

# **Permit Guidelines for Public Transportation Agencies**

**Michigan Department of Environmental Quality (DEQ)  
Water Resources Division, Transportation & Flood Hazard Unit  
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## Introduction

These guidelines are intended for use by Public Transportation Agencies (PTAs) using, or eligible to use, federal or state transportation funds including Act 51 Transportation Funds. Examples of work includes: bridges, culverts, roads, some airports, railroads under PTA ownership, and trails that receive state or federal transportation funds. The following parts of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) apply: (Please refer to specific statutes and rules for more details.)

- Part 31, Water Resources Protection, Floodplains and Floodways
- Part 301, Inland Lakes and Streams
- Part 303, Wetlands Protection
- Part 315, Dam Safety
- Part 323, Shorelands Protection and Management
- Part 325, Great Lakes Submerged Lands
- Part 353, Sand Dunes Protection and Management

## Informal Pre-Application (Early Coordination or Voluntary Preliminary Review)

PTA's are strongly encouraged to have early coordination with the DEQ on their projects 1-2 years before submitting a formal application. To request earlier coordination and a site visit, email the following information to the transportation field staff covering your area.

1. Fill out the Preliminary Review form and Section 14 from the standard application.
2. Include topographic location map.
3. Include plan, cross section, and profile of existing and proposed structure.
4. Include photos of site.

Go to [www.Michigan.gov/EGLTransportationreview](http://www.Michigan.gov/EGLTransportationreview) for the following:

Information- Staff Map

Information - Voluntary Preliminary Review Form

Links - Request a Flood or Low Flow Discharge

Information – Hydraulic Programs and Reports – Hydraulic Report Guidelines –  
Hydraulic Capacity Certification

## Application Process

A copy of the current application can be found at [www.Michigan.gov/EGLTransportationreview](http://www.Michigan.gov/EGLTransportationreview) - Permits - MDEQ/USACE Joint Permit Application. Always fill out sections 1-9, and then the appropriate sections of the application. Include photos and the appropriate maps, plans and drawings

(examples can be found in Appendix B of the application). Include any recommendations or findings that were provided during Early Coordination.

Send the original application and plans via email to DEQ-WRD-TFHM or mail to Lansing at DEQ, WRD-TFHU, P.O. Box 30458, Lansing, MI 48909 and email a copy to the DEQ transportation field staff. Permit fees are not required if the applicant is an agency eligible to received Act 51 funds and if the project is for the construction, maintenance, or improvement of a public transportation facility. Once a complete application has been received the process generally takes 14 days for a General Permit, 30 days for Minor Projects, 60 days for Public Notice files, and longer for projects with Federal oversight.

## Emergency Procedures

For work that needs to be done as soon as possible due to a failed structure, please read the emergency procedure guidance found at ([www.michigan.gov/egletransportationreview](http://www.michigan.gov/egletransportationreview) - Information - Emergency Procedures). Fill out the emergency form and send it to Lansing with a copy to the

appropriate DEQ Transportation Field staff. Include information similar to that requested above for early coordination to insure that a complete and accurate description is submitted.

### **Definition of Stream**

For permitting purposes, the DEQ regulates activities involving inland lakes and streams. Part 301 defines a stream as a river, stream or creek which may or may not be serving as a drain as defined by the drain code of 1956 or any other body of water that has definite banks, a bed, and visible evidence of a continued flow or continued occurrence of water during certain times of the year. This includes seasonal streams that may be dry for significant parts of the year.

If a drainage course shows evidence of flow but does not meet the definition of a stream, this feature is considered a drainage swale or linear wetland, (or possibly a ditch if man made). A road culvert associated with a drainage swale is considered a water equalization cross culvert. A permit from the DEQ is not required, provided the proposed work will not impact regulated wetlands.

### **Definition of Bankfull**

Bankfull is the width of the stream that corresponds to the depth where water fills a main channel to the point of overflowing. In instances where the applicant is unsure of the bankfull width, it is recommended that the applicant contact DEQ staff and request a pre-application site review. In legally established drains (except those constituting mainstream portions of certain natural watercourses identified in rule), if bankfull indicators are not present, the structure span may be determined by calculating the 1.5-year stream width at the 1.5-year flow that is based on a stable stream width and depth. While the bankfull width determination in section 14 of the application is not required for a complete application, transportation agencies are strongly encouraged to install structures that span the bankfull width and are properly buried at the correct slope.

The bankfull width is typically wider than the ordinary highwater mark width. The ordinary highwater mark is defined as the line between upland and bottomland that persists through successive changes in water levels, below which the presence and action of the water is so common or recurrent that the character of the land is marked distinctly from the upland and is apparent in the soil itself, the configuration of the surface of the soil, and the vegetation.

The bankfull depth is also typically lower than the top of bank. See figure below:

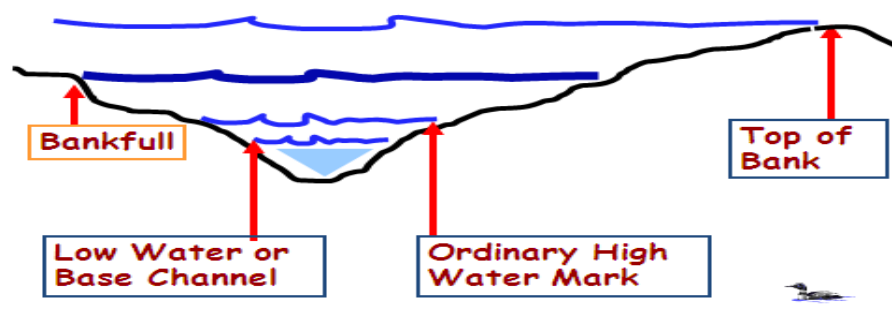


Figure: Comparison of bankfull, ordinary highwater mark and top of bank.

## **Requirements under the Floodplain Regulatory Authority, found in Part 31, Water Resources Protection**

The proposed work must not harmfully interfere with the stage or discharge characteristics of a stream. Part 31 only applies to stream (as defined above) crossings and floodplain locations where the drainage area of the stream is two (2) square miles or greater. If so, the crossing must meet one of the following:

### **Replacement Structures**

The replacement structure, including any weir flow, must be designed with equal or greater hydraulic capacity than the existing structure. When it is not obvious that the replacement structure is a hydraulic improvement then the applicant's licensed professional engineer must provide supporting hydraulic computations. In instances where there is an increase in elevations over 0.01 feet the engineer must certify that the project does not cause a harmful interference and property owners affected by the increase must be notified of the increase and given the opportunity to comment on the increase.

**Harmful interference** means causing an increased stage or change in direction of flow of a river or stream that causes, or is likely to cause, any of the following:

1. Damage to property.
2. A threat to life.
3. A threat of personal injury.
4. Pollution, impairment, or destruction of water or other natural resources.

