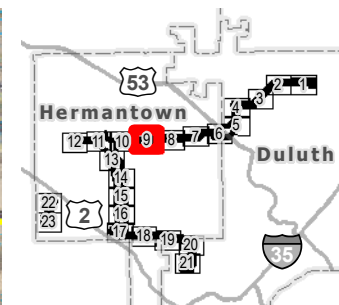
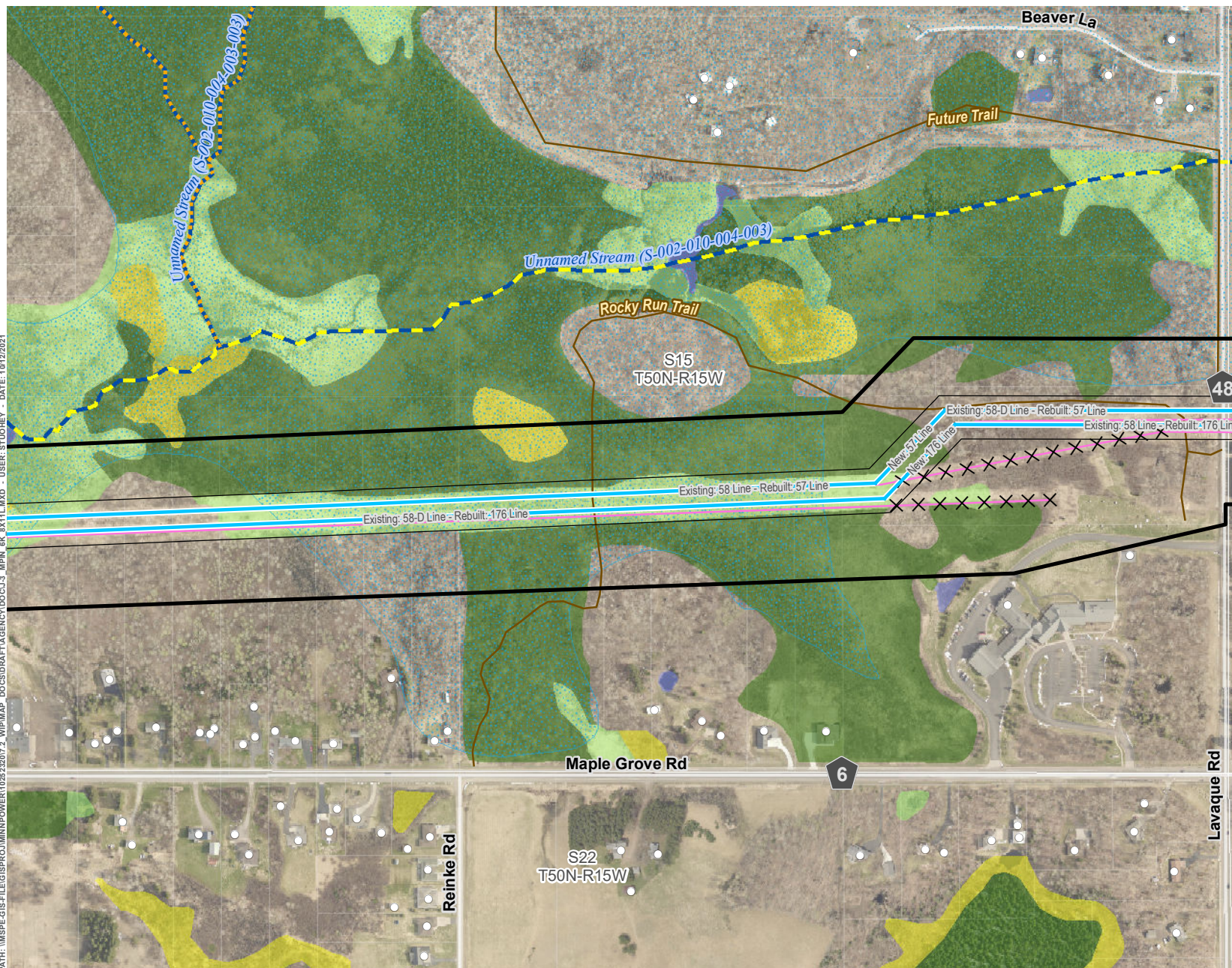


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LEGEND

- Proposed Route
- Approximate ROW
- Project 115 kV Transmission Line (Single Circuit)
- Removed Transmission Line (Realigned)
- Existing Structure
- Existing Transmission Line
- Existing/Proposed Trail
- Designated Trout Stream
- Protected Tributary to Designated Trout Stream
- PWI Watercourse
- FEMA Floodplain
- National Wetlands Inventory**
 - Freshwater Emergent Wetland
 - Freshwater Forested Wetland
 - Freshwater Shrub Wetland
 - Freshwater Pond; Lake; Riverine

*Note: Removals shown for significant realignments only. Line removals associated with the reconstruction of transmission lines, including minor centerline shifts are not indicated for clarity purposes. See Proposed System Overview for further definition on final line configurations and designations.

