RIGHT-OF-WAY OPERATIONS MANUAL

Chapter Forty-Eight Occupancy of Interstate Right-Of-Way

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MONTANA MDT DEPARTMENT OF TRANSPORTATION

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For these guidelines, Utility Occupancy Permits, Utility Encroachment Permits and Notification Permits, and other permits will be referred to as “Utility Permits.”

Guideline Use:

The guidelines are to be used for the permitting of facility in the existing interstate right-of-way.

48-1 UTILITY PERMIT APPLICATION PROCESS

The electronic application is located at the department’s website at http://mdtupas.com/ An applicant must apply for an interstate utility permit through the department’s Utility Permitting Administration System (UPAS), for the installation or repair of any facility in the Interstate Right-of-Way under the jurisdiction of the department.

MDT will require and provide construction oversight for all eligible interstate project installations. MDT will utilize internal staff and/or 3rd party consultants to provide all construction oversight and inspections. The Facility Owner will be responsible for reimbursing MDT for agreed upon construction inspections.

48-1.1 Occupancy Permit

Some of the most common conditions for which permits are required prior to occupancy of interstate right-of-way are:

- Public Utility facilities
- New installations of utilities.
- Major modification to existing facilities.
- A change in transmitting or an increase in operating pressure above that originally.
  approved by the Department.
- Any change in type, function, or physical location of a facility; and

48-1.2 Utility Encroachment Permit

- Non-utility facilities.
- Utility facilities where the following applies:
  - A public utility requests to occupy an area of the right-of-way other than the outer edge for the convenience of the utility or they are non-utility.
  - If a utility does not install a facility in accordance with the conditions of the permit issued. A utility encroachment permit can be issued instead of requiring the utility to relocate the facility.

48-1.3 Notification Permits

- Normal maintenance operations to keep an existing facility in repair without adding to its physical makeup or changing its functional capacity. The owner must apply for an Interstate-Maintenance Notification Permit via UPAS. In case of an emergency, the district must be notified after the emergency repair is made.

- Installing additional capacity in existing conduit systems that does not change the nature or operational conditions of the original facility. An application for a permit must be submitted when installing additional cables in an existing conduit.

48-1.4 Right-of-Way Use Agreement (Non-Exclusive Lease)

MDT makes and enters into a Right-of-Way Use (ROW) Agreement between the facility owner (Developer) and MDT. The non-exclusive lease agreement is negotiated for the life of the term (maximum of 30-years) with an automatic renewal option, payment terms, and location. Every facility owner is required to have a ROW Use Agreement attached to their UPAS permit. The ROW Use Agreement application fee is established at $100.00 per MCA, 60-4-601. The ROW Use Agreement is located on the Interstate Occupancy webpage: Interstate Permitting | Montana Department of Transportation (MDT) (mt.gov)

48-1.5 Fair Market Value

Fair market value is defined in MCA, 60-4-601 and ARMS, 18.7.2. “Fair market value" means $100 per mile for each year, or **$3,000 per mile for a 30-year term** ROW Use Agreement. Applicants may choose to pay annually **or in a lump sum** for the full length of the term. The term length will be on an annual basis with the option to range between 1 year up to a maximum of 30 years. Broadband facility owners have the option to request a wavier exception to the fair market value payment using the template request form on the Interstate Occupancy webpage. All fair market value waiver requests will be submitted via UPAS and will be routed by MDT to FHWA for review and approval.

48-1.6 Utility Installations on Future Construction Projects

When a utility company requests to occupy existing interstate right-of-way with its facilities where a future construction project is proposed, no consideration should be given for the future interstate construction project unless construction limits and the right-of-way are designed. Where construction limits and right-of-way are not designed the utility should be issued the appropriate permit. Where the construction limits and right-of-way are defined, the utility should be issued an Encroachment Permit and advised to design and install the facility outside the new Construction limits.

48-1.7 Non-Use

The guidelines and permits are not to be used when the proposed occupancy is on Department-owned property, which is not interstate right-of-way, such as excess property or a maintenance yard. In these cases of proposed occupancy, consult the Right-of-Way Real Estate Services Section.

48-1.8 Public Properties, Tribal Lands, and Railroad Easements

Where a utility proposes to locate its facility within interstate right-of-way easement that is owned by the U.S. Forest Service, U.S. Bureau of Land Management, Tribal Landowners or other landowners, the facility owner must submit a Utility permit application to MDT and contact the owner of property to make applications for right-of-way permits. State Lands granted the Montana Department of Transportation the right to issue permits where the Department's interstate right-of-way is on State Lands by easement.

Where the Department occupies right-of-way by easement from a private property owner or a railroad, it is the applicant's responsibility to determine ownership type and obtain additional permits along the proposed route from the fee owner.

