

APPENDIX E

Wetland Impact Assessment and Two-Part Finding

Wetland Impact Assessment & Two Part Finding Form

Project Description

S.P. Number: 2506-83

County: Goodhue

Project Name: Trunk Highway 52

Watershed: Cannon River (#39) and Zumbro
River (#41)

Overview: Total Wetland Impacts

This environmental document addresses permanent wetlands impacts. Permanent wetland impacts result in a loss in the quantity, quality or biological diversity of a wetland and will not be restored to pre-project conditions and functions within 90 days of the impact occurrence. Temporary wetland impacts will be repaired, rehabilitated or restored to existing conditions within 90 days of the impact occurrence. The regulatory agencies will determine whether an impact to an aquatic resource is permanent or temporary. Temporary impacts will be addressed through the permitting process.

Table 1. Total Permanent Impacts

| | Permanent Impacts (Acres or Square Feet ¹) |
|---|--|
| Wetland basins | 3.148 |
| Ditches with wetlands in the bottom (WCA* and COE*) | 1.880 |
| Ditches with wetlands in the bottom (COE only) | TBD |
| Other Aquatic Resources | 0.182 |
| *Corps of Engineers "Wetland Conservation Act | |

Location of Wetlands in Project Area

MnDOT's District 6 and Sambatek conducted a Level 1 Wetland Delineation of the project area. Project area maps are provided in Appendix A for location of the project. The following total wetland basins, ditches with wetlands in the bottom and other aquatic resources (lakes, rivers, streams, etc.) are located within the project area (the acreages are the full basin, not just the area within the MnDOT Right of Way).

Table 2. Aquatic Resource Overview

| | Total Areas (Acres or Square Feet ¹) |
|---|---|
| Wetland basins | 8.543 |
| Ditches with wetlands in the bottom (WCA and COE) | 4.033 |
| Ditches with wetlands in the bottom (COE only) | TBD |
| Other Aquatic Resources | TBD |

A Level 1 Wetland Delineation, identifying the wetland and other aquatic resource boundaries, has been completed **and field reviewed for the project corridor** (see Appendix A for Project Location Map). A Level 1 Wetland Delineation uses aerial photos, maps of the project area, etc. to define conservative wetland and other aquatic resource boundaries. The sources used for this Level 1 Wetland Delineation are listed below:

- National Wetlands Inventory (NWI) mapping
- DNR Public Water Inventory (PWI) mapping
- DNR Minnesota Land Cover Classification System (MLCCS) mapping
- County Soil Survey mapping
- Floodplain Mapping
- USGS Topographic Mapping¹
- MnDOT Video Road Log (2012)
- Current Aerial Photos
- Historic Aerial Photos

A Level 2 Delineation **has been completed** for Wetlands #1- #30, which are wetlands with proposed permanent impacts. A Level 2 Delineation is based on a field survey of vegetation, soil, and hydrology characteristics, following procedures described in the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Technical Report Y-87-1, 1987) and in accordance with the methods identified in the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest or Northcentral and Northeast Regions* (Interim Regional Supplements) as required by both the Minnesota Wetland Conservation Act and Section 404 of the Clean Water Act.

PART 1: Avoidance Alternatives

No-Build Alternative

This alternative would avoid all wetland impacts (except those due to routine maintenance), but would fail to meet the project purpose and need. It was therefore rejected from further consideration.

¹ Impacts less than 0.01 acre should be reported in square feet. Impacts greater than 0.01 acre should be reported as acres and rounded to the nearest 0.01 acre.

Alternatives Considered

It is not feasible to completely avoid all wetland impacts. The Highway 52 Interregional Corridor Management Plan documents the study process and key outcomes of the Highway 52 alternative study. The preferred alternative include strategic improvements to address key safety improvements and develop a fully access controlled, high mobility freeway facility. The safety improvements will be achieved by implementing appropriate access control and includes a recommendation for a new interchange, at-grade intersection closures, and local backage road connections and extensions needed due to highway access modifications.

PART 2: Minimization Measures

It was not feasible to completely avoid all wetland impacts resulting from this trunk highway improvement. Wetland impacts that are unavoidable have been minimized to the extent practicable without compromising safety. The project is planned to be reconstructed with the same alignment, which makes avoiding nearby wetlands with geometric changes not possible. The following design measures were utilized to minimize these impacts.

- *Utilizing standard erosion control methods as specified in the DNR Public Waters General Permit Best Practices Manual, to prevent sedimentation within wetlands.*
- *Utilizing Broken-back fore-slopes, which steepen to 3:1 30 feet from the shoulder.*
- *Utilizing guardrail if necessary and meets design standards.*
- *Constructing ditches so that wetland outlets are not lowered.*
- *Ensuring that the location or design does not significantly reduce the contributing watershed of a wetland, resulting in changes to the hydrologic regime.*
- *Designing crossings at public waters for fish passage*

Much of the wetland basins and wet ditch areas in the median occur because of the presence of the north and southbound inside embankments. After reseeding and revegetating these features are likely to reoccupy the area.

In addition, the project includes the construction of maximized outside ditch and profile changes to reduce known blowing snow and ice hazards in the project corridor. These ditches will impact wetland areas, however the widening and cutting back of the backslope will allow native wetland vegetation to repopulate a larger wetted area. MnDOT is planning to seed the backslopes with native vegetation and to only mow the inslope and ditch bottoms. This will improve erosion potential from the upstream farm fields and lead to improved quality wet ditches.

Table 3. Wetlands within the Project Area (Level 2 Wetland Delineation)

| Basin ID | Section, Township, Range | Wetland Type/ Existing Plant Community Type(s) | Basin Size (Acres) | Permitting Jurisdiction (COE, DNR, WCA) | Size of Permanent Impact of the Preferred Alternative (Acres or Square Feet ¹) |
|------------|--------------------------|--|--------------------|---|--|
| Wetland 1 | S31 T112N R17W | 2 / Fresh (Wet) Meadow | 0.269 | WCA & COE | 0.013 |
| Wetland 2 | S6 T111N R17W | 2 / Fresh (Wet) Meadow | 0.047 | WCA & COE | 0.036 |
| Wetland 3 | S22 T111N R17W | 2 / Fresh (Wet) Meadow | 0.076 | WCA & COE | 0.019 |
| Wetland 4 | S27 T111N R17W | 2 / Fresh (Wet) Meadow | 0.055 | WCA & COE | 0.011 |
| Wetland 5 | S35 T111N R17W | 2 / Fresh (Wet) Meadow | 0.077 | WCA & COE | 0 |
| Wetland 6 | S35 T111N R17W | 2 / Fresh (Wet) Meadow | 0.046 | WCA & COE | 0.003 |
| Wetland 7 | S1 T110N R17W | 2 / Fresh (Wet) Meadow | 0.39 | WCA & COE | 0.012 |
| Wetland 8 | S1 T110N R17W | 3 / Shallow Marsh | 0.650 | WCA & COE | 0.65 |
| Wetland 9 | S1 T110N R17W | 2 / Fresh (Wet) Meadow | 0.069 | WCA & COE | 0.027 |
| Wetland 10 | S1 T110N R17W | 3 / Shallow Marsh | 0.238 | WCA & COE | 0.238 |
| Wetland 11 | S1 T110N R17W | 3 / Shallow Marsh | 1.325 | WCA & COE | 0.916 |
| Wetland 12 | S1 T110N R17W | 3 / Shallow Marsh | TBD | WCA & COE | 0 |
| Wetland 13 | S8 T110N R16W | 2 / Fresh (Wet) Meadow | 0.068 | WCA & COE | 0.003 |
| Wetland 14 | S17 T110N R16W | 2 / Fresh (Wet) Meadow | 1.572 | WCA & COE | 0.200 |
| Wetland 15 | S17 T110N R16W | 2 / Fresh (Wet) Meadow | 0.0683 | WCA & COE | 0.003 |
| Wetland 16 | S16 T110N R16W | 2 / Fresh (Wet) Meadow | 0.054 | WCA & COE | 0.004 |
| Wetland 17 | S16 T110N R16W | 2 / Fresh (Wet) Meadow | 0.047 | WCA & COE | 0 |

| | | | | | |
|-------------|----------------|------------------------|--------|---------------------------------|--------------|
| Wetland 18 | S16 T110N R16W | 2 / Fresh (Wet) Meadow | 0.27 | WCA & COE | 0 |
| Wetland 19 | S31 T112N R17W | 2 / Fresh (Wet) Meadow | 1.676 | WCA & COE | 0.783 |
| Wetland 20 | S31 T112N R17W | 2 / Fresh (Wet) Meadow | 0.205 | WCA & COE | 0.078 |
| Wetland 23 | S27 T111N R17W | 2 / Fresh (Wet) Meadow | 0.274 | TBD | 0 |
| Wetland 25 | S17 T110N R16W | 2 / Fresh (Wet) Meadow | 0.174 | TBD | 0.088 |
| Wetland 27 | S17 T110N R16W | 2 / Fresh (Wet) Meadow | 0.1034 | TBD | 0.022 |
| Wetland 28 | S16 T110N R16W | 2 / Fresh (Wet) Meadow | 0.244 | TBD | 0 |
| Wetland 970 | S23 T110N R16W | 2 / Fresh (Wet) Meadow | 0.0161 | TBD | 0.004 |
| Wetland 971 | S23 T110N R16W | 2 / Fresh (Wet) Meadow | 0.038 | TBD | 0.034 |
| Wetland 29 | S23 T110N R16W | 2 / Fresh (Wet) Meadow | 0.013 | TBD | 0.004 |
| Wetland 30 | S23 T110N R16W | 2 / Fresh (Wet) Meadow | 0.478 | TBD | 0 |
| | | | | Total Permanent Impacts: | 3.148 |

Table 4. Ditches with Wetlands in the Bottom in the Project Area (Level 2 Wetland Delineation)

| Ditch ID | Section, Township, Range | Wetland Type/ Existing Plant Community Type(s) | Basin Size (Acres) | Permitting Jurisdiction (COE, DNR, WCA) | Size of Permanent Impact of the Preferred Alternative (Acres or Square Feet ¹⁾) |
|--------------|--------------------------|--|--------------------|---|---|
| Wet Ditch 1 | S31 T112N R17W | - | 0.196 | TBD | 0.196 |
| Wet Ditch 2 | S6 T111N R17W | - | 0.138 | TBD | 0.024 |
| Wet Ditch 3 | S8 T111N R17W | - | 0.021 | TBD | 0.001 |
| Wet Ditch 4 | S17 T111N R17W | - | 0.039 | TBD | 0.039 |
| Wet Ditch 5 | S17 T111N R17W | - | 0.016 | TBD | 0.013 |
| Wet Ditch 6 | S17 T111N R17W | - | 0.064 | TBD | 0.064 |
| Wet Ditch 7 | S22 T111N R17W | - | TBD | TBD | |
| Wet Ditch 8 | S27 T111N R17W | - | 0.023 | TBD | 0.018 |
| Wet Ditch 9 | S1 T110N R17W | - | 0.07 | TBD | 0.02 |
| Wet Ditch 10 | S1 T110N R17W | - | 0.319 | TBD | 0.022 |
| Wet Ditch 11 | S1 T110N R17W | - | 0.368 | TBD | 0.108 |
| Wet Ditch 12 | S1 T110N R17W | - | 0.056 | TBD | 0.056 |
| Wet Ditch 13 | S1 T110N R17W | - | 0.136 | TBD | 0.136 |
| Wet Ditch 14 | S1 T110N R17W | - | 0.059 | TBD | 0.059 |
| Wet Ditch 15 | S6 T110N R16W | - | 0.008 | TBD | 0.001 |
| Wet Ditch 16 | S6 T110N R16W | - | 0.017 | TBD | 0.002 |

| | | | | | |
|--------------|----------------|---|-------|-----|-------|
| Wet Ditch 17 | S7 T110N R16W | - | 0.050 | TBD | 0.050 |
| Wet Ditch 18 | S7 T110N R16W | - | 0.041 | TBD | 0.022 |
| Wet Ditch 19 | S7 T110N R16W | - | 0.043 | TBD | 0.043 |
| Wet Ditch 20 | S7 T110N R16W | - | 0.033 | TBD | 0 |
| Wet Ditch 21 | S8 T110N R16W | - | 0.131 | TBD | 0.020 |
| Wet Ditch 22 | S8 T110N R16W | - | 0.005 | TBD | 0.001 |
| Wet Ditch 23 | S8 T110N R16W | - | 0.016 | TBD | 0.001 |
| Wet Ditch 24 | S17 T110N R16W | - | 0.023 | TBD | 0.023 |
| Wet Ditch 25 | S16 T110N R16W | - | 0.143 | TBD | 0.143 |
| Wet Ditch 26 | S16 T110N R16W | - | 0.282 | TBD | 0.282 |
| Wet Ditch 27 | S16 T110N R16W | - | 0.031 | TBD | 0.031 |
| Wet Ditch 28 | S16 T110N R16W | - | 0.048 | TBD | 0.048 |
| Wet Ditch 29 | S16 T110N R16W | - | 0.004 | TBD | 0.004 |
| Wet Ditch 30 | S16 T110N R16W | - | 0.006 | TBD | 0.006 |
| Wet Ditch 31 | S36 T110N R16W | - | 0.028 | TBD | 0 |
| Wet Ditch 32 | S36 T110N R16W | - | 0.019 | TBD | 0.003 |
| Wet Ditch 33 | S7 T109N R15W | - | 0.011 | TBD | 0.011 |
| Wet Ditch 34 | S7 T109N R15W | - | 0.009 | TBD | 0.009 |
| Wet Ditch 35 | S7 T109N R15W | - | 0.013 | TBD | 0.013 |
| Wet Ditch 36 | S7 T109N R15W | - | 0.026 | TBD | 0.017 |

| | | | | | |
|--------------|----------------|---|-------|---------------------------------|--------------|
| Wet Ditch 37 | S7 T109N R15W | - | 0.014 | TBD | 0 |
| Wet Ditch 38 | S31 T112N R17W | - | 0.609 | TBD | 0 |
| Wet Ditch 39 | S8 T111N R17W | - | 0.015 | TBD | 0.015 |
| Wet Ditch 40 | S27 T111N R17W | - | 0.037 | TBD | 0.036 |
| Wet Ditch 41 | S27 T111N R17W | - | 0.048 | TBD | 0.022 |
| Wet Ditch 42 | S36 T111N R17W | - | 0.031 | TBD | 0.001 |
| Wet Ditch 43 | S21 T111N R17W | - | 0.007 | TBD | 0 |
| Wet Ditch 44 | S1 T110N R17W | - | 0.048 | TBD | 0.03 |
| Wet Ditch 45 | S7 T110N R16W | - | 0.371 | TBD | 0 |
| Wet Ditch 47 | S22 T110N R16W | - | 0.017 | TBD | 0.017 |
| Wet Ditch 49 | S23 T110N R16W | - | 0.025 | TBD | 0.025 |
| Wet Ditch 50 | S23 T110N R16W | - | 0.017 | TBD | 0 |
| Wet Ditch 51 | S23 T110N R16W | - | 0.049 | TBD | 0 |
| Wet Ditch 52 | S23 T110N R16W | - | 0.248 | TBD | 0.248 |
| Wet Ditch 53 | S23 T110N R16W | - | 0.005 | TBD | 0 |
| | | | | Total Permanent Impacts: | 1.880 |

Table 5. Other Aquatic Resources within the Project Area (Level 2 Wetland Delineation)

| Resource ID | Section, Township, Range | Wetland Type/ Existing Plant Community Type(s) | Basin Size (Acres) | Permitting Jurisdiction (COE, DNR, WCA) | Size of Permanent Impact of the Preferred Alternative (Acres or Square Feet ¹) |
|-------------|--------------------------|--|--------------------|---|--|
| OAR 1 | S6 T111N R17W | Butler Creek | TBD | DNR | 0.068 |
| OAR 2 | S22 T111N R17W | stormwater detention pond | - | - | 0 |
| OAR 3 | S1 T110N R17W | Belle Creek | TBD | DNR | 0.034 |
| OAR 4 | S8 T110N R16W | channel | - | - | 0 |
| OAR 5 | S16 T111N R17W | Butler Creek | TBD | DNR | 0.034 |
| OAR 6 | S23 T110N R16W | Zumbro River | TBD | DNR | -0.012 |
| OAR 8 | S1 T110N R17W | Drum Creek | TBD | DNR | 0.017 |
| OAR 9 | S16 T110N R16W | Zumbro River | TBD | DNR | 0.007 |
| OAR 10 | S23 T110N R16W | Zumbro River | TBD | TBD | 0.034 |
| | | | | Total Permanent Impacts: | 0.182 |

The location of each wetland impact is illustrated on the attached exhibits. **See attached wetland impact figures.**

COMPENSATION (REPLACEMENT/ENHANCEMENTS)

Applications for wetland permits will be made to the appropriate agencies with wetland jurisdiction. Expected wetland mitigation needs are refined on a continual basis during early stages of project design, and therefore subject to change. The preferred method of wetland replacement is to use established, federally and state approved wetland bank credits. Efforts will be made to replace wetland losses within the bank service area of the wetland impact. The minimum wetland replacement ratio for the project area is 2:1, within Bank Service Area #8. The specific wetland compensation (bank credits) to be used will be determined through consultation

with the U.S. Army Corps of Engineers (COE) and the MnDOT Office of Environmental Stewardship (OES) as the project proceeds.

For the COE, ditches with wetland bottoms may be replaced at a different ratio, dependent on the following items:

- If a ditch bottom wetland is filled but a new ditch created (the ditch is shifted) no mitigation is typically required;
- If a ditch bottom wetland is filled but no new ditch is created mitigation is typically required at a 1:1 ratio.

Conclusion

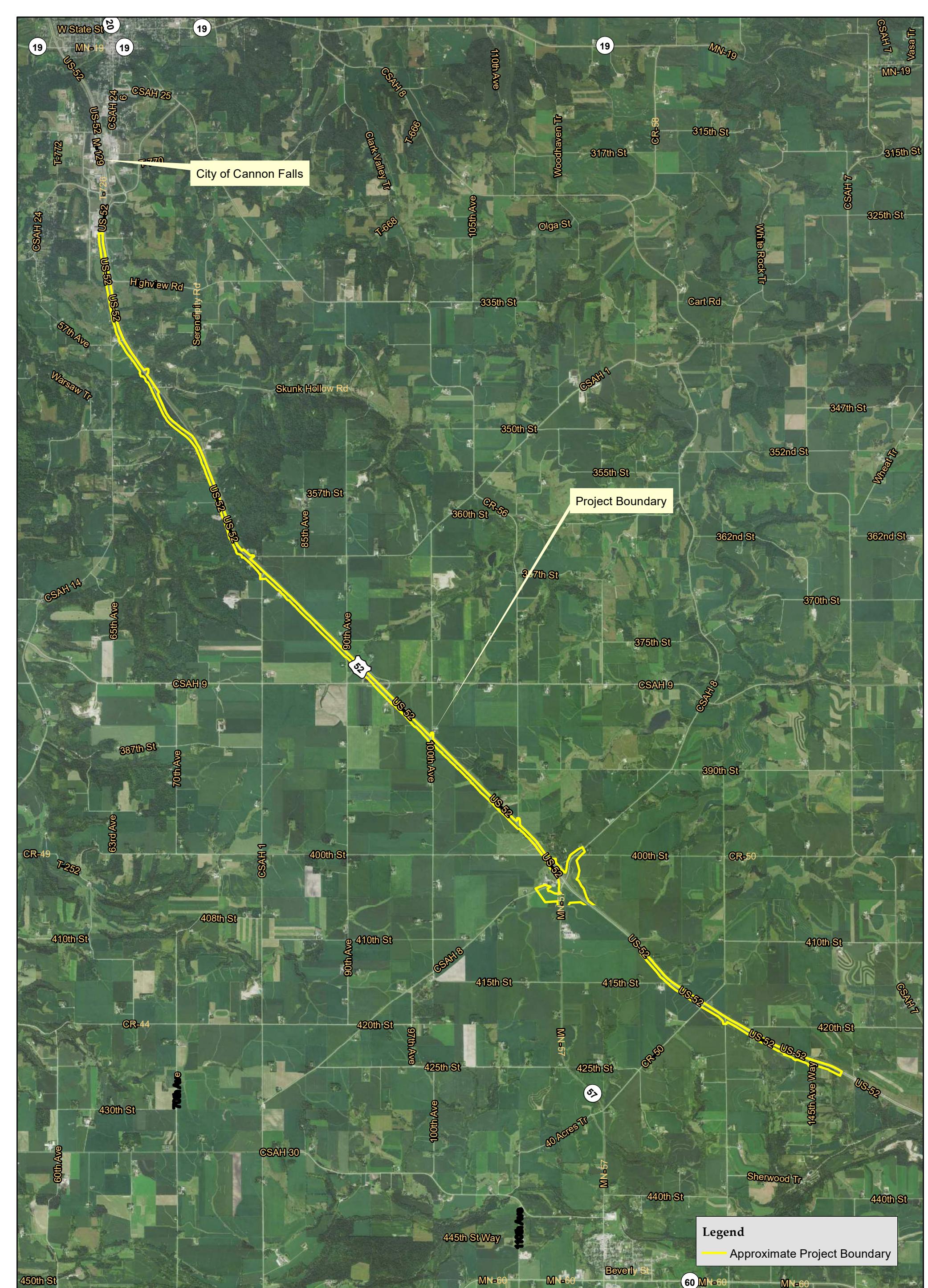
In accordance with Executive Order 11990, based upon the above factors and considerations, it is determined that there is no practicable alternative to the proposed construction in the identified wetlands, and that the proposed action includes all practicable measures to minimize harm to the wetlands.

Based on the estimated 3.148 acres of permanent wetland basin impacts, 1.880 acres of permanent impacts to COE ditches with wetlands in the bottom and 0.182 acres of permanent impacts to other aquatic resources it is anticipated that the project will qualify for the Army Corps of Engineers Transportation Regional General Permit. However, this finding is subject to change as continued coordination occurs with the COE.

ATTACHMENTS

-Project location map.

-Map showing wetlands impacts/encroachments and construction limits in relation to wetland boundaries.



Location Map

TH 52 (SP 2506-77)

Mn/DOT

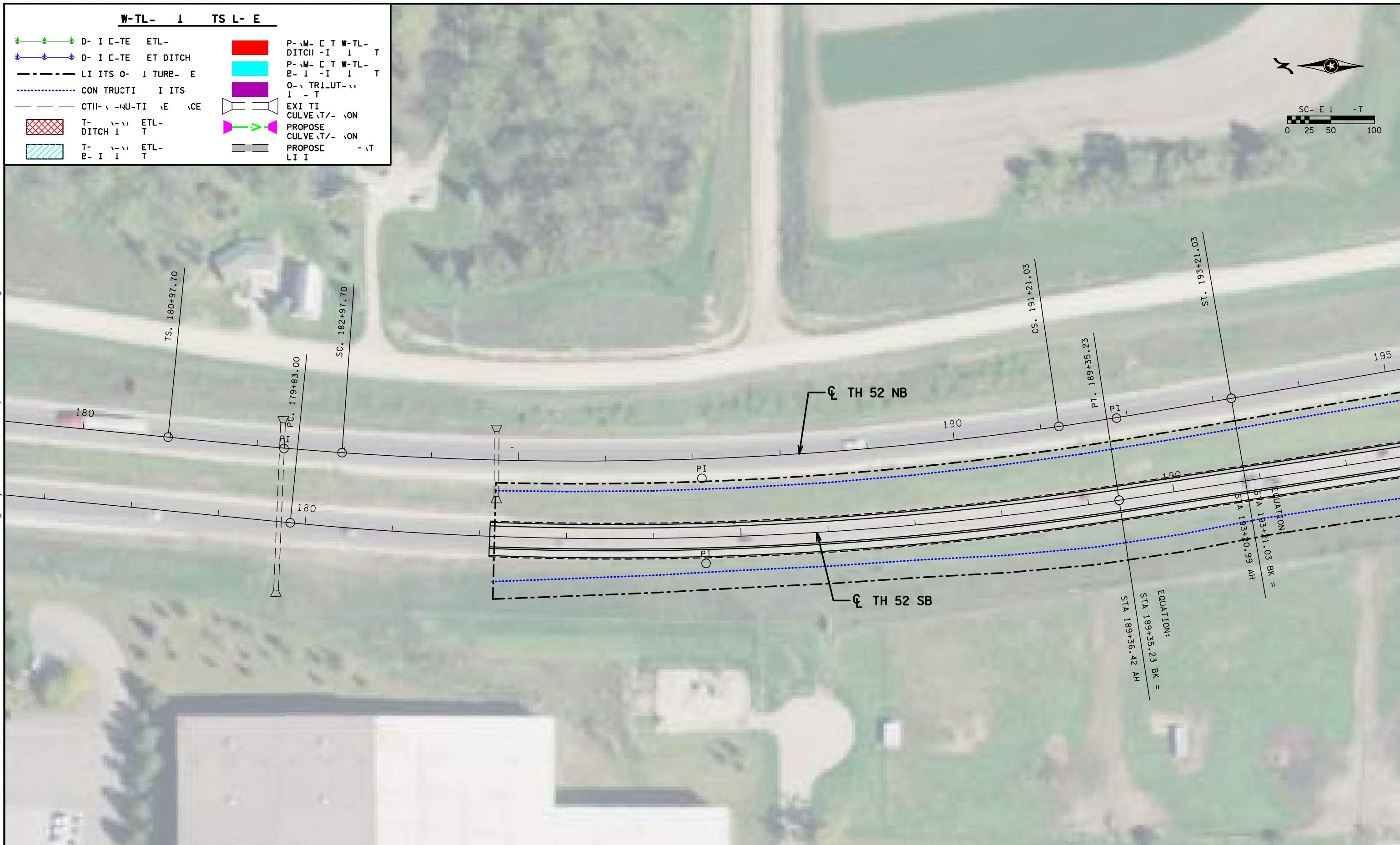


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Sources: MetroGIS, MnDNR, LMIC, ESRI



This map was created using Sambatek's Geographic Information Systems (GIS), it is a compilation of information and data from various sources. This map is not a surveyed or legally recorded map and is intended to be used as a reference. Sambatek is not responsible for any inaccuracies contained herein.

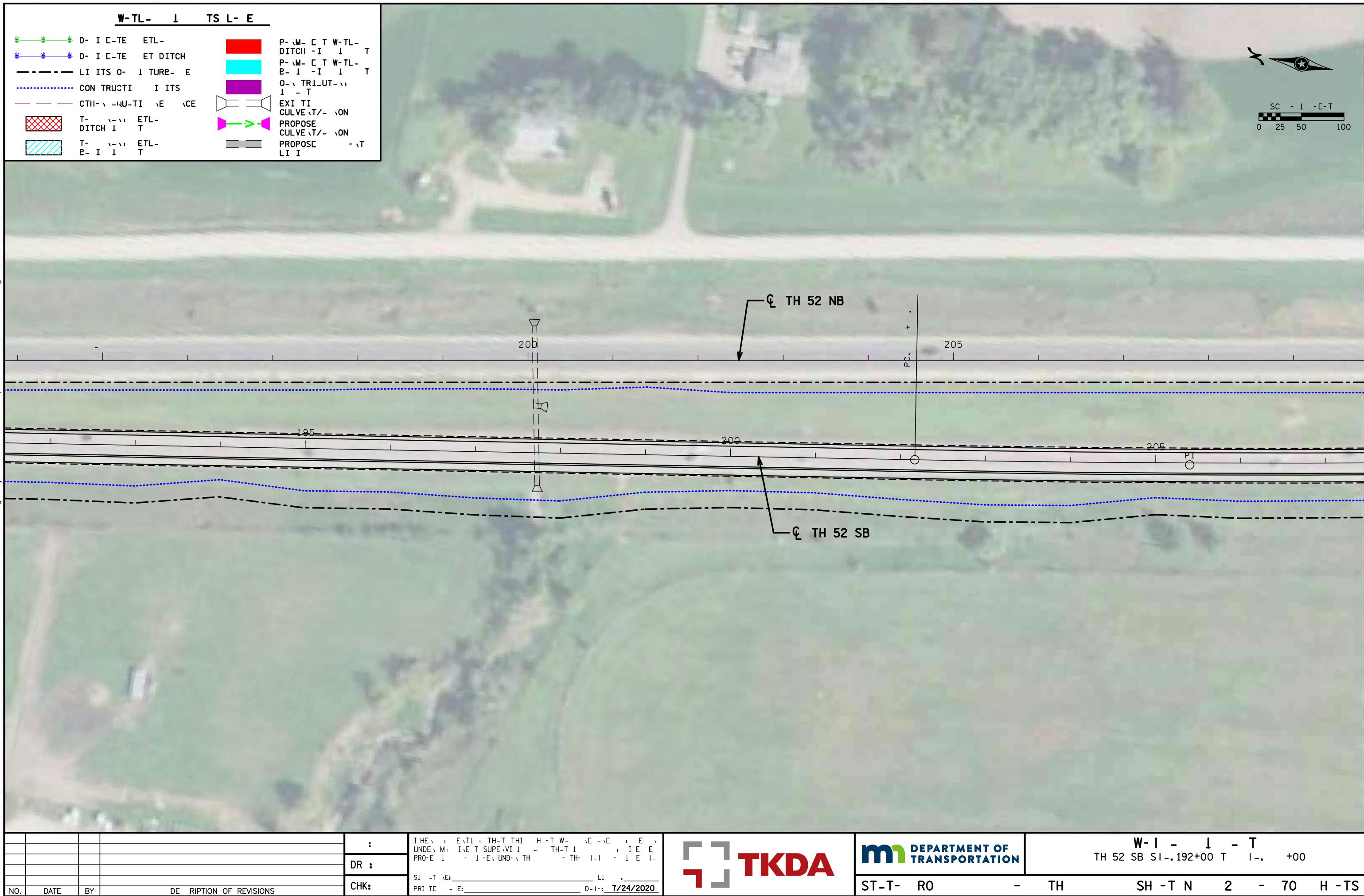


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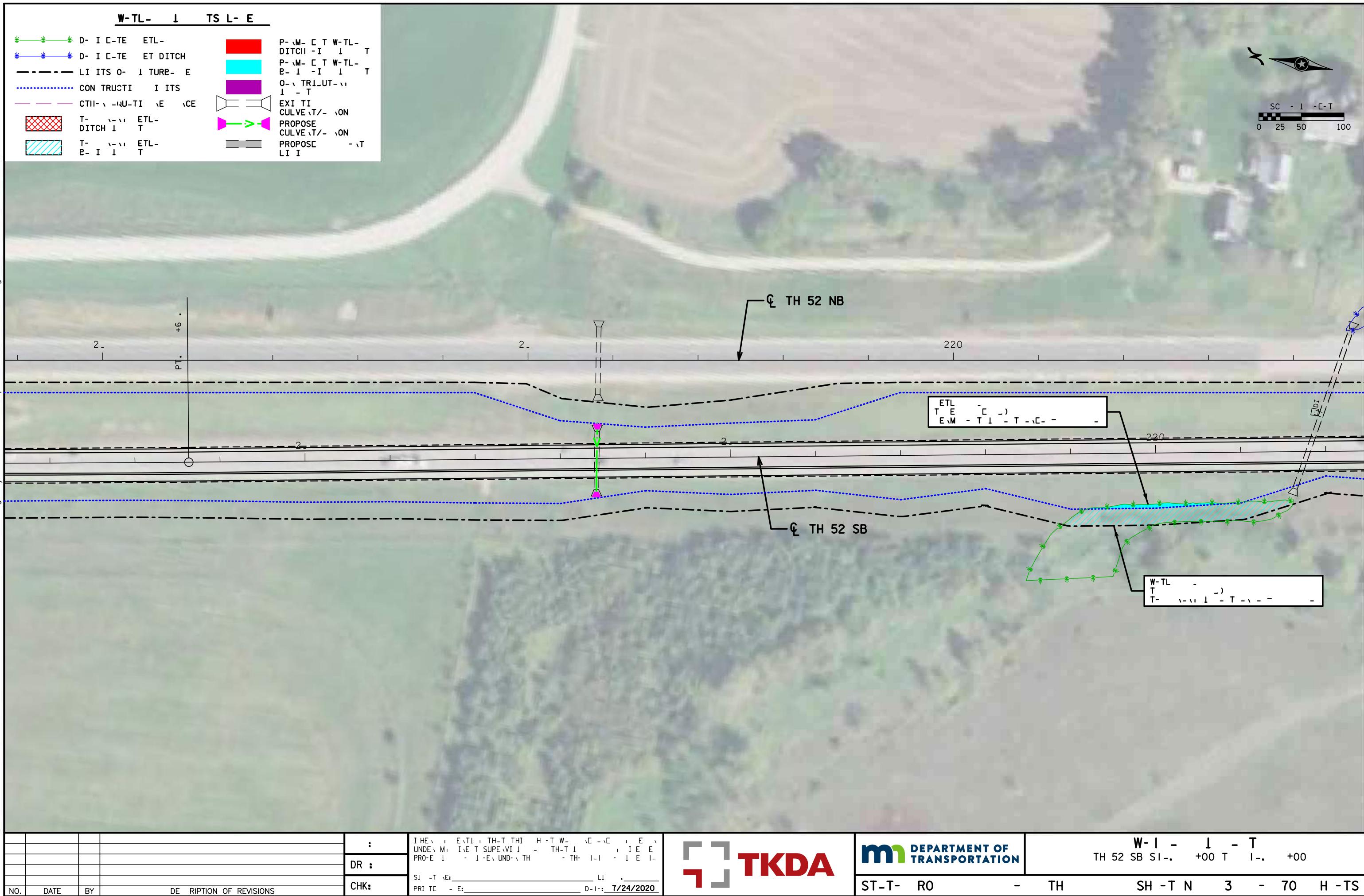
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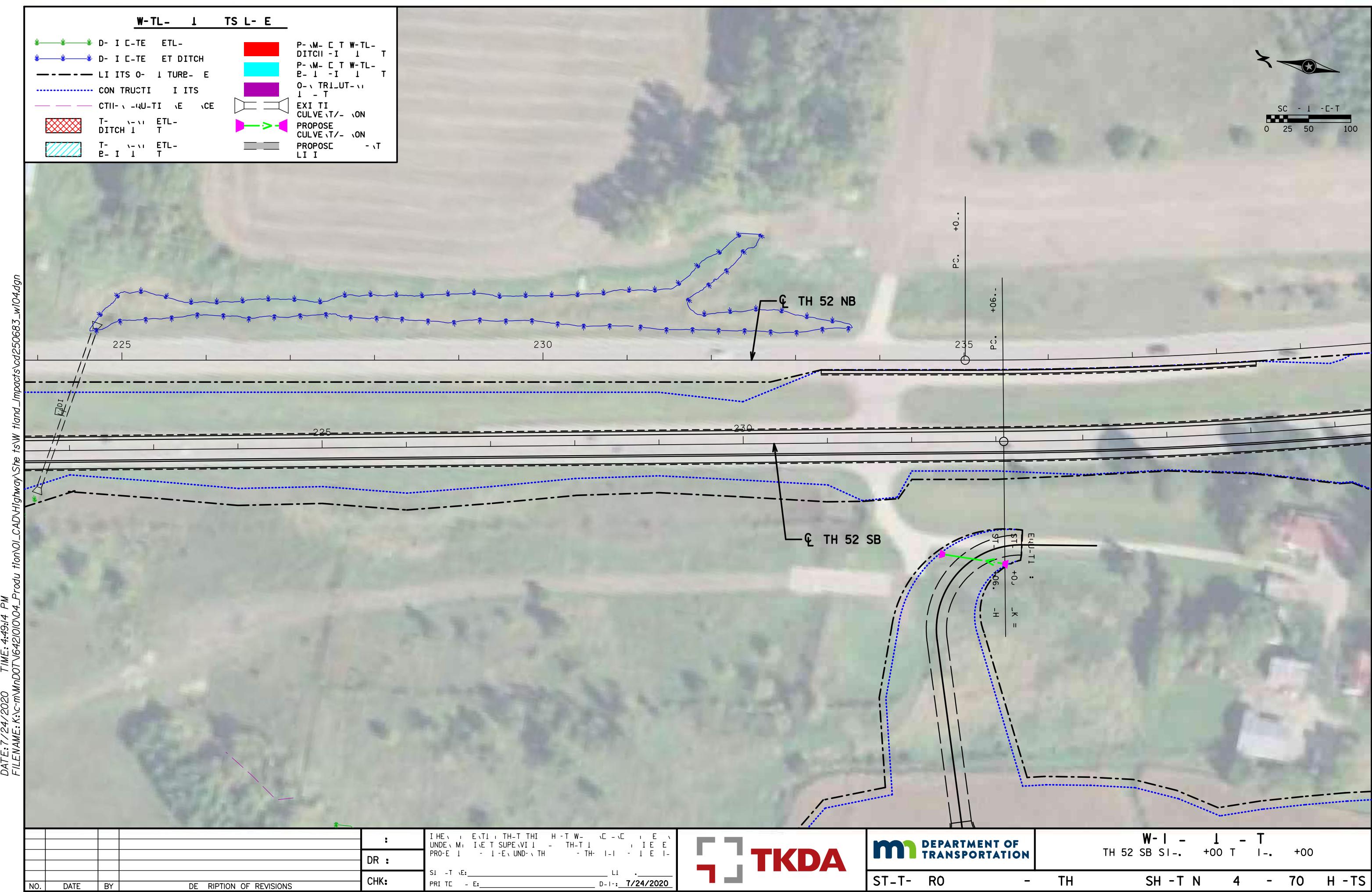


