

**Telecommunication and Wired Broadband Facility Accommodation in
Access-Controlled State Highway Right-of-Way**

June 20, 2025

For exceptions to the encroachment policies listed below for telecommunication and wired broadband facility installations on the Interstate System, Federal Highway Administration (FHWA) approval is required. Refer to the Project Development Procedures Manual (PDPM) Chapter 17, Section 2, Article 4, Federal Highway Administration Approvals for projects on the Interstate System. Refer to PDPM Chapter 17, Section 3, Article 4, Clearance and Offset Requirements for installation requirements. Maintenance access points (MAPs) are locations where installation or maintenance activities can be performed such as pull vaults and splice vaults.

These criteria replace the accommodation criteria within access-controlled highway right-of-way in the PDPM Chapter 17, Section 2, Article 2. Exceptions to the criteria below will be considered on a case-by-case basis in accordance with Section 4, Exception Requests. Approval of policy exceptions will be provided by Headquarters Division of Design, Office of Project Support, or the delegated district approval authority.

1. Longitudinal installations within access-controlled highway right-of-way must be underground.¹
2. Longitudinal installations must be installed according to the following criteria in descending order of preference (See Figure 1):
 - a. Further than 3 feet from the edge of pavement² or further than 4 feet from the face of the guardrail³, in accordance with the following:
 - The preferred placement location is within 10 feet from the right-of-way line.
 - If placement is located more than 10 feet from the right-of-way line, justification reason(s) for installing further than 10 feet from the right-of-way line must be explained in the project report or permit application submittal.
 - b. Within the pavement area, within 3 feet of the edge of pavement, or within 4 feet of the face of guardrail is prohibited. On roadways with limited right-of-way or other physical and environmental constraints, an encroachment policy exception may be considered. Any installation in the pavement will require concurrence from the district materials engineer or district maintenance engineer. Installation in the traveled lane of constructed freeways and expressway is prohibited without exception.
3. Longitudinal installations are prohibited in the highway median. Exceptions for placing MAPs in the median are rarely granted and highly discouraged.

¹ Unless installed on bridges.

² Per Highway Design Manual Index 672.3, the preferred hinge width for pavement structural stability is 3 feet.

³ Per Traffic Safety Systems Manual, 4 feet is the minimum distance to the hinge point to support a standard post.

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4. Buried boxes should be considered to deter and prevent wire theft.⁴ Buried boxes are not considered MAPs.
5. Locate MAPs to optimize safety for workers and the travelling public by prioritizing use of these locations:
 - a. Locations where passing traffic is traveling at low speeds, such as, along local streets (with or without a locked gate) or near on-ramp terminals at the local street.
 - b. Locations where maintenance vehicles can pull completely off the roadway and shoulder and allow maintenance personnel to access the MAP and maintenance vehicle without having to walk along the travel lanes or the shoulder.
 - c. Locations where maintenance vehicles and workers are protected by highway features such as existing guardrails or barriers.
 - d. Locations where there is sight distance for maintenance vehicles entering and exiting vehicle pull-out areas.
 - e. Locations where there is existing lighting so drivers can see maintenance vehicles entering, exiting, and parked at pull-out areas.
 - f. Do not place MAPs in areas along ramps and freeway mainline where drivers must merge onto or diverge from through traffic including gore areas.
6. For Interstate System right-of-way,
 - a. MAPs are prohibited in the pavement or in locations requiring access from the mainline and ramps without an approved policy exception by FHWA.
 - b. FHWA approval is required for new locked gates or new users for existing locked gates used for access.
 - c. Installations in the median of Interstate require FHWA approval and will only be considered in exceptional circumstances.
7. For non-Interstate access-controlled right-of-way, MAPs are allowed if installed on local streets at grade-separated crossings, local streets at at-grade intersections on expressways, or frontage roads where access will not interfere with the safety and operations of the highway facility. If MAPs cannot be installed at these allowed locations, then alternate locations for MAPs must be evaluated according to the following criteria in descending order:
 - a. Per PDPM Chapter 17, Section 2, Article 3, installation of a locked gate on non-Interstate access-controlled highways may be approved by the District Director through the project delivery or encroachment permit process.

⁴ Per Deputy Directive 113 – Wire Theft Prevention, burying pull boxes is one of the most effective theft prevent methods.

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- b. If a MAP must be accessed from the mainline on non-Interstate access-controlled highways, then the MAP must be installed no more than 10 feet from the right-of-way line provided there is an area where maintenance vehicle can be off the highway mainline and shoulder.
 - c. If a MAP can only be accessed from the mainline and ramps on non-Interstate access-controlled highways, then a maintenance vehicle pullout must be installed, unless maintenance can be performed using existing pullouts or existing maintenance access locations. Buried boxes do not require a maintenance vehicle pullout. Existing maintenance locations are area behind existing guardrails or barriers, area accessed through existing access roads or locked gates.
 - d. Underground MAPs within highway right-of-way must be rated for highway traffic to address highway maintenance and operation and motorist safety.
 - e. If longitudinal installations are installed on a bridge, pull vaults or splice vaults are recommended to facilitate future bridge work. Vaults are allowed at both ends of the bridge and the locations for these vaults should follow the criteria outlined above. See Item 16 below.
 - f. If a MAP cannot meet the criteria described above, an encroachment policy exception may be considered on a case-by-case basis.
- 8. Installations are allowed to cross the highway. See the above criteria for MAPs if needed for transverse crossing installations.
 - 9. For longitudinal installations, splice vaults for distribution connections must be on local streets at grade-separated crossings or established at-grade intersections on expressways. Service connections are prohibited from the mainline without exceptions.
 - 10. Large above-ground facilities such as repeater huts are prohibited without exceptions. Smaller appurtenances may be considered on a case-by-case basis.
 - 11. In areas with existing longitudinal above-ground facilities, joint use with the existing facilities may be considered with an encroachment policy exception.
 - 12. Installation should be designed and installed such that lane closures, except shoulder closures, on the mainlines or ramps of access-controlled highways will not be needed for future operation and maintenance.
 - 13. Per PDPM Chapter 17, Section 2, Article 3, no additional longitudinal electric service lines are allowed as part of a broadband installation. Electric supply lines must come from outside of the State right-of-way as a service lateral line perpendicular to the line.

