

U.S. Army Corps of Engineers Permit Application Tips

MnDOT Environmental Conference
Ben Orne and Sarah Wingert,
USACE
4-29-2015



US Army Corps of Engineers
BUILDING STRONG[®]



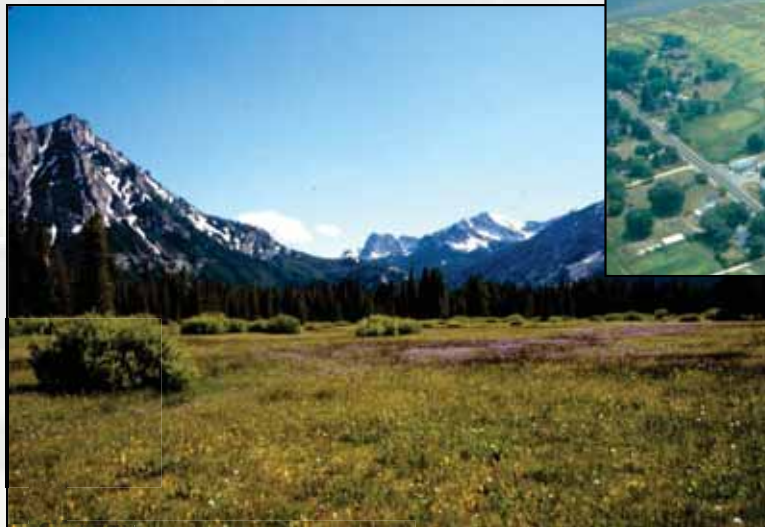
Outline

- Introduction to Corps Regulatory Authorities
- Joint Application Form
- Purpose and Need
- Avoidance and Minimization/Alternatives
- Determining Impacts and Mitigation for Road Projects
- Examples
- Questions
- If time permits: GP-4

Regulatory Statutory Authorities

- Section 10 of the Rivers and Harbors Act of 1899
 - Navigable waters of the United States
 - “those waters subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce “
- Section 404 of the Clean Water Act
 - Waters of the United States
- The type of work proposed and the method used to complete the work determine whether or not a permit is required from the Corps to conduct the work.





• Aquatic Resources

What We Regulate – Types of Activities

The type of work proposed and the method used to complete the work determines whether or not a permit is required from the Corps.

Rivers and Harbors Act:

- work in, over, or under
- *work* (e.g., dredging or disposal of dredged material, temporary work pads, filling, etc)
- *structures* (e.g., piers, marinas, breakwaters, transmission lines, etc)



Clean Water Act:

- discharges of *dredged* and *fill* material



The Revised Joint Application Form

The revised joint application form was released for public use on February 18, 2014.

- effective 2-18-2014, this is the only joint application form in use

TIP: The revised form should be used for *all* requests for approval for authorizations under Section 404 of the CWA (includes 401 certification), and for WCA

- portions can be completed using MPARS

The Revised Joint Application Form

Contents:

- Instructions and submission information (2 pages)
- Main application information (Parts 1-5)
- Five activity-specific attachments (A-E)

TIP: Most **road projects** will require the following:

- Main application Parts 1 through 5
- Attachments C, D, and E.

The Revised Joint Application Form

Activity-Specific Attachments

- **Attachment A:** request for delineation review or jurisdictional determinations (preliminary or approved)
- **Attachment B:** supporting information for applications for 404 exemptions or activities not requiring mitigation
- **Attachment C:** P&N, avoidance, minimization, and off-site alternatives
- **Attachment D:** compensatory mitigation
- **Attachment E:** Local Road Replacement Program qualification

The Revised Joint Application Form

Project Name and/or Number: Click here to enter text.

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name: Click here to enter text.

Mailing Address: Click here to enter text.

Phone: Click here to enter text.

E-mail Address: Click here to enter text.

Authorized Contact (do not complete if same as above): Click here to enter text.

Mailing Address: Click here to enter text.

Phone Number: Click here to enter text.

E-mail Address: Click here to enter text.

Agent Name: Click here to enter text.

Mailing Address: Click here to enter text.

Phone: Click here to enter text.

E-mail address: Click here to enter text.

PART TWO: Site Location Information

County: Click here to enter text.

City/Township: Click here to enter text.

Parcel ID and/or Address: Click here to enter text.

Legal Description (Section, Township, Range): Click here to enter text.

Lat/Long (decimal degrees): Click here to enter text.

Attach a map showing the location of the site in relation to local streets, roads, highways.

Approximate size of site (acres) or if a linear project, length (feet): Click here to enter text.

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf.

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted **prior** to this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

Click here to enter text.

Part Three

- Project description, purpose and need, and schedule for implementation.

The Revised Joint Application Form

Part Four: Common Mistakes

- List impacts to **ALL** aquatic resources (include tributaries)
- Linear feet **and** area for tributary impacts
- Differentiate between permanent and temporary impacts by providing duration (days)

Project Name and/or Number: [Click here to enter text.](#)

PART FOUR: Aquatic Resource Impact¹ Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

| Aquatic Resource ID (as noted on overhead view) | Aquatic Resource Type (wetland, lake, tributary etc.) | Type of Impact (fill, excavate, drain, or remove vegetation) | Duration of Impact Permanent (P) or Temporary (T) ² | Size of Impact ³ | Overall Size of Aquatic Resource ³ | Existing Plant Community Type(s) in Impact Area ⁴ | County, Major Watershed #, and Bank Service Area # of Impact Area ⁵ |
|---|---|--|--|-----------------------------|---|--|--|
| Enter text. | Enter text. | Enter text. | Enter text. | Enter text. | Enter text. | Enter text. | Enter text. |
| Enter text. | Enter text. | Enter text. | Enter text. | Enter text. | Enter text. | Enter text. | Enter text. |
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| Enter text. | Enter text. | Enter text. | Enter text. | Enter text. | Enter text. | Enter text. | Enter text. |

¹If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T(220)".

²Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).

³This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".

⁴Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin 3rd Ed.* as modified in MN Rules 8420.0405 Subp. 2.

⁵Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each: [Click here to enter text.](#)

PART FIVE: Applicant Signature

Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature: _____ Date: [Click here to enter a date.](#)

I hereby authorize _____ to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

¹ The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Minnesota Interagency Water Resource Application Form February 2014 Page 4 of 11

The Revised Joint Application Form

Project Name and/or Number: [Click here to enter text.](#)

Attachment C: Avoidance and Minimization

Project Purpose, Need, and Requirements. Clearly state the purpose of your project and need for your project. Also include a description of any specific requirements of the project as they relate to project location, project footprint, water management, and any other applicable requirements. Attach an overhead plan sheet showing all relevant features of the project (buildings, roads, etc.), aquatic resource features (impact areas noted) and construction details (grading plans, storm water management plans, etc.), referencing these as necessary: [Click here to enter text.](#)

Avoidance. Both the CWA and the WCA require that impacts to aquatic resources be avoided if practicable alternatives exist. Clearly describe all on-site measures considered to avoid impacts to aquatic resources and discuss at least two project alternatives that avoid all impacts to aquatic resources on the site. These alternatives may include alternative site plans, alternate sites, and/or not doing the project. Alternatives should be feasible and prudent (see MN Rules 8420.0520 Subp. 2 C). Applicants are encouraged to attach drawings and plans to support their analysis: [Click here to enter text.](#)

Minimization. Both the CWA and the WCA require that all unavoidable impacts to aquatic resources be minimized to the greatest extent practicable. Discuss all features of the proposed project that have been modified to minimize the impacts to water resources (see MN Rules 8420.0520 Subp. 4): [Click here to enter text.](#)

Off-Site Alternatives. An off-site alternatives analysis is not required for all permit applications. If you know that your proposal will require an Individual permit (standard permit of letter of permission) from the U.S. Army Corps of Engineers, you may be required to provide an off-site alternatives analysis. The alternatives analysis is not required for a complete application but must be provided during the review process in order for the Corps to complete the evaluation of your application and reach a final decision. Applicants with questions about when an off-site alternatives analysis is required should contact their Corps Project Manager.

- Attachment C
- Project purpose, need, and requirements
- Avoidance
- Minimization
- Off-site alternatives

Purpose & Need

“A P&N statement should be a simple statement of:

why the project is proposed **AND what** deficiencies and transportation problems need to be addressed.”

(Minnesota Local Road Authority Reference Guide, Section 5.1 (page 18))

Examples of Needs:

- Accidents/crash rate
- Structural deficiencies: culverts, shoulders, pavement
- Intersection deficiencies
- Sight distance deficiencies
- Drainage problems
- Failure to meet design standards
- Storm water treatment
- Pedestrian/multimodal needs

The P&N statement will:

- Clearly demonstrate “need”
- Identify problem that needs correction
- Form the basis of the “no action” comparison (existing conditions...)
- Drive the alternatives analysis (location restriction, etc)
- Support selection of preferred alternative

Purpose & Need TIPS

- The purpose & need statement can be stated in a single sentence or paragraph for minor activities.
- The purpose & need statement is best separated into two separate paragraphs/sections for more complicated projects.

Example P&N:

“The purpose of this project is to improve roadway safety through the reconstruction of the existing roadway to meet 30 MPH design standards. The need is because the existing roadway lacks the required roadway width, side slopes, curve geometry and sightlines.”

Revised Example P&N:

“The purpose of this project is to improve roadway safety on Highway X between County Road Z and CSAH D. The need is because the existing roadway lacks the required roadway width, side slopes, curve geometry and sightlines.”

-then provide specifics (i.e. roadway has 3-foot wide shoulders where 8-foot wide shoulders are required to meet safety standards).

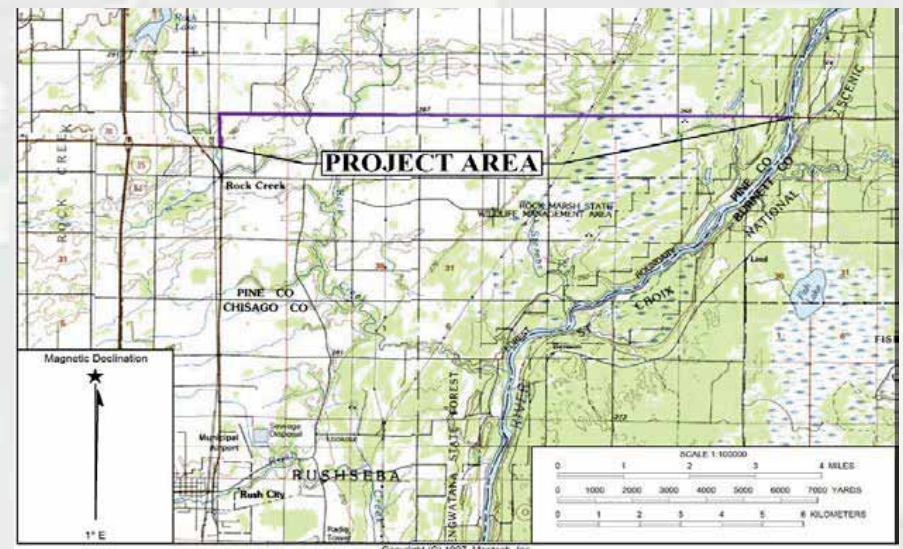
TH 70 – Pine County, MN

Needs:

- deteriorating pavement resulting in a reduced load capacity; ride quality index less than 2.5

- several vertical curves in the project area that are substandard for site distance

- 5 year crash rate (0.71 crashes per million vehicles) and crash severity rates (1.21) above the statewide averages (0.71, and 1.20, respectively)



TH 70 – Pine County

- **Application purpose:** “to improve the safety and restore the carrying capacity of a roadway that has deteriorated pavement conditions and poor site distance”.
- **Corps re-stated purpose:** “to improve safety and carrying capacity on TH 70 between the intersection of Freedom Avenue to the bridge crossing of the St. Croix River to maintain the minimum level of service to the traveling public.”