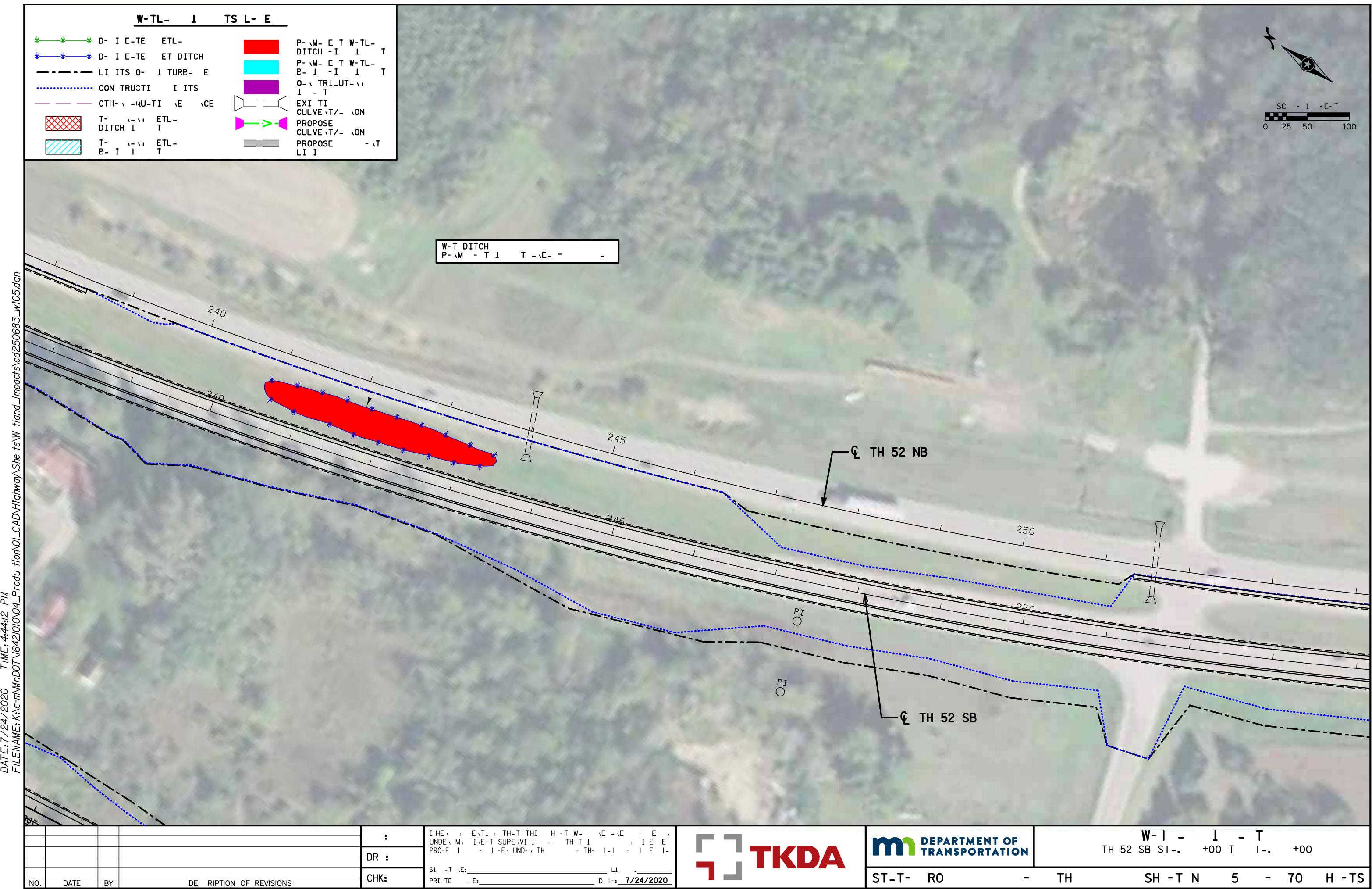
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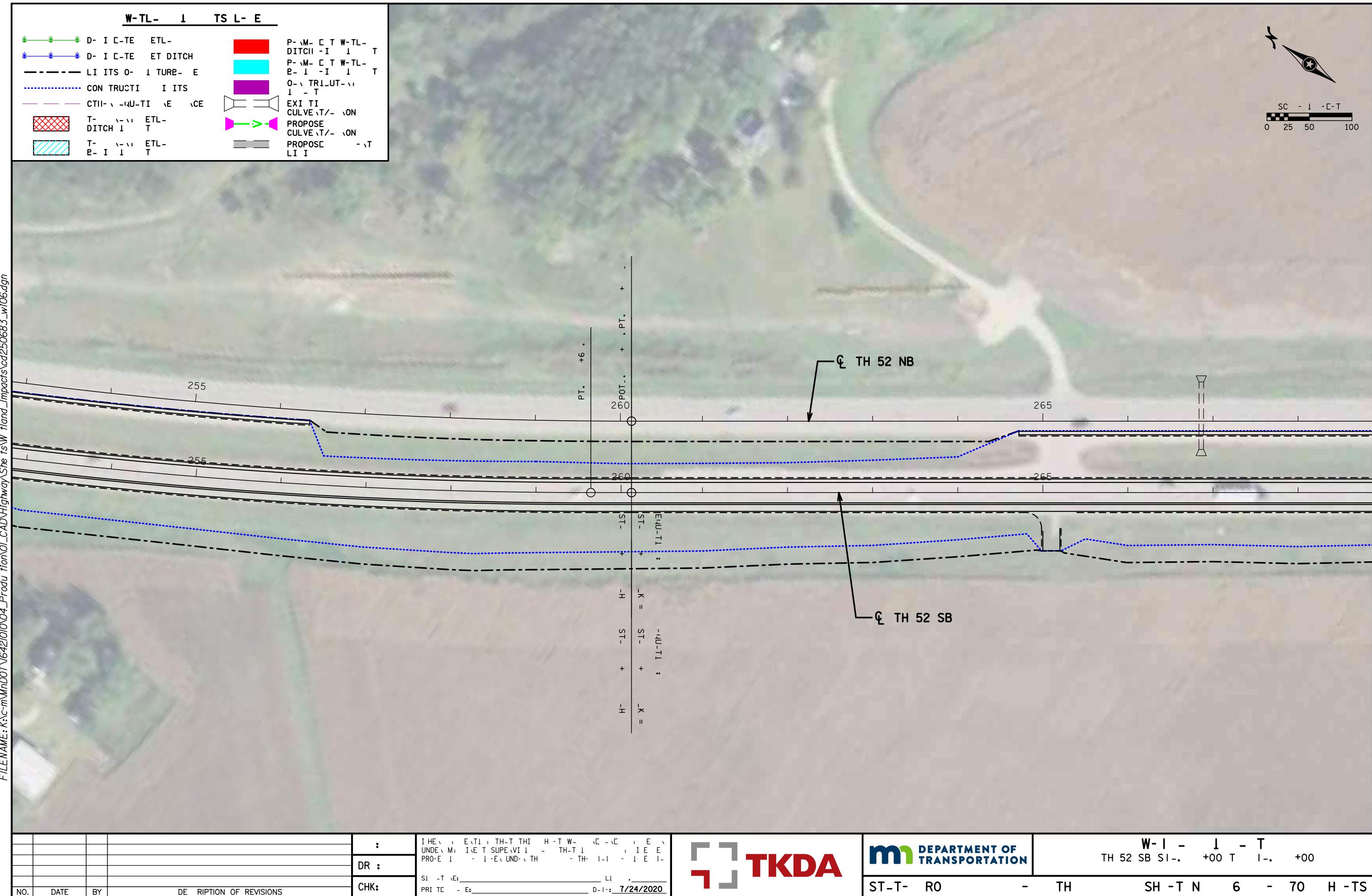


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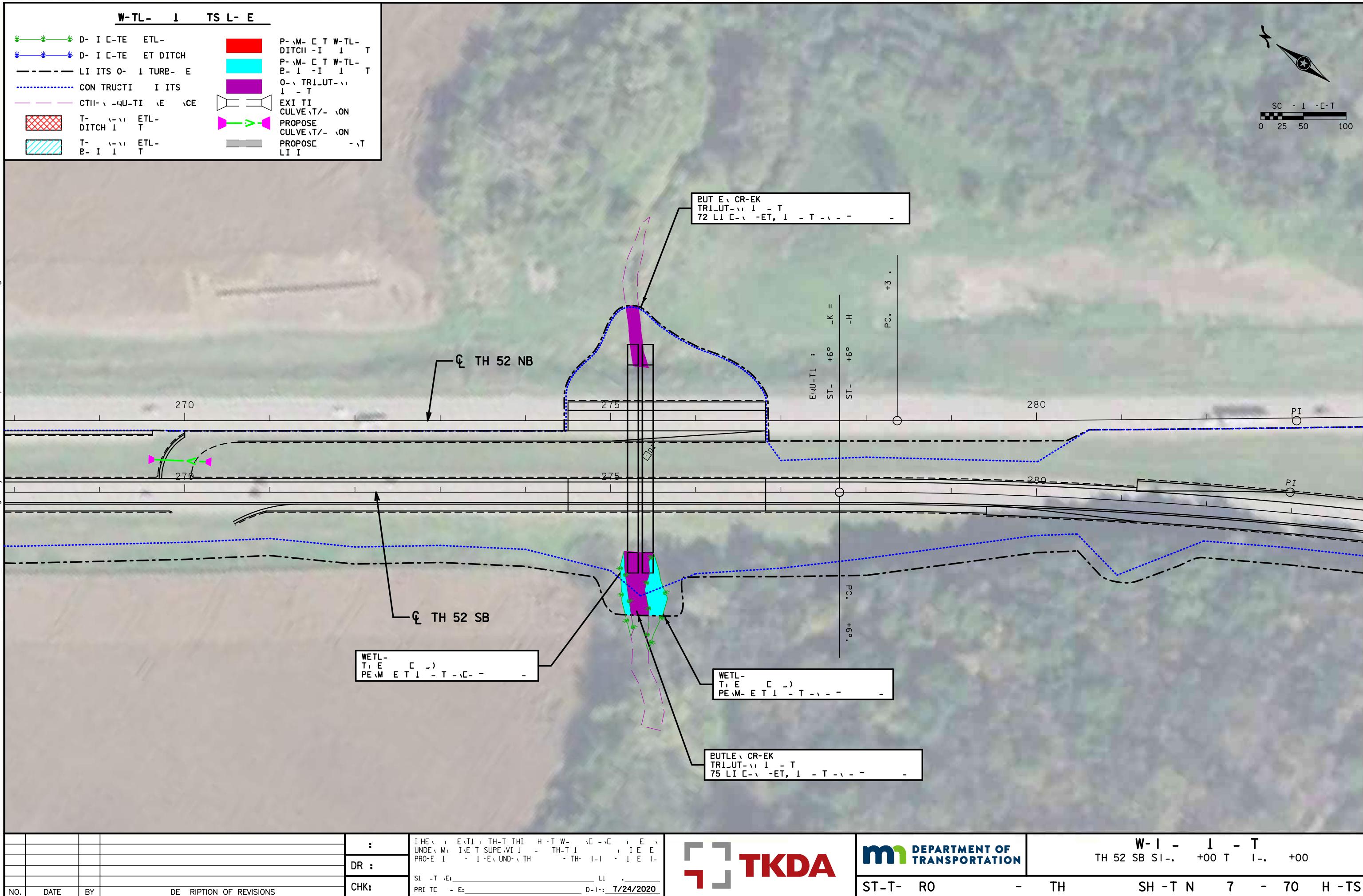


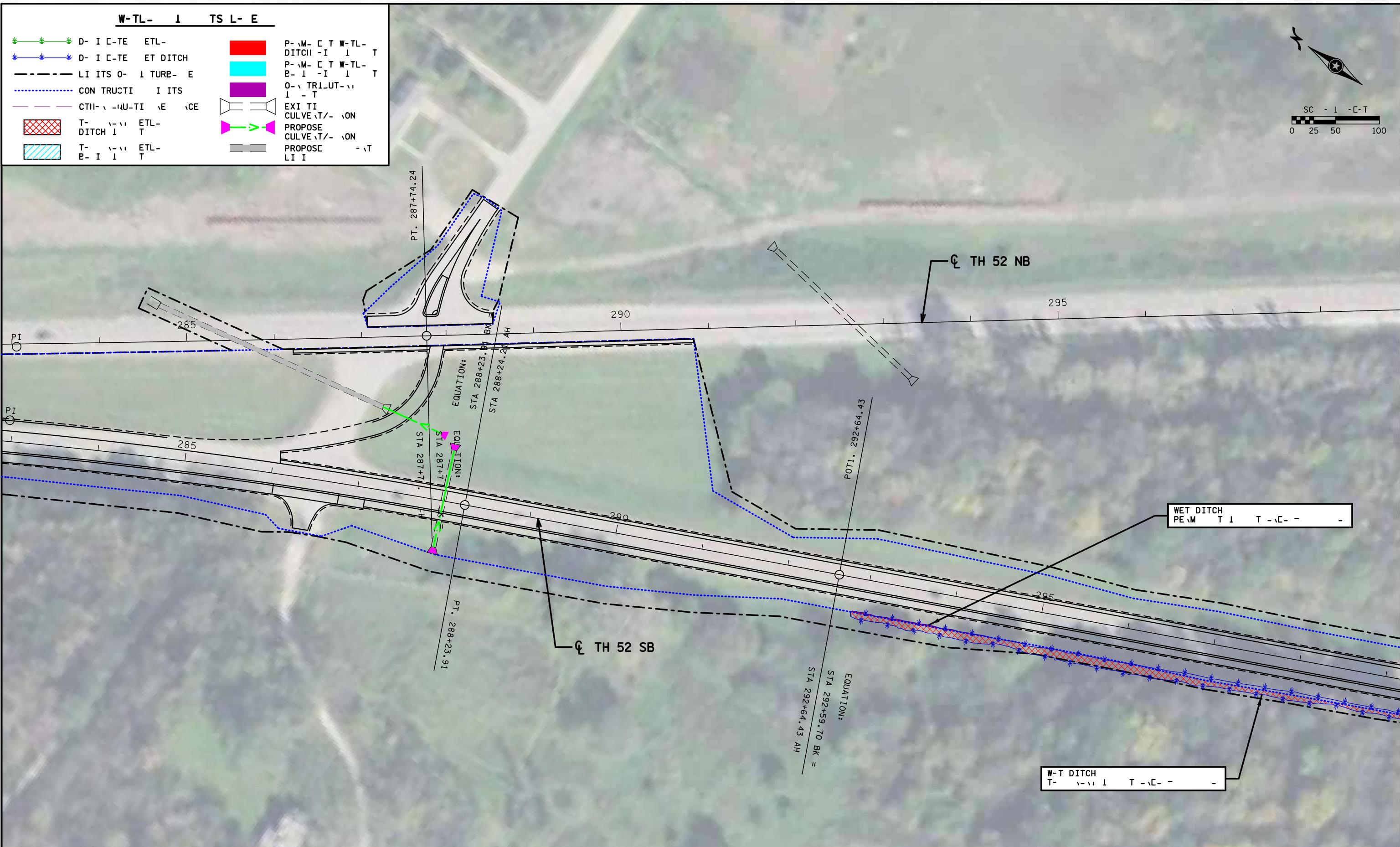






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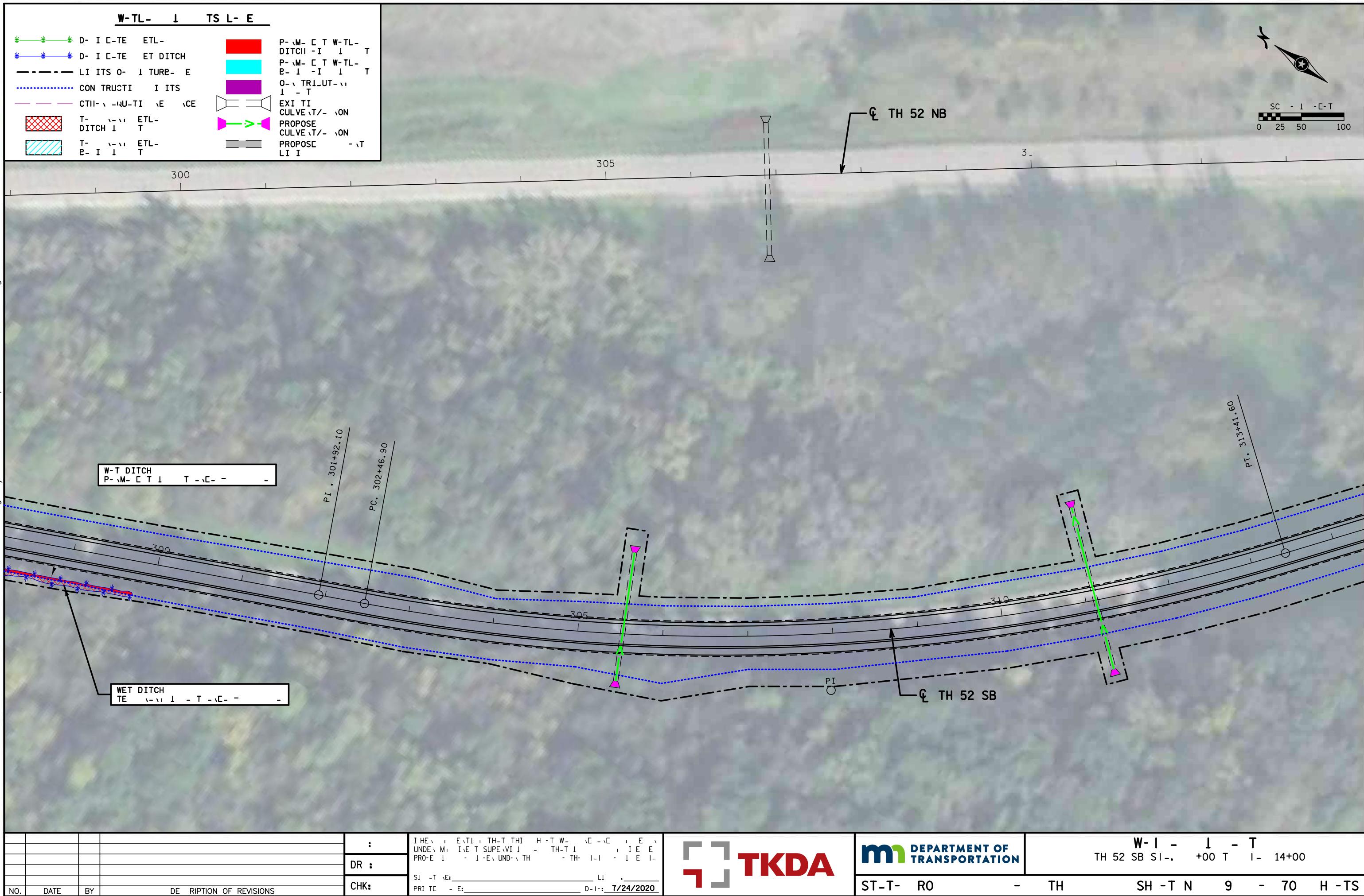
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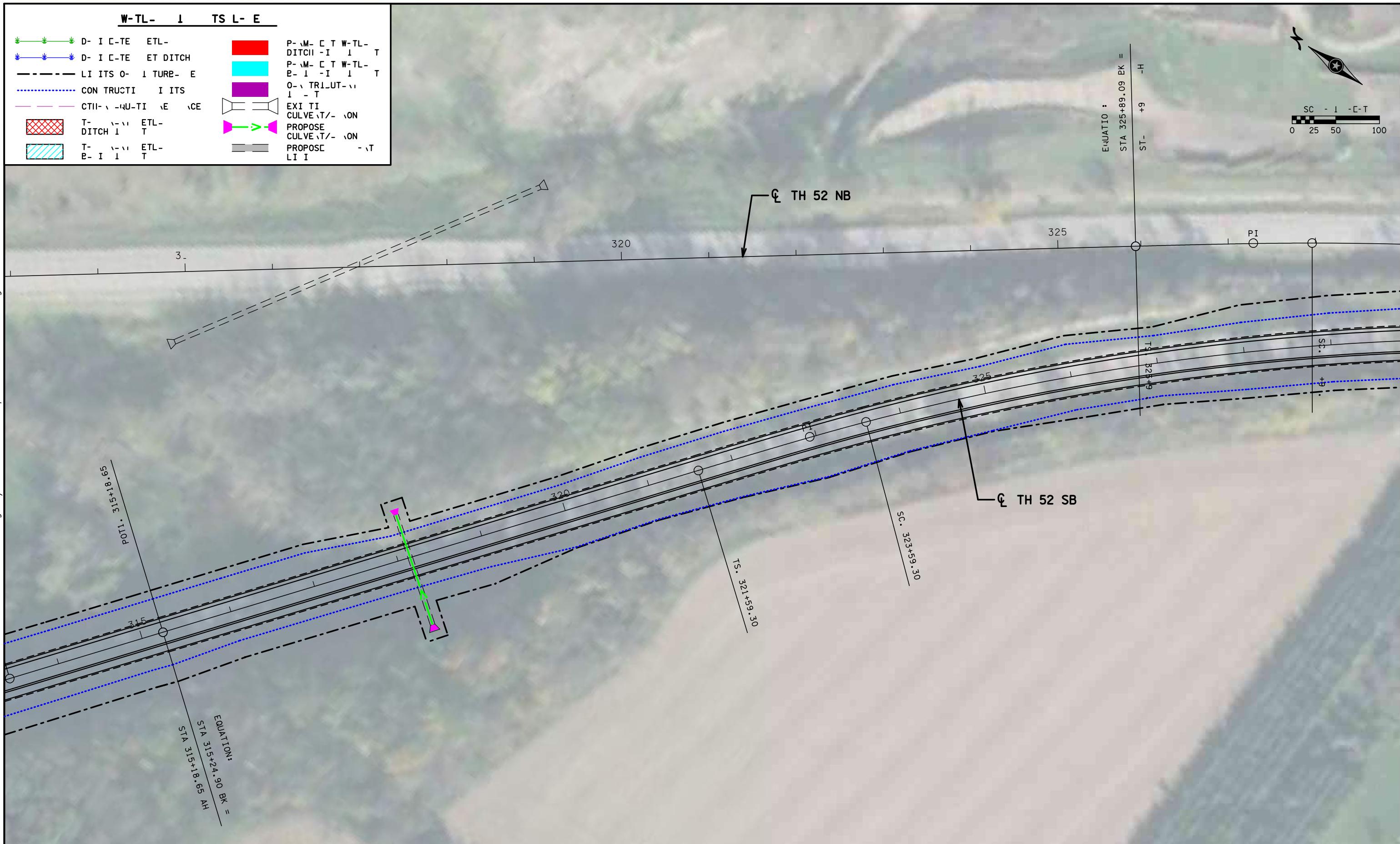
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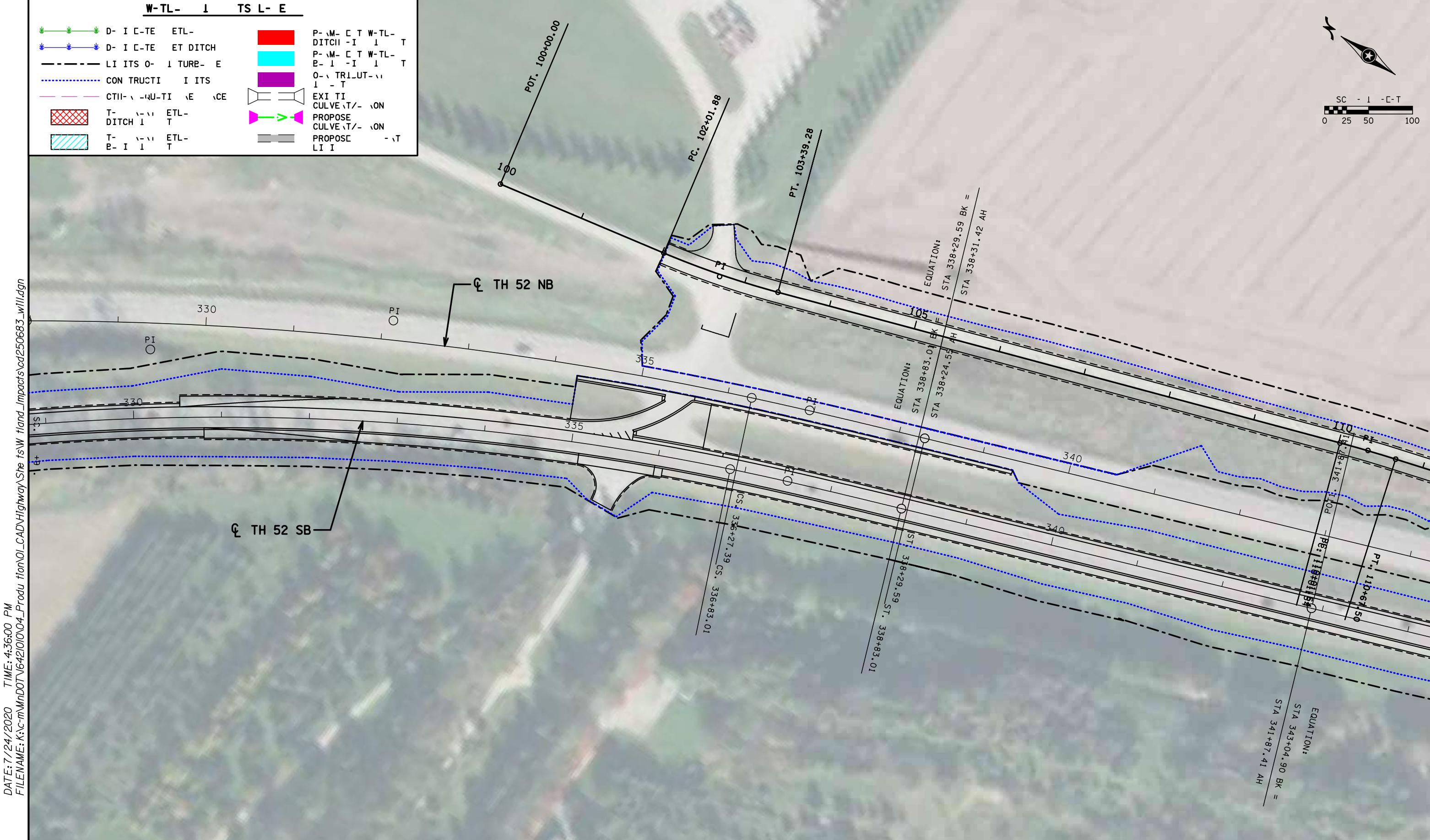
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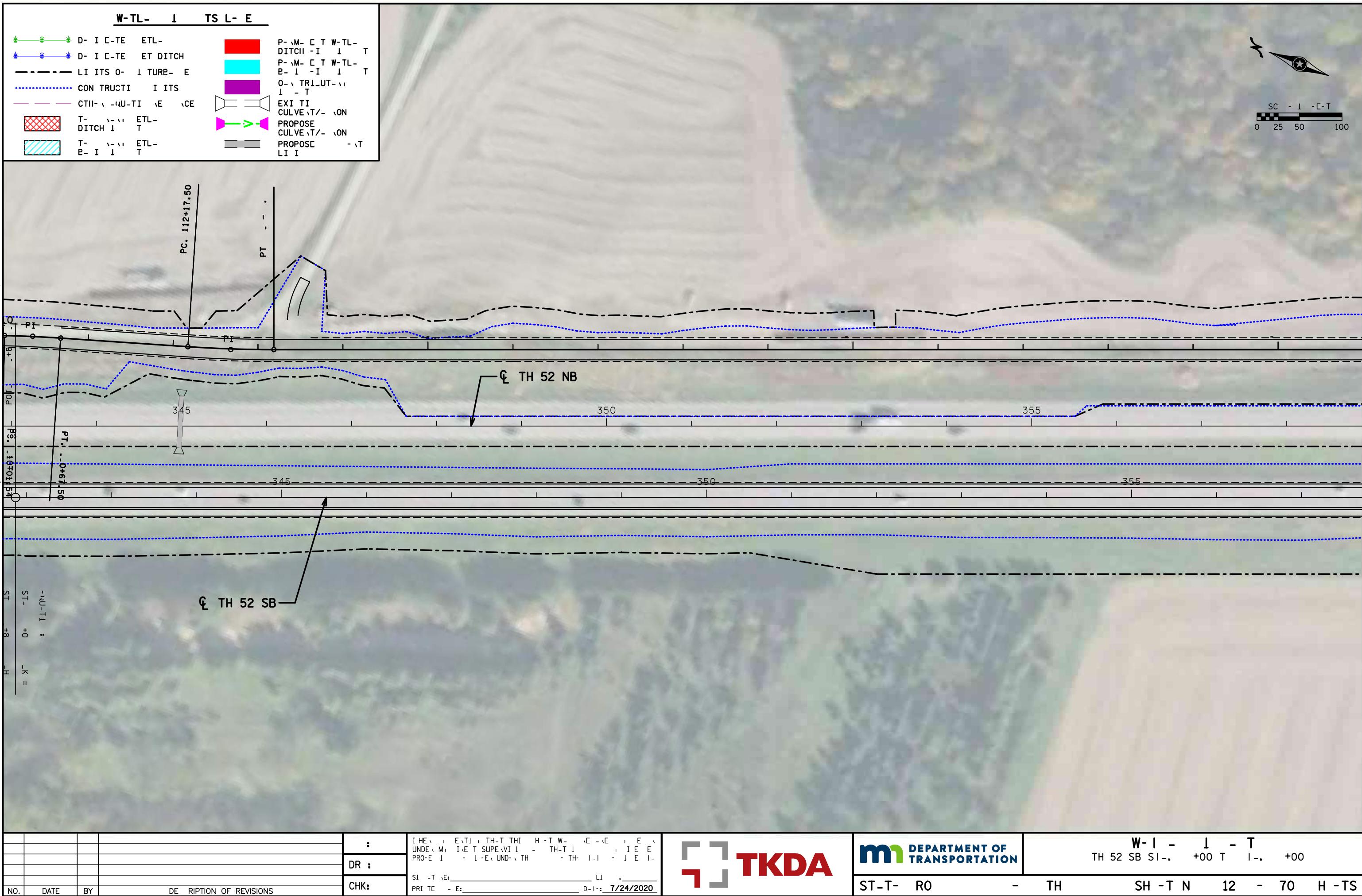
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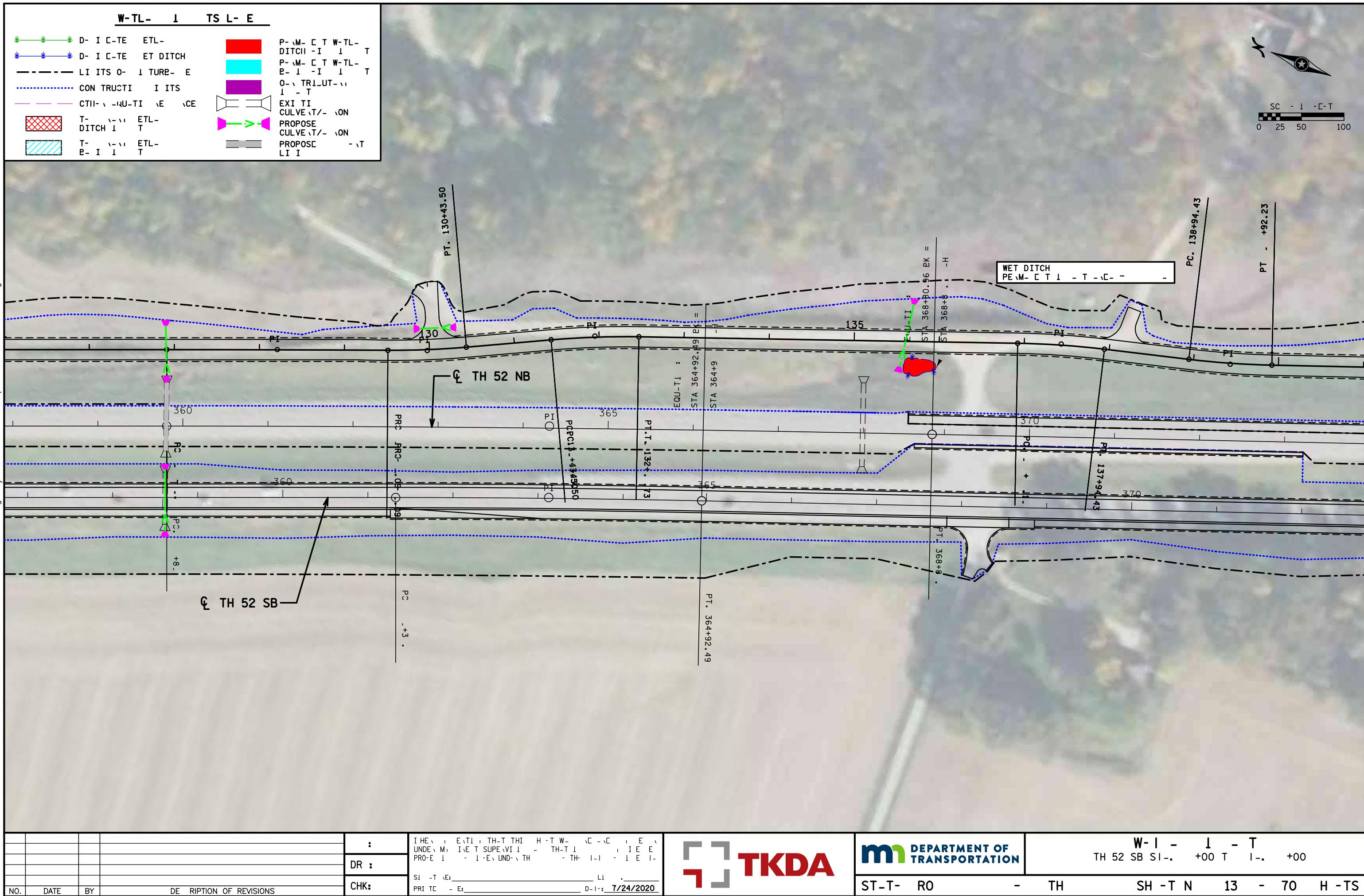
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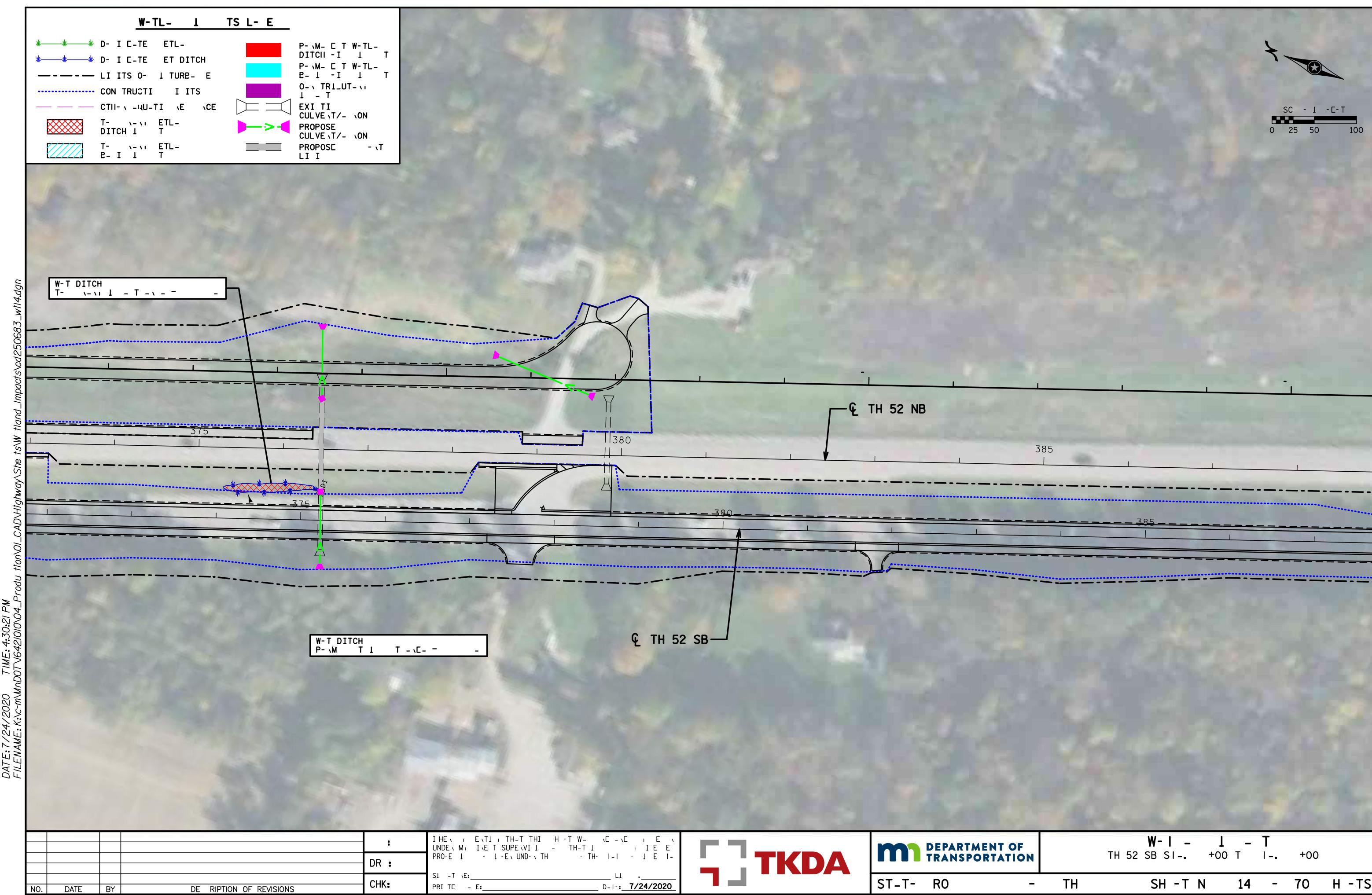
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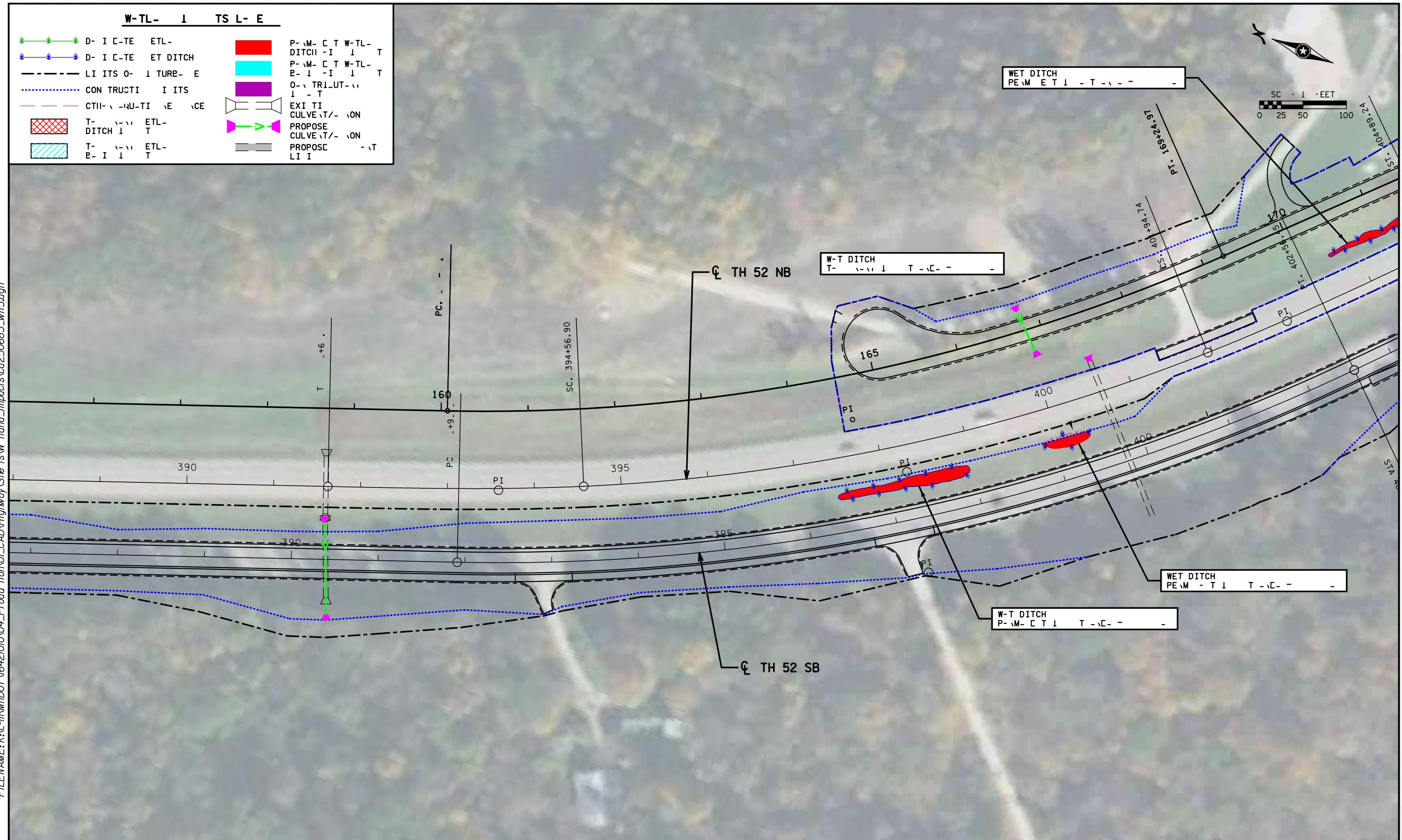
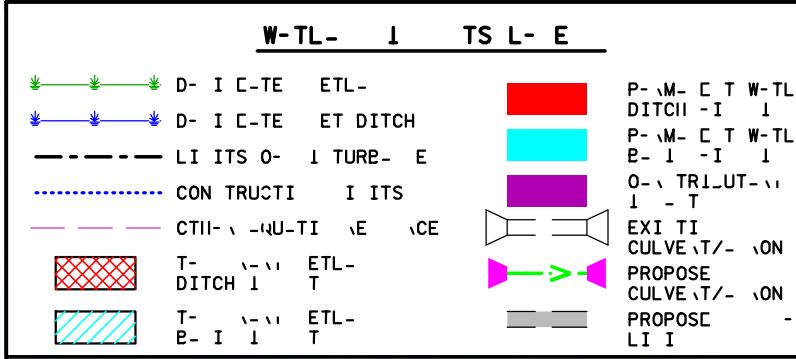