48-1.9 Structure Attachment Permit

A Structure Attachment Permit form MDT-ROW-974 is used for the attachment to an interstate bridge. All structure attachment permits must be approved by the MDT Bridge Bureau.

Note: Form MDT-ROW-974 should only be issued for the structure attachment. A Utility permit is issued for utility installation at the approaches to the structure.

48-2 ENVIROMENTAL CHECKLIST REQUIREMENTS

A completed environmental checklist must accompany each Utility Occupancy or Utility Encroachment permit issued. The environmental check list is not required for Notification permits or utility relocations for interstate projects.

The applicant is responsible for completing the checklist, obtaining all applicable permits/occupancy agreements, and adhering to the conditions of the environmental checklist and applicable laws. When the applicant checks a "yes," the mitigation measures proposed must be attached to the checklist. In these cases, the applicant should be made aware that there would be a delay in processing the permit.

MDT's Broadband Coordinator is responsible for reviewing the checklist for completeness. When the Broadband Coordinator is aware of a possible impact in connection with a proposed installation on interstate right-of-way, the permit, environmental checklist, and an explanation of the possible impact must be submitted to Systems Impact. If the Broadband Coordinator becomes aware of a potential environmental impact during the installation of a facility, the applicant shall cease work and Environmental Services should be contacted.

MDT Planning Division must review and approve the environmental checklist which must accompany a Permit that may result in significant and permanent impacts to the transportation network in terms of substantial increases in traffic volumes, weight or delays on State roadways (e.g., major mines greater than 5 acres), railroad at-grade and above-grade crossings, strip mines, road relocations, major traffic generators such as a discount store or mall) or other impacts on other forms of transportation such as rail, transit or air movements.

If the applicant checks "yes" in any one box, the Broadband Coordinator must:

- not approve the permit,
- not permit the utility to begin work, and
- Send the checklist and permit to Systems Impact for further action.

When Items 15 or 16 are checked on an environmental checklist for any permit, the Broadband Coordinator will send a copy of the checklist and permit to the Planning Division for further action.

48-2.1 OCCURRENCES TO AVOID

Avoid the following:

1. Do not authorize draining a wetland either on or off interstate right-of-way.
2. Do not permit disturbance to an archaeological or historical site.
3. Do not permit the installation of overhead facilities through a scenic strip, overlooks, rest areas, recreational areas, or adjacent interstate right-of-way to these areas.
4. Do not permit installation through a hazardous waste area.
5. Do not permit installation that may disturb a nesting area of an endangered species.
6. Do not permit an installation that is part of a much larger project including other State agencies.

48-2.2 DISCOVERY OF UNKNOWN HAZARDOUS MATERIALS

If the utility discovers hazardous material (e.g., asbestos, PCB's, petroleum, PCP's, hazardous waste, or radioactive material) the existence or location of which was previously unknown to the Department and the utility, the utility should immediately stop working in that area and immediately notify the District Administrator and Broadband Coordinator.

48-3 APPROVAL PROCESS

The applicant must submit the appropriate permit, environmental checklist, and a plan view (preferably on interstate plans) of the proposed occupancy to the Broadband Coordinator through the UPAS system.

The plan must show the following:

- the type of installation (e.g., 200 pair telephone).
- distances from the centerline and distances to the right-of-way line.
- stations and mileposts/reference markers; and
- distance from existing utilities.

If the installation is not started within 1 year after the permit is issued, the applicant is required to submit a new permit for approval. The Department should act on the permit within 30 days of receiving it.

48-4 DIG ONCE

The Department encourages coordinating facility installations to coincide with upcoming interstate projects within the right-of-way to minimize impacts to the traveling public as described in MCA 60-4-501(2). “Dig Once” is a practice of collaborating with MDT on upcoming projects from Montana’s Tentative Construction Plan (TCP) and Five-Year Construction Plan. Additionally, MDT is offering a Broadband Registry and Project Notification system to help you stay informed of changes to the TCP and upcoming interstate projects. A link to the TCP and the Broadband Registry system can be found on the Interstate Permitting website Interstate Permitting | Montana Department of Transportation (MDT) (mt.gov).

48-5 DENIAL OF A PERMIT/AGREEMENT

Denial of a permit should be based on sound engineering judgment and the guidance of the ***Administrative Rules of Montana*** or these guidelines. FHWA also reviews and approves or denies all Interstate permits. The applicant should have an opportunity to re-submit the application after making the required corrections.

48-6 INSTALLATION OF ABOVEGROUND FACILITIES

A facility can install above ground facilities within the interstate right-of-way if the facility does not incommode or endanger the public in the use of the roadway and the facility does not hinder maintenance of the roadway. These facilities can include cabinets, huts, poles, closures, etc.

