



U.S. Department of Transportation
Federal Highway Administration
Office of Infrastructure

High Voltage (HV) Electric within Federal-aid Right-of-Way (ROW)

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Image source: FHWA



Disclaimers

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What is considered a Utility

- The Code of Federal Regulations defines a utility (23 CFR 645.105)
 - privately, publicly or cooperatively owned line, facility, or system for producing, transmitting, or distributing communications, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, storm water not connected with highway drainage, or any other similar commodity, including any fire or police signal system or street lighting system, which directly or indirectly serves the public.
- State law definition of a utility can be more restrictive

What if the State Law Is More Restrictive?

- If proposed installation is not a utility under State law, it is considered a “Non-Highway Use.”
- A ROW use agreement may be issued if certain terms and conditions are met (23 CFR 710.405)
 - Requires FHWA approval in most instances
- Current fair market value must be charged, with few exceptions (23 CFR 710.403(e))
 - Railroads
 - Bikeways and pedestrian walkways
 - Overall public interest based on social, environmental, or economic benefits
 - See 23 CFR 710.403(e) for entire list of exceptions

Longitudinal Utility Installations in Controlled Access ROW

- The use of highway ROW to accommodate utilities is in the public interest (23 CFR 645.205(a))
- Governed by Federal statute and regulation, State law, and the State's Utility Accommodation Policy (UAP)
 - FHWA reviews and approves the UAP (23 CFR 645.215(b))
 - FHWA reviews and approves any exceptions to the UAP (23 CFR 645.215(c))
- Special note for scenic areas (23 CFR 645.209(h))
 - **New Utility installations not permitted in ROW when located within or adjacent to areas of scenic enhancement and natural beauty**
 - public park and recreational lands, wildlife and waterfowl refuges, historic sites as described in 23 U.S.C. 138, scenic strips, overlooks, rest areas and landscaped areas
 - Exceptions can be made when certain conditions are met.

Longitudinal Utility Installations in Controlled Access ROW

FHWA policy for longitudinal utility installations on freeways:

- States may decide if they want to allow longitudinal utility installations on freeways and if so to what extent and under what conditions.
- Must be documented in the utility accommodation policy and approved by the FHWA (23 CFR 645.215(b)).
 - Exceptions or changes must be approved by the FHWA Division Administrator (23 CFR 645.215(c)).
- State may permit certain utilities and exclude others.
- State can prohibit any longitudinal utility installations.
- Utility permit fees charged for utility use are at a State's discretion and may be used as the State sees fit.

Service Connections

- 23 CFR 645.209(c)(2)(v)
 - A utility strip will be established along the outer edge of the right-of-way.
 - Service connections to adjacent properties to provide services to utility consumers shall not be permitted from within the utility strip

Safety & Environment

23 U.S.C. 109

(1)(1) In determining whether any right-of-way on any Federal-aid highway should be used for accommodating any utility facility, the Secretary shall

(A) first ascertain the effect such use will have on highway and traffic safety, since **in no case shall any use be authorized or otherwise permitted, under this or any other provision of law, which would adversely affect safety;**

(B) evaluate the direct and indirect environmental and economic effects of any loss of productive agricultural land or any impairment of the productivity of any agricultural land which would result from the disapproval of the use of such right-of-way for the accommodation of such utility facility; and

(C) consider such environmental and economic effects together with any interference with or impairment of the use of the highway in such right-of-way which would result from the use of such right-of-way for the accommodation of such utility facility.