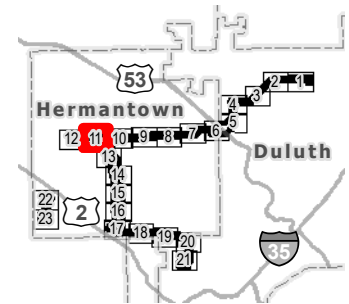
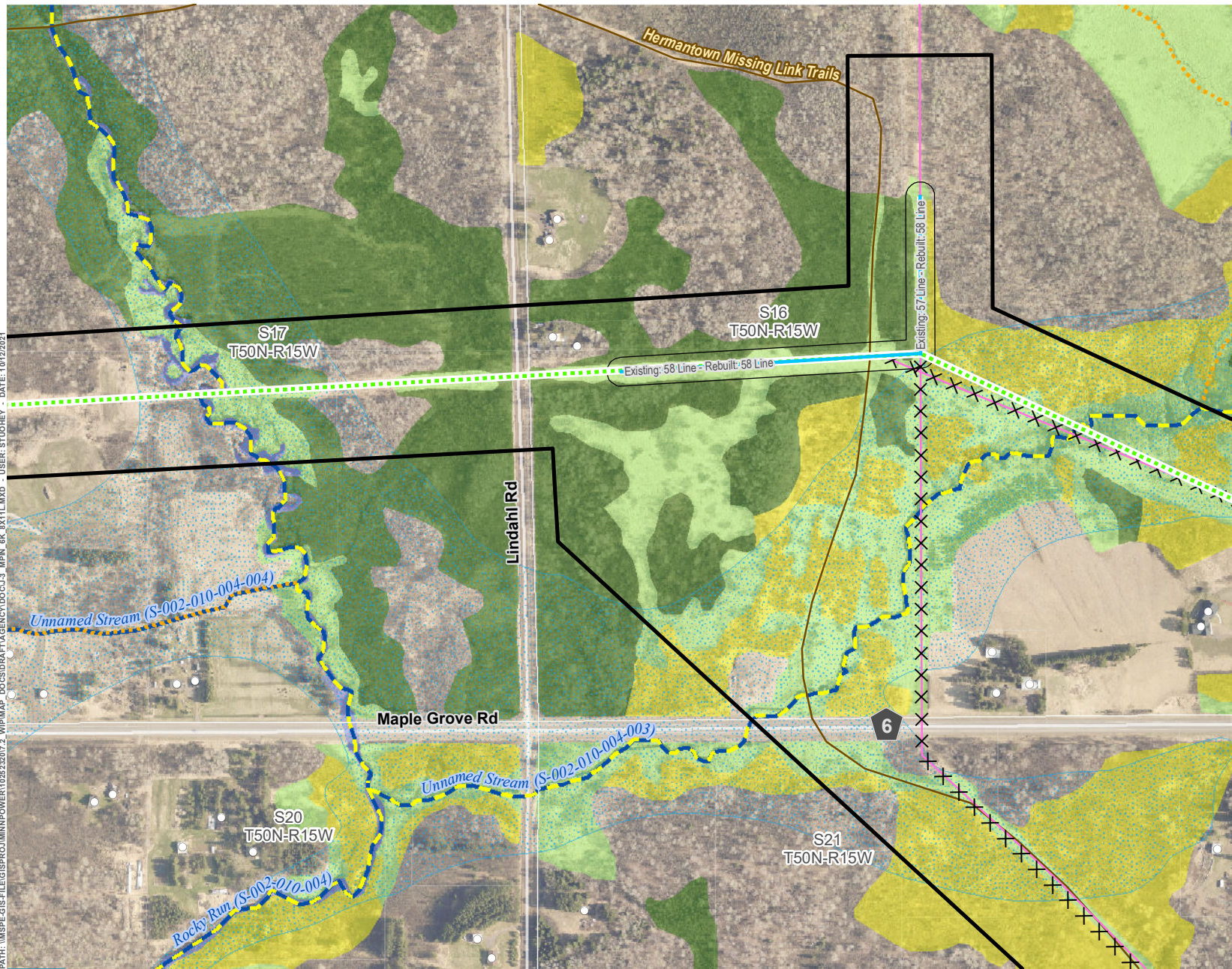


PROJECT DETAIL - HILLTOP TO HAINES ROAD DULUTH LOOP RELIABILITY PROJECT

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PATH: \\MSPE-GIS-FILE\GIS\PROJECT\POWER\102532017_2_WPMAP - DOCS\DATA\AGENCY\DOCS\J_MPH_6K_0X1-L\MXD - USER: STUDIOEY - DATE: 10/12/2021



- LEGEND**
- Proposed Route
 - Approximate ROW
 - Project 115 kV Transmission Line (Single Circuit)
 - Removed Transmission Line (Realigned)
 - New Underground Fiber
 - Existing Structure
 - Existing Transmission Line
 - Existing/Proposed Trail
 - Designated Trout Stream
 - Protected Tributary to Designated Trout Stream
 - PWI Watercourse
 - FEMA Floodplain
 - National Wetlands Inventory**
 - Freshwater Emergent Wetland
 - Freshwater Forested Wetland
 - Freshwater Shrub Wetland
 - Freshwater Pond; Lake; Riverine

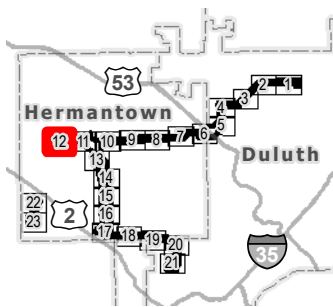
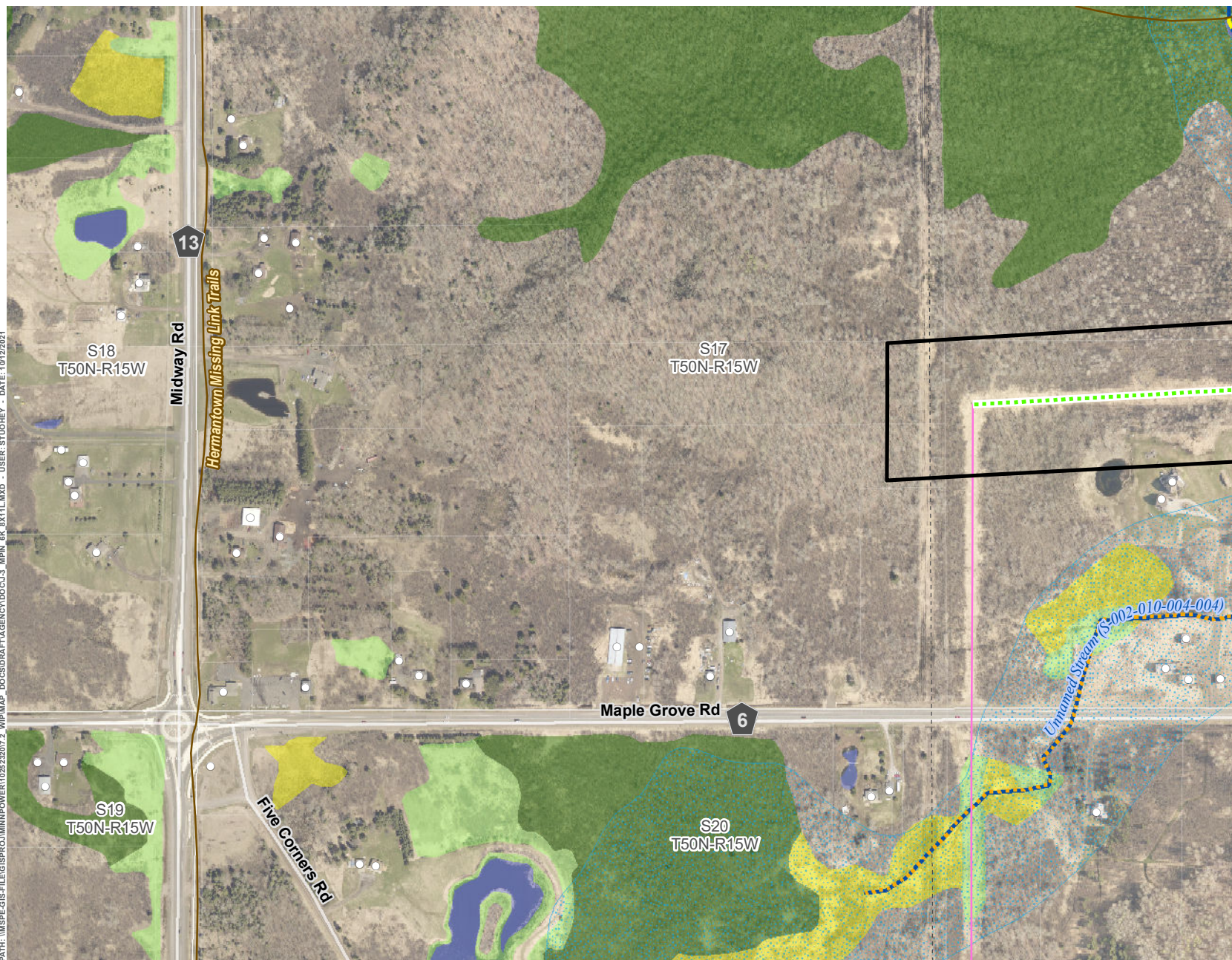
*Note: Removals shown for significant realignments only. Line removals associated with the reconstruction of transmission lines, including minor centerline shifts are not indicated for clarity purposes. See Proposed System Overview for further definition on final line configurations and designations.