As a rule, the Department's position is that a facility has a right to place above ground facilities within interstate right-of-way; however, the Department has the right to determine where the facilities can be placed.

The installation of the above ground facilities is at the discretion of the department.

48-7 OCCUPANCY OF LIMITED ACCESS FACILITIES

Facilities can occupy limited access right-of-way in the same manner as a secondary or primary right-of-way.

48-8 CLEAR RECOVERY AREA

Clear recovery area is defined as a minimum of 42 ft from centerline on unpaved roads, and 30 ft from the outer edge of the outside traveled lane on paved roads,or the clear zone, whichever is greater. (ARM 18.7.202)

48-9 OVERHEAD INSTALLATIONS-LONGITUDINAL

1. All overhead installations should be installed on the right-of-way line if possible.

2. All aboveground fixed objects, including down guys, should be installed outside of the clear recovery area, unless the following occurs:
    - They are installed behind guardrail or other protective devices. Minimum installation distance behind guardrail refers to MDT detailed drawings. A greater separation may be required for deflection; and they are installed in a location where a vehicle cannot reach the facility.

48-10 NON-SHRINK BACKFILL

Non-shrink backfill may be required in place of conventional backfill methods. The placement of the material should:

- be poured to the surface,
- allowed to set a minimum of 3 hours curing time prior to allowing traffic,
- have 4 inches removed prior to patching,
- be of a consistency to fill the voids without excess water, and
- Requires no tamping or vibrating.

Figure A presents the non-shrink patching formula.

48-10-1 Non-Shrink Patching Formula

Figure A

Ingredients	US Customary lbs./yd^3
Cement – 0.45 sack	42
Water – 148 L (39 gallons) *	325
Air (entrapped)	
1.5% Coarse Aggregate 25 mm (1 in) max. – size 57	1700
Sand (ASTM C-33)	1845
TOTAL	3912

*Note: Start with 30 gallons of water or less and add more if necessary.

48-11 BORED, PUSHED OR TRENCHLESS TECHNOLOGY CROSSINGS

Crossings should meet the following:

1. All crossings should be 42 inches below the ditch line.
2. Boring pits should be located as close to the right of way as possible.
3. Crossings should be at right angles to the roadway.

Heavier gauge/strength pipe should be considered for uncased petroleum products pipelines and high-pressure natural gas lines at interstate crossings.

Consideration should be given to providing encasement for carriers of transmittants thatare flammable, corrosive, expansive, energized, or unstable substances.

48-12 LONGITUDINAL INSTALLATION OF UNDERGROUND FACILITIES

No facility shall be placed under the asphalt without the approval of the District Administrator and Broadband Coordinator. Consider the following:

1. All facilities shall be placed near the right-of-way line.
2. The first facility should be placed within 5 ft of the right-of-way line.
3. Additional facilities should have no more than a 4 ft separation.
4. All above-ground facilities (e.g., vent pipes, closures) should be placed on the right-of-way.

Any facility that cannot be detected from above ground should have a tracing wire on or near the facility.

If there are extraordinary circumstances caused by geographical features (e.g., such as a cliff, river, or heavily wooded area) a facility may be placed between the right-of-way and the roadway shoulder for short distances.

The district may require the following:

- Extra depth,
- the installation be placed in conduit,
- aboveground marking where the facility angles toward and leaves the shoulder,and/or,
- a concrete cap.

Where it is possible to place the facility near the right-of-way and the utility requests to place the facility closer to the roadway shoulder, a Utility Encroachment Permit may be issued.

Where it is impossible or impracticable to place a facility near the right-of-way and the utility must be located nearer to the roadway shoulder, an Interstate Permit may be issued.

48-13 FIBER OPTIC CABLE

Fiber optic cable should be buried according to the following:

1. It should be placed within 5 ft of the right-of-way, regardless of the other undergroundfacilities in place, unless authorized by MDT.
2. Should be placed 42 inches deep unless the MDT waives the provision.
3. Must have a warning tape 18 inches above the cable.
4. Aboveground markings should be at least 500 ft intervals and at all crossings.

48-14 COMMUNICATION AND ELECTRICAL

Communication and Electric installations should be placed a minimum of 42 inches deep.

48-15 WIRELESS (SMALL CELL)

The installation of wireless communication facilities must meet the following:

48-15.1 Infrastructure Design and Height Requirements

- A site plan must be submitted showing Latitude and Longitude (6 decimal degrees) for each wireless facility's proposed collation or new installations. Aerial maps are required showing the location of the proposed wireless facility.

- New poles or structures for wireless facilities may be approved if the applicant establishes the proposed wireless facility cannot be located on an existing utility pole, structure, or light pole in the area.

