



SAN FRANCISCO PLANNING DEPARTMENT

WIRELESS PLANNING ADVISORY BULLETIN #4 BEST PRACTICES FOR WTS FACILITY MODIFICATIONS

This bulletin is intended to cover best practices for the preparation of applications to modify existing Micro/Macro WTS facilities that are mounted on buildings.

Most proposed modifications are reviewed through a building permit application submitted to the Department of Building Inspection. ([See WTS Facility Checklist for Modification to Existing Site Applications.](#)) The application is then reviewed by both Planning and Historic Preservation staff.

Nine Primary Review Items:

- Existing Facilities Built and Properly Maintained
- No Active Building or Planning Code Complaints
- Consistent Scope
- New Equipment No More Visible than Necessary
- No Abandoned Antennas/Dishes
- Noise Levels
- Complete Application Submittals
- Consistency with Five-Year Plan
- Section 106 and Historic Preservation Review

1. Existing Facilities Built and Properly Maintained. Verify that the existing facilities at the Project Site are in substantial conformance with prior approvals.

- “Substantial conformance” typically means the correct number, location, and screening/painting of antennas and/or dishes. Also, proper maintenance of screening, shrouding or bundles of cabling, and placement/painting of ancillary elements (see list below).
- Check for prior building permits that were never issued a final inspection or are expired and need to be resubmitted. Cancel any inactive or non-completed permits, or request a permit final as needed.
- Provide recent site photos and photo simulations from various off-site locations so as to provide sufficient clarity on the state of the Project Site.

2. No Active Building or Planning Code Complaints

- Check for any active Planning Department issued Notices of Violation by visiting the [San Francisco Property Information Map](#), entering the project site address, and choosing the Complaints Tab. If active violations are present, work with the property owner and assigned Code Enforcement Planner to resolve the complaints.
- Check [“Track Permits & Complaints”](#) on the Department of Building Inspection website for Building Code violations. *Tip: Check using both the address and block and lot.*

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3. **Consistent Scope.** Ensure that the scope of the Project as identified in the Project Plans, Photo Simulations, Radio-Frequency Emissions Report, & Structural Analysis (if needed) is consistent (e.g. number/type of antenna changes).
 - If exterior alterations are proposed, copy the photo simulations onto the plan set on a sheet preceding the site plan. Ensure the photo simulations are legible.
 - If new screen walls are proposed, indicate the exterior will be smooth faced without exterior bolt patterns. Unless another color is recommended, the general color preference for new rooftop elements is “Ponder” by Sherwin-Williams (non-glossy), or equivalent.

4. **New Equipment No more Visible than Necessary.** Check that new equipment is kept as minimally visible (from surrounding sidewalks, for example) as possible.
 - Think “**ABC**”: Provide prominent (e.g. font size and bold formatting) notes on the Cover Sheet (Project Description), the Site Plan, and Elevation Sheets regarding painting of visible antennas, brackets, cable/trays, and other new or previously unpainted existing facility elements.
 - Check to make sure the GPS antenna is moved out of view and away from building edges. Move to a location attached to a mid-roof cable tray, if possible. Add notes to indicate any changes to the existing GPS antenna on the Cover Sheet, Site Plan, and Elevation Sheets, as needed.
 - Check to make sure cable trays are not broken, worn, or feature loose bundles of wiring that should be shrouded near transition points. Add notes to indicate any cable tray changes on the Cover Sheet, Site Plan, and Elevation Sheets, as needed.
 - For replacements of existing panel antennas that are not screened, and no significant azimuth skew is needed, evaluate opportunities to use a mounting bracket without a bulky mechanical tilt mechanism in order to provide for a slimmer offset from the wall surface. Also, utilize cable shrouds that make the antenna look slightly longer, but screen the bundle of cables exiting the bottom of many panel antennas.

5. **No Abandoned Antennas/Dishes.** Include within the scope of work the removal of any abandoned antennas/dishes and supporting brackets. Or, have the property owner submit an application for a separate building permit to remove any abandoned Micro/Macro WTS facilities. *Additional review may be needed on a case-by-case basis for the removal of certain types of wall surfaces on buildings considered known or potential historic resources.* [See Wireless Planning Advisory Bulletin #1 \(Removal or Transfer of WTS Facilities\).](#)

6. **Noise Levels.** If new noise-generating equipment (e.g. A/C, condensers, equipment cabinets with cooling fans, or generators) is proposed in locations near sensitive receptors (e.g. residential dwellings, child care centers, etc.) provide clarity on the noise profile of the equipment. In some instances, equipment that complies with noise limits could create an echo effect if placed in locations such as a narrow light well.