### **New Structures**

The applicant must meet one of the minor project categories or submit hydraulic computations and certify that the new structure is designed to pass the 100-year flood without causing a harmful interference. Any property owners affected by an increase must be notified of the increase and given the opportunity to comment on the increase.

### **Some Common Exemptions under Part 31, Floodplains**

1. The widening of an existing bridge or extension of a culvert up to 24 feet total (not including end sections) from the original structure design.
2. Deck replacement of an existing bridge where deck surface and approaches are not increased by more than 4 inches and the under clearance is not decreased.
3. The addition of a new wearing course of 4 inches or less unless the road is above the 100-year floodplain elevation in which case there is no limit on the amount of increase.
4. Stream bank restoration work including riprap that meet the Minor Project Category under Part 301, Inland Lakes and Streams.
5. Excavating or dredging where the spoils are placed in an upland area outside of the floodplain.

### **Requirements under Part 301, Inland Lakes and Streams**

The proposed work, including the structure, must not adversely affect the public trust or riparian rights. It must not cause pollution, impairment, or destruction to the waters or other natural resources of the state.

## Requirements under Part 303, Wetlands Protection

The proposed work must not cause an unacceptable disruption to the aquatic resources, and must be in the public interest. Regulated wetlands are those where some portion of the wetland is within 500 feet of an inland lake or stream, within 1000 feet of the Great Lakes (or otherwise determined to be contiguous to the Great Lakes or Lake St. Clair or an inland lake, stream or pond), or five acres in size or larger.

### Mitigation Requirements under Part 303

Mitigation is creation of new wetland area, from an upland area, the restoration of previously drained wetland or preservation of high quality existing wetlands to offset the losses from a project that impacts a regulated wetland. The preferred method of mitigation is to restore wetlands in areas that were previously wetland but have been drained or otherwise modified. In certain circumstances, the preservation of existing wetlands is acceptable mitigation. Preserved wetlands must meet these three criteria: **(1)** provide exceptional functions or be a rare type; **(2)** be under threat of impairment or destruction; and **(3)** be permanently protected or managed to prevent the threat. See Minor Project category for Public Transportation Projects for more details on mitigation.

#### General Wetland Mitigation Requirements

Wetland Impacts/site	Mitigation Ratio	Location	Habitat Type
Less than 0.1 acres**	None required	N/A	N/A
0.1 acres to 0.33 acres*	1:1 ratio	Statewide	Any
More than 0.33 acres	1:1.5 or more	Same Watershed	Same as impacted

\* And less than 1/3 acre per wetland and less than 1 acre total impact for the entire project.

**\*\* Certain agencies using Federal Funds must mitigate for all wetland impacts of any size or wetland regulatory status.**

### Work in Designated County Drains

When a transportation agency is installing a bridge or culvert or performing other road work involving a county drain, a permit from the DEQ is required unless the work is being done with a larger petitioned drain project that is exempt from a DEQ permit. A separate permit/approval may also be required from the county drain office.

### General Exemptions from Permit Requirements

The following activities are exempt from DEQ permits:

1. The installation, repair, replacement, or maintenance of cross-road culverts on **drainage courses** which do not meet the definition of a stream, and cross-culverts which only serve to convey stormwater runoff or equalize the water level at both ends of the culvert when such culverts will not result in impacts to regulated wetlands or lakes.
2. The construction, repair, replacement, or maintenance of **roadside ditches** which serve to convey stormwater runoff from the road right-of-way in such a manner that it does not materially change the drainage pattern, drain adjacent wetlands, extend below the Ordinary High Water Mark (OHWM) of an adjacent stream, and is not part of a stream system. (See clarification on road footprint and road ditch maintenance on ages 20-23).

3. The construction, installation, repair, replacement, or maintenance of standard **stormwater runoff appurtenances** (auxiliary structures), provided that such structures are placed in a manner that they will not obstruct stream or flood flow and will not impact adjacent wetlands. Examples of these structures include:
  - a. Manholes and catch basins
  - b. Headwalls
  - c. Riprap below the OHWM to prevent erosion from a storm water outlet pipe.

### **Culvert Maintenance Exemptions**

The following culvert maintenance activities are exempt from DEQ permit requirements.

1. In-kind, in-place **repairs and maintenance**, excluding structure replacement, to any previously permitted culverts (or those installed before January 9, 1973), provided the watercourse, streambed, and adjacent banks are not altered.
2. The retrieval and placement of riprap shore protection structures where the original material was displaced by erosion or ice damage if the retrieval will not cause disruption of the bottomland and the placement of earthen fill is not required.

### **Bridge Maintenance Exemptions**

The following items are exempt, provided materials are prevented from falling into the watercourse during construction:

1. In-kind, in-place **repairs and maintenance**, excluding structure replacement, to any previously permitted bridges (or those installed before January 9, 1973) provided the watercourse, streambed, and adjacent banks are not altered.
2. The removal and replacement of ties and stringers on **railroad bridges** using materials that do not exceed the original dimensions.
3. Maintenance of restoration of bridges through **sand blasting** and/or painting provided all operations are conducted in accordance with current Michigan Department of Transportation (MDOT) specifications.
4. **Widening of bridge decks**, provided it meets both of the following conditions:
  - a. The work can be done on existing abutments or piers and the existing beams are not removed
  - b. No harmful interference to flood flow and no additional impediment to navigation will occur (i.e. neither raising of the existing original design roadway elevation over 4 inches nor lowering the underclearance elevation).
5. Removal, restoration, maintenance and replacement ( in-kind and in-place), of **bridge appurtenances** including: decks, rails, sealing, concrete work, fixtures, and similar work where the deck is not raised more than 4 inches above the original design elevation.
6. **Resurfacing** or overlay of an existing bridge deck and approaches when such resurfacing will not increase the original design roadway profile elevations in the floodplain by more than 4-inches.

7. **Hydro-demolition** of bridge decks provided that slurry and other materials are prevented from entering the water, floodplain, or wetlands. Because of the potential high pH concentration in the slurry water, the slurry water is not allowed to enter a stream, drain or wetland. It must soak into the ground or be collected in a container and hauled away to a proper disposal site.

**The above bridge work must be conducted so that all of the following apply:**

- a. Removal of bridge beams, abutments and piers is not part of the project.
- b. There will be no change to weir flow elevations in the floodplain, other than the possible replacement of a 4-inch maximum course above the original design surface of the roadway.
- c. The span of the bridge does not change.
- d. The underclearance elevation does not change.
- e. Navigation of the waterway is not impeded by the existing structure or proposed activity.
- f. Temporary work will not require or allow the discharge, placement, or storage of materials or equipment in the water, floodplain, or wetlands.

