# Minnesota Department of Transportation

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St. Paul, MN 55101-2198

Re: CapX 2020 Fargo – St. Cloud Transmission Line Project
PUC Docket No. ET2, E002/TL-09-1056

Dear Mr. Birkholz:

The Minnesota Department of Transportation (Mn/DOT) has reviewed the Route Permit Application for the CapX 2020 Fargo – St. Cloud Transmission Line Project. In response to the Notice of Public Information & EIS Scoping Meetings issued by the Office of Energy Security (OES), Mn/DOT submits these comments regarding topics and impacts that should be addressed in the environmental impact statement (EIS) that the OES will be preparing.

Mn/DOT appreciates the opportunity to comment and commends the applicants and OES for their communication efforts throughout this process. Mn/DOT wishes to participate in the development of the EIS so that it will contain a thorough evaluation of the effects various route proposals may have on the state transportation system. Mn/DOT's fundamental interest is to ensure that the EIS identifies and quantifies, to the extent possible, any impacts the proposed high voltage transmission line (HVTL) may have on the safety of the transportation system, the effectiveness of the operations or maintenance of the state trunk highway system, and any additional costs that may be imposed on the state trunk highway fund as a result of the location of the proposed HVTL.

## I. Comments on the EIS Process

Pursuant to Minn. Stat. Ch. 216E and Minn. Rules part 7850, the environmental review undertaken by the OES will be the only environmental study that is completed. Mn/DOT wishes to work with the OES in developing a clear determination of Mn/DOT's role and responsibilities through the environmental process.

Depending on the route and alignments that are ultimately selected, the applicants may ask Mn/DOT for permits to occupy portions of highway rights-of-way. In submitting these comments on the scope of the EIS, Mn/DOT will describe the information that it believes is needed to make the route analysis clear and complete, conform to state and federal regulatory and permitting requirements, and meet documentation requirements when permits are necessary.

As the governmental unit responsible for preparation of the EIS, the OES should take into consideration how actions by other governmental units may impact environmental or cultural resources. For example, the EIS should identify any environmental amenities that are in or adjacent to the Mn/DOT right-of-way, and it should provide an assessment of whether the intrinsic qualities of those environmental amenities could be impacted by the issuance of a Mn/DOT permit.

In addition to environmental amenities or values that may be impacted by activities associated with a permit issued by Mn/DOT, the EIS should also include a thorough evaluation of all impacts on highways associated with potential alignments within each proposed route. As we will discuss in more detail below, these impacts may include changes to the level of safety for the traveling public, the level of safety to workers who construct, repair and maintain the highway system, and the additional expense that may be incurred by the public if it becomes necessary to relocate the HVTL or work around it once it is built.

It is also anticipated that there may be impacts to non-highway transportation systems in the vicinity of the proposed routes. These systems include rail corridors, trails, and airport operations. The environmental process and subsequent document will need to evaluate resource impacts of each proposed route alignment so these can be properly assessed.

Mn/DOT recommends an inclusive process that engages federal agencies early in the process to aid in expeditious completion of the required documentation. Specifically, the environmental process should identify any locations that would require interaction by the Federal Highway Administration (FHWA), National Park Service, Fish and Wildlife Service, Advisory Council on Historic Preservation, United States Coast Guard, United States Department of Interior, United States Environmental Protection Agency, Federal Aviation Administration, Natural Resources Conservation Service, Army Corps of Engineers, Federal Railroad Administration and the United States Department of Energy.

Mn/DOT also believes it is prudent to identify all requirements for both the Minnesota Environmental Policy Act (MEPA) and National Environmental Policy Act (NEPA) processes in the event a NEPA process is required.

## II. Highway-related Matters to be Addressed in the EIS

Mn/DOT has adopted a formal policy and procedures for accommodation of utilities on the highway rights of way ("Utility Accommodation Policy"). A copy of Mn/DOT's policy can be found at http://www.dot.state.mn.us/utility/files/pdf/appendix-b.pdf . The policy is also attached to the CapX2020 Application in Appendix I.

Mn/DOT's approach to the high voltage transmission lines ("HVTL") involved in the CapX2020 proposals is to work to accommodate these HVTLs within or as near as feasible to the trunk highway rights of way, based on an evaluation of the specific locations to ensure that appropriate clearance is maintained to preserve the safety of the traveling public and highway workers and the effective operation of the highway system now and in the foreseeable future. Mn/DOT's Utility Accommodation Policy seeks to guide the balance between accommodation of utility operations in the highway rights-of-way and preserving the safe and efficient operation of the transportation system.

The provisions of the Utility Accommodation Policy are based on the framework of several interrelated state and federal laws that led to its creation. These comments will outline the legal and regulatory structure under which the Policy was adopted, and will then discuss the types of circumstances and concerns that must be considered when applying the Utility Accommodation Policy to a specific situation as Mn/DOT works to accommodate a utility in a highway right-of-way while preserving the safe and efficient operation of the highway. The comments will also identify some specific locations along the HVTL routes proposed by CapX2020 in this application that should be addressed in the EIS.

### A. Legal Framework Applicable to Mn/DOT's Utility Accommodation Policy

Certain highways in Minnesota are part of the National Highway System, which is established under 23.U.S.C. §103. The National Highway System and the Dwight D Eisenhower National System of Interstate and Defense Highways (Interstate System) are together known as the Federal-aid System. 23 U.S.C. §103(a). See also 23 CFR Part 470. In addition to the highways on the National Highway System, other highways also receive federal funding. Together, the highways in the Federal-aid System plus the other highways that receive federal funding are known as "Federal-aid highways." 23 CFR §470.103. The Federal-aid highways in Minnesota that are impacted by the Fargo – St. Cloud CapX2020 route proposal that would run parallel to the highway include I-94, US 59, US 71, MN 9, MN 23, MN 27, MN 55 and MN 114. Other Federal-aid highways that would be crossed by the route proposals include US 59, US 71, US 75, MN 4, MN 9, MN 27, MN 28, MN 29, MN 34, MN 79, MN 108, MN 127, MN 210, MN 237 and MN 238.

