

# City of San José Street Light Pole-Mounted Small Cell Permit and Design Guidelines



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## 1. Asset Availability

- a. Limited to standard steel streetlight poles
- b. Non-standard pole types by special approval only
- c. Poles with existing electronic/communication devices are not available
- d. Traffic signal poles are not available
- e. Ornamental streetlight and pedestrian light poles are not available
- f. City has the right to withhold certain locations for its own use
- g. Installation of new poles for this purpose is not permitted

## 2. Asset Location Approval

- a. Prior to submittal of permit application, applicant shall submit to City a list of the asset(s) they propose to attach to. Applicant shall verify each asset in the field and via the Small Cell Screening database. Once verification is finished, complete the approved Location Screening Excel template and submit to Public Works for review.
- b. No more than 50 assets shall be submitted at one time for approval
- c. City shall have two weeks (10 working days) to review and provide approval/denial
- d. If applicant fails to submit within one-hundred twenty (120) days of the date of reservation, the City may automatically terminate the applicant's reservation of the proposed site upon written notice.

## 3. Design Requirements

- a. All installations shall comply with City standard [details and specifications](#), standard plans, adopted codes, and shall meet all relevant state and federal regulations and rules.
- b. Telecommunication providers must provide notification to the City's Department of Public Works when planning to onboard a new contractor or subcontractor. All contractors must be onboarded by the Department of Public Works and have a single permit issued before submitting subsequent permits.
- c. Small cell devices:
  - i. Shall be installed on pole structure or underground; ground-level installations are not permitted except by special approval
  - ii. Shall not cause any interference with operation of City facilities, including signs, banners, festoon circuits, and miscellaneous lighting.
  - iii. Shall not cause severe negative visual impact as determined by the City
  - iv. Four (4) added equipment enclosures are allowed on a single pole for single technology generation deployment, including PG&E meter and disconnect switch. An additional two devices are permitted for multiple technology generation deployments for a maximum of six (6) devices.
  - v. Dimensions of each equipment enclosure shall be less than 18"x9"x6", except pole top mounted enclosures shall be less than 40"x11"diameter.
  - vi. Antenna shroud, if applicable, shall not interfere with mast arm
  - vii. Consolidate enclosures with existing signs to minimize visual impact
  - viii. Devices and associated equipment must be UL listed and FCC certified or authorized for the intended use
  - ix. Devices shall not emit audible sounds beyond 55 dB
  - x. Finish color of device/enclosure shall match streetlight unless otherwise approved

- xi. Identification and warning labels shall be installed on all devices as required by codes and standards. At least one warning label shall face towards the street.
- d. Pole
- i. Structural analysis with proposed equipment required. Analysis shall be per 2016 California Building Code, and AASHTO LTS-6 Standard Specifications for Structural Supports for Highway Sign, Luminaires, and Traffic Signals.
    - 1. Wind speed assumption: 85 mph for streetlight poles only
    - 2. Standard pole information: Manuf. Union Metal; pole type 10B; (see E-15 and E016 -- "[Electrical – Signals and Lighting](#)")
    - 3. Standard foundation info: Type 2 foundation (see foundation drawing in E-18 Lighting Standard – Octaflute Type 2 Foundation Detail - "[Electrical – Signals and Lighting](#)")
    - 4. Shall be completed by California licensed civil/structural engineer and submitted to City for review and approval
  - ii. Poles showing signs of damage or corrosion must be replaced in kind.
  - iii. Proposed attachments to any street light pole type other than type 10B will be evaluated on a case-by-case basis. Replacement of the pole may be necessary.
  - iv. All poles must be factory painted consistent with the City's paint specifications.
    - 1. The "[Downtown and Downtown Transit Employment Center \(DT &DTTEC\)](#)" boundaries must be consulted to determine geographic paint requirements.
    - 2. Street lights and decorative post top lights within Downtown and Downtown Transit Employment Center (DT &DTTEC) should be painted black. However, light fixture types LP1, LP2, LP3, and LS3 found in Map 4, should be painted gray.
    - 3. Any street light outside of the DT &DTTEC boundary shall be galvanized. Any existing painted street light pole outside of this boundary, may be re-painted gray.
  - v. Any street light outside of the DT &DTTEC boundary shall be galvanized. Any existing painted street light pole outside of this boundary, may be re-painted gray.
  - vi. New foundation required when installing new street light pole.
  - vii. Minimum foundation shall be per City of San Jose Standard Detail, Lighting Standard – Octaflute Type 2 Foundation Detail, E-18. A larger foundation may be required per structural analysis.
  - viii. If applicant desires a stronger pole to support the devices, replacement pole shall be:
    - 1. Standard Type 15, finish to match existing (CalTrans 2010 Standard Plans ES-6A [http://www.dot.ca.gov/hq/esc/oe/project\\_plans/highway\\_plans/stdplans\\_US-customary-units\\_10/viewable\\_pdf/es-06a.pdf](http://www.dot.ca.gov/hq/esc/oe/project_plans/highway_plans/stdplans_US-customary-units_10/viewable_pdf/es-06a.pdf))
    - 2. Pole height/mast arm: To be reviewed and approved by City
    - 3. Foundation per Caltrans Standards for Type 15 pole
  - ix. Luminaires on replacement pole shall be re-installed from existing pole, except as per 3.e.i.4 below.
  - x. Pole number labels, if incorrect or missing, shall be corrected
- e. Wiring
- i. External conduit attachment to the pole is not permitted
  - ii. No visible wires and cables
  - iii. Splicing is permitted in the pullbox at base of pole. Splicing of small wiring to street light wiring in the pole is not permitted. If the pullbox is not present, a new pullbox will need to be installed, and conduit proved and rewired. Conduit that does not prove usable will need to be replaced.