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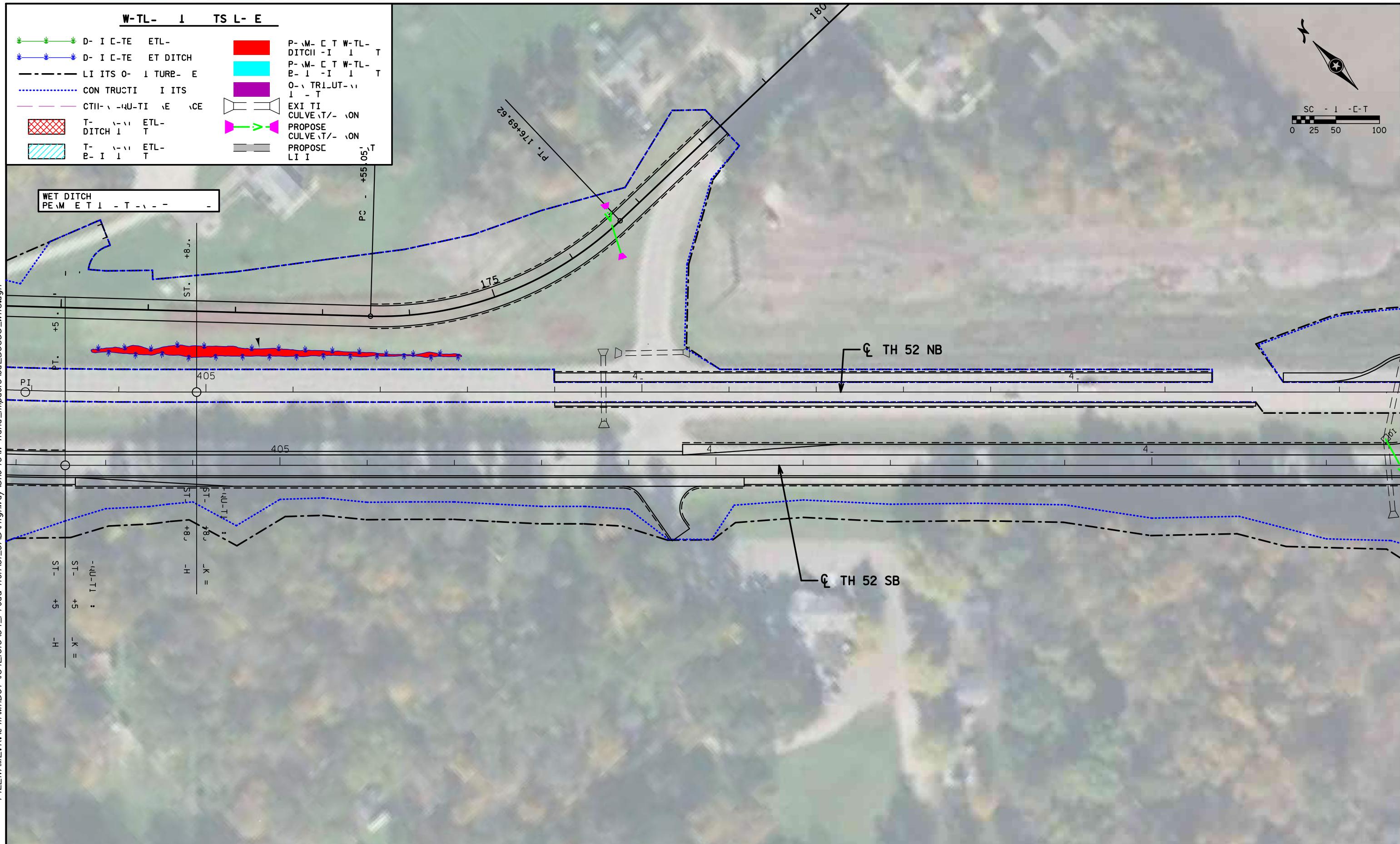
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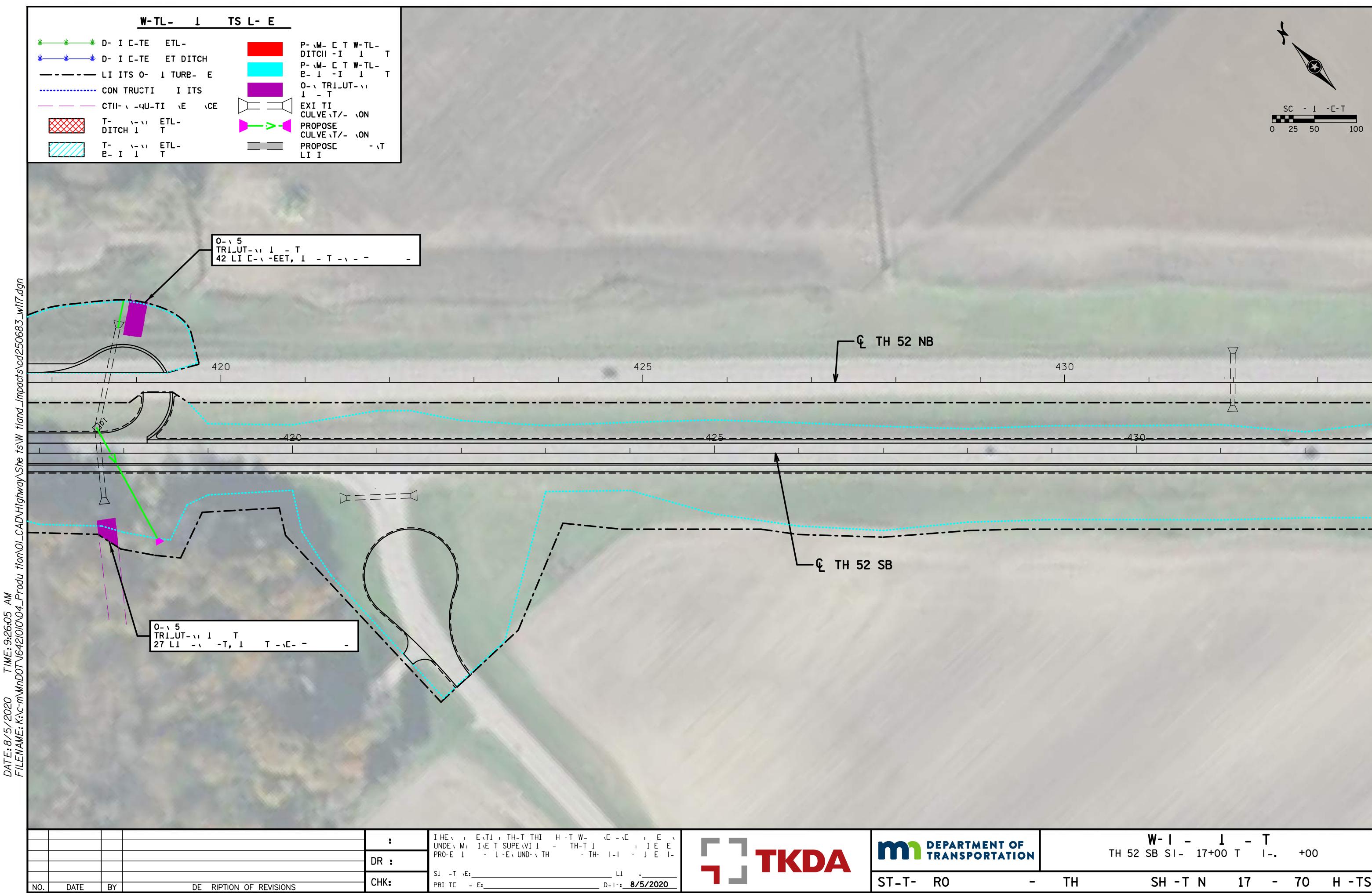


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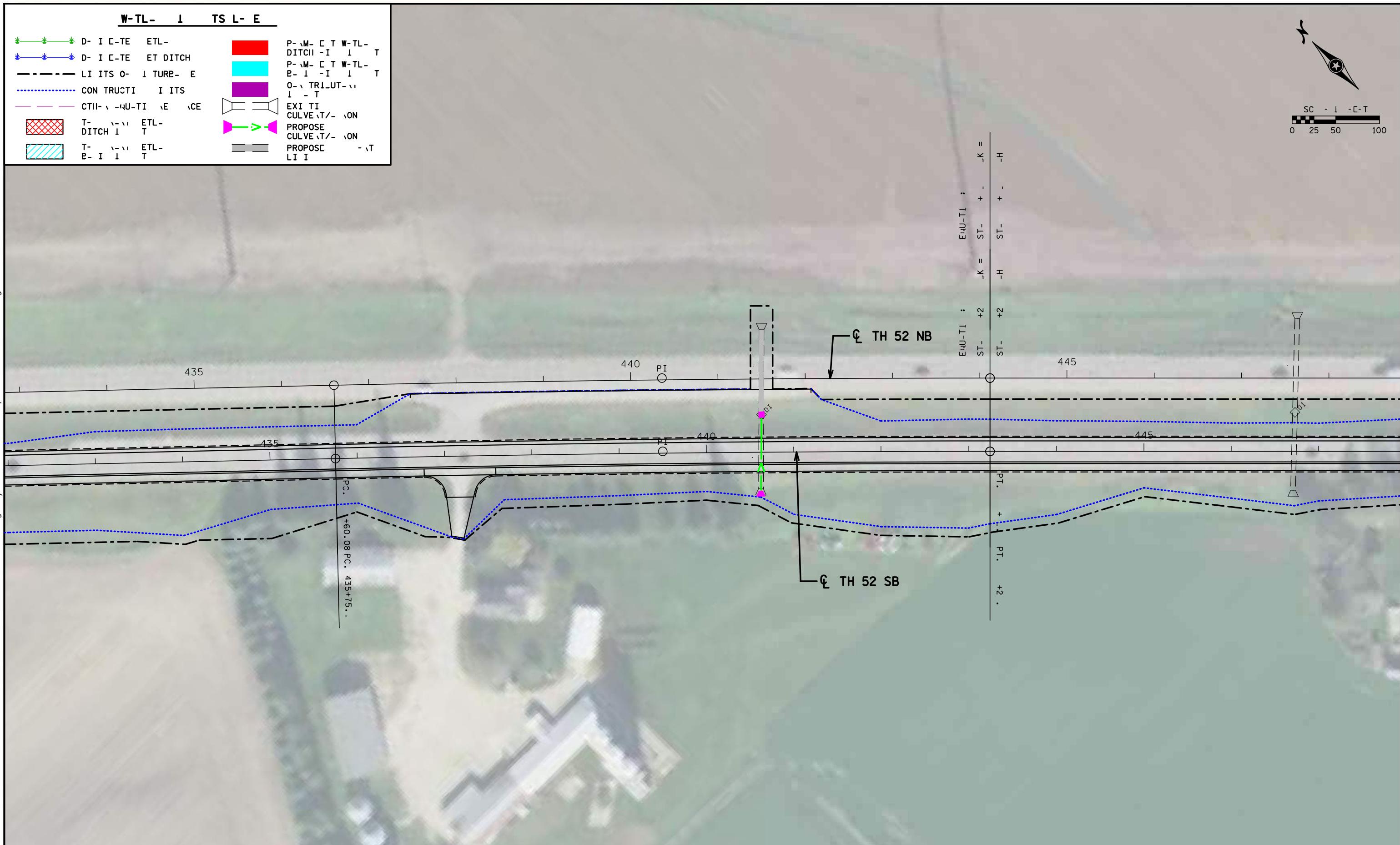
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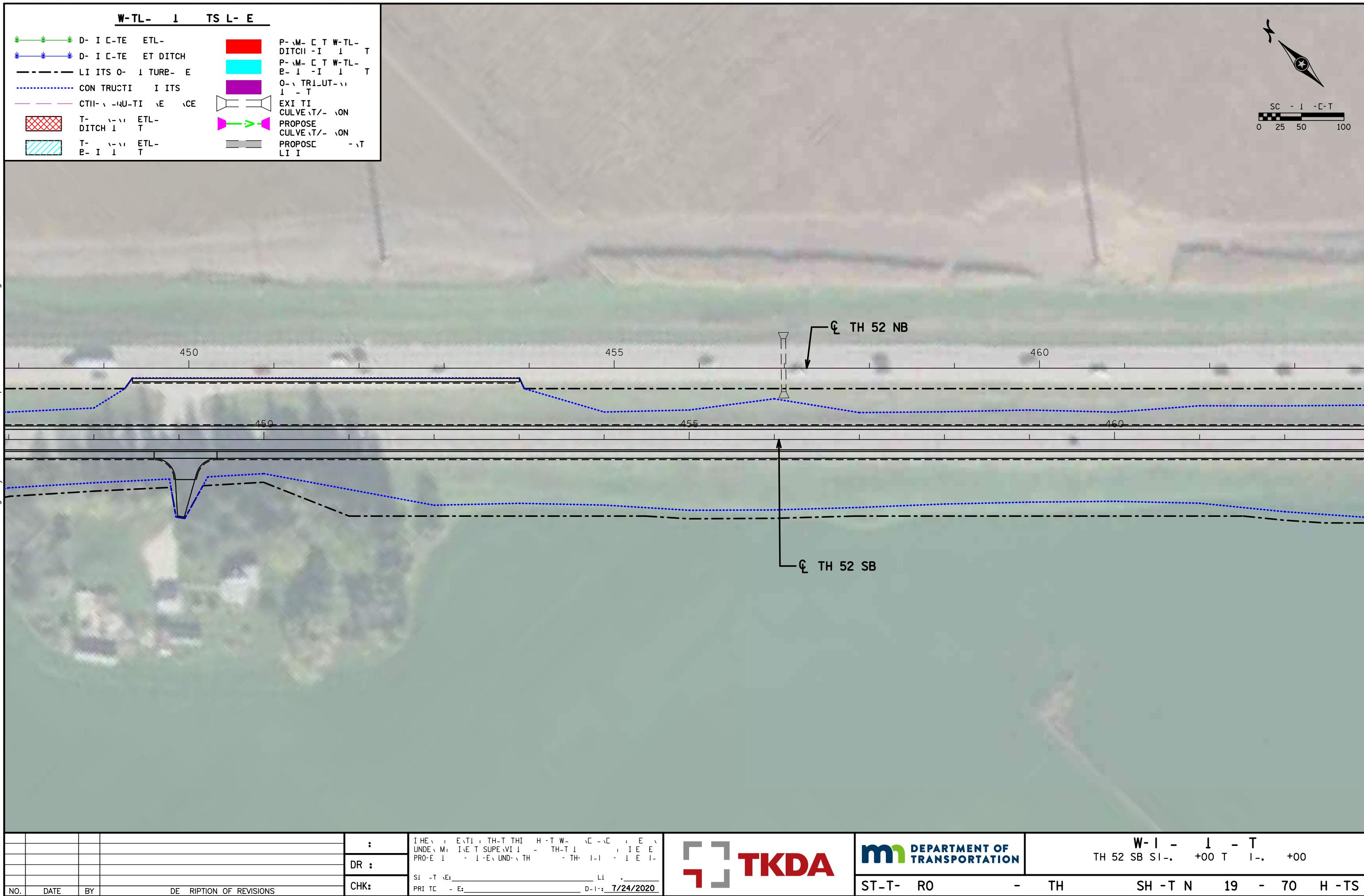
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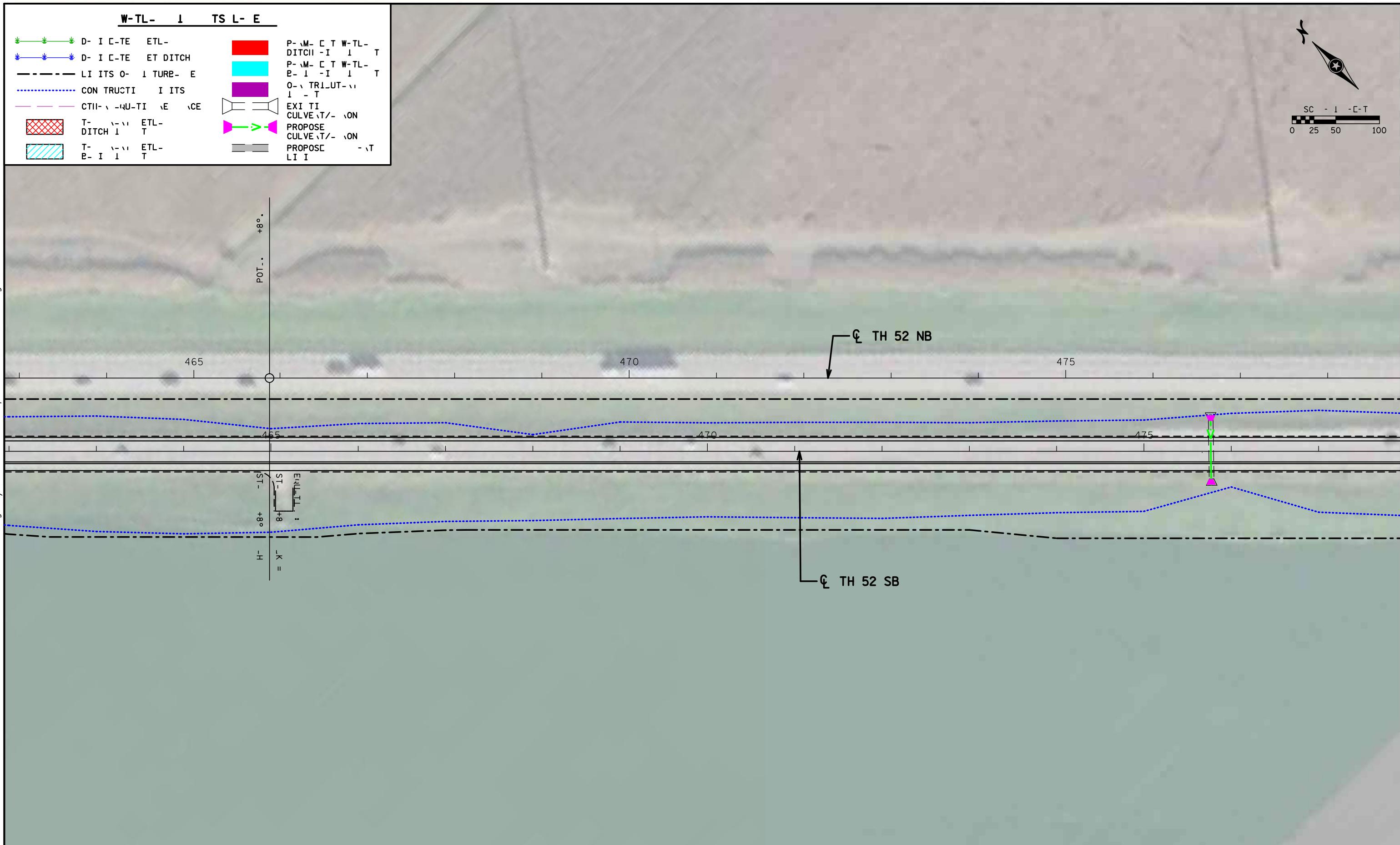


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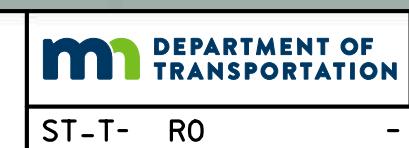