Alternatives and Sequencing

- *Sequencing*: Required steps that must be taken to ensure that activities have the least adverse impact to aquatic resources
- *Alternatives*:
 - Off-site alternatives (LOPs and Standard Permits)
 - On-site alternatives and configurations (all permits)
- The range of alternatives is determined by the purpose and need.
- **TIP**: Compare aquatic resource impacts for each alternative.
- If your preferred alternative does NOT have the least aquatic resource impact, you will need to:
 - demonstrate how the other alternatives are not practicable, OR;
 - reduce the impacts of your alternative to be the LEDPA, OR;
 - adopt the LEDPA alternative

Alternatives and Sequencing

The Clean Water Act 404(b)(1) Guidelines require that...

“No discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem” (LEDPA)

- Least damaging to aquatic resources
- *Practicable* alternatives: available and capable of being done considering cost, existing technology, and logistics in light of the overall project purpose
- Applicant is required to submit necessary information for the Corps to determine compliance with the Guidelines.
- Compensatory mitigation is NOT considered in the LEDPA determination.

Alternatives and Sequencing

NEPA requires that the “No Action” alternative always be considered.

The No Action alternative is the no permit alternative (not necessarily the no-build or no-project alternative)

-TIP: should always be specifically discussed in the application

Discuss not only the difference in aquatic resource impacts, but also the consequences of other likely uses of the project site, any exempt activities that could be undertaken, or any likely negative consequences of not pursuing the activity that requires a permit.

“The No Action alternative does not meet the project purpose” is not a sufficient discussion.

Alternatives and Sequencing

- **Off-site alternatives:**

When an off-site alternatives analysis is required, remember:

-if an alternate site is less environmentally damaging, that doesn't necessarily mean that the applicant has to use that site. It means that they have to **reduce the environmental effects at their proposed site** so that IT is the least environmentally damaging.

-If the applicant doesn't reduce the effects on their proposed site so that their project site is the least environmentally damaging, that doesn't mean that we permit the activity on the other site; it means we must deny the permit.

How Much Detail?

- Alternatives analyses for major reconstruction or new construction will likely require more detail, including an evaluation of off-site alternatives.
- **TIP:** The level of detail and scrutiny given to alternatives and sequencing will be commensurate with the scope and degree of adverse effects to aquatic resources.
- **TIP:** pre-application meeting

Mitigation Sequencing

Examples:

Depending on the Purpose and Need, the following are examples of activities that generally don't require an off-site alternatives analysis. The applicant must still consider on-site alternatives and configurations and demonstrate that they have complied with sequencing requirements:

- Culvert repair, replacement, extension, lining
- Adding turn lanes
- Widening shoulders
- Flattening in-slopes

Mitigation Sequencing

Example design alternatives for an intersection project:

- No Action
- All-way stop
- Signalized intersection
- Two-lane roundabout
- Diamond interchange

Example design alternatives for a widening project:

- No Action
- Non-symmetrical widening to minimize impacts
- Widening to minimum design standards

Mitigation Sequencing

- The applicant must demonstrate that they have taken all appropriate and practicable measures to avoid and minimize adverse effects to aquatic resources and must compensate for unavoidable adverse effects.
 - **Avoid**
 - **Minimize**
 - **Compensate (compensatory mitigation)**

Mitigation Sequencing

- **TIP:** the sequencing discussion for each impact should be included in the application; not just a general discussion.
 - Impacts were minimized at Wetlands A, B, and C by “XXXX”.
- Steps to minimize impacts are required to the extent appropriate to the scope and degree of those impacts and practicable in terms of cost, existing technology, and logistics in light of overall project purpose.

Mitigation Sequencing

Examples of avoidance and minimization measures:

(Reference Guide section 5.3)

- Steeper inslopes/back slopes
- Utilize guardrails
- Broken slopes
- Reduced radius curves
- Reduced ditch widths
- Narrower shoulders
- Turn lanes instead of frontage roads
- Reduced design speed
- Construct ditches so wetland outlets are not lowered
- Ensure activities don't change the hydrologic regime of wetlands
- Use span bridge instead of culverts

TH 70 – Minimization Example

- Wetlands #68 and #69 – The highway profile is being changed with the road surface being raised 1 to 1.5 feet, with inslopes being designed to current design standards and using special ditch grades.
- Wetland #70 – The highway profile is being changed with the road surface being raised approximately 0.5 foot with inslopes being designed to current design standards with special ditch grades.
- Wetlands #71A and 71B – The inslopes are being expanded to meet current state design standards.
- Wetlands #73, #74, and #75 – The highway profile is being changed with the road surface being raised 0.5 to 1.0 feet, with inslopes being designed to current design standards and some shallow ditch excavation.
- Wetlands #76 and #77 – The ditches are being excavated to improve drainage along the roadway.
- Wetland #78 – The forest road approach is being widened for safety reasons.
- Wetland #79 – The highway profile is being changed with the road surface being raised 1 foot and inslopes being designed to current design standards.
- Wetlands #80 and #81 – The highway profile is being changed by raising the road surface approximately 3 feet with steepen inslopes.
- Wetlands #82 and #83 – The road profile is being lowered 1 foot with slight ditch excavation and inslope designed to current state design standards.

The project will have a stormwater pollution prevention plan (SWPPP) to prevent sediments from reaching wetlands during runoff events. Stormwater best management practices will be incorporated into the construction plans with items such as silt fences, ditch blocks, and mulching being specified in the erosion control design sheets.

A considerable amount of effort has been put into minimizing the wetland impacts as part of this project. The initial project design resulted in over 5.25 acres of wetland impacts with concern that there could be lateral effects from some of the deepened ditches (see included Initial Wetland Impact Design Sheets 9/11/14). MnDOT had the design consultant, redo the design to minimize the impacts and reduce excavation depths in the ditches. The attached table shows the list of wetland impacts that have been minimized through their design process. The minimization process reduced wetland impacts by over half. The design standard is 4:1 on inslopes, but as a minimization effort, the inslopes outside of the clear zone were steepen to 3:1 slopes.

Why are
WOUS
being
impacted?

TH 70 – Minimization Example

| Wetland # | Type | Fill Area | Cut Area | Avoided | Minimized |
|-----------|------|-----------|----------|---------|-----------|
| | | SQ FT | SQ FT | | |
| 1 | 1 | 0 | 0 | X | |
| 2 | 2 | 0 | 0 | X | |
| 3 | 1 | 0 | 0 | X | |
| 4 | 3 | 0 | 0 | X | |
| 5 | 3 | 0 | 0 | X | |
| 6 | 1 | 0 | 0 | X | |
| 7 | 2 | 2103 | 4561 | | X |
| 8 | 2 | 1731 | 5473 | | X |
| 9 | 2 | 1725 | 713 | | X |
| 10 | 2 | 439 | 4295 | | X |
| 11A | 3 | 10458 | 324 | | X |
| 11B | 3 | 724 | 0 | | X |
| 12 | 3 | 11053 | 361 | | X |
| 13 | 2 | 690 | 108 | | X |
| 14 | 2 | 321 | 0 | | X |
| 15 | 2 | 0 | 0 | X | |
| 16 | 1 | 0 | 0 | X | |
| 17 | 1 | 0 | 0 | X | |
| 18 | 1 | 0 | 0 | X | |
| 19 | 1 | 1041 | 599 | | X |
| 20 | 1 | 416 | 0 | | X |
| 21A | 1 | 808 | 284 | | X |
| 21B | 1 | 1233 | 293 | | X |
| 22 | 2 | 3722 | 396 | | X |
| 23 | 1 | 0 | 1738 | | X |
| 24 | 1 | 31 | 294 | | X |
| 25 | 2 | 762 | 0 | | X |
| 26 | 2 | 0 | 0 | X | |
| 27A | 2 | 61 | 0 | | X |
| 27B | 2 | 0 | 0 | X | |
| 28A | 2 | 0 | 0 | X | |
| 28B | 2 | 69 | 0 | | X |

Noted:

Avoided:

Modifications to construction limits resulted in elimination of wetland impacts in grading and/or reclamation areas.

Minimized:

Modification to construction limits resulting in reduction of wetland impacts. Maximum inslopes utilized are 1:4 and 1:4 with 1:3 break at clear zone where excessive fills occur.

Modification to wetlands were performed by steepening inslope and backslopes as needed, reducing excavation by revision of special ditch grades or typical ditch depths, and revising ditch widths.

Mitigation Sequencing

Note:

- The Corps defers to the road authority's assessment of need and technical transportation expertise. However, the Corps does require the information necessary to determine compliance with the Guidelines and other federal laws and regulations.
- Often the information the Corps needs does not require additional work be done, but rather that the applicant submit documentation of work that has already been done (alternatives, avoidance, minimization, etc.).
- To prevent having to backtrack, keep permit requirements in mind during project evaluation and design.
- **TIP:** have pre-application meetings for projects with larger impacts (i.e. >0.5 acre) or questionable alternatives analysis

Determining Impacts and Mitigation for Road Projects

- **Basic Requirements:**

- Depict, label and tabulate the size of all waters in the project area
 - Differentiate by type of water
- Depict, label and tabulate the size of all impacts to waters in the project area
 - Differentiate by type and permanence of impact
- Mitigation is generally required for the footprint of the permanent impacts in waters (Waters of the U.S.)
 - There may be impacts that require authorization but do NOT require compensatory mitigation

The Revised Joint Application Form

Part Four

- This is the portion of the application form that has changed the most
- List impacts to **ALL** aquatic resources
- Differentiate between permanent and temporary impacts by providing duration (days)

Project Name and/or Number: [Click here to enter text.](#)

PART FOUR: Aquatic Resource Impact¹ Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

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|---|---|--|--|-----------------------------|---|--|--|
| Enter text. | Enter text. | Enter text. | Enter text. | Enter text. | Enter text. | Enter text. | Enter text. |
| Enter text. | Enter text. | Enter text. | Enter text. | Enter text. | Enter text. | Enter text. | Enter text. |
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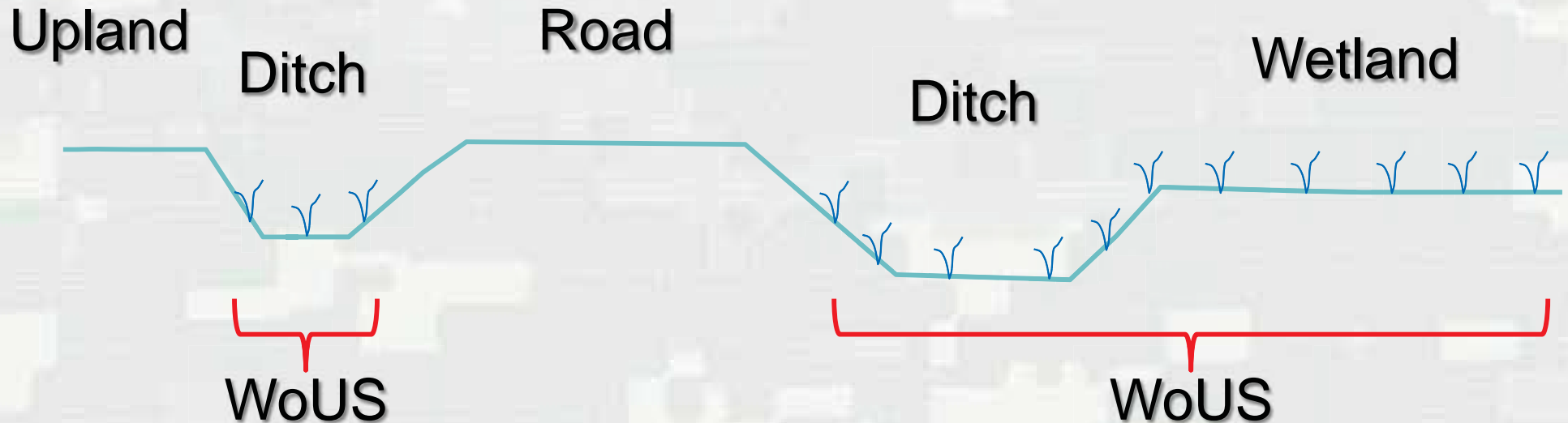
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Determining Impacts and Mitigation for Road Projects