## **Permits**

There is a 3-tiered permitting system depending on the type of project. They are:

- 1) General Permit Categories- eligible for an expedited review process that have been determined to have minimal impacts and generally do not require a site inspection. The average processing time 14 days from the date of receipt of a complete application.
- 2) Minor Project Categories- these have been determined to have only minor impacts and are generally not public noticed. These may or may not require a site inspection. The average processing time is 30 days from the date of receipt of a complete application.
- 3) Individual Permit Category- any project that does not fit into the General Permit or Minor Project Categories is processed as an individual permit. These are required to be public noticed and are generally always site inspected. The average processing time is 60 days. Projects that require a review from the U.S. Environmental Protection Agency are described later in this document and will generally have a processing time of 90 days or more from the date of receipt of a complete application.

Some of the typical transportation related projects that fall into these categories are highlighted below. For a complete list of the General Permit and Minor Project Categories, go to [www.michigan.gov/jointpermit](http://www.michigan.gov/jointpermit) under the Application section.

## **General Permit Category of Projects - Eligible for an Expedited Review Process**

See all exclusions and limitations in complete listing of General Permit categories.

### **C. Clear Span Bridge**

*Category applies to:* ☒ *Part 301, Inland Lakes and Streams*

New or replacement clear span bridges that meet all of the following:

- Any abutments or foundations must be placed a minimum of 1.2 times the bankfull width.
- The lowest bottom beam elevation is at or above the natural ground elevations on either bank and spans the entire bankfull width.
- No filling or dredging in the bankfull channel is included in this category, unless approved by the DEQ based on site conditions.



- The structure will allow passage of watercraft that could be expected to navigate the water involved.
- The bridge shall be anchored to prevent floatation during periods of high water.

For stream crossing locations where the drainage area is 2 square miles or greater, the crossing must also meet the requirements of Part 31 as outlined previously, as well as the following:

**For replacement structures:**

- The proposed structure must have an equal or greater hydraulic capacity when compared to the existing bridge.
- The proposed road grade shall not exceed that of the existing road grade by more than 4 inches, unless the road grade has been shown to be above the 100-year floodplain elevation.

**For new structures:**

- The approach fill slopes to natural ground elevations within 10 feet of either side of the structure, unless the fill has been shown to be above the 100-year floodplain elevation.

**D. Culvert Cleanout**

*Category applies to:* ☒ *Part 301, Inland Lakes and Streams*

Cleanout activities for existing culverts conducted by county drain commissioners, public transportation agencies, their agents, or other governmental agencies that meet all of the following:

- Accumulated sediment and small debris may be removed from within a maximum of 25 feet on either side of the culvert ends to restore a stable stream width and slope.
- Sediments shall be captured to prevent downstream loss of suspended material. When feasible, sufficient materials shall be left to maintain natural bottom materials within the culvert.
- All dredged or excavated materials shall be removed to an identified upland site exclusive of floodplain or wetland areas.
- The culvert cleanout will occur during periods of low flow.
- The culvert cleanout will not occur during any critical fish spawning windows.
- The culvert cleanout will not cause bank or channel failure.

**M. Public Transportation Projects**

*Category applies to:* ☒ *Part 301, Inland Lakes and Streams*

1. Culvert and Bridge Extensions. The extension of existing bridges or culverts by public transportation agencies that meet all of the following:

- The total length of the extension does not exceed 24 feet.
- The end area of the extension must be equal to or greater than the existing structure's end area.
- Dredging and/or filling are limited to the extent necessary for the bridge/culvert extension.
- The proposed inverts shall be at or below the existing stream bottom.
- The structure will be designed and placed to ensure that any increase in stream erosion or downcutting is prevented.
- The placement of riprap shall be limited to the minimum necessary to ensure proper stabilization of the side slopes and fill in the immediate vicinity of the culvert. Riprap shall

not extend upstream or downstream of the culvert more than 25 feet on each end. Riprap shall be properly sized based on velocity and consist of natural field stone or rock unless it is determined by the DEQ that broken concrete can be allowed based on site conditions. Broken concrete, free of protruding metal, contaminants, and other foreign material, may be allowed in legally established drains except those constituting mainstream portions of certain natural watercourses identified in rule.

- The existing culvert is not perched (i.e., a culvert with an outlet invert elevated above the downstream water surface, allowing a freefall condition).
2. Culvert End Sections, Headwalls and Wingwalls. Installation or replacement of culvert end sections, headwalls, and wingwalls by public transportation agencies that meet all the following:
- The end area of the end section must be equal to or greater than the existing structure's end area and the length of the end section is a maximum of 12 feet.
  - Dredging and/or filling are limited to the minimum necessary.
  - The proposed inverts shall be at or below the existing stream bottom.
  - The structure will be designed and placed to ensure that any increase in stream erosion or downcutting is prevented.
  - The placement of riprap shall be limited to the minimum necessary to ensure proper stabilization of the side slopes and fill in the immediate vicinity of the culvert. Riprap shall not extend upstream or downstream of the culvert more than 20 feet on each end. Riprap shall be properly sized based on velocity and consist of natural field stone or rock unless it is determined by the DEQ that broken concrete can be allowed based on site conditions. Broken concrete, free of protruding metal, contaminants, and other foreign material, may be allowed in legally established drains except those constituting mainstream portions of certain natural watercourses identified in rule.
  - The existing culvert is not perched (i.e., a culvert with an outlet invert elevated above the downstream water surface, allowing a freefall condition).

## **P. Soil Borings**

Category applies to: ☒ *Part 301, Inland Lakes and Streams*  
☒ *Part 325, Great Lakes Submerged Lands*

Soil sample borings that meet all of the following:

- The outside diameter of the bore hole does not exceed 8 inches.
- Drilling is carried out either from a bridge or other existing structure, or from a barge anchored on a temporary basis, and is completed within a 48-hour period for each bore hole.
- After completion of drilling, the auger hole is backfilled, as appropriate, and any material remaining on the auger is disposed of in an upland location.
- Written authorization is obtained from any riparian property owners prior to drilling, other than soil borings carried out by or for a public agency within a public right-of-way or under appropriate authority.

## **Minor Project Categories - Eligible for an Expedited Review Process**

See all exclusions and limitations in complete listing of Minor Project categories.

### **2. Bioengineering Practices for Streams**

Category applies to: ☒ *Part 301, Inland Lakes and Streams*  
☒ *Part 303, Wetlands Protection*

Bioengineering practices are used to stabilize stream banks where needed to prevent erosion, and to restore natural stream banks while protecting and enhancing fish and wildlife habitat and other natural features associated with streams. Bioengineering uses a combination of native plantings and natural or biodegradable materials to engineer shoreline protection that, to the extent possible, mimics and/or enhances the natural landscape.

This MP is not applicable to Great Lakes or inland lakes shorelines. It is also not applicable to streams where banks are stable, and where natural wetland habitat would be degraded by installation of these structures.