PROJECT DETAIL - FIBER DULUTH LOOP RELIABILITY PROJECT

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PATH: \\MSPE-GIS-FILE\GIS\PROJECTS\MINNPOWER\102522017_2_WIP\MAP DOCS\DATA\AGENCY\DOC\J_3_MPH_6K_0X1L.MXD - USER: STUOHEY - DATE: 10/12/2021



LEGEND

- Proposed Route
- New Underground Fiber
- Existing Structure
- Existing Transmission Line
- Existing Pipeline
- Existing/Proposed Trail
- Designated Trout Stream
- Protected Tributary to Designated Trout Stream
- PWI Watercourse
- FEMA Floodplain
- National Wetlands Inventory**
 - Freshwater Emergent Wetland
 - Freshwater Forested Wetland
 - Freshwater Shrub Wetland
 - Freshwater Pond; Lake; Riverine

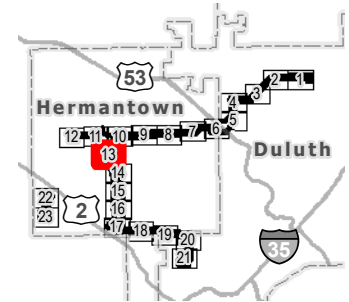
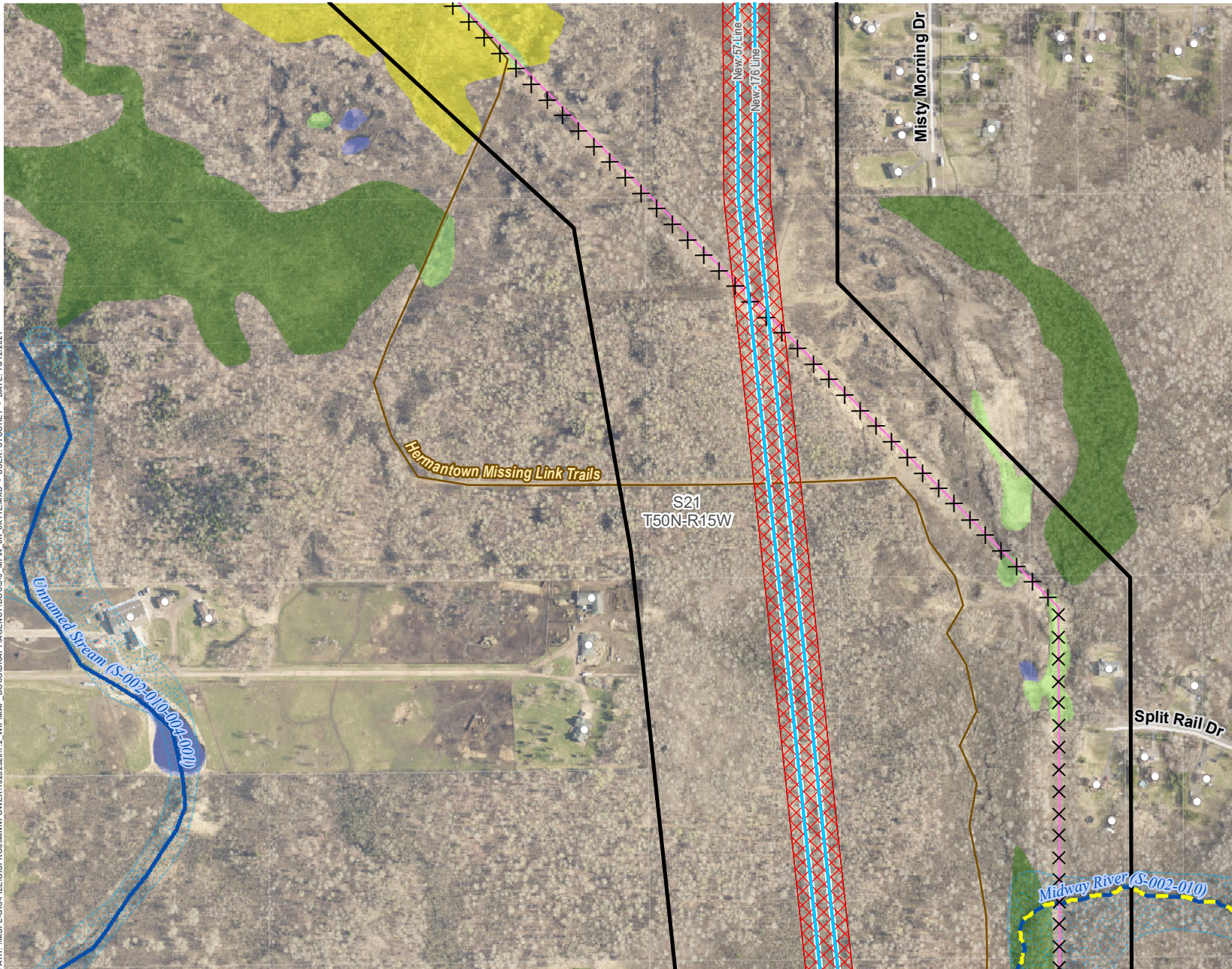
*Note: Removals shown for significant realignments only. Line removals associated with the reconstruction of transmission lines, including minor centerline shifts are not indicated for clarity purposes. See Proposed System Overview for further definition on final line configurations and designations.