Existing Cross-Section



Determining Impacts and Mitigation for Road Projects



Determining Impacts and Mitigation for Road Projects

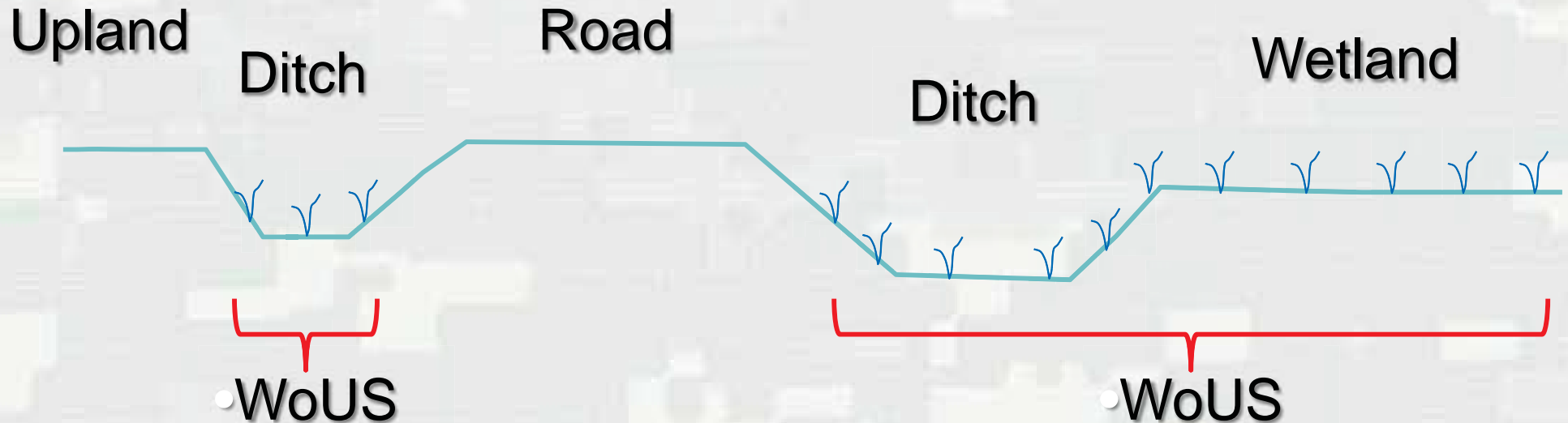


Determining Impacts and Mitigation for Road Projects



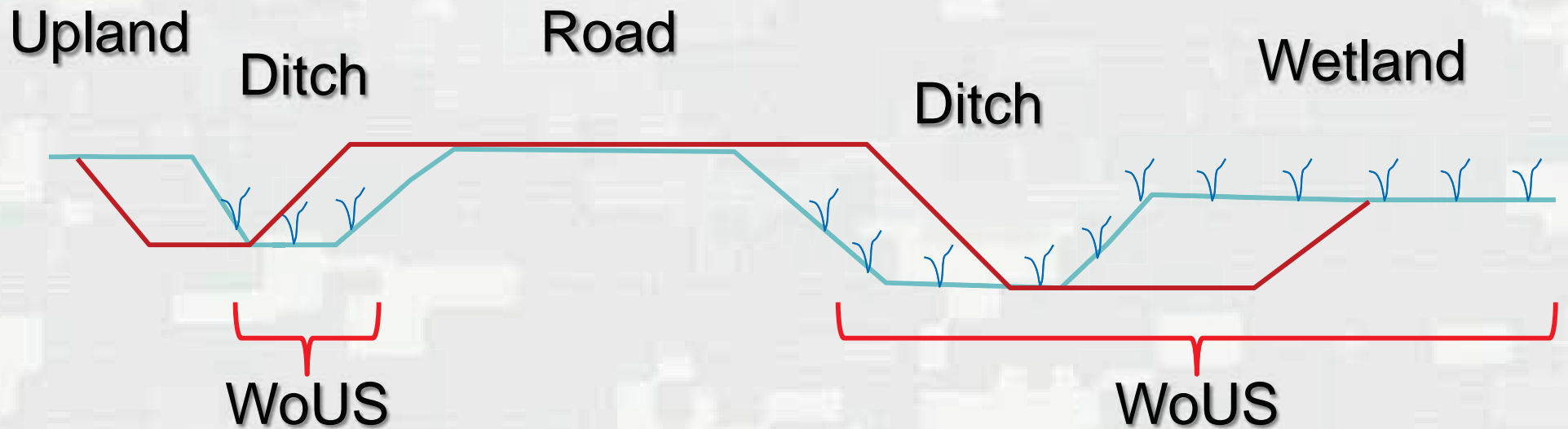
Determining Impacts and Mitigation for Road Projects