This MP category includes installation of bioengineering practices on streambanks as necessary to prevent or control erosion using the following bioengineering practices:

- Placement of biological erosion control structures, including but not limited to fiber rolls, fiber mats, joint plantings, branchpacking, live stakes, brush mattresses, tree revetments, brush bundles, live fascines, and plantings of native vegetation.
- Limited placement of natural stone or rock rip rap, covering no more than 300 feet of the length of the project and allowing for the free growth of plants, if necessary, to stabilize biological materials.
- Rock riprap placed at the toe of the streambank where needed to prevent scouring. Riprap shall be properly sized based on velocity and be limited to consist of natural field stone or rock (broken concrete is not allowed). Broken concrete, free of protruding metal, contaminants, and other foreign material, may be allowed in legally established drains, except those constituting mainstream portions of certain natural watercourses identified in rule.
- Maintenance of previously authorized bioengineering structures.

The installation of bioengineering practices must meet all of the following:

- This MP category shall be limited to less than 500 linear feet of streambank per project.
- Excavation and backfill shall be permitted under this MP category only to the extent necessary to stabilize slopes and to place bioengineering structures. Excavation or fill below the water's edge shall be authorized only to support the reestablishment of native vegetation or to restore and stabilize a severely eroded bank.
- Vegetation, including plantings and other potentially viable material such as live stakes, brush bundles, or other gathered woody material, shall be comprised only of plant species that are considered native to Michigan according to the Floristic Quality Assessment for the State of Michigan.
- Engineered plant material, such as jute and coconut fabric, shall be comprised of inert plant fiber that may be nonnative.
- This MP category shall not be used to authorize the destruction or alteration of areas of existing native wetland or aquatic vegetation or the expansion of beach areas.

## 9. Culverts- Wetland Equalizer

Category applies to: ☒ Part 303, Wetlands Protection

The installation of equalization culverts in wetlands that meet all of the following:

- The culvert is a minimum diameter of 18 inches.
- The culvert is installed at the proper elevation for the purpose of water level equalization and must be buried 20% of the culvert diameter.
- The culvert provides for the free flow of surface water or the movement of organisms between portions of a wetland system.
- The culvert shall not increase drainage of any existing wetland areas.

## 23. Maintenance and Repair of Serviceable Structures

Category applies to: ☒ Part 301, Inland Lakes and Streams  
☒ Part 325, Great Lakes Submerged Lands

The maintenance and repair of any previously permitted, currently serviceable structure that meet all of the following:

- This serviceable structure was previously permitted under Part 301 or Part 325. Serviceable means usable as is or with minor repair, but not so degraded as to essentially require reconstruction.
- The maintenance or repair does not alter the original use.
- Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make the repair are included in this MP category provided that the environmental impacts resulting from the entire repair are minimal. The total impact of the maintenance or repair cannot exceed the impacts originally authorized for the previously permitted structure.
- The repair will not adversely affect public trust values or interests, including, but not limited to, navigation, recreation, fish migration, or water quality.
- This MP may not be used to authorize any alteration of drains, which are not considered serviceable structures.
- This MP may not be used to construct, maintain, repair, or replace shore protection structures.

## 31. Public Transportation Projects

### 1. Linear Transportation Projects

Category applies to: ☒ Part 303, Wetlands Protection

Public road projects contained within the existing right-of-way where all practical means have been used to minimize the wetland impact, and all components of the project will impact no more than 1 acre of wetland. This category shall be further restricted to the following safety improvements, after a finding of necessity by the public transportation agency is determined to be required for safety reasons and for which the wetland fill will not exceed 1/3 acre per wetland:

- a) Flattening of road slopes to meet the minimum safety standard.
- b) Construction of standard shoulder widths.
- c) Installation of guardrail flares.
- d) Intersection improvements.
- e) Elimination of roadside obstacles, such as sign platforms and utility poles.

- f) Addition of a lane for safety reasons.
- g) Open construction highway fencing elevated above the wetland on poles limited to 5 feet in height.
- h) Wetland equalizer culvert extensions.

Mitigation for impacts that exceed 0.1 acre will be required unless the Transportation Review Unit supervisor determines in writing that some other form of mitigation would be more environmentally appropriate. This mitigation must be at a minimum of a 1-to-1 ratio but may be of any wetland type and done on a statewide basis.

## 2. Culverts - Large

*Category applies to:* ☒ *Part 301, Inland Lakes and Streams*

Culverts: New or replacement culverts 100 feet or less in length that meet all of the following:

- The culvert must be bottomless (3-sided), or if the structure has a bottom, then the invert elevation must be buried below the stream bottom 1/6 of the bankfull width up to a maximum buried depth of 2 feet.
- Structures shall be set on the same slope as the stream. For stream crossings with a slope of 3% or greater, a bottomless (3-sided) structure or bridge is required to meet this category.
- The structure must span a minimum of the bankfull width of the stream.
- For the replacement of perched culvert (i.e., a culvert with an outlet invert elevated above the downstream water surface, allowing a freefall condition), grade control structures may be required.
- The structure shall be installed to align with the centerline of the stream at both the inlet and outlet ends. If needed, up to 25 feet of the channel at either end can be reshaped to allow for a smooth transition. The bankfull width must be maintained for any reshaped areas. Meanders upstream or downstream of the culvert shall not be eliminated when creating a smooth transition.
- The structure will allow passage of watercraft that could be expected to navigate the water involved.
- The placement of riprap shall be limited to the minimum necessary to ensure proper stabilization of the side slopes and fill in the immediate vicinity of the culvert. Riprap shall not extend upstream or downstream of the culvert more than 25 feet on each end. Riprap shall be properly sized based on velocity and consist of natural field stone or rock unless it is determined by the DEQ that broken concrete can be allowed based on site conditions. Broken concrete, free of protruding metal, contaminants, and other foreign material, may be allowed in legally established drains except those constituting mainstream portions of certain natural watercourses identified in rule.

For stream crossing locations where the drainage area is 2 square miles or greater, the crossing must also meet the requirements of Part 31, as outlined previously, as well as the following.

### 1. For replacement structures:

- The proposed structure must have an end area equal or greater hydraulic capacity when compared to the existing culvert.
- The proposed road grade shall not exceed that of the existing road grade by more than 4 inches, unless the road grade has been shown to be above the 100-year floodplain elevation.

## 2. For new structures:

- The approach fill slopes to natural ground elevations within 10 feet of either side of the structure, unless the fill has been shown to be above the 100-year floodplain elevation.
- The fill over the culvert is not more than 1.5 feet.

## 3. Riprap Scour Protection

*Category applies to:* ☒ *Part 301, Inland Lakes and Streams*

The placement of riprap for scour protection by public transportation agencies around structures to meet federal highway critical scour protection requirements that meets all of the following:

- Riprap shall be properly sized based on velocity and consist of natural field stone or rock unless it is determined by the DEQ that broken concrete can be allowed based on site conditions. Broken concrete, free of protruding metal, contaminants, and other foreign material, may be allowed in legally established drains, except those constituting mainstream portions of certain natural watercourses identified in rule.
- The riprap may not extend above the normal (nonscoured) channel invert.
- Excavation shall be limited to the amount necessary for scour protection.