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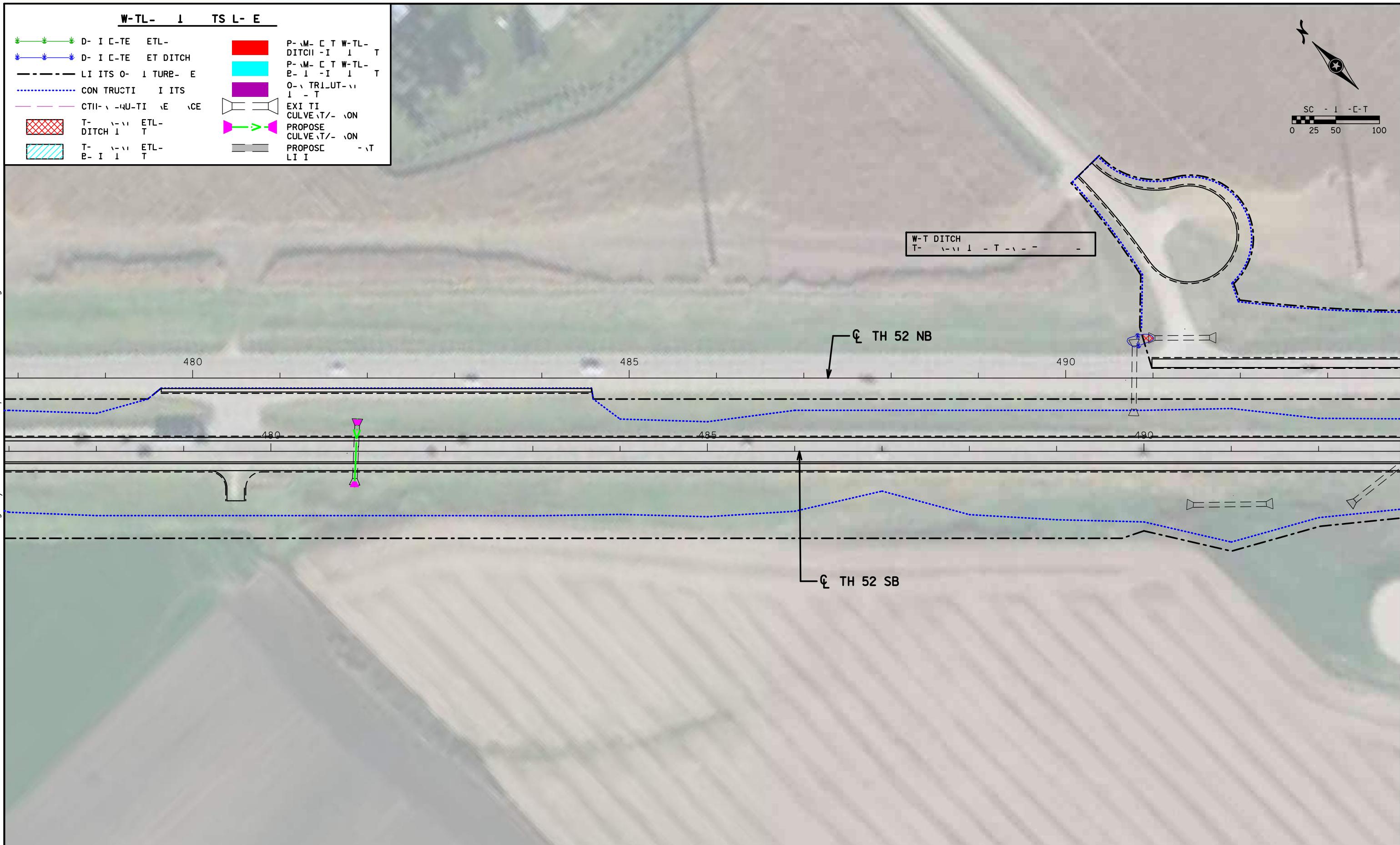
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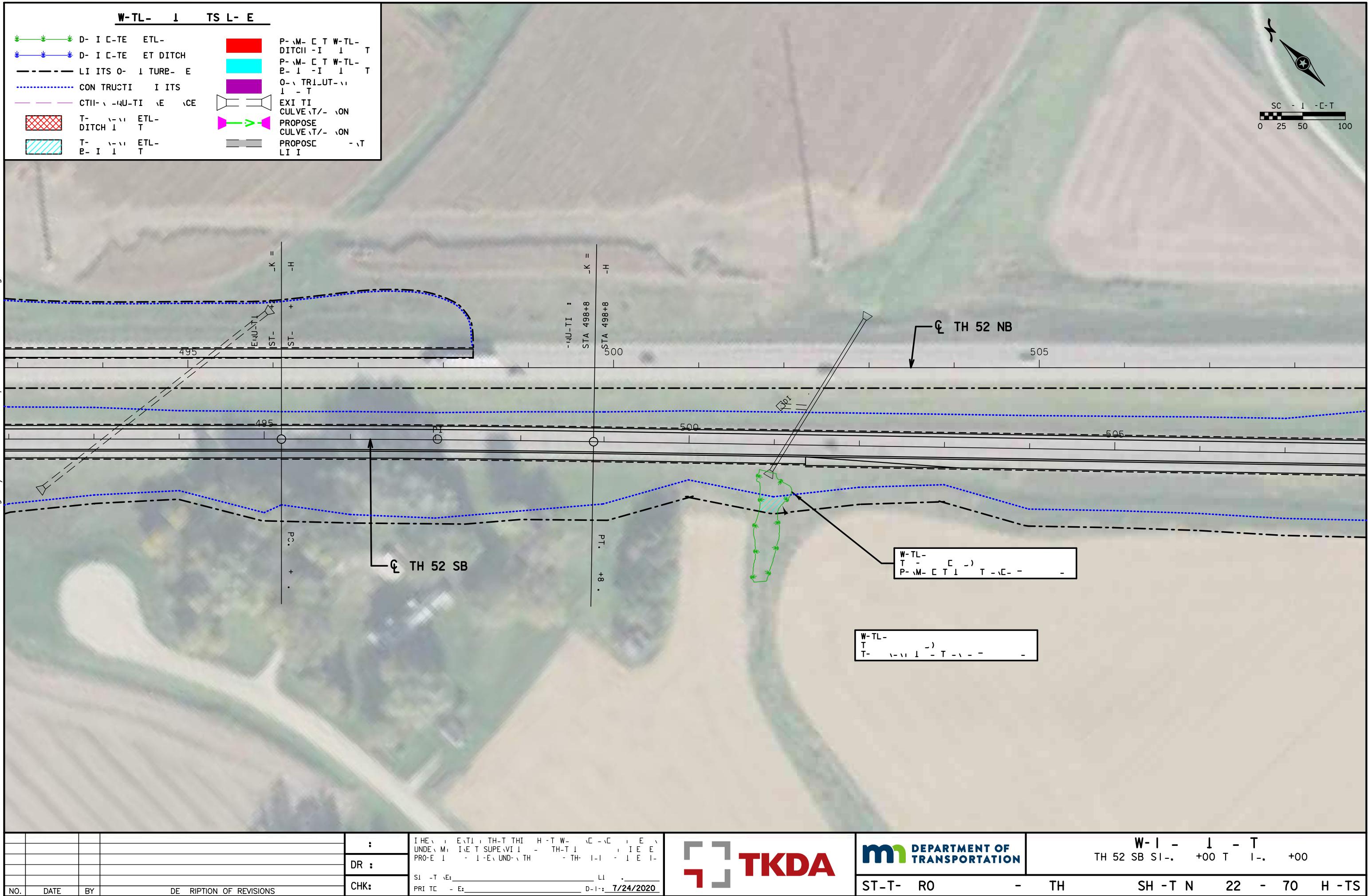
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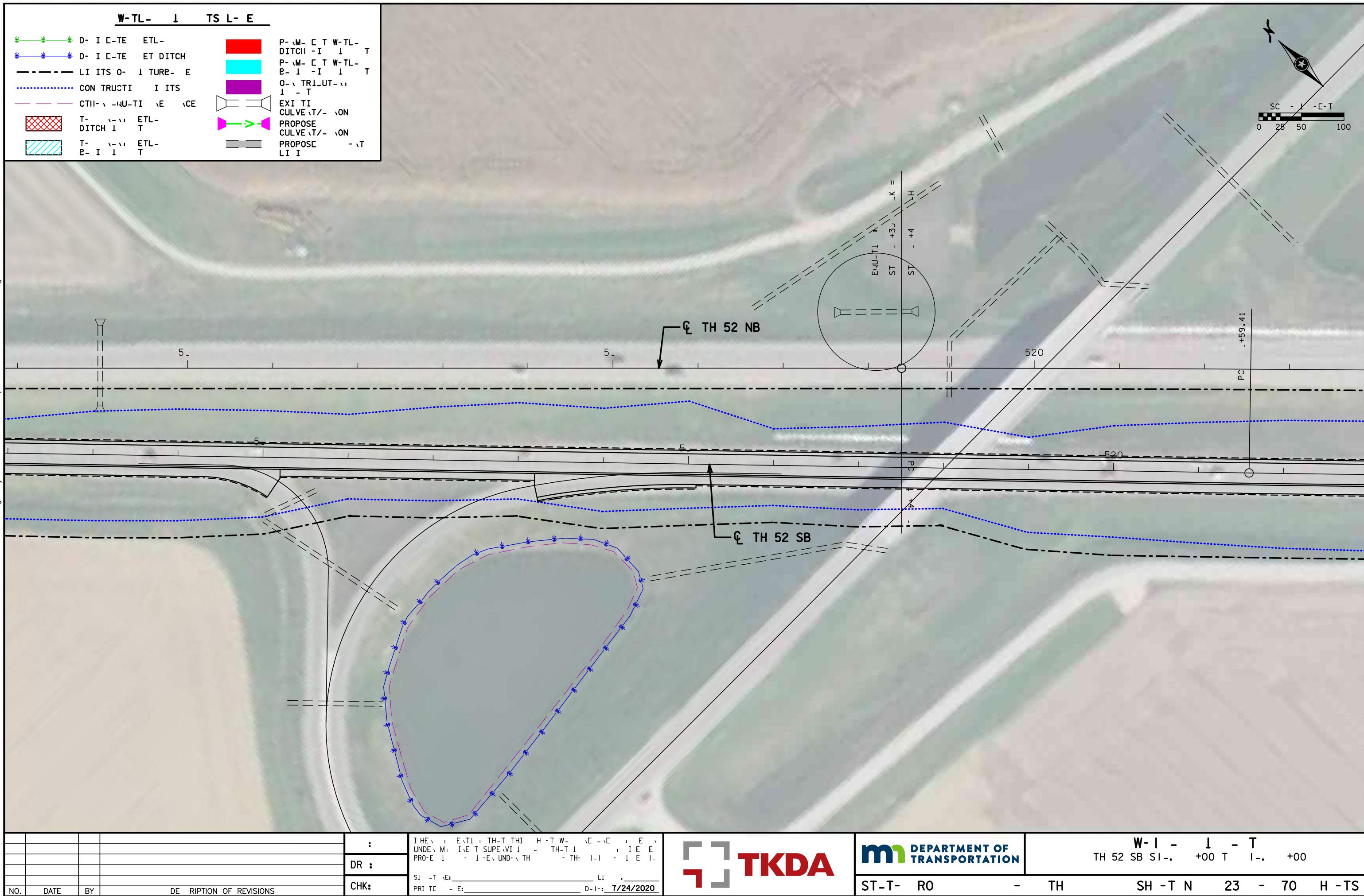
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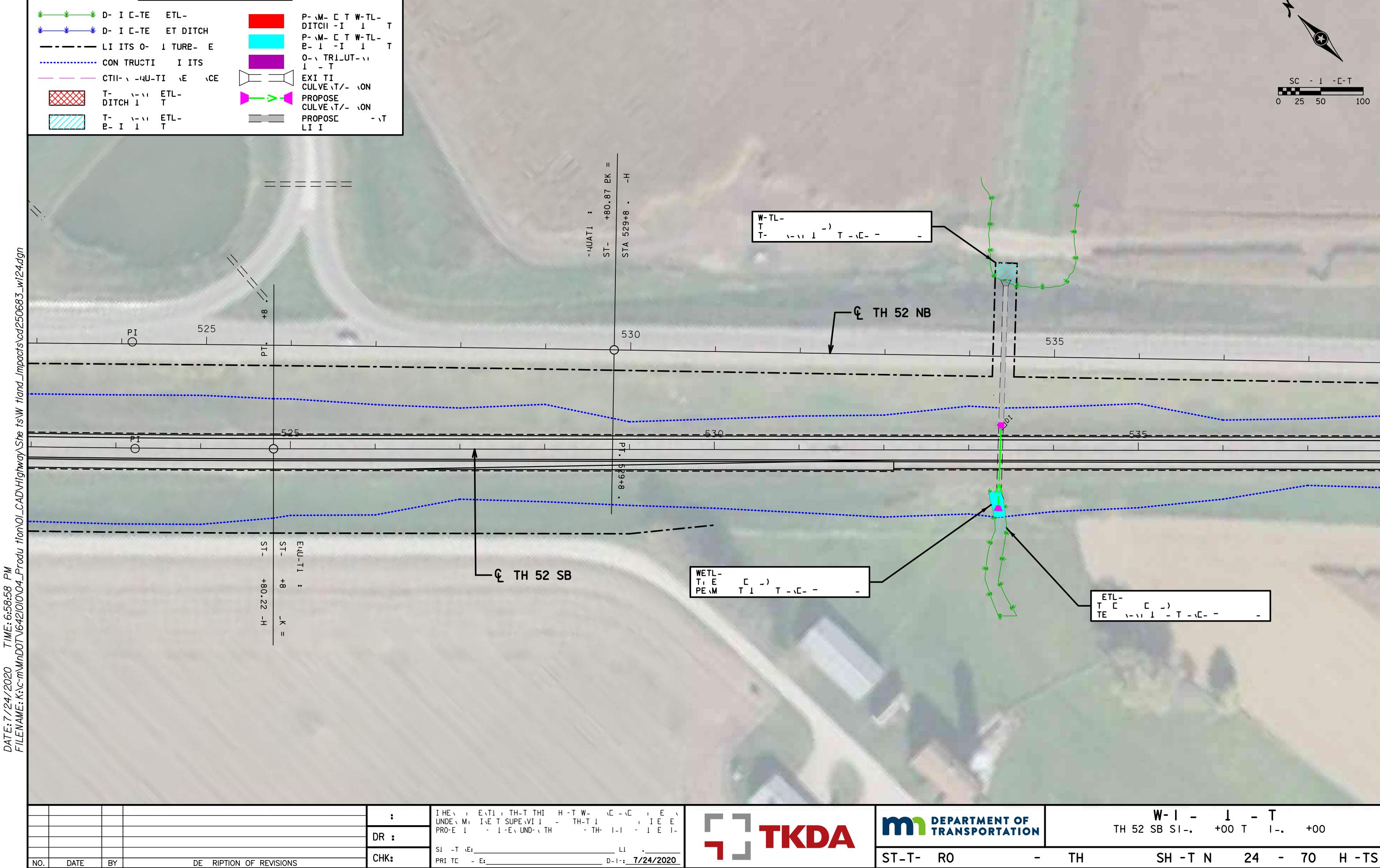
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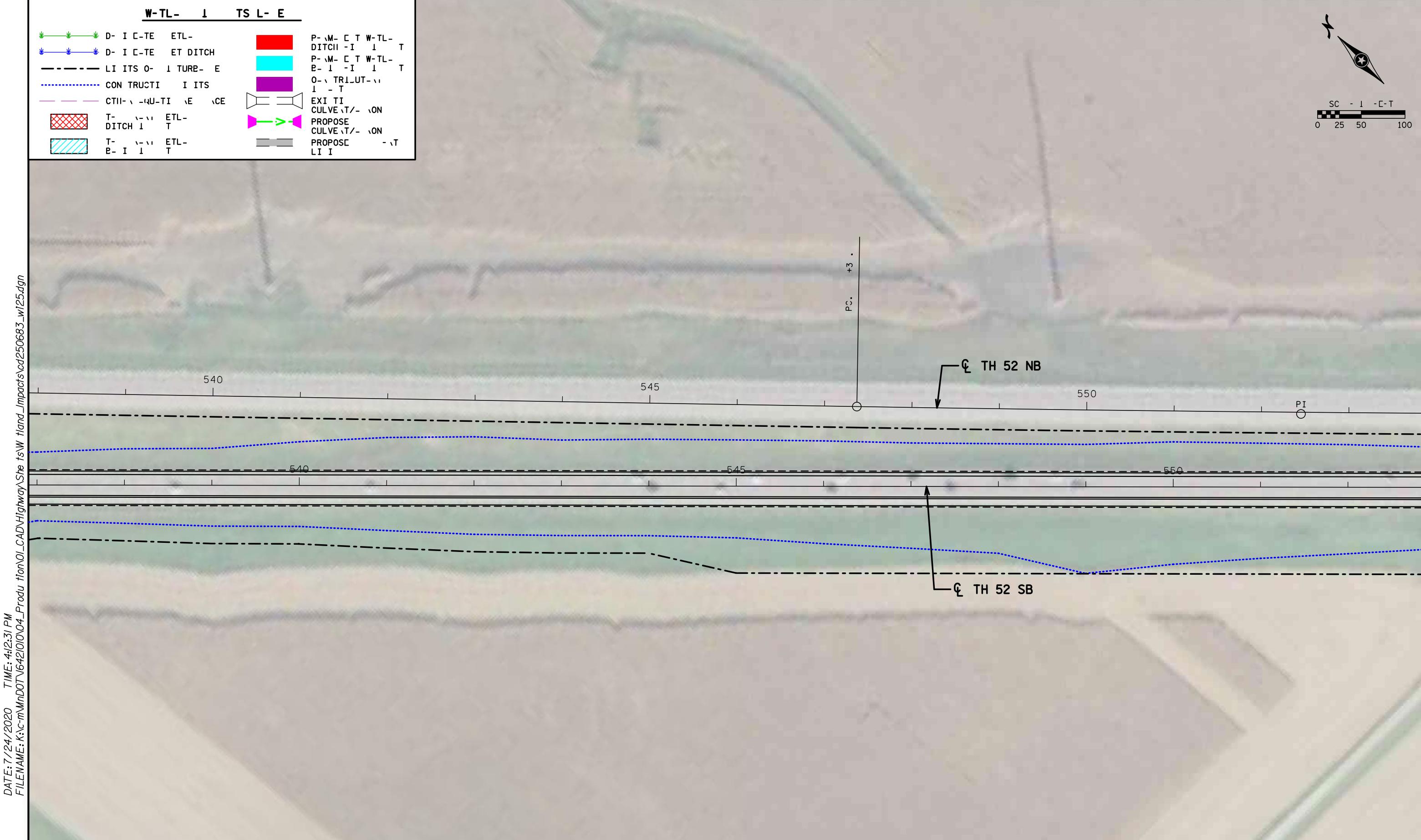
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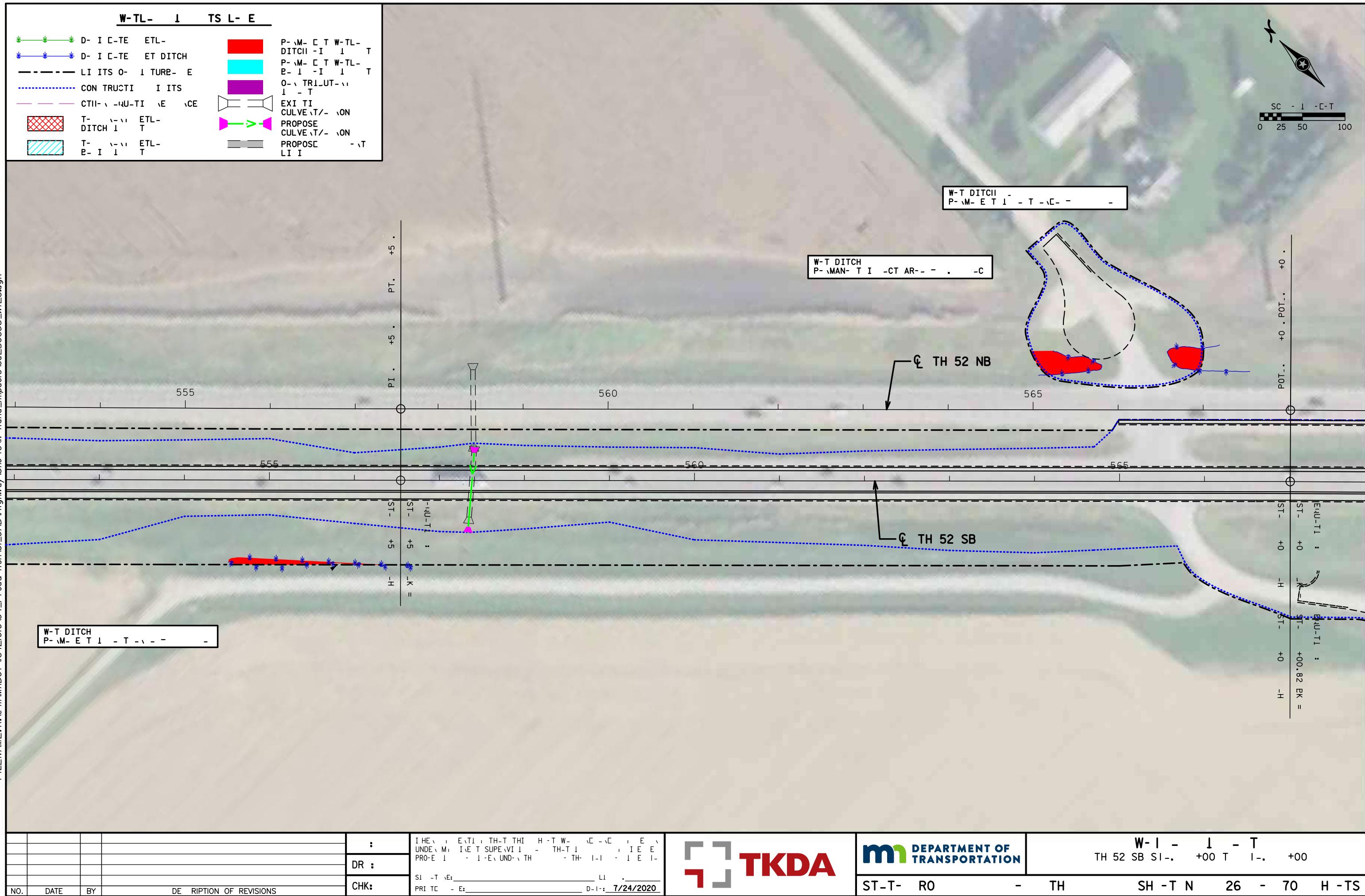
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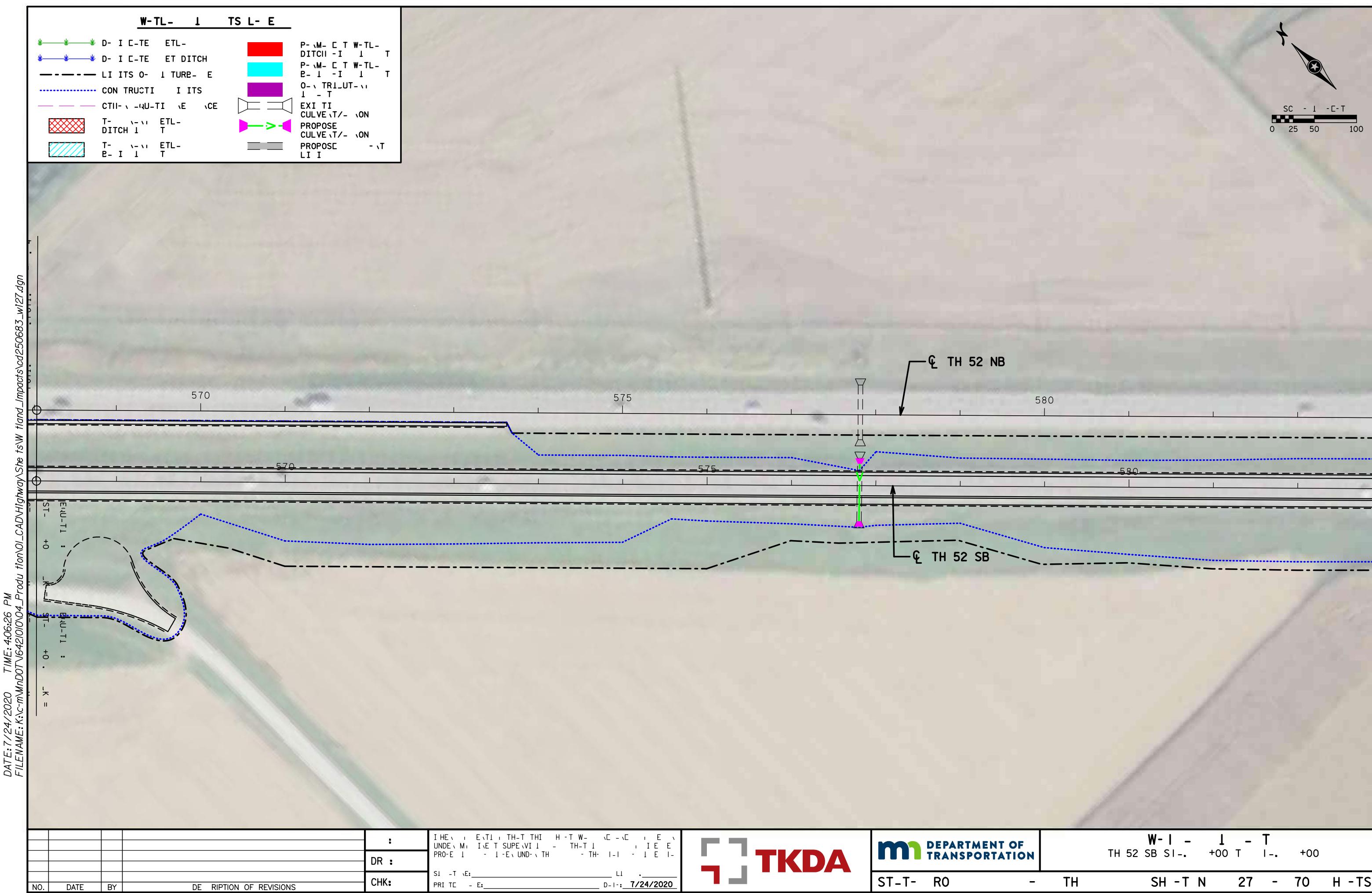
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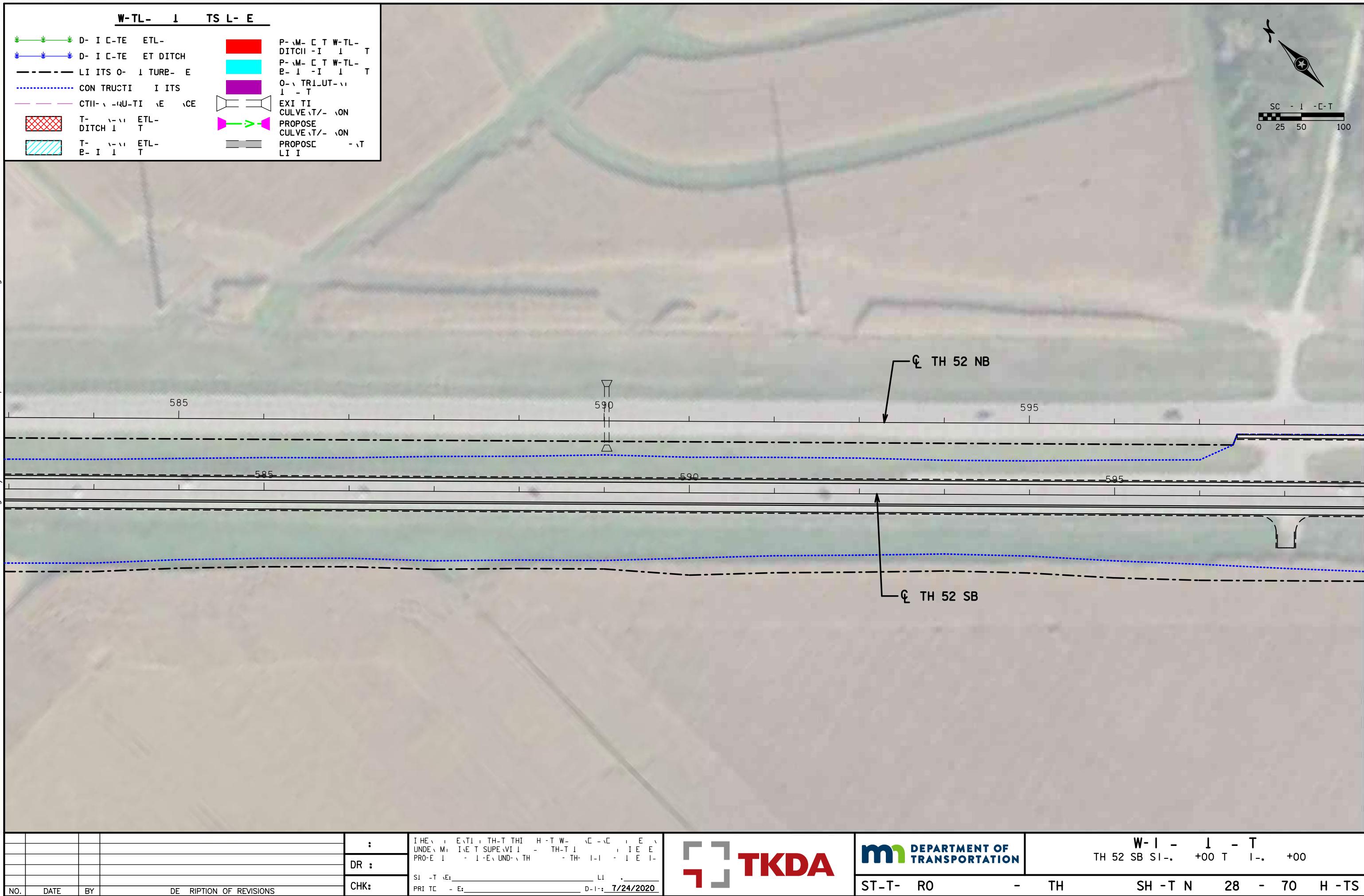


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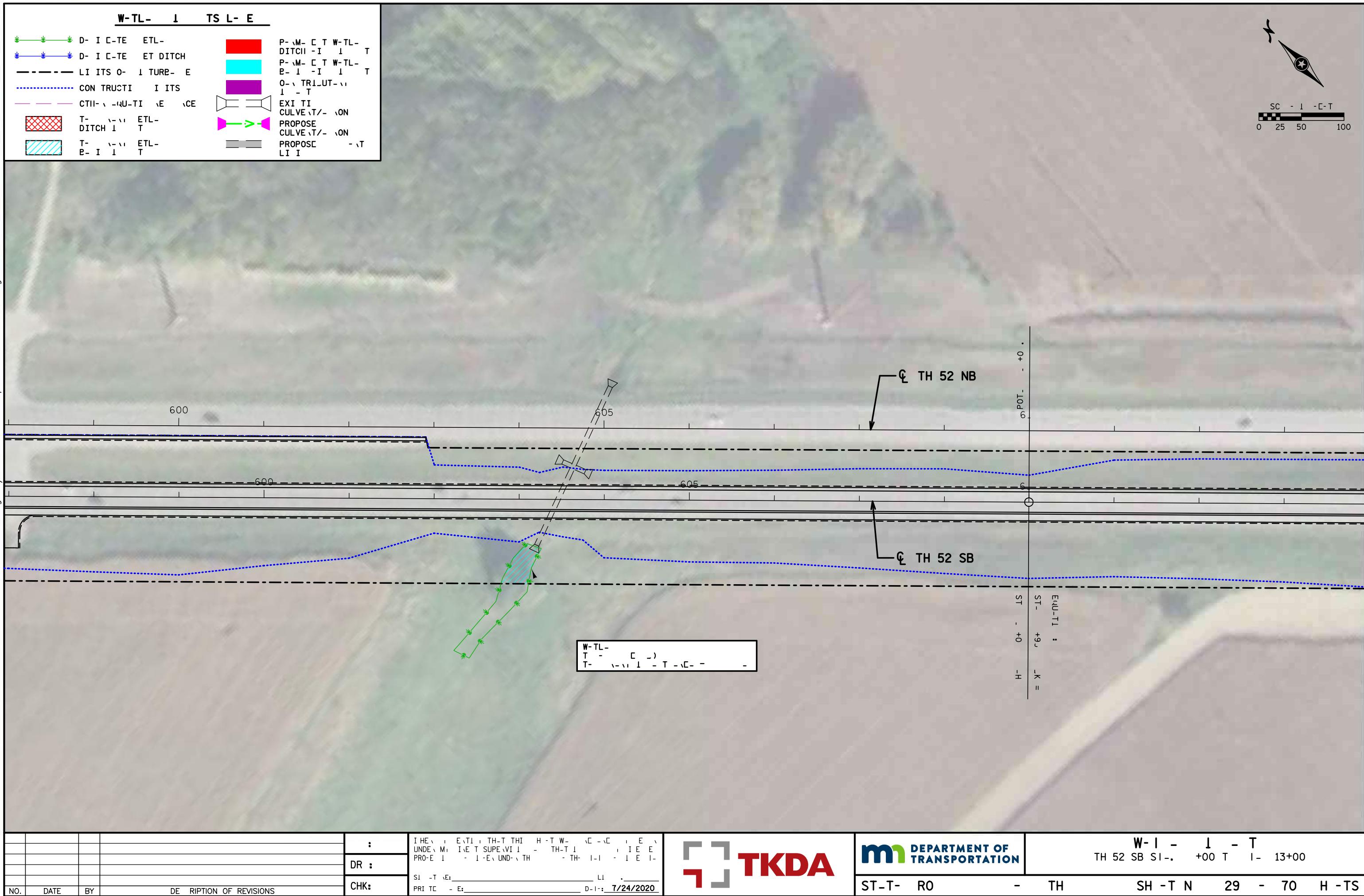
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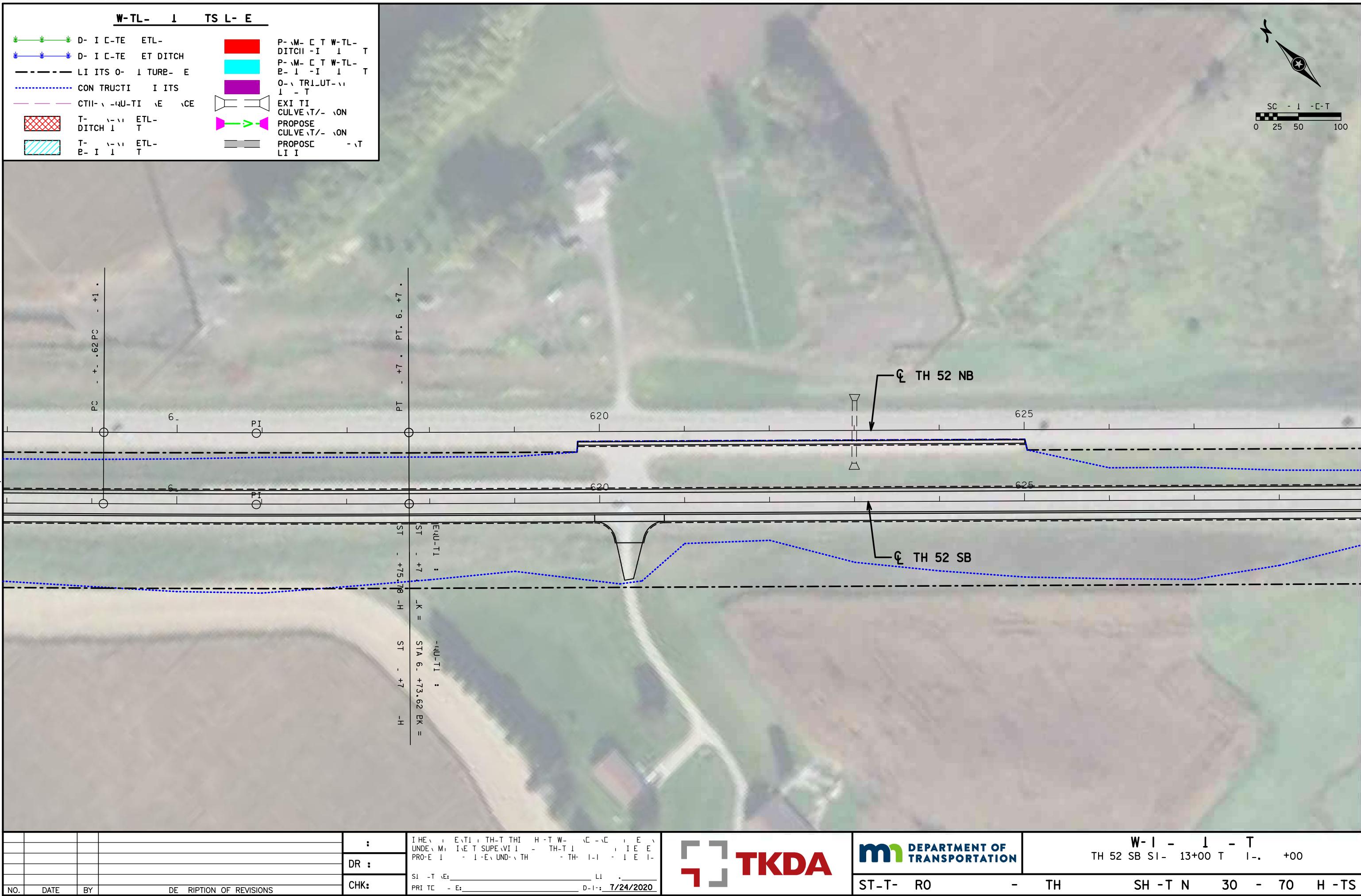