PROJECT DETAIL - FIBER DULUTH LOOP RELIABILITY PROJECT

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PATH: \\MSPE-GIS-FILE\GIS\PROJECTS\MINNPOWER\10252207\2_WPM\MAP DOCS\DATA\AGENCY\DOC\J_3_MPH_6K_0X1L.MXD - USER: STUOHEY - DATE: 10/12/2021



- LEGEND**
- Proposed Route
 - Approximate New Impact Area
 - Project 115 kV Transmission Line (Single Circuit)
 - Removed Transmission Line (Realigned)
 - Existing Structure
 - Existing Transmission Line
 - Existing/Proposed Trail
 - Designated Trout Stream
 - PWI Watercourse
 - FEMA Floodplain
 - National Wetlands Inventory**
 - Freshwater Emergent Wetland
 - Freshwater Forested Wetland
 - Freshwater Shrub Wetland
 - Freshwater Pond; Lake; Riverine

*Note: Removals shown for significant realignments only. Line removals associated with the reconstruction of transmission lines, including minor centerline shifts are not indicated for clarity purposes. See Proposed System Overview for further definition on final line configurations and designations.



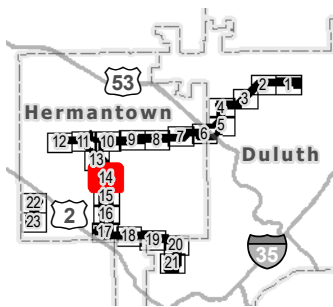
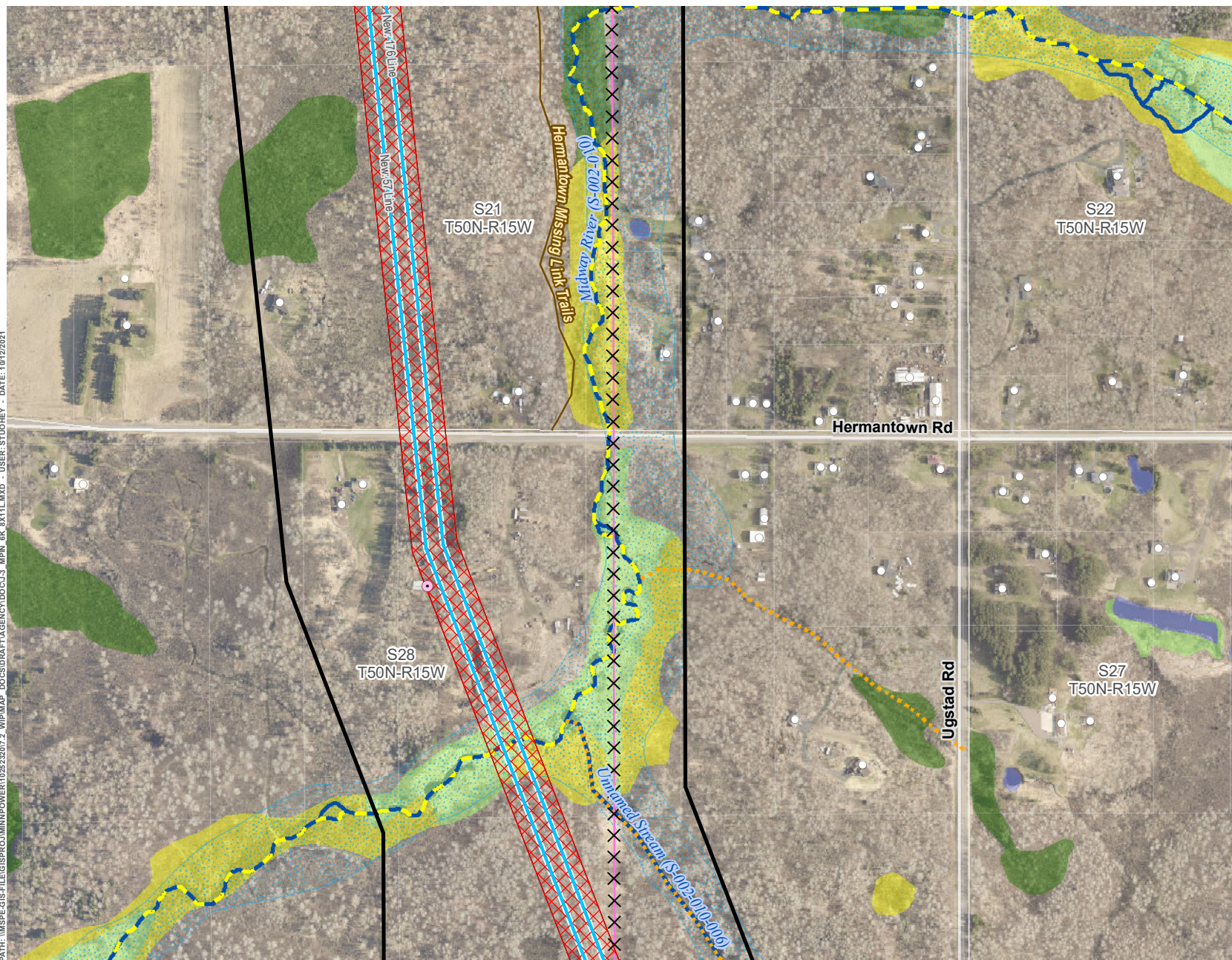
PROJECT DETAIL - HILLTOP TO HAINES ROAD

DULUTH LOOP RELIABILITY PROJECT

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PATH: \\MSPEC\GIS\PROJECTS\POWER\10252207\2_WIP\MAP DOCS\DATA\AGENCY\DOC\3_MPH_6K_0X1\1.MXD - USER: STUONEY - DATE: 10/12/2021



LEGEND

- Proposed Route
- Approximate ROW
- Approximate New Impact Area
- Project 115 kV Transmission Line (Single Circuit)
- Removed Transmission Line (Realigned)
- Existing Structure
- Structure in ROW
- Existing Transmission Line
- Existing/Proposed Trail
- Designated Trout Stream
- Protected Tributary to Designated Trout Stream
- PWI Watercourse
- FEMA Floodplain
- National Wetlands Inventory**
 - Freshwater Emergent Wetland
 - Freshwater Forested Wetland
 - Freshwater Shrub Wetland
 - Freshwater Pond; Lake; Riverine

*Note: Removals shown for significant realignments only. Line removals associated with the reconstruction of transmission lines, including minor centerline shifts are not indicated for clarity purposes. See Proposed System Overview for further definition on final line configurations and designations.