## 4. Replacement of Bridge Superstructure

*Category applies to:* ☒ *Part 301, Inland Lakes and Streams*

The replacement of a bridge superstructure including deck and beams while leaving the existing abutments and piers in place that meets all of the following:

- All work and construction equipment shall be located outside of the stream.
- Demolition materials shall not drop in the water or be placed in wetlands or floodplains.
- Concrete slurry water, concrete dust, and other waste material shall not enter the stream.
- The low beam elevation may not be lowered and there shall be no reduction in the bridge opening.
- For stream crossing locations where the drainage area is 2 square miles or greater, the proposed road grade shall not exceed that of the existing road grade by more than 4 inches, unless the road grade has been shown to be above the 100-year floodplain elevation.

## 32. Removal of Structures

*Category applies to:* ☒ *Part 301, Inland Lakes and Streams*  
☒ *Part 303, Wetlands Protection*  
☒ *Part 325, Great Lakes Submerged Lands*

Physical removal that is either:

1. Removal of man-made structures in wetlands, inland lakes or streams, or the Great Lakes that meet all of the following:
  - The structure to be removed does not control the water level of an inland lake or stream, or the water level in the adjacent wetland.

- All removed materials, including footings and pilings, shall be disposed of in an identified upland (non-floodplain, non-wetland) site.
  - The site must be restored to its original condition or to a condition that is consistent with the surrounding area. Any bare soil or disturbed areas shall be promptly stabilized to prevent erosion. Plants and seed native to Michigan shall be used in the restoration.
  - Upon completion of structure removal, the site does not constitute a safety or navigational hazard.
2. Removal of natural obstructions (e.g., log jams, beaver dams, etc.) in streams that meet all of the following:
- All removed materials shall be disposed of in an identified upland (non-floodplain, non-wetland) site.
  - The site must be restored to its original condition or to a condition that is consistent with the surrounding area. Any bare soil or disturbed areas shall be promptly stabilized to prevent erosion. Plants and seed native to Michigan shall be used in the restoration.
  - The fisheries and wildlife habitat values of the natural obstruction shall be considered.
  - The drawdown shall not negatively impact the downstream receiving waters, habitat, or structures.

This MP category does not include:

- More than de minimus excavation of soil and sediment or the use of water jetting to remove structures.
- The removal of man-made dams (or weirs).
- Maintenance dredging, dredging of sediments in order to recover vessel, shoal removal, or riverbank snagging. Natural obstruction does not apply to shoal material or sediment.
- Abandoned property as defined in Part 761, Aboriginal Records and Antiquities, of the NREPA.

### **37. Riprap Shoreline Protection**

Category applies to: ☒ *Part 301, Inland Lakes and Streams*  
☒ *Part 325, Great Lakes Submerged Lands*

The placement of riprap to facilitate bank stabilization activities that meets all of the following:

- The placement of riprap does not exceed 300 linear feet of shoreline and extend more than 5 feet below the ordinary high water mark. The riprap shall be placed at a 1-on-2 slope (e.g., 1-foot vertical to 2 feet horizontal) or gentler. This category does not include vertical rock walls.
- There is evidence of ongoing erosion.
- Riprap shall consist of natural field stone or rock (broken concrete is not allowed). For inland lakes, the riprap shall be a maximum of 24-inch diameter rock. For streams, riprap shall be properly sized based on velocity. Broken concrete, free of protruding metal, contaminants, and other foreign material, may be allowed in legally established drains, except those constituting mainstream portions of certain natural watercourses identified in rule.
- Geotextile may be placed and tied in before installation of the riprap.

- Vegetation, including plantings and other potentially viable material such as live stakes, brush bundles, or other gathered woody material, comprised of plant species that are considered native to Michigan is encouraged.
- Riprap shall not be placed in any wetland areas or in any manner that impairs surface water flow into or out of any wetland areas.

#### **42. Storm Water Outfall Structures**

Category applies to: ☒ *Part 301, Inland Lakes and Streams*  
☒ *Part 303, Wetlands Protection*  
☒ *Part 325, Great Lakes Submerged Lands*

Construction, maintenance, or modification of storm water outfall structures that meet all of the following:

- Discharges shall meet state water quality standards or the effluent from the outfall is otherwise in compliance with regulations issued under the NPDES Program (Part 31 of the NREPA). The discharge has been passed through storm water treatment devices (i.e., best management practices) to maximize the removal of sediments and other contaminants (e.g., oil, grit, trash, heavy metals, etc.) using the best available and practicable technologies that are necessary when considering the receiving waters and associated aquatic resources.
- The face of the outfall structure shall conform to the side slope of the bank and not extend into the receiving water to impair navigation or create shoreline pockets capable of trapping debris.
- The outfall shall not result in changes in the ecological type of the wetland. Changes to the wetland watershed area and impacts from water storage shall be minimized.
- The outlet shall be stabilized to prevent soil erosion. Excavation and riprap shall be limited to the minimum necessary to ensure proper stabilization. Riprap shall consist of natural field stone or rock (broken concrete is not allowed). Broken concrete, free of protruding metal, contaminants, and other foreign material, may be allowed in legally established drains, except those constituting mainstream portions of certain natural watercourses identified in rule.

#### **43. Temporary Construction, Access, and Dewatering**

Category applies to: ☒ *Part 301, Inland Lakes and Streams*  
☒ *Part 303, Wetlands Protection*

Temporary structures, construction mats, and fill, including cofferdams, necessary for construction activities or access fills or dewatering of construction sites that meet all of the following:

- Temporary fill impacts shall not exceed a maximum of 1,000 square feet and the placement of no more than 25 cubic yards of fill material. The placement of temporary structures or construction mats shall be limited to 0.1 acre.
- The temporary structures, construction mats, and fill must be removed immediately after use has been discontinued or within 90 days of initiation of the authorized activity, whichever is shorter.
- Fill must consist of materials, and be placed in a manner, that will not be eroded by expected high flows.
- Geotextile shall be placed prior to temporary fill. Following completion of construction, temporary fill must be entirely removed to upland areas and the affected areas must be restored to preconstruction grade and wetland type. A restoration plan showing how all



temporary fills and structures will be removed and the area restored to preconstruction grade and wetland type shall be provided by the applicant. Any revegetation shall use seeds and plants native to Michigan.

