may then make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and associated grave goods as provided in Public Resources Code Section 5097.98. The landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further disturbance if: a) the Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission; or b) the descendent identified fails to make a recommendation.

17. Ruggeri-Jensen-Azar & Associates does not specify or recommend the use or installation of any material or equipment which is made from, or which contains asbestos for use in the construction of these improvements. Any party installing or using such materials or equipment shall be solely responsible for all injuries, damages, or liabilities of any kind caused by the use of such materials or use of such equipment. The provisions of this note shall apply unless they are expressly waived in writing by Ruggeri-Jensen-Azar & Associates.

18. The Contractor shall meet and follow all NPDES requirements in effect at the time of construction.

19. Should it appear that the work to be done or any matter relative thereto is not sufficiently detailed or explained on these plans, the Contractor shall contact Ruggeri-Jensen-Azar & Associates at (408) 848-0300 for such further explanations as may be necessary.

CONSTRUCTION NOTES

PAVING NOTES

1. All paving shall conform to the specifications of the Geotechnical Report by Berlogar Stevens & Associates dated February 26, 2015, supplemental Additional Pavement Recommendations letter dated November 14, 2016 and the City of Milpitas standards. "Standard Specifications" refers to the "State of California Department of Transportation (CALTRANS) most recent Standard Specifications as referenced below.

2. All materials and the installation of portland cement concrete curb, gutter and sidewalk shall conform to Section 90, "Portland Cement Concrete", of the Standard Specifications and City standard details.

3. All valve boxes and manholes shall be set flush with finished grade, unless otherwise noted.

4. Aggregate base shall be Class 2 and shall be spread and compacted to conform to Section 26 of the Standard Specifications.

5. Pervious concrete pavement shall be installed per the Geotechnical Letter from Berlogar Stevens and Associates dated October 11, 2017.

6. Pervious concrete and pervious pavers should be installed toward the end of the construction process to prevent damage and sedimentation due to construction activities.

7. Erosion and sediment control measures shall be implemented to prevent sediment deposition on pervious concrete pavement. Nonwoven geotextile or plastic may be folded over the edge of the pavement and secured with stakes or gravel bags until the site is stabilized and all grading operations are complete. Surface sediment shall be removed by a vacuum sweeper and shall not be power-washed into the rock base.

PAVEMENT DESIGN CHART

LOCATION	AC (TYPE 'B')	AB (CLASS 2)	AB (CLASS 4)	PERMEABLE CONC	PCC	TRAFFIC INDEX (TI)	'R' VALUE
VEHICULAR CONCRETE PAVEMENT	–	12"	–	–	6"	6.0	5
HEAVY TRUCKS CONCRETE PAVEMENT	–	12"	–	–	8"	6.0	5
PERVIOUS CONCRETE PAVEMENT*	–	–	12"	8"	–	6.0	5
WALKWAYS & SIDEWALKS	–	4"	–	–	4"	–	5
TRANSFORMER PAD	–	12"	–	–	12"	–	5

*SEE NOTE 5 (ABOVE)

Notes:
1. Pavement, base and subgrade, shall be constructed per the specifications and recommendations of the project geotechnical report prepared by Berlogar Stevens & Associates dated February 26, 2015 and all subsequent addendums.

2. The pavement sections indicated in the pavement design chart are based on the above "TI" and "R" values as referenced in the project geotechnical report. Upon nearing the completion of finish grading at the site, "R" value sampling and testing of subgrade soils may be taken and pavement sections modified as required by the soils engineer.

3. All concrete pavement shall be reinforced with #4 rebar at 18" O.C. each way.

4. All concrete pavement shall have minimum strength of 3,000 psi at 28 days, as tested in accordance with the state of California Test Method No. 521 per city of Milpitas specifications.

5. See landscape plans for decorative paving standards and specifications.

STORM DRAIN NOTES

1. Unless otherwise specified on these plans, all storm drain pipe shall be polyvinyl chloride pipe (PVC) SDR-35, conforming to ASTM D3034 (SDR-35), as amended to date. Pipe shall be installed per manufacturers recommended construction practices for SDR-35. All stubbed pipe ends shall be plugged per manufacturers recommendations.

2. Perforated subdrains shall be (PVC) SDR-35 with four rows of 1/4" holes, 3" to 4" on center, and located within a 160° arc. Perforations shall face downward into the trench.

3. Nonwoven geotextile fabric shall be Mirafi 160N, or approved equal with 6-ounce minimum weight per square yard, installed per manufacturers recommendations. Vapor retarder liners shall be Mirafi NT100, or approved equal with 10-mil minimum thickness, installed per manufacturers recommendations.

4. Storm drain field inlets (FI) and junction boxes (JB) shall be Oldcastle 1818, or approved equal in bioretention and Landscape areas. JB's in EVA shall be Oldcastle 1818 with traffic rated solid grate or approved equal. Manholes shall be constructed per City of Milpitas standard drawing No. 230.

5. Trench shall be constructed per City of Milpitas standard drawing No. 220. Initial backfill shall be compacted with lightweight mechanical tampers or vibrating plate compactors. Heavy equipment should not be used to compact backfill immediately above the pipe. Jetting will not be allowed.

6. A post-construction closed circuit television inspection (CCTV) will be required to document the as-constructed condition of the storm drain.

7. Stencil "No Dumping – Flows to Bay" on all storm drain inlets.

8. Bioretention Basins and Bioswales should be installed toward the end of the construction process, in conjunction with the final landscaping and site stabilization phase, to prevent damage and sedimentation to the swales due to construction activities.

SANITARY SEWER NOTES

1. Unless otherwise specified on these plans, all sanitary sewer pipe shall be polyvinyl chloride pipe (PVC) SDR-35, conforming to ASTM D3034 (SDR-35), as amended to date. Sanitary sewer lines shall be constructed with a laser guided device to the alignment and elevations shown on the plans. All PVC service laterals shall extend beyond the public utility easement line. See improvement plans for locations.

2. Trench shall be constructed per City standard drawing No. 220. Initial backfill shall be compacted with lightweight mechanical tampers or vibrating plate compactors. Heavy equipment shall not be used to compact backfill immediately above the pipe. Jetting will not be allowed.

3. Cap the end of each sewer lateral with an air tight clay stopper per the manufacturer's recommendations. The clay stopper is temporary, and will be removed when the building sanitary sewer system is connected to the lateral.

4. Manholes shall be constructed per City of Milpitas standard drawing No. 230.

DOMESTIC WATER NOTES

1. All work shall be in accordance with the latest edition of the standard specifications and standard drawings of the City of Milpitas.

2. Thrust restraints – thrust blocks shall be constructed at all horizontal and vertical fittings and shall conform to City standard drawing No. 704. Concrete for thrust blocks shall be class a with one and one-half (1-1/2) inch max. size aggregate.

3. As an alternative to utilizing thrust blocks at most new construction locations, the contractor may propose thrust restrained joint construction (EBAA Iron Mechanical Series 2000 PV (fittings) or Series 1600 (piping), or approved equal). The contractor shall submit his request together with material and manufacturer information to the engineer and obtain written approval prior to ordering pipe.

4. Landscape service lines and meter boxes shall be connected to the water system and installed per landscape plans by others.

5. A minimum of 36" cover shall be provided between the top of the water main and the finished street surface grade, 36" in landscape areas unless otherwise noted.

6. Connections to existing water mains shall be approved by the City of Milpitas. The developer shall pay actual cost of construction. The contractor shall perform all excavation, prepare site, furnish all materials, install valve and all thrust blocks, backfill, restore surface and clean up.

7. Trench shall be constructed per City standard drawing No. 220. Initial backfill shall be compacted with lightweight mechanical tampers or vibrating plate compactors. Heavy equipment shall not be used to compact backfill immediately above the pipe. Jetting will not be allowed.

8. All water mains shall be polyvinyl chloride pipe (PVC) C900 conforming to AWWA C900. All domestic water improvements and work shall be done in accordance with City of Milpitas standards.

9. Fire Service (after water meter) requires review and approval by the Milpitas Fire department. A separate and independent permit application is required.

GRADING NOTES

1. Approval of the grading plan applies only to the excavation, placement, and compaction of natural earth materials. Any on-site or off-site improvements are subject to the review and approval by the responsible jurisdiction or City Departments. Any required permit must be obtained by the Contractor.

2. Permittee shall notify the City of Milpitas 2 working days before the start of grading. (408) 586-3329

3. The permittee must maintain the streets, sidewalks, and any other public rights-of-way in a clean, safe, and usable condition. Any spill of soil, rock or construction debris must be removed from publicly owned property during construction and upon completion of the project.

4. All grading shall comply with City of Milpitas Grading Ordinance, this plan, and the Geotechnical Report prepared by Berlogar Stevens & Associates dated February 26, 2015 and all subsequent addendums. All grading work shall be done under the observation of the Geotechnical Engineer. The Geotechnical Engineer shall be notified 48 hours before the start of any grading. (925) 484-0200.

5. Trench backfill material shall be well graded relatively impermeable import material approved by the Soils Engineer and compacted to 95% RC. Material samples shall be submitted to the Soils Engineer 48 hours prior to proposed placement for testing and approval. At locations where wet and/or dry utility trenches cross the curb, an impermeable plug consisting of site material approved by the Soils Engineer, or lean concrete shall be constructed extending 3 feet on either side of the crossing.

6. All deleterious materials, i.e., lumber, logs, brush, or any other organic materials or rubbish shall be removed from all areas to receive compacted fill.

7. Unsuitable materials, such as topsoil, weathered bedrock, etc., shall be removed as required by soils engineer (and engineering geologist, where employed) from all areas to receive compacted fill or drainage structure.

8. All fill areas shall be cleaned of all vegetation and debris, scarified to a minimum depth of 8 inches and inspected by the soils engineer prior to the placing of fill.

9. All cut slopes shall be investigated, both during and after grading by the soils engineering, to determine if any slope stability problem exists. Should excavation disclose any geological hazards, the soils engineer shall recommend necessary treatment to the City Engineer for approval.

10. All cut and fill slopes are 2:1 maximum (H:V) unless shown otherwise on this plan. Temporary shoring slopes may be steeper.

11. The existing topography shown on these plans is based on an aerial/ground survey prepared by Aerogeodetic Corporation and supplemented with field surveys. The contours shown on this plan represent ground elevations as determined at the time of said surveys.

12. The Contractor shall be responsible to confirm ground elevation and overall topography of the site prior to the start of construction. Based on his field reconnaissance, these plans, and the geotechnical report, the Contractor shall estimate the earthwork quantities to his satisfaction prior to the start of construction, and shall dispose of excess material or provide for the acquisition of import material as required to complete the grading as shown on this plan. No additional compensation will be made for any export or import required, except as provided in the bid documents.

13. Should additional revisions to the grading plans be required to facilitate the Contractor's operation, Ruggeri-Jensen-Azar shall be compensated for such additional revisions.

14. During final grading for street subgrade, the Contractor shall compact the subgrade to 95% R.C. at a moisture content between 1% and 3% above optimum per ASTM D 1557. Aggregate base shall be compacted to 95% R.C. per ASTM D 1557, and per the Geotechnical Engineer's recommendations.

15. The Contractor shall grade each pad to the pad grades shown herein for all lots. Variation from pad grade shall not exceed 0.1 foot. Pads shall be constructed per the Geotechnical Engineer's recommendations.

16. Any abandoned underground pipes exposed during construction shall be removed or adequately plugged, or a combination of both in accordance with the requirements of the City of Milpitas Building Division, and Geotechnical recommendations.

17. All exposed or disturbed soil surfaces shall be watered as necessary, but not less than twice daily to control dust. Areas of digging and grading operations shall be consistently watered to control dust. Grading or other dust-producing activities shall be suspended during periods of high wind when dust is readily visible in the air. Stockpiles of soil, debris, sand, or other dust-producing materials shall be watered or covered. The construction area and the surrounding streets shall be swept (no water) as necessary, but not less than twice daily.

GRADING NOTES (Cont.)

18. Earthwork quantities shown on this plan are approximate estimated quantities and are furnished for information only. The quantities have been calculated from existing ground elevations, based on the topography referenced above, to the grades shown on these plans. The actual amount of earth moved will vary depending on compaction, consolidation, stripping, and the Contractor's method of operation.

Earthwork Summary

Item	Estimated Quantity	
Site Cut	21,530±	CY
Site Fill	3,350±	CY
Export	18,180±	CY (Stockpile in Designated Remainder Lot)

- Compaction, consolidation and shrinkage factors for on-site materials are not incorporated in the above quantities.
- Spoils as a result of foundation construction, including depressed slabs, wall, and column footings, shown in the above quantities are estimates and should be confirmed by the contractor.
- Utility trench spoils shown in the above quantities are estimates and should be confirmed by the contractor.
- Actual quantities moved in the field for this project will vary depending on the actual soils encountered, the Contractor's method of operation, etc.

BIORETENTION NOTES

1. General: Begin bioretention facility construction only when the upgradient site has been sufficiently stabilized and temporary erosion and sediment control measures are in place. The rough graded basin may only be used as a temporary sediment control facility prior to placement of the drain rock and biotreatment soil mix. Subgrade excavation and placement of the drain rock and biotreatment soil mix should occur toward the end of the construction process, in conjunction with the final landscaping and site stabilization phase, to prevent damage and sedimentation to the bioretention facility due to construction activities. No heavy equipment shall operate within the perimeter of a bioretention facility during excavation, backfilling, planting, or mulching of the facility.

2. Excavation: The bioretention facility shall be excavated to the dimensions, side slopes, and elevations shown on the plans in accordance with the specifications of the Geotechnical report. The method of excavation shall minimize the compaction of the bottom of the bioretention facility. Hand grading equipment is preferred to reduce compaction potential of the subgrade. Excavators, backhoes, and low ground-contact pressure equipment may be used only if operated on the ground adjacent to the bioretention facility and never on the bottom. No heavy equipment shall be allowed on the bottom of the bioretention facility. Side slopes of the facility shall be compacted to 90% relative compaction (R.C.)

3. Subgrade Preparation: Prior to placing the drain rock and biotreatment soil mix, the bottom of the excavation shall remove any ponded water and construction related sedimentation. Roto-tilling of soil shall be done per the Geotechnical report recommendations.

4. Impermeable Liner: Impermeable liner or HDPE tree root barrier shall be placed in the bioretention facility so as to cover the entire excavation sides and bottom per detail(s). Liner placements shall adhere to the manufacturer's specifications and recommendations. Fabric shall be Mirafi NT100 or approved equal with 10-oz min weight per square yard.

5. Drain Rock: A minimum 12" thick layer of drain rock shall cover the bottom of the bioretention basin excavation per detail(s). Drain rock shall be placed in the excavation so as to minimize compaction of the subgrade. Drain Rock shall be Class 2 permeable material per Section 68 "Surface Drains" of the Caltrans Specifications, clean washed.

6. Subdrain: Subdrain pipe shall be 4" HDPE or PVC SDR 35 with 2 to 3 rows of ¼" holes at 3" to 4" on center, located within a 120° arc, or approved equal. Pipe shall be installed in the permeable drain rock in the configuration and elevation shown on the plans and detail(s). The subdrain perforation shall be facing down in all cases. Subdrain shall be placed at the bottom of the drain rock layer. No clearance is required between the bottom of the drain rock layer and bottom of the subdrain. Connect the subdrain to the downstream overflow inlet per the manufacturer's recommendation, ensuring a tight seal.

7. Cleanout: Cleanout shall be installed at the upstream end of the subdrain. Cleanout shall be solvent welded solid 4" PVC, schedule 40, with a screw on cap of the type recommended by the pipe manufacturer. The cleanout cap shall be watertight and installed to be 2" above the biotreatment soil surface.

8. Biotreatment Soil Mix (BSM): Shall meet the specifications of Appendix C "Soil Specifications of the Santa Clara Valley Urban Runoff Pollution Prevention Program, C.3 Stormwater Handbook, dated April 2012. General requirements are:
   - Soil mixture shall be compacted to 85%-90% relative compaction with long-term, in-place infiltration rate of 5 inches per hour minimum.
   - Soil mix measured on a volume basis: 60%-70% sand, 30%-40% compost.

9. The BSM shall be placed and graded using hand equipment, low ground-contact pressure equipment, or by excavators and/or backhoes operating on the ground adjacent to the bioretention facility. No heavy equipment shall be used within the perimeter of the bioretention facility before, during, or after the placement of the BSM. The BSM shall be placed in horizontal layers not to exceed 12", to a total depth of 18" minimum. The BSM shall be compacted by saturating the entire area of the bioretention facility after each lift of BSM is placed. Water for saturation shall be applied by spraying or sprinkling. Final grading of the BSM shall be performed after a 24-hour settling period. Final elevations shall be within 1" of elevations shown on the Plans.

10. Inlet Protection: Install rock protection at inlet to basin with 3" to 6" washed cobbles as shown on the Plans for energy dissipation and erosion control.

11. Landscaping: Landscaping of the bioretention facility shall be per the Landscape Drawings (separate plans), including plants, mulch, and decorative cobbles. Vegetation should be established as soon as possible to prevent erosion and scour.

12. Stabilization: Stabilize freshly seeded bioretention facilities with appropriate temporary or permanent soil stabilization methods, such as erosion control matting or blankets. Erosion control shall be required for at least the first 60 days following the first storm event of the season, or until permanent vegetation is established. Once the bioretention facility is sufficiently stabilized and vegetation is established, remove temporary erosion and sediment controls.

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LICENSED PROFESSIONAL ENGINEER LUIS SANTIAGO SOTELO C79665 EXP. _____ CIVIL STATE OF CALIFORNIA

Record Drawings
To be completed prior to acceptance of work by the City

Signature & Seal Date
P.E. No. _____ Exp. _____

Public Works Inspector: _____

Public Improvements initially Accepted by the City Council on: _____

REVISIONS

Num.	Date	By	Description	City Engr. Aprv.	Date

CITY OF MILPITAS
ENGINEERING DIVISION

APPROVED: _____
CITY ENGINEER DATE
ANY CHANGES TO PUBLIC IMPROVEMENTS SHALL BE APPROVED BY THE CITY ENGINEER

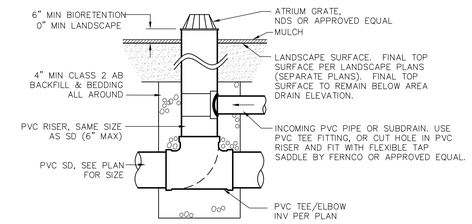
RECOMMENDED FOR APPROVAL:
FIRE DEPT. DATE: _____
ENGINEERING _____ DATE: _____

SOUTH MAIN SENIOR LIFESTYLES – ONSITE
IMPROVEMENT PLANS

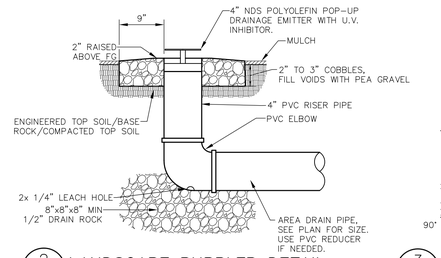
PROJECT NOTES
MILPITAS, CALIFORNIA
FOR: SRM DEVELOPMENT, LLC DECEMBER 2017

JOB NO. 092041
PLAN NO.
SCALE: NONE
SHEET C2 OF 21 SHEETS

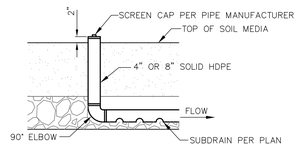
PLOT DATE: December 4, 2017
FILE PATH: W:\Jobs 09\092041\Drawings\Final\Improvement Plans\ONSITE\C2 PROJECT NOTES.dwg



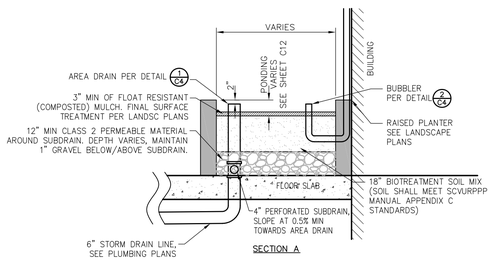
1 — LANDSCAPE AREA DRAIN DETAIL
NO SCALE



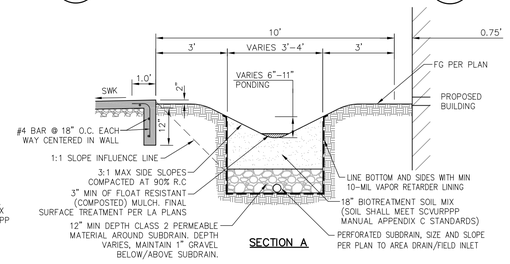
2 — LANDSCAPE BUBBLER DETAIL
NO SCALE



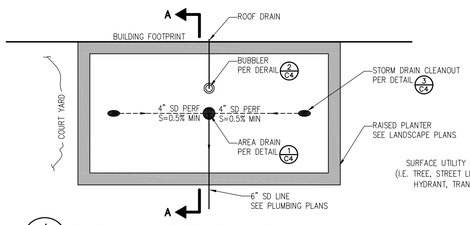
3 — CLEANOUT DETAIL
NO SCALE



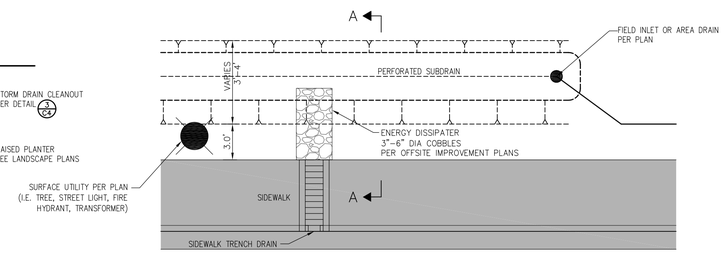
SECTION A



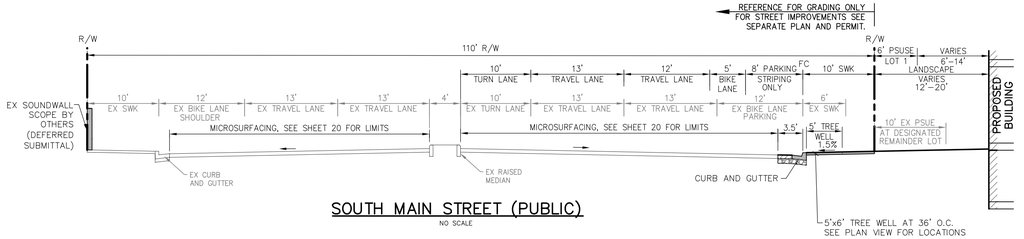
SECTION A



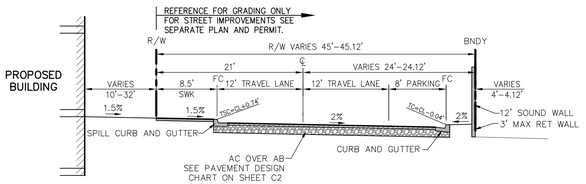
4 — TYPICAL RAISED PLANTER DETAIL
NO SCALE



5 — TYPICAL STREET BIORETENTION BASIN DETAIL
NO SCALE

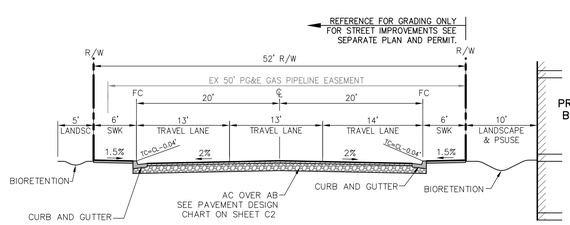


SOUTH MAIN STREET (PUBLIC)
NO SCALE



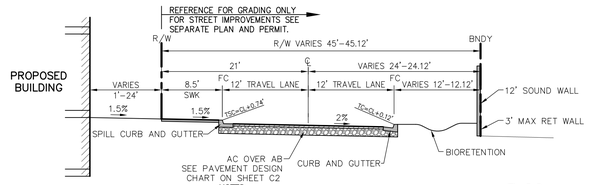
COSTA STREET (PUBLIC)
STA 5+84± TO 6+48±
NO SCALE

TI=6.0



CEDAR WAY (PUBLIC)
STA 5+66± TO 6+14±
NO SCALE

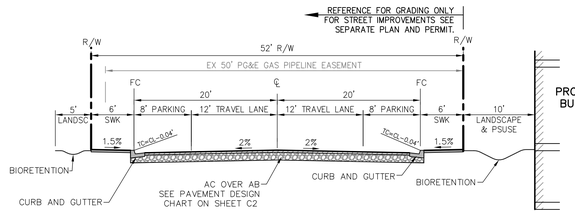
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NOTES:
INSTALL SUBDRAIN PER DETAIL 1/C17

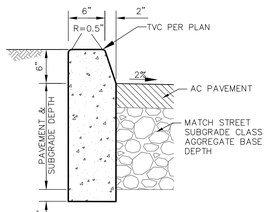
COSTA STREET (PUBLIC)
STA 5+39± TO 5+48±
& 6+48± TO 6+94±
NO SCALE

TI=6.0

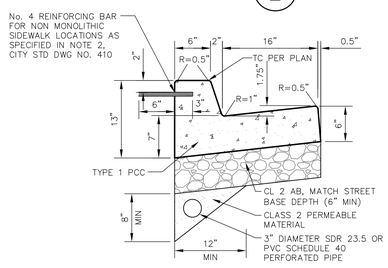


CEDAR WAY (PUBLIC)
STA 6+64± TO 7+28±
& 8+84± TO 9+48±
NO SCALE

TI=6.0

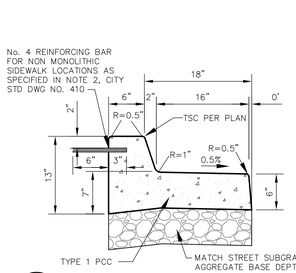


6 — VERTICAL CURB DETAIL
NO SCALE

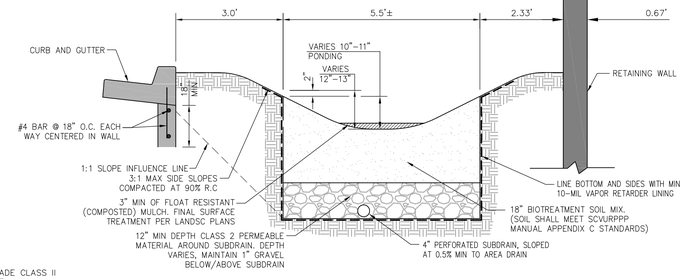


NOTE:
THIS DETAIL IS PROVIDED FOR INFORMATION ONLY.
REFER TO CITY STD DWG NO. 410

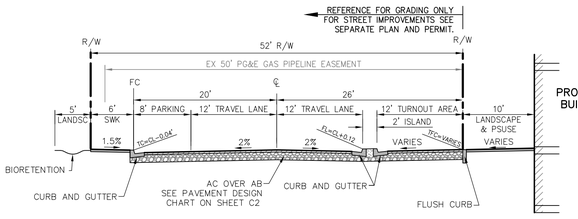
7 — CURB & GUTTER DETAIL
NO SCALE



8 — CURB & SPILL GUTTER DETAIL
NO SCALE

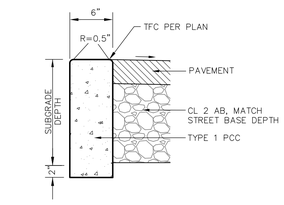


9 — BIORETENTION BASIN AT RETAINING WALL
NO SCALE

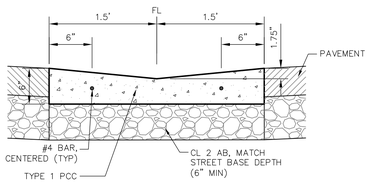


CEDAR WAY (PUBLIC)
STA 7+73± TO 8+34±
NO SCALE

TI=6.0



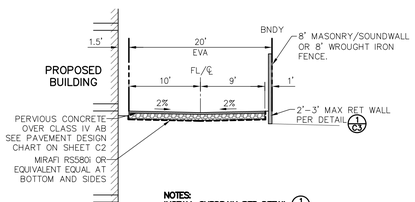
10 — FLUSH CURB DETAIL
NO SCALE



11 — STANDARD VALLEY GUTTER DETAIL
NO SCALE

NOTE:
PUBLIC STREET SECTIONS ARE SHOWN FOR GRADING REFERENCE ONLY.
FOR PUBLIC STREET IMPROVEMENTS SEE SEPARATE PLAN AND PERMIT.

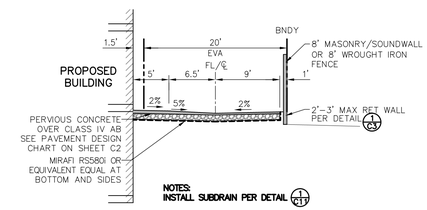
STREET SECTIONS AND DETAILS 5, 7–11
PROVIDED FOR REFERENCE ONLY.



NOTES:
INSTALL SUBDRAIN PER DETAIL 1/C17

EVA
STA 3+00± TO 4+68±
& 6+04± TO 7+66±
NO SCALE

TI=5.0



NOTES:
INSTALL SUBDRAIN PER DETAIL 1/C17

EVA
STA 4+68± TO 6+04±
(ALONG ACCESSIBLE PATH)
NO SCALE

TI=5.0

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LICENSED PROFESSIONAL ENGINEER — NILS SAINT IAGO SORENSEN — C79665 — EXP. ____ — STATE OF CALIFORNIA — CIVIL

Record Drawings
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Signature & Seal Date
P.E. No. _____ Exp. _____

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REVISIONS

Num.	Date	By	Description	City Engr. Aprv.	Date

CITY OF MILPITAS
ENGINEERING DIVISION

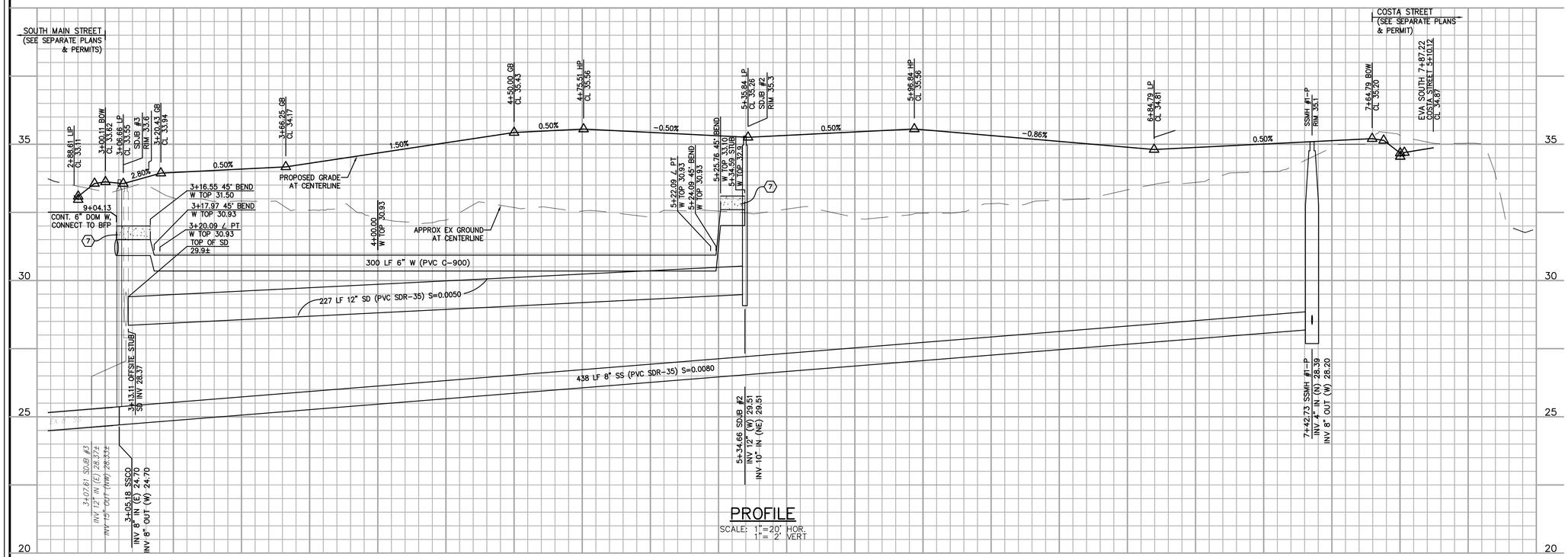
APPROVED: _____
CITY ENGINEER DATE
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RECOMMENDED FOR APPROVAL:
FIRE DEPT. DATE: _____
ENGINEERING _____ DATE: _____

SOUTH MAIN SENIOR LIFESTYLES – ONSITE
IMPROVEMENT PLANS
STREET SECTIONS AND DETAILS
MILPITAS, CALIFORNIA
FOR: SRM DEVELOPMENT, LLC
DECEMBER 2017

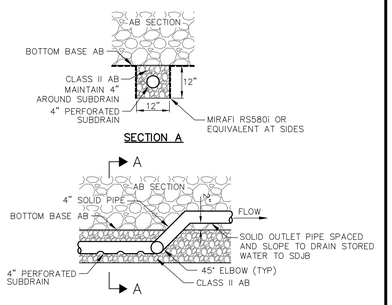
JOB NO. 092041
PLAN NO.
SCALE: NONE
SHEET **C4**
OF 21 SHEETS

PLOT DATE: December 19, 2017
FILE PATH: W:\Jobs 09\092041\Drawings\Final\Improvement Plans\ONSITE\C4 STREET SECTIONS AND DETAILS.dwg



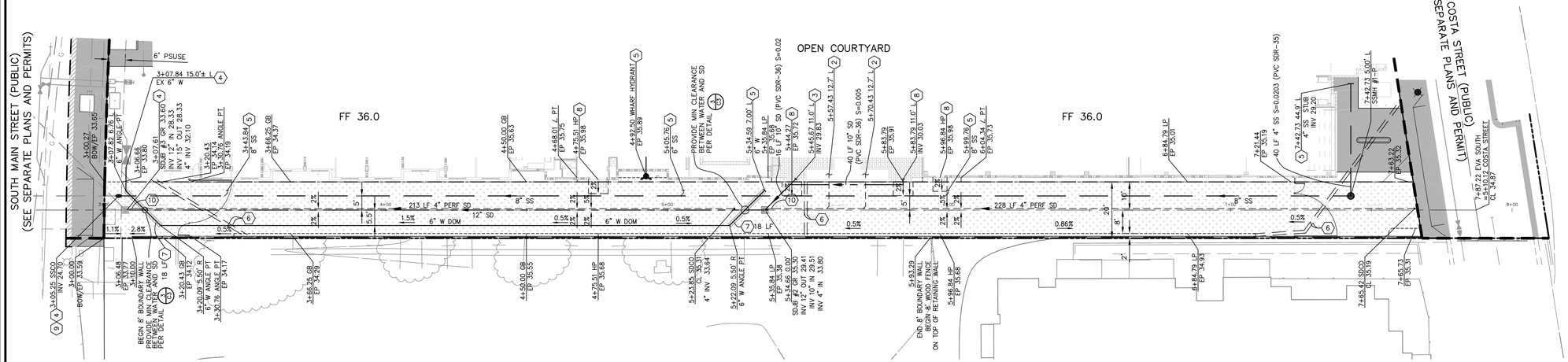
PROFILE

SCALE: 1"=20' HOR.
1"= 2' VERT



① TYPICAL UNDERDRAIN AT SYNTHETIC TURF PERVIOUS PAVEMENT & PAVERS

NO SCALE



EVA PLAN & PROFILE

PLAN

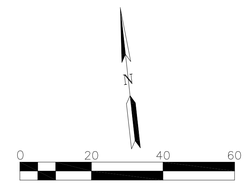
SCALE: 1"=20'

CONSTRUCTION NOTES:

1. SANITARY CLEANOUT/FLUSHING INLET WITH TRAFFIC RATED LID TO BE INSTALLED PER CITY OF MILPITAS STD DWG NO. 602
2. 4" PERFORATED SUBDRAIN FROM SYNTHETIC TURF AND PERMEABLE PAVERS, SEE DETAIL 1 ABOVE AND LANDSCAPE PLANS (SEPARATE PLANS & PERMIT)
3. CONNECT TO COURTYARD STORM DRAIN PIPE, SEE LANDSCAPE PLANS (SEPARATE PLANS & PERMIT)
4. SEE OFFSITE IMPROVEMENT PLANS FOR CONTINUATION OF UTILITIES AND IMPROVEMENTS (PERMIT NO. E-EN16-0149)
5. CONNECT TO BUILDING, SEE PLUMBING PLANS (SEPARATE PLANS & PERMIT)
6. 6" IRRIGATION SLEEVE PER LANDSCAPE PLANS
7. CONCRETE CAP PER DETAIL 3/C3
8. BUILDING ENTRANCES TO HAVE LANDING WITH 2% MAX SLOPE
9. SANITARY SEWER CLEANOUT PER DETAIL 6/C3
10. UNDERDRAIN AT SYNTHETIC TURF, PERVIOUS PAVEMENT AND PAVERS, SEE DETAIL 1 ABOVE

NOTES

1. PRIVATE HYDRANTS SHALL HAVE THE BOTTOM 6 INCHES OF THE HYDRANT PAINTED WITH A WEATHER RESISTIVE PAINT, WHITE IN COLOR. CFC SECTION 507.5.7, ADDED BY MMC SECTION V-300-2.54.
2. PRIVATE FIRE SERVICE WATER LINES. ALL WORK FOR FIRE WATER LINES DOWNSTREAM OF THE PUBLIC UTILITIES (DETECTOR CHECK VALVES) SHALL BE SUBMITTED INDEPENDENTLY OF THE BUILDING DEPARTMENT PERMIT TO THE MILPITAS FIRE PREVENTION DIVISION FOR REVIEW, PERMIT AND INSPECTION PROCESS. PROVIDE 2 SETS OF SHOP DRAWINGS, PROVIDE 2 SETS OF MATERIAL CUT-SHEETS AND PROVIDE 2 SETS OF CALCULATIONS AS NEEDED, AND PROVIDE A FIRE PERMIT APPLICATION. FOR QUESTIONS, PLEASE CONTACT THE FIRE PREVENTION OFFICE (408-586-3365).



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LICENSED PROFESSIONAL ENGINEER — NILS SAINT IAGO SORENSEN — C79665 — EXP. ____ — STATE OF CALIFORNIA — CIVIL

Record Drawings
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REVISIONS

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CITY OF MILPITAS
ENGINEERING DIVISION

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ENGINEERING _____ DATE: _____

SOUTH MAIN SENIOR LIFESTYLES – ONSITE

IMPROVEMENT PLANS

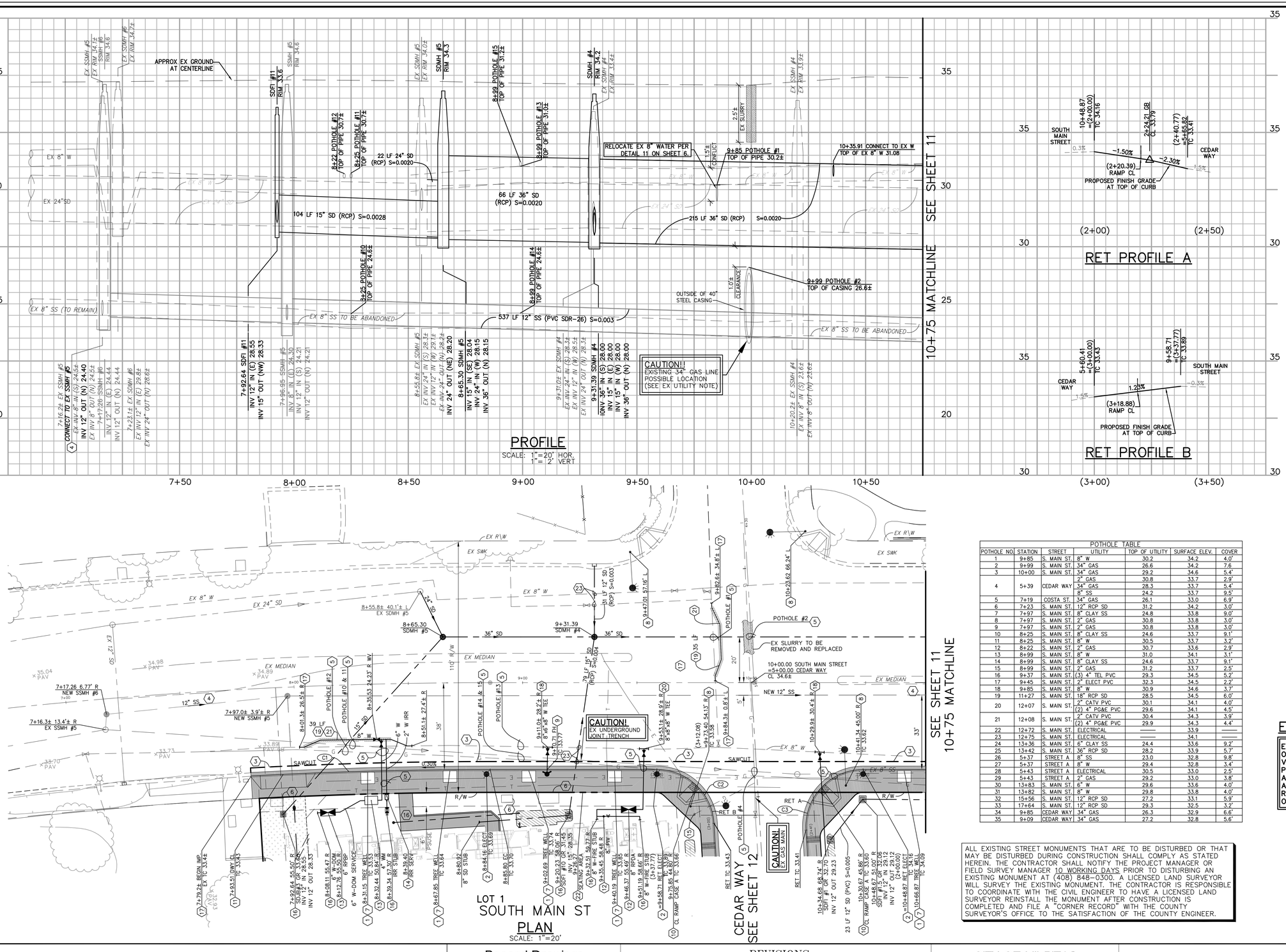
EVA PLAN & PROFILE

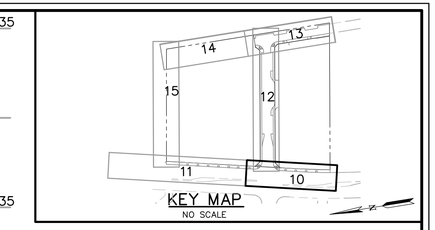
MILPITAS, CALIFORNIA

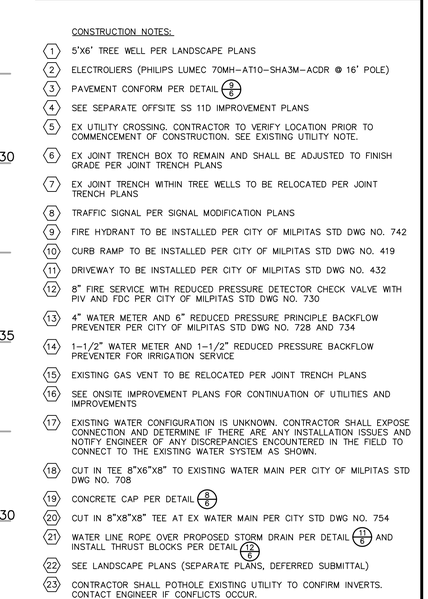
FOR: SRM DEVELOPMENT, LLC DECEMBER 2017

JOB NO. 092041
PLAN NO.
SCALE: 1"=20' H 1"=2' V
SHEET **C11**
OF 21 SHEETS

PLOT DATE: December 20, 2017
FILE PATH: W:\Jobs 09\092041\Drawings\Final\Improvement Plans\ONSITE\C11 EVA PLAN & PROFILE.dwg







CONSTRUCTION NOTES:

1. 5'X6' TREE WELL PER LANDSCAPE PLANS
2. ELECTROLIERS (PHILIPS LUMEC 70MH-AT10-SHA3M-ACDR @ 16' POLE)
3. PAVEMENT CONFORM PER DETAIL 9/6
4. SEE SEPARATE OFFSITE SS 11D IMPROVEMENT PLANS
5. EX UTILITY CROSSING. CONTRACTOR TO VERIFY LOCATION PRIOR TO COMMENCEMENT OF CONSTRUCTION. SEE EXISTING UTILITY NOTE.
6. EX JOINT TRENCH BOX TO REMAIN AND SHALL BE ADJUSTED TO FINISH GRADE PER JOINT TRENCH PLANS
7. EX JOINT TRENCH WITHIN TREE WELLS TO BE RELOCATED PER JOINT TRENCH PLANS
8. TRAFFIC SIGNAL PER SIGNAL MODIFICATION PLANS
9. FIRE HYDRANT TO BE INSTALLED PER CITY OF MILPITAS STD DWG NO. 742
10. CURB RAMP TO BE INSTALLED PER CITY OF MILPITAS STD DWG NO. 419
11. DRIVEWAY TO BE INSTALLED PER CITY OF MILPITAS STD DWG NO. 432
12. 8" FIRE SERVICE WITH REDUCED PRESSURE DETECTOR CHECK VALVE WITH PIV AND FDC PER CITY OF MILPITAS STD DWG NO. 730
13. 4" WATER METER AND 6" REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER PER CITY OF MILPITAS STD DWG NO. 728 AND 734
14. 1-1/2" WATER METER AND 1-1/2" REDUCED PRESSURE BACKFLOW PREVENTER FOR IRRIGATION SERVICE
15. EXISTING GAS VENT TO BE RELOCATED PER JOINT TRENCH PLANS
16. SEE ONSITE IMPROVEMENT PLANS FOR CONTINUATION OF UTILITIES AND IMPROVEMENTS
17. EXISTING WATER CONFIGURATION IS UNKNOWN. CONTRACTOR SHALL EXPOSE CONNECTION AND DETERMINE IF THERE ARE ANY INSTALLATION ISSUES AND NOTIFY ENGINEER OF ANY DISCREPANCIES ENCOUNTERED IN THE FIELD TO CONNECT TO THE EXISTING WATER SYSTEM AS SHOWN.
18. CUT IN TEE 8"X6"X8" TO EXISTING WATER MAIN PER CITY OF MILPITAS STD DWG NO. 708
19. CONCRETE CAP PER DETAIL 9/6
20. CUT IN 8"X8"X8" TEE AT EX WATER MAIN PER CITY STD DWG NO. 754
21. WATER LINE ROPE OVER PROPOSED STORM DRAIN PER DETAIL 11/6 AND INSTALL THRUST BLOCKS PER DETAIL 12/6
22. SEE LANDSCAPE PLANS (SEPARATE PLANS, DEFERRED SUBMITTAL)
23. CONTRACTOR SHALL POTHOLE EXISTING UTILITY TO CONFIRM INVERTS. CONTACT ENGINEER IF CONFLICTS OCCUR.

GENERAL NOTES:

1. CONTRACTOR SHALL RAISE ANY EXISTING MANHOLES, VALVES OR BOXES PRESERVED TO FINISH GRADE TO BE FLUSH WITH FINISH GRADE.

POTHOLE TABLE

POTHOLE NO	STATION	STREET	UTILITY	TOP OF UTILITY	SURFACE ELEV.	COVER
1	9+85	S. MAIN ST.	8" W	30.2	34.2	4.0'
2	9+99	S. MAIN ST.	34" GAS	26.6	34.2	7.6
3	10+00	S. MAIN ST.	34" GAS	29.2	34.6	5.4'
4	5+39	CEDAR WAY	2" GAS	30.8	33.7	2.9'
			34" GAS	28.3	33.7	5.4'
			8" SS	24.2	33.7	9.5'
5	7+19	COSTA ST.	34" GAS	26.1	33.0	6.9'
6	7+23	S. MAIN ST.	12" RCP SD	31.2	34.2	3.0'
7	7+97	S. MAIN ST.	8" CLAY SS	24.8	33.8	9.0'
8	7+97	S. MAIN ST.	2" GAS	30.8	33.8	3.0'
9	7+97	S. MAIN ST.	2" GAS	30.8	33.8	3.0'
10	8+25	S. MAIN ST.	8" CLAY SS	24.6	33.7	9.1'
11	8+25	S. MAIN ST.	8" W	30.5	33.7	3.2'
12	8+22	S. MAIN ST.	2" GAS	30.7	33.6	2.9'
13	8+99	S. MAIN ST.	8" W	31.0	34.1	3.1'
14	8+99	S. MAIN ST.	8" CLAY SS	24.6	33.7	9.1'
15	8+99	S. MAIN ST.	2" GAS	31.2	33.7	2.5'
16	9+37	S. MAIN ST.	(3) 4" TEL PVC	29.3	34.5	5.2'
17	9+45	S. MAIN ST.	2" ELECT PVC	32.3	34.5	2.2'
18	9+85	S. MAIN ST.	8" W	30.9	34.6	3.7'
19	11+27	S. MAIN ST.	18" RCP SD	28.5	34.5	6.0'
20	12+07	S. MAIN ST.	2" CATV PVC	30.1	34.1	4.0'
			(2) 4" PG&E PVC	29.6	34.1	4.5'
21	12+08	S. MAIN ST.	2" CATV PVC	30.4	34.3	3.9'
			(2) 4" PG&E PVC	29.9	34.3	4.4'
22	12+72	S. MAIN ST.	ELECTRICAL	———	33.9	———
23	12+75	S. MAIN ST.	ELECTRICAL	———	34.1	———
24	13+36	S. MAIN ST.	6" CLAY SS	24.4	33.6	9.2'
25	13+42	S. MAIN ST.	36" RCP SD	28.2	33.9	5.7'
26	5+37	STREET A	8" SS	23.0	32.8	9.8'
27	5+37	STREET A	8" W	29.4	32.8	3.4'
28	5+43	STREET A	ELECTRICAL	30.5	33.0	2.5'
29	5+43	STREET A	2" GAS	29.2	33.0	3.8'
30	13+83	S. MAIN ST.	6" W	29.6	33.6	4.0'
31	13+82	S. MAIN ST.	8" W	29.8	33.8	4.0'
32	15+56	S. MAIN ST.	12" RCP SD	27.2	33.1	5.9'
33	17+64	S. MAIN ST.	12" RCP SD	29.3	32.5	3.2'
34	9+85	CEDAR WAY	34" GAS	26.3	32.9	6.6'
35	9+09	CEDAR WAY	34" GAS	27.2	32.8	5.6'

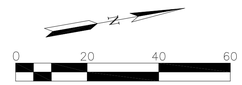
CURVE TABLE

CURVE	DESC	RADIUS	DELTA	LENGTH
C1	FC	1962.00'	002°58'04"	101.62'
C2	FC	25.00'	086°33'30"	37.77'
C3	FC	25.00'	093°26'30"	40.77'

EXISTING UTILITY NOTE:

EXISTING UTILITY INFORMATION HAS BEEN INCORPORATED BASED ON AVAILABLE RECORD INFORMATION, BUT HAS NOT BEEN VERIFIED BY ENGINEER. CONTRACTOR TO FIELD VERIFY (AND POTHOLE AS NEEDED) LOCATIONS OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS. ANY EXISTING UTILITIES DAMAGED SHALL BE REPAIRED/REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY ENGINEER AT THE CONTRACTOR'S EXPENSE.

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RJA
RUGGERI-JENSEN-AZAR
ENGINEERS ▪ PLANNERS ▪ SURVEYORS
8055 CAMINO ARROYO GILROY, CA 95020
PHONE: (408) 848-0300 FAX: (408) 848-0302

LICENSED PROFESSIONAL ENGINEER — WILLIAM SANTIAGO-SIERRA — No. C79665 — EXP. — CIVIL — STATE OF CALIFORNIA

Record Drawings
To be completed prior to acceptance of work by the City

Signature & Seal Date
P.E. No. _____ Exp. _____
Public Works Inspector: _____
Public Improvements initially Accepted by the City Council on: _____

REVISIONS

Num.	Date	By	Description	City Engr. Aprv.	Date

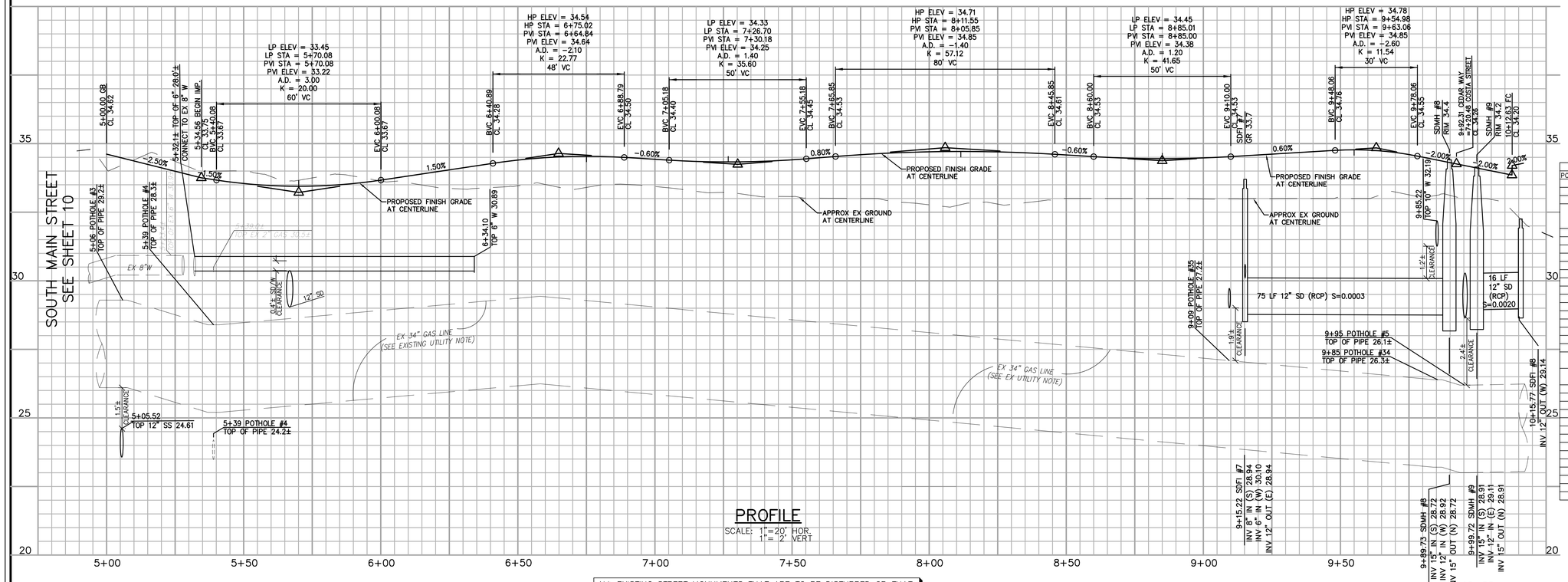
CITY OF MILPITAS
ENGINEERING DIVISION

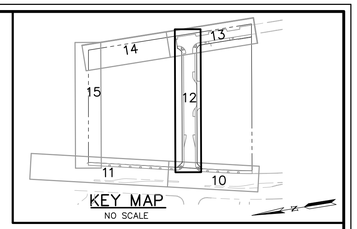
APPROVED: _____
CITY ENGINEER DATE
ANY CHANGES TO PUBLIC IMPROVEMENTS SHALL BE APPROVED BY THE CITY ENGINEER
RECOMMENDED FOR APPROVAL:
FIRE DEPT. _____ DATE: _____
ENGINEERING _____ DATE: _____

SOUTH MAIN SENIOR LIFESTYLES – PUBLIC
PUBLIC IMPROVEMENTS FOR – PHASE 1
SOUTH MAIN STREET (BEGIN TO STA 10+75)
MILPITAS, CALIFORNIA
FOR: SRM DEVELOPMENT, LLC DECEMBER 2017

PROJECT NO. 092041
PLAN NO.
SCALE: 1"=20'H 1"=2'V
SHEET 10 OF 22 SHEETS

PLOT DATE: December 1, 2017
FILE PATH: W:\Jobs 09\092041\Drawings\Final\Improvement Plans\OFFSITE\10 SOUTH MAIN STREET (BEGIN TO STA 10+75).dwg





POTHOLE TABLE					
POTHOLE NO.	STATION	STREET	UTILITY	TOP OF UTILITY	SURFACE ELEV.	COVER
1	9+85	S. MAIN ST.	8" W	30.2	34.2	4.0'
2	9+99	S. MAIN ST.	34" GAS	26.6	34.2	7.6
3	10+00	S. MAIN ST.	34" GAS	29.2	34.6	5.4'
			2" GAS	30.8	33.7	2.9'
4	5+39	CEDAR WAY	34" GAS	28.3	33.7	5.4'
			8" SS	24.2	33.7	9.5'
5	7+19	COSTA ST.	34" GAS	26.1	33.0	6.9'
6	7+23	S. MAIN ST.	12" RCP SD	31.2	34.2	3.0'
7	7+97	S. MAIN ST.	8" CLAY SS	24.8	33.8	9.0'
8	7+97	S. MAIN ST.	2" GAS	30.8	33.8	3.0'
9	7+97	S. MAIN ST.	2" GAS	30.8	33.8	3.0'
10	8+25	S. MAIN ST.	8" CLAY SS	24.6	33.7	9.1'
11	8+25	S. MAIN ST.	8" W	30.5	33.7	3.2'
12	8+22	S. MAIN ST.	2" GAS	30.7	33.6	2.9'
13	8+99	S. MAIN ST.	8" W	31.0	34.1	3.1'
14	8+99	S. MAIN ST.	8" CLAY SS	24.6	33.7	9.1'
15	8+99	S. MAIN ST.	2" GAS	31.2	33.7	2.5'
16	9+37	S. MAIN ST.	(3) 4" TEL PVC	29.3	34.5	5.2'
17	9+45	S. MAIN ST.	2" ELECT PVC	32.3	34.5	2.2'
18	9+85	S. MAIN ST.	8" W	30.9	34.6	3.7'
19	11+27	S. MAIN ST.	18" RCP SD	28.5	34.5	6.0'
20	12+07	S. MAIN ST.	2" CATV PVC	30.1	34.1	4.0'
			(2) 4" PG&E PVC	29.6	34.1	4.5'
21	12+08	S. MAIN ST.	2" CATV PVC	30.4	34.3	3.9'
			(2) 4" PG&E PVC	29.9	34.3	4.4'
22	12+72	S. MAIN ST.	ELECTRICAL	———	33.9	———
23	12+75	S. MAIN ST.	ELECTRICAL	———	34.1	———
24	13+36	S. MAIN ST.	6" CLAY SS	24.4	33.6	9.2'
25	13+42	S. MAIN ST.	36" RCP SD	28.2	33.9	5.7'
26	5+37	STREET A	8" SS	23.0	32.8	9.8'
27	5+37	STREET A	8" W	29.4	32.8	3.4'
28	5+43	STREET A	ELECTRICAL	30.5	33.0	2.5'
29	5+43	STREET A	2" GAS	29.2	33.0	3.8'
30	13+83	S. MAIN ST.	6" W	29.6	33.6	4.0'
31	13+82	S. MAIN ST.	8" W	29.8	33.8	4.0'
32	15+56	S. MAIN ST.	12" RCP SD	27.2	33.1	5.9'
33	17+64	S. MAIN ST.	12" RCP SD	29.3	32.5	3.2'
34	9+85	CEDAR WAY	34" GAS	26.3	32.9	6.6'
35	9+09	CEDAR WAY	34" GAS	27.2	32.8	5.6'

CONSTRUCTION NOTES:

1. SIDEWALK DRAIN, SEE DETAIL 3/7
2. ELECTROLIER (PHILIPS LUMEC 70MH-AT10-SHA3M-ACDR @ 16' POL)
3. VALLEY GUTTER, SEE DETAIL 6/7
4. BIORETENTION BASIN. SEE SHEET 19 AND DETAIL 1/7
5. FOR RETURN PROFILES A AND B, SEE SHEET 10
6. FOR RETURN PROFILES C AND D, SEE SHEET 13
7. EX UTILITY CROSSING. CONTRACTOR TO VERIFY LOCATION PRIOR TO COMMENCEMENT OF CONSTRUCTION. SEE EXISTING UTILITY NOTE.
8. CURB RAMP TO BE INSTALLED PER CITY OF MILPITAS STD DWG NO. 419
9. FIRE HYDRANT TO BE INSTALLED PER CITY OF MILPITAS STD DWG NO. 742
10. STREET BARRICADE PER CITY OF MILPITAS STD DWG NO. 444
11. 6" IRRIGATION SLEEVE PER LANDSCAPE PLANS
12. FLAG POLE PER LANDSCAPE PLANS

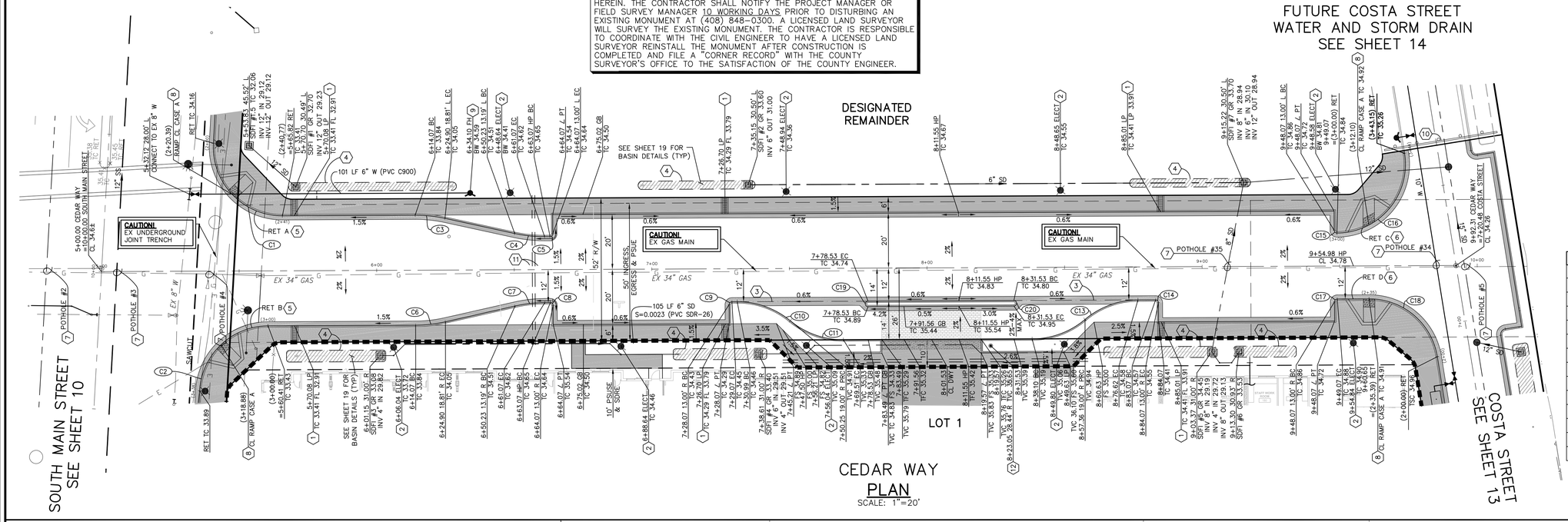
GENERAL NOTES:

1. CONTRACTOR SHALL RAISE ANY EXISTING MANHOLES, VALVES OR BOXES PRESERVED TO FINISH GRADE TO BE FLUSH WITH FINISH GRADE.