Existing Cross-Section

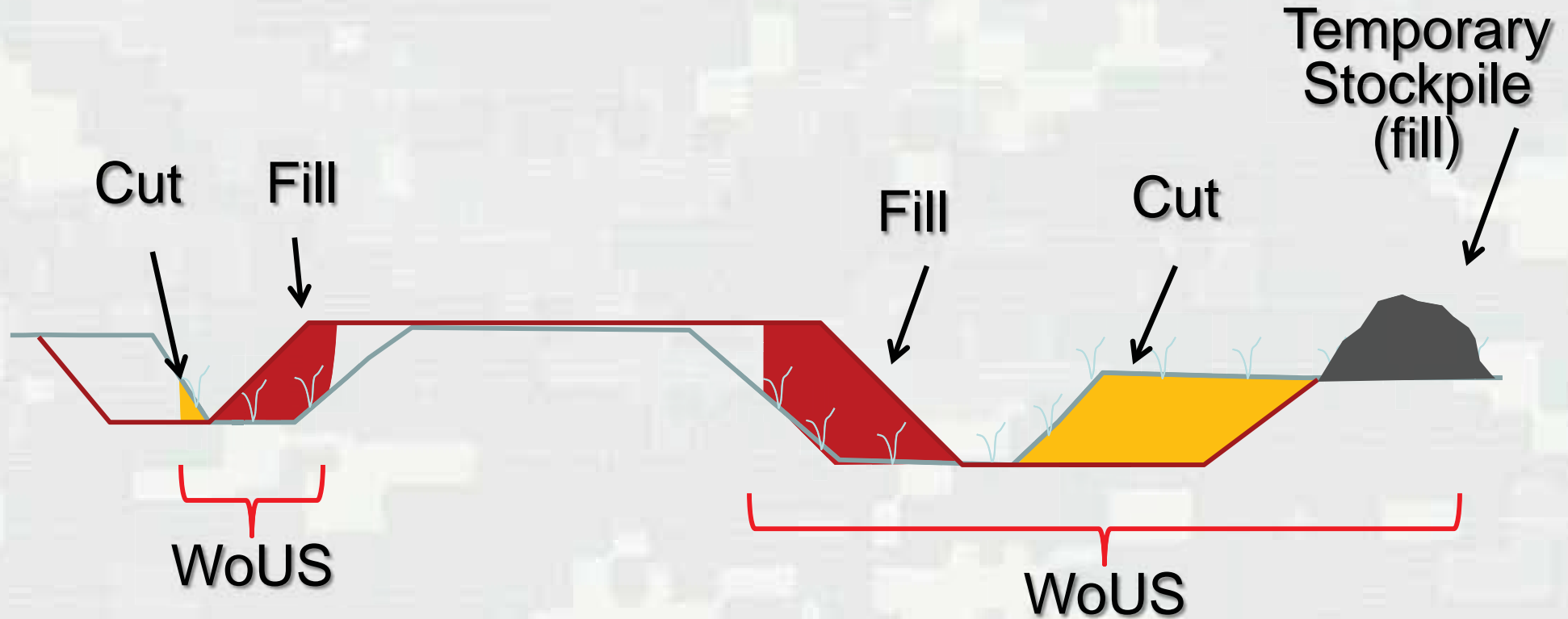


Determining Impacts and Mitigation for Road Projects

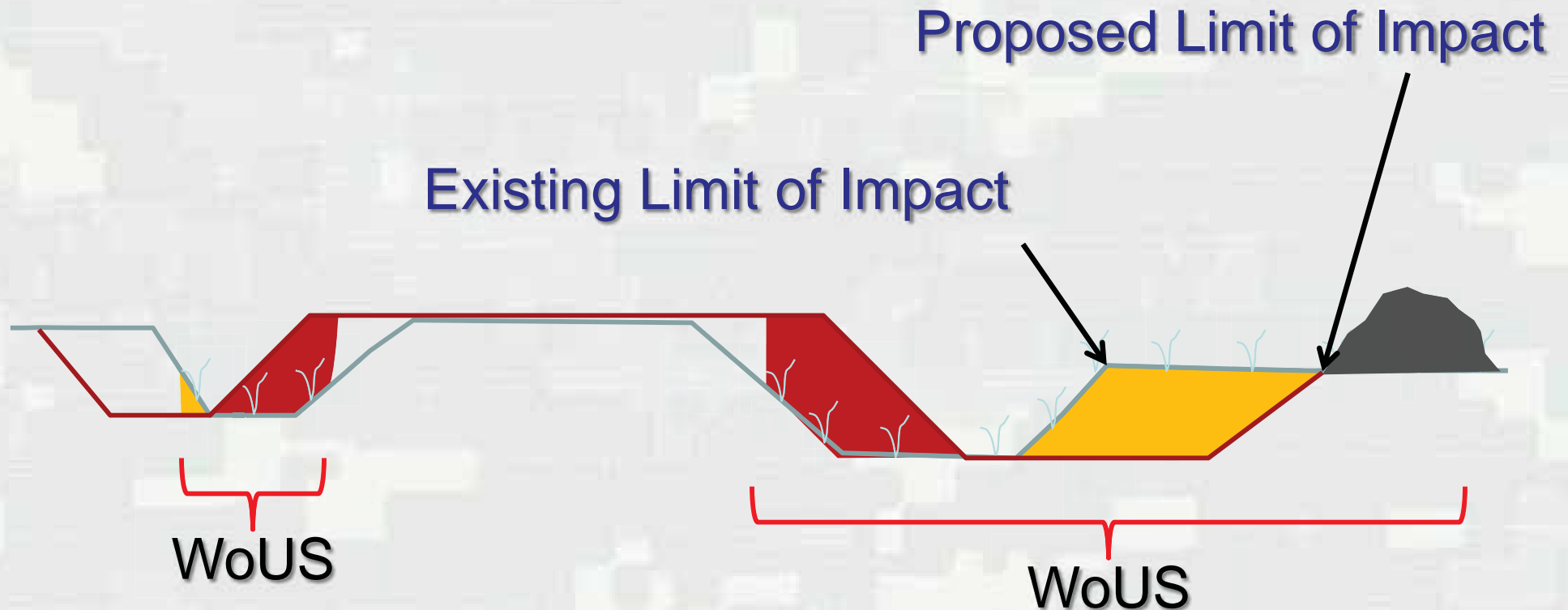
Proposed Cross-Section



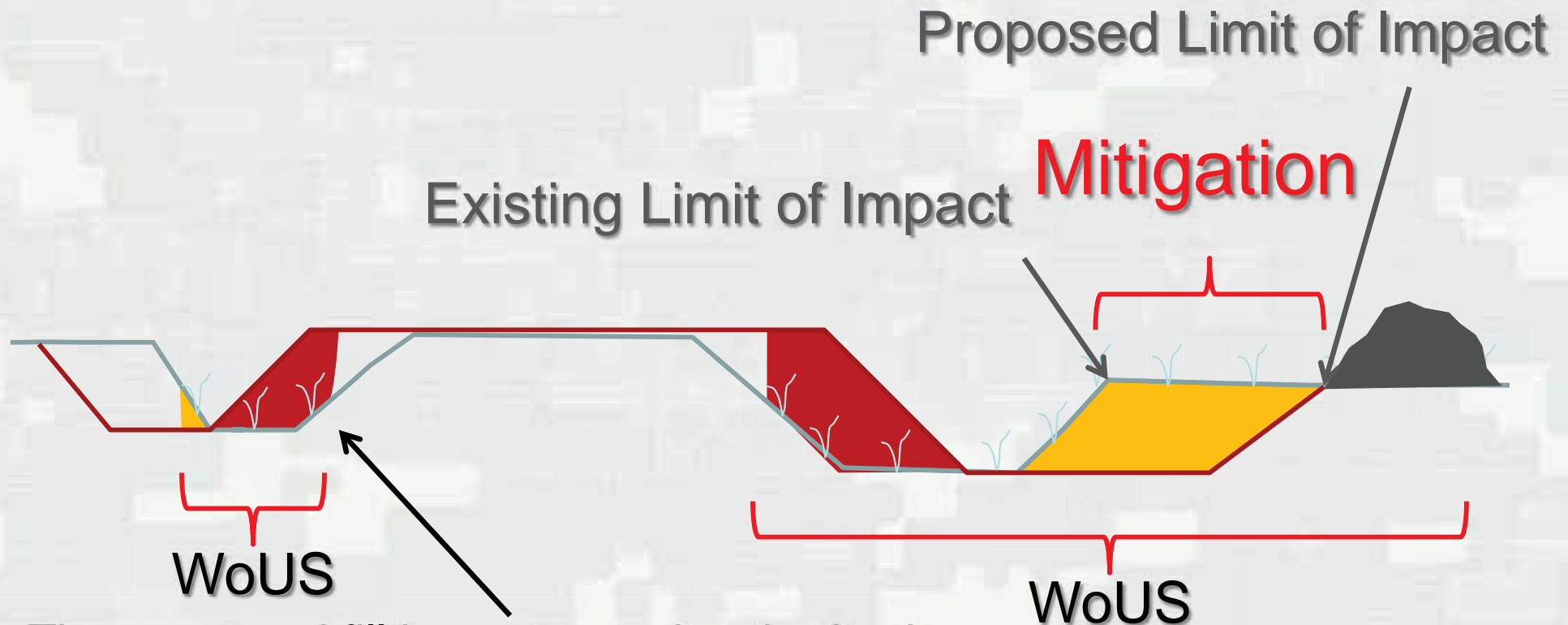
Determining Impacts and Mitigation for Road Projects



Determining Impacts and Mitigation for Road Projects



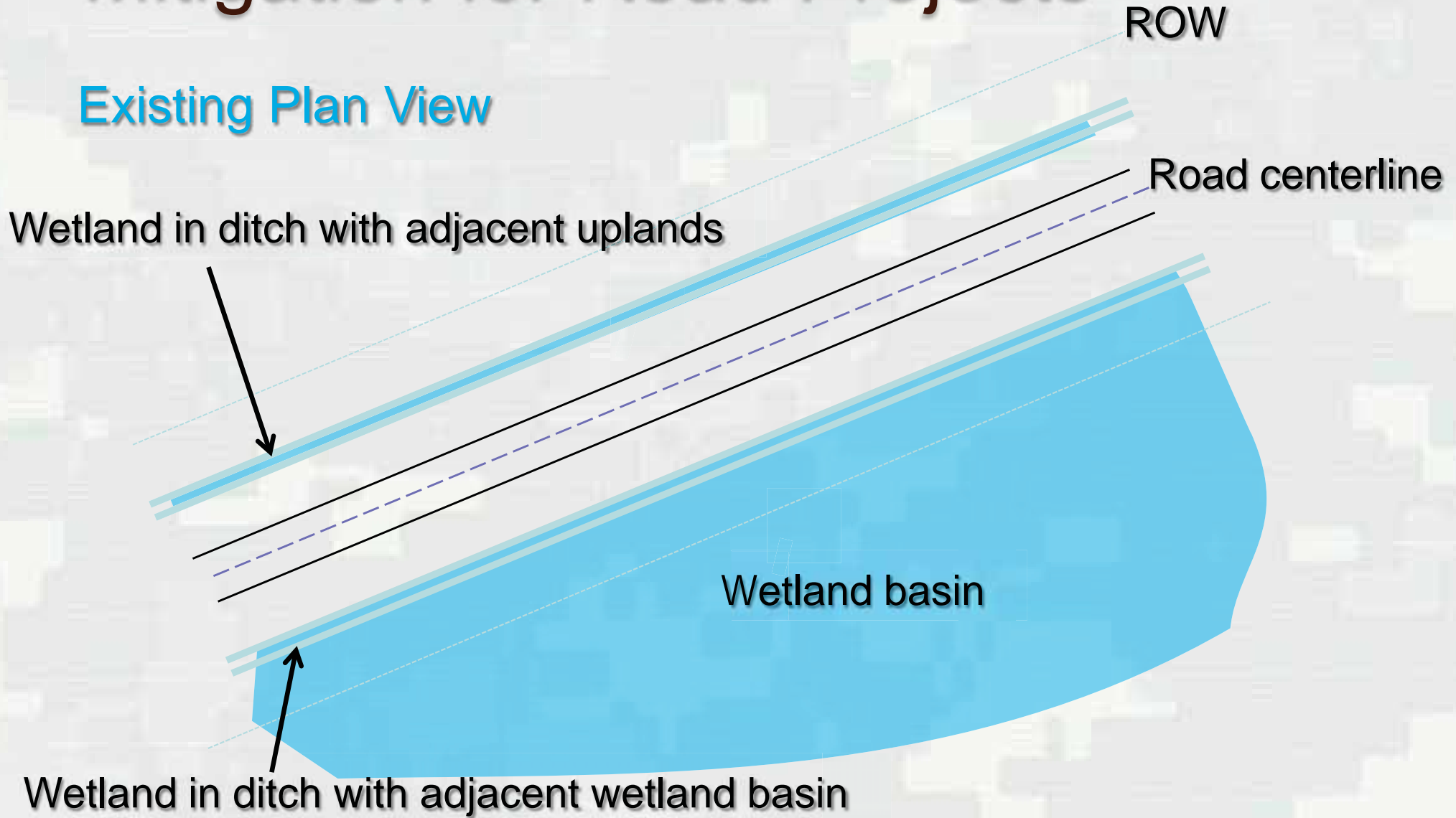
Determining Impacts and Mitigation for Road Projects



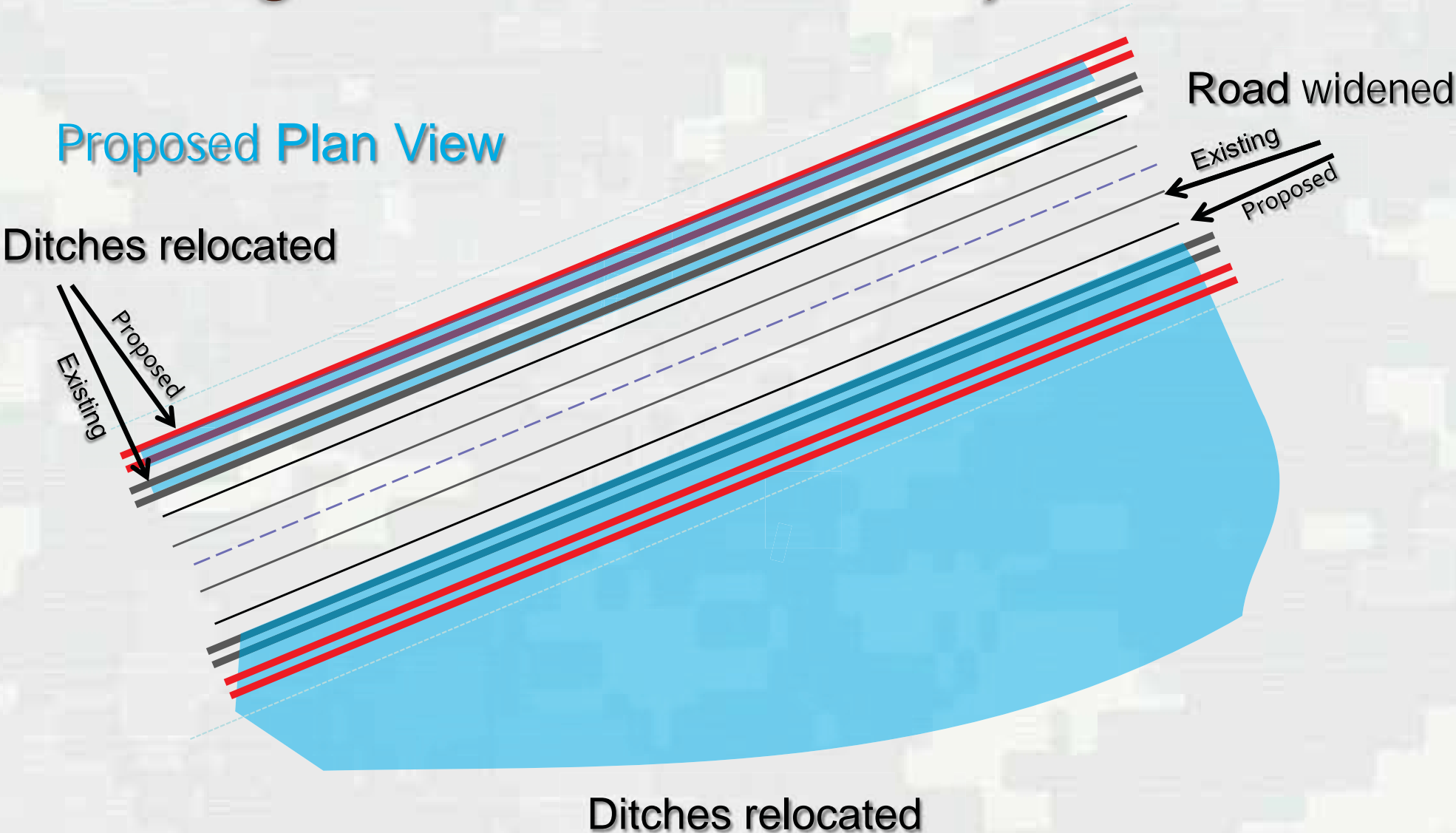
These cut and fill impacts need authorization, but the function is replaced with an in-kind ditch in immediately adjacent uplands, so mitigation is generally not required.