- Cofferdams shall be maintained in good working order throughout the duration of the project. Upon project completion the accumulated materials shall be disposed of in an identified upland (non-floodplain, non-wetland) site.
- All slurry resulting from any dewatering operation shall be discharged through a filter bag or pumped to a sump located away from wetlands and surface waters and allowed to filter through natural upland vegetation, gravel filters, or other engineered devices for a sufficient distance and/or period or time necessary to remove sediment or suspended particles.
- A construction sequence with dates when the structures will be installed and removed must be provided by the applicant. Structures left in place after construction are not included under the MP.
- This MP category does not include the use of cofferdams to dewater wetlands or other aquatic areas to permanently alter or change their use.
- Temporary culverts and bridges shall be limited to other MP and GP categories for those activities.

### **Individual Permit Projects (Public Notice Project)**

Individual Permit projects are those that do not meet a general or minor project category. The individual permit projects require a 20-day public-notice period and may require federal review by the U.S. Environmental Protection Agency (USEPA), the U.S. Army Corps of Engineers (USACE), or the U.S. Fish and Wildlife Service (USFWS).

### **Federal Involvement**

The following major projects will typically require federal review by the USEPA, USACE, and the USFWS. This review normally takes a minimum of 90 days to process.

- a) Major discharges. Major discharges are defined as applications for permits that:
  - i) Affect one or more acres of wetland.
  - ii) Include new construction of breakwaters or seawalls with a total length of more than 1,000 feet.
  - iii) Include enclosure of more than 300 feet of a stream in one or more segments.
  - iv) Require relocation or channelization of more than 1,000 feet of a stream in one or more segments.
- b) Projects with reasonable potential for affecting endangered or threatened species as determined by the USFWS.
- c) Discharges with reasonable potential for adverse impacts on waters of another state.
- d) Discharges known or suspected to contain toxic pollutants in toxic amounts (Section 101(a)(3) of the CWA) or hazardous substances in reportable quantities (Section 311 of the CWA).
- e) Discharges located in proximity of a public water supply intake.

- f) Projects within critical areas established under state or federal law, including national and state parks, fish and wildlife sanctuaries and refuges, national and historical monuments, wilderness areas and preserves, sites identified or proposed under the National Historic Preservation Act, and components of the National Wild and Scenic Rivers System.
- g) Sites identified by the USEPA in advance under provisions of the 404 Guidelines.

### **U.S. Army Corps of Engineers Review**

Certain projects that are within Section 10 Waters will require a separate permit from the U.S. Army Corps of Engineer. Section 10 waters generally include the Great Lakes; commercially navigable portions of rivers; and wetlands in close proximity to the Great Lakes and the navigable portions of rivers. If a proposed project falls within Section 10 waters the MDEQ will forward a copy of the application to the USACE. The applicant can also send a copy directly to the USACE. The USACE will contact the applicant directly and issue a separate permit.

### **Some Environmental Best Management Practices to Consider when Installing Culverts**

1. The span matches the bankfull (BF) width of the stream. Depending on the stream system this can range from being similar to the stream width at the ordinary high water mark to being several feet wider.
2. The new invert is recessed 1/6 BF width, up to two feet (can be more if you want). Recess means buried below the natural stream bottom as measured along deep center portion (thalweg) of the stream. The proper slope and an accurate stream profile should be obtained by surveying the stream bottom for a minimum distance of 100 to 200 feet upstream and downstream of the existing structure. A longer surveyed profile may be needed to be outside the influence of the existing structure.
3. The new structure should be sloped to match the stream gradient. An accurate stream profile can help determine this.
4. If headwalls/wingwalls are not used the new culvert length should extend to the toe of the side slopes, but no longer.
5. The new culvert should align with the stream. In some cases this may mean placing the culvert at a skew to the road. If the culvert is skewed more than 30 degrees, it should be realigned to eliminate the adverse attack angle. The DEQ may allow a minor realignment of the stream in conjunction with the culvert realignment. This should be discussed with the DEQ transportation specialist.
6. If the drainage area is more than two square miles, then the new structure, including any weir flow, must have equal or greater hydraulic capacity than the existing structure for a range of flows up to and including the 1% frequency event also known as the 100 year flow.
7. Place riprap where the structure meets the stream, and other erosion/scour prone areas, but nowhere else unless needed. Consider using vegetative or bioengineering methods to stabilize the channel slopes above the ordinary high water mark.
8. Divert or filter roadside ditch runoff before it enters the stream.
9. The new culvert size, location, and inverts, should not always be based on the old structure. This is especially important where there are obvious signs of scouring, erosion or high velocities occurring with the existing structure. Use the opportunity when installing a new culvert to design it properly to address existing problems.

## Contact Information

**Mail applications to:**  
MDEQ, WRD, Transportation and Flood Hazard Unit  
Box 30458  
Lansing, MI 48909-7958

**Website:** [www.Michigan.gov/EGLEtransportationreview](http://www.Michigan.gov/EGLEtransportationreview)

<b>Environmental</b>		
Jerry Fulcher 517-284-5504 <a href="mailto:fulcherj@michigan.gov">fulcherj@michigan.gov</a>	Supervision Environmental Hydraulic Reviews Statewide Program Administration	DEQ, WRD P.O. Box 30458 Lansing, Michigan 48909-7958 Fax: 517-241-9003
Kim Wood 517-284-5509 <a href="mailto:woodk@michigan.gov">woodk@michigan.gov</a>	Administrative Support Function for Transportation Team	
TFHU Staff	Initial Application Review Statewide	
John Skubinna 517-284-5501 <a href="mailto:skubinnaj@michigan.gov">skubinnaj@michigan.gov</a>	Southeastern Lower Peninsula Permit Program Administration	DEQ, WRD Grand Rapids District Office 350 Ottawa Avenue NW, Unit 10 Grand Rapids, MI 49503 Fax 616-356-0202
Holly Vickers 616-295-2787 <a href="mailto:vickersh@michigan.gov">vickersh@michigan.gov</a>	Southwestern Lower Peninsula Permit Program Administration	
Jeff Silagy 989-370-1569 <a href="mailto:silagvj@michigan.gov">silagvj@michigan.gov</a>	Northern Lower Peninsula Permit Program Administration	DEQ, WRD Gaylord Field Office 2100 West M-32 Gaylord, Michigan 49735-9282 Fax: 989-731-6181
John Gustafson 906-203-9887 <a href="mailto:Gustafsonj2@michigan.gov">Gustafsonj2@michigan.gov</a>	Upper Peninsula Permit Program Administration	DEQ, WRD 1504 W. Washington Marquette, Michigan 49855 Fax: 906-228-4940
<b>Hydraulics</b>		
Minmin Shu 517-284-5506 <a href="mailto:shum@michigan.gov">shum@michigan.gov</a>	Eastern Lower Peninsula Hydraulic Reviews	DEQ, WRD P.O. Box 30458 Lansing, Michigan 48909-7958 Fax: 517-241-9003
Jim Watling 517-284-5508 <a href="mailto:watlingj@michigan.gov">watlingj@michigan.gov</a>	Western Lower Peninsula Hydraulic Reviews	DEQ, WRD P.O. Box 30458 Lansing, Michigan 48909-7958 Fax: 517-373-9958
Sheila Meier 906-228-4803 <a href="mailto:meiers@michigan.gov">meiers@michigan.gov</a>	Upper Peninsula Hydraulic Reviews	DEQ, WRD 1504 W. Washington Marquette, Michigan 49855 Fax: 906-228-4940

## Clarification for Road Footprint and Road Ditch Maintenance

Part 303, Wetlands Protection, section 324.30305(2)(k) reads:

“Maintenance of public streets, highways, or roads, that meets all of the following requirements:

- i) Does not include any modification that changes the original location or footprint
- ii) Is done in a manner that minimizes any adverse effect on the wetland.