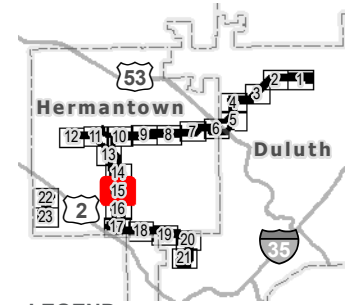
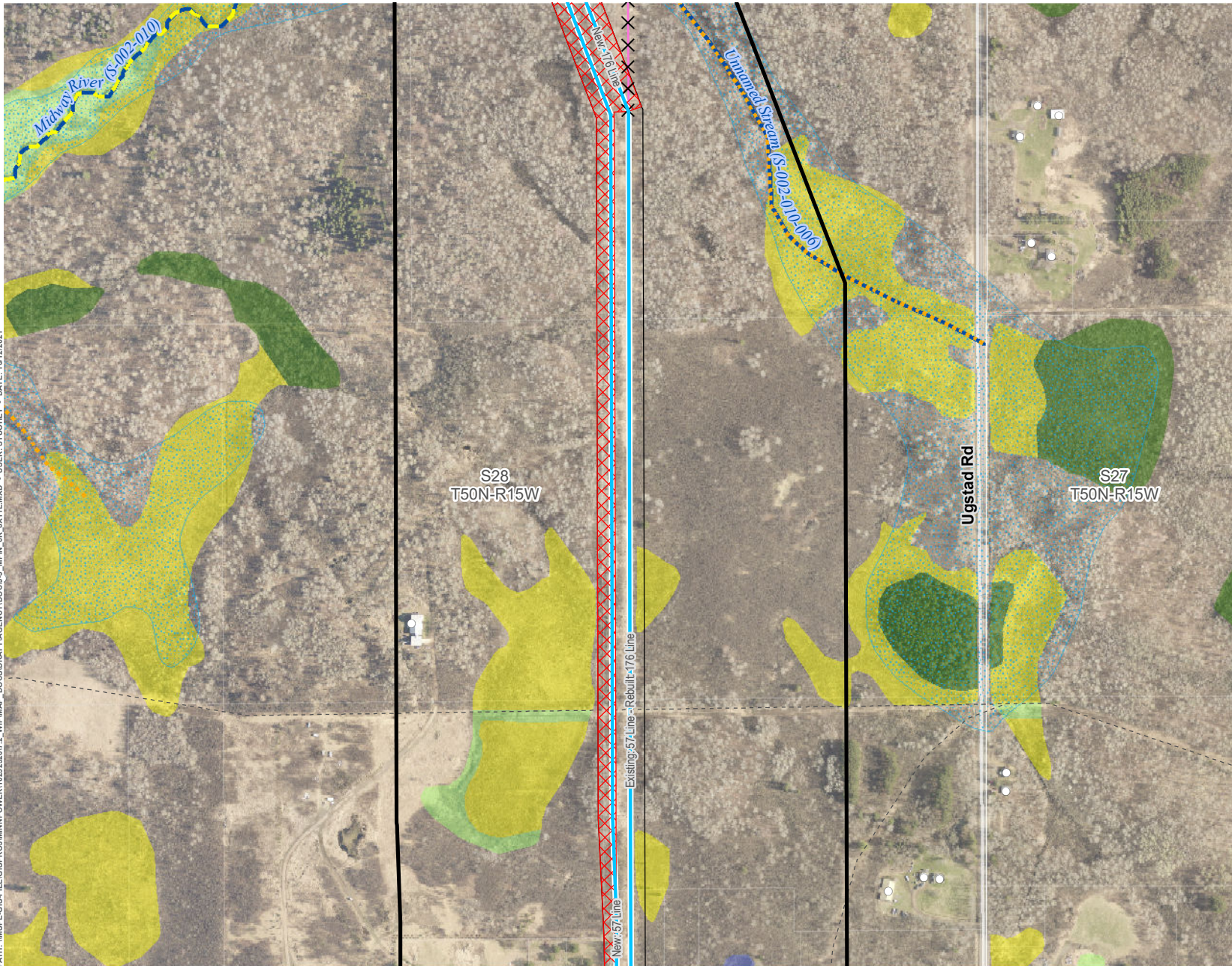


PROJECT DETAIL - HILLTOP TO HAINES ROAD DULUTH LOOP RELIABILITY PROJECT

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PATH: \\MSPE-GIS-FILES\GIS\PROJECTS\MINNPOWER\102522017.2_WIP\MAP DOCS\DATA\AGENCY\DOC\J.3_MPH_6K_0X1L.MXD - USER: STUOHLEY - DATE: 10/12/2021



LEGEND

- Proposed Route
- Approximate ROW
- Approximate New Impact Area
- Project 115 kV Transmission Line (Single Circuit)
- Removed Transmission Line (Realigned)
- Existing Structure
- Existing Transmission Line
- Existing Pipeline
- Existing/Proposed Trail
- Designated Trout Stream
- Protected Tributary to Designated Trout Stream
- PWI Watercourse
- FEMA Floodplain
- National Wetlands Inventory**
 - Freshwater Emergent Wetland
 - Freshwater Forested Wetland
 - Freshwater Shrub Wetland
 - Freshwater Pond; Lake; Riverine

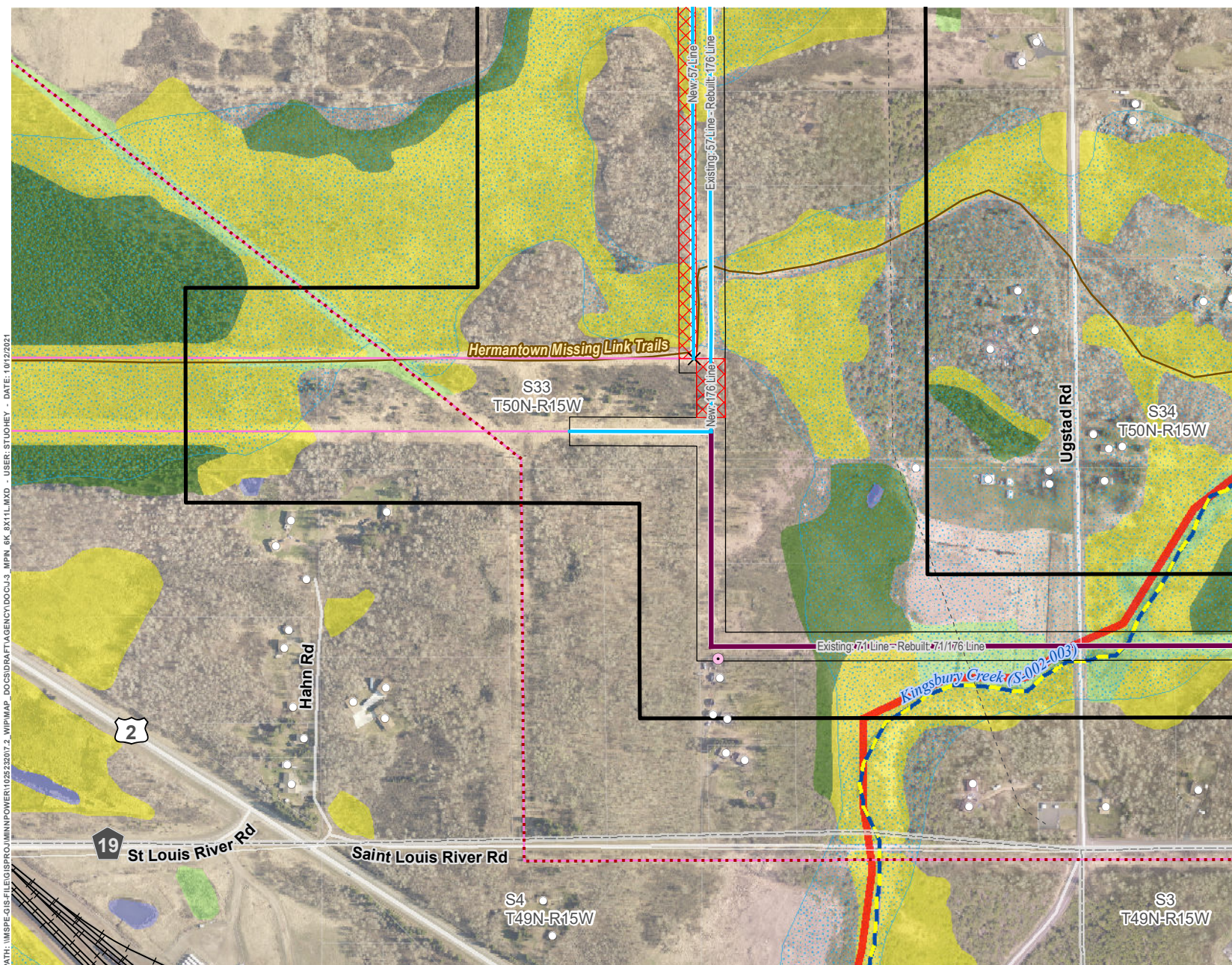
*Note: Removals shown for significant realignments only. Line removals associated with the reconstruction of transmission lines, including minor centerline shifts are not indicated for clarity purposes. See Proposed System Overview for further definition on final line configurations and designations.

