

July 22, 2025

Mr. Peter Hartz
City of Watertown
800 Hoffman Drive
P.O. Box 477
Watertown, WI 53094

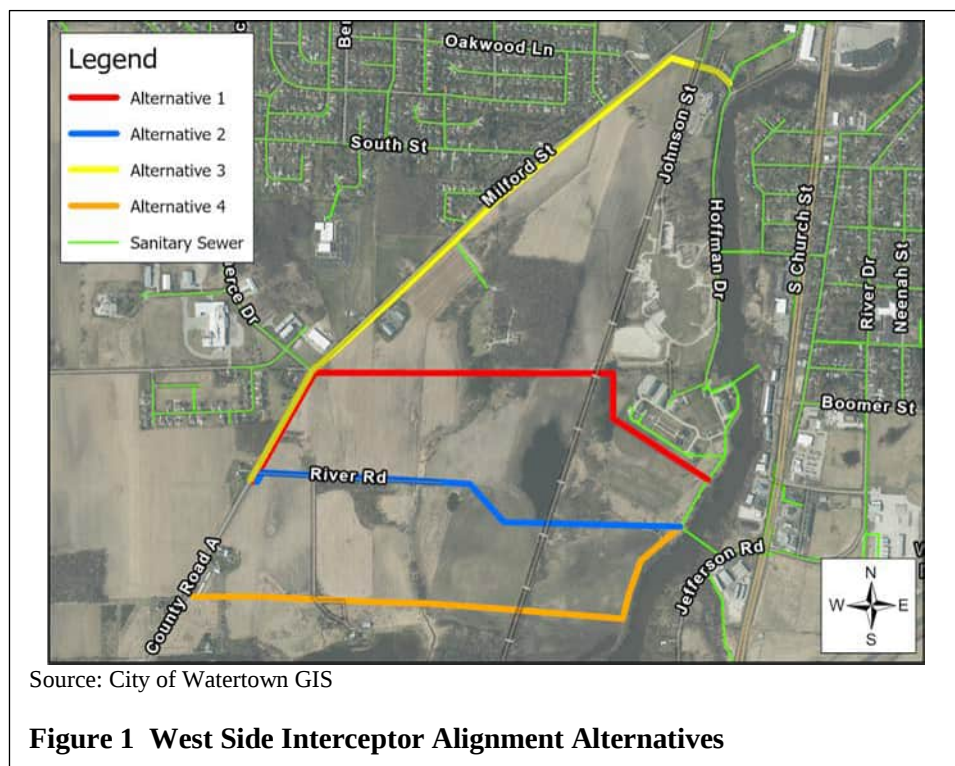
Re: West Side Interceptor Alternatives Analysis
City of Watertown, Wisconsin (City)

Dear Mr. Hartz:

This letter summarizes the services completed in evaluating sewer interceptor alternatives to serve future development in the Southwest Sanitary Service Area. Previous sewer studies conducted by the City have indicated future development in the Southwest Sanitary Service Area will need to be served by a 24-inch-diameter sanitary sewer interceptor that would dead end at the Milford Street and River Road intersection.

Route Alignment Analysis

Four alignments were evaluated for the 24-inch-diameter interceptor routing, as depicted in Figure 1 and descriptions that follow.



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Alternative No. 1–Middle Alignment

This alignment includes approximately 6,600 lineal feet (LF) of 24-inch sewer. The 24-inch sewer connects to the existing 42-inch sewer south of the wastewater treatment plant (WWTP) at Sewer Manhole 30-005, extends northwest to the Milford Street and Commerce Drive intersection through City property, and continues southwest in the Milford Street right-of-way (ROW) to the City limits south of River Road. Challenges associated with Alternative No. 1 include depth of excavation (maximum depth of 31.5 feet), trenchless construction beneath the Union Pacific Railroad (UPRR), and the crossing of three unnamed creeks. See Enclosure A for an overview exhibit and preliminary plan and profile drawings for Alternative No. 1.

Alternative No. 2–South Alignment

This alignment includes approximately 5,100 LF of 24-inch sewer. The 24-inch sewer connects to the existing 42-inch sewer south of the WWTP at existing Sewer Manhole 30-007, extends west through City property and along River Road, ending south of River Road at the City limits. Challenges associated with Alternative No. 2 include potential high groundwater, construction beneath the UPRR, potential conflict with existing drain tiles, and the crossing of three unnamed creeks. See Enclosure B for an overview exhibit and preliminary plan and profile drawings for Alternative No. 2.

Alternative No. 3–North Alignment

This alignment includes approximately 7,600 LF of 24-inch sewer. The 24-inch sewer connects to the existing 36-inch sewer near the intersection of Hoffman Road and Fairview Drive at existing Sewer Manhole 23B-022, extends west on Hoffman Avenue and through private property to Milford Street, then continues southwest in the Milford Street ROW to the City limits south of River Road. Challenges associated with Alternative No. 3 include construction beneath the UPRR, the crossing of two unnamed creeks, and the conflict or replacement of existing water mains, sanitary sewers, and storm sewers on Milford Street and Hoffman Road. See Enclosure C for an overview exhibit and preliminary plan and profile drawings for Alternative No. 3.

Alternative No. 4

This alignment includes approximately 6,225 LF of 24-inch sewer. The 24-inch sewer connects to the existing 42-inch sewer south of the WWTP at existing Sewer Manhole 30-007, extends south adjacent to the river and west through City property, and continues west through Hwy D LLC private property ending at the Milford Street ROW. Challenges associated with Alternative No. 4 include potential high groundwater, construction beneath the UPRR, potential conflict with existing drain tiles, and the crossing of an unnamed creek. Given the existing elevation of the existing 42-inch sewer at Manhole 30-007 and minimum pipe slope of 0.08 percent required for a 24-inch pipe extension, the proposed 24-inch interceptor pipe would need to be constructed above the unnamed creek bottom. Constructing a sewer pipe above a creek bottom is not recommended nor would it be allowed by the Wisconsin Department of Natural Resources (WDNR), therefore Alternative No. 4 was removed from further consideration.

Trenchless Construction Beneath the UPRR

All alternatives require trenchless construction beneath the UPRR and would include a 36-inch steel casing pipe with a 24-inch sewer carrier pipe. The method of trenchless construction will need to be determined after geotechnical investigation but will likely require pilot tube guided auger boring, pipe ramming, or microtunneling to achieve accurate installation and minimize impact to the

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railroad tracks. The trenchless construction will require the City to obtain a Utility Occupancy License from the UPRR. The City should budget 4 to 6 months for UPRR review and approval after final design documents are completed.

Environmental Impacts

All alternatives would impact existing wetlands and cross unnamed creeks. Based on field observations, Strand Associates, Inc.® (Strand) anticipates the creek flows to be low enough to allow a contractor to dam the creek and bypass pump around an open sewer trench. The City will need to obtain Waterway and Wetland disturbance permits from WDNR and receive a concurrence letter from the U.S. Army Corps of Engineers (USACE). Strand's preliminary review indicates the unnamed creeks are not navigable waterways or special resource waters. This indicates that the City would be able to obtain a General Permit from the WDNR and USACE for the creek crossings. Construction will require restoring disturbed wetlands to existing conditions with native wetland seed mixes. It is Strand's understanding that Alternative No. 2 is routed through existing native prairie that is currently part of the City's water quality trading program and would need to be restored to existing conditions.

All alternatives would require tree removal for sewer construction. It is possible that a northern long-eared bat habitat exists along the three alignments; therefore, a WDNR endangered species review should be conducted to determine whether tree clearing restrictions exist. If a northern long-eared bat habitat exists, tree clearing would be required between November 1 and March 31.

The creek crossings, wetland and prairie disturbance, and endangered species impacts will be items to discuss further with the WDNR and City during the final design phase to determine the preferred approach to minimize impacts.

Easements

It is anticipated that Alternative Nos. 1 and 2 would be constructed on City property; therefore, no permanent or temporary construction easements would be required. For Alternative No. 3, a permanent and temporary construction easement would be required to construct the proposed 24-inch sewer through the Dettmann Dairy LLC property.

Summary and Recommendations

Strand has provided a summary table of the three feasible alternatives with various factors and opinion of probable cost (OPC) for comparison. The OPC includes design and construction costs in 2026 dollars. Alternative No. 2--South Alignment is the shortest route and most cost-effective, therefore, would be the recommended alternative.

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Alignment	24-Inch Sewer Length (ft)	Average Sewer Depth (ft)	Maximum Depth (ft)	Wetland Impacts	Number of Easements	Railroad Crossing	Cost (2026 Dollars)
Alternative 1– Middle	6,607	18.5	31.5	Yes	0	Yes	\$7,539,000
Alternative 2– South	5,110	15.2	24.0	Yes	0	Yes	\$5,963,000
Alternative 3– North	7,582	18.5	25.5	Yes	2	Yes	\$8,796,000

Note: ft=feet

Table 1 Alternatives Summary

If Alternative No. 2 is selected as the preferred route, Strand recommends refining this alignment to minimize existing wetland and prairie impacts. In addition, geotechnical soil borings should be taken to understand existing soil and groundwater conditions to review construction feasibility and refine cost opinions before advancing final design.

Thank you for your assistance in preparing this evaluation, and please call 608-251-4843 with any questions.

Sincerely,

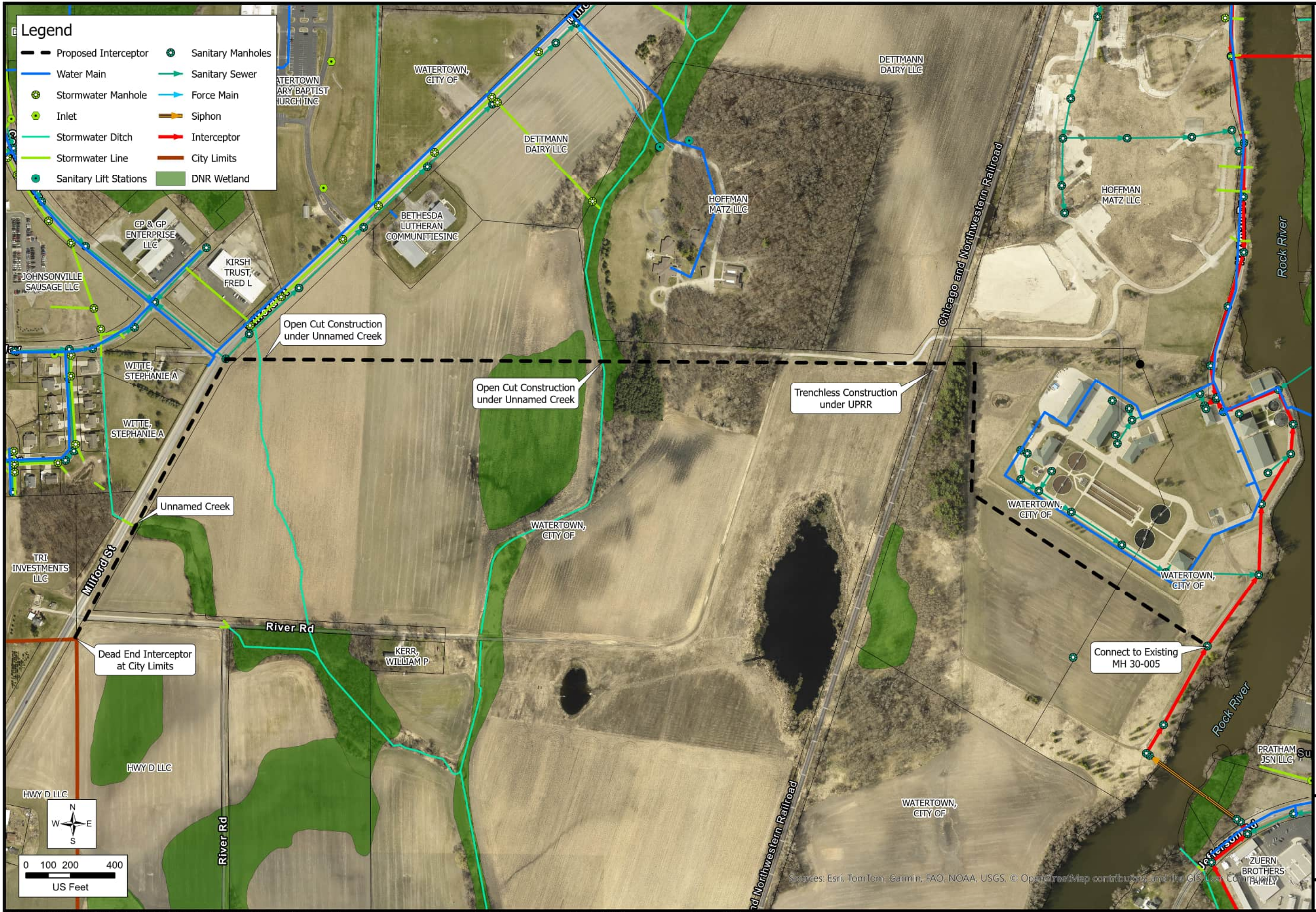
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Eric D. Vieth, P.E.