Determining Impacts and Mitigation for Road Projects

Existing Plan View



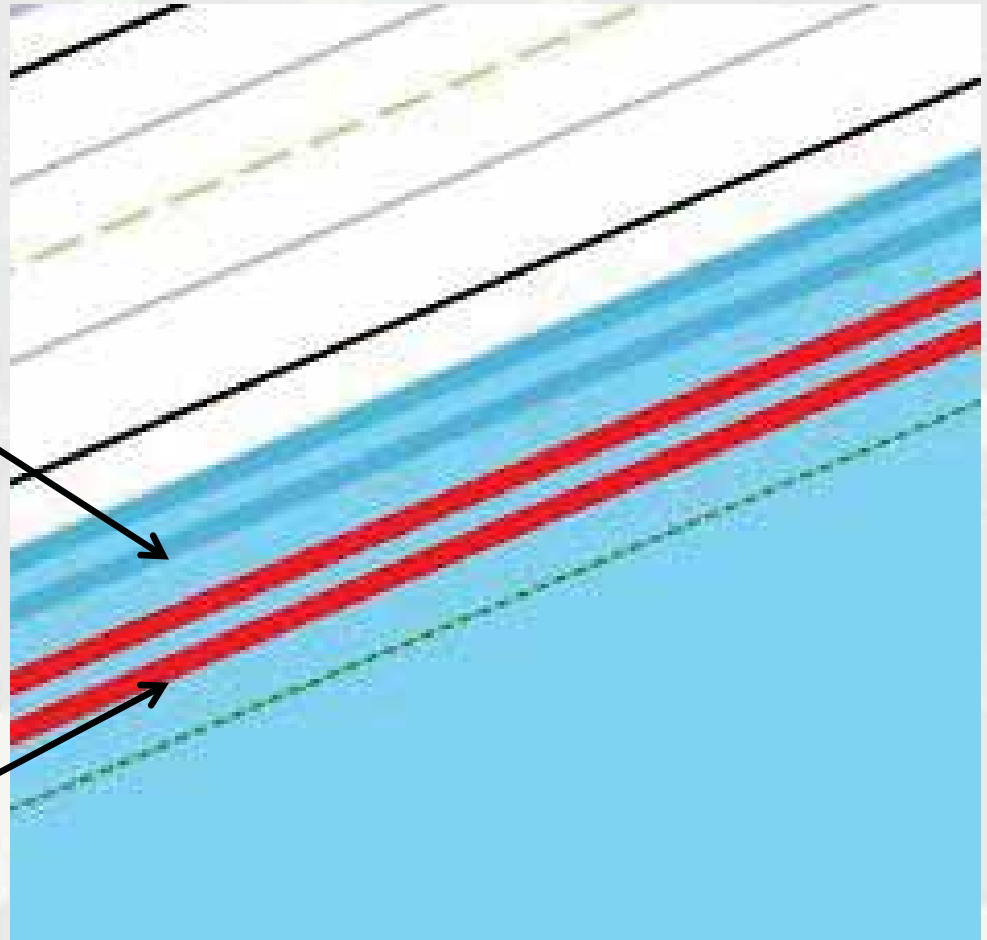
Determining Impacts and Mitigation for Road Projects



Determining Impacts and Mitigation for Road Projects

Proposed Plan View

Existing limit of impact
(outside top of ditch bank)



Proposed limit of impact
(outside top of ditch bank)

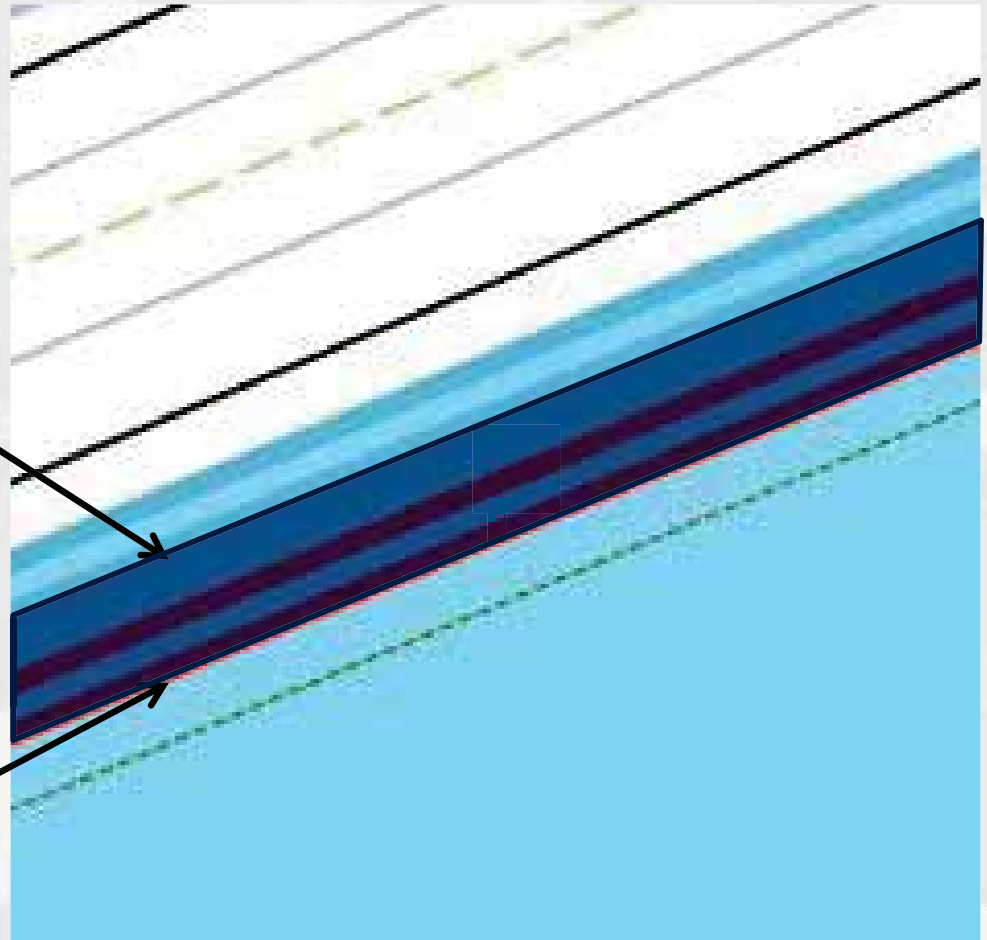
Determining Impacts and Mitigation for Road Projects

Proposed Plan View

Existing limit of impact
(outside top of ditch bank)

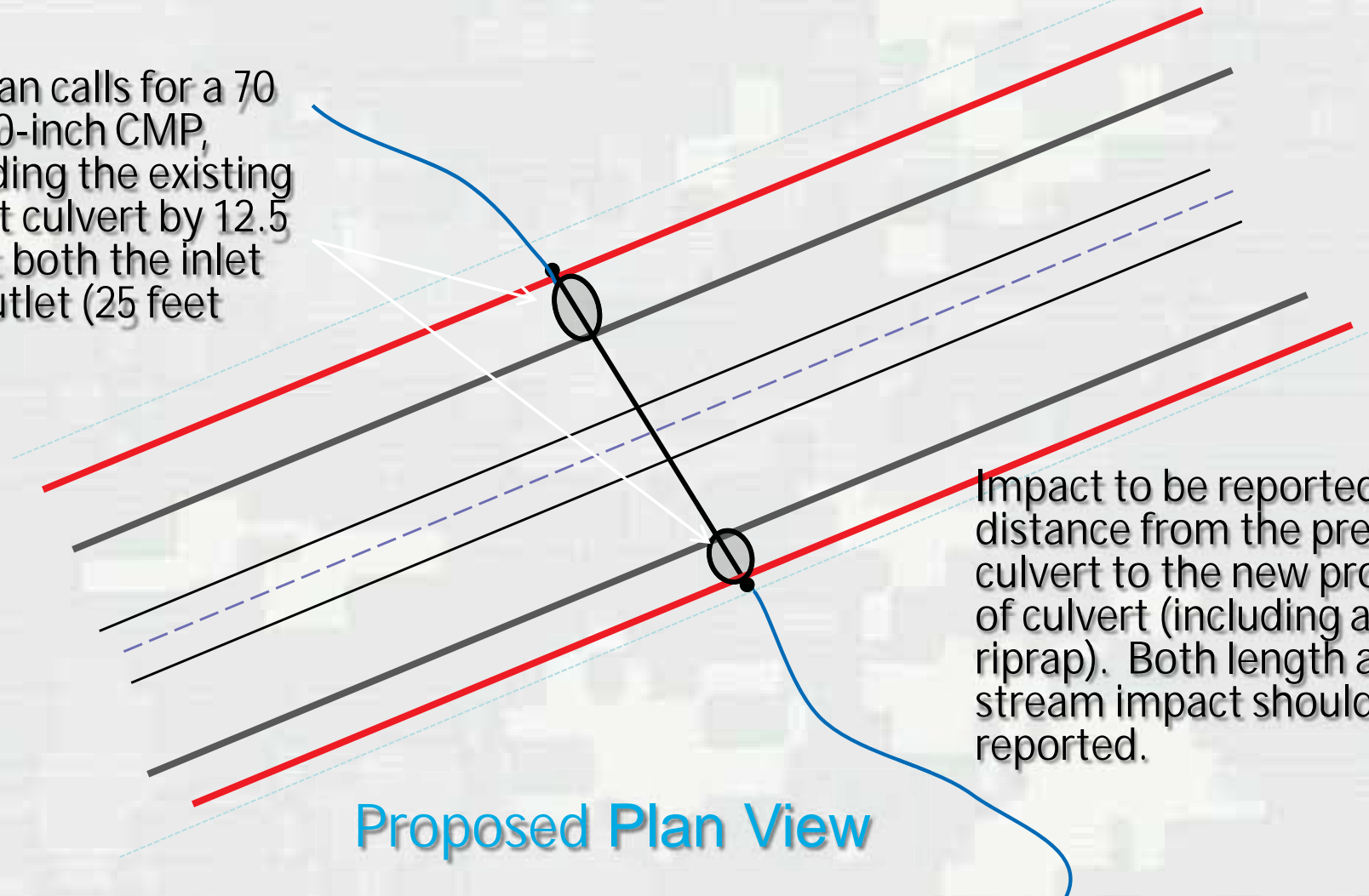
Mitigation requirement

Proposed limit of impact
(outside top of ditch bank)



Determining Impacts and Mitigation for Road Projects

The plan calls for a 70 foot 60-inch CMP, extending the existing 45 foot culvert by 12.5 feet at both the inlet and outlet (25 feet total)