Safety, Operations, & Aesthetics

23 CFR 645.209

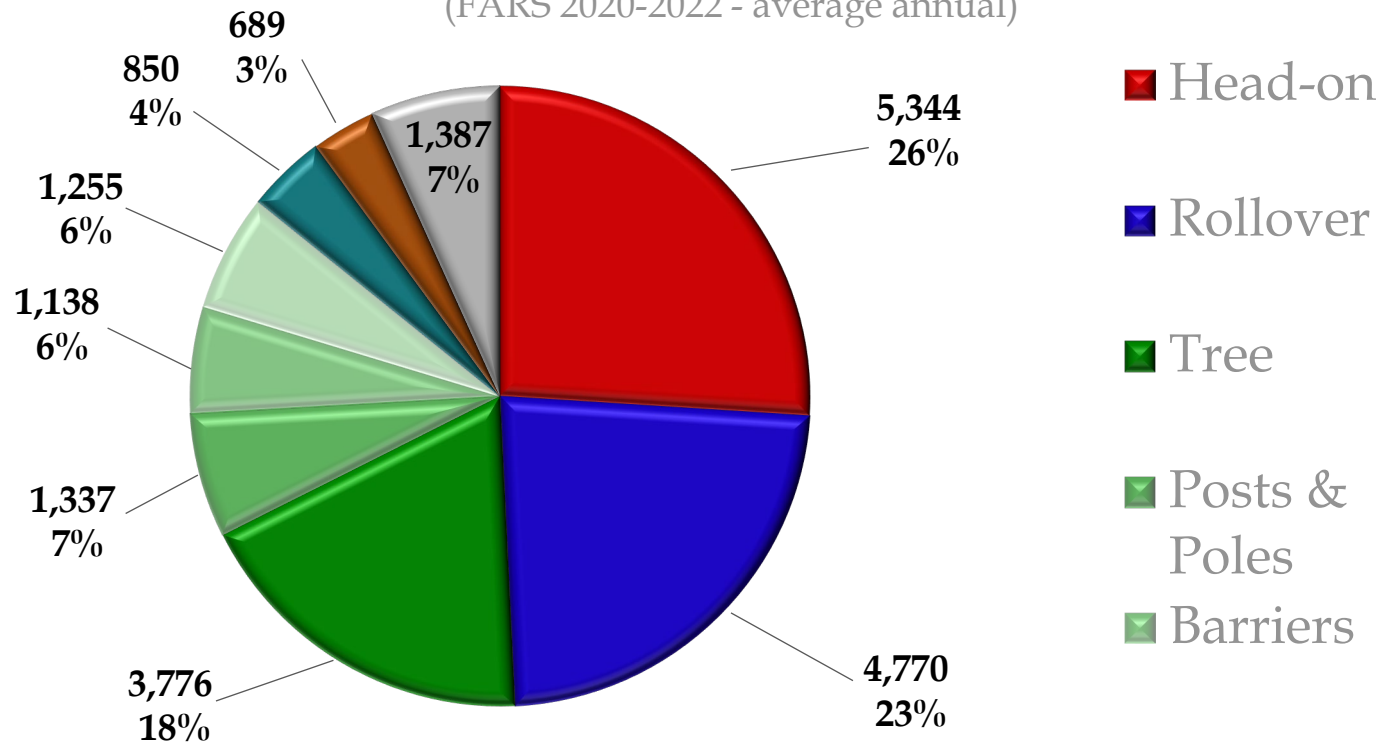
- Location of utilities must conform to the clear roadside policies for the highway involved (645.209(a)).
- Above ground installations should be located as far from the traveled way as possible (645.209(b)).
- With limited exceptions, no new above ground installations may be located within the established clear zone of the highway (see exceptions in 23 CFR 645.209(b)).
 - Safety countermeasures are required when exceptions are made.

*Note: The above is **not** an all-inclusive list.*

Posts & Poles

U.S. RwD Fatalities by Most Harmful Event

(FARS 2020-2022 - average annual)



AASHTO Roadside Design Guide, 4th Edition 2011

- Remove the obstacle
 - Undergrounding
- Redesign the obstacle for safe traversal
- Relocate the obstacle farther from road
 - Outside the clear zone – speed, slope ADT Table 3-1 RDG
 - Locate along or outside fence line
 - Check state design manual
- Reduce obstacle severity
- Shield the obstacle
 - Guardrail length and need, concrete barriers, crash cushions, cable guardrail
 - RDG Table 5-2 – barrier guidelines
- Delineate the obstacle

Median Installations

- Federal regulations indicate that a utility strip will be established along the outer edge of the right-of-way. (23 CFR 645.209(c)(2)(v))

Considerations

- Access during construction
 - ROW fence vs mainline
 - Work zone safety and mobility (WZSM) considerations
- Construction Oversight
- Constructability report

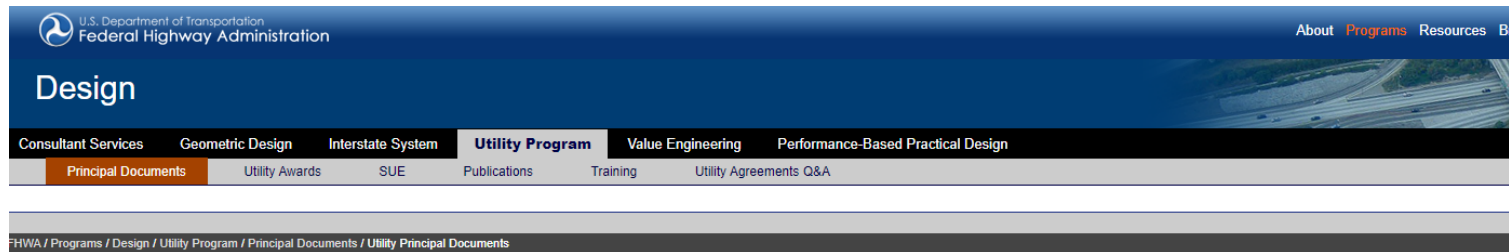
Considerations

- Above ground location markers for underground installations
- How much clearing is required (trees, brush, etc.)
- Who pays for relocations?
- Routine inspection and maintenance by utility
 - Access
 - How often?