- Any replacement pole or new pole must substantially conform to the design of the pole it is replacing or the neighboring pole design standards utilized within the contiguous right-of-way.

- The wireless facility color must match the existing pole color to blend with the color of the pole to the extent possible.

- Wireless facility poles must be a minimum of 300 feet apart.

- Utility vaults and equipment associated with a wireless facility must be underground to the maximum extent possible.

- A wireless facility which includes an antenna must not be more than three (3) cubic feet in volume.

- A new or modified utility pole with a collocated wireless facility may not exceed 50 feet total above ground level.

- An antenna of a small wireless facility may not extend more than 10% of the existing height of the support structure.

- A proposed projecting attachment to a pole must provide a minimum vertical clearance of ten feet from the ground level. If an attachment projects along or over curb or edge of road towards the roadside, the attachment must provide aminimum vertical clearance of 16 feet and maintain adherence to the current PROWAG guidelines.

48-15.2 <u>Attachment to Existing Poles or Structures</u>

- Written permission must be obtained from the pole or structure owner unless theowner and the Utility Permit applicant are the same person or entity.

- Evaluation is required by a licensed professional engineer (PE) certifying the existing infrastructure pole or structure for structural stability; and the capacity tocarry the proposed wireless facility.

- If the existing pole or structure is insufficient and replacement is necessary, the utility owner must provide engineering design and specification drawings for the existing pole or structure replacement for MDT review and approval. Pole or structure replacement is at utility owner's sole cost. If the pole or structure is to be replaced is the property of the State, then any replacement becomes the propertyof the State.

- Scaled drawings must show dimensions of the proposed attachment of the wireless facility to the existing poles or structures. Drawings must include thespacing from existing curb, driveways, sidewalk, and other existing poles or structures.

- Scaled construction plans must indicate the current right-of-way line and showthe dimensions of the proposed underground vault, conduit, and equipment. Solar energy equipment must show the placement, tilt, and orientation. All construction plans must be reviewed and approved by the Department. The wireless facility must be placed within five feet of the right-of-way line. The attachment method must conform to engineering standards for preserving the interstate, its safe operation, maintenance, and appearance.

- Antennas and the associated equipment enclosures (including disconnect switches and other appurtenant devices) must be fully concealed within the pole.If concealment is technically infeasible, or incompatible with pole design, the antennas and associated equipment enclosures must be camouflaged to appearas an integral part of the pole and flush-mounted to the pole.

- Any facilities located off-pole must be installed in an enclosed structure underground, except for the electric meter pedestal. Facilities may not block oralter any drainage flows. Skirts or shrouds must be used on the sides and bottoms of antennas to conceal mounting hardware, create a cleaner appearance, and minimize the visual impact of the antennas. Exposed cabling/wiring are prohibited.

- All equipment must be located to meet the Public Rights-of-Way Accessibility Guidelines (PROWAG) requirements and must not obstruct, impede, or hinder usual pedestrian or vehicular travel or interfere with the operation and maintenance of signal lights, signage, streetlights, street furniture, fire hydrants,or business district maintenance.

- Wireless facilities must not: interfere with the safe operation of traffic control equipment; interfere with a sight line or a clear zone for transportation or pedestrians; fail to comply with Federal, FCC RF regulations, State or local lawsor legal obligations; create a public health or safety hazard; or obstruct or hinderthe usual travel or public safety of the right-of-way.

- Attachment to traffic signal poles is prohibited.

- Attachment to bridges and other interstate structures is prohibited unless a non-structure location creates undue hardship for the installation of the facility, as determined by MDT. If an exception is allowed, a Structure Attachment Permit(Form 974) must be used, which must be approved by MDT's Bridge Bureau.

48-15.3 Local Government Regulation:

- Facility owner must also adhere to all local government regulations for wirelessfacilities located within the local government's jurisdictional area if those regulations are more stringent than those outlined in this section.

- Facility owner must obtain advance written approval from the local authority beforecollocating wireless facility or installing wireless facility support poles in a lightingdistrict or historic district.

48-15.4 Fiber Connection

- The facility owner is responsible for obtaining access and connection to fiber opticlines or other backhaul solutions that may be required for its wireless facility support poles or wireless facility.

- Fiber must be placed 42 inches deep unless MDT waives the provision.

- Fiber must have a warning tape 18 inches above the cable.

48-15.5 Generator and Power Service

- The facility owner must not install generators or back-up generators in the right-of-way.

- The facility owner is responsible for obtaining any required electrical power service tothe wireless facility. The owner of the dedicated power source is required to submit a separate UPAS permit.