EXISTING UTILITY NOTE:

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CEDAR WAY
PLAN

SCALE: 1"=20'

SCALE IN FEET: 1"= 20'

CURVE TABLE									
CURVE	DESC	RADIUS	DELTA	LENGTH	CURVE	DESC	RADIUS	DELTA	LENGTH
C1	FC	25.00'	93°26'30"	40.77'	C14	FC	1.00'	90°00'00"	1.57'
C2	FC	25.00'	86°33'30"	37.77'	C16	FC	25.00'	98°53'37"	43.15'
C3	FC	50.00'	12°31'05"	10.92'	C17	FC	1.00'	90°00'00"	1.57'
C4	FC	50.00'	12°31'05"	10.92'	C18	FC	25.00'	81°06'23"	35.39'
C5	FC	1.00'	90°00'00"	1.57'	C19	FC	1.00'	180°00'00"	3.14'
C6	FC	50.00'	12°31'04"	10.92'	C20	FC	1.00'	180°00'00"	3.14'
C7	FC	50.00'	12°31'04"	10.92'					
C8	FC	1.00'	90°00'00"	1.57'					
C9	FC	1.00'	90°00'00"	1.57'					
C10	FC	30.00'	39°56'40"	20.91'					
C11	FC	30.00'	39°56'40"	20.91'					
C12	FC	30.00'	39°56'40"	20.91'					
C13	FC	30.00'	39°56'40"	20.91'					

RJA
RUGGERI-JENSEN-AZAR
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PHONE: (408) 848-0300 FAX: (408) 848-0302

LICENSED PROFESSIONAL ENGINEER
NILS SANTIAGO-SWEET
C79665
EXP.
CIVIL
STATE OF CALIFORNIA

Record Drawings
To be completed prior to acceptance of work by the City

Signature & Seal Date
P.E. No. _____ Exp. _____
Public Works Inspector: _____
Public Improvements initially Accepted by the City Council on: _____

REVISIONS

Num.	Date	By	Description	City Engr. Aprv.	Date

CITY OF MILPITAS
ENGINEERING DIVISION

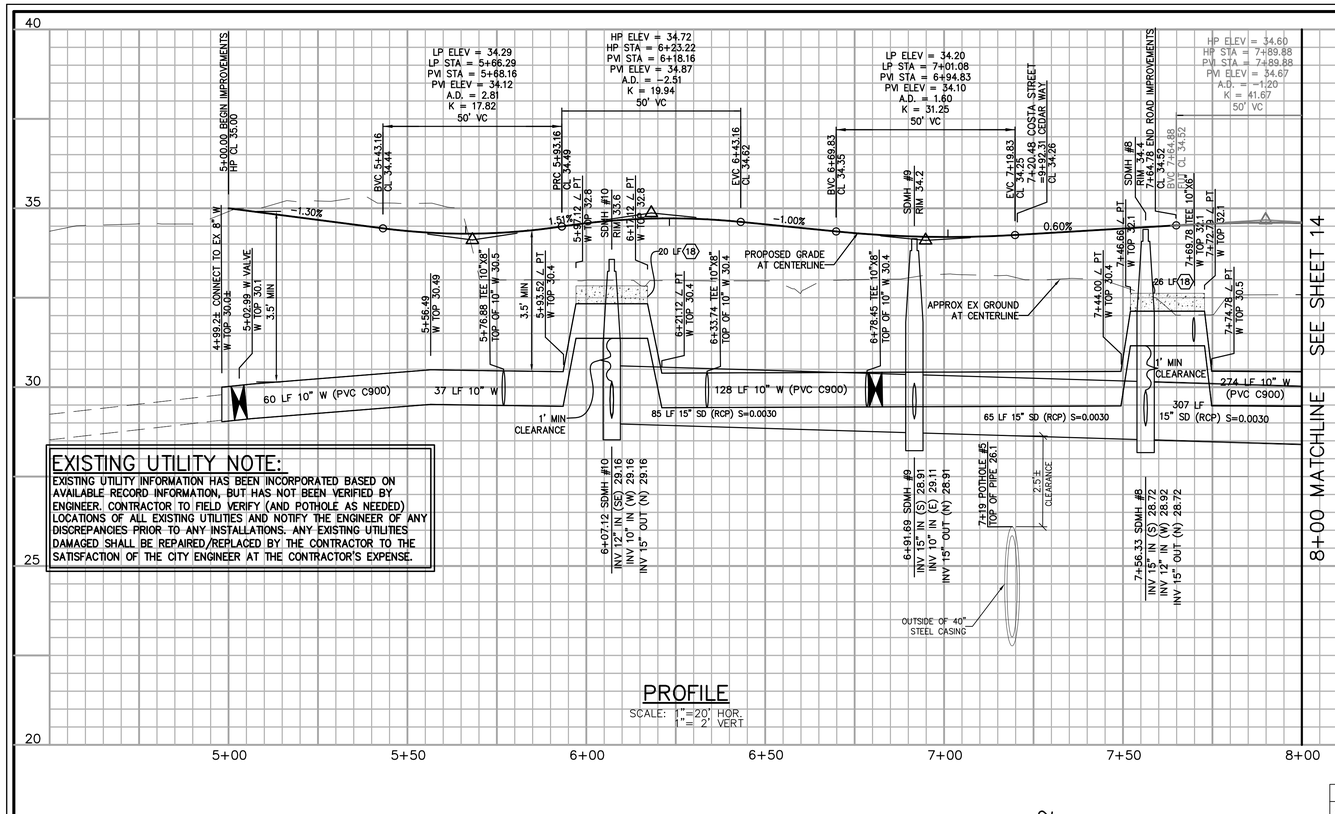
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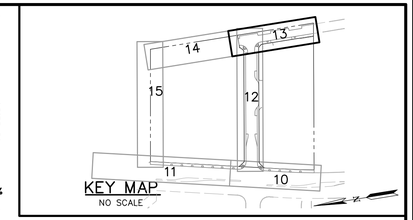
CITY ENGINEER DATE
ANY CHANGES TO PUBLIC IMPROVEMENTS SHALL BE APPROVED BY THE CITY ENGINEER
RECOMMENDED FOR APPROVAL:
FIRE DEPT. DATE:
ENGINEERING DATE:

SOUTH MAIN SENIOR LIFESTYLES – PUBLIC
PUBLIC IMPROVEMENTS FOR – PHASE 1
CEDAR WAY
FOR: SRM DEVELOPMENT, LLC MILPITAS, CALIFORNIA DECEMBER 2017

PROJECT NO. 092041
PLAN NO.
SCALE: 1"=20'H 1"=2'V
SHEET 12 OF 22 SHEETS

PLOT DATE: December 1, 2017
FILE PATH: W:\Jobs 09\092041\Drawings\Final\Improvement Plans\OFFSITE\12 CEDAR WAY.dwg



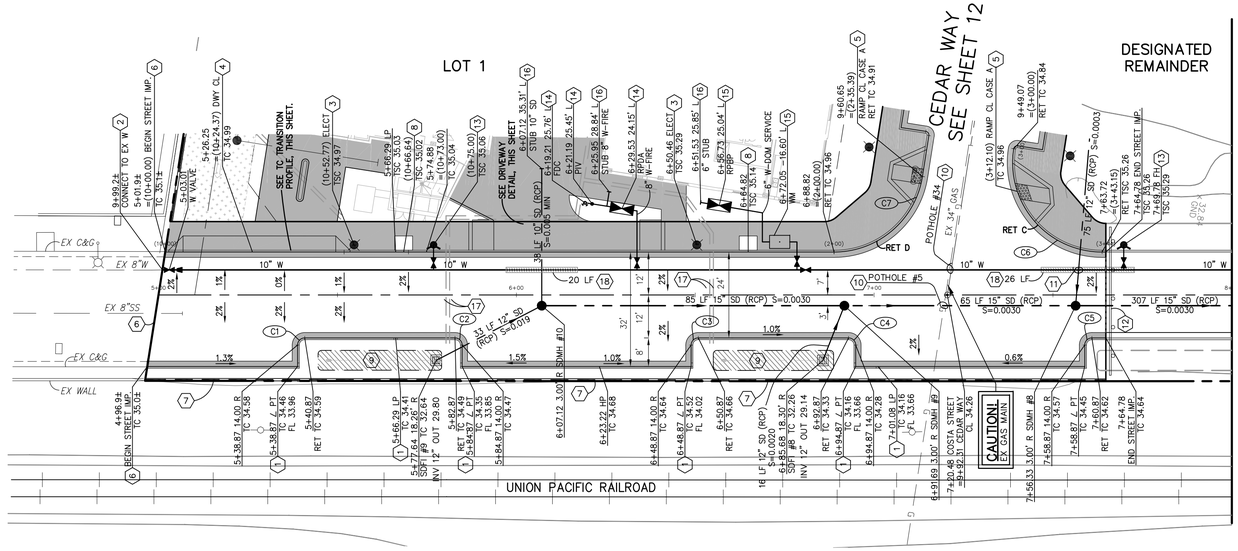


CONSTRUCTION NOTES:

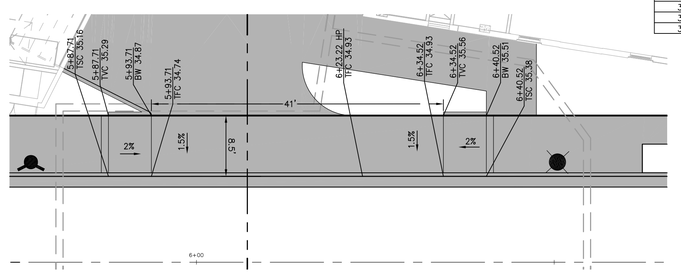
1. CURB CUT PER DETAIL 6/6
2. CONNECT TO EXISTING 8" W WITH 8" VALVE AND 10"X8" REDUCER
3. ELECTROLIERS (PHILIPS LUMEC 70MH-AT10-SHA3M-ACDR @ 16' POLE)
4. DRIVEWAY PER CITY OF MILPITAS STD DWG NO. 430
5. CURB RAMP TO BE INSTALLED PER CITY OF MILPITAS STD DWG NO. 419
6. CONFORM TO EXISTING
7. BOUNDARY WALL PER SEPARATE PLANS AND PERMIT (DEFERRED SUBMITTAL)
8. 5'X6' TREE WELL PER LANDSCAPE PLANS
9. BIORETENTION BASIN. SEE SHEET 19 AND DETAIL 1/7
10. EX UTILITY CROSSING. CONTRACTOR TO VERIFY LOCATION PRIOR TO COMMENCEMENT OF CONSTRUCTION. SEE EXISTING UTILITY NOTE.
11. UTILITY CROSSING PER DETAIL 11/6
12. STREET BARRICADE PER CITY OF MILPITAS STD DWG NO. 444
13. FIRE HYDRANT PER CITY OF MILPITAS STD DWG NO. 742
14. 8" FIRE SERVICE WITH REDUCED PRESSURE DETECTOR CHECK VALVE WITH PIV AND FDC PER CITY OF MILPITAS STD DWG NO. 730
15. 4" WATER METER AND 6" REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER PER CITY OF MILPITAS STD DWG NO. 728 AND 734
16. SEE ONSITE IMPROVEMENT PLANS FOR CONTINUATION OF UTILITIES AND IMPROVEMENTS
17. 6" IRRIGATION SLEEVE PER LANDSCAPE PLANS
18. CONCRETE CAP PER DETAIL 8/8

POTHOLE TABLE

POTHOLE NO.	STATION	STREET	UTILITY	TOP OF UTILITY	SURFACE ELEV.	COVER
1	9+85	S. MAIN ST.	8" W	30.2	34.2	4.0'
2	9+99	S. MAIN ST.	34" GAS	26.6	34.2	7.6
3	10+00	S. MAIN ST.	34" GAS	29.2	34.6	5.4'
			2" GAS	30.8	33.7	2.9'
4	5+39	CEDAR WAY	34" GAS	28.3	33.7	5.4'
			8" SS	24.2	33.7	9.5'
5	7+19	COSTA ST.	34" GAS	26.1	33.0	6.9'
6	7+23	S. MAIN ST.	12" RCP SD	31.2	34.2	3.0'
7	7+97	S. MAIN ST.	8" CLAY SS	24.8	33.8	9.0'
8	7+97	S. MAIN ST.	2" GAS	30.8	33.8	3.0'
9	7+97	S. MAIN ST.	2" GAS	30.8	33.8	3.0'
10	8+25	S. MAIN ST.	8" CLAY SS	24.6	33.7	9.1'
11	8+25	S. MAIN ST.	8" W	30.5	33.7	3.2'
12	8+22	S. MAIN ST.	2" GAS	30.7	33.6	2.9'
13	8+99	S. MAIN ST.	8" W	31.0	34.1	3.1'
14	8+99	S. MAIN ST.	8" CLAY SS	24.6	33.7	9.1'
15	8+99	S. MAIN ST.	2" GAS	31.2	33.7	2.5'
16	9+37	S. MAIN ST.	(3) 4" TEL PVC	29.3	34.5	5.2'
17	9+45	S. MAIN ST.	2" ELECT PVC	32.3	34.5	2.2'
18	9+85	S. MAIN ST.	8" W	30.9	34.6	3.7'
19	11+27	S. MAIN ST.	18" RCP SD	28.5	34.5	6.0'
20	12+07	S. MAIN ST.	2" CATV PVC	30.1	34.1	4.0'
			(2) 4" PG&E PVC	29.6	34.1	4.5'
21	12+08	S. MAIN ST.	2" CATV PVC	30.4	34.3	3.9'
			(2) 4" PG&E PVC	29.9	34.3	4.4'
22	12+72	S. MAIN ST.	ELECTRICAL	———	33.9	———
23	12+75	S. MAIN ST.	ELECTRICAL	———	34.1	———
24	13+36	S. MAIN ST.	6" CLAY SS	24.4	33.6	9.2'
25	13+42	S. MAIN ST.	36" RCP SD	28.2	33.9	5.7'
26	5+37	STREET A	8" SS	23.0	32.8	9.8'
27	5+37	STREET A	8" W	29.4	32.8	3.4'
28	5+43	STREET A	ELECTRICAL	30.5	33.0	2.5'
29	5+43	STREET A	2" GAS	29.2	33.0	3.8'
30	13+83	S. MAIN ST.	6" W	29.6	33.6	4.0'
31	13+82	S. MAIN ST.	8" W	29.8	33.8	4.0'
32	15+56	S. MAIN ST.	12" RCP SD	27.2	33.1	5.9'
33	17+64	S. MAIN ST.	12" RCP SD	29.3	32.5	3.2'
34	9+85	CEDAR WAY	34" GAS	26.3	32.9	6.6'
35	9+09	CEDAR WAY	34" GAS	27.2	32.8	5.6'



COSTA STREET
PLAN
SCALE: 1"=20'



DRIVEWAY DETAIL
PLAN
SCALE: 1"=10'

ALL EXISTING STREET MONUMENTS THAT ARE TO BE DISTURBED OR THAT MAY BE DISTURBED DURING CONSTRUCTION SHALL COMPLY AS STATED HEREIN. THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER OR FIELD SURVEY MANAGER 10 WORKING DAYS PRIOR TO DISTURBING AN EXISTING MONUMENT. A LICENSED LAND SURVEYOR WILL SURVEY THE EXISTING MONUMENT. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE CIVIL ENGINEER TO HAVE A LICENSED LAND SURVEYOR REINSTALL THE MONUMENT AFTER CONSTRUCTION IS COMPLETED AND FILE A "CORNER RECORD" WITH THE COUNTY SURVEYOR'S OFFICE TO THE SATISFACTION OF THE COUNTY ENGINEER.

CURVE TABLE

CURVE	DESC	RADIUS	DELTA	LENGTH
C1	FC	2.00'	090°00'00"	3.14'
C2	FC	2.00'	090°00'00"	3.14'
C3	FC	2.00'	090°00'00"	3.14'
C4	FC	2.00'	090°00'00"	3.14'
C5	FC	2.00'	090°00'00"	3.14'
C6	FC	25.00'	098°53'37"	43.15'
C7	FC	25.00'	081°06'23"	35.39'

0 20 40 60
SCALE IN FEET: 1"= 20'

RUGGERI-JENSEN-AZAR
ENGINEERS ▪ PLANNERS ▪ SURVEYORS
8055 CAMINO ARROYO GILROY, CA 95020
PHONE: (408) 848-0300 FAX: (408) 848-0302

LICENSED PROFESSIONAL ENGINEER — JOHN SAINT AGO SCHEU — C79665 — EXP. ——— — CIVIL — STATE OF CALIFORNIA

Record Drawings
To be completed prior to acceptance of work by the City

Signature & Seal Date
P.E. No. _____ Exp. _____
Public Works Inspector: _____
Public Improvements initially Accepted by the City Council on: _____

REVISIONS

Num.	Date	By	Description	City Engr. Aprv.	Date

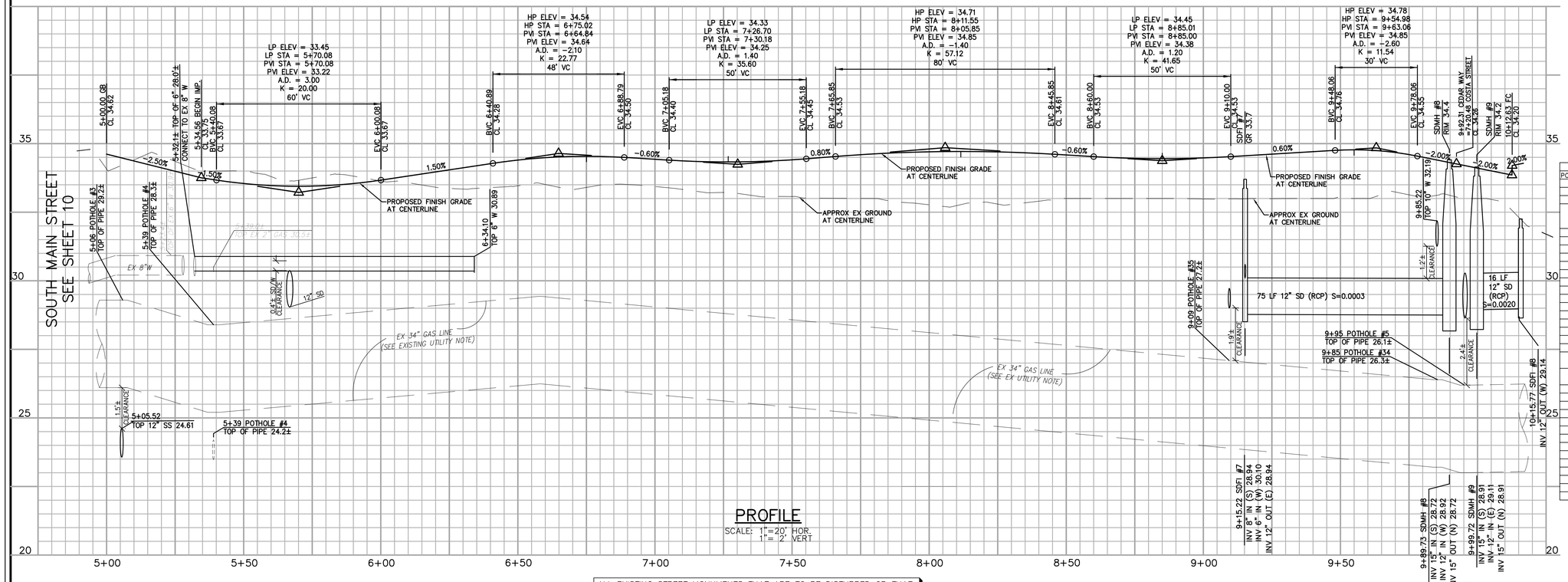
CITY OF MILPITAS
ENGINEERING DIVISION

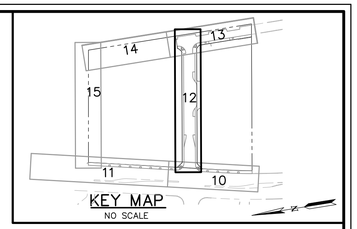
APPROVED:
CITY ENGINEER DATE
ANY CHANGES TO PUBLIC IMPROVEMENTS SHALL BE APPROVED BY THE CITY ENGINEER
RECOMMENDED FOR APPROVAL:
FIRE DEPT. DATE:
ENGINEERING DATE:

SOUTH MAIN SENIOR LIFESTYLES – PUBLIC
PUBLIC IMPROVEMENTS FOR – PHASE 1
COSTA STREET
MILPITAS, CALIFORNIA
FOR: SRM DEVELOPMENT, LLC DECEMBER 2017

PROJECT NO. 092041
PLAN NO.
SCALE: 1"=20'H 1"=2'V
SHEET 13 OF 22 SHEETS

PLOT DATE: December 1, 2017
FILE PATH: W:\Jobs 09\092041\Drawings\Final\Improvement Plans\OFFSITE\13 COSTA STREET.dwg





POTHOLE TABLE					
POTHOLE NO.	STATION	STREET	UTILITY	TOP OF UTILITY	SURFACE ELEV.	COVER
1	9+85	S. MAIN ST.	8" W	30.2	34.2	4.0'
2	9+99	S. MAIN ST.	34" GAS	26.6	34.2	7.6
3	10+00	S. MAIN ST.	34" GAS	29.2	34.6	5.4'
			2" GAS	30.8	33.7	2.9'
4	5+39	CEDAR WAY	34" GAS	28.3	33.7	5.4'
			8" SS	24.2	33.7	9.5'
5	7+19	COSTA ST.	34" GAS	26.1	33.0	6.9'
6	7+23	S. MAIN ST.	12" RCP SD	31.2	34.2	3.0'
7	7+97	S. MAIN ST.	8" CLAY SS	24.8	33.8	9.0'
8	7+97	S. MAIN ST.	2" GAS	30.8	33.8	3.0'
9	7+97	S. MAIN ST.	2" GAS	30.8	33.8	3.0'
10	8+25	S. MAIN ST.	8" CLAY SS	24.6	33.7	9.1'
11	8+25	S. MAIN ST.	8" W	30.5	33.7	3.2'
12	8+22	S. MAIN ST.	2" GAS	30.7	33.6	2.9'
13	8+99	S. MAIN ST.	8" W	31.0	34.1	3.1'
14	8+99	S. MAIN ST.	8" CLAY SS	24.6	33.7	9.1'
15	8+99	S. MAIN ST.	2" GAS	31.2	33.7	2.5'
16	9+37	S. MAIN ST.	(3) 4" TEL PVC	29.3	34.5	5.2'
17	9+45	S. MAIN ST.	2" ELECT PVC	32.3	34.5	2.2'
18	9+85	S. MAIN ST.	8" W	30.9	34.6	3.7'
19	11+27	S. MAIN ST.	18" RCP SD	28.5	34.5	6.0'
20	12+07	S. MAIN ST.	2" CATV PVC	30.1	34.1	4.0'
			(2) 4" PG&E PVC	29.6	34.1	4.5'
21	12+08	S. MAIN ST.	2" CATV PVC	30.4	34.3	3.9'
			(2) 4" PG&E PVC	29.9	34.3	4.4'
22	12+72	S. MAIN ST.	ELECTRICAL	———	33.9	———
23	12+75	S. MAIN ST.	ELECTRICAL	———	34.1	———
24	13+36	S. MAIN ST.	6" CLAY SS	24.4	33.6	9.2'
25	13+42	S. MAIN ST.	36" RCP SD	28.2	33.9	5.7'
26	5+37	STREET A	8" SS	23.0	32.8	9.8'
27	5+37	STREET A	8" W	29.4	32.8	3.4'
28	5+43	STREET A	ELECTRICAL	30.5	33.0	2.5'
29	5+43	STREET A	2" GAS	29.2	33.0	3.8'
30	13+83	S. MAIN ST.	6" W	29.6	33.6	4.0'
31	13+82	S. MAIN ST.	8" W	29.8	33.8	4.0'
32	15+56	S. MAIN ST.	12" RCP SD	27.2	33.1	5.9'
33	17+64	S. MAIN ST.	12" RCP SD	29.3	32.5	3.2'
34	9+85	CEDAR WAY	34" GAS	26.3	32.9	6.6'
35	9+09	CEDAR WAY	34" GAS	27.2	32.8	5.6'

CONSTRUCTION NOTES:

1. SIDEWALK DRAIN, SEE DETAIL 3/7
2. ELECTROLIER (PHILIPS LUMEC 70MH-AT10-SHA3M-ACDR @ 16' POL)
3. VALLEY GUTTER, SEE DETAIL 6/7
4. BIORETENTION BASIN. SEE SHEET 19 AND DETAIL 1/7
5. FOR RETURN PROFILES A AND B, SEE SHEET 10
6. FOR RETURN PROFILES C AND D, SEE SHEET 13
7. EX UTILITY CROSSING. CONTRACTOR TO VERIFY LOCATION PRIOR TO COMMENCEMENT OF CONSTRUCTION. SEE EXISTING UTILITY NOTE.
8. CURB RAMP TO BE INSTALLED PER CITY OF MILPITAS STD DWG NO. 419
9. FIRE HYDRANT TO BE INSTALLED PER CITY OF MILPITAS STD DWG NO. 742
10. STREET BARRICADE PER CITY OF MILPITAS STD DWG NO. 444
11. 6" IRRIGATION SLEEVE PER LANDSCAPE PLANS
12. FLAG POLE PER LANDSCAPE PLANS

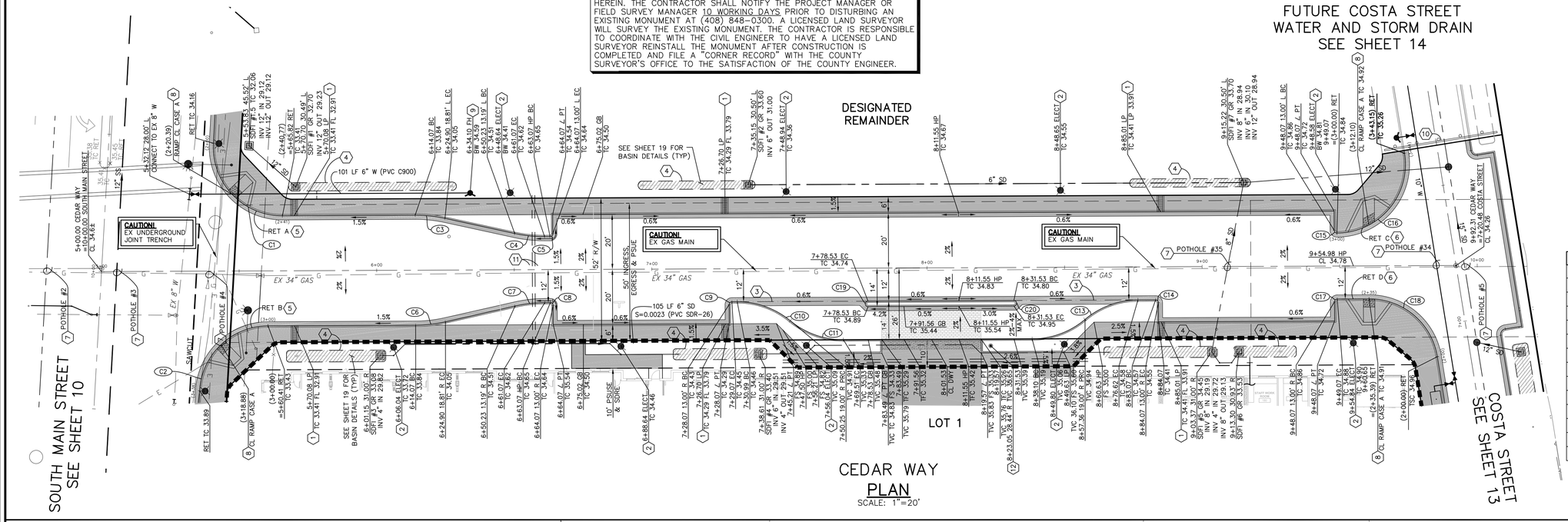
GENERAL NOTES:

1. CONTRACTOR SHALL RAISE ANY EXISTING MANHOLES, VALVES OR BOXES PRESERVED TO FINISH GRADE TO BE FLUSH WITH FINISH GRADE.

EXISTING UTILITY NOTE:

EXISTING UTILITY INFORMATION HAS BEEN INCORPORATED BASED ON AVAILABLE RECORD INFORMATION, BUT HAS NOT BEEN VERIFIED BY ENGINEER. CONTRACTOR TO FIELD VERIFY (AND POTHOLE AS NEEDED) LOCATIONS OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS. ANY EXISTING UTILITIES DAMAGED SHALL BE REPAIRED/REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY ENGINEER AT THE CONTRACTOR'S EXPENSE.

ALL EXISTING STREET MONUMENTS THAT ARE TO BE DISTURBED OR THAT MAY BE DISTURBED DURING CONSTRUCTION SHALL COMPLY AS STATED HEREIN. THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER OR FIELD SURVEY MANAGER 10 WORKING DAYS PRIOR TO DISTURBING AN EXISTING MONUMENT AT (408) 848-0300. A LICENSED LAND SURVEYOR WILL SURVEY THE EXISTING MONUMENT. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE CIVIL ENGINEER TO HAVE A LICENSED LAND SURVEYOR REINSTALL THE MONUMENT AFTER CONSTRUCTION IS COMPLETED AND FILE A "CORNER RECORD" WITH THE COUNTY SURVEYOR'S OFFICE TO THE SATISFACTION OF THE COUNTY ENGINEER.



CEDAR WAY
PLAN

SCALE: 1"=20'

SCALE IN FEET: 1"= 20'

CURVE TABLE									
CURVE	DESC	RADIUS	DELTA	LENGTH	CURVE	DESC	RADIUS	DELTA	LENGTH
C1	FC	25.00'	93°26'30"	40.77'	C14	FC	1.00'	90°00'00"	1.57'
C2	FC	25.00'	86°33'30"	37.77'	C16	FC	25.00'	98°53'37"	43.15'
C3	FC	50.00'	12°31'05"	10.92'	C17	FC	1.00'	90°00'00"	1.57'
C4	FC	50.00'	12°31'05"	10.92'	C18	FC	25.00'	81°06'23"	35.39'
C5	FC	1.00'	90°00'00"	1.57'	C19	FC	1.00'	180°00'00"	3.14'
C6	FC	50.00'	12°31'04"	10.92'	C20	FC	1.00'	180°00'00"	3.14'
C7	FC	50.00'	12°31'04"	10.92'					
C8	FC	1.00'	90°00'00"	1.57'					
C9	FC	1.00'	90°00'00"	1.57'					
C10	FC	30.00'	39°56'40"	20.91'					
C11	FC	30.00'	39°56'40"	20.91'					
C12	FC	30.00'	39°56'40"	20.91'					
C13	FC	30.00'	39°56'40"	20.91'					

RJA
RUGGERI-JENSEN-AZAR
ENGINEERS ▪ PLANNERS ▪ SURVEYORS
8055 CAMINO ARROYO GILROY, CA 95020
PHONE: (408) 848-0300 FAX: (408) 848-0302

LICENSED PROFESSIONAL ENGINEER
NILS SANTIAGO-SWEET
C79665
EXP.
CIVIL
STATE OF CALIFORNIA

Record Drawings
To be completed prior to acceptance of work by the City

Signature & Seal Date
P.E. No. _____ Exp. _____
Public Works Inspector: _____
Public Improvements initially Accepted by the City Council on: _____

REVISIONS

Num.	Date	By	Description	City Engr. Aprv.	Date

CITY OF MILPITAS
ENGINEERING DIVISION

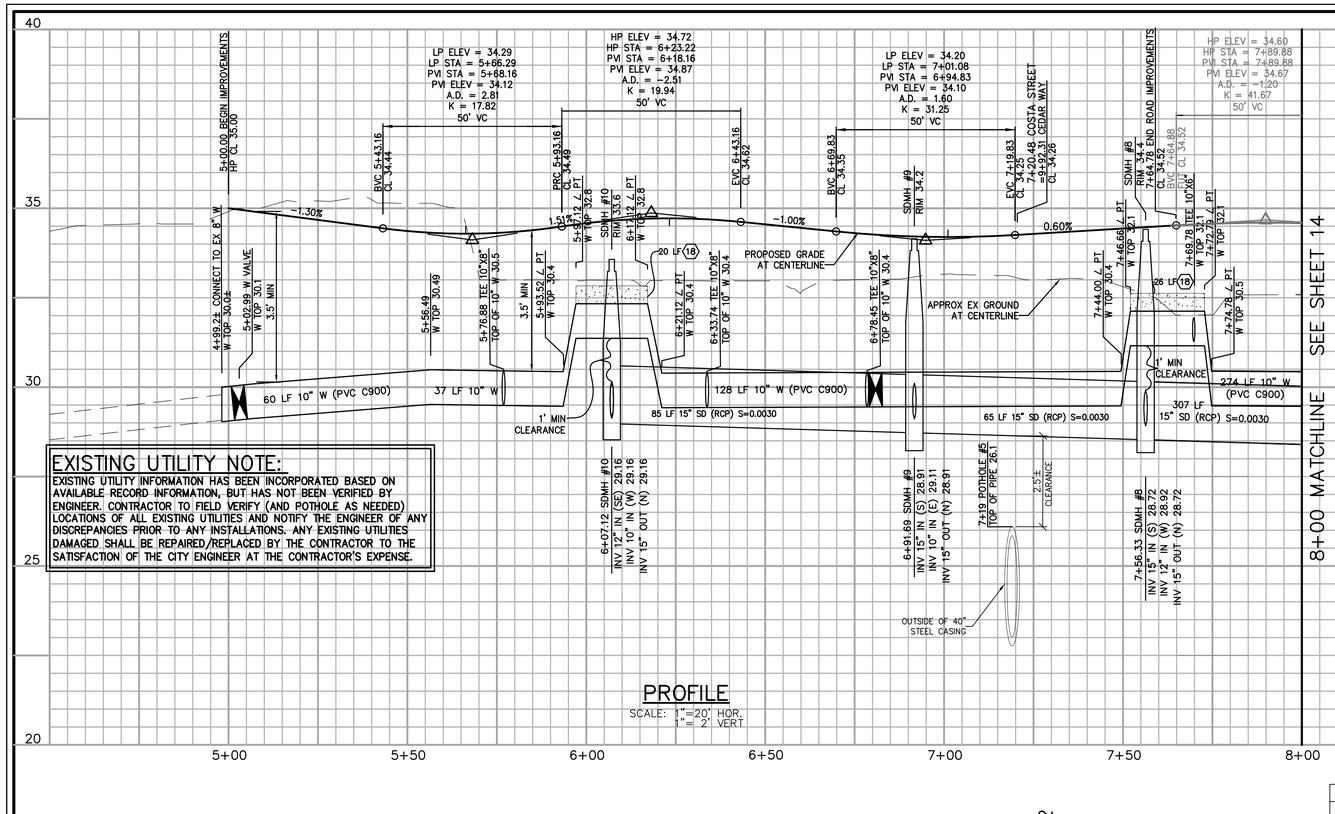
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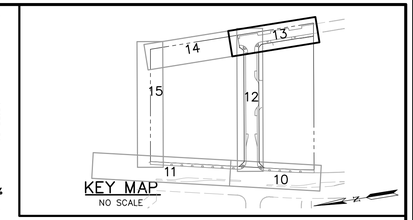
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SOUTH MAIN SENIOR LIFESTYLES – PUBLIC
PUBLIC IMPROVEMENTS FOR – PHASE 1
CEDAR WAY
FOR: SRM DEVELOPMENT, LLC MILPITAS, CALIFORNIA DECEMBER 2017

PROJECT NO. 092041
PLAN NO.
SCALE: 1"=20'H 1"=2'V
SHEET 12 OF 22 SHEETS

PLOT DATE: December 1, 2017
FILE PATH: W:\Jobs 09\092041\Drawings\Final\Improvement Plans\OFFSITE\12 CEDAR WAY.dwg



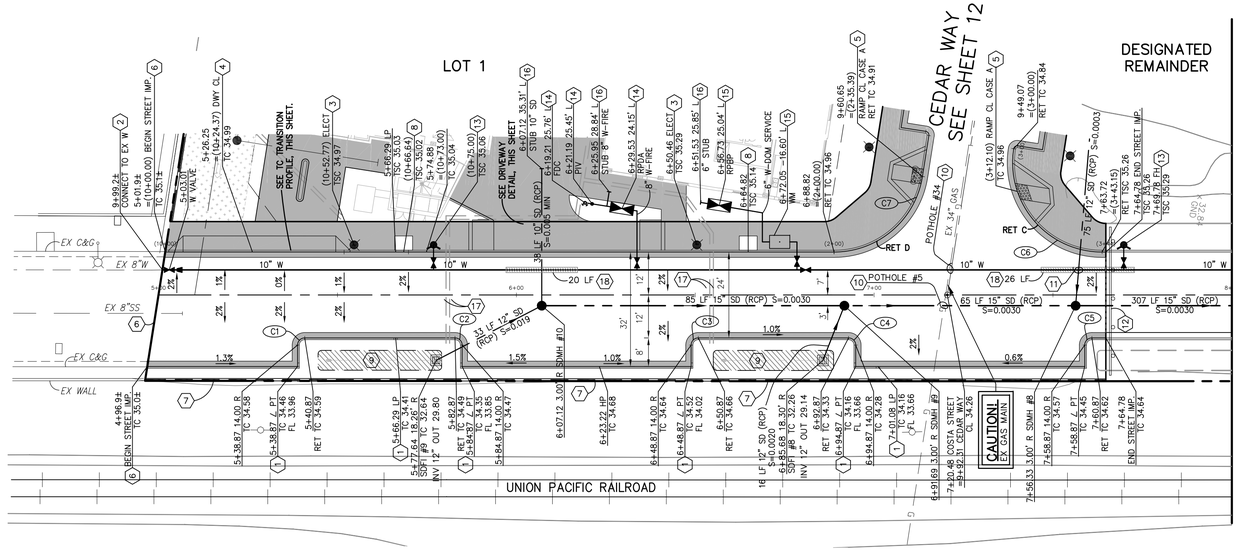


CONSTRUCTION NOTES:

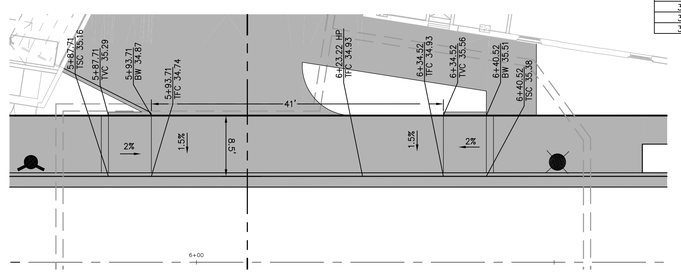
1. CURB CUT PER DETAIL 6/6
2. CONNECT TO EXISTING 8" W WITH 8" VALVE AND 10"X8" REDUCER
3. ELECTROLIERS (PHILIPS LUMEC 70MH-AT10-SHA3M-ACDR @ 16' POLE)
4. DRIVEWAY PER CITY OF MILPITAS STD DWG NO. 430
5. CURB RAMP TO BE INSTALLED PER CITY OF MILPITAS STD DWG NO. 419
6. CONFORM TO EXISTING
7. BOUNDARY WALL PER SEPARATE PLANS AND PERMIT (DEFERRED SUBMITTAL)
8. 5'X6' TREE WELL PER LANDSCAPE PLANS
9. BIORETENTION BASIN. SEE SHEET 19 AND DETAIL 1/7
10. EX UTILITY CROSSING. CONTRACTOR TO VERIFY LOCATION PRIOR TO COMMENCEMENT OF CONSTRUCTION. SEE EXISTING UTILITY NOTE.
11. UTILITY CROSSING PER DETAIL 11/6
12. STREET BARRICADE PER CITY OF MILPITAS STD DWG NO. 444
13. FIRE HYDRANT PER CITY OF MILPITAS STD DWG NO. 742
14. 8" FIRE SERVICE WITH REDUCED PRESSURE DETECTOR CHECK VALVE WITH PIV AND FDC PER CITY OF MILPITAS STD DWG NO. 730
15. 4" WATER METER AND 6" REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER PER CITY OF MILPITAS STD DWG NO. 728 AND 734
16. SEE ONSITE IMPROVEMENT PLANS FOR CONTINUATION OF UTILITIES AND IMPROVEMENTS
17. 6" IRRIGATION SLEEVE PER LANDSCAPE PLANS
18. CONCRETE CAP PER DETAIL 8/8

POTHOLE TABLE

POTHOLE NO.	STATION	STREET	UTILITY	TOP OF UTILITY	SURFACE ELEV.	COVER
1	9+85	S. MAIN ST.	8" W	30.2	34.2	4.0'
2	9+99	S. MAIN ST.	34" GAS	26.6	34.2	7.6
3	10+00	S. MAIN ST.	34" GAS	29.2	34.6	5.4'
			2" GAS	30.8	33.7	2.9'
4	5+39	CEDAR WAY	34" GAS	28.3	33.7	5.4'
			8" SS	24.2	33.7	9.5'
5	7+19	COSTA ST.	34" GAS	26.1	33.0	6.9'
6	7+23	S. MAIN ST.	12" RCP SD	31.2	34.2	3.0'
7	7+97	S. MAIN ST.	8" CLAY SS	24.8	33.8	9.0'
8	7+97	S. MAIN ST.	2" GAS	30.8	33.8	3.0'
9	7+97	S. MAIN ST.	2" GAS	30.8	33.8	3.0'
10	8+25	S. MAIN ST.	8" CLAY SS	24.6	33.7	9.1'
11	8+25	S. MAIN ST.	8" W	30.5	33.7	3.2'
12	8+22	S. MAIN ST.	2" GAS	30.7	33.6	2.9'
13	8+99	S. MAIN ST.	8" W	31.0	34.1	3.1'
14	8+99	S. MAIN ST.	8" CLAY SS	24.6	33.7	9.1'
15	8+99	S. MAIN ST.	2" GAS	31.2	33.7	2.5'
16	9+37	S. MAIN ST.	(3) 4" TEL PVC	29.3	34.5	5.2'
17	9+45	S. MAIN ST.	2" ELECT PVC	32.3	34.5	2.2'
18	9+85	S. MAIN ST.	8" W	30.9	34.6	3.7'
19	11+27	S. MAIN ST.	18" RCP SD	28.5	34.5	6.0'
20	12+07	S. MAIN ST.	2" CATV PVC	30.1	34.1	4.0'
			(2) 4" PG&E PVC	29.6	34.1	4.5'
21	12+08	S. MAIN ST.	2" CATV PVC	30.4	34.3	3.9'
			(2) 4" PG&E PVC	29.9	34.3	4.4'
22	12+72	S. MAIN ST.	ELECTRICAL	———	33.9	———
23	12+75	S. MAIN ST.	ELECTRICAL	———	34.1	———
24	13+36	S. MAIN ST.	6" CLAY SS	24.4	33.6	9.2'
25	13+42	S. MAIN ST.	36" RCP SD	28.2	33.9	5.7'
26	5+37	STREET A	8" SS	23.0	32.8	9.8'
27	5+37	STREET A	8" W	29.4	32.8	3.4'
28	5+43	STREET A	ELECTRICAL	30.5	33.0	2.5'
29	5+43	STREET A	2" GAS	29.2	33.0	3.8'
30	13+83	S. MAIN ST.	6" W	29.6	33.6	4.0'
31	13+82	S. MAIN ST.	8" W	29.8	33.8	4.0'
32	15+56	S. MAIN ST.	12" RCP SD	27.2	33.1	5.9'
33	17+64	S. MAIN ST.	12" RCP SD	29.3	32.5	3.2'
34	9+85	CEDAR WAY	34" GAS	26.3	32.9	6.6'
35	9+09	CEDAR WAY	34" GAS	27.2	32.8	5.6'



COSTA STREET
PLAN
SCALE: 1"=20'



DRIVEWAY DETAIL
PLAN
SCALE: 1"=10'

ALL EXISTING STREET MONUMENTS THAT ARE TO BE DISTURBED OR THAT MAY BE DISTURBED DURING CONSTRUCTION SHALL COMPLY AS STATED HEREIN. THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER OR FIELD SURVEY MANAGER 10 WORKING DAYS PRIOR TO DISTURBING AN EXISTING MONUMENT. A LICENSED LAND SURVEYOR WILL SURVEY THE EXISTING MONUMENT. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE CIVIL ENGINEER TO HAVE A LICENSED LAND SURVEYOR REINSTALL THE MONUMENT AFTER CONSTRUCTION IS COMPLETED AND FILE A "CORNER RECORD" WITH THE COUNTY SURVEYOR'S OFFICE TO THE SATISFACTION OF THE COUNTY ENGINEER.

CURVE TABLE

CURVE	DESC	RADIUS	DELTA	LENGTH
C1	FC	2.00'	090°00'00"	3.14'
C2	FC	2.00'	090°00'00"	3.14'
C3	FC	2.00'	090°00'00"	3.14'
C4	FC	2.00'	090°00'00"	3.14'
C5	FC	2.00'	090°00'00"	3.14'
C6	FC	25.00'	098°53'37"	43.15'
C7	FC	25.00'	081°06'23"	35.39'

0 20 40 60
SCALE IN FEET: 1"= 20'

RUGGERI-JENSEN-AZAR
ENGINEERS ▪ PLANNERS ▪ SURVEYORS
8055 CAMINO ARROYO GILROY, CA 95020
PHONE: (408) 848-0300 FAX: (408) 848-0302

LICENSED PROFESSIONAL ENGINEER — JOHN SAINT AGO SCHEU — C79665 — EXP. ——— — CIVIL — STATE OF CALIFORNIA

Record Drawings
To be completed prior to acceptance of work by the City

Signature & Seal Date
P.E. No. _____ Exp. _____
Public Works Inspector: _____
Public Improvements initially Accepted by the City Council on: _____

REVISIONS

Num.	Date	By	Description	City Engr. Aprv.	Date

CITY OF MILPITAS
ENGINEERING DIVISION

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SOUTH MAIN SENIOR LIFESTYLES – PUBLIC
PUBLIC IMPROVEMENTS FOR – PHASE 1
COSTA STREET
MILPITAS, CALIFORNIA
FOR: SRM DEVELOPMENT, LLC DECEMBER 2017

PROJECT NO. 092041
PLAN NO.
SCALE: 1"=20'H 1"=2'V
SHEET 13 OF 22 SHEETS

PLOT DATE: December 1, 2017
FILE PATH: W:\Jobs 09\092041\Drawings\Final\Improvement Plans\OFFSITE\13 COSTA STREET.dwg

GENERAL NOTES

1. PLANS ARE BASED UPON CIVIL DRAWINGS PREPARED BY RJA ENGINEERS AND ARCHITECTURAL DRAWINGS PREPARED BY BRICK ARCHITECTS. CONTRACTOR SHALL REVIEW THESE DOCUMENTS, CONFIRM ALL DIMENSIONS AND ELEVATIONS AND NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES, EITHER ON THE PLANS OR OBSERVED IN THE FIELD PRIOR TO COMMENCING WORK.

2. ALL WORK SHALL BE PERFORMED BY QUALIFIED LICENSED CONTRACTORS OR SUBCONTRACTORS HAVING AT LEAST 5 YEARS EXPERIENCE WITH SIMILAR PROJECTS.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAYING ALL FEES RELATED TO THE SCOPE OF WORK, UNLESS STATED OTHERWISE IN THE CONTRACT.

4. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORK WITH THAT OF OTHER SUBCONTRACTORS ON THE SITE TO AVOID CONFLICTS WITH WORK SEQUENCE AND DELAYS IN THE PROGRESS OF WORK BY OTHERS.

5. CODES AND STANDARDS: ALL WORK SHALL BE IN ACCORDANCE WITH STANDARDS STATED IN THE PROJECT SPECIFICATIONS AND ALL APPLICABLE LOCAL, COUNTY, STATE AND FEDERAL CODES AND ORDINANCES, INCLUDING BUT NOT LIMITED TO:
   AMERICAN DISABILITIES ACT
   UNIFORM BUILDING CODE
   CALIFORNIA STATE TITLE 24
   CALIFORNIA STATE BOARD OF CONSUMER AFFAIRS FOR AREAS OF WORK GOVERNED BY APPLICABLE LICENCE REQUIREMENTS
   CITY OF MILPITAS
   SANTA CLARA COUNTY

6. CONSTRUCTION LAYOUT: CONTRACTOR SHALL STAKE IN THE FIELD ALL ITEMS SHOWN ON THESE PLANS TO BE CONSTRUCTED FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO COMMENCEMENT OF WORK. IF CONFLICTS BETWEEN PROPOSED CONSTRUCTION AND EXISTING SURFACE AND SUBSURFACE CONDITIONS ARE APPARENT, NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY AND DO NOT PROCEED WITH WORK UNTIL AUTHORIZED TO PROCEED. ALL CHANGES TO PROPOSED CONSTRUCTION WORK MUST BE AUTHORIZED BY LANDSCAPE ARCHITECT IN WRITING. UNAUTHORIZED WORK SHALL BE SUBJECT TO REMOVAL AND PROPERLY CONSTRUCTED IN ACCORDANCE WITH CONDITIONS IDENTIFIED ON THE DRAWINGS AND PROJECT SPECIFICATIONS OR AS AMENDED IN WRITING BY THE LANDSCAPE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

7. GRADING AND DRAINAGE: CONTRACTOR SHALL REVIEW AND BE FAMILIAR WITH ALL RELATED PLANS, DRAWINGS AND SPECIFICATIONS PRIOR TO COMMENCING WORK, INCLUDING BUT NOT LIMITED TO: ARCHITECTURAL, CIVIL, STRUCTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS. NOTIFY OWNER'S REPRESENTATIVE OF ANY CONFLICTS OR OBSTRUCTIONS RELATED TO THE WORK IMMEDIATELY FOR DIRECTIONS OR MODIFICATIONS TO THE PROPOSED PLANS. DO NOT PROCEED WITH WORK WHICH MODIFIES OR CHANGES THE PLANS WITHOUT AUTHORIZATION BY THE OWNER'S REPRESENTATIVE.

8. INSPECTIONS: PROVIDE MINIMUM 48 HOURS PRIOR NOTICE TO LANDSCAPE ARCHITECT TO SCHEDULE INSPECTIONS. INSPECTIONS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING ITEMS. CONTRACTOR TO MAKE EVERY EFFORT TO COMBINE ITEMS FOR INSPECTION WHENEVER POSSIBLE.
   a. PRE-CONSTRUCTION SITE WALK THROUGH
   b. CONSTRUCTION LAYOUT
   c. GRADING AND FORM WORK
   d. IRRIGATION MAINLINES AND VALVING – PRIOR TO BACK FILLING TRENCHES (INCLUDES FULLY PRESSURIZED MAIN LINES.)
   e. IRRIGATION HEAD LAYOUT PRIOR TO INSTALLATION AND PLANTING LAYOUT PRIOR TO INSTALLATION.
   f. PRELIMINARY INSPECTION OF FINAL WORK PRIOR TO AUTHORIZING MAINTENANCE PERIOD.
   g. FINAL INSPECTION PRIOR TO AUTHORIZING MAINTENANCE PERIOD
   h. END OF MAINTENANCE PERIOD PRIOR TO AUTHORIZING WARRANTY PERIOD

9. SUBMITTALS: CONTRACTOR SHALL ALLOW 21 DAYS REVIEW BY OWNER'S REPRESENTATIVE FOR APPROVAL OF SUBMITTAL ITEMS. CONTRACTOR TO IDENTIFY LEAD TIMES FOR PRODUCTION, MANUFACTURE AND DELIVERY OF ALL SUBMITTAL ITEMS IDENTIFIED IN THE SPECIFICATIONS AND PROVIDE ADEQUATE TIME FOR REVIEW BY OWNER'S REPRESENTATIVE. DELAYS TO THE WORK SCHEDULE RESULTING FROM INADEQUATE TIME TO REVIEW SUBMITTAL ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

GRADING NOTES

1. ELEVATIONS ARE BASED UPON FINISHED FLOOR ELEVATIONS INDICATED ON ARCHITECTURAL DRAWINGS AND GRADING PLANS BY CIVIL ENGINEER.

2. PRIOR TO GRADING, VERIFY EXISTING DRAINAGE STRUCTURES, AND UNDER-SLAB UTILITY LOCATIONS. NOTIFY PROJECT LANDSCAPE ARCHITECT SHOULD CONFLICTS ARISE.

3. COORDINATE ALL CONSTRUCTION ELEMENTS PRIOR TO INSTALLATION. VERIFY CRITICAL DIMENSIONS, REFERENCE, AND CONSTRUCTION CONDITIONS PRIOR TO INITIATING WORK.

4. TRANSITIONS BETWEEN SLOPES AND RELATIVELY FLAT AREAS, WHETHER EXISTING OR NEW, SHALL BE ROUNDED, GRADUAL AND SLOPED TO DRAIN. LOW SPOTS WHICH HOLD WATER WILL NOT BE ACCEPTED.

5. PROPOSED PAVING SURFACES SHALL MEET EXISTING PAVED SURFACES WITH A SMOOTH TRANSITION. LOW SPOTS WHICH HOLD STANDING WATER WILL NOT BE ACCEPTED.

6. PROVIDE POSITIVE DRAINAGE THROUGHOUT ALL PLANTING AND HARDSCAPE AREAS. ALL PROPOSED CONSTRUCTION SHALL SMOOTHLY CONFORM TO EXISTING STRUCTURES. 2% MINIMUM IN PLANTING AREAS AND 1% MINIMUM, 2% MAXIMUM IN HARDSCAPE AREAS UON, SCD.

7. ALL PAVING SHALL HAVE A MAXIMUM CROSS SLOPE OF 2% AND A MINIMUM CROSS SLOPE OF 1% UNLESS OTHERWISE NOTED.

8. FINISH GRADES MUST BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO IRRIGATION AND PLANTING WORK.

9. IMPORTANT: CONTRACTOR SHALL NOT PLACE ANY PAVING WITHOUT APPROVAL OF FORMWORK BY THE LANDSCAPE ARCHITECT. NOTIFY LANDSCAPE ARCHITECT IF THERE IS ANY DISCREPANCY BETWEEN EXISTING CONDITIONS & PROPOSED GRADING OR LAYOUT. ANY UN-APPROVED CONCRETE POURED NOT CONSISTENT WITH PLANS OR EXISTING CONDITIONS WILL BE REMOVED & REPLACED AT CONTRACTOR'S EXPENSE.

LAYOUT NOTES

1. DIMENSIONS ARE TO FACE OF CURB, FACE OF WALL, FACE OF COLUMN, AND EDGE OF PAVING UNLESS OTHERWISE NOTED.

2. VERIFY EXISTING AND NEW UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ANY CONFLICTS OR DISCREPANCIES TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.

3. AFTER NOTIFYING UNDERGROUND SERVICE ALERT AND HAVING MARKED & LOCATED UTILITIES, CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE WHICH UTILITIES, IF ANY, HAVE BEEN ABANDONED BY EACH SPECIFIC UTILITY COMPANY.

4. ALL PAVING SHALL HAVE A MAXIMUM CROSS SLOPE OF 2% AND A MINIMUM CROSS SLOPE OF 1% UNLESS OTHERWISE NOTED.

5. NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONFLICTS OR OBSTRUCTIONS RELATED TO THE WORK IMMEDIATELY FOR DIRECTIONS OR MODIFICATIONS TO THE PROPOSED PLANS. DO NOT PROCEED WITH WORK WHICH MODIFIES OR CHANGES THE DESIGN WITHOUT AUTHORIZATION BY LANDSCAPE ARCHITECT.

6. STAKE PROPOSED IMPROVEMENTS FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

7. COORDINATE ALL CONSTRUCTION ELEMENTS PRIOR TO INSTALLATION. VERIFY CRITICAL DIMENSIONS, REFERENCE, AND CONSTRUCTION CONDITIONS PRIOR TO INITIATING WORK.

PLANTING NOTES

1. ALL WORK SHALL BE PERFORMED BY PERSONS FAMILIAR WITH PLANTING WORK AND UNDER THE SUPERVISION OF A QUALIFIED PLANTING FOREMAN.

2. CONTRACTOR TO PROVIDE AGRICULTURAL SOIL ANALYSIS DONE BY A QUALIFIED SOIL-TESTING LABORATORY. SOIL ANALYSIS TO INCLUDE SOIL TEXTURE, PH, SOLUBLE SALTS, SODIUM, ESSENTIAL NUTRIENTS AND PERCENT ORGANIC MATTER. SOIL ANALYSIS LAB TO MAKE RECOMMENDATIONS FOR AMENDING THE TOPSOIL WITH COMPOST TO BRING ORGANIC MATTER TO A MINIMUM OF 5% DRY WEIGHT AND INCORPORATING NON-SYNTHETIC FERTILIZERS TO RECOMMENDED LEVELS FOR PLANTING AREA.

3. PLANT COUNT IS FOR THE CONVENIENCE OF THE CONTRACTOR. IN CASE OF DISCREPANCIES, THE PLAN SHALL GOVERN.

4. PLANT MATERIAL LOCATIONS SHOWN ARE DIAGRAMMATIC AND MAY BE SUBJECT TO CHANGE IN THE FIELD BY THE LANDSCAPE ARCHITECT. PLANT LOCATIONS ARE TO BE ADJUSTED IN THE FIELD AS NECESSARY TO SCREEN UTILITIES BUT NOT SIGNS NOR TO IMPEDE ACCESS.

5. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO MAKE SUBSTITUTIONS, ADDITIONS, AND DELETIONS IN THE PLANTING SCHEME AS THEY FEEL NECESSARY WHILE WORK IS IN PROGRESS UPON WRITTEN APPROVAL OF THE SCOPE AND COST BY THE OWNER. SUCH CHANGES ARE TO BE ACCOMPANIED BY EQUITABLE ADJUSTMENTS IN THE CONTRACT PRICE IF NECESSARY.

6. ALL TREES ARE TO BE STAKED AS SHOWN ON THE TREE STAKING DIAGRAMS. BRANCHING HEIGHT OF TREES SHALL BE A 6'-0" MINIMUM ABOVE FINISH PAVING. ALL TREES IN A FORMAL GROUP PLANTING SHALL BE MATCHING IN SIZE AND SHAPE. LANDSCAPE ARCHITECT SHALL BE CONSULTED REGARDING ORIENTATION OF TREES PRIOR TO PLANTING AND/OR BACKFILLING. TREES INSTALLED WITHOUT THIS APPROVAL WILL BE SUBJECT TO REMOVAL AND REPLANTING TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

7. ALL BOXED MATERIALS SHALL BE HAND-PICKED AND TAGGED BY THE LANDSCAPE ARCHITECT AT THEIR PLACE OF ORIGIN. BOXED MATERIALS PLANTED WITHOUT SELECTION BY LANDSCAPE ARCHITECT MAY BE SUBJECT TO REMOVAL AND REPLACEMENT AT NO ADDITIONAL COST TO THE OWNER.

8. TREES MUST HAVE AN UNCUT LEADER WITH A UNIFORM TAPER FROM BASE TO TIP. TREES MUST MEET AT LEAST NORMAL CALIPER AND HEIGHT FOR CONTAINER SIZE. TREES WHICH ARE OVERGROWN, UNDERSIZED, ROOT BOUND, OR WITH CO-DOMINANT LEADERS ARE NOT ACCEPTABLE AND SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.

9. ALL PLANTING AREAS SHALL BE TOP-DRESSED WITH A 3" LAYER OF MULCH. SUBMIT SAMPLE TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO ORDERIN

10. ALL TREES WITHIN 5'-0" OF PAVING SHALL HAVE 24" DEEP ROOT BARRIERS. REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.

11. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY HIS OPERATIONS TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE WITHOUT ANY ADDITIONAL CHARGE.

SOIL PREPARATION NOTES

1. TOPSOIL ANALYSIS:
   1.1. FURNISH SOIL ANALYSIS BY A NAPT QUALIFIED SOIL-TESTING LABORATORY FOR EXISTING TOPSOIL. FURNISH SOIL ANALYSIS FOR IMPORT TOPSOIL IF IMPORT TOPSOIL IS REQUIRED.
   1.2. SOIL ANALYSIS SHALL INCLUDE SOIL TEXTURE, INFILTRATION RATE, PH, TOTAL SOLUBLE SALTS, SODIUM, ESSENTIAL NUTRIENTS, PERCENT ORGANIC MATTER, AND SUITABILITY OF TOPSOIL FOR PLANT GROWTH.
   1.3. RECOMMENDATION – REQUEST THAT THE LABORATORY MAKE RECOMMENDATIONS FOR AMENDING THE TOPSOIL SOIL WITH COMPOST TO BRING THE SOIL ORGANIC MATTER TO A MINIMUM OF 5% BY DRY WEIGHT AND INCORPORATING NATURAL, NON-SYNTHETIC FERTILIZERS TO RECOMMENDED LEVELS FOR PLANTING AREA.

2. PERFORM SOIL PREPARATION ONLY IN AREAS NOTED ON PLAN.

3. LOOSEN OR SCARIFY TO 8 INCHES MINIMUM DEPTH. BRING GRADE TO TRUE AND UNIFORM GRADE AND REMOVE ALL STONES LARGER THAN ONE INCH, STICKS, AND OTHER EXTRANEOUS MATERIALS.

4. SCARIFY ALL PLANTING AREAS PRIOR TO FINE GRADING IN ORDER TO ENSURE RELATIVE COMPACTION OF 85% OR LESS. ANY PLANTING AREAS WHICH BECOME COMPACTED IN EXCESS OF 85% DUE TO CONSTRUCTION ACTIVITIES SHALL BE THOROUGHLY CROSS-RIPPED TO THE MAXIMUM DEPTH FEASIBLE TO ALLEVIATE THAT CONDITION (MINIMUM DEPTH OF 8 INCHES), TAKING CARE TO AVOID ALL EXISTING DRAINAGE AND SUBSURFACE UTILITY LINES.

5. SOIL AMENDMENTS (ADJUST QUANTITY AND TYPES OF AMENDMENTS/FERTILIZERS PER SUBMITTED SOILS ANALYSIS REPORT). SPREAD THE COMPOST EVENLY OVER SOIL AT A RATE OF 5% DRY WEIGHT BY VOLUME, THEN UNIFORMLY AND THOROUGHLY INCORPORATE INTO UPPER 8 INCHES OF SOIL, OBTAINING A HOMOGENEOUS SOIL MIX. SOIL SHALL BE IN A MOIST CONDITION AT TIME OF MIXING.

6. FINELY FINISH SURFACES BY RAKING SMOOTHLY AND EVENLY. REMOVE ALL EXPOSED, EXTRANEOUS MATTER ONE INCH OR LARGER IN SIZE TO FACILITATE NATURAL RUNOFF. DRAG TO SMOOTH SURFACE.

7. FINISH GRADES WILL SLOPE TO DRAIN, WITHOUT WATER POCKETS OR IRREGULARITIES (HUMPS OR HOLLOWS). FINISH GRADES WILL MEET ALL EXISTING CONTROLS AND SHALL BE 1½ INCHES BELOW ADJACENT TOP OF PAVING, CURBS, SIDEWALKS AND PLANTERS, UNLESS OTHERWISE NOTED ON PLANS. GRADES WILL BE OF UNIFORM SLOPE BETWEEN POINTS OF FIXED ELEVATION. ESTABLISH VERTICAL CURVES OR ROUNDING AT ABRUPT CHANGES IN SLOPE.

8. ALL FINISH GRADES WILL BE APPROVED BY THE ENGINEER PRIOR TO COMMENCING THE PLANTING OPERATIONS.

CITY OF MILPITAS STANDARD DRAWINGS & SPECIFICATIONS

ALL STANDARD DRAWINGS REFERENCED TO CITY OF MILPITAS SHALL BE CONSTRUCTED AND CONFORMED TO THE CITY OF MILPITAS PUBLIC WORKS AND ENGINEERING SERVICES DIVISION, STANDARD DRAWINGS & SPECIFICATIONS. TO OBTAIN ADDITIONAL INFORMATION VISIT www.ci.milpitas.ca.gov OR CALL 408-586-3329.

1. STREET TREE PLANTING, PER CITY OF MILPITAS, ENGINEERING DIVISION, STANDARD DRAWING NO.448

2. CITY OF MILPITAS STREETSCAPE MASTER PLAN, PER FINAL REPORT, MILPITAS – MAIN STREET PLAN LINE STUDY CP4230

   2.A. STREET FURNITURE PLAN, PAGE 22 TO 23
   2.B. SEATING AREA PLAN, PAGE 24
   2.C. BUS SHELTER PLAN, PAGE 24

ABBREVIATIONS

ADJ	ADJACENT
AGG	AGGREGATE
AL	ALIGN
BR	BOTTOM OF RAMP
BS	BOTTOM OF STAIR
BW	BOTTOM OF WALL
CB	CATCH BASIN
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CENTERLINE
CLR	CLEARANCE
CO	CLEAN OUT
CONC	CONCRETE
CONF	CONFIGURATION
CONT	CONTINUOUS
DG	DECOMPOSED GRANITE
DWG	DRAWING(S)
(E)	EXISTING
EJ	EXPANSION JOINT
EQ	EQUAL
EW	EACH WAY
FF	FINISH FLOOR
FG	FINISHED GRADE
FOB	FACE OF BUILDING
FOW	FACE OF WALL
FP	FINISH PAVING
GB	GRADE BREAK
HP	HIGH POINT
HPS	HIGH POINT SWALE
INV	INVERT
LT	LIGHT
MAX	MAXIMUM
MIN	MINIMUM
MFR	MANUFACTURER
NTS	NOT TO SCALE
OC	ON CENTER
PA	PLANTING AREA
PN	PROJECT NORTH
POB	POINT OF BEGINNING
PTDS	PRESSURE TREATED DOUG FIR
R	RISER
RE	RIM ELEVATION
SAD	SEE ARCHITECT'S DRAWINGS
SCD	SEE CIVIL ENGINEER'S DRAWINGS
SDS	STORM DRAIN SYSTEM
SED	SEE ELECTRICAL ENGINEER'S DRAWINGS
SD	STORM DRAIN
SIM	SIMILAR
SJ	SCORE JOINT
SMD	SEE MECHANICAL ENGINEER'S DRAWINGS
SPECS	SPECIFICATIONS
SS	STAINLESS STEEL
SSD	SEE STRUCTURAL ENGINEER'S DRAWINGS
STL	STEEL
TC	TOP OF CURB
TF	TOP OF FENCE
THLD	THRESHOLD
TP	TOP OF PLANTER
TR	TOP OF RAMP
TS	TOP OF STAIR
TW	TOP OF WALL
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VIF	VERIFY IN FIELD
WPM	WATERPROOF MEMBRANE
WP	WATERPROOFING
WRC	WESTERN RED CEDAR

REFER TO PERMIT NO. B-S116-0019 FOR ALL SITE ACCESSIBILITY PLANS AND DETAILS

BID ALTERNATE

UTILIZE STANDARD GRAY CONCRETE PAVING WITH BROOM FINISH IN LIEU OF DECORATIVE INTEGRAL COLOR CONCRETE PAVING (P-1).

Know what's below.
Call before you dig.

