CADD Standards

Wetland_Impacts.dgn
August 2023

The wetlands associated with a project shall be copied from the ArcMap (shape files). The Designer is responsible for confirming with the ETS Division that copied information is current and appropriate for calculating impacts. The delineations in the base maps are occasionally updated. Some projects may have future delineation updates that should be used for your project. Designers should NOT assume the delineations are applicable just because they can reference and copy wetlands. Coordination between Design and ETS is always needed.

The following is an overview of how the Wetlands_Impacts.dgn is to be created.

- Set applicable Geographic Coordinate System
- Reference ArcMap shape files
    - R:\project\BaseMaps\Shape_Files\
        - Wetland_**Polygons**.shp
        - Wetland_Mitigation_**Polygons**.shp
- Copy graphics into project drawings
- Use item types and display styles to review wetlands
    - Jurisdictional, Non-jurisdictional, Undefined Jurisdiction
    - Other Waters and Other Waters D (Drainage)
    - Previous Wetland Mitigation
    - Note Defect 658198, display style hide rules are not honored with selection tools.
- Set Feature Definitions
    - Delineated wetlands are symbolized 3 different ways; Jurisdictional, Non-Jurisdictional, and Undefined Jurisdiction. The wetland symbology should indicate US Army Corp of Engineers Jurisdiction when known.
    - Other Waters and Other Waters D have separate feature definitions that use slightly different colors.
- Change Line Direction for wetlands. The tick marks should be pointed to the water side (internally for closed shape)
- Clip wetlands and "other waters" off the existing roadway embankment inslope based on old plan documentation. Wetlands and "other waters" mapped on the road inslope are considered previously authorized fill.
- Reference applicable RDM drawing for break lines that identify the proposed toe of slope. Use the appliable break line from the Corridor Template such as T_Ditch1_ R to calculate wetland impacts.
- Indicate the "Grading Tie Line". This can be referenced from applicable RDM files. The grading tie line is often the "T_Tie" feature.
- Indicate the "Limits of Disturbance". This is typically the same as the seeding line. This is often referenced from the P_Errosion_C drawing.

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- Label the Grading Tie Lines and Limits of Disturbance lines in order to avoid confusion.
    - The levels used for placing Grading Tie Line labels is important because this is the only label from the Wetland_Impacts drawing that will be displayed in the 076TE and 077PE sheets.
- Use the "Wetland Impact Permanent" and "Wetland Impact Temporary" hatch tools to indicate permanent and temporary wetland impacts.
- Use text fields and item types to expedite labeling. Include the wetland numbers and impact acreage.
- The drawing element "Other Water Line" shall be used to delineate dry channels and deep water habitat (fill greater than 6.6 feet below existing water line). The patterning named "Other Water Permanent Impact" and "Other Water Temporary Impact" shall be used to indicate if these impacts are temporary or permanent. Label impact acreage.
- Use the "Wetland Mitigation Line" and "Wetland Mitigation Pattern" tools to indicate wetland mitigation if applicable. Create a contour line indicating the location and bottom elevation for the wetland mitigation area. Addition labeling and dimensioning may also be helpful. If wetland shapes are irregular, use northing and easting's to indicate important points. The plans need to provide enough details to correctly construct the mitigation areas. Label mitigation acreage.
- On site wetland mitigation usually requires additional plan preparation. The mitigation needs to be detailed on the cross section sheets. Additional cross sections may be needed (See Section 5.15 Cross Sections Interval). If the mitigation wetlands have an irregular shape, additional information should also be included in the plans.

See the "Wetland Information Check List" for additional Guidance.
http://www.dot.nd.gov/manuals/design/designmanual/wordfiles_design/Wetland%20Information%20Guidance%20for%20NDDOT%20Designers.doc