Congress articulated the transportation policy of the United States in 23 U.S.C. §101(b). Among other things, Congress noted that "it is in the national interest to preserve and enhance the surface transportation system to meet the needs of the United States for the 21st Century," that "the current urban and long distance personal travel and freight movement demands have surpassed the original forecasts and travel demand patterns are expected to continue to change," and that "special emphasis should be devoted to providing safe and efficient access for the type and size of commercial and military vehicles that access designated National Highway System intermodal freight terminals." 23 U.S.C. §101(b)(3)(A), (B) and (E).

Federal law requires that "The real property interest acquired for all Federal-aid projects . . . shall be adequate for the construction, operation, and maintenance of the resulting facility and for the protection of both the facility and the traveling public." 23 C.F.R. §710.201(e). In addition, all real property that is part of the Federal-aid highway system must be devoted exclusively to highway purposes unless an alternative use is permitted by federal regulation or the Federal Highway Administration ("FHWA"). This basic proposition is stated in 23 C.F.R. §710.403, which provides:

> (a) The [State Transportation Department] must assure that all real property within the boundaries of a federally-aided facility is devoted exclusively to the purposes of that facility and is preserved free of all other public or private alternative uses, unless such alternative uses are permitted by Federal regulation or the FHWA. An alternative use must be consistent with the continued operation, maintenance, and safety of the facility, and such use shall not result in the exposure of the facility's users or others to hazards.

Similarly, 23 C.F.R §1.23 restricts use of the highway right-of-way unless otherwise permitted. This section provides:

(a) Interest to be acquired. The State shall acquire rights-of-way of such nature and extent as are adequate for the construction, operation and maintenance of a project.

(b) Use for highway purposes. Except as provided under paragraph (c) of this section, all real property, including air space, within the right-of-way boundaries of a project shall be devoted exclusively to public highway purposes. No project shall be accepted as complete until this requirement has been satisfied. The State highway department shall be responsible for preserving such right-of-way free of all public and private installations, facilities or encroachments, except (1) those approved under paragraph (c) of this section; (2) those which the Administrator approves as constituting a part of a highway or as necessary for its operation, use or maintenance for public highway purposes and (3) informational sites established and maintained in accordance with Sec. 1.35 of the regulations in this part.

(c) Other use or occupancy. Subject to 23 U.S.C. 111, the temporary or permanent occupancy or use of right-of-way, including air space, for nonhighway purposes and the reservation of subsurface mineral rights within the boundaries of the rights-of-way of Federal-aid highways, may be approved by the Administrator, if he determines that such occupancy, use or reservation is in the public interest and will not impair the highway or interfere with the free and safe flow of traffic thereon.

(Emphasis added.)

Federal law recognizes accommodating the placement of utility facilities as a permissible exception to the general mandate that all of a highway right-of-way, including the air space above the right-of-way, must be used solely for highway purposes. Section 109(l) of Title 23 of the U. S. Code provides:

(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.

The U.S. DOT has implemented this statutory directive by adopting the rules relating to accommodation of utilities found at 23 C.F.R. Part 645, Subpart B. These regulations require that each state transportation department submit its policies for accommodating utilities within highway rights of way to the FHWA. 23 C.F.R §645.215(a). See also 23 C.F.R §645.209(c). The FHWA will approve the policy upon determination that it is consistent with federal statutes and regulations, and any changes to the policy are also subject to FHWA approval. 23 C.F.R §645.215(b) and (c). Once a state's policy has been approved by the FHWA, the state transportation department can approve requests by a utility to use or occupy part of the right-of-way of a highway that is part of the Federal-aid highway system if the request is encompassed by that policy. Exceptions to the policy can be granted, but if a state proposes to grant to a utility an exception to its utility accommodation policy, the exception is subject to review and

approval by the FHWA. 23 C.F.R § 645.215(d). This may be considered a federal action which would need to meet all requirements of the National Environmental Policy Act (NEPA), 42 U.S.C. §4321 et seq., to be in conformance with federal regulations.

Article 14 of the Minnesota Constitution establishes the state trunk highway system. Under Minn. Stat. §161.20, the Commissioner of the Department of Transportation is charged with the responsibility to carry out the directive of Article 14 to construct, improve and maintain the trunk highway system, and is authorized to acquire property and take other steps necessary to fulfill this responsibility. All of the Federal-aid highways in Minnesota that are impacted by the Fargo – St. Cloud CapX2020 proposal are part of the trunk highway system.

Minnesota has several statutes relating to use of highway rights-of-way by utilities. Minn. Stat. §222.37, Subd. 1, provides in part:

> Any . . . power company . . . may use public roads for the purpose of constructing, using, operating, and maintaining lines . . . for their business, but such lines shall be so located as in no way to interfere with the safety and convenience of ordinary travel along or over the same; and in the construction and maintenance of such line . . . the company shall be subject to all reasonable regulations imposed by the governing body of any county, town or city in which such public road may be.

Minn. Stat. § 161.45 provides additional specifications for utility facilities occupying portions of a trunk highway right-of-way. Section 161.45, Subd. 1 provides in part:

> Electric transmission . . . lines . . . which, under the laws of this state or the ordinance of any city, may be constructed, placed or maintained across or along any trunk highway . . . may be so maintained or hereafter constructed only in accordance with such rules as may be prescribed by the commissioner who shall have power to prescribe and enforce reasonable rules with reference to the placing and maintaining along, across, or in any such trunk highway of any of the utilities hereinbefore set forth.

Subdivision 2 of §161.45 specifies the general rule that if the relocation of a utility placed in a trunk highway right-of-way is necessitated by a construction project on the trunk highway, the utility bears the costs associated with the relocation of its facility. However, if a utility facility is located on the Interstate System, then the cost of relocation of such facility is to be paid out of the state trunk highway fund. See Minn. Stat. § 161.46.