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L3.01	DIMENSION PLAN
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04.11.17 plan check response

rev	date	issue
	03.06.17	health dept. submittal
	01.17.17	bid addendum #3
	01.13.17	bid addendum #2
	01.06.17	delta 1 revision
	12.02.16	issue for bid
	11.22.16	issue for permit
	10.25.16	60% cd
	09.26.16	30% cd
	08.15.16	100% dd

REGISTERED LANDSCAPE ARCHITECT
BRUCE B. JETT
3335
Exp. 05/31/18
Date 04/11/17
STATE OF CALIFORNIA

1620 south main

milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 04/11/2017

PLAN CHECK RESPONSE

GENERAL NOTES & LEGEND

L0.01

SCHEDULE OF MATERIALS & FINISHES

KEY	DESCRIPTION	DETAIL	QTY.	COLOR	FINISH/MATERIAL	MFG./ SUPPLIER	PRODUCT	COMMENTS
PAVING								
P-1	CONC PAVING – DECORATIVE	1/L5.01	470 SF	OMAHA TAN	BROOM FINISH	DAVIS COLOR	OMAHA TAN, 5084 1LB/SACK OF CEMENT	
P-2	CONC PAVING – SIDEWALK	SCD	–	NATURAL	LIGHT BROOM FINISH	–	–	
P-3	CONCRETE PAVER ON PEDESTAL	5,6/L5.01	5540 SF	ALMOND 1406	EXPOSED AGGREGATE	STEPSTONE OR EQUAL	CALARC SERIES PEDESTAL SET ROOF PAVERS 24"X24"X2"	
P-4	CONCRETE PAVER ON GRADE AT ENTRY	4/L5.01	1310 SF	ALMOND 1406	EXPOSED AGGREGATE	STEPSTONE OR EQUAL	CALARC SERIES 24"X24"X2"	
P-5	PERMEABLE CONC PAVER	13/L5.01	2520 SF	TAN BROWN CHARCOAL	STANDARD	CALSTONE OR EQUAL	MISSION PERMEABLE, 4X8 (2.4"–60MM)	
P-6	CONCRETE BAND ON GRADE	10/L5.01	416 LF	NATURAL	LIGHT BROOM FINISH	–	–	
P-7	CONCRETE PRECAST PAVER	13/L5.03	95 SF	TAN BROWN CHARCOAL	CONCRETE PAVER	CALSTONE OR EQUAL	MISSION, 4X8 (3"–80MM), SAND SET	
P-8	TRUNCATED DOME PAVERS	SCD	–	CHARCOAL #511	CONCRETE PAVER	STEPSTONE OR EQUAL	CALARC, ALIGNED TRUNCATED DOME PAVER, 12"X12"X2" (AT BUILDING ENTRY ONLY, SCD FOR SIDEWALK)	SEE CIVIL DWGS FOR GRADES AND CURB RAMP
LANDSCAPE STRUCTURES								
W-1	C3 PLANTER	7/L5.02	621 LF	DARK GREY	SACK & PATCH FINISH	DAVIS COLOR	DARK GREY, 8084 1LB/SACK OF CEMENT	ALSO SEE CIVIL DWGS
W-2	CONCRETE PLANTER WALL ON PODIUM	5/L5.02	653 LF	DARK GREY	SACK & PATCH FINISH	DAVIS COLOR	DARK GREY, 8084 1LB/SACK OF CEMENT	
W-3	EXPANSION JOINT AT WALL	SSD	–	MATCH WALL COLOR	–	–	EXPANSION JOINT AT 20' OC MAX SSD, ALIGN WITH ARCHITECTURE SAD	ALSO SEE STRUCTURAL & ARCH DWGS
W-4	PAVER EDGE SECTION	4/L5.01	–	–	–	–	–	
W-5	CURB AT PLANTING AREA	9/L5.01	22 LF	DARK GREY	SACK & PATCH FINISH	DAVIS COLOR	DARK GREY, 8084 1LB/SACK OF CEMENT	
W-6	C3 PLANTER AT SLAB EDGE	14/L5.02	149 LF	DARK GREY	SACK & PATCH FINISH	DAVIS COLOR	DARK GREY, 8084 1LB/SACK OF CEMENT	ALSO SEE CIVIL & ARCH DWGS
FENCING & GATES, UNDER SEPARATE PERMIT B-BP16-0690								
F-1	METAL FENCE & GATE W/ PANIC HARDWARE	1,2 & 5/L5.04	2 EA	BLACK	GALV STEEL	AMERISTAR FENCE OR EQ	MONTAGE, GENESIS, 2 RAILS 6'H	PROVIDE PANIC HARDWARE AT EGRESS ROUTE, KNOX BOX AT GATE EXTERIOR, SEE ARCH DRAWINGS
F-2	METAL VEHICULAR/ MAINTENANCE GATE AT EVA WITH GATE OPENER	3/L5.04	2 EA	BLACK	GALV STEEL	AMERISTAR FENCE OR EQ LIFTMASTER OPENER OR EQUAL	MONTAGE, GENESIS, 2 RAILS 6'H. GATE OPENER: LIFTMASTER POWER OPERATED LA500PKGU OR EQ WITH BATTERY BACKUP ENTRAPMENT DEVICES: LMRRU & CPS-UN4, CONTACT SENSOR: S506AL, LOOP DETECTOR: LOOPDETLM, REMOTE CONTROL: 892LT, ENTRY SYSTEM: EL25, FIRE DEPT OPEN INPUT WITH KNOX BOX SWITCH	PROVIDE KNOX BOX SWITCH AT GATE EXTERIOR, INSTALL PER MANUFACTURER SPECIFICATION
F-3	GUARDRAIL	4/L5.04	35 LF	BLACK	GALV STEEL	–	–	
F-4	WOOD GATE & FENCE W/ METAL FRAME & POST	7,8/L5.04	FENCE: 92 LF GATE: 1S, 3D	WESTERN RED CEDAR	GALV STEEL	–	–	PROVIDE PANIC HARDWARE AT EGRESS ROUTE, KNOX BOX AT GATE EXTERIOR, SEE ARCH DRAWINGS
F-5	WOOD FENCE AT PROPERTY LINE	11, 12/L5.04	175 LF	REDWOOD	WOOD	–	–	PROVIDE PANIC HARDWARE AT EGRESS ROUTE, KNOX BOX AT GATE EXTERIOR, SEE ARCH DRAWINGS
SITE LIGHTING & ELECTRICAL – SEE ELECTRICAL DRAWINGS FOR SPECIFICATION OF LIGHT FIXTURES								
S-2	BOLLARD LIGHT 39"	SIM, 16/L5.02	15 EA	BLACK	ALUMINUM	BEGA OR EQ	99 058, SEE SHEET L1.04 FOR LOCATION TYP	MOUNT AT FG OF PODIUM, ALSO SED
S-3	BOLLARD LIGHT 21"	12/L5.02	8 EA	BLACK	ALUMINUM	BEGA OR EQ	99 056, SEE SHEET L1.04	MOUNT AT 18" PLANTER HEIGHT PER 12/L5.02
S-4 TO S-6	WALL MOUNT LIGHT & POST LIGHT – SAD	–	–	–	–	–	––	SEE ARCH DWGS AND ELEC DRAWINGS
S-7	DOWN LIGHT – SAD SED	–	–	–	–	–	––	SEE ARCH DWGS AND ELEC DRAWINGS
S-8	TREE UPLIGHT	SEE L1.04	23 EA	BLACK	ALUMINUM	BK LIGHTING OR EQ	NITE STAR, SEE SHEET L1.04 FOR LOCATION	ALSO SEE ELEC DRAWINGS
S-9	STRING LIGHT	10/L5.04	180 LF MIN.	BLACK	14G INSULATED WIRE, PVC SOCKET	TIVOLI OR EQ	ETL LISTED COMMERCIAL GRADE LIGHT STRING, 48' MEDIUM BASE SUSPENDED SOCKET, LED 0.5W 24"O.C.	ALSO SEE ELEC DRAWINGS
OUT	OUTLET (LOCKABLE)	SED	1 EA	SED	SED	SED	SED	ALSO SEE ELEC DRAWINGS
DRAINAGE								
D-1	PLANTER DRAIN	–	20 EA	–	–	JR SMITH OR EQ	PLANTER DRAIN 1909, PERFORATED STAND PIPE W/ DOME GRATE	ALSO SEE ARCH & MEP
D-2	PLANTER DRAIN – C3	–	6 EA	–	–	JR SMITH OR EQ	PLANTER DRAIN 1909, SOLID STAND PIPE W/ DOME GRATE	ALSO SEE ARCH & MEP
D-3	PLANTER DRAIN – C3 ON GRADE	–	4 EA	–	–	–	–	SEE CIVIL DWGS
D-4	DRAIN INLET AT PODIUM LEVEL	–	21 EA	–	–	JR SMITH OR EQ	JR SMITH 1470, ROOF DRAIN	ALSO SEE ARCH & MEP
D-5	DRAINMAT, PODIUM PLANTING	13/L7.04	–	–	–	AMERICAN HYDROTECH	GARDENDRAIN GR-50 & GR-30	
SITE FURNISHINGS								
SF-1	HANDRAILS	16/L5.01	60 LF	–	GALV STEEL	–	–	MATCH ARCHITECT DETAILS, SAD
SF-2	LITTER & RECYCLE RECEPTACLE	14/L5.03	2 EA	BLACK	POWDER COAT/WOOD	LANDSCAPE FORMS OR EQ	GRETCHEN LITTER RECEPTACLE, IPE WOOD, SIDE OPENING, SURFACE MOUNT	
SF-3	BENCH	14/L5.03	8 EA	BLACK	POWDER COAT/WOOD	LANDSCAPE FORMS OR EQ	GRETCHEN BENCH, IPE WOOD, 72" & 96" LOOP ARM, SURFACE MOUNT	PROVIDE MOUNT FOR EXTERIOR AT ENTRY AS REQUIRED
SF-4	BENCH AT PLANTER WALL	6/L5.03	60 LF	––	GALV STEEL/WOOD	––	IPE WOOD, ALT S4S WESTERN RED CEDER OR APP. EQ	
SF-5	TREE GRATE	1/L5.03	8 EA	BLACK	POWDER COAT, CAST IRON	IRONSMITH	36"x36", 3630 MARKET STREET	
SF-6A	PRECAST PLANTERS	8/L5.02	16 EA	REED	FRP	TOURNESOL OR EQ	WR-603024, 60"X30"X24"H	
SF-6B	PRECAST PLANTERS	8/L5.02	27 EA	REED	FRP	TOURNESOL OR EQ	WR-603624, 60"X36"X24"H	
SF-7	BOLLARD	16/L5.02	6 EA	BLACK	POWDER COAT, CAST IRON	IRONSMITH OR EQ	AEGEAN PIPE BOLLARDS, FIX 6"ø X 42"H, INTEGRATED EMBEDMENT	
MISCELLANEOUS								
M-1	SYNTHETIC TURF	9/L5.03	185 SF	OLIVE GREEN & DARK TAN	VARIES	FOREVER LAWN	SELECT LX	
M-2	MULCH	–	–	NATURAL, UN-DYED	TREE TRIMMINGS	RECOLOGY	ARBOR MULCH	3" DEPTH
M-3	JAKOB WIRE ROPE SYSTEM FOR VINES	7/L7.04	24' X 10'	–	STAINLESS STEEL	JAKOB	INOX LINE	
M-4	IRRIGATION WATER METER & BACKFLOW PREVENTER	SCD	–					
M-5	–	–						
CITY OF MILPITAS STANDARDS (SEE CITY STANDARD DETAILS)								
C-1	PAVER	8,13,16/L5.03	346 SF	TAN BROWN CHARCOAL	CONCRETE PAVER	CALSTONE	QUARRY STONE, 2.4"–60MM, SAND SET	CITY OF MILPITAS STANDARD, MAIN STREET
C-2	BENCH	8, 10/L5.03	1 SET	CRANBERRY	PERFORATED, POWDER COAT STEEL	WABASH VALLEY	CL406P – 15 DEGREE CONCAVE W/BACK, A19-8025, INGROUND MOUNT	CITY OF MILPITAS STANDARD, MAIN STREET
C-3	BOLLARD	8, 10/L5.03	2 EA	REGAL BLUE	STD POWDER COAT STEEL	COLUMBIA CASCADE	TIMBERFORM METAL BOLLARD #2190-P, PEDASTAL MOUNT,	CITY OF MILPITAS STANDARD, MAIN STREET
C-4	TRASH RECEPTACLE	8/L5.03	2 EA	BLACK	WELDED WIRE, POWDER COAT STEEL	WABASH VALLEY	FR400W, 32 GAL RECEPTACLE W/ LINER LR105N, SURFACE MOUNT, FLARE TOP, WELDED WIRE W/ FT110N, FLAT TOP LID, 14" DIA OPENING	CITY OF MILPITAS STANDARD, MAIN STREET
C-5	STREET TREE PLANTING	8, 16/L5.03 & L7.05	–	–	–	–	TREE PIT SIZE, SPACING, TRENCH, 2" DECOMPOSED GRANITE (GOLD), MULCH (3"), TREE STAKING, TIES, ROOT BARRIER, PERFORATED PVC DRAIN PIPE, BUBBLER, SOIL (STRUCTURAL SOIL & AMENDMENT)	CITY OF MILPITAS, ENGINEERING DIVISION, STANDARD DRAWING 448 – STREET TREE
C-6	BUS SHELTER	16/L5.03	1 EA	STANDARD BLACK	POWDER COAT METAL/ POLYCARBONATE	DAYTECH LIMITED	BARREL ROOF TRANSITE SHELTER – CONTEMPORARY, ACCO 4'X12' HERITAGE CANTILEVERED DESIGN WITH BENCH	CITY OF MILPITAS STANDARD, MAIN STREET

NOTES
1. REFER TO SPECIFICATIONS FOR MANUFACTURER AND ADDITIONAL INFORMATION.
2. ALL QUANTITIES NOTED ABOVE ARE ESTIMATED FOR THE CONVENIENCE OF THE CONTRACTOR. FINAL COUNTS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

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rev	date	issue
	04.11.17	plan check response
	03.06.17	health dept. submittal
	01.17.17	bld addendum #3
	01.13.17	bld addendum #2
	01.06.17	delta 1 revision
	12.02.16	issue for bld
	11.22.16	issue for permit
	10.25.16	60% cd
	09.26.16	30% cd
	08.15.16	100% dd

REGISTERED LANDSCAPE ARCHITECT
BRUCE B. JETT
3335
Exp. 05/31/18
Date 04/11/17
STATE OF CALIFORNIA

1620 south main

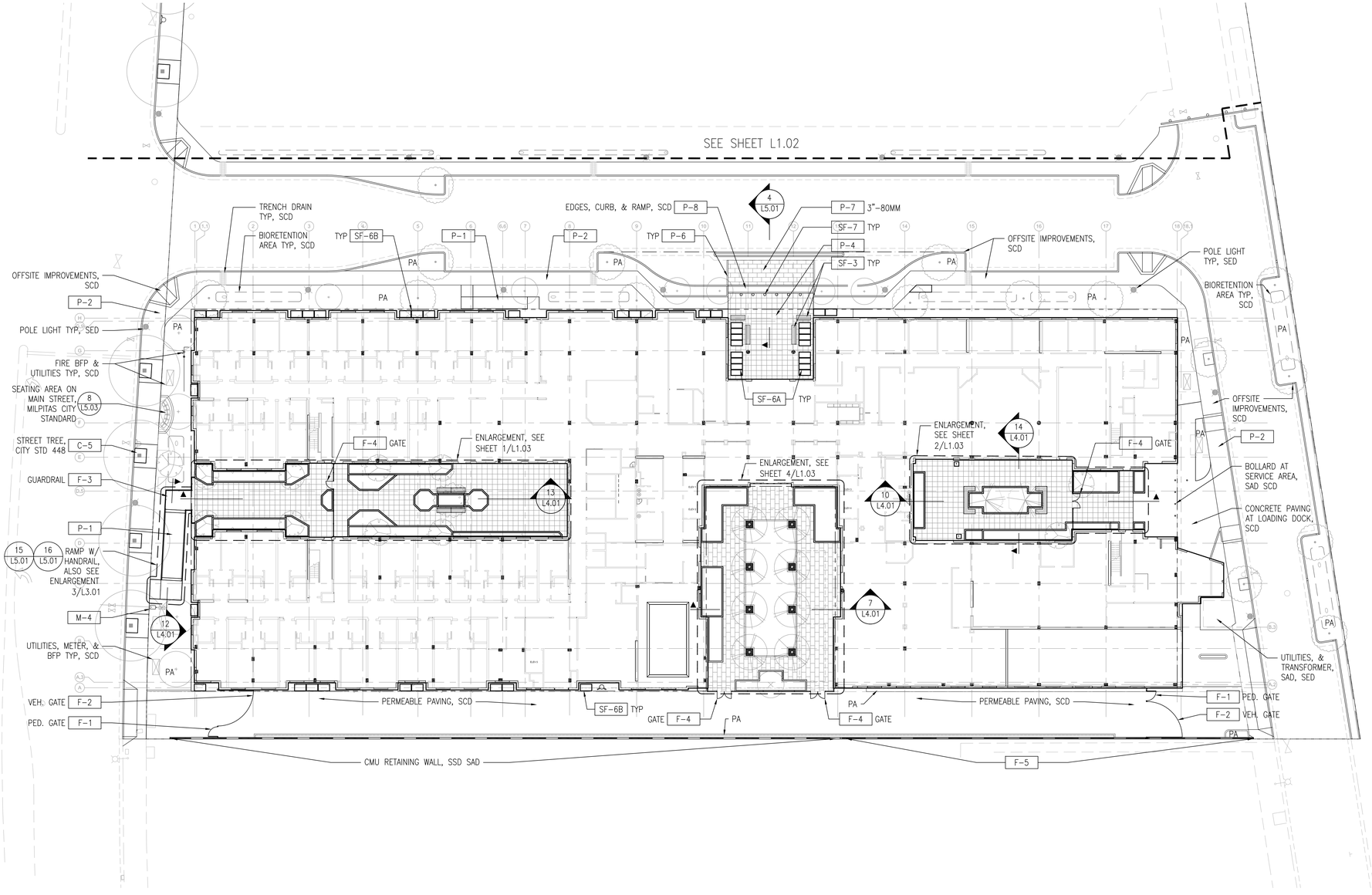
milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 04/11/2017

PLAN CHECK RESPONSE

MATERIALS SCHEDULE

L0.02



SCHEDULE OF MATERIALS & FINISHES

KEY	DESCRIPTION	DETAIL
PAVING		
P-1	CONC PAVING – DECORATIVE	1/L5.01
P-2	CONC PAVING – SIDEWALK	SCD
P-3	CONCRETE PAVER ON PEDESTAL	5,6/L5.01
P-4	CONCRETE PAVER ON GRADE AT ENTRY	4/L5.01
P-5	PERMEABLE CONC PAVER	13/L5.01
P-6	CONCRETE BAND ON GRADE	10/L5.01
P-7	CONCRETE PRECAST PAVER	13/L5.03
P-8	TRUNCATED DOME PAVERS	SCD
LANDSCAPE STRUCTURES		
W-1	C3 PLANTER	7/L5.02
W-2	CONCRETE PLANTER WALL ON PODIUM	5/L5.02
W-3	EXPANSION JOINT AT WALL	SSD
W-4	PAVER EDGE SECTION	4/L5.01
W-5	CURB AT PLANTING AREA	9/L5.01
W-6	C3 PLANTER AT SLAB EDGE	14/L5.02
FENCING & GATES, UNDER SEPARATE PERMIT B-BP16-0690		
F-1	METAL FENCE & GATE W/ PANIC HARDWARE	1,2 & 5/L5.04
F-2	METAL VEHICULAR/ MAINTENANCE GATE AT EVA WITH GATE OPENER	3/L5.04
F-3	GUARDRAIL	4/L5.04
F-4	WOOD GATE & FENCE W/ METAL FRAME & POST	7,8/L5.04
F-5	WOOD FENCE AT PROPERTY LINE	11, 12/L5.04
SITE LIGHTING & ELECTRICAL – SEE ELECTRICAL DRAWINGS		
S-2	BOLLARD LIGHT 39"	SIM, 16/L5.02
S-3	BOLLARD LIGHT 21"	12/L5.02
S-4 TO S-6	WALL MOUNT LIGHT & POST LIGHT – SAD	–
S-7	DOWN LIGHT – SAD SED	–
S-8	TREE UPLIGHT	SEE L1.04
S-9	STRING LIGHT	10/L5.04
OUT	OUTLET (LOCKABLE)	SED
DRAINAGE		
D-1	PLANTER DRAIN	–
D-2	PLANTER DRAIN – C3	–
D-3	PLANTER DRAIN – C3 ON GRADE	–
D-4	DRAIN INLET AT PODIUM LEVEL	–
D-5	DRAINMAT, PODIUM PLANTING	13/L7.04
SITE FURNISHINGS		
SF-1	HANDRAILS	16/L5.01
SF-2	LITTER & RECYCLE RECEPTACLE	14/L5.03
SF-3	BENCH	14/L5.03
SF-4	BENCH AT PLANTER WALL	6/L5.03
SF-5	TREE GRATE	1/L5.03
SF-6A	PRECAST PLANTERS	8/L5.02
SF-6B	PRECAST PLANTERS	8/L5.02
SF-7	BOLLARD	16/L5.02
MISCELLANEOUS		
M-1	SYNTHETIC TURF	9/L5.03
M-2	MULCH	–
M-3	JAKOB WIRE ROPE SYSTEM FOR VINES	7/L7.04
M-4	IRRIGATION WATER METER & BACKFLOW PREVENTER	SCD
M-5	–	–
CITY OF MILPITAS STANDARDS (SEE CITY STANDARD DETAILS)		
C-1	PAVER	8,13,16/L5.03
C-2	BENCH	8, 10/L5.03
C-3	BOLLARD	8, 10/L5.03
C-4	TRASH RECEPTACLE	8/L5.03
C-5	STREET TREE PLANTING	8, 16/L5.03 & L7.05
C-6	BUS SHELTER	16/L5.03

NOTE: REFER L0.02 FOR FULL SCHEDULE OF MATERIALS AND FINISHES

N

0 10' 20' 40' 60'

SCALE: 1" = 20'-0"

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04.11.17 plan check response

rev	date	issue
	03.06.17	health dept. submittal
	01.17.17	bld addendum #3
	01.13.17	bld addendum #2
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	12.02.16	issue for bld
	11.22.16	issue for permit
	10.25.16	60% cd
	09.26.16	30% cd
	08.15.16	100% dd

REGISTERED LANDSCAPE ARCHITECT
BRUCE B. JETT
3335
Exp. 05/31/18
Date 04/11/17
STATE OF CALIFORNIA

1620 south main

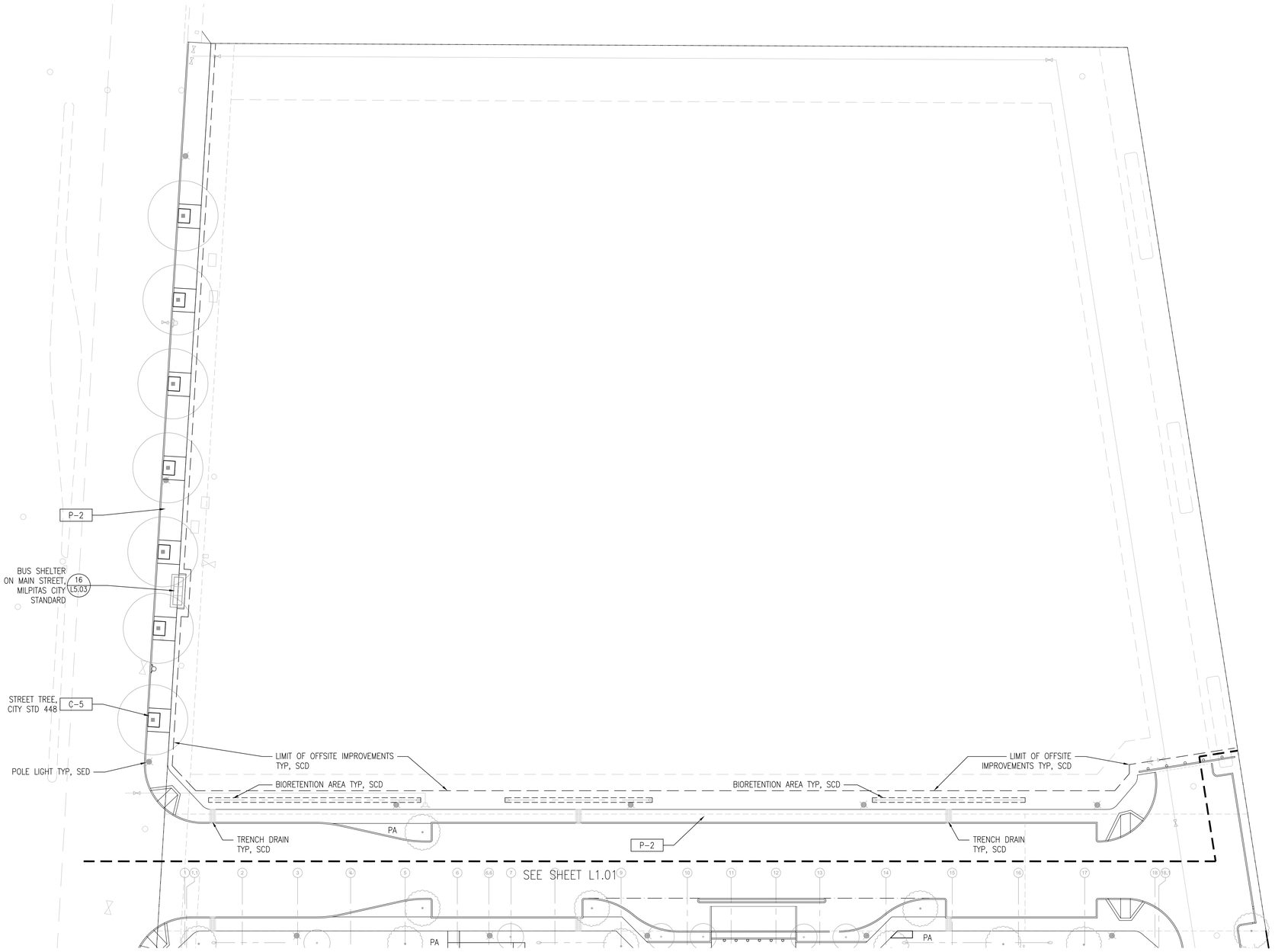
milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 04/11/2017

PLAN CHECK RESPONSE

CONSTRUCTION PLAN - OVERALL SITE

L1.01



SCHEDULE OF MATERIALS & FINISHES

KEY	DESCRIPTION	DETAIL
PAVING		
P-1	CONC PAVING – DECORATIVE	1/L5.01
P-2	CONC PAVING – SIDEWALK	SCD
P-3	CONCRETE PAVER ON PEDESTAL	5,6/L5.01
P-4	CONCRETE PAVER ON GRADE AT ENTRY	4/L5.01
P-5	PERMEABLE CONC PAVER	13/L5.01
P-6	CONCRETE BAND ON GRADE	10/L5.01
P-7	CONCRETE PRECAST PAVER	13/L5.03
P-8	TRUNCATED DOME PAVERS	SCD
LANDSCAPE STRUCTURES		
W-1	C3 PLANTER	7/L5.02
W-2	CONCRETE PLANTER WALL ON PODIUM	5/L5.02
W-3	EXPANSION JOINT AT WALL	SSD
W-4	PAVER EDGING CONSTRAINT	4,14/L5.01
W-5	CURB AT PLANTING AREA	9/L5.01
W-6	C3 PLANTER AT SLAB EDGE	14/L5.02
FENCING & GATES, UNDER SEPARATE PERMIT B-BP16-0690		
F-1	METAL FENCE & GATE W/ PANIC HARDWARE	1,2 & 5/L5.04
F-2	METAL VEHICULAR/ MAINTENANCE GATE AT EVA WITH GATE OPENER	3/L5.04
F-3	GUARDRAIL	4/L5.04
F-4	WOOD GATE & FENCE W/ METAL FRAME & POST	7,8/L5.04
F-5	WOOD FENCE AT PROPERTY LINE	11, 12/L5.04
SITE LIGHTING & ELECTRICAL – SEE ELECTRICAL DRAWINGS		
S-2	BOLLARD LIGHT 39"	SIM, 16/L5.02
S-3	BOLLARD LIGHT 21"	12/L5.02
S-4 TO S-6	WALL MOUNT LIGHT & POST LIGHT – SAD	–
S-7	DOWN LIGHT – SAD SED	–
S-8	TREE UPLIGHT	SEE L1.04
S-9	STRING LIGHT	10/L5.04
OUT	OUTLET (LOCKABLE)	SED
DRAINAGE		
D-1	PLANTER DRAIN	–
D-2	PLANTER DRAIN – C3	–
D-3	PLANTER DRAIN – C3 ON GRADE	–
D-4	DRAIN INLET AT PODIUM LEVEL	–
D-5	DRAINMAT, PODIUM PLANTING	13/L7.04
SITE FURNISHINGS		
SF-1	HANDRAILS	16/L5.01
SF-2	LITTER & RECYCLE RECEPTACLE	14/L5.03
SF-3	BENCH	10, 14/L5.03
SF-4	BENCH AT PLANTER WALL	6/L5.03
SF-5	TREE GRATE	1/L5.03
SF-6A	PRECAST PLANTERS	8/L5.02
SF-6B	PRECAST PLANTERS	8/L5.02
SF-7	BOLLARD	16/L5.02
MISCELLANEOUS		
M-1	SYNTHETIC TURF	9/L5.03
M-2	MULCH	–
M-3	JAKOB WIRE ROPE SYSTEM FOR VINES	7/L7.04
M-4	IRRIGATION WATER METER & BACKFLOW PREVENTER	SCD
M-5	–	–
CITY OF MILPITAS STANDARDS (SEE CITY STANDARD DETAILS)		
C-1	PAVER	8,13,16/L5.03
C-2	BENCH	8/L5.03
C-3	BOLLARD	8/L5.03
C-4	TRASH RECEPTACLE	8/L5.03
C-5	STREET TREE PLANTING	8, 16/L5.03 & CITY STD 448
C-6	BUS SHELTER	16/L5.03

NOTE: REFER L0.02 FOR FULL SCHEDULE OF MATERIALS AND FINISHES

N

0 10' 20' 40' 60'

SCALE: 1" = 20'-0"

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REGISTERED LANDSCAPE ARCHITECT
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3335
Exp. 05/31/18
Date 04/11/17
STATE OF CALIFORNIA

1620 south main

milpitas, california

project number: 16-123

plot date:

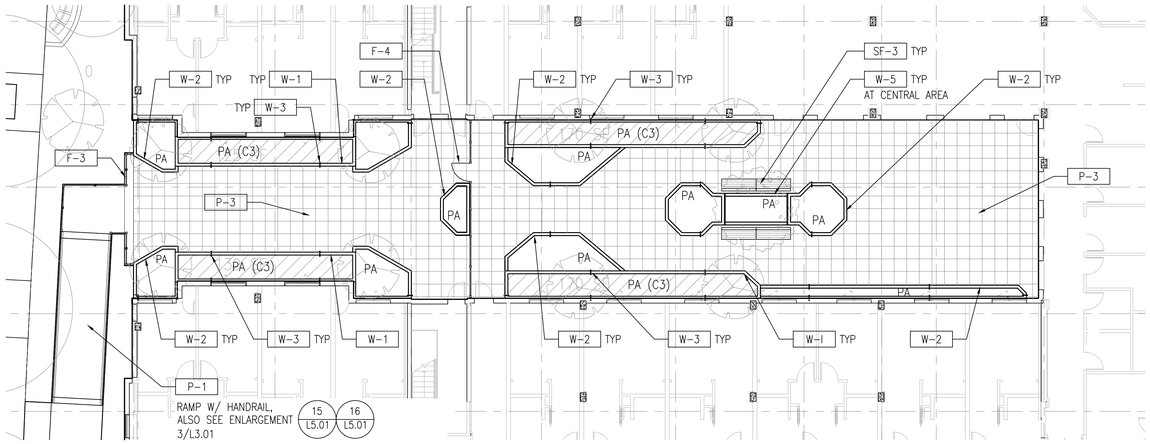
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date: 04/11/2017

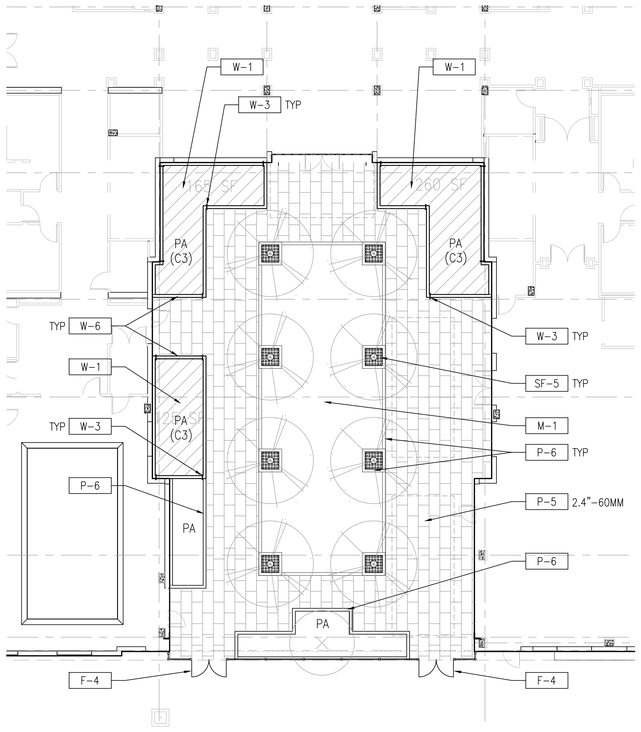
PLAN CHECK RESPONSE

CONSTRUCTION PLAN - OFFSITE NORTH

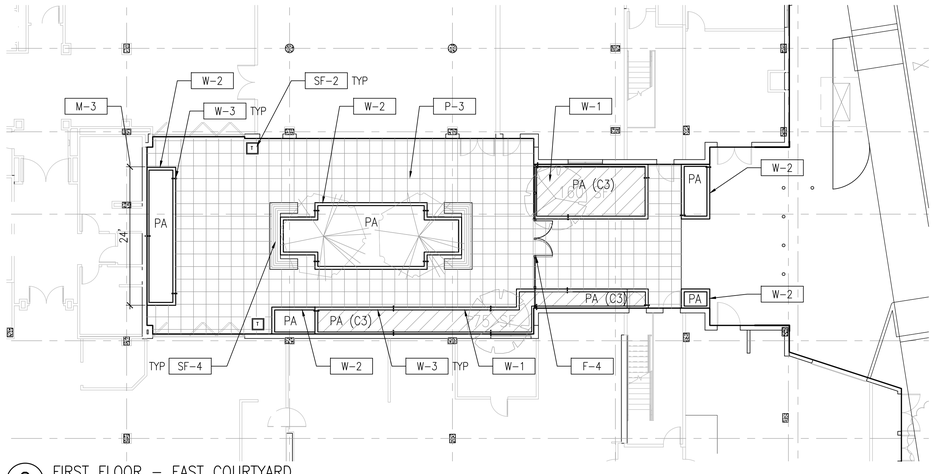
L1.02



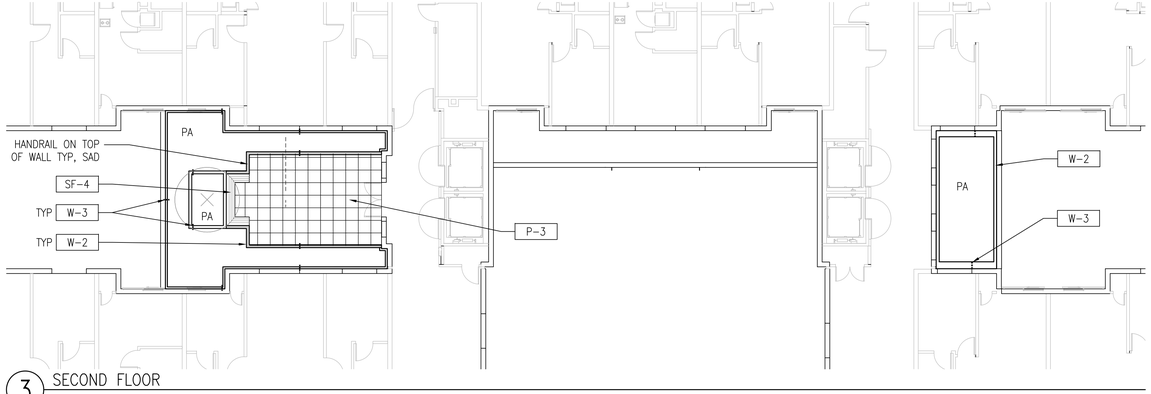
1 FIRST FLOOR – WEST COURTYARD



4 FIRST FLOOR – SOUTH COURTYARD



2 FIRST FLOOR – EAST COURTYARD

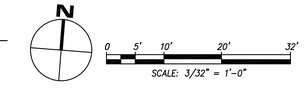


3 SECOND FLOOR

SCHEDULE OF MATERIALS & FINISHES

KEY	DESCRIPTION	DETAIL
PAVING		
P-1	CONC PAVING – DECORATIVE	1/L5.01
P-2	CONC PAVING – SIDEWALK	SCD
P-3	CONCRETE PAVER ON PEDESTAL	5,6/L5.01
P-4	CONCRETE PAVER ON GRADE AT ENTRY	4/L5.01
P-5	PERMEABLE CONC PAVER	13/L5.01
P-6	CONCRETE BAND ON GRADE	10/L5.01
P-7	CONCRETE PRECAST PAVER	13/L5.03
P-8	TRUNCATED DOME PAVERS	SCD
LANDSCAPE STRUCTURES		
W-1	C3 PLANTER	7/L5.02
W-2	CONCRETE PLANTER WALL ON PODIUM	5/L5.02
W-3	EXPANSION JOINT AT WALL	SSD
W-4	PAVER EDGING CONSTRAINT	4,14/L5.01
W-5	CURB AT PLANTING AREA	9/L5.01
W-6	C3 PLANTER AT SLAB EDGE	14/L5.02
FENCING & GATES, UNDER SEPARATE PERMIT B-BP16-0690		
F-1	METAL FENCE & GATE W/ PANIC HARDWARE	1,2 & 5/L5.04
F-2	METAL VEHICULAR/ MAINTENANCE GATE AT EVA WITH GATE OPENER	3/L5.04
F-3	GUARDRAIL	4/L5.04
F-4	WOOD GATE & FENCE W/ METAL FRAME & POST	7,8/L5.04
F-5	WOOD FENCE AT PROPERTY LINE	11, 12/L5.04
SITE LIGHTING & ELECTRICAL – SEE ELECTRICAL DRAWINGS		
S-2	BOLLARD LIGHT 39"	SIM, 16/L5.02
S-3	BOLLARD LIGHT 21"	12/L5.02
S-4 TO S-6	WALL MOUNT LIGHT & POST LIGHT – SAD	–
S-7	DOWN LIGHT – SAD SED	–
S-8	TREE UPLIGHT	SEE L1.04
S-9	STRING LIGHT	10/L5.04
OUT	OUTLET (LOCKABLE)	SED
DRAINAGE		
D-1	PLANTER DRAIN	–
D-2	PLANTER DRAIN – C3	–
D-3	PLANTER DRAIN – C3 ON GRADE	–
D-4	DRAIN INLET AT PODIUM LEVEL	–
D-5	DRAINMAT, PODIUM PLANTING	13/L7.04
SITE FURNISHINGS		
SF-1	HANDRAILS	16/L5.01
SF-2	LITTER & RECYCLE RECEPTACLE	14/L5.03
SF-3	BENCH	10, 14/L5.03
SF-4	BENCH AT PLANTER WALL	6/L5.03
SF-5	TREE GRATE	1/L5.03
SF-6A	PRECAST PLANTERS	8/L5.02
SF-6B	PRECAST PLANTERS	8/L5.02
SF-7	BOLLARD	16/L5.02
MISCELLANEOUS		
M-1	SYNTHETIC TURF	9/L5.03
M-2	MULCH	–
M-3	JAKOB WIRE ROPE SYSTEM FOR VINES	7/L7.04
M-4	IRRIGATION WATER METER & BACKFLOW PREVENTER	SCD
M-5	–	–
CITY OF MILPITAS STANDARDS (SEE CITY STANDARD DETAILS)		
C-1	PAVER	8,13,16/L5.03
C-2	BENCH	8/L5.03
C-3	BOLLARD	8/L5.03
C-4	TRASH RECEPTACLE	8/L5.03
C-5	STREET TREE PLANTING	8, 16/L5.03 & CITY STD 448
C-6	BUS SHELTER	16/L5.03

NOTE: REFER L0.02 FOR FULL SCHEDULE OF MATERIALS AND FINISHES



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04.11.17 plan check response

rev	date	Issue
	03.06.17	health dept. submittal
	01.17.17	bld addendum #3
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	11.22.16	Issue for permit
	10.25.16	60% cd
	09.26.16	30% cd
	08.15.16	100% dd

REGISTERED LANDSCAPE ARCHITECT
BRUCE B JETT
3335
Exp. 05/31/18
Date 04/11/17
STATE OF CALIFORNIA

1620 south main

milpitas, california
project number: 16-123
plot date:

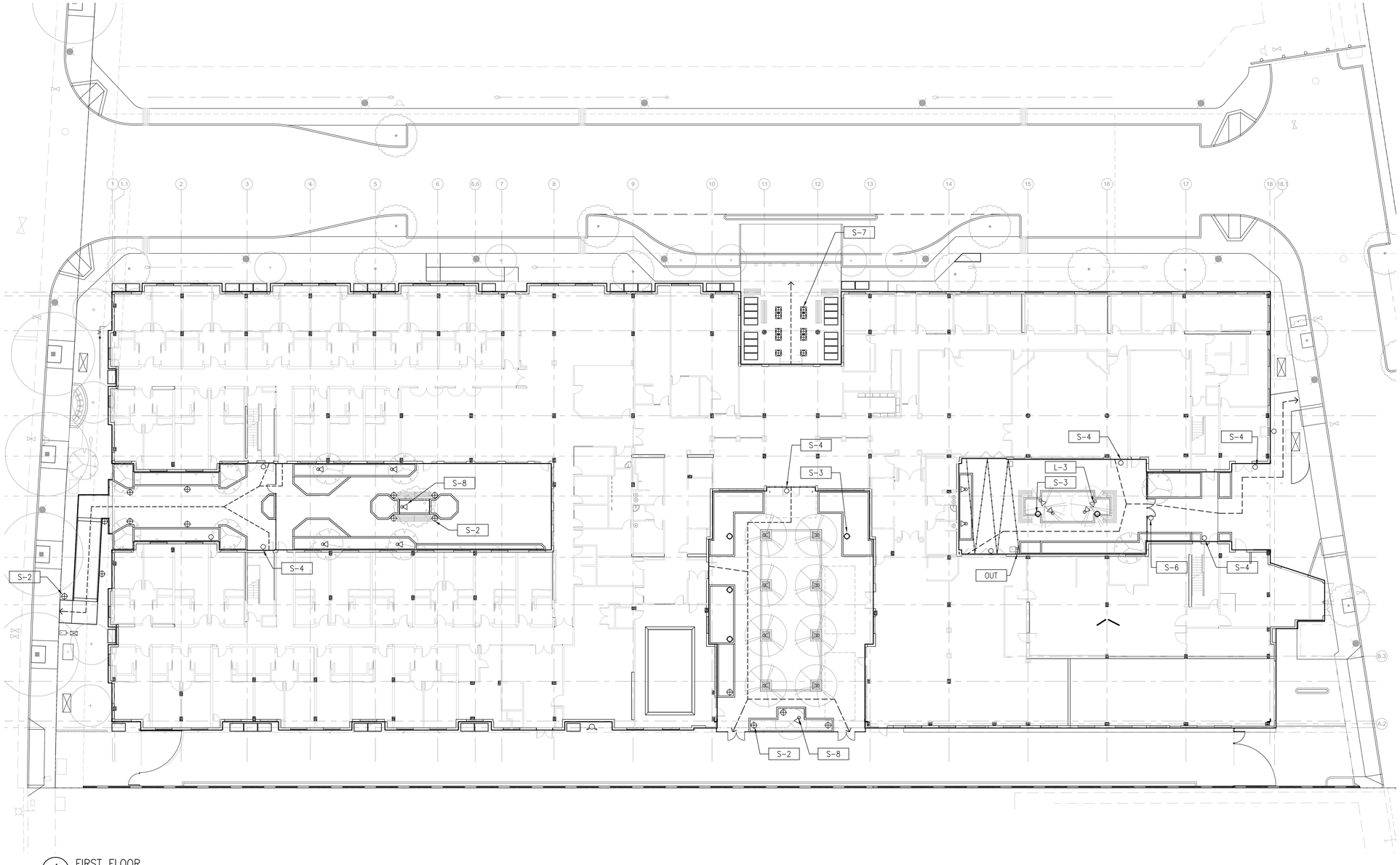
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date: 04/11/2017

PLAN CHECK RESPONSE

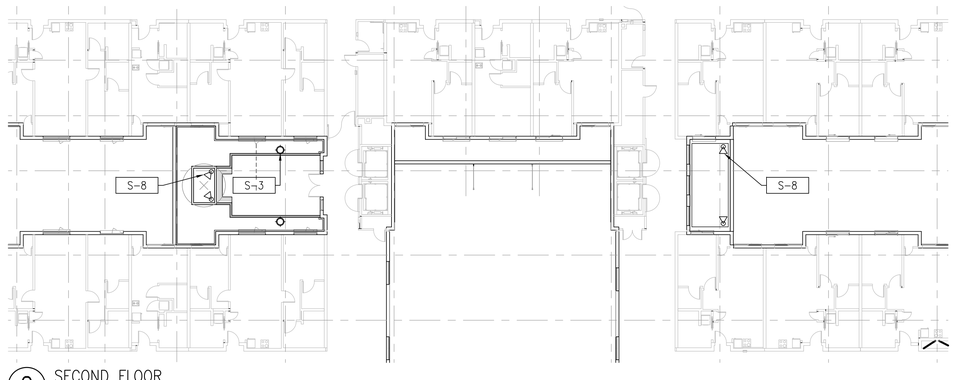
CONSTRUCTION PLAN

L1.03

LEGEND		
SEE ELECTRICAL DRAWING FOR SPECIFICATION OF LIGHT FIXTURES		
⊕	S-2	BOLLARD LIGHT 39" – MOUNT ON PODIUM FINISH GRADE
☼	S-3	BOLLARD LIGHT 21" – MOUNT AT PLANTER WALL, SEE 12/L5.02
○	S-4	WALL MOUNT LIGHT, SED SAD
○	S-5	WALL MOUNT LIGHT, SED SAD
○	S-6	POST MOUNT LIGHT, SED SAD
⊕	S-7	DOWN LIGHT, SED SAD
▽	S-8	TREE UP-LIGHT
▷	S-9	STRING LIGHT
OUT	OUT	OUTLET (LOCKABLE), SEE ELECTRICAL
←		EGRESS PATH OF TRAVEL, SEE ARCH DWGS



1 FIRST FLOOR



2 SECOND FLOOR

N

0 8' 16' 32' 48'

SCALE: 1/16" = 1'-0"

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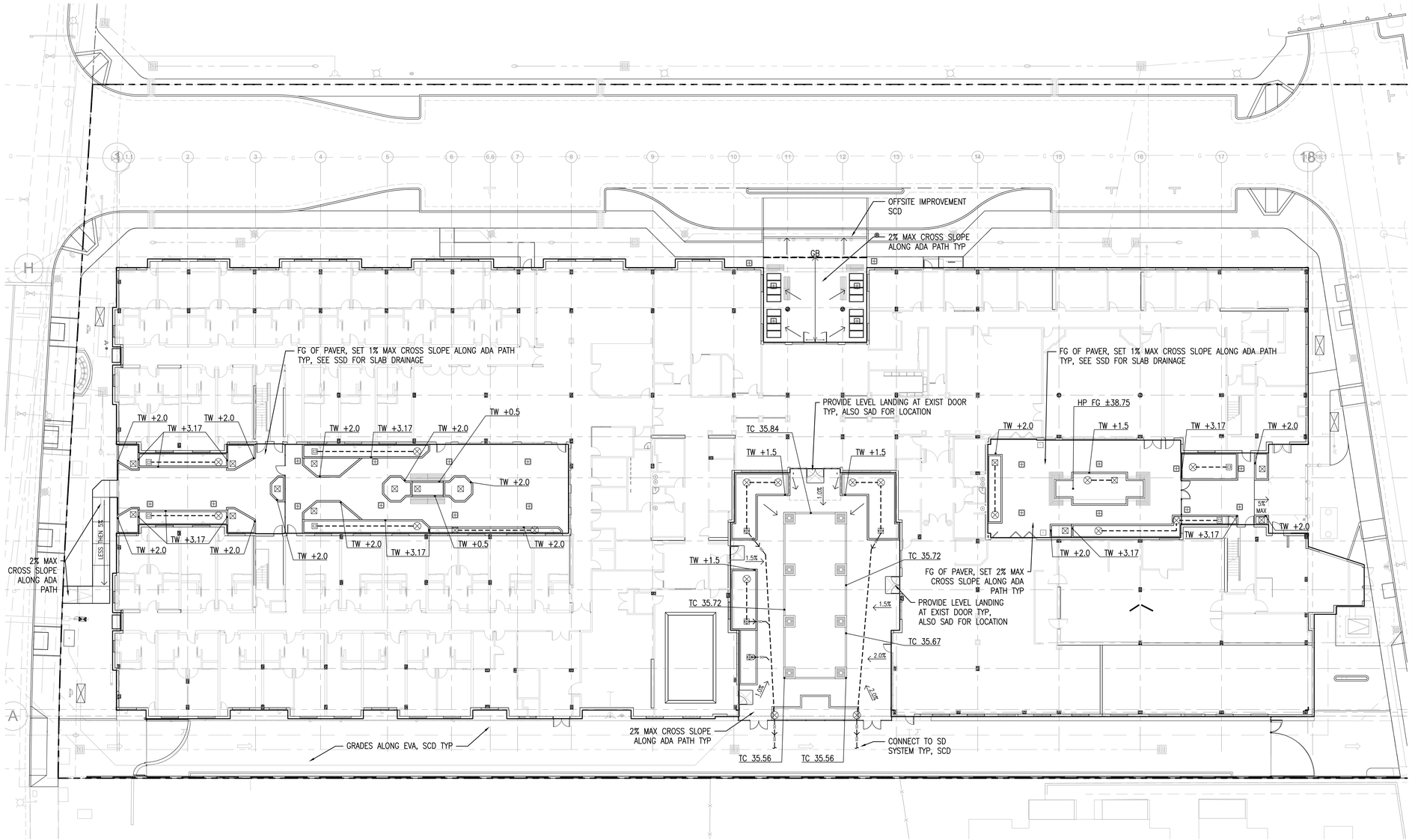
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date: 04/11/2017

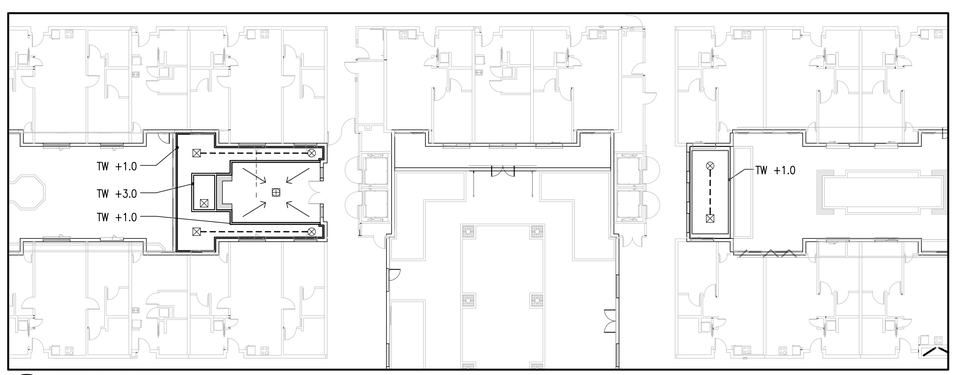
PLAN CHECK RESPONSE

LANDSCAPE LIGHTING PLAN

L1.04



1 FIRST FLOOR



2 SECOND FLOOR

LEGEND	
TW	TOP OF WALL
BS	BOTTOM OF STAIR
CONT.	CONTINUOUS
⊠	D-1 (PLANTER DRAIN W/ PERFORATED STAND PIPE W/ DOME GRATE) JR SMITH 1909 PLANTER DRAIN OR EQ
C3	D-2 (C3 PLANTER DRAIN W/ NON-PERFORATED STAND PIPE AND DOME GRATE) JR SMITH 1909 PLANTER DRAIN OR EQ
⊞	D-3 (C3 PLANTER AREA DRAIN ON GRADE) ALSO SEE CIVIL DWGS
⊞	D-4 (DRAIN AT PODIUM LEVEL FOR PRECAST PLANTER) JR SMITH 1470 ROOF DRAIN OR EQ
⊗	CLEANOUT
- - -	D-8, 4" UNDERDRAIN
⊶⊶⊶	SOLID SD PIPE, CONNECT TO SD SYSTEM, ALSO SEE CIVIL DWGS
(E)	EXISTING
FE	FILL ELEVATION
FEP	FILL ELEVATION AT PAVING
FG	FINISH GRADE
FOB	FACE OF BUILDING
FP	FINISH PAVING
GB	GRADE BREAK
GBP	GRADE BREAK AT FINISH PAVING
HP	HIGH POINT
HPF	HIGH POINT FILL
MEP	MECHANICAL, ELECTRICAL, AND PLUMBING
(N)	NEW
RE	RIM ELEVATION AT FINISHED PAVING
SSD	SEE STRUCTURAL ENGINEER'S DRAWINGS
→	SLOPE AT FINISH PAVING – 2% MAX, 1% MIN
SSE	STRUCTURAL SLAB ELEVATION
TC	TOP OF CURB
TD	TRENCH DRAIN
THLD	THRESHOLD
TF	TOP OF FENCE
TW	TOP OF WALL
TP	TOP OF PLANTER
UEP	USE EXISTING PENETRATION
UON	UNLESS OTHERWISE NOTED
⌖	LEVEL INDICATOR

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rev	date	issue
	12.01.17	City & EOA resp.
	10.02.17	3rd plan check resp.
	06.27.17	2nd plan check resp.
	05.15.17	bld set update
	05.03.17	health dept. submittal
	04.11.17	plan check response
	03.06.17	health dept. submittal
	01.17.17	bld addendum #3
	01.13.17	bld addendum #2
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milpitas, california

project number: 16-123

plot date:

scale: as noted

date: 10.02.17

2ND PLAN CHECK RESPONSE

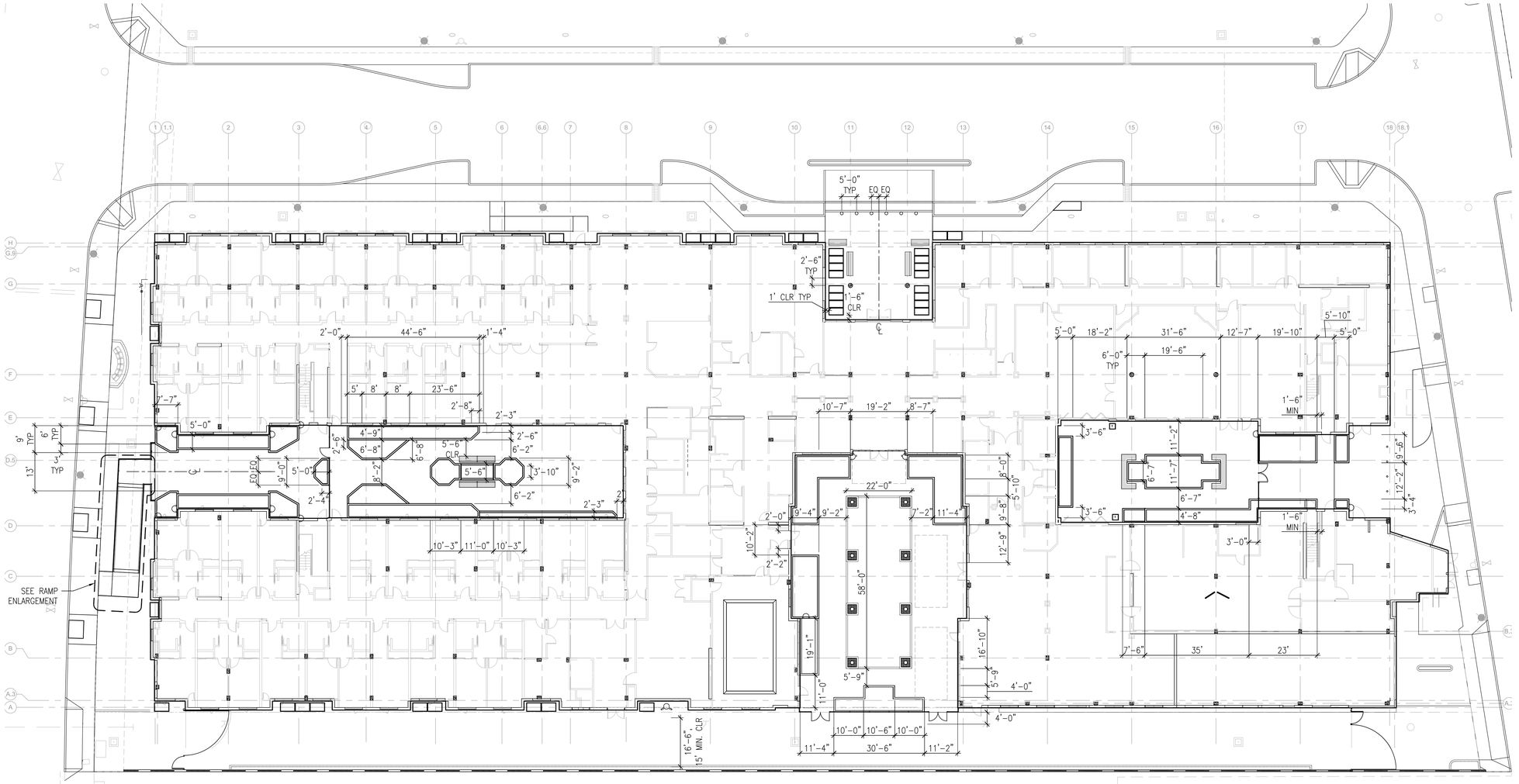
GRADING & DRAINAGE PLAN

N

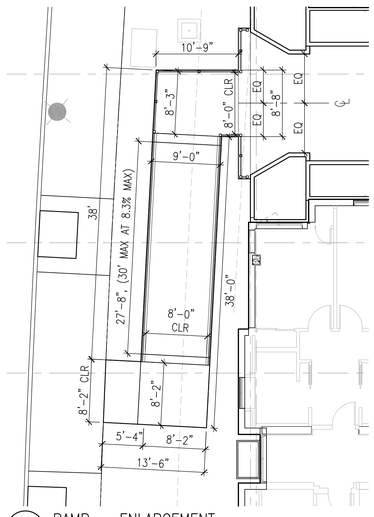
0 8' 16' 32' 48'

SCALE: 1/16" = 1'-0"

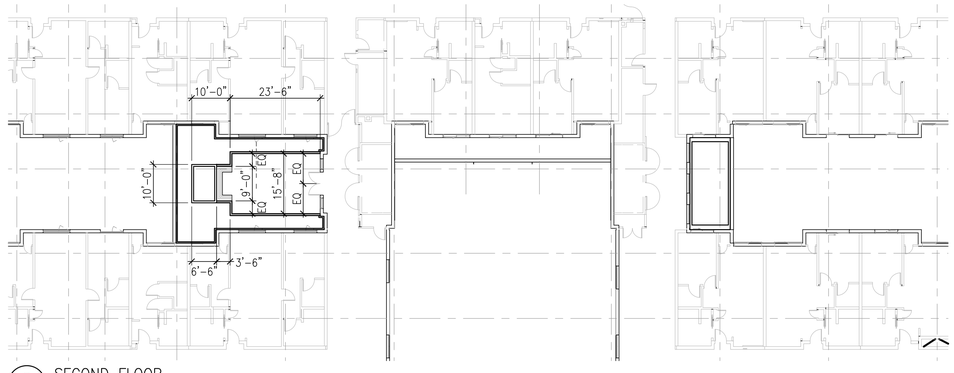
L2.01



1 FIRST FLOOR

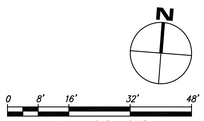


3 RAMP – ENLARGEMENT
SCALE: 1/8"=1'-0"



2 SECOND FLOOR

REFER TO PERMIT NO. B-S116-0019 FOR ALL SITE ACCESSIBILITY PLAN AND DETAIL



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04.11.17 plan check response

rev	date	Issue
	03.06.17	health dept. submittal
	01.17.17	bid addendum #3
	01.13.17	bid addendum #2
	01.06.17	delta 1 revision
	12.02.16	Issue for bid
	11.22.16	Issue for permit
	10.25.16	60% cd
	09.26.16	30% cd
	08.15.16	100% dd

REGISTERED LANDSCAPE ARCHITECT
BRUCE B. JETT
3335
Exp. 05/31/18
Date 04/11/17
STATE OF CALIFORNIA

1620 south main

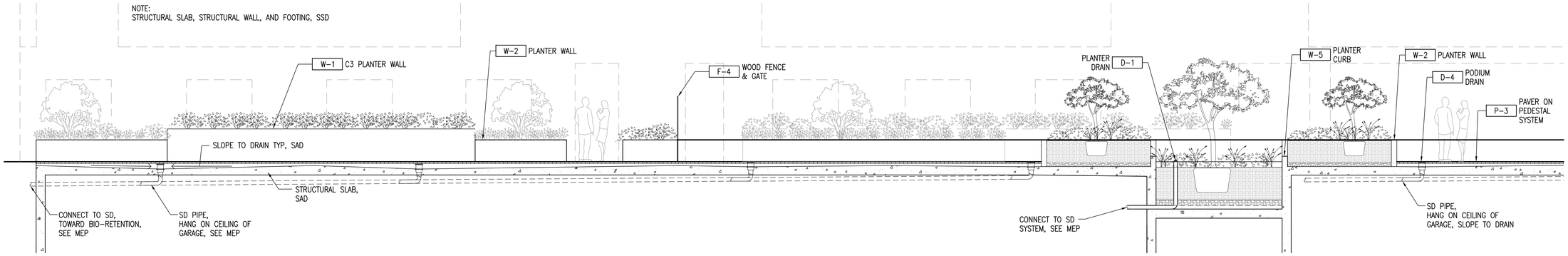
milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 04/11/2017

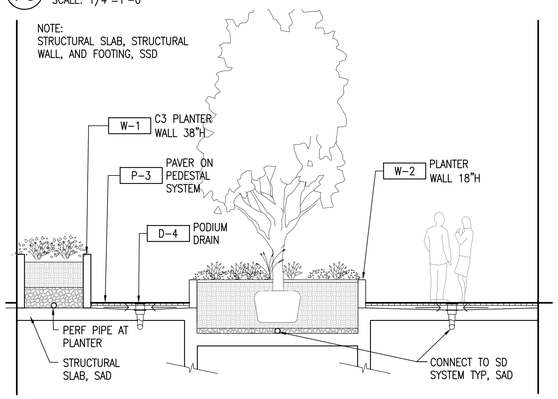
PLAN CHECK RESPONSE

DIMENSION PLAN

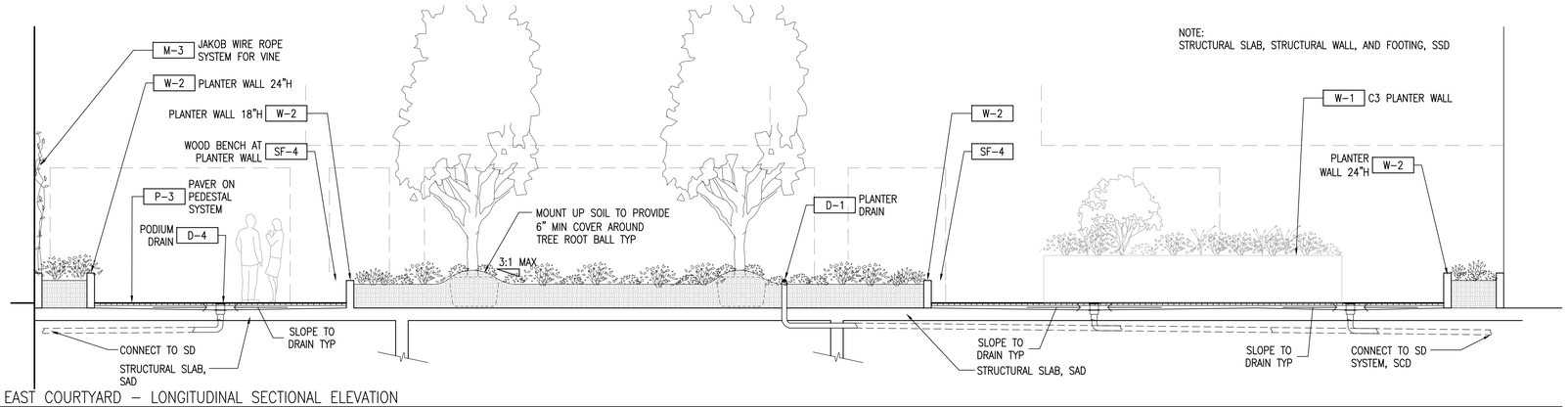
L3.01



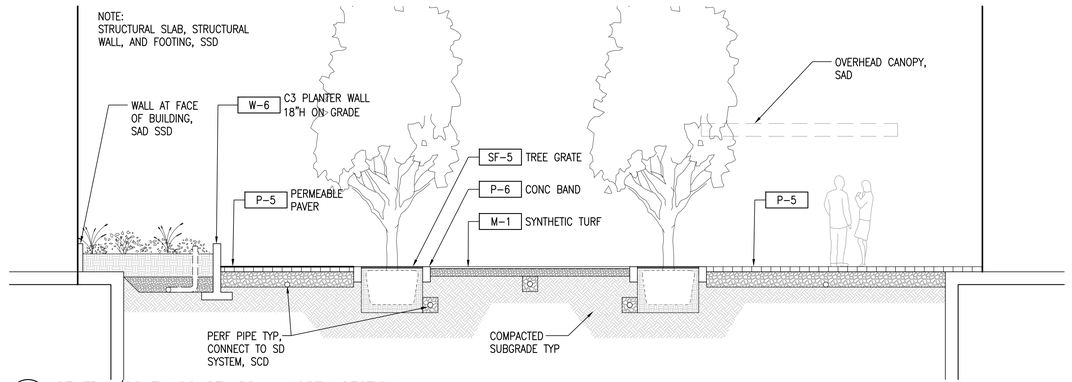
13 WEST COURTYARD – SOUTH SECTIONAL ELEVATION
SCALE: 1/4"=1'-0"



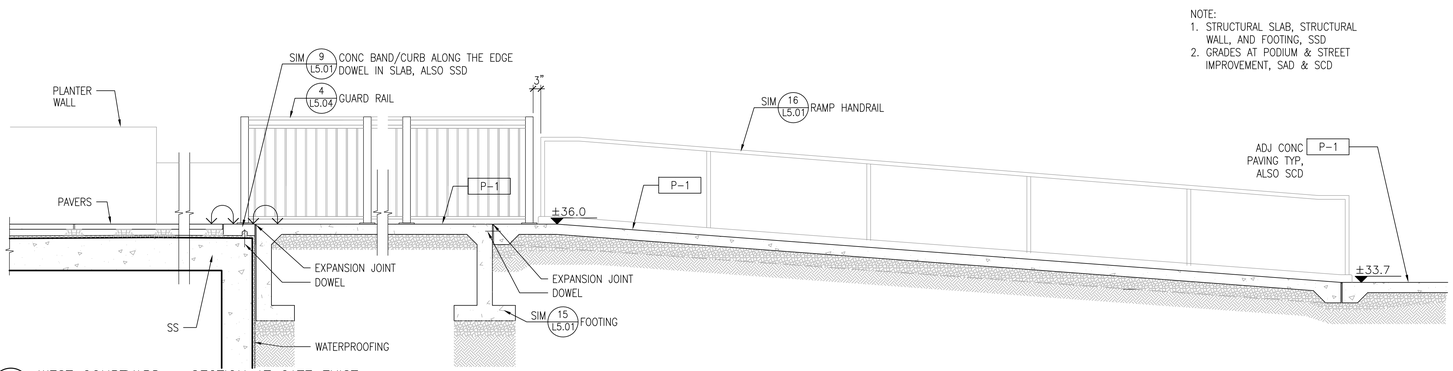
14 EAST COURTYARD – PLANTER SECTION
SCALE: 1/4"=1'-0"



10 EAST COURTYARD – LONGITUDINAL SECTIONAL ELEVATION
SCALE: 1/4"=1'-0"



7 CENTRAL/SOUTH COURTYARD – NORTH SECTION
SCALE: 1/4"=1'-0"



12 WEST COURTYARD – SECTION AT GATE EXIST
SCALE: 1/2"=1'-0"

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3335
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1620 south main

milpitas, california

project number: 16-123

plot date:

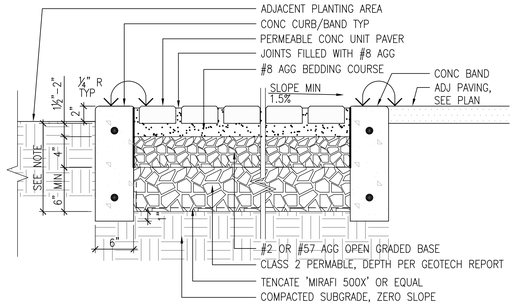
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date: 04/11/2017

PLAN CHECK RESPONSE

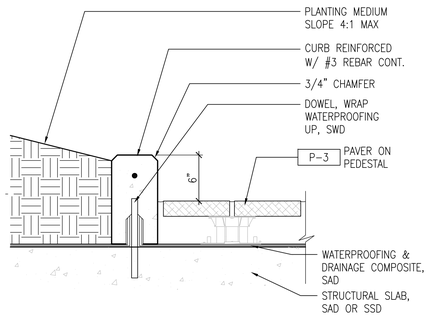
SECTIONS

L4.01

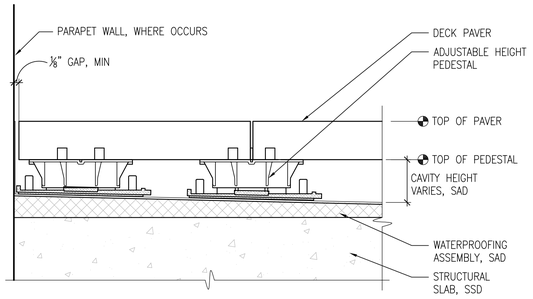


NOTES:
1. DEPTH OF AGGREGATES SHOWN IS TYPICAL. REFER TO GEOTECH REPORT & INFILTRATION TEST FOR DEPTHS REQUIRED FOR THE SPECIFIC PROJECT. SEE SPECIFICATIONS.
2. REFER TO CIVIL DETAILS FOR OVERFLOW DRAINAGE & CONNECTIONS.AND UNDERDRAIN.

13 PERMEABLE PAVER
SCALE: 1-1/2"=1'-0"

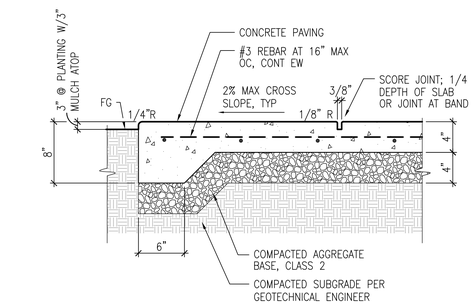


9 CURB ON PODIUM
SCALE: 1-1/2"=1'-0"



NOTE:
1. PAVERS TO HAVE A MINIMUM NUMBER OF PEDESTAL SUPPORTS PER PAVER IN ACCORDANCE WITH BISON INNOVATIVE PRODUCTS SPECIFICATIONS OR EQUAL.
2. INSTALLATION SHALL BE COMPLETED IN ACCORDANCE WITH BISON INNOVATIVE PRODUCTS SPECIFICATIONS OR APPROVED EQUAL

5 PEDESTAL PAVER SYSTEM
SCALE: 3"=1'-0"

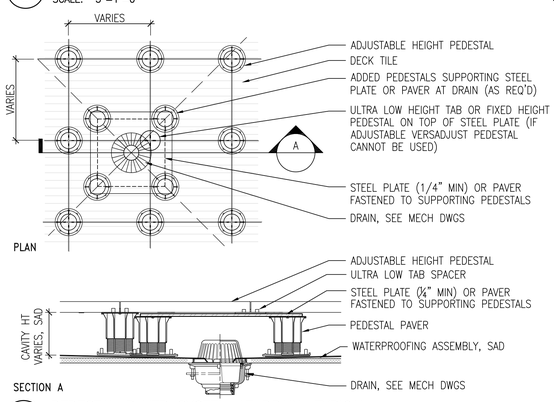


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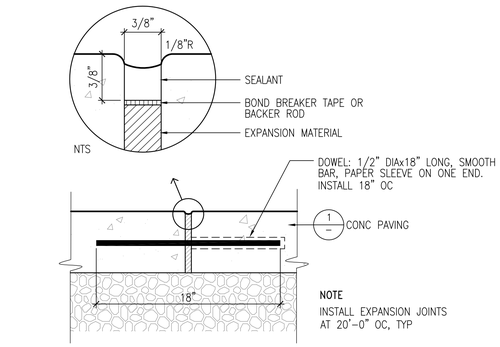
1 CONCRETE PAVING
SCALE: 1-1/2"=1'-0"

14 NOT USED
SCALE: –

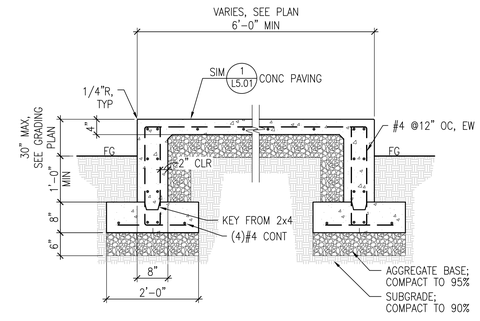
10 CONCRETE BAND
SCALE: 1'=1'-0"



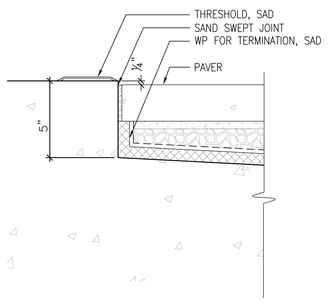
6 PEDESTAL PAVER SYSTEM AT DRAIN, TYPICAL
SCALE: NTS



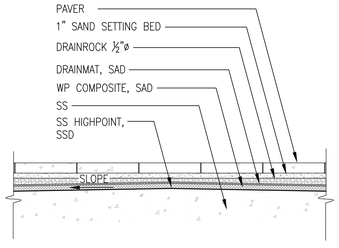
2 EXPANSION JOINT
SCALE: 3"=1'-0"



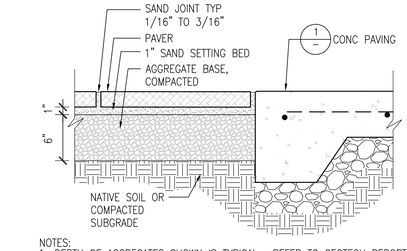
15 RAMP SECTION
SCALE: 3/4"=1'-0"



8 PAVER AT AT THRESHOLD
SCALE: 3"=1'-0"

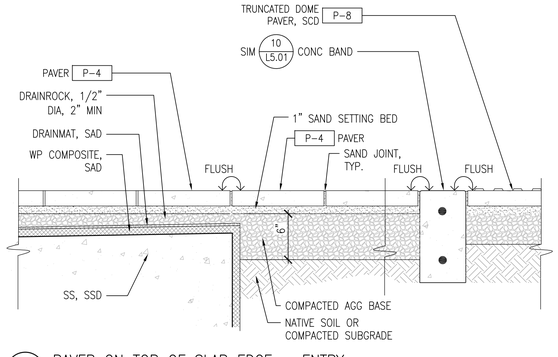


7 PAVER ON TOP OF SLAB – ENTRY
SCALE: 1-1/2"=1'-0"



NOTES:
1. DEPTH OF AGGREGATES SHOWN IS TYPICAL. REFER TO GEOTECH REPORT & INFILTRATION TEST FOR DEPTHS REQUIRED FOR THE SPECIFIC PROJECT.