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14. As-builts of the installation and trenchless installation bore paths must be submitted to the district Utility Engineer Workgroup. Using a Caltrans-specified datum, as-built drawings must show the horizontal location and vertical profile of the conduits and MAPs as constructed in the field in Caltrans-accepted electronic CADD files.
15. Longitudinal underground installations require cable markers and tracer wire. Uniform color-coded utility mark-outs, such as colored backfill or warning tape, are also required if installed by open trench.
16. For installation proposed on bridges, please refer to Caltrans standard details for attachment of conduits to bridges available at <https://dot.ca.gov/programs/engineering-services/manuals/bridge-standard-details>. The link includes “*The User Guide to Bridge Standard Detail Sheets, Section 20 – 2*”, “*Communication Conduit Attached to Structures*.” Refer to the Encroachment Permits Manual and Caltrans District staff for additional guidance on using the appropriate attachment details. A non-standard attachment method will require review and approval by Caltrans’ structure unit.

In addition to these requirements, all other applicable requirements within the PDPM Chapter 17, Highway Design Manual, and Encroachment Permits Manual still apply within access-controlled right-of-way.

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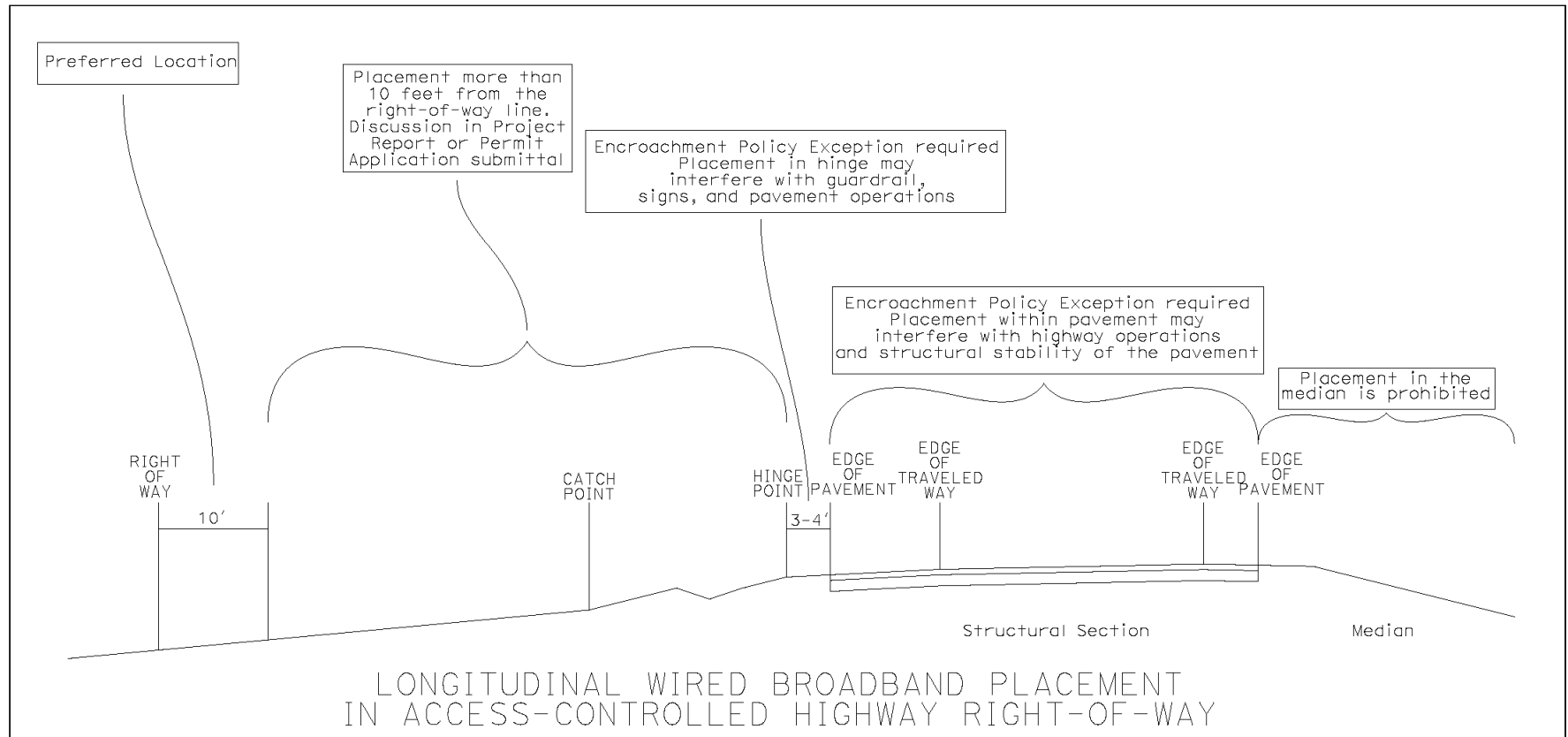


Figure 1 Longitudinal Wired Broadband Placement in Access-Controlled Highway Right-of-Way