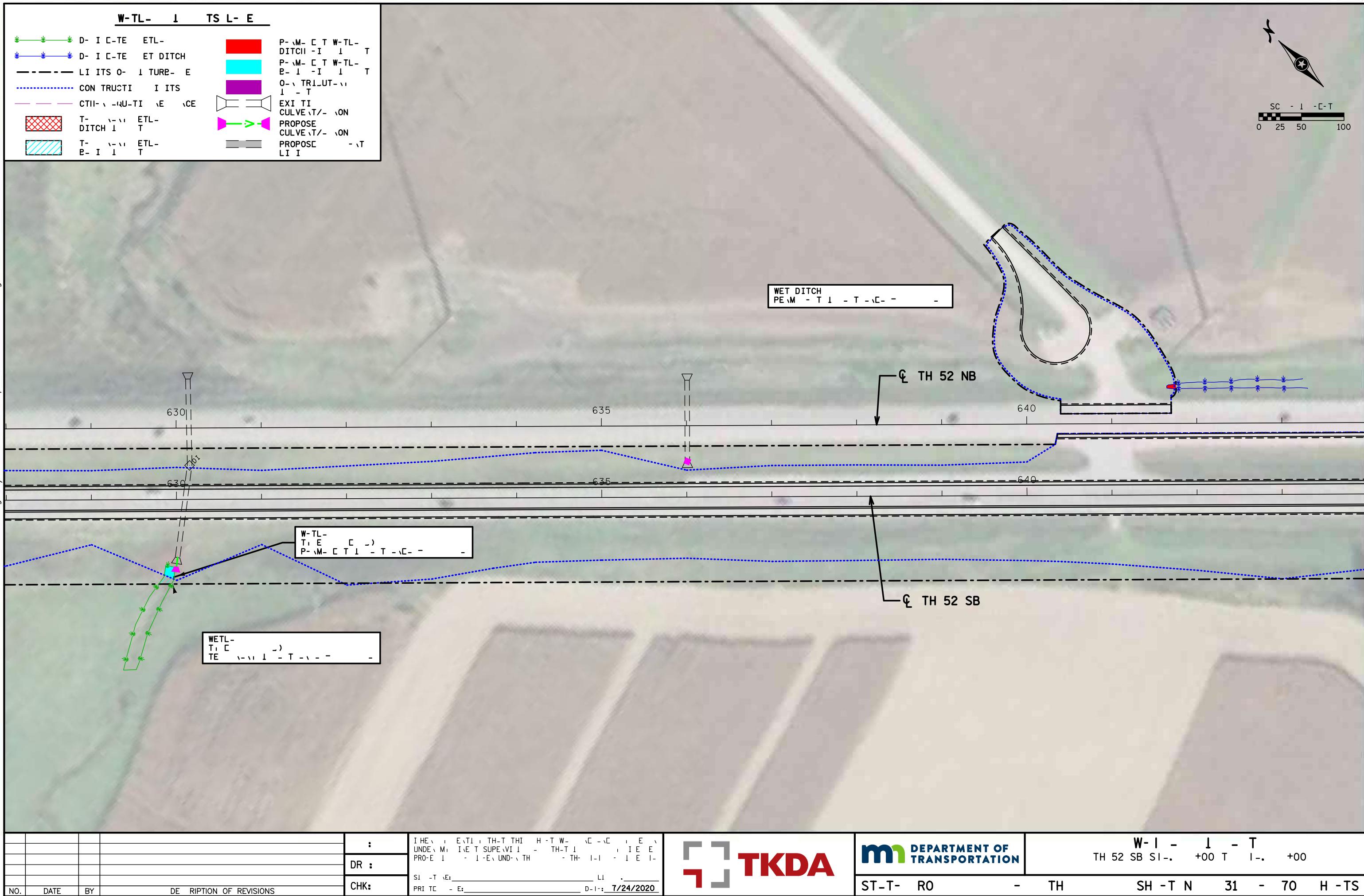
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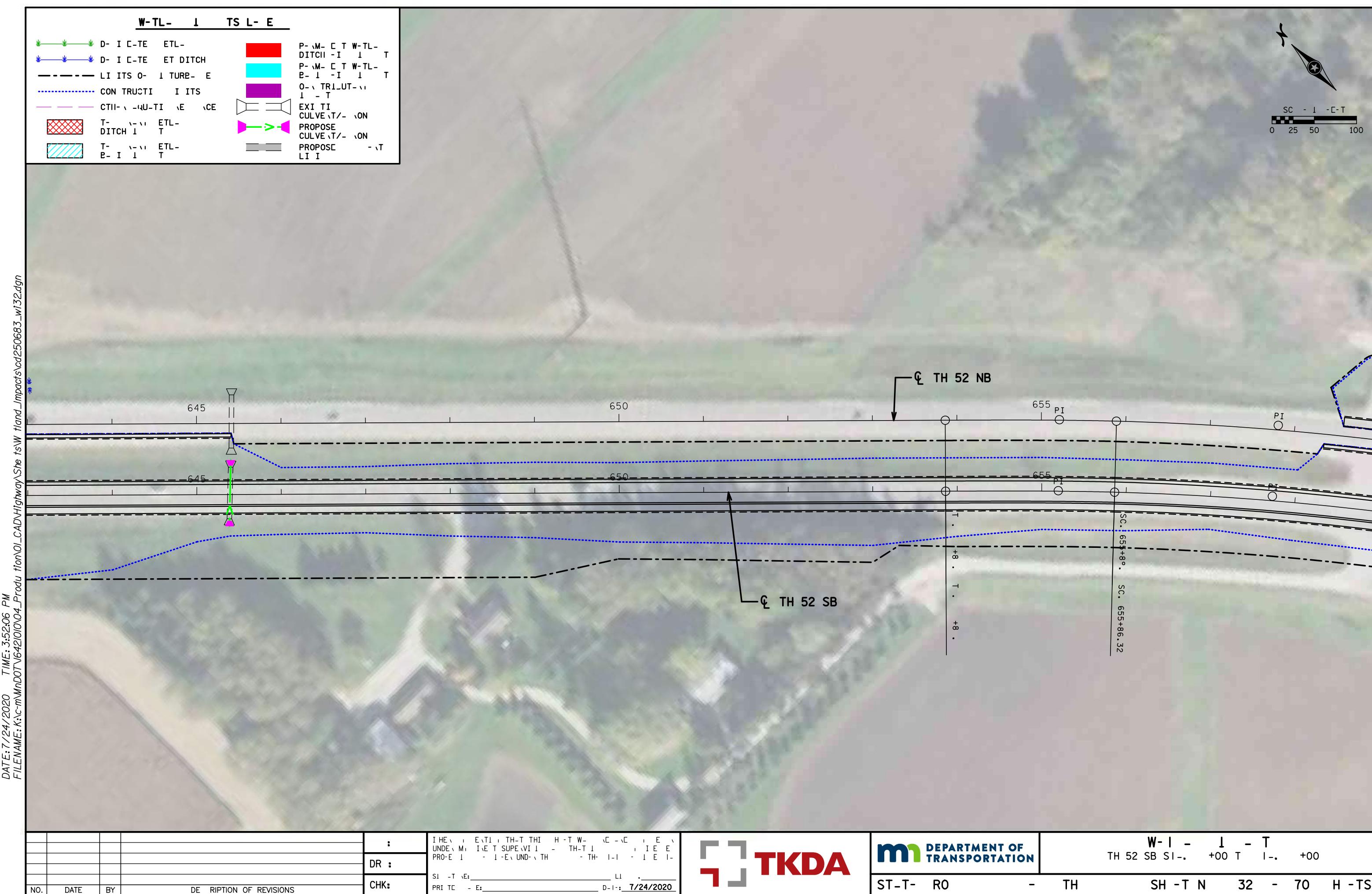
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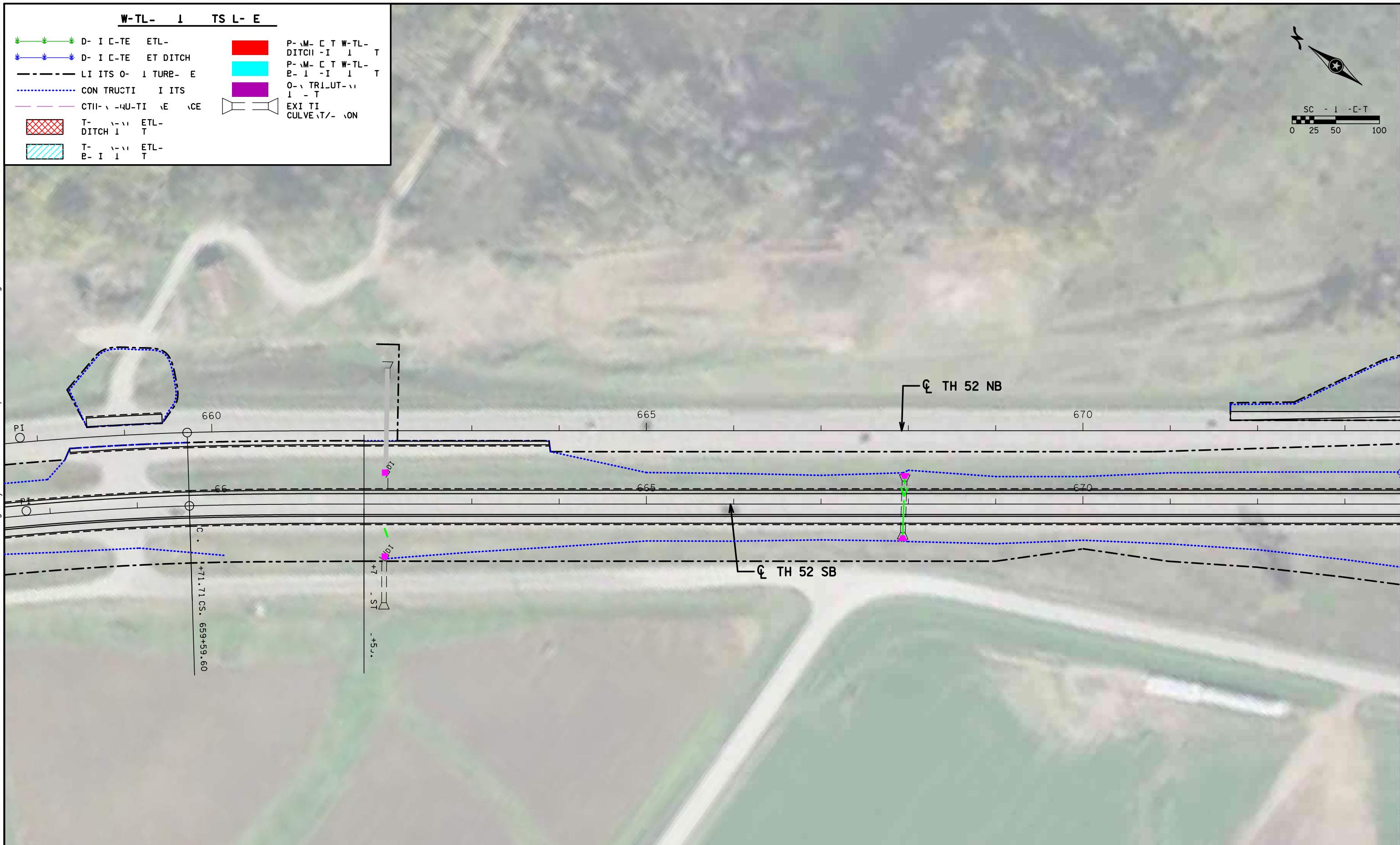
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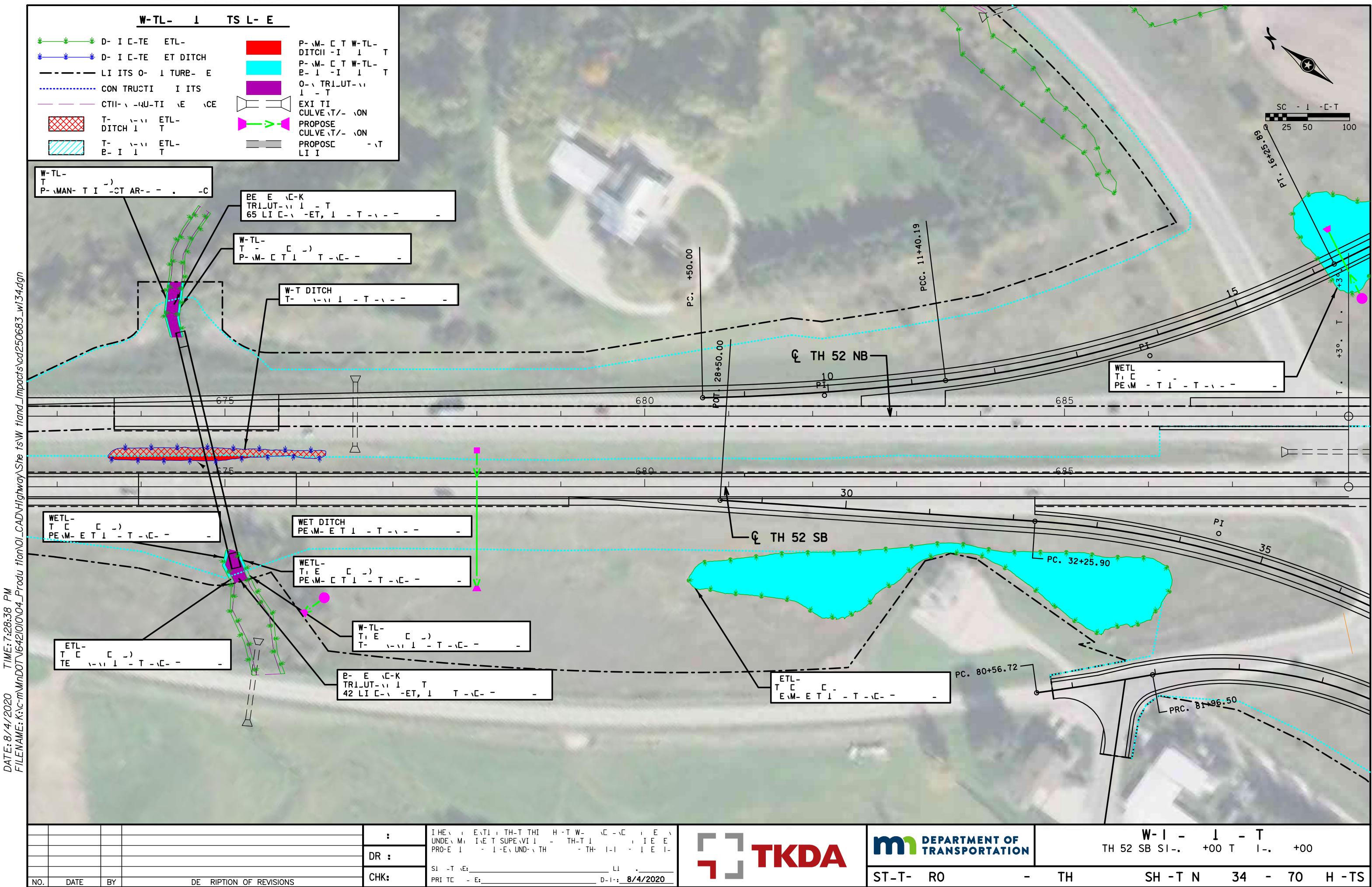


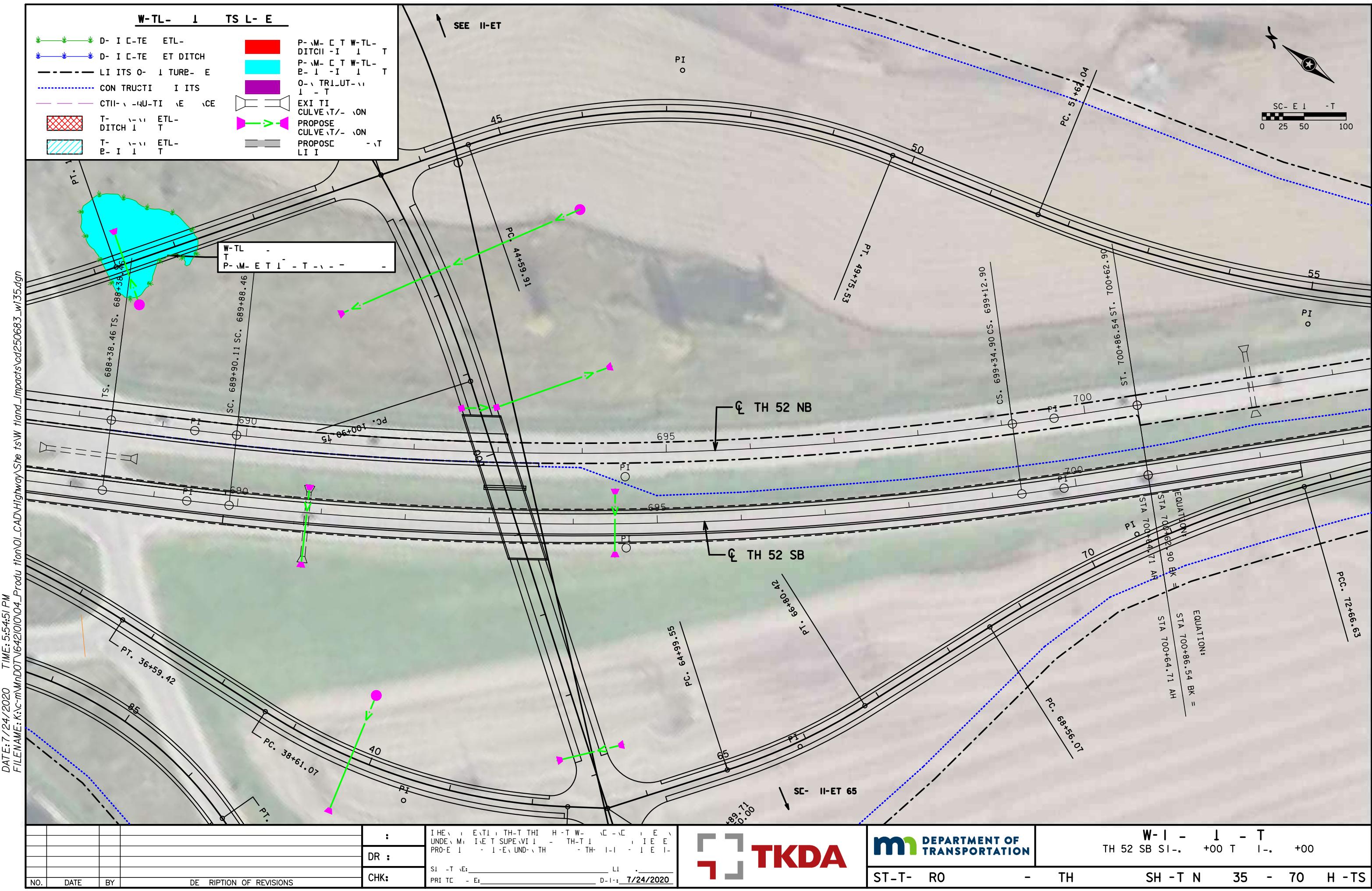
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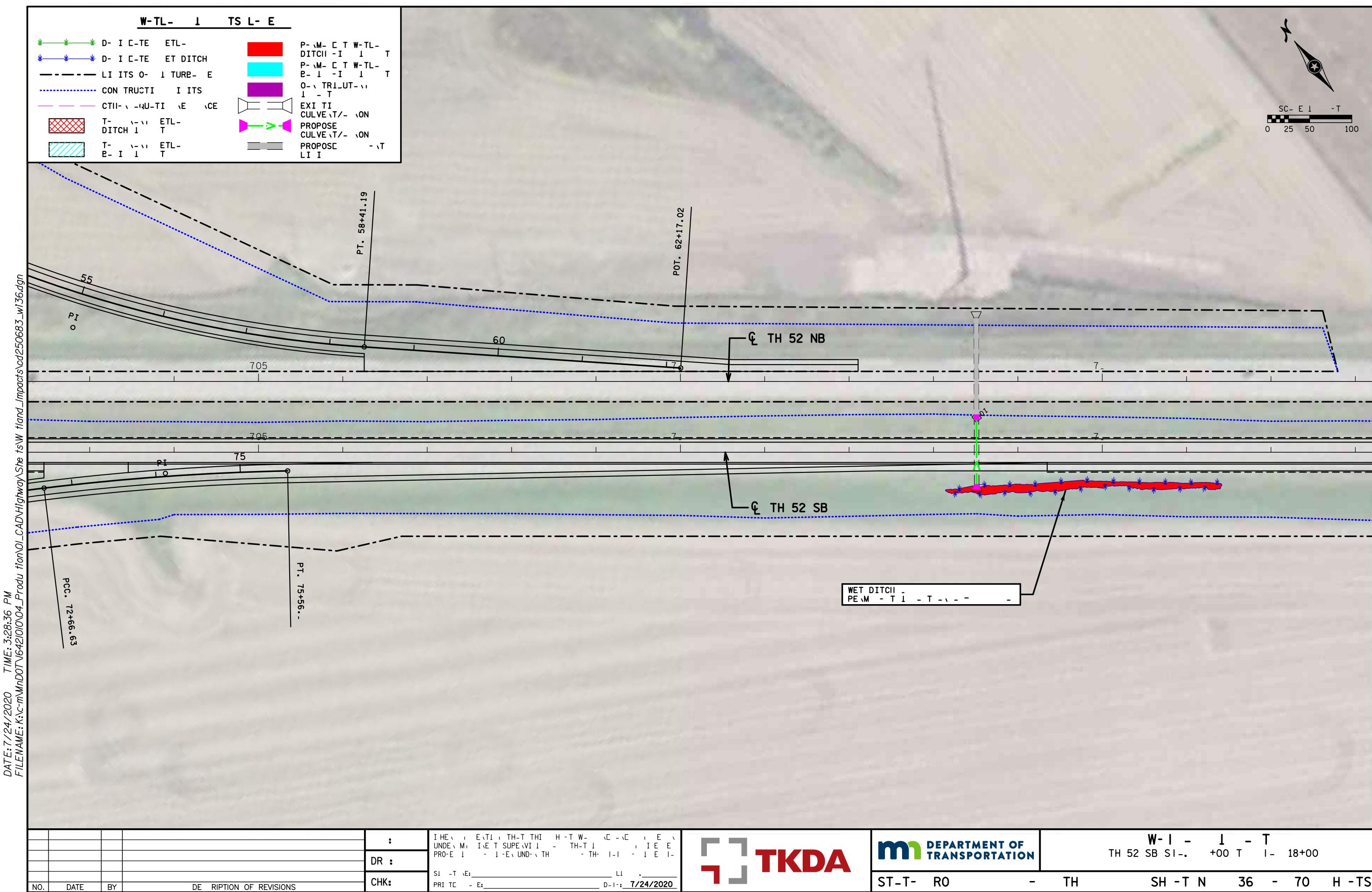


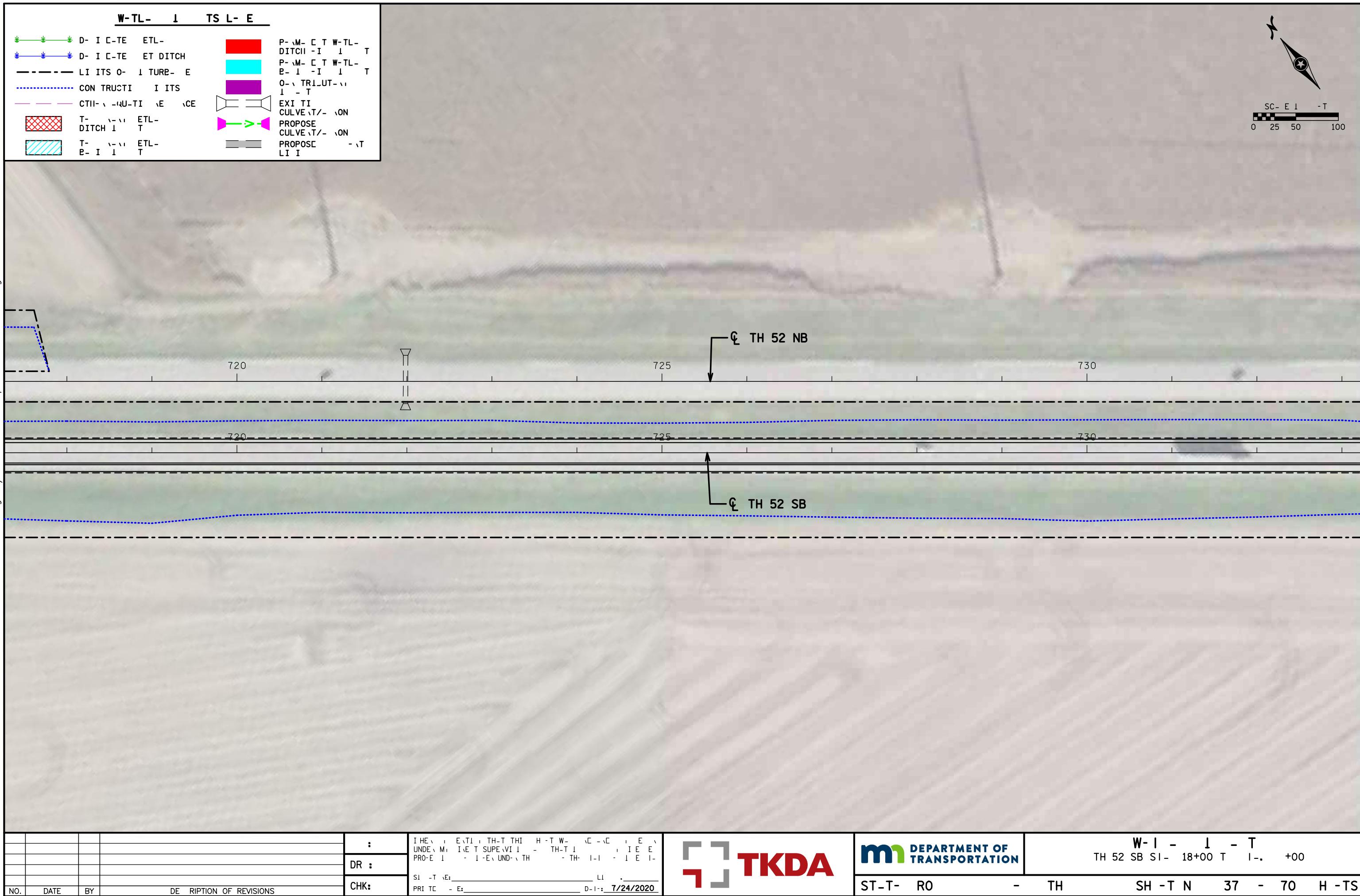
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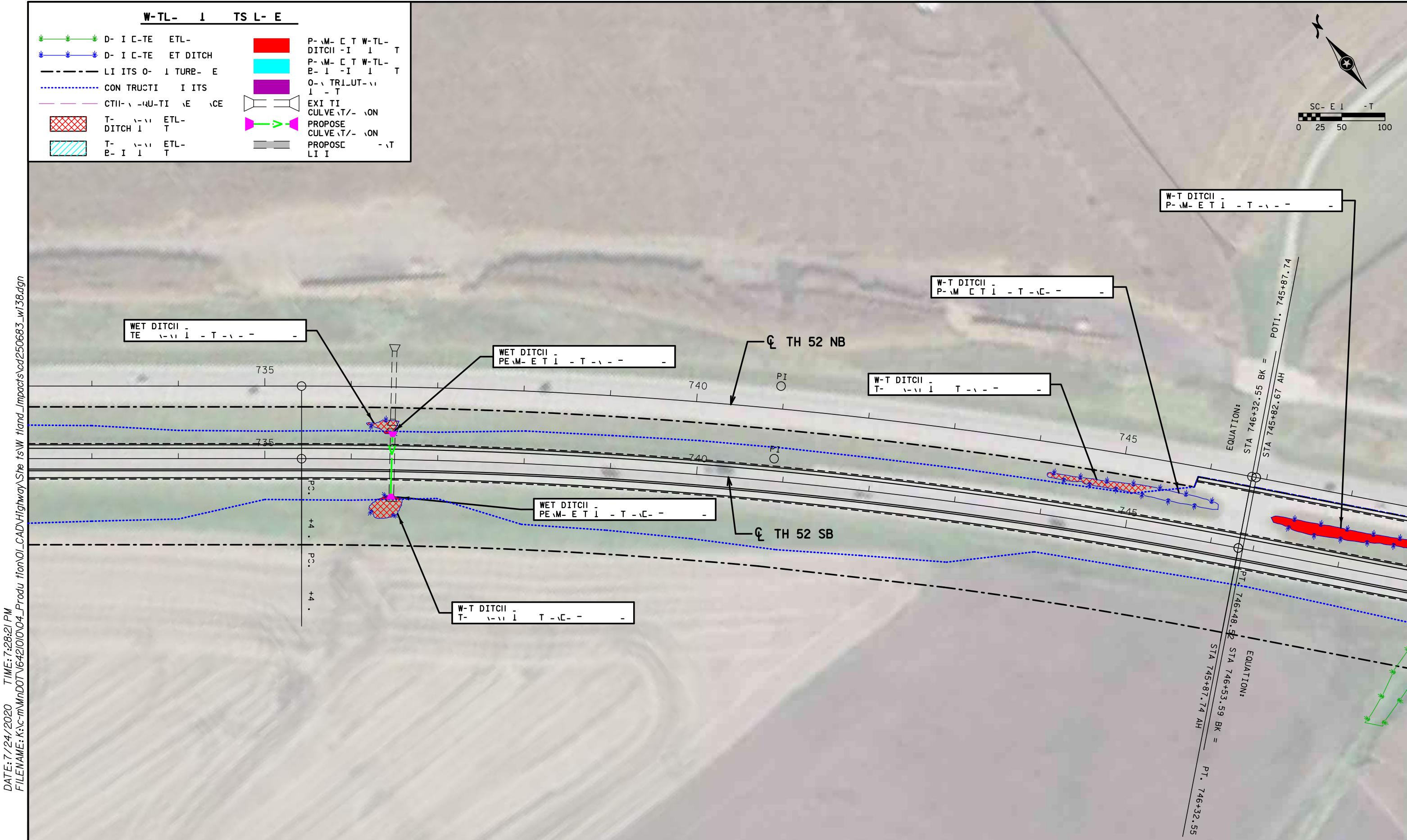
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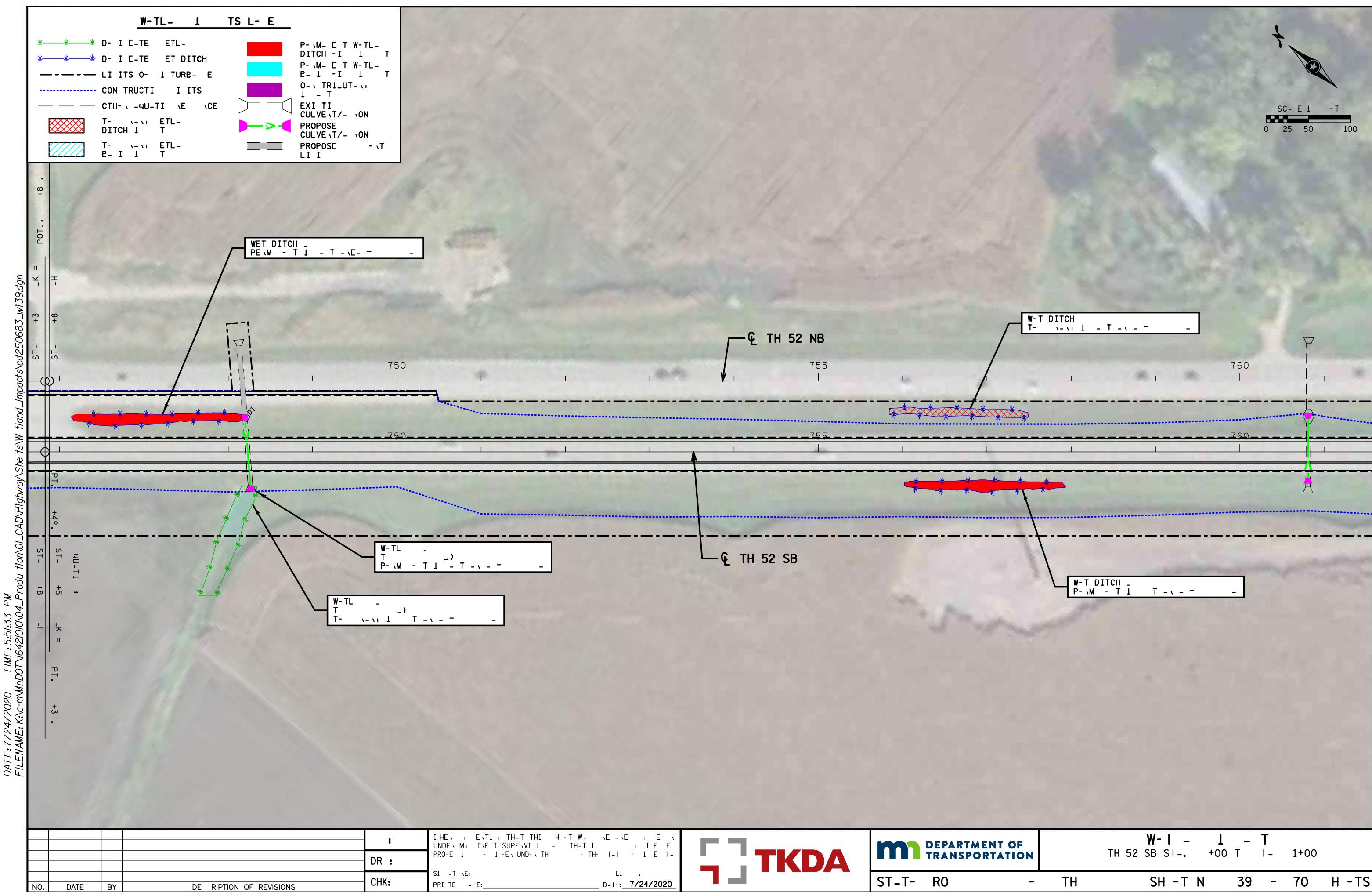