3 PAVER ON GRADE
SCALE: 1-1/2"=1'-0"



4 PAVER ON TOP OF SLAB EDGE – ENTRY
SCALE: 1-1/2"=1'-0"

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rev	date	issue
	12.01.17	City & EOA resp.
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	05.03.17	health dept. submittal
	04.11.17	plan check response
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REGISTERED LANDSCAPE ARCHITECT
BRUCE B. JETT
3335
Exp. 05/31/18
Date 12/01/17
STATE OF CALIFORNIA

1620 south main

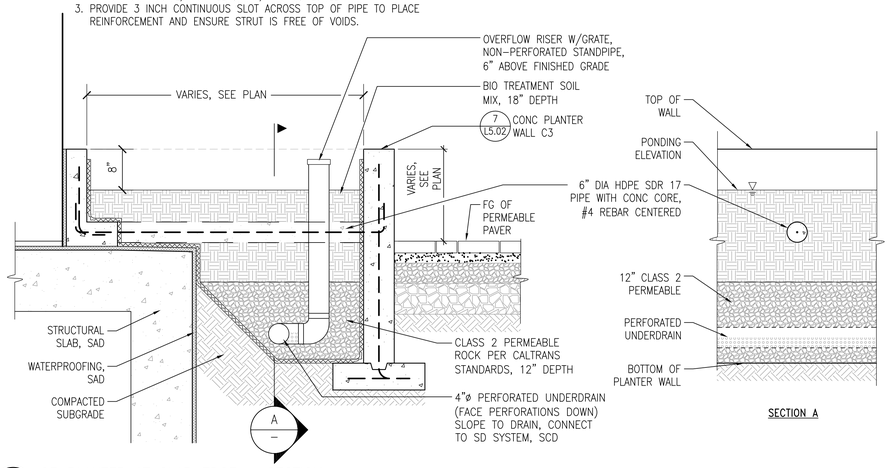
milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 10.02.17

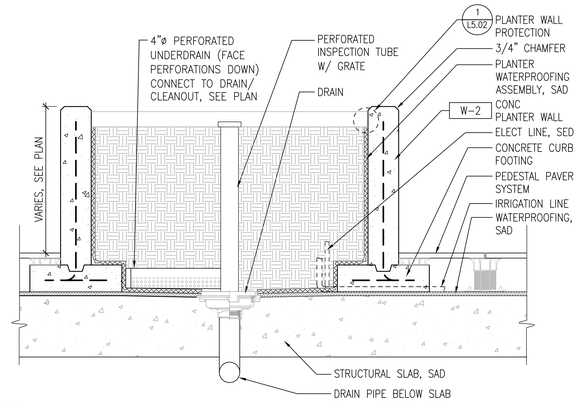
2ND PLAN CHECK RESPONSE

CONSTRUCTION DETAILS

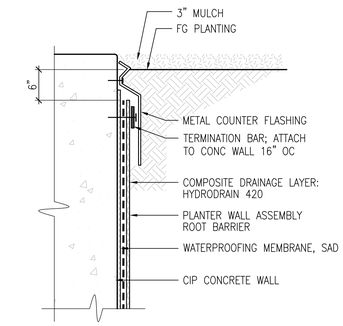
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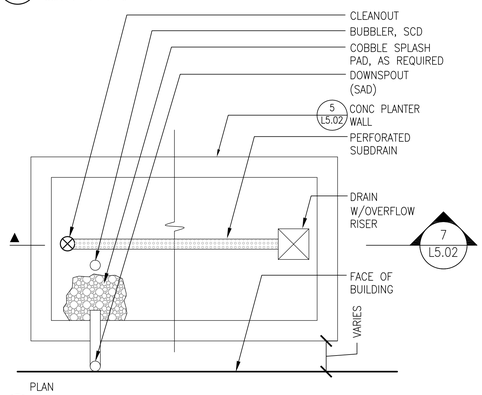
14 C3 PLANTER AT SLAB EDGE – SECTION
SCALE: 1"=1'-0"



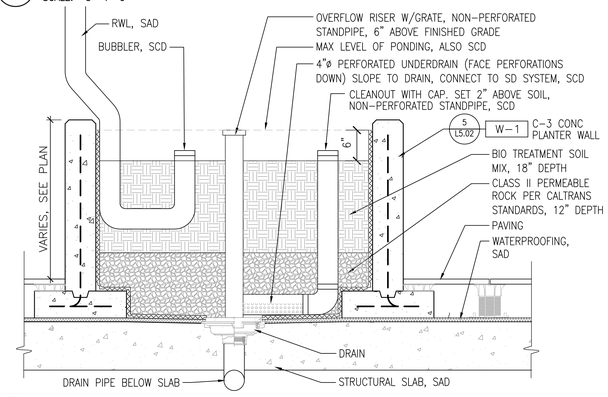
5 TYPICAL CONCRETE PLANTER WALL ON PODIUM
SCALE: 1"=1'-0"



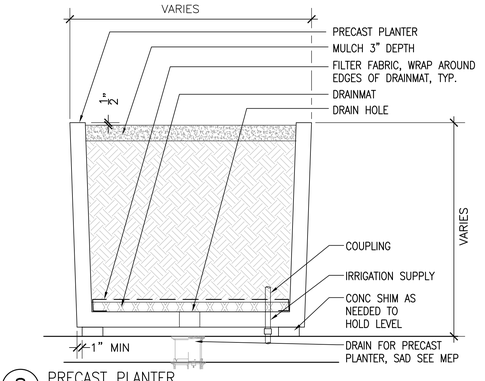
1 PLANTER WALL PROTECTION
SCALE: 1" = 1'



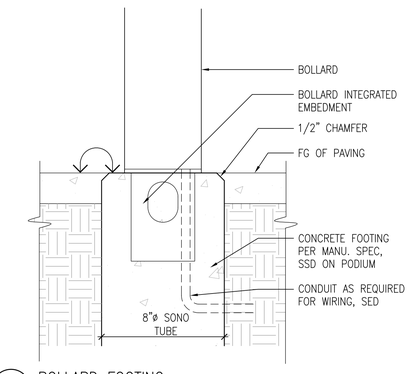
6 C3 PLANTER AT DOWNSPOUT
SCALE: 3"=1'-0"



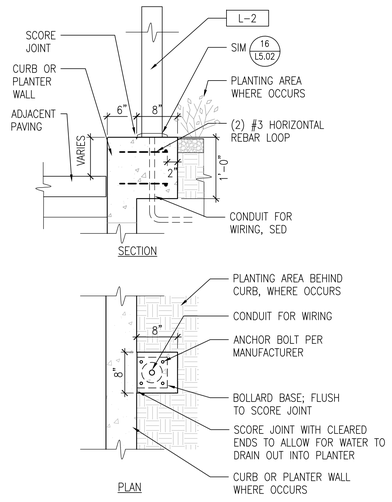
7 TYPICAL C3 PLANTER SECTION
SCALE: 1"=1'-0"



8 PRECAST PLANTER
SCALE: 1"=1'-0"



16 BOLLARD FOOTING
SCALE: 1"=1'-0"



12 BOLLARD FOOTING AT PLANTER
SCALE: 1"=1'-0"

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3335
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STATE OF CALIFORNIA

1620 south main

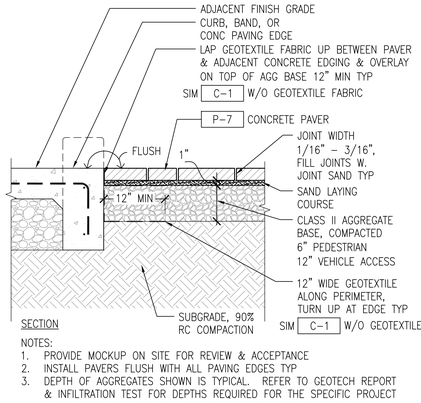
milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 04/11/2017

PLAN CHECK RESPONSE

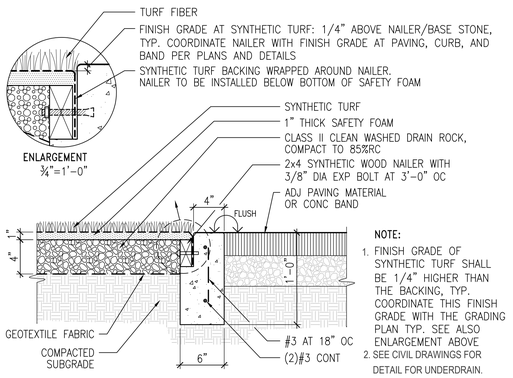
CONSTRUCTION DETAILS

L5.02



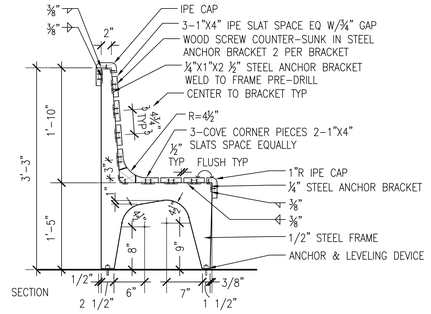
NOTES:
1. PROVIDE MOCKUP ON SITE FOR REVIEW & ACCEPTANCE
2. INSTALL PAVERS FLUSH WITH ALL PAVING EDGES TYP
3. DEPTH OF AGGREGATES SHOWN IS TYPICAL. REFER TO GEOTECH REPORT & INFILTRATION TEST FOR DEPTHS REQUIRED FOR THE SPECIFIC PROJECT

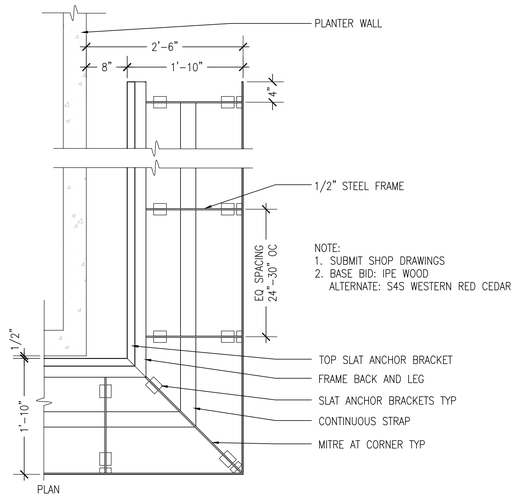
13 PRECAST CONCRETE PAVER ON GRADE
SCALE: 1" = 1'



NOTE:
1. FINISH GRADE OF SYNTHETIC TURF SHALL BE 1/4" HIGHER THAN THE BACKING, TYP. COORDINATE THIS FINISH GRADE WITH THE GRADING PLAN TYP. SEE ALSO ENLARGEMENT ABOVE
2. SEE CIVIL DRAWINGS FOR DETAIL FOR UNDERDRAIN.

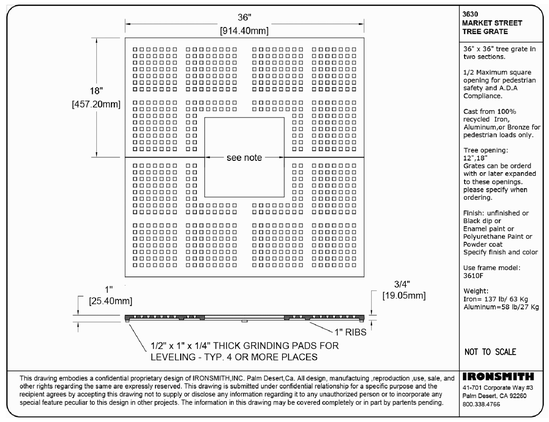
9 SYNTHETIC TURF
SCALE: 1-1/2"=1'-0"





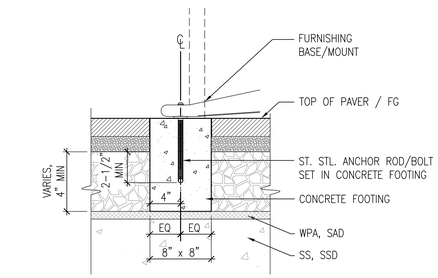
NOTE:
1. SUBMIT SHOP DRAWINGS
2. BASE BID: IPE WOOD
ALTERNATE: S4S WESTERN RED CEDAR

6 BENCH AT PLANTER WALL
SCALE: 1"=1'-0"

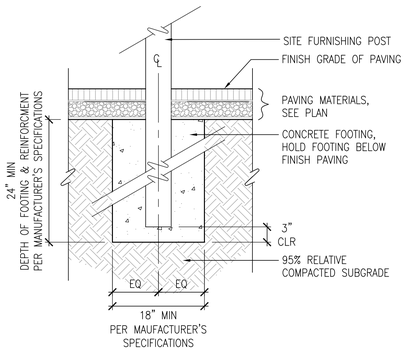


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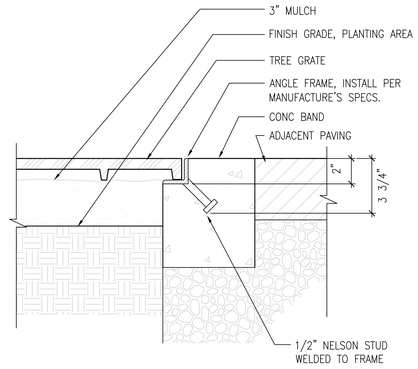
1 TREE GRATE
SCALE: 3"=1'-0"



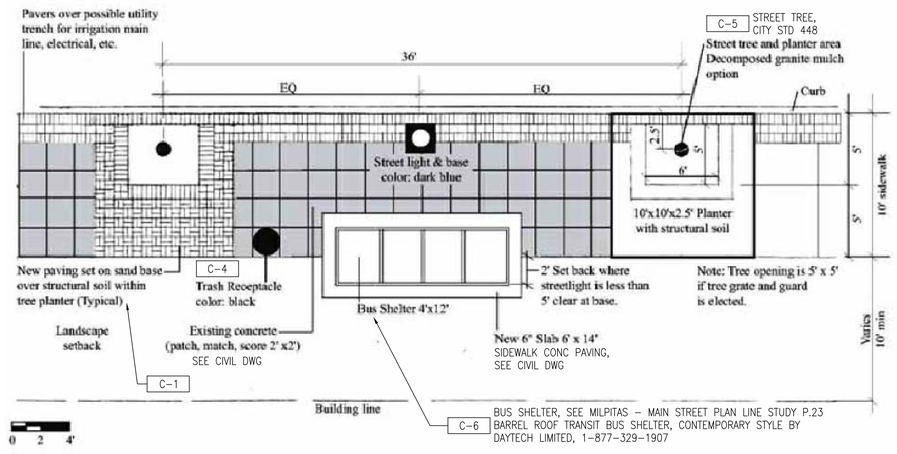
14 FURNISHING MOUNT AT PAVER ON SLAB
SCALE: 1 1/2" = 1'



10 EMBEDDED SITE FURNISHING FOOTING, ON GRADE
SCALE: 1"=1'-0"



1 TREE GRATE
SCALE: 3"=1'-0"

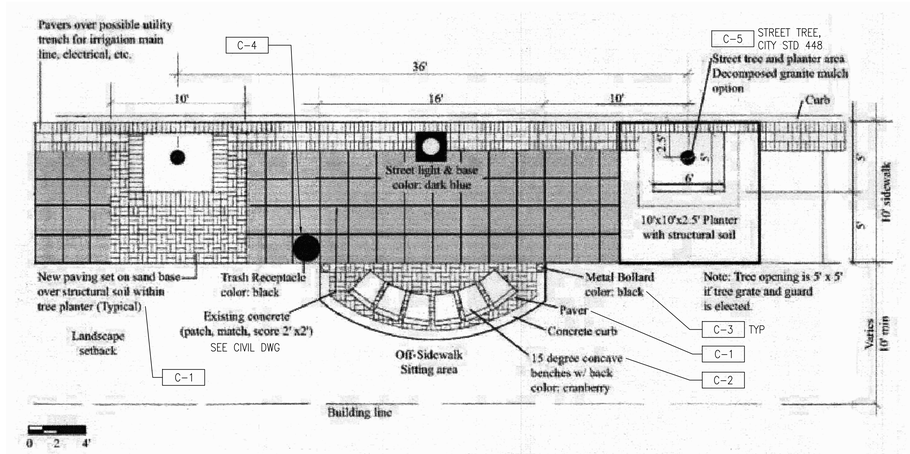


Bus Shelter Plan Sketch A

Sidewalk Street Tree Planter Plan
With Bus Shelter And Street Light Location

CITY OF MILPITAS PLAN LINE STUDY, SOUTH MAIN AND SOUTH ABEL STREETS

16 BUS SHELTER AT SOUTH MAIN STREET
SCALE: NTS



Seating Area Plan Sketch B

Sidewalk Street Tree Planter Plan
With Seating Area And Street Light Location

CITY OF MILPITAS PLAN LINE STUDY, SOUTH MAIN AND SOUTH ABEL STREETS

8 SEATING AREA AT SOUTH MAIN STREET
SCALE: NTS

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	08.15.16	100% dd

REGISTERED LANDSCAPE ARCHITECT
BRUCE B. JETT
3335
Exp. 05/31/18
Date 12/01/17
STATE OF CALIFORNIA

1620 south main

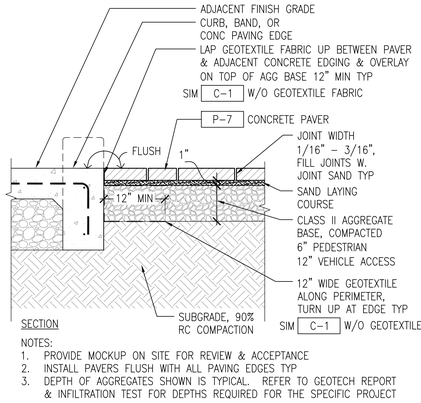
milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 10.02.17

2ND PLAN CHECK RESPONSE

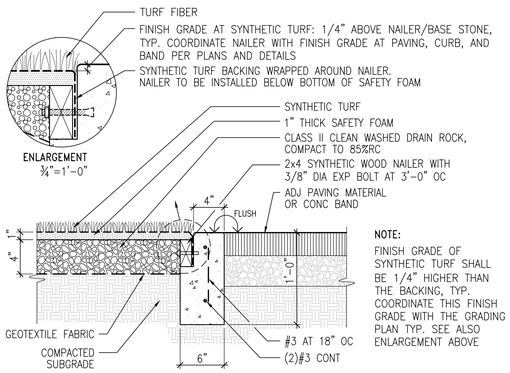
CONSTRUCTION DETAILS

L5.03



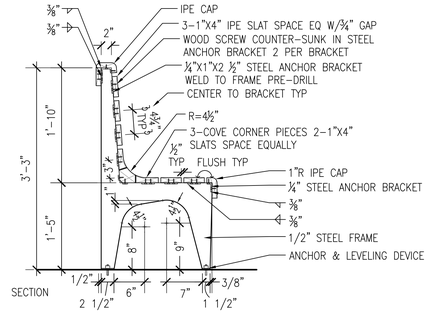
NOTES:
1. PROVIDE MOCKUP ON SITE FOR REVIEW & ACCEPTANCE
2. INSTALL PAVERS FLUSH WITH ALL PAVING EDGES TYP
3. DEPTH OF AGGREGATES SHOWN IS TYPICAL. REFER TO GEOTECH REPORT & INFILTRATION TEST FOR DEPTHS REQUIRED FOR THE SPECIFIC PROJECT

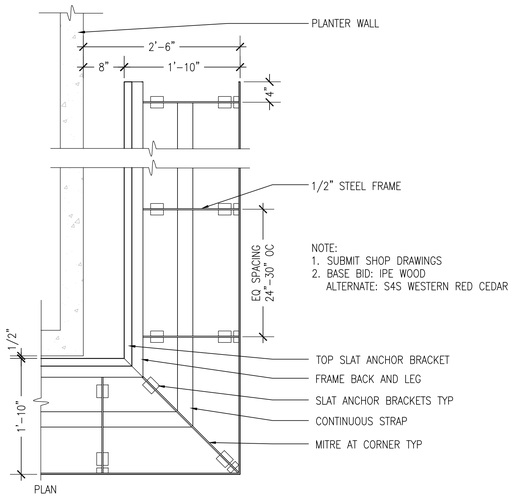
13 PRECAST CONCRETE PAVER ON GRADE
SCALE: 1" = 1'



NOTE:
FINISH GRADE OF SYNTHETIC TURF SHALL BE 1/4" HIGHER THAN THE BACKING, TYP. COORDINATE THIS FINISH GRADE WITH THE GRADING PLAN TYP. SEE ALSO ENLARGEMENT ABOVE

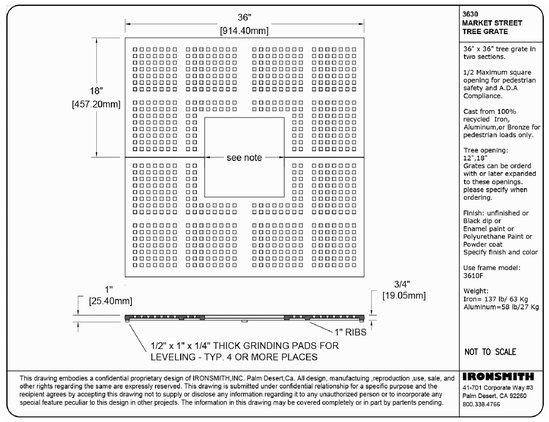
9 SYNTHETIC TURF
SCALE: 1-1/2"=1'-0"





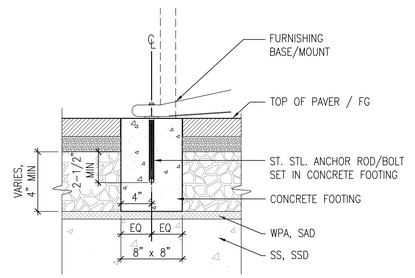
NOTE:
1. SUBMIT SHOP DRAWINGS
2. BASE BID: IPE WOOD
ALTERNATE: S4S WESTERN RED CEDAR

6 BENCH AT PLANTER WALL
SCALE: 1"=1'-0"

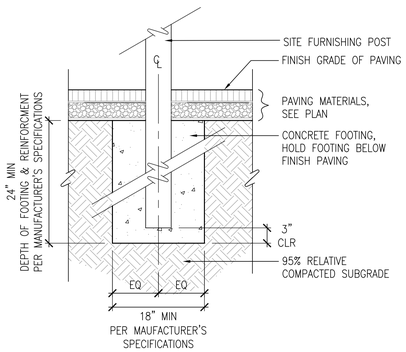


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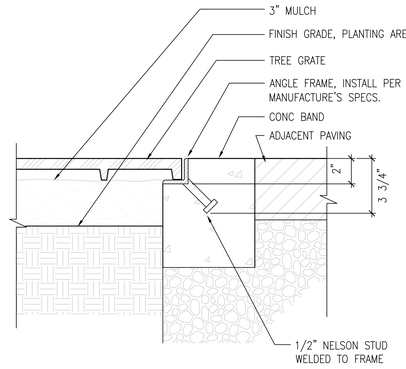
1 TREE GRATE
SCALE: 3"=1'-0"



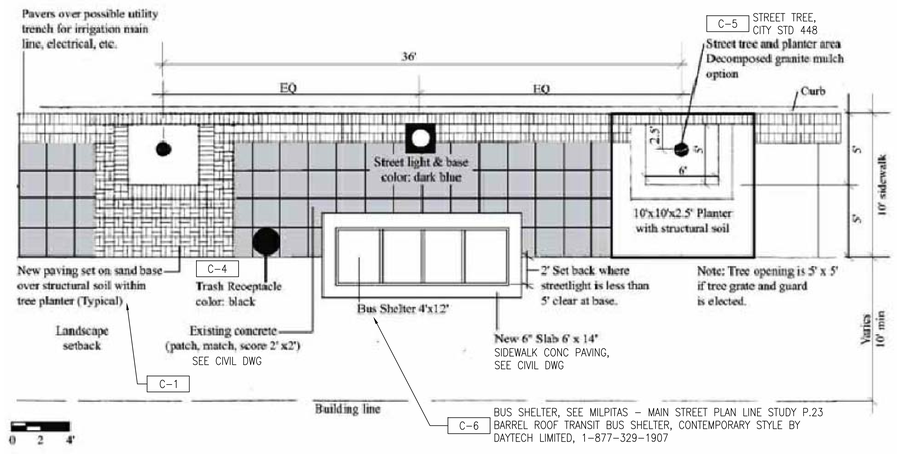
14 FURNISHING MOUNT AT PAVER ON SLAB
SCALE: 1 1/2" = 1'



10 EMBEDDED SITE FURNISHING FOOTING, ON GRADE
SCALE: 1"=1'-0"



1 TREE GRATE
SCALE: 3"=1'-0"

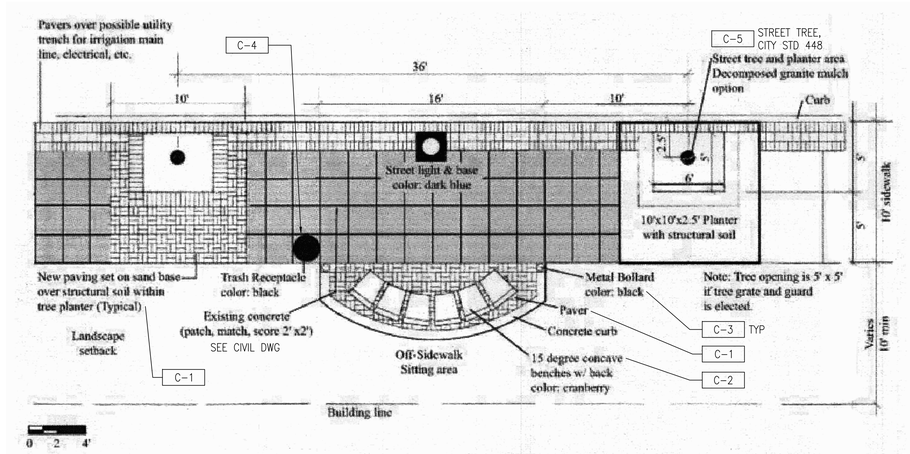


Bus Shelter Plan Sketch A

Sidewalk Street Tree Planter Plan
With Bus Shelter And Street Light Location

CITY OF MILPITAS PLAN LINE STUDY, SOUTH MAIN AND SOUTH ABEL STREETS

16 BUS SHELTER AT SOUTH MAIN STREET
SCALE: NTS



Seating Area Plan Sketch B

Sidewalk Street Tree Planter Plan
With Seating Area And Street Light Location

CITY OF MILPITAS PLAN LINE STUDY, SOUTH MAIN AND SOUTH ABEL STREETS

8 SEATING AREA AT SOUTH MAIN STREET
SCALE: NTS

brick.

ARCHITECT
brick.
1266 66th street, suite 1
emeryville, ca 94608
510.516.0167
www.brick-inc.com

CLIENT
milpitas phase 1, LP

JETT
LANDSCAPE ARCHITECTURE + DESIGN
CRLA #3335 · 2 Theatre Square #218 · Orinda CA · 94563
925.254.5422 · www.jett.land

rev	date	issue
	12.01.17	City & EOA resp.
	10.02.17	3rd plan check resp.
	06.27.17	2nd plan check resp.
	05.15.17	bid set update
	05.03.17	health dept. submittal
	04.11.17	plan check response
	03.06.17	health dept. submittal
	01.17.17	bid addendum #3
	01.13.17	bid addendum #2
	01.06.17	delta 1 revision
	12.02.16	issue for bid
	11.22.16	issue for permit
	10.25.16	60% cd
	09.26.16	30% cd
	08.15.16	100% dd

REGISTERED LANDSCAPE ARCHITECT
BRUCE B. JETT
3335
Exp. 05/31/18
Date 12/01/17
STATE OF CALIFORNIA

1620 south main

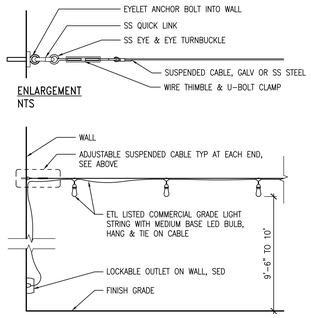
milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 10.02.17

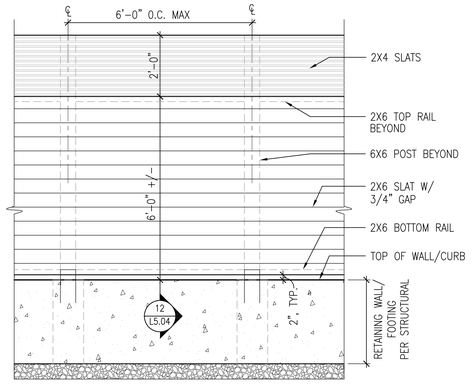
2ND PLAN CHECK RESPONSE

CONSTRUCTION DETAILS

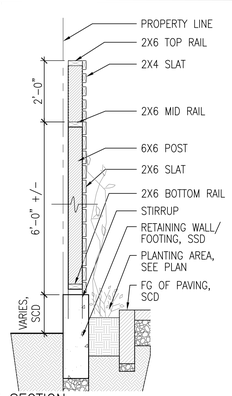
L5.03



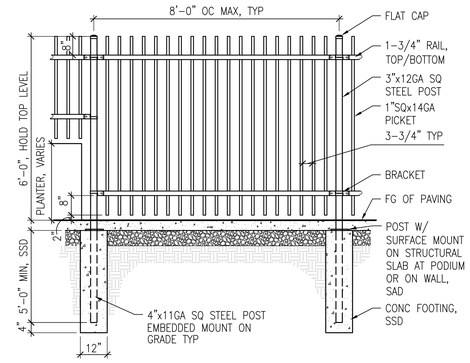
10 STRING LIGHT WITH SUSPENDED CABLE
SCALE: 3/4" = 1'



11 WOOD FENCE AT PROPERTY LINE
SCALE: 1/2" = 1'

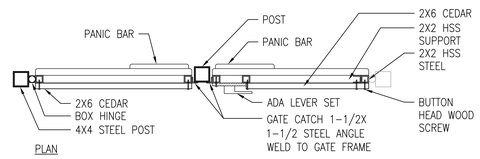


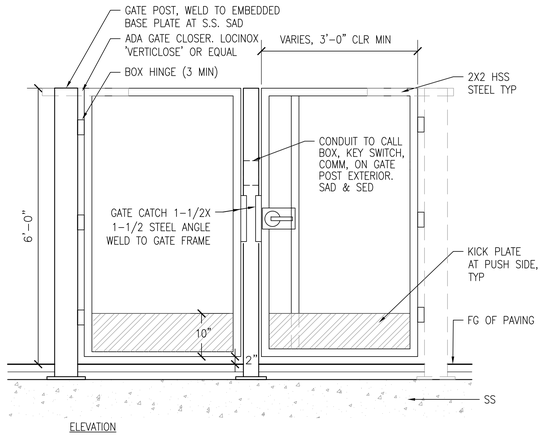
12 WOOD FENCE SECTION
SCALE: 1/2" = 1'



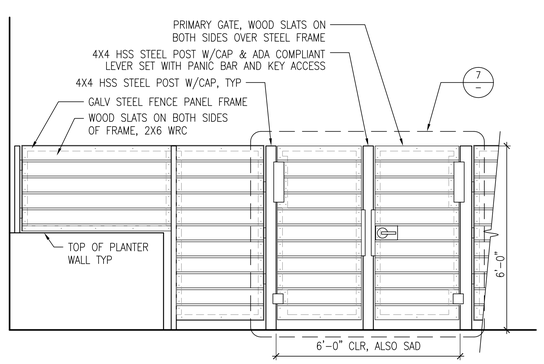
5 METAL FENCE
SCALE: 1/2" = 1'

NOTES:
1. LOCKABLE ADA COMPLIANT LEVER SET ON SWING SIDE, SAD
2. PROVIDE MILPITAS FIRE DEPT APPROVED KNOX BOX AT EXTERIOR, SAD
3. PROVIDE POWER, SIGN, KEY LOCK/SWITCH, CALL BOX, SAD & SED

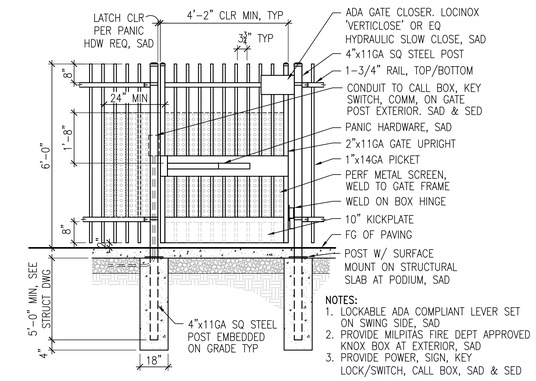




7 WOOD GATE – METAL FRAME
SCALE: 3/4" = 1'

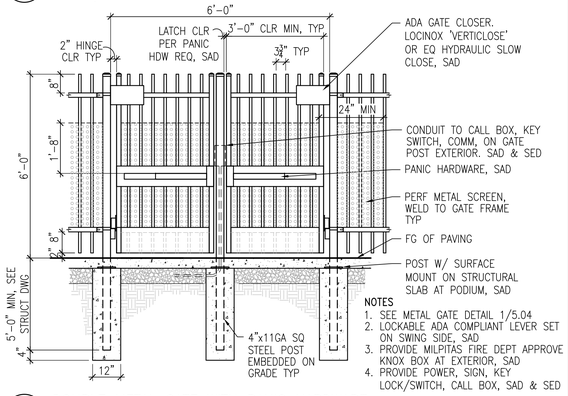


8 WOOD GATE & FENCE ELEVATION – METAL FRAME
SCALE: 1/2" = 1'



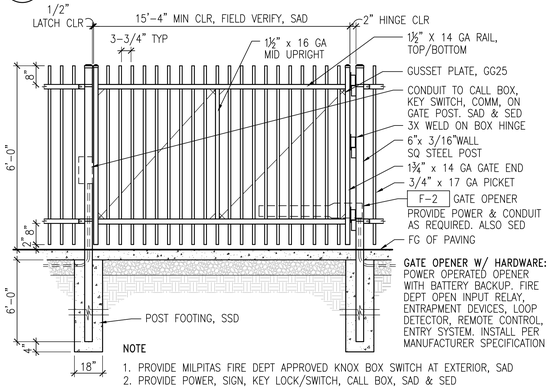
NOTES:
1. LOCKABLE ADA COMPLIANT LEVER SET ON SWING SIDE, SAD
2. PROVIDE MILPITAS FIRE DEPT APPROVED KNOX BOX AT EXTERIOR, SAD
3. PROVIDE POWER, SIGN, KEY LOCK/SWITCH, CALL BOX, SAD & SED

1 SINGLE METAL GATE WITH PANIC HARDWARE
SCALE: 1/2"=1'-0"



NOTES
1. SEE METAL GATE DETAIL 1/5.04
2. LOCKABLE ADA COMPLIANT LEVER SET ON SWING SIDE, SAD
3. PROVIDE MILPITAS FIRE DEPT APPROVE KNOX BOX AT EXTERIOR, SAD
4. PROVIDE POWER, SIGN, KEY LOCK/SWITCH, CALL BOX, SAD & SED

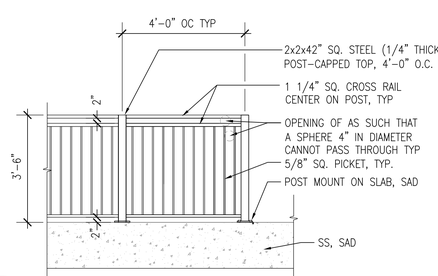
2 DOUBLE METAL GATE WITH PANIC HARDWARE
SCALE: 1/2" = 1'



NOTE
1. PROVIDE MILPITAS FIRE DEPT APPROVED KNOX BOX SWITCH AT EXTERIOR, SAD
2. PROVIDE POWER, SIGN, KEY LOCK/SWITCH, CALL BOX, SAD & SED

3 METAL GATE – EVA/MAINTENANCE
SCALE: 1/2"=1'-0"

NOTE:
1. GUARDRAIL TO MATCH ARCHITECT'S FINISH ON BUILDING, SAD
2. SAD FOR WATERPROOFING PENETRATIONS.
3. ALL STEEL TO BE GALVANIZED STEEL CONTRACTOR TO PRICE DOUBLE COAT PAINT
4. CONTRACTOR TO PROVIDE SHOP DRAWING OR EQUAL. SEE DRAWINGS AND SPECIFICATIONS FOR OTHER REQUIREMENTS.



4 GUARDRAIL
SCALE: 1/2"=1'-0"

brick.

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emeryville, ca 94608
510.516.0167
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milpitas phase 1, LP

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CRLA #3335 · 2 Theatre Square #218 · Orinda CA · 94563
925.254.5422 · www.jett.land

04.11.17 plan check response

rev	date	Issue
	03.06.17	health dept. submittal
	01.17.17	bld addendum #3
	01.13.17	bld addendum #2
	01.06.17	delta 1 revision
	12.02.16	Issue for bld
	11.22.16	Issue for permit
	10.25.16	60% cd
	09.26.16	30% cd
	08.15.16	100% dd

REGISTERED LANDSCAPE ARCHITECT · BRUCE B. JETT · 3335 · Exp. 05/31/18 · Date 04/11/17 · STATE OF CALIFORNIA

1620 south main

milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 04/11/2017

PLAN CHECK RESPONSE

CONSTRUCTION DETAILS

L5.04

WATER CONSERVATION CONCEPT STATEMENT PLAN

LANDSCAPE PACKET # _____

CITY OF MILPITAS
WATER CONSERVATION CONCEPT STATEMENT

Project Name: SOUTH MAIN SENIOR LIFESTYLES

Project Address/Location:	Water Meter Serial Number (Provide existing or later with certificate of completion):
1620 SOUTH MAIN STREET, MILPITAS CA 95035	

Landscape Architect/Irrigation Designer - Separate Water Conservation Concept Statements shall be submitted for each irrigation meter.

Included in this project submittal package are (Check (4) to indicate completion):

☐ total area 15,808 square feet

☐ 1. Maximum Applied Water Allowance (MAWA):
- New/Rehabilitated Landscapes 244,469 Gallons/year
- •• Existing Landscapes, if applicable – Gallons/year
- TOTAL MAWA 244,469 Gallons/year

☐ 2. Estimated Applied Water Use (EAWU):
- New/Rehabilitated Landscapes 138,105 Gallons/year
- •• Existing Landscapes, if applicable – Gallons/year
- TOTAL EAWU 138,105 Gallons/year

☐ 2a. Estimated Amount of Water Expected from Effective Precipitation •: 0 Gallons/year

☐ 3. Estimated Total Water Use (ETWU):
- New/Rehabilitated Landscapes 174,591 Gallons/year
- •• Existing Landscapes, if applicable – Gallons/year
- TOTAL ETWU 174,591 Gallons/year

NOTES: • If the design assumes that a part of the Estimated Total Water Use will be provided by precipitation, the Effective Precipitation Disclosure Statement in VIII-5-5.00 shall be completed and submitted. The Estimated Amount of Water Expected from Effective Precipitation shall not exceed 25 percent of the local annual mean precipitation (average rainfall).

•• To determine gallons/year for existing landscaping, contact the Public Works Department, Land Development Engineering Section. This value shall be the same in items 1, 2, and 3 above.

☐ 4.	Landscape Design Plan	Sheet L1.01, L1.02, L1.03
☐ 5.	Irrigation Design Plan	Sheet L6.02, L6.03, L6.04
☐ 6.	Irrigation Schedule	Sheet L6.00
☐ 7.	Maintenance Schedule	Sheet L6.01
☐ 8.	Landscape Irrigation Audit Schedule	Sheet L6.01
☐ 9.	Grading Design Plan	Sheet C6
☐ 10.	Soil Specification	Sheet L0.01

Description of Project: Briefly describe the planning and design actions that are intended to achieve conservation and efficiency in water use.

PLANTING DESIGN USING LOW WATER USE AND NATIVE PLANTS TO ADOPT THE ENVIRONMENT AND MINIMIZE USE OF WATER. THE IRRIGATION SYSTEM DESIGNED USING THE LATEST TECHNOLOGY IN WATER CONSERVATION, HIGH EFFICIENCY, AND MAXIMIZING WATER CONSERVATION THROUGH SMART WEATHER-BASED IRRIGATION CONTROLLER IMPLEMENTING BEST MANAGEMENT PRACTICES.

Use of drought tolerant plant species, drought tolerant turf species and mulch.
Irrigation was zoned for plant type and exposure.

Prepared by: JETT LANDSCAPE ARCHITECTURE + DESIGN Date: 03/17/2017

IRRIGATION MAINTENANCE SCHEDULE: (SEE NOTES ON SHEET L6.01)

1. LANDSCAPES SHALL BE MAINTAINED TO ENSURE WATER EFFICIENCY. A REGULAR MAINTENANCE SCHEDULE SHALL INCLUDE BUT NOT BE LIMITED TO CHECKING, ADJUSTING, AND REPAIRING IRRIGATION EQUIPMENT; RESETTING REPLENISHING MULCH; FERTILIZING; PRUNING; AND WEEDING IN ALL LANDSCAPE AREAS.
2. WHENEVER POSSIBLE, REPAIR OF THE IRRIGATION EQUIPMENT SHALL BE DONE WITH THE ORIGINALLY SPECIFIED MATERIALS OR THEIR EQUIVALENTS.

IRRIGATION AUDIT SCHEDULE: (SEE NOTES ON SHEET L6.01)

1. AT A MINIMUM, AUDITS SHALL BE IN ACCORDANCE WITH THE STATE OF CALIFORNIA LANDSCAPE AUDITOR HANDBOOK.
2. AUDITS SHALL BE CONDUCTED BY A STATE CERTIFIED LANDSCAPE IRRIGATION AUDITOR AT LEAST ONCE EVERY FIVE YEARS AND SUBMITTED TO THE LOCAL WATER PURVEYOR.

SOIL SPECIFICATION / ANALYSIS:

SEE PLANTING & SOIL PREPARATION NOTES AT SHEET L0.01.
SOIL ANALYSIS WILL PROVIDED FOR SUBSTANTIAL COMPLETION.

CERTIFICATE OF COMPLETION IS REQUIRED PRIOR TO OCCUPANCY.

EFFECTIVE PRECIPITATION DISCLOSURE STATEMENT

I certify that I have informed the project owner and developer that this project depends on _____ gallons of effective precipitation per year. This represents_____ percent of the local mean precipitation of _____ inches per year.

I have based my assumptions about the amount of precipitation that is effective upon:

_____

_____

_____

_____

_____

_____

I certify that I have informed the project owner and developer that in times of drought, there may not be enough water available to keep the entire landscape alive.

_____ _____
Licensed or Certified Landscape Professional Date

I certify that I have been informed that in times of drought, there may not be enough water available to keep the entire landscape alive.

_____ _____
Owner/Developer Date

CITY OF MILPITAS - WATER EFFICIENT LANDSCAPES
CERTIFICATE OF SUBSTANTIAL COMPLETION

Project Name: SOUTH MAIN SENIOR LIFESTYLES

Project Address/Location:	** Water Meter Register # (Enter When Meter Is Set):	Bldg. Permit # (if applicable):
1620 SOUTH MAIN ST, MILPITAS CA 95035		

Preliminary Project Documentation Submitted: (Check (4) to indicate completion):

☐ total area _____ square feet

☐ 1. Total Maximum Applied Water Allowance (MAWA): _____ Gallons/year
☐ 2. Total Estimated Applied Water Use (EAWU): _____ Gallons/year
☐ 2a. Estimated Amount of Water Expected from Effective Precipitation: _____ Gallons/year
☐ 3. Total Estimated Total Water Use (ETWU): _____ Gallons/year

NOTE: * If the design assumes that a part of the Estimated Total Water Use will be provided by precipitation, the Effective Precipitation Disclosure Statement in VIII-5-5 shall be completed and submitted. The Estimated Amount of Water Expected from Effective Precipitation shall not exceed 25 percent of the local annual mean precipitation (average rainfall).

☐ 4. Landscape Design Plan
☐ 5. Irrigation Design Plan
☐ 6. Irrigation Schedule
☐ 7. Maintenance Schedule
☐ 8. Landscape Irrigation Audit Schedule
☐ 9. Grading Design Plan
☐ 10. Soil Analysis

Post-Installation Inspection: (Check (4) to indicate completion):

☐ A. Plants installed as specified
☐ B. Irrigation system installed as designed
- ☐ dual distribution system for recycled water
- ☐ minimal runoff or overspray

☐ C. Landscape Irrigation Audit performed

Project submittal package and a copy of this certification has been provided to property owner/manager and local water agency.
Comments:

I/we certify that work has been installed in accordance with the contract documents.

Contractor

è Signature Date State License Number

I/we certify that based upon periodic site observations, the work has been substantially completed in accordance with the Water Efficient Landscape Ordinance and that the landscape planting and irrigation conform with the approved plans and specifications.

Landscape Architect, Irrigation Designer or Licensed or Certified Professional in Horticulture or in a field related to Horticulture.

è Signature Date State License Number

I/we certify that I/we have received all of the contract documents and that it is our responsibility to see that the project is maintained in accordance with the contract documents.

Owner

è Signature Date

è Must sign in order for City to accept certificate.
**** Must fill: Inspector & contractor to verify register #, this must be done before occupancy**

IRRIGATION SCHEDULE

STATION/ HYDROZONE	PRECIP	OPERATE PRESSURE (MIN PSI)	JULY RUN TIME (MIN/CYC)	JULY CYCLE /DAY	JULY # OF CYC /WEEK	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	ANNU TOTAL (GAL)	ANNU TOTAL (CU FT)
1	0	20	5	2	4	520.8	624.9	1076.3	1423.5	2013.7	2013.7	2256.7	2048.4	1805.4	1145.7	624.9	347.2	15901.2	2125.7
2	0	20	5	2	4	64.6	77.5	133.5	176.6	249.8	249.8	280.0	254.1	224.0	142.1	77.5	43.1	1972.6	263.7
3	0	20	5	2	4	41.8	50.1	86.3	114.2	161.5	161.5	181.0	164.3	144.8	91.9	50.1	27.8	1275.3	170.5
4	0	20	5	2	4	9.2	11.1	19.1	25.2	35.7	35.7	40.0	36.3	32.0	20.3	11.1	6.2	281.9	37.7
5	0	20	5	2	4	53.5	64.2	110.6	146.3	207.0	207.0	232.0	210.6	185.6	117.8	64.2	35.7	1634.5	218.5
6	0	20	5	2	4	282.0	338.4	582.7	770.7	1090.3	1090.3	1221.8	1109.1	977.5	620.3	338.4	188.0	8609.5	1150.9
7	0	20	5	2	4	55.4	66.5	114.4	151.4	214.1	214.1	240.0	217.8	192.0	121.8	66.5	36.9	1690.9	226.0
8	0	20	5	2	4	5.5	6.6	11.4	15.1	21.4	21.4	24.0	21.8	19.2	12.2	6.6	3.7	168.9	22.6
9	0	20	5	2	4	209.7	251.7	433.5	573.3	811.0	811.0	908.9	825.0	727.1	461.4	251.7	139.8	6404.1	856.1
10	0	20	5	2	4	1.8	2.2	3.8	5.0	7.1	7.1	8.0	7.3	6.4	4.1	2.2	1.2	56.2	7.5
11	0	20	5	2	4	0.9	1.1	1.9	2.5	3.6	3.6	4.0	3.6	3.2	2.0	1.1	0.6	28.1	3.8
12	0	20	5	2	4	29.3	35.2	60.6	80.1	113.3	113.3	127.0	115.3	101.6	64.5	35.2	19.5	894.9	119.6
13	0	20	5	2	4	5.8	6.9	11.9	15.8	22.3	22.3	25.0	22.7	20.0	12.7	6.9	3.8	176.1	23.5
14	0	20	5	2	4	3.7	4.4	7.6	10.1	14.3	14.3	16.0	14.5	12.8	8.1	4.4	2.5	112.7	15.1
15	0	20	5	2	4	67.8	81.4	140.2	185.4	292.3	262.3	294.0	266.8	235.2	149.2	81.4	45.2	2101.2	280.9
16	0	20	5	2	4	52.4	62.9	108.2	143.2	202.5	202.5	227.0	206.0	181.6	115.2	62.9	34.9	1599.3	213.8
17	0	20	5	2	4	3.7	4.4	7.6	10.1	14.3	14.3	16.0	14.5	12.8	8.1	4.4	2.5	112.7	15.1
18	0	20	5	2	4	27.9	33.5	57.7	76.3	108.0	108.0	121.0	109.8	96.8	61.4	33.5	18.6	852.5	114.0
19	0	20	5	2	4	5.2	6.2	10.7	14.2	20.1	20.1	22.5	20.4	18.0	11.4	6.2	3.5	158.5	21.2
20	0	20	5	2	4	67.8	81.4	140.2	185.4	262.3	262.3	294.0	266.8	235.2	149.2	81.4	45.2	2071.2	276.9
21	0	20	5	2	4	46.1	55.4	95.4	126.1	178.4	178.4	200.0	181.5	160.0	101.5	55.4	30.8	1409.0	188.4
22	0	20	5	2	4	3.7	4.4	7.6	10.1	14.3	14.3	16.0	14.5	12.8	8.1	4.4	2.5	112.7	15.1
23	0	20	5	2	4	11.5	13.8	23.8	31.5	44.6	44.6	50.0	45.4	40.0	25.4	13.8	7.7	352.1	47.1
24	0	20	5	2	4	268.2	321.9	554.4	733.2	1037.2	1037.2	1162.4	1055.1	929.9	590.1	329.1	178.8	8197.5	1095.8
25	0	20	5	2	4	2.3	2.8	4.8	6.3	8.9	8.9	10.0	9.1	8.0	5.1	2.8	1.5	70.5	9.4
26	0	20	5	2	4	14.8	17.7	30.5	40.4	57.1	57.1	64.0	58.1	51.2	32.5	17.7	9.8	450.9	60.3
27	0	20	5	2	4	32.8	39.3	67.7	89.6	126.7	126.7	142.0	128.9	113.6	72.1	39.3	21.8	1000.5	133.7
28	0	20	5	2	4	165.2	198.3	341.4	451.6	638.8	638.8	715.9	649.8	572.7	363.5	198.3	110.1	5044.4	674.3
29	0	20	5	2	4	4.6	5.5	9.5	12.6	17.8	17.8	20.0	18.2	16.0	10.2	5.5	3.1	140.8	18.8
30	0	20	5	2	4	4.6	5.5	9.5	12.6	17.8	17.8	20.0	18.2	16.0	10.2	5.5	3.1	140.8	18.8
31	0	20	5	2	4	21.9	26.3	45.3	59.9	84.8	84.8	95.0	86.2	76.0	48.2	26.3	14.6	669.3	89.5
32	0	20	5	2	4	18.7	22.4	38.6	51.1	72.3	72.3	81.0	73.5	64.8	41.1	22.4	12.5	570.7	76.3
33	0	20	5	2	4	72.5	86.9	149.7	198.0	280.2	280.2	314.0	285.0	251.2	159.4	86.9	48.3	2212.3	295.7
34	0	20	5	2	4	119.4	143.3	246.8	326.4	461.7	461.7	517.4	469.7	413.9	262.7	143.3	79.6	3645.9	487.4
35	0	20	5	2	4	4.6	5.5	9.5	12.6	17.8	17.8	20.0	18.2	16.0	10.2	5.5	3.1	140.8	18.8
36	0	20	5	2	4	10.2	12.2	21.0	27.8	39.3	39.3	44.0	39.9	35.2	22.3	12.2	6.8	310.2	41.5
37	0	20	5	2	4	83.1	99.7	171.7	227.0	321.2	321.2	360.0	326.7	288.0	182.7	99.7	55.4	2536.4	339.1
38	0	20	5	2	4	5.5	6.6	11.4	15.1	21.4	21.4	24.0	21.8	19.2	12.2	6.6	3.7	168.9	22.6
39	0	20	5	2	4	668.0	801.6	1380.5	1825.9	2582.9	2582.9	2894.6	2627.4	2315.7	1469.6	801.6	445.3	20396.0	2726.6
40	0	20	5	2	4	218.0	261.7	450.6	596.0	843.1	843.1	944.9	857.7	755.9	479.7	261.7	145.4	6657.8	890.0
41	0	20	5	2	4	92.3	110.8	190.7	252.3	356.9	356.9	400.0	363.0	320.0	203.1	110.8	61.5	2818.3	376.8
42	0	20	5	2	4	64.8	77.8	134.0	177.2	250.7	250.7	281.0	255.0	224.8	142.6	77.8	43.2	1979.6	264.6
43	0	20	5	2	4	153.0	183.6	316.2	418.1	591.5	591.5	622.9	601.7	530.3	336.6	183.6	102.0	4631.0	619.1
44	0	20	5	2	4	18.5	22.2	38.1	50.5	71.4	71.4	80.0	72.6	64.0	40.6	22.2	12.3	563.8	75.4
45	0	20	5	2	4	2.3	2.8	4.8	6.3	8.9	8.9	10.0	9.1	8.0	5.1	2.8	1.5	70.5	9.4
46	0	20	5	2	4	97.5	117.0	201.5	266.5	377.0	377.0	422.4	383.5	338.0	214.5	117.0	85.0	2996.9	400.6
47	0	20	5	2	4	111.9	134.3	231.3	305.9	432.7	432.7	484.9	440.2	388.0	246.2	134.3	74.6	3417.0	456.8
48	0	20	5	2	4	13.8	16.6	28.6	37.8	53.5	53.5	60.0	54.5	48.0	30.5	16.6	9.2	422.6	56.5
49	0	20	5	2	4	101.1	121.3	208.9	276.2	390.8	390.8	437.9	397.5	350.4	222.3	121.3	67.4	3085.9	412.5
50	0	20	5	2	4	578.5	694.2	1195.5	1581.1	2236.7	2236.7	2506.7	2275.3	2005.4	1272.6	694.2	385.6	17662.5	2361.1
51	0	20	5	2	4	4.2	5.0	8.6	11.4	16.1	16.1	18.0	16.3	14.4	9.1	5.0	2.8	127.0	17.0
TOTAL (GAL)						4522.4	5427.0	9346.1	12361.5	17517.1	17487.1	19557.9	17788.7	15678.6	9949.4	5434.2	3034.9	138104.9	
TOTAL (CU FT)						604.6	725.5	1249.4	1652.5	2341.7	2337.7	2614.5	2378.0	2095.9	1330.0	726.4	405.7		18462.0

Landscape Package No.

Project Title

Record Drawings
To be completed with submission of Record Drawings

_____ _____
Signature Date
(Landscape Architect/Contractor)

License No. ____ Exp. ____ _____

Revisions

Num.	Date	By	Description	City Engr.	Date

CITY OF MILPITAS ENGINEERING DIVISION

Approved: _____
Engineering

Date: _____

Project No.
Drawing No.
E.P. No.
Sheet ____ of ____

brick.
ARCHITECT
brick.
1266 66th street, suite 1
emeryville, ca 94608
510.516.0167
www.brick-lnc.com

CLIENT
milpitas phase 1, LP

JETT
LANDSCAPE ARCHITECTURE + DESIGN
CRLA #3335 · 2 Theatre Square #218 · Orinda CA · 94563
925.254.5422 · www.jett.land

04.11.17 plan check response

rev	date	issue
	03.06.17	health dept. submittal
	01.17.17	bid addendum #3
	01.13.17	bid addendum #2
	01.06.17	delta 1 revision
	12.02.16	issue for bid
	11.22.16	issue for permit
	10.25.16	60% cd
	09.26.16	30% cd
	08.15.16	100% dd

REGISTERED LANDSCAPE ARCHITECT
BRUCE B. JETT
3335
Exp. 05/31/18
Date 04/11/17
STATE OF CALIFORNIA

1620 south main

milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 04/11/2017

PLAN CHECK RESPONSE

WATER CONSERVATION CONCEPT STATEMENT

L6.00

GENERAL IRRIGATION NOTES:

IRRIGATION SYSTEM TO BE FULLY AUTOMATIC WEATHER-BASED SYSTEM USING LOW FLOW DRIP AND BUBBLER DISTRIBUTION. NEW IRRIGATION IN ACCORDANCE WITH REGULATIONS OF THE CITY OF MILPITAS, SCVWD AND THE STATE WATER ORDINANCE.

IRRIGATION NOTES:

1. THESE IRRIGATION DRAWINGS ARE DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. ALL PIPING, VALVES, AND OTHER IRRIGATION COMPONENTS MAY BE SHOWN WITHIN PAVED AREAS FOR GRAPHIC CLARITY ONLY AND ARE TO BE INSTALLED WITHIN PLANTING AREAS. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, CONDUIT, AND OTHER ITEMS WHICH MAY BE REQUIRED. IN THE EVENT OF FIELD DISCREPANCY WITH CONTRACT DOCUMENTS, PLAN THE INSTALLATION WORK ACCORDINGLY BY NOTIFICATION AND APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE AND ACCORDING TO THE CONTRACT SPECIFICATIONS. NOTIFY AND COORDINATE IRRIGATION CONTRACT WORK WITH APPLICABLE CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE, CONDUIT OR SLEEVES THROUGH OR UNDER WALL, ROADWAYS, PAVING AND STRUCTURES BEFORE CONSTRUCTION. IN THE EVENT THESE NOTIFICATIONS ARE NOT PERFORMED, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR REQUIRED REVISIONS.
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, STANDARDS, AND REGULATIONS. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE NATIONAL ELECTRIC CODE; THE UNIFORM PLUMBING CODE, PUBLISHED BY THE WESTERN PLUMBING OFFICIALS ASSOCIATION; AND OTHER STATE OR LOCAL LAWS OR REGULATIONS. NOTHING IN THESE DRAWINGS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR REGULATIONS. THE CONTRACTOR SHALL FURNISH WITHOUT ANY EXTRA CHARGE, ANY ADDITIONAL MATERIAL AND LABOR WHEN REQUIRED BY THE COMPLIANCE WITH THESE CODES AND REGULATIONS.
3. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF IRRIGATION SYSTEM WITH LAYOUT AND INSTALLATION OF THE PLANT MATERIALS TO INSURE THAT THERE WILL BE COMPLETE AND UNIFORM IRRIGATION COVERAGE OF PLANTING IN ACCORDANCE WITH THESE DRAWINGS, AND CONTRACT DOCUMENTS. THE IRRIGATION LAYOUT SHALL BE CHECKED BY THE CONTRACTOR AND OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO CONSTRUCTION TO DETERMINE IF ANY CHANGES, DELETIONS, OR ADDITIONS ARE REQUIRED. IRRIGATION SYSTEM SHALL BE INSTALLED AND TESTED PRIOR TO INSTALLATION OF PLANT MATERIAL.
4. THE INTENT OF THIS IRRIGATION SYSTEM IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH.
5. IT IS THE RESPONSIBILITY OF THE MAINTENANCE CONTRACTOR AND/OR OWNER TO PROGRAM THE IRRIGATION CONTROLLER TO PROVIDE THE MINIMUM AMOUNT OF WATER NEEDED TO SUSTAIN GOOD PLANT HEALTH. THIS INCLUDES MAKING ADJUSTMENTS TO THE PROGRAM FOR SEASONAL WEATHER CHANGES, PLANT MATERIAL, WATER REQUIREMENTS, MOUNDS, SLOPES, SUN, SHADE AND WIND EXPOSURE.
6. IT IS THE RESPONSIBILITY OF A LICENSED ELECTRICAL CONTRACTOR TO PROVIDE 120 VOLT A.C. (2.5 AMP DEMAND PER CONTROLLER) ELECTRICAL SERVICE TO THE CONTROLLER LOCATION(S). IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO COORDINATE THE ELECTRICAL SERVICE STUB-OUT TO THE CONTROLLER(S). PROVIDE PROPER GROUNDING PER CONTROLLER MANUFACTURER'S INSTRUCTIONS AND IN ACCORDANCE WITH LOCAL CODES.
7. PROVIDE EACH IRRIGATION CONTROLLER WITH ITS OWN INDEPENDENT LOW VOLTAGE COMMON GROUND WIRE.
8. SCHEDULE A MEETING WHICH INCLUDES REPRESENTATIVES OF THE IRRIGATION CONTROLLER MANUFACTURER, THE MAINTENANCE CONTRACTOR, THE OWNER AND THE IRRIGATION CONTRACTOR AT THE SITE FOR INSTRUCTION ON THE PROPER PROGRAMMING AND OPERATION OF THE IRRIGATION CONTROLLER.
9. INSTALL 2-WIRE CABLE ALONG THE MAIN LINE. CONTACT CONTROLLER REPRESENTATIVE FOR A PRE-CONSTRUCTION MEETING.
10. IRRIGATION CONTROL WIRES: SOLID COPPER WITH U.L. APPROVAL FOR DIRECT BURIAL IN GROUND. SIZE #14AWG WIRE WITH A JACKETED 2-CONDUCTOR. PREFERRED WIRE MAKE AND MODEL IS THE PAIGE IRRIGATION WIRE, P7072D (RAIN BIRD). ALL SPLICING SHALL BE MADE WITH 3-M DBR/Y-6 WATERPROOF SPLICE KIT.
11. DECODER GROUNDING SHALL BE PROVIDED EVERY 500 FEET OR EVERY 8 DECODERS, WHICHEVER IS SMALLER, OR AT THE END OF THE 2 WIRE PATH. GROUND WITH A 8' GROUNDING ROD. INCLUDE A SURGE ARRESTOR AT EACH GROUNDING LOCATION. A SPLIT BOLT CONNECTION TO BE USED TO CONNECT THE SURGE DEVICE TO THE GROUND WIRE WITH A DBR/Y-6 WATERPROOF CONNECTOR.
12. SPLICING OF JACKETED 2-WIRE IS PERMITTED IN VALVE BOXES ONLY. LEAVE A 36" LONG COIL OF WIRE AT EACH SPLICE AND A 36" LONG EXPANSION LOOP EVERY 100 FEET ALONG WIRE RUN.
13. INSTALL GREEN PLASTIC VALVE BOXES WITH BOLT DOWN, NON HINGED COVER MARKED "IRRIGATION". BOX BODY SHALL HAVE KNOCK OUTS. ACCEPTABLE VALVE BOX MANUFACTURER'S INCLUDE NDS, CARSON OR APPROVED EQUAL, USE CONCRETE BOXES IN DG & PAVING AREAS AS SHOWN IN THE IRRIGATION DETAILS.
14. INSTALL REMOTE CONTROL VALVE BOXES 12" FROM WALK, CURB, BUILDING OR LANDSCAPE FEATURE. AT MULTIPLE VALVE BOX GROUPS, INSTALL EACH BOX AN EQUAL DISTANCE FROM THE WALK, CURB, BUILDING OR LANDSCAPE FEATURE AND PROVIDE 12" BETWEEN BOX TOPS. ALIGN THE SHORT SIDE OF RECTANGULAR VALVE BOXES PARALLEL TO WALK, CURB, BUILDING OR LANDSCAPE FEATURE.
15. VALVE LOCATIONS SHOWN ARE DIAGRAMMATIC. INSTALL IN GROUND COVER/SHRUB AREAS.
16. THE CONTRACTOR SHALL LABEL CONTROL LINE WIRE AT EACH REMOTE CONTROL VALVE WITH A 2 1/4" X 2 3/4" POLYURETHANE I.D. TAG, INDICATING IDENTIFICATION NUMBER OF VALVE (CONTROLLER AND STATION NUMBER). ATTACH LABEL TO CONTROL WIRE. THE CONTRACTOR SHALL PERMANENTLY STAMP ALL VALVE BOX LIDS WITH APPROPRIATE IDENTIFICATION AS NOTED IN CONSTRUCTION DETAILS.
17. FOR 2 1/2" AND LARGER MAIN LINE PIPING INSIDE SLEEVES USE 1120-315 PSI PVC PLASTIC PIPE WITH SCHEDULE 40 PVC COUPLINGS. DO NOT INSTALL GASKETED COUPLINGS INSIDE SLEEVES
18. FLUSH AND ADJUST IRRIGATION OUTLETS AND NOZZLES FOR OPTIMUM PERFORMANCE AND TO PREVENT OVER SPRAY ONTO WALKS, ROADWAYS, AND/OR BUILDINGS. SELECT THE BEST DEGREE OF THE ARC AND RADIUS TO FIT THE EXISTING SITE CONDITIONS AND THROTTLE THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH CONTROL ZONE.
19. OVERHEAD IRRIGATION SHALL BE RESTRICTED BETWEEN THE HOURS OF 10PM AND 6AM, SEE ALLOWABLE TIME PER LOCAL WATER PURVEYOR.
20. SET SPRINKLER HEADS PERPENDICULAR TO FINISH GRADE.
21. LOCATE BUBBLERS ON UPHILL SIDE OF PLANT OR TREE.
22. INSTALL A HUNTER HCV SERIES, KBI CV SERIES, OR APPROVED EQUAL SPRING LOADED CHECK VALVE IN SPRINKLER RISER ASSEMBLIES WHERE LOW OUTLET DRAINAGE WILL CAUSE EROSION AND/OR EXCESS WATER.
23. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, USE CAUTION TO AVOID INJURY TO TREES AND TREE ROOTS. EXCAVATE BY HAND IN AREAS WHERE TWO (2) INCH AND LARGER ROOTS OCCUR. BACK FILL TRENCHES ADJACENT TO TREE WITHIN TWENTY-FOUR (24) HOURS. WHERE THIS IS NOT POSSIBLE, SHADE THE SIDE OF THE TRENCH ADJACENT TO THE TREE WITH WET BURLAP OR CANVAS.
24. NOTIFY LOCAL JURISDICTIONS FOR INSPECTION AND TESTING OF INSTALLED BACKFLOW PREVENTION DEVICE.
25. THE SPRINKLER SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN ON THE IRRIGATION DRAWINGS. VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.
26. PIPE SIZING SHOWN ON THE DRAWINGS IS TYPICAL. AS CHANGES IN LAYOUT OCCUR DURING STAKING AND CONSTRUCTION THE SIZE MAY NEED TO BE ADJUSTED ACCORDINGLY.
27. PIPE THREAD SEALANT COMPOUND SHALL BE RECTOR SEAL #5.
28. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MINOR CHANGES IN THE IRRIGATION LAYOUT DUE TO OBSTRUCTIONS NOT SHOWN ON THE IRRIGATION DRAWINGS SUCH AS LIGHTS, FIRE HYDRANTS, SIGNS, ELECTRICAL ENCLOSURES, ETC.
29. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR CHANGES IN THE IRRIGATION LAYOUT AND VALVE ZONING DUE TO VARIATIONS IN THE EXISTING SITE CONDITIONS SUCH AS EXPOSURE FROM BUILDINGS, TRELLISES, TREES, ETC., AS WELL AS SLOPE AND SOIL CONDITIONS. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT OF THE PROPOSED CHANGES PRIOR TO INSTALLATION FOR APPROVAL.
30. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THE IRRIGATION SYSTEM DESIGN IF THE PLANTING DESIGN CHANGES FROM THE ORIGINAL PLAN AND NEEDS TO ADAPT TO THE NEW PLANTING DESIGN. THE LANDSCAPE CONTRACTOR NEEDS TO NOTIFY THE LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT OF PROPOSED CHANGES PRIOR TO INSTALLATION FOR APPROVAL.
31. WHEN WORK OF THIS SECTION HAS BEEN COMPLETED AND SUCH OTHER TIMES AS MAY BE DIRECTED, REMOVE ALL TRASH, DEBRIS, SURPLUS MATERIALS AND EQUIPMENT FROM SITE.
32. CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLEMENTAL HAND WATERING OF ALL PLANT MATERIAL WITHIN DRIPLINE AREAS UNTIL THE PLANTS ARE SUFFICIENTLY ESTABLISHED.
33. VERIFY LOCATIONS OF ALL IRRIGATION COMPONENTS INSTALLED WITHIN A VALVE BOX WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. DO NOT INSTALL UNTIL LANDSCAPE ARCHITECT PROVIDES ACCEPTABLE LOCATIONS.

SUBSURFACE DRIP IRRIGATION NOTES:

1. PROVIDE TEMPORARY SUPPLEMENTAL OVERHEAD IRRIGATION TO ESTABLISH PLANTS.
2. HOLD DRIPPERLINES 12" OFF FACE OF BUILDING, 6" OFF PAVING @ SHRUBS, 2" OFF PAVING @ SOD, TURF & GROUNDCOVER TYP.
3. SPACE DRIPPERLINES EQUALLY WITHIN EACH ZONE UNLESS OTHERWISE NOTED (12" OR 18" O.C. MAX PER LEGEND)
4. FOR SLOPES GREATER THAN 10:1, MODIFY DRIPPERLINE SPACING ON THE BOTTOM 1/3 OF THE SLOPE TO BE 25% GREATER AND OMIT THE DRIPPERLINE AT THE BOTTOM OF SLOPE.
5. DRIP SYSTEMS WITH 12" & 18" EMITTER SPACING HAVE DIFFERENT PRECIPITATION RATES. INDEPENDENTLY TEST AND SET RUN TIMES FOR THESE TWO CONDITIONS.
6. INSTALL AVRV(S) AT HIGH POINT(S) OF EACH PLANTING AREA. AVRV'S ARE SHOWN TO INDICATE INTENT- LOCATE AS REQUIRED BASED ON ACTUAL GRADES OF THE SITE. LOCATE (1) AVRV PER 500' OF DRIPPERLINE TUBING, TYP. SEE DETAIL

IRRIGATION SYSTEM MAINTENANCE

1. SYSTEM OBSERVATION: THE CONTRACTOR SHALL VISUALLY CHECK ALL SYSTEMS FOR PROPER OPERATION ON A WEEKLY BASIS AND MAKE ALL NECESSARY REPAIRS. ALL EQUIPMENT SHALL BE ADJUSTED AS NECESSARY FOR PROPER COVERAGE AND FUNCTION.
2. ESTABLISHMENT IRRIGATION SCHEDULING: FOR THE FIRST 60-DAYS OF PLANTING ESTABLISHMENT AND MAINTENANCE, PROGRAM CONTROLLER IN A PLANTING ESTABLISHMENT IRRIGATION MODE. SCHEDULE IRRIGATION TO ESTABLISH PLANTINGS PER THE SPECIFICATIONS.
3. CLIMATOLOGICALLY CONTROLLED IRRIGATION SCHEDULING: FOR THE LAST 60-DAYS OF PLANTING ESTABLISHMENT AND MAINTENANCE, PROGRAM CONTROLLER TO RUN AUTOMATICALLY, SITE-SPECIFIC CLIMATOLOGICAL EVAPOTRANSPIRATION (ET) DATA. OPTIMIZE AUTOMATIC SCHEDULE AS REQUIRED FOR PLANT MATERIALS, SUN, ASPECT, SOLAR REFLECTANCE & HEAT ISLANDS, LOCALITY, SLOPE, AND THE INSTALLED IRRIGATION SYSTEM. CHECK SYSTEM FOR PROPER FUNCTION AND ADJUST AUTOMATIC SCHEDULE WEEKLY TO PROVIDE OPTIMAL CONDITIONS FOR SUSTAINING HEALTHY PLANTING.
4. COORDINATE LANDSCAPE MAINTENANCE WITH OPERATOR: PERFORM A FULL INSTRUCTION SESSION IN THE PRESENCE OF THE DESIGNATED MAINTENANCE PERSONNEL DEMONSTRATING THE IRRIGATION CONTROLLER SYSTEM, PROGRAM ADJUSTMENT AND OVER-RIDES, SYSTEM TESTING, TROUBLE-SHOOTING, ETC. INCLUDE INSTRUCTIONS ON HOW TO TURN OFF SYSTEM IN CASE OF EMERGENCY.
5. REPAIRS: DURING THE PLANT ESTABLISHMENT & MAINTENANCE PERIOD, ALL REPAIRS MADE TO THE IRRIGATION SYSTEM SHALL BE AT THE CONTRACTOR'S EXPENSE. ALL REPAIRS SHALL BE MADE WITHIN TWENTY-FOUR (24) HOURS.
6. SYSTEM CERTIFICATION: OBTAIN A LETTER OF CERTIFICATION FROM CONTROLLER MANUFACTURER'S REPRESENTATIVE CERTIFYING THAT THE CONTROLLER IS PROPERLY PROGRAMMED AND IN WORKING ORDER BEFORE THE END OF THE MAINTENANCE PERIOD.