Enclosures

ENCLOSURE A
ALTERNATIVE NO. 1 OVERVIEW MAP AND PLAN AND PROFILE SHEETS

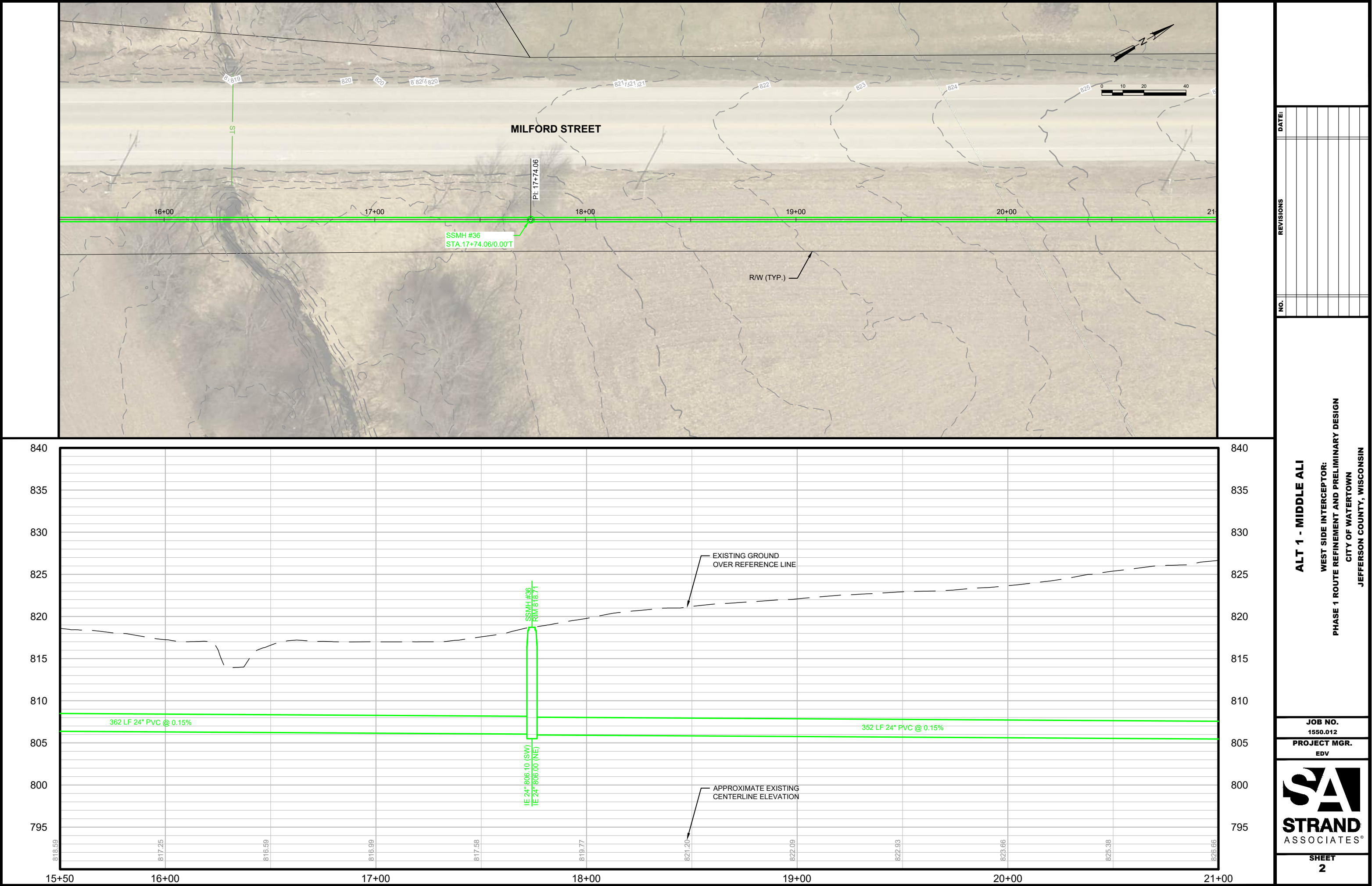


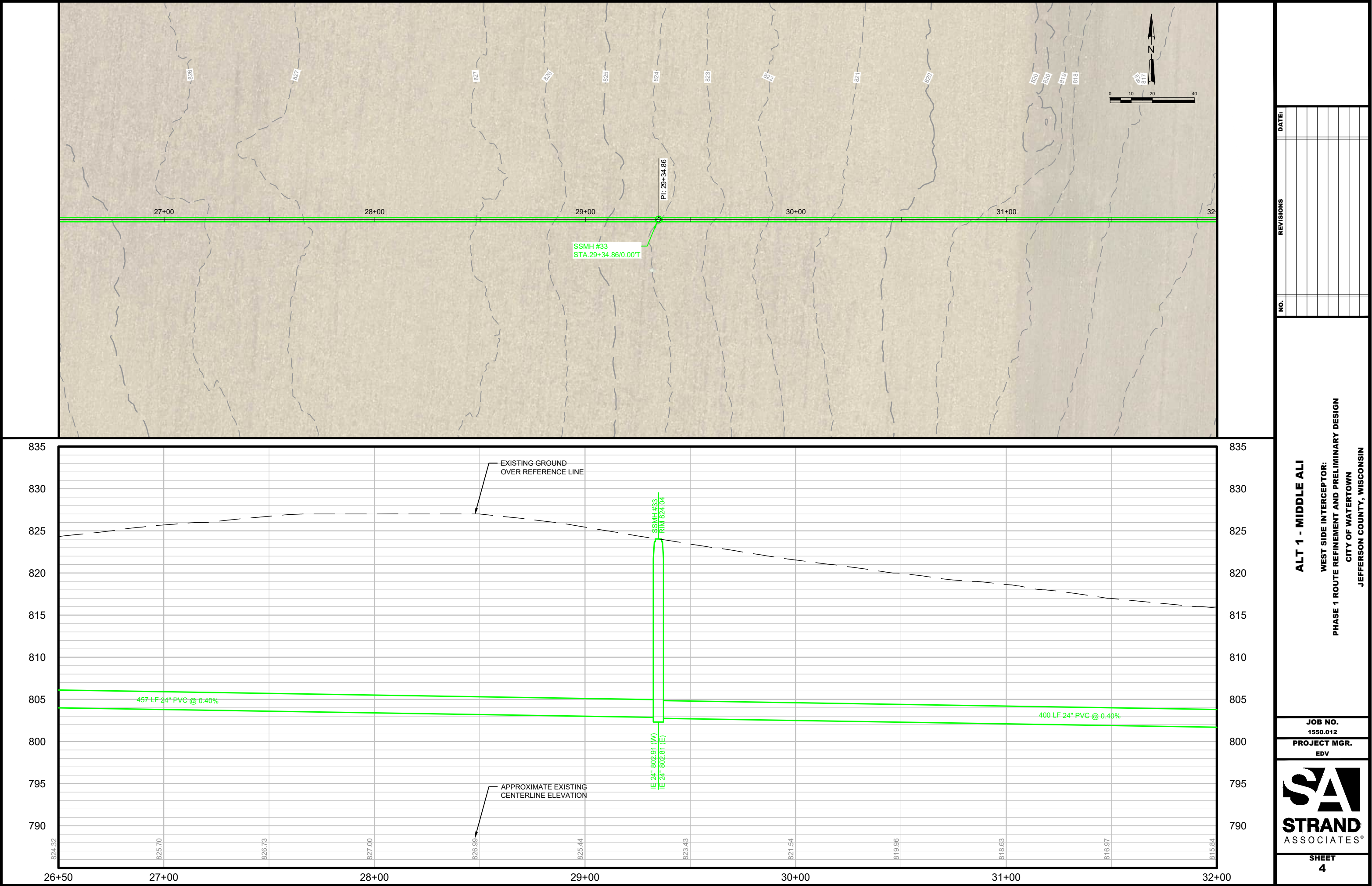
ALTERNATIVE NO. 1 - MIDDLE ALIGNMENT

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JEFFERSON COUNTY, WISCONSIN



FIGURE 2