- Electrical installations must be placed at a minimum of 42 inches deep. For location, see Longitudinal Installation of Underground facilities, Rural and Urban,in this Manual.

48-15.6 Signage

- The facility owner must post its name, location identifying information, and emergencytelephone number in an area on the cabinet of the wireless facility that is visible to the public on a sign which must not exceed 4" x 6," unless otherwise required by law.

- Facility owner must not post any other signage or advertising on the wirelessfacility, pole, or structure to which it is attached.

48-16 PIPELINES

The installation of pipelines should meet the following:

1. They should be placed 42 inches deep unless the MDT waives the provision.
2. Aboveground markings should be placed at least 500 ft intervals and at all crossings.
3. The facility should be placed deeper than 42 inches if possible.

48-17 AS-BUILTS

The applicant will provide “as-builts” to the Broadband Coordinator as each 5 miles consecutive construction section is completed and at the end of the construction season. Surveys must be submitted to MDT through the UPAS system in accordance with the MDT survey manual and the ARM 18.7.207 Electronic Utility Permit Application Process within 90 days after the completion of the utility installation. All borings are required to have the entry and exit points surveyed along with 10' regular intervals noting the actual depth of the installed utility for the entire length of the bore. For non-bored straight alignments, survey points spacing shall be at 50' intervals and 25' intervals for curved segments.

- As-built records shall be produced that describe the facility, usage, size, configuration, material, and coordinates X, Y, and Z (elevation of facility) at time of installationand any special features such as encasement.

48-17.1 Survey Requirements

- ASCE As-built requirements of positional accuracy level 3 are required for X, Y (Easting, Northing) and a positional accuracy level 4 applies for Z.

Positional Accuracy Level	Positional Accuracy[1] (English Units)
1	0.1 feet
2	0.2 feet
3	0.3 feet
4	1 foot
5	3 feet
0	Indeterminate

48-18 TRAFFIC CONTROL AND SAFETY

The ***Manual on Uniform Traffic Control Devices*** contains the national standards for work zone traffic control.

For unusual operations, such as an open-cut crossing, the district should approve a trafficcontrol plan.

All material stored on interstate right-of-way should be located outside of the clear recoveryarea, or a minimum of 30 ft from the outside edge of the outer driving lane, or theclear zone, whichever is greater.

All equipment not in use should be located the same distance from the roadway. Open trenches within the clear zone must be either covered or protected at the end of thework shift. Open trenches in populated areas must be protected with a temporary fenceor other barriers.

Trench spoils should be placed far enough from the driving lane, leveled, or protected sothat it is not a hazard.

Equipment working near the roadway should have visible amber flashing lights.

All workers within the right-of-way of a Federal-aid interstate who are exposed either to traffic (vehicles using the interstate for purposes of travel) or to construction equipment shall wear high-visibility class 2 or 3 safety apparel. For nighttime activity, the flagger shallwear class 3 safety apparel.

The Permittee should provide flaggers who are currently certified by the Montana flagger training program; the ATSSA flagger program; or the Idaho, Oregon, or Washington State flaggertraining programs.

48-19 CLEANUP AND RESTORATION

The cleanup of the installation shall be in original-like condition.

48-20 DRAINAGE / STOCKPASS STRUCTURES

The following will apply:

1. No facility may be installed in a drainage culvert.
2. Facilities must be 42 inches below any drainage structure.

48-21 BLASTING

The following will apply:

1. Blasting is prohibited unless approved by MDT.
2. Blasting is prohibited around interstate structures.

48-22 HERBICIDES

The use of chemicals to control foliage is prohibited without the approval of the district.

The utility must submit to the county weed board a written two year weed management plan specifying the methods to be used to accomplish revegetation at least 15 days priorto the activity. The plan must describe the time and method of seeding, fertilization practices, recommended plant species, use of weed-free seed, and the weed management procedures to be used.

The plan is subject to approval by the board, which may require revisions to bring the revegetation plan into compliance with the district weed management plan. The activity for which the notice is given may not occur until the plan is approved by the board and signed by the presiding officer of the board and by the person or a representative of the agencyresponsible for the action. The signed plan constitutes a binding agreement between theboard and the person or agency. The plan must be approved, with revisions, if necessary,within 10 days of receipt by the board.

Reference: MCA 7-22-2152. Revegetation of rights-of-way and areas that have potential for noxious weed infestation.

48-23 ATTACHMENT TO INTERSTATE STRUCTURES

The law does not prohibit the attachments of utilities to MDT structures, but the policy of MDT is to discourage these attachments to protect the appearance, integrity, and functional purpose of the structures. MDT discourages these attachments because the relocation of the attachments has been historically problematic when it comes to carrying out highway projects. MDT also has concerns with attachments damaging the integrity of the bridge or impacting MDT's ability to inspect and maintain the structure.

