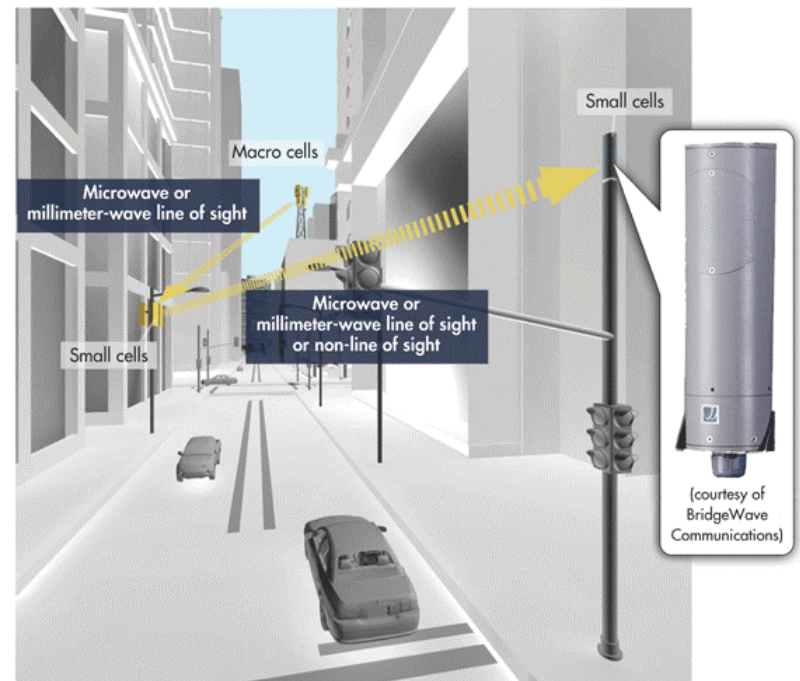


Streamlined Environmental Requirements for Distributed Antenna Systems (DAS) and Small Cells



SMALL CELLS

- Small cells (picocells and femtocells) take traditional cellular architecture down to a more granular level.
 - Cell radius of hundreds of feet or less.
 - Suited both for outdoor and large indoor spaces.
 - Sometimes used to fill small gaps in coverage or supplement service in limited areas of high demand.
- Distributed Antenna Systems (DAS) take the concept a step further.

DISTRIBUTED ANTENNA SYSTEMS

- Integrated system of many small antennas connected by fiber.
- One base station transceiver can serve several nodes.
- Neutral host technology lets multiple carriers share the same antennas and other facilities.
- Outdoor DAS commonly located on street lights or utility poles.
- Indoor DAS applications include stadiums, hotels, shopping malls, and office buildings.

ADVANTAGES OF SMALL CELLS & DAS

- Expands capacity by many multiples; obviates need to keep splitting cells as demand increases.
- Creates capacity for high-speed broadband data services.
- Improves indoor coverage.
- Opportunity to share infrastructure.

BUT

- May not be economically reasonable in all circumstances.
- Typically supplements, and does not replace, existing macrocell network

ENVIRONMENTAL REVIEW IMPLICATIONS OF WIRELESS INFRASTRUCTURE REPORT AND ORDER

October 2014 infrastructure rules remove unnecessary obstacles to the siting of facilities needed for broadband.

- National Environmental Policy Act (NEPA) Review
 - New and expanded Categorical Exclusion
- National Historic Preservation Act (NHPA) Review
 - New exclusions
- Temporary Towers ASR Notification Exclusion

Infrastructure Report and Order Section IIIB

NEPA Categorical Exclusions

- Collocations on structures other than buildings and towers are now considered Categorical Exclusions for NEPA (except for effects on historic properties and radio frequency [RF] emissions exposure)
- Definition of ‘Antenna’ Includes associated site equipment
 - Wiring
 - Cabling
 - Cabinets
 - Back-up Power
- Clarification that the existing NEPA categorical exclusion for mounting antennas “on” existing buildings applies to installations in the interior of existing buildings

Categorical Exclusion for collocations on towers and buildings broadened to apply to utility poles, water towers, and other man-made structures.

CatEx includes equipment like power cabinets, cabling and wiring.

Pictures of Typical Small Cell and DAS Deployments



Infrastructure Report and Order Section IIIB NEPA Categorical Exclusions

New Categorical Exclusion for deployment of wireless facilities on new or replacement poles within designated, active utility and communications rights of way if there is no substantial increase in size over existing uses.



REQUIREMENTS

- The facility will be located in a right-of-way that is designated by a Federal, State, local, or Tribal government for communications towers, above-ground utility transmission or distribution lines, or any associated structures and equipment;
- The right-of-way is in active use for such designated purposes; and
- The facility will not constitute a substantial increase in size over existing support structures that are located in the right-of-way within the vicinity of the proposed construction.