7. Complete Application Submittals. In order to avoid delays, ensure that application contains all of the following:

- *Previously approved plans, site photos, and photo simulations are important submittal items used to ensure the existing facility was built correctly.*
- Review [SF Fire Department Bulletin 2.06](#) to ensure the WTS facility complies with fire codes. *A substantial number of plan revisions are often attributed to project plans that do not demonstrate compliance.*
- **Ancillary Elements:** Include in plans any and all ancillary elements such as barriers/fences, cable trays, caged access ladders, equipment cabinets, generators, generator plugs, GPS antennas, H-frames, radio relay units (RRUs), and storefront alterations for new electric meters & generator plugs. These elements are sometimes left off of initial plan sets and/or photo simulations and may need to be relocated or redesigned.
- Include the carrier name in the project description (and not just the lessee field) on the pink building permit application.
- Ensure plans clearly show heights of antenna/screening elements (and heights of new/relocated ancillary elements such as RRUs), and setbacks from roof edges.
- If panel antennas are to remain unscreened and attached to a building façade, indicate the tops of the new antennas will be flush with the parapet/roof (unless unique circumstances warrant otherwise).

If new equipment areas are proposed, ensure sufficient information is provided on the plans to ensure compliance with applicable rules (based on the zoning district) for required rear yard areas (Planning Code Section 134) and usable open space (applies to buildings with residential dwellings – Planning Code Section 135). [Visit the San Francisco Planning Department's Website:](#) choose Resource Library, then choose the Complete San Francisco Planning Code.

- Ensure RF barricades/fences are accurately shown on plans. Minimize height to extent feasible as they approach roof edges.
- Ensure the RF report clearly indicates the number of **existing** antennas/dishes (**broken down by carrier on the same project site**) and provides a clear sense of how many antennas/dishes will exist at the site, post-completion.
- Ensure the RF report is updated in the event antennas/dishes are relocated as part of a revision to plans.
- Also see Item 3 above.

8. Consistency with Five-Year Plan. Check that the number of antennas is consistent with the Five-Year plan on file with the Planning Department. Update if needed. See Map Library on the [Planning Department's website](#).

9. Section 106 and Historic Preservation Review.

- Ensure Section 106 Review (National Historic Preservation Act) occurs. The majority of WTS facilities in San Francisco are situated either on buildings considered known/potential historic resources or within historic districts.
- An Administrative Certificate of Appropriateness (ACOA) under Planning Code Article 10 or a Minor Permit to Alter (MPTA) under Planning Code Article 11 may be required for buildings with an Article 10/11 designation, including relatively “newer” buildings in Article 10/11 Districts. [See HISTORIC PRESERVATION on Page 7 of the Wireless Planning Bulletin for Micro WTS Facilities.](#) If the Project Site requires an ACOA or MPTA, the initial submittal to the Department of Building Inspection must include the appropriate application. See the Permit Forms page (under Permits & Zoning) on the [Planning Department Website](#).
- Link: [Powerpoint Introduction to the Section 106 Process \(fcc.gov\)](#)

For additional information on applicable best practices, review the [Wireless Planning Bulletin of Best Practices for Micro WTS facilities](#).

- Many sections of the Micro WTS facility bulletin also apply to Macro WTS facilities.
- Pertinent sections for modifications include: Antennas, **Block Book Notifications (permit holds)**, Building Permit Applications, Cable Trays, Generators, GPS antenna, Historic Preservation, Hospitals, Ladders, Land Use jurisdiction, Letters of Determination, Noise, Photo Simulations, Primary Equipment Locations, Project Plans, Radio-Frequency Reports, Rear Yard Areas, Secondary Equipment Locations, Unscreened Antennas, and Usable Open Space

This bulletin is not intended to supersede Federal/State laws, the Planning Code, [the Wireless Facility Siting Guidelines \(and 2003 supplement\)](#), or determinations made by the Zoning Administrator.

This bulletin does not apply to Personal Wireless Services Facilities (AKA Small Cells, outdoor Distributed Antenna Systems, or “oDAS”) located within the Public Right-of-Way (e.g. attachments to wooden utility poles). Those facilities are subject to permitting by the [Department of Public Works](#).