Minnesota Rules part 8810.3100 through 8810.3600 contain rules relating to placement of utility facilities in trunk highway rights of way. Under part 8810.3300, a utility must obtain a permit for any construction or maintenance work in a trunk highway right-of-way, and special rules apply to interstate highways. Part 8810.3300, Subp. 4 provides in part as follows:

> Utilities along the interstate highways shall be located outside the control-of-access lines except as outlined below. Where the control-of-access lines coincide with the right-of-way lines, the utilities shall generally be located on private property. Where the control-of-access lines and right-of-way lines do not coincide, utilities may in general be located in the area between them. All utilities shall be serviced and maintained without access from the ramps, loops, and through traffic roadbeds. Utilities may be serviced from frontage roads and roads other than another interstate highway which cross either over or under the interstate highway. At aerial crossings of an interstate highway, supporting poles may be located on interstate highway right-of-way if they are

> a minimum of 30 feet beyond the shoulders of all through traffic roadbeds; however, in no event shall they be located in a median unless its width is 80 feet or more. . . .
>
> There may be extreme cases where, under strictly controlled conditions, a utility may be permitted inside the control-of-access lines along an interstate highway. In each case there must be a showing that any other utility location is extremely difficult and unreasonably costly to the utility consumer, that the installation on the right-of-way of the interstate highway will not adversely affect the design, construction, stability, traffic safety, or operation of the interstate highway and that the utility can be serviced without access from through traffic roadbeds, loops, or ramps.

In addition, Subp. 6 of part 8810.3300 requires that, except for the negligent acts of the state, its agents and employees, the utility shall assume all liability for and save the state harmless from any and all claims arising out of the utility's work and occupation of a portion of the trunk highway right-of-way.

### B. Mn/DOT's Utility Accommodation Policy

Mn/DOT has adopted a policy statement regarding the circumstances and methods under which it will grant permits to utilities to occupy a portion of a trunk highway right-of-way. Mn/DOT's Utility Accommodation Policy is in conformance with the federal and state statutes and regulations described above, and is also consistent with the American Association of State Highway and Transportation Officials (AASHTO) publications, A Guide for Accommodating Utilities Within Highway Right-of-Way and A Policy on the Accommodation of Utilities Within Freeway Right-of-Way. Mn/DOT's Utility Accommodation Policy has been reviewed and approved by FHWA under 23 CFR §645.215(b). Therefore, with respect to Federal-aid highways, further review and approval by the FHWA is required for Mn/DOT to grant an exception to the general application of the Policy, but FHWA review and approval is not necessary for permits granted within the scope of the Policy.

Mn/DOT's Utility Accommodation Policy recognizes that it is in the public interest for utility facilities to be accommodated on highway rights-of-way when such use does not interfere with the flow of traffic and safe operation of vehicles or otherwise conflict with applicable laws or impair the function of the highway. The Policy applies to all utilities, both public and private. Therefore it speaks in somewhat generic terms to cover as many anticipated situations as possible.

The Policy was developed with integrated sections, and two or more sections usually need to be read together when applying the Policy to the context of a utility accommodation circumstance. Some of the provisions most relevant to the CapX2020 route applications include:

- Part I.F – articulates the general policy of accommodation of utilities;
- Part I.G – contains provisions for granting exceptions to the Policy;
- Part V – addresses the location requirements for utilities occupying a portion of a highway right-of-way that apply to most highways;
- Part VI – contains special rules for utility accommodation requests along freeways;
- Part X – contains specific requirements relating to overhead power and communication lines.

Mn/DOT is expressly required to include in its Utility Accommodation Policy some provisions that apply specifically to freeways. 23 CFR §645.209(c). Freeways are characterized by the fact that they are subject to full control of access – i.e., preference is given to through traffic by restricting areas where any person, including vehicles that use the highway, may enter or leave the freeway. By implementing full control of access, through traffic can safely achieve higher speeds and encounter fewer stoppages or slowdowns of the flow of traffic. On freeways, all crossings at grade are prohibited, and fencing is installed along the right-of-way to prevent other persons (including snowmobilers, bicyclists, walkers, etc.) or animals from entering the freeway right-of-way. Freeways also require special design considerations, such as the wider clear zones adjacent to the roadway due to the higher speeds achieved by through traffic on freeways.

The control of access aspect of freeways is a key consideration underlying the special rules regarding utility accommodation requests on freeways. The Utility Accommodation Policy states: "The installation of new utility facilities shall not be allowed longitudinally within the right of way of any freeway, except in special cases under strictly controlled conditions." Under Utility Accommodation Policy, Section VI.C, the utility seeking to establish that special circumstances exist to justify an installation on a freeway must demonstrate to Mn/DOT's satisfaction the following:

> "a. The accommodation will not adversely affect the safety, design, construction, traffic operations, maintenance, or stability of the freeway.
> b. Alternate locations are not available or are cost prohibitive from the standpoint of providing efficient utility services.
> c. The accommodation will not interfere with or impair the present use or future expansion of the freeway.
> d. The location of the utility facility outside of the right of way would result in the loss of productive agricultural land or loss of productivity of agricultural land. In this case, the utility owner must provide information on the direct and indirect environmental and economic effects for evaluation and consideration by the Commissioner of Transportation.
> e. Access for constructing and servicing utility facility will not adversely affect safety and traffic operations or damage any highway facility."

Concurrence by the FHWA is also required before the permit for a longitudinal installation on a freeway can be granted.

### C. Impacts of HVTLs on Trunk Highways That the EIS Should Address

The preferred and alternate routes proposed by CapX2020 in this matter either cross over or run parallel to trunk highways in a number of locations. The EIS should identify and evaluate all impacts that construction of a HVTL would have on the trunk highways.