Considerations

- Grounding requirements for above ground installations
- 90-degree crossings typically not practical for above ground
- How far from bridges
 - Crane distances
- Considering OSHA requirements for worker safety

Principle Documents



Utility Principal Documents

Broadband Infrastructure Deployment Final Rule

The Consolidated Appropriations Act, 2018 (Pub. L. 115-141), Division P, Title VII ("Mobile Now Act"), Section 607, Broadband Infrastructure Deployment (47 U.S.C. 1504), directs the Secretary of Transportation to promulgate regulations to ensure that States meet specific registration, notification, and coordination requirements to facilitate broadband infrastructure deployment in the ROW of applicable Federal-aid highway projects. Accordingly, FHWA revised its regulations governing the accommodation of utilities to implement the Section 607 requirements by amending 23 CFR Part 645 to add a new Subpart C. The requirements, which will apply to each State that receives Federal funds under Chapter 1 of Title 23, United States Code (U.S.C.), aim to facilitate the installation of broadband infrastructure.

The Notice of Proposed Rulemaking (NPRM) for Broadband Infrastructure Deployment was published on August 13, 2020, in the Federal Register. Comments were accepted on the [Federal Register](#) docket through September 14, 2020. The Broadband Infrastructure Deployment Final Rule was published 12/03/2021, Docket Number FHWA-2019-0037, the Final Rule takes effect 90 days after the date of publication in the Federal Register.

- [Broadband Infrastructure Deployment Presentation](#)

Laws and Regulations

Utility facilities, unlike most other fixed objects that may be present within the highway environment, are not owned nor are their operations directly controlled by State or local highway agencies. Because of this, highway authorities have developed policies and practices which govern when and how utilities may use public highway right-of-way, and under what conditions public funds may be used to relocate utility facilities to accommodate highway construction. Federal laws and FHWA regulations contained in title 23 of the United States Code (cited 23 U.S.C.) and title 23 of the Code of Federal Regulations (cited 23 CFR), regulate the accommodation, relocation and reimbursement of utilities located within the highway rights of way.

Two sections of Federal highway law in title 23 of the United States Code (cited 23 U.S.C.) deal specifically with utilities:

- [23 USC 109\(l\) Standards](#) (.pdf) (2011) addresses with the accommodation of utilities on the right-of-way of Federal-aid highways.
- [23 USC 123 Relocation of utility facilities](#) (.pdf) (2011) addresses with reimbursement for the relocation of utility facilities necessitated by the construction of a project on any Federal-aid highway.

Four sections of Federal Highway regulations in title 23 of the Code of Federal Regulations (cited 23 CFR) deal specifically with utilities:

- [23 CFR 645 Subpart C Broadband Infrastructure Deployment](#) (.pdf) (12/03/2021) addresses registration, notification, and coordination requirements to facilitate broadband infrastructure deployment. addresses registration, notification, and coordination requirements to facilitate broadband infrastructure deployment.
- [Executive Order on Accelerating Broadband Infrastructure Deployment](#) (06/14/2012)
- [23 CFR 635 Construction and Maintenance](#) (.pdf) (11/15/2006) Subpart C addresses the coordination with the construction contract and project authorization.
- [23 CFR 645 Subpart A Utility Relocations, Adjustments, and Reimbursement](#) (.pdf) (11/22/2000) addresses with utility relocations, adjustments, and reimbursement.
- [23 CFR 645 Subpart B Accommodation of Utilities](#) (.pdf) (11/22/2000) addresses with the accommodation of utilities.

Utilities in the Right-of-Way

- June 2017 Memo
- Utility Accommodation and Other Uses of Highway Rights-of-Way (ROW)
 - Brief refresher on regulations that govern utility accommodation and other uses of highway ROW

Web search: FHWA Utilities ==> Principle Documents

Safety Resources

- FHWA's Roadway Departure Website
<https://highways.dot.gov/safety/RwD>
- The Transportation Research Board's National Cooperative Highway Research Program (NCHRP) Report 500 – Guidance for Implementation of the AASHTO Strategic Highway Safety Plan; Vol. 8: A Guide for Reducing Collisions Involving Utility Poles
<https://nap.nationalacademies.org/catalog/23426/a-guide-for-reducing-collisions-involving-utility-poles>
- The National Highway Traffic Safety Administration's (NHTSA's) Fatality and Injury Reporting System Tool The (FIRST) is a tool for querying the Fatality Analysis Reporting System (FARS) database.
<https://cdan.dot.gov/query>
- FARS database
<https://www.nhtsa.gov/research-data/fatality-analysis-reporting-system-fars>

Thank You

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