**CITY OF EAST PALO ALTO**

**GENERAL CONSTRUCTION NOTES**

1. **ENCROACHMENT PERMITS:** Obtain an encroachment permit from Public Works Department for all off-site improvements shown on this plan.
2. **GRADING AND EARTHWORK:** Work shall be in conformance with the recommendation of the project soils/geotechnical. Grading work will be subject to approval of geotechnical engineer.

No grading shall be performed during the winter season (October 1 to April 30) to avoid potential soil erosion unless approved, in writing, by the City Engineer.
3. **REVISIONS:** Any Revisions to these plans must be reviewed and approved in writing by the City Engineer prior to construction of affected items. Revisions shall be accurately shown on revised plans, which shall be reviewed by the City Engineer prior to installation of improvements.
4. **STANDARD DETAILS AND CONSTRUCTION GUIDELINES:** All work shall be performed in accordance with the latest Caltrans Standard Details and Specifications, California Manual on Uniform Traffic Control Devices (CA MUTCD) and the City’s latest Standards, unless otherwise approved by the City.
5. **INSPECTIONS:** Notify City Public Works Inspector at (650)815-9619 before 4 pm a minimum of 24 hours in advance of starting work and for each inspection request, including the final inspection.
6. **EMERGENCY CONTACT INFO:** The contractor shall provide 24-hour/7-day contact information to the City inspector.
7. **UTILITY LOCATION VERIFICATION:** It is the contractor’s responsibility to verify the locations of existing utilities and to protect them from damage.
8. **UNDERGROUND SERVICE ALERT NOTIFICATION:** Contractor shall contact Underground Service Alert (USA) at (800) 227-2600 or 811 at least 48 hours prior to starting work. Contractor shall retain documentation to verify USA contact.
9. **TRAFFIC CONTROL:** Traffic control shall be per City-approved traffic control plan.

Short term and/or long term traffic control plans are required to be submitted and approved by the Engineering Division prior to the start of any work impacting the public right-of-way. Traffic control plans shall be submitted at the same time as the encroachment permit application. Traffic control plans must be prepared and stamped by person trained/certified to prepare traffic control plans and to comply with the latest version of the California Manual on Uniform Traffic Control Devices (California MUTCD).

1. **ELEVATION DATUM:** All elevations shown are based upon City of East Palo Alto datum, unless otherwise noted on the plans.
2. **SURVEY MONUMENT PRESERVATION and RESTORATION:** All standard street monuments, lot corner pipes, and other permanent monuments disturbed during the process of construction shall be replaced and a record of survey or corner record per section 8771 of the professional land surveyor’s act filed before acceptance of the improvements by the City. Copies of any record of survey or corner records shall be submitted to the City.
3. **ERRORS and OMISSIONS:** Approval of plans does not relieve the contractor/owner of the responsibility for the correction of mistakes, errors or omissions.
4. **RECORD DRAWINGS:** Contractor shall keep up-to-date a complete record set of prints of the contract drawings showing every change from the original drawings made during the course of construction including exact location, sizes, materials and equipment. A complete set of corrected and completed record drawing prints (as-builts) shall be submitted to the City Public Works Inspector prior to final acceptance for review and approval by the City.
5. **UTILITY INSTALLATION COORDINATION:** Contractor shall coordinate utility information shown on the plans with utility owners, including but not limited to PG&E, water, cable, telephone and/or joint trench facilities, for layout and details of installation, relocation, adjustment and abandonment.
6. **WATER SERVICE INSTALLATION:** Construction of water services shall be per

City Standards. All wet (live) taps shall be performed by the City or under its supervision and require a minimum 48 hours advance notification to the City Public Works Inspector. All existing valve operations shall be operated only by the City.