Where it is feasible and reasonable to locate utility facilities elsewhere, attachment to highway structures will not be allowed. Where other locations create undue hardship for the installation of the facility, consideration will be given to attaching the utility facility to a highway structure.

A permit will be granted, subject to any and all reasonable terms and conditions, whenever a permit applicant demonstrates no reasonable and feasible alternative. An alternative is not reasonable and feasible if it would result in undue hardship among the applicant, considering all the relevant facts and circumstances. The existence of undue hardship will be evaluated on a case-by-case basis. Below is a non-exclusive list of elements MDT will consider when determining the existence of undue hardship:

- 2 or more Boring Company statements stating site cannot be bored or boring is high risk discouraging the operation
- Documented time restrictions or delays related to alternative solutions
- Facility owner Cost / Benefit analysis comparing the proposed bridge attachment to an otherwise available option
- Documentation confirming that private easements or other permitting requirements are not reasonably obtainable
- Documented inability or exceptional limitations on the ability to install aerial facility
- Documented inability or exceptional limitations on the ability to install weighted line (submarine) conduit
- Whether the request is for a permanent attachment or time-limited attachment
- A written response to MDT's suggestion of a potentially reasonable and feasible option

It is the utility companies' responsibility to provide written documentation for each of the considerations noted above to justify and demonstrate a hardship exists.

Temporary Attachment Option:
Allow temporary attachment (up to 2 years w/signed agreement) where hardship cannot be documented.

- Develop alternative permanent relocation plan (may include partnership w/existing communications company)

- Develop approved and permitted mitigation plan for future bridge construction (may include partnership w/existing communications company)

The following structural review will apply to any permanent or temporary attachment upon the finding of undue hardship:

- MDT will consider the load of the proposed utility to ensure it does not materially affect the load bearing capacity for roadway purposes (e.g. a conduit of broadband would not be material, but a 4' water culvert would be material).
- MDT requires engineering specifications of proposed equipment and facilities as part of the permit application to allow MDT staff to evaluate structural loads for attachments to state facilities; new standalone structures; impacts to pedestrian facilities and the State Right-of-Way
- Electric power and communication facilities shall conform to MDT minimum installation standards, including vertical clearance and other considerations
- If not load-prohibitive, then ensure that the mode of attachment does not compromise or otherwise damage the integrity of the bridge.
- Finally, ensure the proposed attachment does not obscure the bridge or the utility facility from being effectively inspected/maintained.

Attachment to longitudinal structures on a full control access facility system generally will not be permitted except to exclusively serve a highway facility. Attachments to existing structures crossing the full control access facility will be considered on a case by-case basis (ARM 18.7.230). . (The approach to the structure for a proposed utility attachment to a structure is either Utility Occupancy Agreement or a Utility Encroachment Permit).

Structure attachments shall be submitted on a Structure Attachment Permit form MDT-ROW-974. Include sufficient detailed drawings to indicate the method of attachment, inside diameter,outside diameter, pipe weight per foot, working pressure, type of coating, substance carried, pipe material and any other information required in the structure attachment guidelines.

Attachments to existing structures in place prior to the effective date of these rules are in compliance with this rule, provided the owner inspects the attachment annually and shall repair any deficiencies. The owner shall maintain a recordof the inspections for 3 years.

If a Structure Attachment Permit does not currently permit the attachment, the owner shallsubmit an application for a permit and drawings to the appropriate District Office for approval under these rules within 6 months of the effective date of these rules.

48-23.1 Proposed Attachments to Existing Structures

Where it is feasible and reasonable to locate utility facilities elsewhere, attachment to interstate structures will not be allowed. Where other locations create undue hardship for the installation of the facility, consideration will be given to attaching the utility facility to aninterstate structure. The following conditions will apply:

1. All utility facilities attached to structures shall be attached as provided in the rulesunless written approval to do otherwise is granted by the Department's Bridge Engineer.

2. The owner shall inspect attachments to structures at least once per year; the ownershall repair any deficiencies immediately. The owner shall maintain records of theinspections for a minimum of 3 years.

3. The attachment method shall conform to engineering standards for preserving theinterstate, its safe operation, maintenance, and appearance.

4. Attachment of a utility facility will not be permitted unless the structure can support the additional load, accommodate the utility facility without compromising interstateuser safety and convenience, and the attachment does not impair bridge inspection or maintenance.

5. The utility attachment will be installed on the bridge in a manner that will not reducethe vertical clearances above the river, stream, pavement or top of a rail.