In conducting this evaluation, it should be recognized that highway rights-of-way do not have a uniform width. The width of the right-of-way, and the distance from the centerline of the roadway to the boundary of the right-of-way, varies from highway to highway, and even from mile to mile along a given highway. The reasons for this variability are many, and include considerations such as the time when the right-of-way was purchased, the topography and geology of the area, the negotiations with the individual landowners from whom the right-of-way was acquired, and the timing and nature of changes and upgrades to the highway that have

occurred over the years. Therefore, a uniform policy that an HVTL can safely be located "X" feet or "Y" feet outside the highway right-of-way boundary line generally does not work well.

Mn/DOT believes the EIS should evaluate the type of activities that regularly occur on and along highways. These activities can be evaluated in three groups – (a) traffic that uses a highway, (b) maintenance, repair and related activities and structures associated with the ongoing operation of the highway, and (c) construction activities that are likely to occur in the foreseeable future. These functions or uses of the highway each have a zone – i.e., a height and width – in which they take place either along the roadway surface or in the ditches, near bridges, intersections or interchanges where the maintenance and construction activities take place.

Once the zones of these recurring highway activities are identified, a safety buffer zone from the location of the energized wires of the HVTLs must be applied. The Occupational Safety and Health Administration (OSHA) and the National Electric Safety Code (NESC) can provide guidance on the safety clearances for activities near various voltages of HVTLs. The OSHA or NESC safety buffer should be applied between the zones of transportation activities and the location of the energized lines.

1. Traffic That Uses a Highway

Minnesota's trunk highways are designed to facilitate both personal travel and the distribution of freight throughout the state. Pursuant to Minn. Stat. §§169.80 and169.81, vehicles that do not exceed 13 feet 6 inches in height and 8 feet 6 inches in width can be operated on Minnesota's highways without a permit. Vehicles with larger dimensions, excluding farm vehicles, must obtain a permit. Over the past 5 years, Mn/DOT has issued 233,376 permits for oversize vehicles to operate on state trunk highways. These do not include oversize farm machinery (which do not require a permit) nor movements of houses or other buildings such as grain bins. The number of building moves varies between 400 and 600 per year. Of the oversize vehicle permits issued, 73 were for vehicles over 18 feet 5 inches high, with the largest reaching nearly 37 feet high. An example of the type of oversize loads frequently transported over trunk highways are the blades, base sections and nacelles used in constructing wind turbines. It is important to note that I-94 between Fargo and St. Cloud is designated as a Super-Haul truck route in the Northern Minnesota & Northwestern Wisconsin Regional Freight Study.

In addition to freight and building moves, other traffic on the roadway portion of trunk highways includes such activities as snowplows, which operate on both the roadway and the shoulder. Snowplows are about 13 feet tall, and when their boxes are raised to distribute sand and salt, their height can reach as high as 18 feet. The relative size of snowplows on a typical highway surface is depicted in the drawing enclosed as Attachment 1.

2. Maintenance, Repair and Operational Activities

In addition to the zone associated with traffic traveling on a highway, there is another zone associated with maintenance and operational activities alongside the roadways. Examples of maintenance activities performed by highway workers, and the types of equipment commonly associated with those activities, include the following:

- guardrail and fence installation and repairs, using augers, loaders and skidsteers (which commonly have raised buckets for pulling posts, etc.).

- vegetation control, using mowers, bucket trucks for tree trimming, and equipment for applying herbicides.
- cleaning ditches, culverts and drains, using backhoes and excavators of various sizes that have boom arms that are used to scoop dirt and vegetation and deposit it into a dump truck that will be parked alongside the highway. Mn/DOT's larger ditch dredging equipment has a horizontal reach as long as 60 feet and a vertical operating dimension of up to 47 feet.
- vehicular accidents on highways often require special equipment to retrieve vehicles and repair damage. For example, when large vehicles such as trucks or buses run off the road or go down large ditches or into wetlands, large equipment with booms or winches may be used to pull them out.
- bridge inspections, using snoopers which have articulating arms that can lift a worker out over the side and then underneath the bridge structure.

In addition to the existing interchange locations, there are 80 overpass bridges, 16 ditches or culvert bridges, 9 railroad bridges and 1 pedestrian bridge located along the I-94 corridor between the location north of Barnesville where the proposed "Preferred" route intersects with I-94 and the proposed Quarry substation. The abutments of these bridges are generally close to the I-94 right-of-way line. The location of the transmission line could impact future maintenance and construction activities on these bridges.

Occasionally there is a need for immediate medical transport from roadside locations due to accidents and illnesses. For these situations there are a number of air medical helicopters stationed throughout Minnesota that will land in the roadside environment. These aircraft require clear approach and departure paths as well as an area large enough for the helicopter to land. Given the dimensions of the helicopters used in Minnesota, an area with a diameter of 90 feet should be considered the minimum requirement for landing. There should be two approaches to this area from different directions separated by an arc of at least 90° so that the aircraft can land and take off without a tailwind. Powerlines can be a particularly difficult obstruction for helicopter landings at night. The lines themselves are nearly invisible to the pilot, who must use the presence of poles as evidence that the lines exist. Most helicopters operating in this environment have line cutters installed on the aircraft to cut powerlines they encounter. Even so, helicopter crashes occur when powerlines get entangled in their rotor system or landing gear.

Mn/DOT also maintains a number of structures alongside highways necessary for the safe and efficient operation of the highway, each of which requires periodic installation, maintenance and repair work. Examples of these structures include:

- road signs. The largest signs tend to be on freeways. Signs that extend out over the travel portion of a freeway must have 17.33 feet of clearance to the bottom of the sign, and the top of such signs can be 30.5 feet tall and may require boom trucks, bucket trucks or cranes to install or maintain such signs. Roadside guide signs along freeways can reach 13 feet tall and tend to be located as far out in the clear zone as practical.
- light posts, traffic control signals and poles for traffic monitoring cameras exist at various locations along highways, and range in height from 20 to 50 feet.
- high mast light towers are used along some freeways, and range in height from 100 to 140 feet.
- noise walls, which can be up to 20 feet high, are becoming increasingly common along freeways.