- iv. Foundations without conduit will need to have new conduit added to the existing foundation, or a new foundation installed in accordance with structural analysis
- v. Fuses shall be located in the pole, behind the hand hole
- vi. Per City Standard Specifications, existing wires in pole must be removed before any drilling or welding takes place on pole
- f. Electric Service
  - i. If sharing service with City facility, for each location, applicant shall:
    - 1. Survey and document all loads connected to circuit involved, including any non-streetlight load. Circuit tracing shall be completed using proper circuit tracing equipment.
    - 2. Conduct load analysis to evaluate loading level and voltage drop. Calculations shall be completed by an electrical engineer.
    - 3. Reserve at minimum 40% of circuit load capacity (not breaker rating) for City's use.
    - 4. Replacement of light fixtures to LEDs is allowed to free up capacity in the circuit
    - 5. Conductors shall be spliced at base of pole in pull box. If there is no existing pull box, installation of a new pull box will be required.
- g. Metering
  - i. Service metering arrangement shall be reviewed and accepted by City
  - ii. Applicant shall submit proof of approved service metering arrangements from PG&E (i.e. Absolving Service Agreement) to the City prior to acceptance.
- h. Communication/Backhaul Service
  - i. Applicant shall secure their own communication/backhaul arrangements independent of City facilities. A separate [Major Utility Permit](#) for fiber optic installations, which is typically a 10-day permit, will be required.

#### 4. Public Outreach Requirements

- a. Prior to permit submittal, applicant shall mail out, by certified mail, a notification letter to residents/businesses/schools within a 250-foot radius of the subject street light. The notification letter shall contain the following information:
  - i. Clear description of the scope of work
  - ii. Photo simulation
  - iii. Applicant contact information
- b. Residents/businesses/schools must be given 20 calendar days to contact the applicant with their concerns and questions.
- c. Applicant must address and resolve any issues prior to permit submittal
- d. The following public outreach information shall be provided with permit submittal package:
  - i. Notification letter
  - ii. List of recipients
  - iii. Summary of all comments, questions and responses
  - iv. The complete text of each comment, question and response
- e. Applicant shall inform the City of San Jose, in writing, if issues are not resolved

#### 5. Permit Application Submittal

- a. Permit submittals shall be bundled by type of work (e.g. pole replacement, non-pole replacement, festoon circuits, etc.) to help streamline permit review