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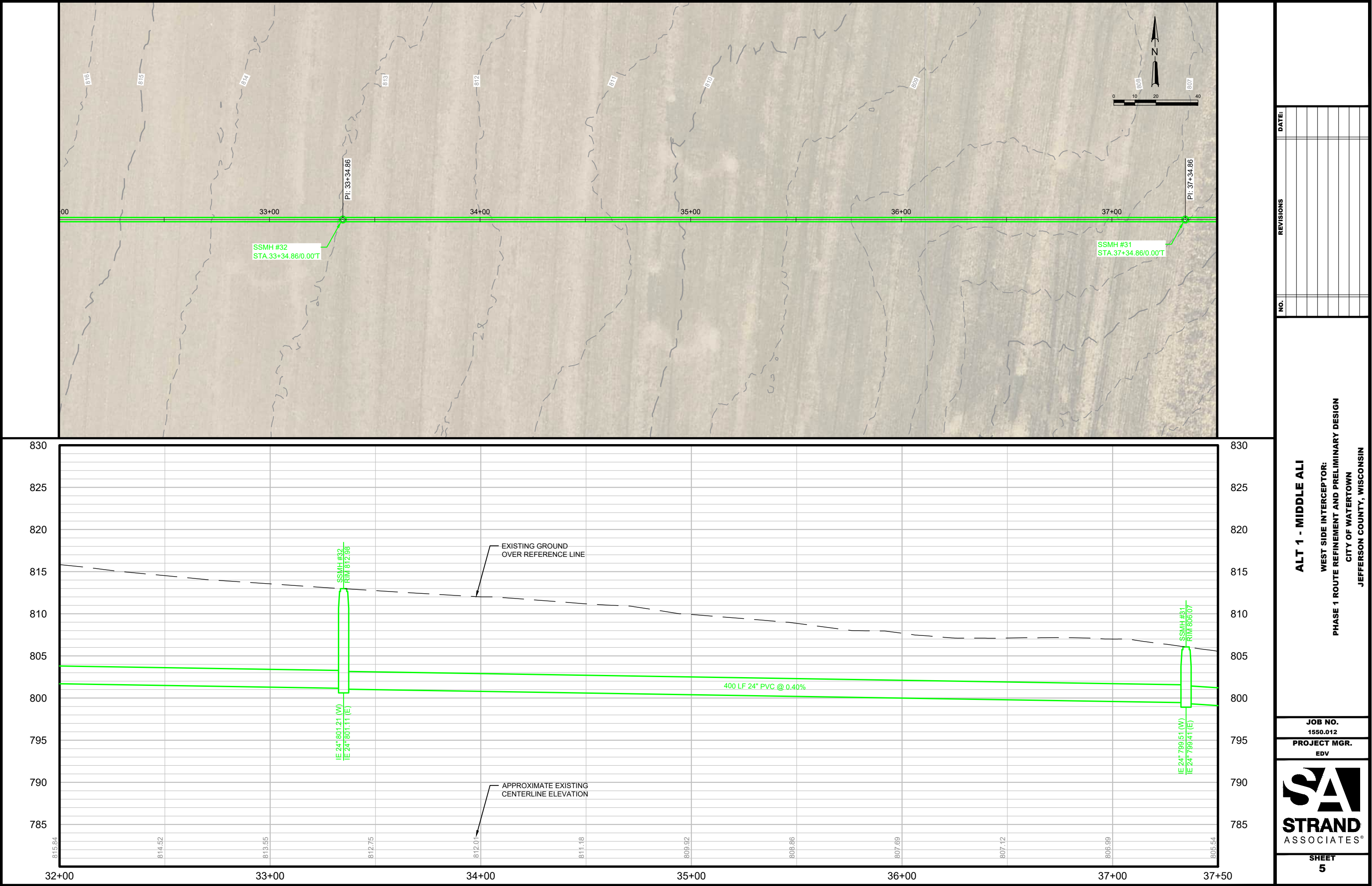
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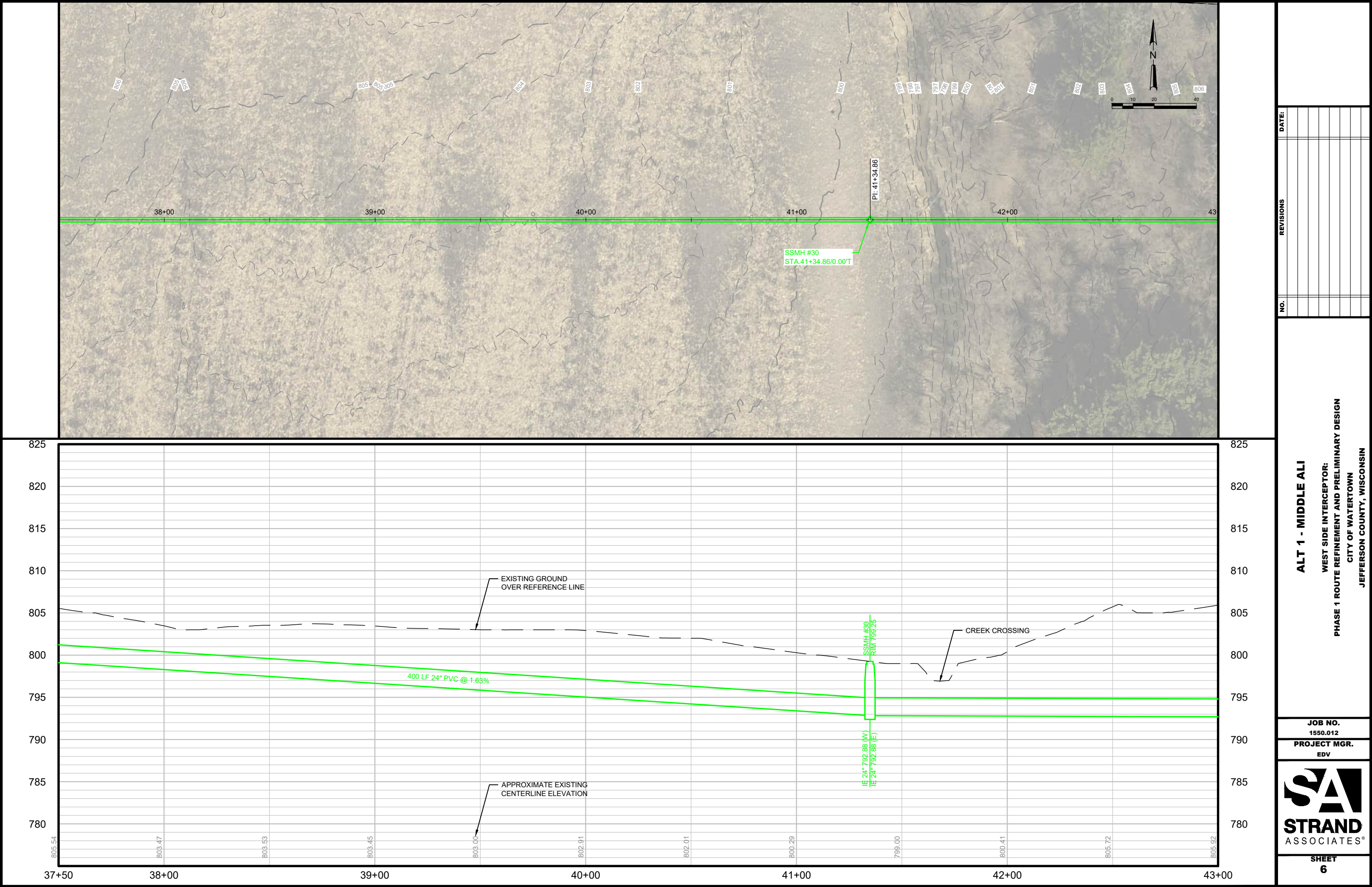
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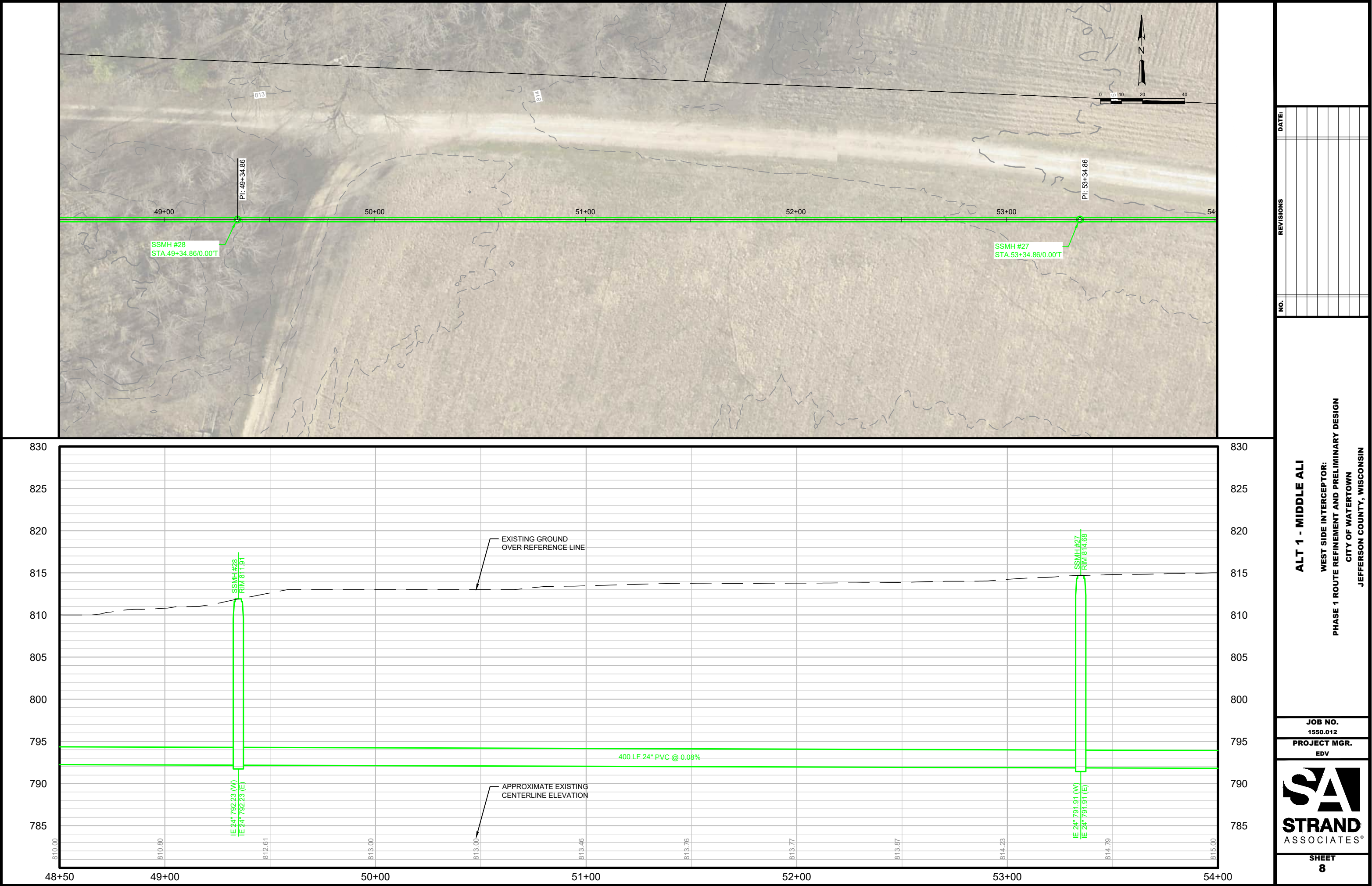