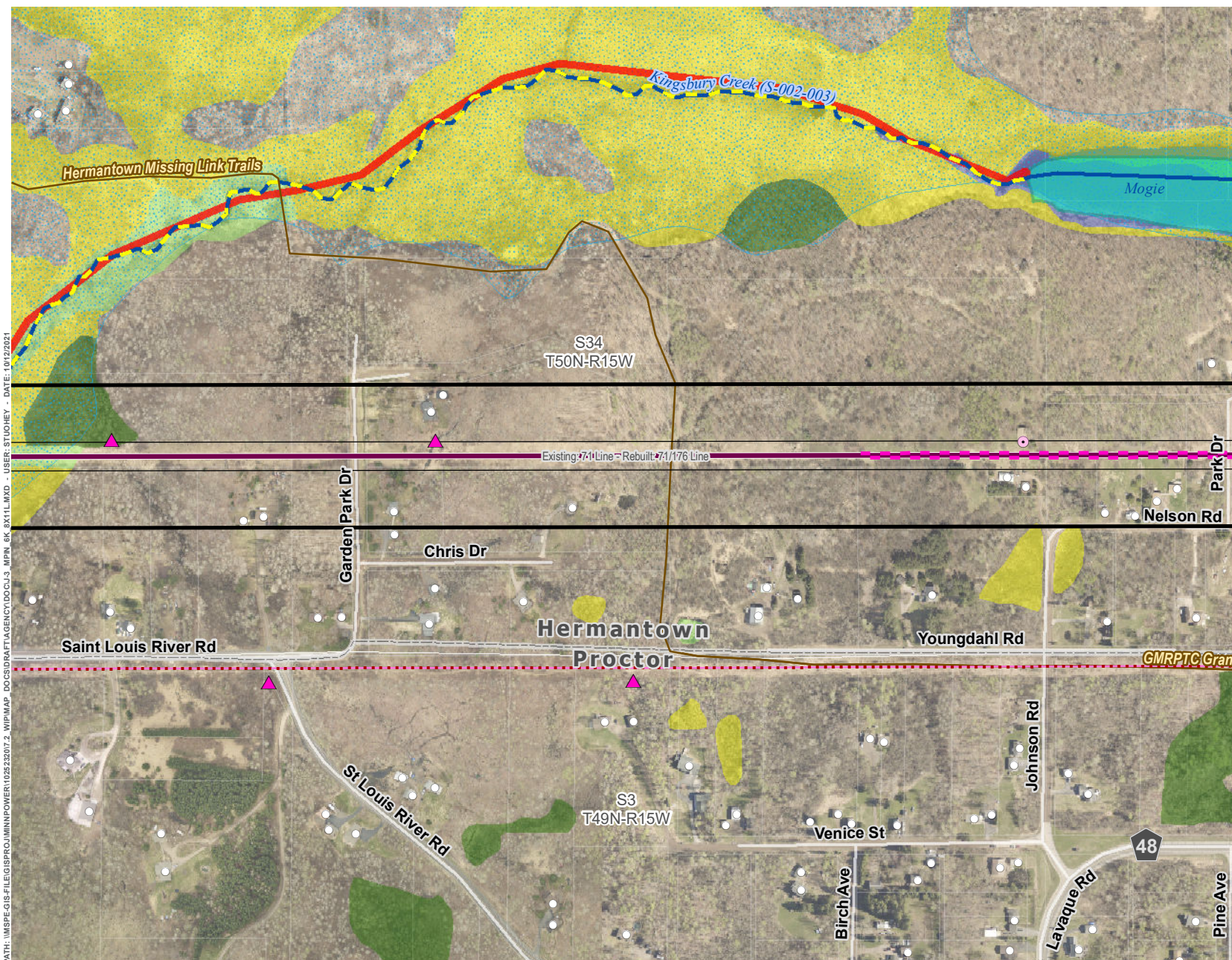


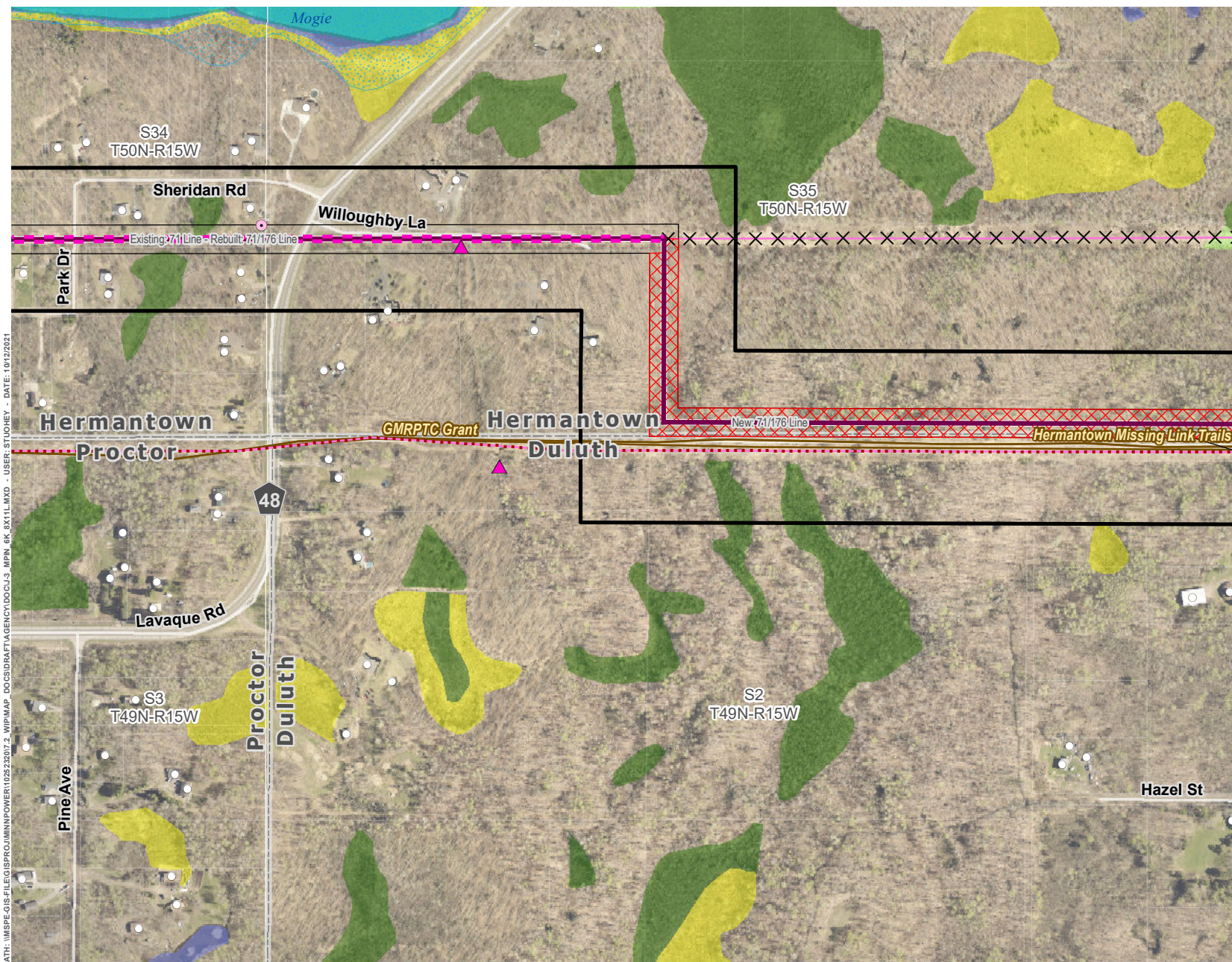
PROJECT DETAIL - HILLTOP TO HAINES ROAD DULUTH LOOP RELIABILITY PROJECT