LANDSCAPE IRRIGATION AUDIT

SUBMIT AN IRRIGATION AUDIT REPORT CONDUCTED BY A CERTIFIED LANDSCAPE IRRIGATION AUDITOR (CLIA) WITH THE CERTIFICATE OF COMPLETION THAT INCLUDE, BUT NOT LIMITED TO: INSPECTION, SYSTEM TUNE-UP, SYSTEM TEST WITH DISTRIBUTION UNIFORMITY, REPORTING OVERSPRAY OR RUN OFF THAT CAUSES OVERLAND FLOW, AND PREPARATION OF AN IRRIGATION SCHEDULE PRIOR TO THE FINAL ACCEPTANCE. COORDINATE IRRIGATION AUDIT WITH LANDSCAPE OPERATOR / PERSONNEL: SCHEDULE AN IRRIGATION AUDIT ONCE EVERY 5 YEARS AT THE OWNER'S COST.

HYDROZONE INFORMATION TABLE

REFERENCE ANNUAL ET_0 FOR:	SAN JOSE (NEAREST CITY; WUCOLS IV)	45.3

ET ADJUSTMENT FACTOR	.55	ET ADJ FACTOR PER MWELO & CALGREEN: 0.80= EXISTING NON-REHABILITATED LANDSCAPE, 0.65= SCHOOL 0.55= RESIDENTIAL, 0.45= NON-RESIDENTIAL	SLA ADDITIONAL WATER ALLOWANCE (1.0-ETAF)	0.45

HYDROZONE	WUCOLS IV PLANT FACTOR (PF)	IRR METHOD DRIP: 0.81 BUBB.: 0.81	IRRIGATION EFFICIENCY (IE)	$ETAF_Z$ (PF/IE)	LANDSCAPE AREA (SQ FT)	$ETAF_Z$ X AREA	ESTIMATED TOTAL WATER USE (ETWU)
1	.3	D	.81	0.37	2257	835.93	23477.82
2	.3	D	.81	0.37	280	103.70	2912.62
3	.3	D	.81	0.37	181	67.04	1882.80
4	.3	B	.81	0.37	40	14.81	416.09
5	.3	D	.81	0.37	232	85.93	2413.32
6	.3	D	.81	0.37	1222	452.59	12711.52
7	.3	D	.81	0.37	240	88.89	2496.53
8	.3	B	.81	0.37	24	8.89	249.65
9	.3	D	.81	0.37	909	336.67	9455.62
10	.3	B	.81	0.37	8	2.96	83.22
11	.3	B	.81	0.37	4	1.48	41.61
12	.3	D	.81	0.37	127	47.04	1321.08
13	.3	D	.81	0.37	25	9.26	260.06
14	.3	D	.81	0.37	16	5.93	166.44
15	.3	D	.81	0.37	294	108.89	3058.25
16	.3	D	.81	0.37	227	84.07	2361.30
17	.3	B	.81	0.37	16	5.93	166.44
18	.3	D	.81	0.37	121	44.81	1258.67
19	.6	D	.81	0.74	9	6.67	187.24
20	.3	D	.81	0.37	294	108.89	3058.25
21	.3	D	.81	0.37	200	74.07	2080.44
22	.3	B	.81	0.37	16	5.93	166.44
23	.3	D	.81	0.37	50	18.52	520.11
24	.6	D	.81	0.74	465	344.44	9674.07
25	.6	B	.81	0.74	4	2.96	83.22
26	.3	D	.81	0.37	64	23.70	665.74
27	.3	D	.81	0.37	142	52.59	1477.12
28	.3	D	.81	0.37	716	265.19	7447.99
29	.3	B	.81	0.37	8	2.96	83.22
30	.6	B	.81	0.74	8	5.93	166.44
31	.3	D	.81	0.37	95	35.19	988.21
32	.9	B	.81	1.11	18	20.00	561.72
33	.3	D	.81	0.37	314	116.30	3266.30
34	.6	D	.81	0.74	207	153.33	4306.52
35	.3	B	.81	0.37	8	2.96	83.22
36	.3	D	.81	0.37	44	16.30	457.70
37	.3	D	.81	0.37	360	133.33	3744.80
38	.3	B	.81	0.37	24	8.89	249.65
39	.3	D	.81	0.37	1158	428.89	12045.77
40	.3	D	.81	0.37	378	140.00	3932.04
41	.3	D	.81	0.37	400	148.15	4160.89
42	.3	D	.81	0.37	281	104.07	2923.02
43	.3	D	.81	0.37	663	245.56	6896.67
44	.6	B	.81	0.74	32	23.70	665.74
45	.6	B	.81	0.74	4	2.96	83.22
46	.6	D	.81	0.74	169	125.19	3515.95
47	.3	D	.81	0.37	485	179.63	5045.08
48	.6	B	.81	0.74	24	17.78	499.31
49	.3	D	.81	0.37	438	162.22	4556.17
50	.3	D	.81	0.37	2507	928.52	26078.37
51	.3	B	.81	0.37	18	6.67	187.24
				TOTAL	15826.00	6216.30	174,590.90
SPECIAL LANDSCAPE AREAS							
--				1	0	0.00	0.00
--				0	0	0.00	0.00
				TOTAL	0	0.00	0.00
	TOTAL LANDSCAPE AREA (LA + SLA)				15,826.00		

TOTAL ETWU	TOTAL ETWU ALL AREAS (SLA AND REGULAR LA)	TOTAL ETWU	174,590.90
MAWA	(ANNUAL ETO)(0.62 CONVERSION FACTOR) [(ET ADJUSTMENT FACTOR)(TOTAL LANDSCAPE AREA) + (1-ETAF)*SLA))]	MAWA	244,468.97

AVERAGE ETAF	SUM($ETAF_Z$ X AREA) / TOTAL AREA (AVERAGE ETAF AS DESIGNED, EXCLUSIVE OF SLA_S)	0.39
SITEWIDE ETAF	TOTAL ETAF X AREA / TOTAL LANDSCAPE AREA (INCLUDES SLA_S)	0.39

KEY	IRRIG METHOD	PLANT TYPE BASED ON WUCOLS	
B	BUBBLER	H = HIGH WATER USE	0.7 - 1.0
D	DRIP	M = MEDIUM WATER USE	0.4 - 0.6
		L = LOW WATER USE	0.0 - 0.3

* SPECIAL LANDSCAPE AREA (0.3)
- RECYCLED WATER
- EDIBLE PLANTS
- ACTIVE PLAY AREA
- SPORTS FIELDS
- GOLF COURSES

CONTROLLER "A" HYDROZONE INFORMATION TABLE

ANNUAL ETo BASED ON NEAREST CITY OF SAN JOSE

45.3

CONVERSION FACTOR

0.55

IRRIGATION EFFICIENCY

0.81

PRESSURE LOSS CALCULATION CHART

EXISTING IRRIGATION PRESSURE

IRRIGATION WATER PRESSURE & FLOW MEASURED ON SITE AT THE NEAREST FIRE HYDRANT:
STATIC PRESSURE 78 PSI, RESIDUAL PRESSURE 59 PSI
2.0" METER MAX FLOW ~30 GPM

ITEMS	PRESSURE LOSS (PSI)
METER	~5
BFP	~10
MV/FS	1.0
MAINLINE	2.4
VALVE	7.0
LATERALS	0.75
ELEVATION CHANGE	8.7
SUBTOTAL	34.85
FITTINGS (10%)	3.5
TOTAL PSI LOSS	38.35
TOTAL ENDING PRESSURE	20.65

IRRIGATION LEGEND

SYMBOL	MODEL NUMBER	MNFR	DESCRIPTION & NOTES
⊠	POINT OF CONNECTION		AT POINT OF CONNECTION, STATIC WATER PRESSURE IS 55 PSI; MAXIMUM FLOW IS 30 GPM
A	ESP-LXD-SM75 LXMMSS -STAINLESS STEEL CABINET ETC-LX -ET MANAGER SMART CARTRIDGE PBCLXD -PROGRAM BACKUP CARTRIDGE IQNCCEN -ETHERNET NETWORK CARTRIDGE IQADVCEDCD -IQ DESKTOP SOFTWARE DPU-210 -DECODER PROGRAM UNIT	RAINBIRD	2-WIRE 75 STATIONS DECODERS STAINLESS STEEL WALL MOUNT ET IRRIGATION CONTROLLER WITH REMOTE READY AND FLOW SENSOR BASED, COMPATIBLE WITH WEATHER SENSING SYSTEM, AND IQ PROGRAM TO AUTOMATICALLY ADJUST THE CONTROLLER'S PROGRAM BASED ON WEATHER STATION. COORDINATE INSTALLATION WITH RAINBIRD REPRESENTATIVE JIM WINEBARGER (760) 238-2118, JWINEBARGER@RAINBIRD.COM
	LIMAR-KIT	RAINBIRD	MAINTENANCE REMOTE (PROVIDE 2 MAINTENANCE REMOTE TO OWNER)
RS	RSDCES	RAINBIRD	RAIN SENSOR. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AS REQUIRED. LOCATE SO THAT SENSOR RECEIVES UNOBSTRUCTED RAINFALL, CLEAR OF IRRIGATION AND OTHER ARTIFICIAL WATER SOURCES.
BFP	SEE CIVIL DWG	--	REDUCED PRESSURE BACKFLOW PREVENTER WITH ENCLOSURE AND FROST BLANKET, SEE CIVIL DRAWING
— IWB —	MAXI-CABLE	RAINBIRD	14 AWG DECODER CABLE W/ BLUE JACKET, INSTALL PARALLEL TO MAINLINE W/ PVC SCHEDULE 40 ELECTRICAL CONDUIT UNDER PAVING OR THROUGH WALL, SIZE AS REQUIRED
	3MDBRY-6	3M	3AMP DBRY-600 WIRE CONNECTOR; MUST BE USED ON ALL 2 WIRE PATH CONNECTIONS IN PULL BOX
IC1	FD-101TURF	RAINBIRD	DECODERS: 101 = SINGLE STATION
IC2	FD-202TURF		202 = 2 STATION
IC4	FD-401TURF		401 = 4 STATION
SEN	SD-210TURF		SEN = SENSOR DECODER (FLOW SENSOR)
SP	LSP-1TURF	RAINBIRD	2-WIRE LINE SURGE PROTECTOR, INSTALL EVERY 500 FEET ALONG 2-WIRE PATH
G	GROUNDING ROD	--	EVERY 12TH DECODER OR 1,000 FOOT OF WIRE RUN MUST BE GROUNDED.
	P220-26-X-X SERIES RCV	TORO	REMOTE CONTROL ANGLE VALVE ASSEMBLY AND BOX. SIZE PER PLAN. TUNE VALVE FOR FLOWS FROM 1-5 GPM. INSTALL PER DETAIL
	LT-####-T LINE SIZE TYP (2" AND SMALLER)	KBI	LO-TORQUE™ SCH 80 PVC THREADED BALL VALVE SHUT-OFF OR ISOLATION VALVE, FOR LINES 2" AND SMALLER
	100-2SLLVC LK - PROVIDE (3) TOTAL 100-MHS - PROVIDE (3) TOTAL 100-SLK - PROVIDE (3) TOTAL	TORO	2-PIECE, 1" SINGLE-LUG RECYCLED WATER QUICK COUPLER VALVE W/ LOCKING COVER KEY FOR LOCKING COVER 1" NPT x 1" MHT HOSE SWIVEL SINGLE LUG KEY, 1" TOP PIPE THREAD OUTLET W/INTERNAL 3/4" NPT THREAD
PB	CARSON #1419 CHRISTY #N-9 (PAVING)	OLD CASTLE	PULL BOX
MV	2000 SERIES, 1-1/2" SIZE	GRISWOLD	NORMALLY OPEN MASTER VALVE (SEE DETAIL)
FS	FS100B SD210TURF DECODER	RAINBIRD	FLOW SENSOR WITH TWO-WIRE DECODER
	COPPER K	--	NON-PRESSURE LATERAL LINE, TYPE K COPPER: COPPER K LATERAL LINE ROUTED THROUGH SLAB, WALL, & UNDER PAVERS TO EACH PLANTER TERMINATED WITH WROT COPPER SOLDER JOINT FITTINGS TO BE INSTALLED BY PLUMBING CONTRACTOR. ANCHOR TO STRUCTURE AS REQUIRED AND IN ACCORDANCE WITH LOCAL CODES
	NON-PRESSURE LATERAL IRRIGATION PIPE INSIDE PLANTER PVC: SCH 40		PVC LATERAL IRRIGATION PIPE WITH SOLVENT WELD SCHEDULE 40 FITTINGS INSTALL BY LANDSCAPE CONTRACTOR. 3/4" MIN. PIPE SIZE,
	COPPER K	--	MAIN PRESSURE IRRIGATION PIPE, TYPE K COPPER COPPER K WITH WROT COPPER SOLDER JOINT FITTINGS TO BE INSTALLED BY PLUMBING CONTRACTOR. ANCHOR TO STRUCTURE AS REQUIRED AND IN ACCORDANCE WITH LOCAL CODES. MAIN LINE ROUTED THROUGH BUILDING TO EXTERIOR PLANTER TERMINATED WITH COPPER FEMALE ADAPTER. COPPER MAIN LINE ROUTED UNDER PAVERS AND IN PLANTER TO EACH VALVE TERMINATED WITH COPPER FEMALE ADAPTER. BY IRRIGATION CONTRACTOR TYPICAL.
	PVC: CLASS 315 SCHEDULE 40	--	MAIN PRESSURE IRRIGATION PIPE, PVC SIZE / MATERIAL 1"-1½" SCH 40 W/SOLVENT WELD SCH 40 FITTINGS 2"-3" CLASS 315 W SOLVENT WELD SCH 40 FITTINGS
	PVC: CLASS 315	--	SLEEVE. SIZE AS REQUIRED

SEE PLANTING PLAN FOR VALVE LOCATIONS TYP

VALVE BOX LAYOUT

TRENCHING DETAIL

¾" 1" 1¼" 1½" 2" — LATERAL SIZING
¾" 1" 1¼" 1½" 2" — MAINLINE SIZING
\# — STATION NUMBER
SIZE — VALVE SIZE
GPM — GALLONS PER MINUTE

PIPE SIZING

MAIN LINE PIPE SIZE	SCHEDULE 40 (GPM)	CLASS 315 (GPM)
1 1/2"	0-30	--
2"	--	30-50
2 1/2"	--	50-70
3"	--	70-100
4"	--	100-180

*1" MAIN LINE USED ONLY FOR QCV (SCH 40 TYP)

LATERAL LINE PIPE SIZE	SCHEDULE 40* (GPM)
3/4"	0-8
1"	8-12
1 1/4"	12-22
1 1/2"	22-30
2"	30-50
2 1/2"	50-70
3"	70-100

3/4" MINIMUM LATERAL PIPE, DO NOT USE 1/2"

BUBBLERS

SYMBOL	MODEL NUMBER	MNFR		DESCRIPTION & NOTES		
	570Z 4P-COM FB-200-ADJ-PC2.00	TORO	BLACK	ADJUSTABLE FLOW FULL-CIRCLE FLOOD BUBBLER ON 4" POP-UP. UP TO 2.0 GPM. SET FLOW AT 0.25 GPM, TYP	0.25	20
	DEEP WATERING BUBBLER: RZWS-10-25-CV, 10" AT SHRUBS OR SMALL TREE RZWS-18-25-CV, 18" AT TREES	HUNTER	--	0.25 GPM FLOOD BUBBLER AND DEEP WATERING TUBE ASSEMBLY WITH CHECK VALVE. INSTALL PER MANUFACTURER'S DIRECTIONS. AT DG AREAS, USE A TAN ZURN DRAIN CAP IN PLACE OF HUNTER STANDARD CAP	0.25	15-70

DRIP IRRIGATION

SYMBOL	MODEL NUMBER	MNFR	DESCRIPTION & NOTES
⊕	DZK-700-1-LF (FLOW BETWEEN 0.1 TO 7.9 GPM) DZK-700-1-MF (FLOW BETWEEN 8.0 TO 20 GPM)	TORO	700 ULTRAFLOW IN-LINE DRIP ZONE VALVE KITS WITH Y-FILTER, REMOTE CONTROL VALVE, ISOLATION BALL VALVE & MED/LOW FLOW PRESSURE REGULATOR & EFFLUENT VALVE ID TAG
	AS DETAILED	TORO	PVC TO DRIPPERLINE CONNECTION

VALVE CALLOUT W/ DRIP VALVE INFO: DRIP LINE MODEL, FLOW RATE & LINE SPACING
1A / 1" / 1.0 — RGP 212 — DRIP LINE MODEL # (GPH AND EMITTER SPACING)
12" — DRIP LINE SPACING (MAX)

DRIP HYDROZONE	MAXIMUM LINE RUN LENGTH @ 25PSI:	MNFR	DESCRIPTION & NOTES
RGP-218	515'	TORO	0.53 GPH BLACK DRIPPERLINE WITH ROOTGUARD EMITTERS AT 18" ON CENTER
RGP-418	340'		1.0 GPH BLACK DRIPPERLINE WITH ROOTGUARD EMITTERS AT 18" ON CENTER
RGP-212	360'	TORO	0.53 GPH BLACK DRIPPERLINE WITH ROOTGUARD EMITTERS AT 12" ON CENTER
RGP-412	240'		1.0 GPH BLACK DRIPPERLINE WITH ROOTGUARD EMITTERS AT 12" ON CENTER

SYMBOL	MODEL NUMBER	MNFR	DESCRIPTION & NOTES
	AS DETAILED	TORO	DRIPPERLINE TO DRIPPERLINE CONNECTION. USE TORO LOC-EZE FITTINGS COMPATIBLE WITH DRIPPERLINE PIPE. USE THIS CONNECTION AT TIGHT BENDS AND AS INDICATED ON DETAIL DIAGRAM
AV	YD-500-34	TORO	AIR VACUUM RELIEF VALVE AND BOX PER DETAIL. CROSS-CONNECT ALL DRIPPERLINES TO AVRV WITH BLANK TUBING
	FCH-H-FIPT	TORO	AUTOMATIC FLUSH VALVE ASSEMBLY AND BOX PER DETAIL
	SEE DETAIL	TORO	MANUAL FLUSH VALVE ASSEMBLY AND AUTO-FLUSH VALVE IN BOX PER DETAIL
	OPERIND	RAINBIRD	POP-UP INDICATOR. SET FLUSH WITH FINISH GRADE. INSTALL PER MANUFACTURER'S SPECIFICATIONS. LOCATE AWAY FROM PATHWAYS, AT LOCATIONS DIRECTED BY THE SITE MAINTENANCE PERSONNEL.
©	IRRIGATON CHECK VALVE BPC-XXXX-S, SIZE PER LINE	KBI	3/4", 1" OR 1-1/2" KING SPRING CHECK VALVES (5 LB SPRING - SOLVENT). INSTALL CHECK VALVE IN LATERAL LINE WITH OUT BOX. MARK LOCATION ON RECORD DRAWINGS

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REGISTERED LANDSCAPE ARCHITECT
BRUCE B. JETT
3335
Exp. 05/31/18
Date 04/11/17
STATE OF CALIFORNIA

1620 south main

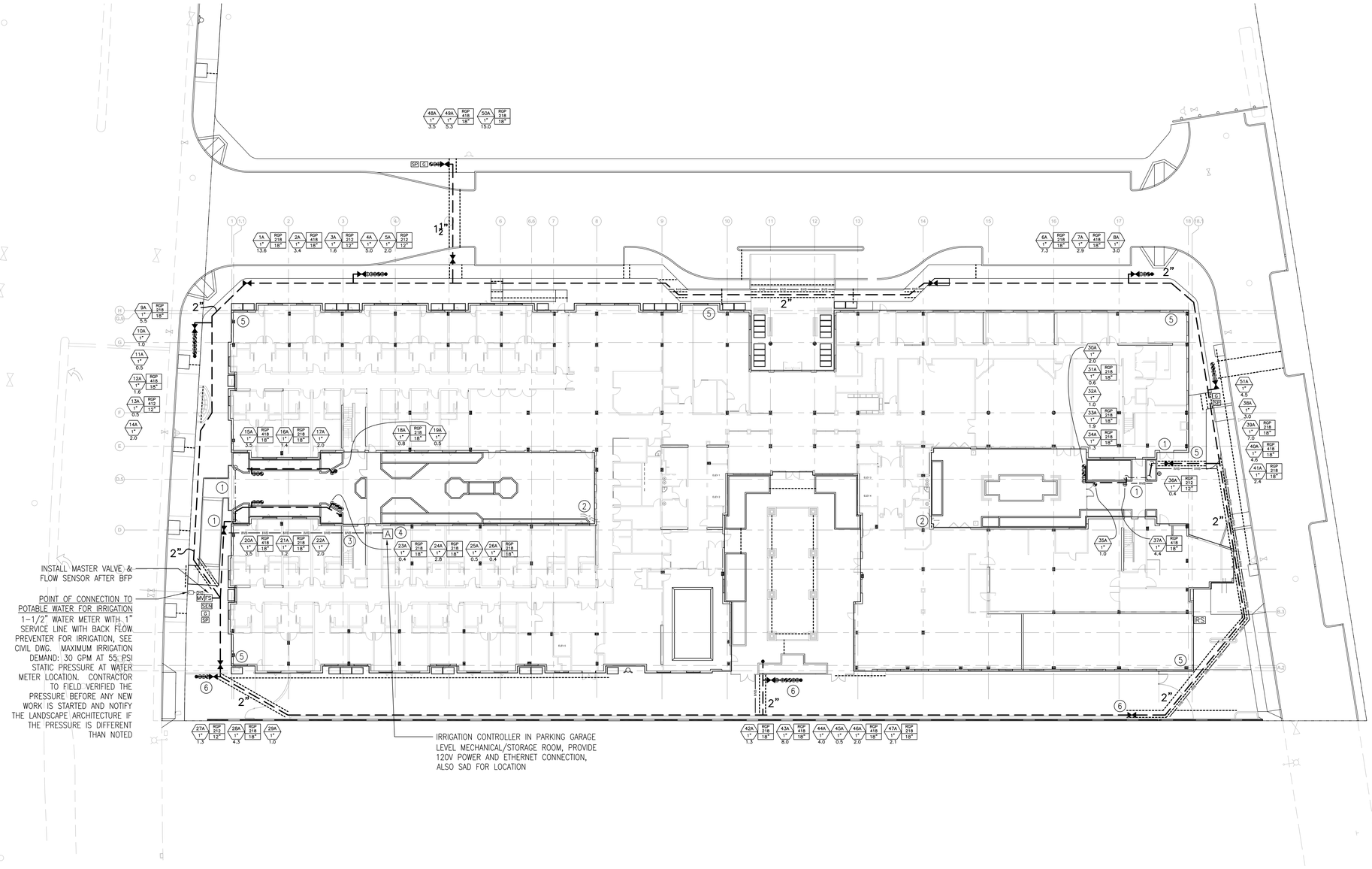
milpitas, california

project number: 16-123
plot date:

scale: as noted
date: 04/11/2017

PLAN CHECK RESPONSE

IRRIGATION LEGEND



NOTE:
REFER L6.01 – IRRIGATION LEGEND FOR FULL SCHEDULE

PLAN NOTES:

1. (K) 2" COPPER MAIN LINE ROUTED THROUGH BUILDING INTO PARKING GARAGE, MOUNTED ON CEILING AND PENETRATE SLAB TO PODIUM LEVEL, TERMINATED WITH COPPER FEMALE ADAPTER. BY BUILDING PLUMBING CONTRACTOR. ALSO SEE ARCH DRAWINGS.
2. (C) COPPER LATERAL LINE ROUTED UNDER PAVERS TO PLANTER TERMINATED WITH COPPER FEMALE ADAPTER. BY BUILDING PLUMBING CONTRACTOR TYPICAL. ALSO SEE ARCH DRAWINGS.
3. LOW VOLTAGE CONDUIT WITH PULL ROPE TO BE INSTALLED UNDER ELECTRICAL SCOPE OF WORK. (E) TYPICAL.
4. IRRIGATION CONTROLLER, PROVIDE 120V POWDER, SED IRRIGATION CONTROLLER IN PARKING GARAGE LEVEL MECHANICAL/STORAGE ROOM, ALSO SAD FOR LOCATION
5. IRRIGATION TRENCH, DO NOT DISTURB CLAY CAP OF FILL MATERIALS ~4' DOWN AT BUILDING PERIMETER PER GEOTECHNICAL REPORT
6. DWGS ARE DIAGRAMMATIC, EQUIPMENTS TO BE INSTALLED WITHIN PLANTING AREAS. INSTALL GATE VALVE W/ TRAFFIC RATED BOX AS REQUIRED. PROVIDE SLEEVES THROUGH OR UNDER PAVING AND STRUCTURES TYP. ALSO SEE IRRIG NOTES

TITLE 23 MODEL WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE:
I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN AND IRRIGATION DESIGN PLAN.

N

0 10' 20' 40' 60'
SCALE: 1" = 20'-0"

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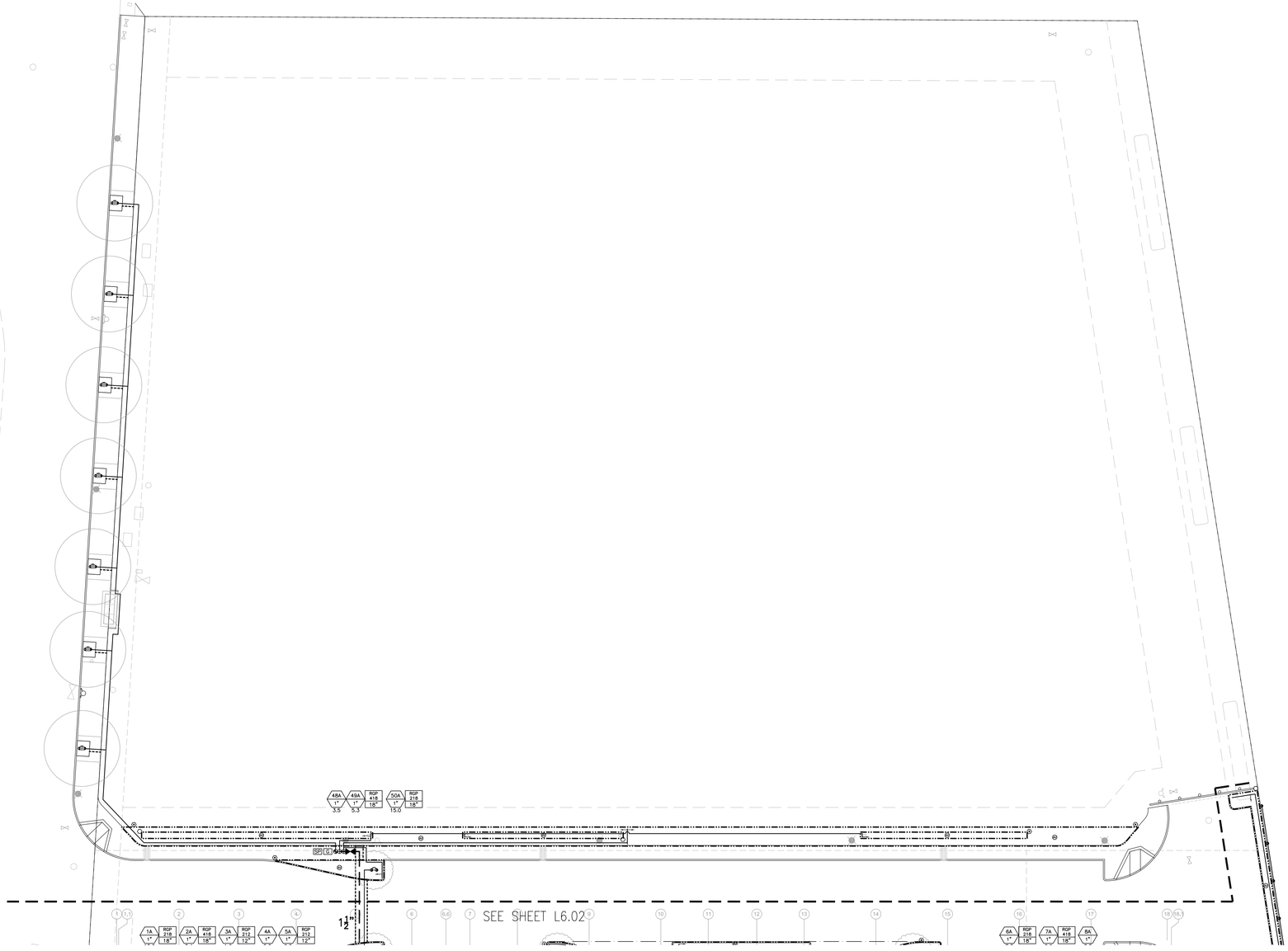
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PLAN CHECK RESPONSE

IRRIGATION PLAN - OVERALL SITE

L6.02

NOTE:
REFER L6.01 – IRRIGATION LEGEND FOR FULL SCHEDULE



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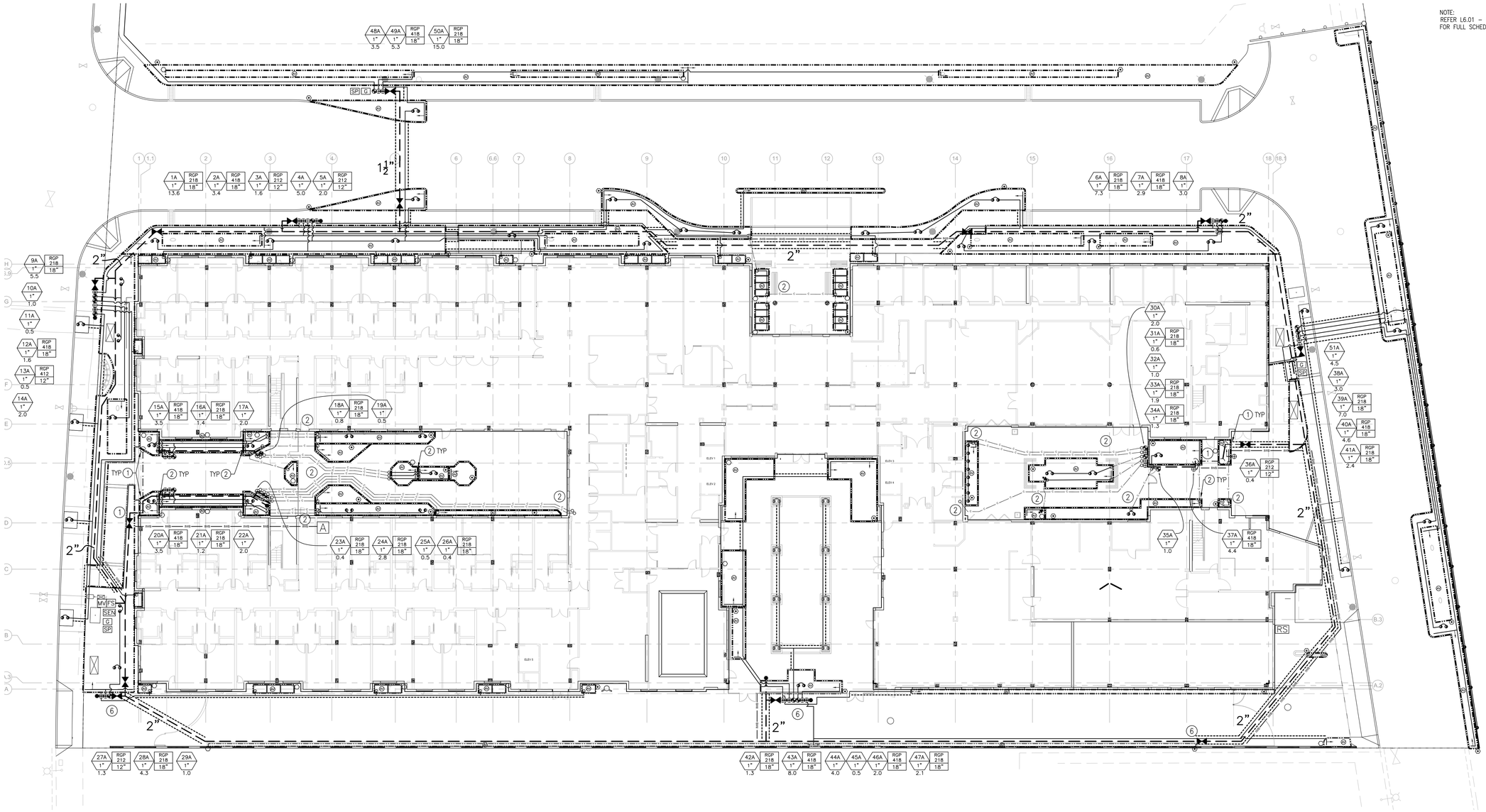
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PLAN CHECK RESPONSE

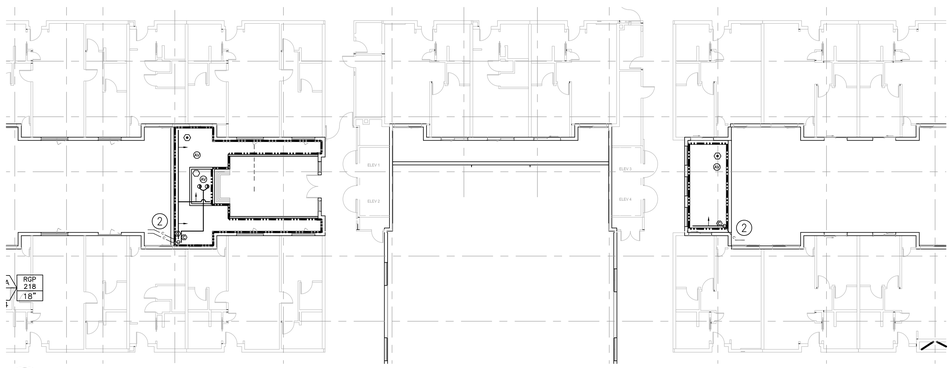
IRRIGATION PLAN - OFFSITE NORTH

L6.03

NOTE:
REFER L6.01 – IRRIGATION LEGEND FOR FULL SCHEDULE



1 FIRST FLOOR



2 SECOND FLOOR

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2. (C) COPPER LATERAL LINE ROUTED UNDER PAVERS TO PLANTER AND BETWEEN PLANTER WALLS, TERMINATED WITH COPPER FEMALE ADAPTER. BY BUILDING PLUMBING CONTRACTOR TYPICAL. ALSO SEE ARCH DRAWINGS.
3. LOW VOLTAGE CONDUIT WITH PULL ROPE TO BE INSTALLED UNDER ELECTRICAL SCOPE OF WORK. (E) TYPICAL.
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N

0 8' 16' 32' 48'

SCALE: 1/16" = 1'-0"

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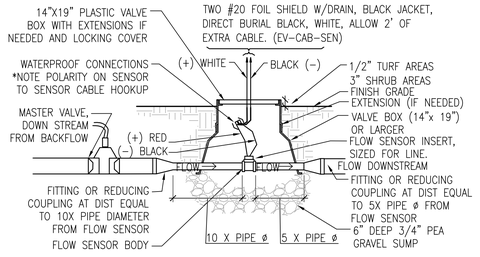
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PLAN CHECK RESPONSE

IRRIGATION PLAN

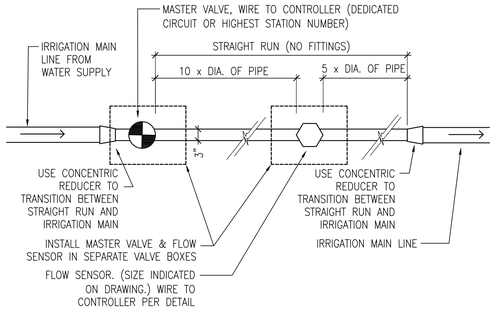
L6.04



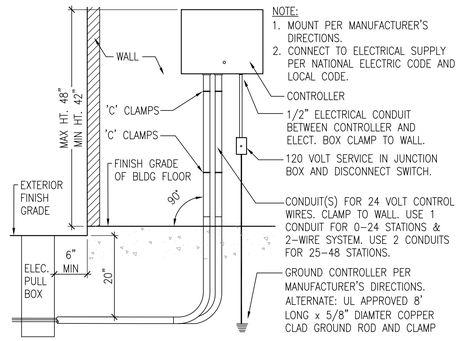
LASCO REDUCING COUPLINGS AVAILABLE IN THE FOLLOWING SIZES AND PART NUMBERS:
429-585 8"x6"
429-532 6"x4"
429-422 4"x3"
429-338 3"x2"
429-251 2"x1 1/2"
429-212 1 1/2"x1 1/4"
429-168 1 1/4"x1"

MASTERVALVE/ FLOW SENSOR INSTALLATION DETAIL

NOTE:
1. FLOW SENSOR MUST BE INSTALLED WITH INSERT (TOP) POSITIONED VERTICALLY AND BODY (TEE) POSITIONED HORIZONTALLY.
2. FLOW SENSOR CABLE MUST BE RUN IN 1" PVC CONDUIT FROM FLOW SENSOR TO CONTROLLER ENCLOSURE.
3. MANUFACTURE: CALSENSE MODEL: FM-2



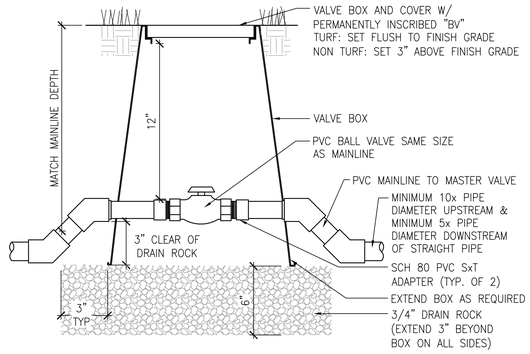
14 MASTER VALVE – FLOW SENSOR
SCALE: 3/4"=1'-0"



NOTE:
1. MOUNT PER MANUFACTURER'S DIRECTIONS.
2. CONNECT TO ELECTRICAL SUPPLY PER NATIONAL ELECTRIC CODE AND LOCAL CODE.

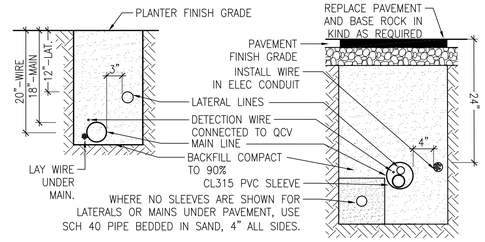
CONTROLLER
1/2" ELECTRICAL CONDUIT BETWEEN CONTROLLER AND ELECT. BOX CLAMP TO WALL.
120 VOLT SERVICE IN JUNCTION BOX AND DISCONNECT SWITCH.
CONDUIT(S) FOR 24 VOLT CONTROL WIRES. CLAMP TO WALL. USE 1 CONDUIT FOR 0-24 STATIONS & 2-WIRE SYSTEM. USE 2 CONDUITS FOR 25-48 STATIONS.
GROUND CONTROLLER PER MANUFACTURER'S DIRECTIONS. ALTERNATE: UL APPROVED 8' LONG x 5/8" DIAMTER COPPER CLAD GROUND ROD AND CLAMP

9 CONTROLLER – INTERIOR WALL MOUNT
SCALE: 1"=1'-0"



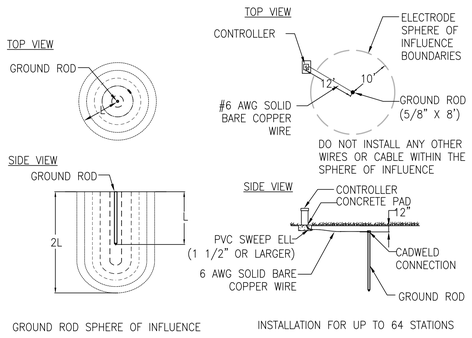
VALVE BOX AND COVER W/ PERMANENTLY INSCRIBED "BV"
TURF: SET FLUSH TO FINISH GRADE
NON TURF: SET 3" ABOVE FINISH GRADE
VALVE BOX
PVC BALL VALVE SAME SIZE AS MAINLINE
PVC MAINLINE TO MASTER VALVE
MINIMUM 10x PIPE DIAMETER UPSTREAM & MINIMUM 5x PIPE DIAMETER DOWNSTREAM OF STRAIGHT PIPE
SCH 80 PVC SxT ADAPTER (TYP. OF 2)
EXTEND BOX AS REQUIRED
3/4" DRAIN ROCK (EXTEND 3" BEYOND BOX ON ALL SIDES)

5 ISOLATION VALVE
SCALE: 3"=1'-0"



NOTE:
1. TIE A LOOSE 20" LOOP IN WIRE AT CHANGES IN DIRECTION AND AT INTERVALS OF 100'.
2. INSTALL PIPE, WIRE AND SLEEVES UNDER PAVEMENT PRIOR TO PLACEMENT OF PAVEMENT AND MINIMUM OF 24" DEEP.
3. BUNDLE AND TAPE WIRE AT 10' INTERVALS.
4. SOIL BACKFILL TO BE FREE OF ROCK, DIRT CLODS, AND DEBRIS GREATER THAN 1/2" DIAMETER WITHIN 4" OF PIPE.
5. ALTERNATE: BACKFILL WITH SAND IMPORT.

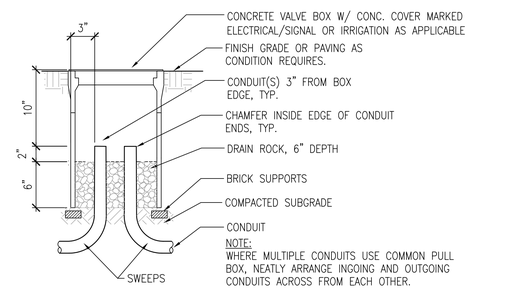
1 TRENCH
SCALE: 1"=1'-0"



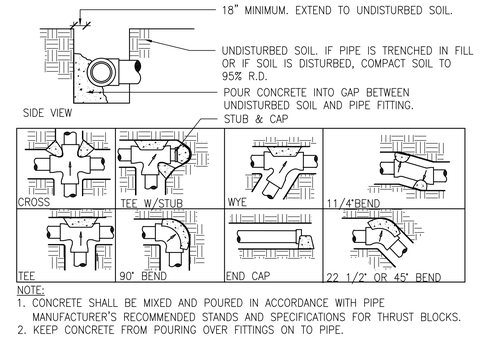
GROUND ROD SPHERE OF INFLUENCE

INSTALLATION FOR UP TO 64 STATIONS

10 GROUNDING ROD
SCALE: 3"=1'-0"

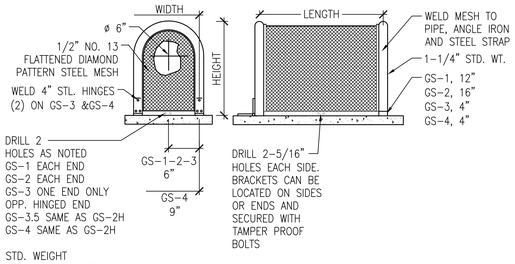


6 PULL BOX
SCALE: 1-1/2"=1'-0"



NOTE:
1. CONCRETE SHALL BE MIXED AND POURED IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDED STANDS AND SPECIFICATIONS FOR THRUST BLOCKS.
2. KEEP CONCRETE FROM POURING OVER FITTINGS ON TO PIPE.

2 THRUST BLOCK
SCALE: 3"=1'-0"

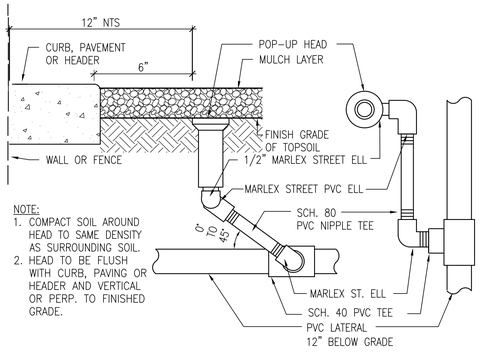


STD. WEIGHT

SIZES CGS	CENTERLINE DIMENSIONS			GS
GS-.5	12"W x 18"H x 12"L	LIFT OFF UNIT	35	30
GS-1	12"W x 24"H x 24"L	LIFT OFF UNIT	40	34
GS-2	12"W x 24"H x 32"L	LIFT OFF UNIT	45	40
GS-3	12"W x 24"H x 42"L	HINGED UNIT	51	46
CGS-3.5	12"W x 30"H x 42"L	HINGED UNIT	N/A	55
GS-4	18"W x 30"H x 48"L	HINGED UNIT	67	60

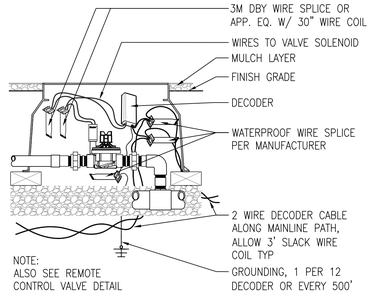
NOTE:
1. SIZE ENCLOSURE TO FIT BACKFLOW PREVENTION DEVICE. ENSURE THAT ENCLOSURE WILL NOT IMPAIR ACCESS TO EQUIPMENT.
2. GS = POWDER COATED STEEL GUARD SHACK DARK GREEN
3. CGS = STAINLESS STEEL COAST GUARD SHACK W/ SAND BLASTED SATIN FINISH
4. A-53 E.W. BLK STL. PIPE BE A MINIMUM OF 1/4" BEAD EVERY 4" ALL WELDED AREAS SFALL
5. AFTER ALL WELDING, ENTIRE UNIT SHALL BE PROCESSED WITH IRON PHOSPHATE PRETREATMENT.
6. ELECTROSTATIC APPLICATION OF POWDER SHALL BE FUSION BONDED PRS-8-4004-C (BEIGE) OR PRS-8-4003-C (LEAF GREEN) OR APPROVED EQUAL.
9. ALL BOLTS FOR HINGES AND HASPS SHALL BE ZINC PLATED TAMPER PROOF, EXCEPTION-USE SS HARDWARE FOR SS UNITS.
10. GUARDSHACK 1/2"-2" BACKFLOW ASSEMBLY ENCLOSURES AVAILABLE FROM: BACKFLOW PREVENTION DEVICE ENCLOSURES 15840 N. 32ND ST. SUITE 4, PHOENIX, ARIZONA 85032 (602) 788-5411
11. ALL UNITS ALSO AVAILABLE IN 304 S.S. GS-3.5 AVAILABLE IN 304 S.S. ONLY.

16 BFP ENCLOSURE
SCALE: 1"=1'-0"



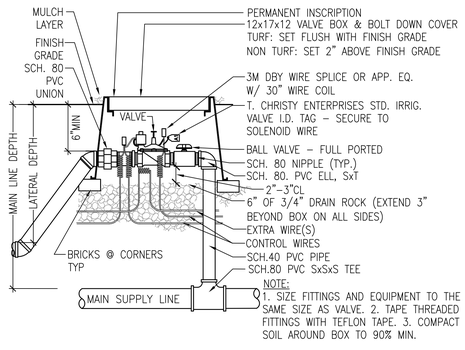
NOTE:
1. COMPACT SOIL AROUND HEAD TO SAME DENSITY AS SURROUNDING SOIL.
2. HEAD TO BE FLUSH WITH CURB, PAVING OR HEADER AND VERTICAL OR PERP. TO FINISHED GRADE.

11 POP-UP BUBBLER
SCALE: 3"=1'-0"



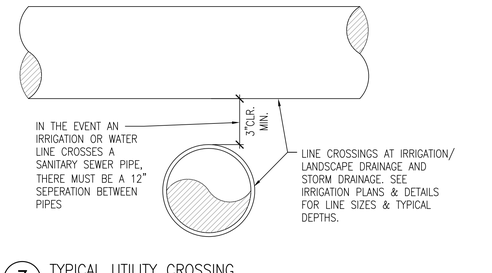
NOTE:
ALSO SEE REMOTE CONTROL VALVE DETAIL

12 DECODER INSTALLATION
SCALE: 1-1/2"=1'-0"

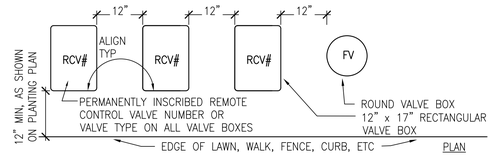


NOTE:
1. SIZE FITTINGS AND EQUIPMENT TO THE SAME SIZE AS VALVE. 2. TAPE THREADED FITTINGS WITH TEFLON TAPE. 3. COMPACT SOIL AROUND BOX TO 90% MIN.

7 QUICK COUPLING VALVE
SCALE: 3"=1'-0"



3 TYPICAL UTILITY CROSSING
SCALE: 3"=1'-0"



NOTES
1. CENTER VALVE BOX OVER REMOTE CONTROL VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 2" ABOVE FINISH GRADE OF MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
3. SET RCV AND VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN ONLY IF GROUND COVER DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE OF LAWN, WALK, FENCE, CURB, ETC.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOXES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. INSTALL EXTENSION BY VALVE BOX MANUFACTURER AS REQUIRED TO COMPLETELY ENCLOSE ASSEMBLY FOR EASY ACCESS.
7. THIS DETAIL INDICATES GENERAL INTENT. SEE PLANTING PLANS FOR VALVE BOX LOCATIONS. COORDINATE BOX LOCATIONS WITH THE PLANTING, TYP.

4 VALVE BOX LAYOUT
SCALE: 3/4"=1'-0"

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510.516.0167
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04.11.17 plan check response

rev	date	issue
	03.06.17	health dept. submittal
	01.17.17	bid addendum #3
	01.13.17	bid addendum #2
	01.06.17	delta 1 revision
	12.02.16	issue for bid
	11.22.16	issue for permit
	10.25.16	60% cd
	09.26.16	30% cd
	08.15.16	100% dd

REGISTERED LANDSCAPE ARCHITECT · BRUCE B. JETT · 3335 · Exp. 05/31/18 · Date 04/11/17 · STATE OF CALIFORNIA

1620 south main

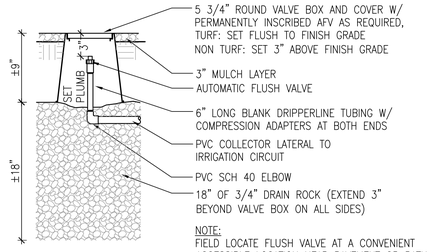
milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 04/11/2017

PLAN CHECK RESPONSE

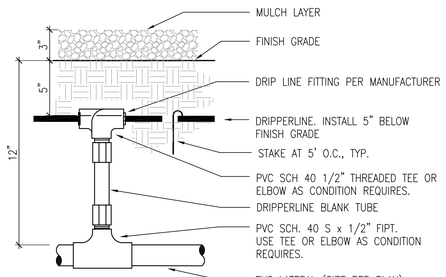
IRRIGATION DETAILS

L6.05



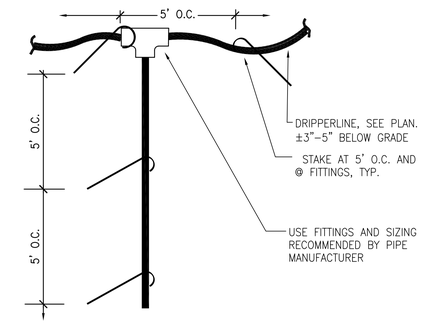
NOTE:
FIELD LOCATE FLUSH VALVE AT A CONVENIENT ACCESSIBLE LOCATION NEAR PAVEMENT OR PATH. EXTEND LATERAL AS NECESSARY.

5 AUTO FLUSH VALVE
SCALE: 1-1/2"=1'-0"

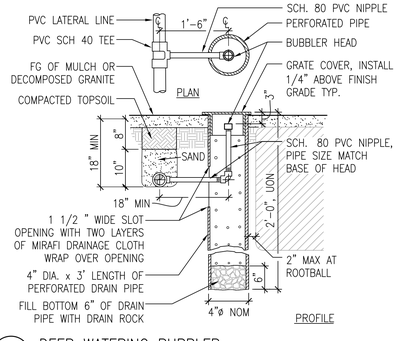


NOTE:
DRIPPERLINE FITTINGS SHALL BE COMPATIBLE WITH DRIPPLERLINE PIPE.

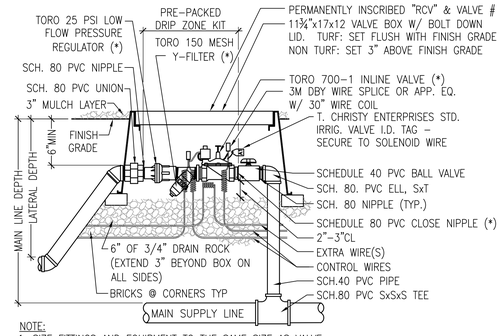
6 PVC TO DRIPLINE CONNECTION
SCALE: 3"=1'-0"



7 DRIPLINE TO DRIPLINE CONNECTION
SCALE: 3/8"=1'-0"

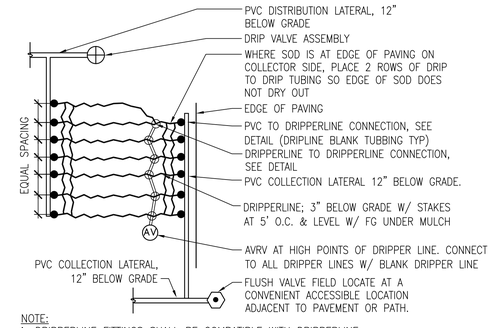


8 DEEP WATERING BUBBLER
SCALE: 3/4" = 1'



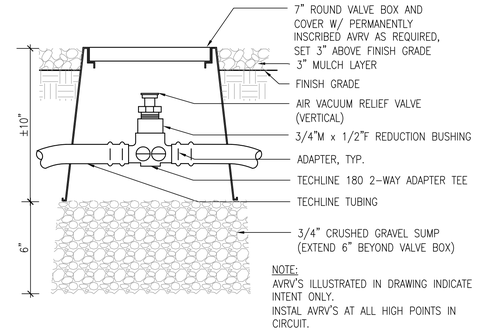
NOTE:
1. SIZE FITTINGS AND EQUIPMENT TO THE SAME SIZE AS VALVE.
2. TAPE THREADED FITTINGS WITH TEFLON TAPE.
3. COMPACT SOIL AROUND BOX TO 90% MIN.
4. MIN. FLOW RATE - 2.0 GPM, MAX. FLOW RATE - 20.0 GPM
5. (*) PARTS IN DRIP ZONE KIT

1 DRIP ZONE KIT
SCALE: 1-1/2"=1'-0"



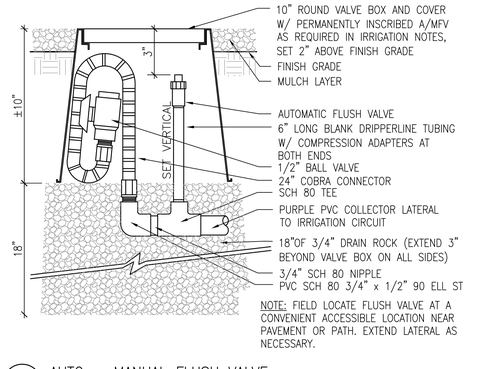
NOTE:
1. DRIPPERLINE FITTINGS SHALL BE COMPATIBLE WITH DRIPPERLINE
2. HOLD DRIPPERLINES 18" OFF FACE OF BUILDING, 6" OFF PAVING @ SHRUBS, 2" OFF PAVING @ SOD, TURF & GROUNDCOVER, TYP

2 DRIP SYSTEM LAYOUT
SCALE: 3/4"=1'-0"



NOTE:
AVRV'S ILLUSTRATED IN DRAWING INDICATE INTENT ONLY.
INSTAL AVRV'S AT ALL HIGH POINTS IN CIRCUIT.

3 AIR VACUUM RELIEF VALVE
SCALE: 3"=1'-0"



NOTE: FIELD LOCATE FLUSH VALVE AT A CONVENIENT ACCESSIBLE LOCATION NEAR PAVEMENT OR PATH. EXTEND LATERAL AS NECESSARY.

4 AUTO - MANUAL FLUSH VALVE
SCALE: 3"=1'-0"

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rev	date	Issue
	04.11.17	plan check response
	03.06.17	health dept. submittal
	01.17.17	bid addendum #3
	01.13.17	bid addendum #2
	01.06.17	delta 1 revision
	12.02.16	Issue for bid
	11.22.16	Issue for permit
	10.25.16	60% cd
	09.26.16	30% cd
	08.15.16	100% dd

REGISTERED LANDSCAPE ARCHITECT
BRUCE B. JETT
3335
Exp. 05/31/18
Date 04/11/17
STATE OF CALIFORNIA

1620 south main

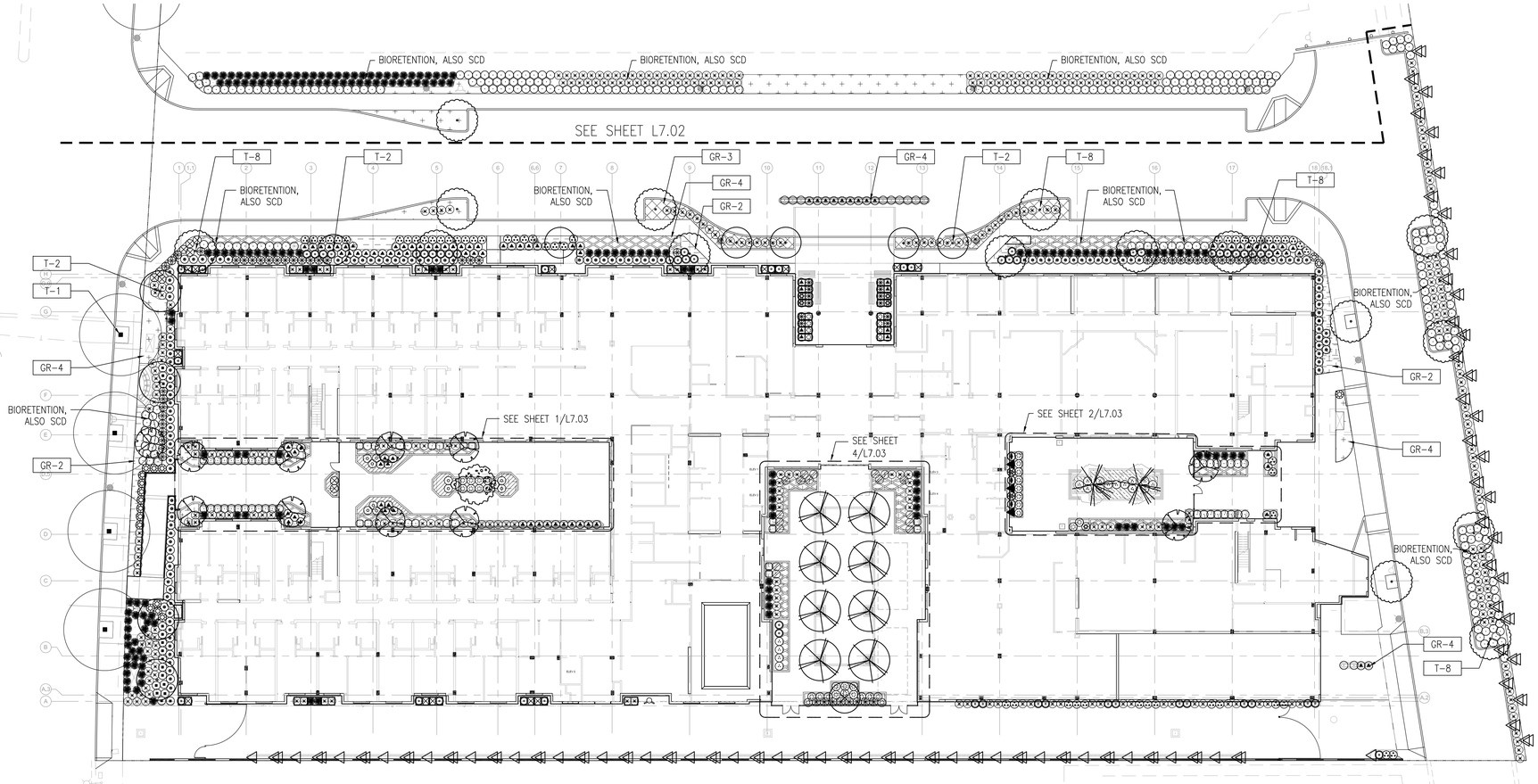
milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 04/11/2017

PLAN CHECK RESPONSE

IRRIGATION DETAILS

L6.06



PLANT LIST

KEY	SYMBOL	QNTY		BOTANICAL NAME	COMMON NAME	SIZE	SPACING	COMMENTS	WUCOLS
TREES									
T-1		11	EA	QUERCUS COCCINEA	SCARLET OAK	24" BOX	AS SHOWN	MILPITAS CITY STREETSCAPE STANDARD AT SOUTH MAIN ST.	M
T-2		10	EA	LAGERSTROEMIA X FAUERI 'ARAPAHO'	ARAPAHO CRAPE MYRTLE	24" BOX	AS SHOWN	STANDARD	L
T-3		2	EA	ACER PALMATUM VAR. DISSECTUM 'RED DRAGON'	DISSECTUM JAPAN MAPLE	24" BOX	AS SHOWN	MULTI	M
T-4		8	EA	PYRUS CALLERYANA 'ARISTICRAT'	ORNAMENTAL PEAR	36" BOX	AS SHOWN	STANDARD	M
T-5		1	EA	ACER CIRCINATUM	VINE MAPLE	36" BOX	AS SHOWN	STANDARD	M
T-6		11	EA	CERCIS OCCIDENTALIS	WESTERN REDBUD	24" BOX	AS SHOWN	STANDARD	L
T-7		2	EA	BETULA JACQUEMONTII	HIMALAYAN BIRCH	36" BOX	AS SHOWN	STANDARD	H
T-8		16	EA	ULMUS X 'FRONTIER'	FRONTIER ELM	24" BOX	AS SHOWN	STANDARD	L

PLANT LIST

KEY	SYMBOL		BOTANICAL NAME	COMMON NAME	SIZE	SPACING	WUCOLS
VINES							
V-1		EA	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	5 GAL.	AS SHOWN	M
V-2		EA	JASMINUM POLYANTHUM	PINK JASMINE	5 GAL	AS SHOWN	M
V-3		EA	DISTICTIS BUCCINATORIA	RED TRUMPET VINE	5 GAL	AS SHOWN	M
V-4		EA	JASMINUM OFFICINALE	JASMINE VINE	1 GAL	AS SHOWN	L
V-5		EA	PARTHENOCISSUS TRICUSPIDATA 'VEITCHII'	BOSTON IVY	1 GAL	AS SHOWN	L

PLANT LIST

KEY	SYMBOL		BOTANICAL NAME	COMMON NAME	SIZE	SPACING	WUCOLS
SHRUBS							
S-1		EA	PITTOSPORUM TOBIRA 'VARIEGATA'	PITTOSPORUM	5 GAL.	36"	L
S-2		EA	SALVIA GREGGII	AUTUMN SAGE	5 GAL.	36"	L
S-3		EA	PHILADELPHUS MEXICANUS	MOCK ORANGE	5 GAL.	36"	L
S-4		EA	CEANOTHUS 'SKYLARK'	WILD LILAC	5 GAL.	36"	L
S-5		EA	CORNUS ALBA	RED BARK DOGWOOD	5 GAL.	36"	M
S-6		EA	SARCOCOCCA CONFUSA	SWEET BOX	5 GAL.	36"	L
S-7		EA	IRIS PCH	PACIFIC COAST HYBRIDS IRIS	5 GAL.	24"	L
S-8		EA	PHORMIUM 'AMAZING RED'	NEW ZELAND FLAX	5 GAL.	36"	L
S-9		EA	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	5 GAL	36"	M
S-10		EA	ACHILLEA MILLEFOLIUM	YARROW	5 GAL	24"	L
S-11		EA	EPILOBIUM CANUM (ZAUSCHNERIA)	CALIFORNIA FUCHSIA	5 GAL	36"	L

PLANT LIST – BIORETENTION AND FLOW THROUGH PLANTER

KEY	SYMBOL		BOTANICAL NAME	COMMON NAME	SIZE	SPACING	WUCOLS
SCVURPPP PLANTS							
T-6			CERCIS OCCIDENTALIS	WESTERN REDBUD	24" BOX STANDARD	AS SHOWN	L
G-1		EA	MUHLENBERGIA RIGENS	DEER GRASS	5 GAL.	36"	L
G-2		EA	MUHLENBERGIA CAPILLARIS	PINK MUHLY	5 GAL.	36"	L
G-4		EA	CAREX TUMULICOLA	BERKELEY SEDGE	1 GAL.	18"	L
G-5		EA	JUNCUS PATENS	CALIFORNIA GREY RUSH	1 GAL.	24"	L
G-6		EA	CHONDROPETALUM TECTORUM	CAPE RUSH	5 GAL.	36"	L
S-7		EA	IRIS PCH	PACIFIC COAST HYBRIDS IRIS	5 GAL.	24"	L
S-10		EA	ACHILLEA MILLEFOLIUM	YARROW	5 GAL	24"	L

NOTE: BIORETENTION SOIL MEET STANDARDS SET IN THE SCVURPPP MANUAL APPENDIX C

PLANT LIST

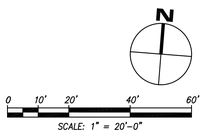
KEY	SYMBOL		BOTANICAL NAME	COMMON NAME	SIZE	SPACING	WUCOLS
ACCENT							
A-1		EA	CORREA PULCHELLA 'PINK EYRE'	PINK AUSTRALIAN FUCHSIA	5 GAL.	36"	L
A-3		EA	ABUTILON PALMERI	INDIAN MALLOW	5 GAL.	36"	L
A-4		EA	LOROPETALUM CHINENSE 'RUBRUM'	CHINESE FRINGE FLOWER	5 GAL.	36"	L

PLANT LIST

KEY	SYMBOL		BOTANICAL NAME	COMMON NAME	SIZE	SPACING	WUCOLS
GRASSES AND GRASS LIKE							
G-1		EA	MUHLENBERGIA RIGENS	DEER GRASS	5 GAL.	36"	L
G-2		EA	MUHLENBERGIA CAPILLARIS	PINK MUHLY	5 GAL.	36"	L
G-3		EA	LOMANDRA LONGIFOLIA	SPINY HEAD MAT RUSH	5 GAL.	30"	L
G-4		EA	CAREX TUMULICOLA	BERKELEY SEDGE	1 GAL.	18"	L
G-5		EA	JUNCUS PATENS	CALIFORNIA GREY RUSH	1 GAL.	24"	L
G-6		EA	CHONDROPETALUM TECTORUM	CAPE RUSH	5 GAL.	36"	L

PLANT LIST

KEY	SYMBOL		BOTANICAL NAME	COMMON NAME	SIZE	SPACING	WUCOLS
GROUNDCOVERS							
GR-1		SF	ARTEMISIA 'POWIS CASTLE'	WORMWOOD	5 GAL.	24" O.C.	L
GR-2		SF	MYOPORUM PARVIFOLIUM	GROUNDCOVER MYOPORUM	1 GAL.	12" O.C.	L
GR-3		SF	PENSTEMON HETEROPHYLLUS	FOOTHILL PENSTEMON	1 GAL.	12" O.C.	L
		SF	ESCHSCHOLZIA CALIFORNICA	CALIFORNIA POPPY	1 GAL.	12" O.C.	L
GR-4		SF	LANTANA X 'YELLOW'	YELLOW LANTANA	1 GAL.	18" O.C.	L
GR-5		SF	SCAEVOLA AEMULA	FAIRY FAN	1 GAL.	12" O.C.	L



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1266 66th street, suite 1
emeryville, ca 94608
510.516.0167
www.brick-inc.com

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LANDSCAPE ARCHITECTURE + DESIGN
CRLA #3335 · 2 Theatre Square #218 · Orinda CA · 94563
925.254.5422 · www.jett.land

04.11.17 plan check response

rev	date	issue
	03.06.17	health dept. submittal
	01.17.17	bld addendum #3
	01.13.17	bld addendum #2
	01.06.17	delta 1 revision
	12.02.16	issue for bld
	11.22.16	issue for permit
	10.25.16	60% cd
	09.26.16	30% cd
	08.15.16	100% dd