CONSIDERATIONS

- Does not exclude Section 106 review and associated Tribal participation
- Subject to 1.1307(c) and (d) of FCC rules (i.e. Processing Bureau or public complaint could trigger Environmental Assessment (EA) requirement)
- EA required if RF emissions exposure exceeds specified levels
- No substantial increase in size over existing uses

Substantial increase in size definition drawn from Collocation Programmatic Agreement

- Can't increase height by more than 10% or 20 feet
- Standard number of cabinets, not to exceed 4
- No appurtenances that protrude more than 20' (or beyond width of the structure at the level added if greater)
- No excavation beyond the existing leased or owned property surrounding the structure or the right-of-way easement proximate to the structure

Infrastructure Report and Order Section III C NHPA Section 106 Exclusions

- Certain collocations on utility structures (including utility poles and electronic transmission towers) are considered excluded from Section 106 review
- To qualify as exempt, collocation must meet specified size and other limitations

REQUIREMENTS

- No new ground disturbance;
- Not within historic district or within 250' of a historic district boundary;
- Not located on a designated National Historic Landmark or property that is listed or determined eligible for listing in the National Register of Historic Places; and
- Not subject of a pending complaint alleging adverse effects on historic properties.

Infrastructure Report and Order Section III C NHPA Section 106 Exclusions

Collocation on buildings and non-tower structures over 45-years old are excluded from Section 106 review if an antenna exists at the proposed location.

New antenna must:

- Meet requirements related to visibility and proximity
- Comply with any zoning and/or historic preservation conditions for the existing antenna

REQUIREMENTS

- No new ground disturbance;
- Not within historic district or within 250' of a historic district boundary;
- Not located on a designated National Historic Landmark or property that is listed or determined eligible for listing in the National Register of Historic Places; and
- Not subject of a pending complaint alleging adverse effects on historic properties.

Infrastructure Report and Order Section III C NHPA Section 106 Exclusions

Clarification: Existing exclusions for collocations on buildings under NPA and Collocation PA apply to collocations **inside** buildings.

Infrastructure Report and Order Section IV New ASR Notification Exemption for Temporary Towers

New permanent exemption from local and national environmental notification requirements associated with application for Antenna Structure Registration provided:

- The tower will be in place for 60 days or less
- FAA Notice of Construction is required
- No FAA required marking or lighting
- Less than 200' above ground level
- Either involves no excavation or excavation only where the depth of previous disturbance exceeds the proposed construction depth by at least two feet

NOTE:

This is not a Categorical Exclusion – If an EA is needed, public notice is required

Streamlined Environmental Reviews for Distributed Antenna Systems (DAS) and Small Cells

Next Steps: Further consultation with CEQ, ACHP, State Historic Preservation Officers and Tribal Nations on additional, broader exclusions and efficiencies for environmental review of DAS networks and other small facilities.

Goal: Program Alternative to further streamline Section 106 review of DAS and small-cell deployments.

Schedule: 18 - 24 months after the release of the Report and Order.

Streamlined Environmental Reviews for Distributed Antenna Systems (DAS) and Small Cells

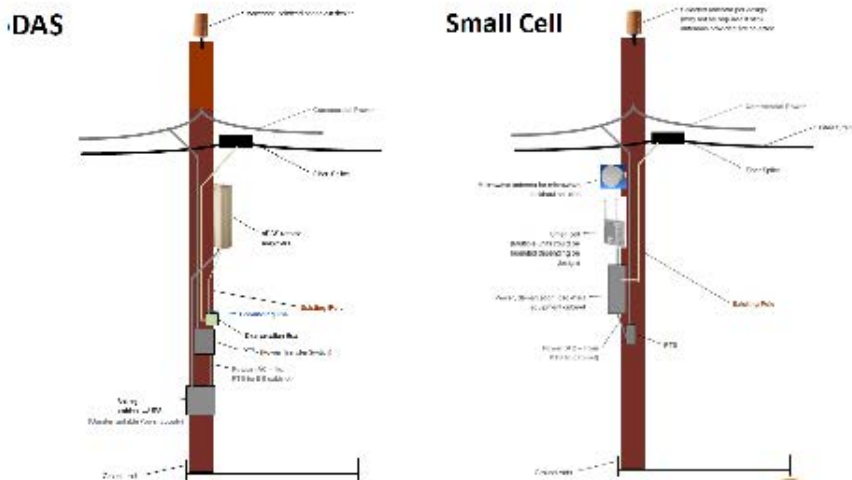


Photo 4. Small Cell and DAS Comparison