

Sub-part 7501 - Maintenance

Chapter 04015 Parallel Utility Lines and Overhead Crossing Encroachment Permits

Purpose

100 To establish a policy for location and construction of parallel utility lines and overhead crossings.

101 This rule sets forth the requirements necessary to regulate the location and construction of parallel utility lines and overhead crossings on Mississippi Department of Transportation right of way.

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GENERAL

200 The Mississippi Department of Transportation, hereinafter the Department, will authorize permits for parallel utility lines and overhead crossings as set out below.

201 Utility installations, adjustments and relocation are to be located and made with due consideration to highway and utility costs and in a manner that will be the least hazard to the highway users, that will constitute the least interference with the highway facilities and their operations, that will

comply with the minimum clearances and that will not appreciably increase the difficulty of or cost of maintenance of the highway.

TYPES OF HIGHWAYS

300 Type 1, 2A, 2B and 3 highways are defined in Rule 37.I.7501.04002, Right of Way Encroachment Permits.

OVERHEAD POWER AND COMMUNICATION LINES - CONVENTIONAL HIGHWAYS (TYPE3)

400 General - Overhead lines will be located as near the right of way line as possible, taking into consideration the length of the cross arm and the preservation of desirable trees and vegetation insofar as such preservation is in accordance with practical considerations of utility pole alignment, however, such alignment must be in accordance with the requirements of the clear roadsides and scenic enhancement policy expressed in Rule 941-7501-04017, Location of Above Ground Utility or Other Structures Affecting Traffic and Scenic Enhancement.

401 Construction Areas - Overhead lines may be located in areas other than medians within construction limits where such limits are sufficient distance from the traveled way that such location would not result in any support brace or guy interfering with traffic safety or interfere with the construction or maintenance of the highway.

402 Joint Use Agreements - Where there is not sufficient right of way or it appears necessary to conserve available right of way to accommodate present and future utility applications, joint use of a single pole, overhead facility by agreement between the several utilities is encouraged. Such agreements may also reduce impairment of the visual quality of the highway.

403 Attachment to Bridges, etc. - Electric power and communication lines shall not be attached or affixed to bridges and grade separation structures nor will they be permitted through pipe culverts, box culverts or box bridges. Crossings may be permitted over or under bridges or grade separation structures where proper clearances from the structure and from the traveled way are obtained.

404 Ground-Roadway Clearance - Overhead lines will cross the highway as near normal to the highway alignments as practical and be of durable materials and as maintenance free as feasible. All overhead lines will have a minimum ground clearance of sixteen (16) feet in order to provide free access to the rights of way by the various types of equipment employed in

maintaining the highways. Vertical clearance to all wires from the roadways will be in accordance with the National Electrical Safety Code, Current Edition, but with a minimum clearance from roadways as follows:

Communication lines 18' minimum
Power Line 0-750 volts 20' minimum
Over 750 volts 24' minimum

- 405 Low and High Speed Highways - Rule 941-7501-04017, Location of Above Ground Utility or other Structures Affecting Traffic Safety and Scenic enhancement, outlines the specific horizontal clearances required for above ground installations on low and high speed highways. Above ground installations include utility and traffic signal poles and highway or street lighting supports.
- 406 Medians - Overhead power and communication lines to be constructed parallel to the highway shall not be placed in the medians of multiple lane highways except as necessary for approved street or highway lighting or traffic signals. Poles or standards for street and highway lighting and traffic signals may be permitted in the medians of low and high speed highways in accordance with Rule 941-7501-04017, Location of Above Ground Utility or Other Structures Affecting Safety and Scenic Enhancement, and will be of a type that will not adversely affect or mar the appearance of the area traversed.
- 407 Median Crossings - No utility poles or other above ground supports for overhead crossings may be placed in the medians as a part of utility highway crossings unless, in each case, a determination is made by the Chief Engineer that without such pole or support located in the median, the line would be (1) extremely difficult and unreasonably costly to the utility consumer, (2) the installation in the median will not adversely affect to a substantial degree the design, construction, stability, traffic safety or operation of the highway and (3) that in case the highway is designated as a fully or partially controlled access facility every practicable provision will be made for servicing the utility without access from the through traffic lanes or ramps, including removal to a new location.
- 408 Appurtenances - Pay telephone booths, transformer banks involving multiple pole supports, substations, etc., are not to be permitted upon the right of way. Repeater cabinets such as those used by telephone companies may be installed on poles located on the right of way provided concrete slabs of sufficient size to enclose the poles and servicing area are constructed flush