REGISTERED LANDSCAPE ARCHITECT
BRUCE B. JETT
3335
Exp. 05/31/18
Date 05/24/17
STATE OF CALIFORNIA

1620 south main

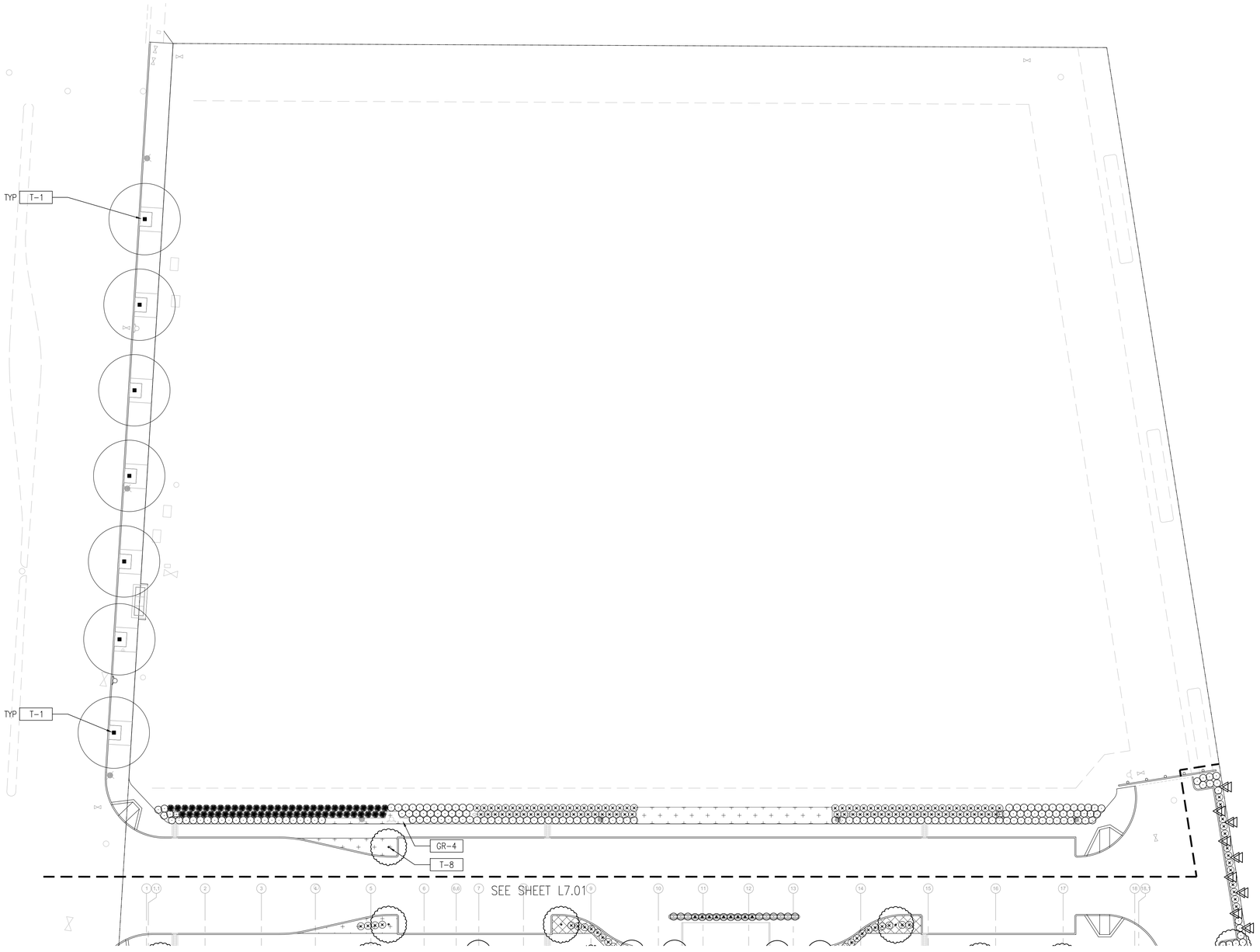
milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 04/11/2017

PLAN CHECK RESPONSE

PLANTING PLAN - OVERALL SITE

L7.01



PLANT LIST

KEY	SYMBOL	QNTY		BOTANICAL NAME
TREES				
T-1		11	EA	QUERCUS COCCINEA
T-2		10	EA	LAGERSTROEMIA X FAUERI 'ARAPAHO'
T-3		2	EA	ACER PALMATUM VAR. DISSECTUM 'RED DRAGON'
T-4		8	EA	PYRUS CALLERYANA 'ARISTICRAT'
T-5		1	EA	ACER CIRCINATUM
T-6		11	EA	CERCIS OCCIDENTALIS
T-7		2	EA	BETULA JACQUEMONTII
T-8		16	EA	ULMUS X 'FRONTIER'
SHRUBS				
S-1			EA	PITTOSPORUM TOBIRA 'VARIEGATA'
S-2			EA	SALVIA GREGGII
S-3			EA	PHILADELPHUS MEXICANUS
S-4			EA	CEANOTHUS 'SKYLARK'
S-5			EA	CORNUS ALBA
S-6			EA	SARCOCOCCA CONFUSA
S-7			EA	IRIS PCH
S-8			EA	PHORMIUM 'AMAZING RED'
S-9			EA	POLYSTICHUM MUNITUM
S-10			EA	ACHILLEA MILLEFOLIUM
S-11			EA	EPILOBIUM CANUM (ZAUSCHNERIA)
ACCENT				
A-1			EA	CORREA PULCHELLA 'PINK EYRE'
A-3			EA	ABUTILON PALMERI
A-4			EA	LOROPETALUM CHINENSE 'RUBRUM'
GRASSES AND GRASS LIKE				
G-1			EA	MUHLENBERGIA RIGENS
G-2			EA	MUHLENBERGIA CAPILLARIS
G-3			EA	LOMANDRA LONGIFOLIA
G-4			EA	CAREX TUMULICOLA
G-5			EA	JUNCUS PATENS
G-6			EA	CHONDROPETALUM TECTORUM
GROUNDCOVERS				
GR-1			SF	ARTEMISIA 'POWIS CASTLE'
GR-2			SF	MYOPORUM PARVIFOLIUM
GR-3			SF	PENSTEMON HETEROPHYLLUS
			SF	ESCHSCHOLZIA CALIFORNICA
GR-4			SF	LANTANA X 'YELLOW'
GR-5			SF	SCAEVOLA AEMULA
VINES				
V-1			EA	PARTHENOCISSUS QUINQUEFOLIA
V-2			EA	JASMINUM POLYANTHUM
V-3			EA	DISTICTIS BUCCINATORIA
V-4			EA	JASMINUM OFFICINALE
V-5			EA	PARTHENOCISSUS TRICUSPIDATA 'VEITCHII'

NOTE: REFER L7.01 FOR FULL SCHEDULE

N

0 10' 20' 40' 60'

SCALE: 1" = 20'-0"

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REGISTERED LANDSCAPE ARCHITECT
BRUCE B. JETT
3335
Exp. 05/31/18
Date 05/19/17
STATE OF CALIFORNIA

1620 south main

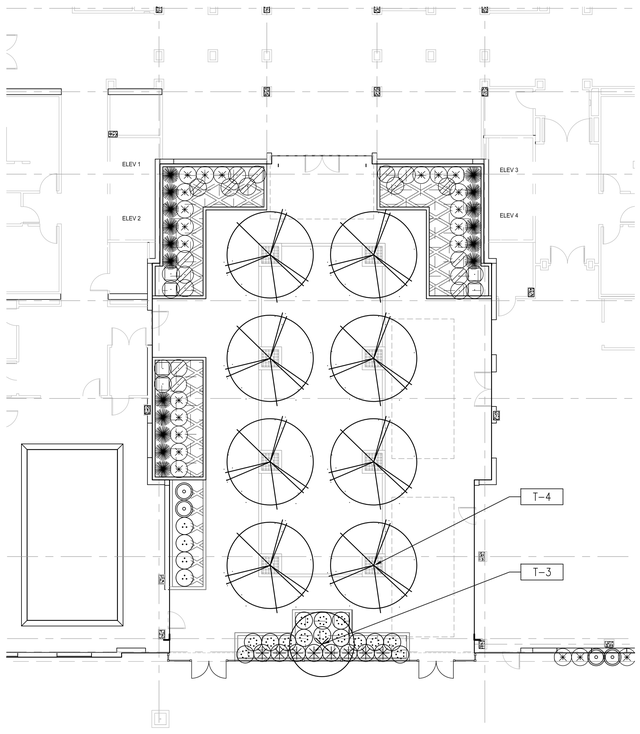
milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 04/11/2017

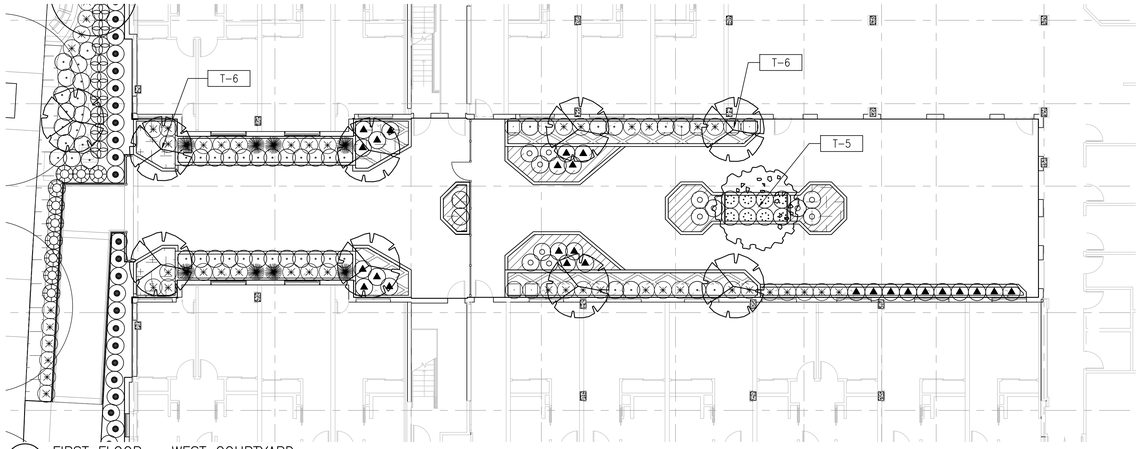
PLAN CHECK RESPONSE

PLANTING PLAN - OFFSITE NORTH

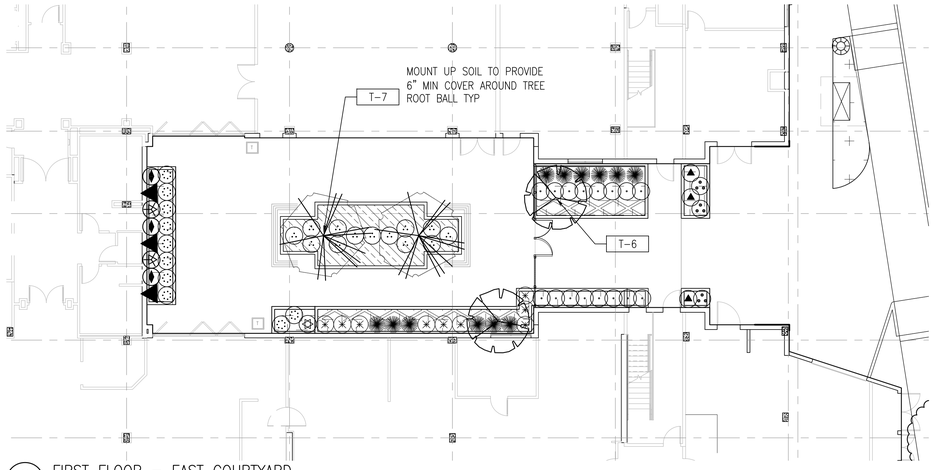
L7.02



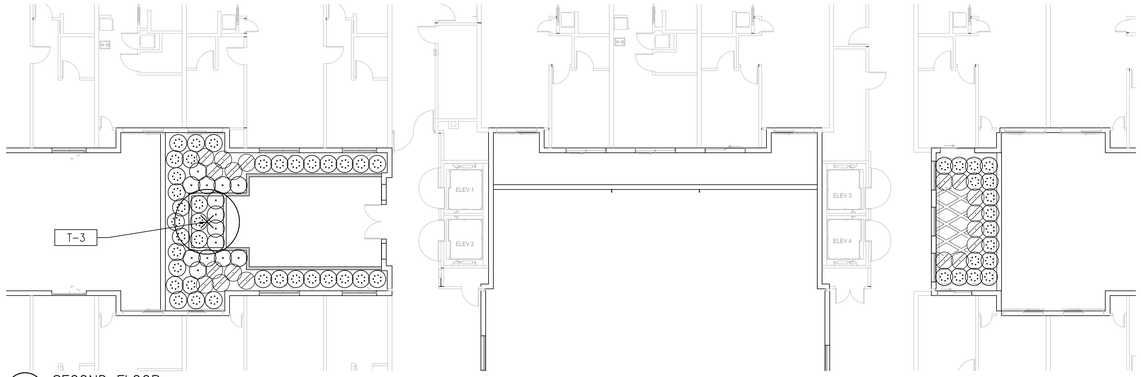
4 FIRST FLOOR – SOUTH COURTYARD



1 FIRST FLOOR – WEST COURTYARD



2 FIRST FLOOR – EAST COURTYARD



3 SECOND FLOOR

PLANT LIST

KEY	SYMBOL	QNTY		BOTANICAL NAME
TREES				
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T-2		10	EA	LAGERSTROEMIA X FAUERI 'ARAPAHO'
T-3		2	EA	ACER PALMATUM VAR. DISSECTUM 'RED DRAGON'
T-4		8	EA	PYRUS CALLERYANA 'ARISTICRAT'
T-5		1	EA	ACER CIRCINATUM
T-6		11	EA	CERCIS OCCIDENTALIS
T-7		2	EA	BETULA JACQUEMONTII
T-8		16	EA	ULMUS X 'FRONTIER'
SHRUBS				
S-1			EA	PITTOSPORUM TOBIRA 'VARIEGATA'
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			SF	ESCHSCHOLZIA CALIFORNICA
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V-1			EA	PARTHENOCISSUS QUINQUEFOLIA
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NOTE: REFER L7.01 FOR FULL SCHEDULE

N

0 5' 10' 20' 30'

SCALE: 1" = 10'-0"

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04.11.17 plan check response

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BRUCE B. JETT
3335
Exp. 05/31/18
Date 05/19/17
STATE OF CALIFORNIA

1620 south main

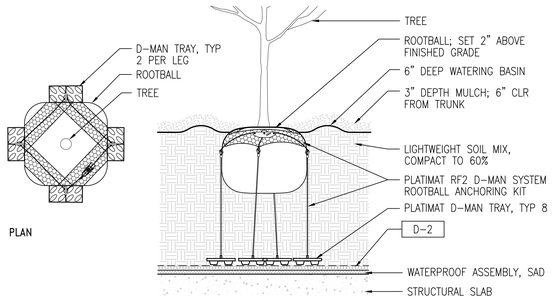
milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 04/11/2017

PLAN CHECK RESPONSE

PLANTING PLAN

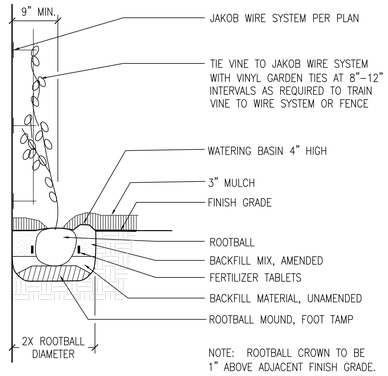
L7.03



NOTES

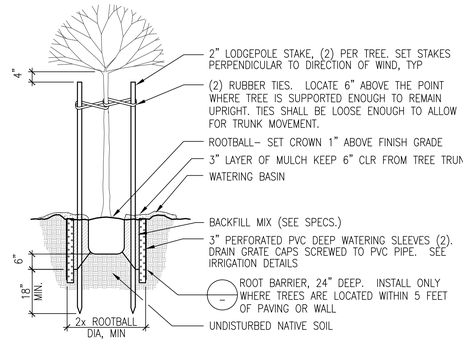
1. ROOTBALL ANCHORING KIT TO INCLUDE ROOTBALL PROTECTION MESH, GALVANIZED WIRE CHOKES, TWO-WAY TENSIONER & TWO D-MAN CELLS PER LEG
2. INSTALL PER MFR INSTRUCTIONS

9 TREE ON PODIUM
SCALE: 3/4"=1'-0"



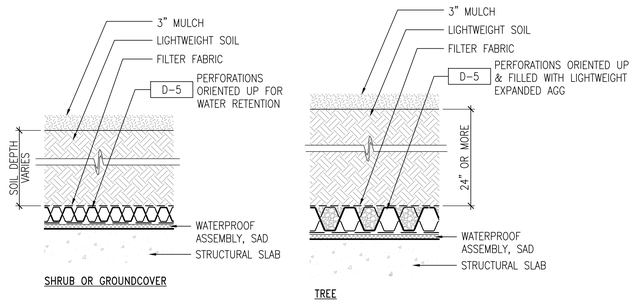
NOTE: ROOTBALL CROWN TO BE 1" ABOVE ADJACENT FINISH GRADE.

5 VINE PLANTING
SCALE: 1"=1'-0"



NOTE
EXCAVATE PLANTING PIT TO 2x THE WIDTH OF THE ROOTBALL. SCARIFY SIDES OF PIT.

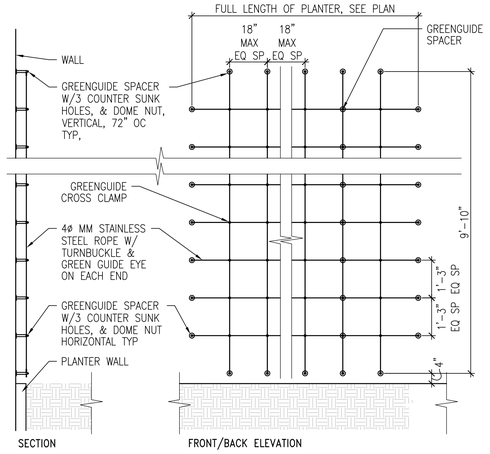
1 TREE IN PLANTING - ON GRADE
SCALE: 1/2"=1'-0"



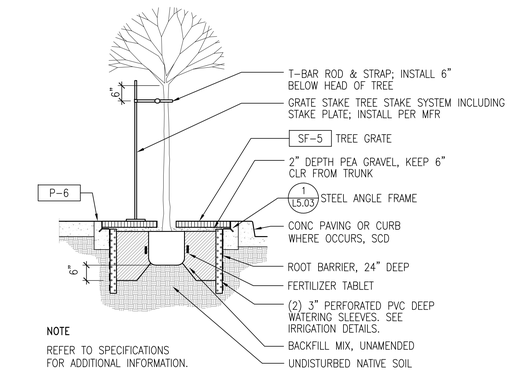
13 DRAINMAT AT PODIUM PLANTING & SOIL PROFILES
SCALE: 3" = 1'

NOTE

JAKOB INC: INFO@JAKOB-USA.COM, PHONE: (561) 330-6502
JAKOB INOX MODEL NUMBERS:
GRN.GUIDE SPACER - 30919-0100-100
GRN.GUIDE EYE - 30914-0400-04-156
GRN.GUIDE X CLAMP - 30920-400-02
DOME NUT - 30894-0800
SS ROPE - 20810-0006-00, 4MM



7 JAKOB WIRE SYSTEM
SCALE: 1/2"=1'-0"



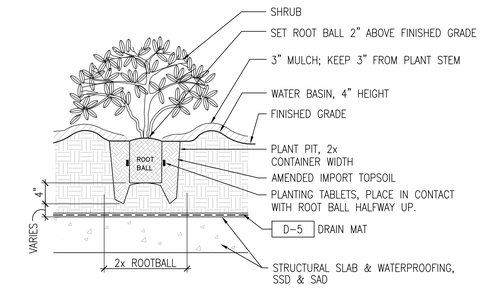
NOTE
REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

2 TREE IN TREE GRATE - ON GRADE
SCALE: 1/2"=1'-0"

NOTES

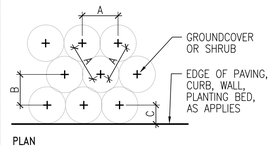
1. HOLD TOP OF ROOT BARRIER 1" ABOVE FINISH GRADE OF PLANTING AREA (2" BELOW FINISH GRADE OF ADJACENT PAVING). PLACE BARRIERS SUCH THAT VERTICAL RIBS ARE FACING THE TREE
2. ROOT BARRIER TO BE INSTALLED WHERE (N) TREES ARE WITHIN 5 FEET OF PAVING
3. ROOT BARRIERS ARE TO BE INSTALLED AGAINST PERIMETER OF TREE WELL; BARRIERS ENCIRCLING ROOTBALL ARE NOT ACCEPTABLE
4. REFER TO DETAIL ON SHEET L7.05 FOR ROOT BARRIER IN TREE WELL TYP

11 ROOT BARRIER - TREE WELL ON GRADE
SCALE: 1/2"=1'-0"



3 SHRUB PLANTING - ON PODIUM
SCALE: 1"=1'-0"

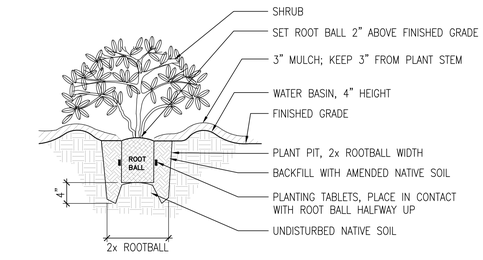
PLANT SPACING & QUANTITIES CHART			
SPACING 'A'	SPACING 'B'	SPACING 'C'	NUMBER OF PLANTS PER SQUARE FOOT
6" OC	5.20"	2.60"	4.615
8" OC	6.93"	3.47"	2.597
10" OC	8.66"	4.33"	1.663
1'-0" OC	10.40"	5.20"	1.154
1'-3" OC	13.00"	6.50"	0.738
1'-6" OC	15.60"	7.80"	0.513
2'-0" OC	20.78"	10.39"	0.289
2'-6" OC	26.00"	13.00"	0.185
3'-0" OC	31.18"	15.59"	0.128
3'-6" OC	34.64"	17.32"	0.104
4'-0" OC	41.57"	20.79"	0.072
5'-0" OC	51.96"	25.98"	0.046
6'-0" OC	62.35"	31.18"	0.032



NOTES

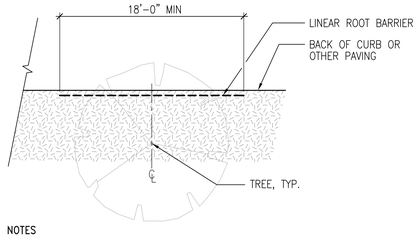
1. DIAGRAM APPLIES TO ALL GROUNDCOVER AND MASSED SHRUB PLANTINGS. SUCH PLANTS ARE TO BE SPACED EQUIDISTANT TO EACH OTHER IN A TRIANGULAR PATTERN AS SHOWN ABOVE, UNLESS OTHERWISE NOTED ON THE PLANS.
2. WHERE GROUNDCOVER OR SHRUB MASSING OCCURS ADJACENT TO EDGE OF PAVING, WALLS, CURBS, OR ADJACENT PLANTING BEDS, UTILIZE SPACING 'C', WHERE C=1/2 B.

8 GROUNDCOVER SPACING
SCALE: 1"=1'-0"



4 SHRUB PLANTING - ON GRADE
SCALE: 1"=1'-0"

12 ON GRADE ROOT BARRIER - LINEAR
SCALE: 1/2"=1'-0"



NOTES

1. HOLD TOP OF ROOT BARRIER 1" ABOVE FINISH GRADE OF PLANTING AREA (2" BELOW FINISH GRADE OF ADJACENT PAVING). PLACE BARRIERS SUCH THAT VERTICAL RIBS ARE FACING THE TREE
2. ROOT BARRIER TO BE INSTALLED WHERE (N) TREES ARE WITHIN 5 FEET OF PAVING
3. ROOT BARRIERS ENCIRCLING ROOTBALL ARE NOT ACCEPTABLE
4. REFER TO DETAIL 19/L4.0 FOR ROOT BARRIER AT CMU PLANTER WALL

brick.

ARCHITECT
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	09.26.16	30% cd
	08.15.16	100% dd

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BRUCE B. JETT
3335
Exp. 05/31/18
Date 04/11/17
STATE OF CALIFORNIA

1620 south main

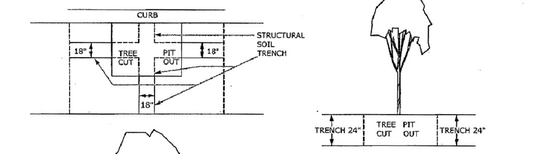
milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 04/11/2017

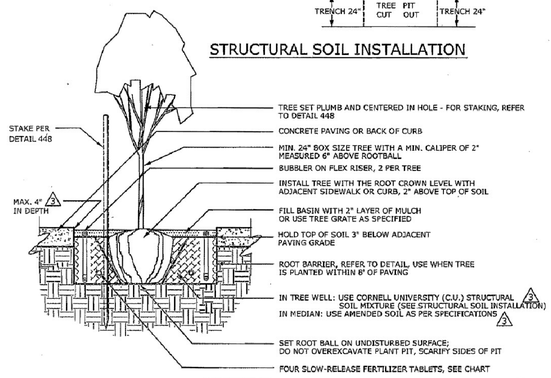
PLAN CHECK RESPONSE

PLANTING DETAILS

L7.04



STRUCTURAL SOIL INSTALLATION



SECTION

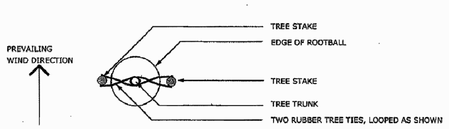
Notes:

1. TREES SHALL NOT BE ROOT-BOUND. CAREFULLY SCARIFY ROOTBALL BEFORE PLANTING, IF DIRECTED.
2. REMOVE ANY SPROUTS/SHOOTS WITHIN 6" OF SOIL.
3. CONFIRM POSITIVE DRAINAGE OF PLANT PIT PRIOR TO PLANTING TREE. INSTALL DRAIN AS PER TREEWELL DETAIL 448. DRAINAGE RATE OF ALL MATERIALS, INCLUDING MULCH, SHOULD BE NO LESS THAN 1/4" PER HOUR AND NOT EXCEED 2" PER HOUR.
4. WHEN TREE GRATES ARE USED, LOWER ALL FEATURES SHOWN WITHIN THE TREE PIT BY 3".

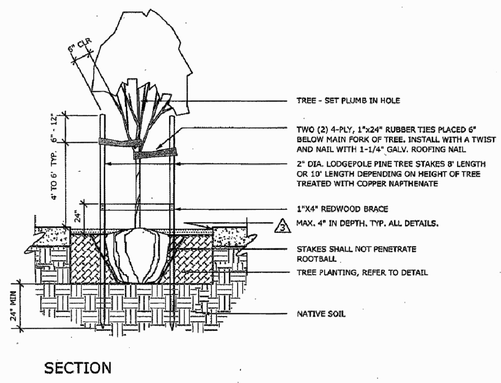
NOT TO SCALE

CITY OF MILPITAS, ENGINEERING DIVISION			
REVISION	DATE	STREET TREE PLANTING AT TREE WELLS & MEDIANS	STANDARD DRAWING NO. 448
1	1991		
2	2001		DATE : 6/15/10
3	2010	APPROVED BY: 3 PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283	SHEET 1 OF 5

10 STREET TREE PLANTING AT TREE WELLS – CITY STANDARD
SCALE: NTS



SECTION



SECTION

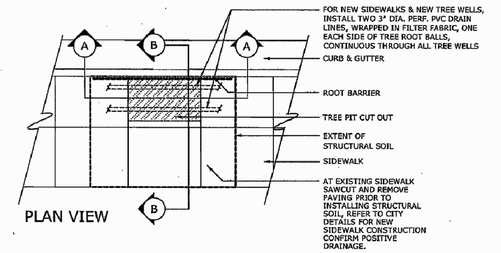
Notes:

1. PROVIDE TWO STAKES AND TIES AS SHOWN.

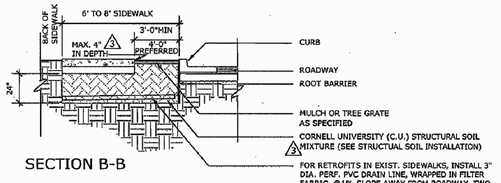
NOT TO SCALE

CITY OF MILPITAS, ENGINEERING DIVISION			
REVISION	DATE	TREE STAKING	STANDARD DRAWING NO. 448
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2	2001		DATE : 6/15/10
3	2010	APPROVED BY: 3 PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283	SHEET 2 OF 5

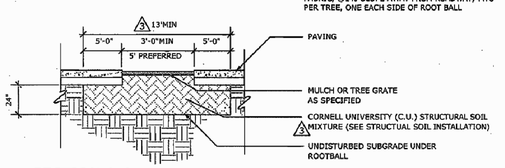
12 TREE STAKING – CITY STANDARD
SCALE: NTS



PLAN VIEW



SECTION B-B

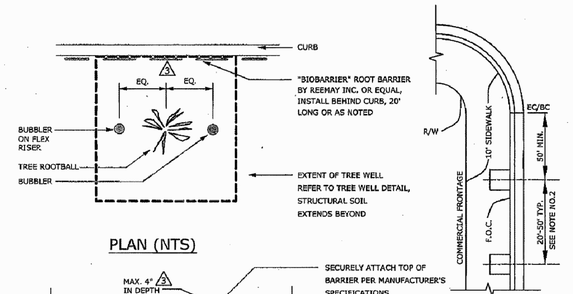


SECTION A-A

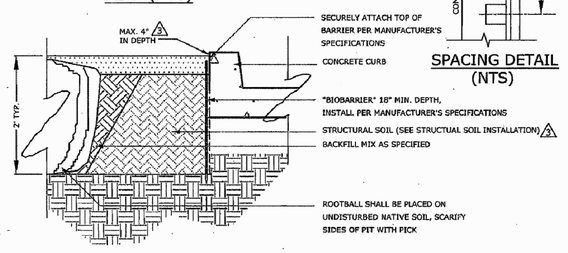
NOT TO SCALE

CITY OF MILPITAS, ENGINEERING DIVISION			
REVISION	DATE	STREET TREE PLANTING IN TREE WELL	STANDARD DRAWING NO. 448
1	1991		
2	2001		DATE : 6/15/10
3	2010	APPROVED BY: 3 PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283	SHEET 4 OF 5

2 STREET TREE PLANTING IN WELL – CITY STANDARD
SCALE: NTS



PLAN (NTS)



SPACING DETAIL (NTS)

SECTION (NTS)

Notes:

1. ROOT BARRIER IS REQUIRED WHEN THE CENTERLINE OF THE TREE IS WITHIN EIGHT FEET OF STREET CURB OR PAVING.
2. ONE STREET TREE SHALL BE PROVIDED PER RESIDENTIAL LOT PER STREET, OR AS SHOWN ON PLANS APPROVED BY THE CITY ENGINEER. SPACING WILL VARY DEPENDING ON TREE SPECIES, IN GENERAL, THE SPACING SHALL BE EQUAL TO THE MATURE CANOPY DIAMETER.

NOT TO SCALE

CITY OF MILPITAS, ENGINEERING DIVISION			
REVISION	DATE	STREET TREE PLANTING	STANDARD DRAWING NO. 448
1	1991		
2	2001		DATE : 6/15/10
3	2010	APPROVED BY: 3 PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283	SHEET 5 OF 5

4 STREET TREE PLANTING – CITY STANDARD
SCALE: NTS

brick.

ARCHITECT
brick.
1266 66th street, suite 1
emeryville, ca 94608
510.516.0167
www.brick-inc.com

CLIENT
milpitas phase 1, LP

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925.254.5422 · www.jett.land

rev	date	issue
	04.11.17	plan check response
	03.06.17	health dept. submittal
	01.17.17	bid addendum #3
	01.13.17	bid addendum #2
	01.06.17	delta 1 revision
	12.02.16	issue for bid
	11.22.16	issue for permit
	10.25.16	60% cd
	09.26.16	30% cd
	08.15.16	100% dd

REGISTERED LANDSCAPE ARCHITECT BRUCE B. JETT 3335 Exp. 05/31/18 Date 04/11/17 STATE OF CALIFORNIA

1620 south main

milpitas, california
project number: 16-123
plot date:

scale: as noted
date: 04/11/2017

PLAN CHECK RESPONSE

PLANTING DETAILS

L7.05

Appendix H

Geotechnical Report

GEOTECHNICAL INVESTIGATION FOR THE PHASE 1 ASSISTED LIVING AND CONGREGATE CARE, PUBLIC UTILITY CORRIDOR AND GRADING RECOMMENDATIONS FOR THE PHASE 2 SENIOR INDEPENDENT LIVING MILPITAS SENIOR HOUSING SOUTH MAIN STREET AT CEDAR WAY MILPITAS, CALIFORNIA

FOR
SOUTH MAIN STREET SENIOR LIFESTYLES, LLC (SMSL)
c/o MR. JOE CALLAHAN, CALLAHAN PROPERTY COMPANY
February 26, 2015

Job No. 3693.100

BERLOGAR STEVENS & ASSOCIATES

Via E-Mail and Mail

February 26, 2015
Job No. 3693.100

BERLOGAR STEVENS & ASSOCIATES

South Main Street Senior Lifestyles, LLC (SMSL)
c/o Mr. Joe Callahan
Callahan Property Company
5674 Stoneridge Drive, Suite 212
Pleasanton, California 94588

Subject: Geotechnical Investigation for the Phase 1 Assisted Living and Congregate Care, Public Utility Corridor and Grading Recommendations for the Phase 2 Senior Independent Living
Milpitas Senior Housing
South Main Street at Cedar Way
Milpitas, California

Dear Mr. Callahan:

This report presents our Design Level Geotechnical Investigation for the Phase 1 Assisted Living and Congregate Care project and public right-of-way improvements. We are also providing grading recommendations for the Phase 2 Senior Independent Living project since grading Phase 2 will be simultaneous with grading Phase 1. The approximately 3.0 acre Phase 1 site and the approximately 2.9 Phase 2 site are located on the east side of South Main Street, at the intersection with Cedar Way, as shown on Plate 1, Vicinity Map.

The Phase 1 project is a 4-story structure with a subterranean parking garage, which will have 199 apartment homes. Common areas with a living room, restaurant, bistro, indoor pool, theater, and activity rooms are planned. Entry to the basement parking garage will be a ramp located in the southeast corner of the building. Cedar Way will be extended to the east along the north side of Phase 1, and Costa Street will be located on the east side of Phase 1, both of which will be public utility corridors. Phase 2 will have 190 apartment homes in a 4-story at-grade structure with a 4-story at-grade parking structure. We anticipate that the soil from the Phase 1 basement parking garage excavation will be utilized to raise the site grades for Phases 1 and 2 as much as 4 feet. Temporary shoring up to approximately 10 feet tall is anticipated for constructing the basement parking garage.

PURPOSE AND SCOPE OF SERVICES

The purpose of this design level geotechnical investigation was to evaluate the proposed project with respect to site soil and groundwater conditions, and to develop design level geotechnical conclusions and recommendations. The scope of our services included a review of available geologic/geotechnical literature pertinent to the area and previous geotechnical reports, field exploration, laboratory testing, engineering analyses and preparation of this report. We have reviewed a prior Geotechnical Investigation prepared by Capex Engineering, Inc., dated December 11, 2005, for this project.

FIELD EXPLORATION AND LABORATORY TESTING

Our field exploration for this investigation was performed on January 20, 2015, and consisted of drilling 8 borings up to approximately 45 feet deep and 5 Cone Penetration Tests up to 50 feet deep. Five of the borings, B1 and B3 through B6, were drilled to a depth of 5 feet along the public utility corridor. Materials encountered in each boring were visually classified in the field and a log was recorded. The boring logs showing soil classification and blow counts and a Key to Boring Log Symbols are presented in Appendix A. CPT graphs are contained in Appendix B, and the boring logs from the Capex report are contained in Appendix C. Upon completion of drilling and sampling, the borings and CPTs were backfilled with neat cement grout. The locations of the borings and CPTs, as well as the Capex borings, are shown on Plate 2, Site Plan.

An open pipe piezometer was installed in boring B2 upon completion of drilling. A slotted 2-inch diameter PVC pipe was installed between 15 to 25 feet in depth, and backfilled with #3 sand. A 2 foot thick bentonite pellet seal was then constructed. The remainder of the annulus was backfilled with cement grout to the ground surface. A lockable casing was installed at the top of the piezometer.

Laboratory testing was performed on selected samples from our borings, including moisture content, dry density, Atterberg limits, sieve analysis, unconfined compressive strength, direct shear, single-point consolidation/swell, multi-point consolidation and R-Value tests. The results from the laboratory tests are contained in Appendix D.

Corrosivity testing was performed on a combined soil sample from the auger cuttings in the upper 2 feet from borings B3 and B4. These samples were delivered to CERCO Analytical, Inc. in Concord, California for corrosivity testing. The results of the corrosivity tests and a brief evaluation are included in Appendix E.

SITE CONDITIONS

SURFACE CONDITIONS

The Phase 1 and 2 sites are relatively flat, with elevations of approximately 35 feet in the southeast to 32 feet in the northwest. The site is covered with weeds and heavy brush and remnant crushed rock/concrete and gravel is strewn around the site. According to Google Earth historical photographs, the site used to contain commercial and industrial buildings and laydown/storage areas. It appears that the structures were demolished at the Phase 1 site in 2008 and Phase 2 in 2009.

SUBSURFACE CONDITIONS

The USGS Web Soil Survey shows the site is mantled by the Urban Land Elpaloalto Complex on the western half and the Urban Land Newpark Complex on the eastern half of the Phase 1 and 2 sites. These soil series are reported to contain 75% to 100% passing the No. 200 sieve, with Liquid Limits between 33 and 54, and Plasticity Indices between 13 and 29. These soil series are a lean to fat clay, and can be highly expansive. The saturated hydraulic conductivity is reported

to range from 0.2 inches/hour to 1 inches/hour; we expect the hydraulic conductivity of the predominantly clayey soils at the site to fall into the lower end of the range.

Much of the site is mantled with up to 2 feet of fill or disturbed soil from the demolition activities. Deeper fill is likely in former foundation locations. It is uncertain if abandoned utilities have been removed or left in place. The upper 5 feet of soil was found to be silty clay to clayey silt, with some silty sand. The underlying soil to a depth of approximately 25 feet consists of light gray brown to dark gray brown, stiff to very stiff, moist to saturated, silty to fat clay. The soils were found to be light gray brown to gray brown, stiff to very stiff, silty clay to sandy silt to a depth of 50 feet. Very dense sandy soil was encountered in CPT 2 and CPT 3 and boring B7 between approximately 45 to 50 feet in depth. For a more detailed description of the subsurface conditions encountered, please refer to the current and previous boring logs and CPT graphs presented in the appendices.

GROUNDWATER

Water level readings were obtained from the open pipe piezometer on January 28th and February 11th, 2015. The depth to the water level in the piezometer was 10.4 feet in January and 10.2 feet in February.

GEOLOGIC HAZARDS

SURFACE FAULT RUPTURE

The site is not located within a designated State of California Alquist-Priolo Earthquake Fault Zone for active faults. It is our opinion that the potential for fault rupture at the site appears to be very low.

SEISMIC SHAKING

The site is located in a region of high seismicity. As with all sites in the San Francisco Bay Area, the site should be expected to experience at least one moderate to large earthquake during the lifespan of the development. The site is located at approximately 37.4078 degrees north latitude and 121.9019 degrees west longitude. According to the USGS website, the 2013 CBC peak ground acceleration (PGA) is 0.60 g.

LIQUEFACTION

Liquefaction is the temporary transformation of saturated, loose to medium dense sandy soils into a viscous liquid during strong ground shaking from a major earthquake. Some silty and clayey soils have recently been classified as being susceptible to liquefaction phenomena. The site is located within a California designated Seismic Hazard Zone for Liquefaction, and a quantitative evaluation is required to assess the liquefaction hazards at the site.

Liquefaction analyses were performed for the CPT's using CLiq, v1.7.1.4.34, a Geologismiki geotechnical software, using the CPT-based evaluation procedures by Robertson (2010) and

Boulanger (2008). The following input parameters were incorporated in our liquefaction analyses:

- Earthquake Magnitude (Mw = 6.8): This earthquake magnitude represents the most probable earthquake magnitude obtained from the USGS Interactive Deaggregation website for a 10 percent probability of exceedance in 50 years.
- Peak Ground Acceleration (PGA = 0.60g): This PGA value is from the 2013 CBC.
- Groundwater Table: The groundwater level in the piezometers has been measured to be approximately 10 feet deep. The groundwater table used in the analysis was based on an assumed historically-high groundwater level at a depth of approximately 5 feet.

We conclude that there is a potential for liquefaction to occur within the occasional interbedded layers of loose to medium dense sandy soils below the groundwater table. The primary effect of liquefaction at this site is expected to be ground surface settlement due to reconsolidation of the liquefied layers. Settlement calculations due to liquefaction indicate that the potential liquefaction-induced settlement could range from zero inches to approximately 2½ inches. However, it is our opinion that the site could experience approximately 1 inch of total liquefaction induced settlement and 1 inch of differential settlement in an approximately 100-foot span. Surface manifestation from liquefaction (such as sand boils, ground fissures, etc.) is not anticipated since the more sandy soils are at depth.

LATERAL SPREADING

Lateral spreading is lateral movement of soil towards a free face (such as an incised river channel or open body of water) during earthquakes. There are no such features in the immediate vicinity of the site. Therefore, the risk of lateral spreading to occur at the site is low.

SEISMIC COMPRESSION

Settlement of the ground surface can also occur as a result of seismic compression (i.e. "shakedown" when loose, unsaturated sandy soils are subjected to strong seismic shaking). The unsaturated soils encountered in the borings and CPTs were predominantly stiff to very stiff clayey soils. Therefore, the potential for significant ground settlement due to seismic compression at the site is low.

CORROSIVE SOILS

We obtained a bulk soil sample from in the upper 2 feet from borings B2 and B3 for corrosivity testing. The corrosivity test results are included in Appendix E and were performed by CERCO Analytical, Inc. of Concord, California. The soil was classified as "corrosive to the steel" and the chloride and sulfate ion concentrations were found to insufficient to damage reinforced concrete in contact with the ground. The corrosivity test results should be transmitted to the structural engineer and underground utility consultants.

CONCLUSIONS AND RECOMMENDATIONS

GENERAL

It is our opinion that the proposed Phase 1 Senior Lifestyles Project and grading for the adjacent Phase 2 site is generally feasible from a geotechnical engineering standpoint, provided that the recommendations in this geotechnical investigation are incorporated into the project design and construction. The primary geotechnical considerations for this project are shallow groundwater, temporary shoring, disturbed ground from past demolition, and expansive soils.

SHALLOW GROUNDWATER

The water level in the piezometer at the site indicates groundwater is approximately 10 feet deep. The Bay Area is in its fourth year of a drought, and higher groundwater levels could occur once the drought ends. High groundwater could impact the construction of the subterranean parking garage and deep underground utilities such as storm drain and sanitary sewer lines. Dewatering may be required during construction. Additionally, sump pits will likely be needed at the subterranean parking garage level and the bottom of elevator shafts.

The soil from the Phase 1 parking garage excavation is anticipated to be wet and saturated in the bottom half of the excavation. The grading contractor should be informed that this material will need to be processed to dry the material. Another option would be to treat the soil with lime.

TEMPORARY SHORING

The subterranean garage and footing excavations will be approximately 10 feet below the ground surface. It is our understanding that temporary shoring may be required along Main Street to support the utility easement along the sidewalk. Temporary shoring lateral earth pressures are provided in Plate 4, Temporary Shoring Lateral Earth Pressures. Lateral earth pressures are the sum of lateral soil pressure, hydrostatic pressure, and surcharge loads. Lateral soil pressure is estimated to be 38H psf. Currently, the groundwater level is 10 feet deep. Piezometer readings should be obtained periodically to determine the highest water levels for use in temporary shoring design. A minimum of 300 psf uniform surcharge load should be utilized.

PAST DEMOLITION

Structures on the Phase 1 and 2 sites were demolished in 2008 and 2009. Some buried structures, such as foundations or abandoned underground utilities, could be present. Additionally, we anticipate that the surficial soils to be disturbed from demolition activities. The upper 2 feet of existing ground should be reworked (1 foot overexcavation and 1 foot scarify) in building pad and fill areas.

EXPANSIVE SOILS

The upper 8 feet of soils were found to have low to moderate expansion potential. However, highly expansive soils were encountered below a depth of approximately 8 feet. Special handling of the more expansive clays should be considered, such as offhaul or lime treatment. The foundations and lower portions of the cut for the subterranean garage will likely encounter

expansive soils. The exposed basement subgrade and cut slopes should not be permitted to dry out in the summer months. The garage footing bottom may need to be presoaked prior to placing concrete.

SITE PREPARATION AND GRADING

Our general site preparation and grading recommendations for both Phase 1 and 2 are as follows:

1. Existing structures were demolished in 2008 and 2009. However, remnant abandoned utilities and buried structures may be present, which should be removed from the site.
2. The surficial soil should be stripped and may be used as non-structural fill in landscaping areas. The amount of stripping will be evaluated just before grading commences.
3. In engineered fill and building pad areas, the exposed ground surface following stripping and clearing operations should be overexcavated 1 foot, and the overexcavation bottom should be scarified to a depth of 12 inches, properly moisture conditioned and compacted in accordance with the moisture and compaction requirements below. The basement garage subgrade does not have to be reworked.
    a. Expansive soils (PI more than 20) should be brought to a moisture content of at least 7 percent above the optimum moisture content and compacted to between 85 and 90 percent relative compaction.
    b. Soils with low expansion potential (PI of 20 or less) should be moisture conditioned to at least 5 percent above the optimum moisture content and compacted to at least 90 percent relative compaction.

    Relative compaction refers to the in-place dry density of soil expressed as a percentage of the maximum dry density determined by ASTM D1557 compaction test procedure. Optimum moisture is the water content (percentage by dry weight) corresponding to the maximum dry density.
4. If zones of soft or saturated soils are encountered during excavation and compaction, deeper excavations may be required to expose firm soils. This should be determined in the field by the soils engineer.
5. Fill should be properly moisture conditioned and placed in thin lifts (normally 6 to 8 inches depending on the compaction equipment) and compacted as discussed above.
6. Observation and soil density tests should be performed during grading to assist the contractor in obtaining the required degree of compaction and proper moisture content. Where the compaction is outside the range required, additional effort and adjustments to the moisture content should be made until the specified compaction and moisture conditioning is achieved.
7. The soils engineer should be notified at least 48 hours prior to any grading operations. The procedure and methods of grading may then be discussed between the contractor and the soils engineer.
8. The on-site soils are generally suitable for engineered fill, provided they are free of debris, significant vegetation, rocks greater than 4 inches in largest dimension and other deleterious matter.

9. Import fill should contain no deleterious matter and rocks greater than 4 inches in largest dimension, and should have a PI less than 20. Fill materials should be subject to the evaluation of the soil engineer prior to their use. Import fill should also be cleared of toxic or hazardous materials prior to importing to the site.

CALIFORNIA BUILDING CODE (CBC) SEISMIC DESIGN PARAMETERS

The subject is at approximately 37.4078 degrees North latitude and 121.9019 degrees West longitude. The peak ground acceleration (PGA) according to the 2013 CBC is 0.60 g. We are providing the following 2013 California Building Code seismic design criteria using the USGS Seismic Design Maps program, Version 3.1.0 dated July 11, 2013.

Mapped Spectral Acceleration for Short Periods, S_s	1.556 g
Mapped Spectral Acceleration for 1-Second Period, S_1	0.613 g
Site Class	D
Site Coefficient F_a (for Site Class D)	1.0
Site Coefficient F_v (for Site Class D)	1.5
Acceleration Parameter S_{MS} (adjusted for Site Class D)	1.556 g
Acceleration Parameter, S_{M1} (adjusted for Site Class D)	0.919 g
Acceleration Parameter, S_{DS}(adjusted for Site Class D)	1.037 g
Acceleration Parameter, S_{D1} (adjusted for Site Class D)	0.613 g

FOUNDATION FOR THE PHASE 1 STRUCTURE WITH A SUBTERRANEAN PARKING GARAGE

The Phase 1 structure will be founded at a depth of approximately 10 feet and should be supported on a reinforced concrete mat foundation. The reinforced concrete mat foundation should be underlain by at least 8 inches of Class 2 aggregate baserock. The following are recommendations for reinforced concrete mat foundations:

Allowable Bearing Capacity (DL + LL) – (may be increased by one-third for seismic and wind loads at the discretion of the structural engineer)	1,500 psf 2,000 psf localized bearing capacity at perimeter
Modulus of Subgrade Reaction	50 pci
Allowable Base Friction Coefficient	0.25
Allowable Lateral Passive Resistance for foundation and subterranean retaining walls.	300 psf per foot of depth Maximum 2,000 psf

The foundation and subterranean retaining walls should be designed for a 5 foot deep groundwater level, including water proofing, buoyancy, and a sump pit system. We estimate that the total settlement could be on the order of 2 inches, with much of the settlement occurring during construction.

FOUNDATIONS FOR AT-GRADE STRUCTURES

Minor at-grade structures, such as trash enclosures, canopies, or structures attached to the Phase 1 building, can be supported on shallow strip and isolated column foundations. Shallow foundations for at-grade structures that are within approximately 15 to 20 feet from the Phase 1

building could impart a lateral load on the subterranean parking garage walls. An option for at-grade structures proximal to the subterranean retaining walls could be drilled, reinforced concrete piers (discuss below). The drilled piers would need to be at least 10 feet deep so that lateral loads are not imposed on the subterranean retaining walls. This should be evaluated once more detailed plans are available. The following are recommendations for at-grade shallow foundations.

Allowable Bearing Capacity (DL + LL) (may be increased by one-third for seismic and wind loads at the discretion of the structural engineer)	2,500 psf
Allowable Passive Equivalent Fluid Pressure (neglect the upper foot) *	300 pcf
Allowable Base Friction Coefficient *	0.25
Minimum Footing Depth	2 feet

* no reduction is required when combining passive resistance and friction

It is recommended that the footing excavations be observed by the geotechnical engineer prior to placement of rebar in the footings. The footing bottom conditions can be evaluated at that time. The soil in the footings should not be permitted to dry out prior to concrete placement. The foundation excavations may need to be moistened regularly during the hot summer months to prevent drying of the expansive soils in the footing excavation. Concrete for footings should be placed against firm on-site soils. The estimated settlements for shallow foundations designed and constructed according to our recommendations are estimated to be about 1 inch total and ¾ inch differential in an approximately 50-foot span.

DRILLED PIER FOUNDATIONS

Drilled pier foundations can be utilized to support canopies, light poles, and similar structures. If drilled pier foundations are used adjacent to the subterranean retaining walls, the piers should be at least 10 feet deep. Recommendations for drilled, reinforced concrete pier foundations follow:

Allowable Skin Friction – Vertically Down (may be increased by 1/3 for seismic and wind loads; neglect the upper 2 feet in calculating pier capacity)	400 psf
Allowable Skin Friction – Uplift (may be increased by 1/3 for seismic and wind loads; neglect the upper 2 feet in calculating pier capacity)	250 psf
Passive Equivalent Fluid Pressure (neglect the upper 2 feet in calculating the lateral capacity)	350 pcf
Minimum Pier Diameter	8 inches
Minimum Pier Spacing (center to center)	At least 3 pier diameters apart

The piers should be drilled and poured on the same day to prevent the soils exposed in the pier holes from drying out significantly. If the drilled pier holes are to be left open overnight for production purposes, the drilled pier holes should be covered; however, the potential for caving increases with time. If significant water (more than 6 inches) is encountered at the bottom of the pier holes, the water should be removed prior to concrete placement.

EXTERIOR CONCRETE FLATWORK

Exterior flatwork should be underlain by at least 4 inches of Class 2 aggregate base compacted to at least 90 percent relative compaction. The subgrade should be presoaked to at least 5 percent above optimum moisture content to a depth of at least 12 inches prior to placing the Class 2 AB. Construction and expansion joints should be considered by the designer to allow for concrete shrinkage and differential movement of soils.

UTILITY TRENCH EXCAVATION AND BACKFILL

Excavations should conform to applicable State and Federal industrial safety requirements. Where trench excavations are more than 5 feet deep, they should be sloped and/or shored. Trench walls should be sloped no steeper than 1½ horizontal to 1 vertical (1½ H:1V) in dry granular soils, and no steeper than 1H:1V in dry cohesive soils. Flatter trench slopes may be required if seepage is encountered during construction or if exposed soil conditions differ from those encountered by the test borings. If sloped trench walls cannot be excavated due to site constraints, shoring should be provided to ensure trench stability and safety. Shoring design parameters are provided above and summarized on Plate 4.

Materials quality, placement procedures and compaction operations for utility pipe bedding and shading materials should meet applicable agency requirements. Utility trench backfill above the shading materials may consist of native soils, processed to remove rubble, rock fragments over 4 inches in largest dimension, rubbish, vegetation and other undesirable substances. Backfill materials should be placed in level lifts about 6 to 8 inches in loose thickness, moisture conditioned and mechanically compacted according to the requirements contained in the *Site Preparation and Grading* section. No jetting is permissible on this project.

We have installed a piezometer at the site, and shallow groundwater has been recorded averaging approximately 10 feet deep. We will continue monitoring the water level in the piezometer, and can provide piezometer wall levels upon request. Deep underground utilities, such as sanitary sewer and storm drain, will likely be impacted by shallow groundwater conditions. Trenches more than approximately 8 feet deep will likely encounter soft and wet soil conditions, and trenches more than 10 feet deep could encounter groundwater.

RETAINING WALLS

We recommend that proposed retaining walls be designed using the following earth pressures and foundation design criteria. Retaining walls for the subterranean parking garage can be designed as part of the reinforced concrete mat foundation above.

At-Rest Condition – Subterranean Parking Garage Retaining Walls

Equivalent Fluid Pressure, level backfill conditions	60 pcf
Seismic Load for retaining walls over 6 feet tall, Equivalent Fluid Pressure	40H pcf
Minimum Uniform Surcharge Load	300 psf on the ground surface at the top of the retaining wall
Hydrostatic load, assume groundwater is 5 feet above garage floor slab	60 pcf

Active Condition – At-Grade Cantilever Retaining Walls

Equivalent Fluid Pressure, level backfill conditions	45 pcf
Seismic Load for retaining walls over 6 feet tall, Equivalent Fluid Pressure	22H pcf

At-Grade Retaining Wall Foundations

Allowable Bearing Capacity (DL + LL) (may be increased by one-third for seismic and wind loads at the discretion of the structural engineer)	2,500 psf
Allowable Passive Equivalent Fluid Pressure (neglect the upper 2 feet) *	300 pcf
Allowable Base Friction Coefficient *	0.25
Minimum Footing Depth	2 feet

* no reduction is required when combining passive resistance and friction

AT-GRADE RETAINING WALL BACKDRAINS

The recommended lateral pressures on the at-grade retaining walls assume drained conditions except for the subterranean parking garage walls. To prevent hydrostatic pressure build-up, the retaining walls should be provided with permanent backdrains. The backdrain should consist of a vertical blanket of Caltrans Class 2 Permeable Material and a 4-inch diameter perforated PVC pipe (SDR 35). The permeable material blanket should be at least 12 inches thick and be placed from the base of the retaining wall to about 1 foot below the finished grade of the top of the retaining wall. The perforated pipe should have two rows of holes and be placed face down near the bottom of the wall to carry collected water to a suitable gravity discharge. For MSE walls, the subdrain pipes should be set at the level of the base of the gravel pad and for DSM walls, the top of the pipes should be below the top of footing.

PAVEMENT RECOMMENDATIONS

The following are recommended structural pavement sections. We performed two R-Value tests on soil samples collected at the site. The surficial soils were found to have R-Values of 8 and 13. Our pavement analyses are based upon an R-value of 5 for the subgrade soil, the Caltrans Design Method for Flexible Pavement, and traffic indices (TI), which are indications of load frequency and intensity.

Traffic Index	AC (in)	Class 2 AB (in)	Total (in)
TI=4.5	3	8	11
TI=5	3	10	13
TI=6	3.5	13	16.5
TI=7	4	15	19
TI=8	5	17	22
TI=9	6	20	26

Concrete pavement should be at least 6 inches thick and supported on a minimum of 8 inches of Class 2 aggregate base. Concrete pavement supporting heavy trucks, aprons around trash enclosures, and loading docks should be at least 8 inches thick, reinforced, and supported on at least 12 inches of Class 2 aggregate base.

SUBGRADE AND AGGREGATE BASE

Prior to subgrade preparation, utility trench backfill should be properly placed and compacted. Subgrade soils for asphalt concrete pavement should be rolled to at least 95 percent relative compaction to provide a smooth, unyielding surface. Subgrade soils should be maintained in a moist and compacted condition until covered with the complete pavement section.

Class 2 aggregate base should conform to the requirements in Section 26, Caltrans Standard Specifications. The aggregate base should be placed in thin lifts in a manner to prevent segregation, uniformly moisture conditioned, and compacted to at least 95 percent relative compaction to provide a smooth, unyielding surface.

PAVEMENT DRAINAGE

A pavement edge drain should be constructed under the curb and gutter as shown on Plate 3, Pavement Edge Drain. This edge drain will drain water that may collect and saturate the AB, which could cause premature pavement failure. The pavement edge drains should be installed on the downhill side of sloped or crowned streets; the geotechnical and civil engineers should review pavement edge drain locations during design.

ADDITIONAL SOIL ENGINEERING SERVICES

Prior to construction, our firm should be provided the opportunity to review the plans and specifications to determine if the recommendations of this report have been implemented in those documents. We would appreciate the opportunity to meet with the contractors prior to the start of site grading, retaining wall backfilling, underground utility installation and foundation and pavement construction to discuss the procedures and methods of construction. This can facilitate the performance of the construction operation and minimize possible misunderstanding and construction delays.

To a degree, the performance of the proposed project is dependent on the procedures and quality of the construction. Therefore, we should provide observations of the contractor's procedures and the exposed soil conditions, and field and laboratory testing during site preparation and grading, placement and compaction of fill, retaining wall backfilling, underground utility installation, and foundation and pavement construction. These observations will allow us to check the contractor's work for conformance with the intent of our recommendations and to observe any unanticipated soil conditions that could require modification of our recommendations.

LIMITATIONS

The conclusions and recommendations of this report are based upon the information provided to us regarding the proposed project, subsurface conditions encountered at the field exploration locations, and professional judgment. This study has been conducted in accordance with currently accepted standards of geotechnical engineering practice; no other warranty is expressed or implied.

The field exploration locations were determined by pacing from existing surface features and should be considered approximate only. Site conditions described in the text are those existing at the time of our field exploration in January 2015, and are not necessarily representative of such conditions at other locations and times.

The boring logs and CPT graphs show subsurface conditions at the locations and on the date indicated. It is not warranted that they are representative of such conditions elsewhere or at other times. In the event that changes in the nature, design or location of the proposed project are planned or if subsurface conditions differ from those described in this report, then the conclusions and recommendations in this report shall be considered invalid, unless the changes are reviewed and the conclusions and recommendations modified or approved in writing.

Respectfully submitted,

BERLOGAR STEVENS & ASSOCIATES



William R. Stevens
Principal Engineer
GE 2339

Frank Berlogar

WRS/FB:jmo

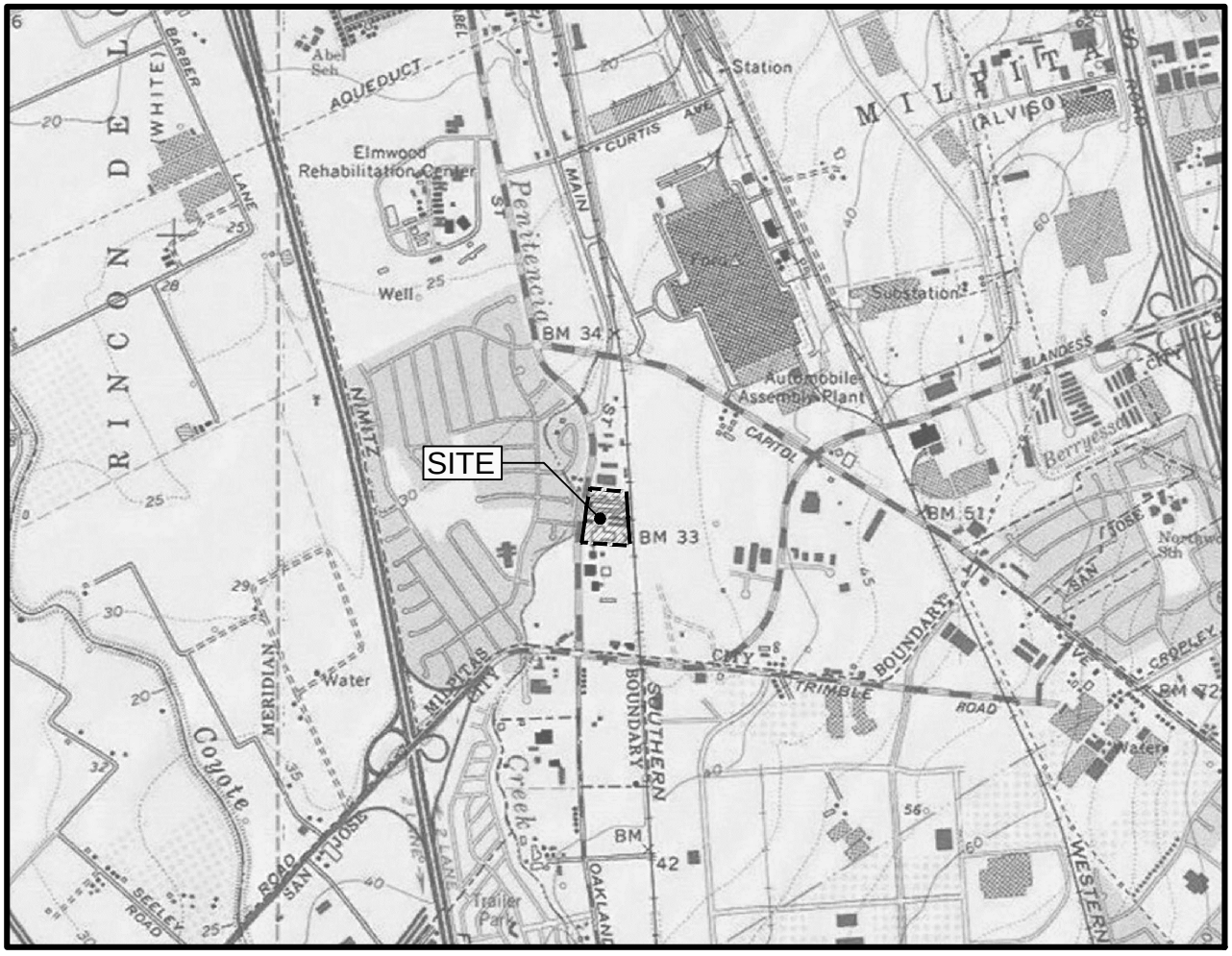
Attachments:

Plate 1 – Vicinity Map
Plate 2 – Site Plan
Plate 3 – Pavement Edge Drain
Plate 4 – Temporary Shoring Design Criteria
Appendix A – Boring Logs and Key to the Boring Logs
Appendix B – CPT Graphs
Appendix C – Boring Logs, Capex 2005
Appendix D – Laboratory Test Results
Appendix E – Corrosivity Test Results
Appendix F – Liquefaction Analyses

Copies: Addressee (3)
James Burns (1)

U:\@@@Public\1-Pleasanton\3693-Sen Lifestyles\Des Lvl Geot Inv Milp Sen Lifestyles - 27350.docx

JOB NUMBER: 3693.100 DATE: 12-29-14 BY: CC



0 2000'

1"=2000'

VICINITY MAP

MILPITAS SENIOR HOUSING

SOUTH MAIN STREET

MILPITAS, CALIFORNIA

FOR

SOUTH MAIN STREET SENIOR LIFESTYLES, LLC

BASE: PORTION OF U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE, MILPITAS, CALIFORNIA, AT A SCALE OF 1:24,000.

PLATE 1



N

0 60

1"=60'

EXPLANATION

- PROJECT BOUNDARY
- B-8 — BORING LOCATION
- CPT-5 — CPT LOCATION
- B-3 — BORING LOCATION (CAPEX ENGINEERING 12-05)

NOTE:
PIEZOMETER INSTALLED IN BORING B-2. SLOTTED PIPE BETWEEN 15-25 FEET

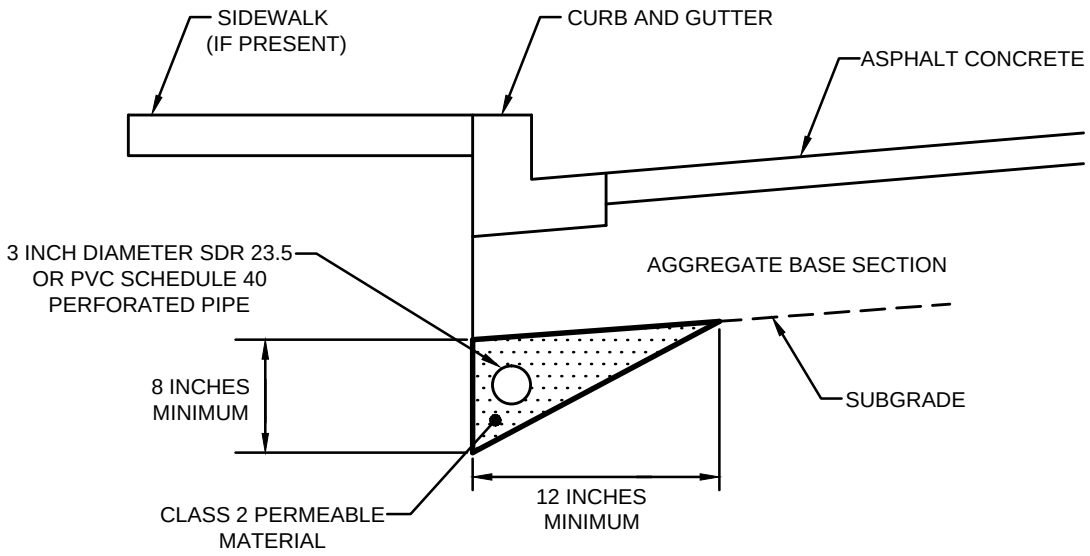
SITE PLAN

MILPITAS SENIOR HOUSING

SOUTH MAIN STREET
MILPITAS, CALIFORNIA
FOR
SOUTH MAIN STREET
SENIOR LIFESTYLES, LLC

Berlogar Stevens & Associates
SOIL ENGINEERS * ENGINEERING GEOLOGISTS

DRAWN BY: CC
DATE: 2-11-15
JOB NUMBER: 3693.100



DRAWN BY: CC

DATE: 2-11-15

JOB NUMBER: 3693.100

NOTES:

1. PERFORATED PIPE TO BE SURROUNDED BY AT LEAST 2 INCHES OF CLASS 2 PERMEABLE MATERIAL.

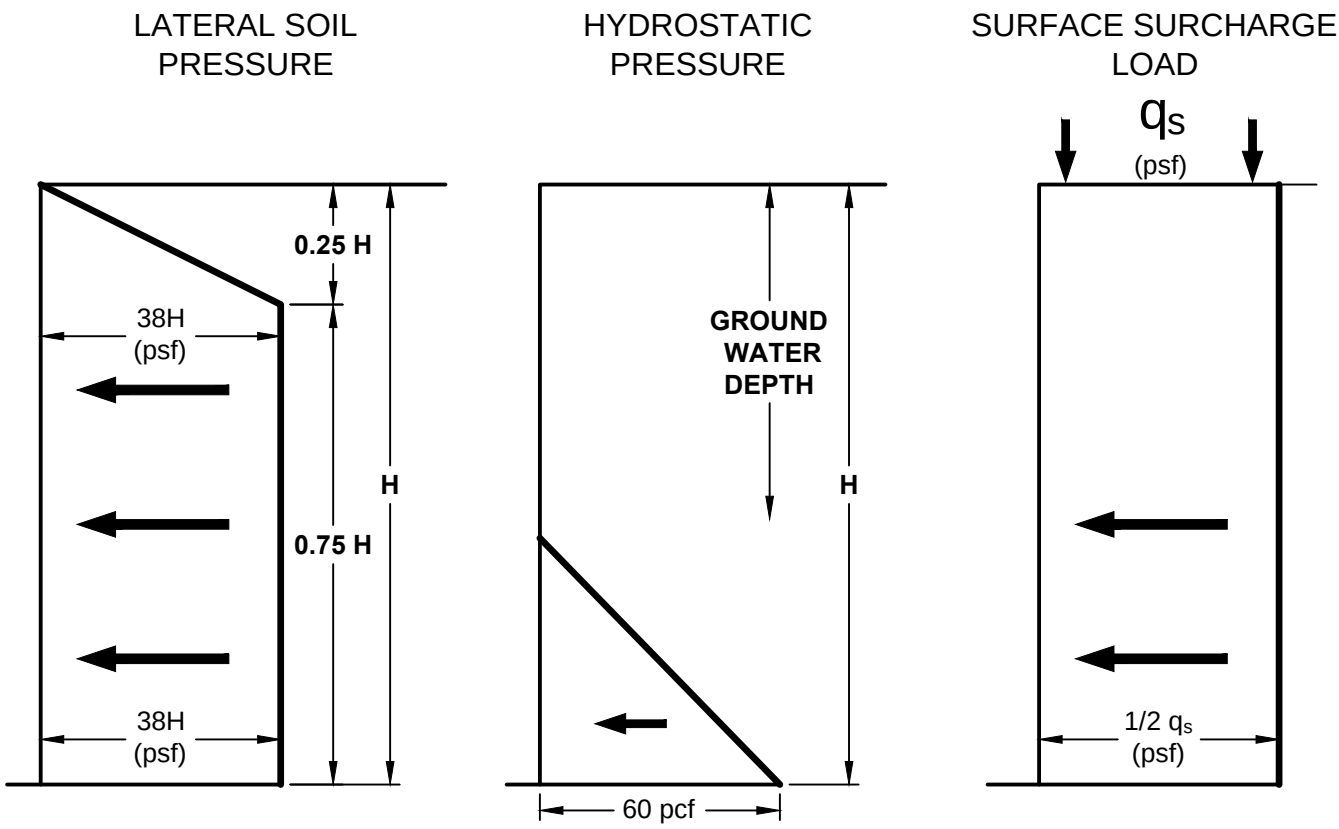
2. PERFORATED PIPE TO DISCHARGE INTO CATCH BASIN/DRAIN INLET.