- b. Street light locations that are on the same electrical service shall be bundled into one permit application
- c. Initial Submittal
  - i. One copy (unless noted otherwise) and one electronic copy of all documents submitted. Electronic copy shall be in PDF format unless noted otherwise
  - ii. [Major Utility Permit application](#)
  - iii. Utility Plan Checklist: Small Cell with each item verified
  - iv. Three (3) copies of construction drawings (11" x 17")
  - v. One (1) copy of the structural analysis report, signed and stamped by CA licensed civil/structural engineer.
  - vi. Supporting documentation used for structural analysis
  - vii. Voltage drop calculations in Excel format with formula included in the cells
  - viii. Photo simulation of streetlight pole before and after small cell installation
  - ix. RF-EME Report
  - x. All providers must provide the City with material specifications and manufacturer information for equipment to be installed in the form of a "master materials list" for all small cell installations.
  - xi. Public outreach information
  - xii. Certificate of insurance documents for non-franchised utility companies (City's insurance requirements are attached)
  - xiii. Plan set tracking applicant quality assurance and quality control efforts
- d. Re-Submittals
  - i. One copy (unless noted otherwise) and one electronic copy of all documents submitted. Electronic copy shall be in PDF format unless noted otherwise
  - ii. Three (3) copies of construction drawings (11" x 17")
  - iii. One (1) copy of the structural analysis report, signed and stamped by CA licensed civil/structural engineer
  - iv. Responses to previous round of comments
    - 1. Utilities and Electrical review: Provide electronic response to comments in Excel file
    - 2. Structural: Provide written response to comments
- e. Submittals for Final Permit Approval
  - i. One copy (unless noted otherwise) and one electronic copy of all documents submitted. Electronic copy shall be in PDF format unless noted otherwise
  - ii. Two (2) copies of construction drawings (24" x 36")
  - iii. Two (2) copies of structural analysis report, signed and stamped by CA licensed civil/structural engineer
  - iv. Completed Special Inspections Form, if applicable
  - v. Responses to previous round of comments (refer to 2.d.iii)

## 6. Permit

- a. Permit Fees
  - i. Time and materials for both engineering review and inspection
  - ii. Billed on a monthly basis
  - iii. If the applicant has a current Funding and Reimbursement Agreement with a permitting fee payment draw down account, the draw-down account will be used for fees
- b. Review Timeline
  - i. 10 working days / review

- c. Reviewers
  - i. DPW, Development Services Utility Permitting
  - ii. DPW, THS Electrical
  - iii. DPW, Structural and Electrical Code Inspection

## 7. Site License Agreements (SLA)

- a. SLA's must be completed in parallel with permit review and issuance.

## 8. Construction Requirements

- a. Notification after issuance of permit and prior to construction:
  - i. Applicant is required to distribute written notice to residents, businesses, and schools within a 300-foot radius of the project limits a minimum of 3-days prior to start of construction. Notices shall include the project name, describe the nature and duration of the construction operations, and provide a telephone number in which the applicant or the designated representative may be contacted.
  - ii. If construction operations are delayed for any reason beyond the duration stipulated in the notices, or phasing of work includes dormant periods greater than 1-month intervals, the applicant shall re-issue written notices.
  - iii. A copy of the written notices and a map showing the notice distribution area shall be submitted to the Public Works Inspector listed on the first page of the permit.
- b. Pole Replacement
  - i. If the Public Works Utility Inspector identifies damage or corrosion of the existing street light pole, City will require revised plans and replacement of the pole and foundation
- c. Traffic Control
  - i. Temporary traffic control plans shall be reviewed and approved by the Public Works Utility Inspector after permit issuance and prior to start of construction
- d. Inspection
  - i. Utility inspection
  - ii. Electrical inspection
  - iii. Code inspection
- e. Moratorium
  - i. All currently observed moratoriums will be applicable (i.e. paving moratorium, holiday construction moratorium, etc.)
- f. Material List
  - i. A list of all materials must be provided to the City's Department of Public Works prior to construction.

## 9. Record Requirements

- a. Prior to construction applicants are required to provide electrical record drawings.
- b. At completion of construction, permittee shall submit the following:
  - i. As-builts
  - ii. Streetlight Datasheet (will be provided with approved permit package)
  - iii. Photograph of pole with devices installed (digital file identified by pole number)
  - iv. Up to date street light circuit diagram stored in service cabinet.

## 10. Permit and Design Guideline Revision History

Revision #4 on May 22, 2019

Revision #3 on April 16, 2019

Revision #2 on November 16, 2018

Original Guidelines posted on October 5, 2018