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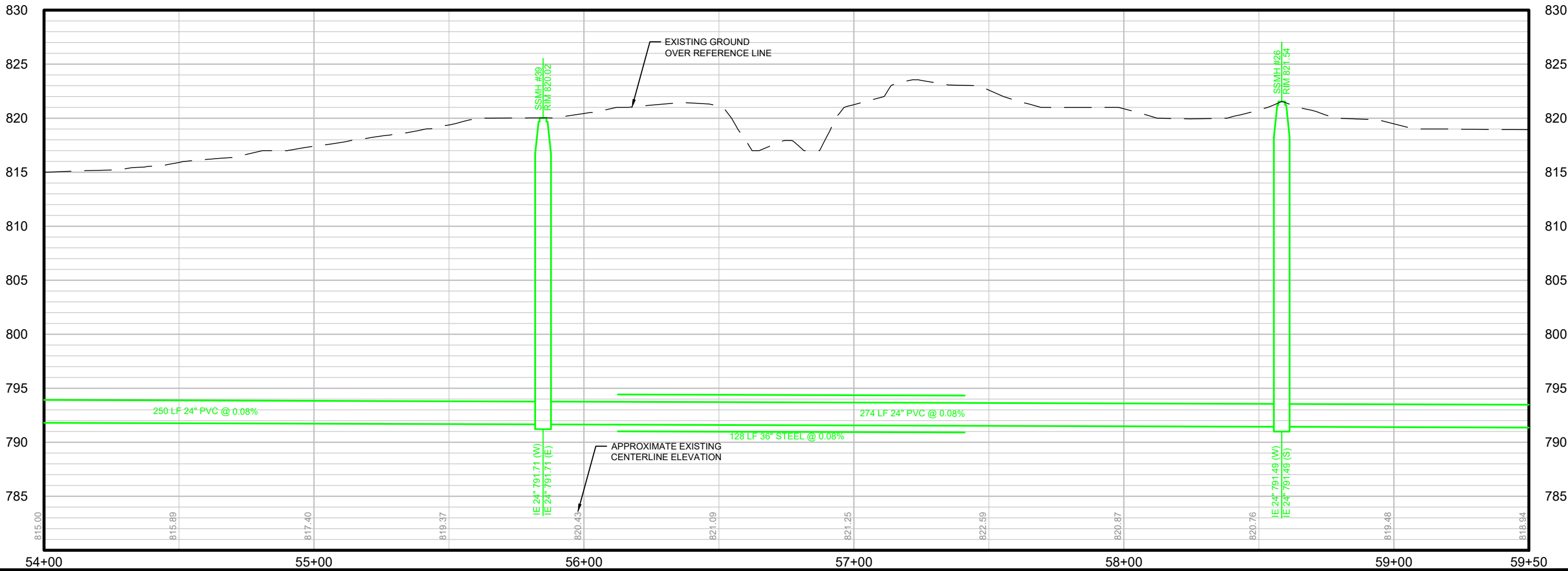
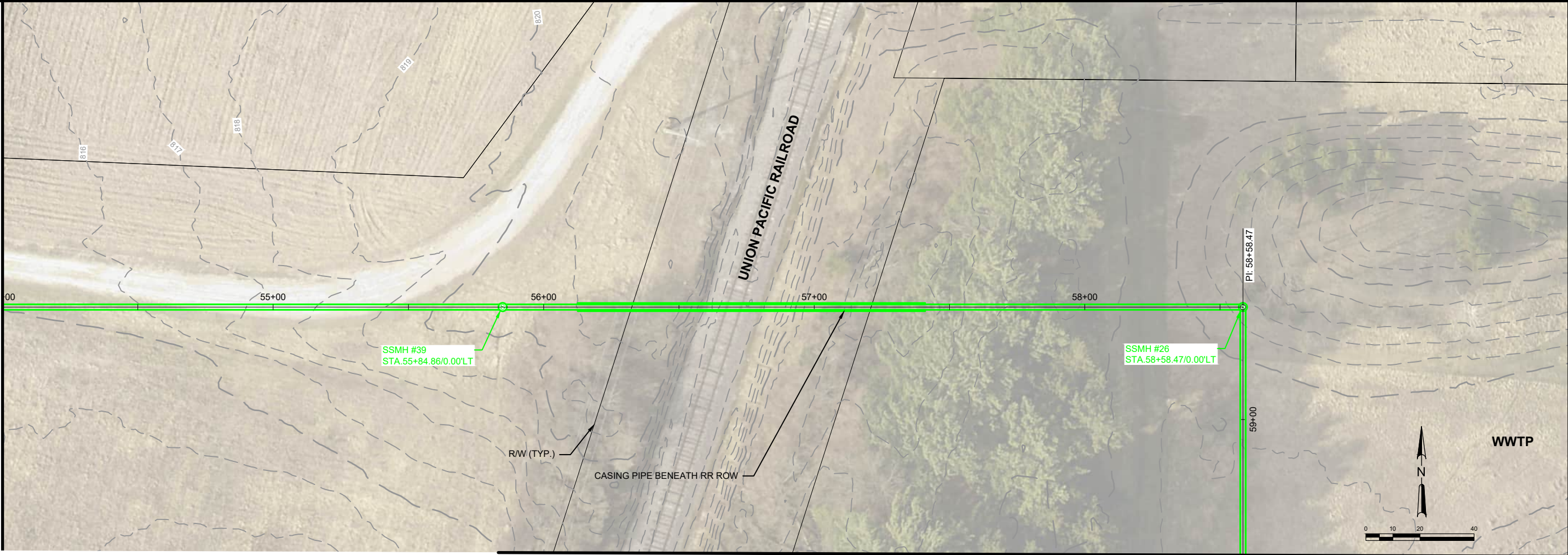
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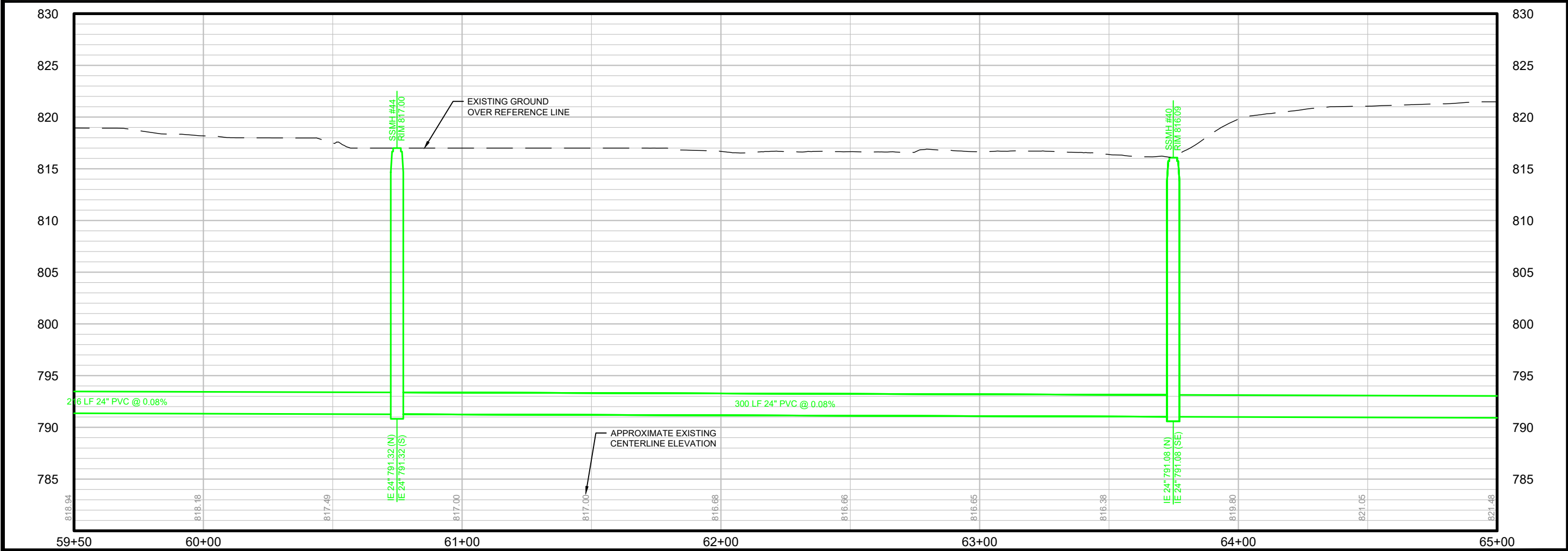
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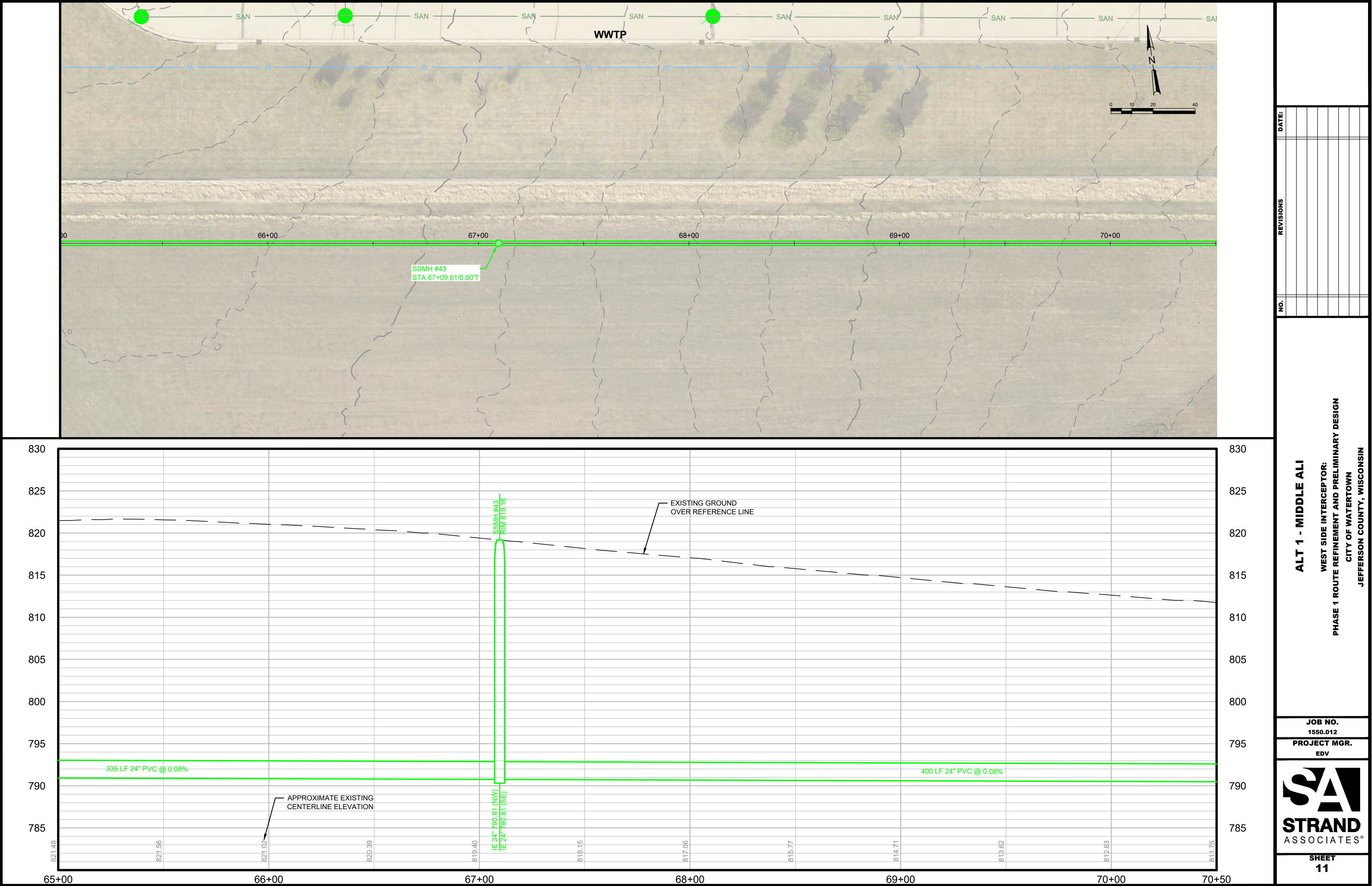