The relative size of some of these structures on a typical highway surface is depicted in the drawing enclosed as Attachment 2.

Another type of physical item located along highways is snow fences, either structural or living. Some snow fences are in the highway right-of-way, and others are placed by agreement with adjoining landowners and may be 150 feet off the highway right-of-way. The EIS should evaluate whether the proposed HVTL may require the removal of or limitation of cost effective snow protection activities such as living snow fences. The study should address specific limitations to vegetation related to the trunk highway use into the future. While Mn/DOT is usually able to work out arrangements with a utility owner regarding height and placement of vegetation used as a living snow fence in locations where a utility is placed, the EIS should consider whether living snow fences owned by Mn/DOT need to be removed or relocated to accommodate a utility placement.

3. Future Construction Activities

Mn/DOT continually evaluates the future needs for the trunk highway system and has construction projects in varying stages of development. Some have been designed and funded and are ready for construction. Others have been identified as needed or are anticipated due to development trends but have not yet been funded. The types of construction projects Mn/DOT performs that could be impacted by the location of a HVTL range from relatively minor changes to the width of a highway to major reconstruction projects. Examples of such construction projects might include:

- widening a roadway by addition of travel lanes or turn lanes, installation of a roundabout, or widening a shoulder area;
- rebuilding a highway in a way that changes the location or grade of a roadway; and
- addition of an overpass or interchange on a freeway or other highway.

With respect to I-94, the current Mn/DOT 2009 - 2028 projects include: the regrade of the median inslope and installation of median cable guardrail from Sauk Centre to Albany, pavement preservation projects from the Todd/Douglas county line to St. Cloud, and replacing Type A and overhead signs from the Douglas/Todd County line to St. Cloud. There will be revisions (expansion) to the interchanges at MN 29/I-94 in Alexandria and US 75/I-94. It should also be noted that there are several stretches of I-94 that have fluctuating topography, with large cut and fill areas along the highway right-of-way. If poles for a HVTL are located in or near these areas, additional work in the highway right-of-way may be required to assure proper drainage is maintained.

In addition to changes in the configuration of a highway, consideration must be given to the equipment used during the construction process. Construction projects often involve the use of large excavators and cranes similar in size to the equipment described above which Mn/DOT uses for its maintenance activities. The equipment used in bridge work is especially large, usually requiring cranes with long booms to lift material into place. The equipment used on construction projects also needs to be refueled at the job site, which requires consideration of the safety precautions necessary for this procedure.

The activities associated with vehicular traffic using the roadway surface have a zone in which they typically occur. The drawings enclosed as Attachments 1, 2 and 3 do not depict a specific location on a specific highway. Rather, they are illustrative of the zones or areas on any

given highway where transportation-related activities may take place. The lighter shaded area above the roadway surface in the drawing enclosed as Attachment 3 depicts the zone or area in which vehicular traffic on the roadway may operate. The zone within which the activities associated with maintenance work take place is depicted by the darker shaded area on the drawing enclosed as Attachment 3. The EIS should consider factors such as the width of the right-of-way, the topography of the land and the geometry of the roadway in a specific location and evaluate how potential alignments of the CapX2020 HVTL would impinge on these zones of activities and impact the safety or functionality of the highway.

Location of a HVTL in close proximity to a highway right-of-way limits future expansion or reconstruction of highways due to the complex and extremely costly nature of either moving the transmission lines or moving the path of the highway. In order for the Minnesota Public Utilities Commission to make a fully-informed selection of a route based on all the pros and cons of the various alternatives, these costs should be recognized and evaluated in the EIS evaluation of the impacts of the proposed routes. The EIS should include an evaluation of the risk of trunk highway funding liabilities, and the potential magnitude of such liabilities, that may be imposed on the Trunk Highway Fund resulting from various proposed alignments along trunk highway rights-of-way.

### D. Other Safety Issues Associated With HVTLs Near Highways

It is expected that weather events (tornado, ice or blizzard conditions, heavy winds, lightning, etc) could cause damage to HVTL towers or downed lines, which in turn could disrupt access to the trunk highway system. For example, in 1998 a severe tornado hit St. Peter, Minnesota and major roadways were closed due to power lines that were down. A similar event that affected Nicollet and St. Peter occurred in 2006 and again required closure of major roadways due to lines on the ground. A third event that affected Hugo required closure of US 61 to secure the area.

The EIS should collect information on the history of transmission line disruptions, including specific information on how often HVTL towers and/or lines are down and why. The EIS should also evaluate the possible impacts to the transportation system of such events, including how a downed HVTL may affect emergency vehicle access, large equipment moves, defense actions, evacuation, and emergency landings, especially in locations where alternate highway routes are not readily available.

The EIS should also evaluate safety issues for workers or the traveling public associated with induced voltage. The EIS should evaluate matters including, but not limited to:

- the causes of induced voltage, and the distance from 345 kV transmission lines at which it can occur;
- methods for measuring electric voltage near 345 kV transmission lines;
- the amount of clearance needed to assure that workers and the public are safe from electric shock,
- methods for making highway related structures in the highway right-of-way safe from electric shock, and
- the amount of health risk for workers in close proximity to a 345 kV transmission line who have special circumstances such as heart pacemakers, pregnancy or diabetes.

### E. Safety Rest Areas

There are four safety rest areas located within the preferred route proposed by CapX2020. The Hansel Lake Safety Rest Area is located on westbound I-94 in Otter Tail County and lies 1.2 miles southeast of the County Road 35. The Lake Iverson Safety Rest Area is located on eastbound I-94 in Otter Tail County and lies 8.0 miles southeast of Fergus Falls. The Burgen Lake Safety Rest Area is located on westbound I-94 in Douglas County and lies 1.5 miles east of MN 29. The Lake Latoka Safety Rest Area is located on eastbound I-94 in Douglas County and lies 1.15 miles northwest of MN 27.