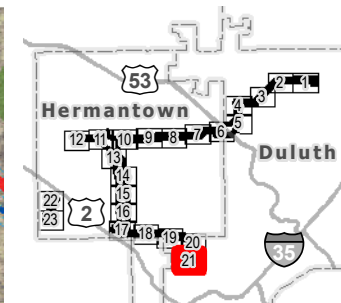
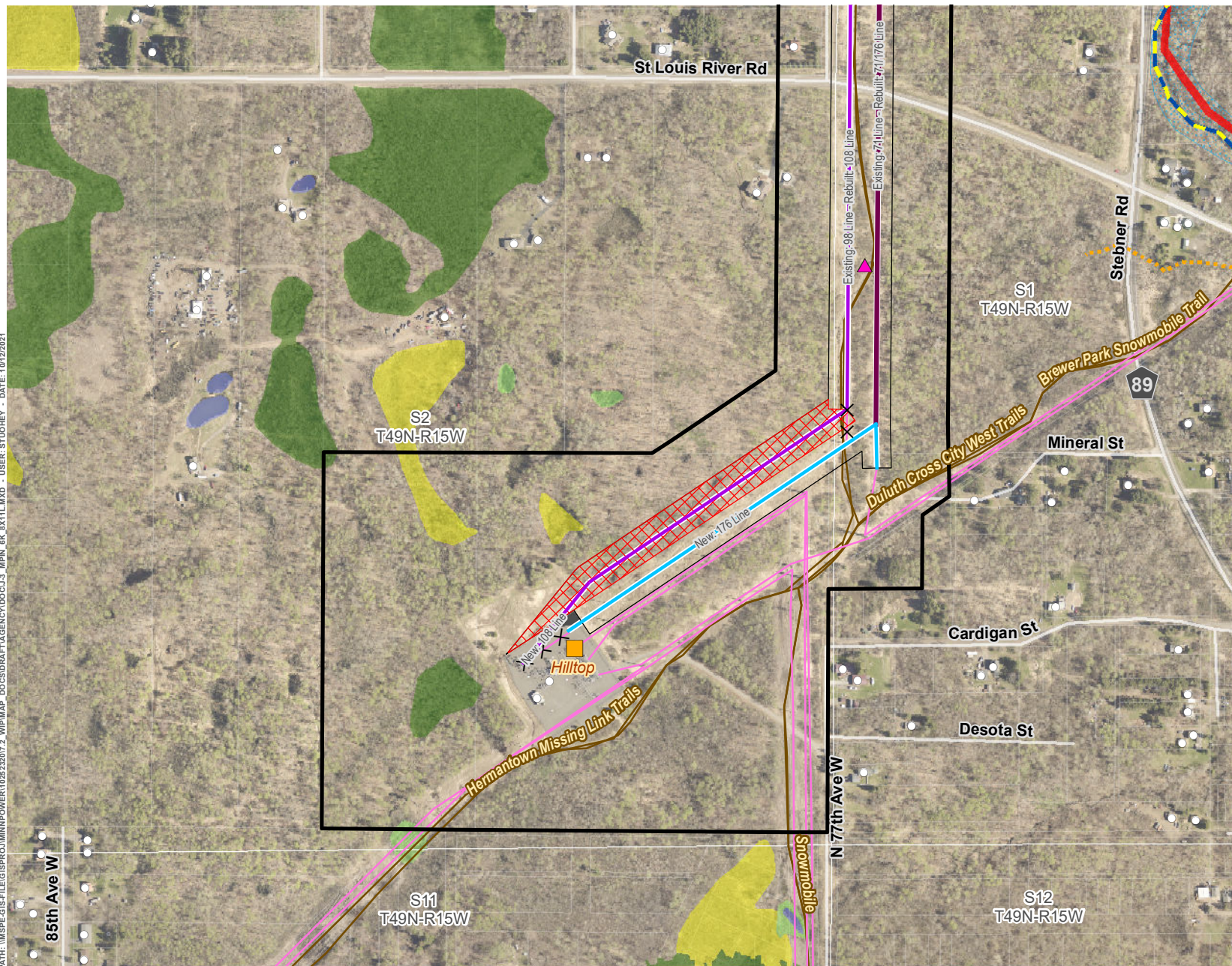
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LEGEND