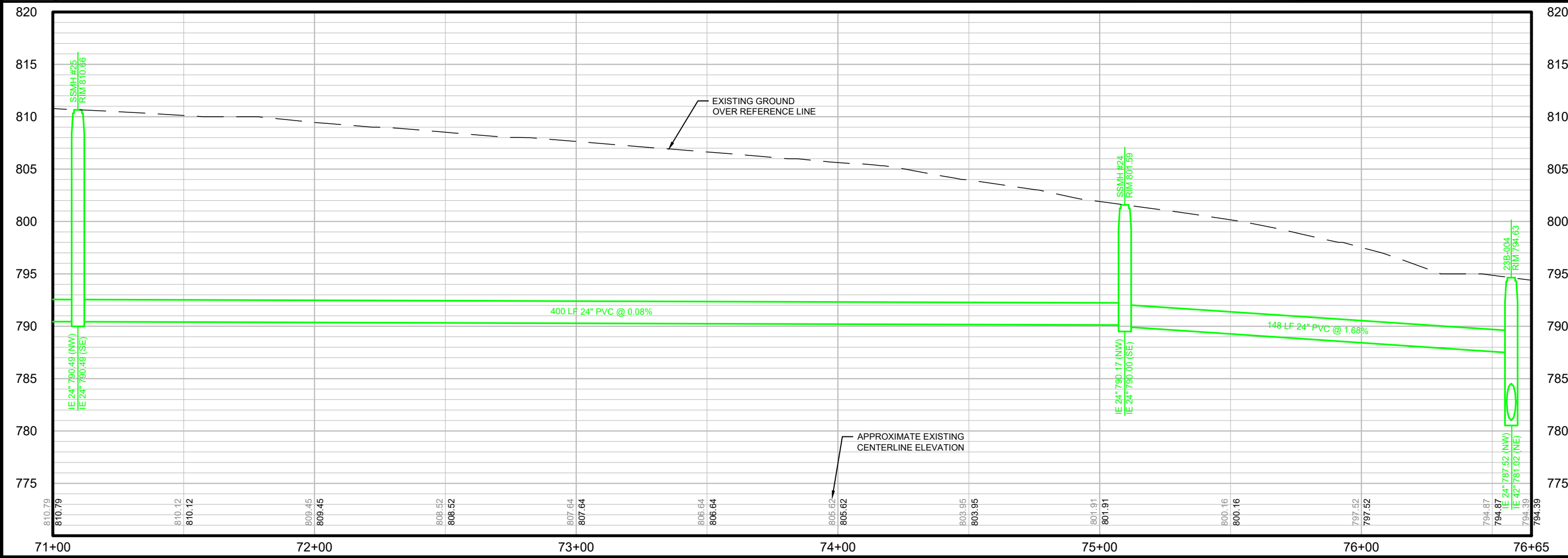
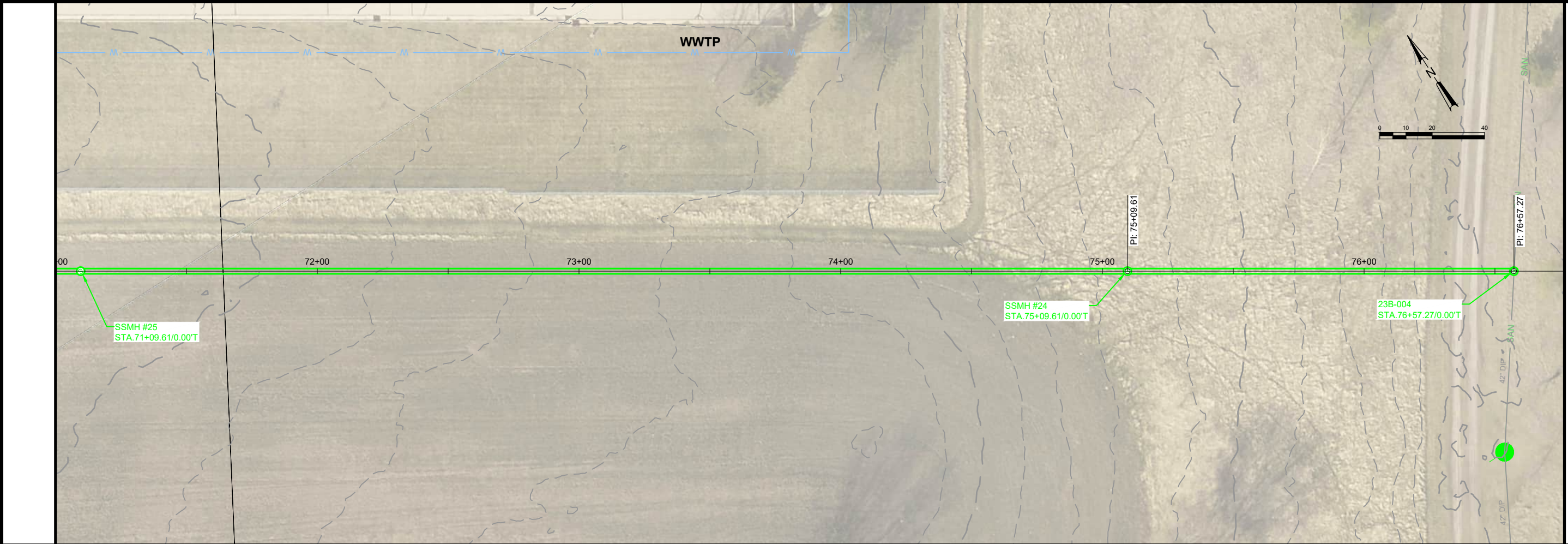
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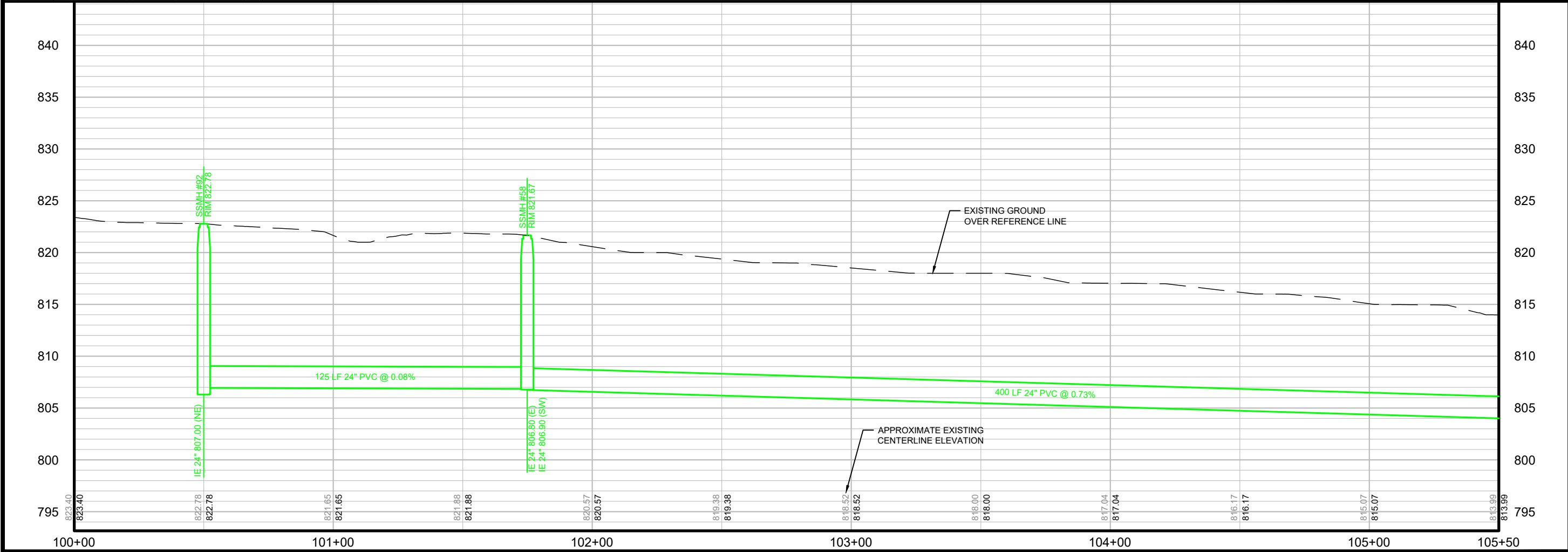
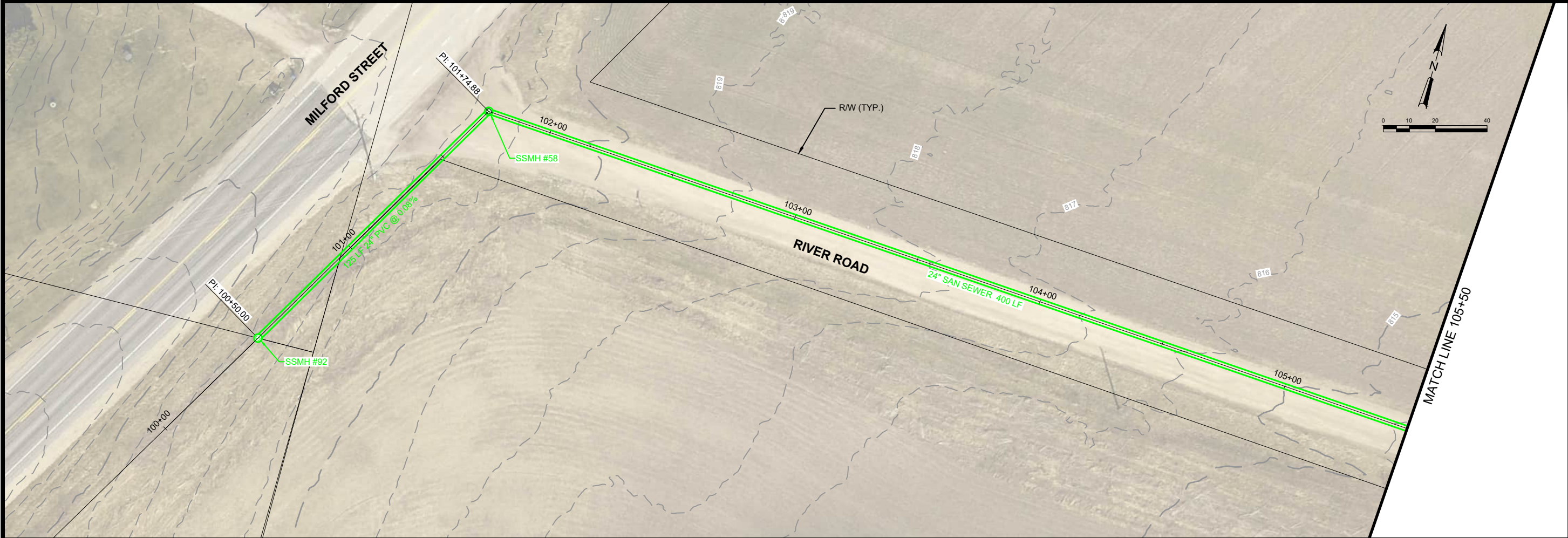
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ENCLOSURE B
ALTERNATIVE NO. 2 OVERVIEW MAP AND PLAN AND PROFILE SHEETS