Federal highway regulations define a "safety rest area" as: "A roadside facility safely removed from the traveled way with parking and such facilities for the motorist deemed necessary for his rest, relaxation, comfort and information needs. The term is synonymous with 'rest and recreation areas.'" 23 CFR §752.3(b). In the selection of rest area sites, the prime considerations are the "scenic quality of the site, its accessibility and adaptability, and the availability of utilities." 23 CFR §752.5(e).

Safety rest areas contribute to the safety of the traveling public by providing fatigued drivers the ability to stop and rest. They also reduce the need for stops along highway shoulders and provide an escape from driving under hazardous weather and road conditions. Though their primary value is accident prevention, they also address many needs of commercial truck operators and help promote the state and state tourism. With this in mind, Mn/DOT generally does not issue permits for alignments of HVTLs that would run between the rest area and I-94, or across the rest area property. Such alignments would unreasonably constrain future rest area expansion and limit current and future use of the site. All potential alignments for the HVTL will need to be evaluated for their impact on the safety rest areas.

Mn/DOT's Safety Rest Area Program is currently developing a strategic plan for redevelopment of the interstate rest area system in Minnesota. The plan may propose the development of rest areas in new locations along interstate highways in Minnesota, and may also propose the abandonment or reuse of some existing interstate rest areas. The Lake Iverson Safety Rest Area in particular will likely need to be relocated in the near future because the water level of the lake is rising and the rest area may be flooded. A new site has not yet been identified. If Mn/DOT does build interstate rest areas in new locations or expand existing rest areas, the location of HVTLs would be a significant factor in evaluating the projects. If Mn/DOT were required to pay the cost to relocate transmission lines, the cost of construction of the facilities could increase dramatically.

### F. Scenic Areas

Federal law prohibits new utility installations on highway right-of-way or other lands "within or adjacent to areas of scenic enhancement and natural beauty." 23 CFR §645.209(h). Areas of scenic enhancement "include public park and recreation lands, wildlife and waterfowl refuges, historic sites as described in 23 U.S.C. 138, scenic strips, overlooks, rest areas and landscaped areas." Id. The rule permits exceptions in limited circumstances. The EIS process should identify scenic areas along highways and consider the impact of compliance with 23 CFR §645.209(h) in the evaluation of the various route proposals.

### G. State Scenic Byways

The "preferred" route for the proposed Fargo to Saint Cloud transmission line will cross the Highway 75 "King of Trails" scenic byway in one location and the Glacial Ridge Trail in two locations (MN 27 and MN 29 near Alexandria). Both are state scenic byways. The "alternate" route will cross the Highway 75 "King of Trails" in one location and the Glacial Ridge Trail in two locations (MN 29 near Alexandria and MN 28 near Sauk Centre).

Scenic byways are designated because they possess one or more of six intrinsic qualities, including: scenic, cultural, recreational, natural, historic and archaeological qualities. An analysis of the physical and visual impact on each of these six intrinsic qualities should be conducted at each proposed crossing location to determine the route with the least adverse impact on the byway routes and corridors. Mitigation measures should be recommended for unavoidable impacts on intrinsic qualities within the scenic byway corridors.

Each scenic byway has a leaders group and/or stakeholder group. These groups should be contacted as part of the environmental review process. Among other information about the scenic byways, these groups can provide information about whether there are any scenic easements or other limitations that apply to land uses in the vicinity of the scenic byways.

## III. Other Transportation Systems to be Addressed in the EIS

The Commissioner of Transportation is required by Minn. Stat. Ch. 174, to develop, adopt, revise and monitor a statewide transportation plan that includes all modes of transportation, including highway, rail, air, waterways, transit, trails, bicycles and pedestrians. Therefore, these comments include information about other transportation services (rail, waterways, airports and scenic enhancements) that could be impacted by the proposed routes.

### A. Rail Corridors

Where proposed transmission lines may parallel highway rights-of-way and there is a railroad right-of-way adjacent to the highway, there may not be enough room for construction of the transmission lines outside of the clear zones for both the railroad and the highway. For highways, the clear zone is an unobstructed, relatively flat area that extends out from the traveled lane to give drivers who run off the road a safe place to stop or to regain control of the vehicle. This area must be free from obstructions or other hazards. The railroads may have concerns with overhead crossings in their right of way, gate clearances, foundations, and electrical buildup on the rails. Railroads that could be affected (depending on route option) are: Burlington Northern Santa Fe (BNSF), Otter Tail Valley (OTVR) and Canadian Pacific (CP). At a minimum, all of the railroads noted should be part of the discussions to identify impacts of the proposed routes. Mn/DOT can provide contact information if requested.

### B. Airports

The proposed transmission line routes have the potential to negatively affect airport operations, navigational equipment, and land uses around airports. The Commissioner of Transportation has general supervision over the statewide system of airports in the state. He must assist political subdivisions, cooperate with federal authorities and promote and protect the utility of all Minnesota public airports and the public investment in them as outlined in Minn. Stat. Ch. 360. Section 360.063 requires the Commissioner to prescribe airport approach and turning

standards and authorizes the Commissioner to indicate circumstances in which structures would be airport hazards.

The routes proposed are in proximity to a number of public airports. Due to the proximity of an airport, a Notice of Proposed Construction or Alteration to the Federal Aviation Administration will be required. Please review the criteria for which notice must be made at the FAA Website - http://forms.faa.gov/forms/faa7460-1.pdf. A "Determination of Hazard" or "No Hazard" from the FAA is not a permit to construct. Independent of the determination, permits from the local airport zoning authority are required. All public airports within five miles of the project must be notified and given an opportunity to comment on compatibility of transmission lines with airport operations and land use compatibility. This project will potentially have an impact on the Barnesville Municipal Airport, Chandler Field Airport, Elig Field Airport, Fergus Falls Municipal Airport, Sauk Centre Airport and South Hector Airstrip Airport.