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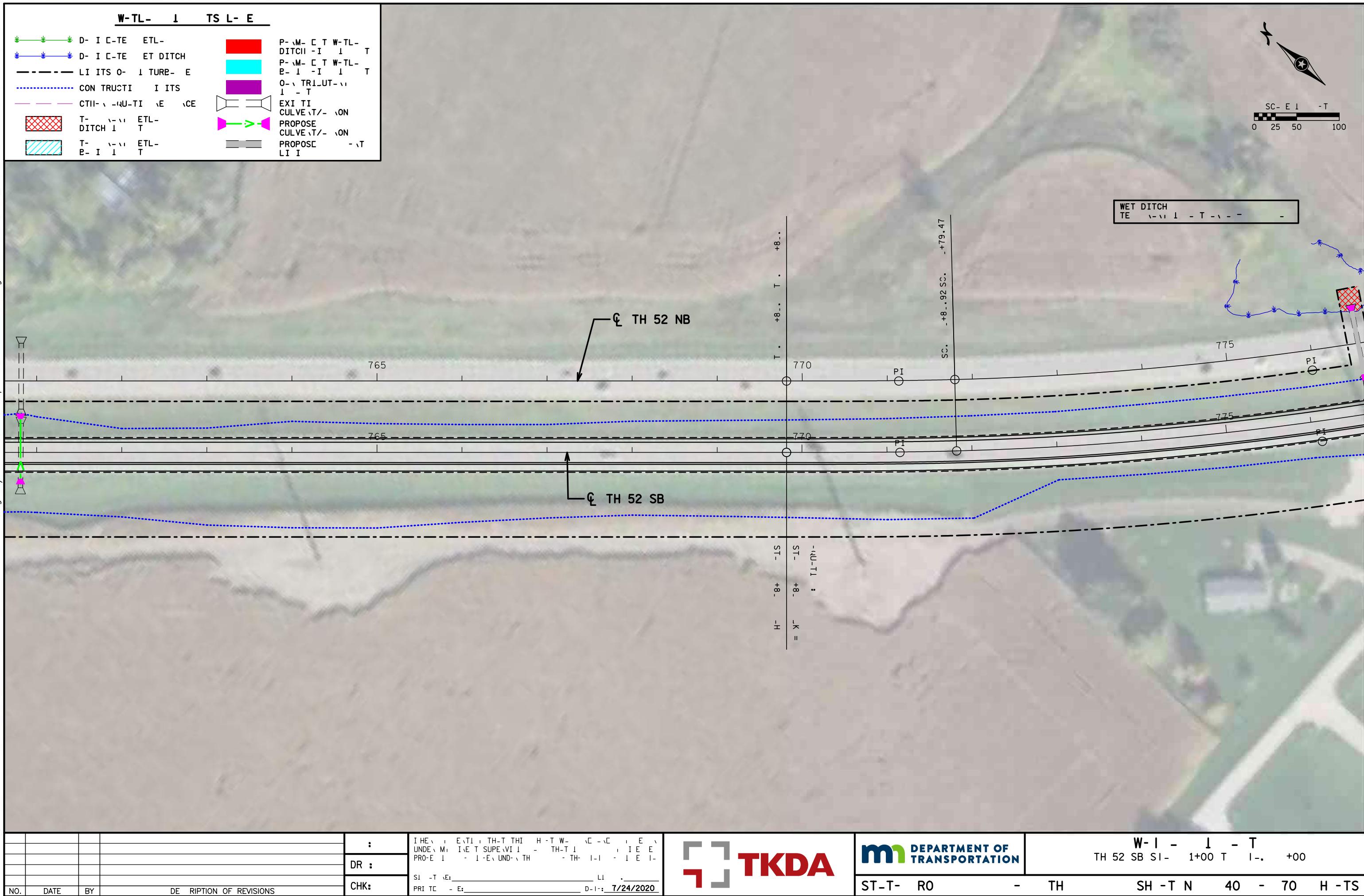


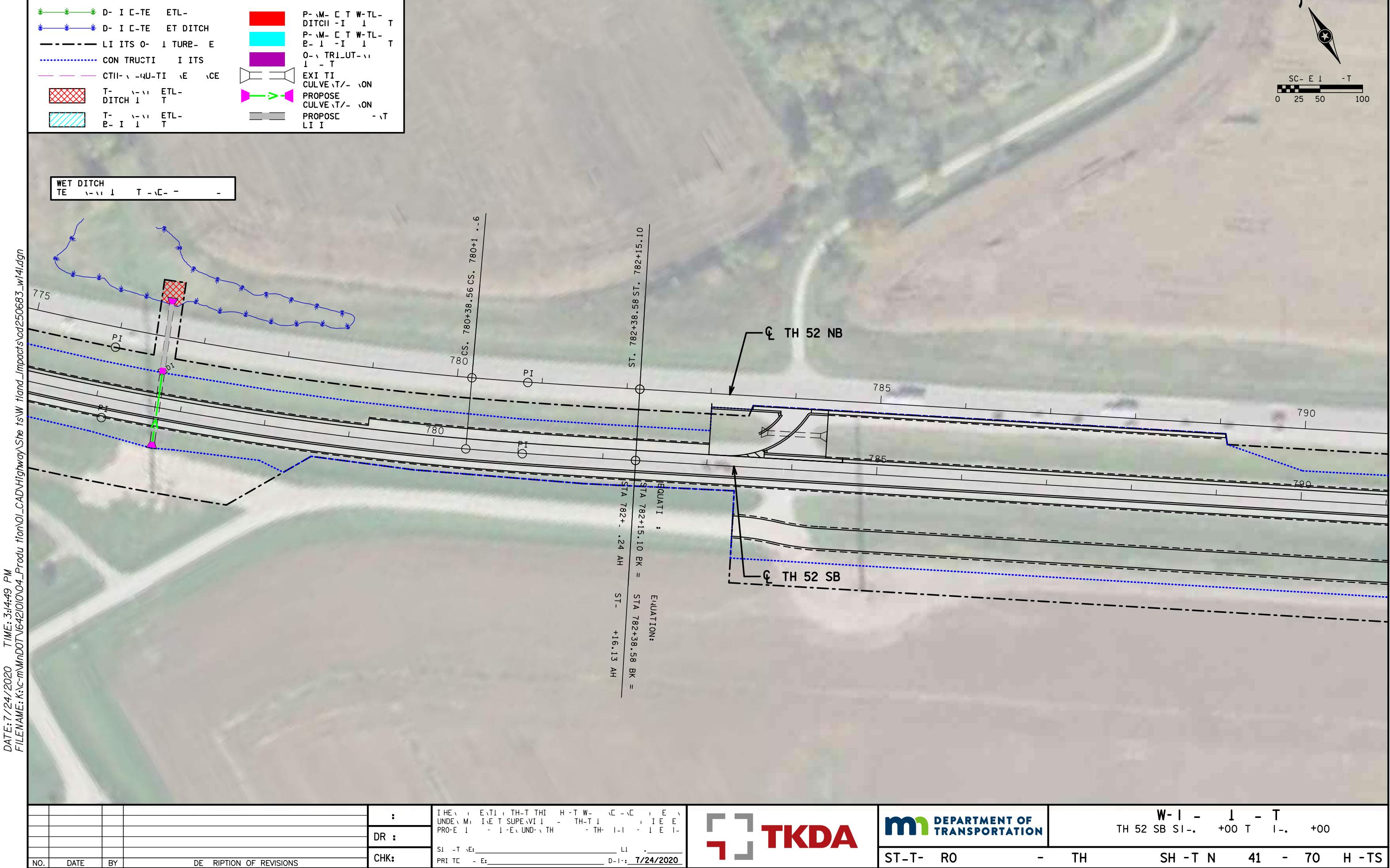
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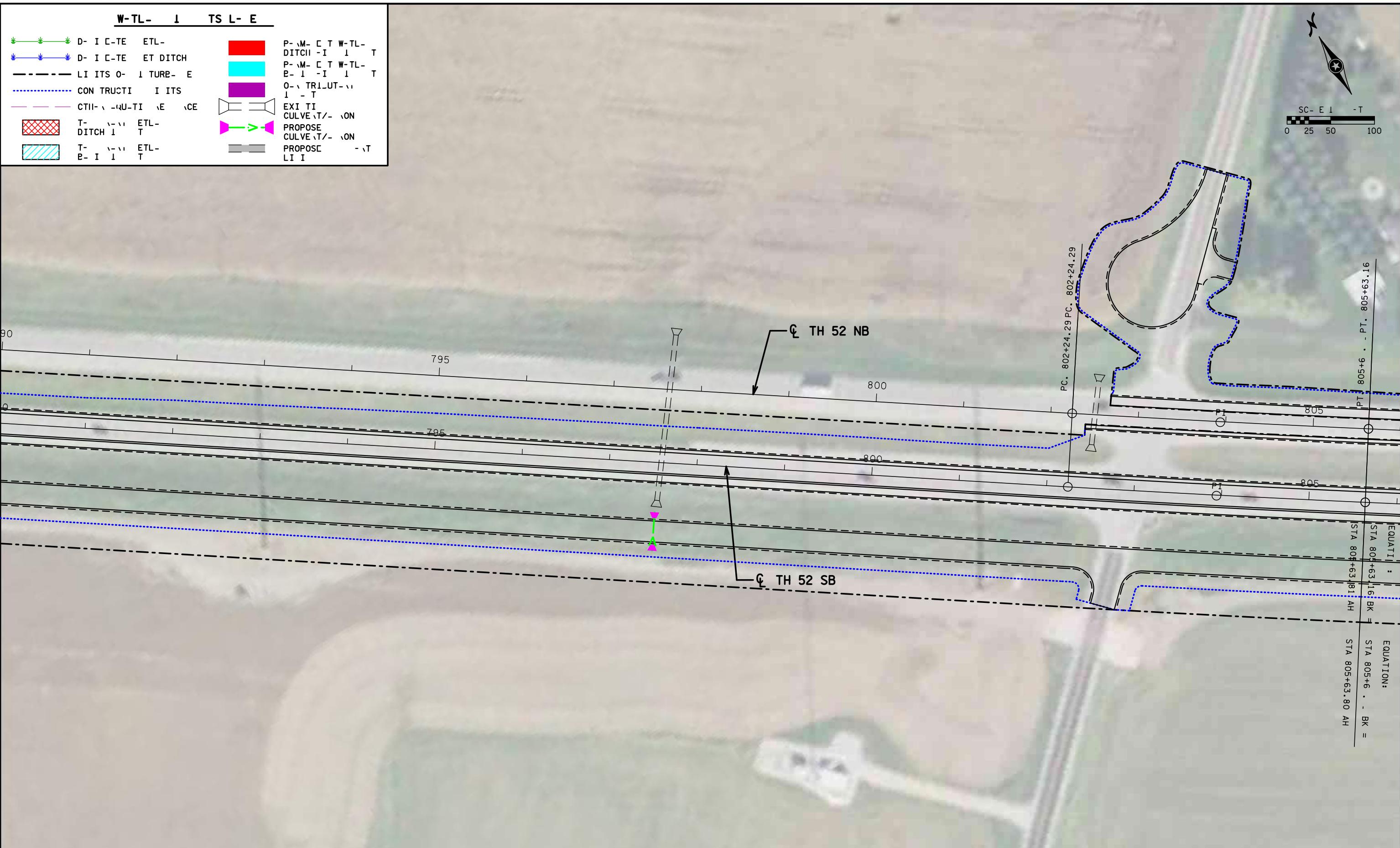
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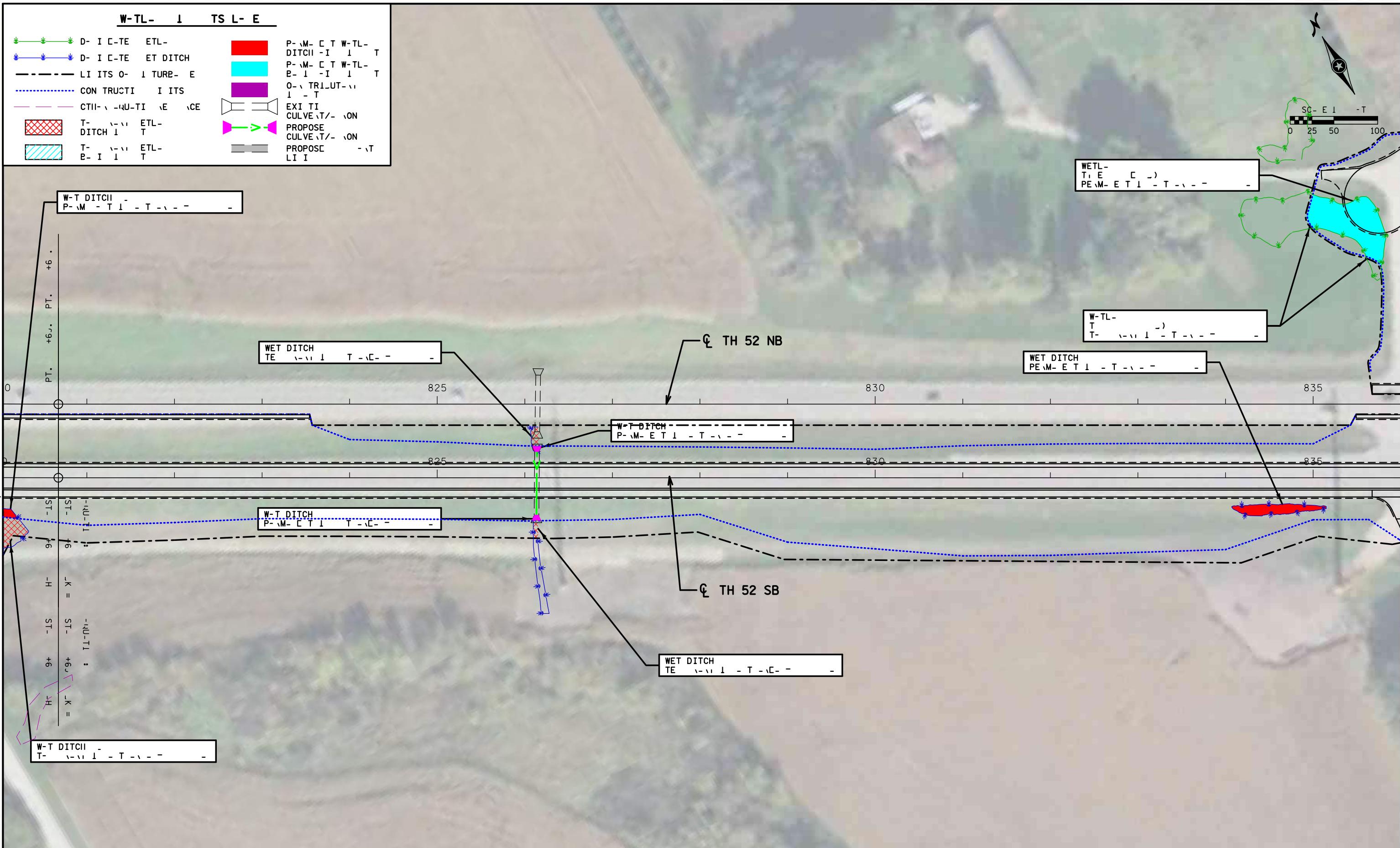
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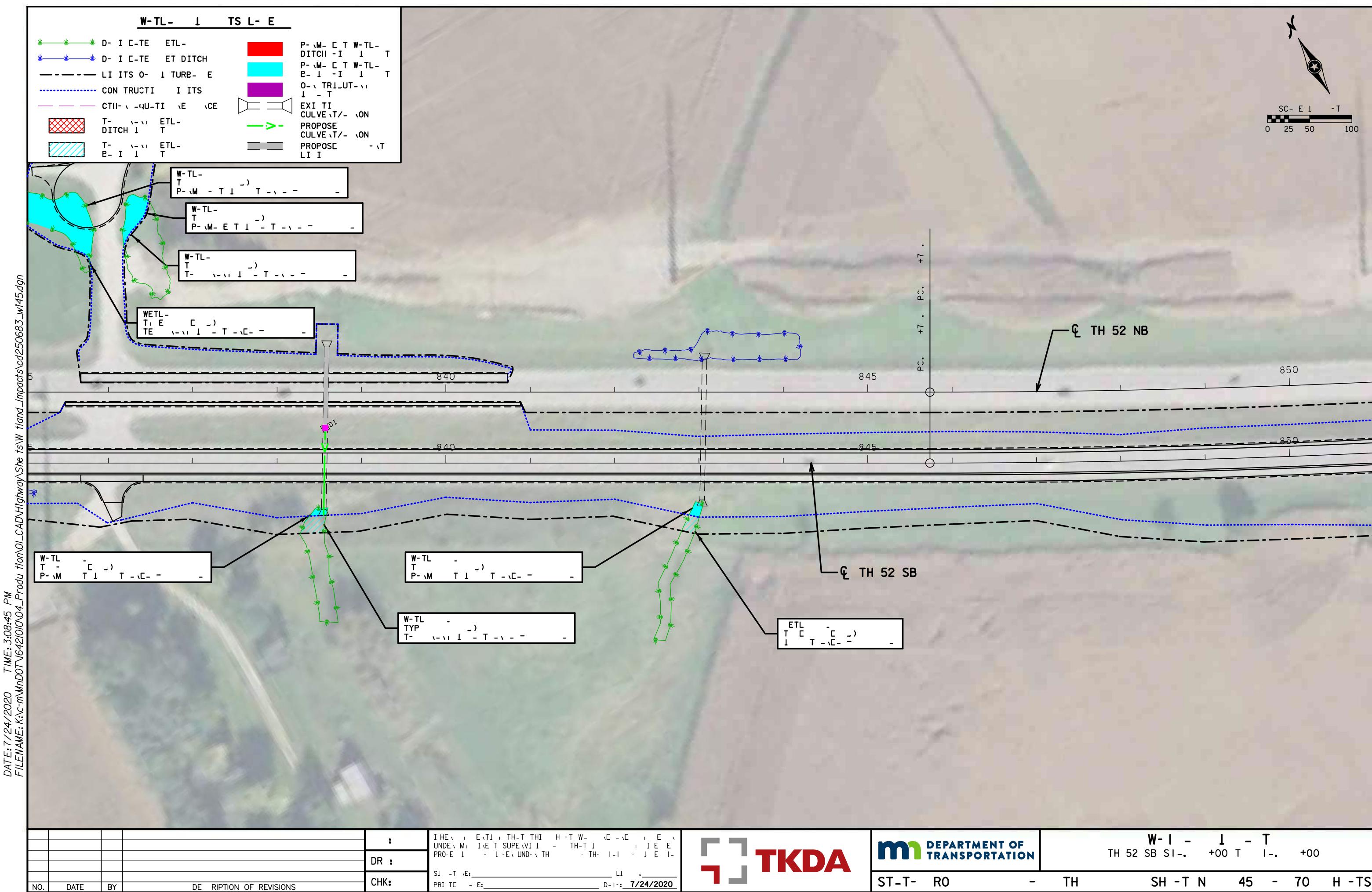
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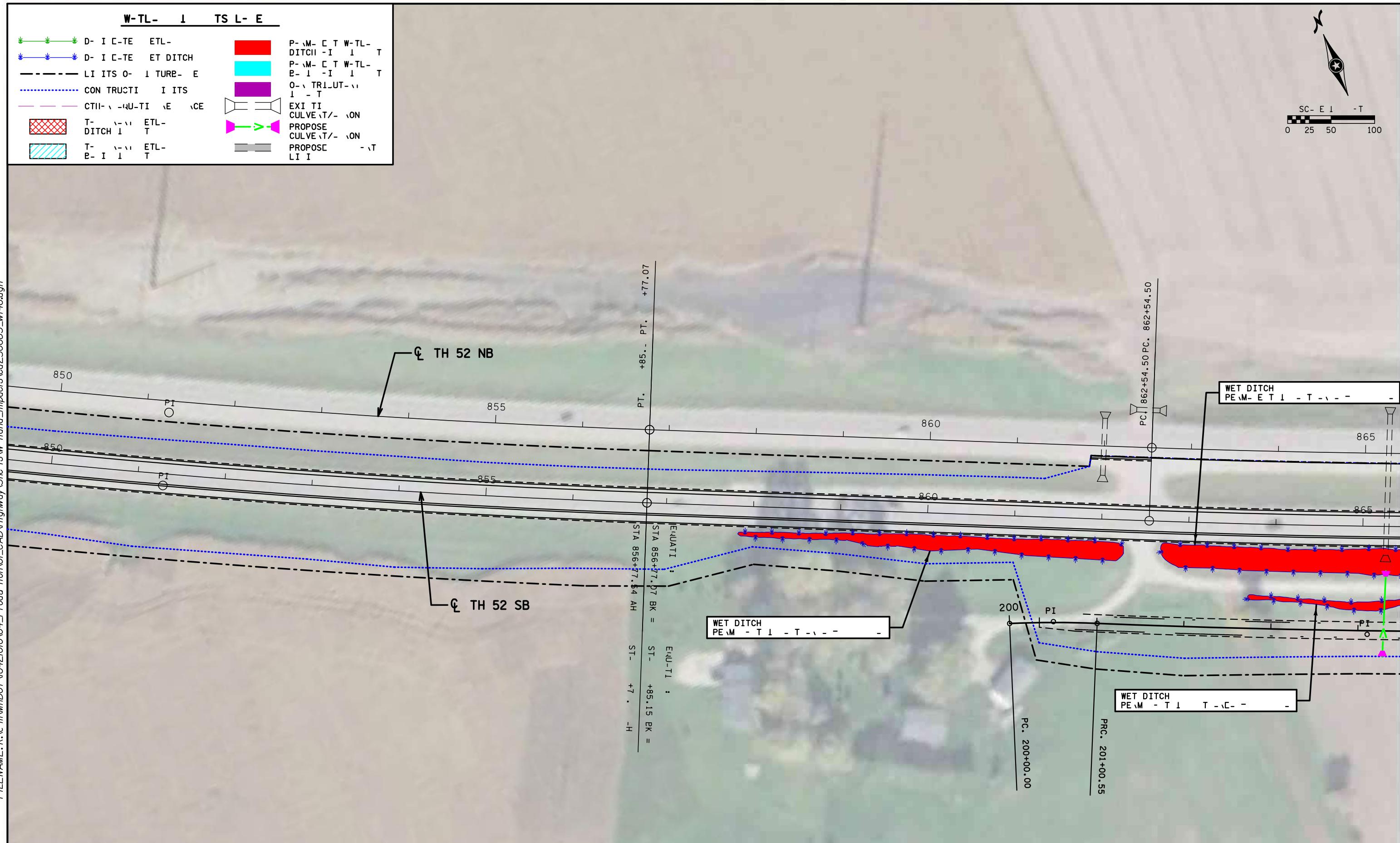
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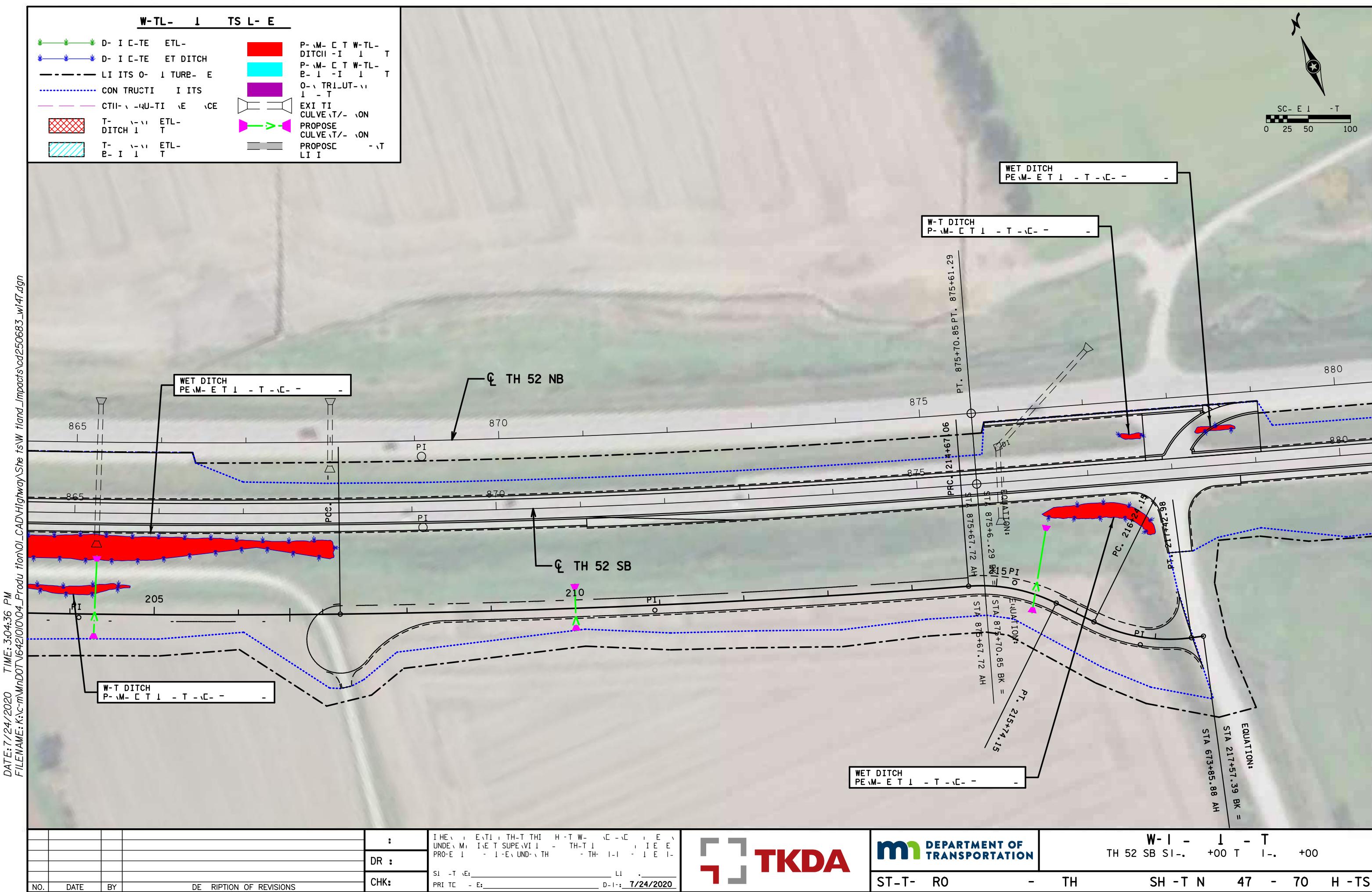


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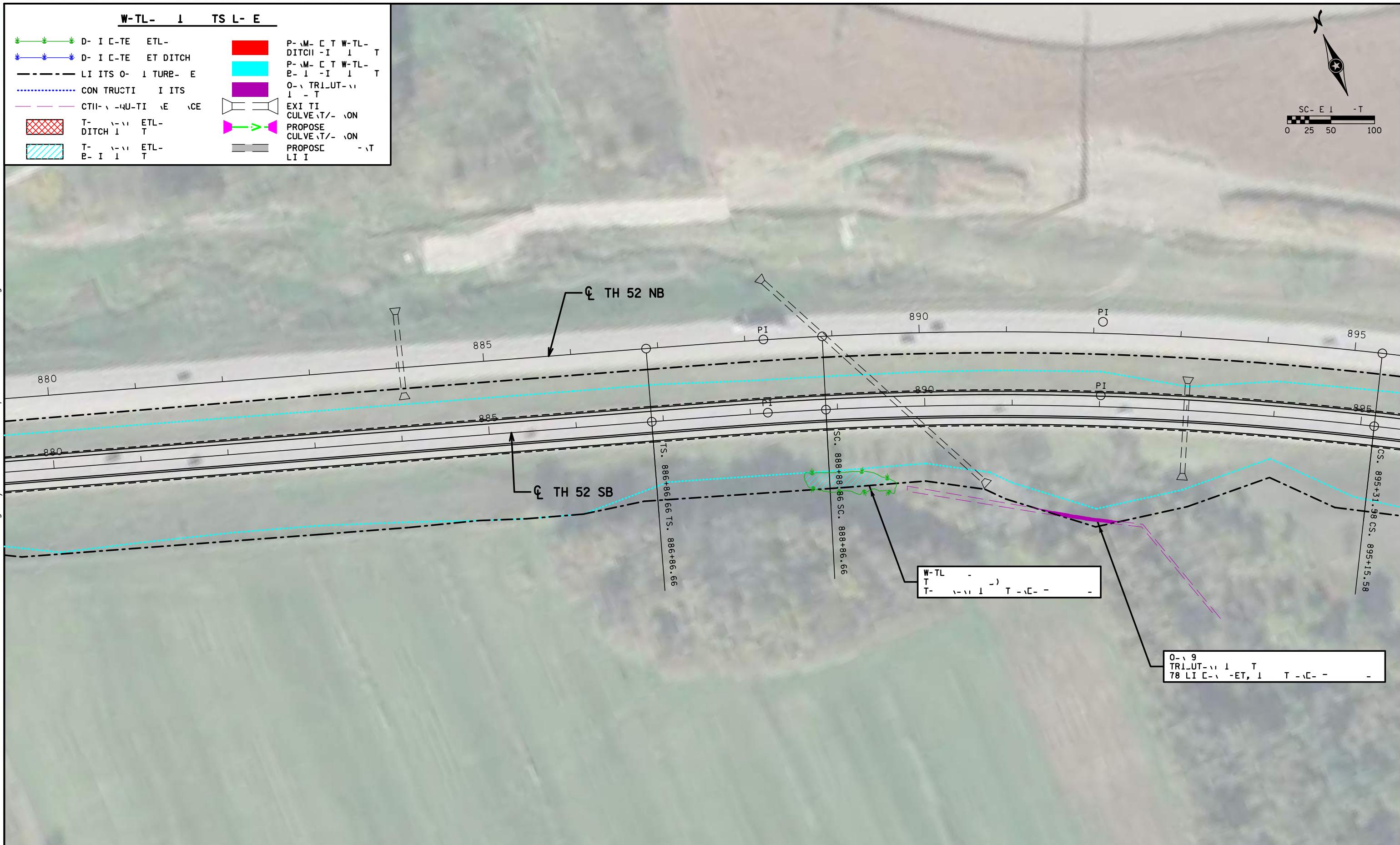


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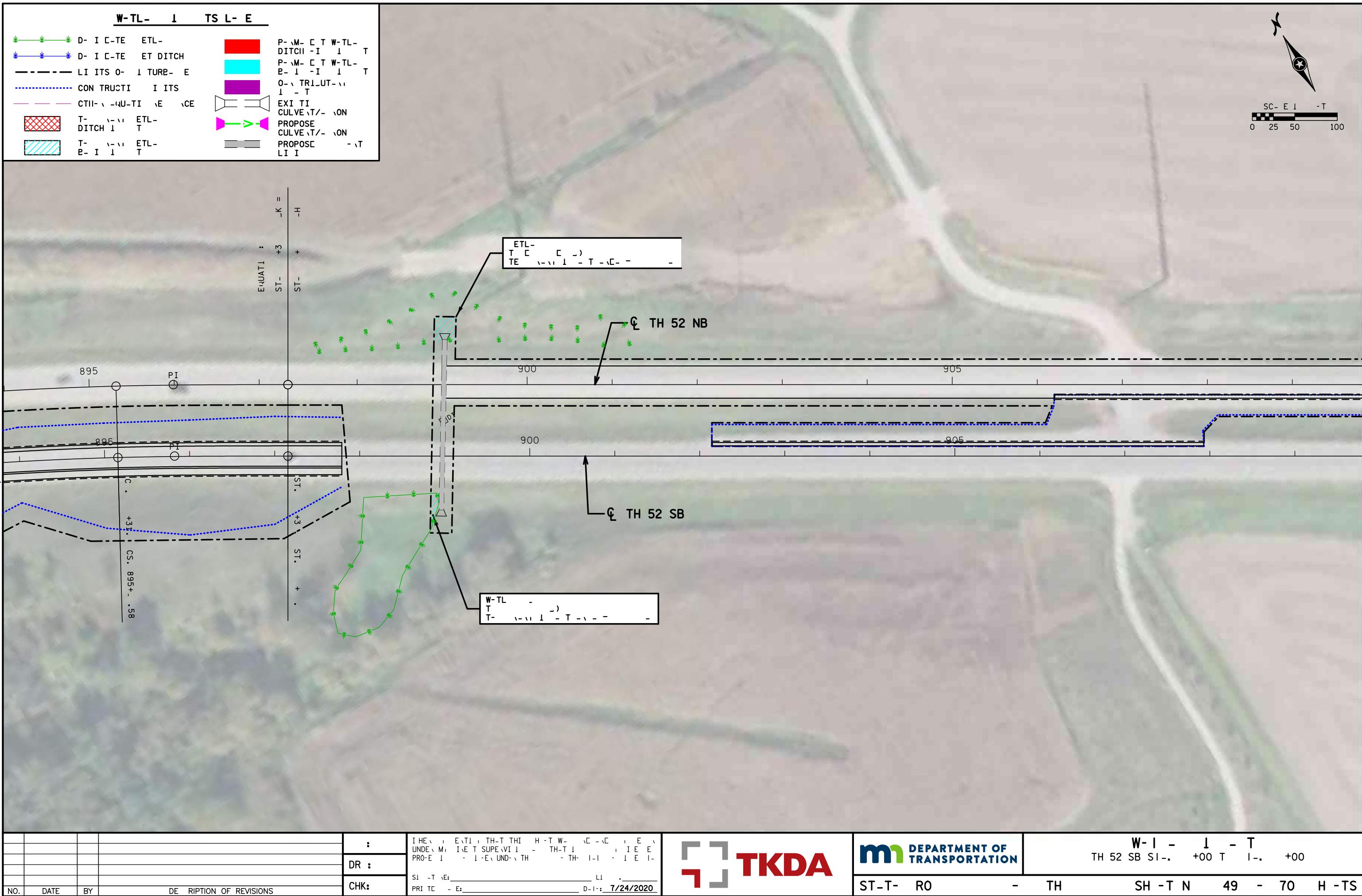
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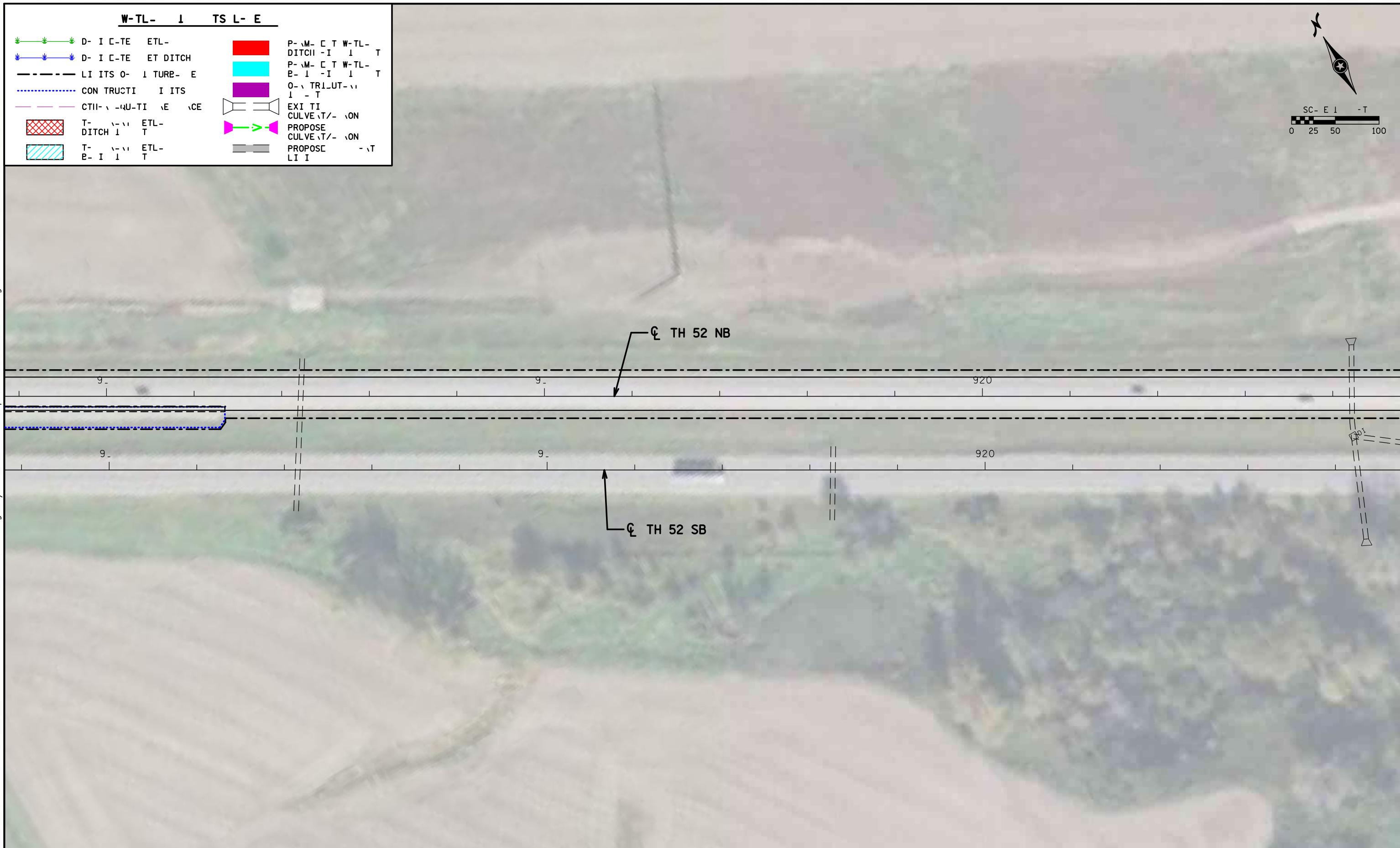