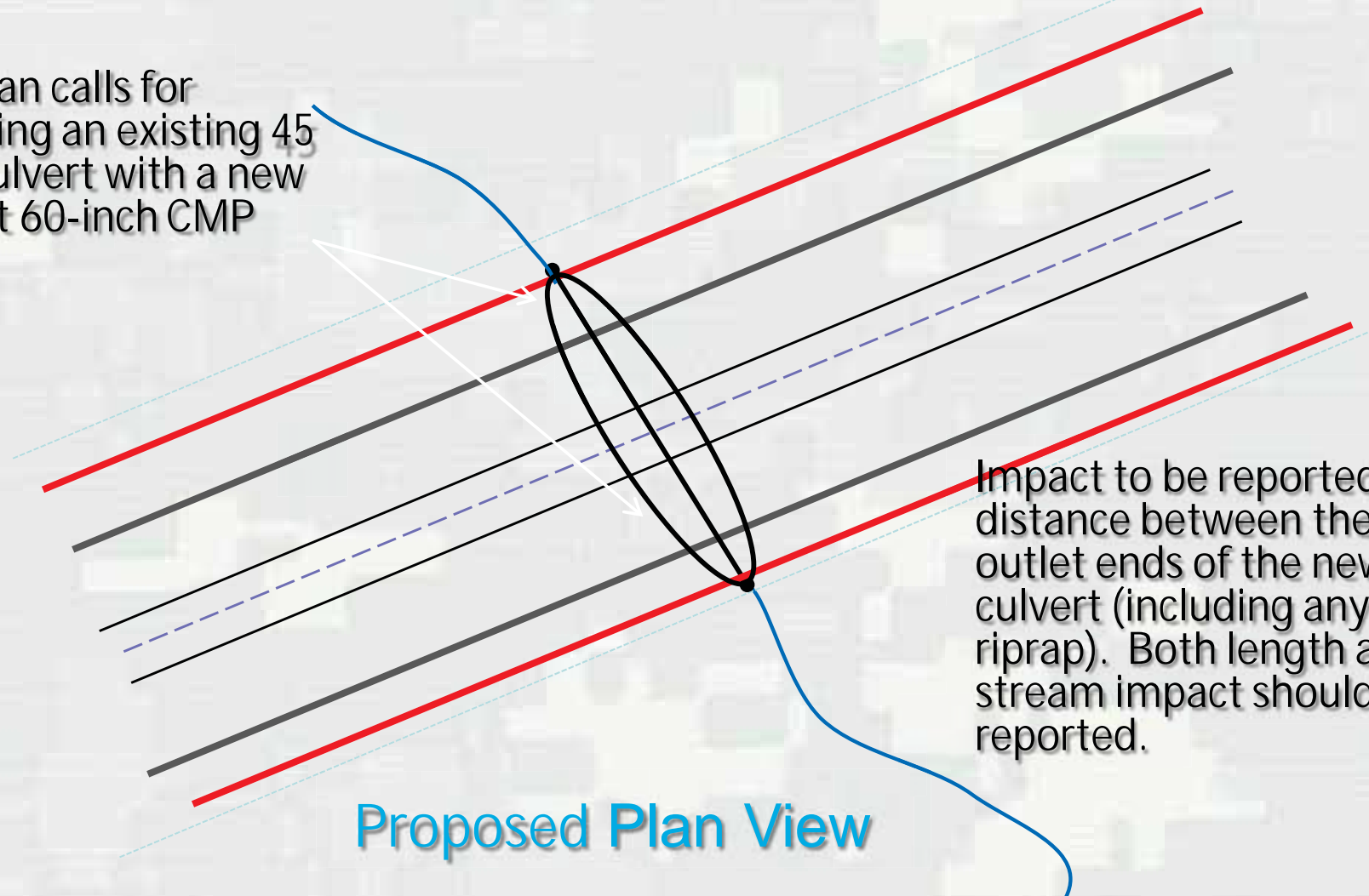


Impact to be reported is the distance from the previous end of culvert to the new proposed end of culvert (including any apron or riprap). Both length and area of stream impact should be reported.

Proposed Plan View

Determining Impacts and Mitigation for Road Projects

The plan calls for replacing an existing 45 foot culvert with a new 70 foot 60-inch CMP



Impact to be reported is the distance between the inlet and outlet ends of the new proposed culvert (including any apron or riprap). Both length and area of stream impact should be reported.

Determining Impacts and Mitigation for Road Projects

Aquatic Resource Impact Summary from MN Joint Application (Part Four)

| Aquatic Resource ID (as noted on overhead view) | Aquatic Resource Type (wetland, lake, tributary etc.) | Type of Impact (fill, excavate, drain, or remove vegetation) | Duration of Impact Permanent (P) or Temporary (T) ¹ | Size of Impact ² | Overall Size of Aquatic Resource ³ | Existing Plant Community Type(s) in Impact Area ⁴ | County, Major Watershed #, and Bank Service Area # of Impact Area ⁵ |
|---|---|--|--|-----------------------------|---|--|--|
| Wetland A | Wetland | Fill | P | 0.23 ac | NA | Fresh Wet Meadow | Grant Co. BSA 4 |
| Wetland A | Wetland | Excavate (Cut) | P | 0.14 ac | NA | Fresh Wet Meadow | Grant Co. BSA 4 |
| Wetland B | Wetland | Fill | P | 0.21 ac | NA | Shallow Marsh | Grant Co. BSA 4 |
| Wetland C | Wetland | Fill | T(60 days) | 0.45 ac | NA | Shallow Marsh | Grant Co. BSA 4 |
| Tributary 1 | Tributary | Fill | P | 250 sq ft 25 linear ft | NA | NA | Grant Co. BSA 4 |

Determining Impacts and Mitigation for Road Projects

Describe proposed mitigation in Joint Application Form

Road Bank – Attachment E

Any mitigation not provided by Road Bank – Attachment D

The mitigation required by the Clean Water Act and by the Wetland Conservation Act may not always be the same because the two laws regulate different impacts.

If an applicant is not proposing to mitigate for some or all of the impacts in Part Four, then justify that in Attachment B.

Determining Impacts and Mitigation for Road Projects

Local Road Replacement Table – Attachment E of Joint Application

| Wetland Impact ID (as noted on overhead view) | Type of Impact (fill, excavate, drain) | Size of Impact (square feet or acres to 0.01) | Existing Plant Community Type(s) in Impact Area ¹ | County, Major Watershed #, and Bank Service Area # of Impact ² |
|---|--|---|--|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

• **Replacement/Compensatory Mitigation Table – Attachment D of Joint Application**

| Wetland Bank Account # | County | Major Watershed # | Bank Service Area # | Credit Type (if applicable) | Number of Credits |
|------------------------|--------|-------------------|---------------------|-----------------------------|-------------------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

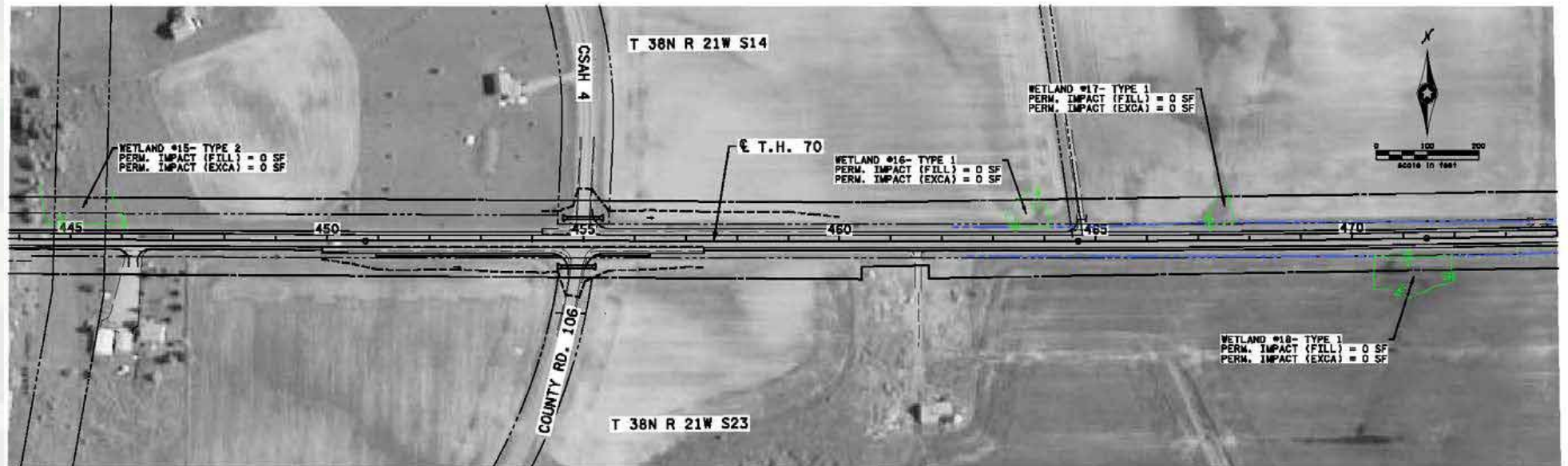
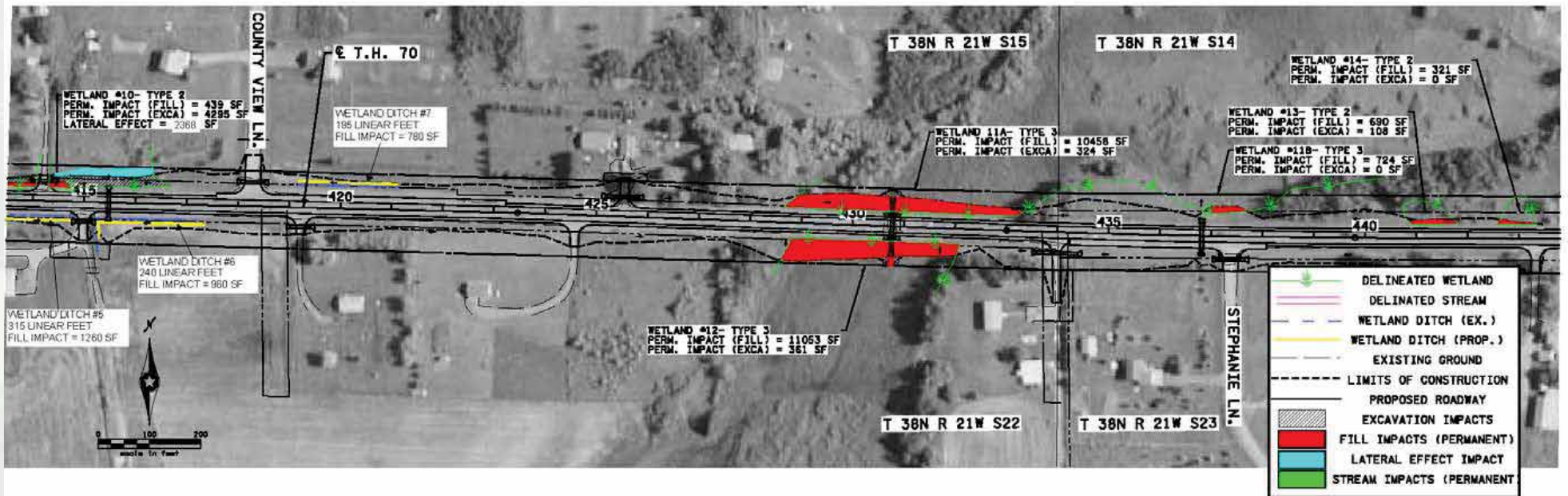
Determining Impacts and Mitigation for Road Projects

Summary:

- ✓ Depict, label and tabulate all waters by type (wetland plant community, tributary, etc.)
- ✓ Depict, label and tabulate all impacts by type (cut, fill, etc.) and permanence (permanent, temporary)

- Example - Expand road and an in-kind ditch into uplands:
 - ✓ Cut and/or fill in WoUS needs to be authorized
 - ✓ Generally no mitigation requirement

- Example - Expand road and an in-kind ditch into WoUS:
 - ✓ Cut and/or fill in WoUS needs to be authorized
 - ✓ Mitigation required for additional encroachment into WoUS