1. **WATER METERS and METER BOXES:** Water meters and meter boxes shall be furnished and installed by the City upon acceptance of a water service lateral line, and the property owner has assumed responsibility for the connection on the discharge side of the meter.
2. **BACKFLOW PREVENTION DEVICES:** Backflow prevention devices shall be required on all non-single family residences for irrigation, domestic, and fire lines, per City standards and as shown on City approved plans. A backflow prevention enclosure may be required for backflow devices from ¾” to 2”. No meter shall be turned on until there is full compliance with backflow prevention.
3. **WATER SYSTEM DISINFECTION:** New water pipelines, valves, fittings, and appurtenances shall be disinfected, tested by the contractor, and shall pass all bacteriological and other water quality requirements before being put into service. Contractor shall supply all materials, labor and equipment required to disinfect and test the pipelines and appurtenances. Water main disinfecting and flushing shall be per AWWA Standards and shall be witnessed by the City inspector.
4. **WATER SERVICE SHUTDOWNS:** It is the contractor’s responsibility to notify affected residents and businesses 48 hours in writing prior to the start of a water main shutdown. A water main shutdown will be done by City crews only.
5. **SEWER AND STORM DRAIN ELEVATION DATA:** Contractor shall verify all existing invert elevations for storm drain and sanitary sewer construction prior to commencement of any work.
6. **SANITARY SEWERS:** Sanitary sewer connections and testing must be made in the presence of a sewer district representative.
7. **GRAVITY UTILITIES:** Construct gravity flow utilities from the downstream connection point to the upstream terminus.
8. **UTILITY PROTECTION:** Contractor to protect all existing utilities and service laterals from damage due to contractor’s operations. Any and all utility service laterals that are damaged during construction shall be repaired or replaced to the satisfaction of the City Public Works Inspector.
9. **UTILITY LOCATION POTHOLING:** It is the contractor’s responsibility to pothole and/or uncover and expose existing utilities at crossing locations. Backfill, compaction, and pavement repair of potholed locations shall be done to the satisfaction of the City Public Works Inspector.
10. **UTILITY CROSSINGS:** The existing utilities crossing the new pipeline are shown according to the best available information. The contractor shall verify the type, size, location and depth of all the utility crossings (both mains and laterals) are correct as shown. No guarantee is made that all existing utilities (both mains and laterals) are shown.
11. **UTILITY CROSSING SEPARATION:** Contractor shall maintain a minimum 12 inch vertical and 4 feet horizontal clearance to other existing utilities. Five feet horizontal clearance must be maintained when working near natural gas lines. Where 12 inch vertical minimum clearances cannot be maintained, use the following:
	1. Install concrete saddle either on the upper or lower pipe in accordance with applicable standard details and as approved by the City; and
	2. Place new pipeline joints at a minimum 5 feet from the centerline of the existing pipe.

The two joints on either side of new pipeline are to be restrained. This method applies to the new pipeline crossing below an existing water line or above an existing sewer; and/or

* 1. Place new pipeline joints at a minimum 9 feet from the centerline of the existing pipe.

The two joints on either side of new pipeline are to be restrained. This method applies to the new pipeline crossing above an existing water line or below an existing

sewer.

* 1. Blanket protection for pipes or encasement for pipes may be required as directed and approved by the City Engineer.
1. **UTILITY VAULTS and PULLBOXES:** All existing utility vaults and/or pull boxes that are loose and/or broken shall be re-secured and/or replaced to the City Public Works Inspector’s satisfaction. All existing and new utility structures shall be adjusted to finish grade.
2. **VEHICLE and PEDESTRIAN ACCESS:** Vehicle and pedestrian access in accordance with Americans with Disabilities Act (ADA) standards must be provided at all times to all abutting properties, except as approved by the City Public Works Inspector. 48 hours written notice must be given to the affected property owner(s) when access is affected.
3. **TEMPORARY TRENCH PAVING:** Trenches deemed by the inspector to be correctly backfilled but not permanently paved may be temporarily paved with cutback asphalt until the next working day.

Trenches deemed by the inspector to be correctly backfilled but not permanently paved may be temporarily paved with high-performance patching material until permanent paving is installed. Due to the instability of cutback asphalt, it is not allowed as interim paving while waiting for permanent paving unless permanent paving is done the following workday.

1. **FINISH PAVING STANDARDS:** All paving – temporary or permanent – must installed in a manner that provides an acceptable safe passageway for traffic and pedestrians (including ADA).

Asphalt concrete shall conform to State Standard Specifications. Asphalt concrete shall not be placed when the atmospheric temperature is below 10°c (50°f) and falling or during unsuitable weather, as determined by the inspector.
2. **CRACK SEALING:** Contractor shall hot-apply crack seal emulsion to all cracks in pavement prior to any slurry seal application.
3. **TREE PROTECTION:**
The applicant shall establish and maintain tree protection zones throughout the entire length of the project. Tree protection zones shall be delineated using 4-foot tall orange plastic fencing supported by poles pounded into the ground, located as close to the drip-line as possible while still allowing room for construction/grading to safely continue. The applicant shall maintain tree protection zones free of equipment and materials storage and shall not clean any equipment within these areas. Should any large roots or large masses of roots need to be cut, the roots shall be inspected by a certified arborist prior to cutting. Any root cutting shall be monitored by an arborist or forester and documented. Roots to be cut should be severed cleanly with a saw or toppers. Normal irrigation shall be maintained, but oaks should not need summer irrigation. The above information shall be on-site at all times.
4. **TRENCH PLATES:** Steel plates may be used per the City Public Works Inspector’s approval and when in compliance with CALTRANS specification TR-0157, which addresses required plate thicknesses, edging design, placement, and anti-skid surfacing.
5. **TRENCH BACKFILL:** Typical trench backfill shall be per applicable City standards. For CDF or CLSM, the 28-day compressive strength shall be a minimum of 50 psi and a maximum of 100 psi. Typical trench backfill for water shall be sand 6” below the pipe up to the spring line of the pipe for bedding. Class 2 AB shall used for the remainder. Class 2 AB to be dampened and compacted with a rammer or vibration plate to 95% compaction every 12” lift.
6. **WARRANTY PERIOD:** The contractor is responsible for maintenance and repairs to trenches and pavement for a one-year warranty period after acceptance of the work by the City. One year after acceptance, the City will make a final inspection. If repairs have to be made, the contractor or developer will be notified to make repairs.
7. **GRADE BREAK DETAILS:** Grade breaks on curbs and sidewalks to be rounded off

(while concrete finishing work is in progress) in form work and finished surfacing.