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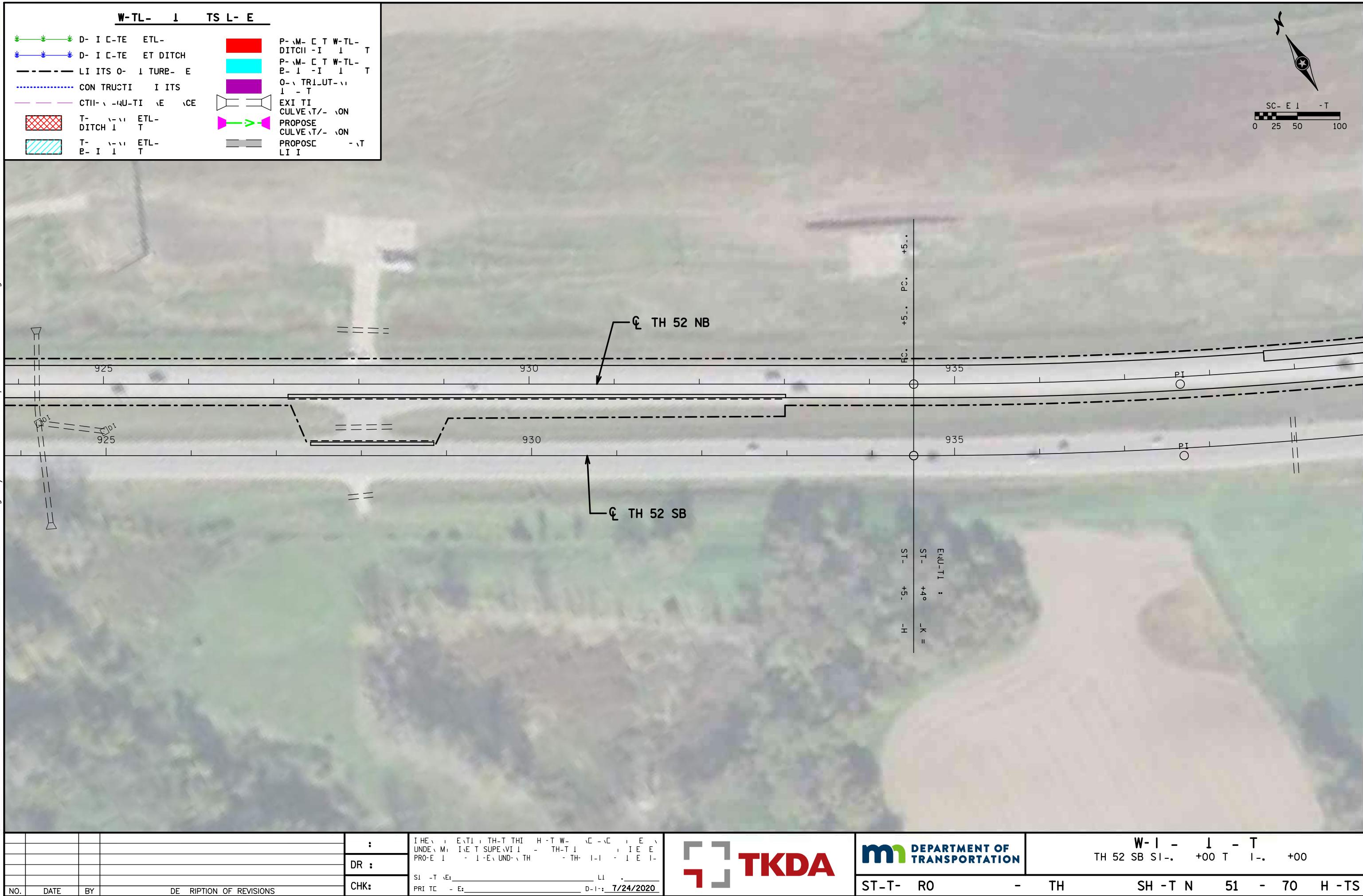
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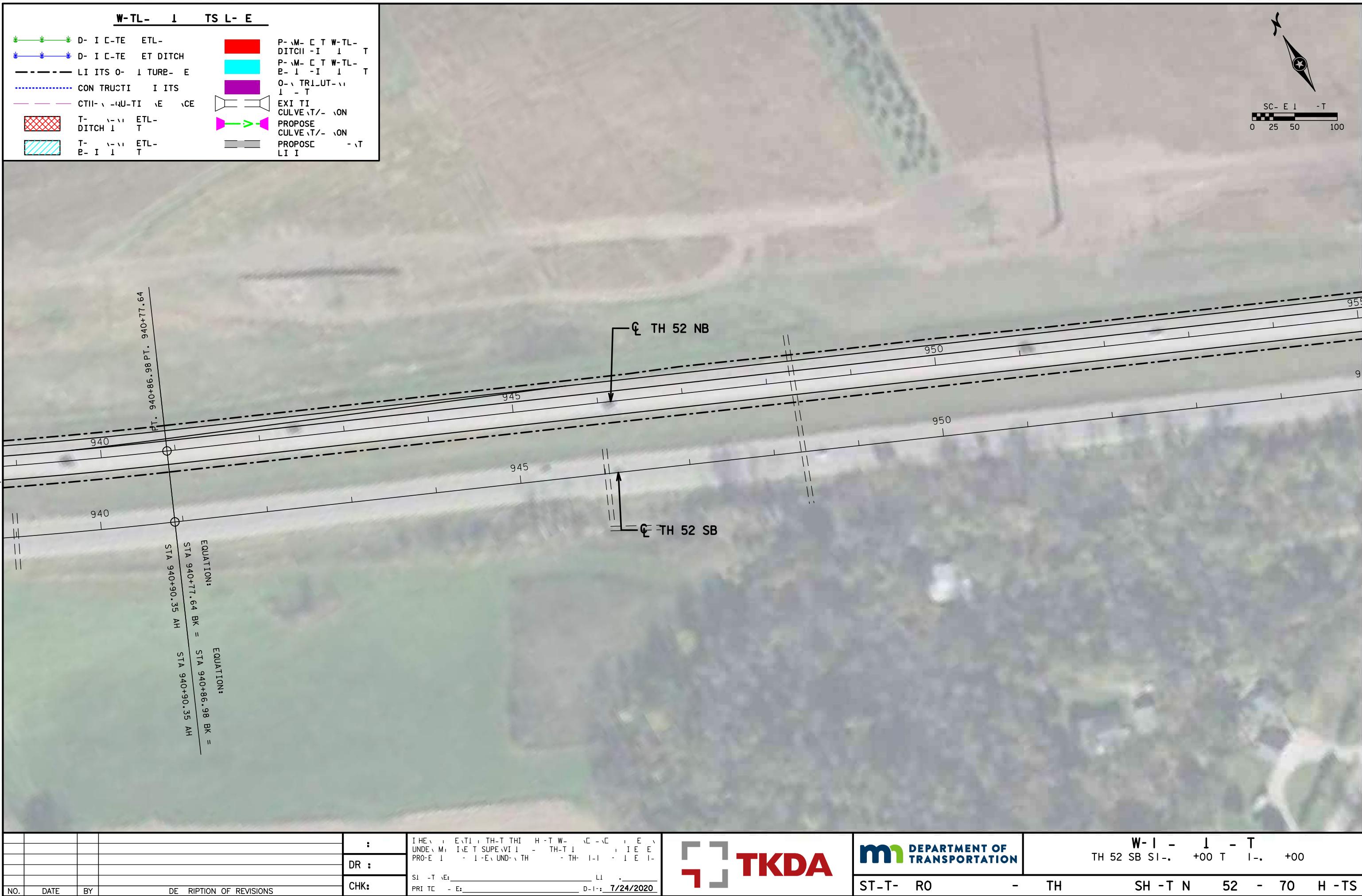
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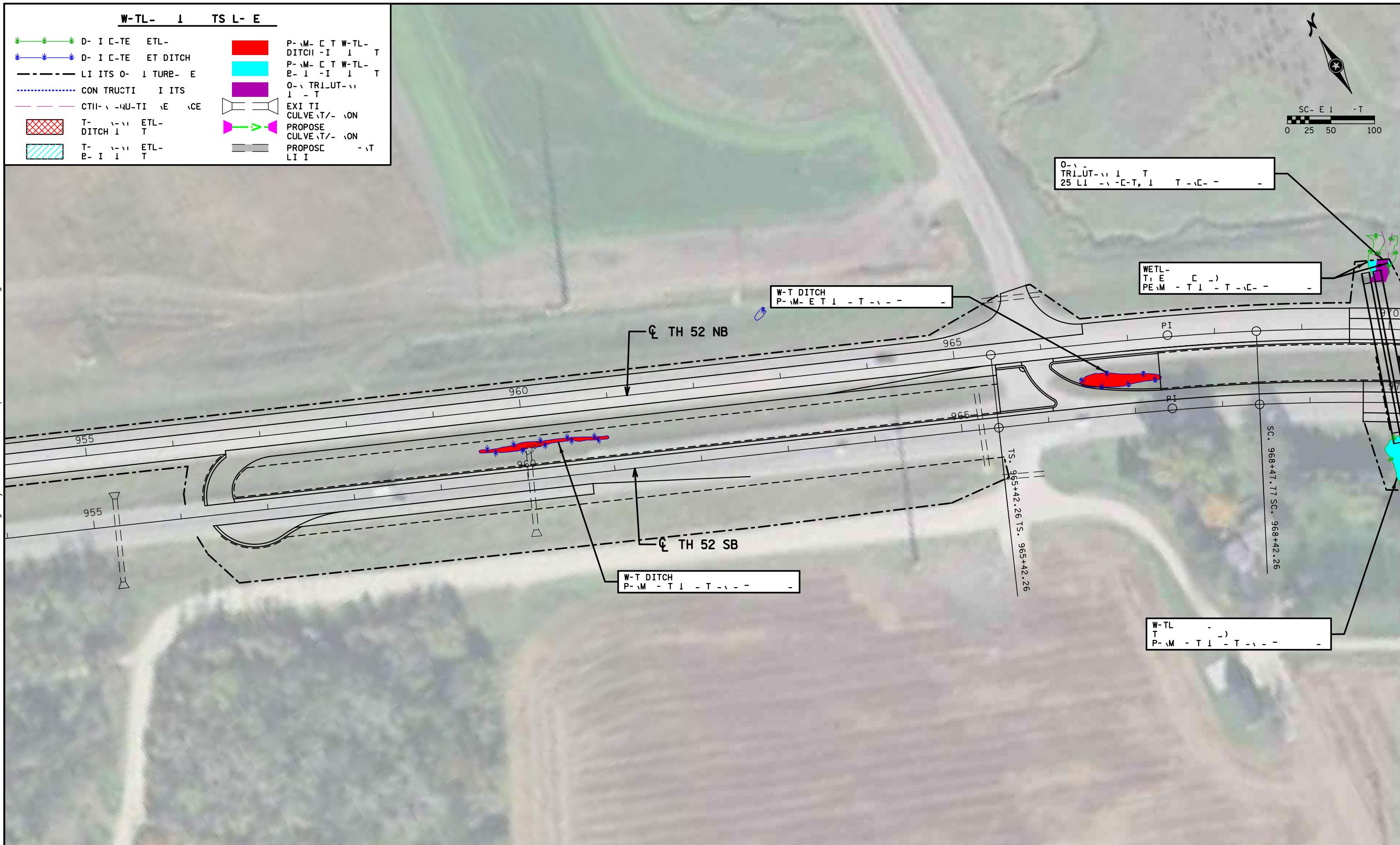
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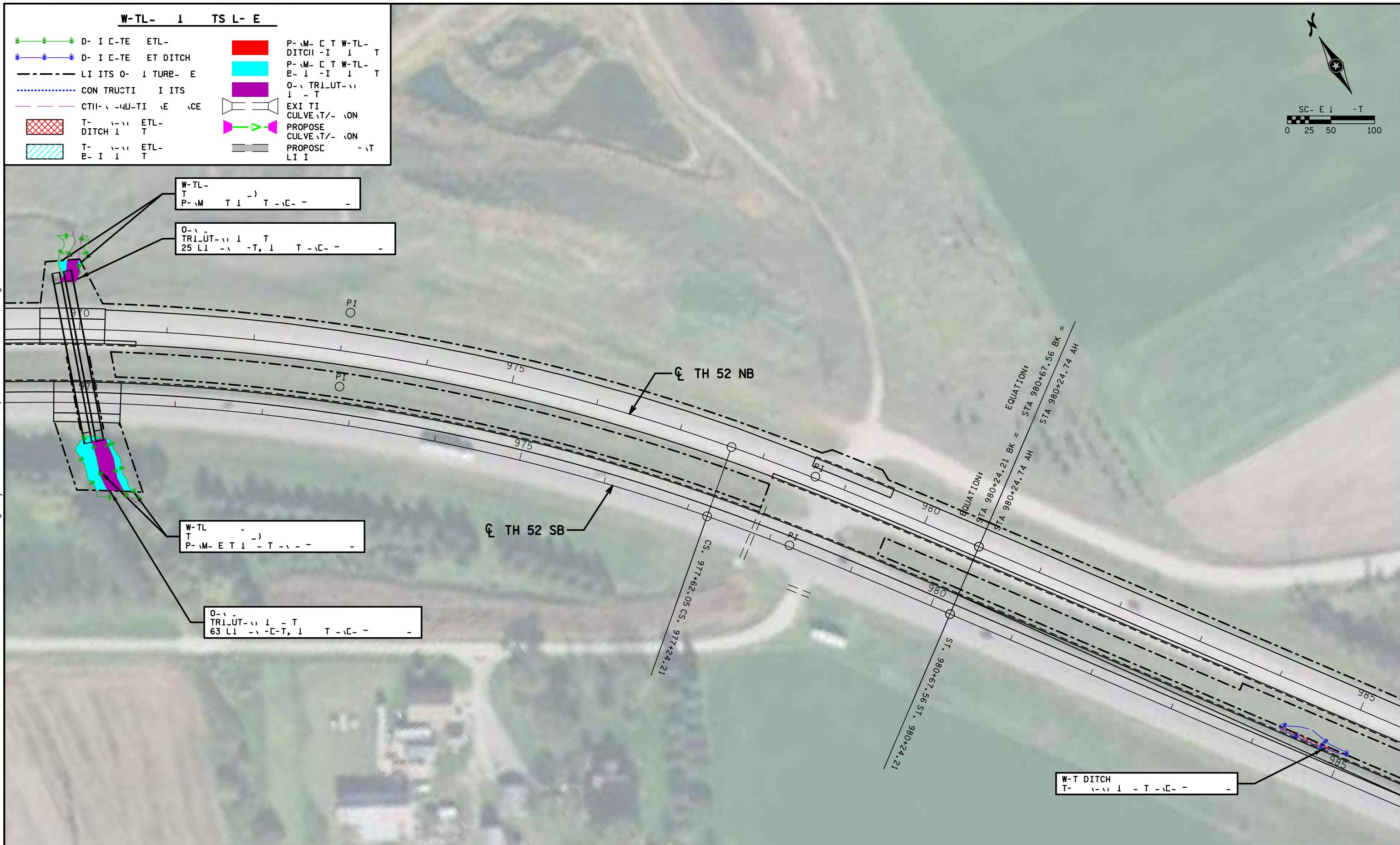
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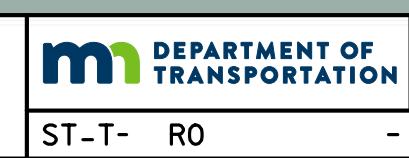
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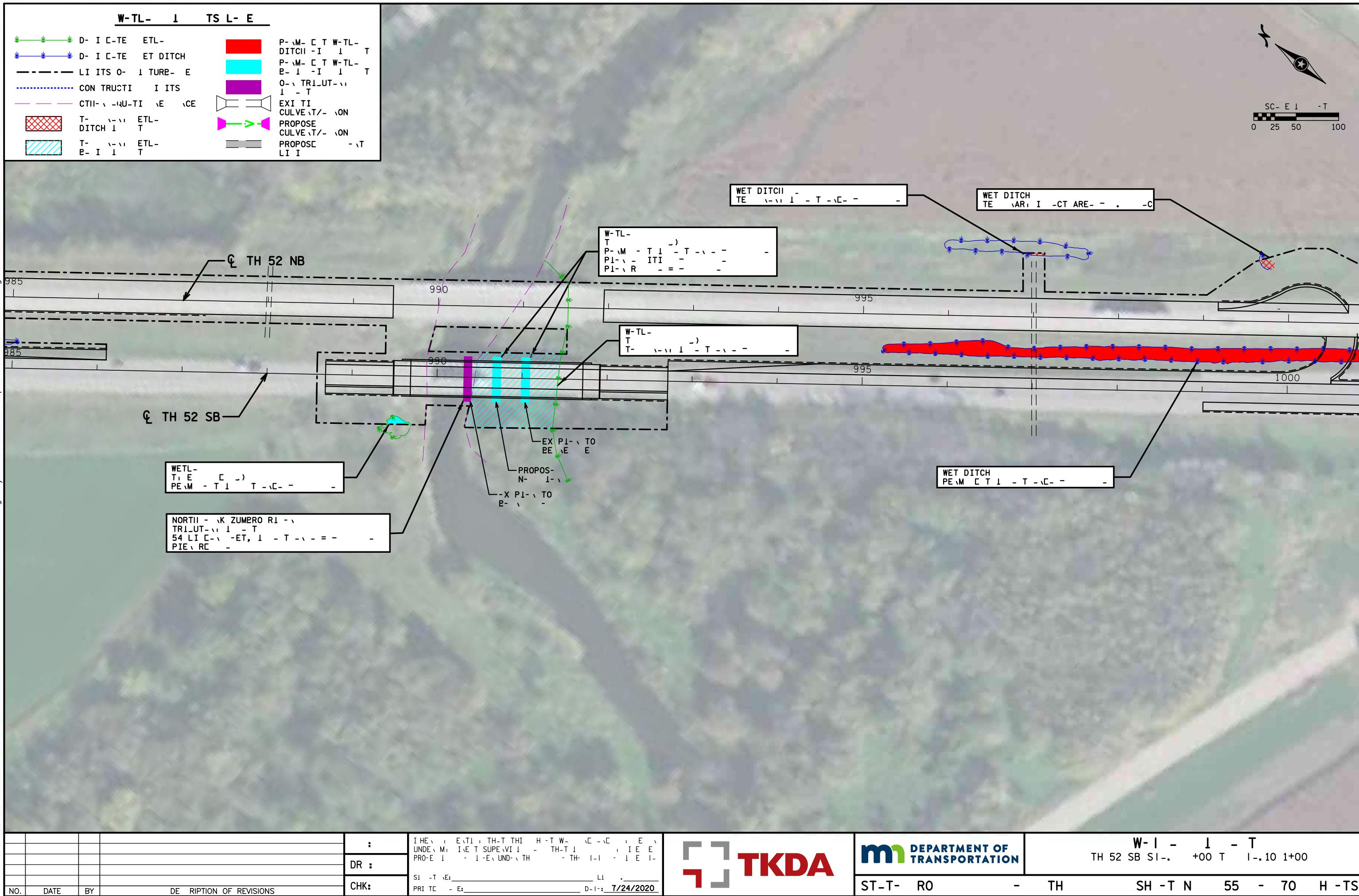


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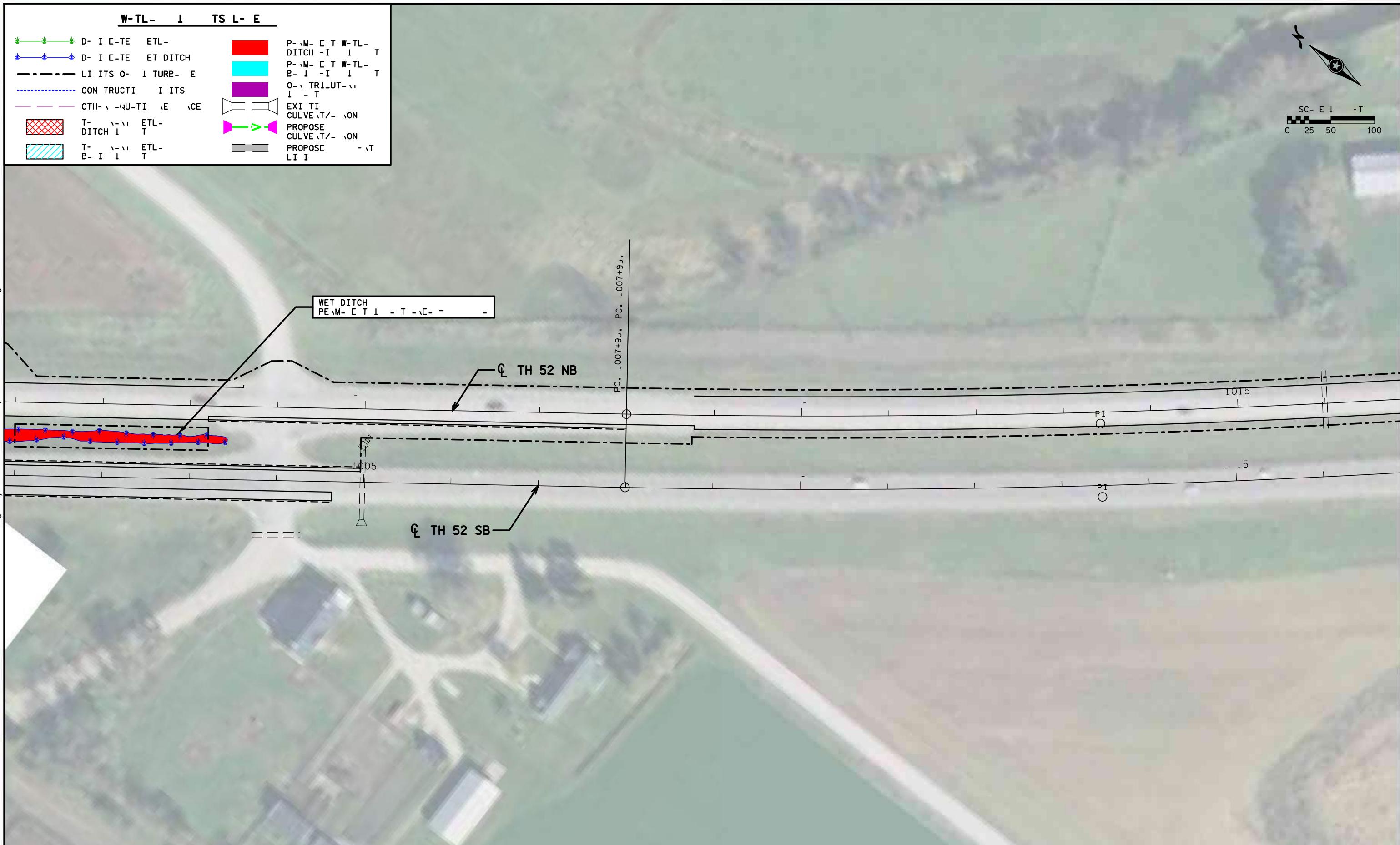
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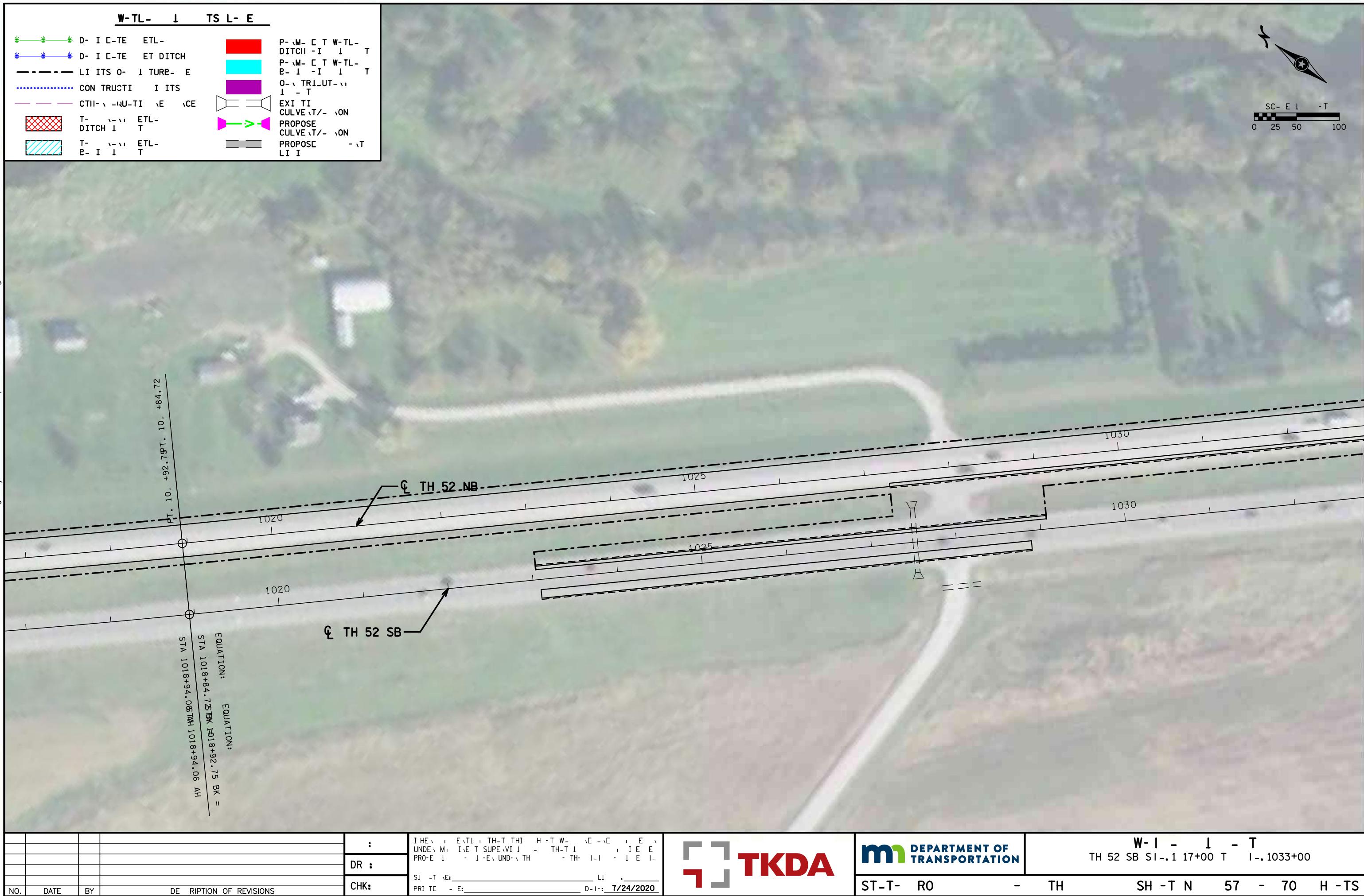
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ST-T- RO - TH SH - T N 56 - 70 H - TS