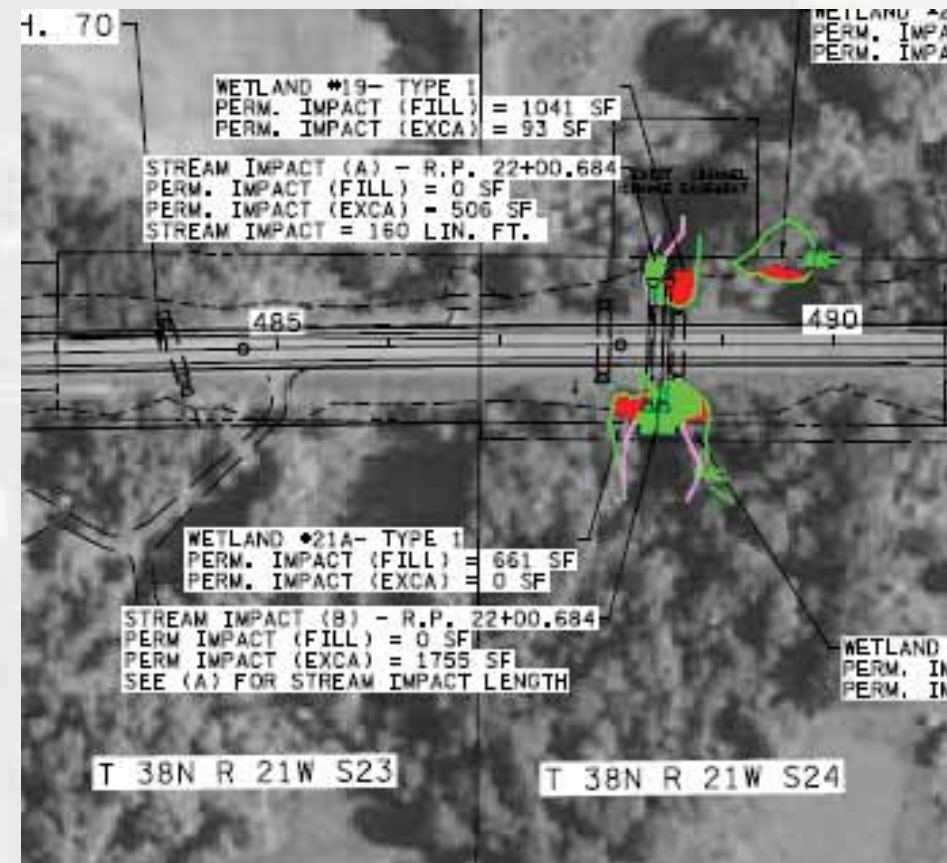
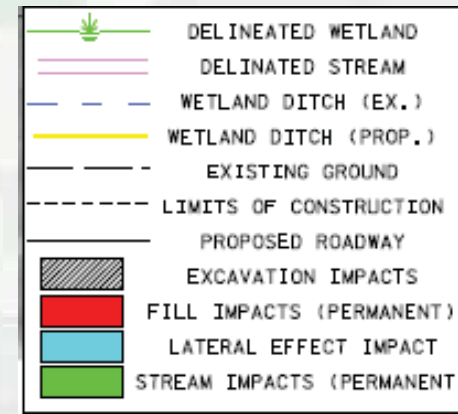
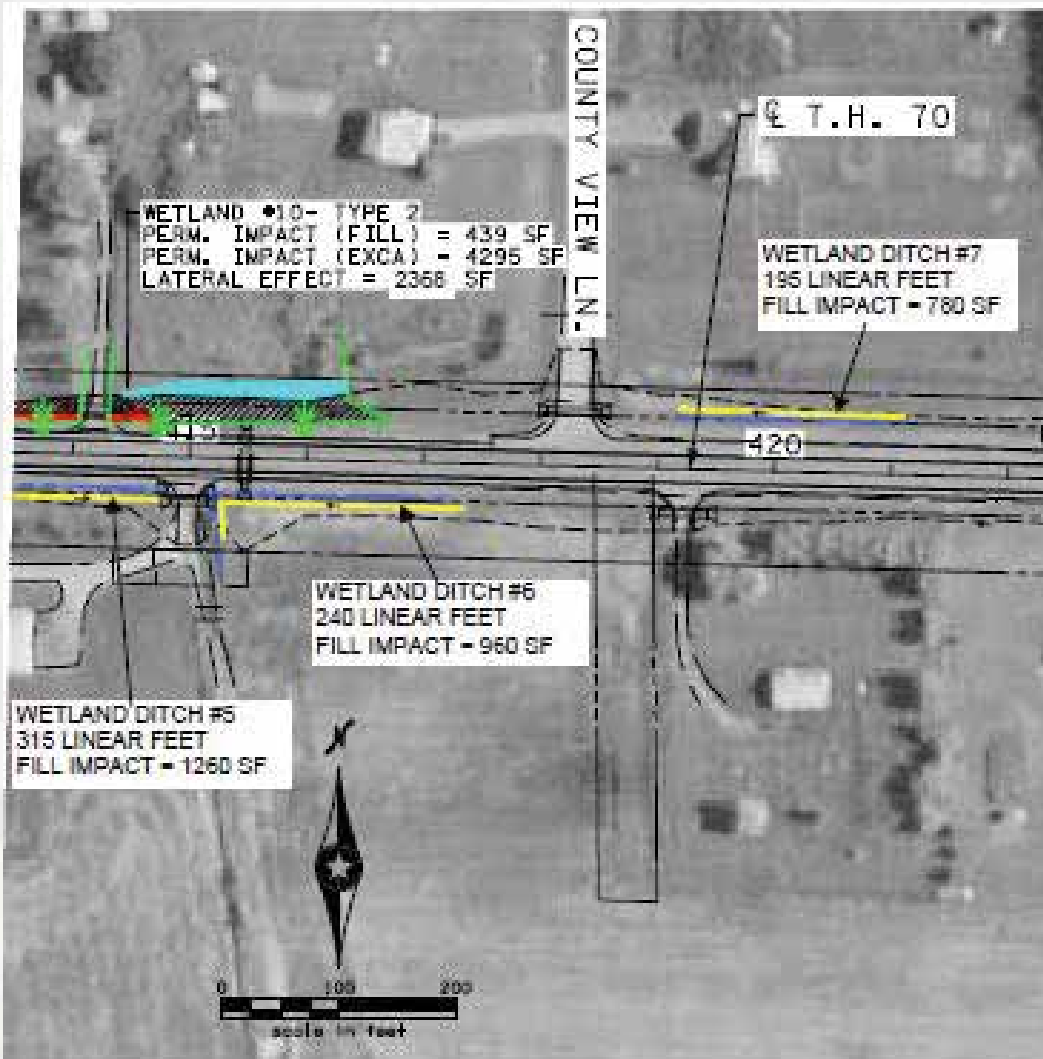
| | | | | | | | | |
|------|--|----|------|------|----------|---------------------|--|-----------------------|
| DATE | | BY | CHKD | APPR | REVISION | STATE PR 5811-12 | S.P. 5811-12 WETLAND IMPACTS T.H. 70 | SHEET 2 OF 8 |
| | | | | | | | | |

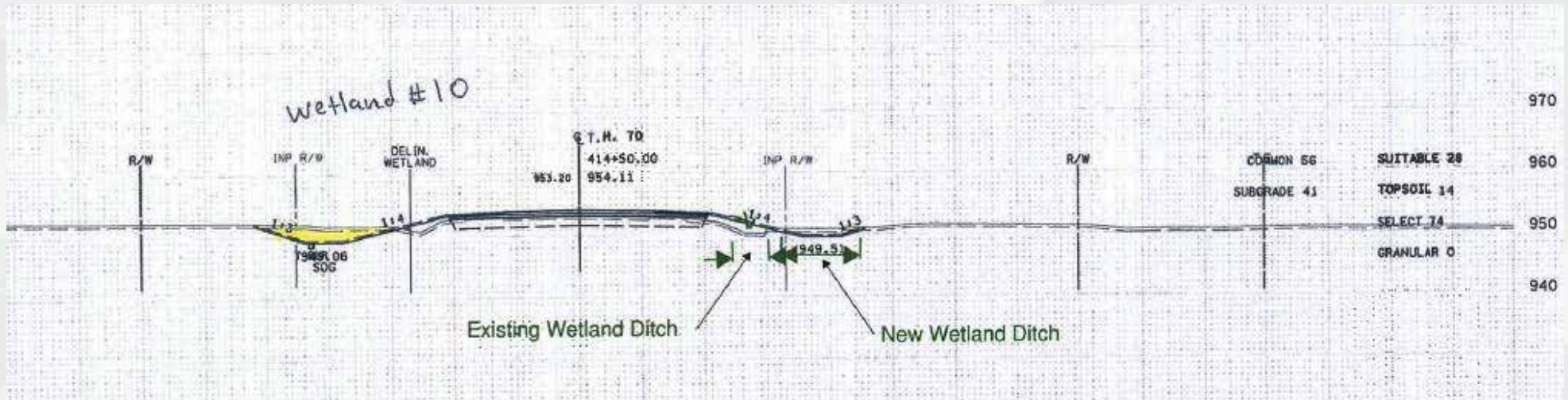
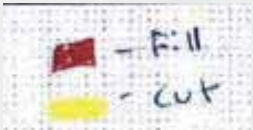
TH 70 Project: aerial photo background, sheet number, north arrow, scale bar



TIP: Don't need to include numbers on maps if the aquatic resource IDs are labeled, you have a corresponding impact table, and the impacts are depicted on the maps with a legend

TIP: provide separate impact amounts for wetland and stream/tributary impacts and depict separately





TIP: Label cross-sections with aquatic resource IDs; it is very helpful to depict fill/cut with colors or shading, but you don't need to if you have it displayed on the plan-view aerial photograph maps.