1. **TRAFFIC STRIPING:** Contractor shall replace existing curb markings and paint (or thermoplastic) after installation of new curb and gutter.

Contractor shall replace existing traffic striping/legends and detector loops that are disturbed by construction operations to the City inspector’s satisfaction. All pavement markings are to be thermoplastic material**.**

1. **JOBSITE MANAGEMENT:** Contractor is required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property. This requirement shall be made to apply continuously and not be limited to normal working hours.

All construction materials, equipment, storage, stockpiling, and staging must be done on- site and the public right-of-way/street must be kept clear and free of debris.
2. **DUST CONTROL:** All graded surfaces and materials, whether filled, excavated, transported or stockpiled, shall be wetted, protected or contained in such a manner as to prevent any significant nuisance from dust, or spillage upon adjoining water body, property, or streets. Equipment and materials on the site shall be used in such a manner as to avoid excessive dust. A dust control plan may be required at anytime during the course of the project.
3. **NOISE CONTROL:** Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).

Except as provided herein, Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.

Residential property owners within 200 feet of planned construction areas shall be notified of the construction schedule in writing, prior to construction; the project sponsor shall designate a “disturbance coordinator” who shall be responsible for responding to any local complaints regarding construction noise; the coordinator (who may be an employee of the developer or general contractor) shall determine the cause of the complaint and shall require that reasonable measures warranted to correct the problem be implemented; a telephone number of the noise disturbance coordinator shall be conspicuously posted at the construction site fence and on the notification sent to neighbors adjacent to the site.
4. **STORMWATER BEST MANAGEMENT PRACTICES:** Contractor shall familiarize himself with the San Mateo County best management practices handbook for applicable stormwater runoff control measures and employ its provisions throughout all construction.
5. **STENCILS FOR CATCHBASINS and STORMWATER INLETS:** Contractor shall stencil all new or repaired catchbasins and stormdrain inlets with the non-point-source ”No Dumping” message as shown on the City-approved plans.
6. **REMOVAL OF USA MARKINGS:** All underground service alert (USA) markings on concrete and asphaltic pavement or other structures shall be removed when they are no longer required. Acceptable means of removal include sand blasting or high pressure water blasting.

**STREET LIGHTING NOTES**

1. **MATERIALS LIST SUBMISSION:** A list of the materials proposed by the contractor to be used on this project for street lighting including, but not limited to, luminaires, poles, conduit, conductors, pull boxes and service equipment shall be submitted to the City’s Engineering Division for review prior to the start of work. The list shall include the manufacturer’s specifications for all applicable products.
2. **ELECTRICAL SERVICES:**
	1. Install a 240v service next to each PG&E secondary box used for streetlight service, unless specified otherwise.
	2. All electric service points shown on these plans were determined by PG&E and are tentative and shown for reference only. The actual service point(s) must be confirmed with PG&E prior to construction of electrical work. All additional costs incurred for work modifications required due to final service point locations/adjustment shall be borne by the permittee. If the final service point location(s) differ from the tentative service point location(s) as shown on the plans, the permittee shall revise the plans and notify the Public Works inspector of any changes and shall obtain City approval of changes prior to installation of electrical work.
3. **EQUIPMENT SALVAGE:** All equipment to be salvaged shall be delivered to the City of Palo Alto corporation yard at 150 Tara Street in East Palo Alto. Contact City Public Works Inspector prior to delivery for further instructions.
4. **OVERHEAD LINE CLEARANCE:** Permittee is responsible for providing clearance for electroliers and traffic signal standards from overhead utility lines. Clearance must be a minimum of 10 feet from high voltage lines, 3 feet from secondary lines, and 1 foot from communication lines. No electrolier or traffic signal standard shall be installed until proper clearance is obtained. All expenses associated with providing these clearances must be borne by the developer.
5. **ELECTROLIER LOCATIONS:** All electrolier locations shall be staked in the field by the permittee.
6. **PULLBOXES:** All new pull boxes shall be #3-1/2 unless noted otherwise.
7. **GROUNDING CONDUCTOR(S):** A continuous #8 AWG grounding conductor shall be installed for each new luminaire on new or re-wired electroliers. The grounding conductor shall be terminated in the luminaire housing and connected to the grounding wire in base of the pole.
8. **TESTING:** Contractor shall test all street lights before and after the project to ensure all work as expected.