6. Utility attachments to the outside of a structure that is located within (440 yards) ofa residential structure, park, fishing access site or other recreational facility will notbe permitted. A residential structure is any building intended for human occupancy, including businesses. MDT may waive this provision if the utility can demonstrate the provision will place an economic hardship on the utility and that the design and attachment of the facility will not detract from the aesthetics of the structure. In other areas where, in the opinion of MDT, bridge aesthetics are not a particular concern, a utility may be attached to the outside of the structure. Utilities attached to the outside ofthe structure will be on the downstream side.

7. Utility facilities shall be firmly attached to the structure and where necessary padded to eliminate noise and abrasion due to vibrations caused by wind or traffic.

8. The installation of a utility through the abutment or wing wall of an existing structureshall not be permitted.

9. In locations where a utility attached to a structure is carried beyond the back of theabutment, the utility shall curve or angle out to its proper alignment outside the roadbed area within the shortest possible distance from the abutment.

10. So long as utility facilities comply with the other conditions set forth in these rules, such a facility may be attached to structures by hangers or roller assemblies suspended from inserts in the underside of the deck or from hanger rods clampedto a flange of a superstructure member.

11. Bolting through the deck or concrete beams shall not be permitted.

12. Welding of attachments to steel members or bolting through such members shall not be permitted.

13. The use of driven anchors using the explosive type drilling force shall not be permitted.

14. Drilling in pre-stressed concrete beams shall not be permitted.

15. Attachments of utilities facilities to bridge handrail or guardrail or their anchorage systems shall not be permitted.

16. Attachment of pipelines carrying deleterious or corrosive substances shall not be permitted.

17. The design of a utility attachment to an interstate structure shall include provisions acceptable to the Department for lineal expansion and contraction due to temperature changes. Line bends or expansion couplings may be used for this purpose.

18. Each proposed bridge attachment will be considered on a case-by-case basis by the Department.

19. Trenching in the vicinity of piers, bents or abutments shall be a sufficient distancefrom footings to prevent undercutting or material from sloughing from under the footing.

20. An application which involves the reduction of existing waterway area shall not be permitted.

21. Utilities attached to bridges shall not be maintained from the bridge deck without the prior approval of MDT.

22. Utility facilities shall not be attached to bridges or eligible for listing on the National Register of Historic Places without written consent of the State Historic Preservation Officer.

23. By accepting the structure permit, the owner of the utility facility shall be fully liableto the Department, or others, for any damage to the structure, or the surrounding environment, caused by the placement and use of the facility on an interstate structure. If the structure is damaged by the utility facility, through negligence or otherwise, so that the traveling public cannot use the structure, then the utility mustpay all costs to repair the structure and associated costs.

24. The Department shall not allow any new attachments to an interstate structure by petroleum, natural gas, or other products pipelines in seismically active areas (those areas where the anticipated acceleration coefficients due to an earthquakeexceed 10% of gravity) unless the structure has been retrofitted or built-in conformity to the Department's seismic requirements since January 1, 1992. The Department may waive this requirement if the Department determines that thestructure is adequate for the seismic area within which it is located.

48-23-2 Proposed Attachments to New Bridge Structures

Where the Department plans to construct a new structure, the design of the structure will, upon request of a utility company, be reviewed by the Department's Bridge Bureau for accommodation of existing or proposed utility installations consistent with the requirements set forth herein. The utility company may be required to reimburse the Statefor additional design and construction costs associated with accommodating the utility facility on the new structure.

The installation of a utility facility on a new structure shall be coordinated with the bridge construction so as not to interfere with the operations of the interstate contractor.

The applicant shall submit complete plans and specifications of the proposed installation,including the weight per linear foot and detail drawings to the Department prior tothe Department's completion of plans and specifications for the proposed structure.

Utility facilities may be installed through freestanding bridge abutments but shall not be permitted through abutments or bents that are expected to move as thermal expansion and contraction affects the bridge. The hole created in the bridge abutment must be of the minimum size necessary to accommodate the utility and it shall be sleevedto permit relative movement between the abutment and utility.

48-23-3 Pipelines

At the option of the utility company, pipelines must be attached to an interstate structure byone of the following methods:

1. Method 1: The carrier line shall be encased throughout the length of the structureand the casing shall be carried beyond, but not through, the bridge abutments andshall be effectively opened or vented at each end. The casing shall be designed to withstand the same internal pressure as the carrier pipe.

2. Method 2: The carrier line may be attached to the structure not encased using thefollowing design factors:

Class Location 1	0.50
Class Location 2	0.40
Class Location 3	0.33
Class Location 4	0.27

The design factor specified shall be obtained in accordance with the equations set forth in 49 **CFR** 192 by any combination of wall thickness and/or pipe yield strength that will provide the required design factors. If the design factor is obtained by increasing steel strength, the utility shall provide certification at the time of installation to the Department that the pipe, in fact, meets the strength requirements in the design calculations.