The Mn/DOT Office of Aeronautics establishes, operates and maintains electronic navigation aids to augment the federal system in Minnesota. The Very High Frequency Omnidirectional Radio Range (VOR) system must be protected. The FAA or Mn/DOT Office of Aeronautics must be notified to evaluate potential impacts of the proposed routes within five miles of a VOR.

### C. Lake Wobegon Trail and Central Lakes Trail

Both the preferred and alternate routes proposed by CapX2020 would cross over the Lake Wobegon Trail, and the preferred route would also run parallel to the Lake Wobegon Trail in three locations for a total of about five miles.

The Lake Wobegon Trail and the Central Lakes Trail are situated on an abandoned railroad property that is part of the state rail bank program. In 1994, Mn/DOT acquired ownership of approximately 100 miles of abandoned railroad right-of-way between Fergus Falls and Avon under the authority delegated to the Commissioner of Transportation in Minn. Stat. §222.63. The state rail bank was created to acquire and preserve abandoned rail lines and right-of-way for future public use, including "transmission of energy, fuel, or other commodities." Minn. Stat. §222.63, Subd. 2. Mn/DOT has issued non-exclusive permits to Stearns County, Todd County and the Minnesota Department of Natural Resources authorizing them to operate the two recreational trails on the state rail bank property.

CapX2020 would need to obtain a permit from Mn/DOT for each location where it proposes to cross or to run longitudinally along the state rail bank right-of-way. Minn. Stat. §222.63 authorizes Mn/DOT to establish a fee schedule for lease of the state rail bank property, and CapX2020 would be subject to lease fees, as are other utilities that occupy a portion of state rail bank property.

The EIS should include evaluation of all of the issues described above as part of its assessment of the environmental impacts of each proposed route. As the selection of the final route is made, in all locations where the route will cross or run parallel to a trunk highway it is imperative that the designated route be sufficiently wide so that Mn/DOT and the applicant can address the circumstances at each location and determine a specific alignment that can be permitted consistent with these considerations.

Mn/DOT has a continuing interest in working with the OES to ensure that possible impacts to highways, airports, waterways, rail lines and the environmentally significant areas of highway right of way are adequately addressed. We appreciate the opportunity to provide these comments. Please feel free to contact me if you have any questions regarding the information provided.

Sincerely,

David G. Seykora
Office of the Chief Counsel

Enclosures
Attachments 1, 2 and 3
Highway 75 King of Trails (See King Of Trails )
Glacial Ridge Scenic Byway (See Glacial Ridge Scenic Byway )
Federal Regulations (See Code of Federal Regulations )
2009 MN Statutes Ch. 161. (See MN Statute 161.45 and MN Statute 161.46 )
Mn/DOT Accommodation Policy (See Mn/DOT Accommodation Policy )

cc: Commissioner Tom Sorel
Khani Sahebjam
Derrell Turner– FHWA, Minnesota Division Administrator
Rima Kawas
Patrick Robben
Joshua Gackle
Deborah Pile – OES

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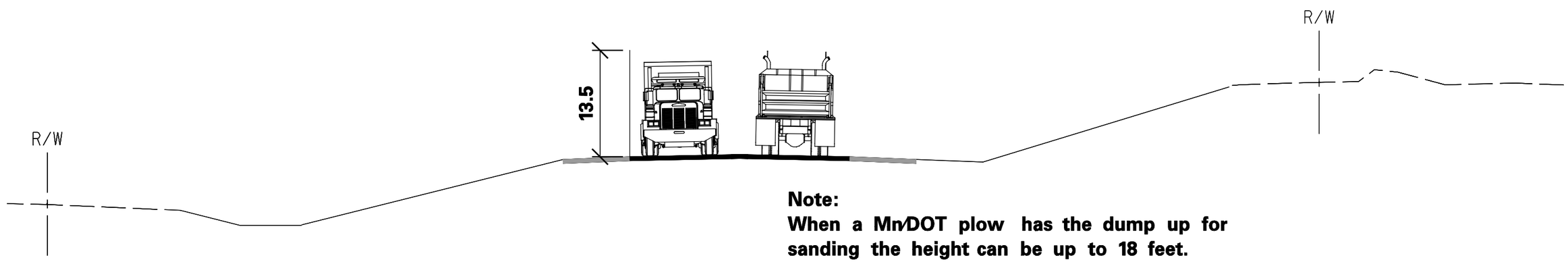