- Proposed Route
- Approximate ROW
- Approximate New Impact Area
- Project Substation
- Substation Expansion Area
- Project 115 kV Transmission Line (Single Circuit)
- Project 115 kV Transmission Line (Double Circuit)
- Project 230 kV Transmission Line (Single Circuit)
- Removed Transmission Line (Realigned)
- Existing Structure
- Existing Transmission Line
- Existing/Proposed Trail
- Impaired Water
- Designated Trout Stream
- Protected Tributary to Designated Trout Stream
- Unmapped Tributary
- PWI Watercourse
- FEMA Floodplain
- National Wetlands Inventory**
 - Freshwater Emergent Wetland
 - Freshwater Forested Wetland
 - Freshwater Shrub Wetland
 - Freshwater Pond; Lake; Riverine

*Note: Removals shown for significant realignments only. Line removals associated with the reconstruction of transmission lines, including minor centerline shifts are not indicated for clarity purposes. See Proposed System Overview for further definition on final line configurations and designations.

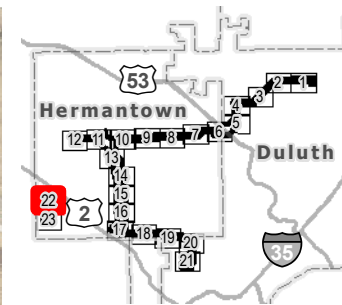
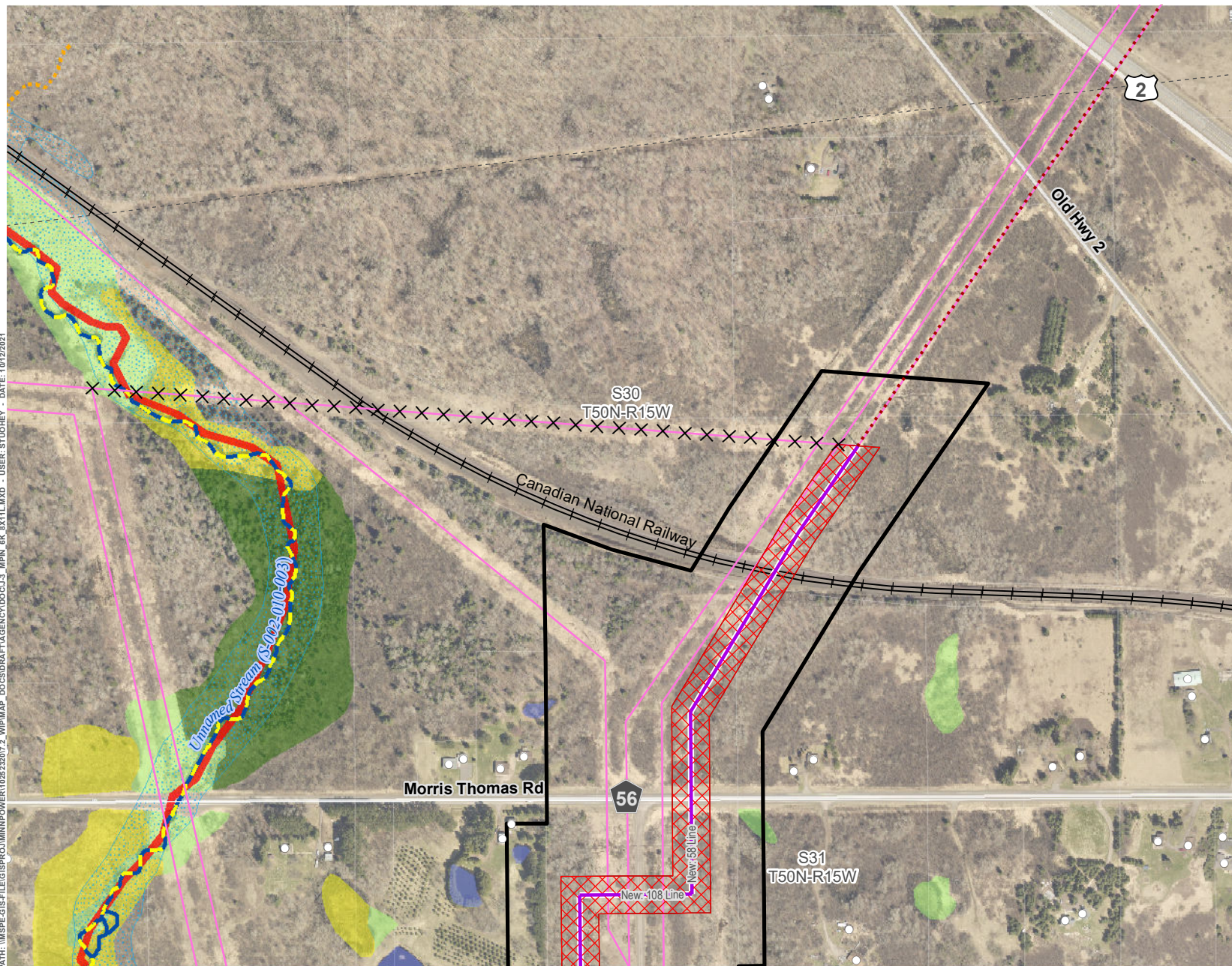


PROJECT DETAIL - HILLTOP TO HAINES ROAD DULUTH LOOP RELIABILITY PROJECT

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PATH: \\MSPE-GIS-FILE\GIS\PROJECTS\MINNPOWER\10252207\2_WPM\MAP DOCS\DATA\AGENCY\DOCS\J3_MPH_6K_0X1L.MXD - USER: STUDNEY - DATE: 10/12/2021



LEGEND

- Proposed Route
- Approximate ROW
- Approximate New Impact Area
- Project 230 kV Transmission Line (Single Circuit)
- Removed Transmission Line (Realigned)
- Thermal Upgrades
- Existing Structure
- Existing Transmission Line
- Existing Pipeline
- Railroad
- Existing/Proposed Trail
- Impaired Water
- Designated Trout Stream
- Protected Tributary to Designated Trout Stream
- PWI Watercourse
- FEMA Floodplain
- National Wetlands Inventory**
 - Freshwater Emergent Wetland
 - Freshwater Forested Wetland
 - Freshwater Shrub Wetland
 - Freshwater Pond; Lake; Riverine

*Note: Removals shown for significant realignments only. Line removals associated with the reconstruction of transmission lines, including minor centerline shifts are not indicated for clarity purposes. See Proposed System Overview for further definition on final line configurations and designations.



PROJECT DETAIL - ARROWHEAD DULUTH LOOP RELIABILITY PROJECT

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