The carrier pipe shall be pressure tested before start-up in accordance with the latest edition of applicable industry codes, as well as the applicable statutes and regulations.

The attachment shall be designed to prevent any discharge from damaging the structureor reaching the waterway in the event of a rupture. That capability should be demonstratedto the satisfaction of the Department's Bridge Bureau prior to approval of the attachment.

Pipelines using bridge members to resist forces generated by fluids in motion shall not bepermitted.

The following information shall be included in the application:

- outside diameter,
- inside diameter,
- pipe material,
- actual working pressure,
- substance carried,
- type of coating, and
- Any other information requested by the Department.

Pipelines attached to interstate structures shall be electrically isolated from the structure.

Pipelines shall be attached to provide sufficient clearance for convenience and safety during maintenance and repair of the structure or other utility attachments on the structure. The pipeline shall be located to minimize the possibility of damage from traffic.

Pipelines shall include the capability to allow for expansion and contraction of the structure and the pipeline.

48-23-4 Power and Communications Lines

Electric power and communication conductors attached to an interstate structure shall be insulated from the structure and carried in protective conduit or pipe throughout the structure. Exposed metallic conduit shall be grounded on each end. Where metallic conduit is installed within 7 ft of any metal parts of the structure which are readily accessible, including, but not limited to, railings, platforms or stairs, the metallic conduit shall be bonded to the metal parts of the structure. When bonding, all sections of the structure shall be bonded to the metallic conduits.

Electrical power and communication lines shall be attached to provide sufficient clearancefor convenience and safety during maintenance and repair of the structure or other utility attachments on the structure. The conduit should be located to minimize the possibility of damage from traffic. Conduits shall allow for the expansion and contraction of the structure.

Attachments shall comply with the ***National Electrical Safety Code*** and applicable regulations.

Metallic conduit attached to structures that are catholically protected shall meet all the above requirements and shall not adversely affect the cathodic protection of the structure(i.e., insulate the conduit from the soil and use anodes at each end for grounding). The method to be used shall be approved by the Department's Bridge Bureau on a case-by- case basis.

48-23-5 Materials

All attachments to structures shall be constructed from durable materials designed for long service life and be free from routine servicing or maintenance. All materials shall conform to current applicable industry specifications and codes.

All steel materials used in attaching a utility conduit to a structure shall be stainless or galvanized.

Materials used for attaching a utility facility to the structure shall be compatible with the structural material to eliminate the possibility of corrosion.

48-23-6 Bridge Clearances

Aerial power or communications lines will not cross over bridges where it is possible to avoid such installations. This is necessary to allow the Department sufficient room to operate equipment to maintain bridges. Lateral clearance from a bridge will be sufficient to allow construction and maintenance of the bridge structure. A minimum vertical clearance of 25 ft from the top of the bridge rail will be maintained. A horizontal clearance of 25 ft will be maintained from the neat lines of the structures.

48-24 BROADBAND COORDINATOR

For interpretation of these guidelines consult the MDT Broadband Coordinator, District Utility Agent or the Utilities Section Manager of the Right-of-Way Bureau at one of the following locations:

Helena Headquarters
Montana Department of Transportation
2701 Prospect Avenue
Helena, MT 59620-1001

- Broadband Coordinator – Telephone (406) 444-6350

- Utility Manager – Telephone (406) 444-6080

District 1
Montana Department of Transportation
2100 West Broadway
P.O. Box 7039
Missoula, MT 59807-7039

- Missoula District Utility Agent - Telephone: (406) 523-5800
- Kalispell Office, District Utility Agent -Telephone: (406) 751-2000

District 2
Montana Department of Transportation Wynne & Lowell
P.O. Box 3068
Butte, MT 59702-3068

- District Utility Agent - Telephone: (406) 494-9600
- Bozeman Office, District Utility Agent -Telephone: (406) 586-9562

District 3
Montana Department of Transportation 104 - 18th Avenue N.E.
P.O. Box 1359
Great Falls, MT 59403-1359

- District Utility Agent - Telephone: (406) 454-5880

District 4
Montana Department of Transportation 503 North River Avenue
P.O. Box 890
Glendive, MT 59330-0890

- District Utility Agent - Telephone: (406) 377-5296

District 5
Montana Department of Transportation 424 Morey
P.O. Box 20437
Billings, MT 59104-0437

- District Utility Agent - Telephone: (406) 252-4138

48-26 APPENDIX – LINKS

- Structure Encroachment Permit Form
- Wavier Form
- Certification & Inspection Form
- MDT UPAS
- Interstate Permitting | Montana Department of Transportation (MDT) (mt.gov).