with the ground and are constructed so as to prevent vegetative growth and not impede mowing of adjacent vegetation. This paragraph is not to be construed so as to prevent the location of needed facilities in rest or recreation areas and in hospitality stations.

UNDERGROUND POWER AND COMMUNICATION LINES - CONVENTIONAL HIGHWAYS (TYPE 3)

500 General - Underground cables, conduits and other approved installations should be located outside construction limits and as near the right of way line as feasible. Future highway reconstruction widening or other possible improvements should be considered when locating the utility. Highway and street crossings will be as near normal to the highway and street alignment as practical and be of durable materials and as maintenance free as feasible. (Reference: Rule 941-7501-04001, Underground Utility Crossings)

501 Permissible Locations - All installations should be located outside cut and fill slopes; however, in some instances narrow right of way widths and conflicts with other utilities on relatively unimproved roads may require a location in such slopes and such location require special measures to be taken by the applicant for prevention of erosion as directed by the District Engineer. In situations of narrow right of way it may be preferred that underground cables or conduits with manholes flush with the ground be permitted at the back of a regular cut ditch near the toe of the cut slope when such location would not disturb any base, subbase or treated design soil.

502 Prohibited Locations

1. No parallel electric power or communication utility lines are to be attached or affixed to bridges or grade separation structures. No parallel line will be located within the pavement, the shoulders, or within the limits of any prepared base, subbase or treated design soil or at locations which would require any of the foregoing to be disturbed during construction or maintenance of the utility. Underground power and communication lines to be constructed parallel to the highway shall not be placed in the medians of multiple lane highways except as necessary for approved street or highway lighting or traffic signals.
2. Underground transmission power lines will not be permitted to be installed parallel or crossing the highway right of way.
3. Underground distribution power lines (7,200 to 13,000 Volts), when approved, will require that the electrical power line be placed in a steel encasement throughout the entire highway right of way and extend a minimum distance of two (2) feet outside the highway right of way lines.

503 Appurtenances - Pedestal type underground cable connections such as those commonly used by telephone companies may be permitted to be installed within the outer two (2) feet of the rights of way. Such pedestal type connections may also be permitted to be installed within two (2) feet of existing permanently located utility poles. Upon relocation of such pole the pedestals will be relocated to comply with this paragraph. This paragraph is not to be construed so as to prevent the location of needed facilities in rest or recreation areas and in hospitality stations. (Reference: Rule 941-7501-04017, Location of Above Ground Utility or Other Structures Affecting Traffic Safety and Scenic Enhancement).

504 Underground power and communication lines will comply with Rule 941-7501-4001, Underground Utility Crossings, except for restrictions outlined in prohibited locations sections in this Rule (Rule 941-7501-04015, Parallel Utility and Overhead Crossing Encroachment Permits).

PIPE LINES - CONVENTIONAL HIGHWAYS (TYPE 3)

600 Permissible Locations - It is preferred that utility pipelines be located outside construction limits and as near the right of way line as feasible. Wide cut sections and wide borrow sections may be utilized for acceptable locations. Future reconstruction, widening and other improvements planned for the highway should be considered when locating the pipeline. In special cases, water line crossings may be attached to bridges when the applicant shows just cause as outlined in Rule 941-7501-06001, Accommodation of Utilities on Freeway Rights of Way, Section 2, Paragraphs A, B, C and D and the water line installation will not damage the bridge or interfere with traffic or maintenance of the bridge. Where permitted, such water lines will be placed well outside bridge abutment fills and may be attached to intermediate bents or piers after approaching same underground from the parallel location of the line. The method of attachment will be shown in detailed drawings on the application and must be approved by the Bridge Engineer. The installation will be of durable materials and designed to be as maintenance free as is feasible. In some instances narrow right of way widths or conflicts with other utilities may require a location within construction limits and such location required special measures to be taken by the applicant for prevention of erosion as directed by the District Engineer. In municipal or other built-up sections there may not be enough unpaved area in which to locate parallel pipelines. These instances will be treated as special cases, each according to its merits. They should be fully documented and referred to the State Maintenance Engineer for disposition.