**Note:**
**When a Mn/DOT plow has the dump up for sanding the height can be up to 18 feet.**

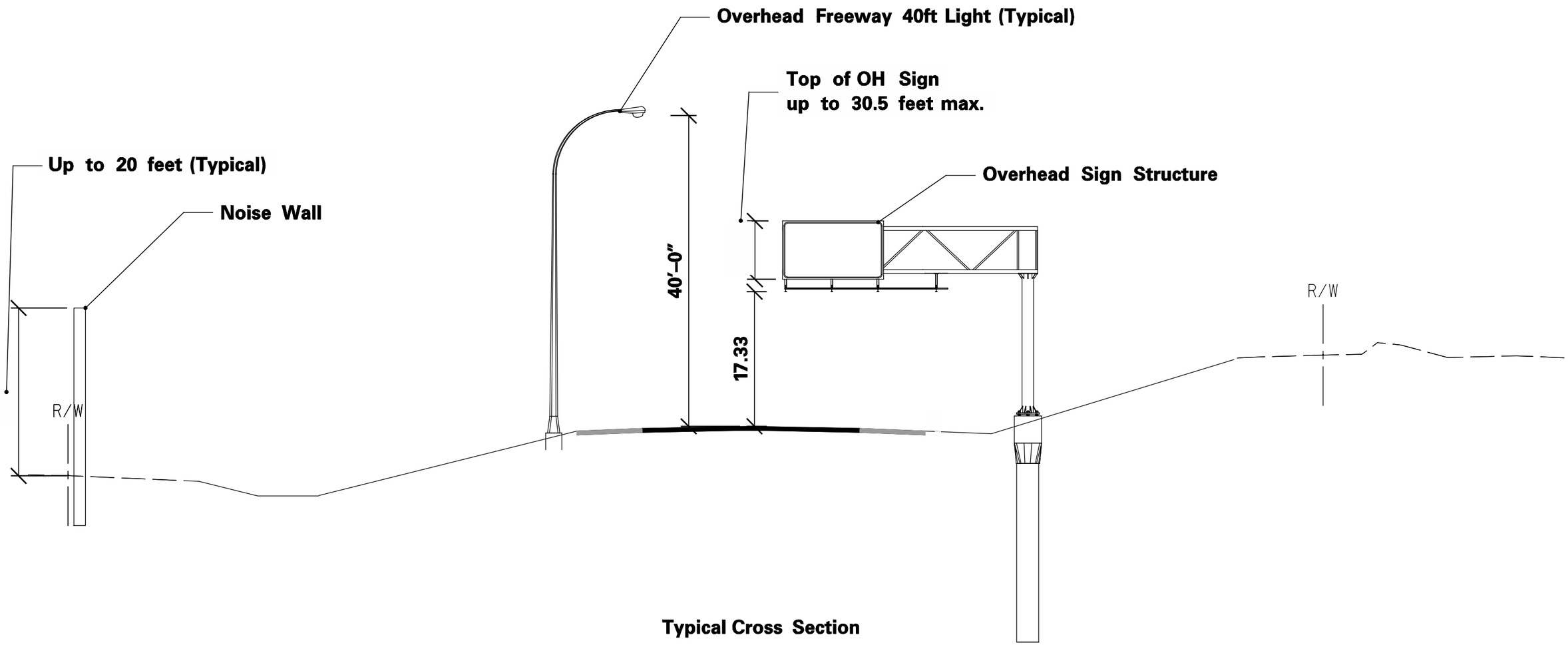
**Typical Cross Section**

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

TRANSPORTATION BUILDING
ST. PAUL, MINNESOTA 55155-1899

**Vehicles**

**Attachment – 1**




**Typical Cross Section**

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

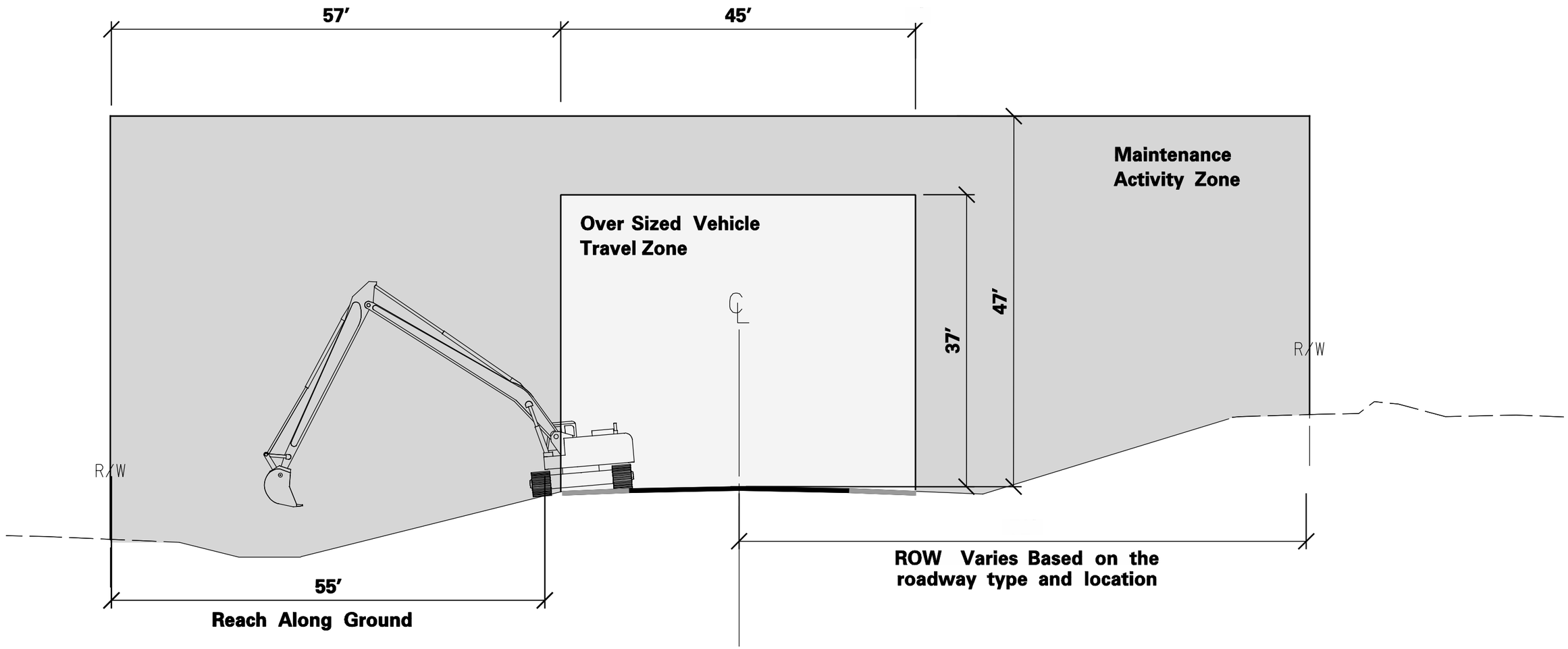
TRANSPORTATION BUILDING
ST. PAUL, MINNESOTA 55155-1899

**MnDOT Structure Examples**

**Attachment – 2**

**Note:**

**All Zones vary based on roadway types and locations**




**Typical Cross Section**

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

TRANSPORTATION BUILDING
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**MnDOT Restriction Zone Examples**

**Attachment – 3**