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ALT 2 - SOUTH ALI_PP_1

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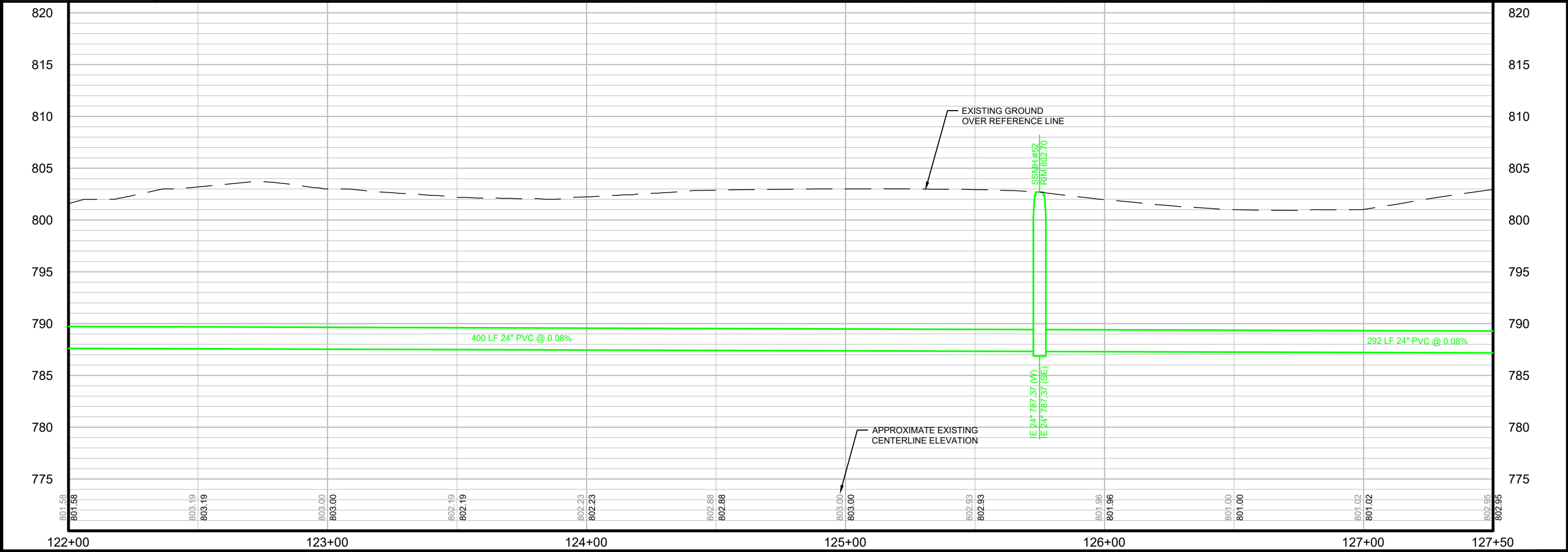
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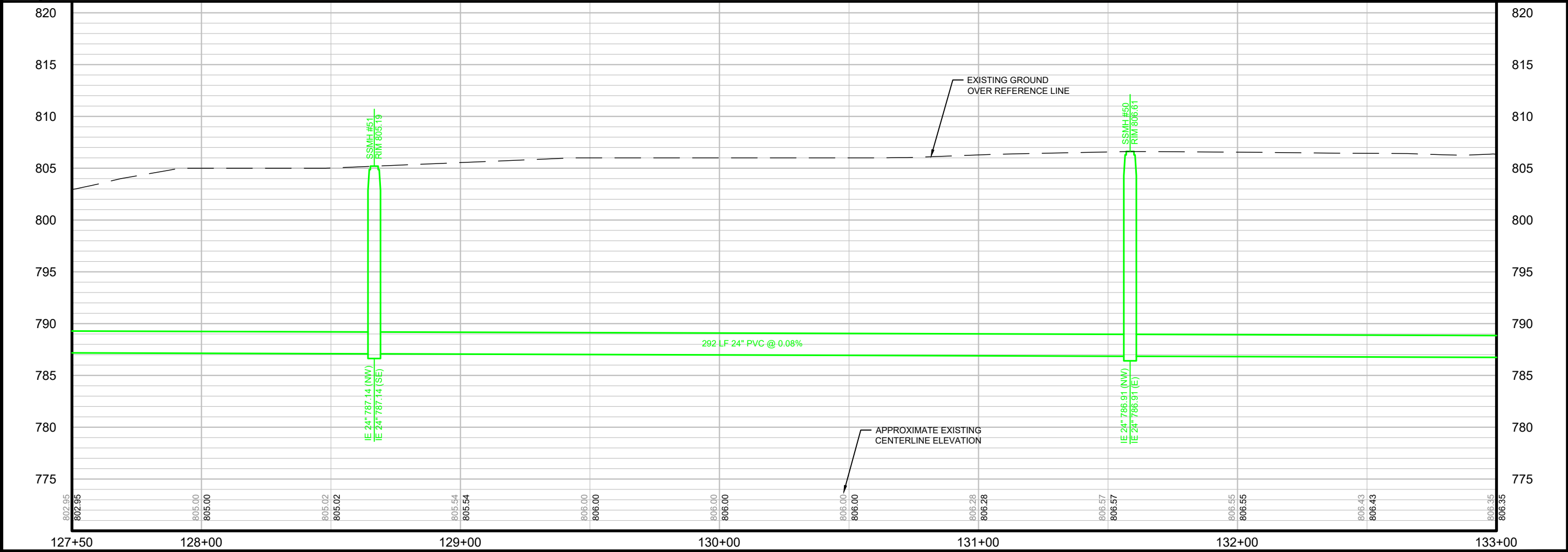
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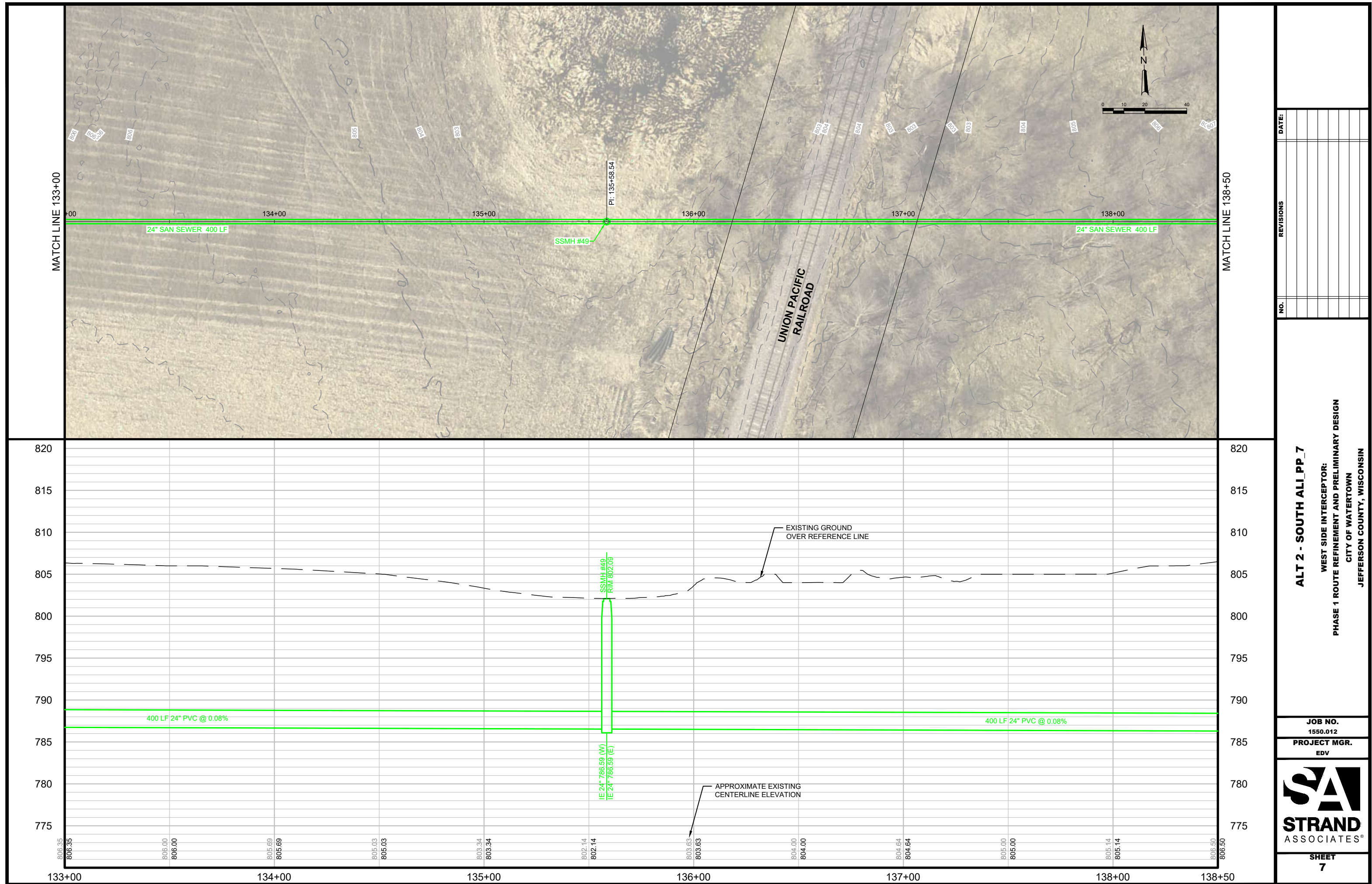
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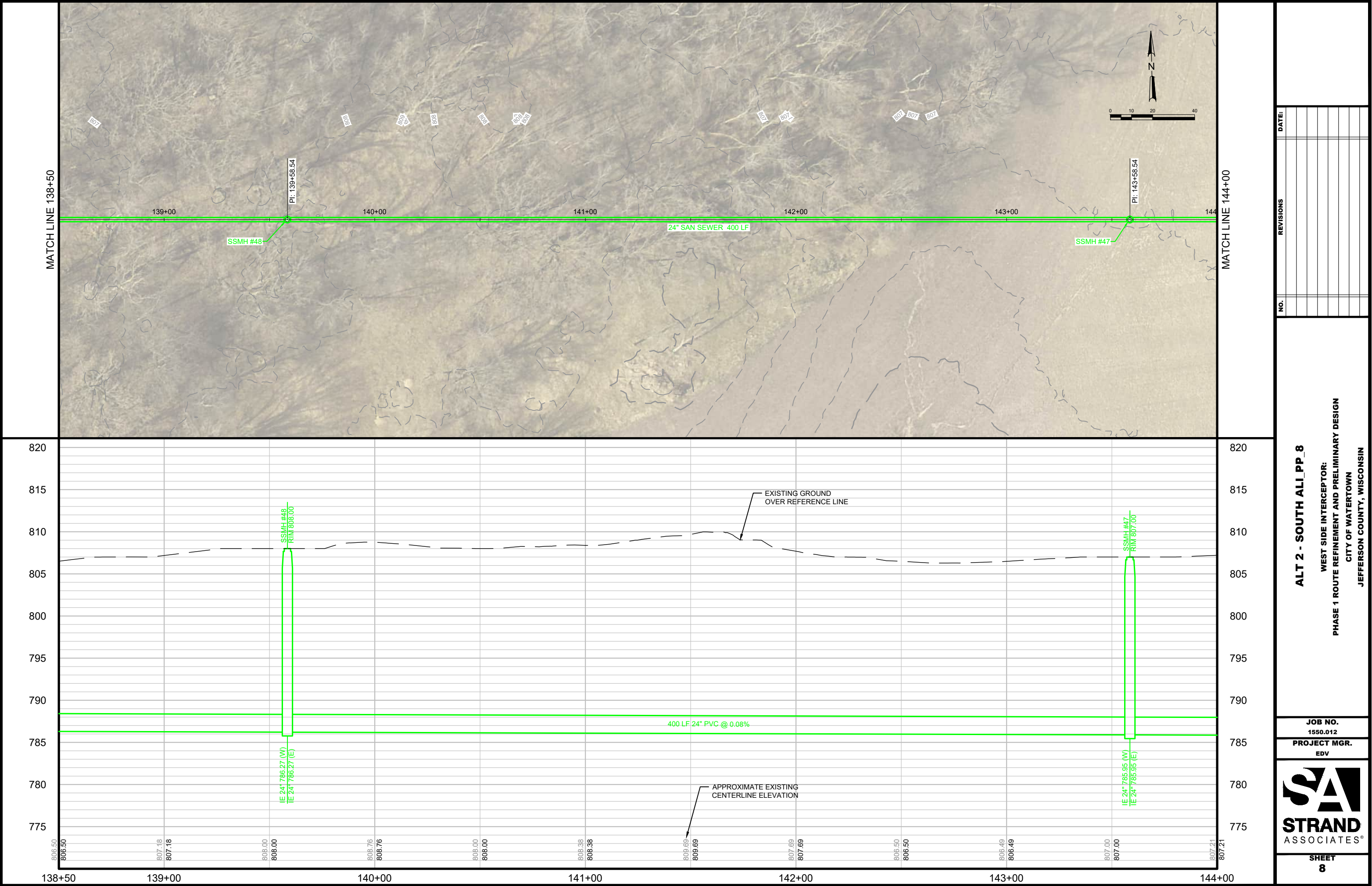
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ALT 2 - SOUTH ALI_PP_8

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ENCLOSURE C
ALTERNATIVE NO. 3 OVERVIEW MAP AND PLAN AND PROFILE SHEETS