In order to clarify what is allowed under this exemption the following language has been agreed to by the Joint Agency Transportation Committee (JATC) which is responsible for implementing and overseeing the annual Memorandum of Understanding between the Michigan Department of Transportation and the Michigan Department of Environmental Quality.

Under the proposed Part 303 language, road agencies can perform general road maintenance work without a permit within the existing footprint under the following conditions (note permits maybe required under Part 301, Inland Lakes and Streams or Part 31, Water Resources Protection if a stream or floodplain is involved):

- 1) Maintenance work would include repair, reconstruction, road raising, road widening, ditch cleanout to the original ditch grade, and slope flattening that does not extend beyond the existing road footprint. (Note: if the road grade is raised more than a new wearing coarse (including gravel) within the floodplain of a stream with a drainage area of two square miles or more then a permit would be required under the states Floodplain Regulatory Authority found in Part 31. If the road widening results in impacts to a stream then a Part 301 permit would be required).
- 2) The footprint is defined as back slope to back slope of existing ditches that run parallel to the existing road (see figure 1). If there are no ditches present then the footprint is defined as the point where the road fill material intersects the natural ground (see figure 2).
- 3) Berms directly adjacent to a road side ditch may be maintained without a permit to original design/constructed conditions if they were in existence before October 1, 1980 or constructed pursuant to Part 303.
- 4) Ditches that are not part of a regulated stream may be:
  - a. Cleaned out or relocated within the existing backslope to original size, shape and profile (example 1). (Note: a permit would be required where the ditch is deepened beyond its original size, shape and profile if the ditch is adjacent to wetlands (example 2)).
  - b. Filled to the top of the existing backslope (example 3). (Note: a permit would be required if fill extended beyond the existing footprint (example 4).
- 5) Wetland equalizer culverts that are not part of a regulated stream may be:
  - a. Cleaned out in the immediate vicinity to original size shape profile. (Note: the spoils must be hauled to an upland (non-wetland, non-floodplain) location.
  - b. Extended within the existing footprint (example 6). (Note a permit would be required if the equalizer culvert was extended beyond the existing road footprint that required dredging or filling in existing wetlands (example 5)).
- 6) The placement or replacement of signs, guard rails and similar structures within the existing road footprint is exempt from permit.

**Road agencies would still have to comply with any state and federal requirements if there are impacts to any threatened or endangered species.**

FIGURE 1 - TYPICAL DITCH SECTION  
NO SCALE

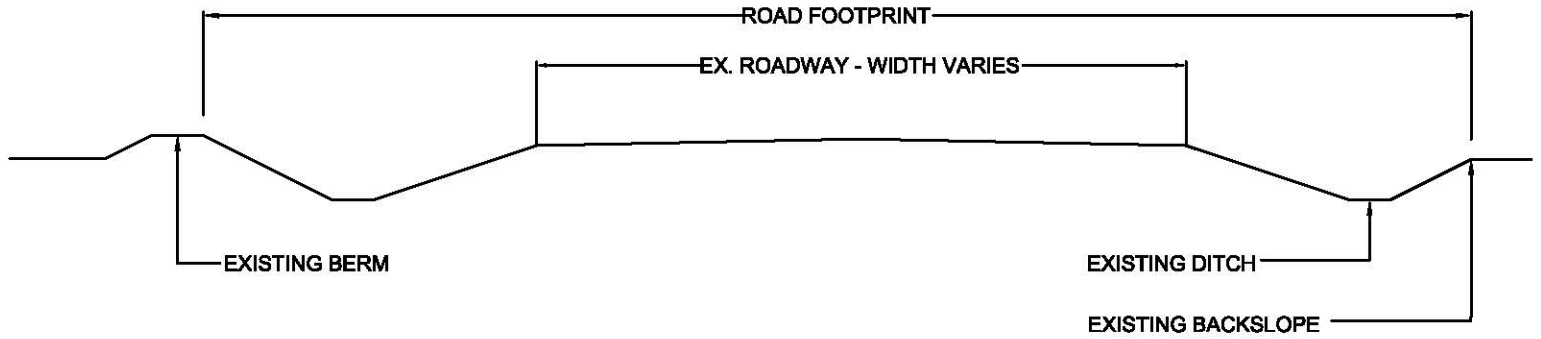
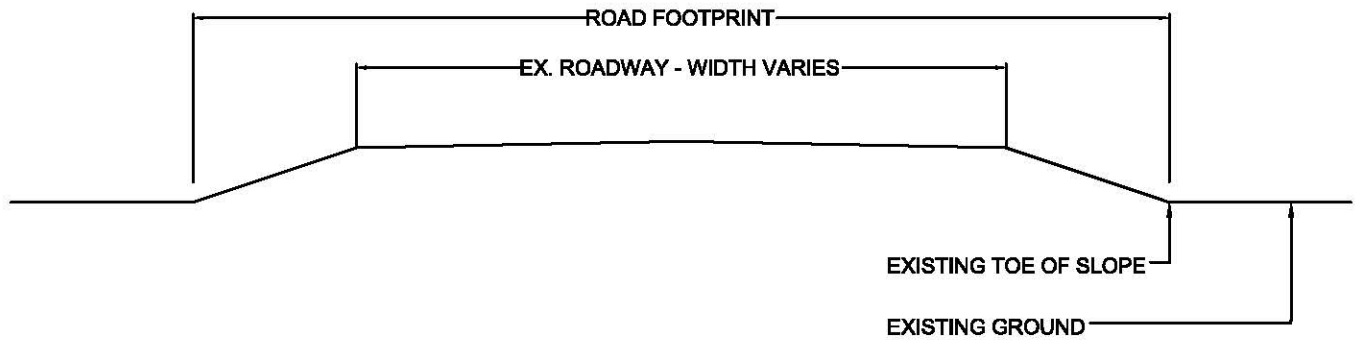
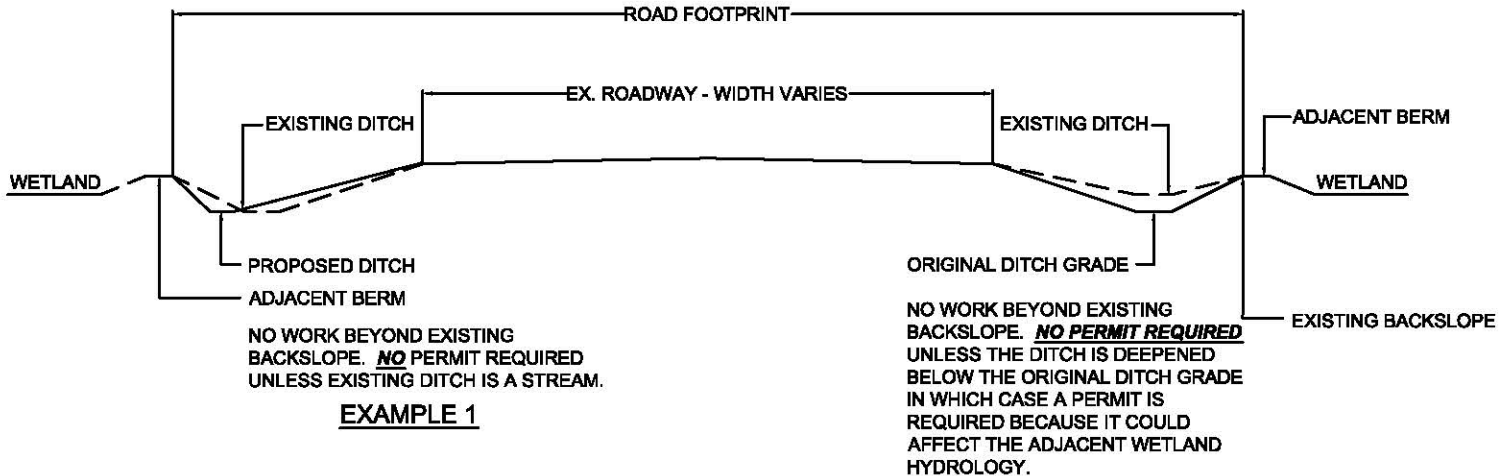