601 Prohibited Locations - Pipelines, other than water lines as discussed above, are not to be attached or affixed to bridges, grade separation structures or drainage structures. High pressure parallel transmission lines moving gases and petroleum products are not to be constructed on state highway rights of way. No parallel pipeline will be permitted within the limits of the pavement, the shoulders, the slopes of any prepared base, subbase, treated design soil or at locations which would require any of the foregoing to be disturbed during construction or maintenance of the line. Parallel pressure pipelines or force mains will not be permitted in the medians of multiple lane highways. Parallel gravity flow pipelines may be permitted in the medians provided, in each case, a determination is made by the Chief Engineer that without such location in the median the line will be (a) extremely difficult and unreasonably costly to the user, (b) the installation in the median will not adversely affect to a substantial degree the design, construction stability, traffic safety or operation of the highway, and (c) that in case the highway is designated as a fully or partially controlled access highway, every practicable provision will be made for servicing the utility without access from the through traffic roadways or from the ramps, including removal to a new location.

602 Appurtenances - Lift stations, wells, gas and water meters, anode fields, etc., are not to be permitted on state highway rights of way. Where municipal streets have been taken for state maintenance as a state highway, water and gas meters may be installed back of the curbs if agreeable to municipal authorities. This paragraph is not to be construed so as to prevent the location of needed facilities in rest or recreation areas and in hospitality stations.

603 Underground pipeline crossings will comply with Rule 941-7501-04001, Underground Utility Crossings, except for restrictions outlined in prohibited locations sections in this Rule (Rule 941-7501-04015, Parallel Utility and Overhead Crossing Encroachment Permits).

PARALLEL LOCATIONS PARTIALLY CONTROLLED ACCESS HIGHWAYS (TYPE 2A and 2B)

700 General - Except as restricted herein the same general requirements for location of above ground and underground parallel lines on conventional highways will apply to their location on partially controlled access highways.

701 Permissible Locations - All Lines

1. For highways designated to have Type 2A access, it is preferred that parallel lines on partially controlled access highways be located between the frontage roads and the right of way line. In extreme

situations they may be located in the outer separation, provided there is no interference with highway maintenance operations or drainage and the line will be serviced from the frontage road. If frontage roads have not been constructed at the time the utility application is made, the probable location of the frontage road should be determined and this location taken into consideration in locating the line. In the absence of frontage roads the line should be serviced from adjacent streets or roads where possible.

2. For highways designated to have Type 2B access, it is preferred that parallel lines be located along the outer right of way. The utility lines must be constructed and maintained without vehicular travel from and to the through traffic lanes or ramps of the highway, except at established entrances and exits.

702 Prohibited Locations - All Lines - Neither parallel underground lines nor supports for overhead power and communication lines to be constructed parallel to the highway or crossing the highway will be permitted in the medians of multiple lane highways other than as authorized in Section 1, Paragraphs (g) and (h) above.

PARALLEL LOCATIONS AND CROSSINGS - FREEWAYS (TYPE 1)

800 General - Except as restricted herein the same general requirements for location of above ground and underground lines on conventional highways will apply to their location on freeways.