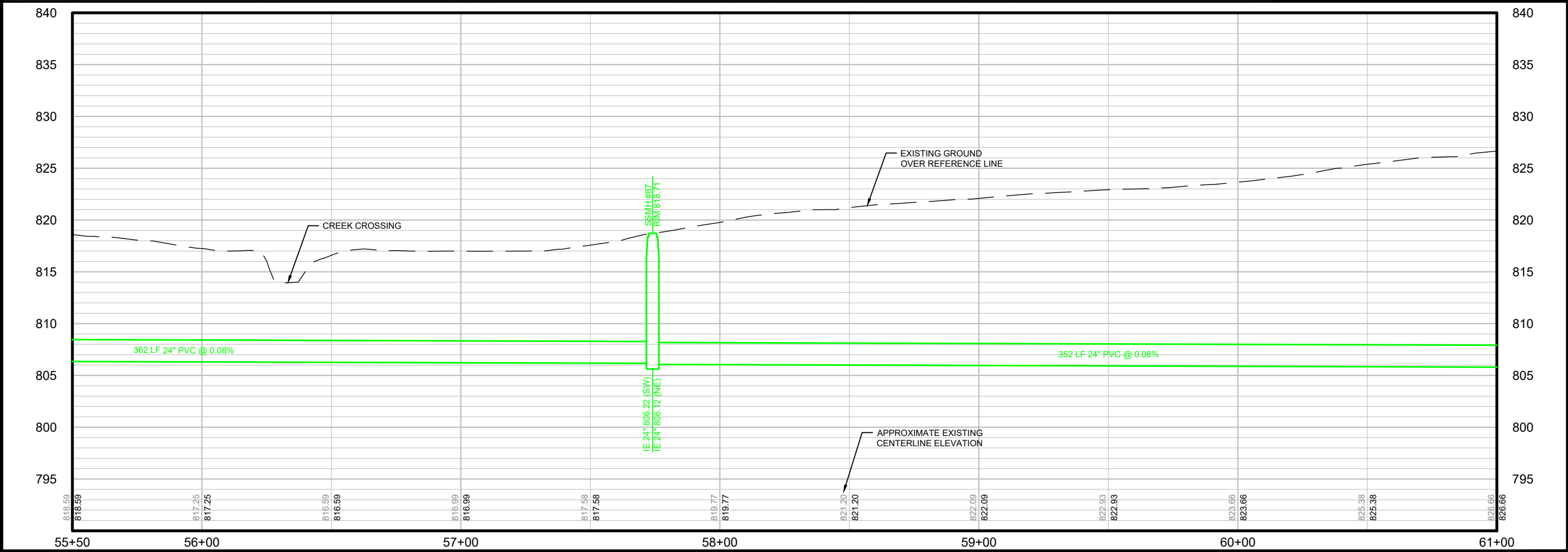
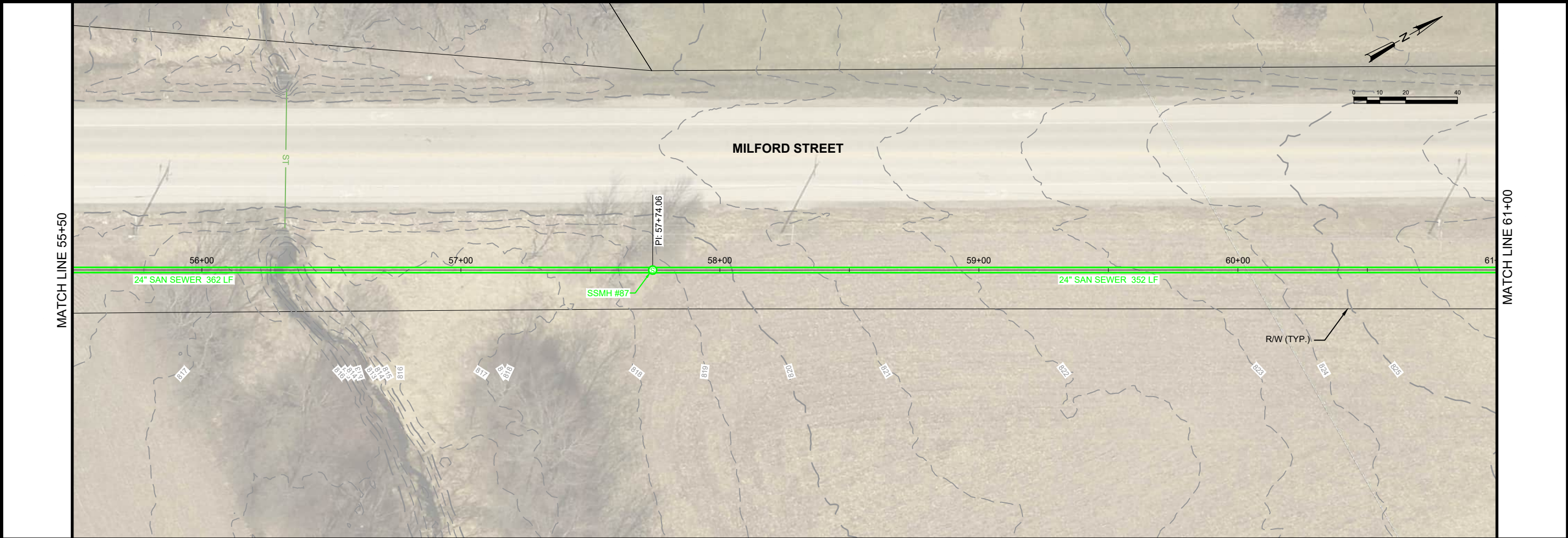


ALTERNATIVE NO. 3 - NORTH ALIGNMENT

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FIGURE 4
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ALT 3 - NORTH ALI_PP_2