3. PERFORATED PIPE TO BE LOCATED BELOW EXISTING SHALLOW UNDERGROUND UTILITIES WHERE THEY CROSS.

4. FOR CROWNED STREETS, PAVEMENT EDGE DRAIN TO BE INSTALLED ON BOTH SIDES OF STREET. FOR FIXED CROSS SLOPE STREETS, PAVEMENT EDGE DRAIN TO BE INSTALLED ON LOW SIDE OF STREET.

SCALE N.T.S.

PAVEMENT EDGE DRAIN



NOTES:

1. STIFF SILTY CLAY, Φ=16-20°, COHESION=200 to 400 psf, UNIT WEIGHT OF 110 pcf.
2. CURRENTLY GROUNDWATER IS 10 FEET DEEP. PIEZOMETER WATER LEVELS WILL CONTINUE TO BE TAKEN. MOST RECENT GROUNDWATER LEVELS SHALL BE USED FOR SHORING DESIGN.
3. INCLUDE SURCHARGE LOADS, MINIMUM q_s=300 psf UNIFORM SURFACE SURCHARGE LOAD SHOULD BE CONSIDERED.
4. EMBED BOTTOM OF SHORING TO PROVIDE ADEQUATE SAFETY FACTOR AGAINST BOTTOM HEAVE.

TEMPORARY SHORING
LATERAL EARTH PRESSURES

APPENDIX A

Boring Logs and Key to the Boring Logs

BORING LOG B-1

Job No.: 3693.100	**Client:** South Main Street Senior Lifestyles, LLC	**Elevation**: 32 feet
Job Name: Milpitas Senior Housing	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 1-20-15

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
Bulk Sample		

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS	Elevation (in feet above MSL)
			0				32
					GP	SANDY GRAVEL, gray-brown, moist, dense, fine-to coarse-grained sand, fine-to coarse gravel, occasional cobbles, trace clay, trace silt	
					CL	SILTY CLAY, dark gray-brown, moist, very stiff	
					ML	SANDY SILT, light gray-brown, moist, loose to medium dense, fine-grained sand, trace clay	
			5				27
						Boring terminated at 5 feet No groundwater encountered	
			10				22
			15				17
			20				12

BORING LOG B-2

Job No.: 3693.100	**Client:** South Main Street Senior Lifestyles, LLC	**Elevation**: 32 feet
Job Name: Milpitas Senior Housing	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 1-20-15

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
2.5-inch I.D. Split Barrel	140	30

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS	Elevation (in feet above MSL)
			0				32
					GP	SANDY GRAVEL, light gray-brown, dry to moist, medium dense, fine-to coarse-grained sand, fine gravel, PI=7	
					CL-ML	SILTY CLAY to CLAYEY SILT, dark gray-brown, moist, very stiff, trace fine-grained sand, trace fine gravel, PI=7	
-	-	25			CL	SILTY CLAY, light gray-brown, moist, medium dense, trace fine-grained sand PI=10	
-	-	21	5		ML	SANDY SILT, light gray-brown, moist, fine-grained sand, trace clay Φ=16°, C=430 psf	27
29	91	37			CL/CH	SILTY CLAY to FAT CLAY, mottled dark and light gray-brown, moist, very stiff, caliche stains (consolidated 3.1% upon loading to 2,000 psf and then swelled 0.4% upon saturation)	
			10				22
25	99	46				below 13-1/2 feet, hard	
			15				17
24	101	45			CL	SILTY CLAY, light gray-brown, moist, hard, minor caliche stains	
			20				12

BORING LOG B-2

Job No.: 3693.100	**Client:** South Main Street Senior Lifestyles, LLC	**Elevation**: 32 feet
Job Name: Milpitas Senior Housing	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 1-20-15

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
2.5-inch I.D. Split Barrel	140	30

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS	Elevation (in feet above MSL)
-	-	45	20		CL	SILTY CLAY, light gray-brown, moist, hard, minor caliche stains	12
-	-	24	25				7
						Boring terminated at 25 feet Groundwater encountered at 23 feet, rose to 16-1/2 feet	
			30				2
			35				-3
			40				-8

BORING LOG B-3

Job No.: 3693.100	**Client:** South Main Street Senior Lifestyles, LLC	**Elevation**: 33 feet
Job Name: Milpitas Senior Housing	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 1-20-15

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
Bulk Sample		

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS	Elevation (in feet above MSL)
			0		SP	GRAVELLY SAND, light gray-brown, moist, loose to medium dense, fine- to coarse-grained sand, trace clay	33
					CL	SILTY CLAY, gray-brown, moist, stiff, trace fine-to medium-grained sand	
					ML	SANDY SILT, light to medium gray-brown, moist, stiff, fine-grained sand, trace to some clay	
					SM	SILTY SAND, light gray-brown, moist, medium dense, fine-grained sand	
			5				28
						Boring terminated at 5 feet No groundwater encountered	
			10				23
			15				18
			20				13

BORING LOG B-4

Job No.: 3693.100	**Client:** South Main Street Senior Lifestyles, LLC	**Elevation**: 33 feet
Job Name: Milpitas Senior Housing	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 1-20-15

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
Bulk Sample		

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS	Elevation (in feet above MSL)
			0				33
					CL	SILTY CLAY, gray-brown, moist, stiff, trace fine gravel, fine-to medium-grained sand, occasional cobbles	
					GP	SANDY GRAVEL, gray, moist, dense, crushed rock, fine-to coarse gravel, fine-to coarse-grained sand, occasional cobbles	
					CL	SILTY CLAY, medium to dark gray-brown, moist, stiff	
					ML	SANDY SILT, light gray-brown, dry to moist, stiff, fine-grained sand, porous, slightly cemented	
			5				28
						Boring terminated at 5 feet No groundwater encountered	
			10				23
			15				18
			20				13

BORING LOG B-5

Job No.: 3693.100	**Client:** South Main Street Senior Lifestyles, LLC	**Elevation**: 33 feet
Job Name: Milpitas Senior Housing	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 1-20-15

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
Bulk Sample		

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS	Elevation (in feet above MSL)
			0				33
					ML	aggregate base approximately 3 inches SANDY SILT, medium brown, dry, loose to stiff, fine-grained sand, trace clay	
						Boring terminated at 3-1/2 feet No groundwater encountered	
			5				28
			10				23
			15				18
			20				13

BORING LOG B-6

Job No.: 3693.100	**Client:** South Main Street Senior Lifestyles, LLC	**Elevation**: 35 feet
Job Name: Milpitas Senior Housing	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 1-20-15

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
Bulk Sample		

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS	Elevation (in feet above MSL)
			0				35
						aggregate base approximately 4 inches	
					ML	SANDY SILT, light brown, dry, loose to stiff, fine-grained sand, trace clay (fill)	
					CL	SANDY CLAY, medium brown, dry, stiff, fine-grained sand, trace silt (fill)	
					ML	GRAVELLY SILT, medium brown, dry, stiff, fine-to coarse gravel, trace fine-grained sand	
			5				30
						Boring terminated at 5 feet No groundwater encountered	
			10				25
			15				20
			20				15

BORING LOG B-7

Job No.: 3693.100	**Client:** South Main Street Senior Lifestyles, LLC	**Elevation**: 32 feet
Job Name: Milpitas Senior Housing	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 1-20-15

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
2.5-inch I.D. Split Barrel	140	30
Standard Penetration Test	140	30

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS	Elevation (in feet above MSL)
			0				32
					SP/CL	GRAVELLY SAND/SANDY CLAY, concrete rubble, concrete chunks, brick and wood debris, plastic debris (fill)	
-	-	22			CL	SILTY CLAY, dark gray-brown, moist, very stiff	
-	-	18	5		CL	SILTY CLAY, light gray-brown, moist, very stiff	27
-	-	12			CL/CH	SILTY CLAY to FAT CLAY, gray-brown, moist, stiff, caliche stains,	
			10				22
25	99	39	15			below 15 feet, very stiff	17
			20				12

BORING LOG B-7

Job No.: 3693.100	**Client:** South Main Street Senior Lifestyles, LLC	**Elevation**: 32 feet
Job Name: Milpitas Senior Housing	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 1-20-15

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
2.5-inch I.D. Split Barrel	140	30
Standard Penetration Test	140	30

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS	Elevation (in feet above MSL)
			20		CL	SILTY CLAY, gray-brown, moist, very stiff, caliche stains,	12
					CL	SILTY CLAY, light gray-brown, moist, stiff	
-	-	14	25			94% Passing #200 sieve PI=19	7
			30			below 31-1/2 feet, trace fine-grained sand	2
-	-	32	35		SC	CLAYEY SAND, light gray-brown, wet, medium dense, fine-grained sand, trace silt	-3
					CL	SILTY CLAY, light gray-brown, wet, very stiff, trace fine-grained sand	
			40				-8

BORING LOG B-7

Job No.: 3693.100	**Client:** South Main Street Senior Lifestyles, LLC	**Elevation**: 32 feet
Job Name: Milpitas Senior Housing	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 1-20-15

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
2.5-inch I.D. Split Barrel	140	30
Standard Penetration Test	140	30

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS	Elevation (in feet above MSL)
			40		CL	SILTY CLAY, light gray-brown, wet, very stiff, trace fine-grained sand	-8
					SC	CLAYEY SAND, light gray-brown, wet, medium dense, fine-grained sand, trace silt	
-	-	38			SM	SILTY SAND, light gray-brown, saturated, dense, fine-to medium-grained sand	
			45			Boring terminated at 45 feet Groundwater encountered at 41-1/2 feet	-13
			50				-18
			55				-23
			60				-28

BORING LOG B-8

Job No.: 3693.100	**Client:** South Main Street Senior Lifestyles, LLC	**Elevation**: 33 feet
Job Name: Milpitas Senior Housing	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 1-20-15

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
2.5-inch I.D. Split Barrel	140	30
Standard Penetration Test	140	30

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS	Elevation (in feet above MSL)
			0				33
-	-	7	-		CL	SILTY CLAY, dark gray-brown, moist, medium stiff, trace to some fine-grained sand, light gray-brown mottling PI=7	-
-	-	4	-				-
			-		ML/CL	SANDY SILT to SANDY CLAY, light gray-brown, moist, loose to medium dense, fine-grained sand, trace clay, porous	-
-	-	23	5			100% Passing #30 sieve 76% Passing #200 sieve	28
			-		SM	SILTY SAND, light gray-brown, moist, medium dense, fine-grained sand, trace clay, porous	-
-	-	12	-		ML	SANDY SILT, light gray-brown, moist, medium dense, fine-grained sand, porous	-
			-		CL/CH	FAT to SILTY CLAY, dark gray-brown, moist, stiff to very stiff, light gray-brown mottling, occasional trace organic matter, caliche stains	-
28	90	31	10			Φ=20°, C=250 psf	23
			-				-
-	-	36	-			85% Passing #200 sieve PI=31	-
			15				18
			-				-
			-				-
			-				-
			-				-
-	-	31	20				13

BORING LOG B-8

Job No.: 3693.100	**Client:** South Main Street Senior Lifestyles, LLC	**Elevation**: 33 feet
Job Name: Milpitas Senior Housing	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 1-20-15

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
2.5-inch I.D. Split Barrel	140	30
Standard Penetration Test	140	30

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS	Elevation (in feet above MSL)
					CL/CH	FAT to SILTY CLAY, gray-brown, moist, very stiff, light gray mottling, caliche stains	
-	-	31	20				13
					CL/CH	FAT to SILTY CLAY, light gray-brown, moist to wet, medium stiff	
-	-	11	25			96% Passing #200 sieve PI=22	8
						below 28 feet, stiff	
-	-	38	30			96% Passing #200 sieve PI=31 below 31 feet, very stiff, minor caliche stains, trace fine-grained sand	3
			35		SP	GRAVELLY SAND, light brown-gray, moist to wet, very dense, fine-to coarse-grained sand, fine gravel	-2
-	-	97			CL	SILTY CLAY, light gray-brown, moist to wet, very stiff, trace fine-grained sand	
-	-	34	40				-7

BORING LOG B-8

Job No.: 3693.100	**Client:** South Main Street Senior Lifestyles, LLC	**Elevation**: 33 feet
Job Name: Milpitas Senior Housing	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 1-20-15

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
2.5-inch I.D. Split Barrel	140	30
Standard Penetration Test	140	30

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS	Elevation (in feet above MSL)
-	-	34	40		CL	SILTY CLAY, light gray-brown, moist to wet, very stiff, trace fine-grained sand	-7
					CL	SANDY CLAY, light gray-brown, moist to wet, very stiff, fine-grained sand, trace to some silt	
-	-	40			CL	SANDY CLAY, light gray-brown, moist to wet, very stiff, trace fine-grained sand, 64%Passing #200 sieve, PI=8	
			45			Boring terminated at 45 feet Groundwater encountered at 24 feet	-12
			50				-17
			55				-22
			60				-27

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			CLASSIFICATION SYMBOL	TYPICAL NAMES
COARSE GRAINED SOILS MORE THAN HALF OF THE MATERIAL IS LARGER THAN NO. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LITTLE TO NO FINES	GW	WELL GRADED GRAVELS, GRAVEL/SAND MIXTURES
			GP	POORLY GRADED GRAVELS, GRAVEL/SAND MIXTURES
		GRAVEL WITH OVER 12% FINES	GM	SILTY GRAVELS, POORLY GRADED GRAVEL/SAND/SILT MIXTURES
			GC	CLAYEY GRAVELS, POORLY GRADED GRAVEL/SAND/CLAY MIXTURES
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE TO NO FINES	SW	WELL GRADED SANDS, GRAVELLY SANDS
			SP	POORLY GRADED SANDS, GRAVELLY SANDS
		SANDS WITH OVER 12% FINES	SM	SILTY SANDS, POORLY GRADED SAND/SILT MIXTURES
			SC	CLAYEY SANDS, POORLY GRADED SAND/CLAY MIXTURES
FINE GRAINED SOILS MORE THAN HALF OF THE MATERIAL IS SMALLER THAN NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			Pt	PEAT AND OTHER HIGHLY ORGANIC SILTS

KEY TO BORING LOG SYMBOLS

Depth in Feet	Moisture Content (%)	Dry Unit Weight (pcf)	Blows per foot	Unified Soil Classification System	
					Bulk Sample
					2.5-inch I.D. Split Barrel Sample
					2.8-inch I.D. Shelby Tube Sample
					No Sample recovered
					Standard Penetration Test interval
					Well-defined stratum change
					Gradual stratum change
					Interpreted stratum change
					Water level encountered while drilling boring
					Stabilized water level in boring after drilling

Note: Soils described as dry, moist, and wet are estimated to be dry of optimum, near optimum, and more wet than optimum moisture content, respectively. Saturated soils are estimated to be within areas of free groundwater.

BY: CC

DATE: 2-11-15

JOB NUMBER: 3693.100

APPENDIX B

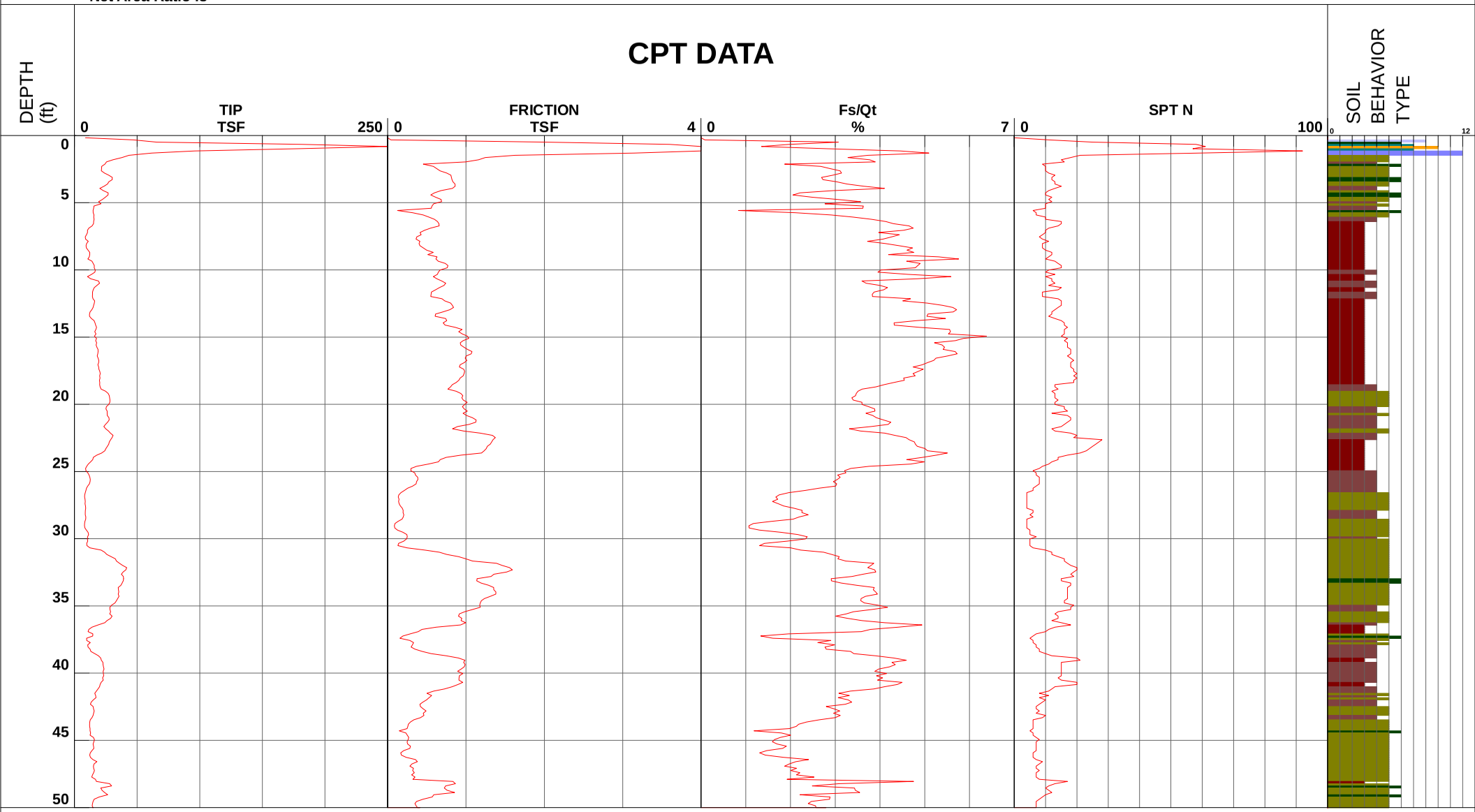
CPT Graphs

Berlogar Stevens

Project	Milpitas Senior Housing	Operator	CB-MM	Filename	SDF(124).cpt
Job Number	3693.100	Cone Number	DDG1268	GPS	
Hole Number	CPT-01	Date and Time	1/20/2015 10:52:05 AM	Maximum Depth	50.52 ft
EST GW Depth During Test		14.00 ft			

Net Area Ratio .8

CPT DATA



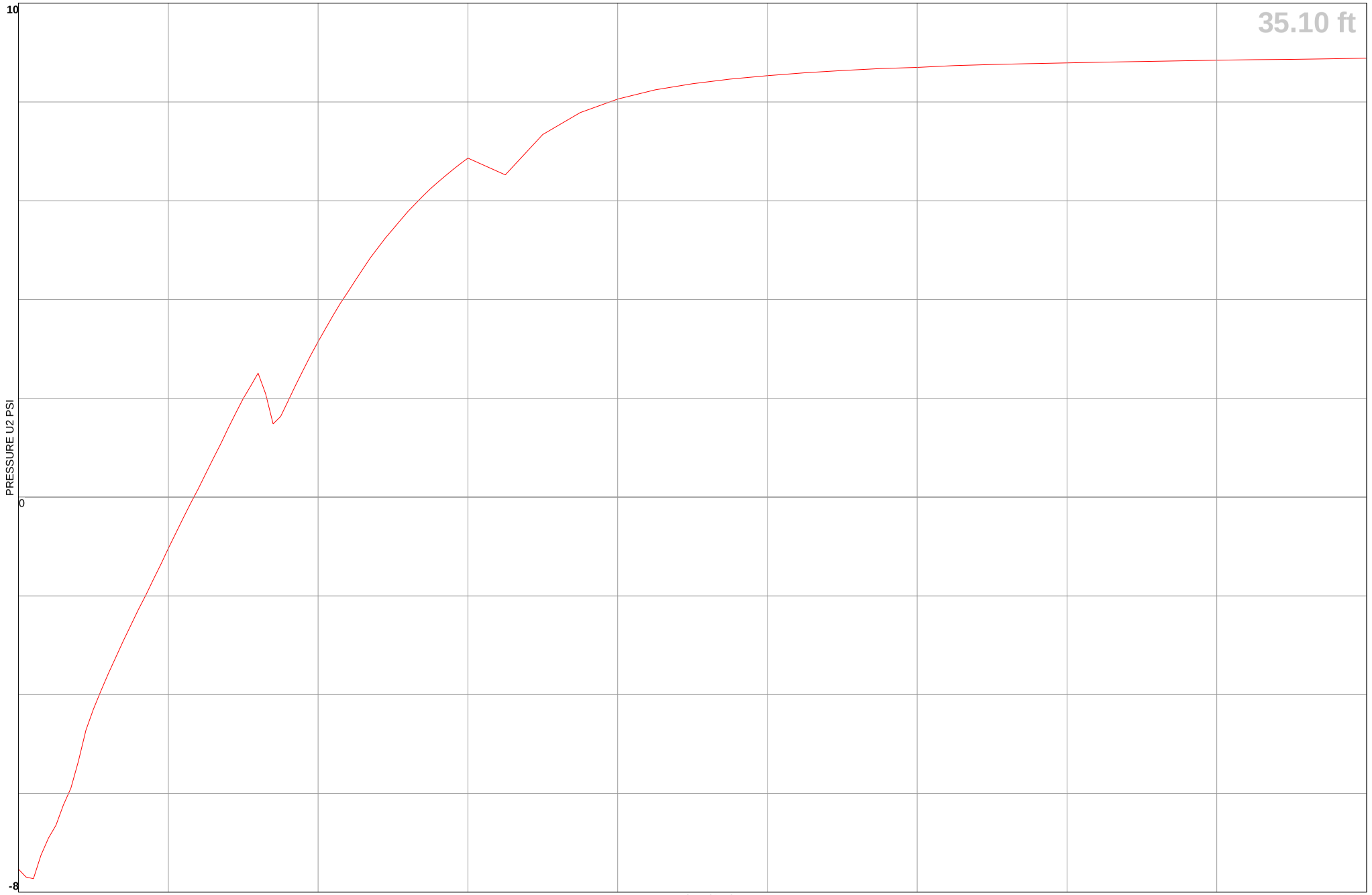
1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

Cone Size 10cm squared

S*Soil behavior type and SPT based on data from UBC-1983

Berlogar Stevens

Location	Milpitas Senior Housing	Operator	CB-MM	
Job Number	3693.100	Cone Number	DDG1268	GPS
Hole Number	CPT-02	Date and Time	1/20/2015 8:34:13 AM	
Equilized Pressure	8.8	EST GW Depth During Test	14.6	

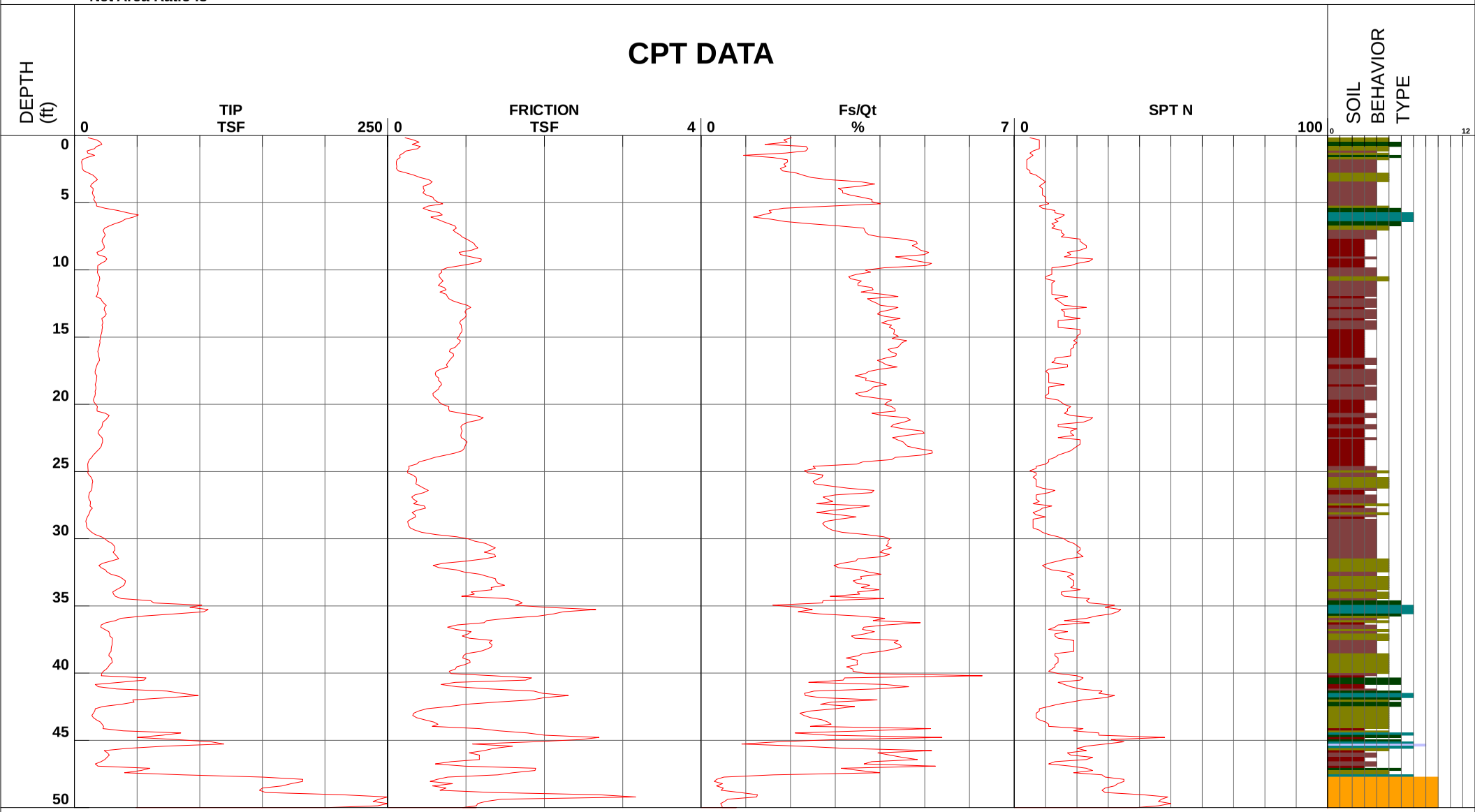


Berlogar Stevens

Project	Milpitas Senior Housing	Operator	CB-MM	Filename	SDF(121).cpt
Job Number	3693.100	Cone Number	DDG1268	GPS	
Hole Number	CPT-02	Date and Time	1/20/2015 8:34:13 AM	Maximum Depth	50.52 ft
EST GW Depth During Test	14.00 ft				

Net Area Ratio .8

CPT DATA



1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

Cone Size 10cm squared

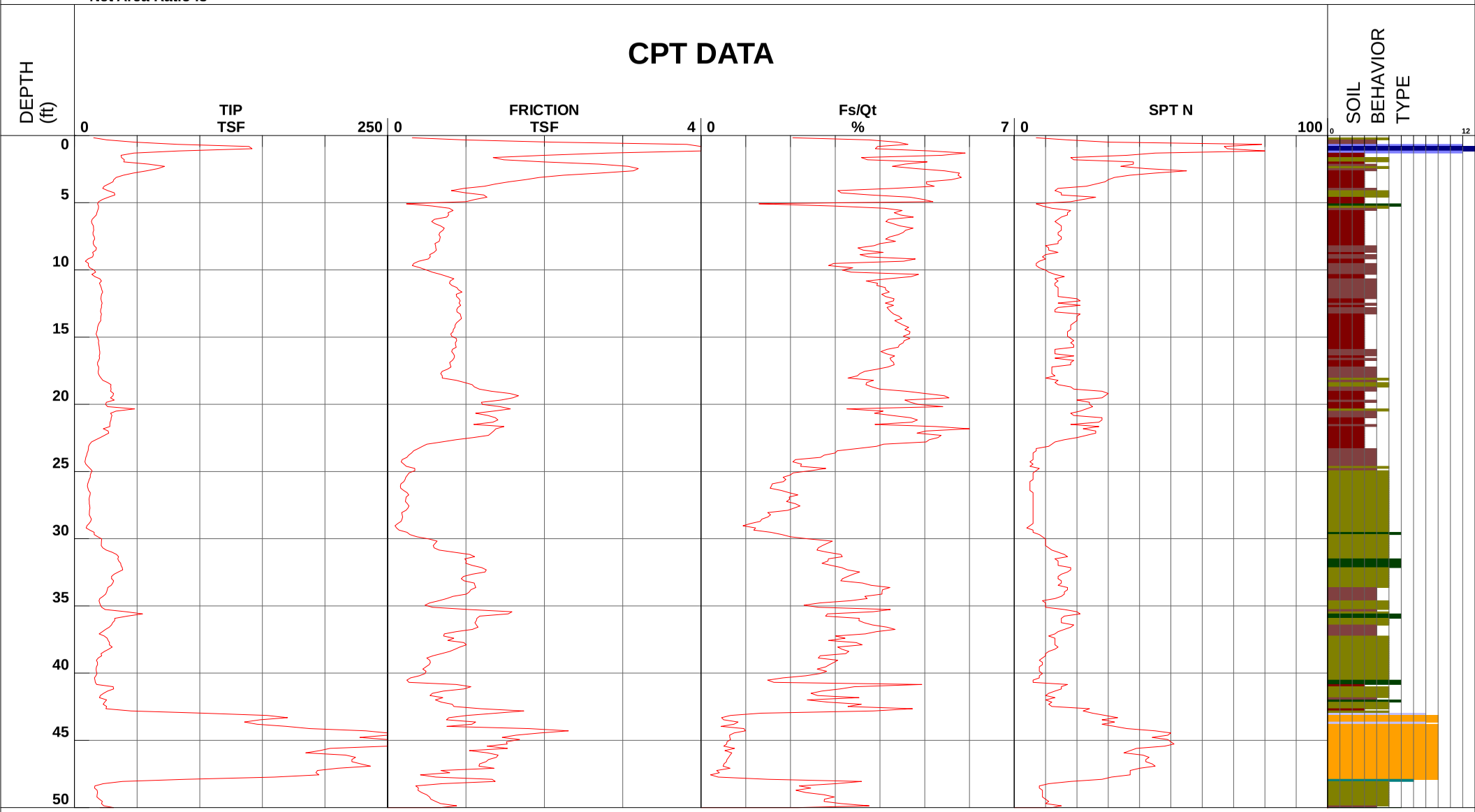
S*Soil behavior type and SPT based on data from UBC-1983

Berlogar Stevens

Project	Milpitas Senior Housing	Operator	CB-MM	Filename	SDF(122).cpt
Job Number	3693.100	Cone Number	DDG1268	GPS	
Hole Number	CPT-03	Date and Time	1/20/2015 9:19:25 AM	Maximum Depth	50.36 ft
EST GW Depth During Test		14.00 ft			

Net Area Ratio .8

CPT DATA



1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

Cone Size 10cm squared

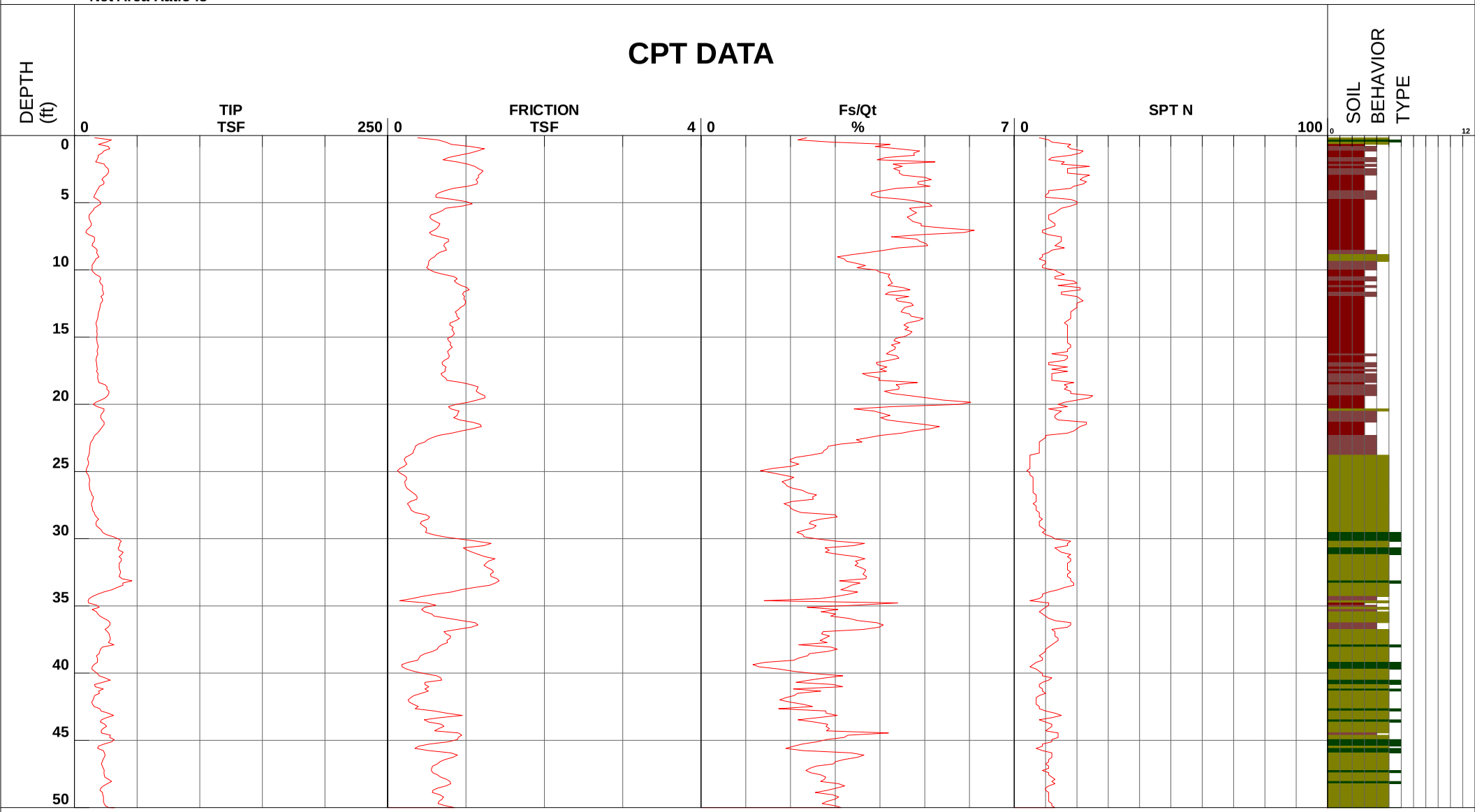
S*Soil behavior type and SPT based on data from UBC-1983

Berlogar Stevens

Project	Milpitas Senior Housing	Operator	CB-MM	Filename	SDF(123).cpt
Job Number	3693.100	Cone Number	DDG1268	GPS	
Hole Number	CPT-04	Date and Time	1/20/2015 9:59:19 AM	Maximum Depth	50.52 ft
EST GW Depth During Test		14.00 ft			

Net Area Ratio .8

CPT DATA



1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

Cone Size 10cm squared

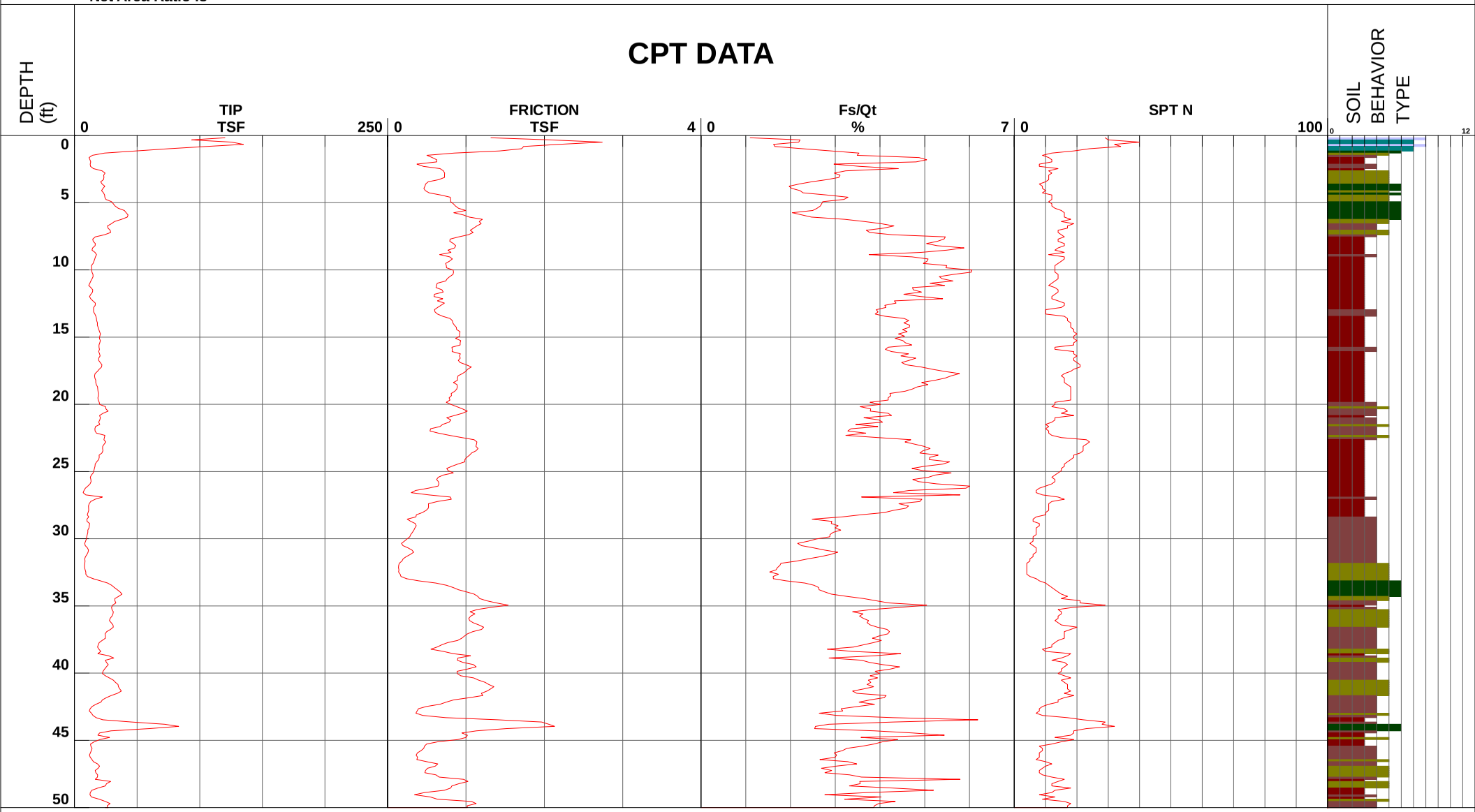
S*Soil behavior type and SPT based on data from UBC-1983

Berlogar Stevens

Project	Milpitas Senior Housing	Operator	CB-MM	Filename	SDF(125).cpt
Job Number	3693.100	Cone Number	DDG1268	GPS	
Hole Number	CPT-05	Date and Time	1/20/2015 11:33:31 AM	Maximum Depth	50.52 ft
EST GW Depth During Test		14.00 ft			

Net Area Ratio .8

CPT DATA



1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

Cone Size 10cm squared

S*Soil behavior type and SPT based on data from UBC-1983

APPENDIX C

Boring Logs, Capex 2005

Depth (Feet)	Description	Sample No.	Unified Soil Classification	Blows/Foot (350 Ft.-Lbs)	Dry Density (P.C.F)	Moisture (% Dry Density)	Pocket Penet. (T.S.F)	Remarks
1	Brown Silty Clay top soil to 2 feet							
2	Brown Silty Clay, moist, very stiff	1-1	CL	20	114.5	14.5	3.5	PI=9.5 Uc=2150 psf
3								
4								
5	Same As Above							
6								
7	Brown Silty Clay, Moist, stiff	1-2	CL	15	110.5	16.5	2.5	
8								
9								
10	Same As Above							
11								
12	Olive brown Silty clay, moist, very stiff	1-3	CL	23	108.5	18.5	2.0	
13								
14								
15	Same As Above							
16								
17	Same as Above							
18								
19								
20	Terminated of Boring at depth of 20 feet							
21	No Groundwater was encountered During Boring							
22								
23								
24								
25								

CAPEX ENGINEERING INC.

BORING LOG NO. 1

Figure No. 3

Date Drilled: November 3, 2005 *By:* G.H

Project No. 3302

Depth (Feet)	Description	Sample No.	Unified Soil Classification	Blows/Foot (350 Ft.-Lbs)	Dry Density (P.C.F)	Moisture (% Dry Density)	Pocket Penet. (T.S.F)	Remarks
1	8" A.C pavement 5" Aggragate Subgrade							
2								
3								
4	Brown Silty Clay, moist, very stiff	2-1	CL	24	116.5	12.5	4.0	
5	Same As Above							
6								
7								
8								
9	Brown Silty Clay, Moist, very stiff	2-2	CL	18	112.5	14.5	3.0	Uc= 1850 psf
10	Same As Above							
11								
12								
13								
14	Brown Silty clay, moist, very stiff	2-3	CL	20	111.5	13.5	3.5	
15	Same As Above							
16								
17	Same as Above							
18								
19								
20								
21	Terminated of Boring at depth of 20 feet No Groundwater was encountered During Boring							
22								
23								
24								
25								

CAPEX ENGINEERING INC.

BORING LOG NO. 2

Figure No. 4

Date Drilled: November 3, 2005 *By:* G.H

Project No. 3302

Depth (Feet)	Description	Sample No.	Unified Soil Classification	Blows/Foot (350 Ft.-Lbs)	Dry Density (P.C.F)	Moisture (% Dry Density)	Pocket Penet. (T.S.F)	Remarks
1	Brown Silty Clay top soil, Moist							
2								
3								
4	Brown Silty Clay, moist, very stiff	3-1	CL	22	116.5	16.5	3.0	
5	Same As Above							
6								
7								
8	Brown Silty Clay, Moist, stiff	3-2	CL	19	110.5	14.5	2.5	
9								
10	Same As Above							
11								
12								
13	Brown Silty clay, moist, very stiff	3-3	CL	24	113.5	18.5	3.5	
14								
15	Same As Above							
16								
17	Same as Above							
18								
19								
20	Terminated of Boring at depth of 20 feet							
21	No Groundwater was encountered During Boring							
22								
23								
24								
25								

CAPEX ENGINEERING INC.

BORING LOG NO. 3

Figure No. 5

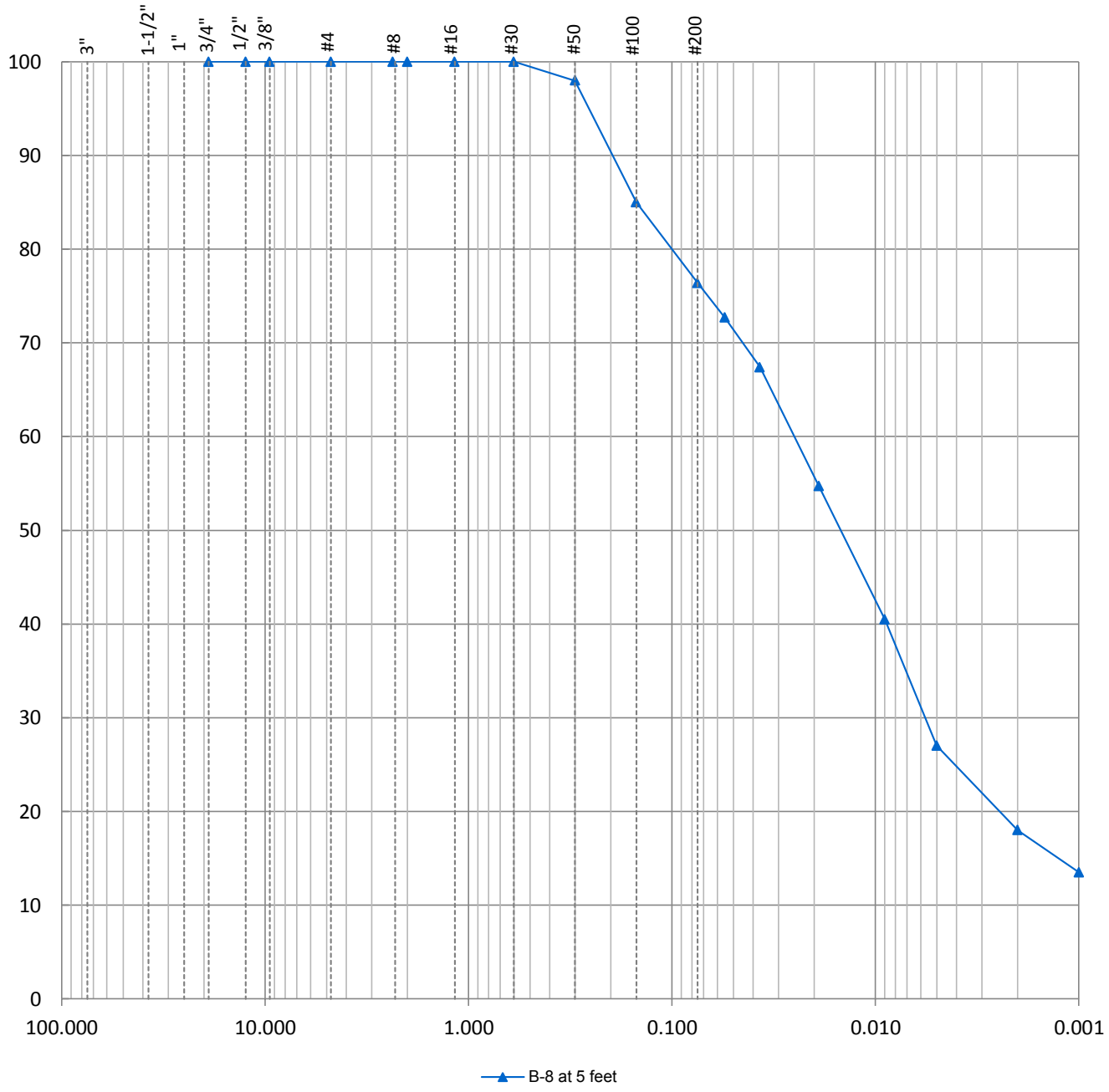
Date Drilled: November 3, 2005 *By:* G.H

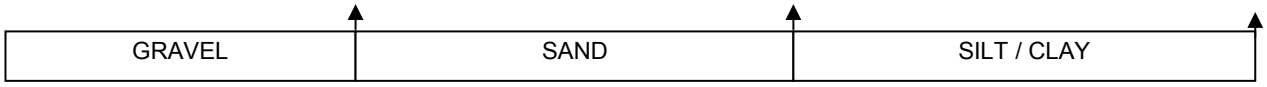
Project No. 3302

APPENDIX D

Laboratory Test Results

JOB NUMBER: 3693.100 DATE: 2-11-15 BY: CC

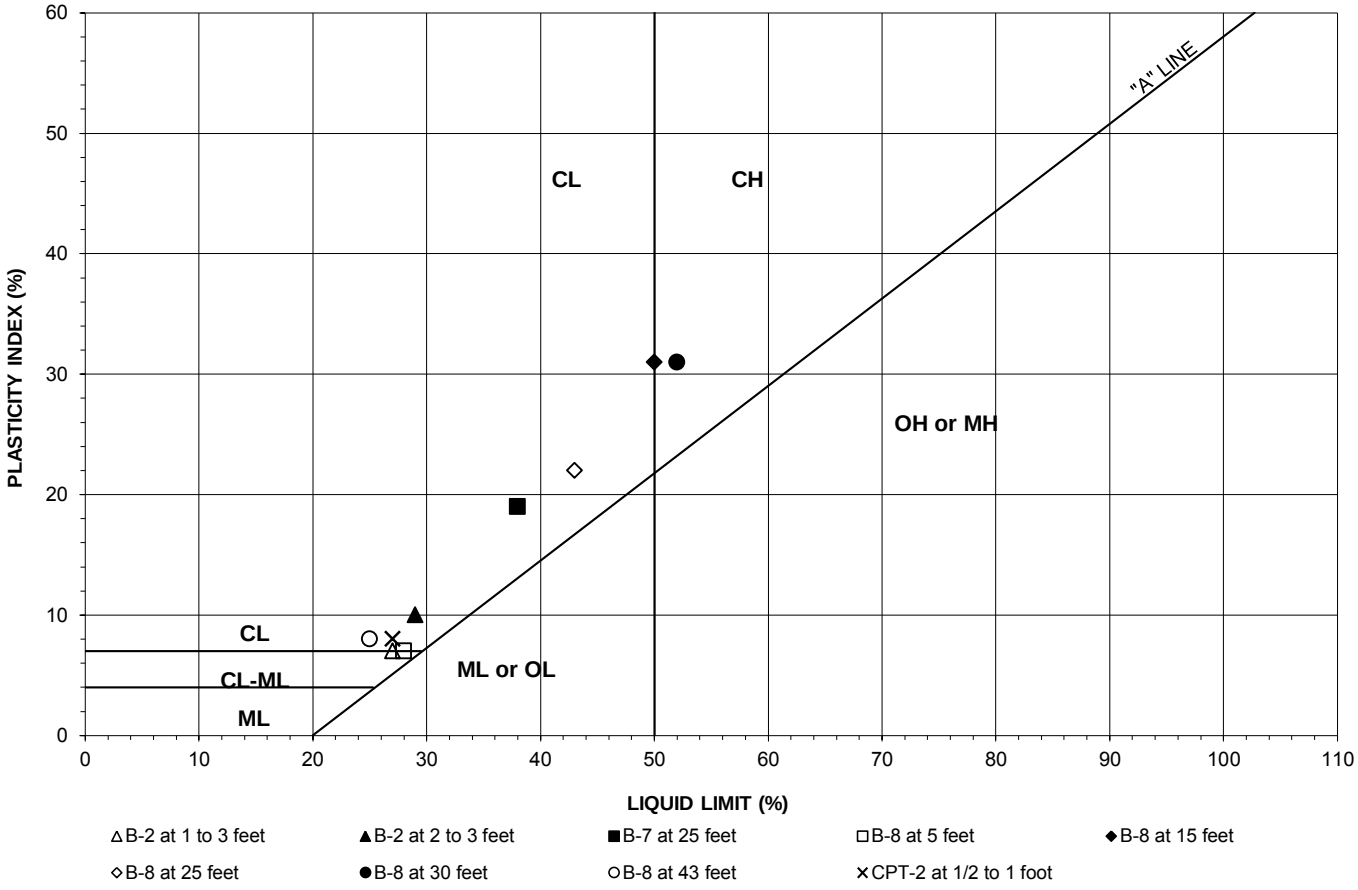




LOCATION	DESCRIPTION
B-8 at 5 feet	SILTY CLAY with SAND, gray-brown

GRADATION TEST DATA

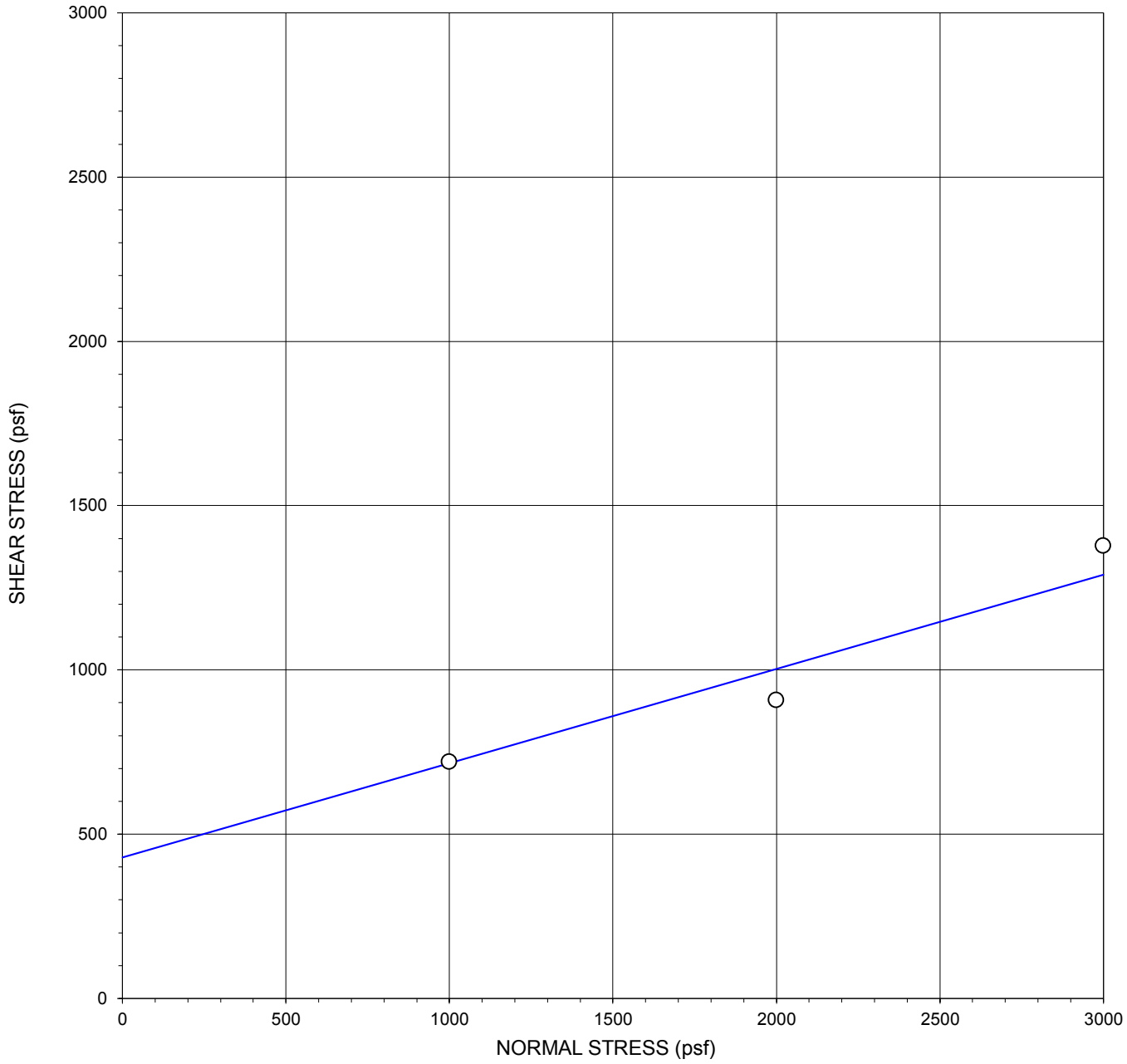
JOB NUMBER: 3693.100 DATE: 2-11-15 BY: CC



LOCATION	LIQUID LIMIT	PLASTICITY INDEX	USCS CLASSIFICATION
B-2 at 1 to 3 feet	27	7	**C L - M L**
B-2 at 2 to 3 feet	29	10	**C L**
B-7 at 25 feet	38	19	**C L**
B-8 at 5 feet	28	7	**C L - M L**
B-8 at 15 feet	50	31	**C H**
B-8 at 25 feet	43	22	**C L**
B-8 at 30 feet	52	31	**C H**
B-8 at 43 feet	25	8	**C L**
CPT-2 at 1/2 to 1 foot	27	8	**C L**

ATTERBERG LIMITS TEST

JOB NUMBER: 3693.100 DATE: 2-11-15 BY: CC



LOCATION: B-2 at 8-1/2 feet

SAMPLE: SILTY CLAY, gray

TEST TYPE: Consolidated Drained

RATE OF SHEAR (in/min): 0.00099

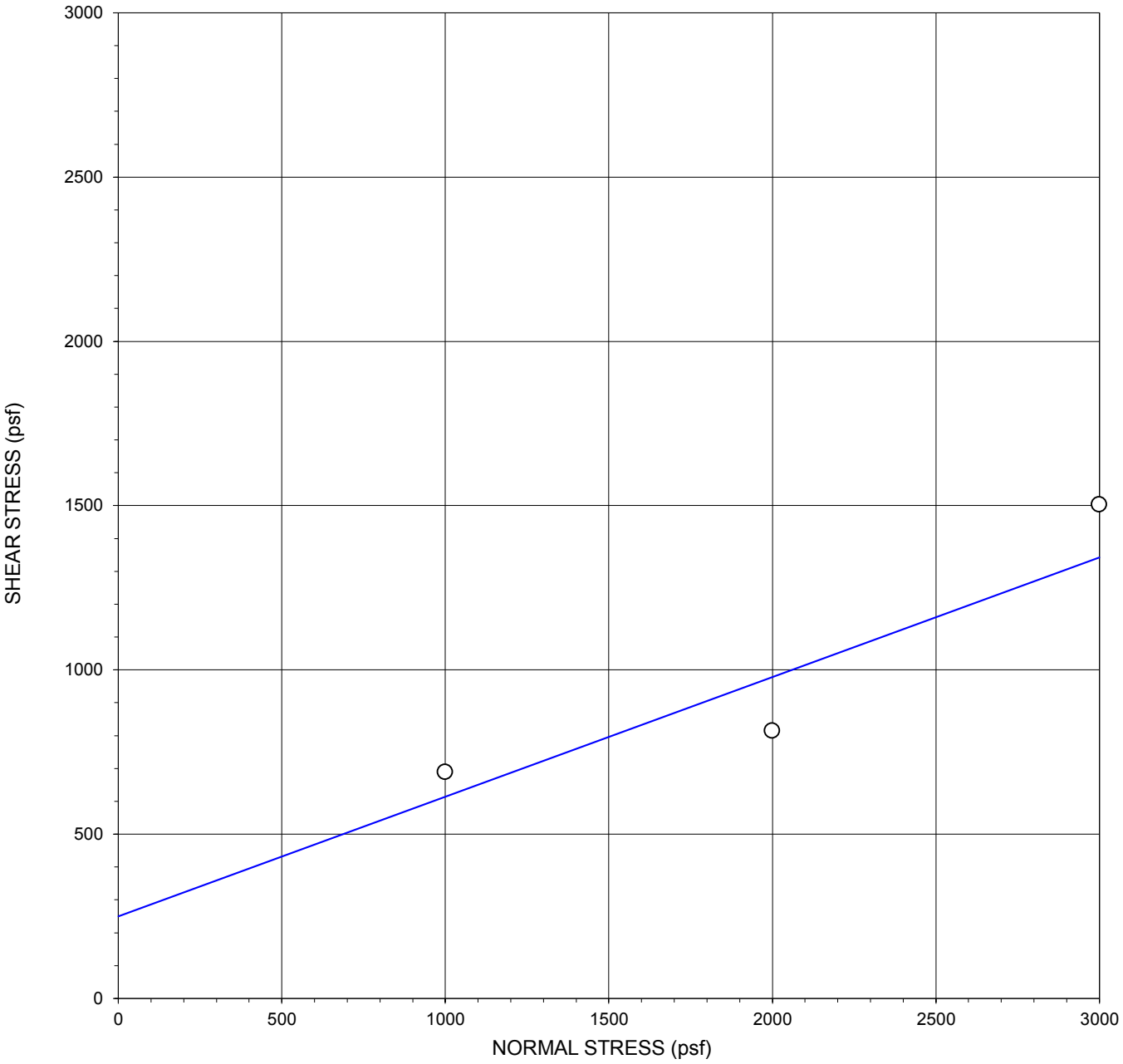
FRICTION ANGLE: 16

COHESION (psf): 430

SPECIMEN	A	B	C
DRY DENSITY (psf)	87.4	87.3	87
INITIAL WATER CONTENT (%)	29.8	29.8	29.8
FINAL WATER CONTENT (%)	33.1	32.7	32.2
NORMAL STRESS (psf)	1000	2000	3000
MAXIMUM SHEAR (psf)	720	908	1378

DIRECT SHEAR TEST

JOB NUMBER: 3693.100 DATE: 2-11-15 BY: CC



LOCATION: B-8 at 10-1/2 feet

SAMPLE: SILTY CLAY, gray

TEST TYPE: Consolidated Drained

RATE OF SHEAR (in/min): 0.00099

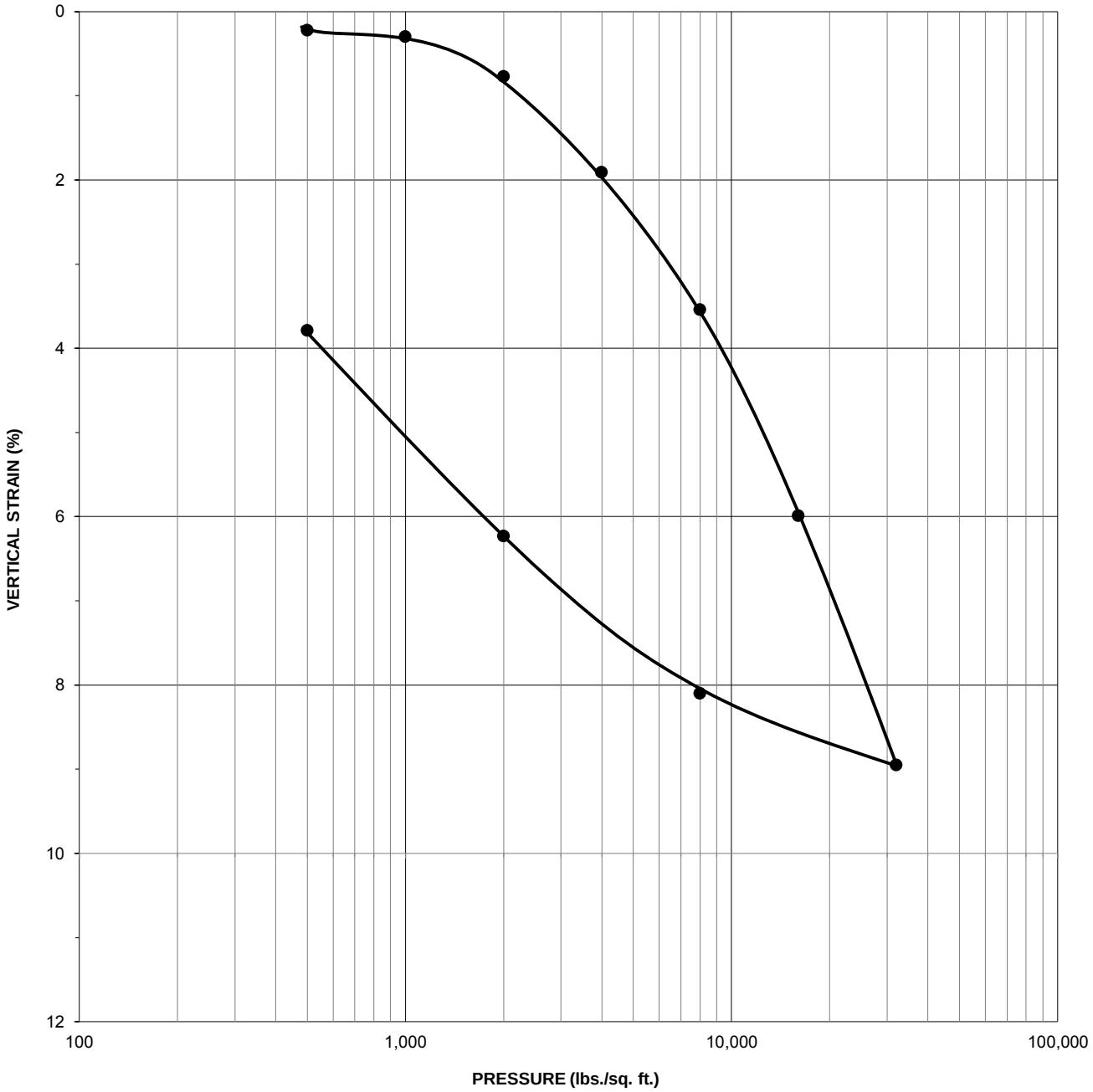
FRICTION ANGLE: 20

COHESION (psf): 250

SPECIMEN	A	B	C
DRY DENSITY (psf)	91.5	90.3	89.3
INITIAL WATER CONTENT (%)	27.6	27.6	27.6
FINAL WATER CONTENT (%)	30	29.9	29.9
NORMAL STRESS (psf)	1000	2000	3000
MAXIMUM SHEAR (psf)	689	814	1503

DIRECT SHEAR TEST

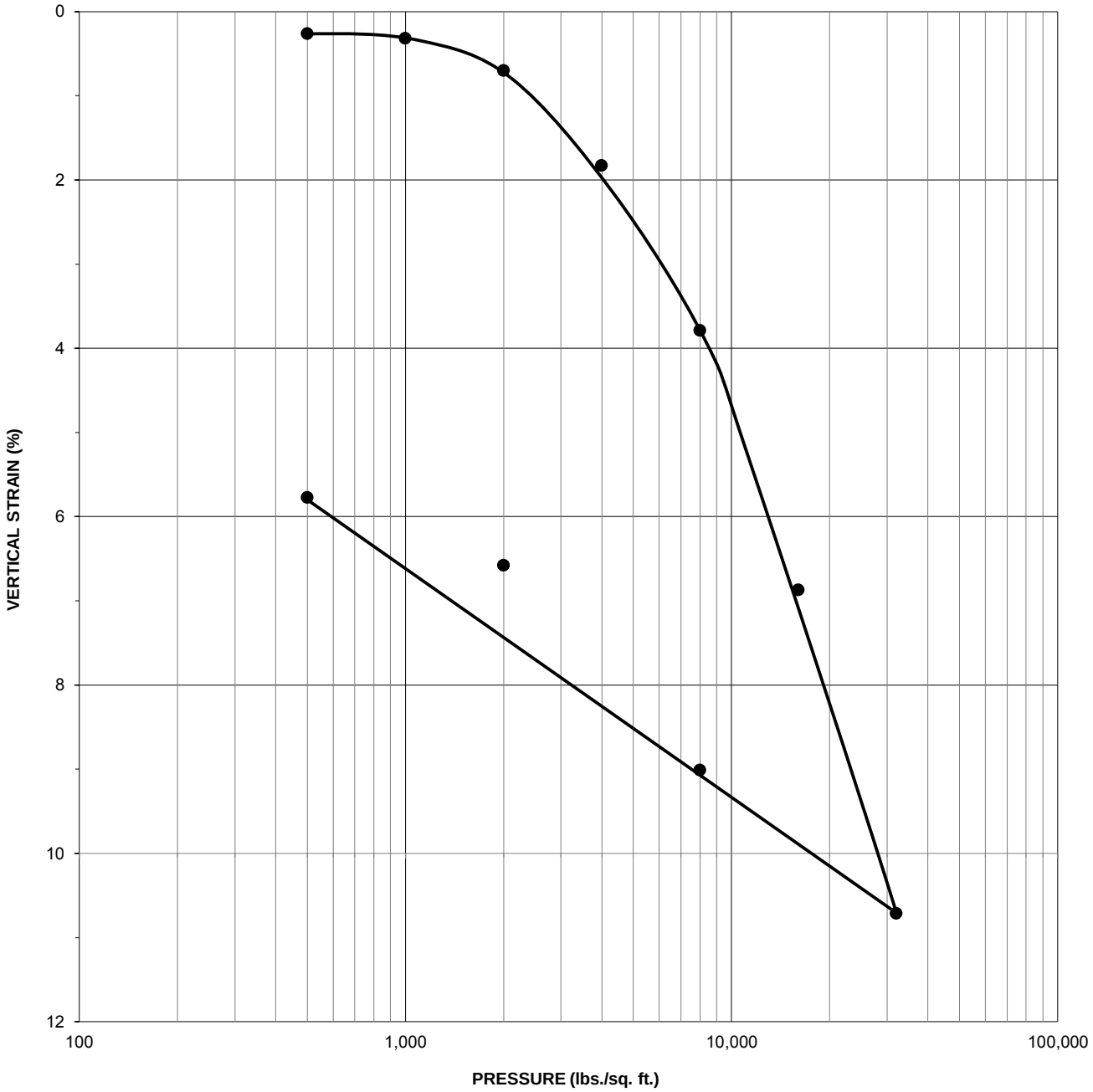
JOB NUMBER: 3693.100 DATE: 2-11-15 BY: CC



LOCATION	DESCRIPTION	INITIAL MOISUTRE CONTENT (%)	INITIAL DRY DENSITY (pcf)
● B-2 at 14 feet	SILTY CLAY, gray-brown	25.3	99.3

CONSOLIDATION TEST DATA

JOB NUMBER: 3693.100 DATE: 2-11-15 BY: CC



LOCATION	DESCRIPTION	INITIAL MOISUTRE CONTENT (%)	INITIAL DRY DENSITY (pcf)
● B-7 at 15 feet	SILTY CLAY, dark gray-brown	25.3	98.9

CONSOLIDATION TEST DATA

PASSING #200 SIEVE TEST RESULTS		
Sample	**Soil**	**% Passing**
B-7 25 ft	Light Brown Silty Clay	94.1
B-8 15 ft	Light Gray Brown Fat Clay with Sand	84.8
B-8 25 ft	Light Gray Brown Silty Clay	95.7
B-8 30 ft	Light Gray Brown Fat Clay	96.2
B-8 43 ft	Light Gray Brown Sandy Clay	63.6

SINGLE POINT CONSOLIDATION TEST RESULTS					
Sample ID	**Sample Description**	**Dry Density**	**% Moisture Content**	**% Consolidation with 2,000 psf**	**% Consolidation upon Saturation**
B-2 8 1/2 ft	Gray Silty Clay	90.8 pcf	29.2	3.14	2.79

R-VALUE TEST RESULTS		
Sample	**Soil**	**R-Value**
B-2 1 - 3 ft	Brown Silty Clay with Sand	8
CPT-2 1/2 - 1 ft	Dark Gray Silty Clay with Gravel	14

APPENDIX E

Corrosivity Test Results

California State Certified Laboratory No. 2153

CERCO analytical
1100 Willow Pass Court, Suite A
Concord, CA 94520-1006
925 462 2771 Fax. 925 462 2775
www.cercoanalytical.com

17 February 2015

Job No. 1502037
Cust. No.10598

Mr. Bil Stevens
Berlogar Stevens & Associates
5587 Sunol Blvd.
Pleasanton, CA 94566

Subject: Project No.: 3693.100
Project Name: Senior Lifestyle
Corrosivity Analysis – ASTM Test Methods with Brief Evaluation

Dear Mr. Stevens:

Pursuant to your request, CERCO Analytical has analyzed the soil samples submitted on February 05, 2015. Based on the analytical results, this brief corrosivity evaluation is enclosed for your consideration.