801 Permissible Locations-All Lines - Generally, all parallel utility lines on freeways, if approved, will be confined to areas outside the control of access line and preferably to the area between the frontage road and the right of way line. The control of access fence will usually be erected near the inside shoulder of the frontage road leaving little or no acceptable area between the fence and the frontage road for underground lines location. Servicing of such lines must be accomplished from the frontage roads. Where there are no frontage roads the control of access line is the right of way line unless noted differently on the highway and/or right of way plans. When underground lines follow cross roads or streets which are carried over fully controlled access highways they may not be attached to bridges, except for water lines indicated in Section 3(a) above, as they cannot be serviced without access from the through lanes or ramps and generally cannot approach the bridge(s) without being placed in the embankment or pavement structure, if any. Underground and overhead lines along such cross road or streets must be located so that servicing can be accomplished from the crossroad or street. Individual service line crossings of freeways are to be avoided where possible, such servicing to be accomplished from single distribution line crossings to the extent

practicable and feasible. (Reference: Rule 37.I.7501.06001, Accommodation of Utilities on Freeway Rights of Way).

802 Prohibited Locations - New utilities will not be permitted to be installed longitudinally within the control of access lines except as outlined in Rule 37.I.7501.06001, Accommodation of Utilities on Freeway Rights of Way.

CONSTRUCTION REQUIREMENTS - ALL HIGHWAYS

900 Overhead Lines - Required clearances of overhead utility lines are detailed in Section 1, Paragraph (e) above. Generally, construction requirements will comply with the regulations of the Mississippi Public Service Commission and/or with the National Electrical Safety Code.

901 Underground Lines - Pipelines, multiple ducts, rigid conduits, telephone cables and like underground structures shall have a minimum cover of thirty six (36) inches. All encasements and carrier pipes will also have a minimum cover of thirty six (36) inches. Underground installations will be covered additionally as required to protect them from damage by heavy maintenance equipment or other apparent hazards. In special circumstances where required depth of cover cannot be obtained. Other means for obtaining protection of an appropriate design and approved by the Department, may be required. Generally, construction and design requirements will comply with the regulations of the Mississippi Public Service Commission and/or with the current Standard Code of Pressure Piping of the American National Standards Institute.

GENERAL - APPLICABLE TO ALL LINES

1000 Clearing and pruning of trees and other vegetation will be in accordance with Rule 37.I.7501.03005, Clearing and Pruning of Trees and Other Vegetation for Utility Lines.

1001 Restoration of sod on graded or otherwise disturbed areas will be in accordance with Rule 37.I.7501.04002, Right of Way Encroachment Permits.

1002 Underground and overhead installations shall be of durable materials, designed for long service life expectancy and relatively free from routine servicing and maintenance.

1003 New construction and reconstruction of existing facilities shall be designed so as to provide for known or expected expansion of the utility facilities in order that construction of the expanded facility may be accomplished in a manner that will minimize hazards and interference with highway traffic.

1004 When construction and maintenance equipment and personnel are permitted to operate by access from the through lanes or frontage roads, advance warning signing and ample flagmen shall be provided to handle traffic at times of ingress and egress. When equipment and personnel are permitted to work within or near the roadway or in close proximity to the outer edge of the shoulder, the utility owners shall furnish the necessary traffic control devices in accordance with Part VI of the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), Current Edition, as a minimum. Special traffic control details may require a traffic control plan, to be approved by the Department.

REFERENCES (All references herein to other materials are as to the most current version of that particular document.)

1100 Section 65-1-8, Mississippi Code Annotated (1972).

1101 941-7501-04001, Underground Utility Crossings.

1102 941-7501-04002, Right of Way Encroachment Permits.

1103 941-7501-03005, Clearing and Pruning of Trees and Other Vegetation for Utility Lines.

1104 941-7501-04017, Location of Above Ground Utility or Other Structures Affecting Traffic Safety and Scenic Enhancement.

1105 941-7501-06001, Accommodation of Utilities of Freeway Right of Way.

1106 Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), Part VI, Current Edition.

1107 Mississippi Public Service Regulations, Current Edition.

1108 American National Standards Institute, Current Edition.

1109 National Electrical Code, Current Edition.

1110 For Mississippi Code see www.state.ms.us

1111 MDOT specific rules, forms, publications, SOPs, and other support documentation are available for review at MDOT