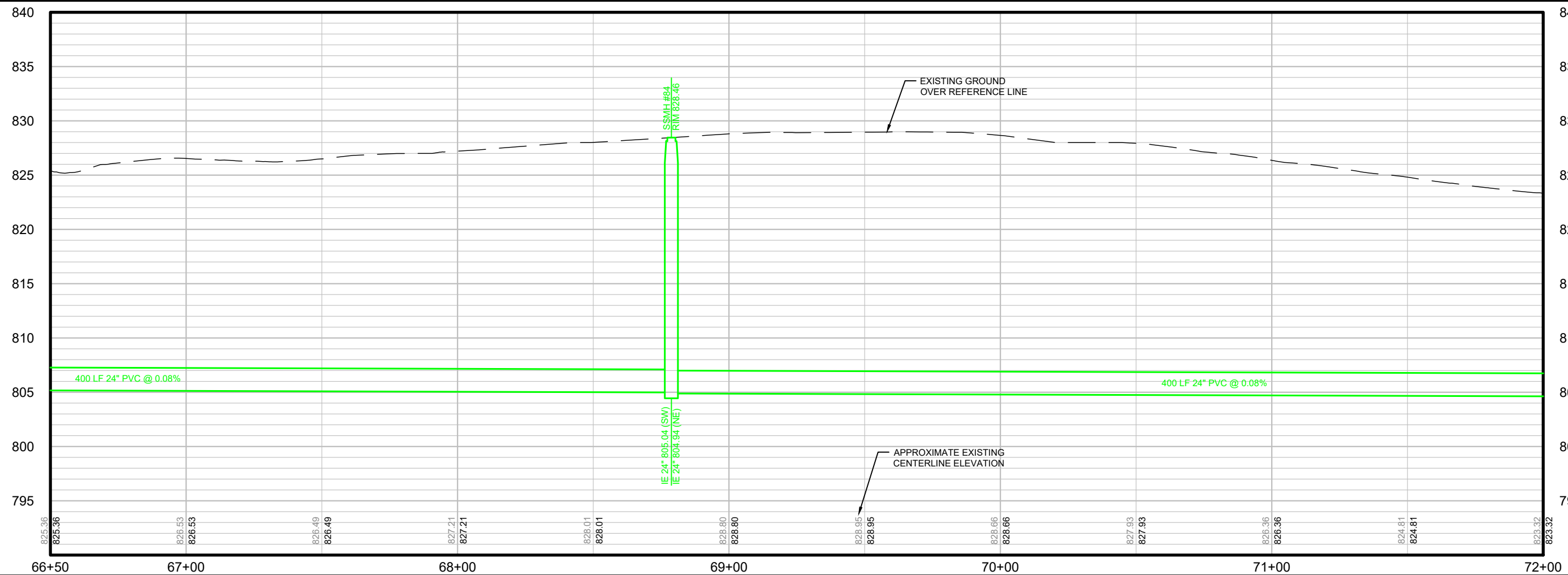
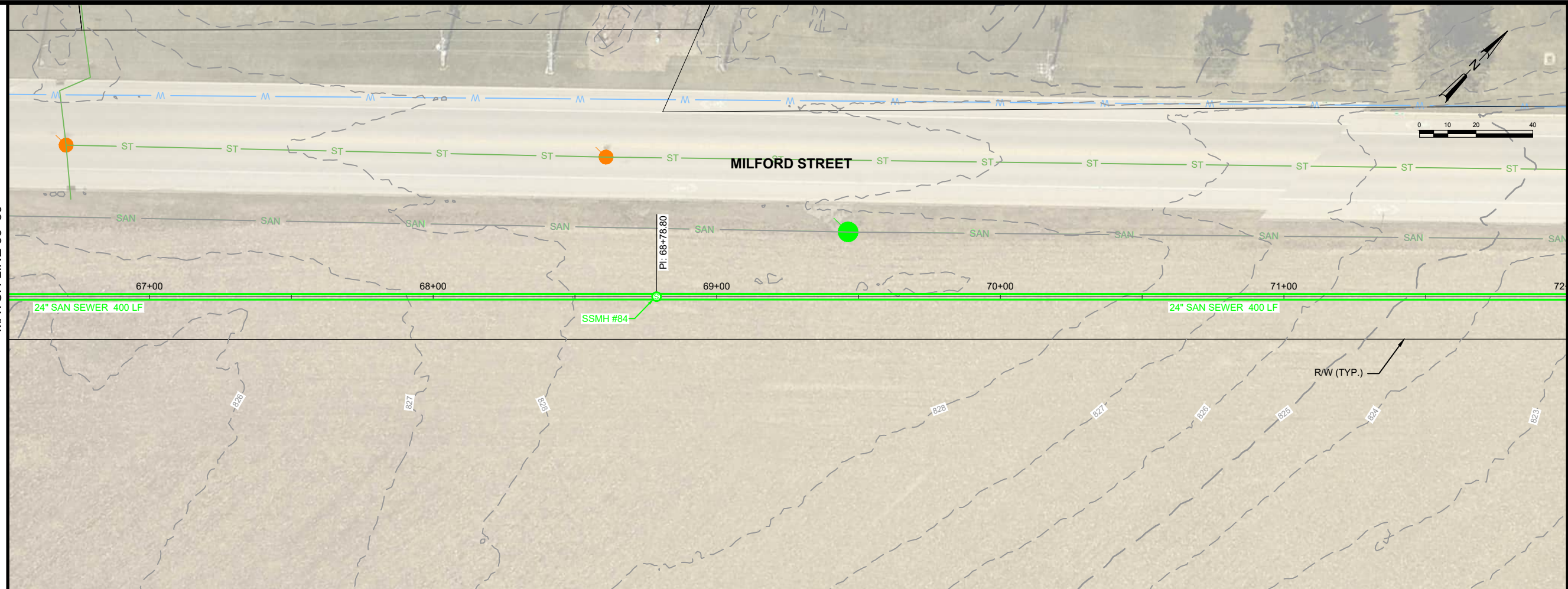
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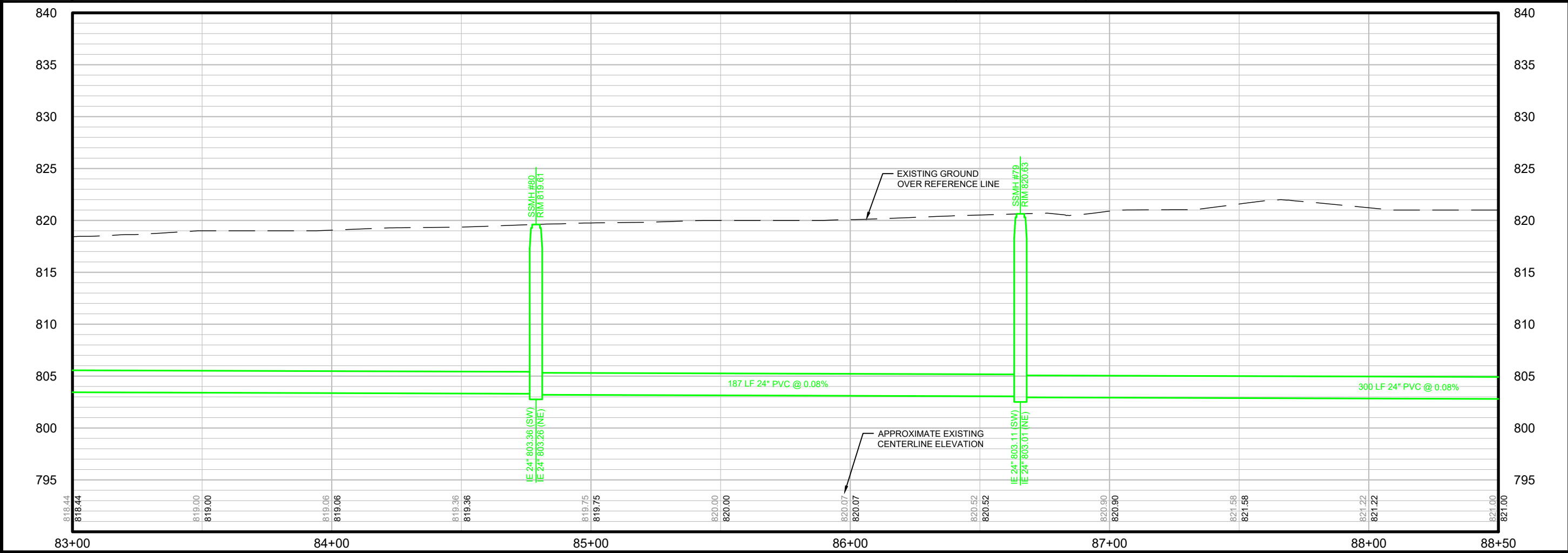
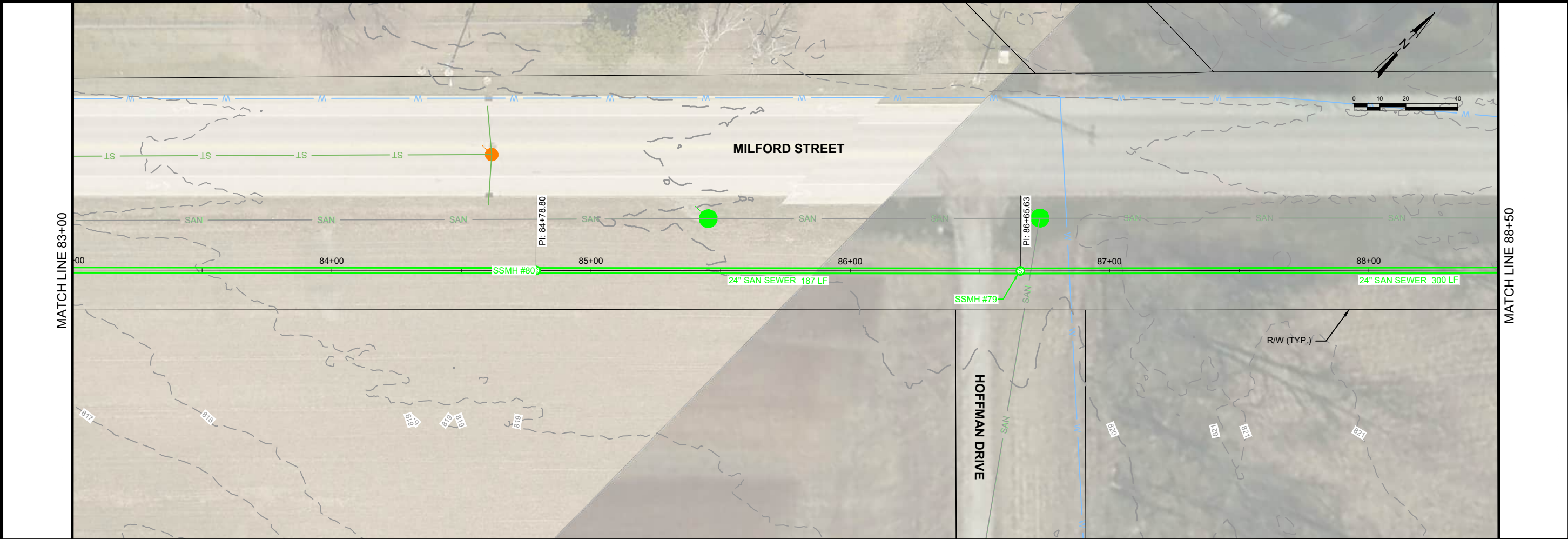
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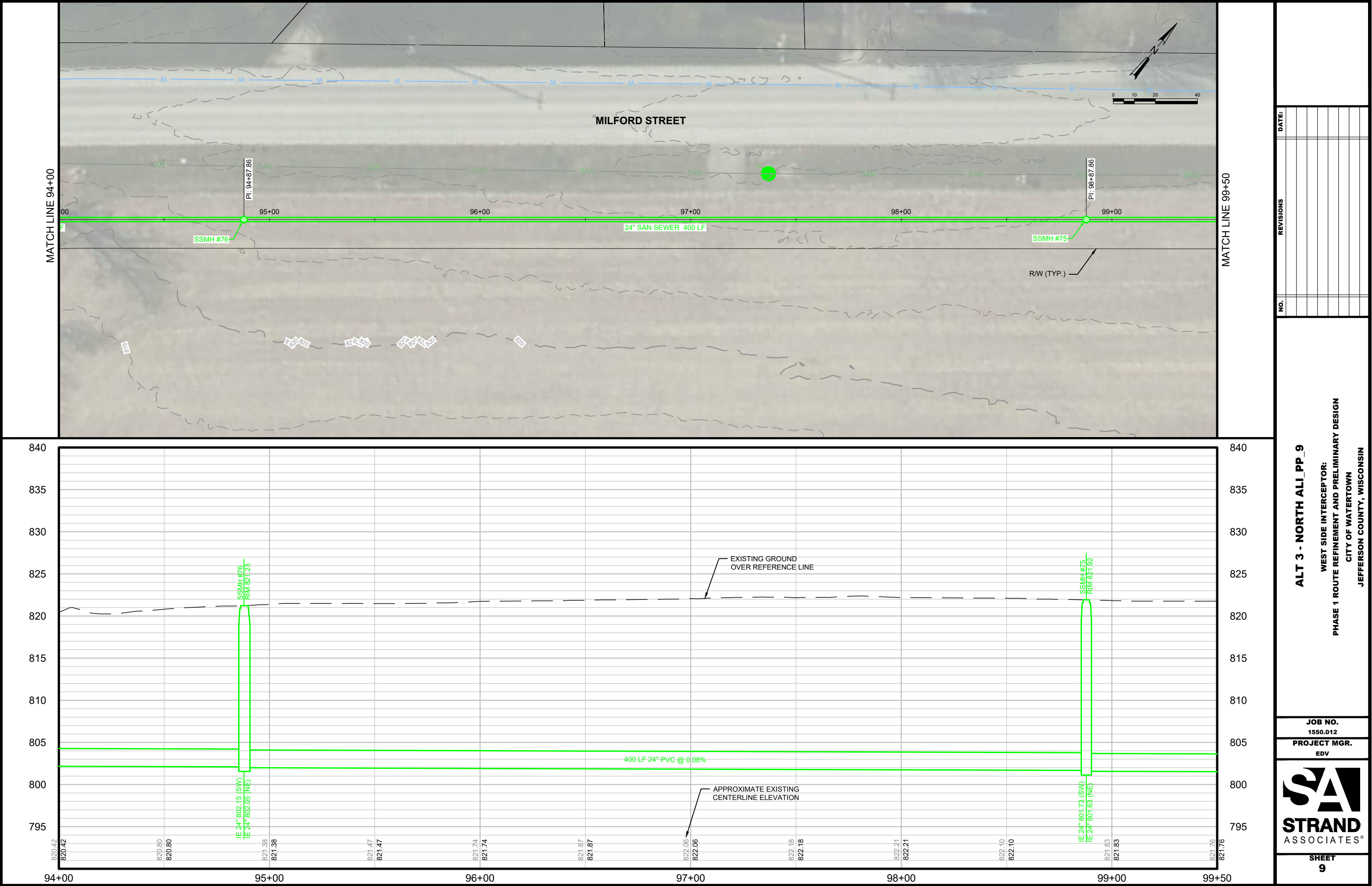
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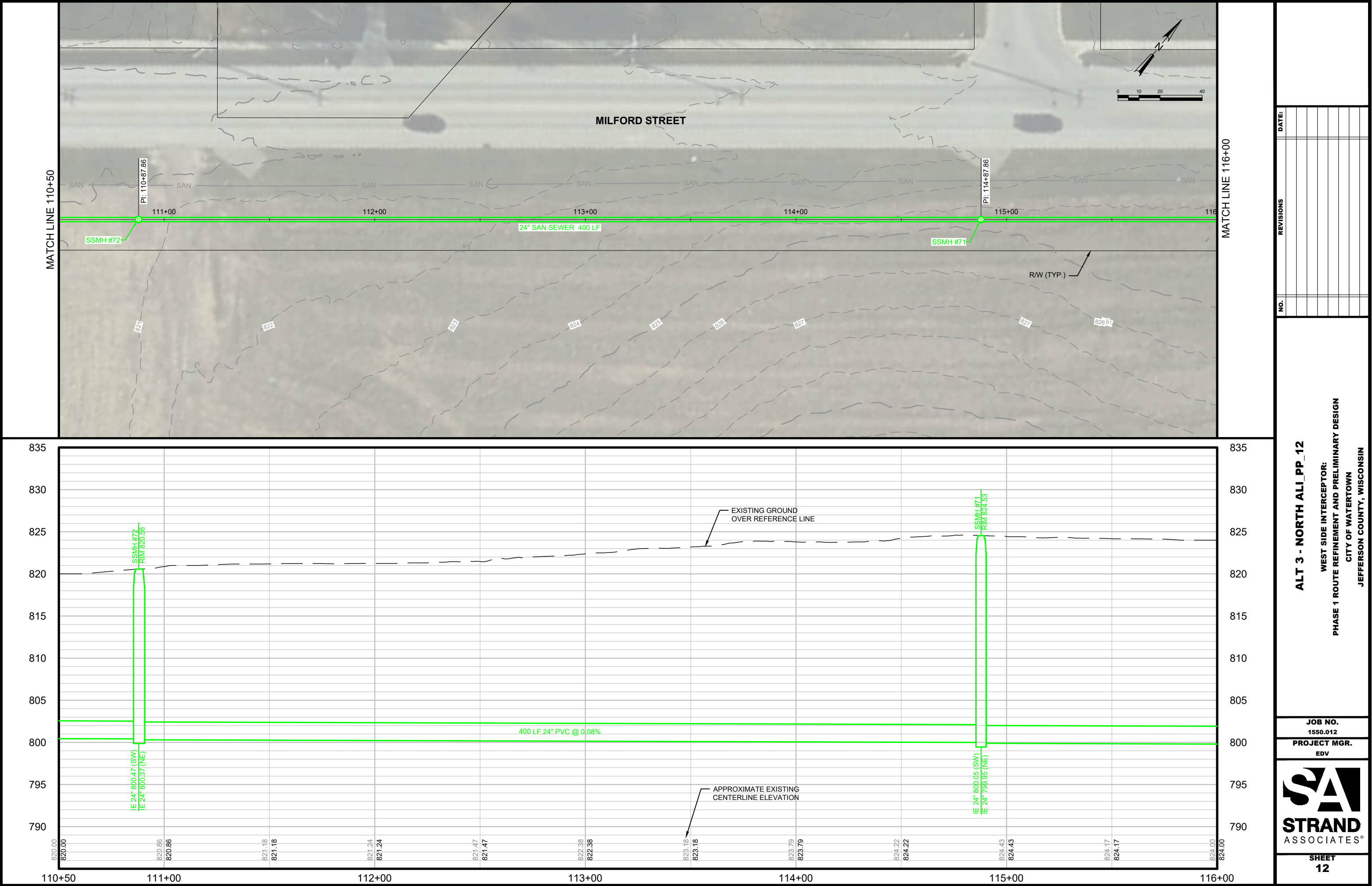
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