FIGURE 2 - TYPICAL FILL SECTION  
NO SCALE



## EXAMPLE 1 & 2 - DITCH MAINTENANCE

NO SCALE

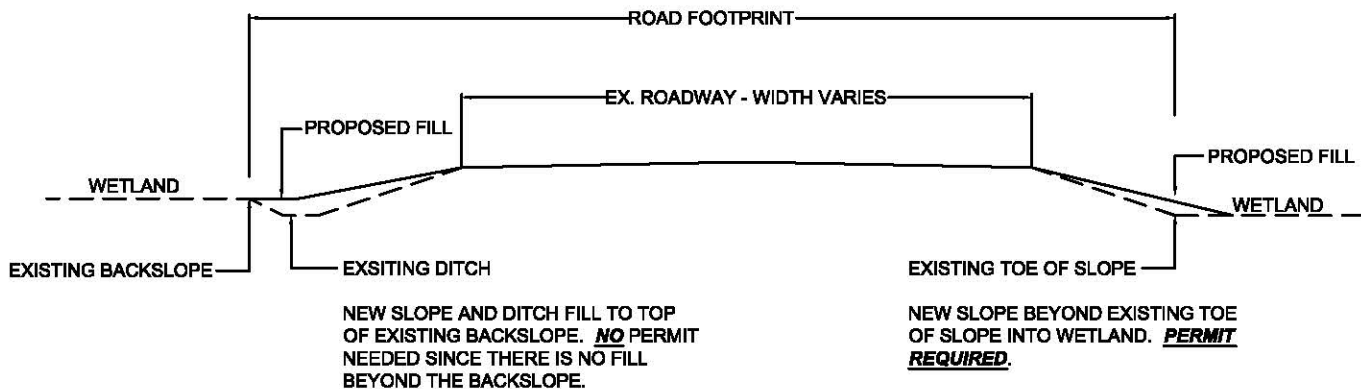


**EXAMPLE 1**

**EXAMPLE 2**

## EXAMPLE 3 & 4 - DITCH MAINTENANCE

NO SCALE



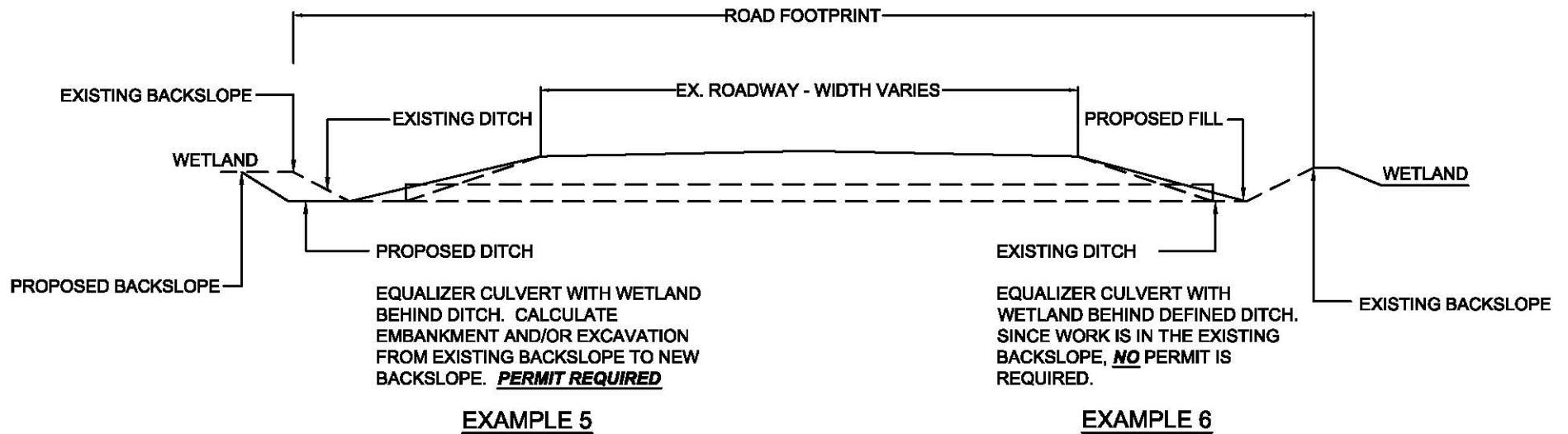
**EXAMPLE 3**

**EXAMPLE 4**

\* ADJACENT BERMS MAY BE MAINTAINED WITHOUT A PERMIT TO ORIGINAL DESIGNED/CONSTRUCTED CONDITIONS IF THEY WERE IN EXISTENCE BEFORE OCTOBER 1, 1980 OR CONSTRUCTED PURSUANT TO PART 303.

## EXAMPLE 5 & 6 - CULVERT EXTENSIONS

NO SCALE



EXAMPLE 5

EXAMPLE 6