Example Table – TH 70

Aquatic Resource Impact Summary

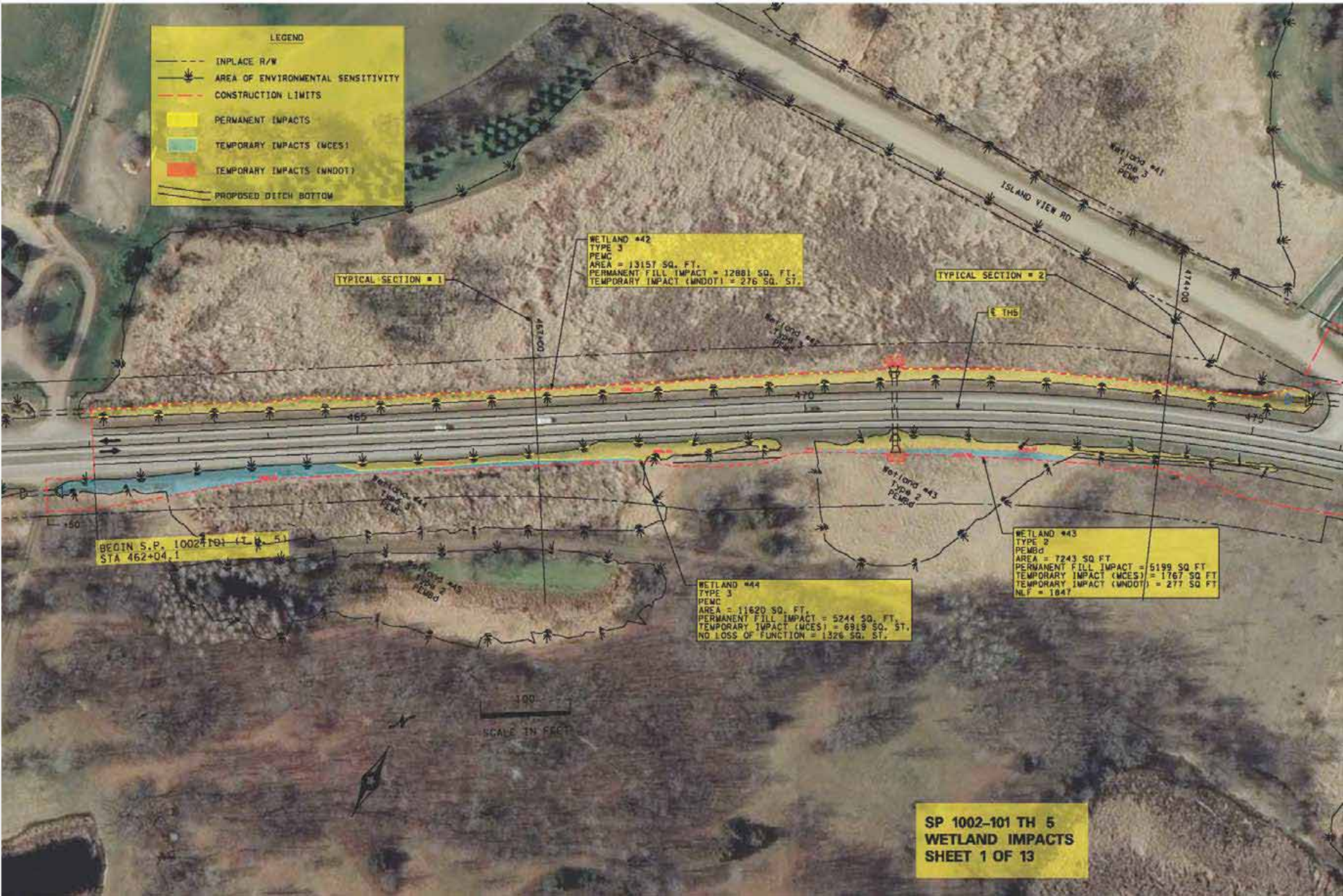
| Aquatic Resource ID | Aquatic Resource Type | Type of Impact | Duration of Impact | Size of Impact (Sq. Ft.) | Overall Size of Aquatic Resource | Location | Wetland Type Circular 39 | Existing Plant Community Types | County/Major Watershed/Bank Service Area (BSA) | Wetland Extends Beyond ROW |
|-------------------------------------|--------------------------------|---|--------------------------------|------------------------------------|----------------------------------|--|--------------------------|--------------------------------|--|----------------------------|
| Wetland ID From Delineation Report* | Wetland, Lake, Tributary, Etc. | Fill, Excavate, Drain, or Remove Vegetation | Permanent (P) Temporary (T) | | | | | | | |
| 74 | Wetland | Excavate | P | 1380 | N/A | ≈ m.p.28+00.840 | Type 6 | Shrub-Carr | Pine/37/BSA 6 | Yes |
| 75 | Wetland | Excavate | P | 53 | N/A | Culvert m.p.28+00.868 | Type 6 | Shrub-Carr | Pine/37/BSA 6 | Yes |
| 76 | Wetland | Excavate | P | 311 | N/A | ≈ m.p.28+00.890 | Type 2 | Sedge Meadow | Pine/37/BSA 6 | Yes |
| 77 | Wetland | Excavate | P | 1327 | N/A | ≈ m.p.28+00.920 | Type 7 | Hardwood Swamp | Pine/37/BSA 6 | Yes |
| 78 | Wetland | Fill | P | 42 | N/A | ≈ m.p.28+00.940 | Type 2 | Sedge Meadow | Pine/37/BSA 6 | Yes |
| 79 | Wetland | Fill | P | 459 | N/A | ≈ m.p.29+00.020 | Type 2 | Sedge Meadow | Pine/37/BSA 6 | Yes |
| 80 | Wetland | Fill | P | 1905 | N/A | ≈ m.p.29+00.150 | Type 3 | Hardwood Swamp | Pine/37/BSA 6 | Yes |
| 80 | Wetland | Excavate | P | 954 | N/A | ≈ m.p.29+00.150 | Type 3 | Hardwood Swamp | Pine/37/BSA 6 | Yes |
| 81 | Wetland | Fill | P | 5980 | N/A | ≈ m.p.29+00.150 | Type 3 | Hardwood Swamp | Pine/37/BSA 6 | Yes |
| 81 | Wetland | Excavate | P | 541 | N/A | ≈ m.p.29+00.150 | Type 3 | Hardwood Swamp | Pine/37/BSA 6 | Yes |
| 82 | Wetland | Excavate | P | 480 | N/A | ≈ m.p.29+00.230 | Type 3 | Hardwood Swamp | Pine/37/BSA 6 | Yes |
| 83 | Wetland | Fill | P | 1101 | N/A | ≈ m.p.29+00.230 | Type 3 | Hardwood Swamp | Pine/37/BSA 6 | Yes |
| 83 | Wetland | Excavate | P | 1854 | N/A | ≈ m.p.29+00.230 | Type 3 | Hardwood Swamp | Pine/37/BSA 6 | Yes |
| 84 | Wetland | No Impact | P | 0 | N/A | ≈ m.p.29+00.320 | Type 3 | Hardwood Swamp | Pine/37/BSA 6 | Yes |
| Wetland Ditches | Wetland | Fill | P | 9,060 linear ft. 40,084 sq. ft. | N/A | Various along roadway (see separate Table for specific wetland ditch impact locations) | Various | Various | Pine/37/BSA 6 | No |

* Wetland ID represents the Wetland ID Number from the Wetland Delineation Report

| | |
|---------|-------------------------------------|
| 150,321 | Permanent Wetland Impacts (sq. ft.) |
| 3491 | Temporary Impacts (sq. ft.) |
| 280 | Permanent Stream Impacts (l. ft.) |
| 3484 | Permanent Stream Impacts (sq. ft.) |

LEGEND

- INPLACE R/W
- AREA OF ENVIRONMENTAL SENSITIVITY
- CONSTRUCTION LIMITS
- PERMANENT IMPACTS
- TEMPORARY IMPACTS (WCES)
- TEMPORARY IMPACTS (NNDOT)
- PROPOSED DITCH BOTTOM



WETLAND #42
 TYPE 3
 PEMC
 AREA = 13157 SQ. FT.
 PERMANENT FILL IMPACT = 12881 SQ. FT.
 TEMPORARY IMPACT (NNDOT) = 276 SQ. FT.

WETLAND #43
 TYPE 2
 PEMBd
 AREA = 7243 SQ. FT.
 PERMANENT FILL IMPACT = 5199 SQ. FT.
 TEMPORARY IMPACT (WCES) = 1767 SQ. FT.
 TEMPORARY IMPACT (NNDOT) = 277 SQ. FT.
 NLF = 1847

WETLAND #44
 TYPE 3
 PEMC
 AREA = 11620 SQ. FT.
 PERMANENT FILL IMPACT = 5244 SQ. FT.
 TEMPORARY IMPACT (WCES) = 6919 SQ. FT.
 NO. LOSS OF FUNCTION = 1326 SQ. FT.

BEGIN S.P. 1002-101 TH 5
 STA 462+04.1

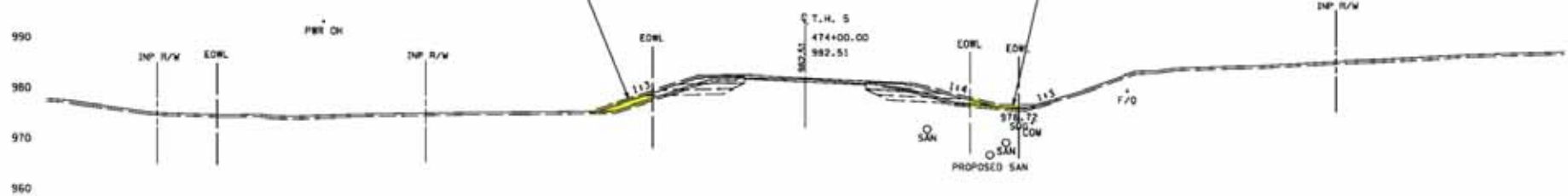
**SP 1002-101 TH 5
 WETLAND IMPACTS
 SHEET 1 OF 13**

EXCAVATION CU. YD. EMBANKMENT CU. YD.

TYPICAL SECTION #1

WETLAND #43
TYPE 2
PEMC
PERMANENT FILL END AREA = 12.1 SQ FT

WETLAND #42
TYPE 3
PEMC
PERMANENT FILL END AREA = 21.9 SQ FT



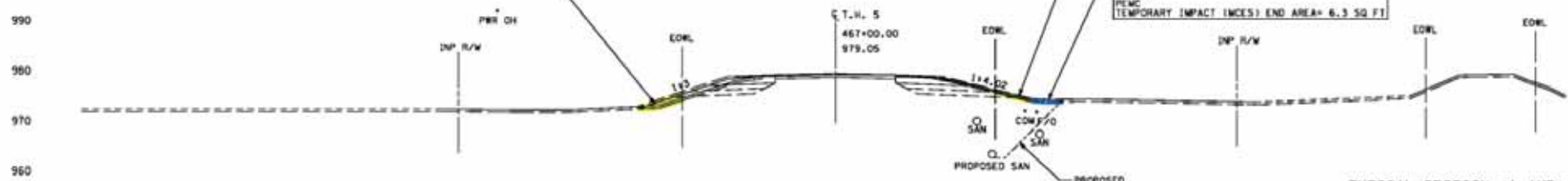
NOTE:
EDWL = EDGE OF WETLAND
MCESS = MET COUNCIL ENVIRONMENTAL SERVICES

TYPICAL SECTION #2

WETLAND #44
TYPE 3
PEMC
PERMANENT FILL END AREA = 8.0 SQ FT

WETLAND #42
TYPE 3
PEMC
PERMANENT FILL END AREA = 17.0 SQ FT

WETLAND #44
TYPE 3
PEMC
TEMPORARY IMPACT (ICES) END AREA = 6.3 SQ FT



TYPICAL SECTION #1 AND #2
TH 5
STA. 467+00.00 AND 472+00.00

DISTRICT # 1 PROJECT NO. 1002-101 (TH 5) SHEET NO. 1 OF 9 SHEETS

Questions?



BUILDING STRONG®

GP-4 (Transportation GP)

- Permittee: public road authorities in MN
- Authorities: Sec. 10 RHA & Sec. 404 CWA
- Authorized activities:
 - Discharge dredged/fill material in WOUS or work in navigable WOUS for activities associated with the ***reconstruction, expansion, modification, or improvement*** of existing public road systems

GP-4 (Transportation GP)

- Impact Thresholds:
 - *Permanent to WOUS*: 3 acres
 - Includes tributaries
 - Tributaries also have a 500 linear foot threshold per crossing or location
 - Wetlands located in roadside ditches are not counted toward the threshold
 - *Temporary to WOUS*: no threshold
 - limited to minimum necessary for the project

GP-4 (Transportation GP)

- Examples of Eligible Activities:
 - a) repair, rehabilitation, reconstruction, or replacement of existing bridges, culverts, and roads, including road widening, lane addition, shoulder improvements, etc.; b) the maintenance or construction of non-motorized pedestrian, bicycle, or multi-use sidewalks and trails whose purpose is to enhance the safety and mobility of the existing public road system (w/caveat Exclusion f); c) minor realignments of existing transportation projects where there is a demonstrated need to improve safety, durability, or capacity, such as vertical and horizontal curve corrections or improvements to existing roadway intersections and interchanges

GP-4 (Transportation GP)

- Notable differences between GP-4 and GP-3:
 - Different thresholds
 - Different PCN requirements
 - Some new exclusions
 - e.g. New roads, including frontage roads
 - e.g. Stormwater ponds outside roadside ditches
 - Some new reporting requirements
 - Permanent impacts >0.1 ac
 - Temporary impacts >0.5 ac
 - 30-day notification of complete PCN

GP-4 (Transportation GP)

- Comment period open until May 13, 2015
- Questions???
- Sarah Wingert,
sarah.e.wingert@usace.army.mil, 651-290-5358
- Ben Orne, benjamin.g.orne@usace.army.mil,
651-290-5280