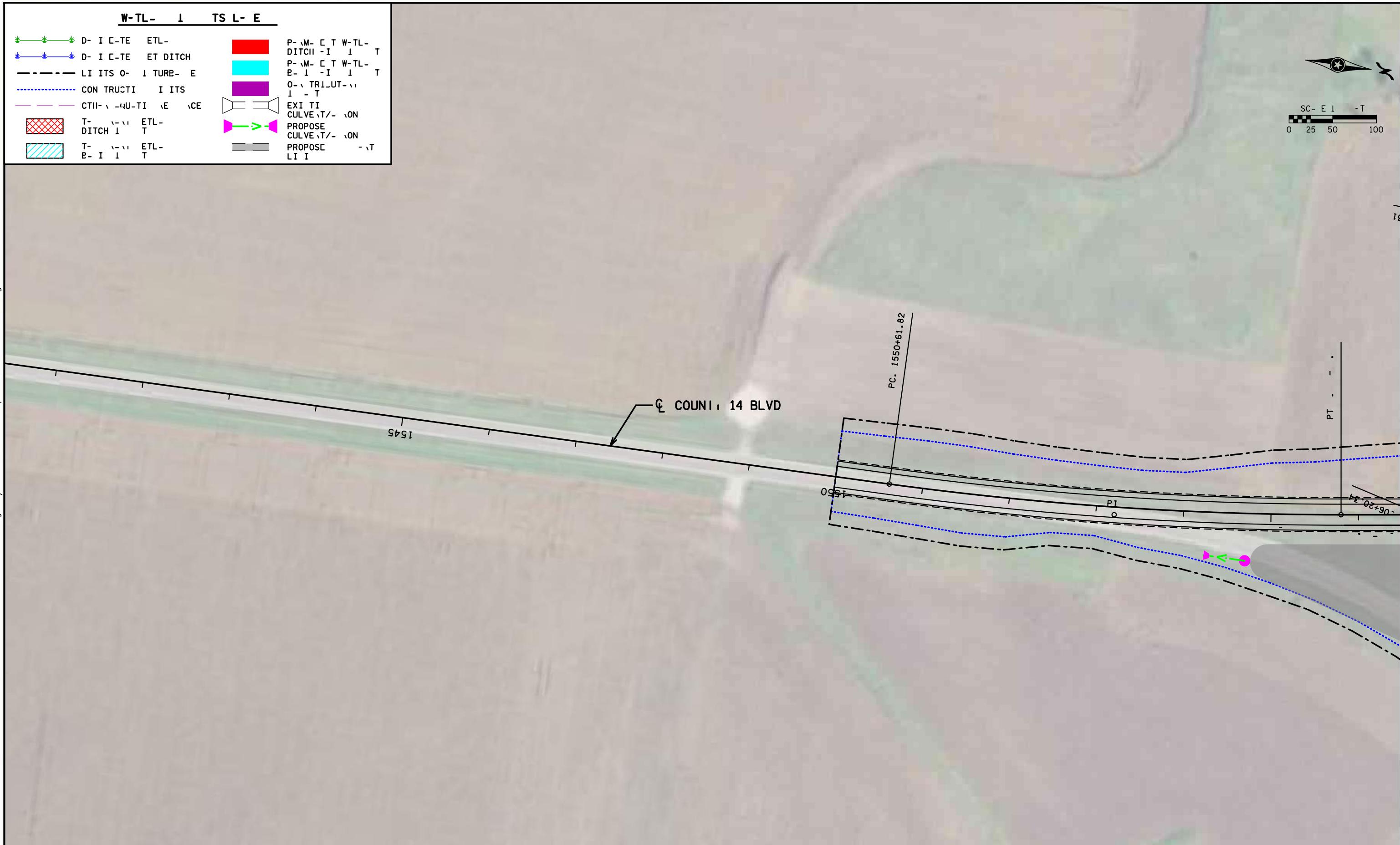
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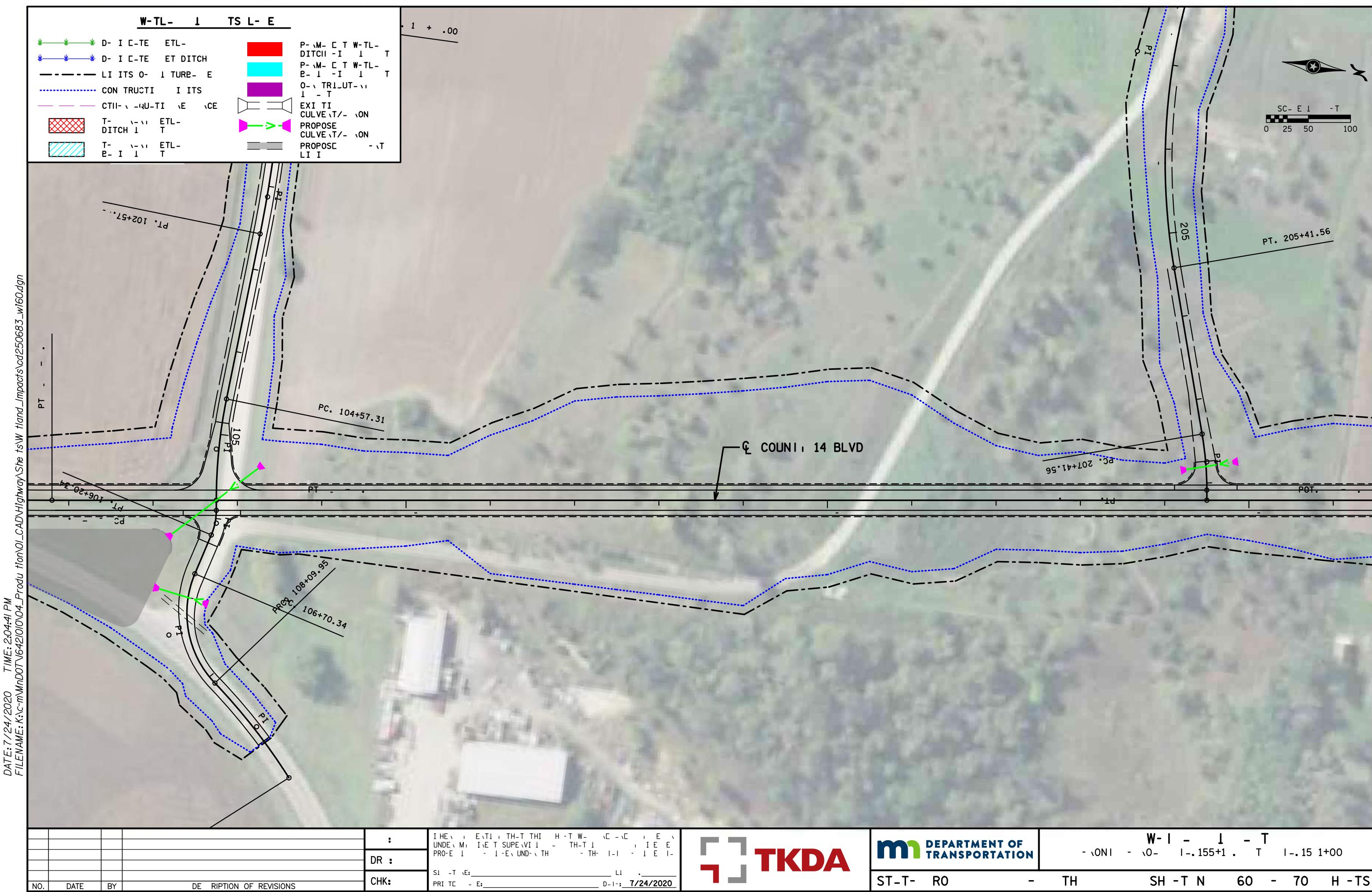
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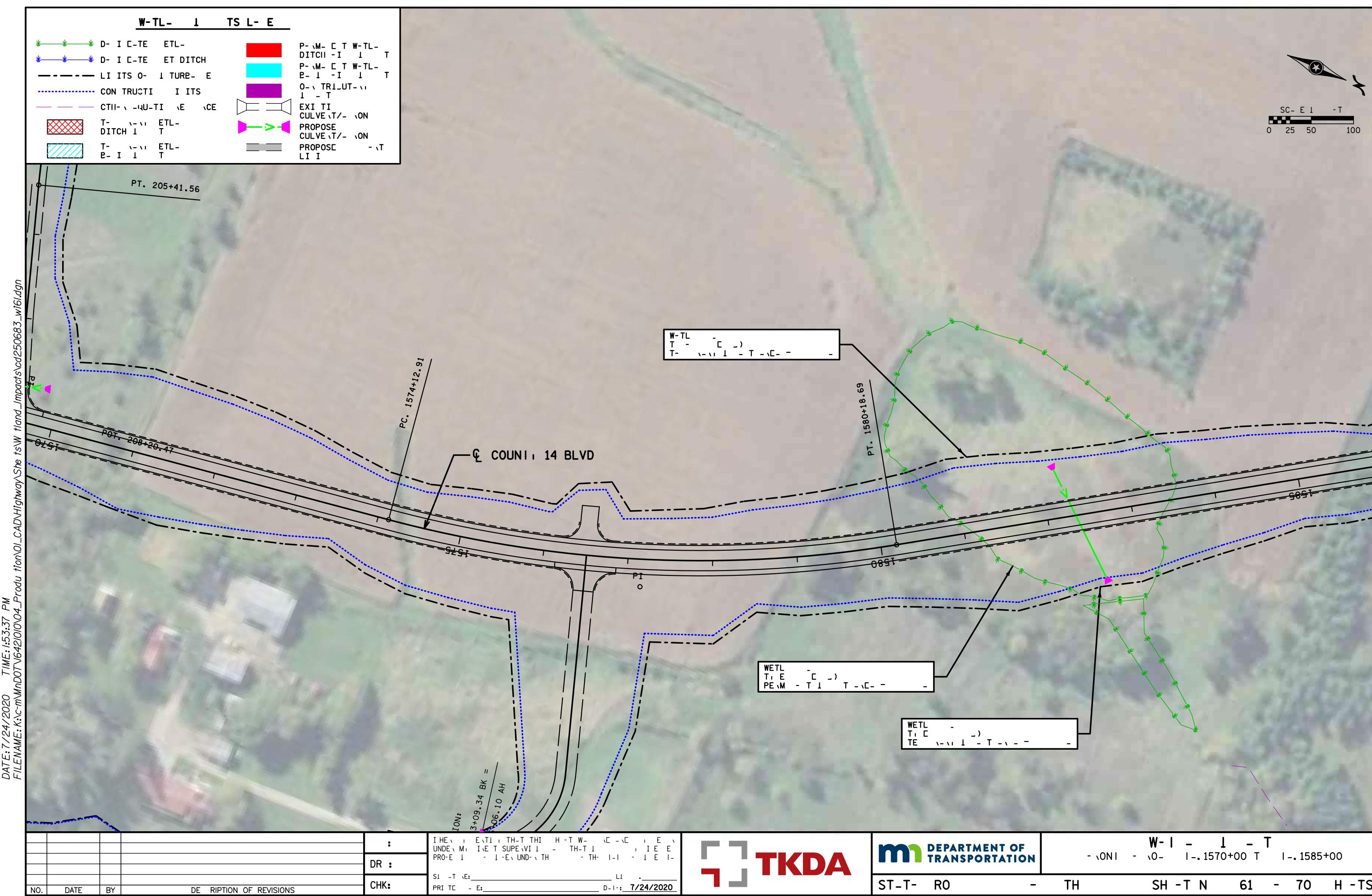
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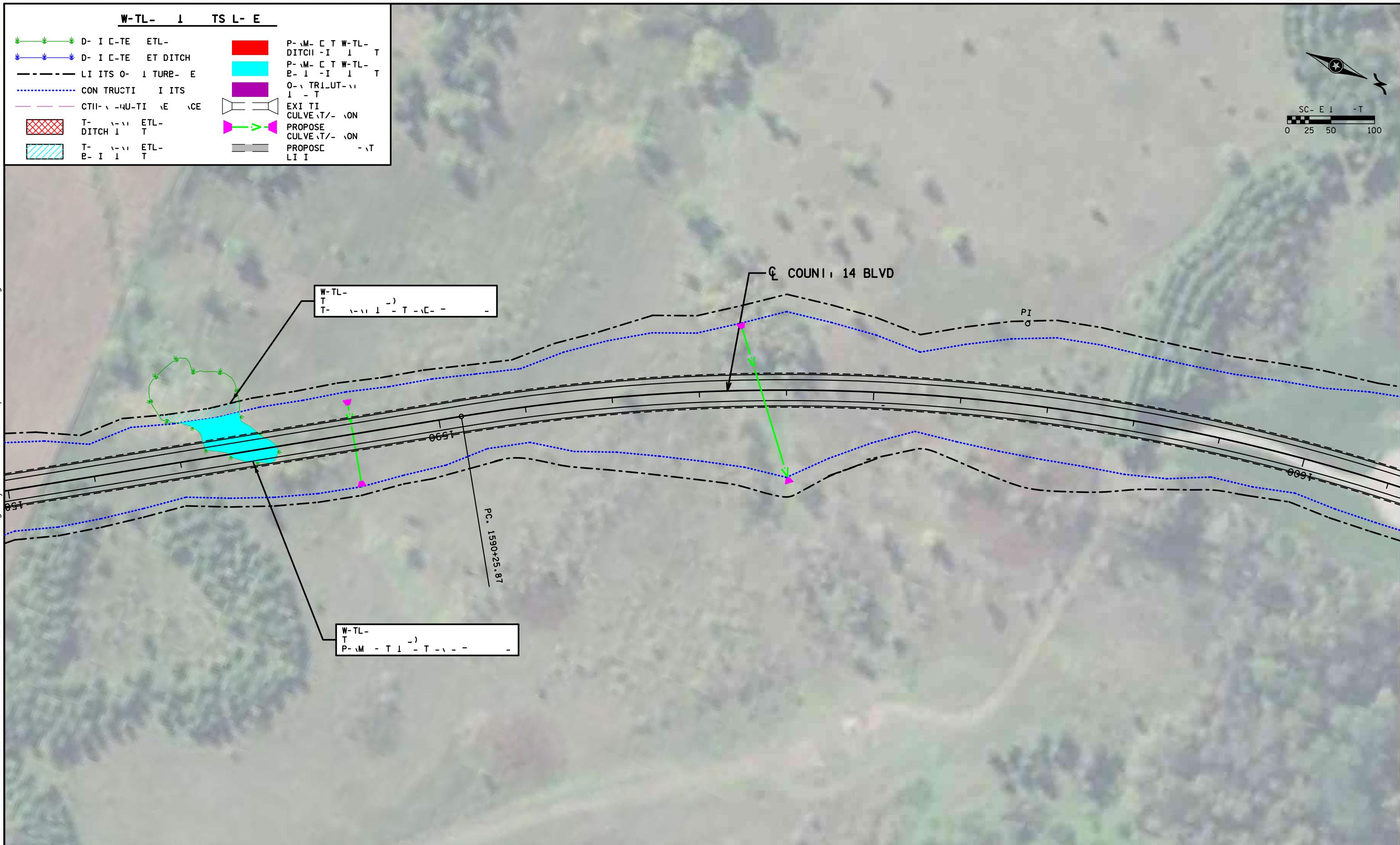


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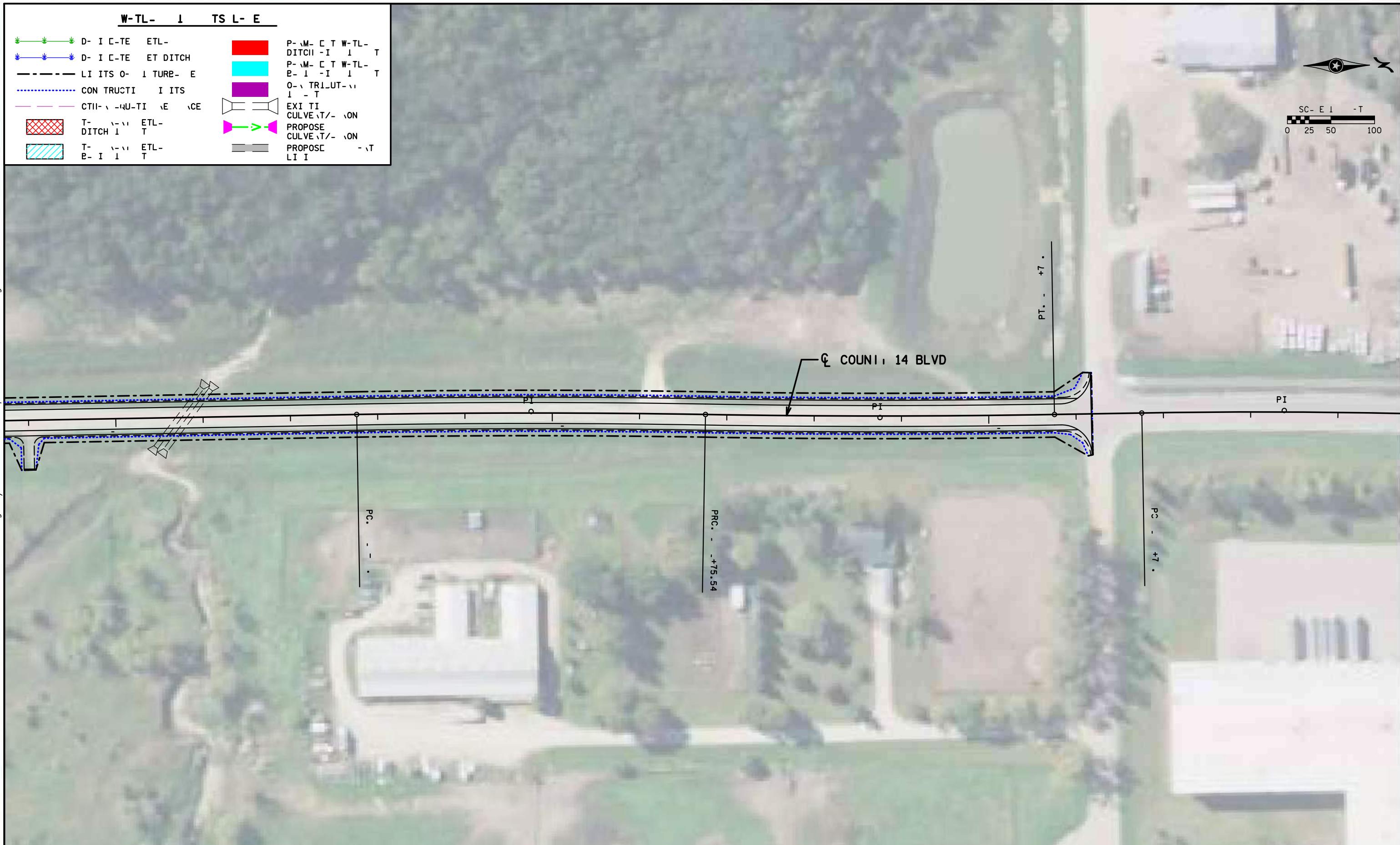
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ST-T- RO - TH SH - T N 62 - 70 H - TS

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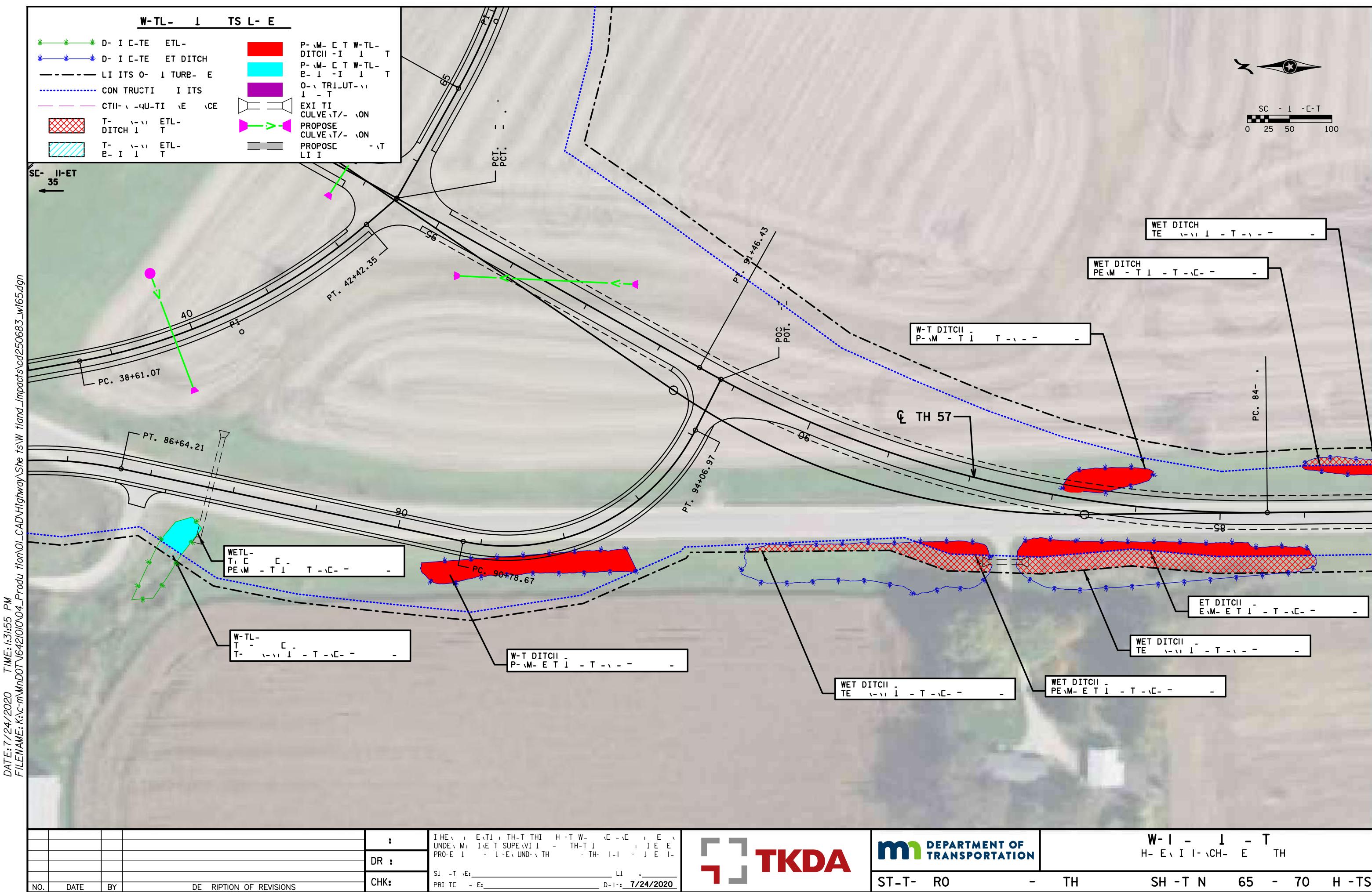
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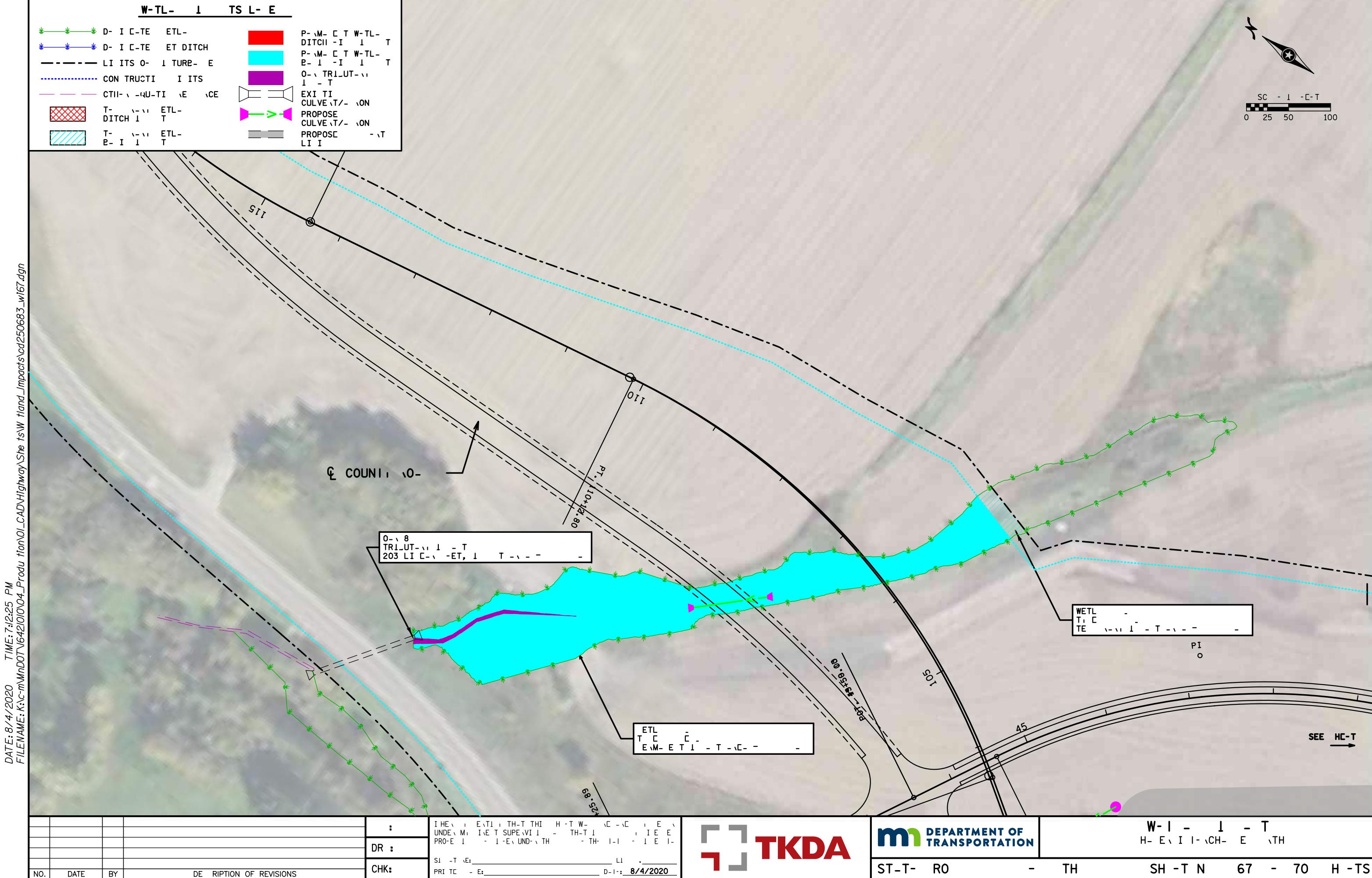


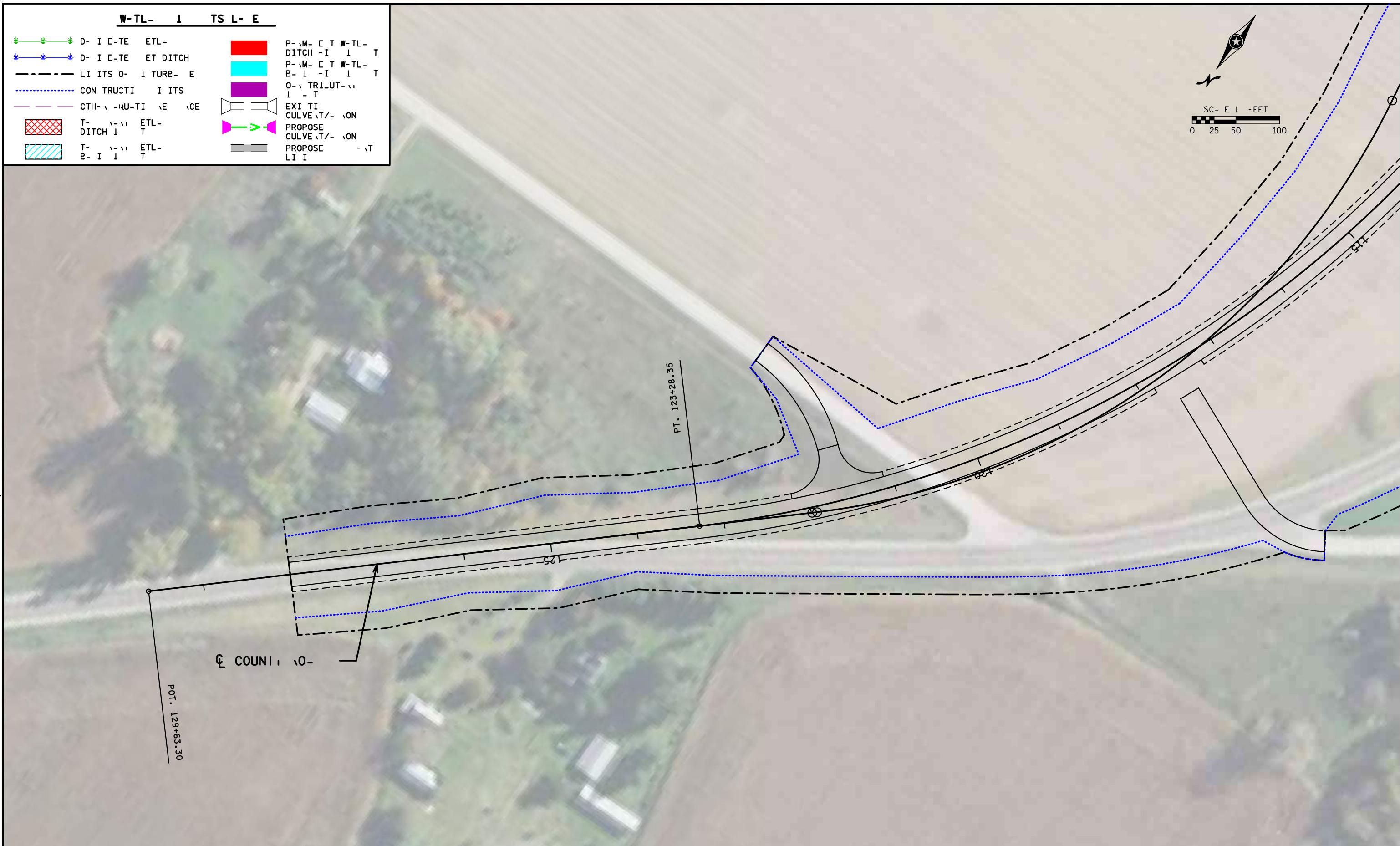
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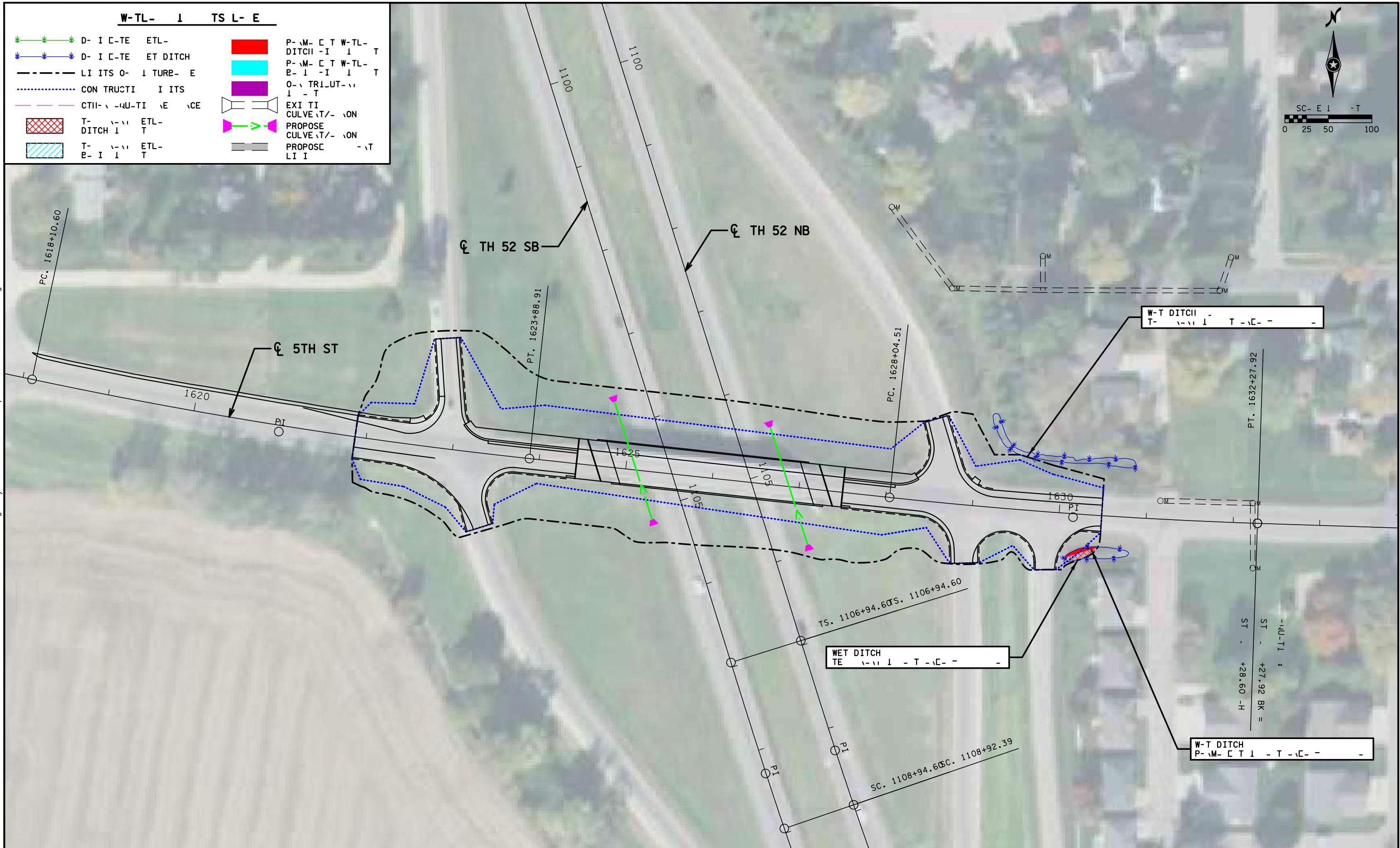


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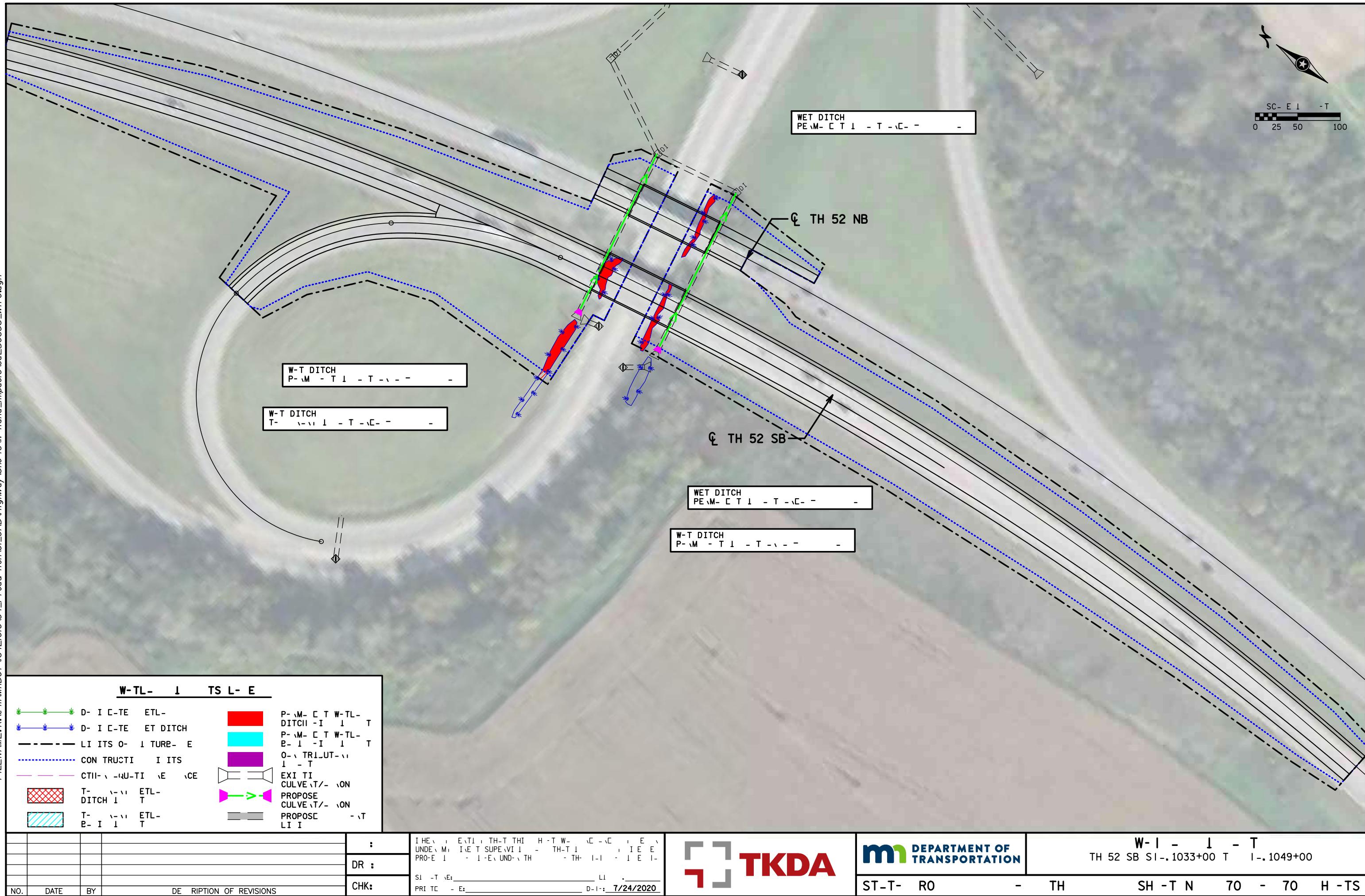


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DEPARTMENT OF
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