Based upon the resistivity measurement, this sample is classified as "corrosive". All buried iron, steel, cast iron, ductile iron, galvanized steel and dielectric coated steel or iron should be properly protected against corrosion depending upon the critical nature of the structure. All buried metallic pressure piping such as ductile iron firewater pipelines should be protected against corrosion.

The chloride ion concentration is 17 mg/kg and is determined to be insufficient to attack steel embedded in a concrete mortar coating.

The sulfate ion concentration is 65 mg/kg and is determined to be insufficient to damage reinforced concrete structures and cement mortar-coated steel at this location.

The sulfide ion concentrations reflect none detected with a detection limit of 50 mg/kg.

The pH of the soil is 9.01, which does not present corrosion problems for buried iron, steel, mortar-coated steel and reinforced concrete structures.

The redox potential is 360-mV, which is indicative of potentially "slightly corrosive" soils resulting from anaerobic soil conditions.

This corrosivity evaluation is based on general corrosion engineering standards and is non-specific in nature. For specific long-term corrosion control design recommendations or consultation, please call *JDH Corrosion Consultants, Inc. at (925) 927-6630.*

We appreciate the opportunity of working with you on this project. If you have any questions, or if you require further information, please do not hesitate to contact us.

Very truly yours,
CERCO ANALYTICAL, INC.

J. Darby Howard, Jr., P.E.
President

JDH/jdl
Enclosure

CERCO analytical
1100 Willow Pass Court, Suite A
Concord, CA 94520-1006
925 462 2771 Fax. 925 462 2775
www.cercoanalytical.com

Client: Berlogar Stevens & Associates
Client's Project No.: 3693.100
Client's Project Name: Senior Lifestyle
Date Sampled: 4-Feb-15
Date Received: 5-Feb-15
Matrix: Soil
Authorization: Signed Chain of Custody

Date of Report: 17-Feb-2015

Job/Sample No.	Sample I.D.	Redox (mV)	pH	Conductivity (umhos/cm)*	Resistivity (100% Saturation) (ohms-cm)	Sulfide (mg/kg)*	Chloride (mg/kg)*	Sulfate (mg/kg)*
1502037-001	B3/B4 @ 0'-2'	360	9.01	-	1,200	N.D.	17	65

Method:	ASTM D1498	ASTM D4972	ASTM D1125M	ASTM G57	ASTM D4658M	ASTM D4327	ASTM D4327
Reporting Limit:	-	-	10	-	50	15	15
Date Analyzed:	13-Feb-2015	12-Feb-2015	-	12-Feb-2015	13-Feb-2015	13-Feb-2015	13-Feb-2015

Cheryl McMillen
Laboratory Director

* Results Reported on "As Received" Basis
N.D. - None Detected

Quality Control Summary - All laboratory quality control parameters were found to be within established limits

Chain Of Custody

Page of

3942-A Valley Avenue
Pleasanton, CA 94566-4715
Tel:925.462.2771
Fax:925.462.2775

CERCO analytical, inc.

Job No. 1502037 | Client No. | Client Project I.D. 10598

Sample Schedule: WK MO QT AN Resample New: 1 2 3 4 5 6 7 8 9 10 11 12 | Date Sampled | Date Due

Contact Name: Bill Stevens

Company Name: Berlogar Stevens & Associates

Sample Source: B3/B4 0-2 ft deep

Lab No.	Sample I.D.	Date	Time	Matrix	Container	Preserv.	Qty.	ANALYSIS: PG&E Corrosion w/ brief evaluation
001	B3/B4, 0-2 ft	2/4						1

MATRIX: DW - Drinking Water; GW - Ground Water; SW - Surface Water; WW - Waste Water; SL - Sludge; S - Soil

ABBREVIATIONS: HB - Hosebib; PV - Petcock Valve; PT - Pressure Tank; PH - Pump House; RR - Restroom; GL - Glass; PL - Plastic; ST - Sterile

SAMPLE RECEIPT: Total No. of Containers; Rec'd Good Cond./Cold; Conforms to Record; Sampler

Sample Location/Instructions: BSA Job No 3693.100, Senior Lifestyle

		Date	Time
Relinquished By	Bill Stevens	2/5/15	1341
Received By		2/5/15	1341
Relinquished By		2/5/15	1435
Received By		2/5/15	1434
Relinquished By		Date	Time
Received By		Date	Time

APPENDIX F

Liquefaction Analyses

Via E-Mail Only

BERLOGAR STEVENS & ASSOCIATES

October 11, 2017
Job No. 3789.000

Mr. Peter Friis
Milpitas Phase 1, LP
111 N. Post, Suite 200
Spokane, Washington 99201

Subject: Pervious Concrete Pavement for EVA
Milpitas Senior Housing
South Main Street at Cedar Way
Milpitas, California

Dear Mr. Friis:

The document was prepared in response to a request for additional information regarding pervious pavement design for the subject project. The request made by the project Civil Engineer, RJA, was in response to Plan Check comments issued by the City of Milpitas. The recommendations presented below are intended to supplement previous pavement recommendations provided in our "Additional Pavement Recommendations" letter of November 14, 2016, and our e-mail correspondence of May 18, 2017. The May 18, 2017 e-mail included a recommendation that the structural section consist of 8 inches of pervious concrete over 12 inches of Class 2 aggregate base.

PERVIOUS CONCRETE PAVEMENT

Design of a pervious concrete pavement section needs to consider infiltration rates of the subgrade soils as well as the load carrying capacity of those soils. The pervious concrete and underlying base (where used), and the thicknesses of those materials, need to meet both the storm water storage demands and the anticipated traffic loads. Based on our analysis, which is discussed below, we recommend that the pavement section consist of 8 inches of pervious concrete over 12 inches of Class 4 aggregate base (AB), with a geotextile fabric between the Class 4 AB and the prepared subgrade.

Section Design

General soil information presented in Subsurface Conditions section of our geotechnical report (BSA 2015) for the projects included identification of the soil units and soil infiltration rate ranges for the soils, obtained from the USGS Web Soil Survey. The soils range from Hydrologic Soil Group B to D (USDA, NRCS classifications). It is important to note that the infiltration rates are for an unimproved, undisturbed site. Based on the soils encountered in our borings, we stated an expectation that the hydraulic conductivity of the clayey soils at the site would fall into

the lower end of the range, that being 0.2 in/hr. Given that the site was previously developed, the infiltration rate will likely be lower still.

Storm water storage capacity is calculated based on the voids in the pervious concrete and the underlying aggregate base section (where used). Pervious concrete typically has a porosity (volume of void space divided by total volume of the solid) of 15 percent to 25 percent. According to Caltrans (Caltrans 2014), the aggregate base should have a void content of 30 percent or more. Lower void contents are allowed where the aggregate base section is designed or adjusted for the reduced void content. Caltrans has developed a design aid for reservoir design. It is available at:
(http://www.dot.ca.gov/hq/oppd/stormwtr/pervious.htm)

Structural design methodologies are not well-established. Pervious pavements are commonly designed based on an empirical approach. According to the American Concrete Institute (ACI), "pavement designs with demonstrated performance history are available from experienced installers and being used currently in several areas of the U.S. Care should be taken to verify the installer has a history of successful performance both from installation quality and use of designs similar to any specific project needs. If unable to find suitable local installers with examples of successful projects, the National Ready Mixed Concrete Association (NRMCA) (2007) suggests pervious pavement sections of 6 in. (150 mm) of pervious concrete pavement for low (under 5) ADTT truck exposure in parking lots. There are no current standard thicknesses for streets but there are examples of low-volume streets being installed with pavements ranging from 6 to 12 in. (150 to 300 mm) thick" (ACI 522R-10). According to Karthik H. Obla Ph.D., P.E., Vice President, Technical Services, NRMCA, "numerous applications have used a 5 to 6 in. thick pervious concrete over an aggregate base generally of the same dimension. Field performance of these projects have shown that they are adequate to handle the traffic loads expected in parking lot type applications (passenger cars) where the heaviest loads are generally from garbage trucks. If heavier loads and higher traffic are expected then a thicker pavement (8 to 12 in.) has been used" (Obla, 2007). Caltrans provides minimum recommended pavement sections based on the usage category. The recommended aggregate base section base section for Category C (moderate number of heavy loads, low speed) truck areas is 0.9 feet, with 0.7 feet of pervious concrete. Our minimum recommended sections of 8 inches of pervious concrete over 12 inches of aggregate base are consistent with recommendations of ACI, NRMCA and Caltrans.

Materials

The aggregate base should comply with Caltrans Standard Specifications, Section 26, as addended by the attached non-standard specifications (NSSP).

The pervious concrete mix should be designed in accordance with ACI 522R-10, Chapter 6. The minimum compressive strength should be 2.500 psi.

Geotextile fabric should be Mira RS580i.

Construction

Any fill soils in the area of the pervious concrete should consist of primary granular soils (less than 50 percent clays and silts). Granular soils should be compacted to no less than 90 percent relative compaction. The maximum density of the soil shall be determined in accordance with ASTM D1557. Clayey and silty soils should be compacted to between 88 and 93 percent relative compaction.

The top 12 inches of completed subgrade should be compacted to between 88 and 93 percent relative compaction.

Geotextile fabric should be placed with minimum 2-foot laps at adjacent panels.

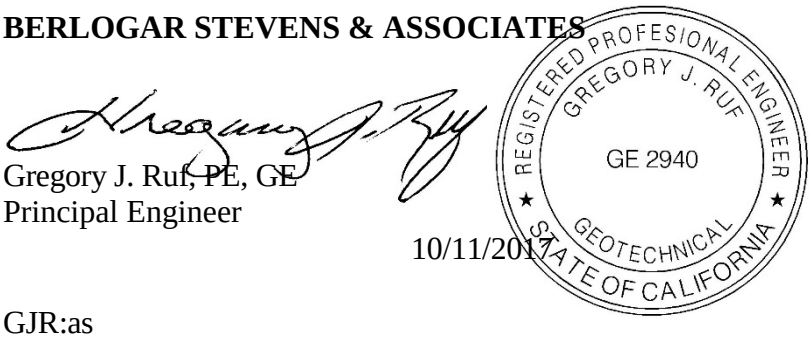
AB should be pushed out over the geotextile in lifts not to exceed 0.5 feet and should be compacted in accordance with the requirements presented on the attached NSSP.

Pervious concrete construction should be performed in accordance with ACI 522R-10, Chapter 8 and ACI 522.1-13.

Please contact the undersigned at (925) 484-0220 if you have any questions or comments regarding the above recommendations.

Respectfully Submitted,

BERLOGAR STEVENS & ASSOCIATES



Gregory J. Ruf, PE, GE
Principal Engineer

10/11/2017

GJR:as

Copies: Addressee
Luis Santiago-Sotelo, RJA
Sean Walton, Brick, Inc.

U:\@@@Public\1-Pleasanton\3789-Sen Housing Milpitas\000-Consult\Pervious Pavement - 29846.docx

REFERENCES

ACI Committee 522, 2013, ACI 522.1-13, Specifications for Pervious Concrete Pavement.

ACI Committee 522, 2010, ACI 522R-10 (Reapproved 2011), Report on Pervious Concrete Pavement.

BSA, 2017, RE: [902041] SMSL - Pervious Concrete (email correspondence to Luis 'Luis Santiago' <lsantiago@rja-gps.com>; Sean Walton <swalton@brick-inc.com>; Eric Kimmelshue ekimmelshue@srmdevelopment.com) May 18, 2017.

BSA, 2015, Geotechnical Investigation for the Phase 1 Assisted Living and Congregate Care, Public Utility Corridor and Grading Recommendations for the Phase 2 Senior Independent Living, Milpitas Senior Housing, South Main Street at Cedar Way, Milpitas, California, February 26, 2015, Job No. 3693.100.

Caltrans, 2014, Pervious Pavement Design Guidance.

Obla, K., 2007, Pervious Concrete for Sustainable Development, Proceedings from the First International Conference on Recent Advances in Concrete Technology, September 19-21, 2007, Washington, DC.

Non-Standard Specification for Class 4 AB
Replace Section 26-1.01C with:

26-1.01C Submittals

Submit your gradation test results for Class 4 AB.

Submit the void content for your selected Class 4 AB.

Add to Section 26-1.02:

26-1.02D Class 4 Aggregate Base

Nominal maximum aggregate size from 3/4 to 1 inch. Select an aggregate gradation that will result in a void content of 30 percent or more. Calculate the void content using the following formula:

V= 1-(Wd/(sg*62.4))*100

where:
V = void content in percent
Wd = dry unit weight determined under California Test 212
sg = dry specific gravity determined under California Test 207

You may use an aggregate gradation that provides a void content less than 30 percent provided you increase the AB thickness shown in compliance with the following formula:

D' = D*30/V

where:
D' = modified AB thickness
D = AB thickness shown
V = void content of the Class 4 AB in percent

The maximum aggregate size of the Class 4 AB must be less than 2.5 times the maximum aggregate size of the material layer placed above.
If Class 4 AB includes a pipe under drain outfall system for the 2 year or shorter recurrence interval storm event delete the cleanness value requirement, otherwise delete the NTU requirement.
Aggregate must comply with the quality requirements shown in the following table:

Property	Test Method	Contract Compliance
Cleanness Value (min)	California Test 227	75
NTU of effluent in place AB (max)	ASTM D 7315	200
Loss in Los Angeles rattler after 500 revolutions (max)	California Test 211	50
Percent of crushed particles one or more fractured face (min)	California Test 205	90
Percent of crushed particles two or more fractured face (min)	California Test 205	75

Add to Section 26-1.03D:

If you modify the shown thickness for Class 4 AB, the specifications for spreading AB in 1 or more layers apply to the modified AB thickness. Increase the layer thickness by lowering the grading plane of all layers below the Class 4 AB.

Replace the 1st paragraph of Section 26-1.03E with:

Compact each AB layer. For Class 4 AB, comply with the following:

1. Compact with a 10-ton vibratory roller
2. Make 2 complete passes in vibratory mode and at least 2 complete passes in static mode
3. In areas not accessible to the vibratory roller, use a 13,500 lbf plate compactor with a compaction indicator

Appendix I

Operations and Maintenance (O&M) plan

APPENDIX I - BMP Operation and Maintenance Plan

Implementation of a long term Operation and Maintenance Plan (O&M) is necessary for the proper operation and maintenance of the stormwater control measures for the project. This O&M is intended to be a guide for the main items involved in BMP maintenance. Inspections, maintenance, and documentation will be the responsibility of the Home Owners Association.

The South Main Senior Housing Project will develop the site into residential units for senior residents. The project consists of approximately 2.8-acres (2.9-acres for purposes of this report) and includes a 4-story podium building with an underground parking garage, and 199 senior housing units. Other improvements includes extension of Cedar Way and Costa Street (public streets), courtyards, sidewalks, landscaping, and an emergency vehicle access.

Stormwater will be treated by using biotreatment areas. The project is allowed to take a credit of up to 55% of the pervious area based on the type of project – See appendix C for special project details. However, given that the courtyards have pervious pavers, landscape areas and minimal or no impervious surfaces this will not be necessary. The northern portion of the site will be treated in bioswales along the north side of the building and across Cedar Way. The east portion of the site will be treated in bioswales along the east property line (along Costa Drive). The south portion of the building is composed of pervious pavers and landscaped areas making it a self-treating. No treatment is required for this area. Tributary areas, treatment areas, and treatment details are shown in Attachment B of this O&M Plan.

A. Responsibility for Maintenance

Pursuant to the Declaration of Restrictions (CC&Rs), the South Main Senior Housing Project Association will be is responsible for maintaining the storm water treatment measures. The CC&Rs provides that the HOA assumes the obligations of Stormwater Management facilities Operation and Maintenance Agreement between The South Main Senior Housing and the City of Milpitas. The executed agreement - after recorded – is included as Attachment A to this O&M plan. The CC&Rs further states maintenance of storm water facilities within the Development shall be in compliance with the Stormwater Control Operations and Maintenance Plan (this plan).

Individuals Responsible for Stormwater Treatment Bmp Operations and Maintenance
Date accepted: (to be recorded prior to final occupancy)
Facility Name: The South Main Senior Housing Project
Facility Address: 1504-1620 South Main Street, Milpitas, CA 95035
Designated Contact for Operation and Maintenance
Name: South Main Senior Lifestyles – James Burns
Title: Managing Member
Phone: Direct (415) 339-8880
Email: jrburns@cda-sf-architects.com
Off-hours or Emergency Contact
Phone: (415) 339-8880 (Off-hour service is provided)

B. Organization Chart

A five member Board of Directors has selected Compass Management to be the professional property manager for the South Main Senior Lifestyles Homeowners Association. Both the Board of Directors and selected property manager are subject to change in the future.

C. O&M Agreement

An Operation and Maintenance agreement between the City of Milpitas and Owner will be recorded with the County of Santa Clara prior to the final occupancy phase. The recorded document is included as attachment A to this O&M plan.

D. Means to Finance and Implement BMP Maintenance

Proper maintenance and operation of the stormwater management facilities identified in this SWCP will be the responsibility of the HOA to be established under this Project. The applicant will prepare and submit, for the City's review, an acceptable Stormwater Control Operation and Maintenance Plan prior to completion of construction, and will execute a Stormwater Management Facilities Operation and Maintenance Agreement before transfer or final occupancy at the site. The Applicant accepts responsibility for maintenance of stormwater management facilities until such responsibility is legally transferred to another entity.

E. Records

The South Main Senior Housing Association will maintain annual records of the operation and maintenance of BMP's identified in this O&M. The records will consist of inspections per the BMP Maintenance Schedule in this O&M. The reports will be available to the City upon request.

F. Summary of Drainage Areas and BMP's

A. Drainage Areas - A drawing showing the location and type of all treatment area is included on Attachment B.

B. Details of Treatment BMPs - Details of individual treatment BMP's are shown on Attachment B.

G. BMP Maintenance Schedules

A. Summary of Inspection and Maintenance for all BMPs
A summary of inspection schedules are shown on Attachment C. Annual inspections shall be conducted during the months of September or October, prior to October 15 (prior to the rainy season). Bi-annual inspections shall be conducted during the months of September or October, and again during April (before April 15, end of the rainy season). Inspections shall be completed using the Inspection Maintenance Forms (Attachment D). Additional inspections may be required throughout the rainy season if excessive debris is found within the swales, or the swales do not drain completely in 48-hours after a rain event.

B. Service Agreement Information
Maintenance of the biofilter swale will be contracted for with a qualified landscape maintenance company.

ATTACHMENT A

RECORDED MAINTENANCE AGREEMENT BETWEEN CITY AND HOME OWNERS ASSOCIATION

ATTACHMENT B

MAP AND SUMMARY OF DRAINAGE AREAS, BMP'S, AND BMP DETAILS

TRIBUTARY AREA ID	TRIBUTARY AREA (SF)	IMPERVIOUS AREA (SF)	LANDSCAPE/PERV AREA (SF)	TREATMENT AREA REQUIRED (SF)	TREATMENT AREA PROVIDED (SF)
A1	7,260	6,440	820	173	180
A2	4,360	3,545	815	107	125
A3	4,490	3,610	880	108	130
A4	6,235	4,555	1,680	137	140
A5	5,665	4,505	1,160	133	135
A6	6,260	4,090	2,170	148	160
A7	7,840	6,570	1,270	174	185
A8	7,875	6,755	1,120	176	190
R1[1]	4,315	4,315	0	120	125
R2[1]	5,930	5,930	0	169	170
R3[1]	4,420	4,420	0	118	130
R4[1]	5,895	5,895	0	166	170
R5[1]	5,670	5,670	0	156	165
R6[1]	8,820	8,820	0	234	260
R7[1]	4,290	4,290	0	117	125
R8[1]	5,485	5,485	0	150	160
R9[1]	5,985	5,985	0	162	175
C1	6,575	4,290	2,285	156	160
C2[2]	16,695	0	16,695	Self-Treating	
C3	3,070	2,353	717	83	90

SEE PUBLIC IMP. PLANS

JUNCTION BOX (TYP)
FIELD INLET (TYP)
SIDEWALK DRAIN (TYP)
STORM DRAIN CLEAN OUT (TYP)
FIELD INLET (TYP)
SIDEWALK DRAIN (TYP)
CEDAR WAY (PUBLIC)
SIDEWALK DRAIN (TYP)
SIDEWALK DRAIN (TYP)
SOUTH MAIN STREET (PUBLIC)
FIELD INLET (TYP)
CURB CUT (TYP)
FIELD INLET (TYP)
CURB CUT (TYP)
ROOF DRAIN (TYP)
ROOF DRAIN (TYP)
ROOF DRAIN (TYP)
ROOF DRAIN (TYP)
ROOF DRAIN (TYP)
GREASE INTERCEPTOR (SEE NOTE 4)
COVERED DUMPSTER AREA
SS LAT
INDOOR SWIMMING POOL (SEE NOTE 3)
SELF-TREATING AREA
SELF-TREATING AREA
COSTA STREET (PUBLIC)
CURB CUT (TYP)
CURB CUT (TYP)
SDJB (TYP)
SDJB (TYP)
EVA
FIELD INLET (TYP)
PERVIOUS/SELF-TREATING SURFACE (TYP)
TA 1
TA 2
TA 3
TA 4
TA 5
TA 6
TA C3
TA 7
TA 8
TA C1
TA R1
TA R2
TA R3
TA R4
TA R5
TA R6
TA R7
TA R8
TA R9
A1
A2
A3
A4
A5
A6
A7
A8
R1
R2
R3
R4
R5
R6
R7
R8
R9
C1
C2
C3
HP
LP

LEGEND

- BUILDING ROOF AREA
- BMP AREA
- CONCRETE
- DRAINAGE AREA
- XX — DRAINAGE AREA NUMBER
- TA(X) — BMP DESCRIPTION
- DRAINAGE FLOW LINES
- HP — HIGH POINT
- LP — LOW POINT

NOTES:

1. ROOF AREAS WILL BE TREATED IN RAISED PLANTERS WHICH WILL INCLUDE BIO-RETENTION SOIL MIX. SEE LANDSCAPE PLANS AND DETAIL 4 ON SHEET C4.
2. AREA C2 IS A SELF-TREATING AREA CONSISTING OF PERVIOUS CONCRETE PAVING IN EVA AND PERVIOUS PAVERS AND SYNTHETIC TURF IN COURTYARD.
3. INDOOR SWIMMING POOL, CONNECT TO THE SANITARY SEWER SYSTEM WITHIN THE BUILDING.
4. RESTAURANT / KITCHEN FACILITIES INCLUDING WASH AREA/RACK, DRAIN TO THE GREASE INTERCEPTOR / SANITARY SEWER.

N

0 20 40 60

SCALE IN FEET: 1"= 20'

PLOT DATE: December 4, 2017
FILE PATH: W:\Jobs 09\092041\Drawings\Final\Improvement Plans\ONSITE\C12 STORMWATER CONTROL PLAN.dwg

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8055 CAMINO ARROYO GILROY, CA 95020
PHONE: (408) 848-0300 FAX: (408) 848-0302

LICENSED PROFESSIONAL ENGINEER — WILLIAM SAMUEL SCHEA — C79665 — EXP. ____ — CIVIL — STATE OF CALIFORNIA

Record Drawings
To be completed prior to acceptance of work by the City

Signature & Seal Date
P.E. No. _____ Exp. _____
Public Works Inspector: _____
Public Improvements initially Accepted by the City Council on: _____

REVISIONS

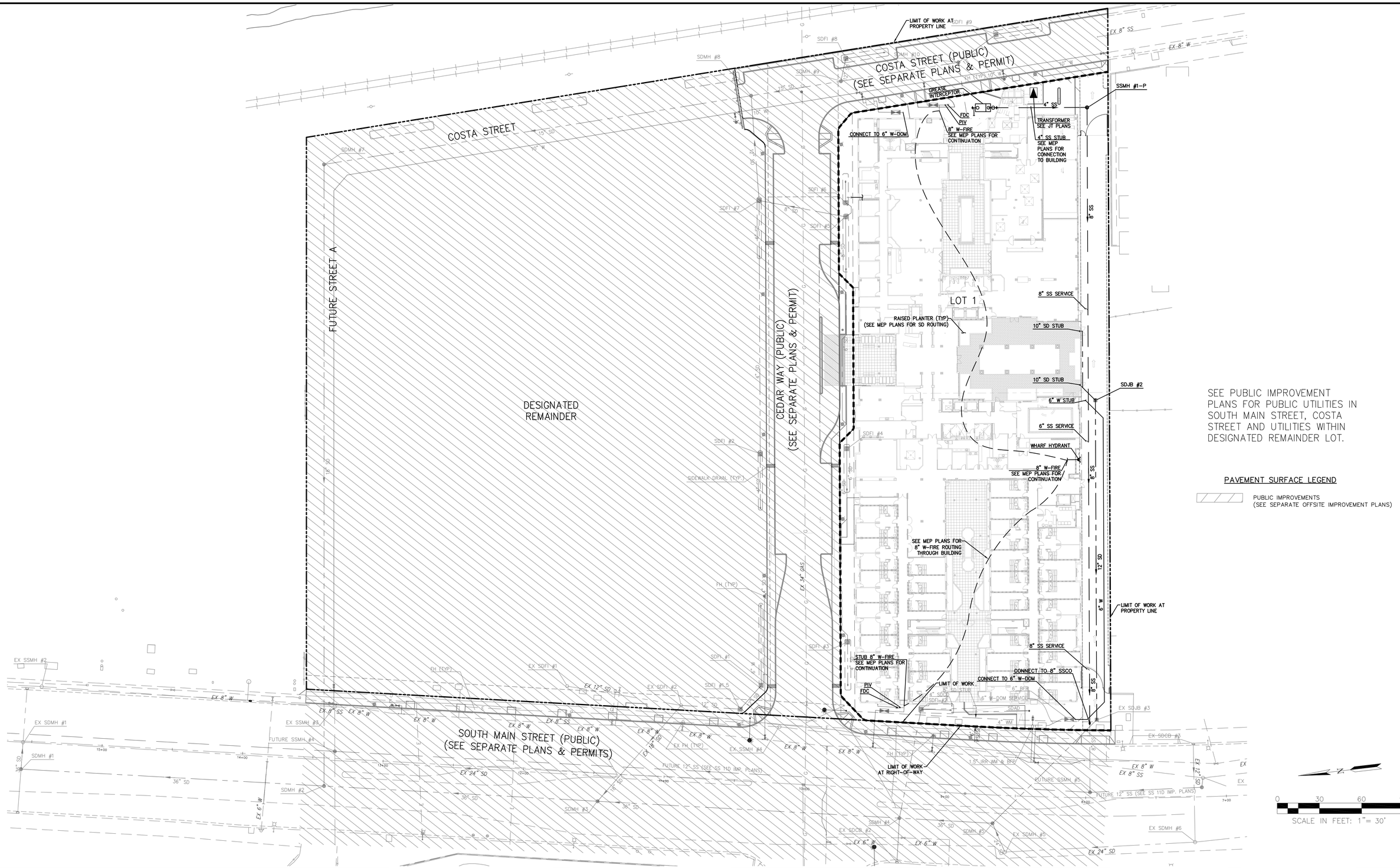
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CITY OF MILPITAS
ENGINEERING DIVISION

APPROVED: _____
CITY ENGINEER DATE
ANY CHANGES TO PUBLIC IMPROVEMENTS SHALL BE APPROVED BY THE CITY ENGINEER
RECOMMENDED FOR APPROVAL:
FIRE DEPT. _____ DATE: _____
ENGINEERING _____ DATE: _____

SOUTH MAIN SENIOR LIFESTYLES – ONSITE
IMPROVEMENT PLANS
STORMWATER CONTROL PLAN
MILPITAS, CALIFORNIA
FOR: SRM DEVELOPMENT, LLC DECEMBER 2017

JOB NO. 092041
PLAN NO.
SCALE: 1"=20'
SHEET C12
OF 21 SHEETS



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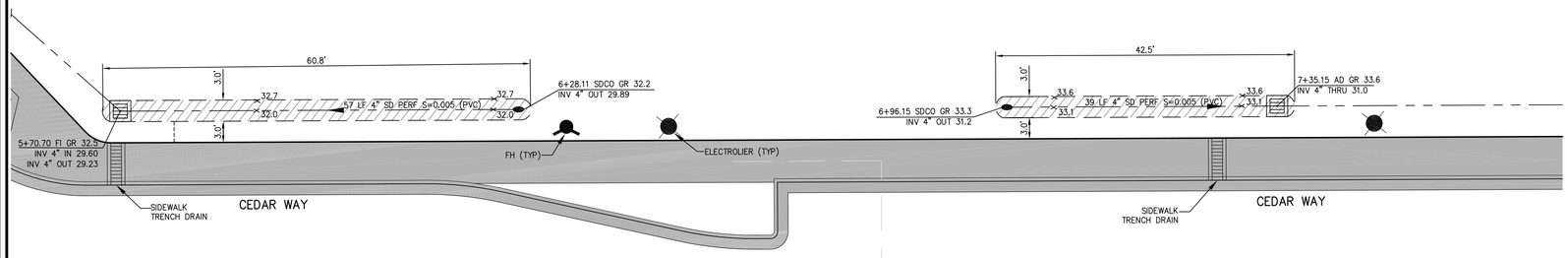
CITY OF MILPITAS
ENGINEERING DIVISION

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CITY ENGINEER DATE
ANY CHANGES TO PUBLIC IMPROVEMENTS SHALL BE APPROVED BY THE CITY ENGINEER
RECOMMENDED FOR APPROVAL:
FIRE DEPT. _____ DATE: _____
ENGINEERING _____ DATE: _____

SOUTH MAIN SENIOR LIFESTYLES – ONSITE
IMPROVEMENT PLANS
UTILITY PLAN
MILPITAS, CALIFORNIA
FOR: SRM DEVELOPMENT, LLC DECEMBER 2017

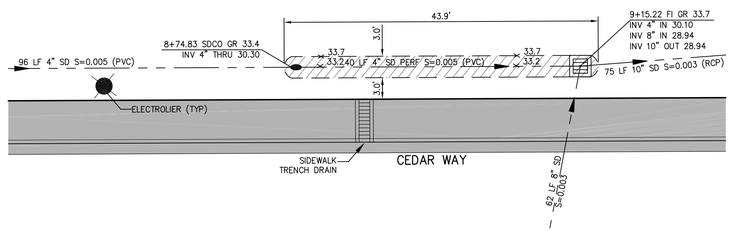
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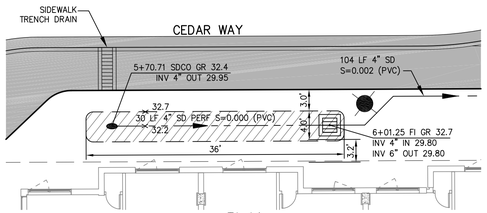


TA A1
TREATS DRAINAGE A1
TREATMENT AREA PROVIDED = 180 SF

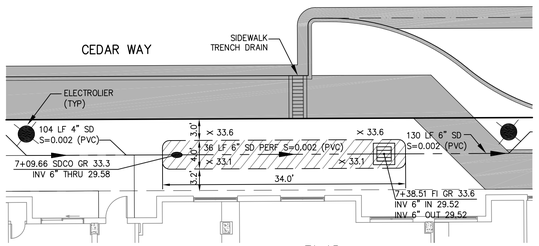
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TREATS DRAINAGE A2
TREATMENT AREA PROVIDED = 125 SF



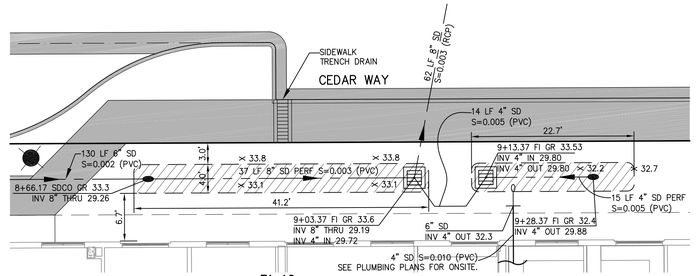
TA A3
TREATS DRAINAGE A3
TREATMENT AREA PROVIDED = 130 SF



TA A4
TREATS DRAINAGE A4
TREATMENT AREA PROVIDED = 140 SF

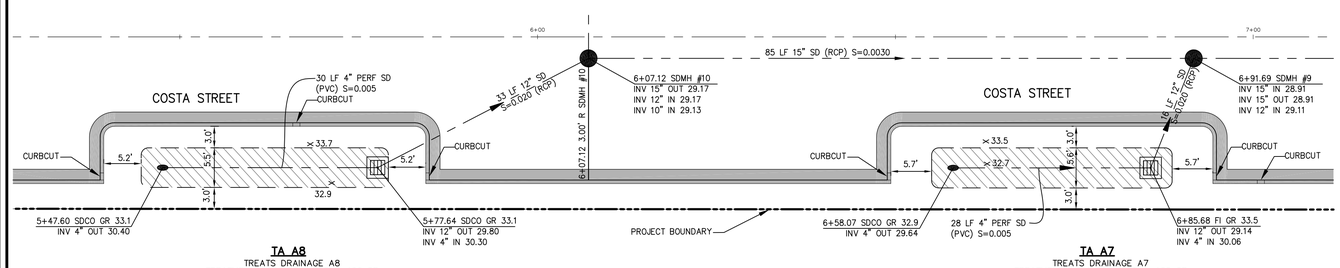


TA A5
TREATS DRAINAGE A5
TREATMENT AREA PROVIDED = 135 SF



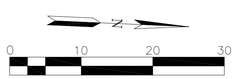
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TREATS DRAINAGE A6
TREATMENT AREA PROVIDED = 160 SF

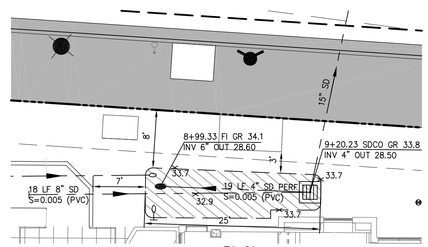




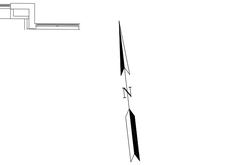
TA A8
TREATS DRAINAGE A8
TREATMENT AREA PROVIDED = 190 SF

TA A7
TREATS DRAINAGE A7
TREATMENT AREA PROVIDED = 185 SF





TA C1
TREATS DRAINAGE C4
TREATMENT AREA PROVIDED = 160 SF



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REVISIONS

Num.	Date	By	Description	City Engr. Aprv.	Date

CITY OF MILPITAS
ENGINEERING DIVISION

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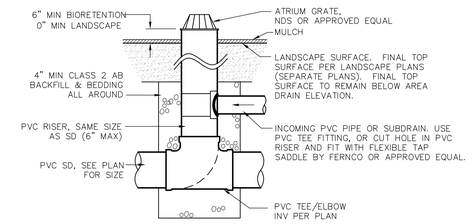
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ANY CHANGES TO PUBLIC IMPROVEMENTS SHALL BE APPROVED BY THE CITY ENGINEER

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ENGINEERING _____ DATE: _____

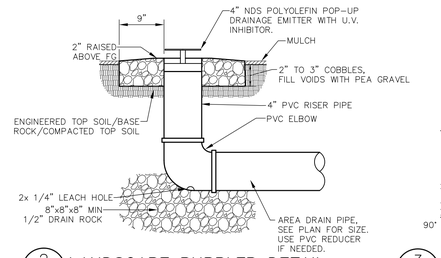
SOUTH MAIN SENIOR LIFESTYLES – PUBLIC
PUBLIC IMPROVEMENTS FOR – PHASE 1
BIOTREATMENT BLOW UP DETAILS

FOR: SRM DEVELOPMENT, LLC MILPITAS, CALIFORNIA DECEMBER 2017

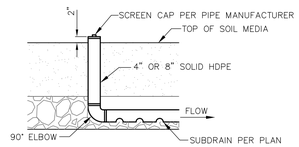
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PLAN NO.
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SHEET
19
OF 22 SHEETS



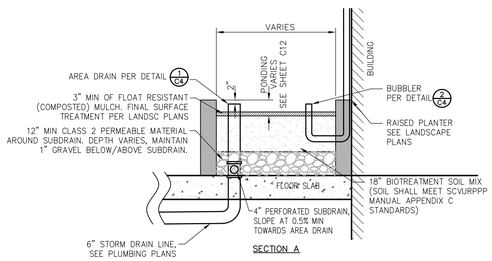
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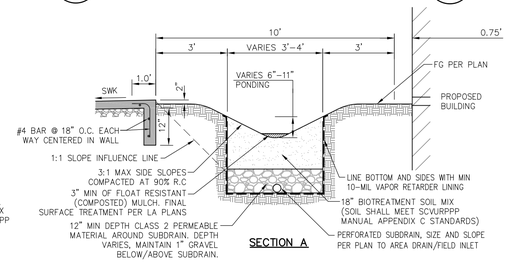
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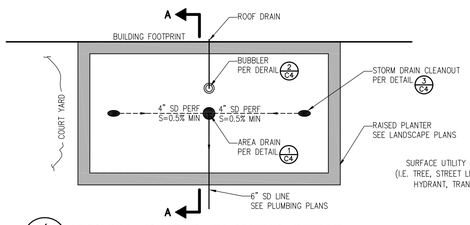
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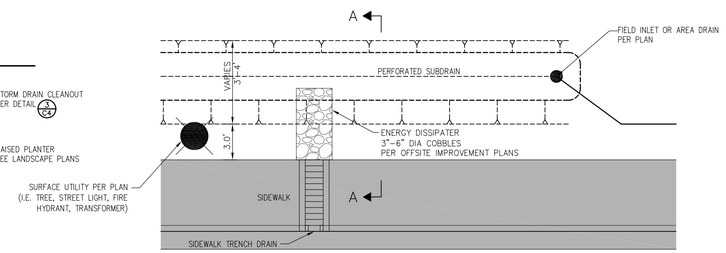
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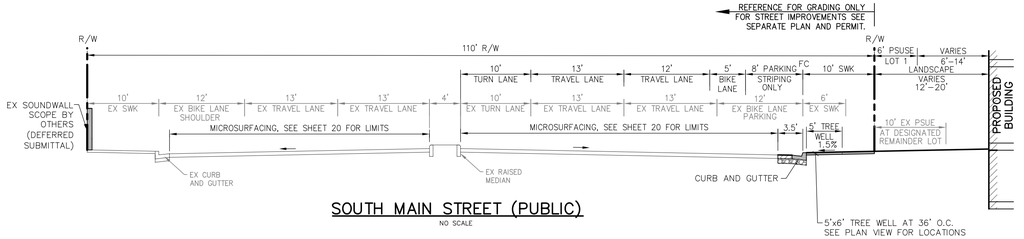
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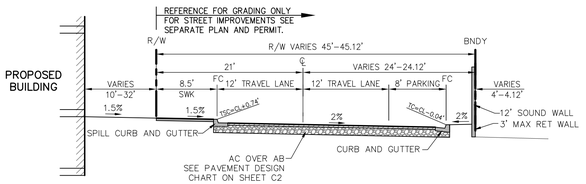
4 — TYPICAL RAISED PLANTER DETAIL
NO SCALE



5 — TYPICAL STREET BIORETENTION BASIN DETAIL
NO SCALE

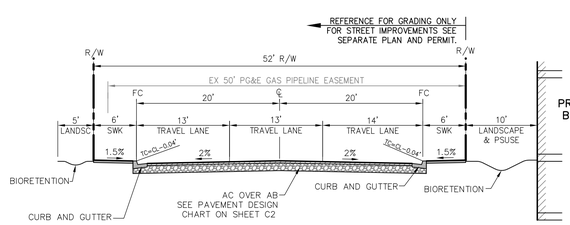


SOUTH MAIN STREET (PUBLIC)
NO SCALE



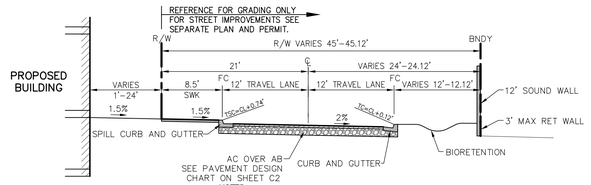
COSTA STREET (PUBLIC)
STA 5+84± TO 6+48±
NO SCALE

TI=6.0



CEDAR WAY (PUBLIC)
STA 5+66± TO 6+14±
NO SCALE

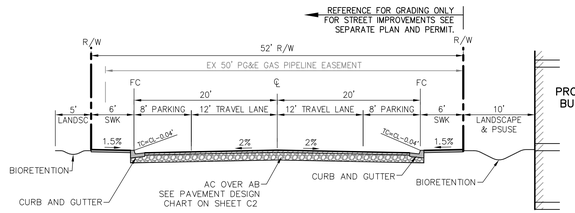
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NOTES:
INSTALL SUBDRAIN PER DETAIL 1/C17

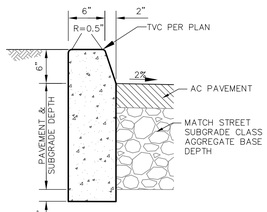
COSTA STREET (PUBLIC)
STA 5+39± TO 5+48±
& 6+48± TO 6+94±
NO SCALE

TI=6.0

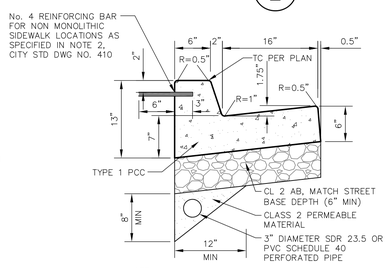


CEDAR WAY (PUBLIC)
STA 6+64± TO 7+28±
& 8+84± TO 9+48±
NO SCALE

TI=6.0

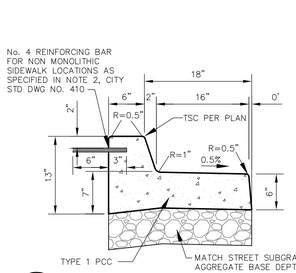


6 — VERTICAL CURB DETAIL
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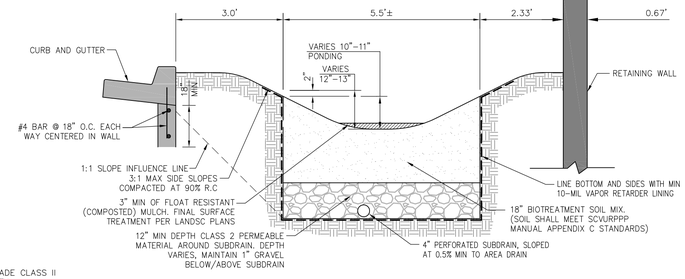


NOTE:
THIS DETAIL IS PROVIDED FOR INFORMATION ONLY.
REFER TO CITY STD DWG NO. 410

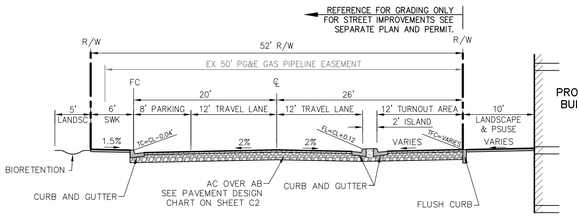
7 — CURB & GUTTER DETAIL
NO SCALE



8 — CURB & SPILL GUTTER DETAIL
NO SCALE

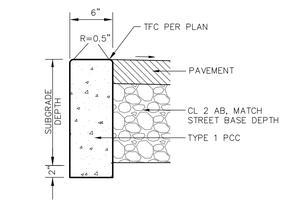


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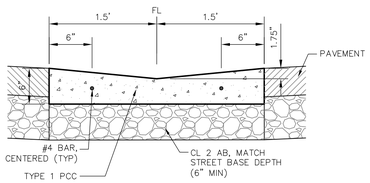


CEDAR WAY (PUBLIC)
STA 7+73± TO 8+34±
NO SCALE

TI=6.0



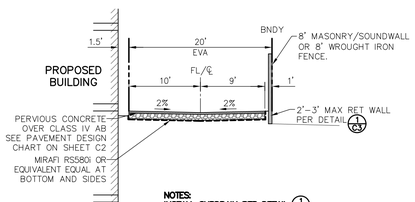
10 — FLUSH CURB DETAIL
NO SCALE



11 — STANDARD VALLEY GUTTER DETAIL
NO SCALE

NOTE:
PUBLIC STREET SECTIONS ARE SHOWN FOR GRADING REFERENCE ONLY.
FOR PUBLIC STREET IMPROVEMENTS SEE SEPARATE PLAN AND PERMIT.

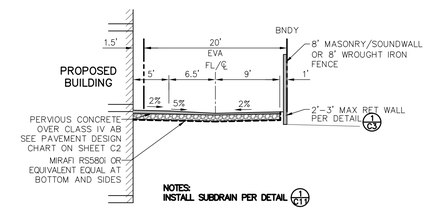
STREET SECTIONS AND DETAILS 5, 7–11
PROVIDED FOR REFERENCE ONLY.



NOTES:
INSTALL SUBDRAIN PER DETAIL 1/C17

EVA
STA 3+00± TO 4+68±
& 6+04± TO 7+66±
NO SCALE

TI=5.0



NOTES:
INSTALL SUBDRAIN PER DETAIL 1/C17

EVA
STA 4+68± TO 6+04±
(ALONG ACCESSIBLE PATH)
NO SCALE

TI=5.0

RUGGERI-JENSEN-AZAR
ENGINEERS ▪ PLANNERS ▪ SURVEYORS
8055 CAMINO ARROYO GILROY, CA 95020
PHONE: (408) 848-0300 FAX: (408) 848-0302

LICENSED PROFESSIONAL ENGINEER — NILS SAINT IAGO SORENSEN — C79665 — EXP. ____ — STATE OF CALIFORNIA — CIVIL

Record Drawings
To be completed prior to acceptance of work by the City

Signature & Seal Date
P.E. No. _____ Exp. _____

Public Works Inspector: _____

Public Improvements initially Accepted by the City Council on: _____

REVISIONS

Num.	Date	By	Description	City Engr. Aprv.	Date

CITY OF MILPITAS
ENGINEERING DIVISION

APPROVED: _____
CITY ENGINEER DATE
ANY CHANGES TO PUBLIC IMPROVEMENTS SHALL BE APPROVED BY THE CITY ENGINEER

RECOMMENDED FOR APPROVAL:
FIRE DEPT. DATE: _____
ENGINEERING _____ DATE: _____

SOUTH MAIN SENIOR LIFESTYLES – ONSITE
IMPROVEMENT PLANS
STREET SECTIONS AND DETAILS
MILPITAS, CALIFORNIA
FOR: SRM DEVELOPMENT, LLC
DECEMBER 2017

JOB NO. 092041
PLAN NO.
SCALE: NONE
SHEET **C4**
OF 21 SHEETS

PLOT DATE: December 19, 2017
FILE PATH: W:\Jobs 09\092041\Drawings\Final\Improvement Plans\ONSITE\C4 STREET SECTIONS AND DETAILS.dwg

ATTACHMENT C

SUMMARY OF INSPECTION AND MAINTENANCE OF ALL BMP'S

South Main Senior Lifestyles
Stormwater Treatment Measure Operation and Maintenance
Inspection Report to the City of Milpitas, California

This report and attached Inspection and Maintenance Checklists document the inspection and maintenance conducted for the identified stormwater treatment measure(s) subject to the Maintenance Agreement between the City of Milpitas and the property owner during the annual reporting period indicated below.

I. Property Information

Property Address or APN: 1504, 1556, 1602, 1618 & 1620 South Main Street, Milpitas, CA

Property Owner: South Main Senior Lifestyles LLC

II. Contact Information

Name of person to contact regarding this report: _____

Phone Number of contact person: _____ Email: _____

Mailing Address: _____

III. Stormwater Control Measure Information

The report, with the attached completed inspection checklists, documents the inspections and maintenance of the identified treatment measures during the time period from _____ to _____.

IV. Stormwater Control Measure Information

The following stormwater control measures (identified treatment measures) are located on the property identified above and are subject to the Maintenance Agreement:

Identifying Number of SCM	Type of SCM	Location of SCM on Property
TA-1	Bioretention Basin	North side of Cedar Way
TA-2	Bioretention Basin	North side of Cedar Way
TA-3	Bioretention Basin	North side of Cedar Way
TA-4	Bioretention Basin	South side of Cedar Way
TA-5	Bioretention Basin	South side of Cedar Way
TA-6	Bioretention Basin	South side of Cedar Way
TA-7	Bioretention Basin	East side of Costa Street
TA-8	Bioretention Basin	East side of Costa Street
TA-R1	Raised Planter	West Courtyard
TA-R2	Raised Planter	West Courtyard
TA-R3	Raised Planter	West Courtyard
TA-R4	Raised Planter	West Courtyard
TA-R5	Raised Planter	Central Courtyard
TA-R6	Raised Planter	Central Courtyard
TA-R7	Raised Planter	Central Courtyard
TA-R8	Raised Planter	East Courtyard
TA-R9	Raised Planter	East Courtyard
TA-C1	Bioretention Basin	East side of South Main Street
TA-C3	Bioretention Basin	South side of Cedar Way
TA-C2	Pervious Pavers/Synthetic Turf/Pervious Conc.	EVA on south side of Building

South Main Senior Lifestyles
Stormwater Treatment Measure Operation and Maintenance
Inspection Report to the City of Milpitas, California

V. Summary of Inspections and Maintenance

Summarize the following information using the attached Inspection and Maintenance Checklists:

Identifying Number of Treatment Measure	Date of Inspection	Operation and Maintenance Activities Performed and Date(s) Conducted	Additional Comments

VI. Sediment Removal

Total amount of accumulated sediment removed from the stormwater treatment measure(s) during the reporting period: _____ cubic yards.

How was the sediment disposed?

___ Landfill

___ Other location on-site, as described in and allowed by the maintenance plan

___ Other, explain _____

VII. Inspector Information

The inspections documented in the attached Inspection and Maintenance Checklists were conducted by the following inspector(s):

Inspector Name and Title	Inspector's Employer and Address

South Main Senior Lifestyles
Stormwater Treatment Measure Operation and Maintenance
Inspection Report to the City of Milpitas, California

VIII. Certification

I hereby certify, under penalty of perjury, that the information presented in this report and attachments is true and complete:

_____ _____

Signature of Property Owner or Responsible Party Date

_____

Type of Print Name

_____

Company Name

_____

Address

Phone Number: _____ Email: _____

IX. Certification

Please submit the Operation and Maintenance inspection reports for each BMP to the following:

City of Milpitas
455 E. Calaveras Blvd.
Milpitas, CA 95035
Attn: Utility Engineer

ATTACHMENT D

MAINTENANCE LOG

APPENDIX D – Stormwater BMP Inspection and Maintenance Log

Submit the Operations and Maintenance Inspection reports, Maintenance Plan, and Inspection and Maintenance Checklist for each BMP to: City of Milpitas, 455 E. Calaveras Blv, Milpitas, CA 95035, ATTN: Utility Engineer

Facility Name	
Address	
Begin Date	End Date

Date	BMP ID#	BMP Description ID	Inspected by:	Cause for Inspection	Exceptions Noted (Write ID code-see potential inspection results)	Comments and Actions Taken

Instructions: Record all inspections and maintenance for all treatment BMPs on this form. Use additional log sheets and/or attach extended comments or documentation as necessary. Submit a copy of the completed log with the annual independent inspectors' report to the municipality, and start a new log at that time.

- BMP ID# — Always use ID# from the Operation and Maintenance Manual.
- Inspected by — Note all inspections and maintenance on this form, including the required independent annual inspection.
- Cause for inspection — Note if the inspection is routine, pre-rainy-season, post-storm, annual, or in response to a noted problem or complaint.
- Exceptions noted — Note any condition that requires correction or indicates a need for maintenance. Write ID code per potential inspection results
- Comments and actions taken — Describe any maintenance done and need for follow-up.

Potential Inspection Results with Definitions

ID	Inspection Results	Definitions
I. All BMP Types		
1	No Visible/Apparent Problems	No visible or apparent problems with BMP function. BMP appears to be well-maintained.
2	Significant Engineering/Design Flaws	BMP observed to have significant engineering/design flaws which lessen its effectiveness as a stormwater treatment measure.
3	Unauthorized Modifications	Any modification that lessens the effectiveness of the BMP; any modification not authorized by the City, designated agency or other regulatory agency.
4	BMP Destroyed or Eliminated	BMP destroyed, removed or eliminated from property.
5	Trash/Debris Accumulation or Dumping	Trash & debris accumulates within and/or on BMP; trash & debris interferes with proper BMP function; visual evidence of trash/debris dumping.
6	Evidence of Contamination & Pollution	Evidence or presence of oil, gasoline, contaminants or other pollutants.
7	BMP Access Obstructed	Access to BMP obstructed or limited
8	Obnoxious Odors	Unpleasant odors within/from BMP
9	Fencing- Missing or Broken Bars	Any defect in or damage to the fence or gate that permits easy entry to a facility.
10	BMP Cannot Be Located	BMP cannot be located for the inspection
II. Biofiltration		
A. General		
11	Uneven or Clogged Flow Spreader	Flow spreader uneven or clogged so that flows are not uniformly distributed across the BMP.
12	Leaking or Malfunctioning Irrigation System	Irrigation system leaking or malfunctioning
B. Sediment and Erosion Problems		
13	Sediment Accumulation	Sediment depth exceeds 2 inches on more that 10% of the vegetated treatment area; or sediment interferes with BMP performance.
14	Erosion/Scouring	Eroded or scoured areas due to flow channelization, higher flows, wind or water.
C. Vegetation Maintenance Issues		
15	Poor Vegetation Coverage	Planted vegetation is sparse or bare or eroded patches occur in more than 10% of the BMP. Growth of planted vegetation is poor because sunlight does not reach swale.
16	Invasive/Nuisance Vegetation or Weeds	Planted vegetation is excessively tall; nuisance weeds, invasive or noxious vegetation are overgrown; vegetation reduces free movement of water through BMP.
17	Tree/Brush Growth	Growth does not allow maintenance access or interferes with maintenance activity
D. Drainage Problems		
18	Standing Water/Excessive Ponding/Soggy Soil	Water is observed within the BMP (between storms) and appears not to drain freely or soil is excessively soggy. Excessive ponding of water within vegetated swale or other BMP.
19	Mosquito Habitat	Suitable habitat exists for mosquito production (e.g., standing water for more than 72 hours in areas accessible to mosquitos).
20	Clogged or Obstructed Inlets/Outlets	Inlet/outlet clogged or obstructed with sediment and/or debris.
21	Constant Baseflow/Damage	Small quantities of water flow through the vegetated swale, even when it has been dry for weeks, and an eroded, muddy channel has formed in the swale bottom, constant baseflow from irrigation runoff.

Stormwater Control Measure Routine Maintenance Checklist

Property Address/Cross Streets: 1504, 1556, 1602, 1618 & 1620 South Main Street, Milpitas, CA

Property Owner: South Main Senior Lifestyles LLC

Date of Maintenance: _____ Responsible Party: _____

Phone No.: _____ Email: _____

General Site Housekeeping Checklist

Task #	Maintenance Task Description	Recommended Frequency	Action Required (Y/N)*	Comments
1	Remove all trash and debris from common areas.	Weekly		
2	Empty trash and recycling receptacles located in common areas.	Weekly		
3	Maintain all common landscaping in accordance with an established landscape maintenance plan.	Weekly		
4	Prevent landscape maintenance debris from entering the storm drain system. Remove all debris from the site and dispose of properly.	Weekly		
5	Vacuum sweep all HOA maintained streets and parking areas.	Weekly		
6	Evaluate the irrigation system and repair any observed damage or leaks.	Monthly		
7	Re-vegetate bare areas or cover with mulch or other equivalent ground cover.	Monthly		
8	Evaluate common areas for evidence of illicit dumping or any spilled hazardous materials. Implement a clean-up and prevention plan.	Monthly		
9	Evaluate storm drain system. Remove debris and sediment from drain inlets. Confirm "No Dumping" stenciling is still visible; repaint as needed.	Monthly		

Additional Comments:

**Mark "n/a" or leave blank if not applicable.*

Stormwater Control Measure Routine Maintenance Checklist

Property Address/Cross Streets: 1504, 1556, 1602, 1618 & 1620 South Main Street, Milpitas, CA

Property Owner: South Main Senior Lifestyles LLC

Date of Maintenance: _____ Responsible Party: _____

Phone No.: _____ Email: _____

Bioretention Basin/Bioswale Checklist				**SCM ID:**
Task #	**Maintenance Task Description**	**Recommended Frequency**	**Action Required (Y/N)***	**Comments**
1	Maintain all landscaping in and around the basin. Prune and weed to keep basin neat and orderly in appearance. Replace any dead or dying plants.	Monthly		
2	Remove accumulated trash and debris from the basin and dispose of properly.	Monthly		
3	Evaluate the irrigation system and repair any observed damage or leaks.	Monthly		
4	Check mulch coverage. Replenish as needed to cover bare spots and maintain a 2 inch depth.	Monthly		
5	Evaluate basins for evidence of illicit dumping or any spilled hazardous materials. Implement a clean-up and prevention plan.	Monthly		
6	Inspect for standing water. If water remains for longer than 5 days, inspect further to determine the cause (e.g. clogged underdrain, blockage at outlet structure, biotreatment soil is clogged or overly compacted, etc.) and correct any problems.	Monthly, or as needed after storm events		
7	Inspect inlets, outlets, and overflow structures for damage and signs of blockage. Remove any accumulated sediment or debris. Ensure energy dissipation (e.g. splash pad, cobbles, etc.) is functioning adequately.	Twice a year by May 1 and September 15		
8	Examine side slopes for signs of erosion or rodent burrows. Repair slopes as needed and cover with mulch or other ground cover.	Twice a year by May 1 and September 15		
9	Remove accumulated sediment from the basin and regrade as needed. Minimize compaction of biotreatment soil.	Annually, or as needed		
Additional Comments:				

**Mark "n/a" or leave blank if not applicable.*

Stormwater Control Measure Routine Maintenance Checklist

Property Address/Cross Streets: 1504, 1556, 1602, 1618 & 1620 South Main Street, Milpitas, CA

Property Owner: South Main Senior Lifestyles LLC

Date of Maintenance: _____ Responsible Party: _____

Phone No.: _____ Email: _____

Pervious Pavement/Pavers and Synthetic Turf Checklist				**SCM ID:**
Task #	**Maintenance Task Description**	**Recommended Frequency**	**Action Required (Y/N)***	**Comments**
1	Check for sediment and debris accumulation. Prevent soil from washing or blowing onto the pavement. Do not store sand, soil, mulch, or other landscaping materials on pervious pavement surfaces.	Twice a year by May 1 and September 15		
2	Replace surface gravel to maintain a consistent cover.	Twice a year by May 1 and September 15		
3	Inspect for any signs of pavement failure. Repair any surface deformations or broken gravel cells.	Twice a year by May 1 and September 15		
4	Check for standing water on the pavement surface within 30 minutes after a storm event.	Twice a year by May 1 and September 15		
5	Inspect overflow drains, preferably before the wet season. Remove trash/debris.	Twice a year by May 1 and September 15		
6	Deep cleaning/unclogging by pressure washing and vaccuuming	As needed		
Additional Comments:				

**Mark "n/a" or leave blank if not applicable.*

Flow-Through Planter
Inspection and Maintenance Checklist

Property Address/Cross Streets: 1504, 1556, 1602, 1618 & 1620 South Main Street, Milpitas, CA

Property Owner: South Main Senior Lifestyles LLC

SCM No.:_____ Date of Inspection:_____ Inspection Type: Monthly Post-Wet Season (May 1) Pre-Wet Season (Sept 15)

Inspector(s):_____ Phone No.:_____ Other:_____

Defect	**Conditions When Maintenance is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done.)	**Results Expected When Maintenance is Performed**
Vegetation	Vegetation is dead, diseased and/or overgrown.			Vegetation is healthy and attractive in appearance
Soil	Soil is too deep or too shallow			Soil is at proper depth (per soil specifications) for optimum filtration and flow
Mulch	Mulch is missing or patchy in appearance			Mulch is even in appearance
Sediment, Trash and Debris Accumulation	Sediment, trash and debris accumulated in the flow-through planter. Planter does not drain within 3-4 hours.			Sediment, trash, and debris is removed from flow-through planter and disposed of properly. Planter drains within 3-4 hours
Clogs/Drainage	Planter does not drain within 3-4 hours after rainfall			Planter drains per design specifications
Downspouts and Sheet Flow	Flow to planter is impeded. Downspouts are clogged or pipes are damaged. Splash blocks and rocks in need of repair, replacement or replenishment			Downspouts and sheet flow is conveyed efficiently to the planter
Overflow Pipe	Does not safely convey excess flows to storm drain. Piping damaged or disconnected			Overflow pipe conveys excess flow to storm drain efficiently
Structural Soundness	Planter is cracked, leaking or falling apart.			Cracks and leaks are repaired and planter is structurally sound
Miscellaneous	Any condition not covered above that needs attention in order for the flow-through planter to function as designed.			Meet the design specifications

Pervious Pavement
Inspection and Maintenance Checklist

Property Address/Cross Streets: 1504, 1556, 1602, 1618 & 1620 South Main Street, Milpitas, CA

Property Owner: South Main Senior Lifestyles LLC

SCM No.:_____ Date of Inspection:_____ Inspection Type: Monthly Post-Wet Season (May 1) Pre-Wet Season (Sept 15)

Inspector(s):_____ Phone No.:_____ Other:_____

Defect	**Conditions When Maintenance is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done.)	**Results Expected When Maintenance is Performed**
Standing Water	Water stands in the bioretention area between storms and does not drain within 30 minutes after storm event.			There should be no areas of standing water once storm event has ceased. Restorative surface sweeping with a vacuum sweeper (or power washing) and/or reconstruction of part of the pervious surface may be required.
Trash, or Sediment and Debris Accumulation	Trash, sediment, or debris accumulated on pervious pavement.			Trash and debris removed from pervious pavement and disposed of properly. Adjacent areas do not contribute to sediment and debris
Damage	Surface deformation or broken pavers			Surface restored; no deformation or broken pavers
Vegetation	Weeds growing on pervious pavement			No weeds on pervious pacement
Underdrain Outlets	Water accumulates due to trash/sediment accumulation in outlets			No standing water observed. Clean and clean underdrain outlest
Miscellaneous	Any condition not covered above that needs attention in order for the pervious pavement to function as designed.			Meets the design specifcations

Appendix J

3rd Party Certification

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS
870 Market Street, Suite 1278
San Francisco, CA 94102-2906
415-433-4848
FAX 415-433-1029

Kirk R. Wheeler, PE
Peder C. Jorgensen, PE
Charles D. Anderson, PE
Daniel J. Schaaf, PE

Benjamin L. Shick, PE
Leif M. Coponen, PE
Principal Emeriti
James R. Schaaf, Ph. D, PE
David A. Foote, PE

May 31, 2017

City of Milpitas Plan Check
455 E Calaveras Blvd.
Milpitas, CA, 95035

Subject: South Main Senior Lifestyles Phase 1 SWMP 3rd Party *Conditional* Certification

Plan Checker:

At the request of Stone Rivard McGonigle Development, LLC (Developer), we have performed a third-party review of the Stormwater Management Plan and Civil Engineering Plans for South Main Senior Lifestyles Phase 1 development dated May 2017, developed by Ruggeri-Jensen-Azar & Associates (Engineer). The project includes a 2.9 acre development of residential complex with senior housing and related amenities.

The project includes the construction of a 4-story podium building with 199 senior assisted living resident units. The site improvements also include an underground parking garage, extensions of Cedar Way and Costa Street (public streets), courtyards, sidewalks, landscaping, and an emergency vehicle access road at 1504, 1556, 1602, 1618 and 1620 South Main Street in Milpitas. The project is located in the Penitencia Creek Watershed.

A VTA light rail and bus transfer station are located at the intersection of Great Mall Parkway and South Main Street, within 0.5 miles of the project site. This, combined with the high-density nature of the site, may allow for "Special Project" status under the Regional Board C.3 permit. Currently, the project has not claimed any "Special Project" credits.

We reviewed the following submittals with regard to this project:

- The Storm Water Control Plan (SWCP) dated May 2017 which includes:
  - Project Narrative
  - C.3 Data Forms
  - Treatment measure sizing calculations
- The following plan sheets:
  - Sheet C12 Stormwater Control Plan
  - Sheet 19 BMP Blowups
  - Sheet C4 Sections and Details
  - C8-C9 Grading Plan and Sections
  - C9-C10 Utility Plan and Sections

  - L7.01 – L7.5 Landscape Planting Plans and Planting Palette
- The following reports:
  - Geotechnical Report
  - Operation and Maintenance Report

We reviewed the project submittals for compliance with the stormwater requirements in the NPDES Municipal Regional Stormwater Permit (Order No. R2-2009-0074 and amendment Order No. R2-2011-0083) provision C.3 and the City's Municipal Code section XI-16-6.

1. Applicability of NPDES Permit Provision C.3 Requirements

There is a total of 97,170 sf of replaced impervious area, which is greater than the 10,000 square foot threshold. Therefore, C.3 source control, site design and treatment requirements **do** apply to this project. The project did not receive final discretionary approval before 12/1/2011, therefore it must use LID treatment measures to treat 100% of the runoff as determined by section C.3.d of the Permit. LID treatment measures include rainwater harvesting, infiltration, and evapotranspiration.

Hydromodification Management requirements do not apply to this project since the project is located in an area specifically excluded from HM requirements on the City of Milpitas HMP Applicability Map (available from SCVURPPP).

2. Proposed Stormwater Measures and Sizing Calculations

Source Control Measures for the project are as follows (as shown on the C.3 Form and explained in the SWCP)

- Alternative building materials
- Covered dumpster area, drain to sanitary sewer
- Beneficial Landscaping (minimize irrigation and runoff, minimize pesticide and fertilizer use)
- Maintenance Activities (such as street sweeping, storm drain system cleansing)
- Storm Drain Labeling (to deter non-storm water discharges)

Site Design Measures are as follows (as shown on the C.3 Form and explained in the SWCP)

- Minimize impervious surfaces
- Minimum-impact street design (narrower street widths to limit impervious surfaces)
- Disconnected downspouts
- Pervious pavement
- Microdetention in landscape
- Other self-treating area

Stormwater Treatment Measures

- Nineteen bioretention basins and flow through planters collecting water from all proposed rooftops, sidewalks, driveways and surface streets.
- Three self-treating areas collecting water from pervious areas only

Schaaf & Wheeler verified that calculations for all bio-treatment measures were done correctly, based on a combined flow and volume based method. The details provided for both bio-treatment devices are consistent with the SCVURPPP C.3 Handbook.

Operations and Maintenance Plans have been included in the SWCP which clearly state the responsible party and describe maintenance of all stormwater treatment BMPs.

The sizing, selection, and preliminary design of the 100% LID storm water treatment control BMPs in the SWCP meet the requirements of City's Municipal Code XI-16-6, the Municipal Regional Stormwater Permit (Order No. R2-2009-0074 and amendment Order No. R2-2011-0083) provision C.3 and the SCVURPPP C.3 Handbook dated April 2012.

If you require any additional information, please feel free to call me at the number above.

Best regards,
Sincerely,
Schaaf & Wheeler



Rupeet Malhotra, PE
Associate Engineer