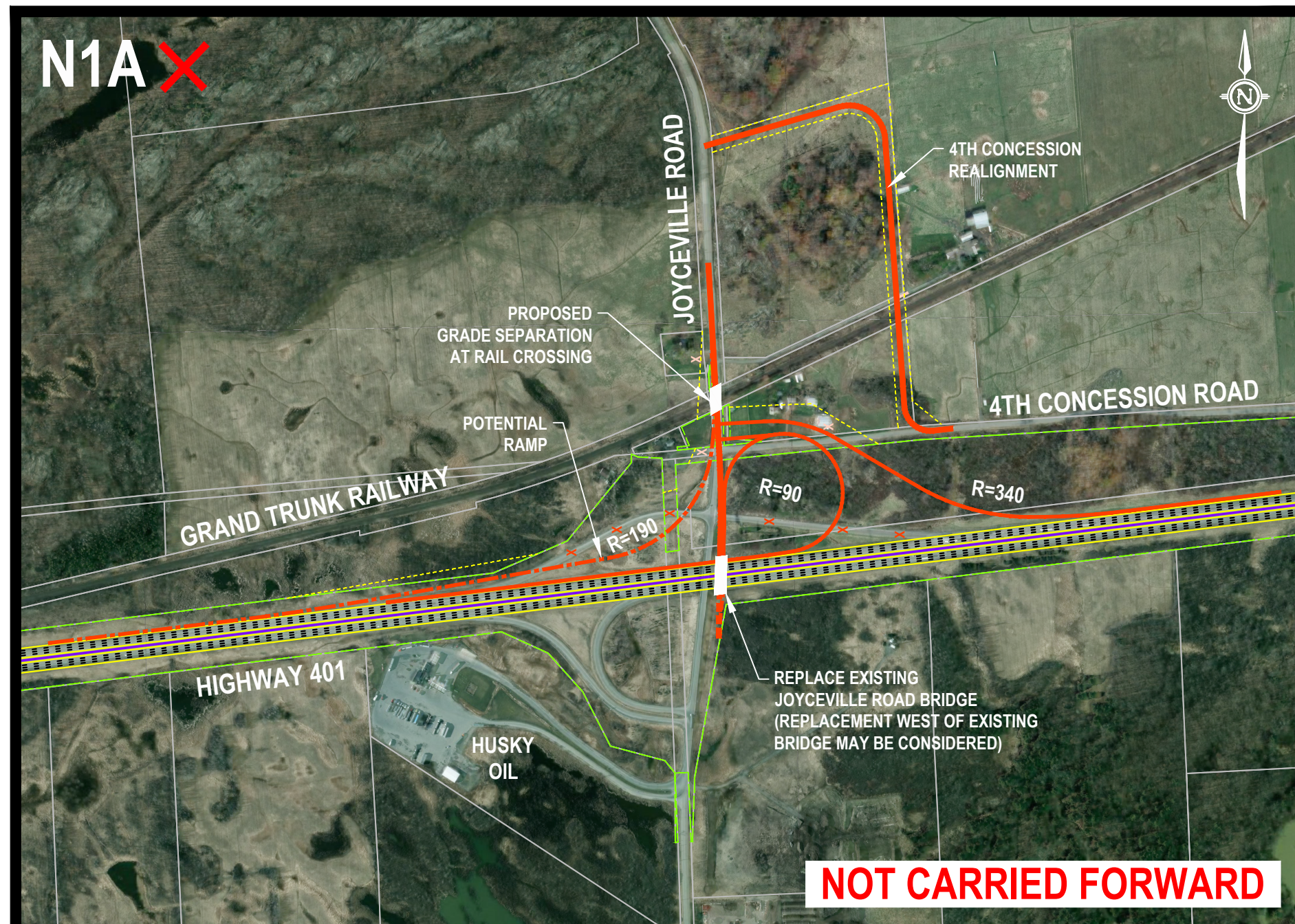
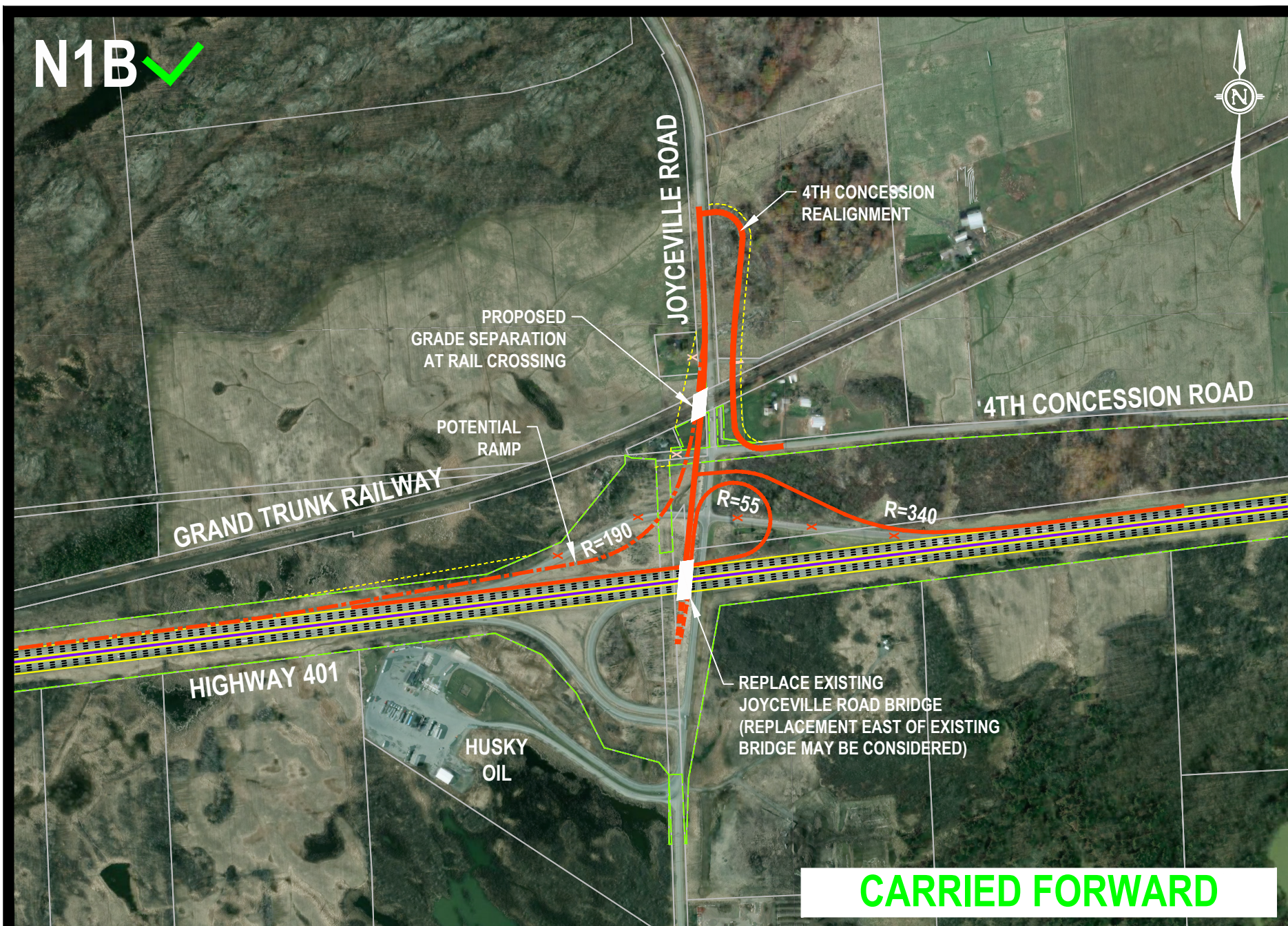


JOYCEVILLE ROAD INTERCHANGE - LONG LIST ALTERNATIVES



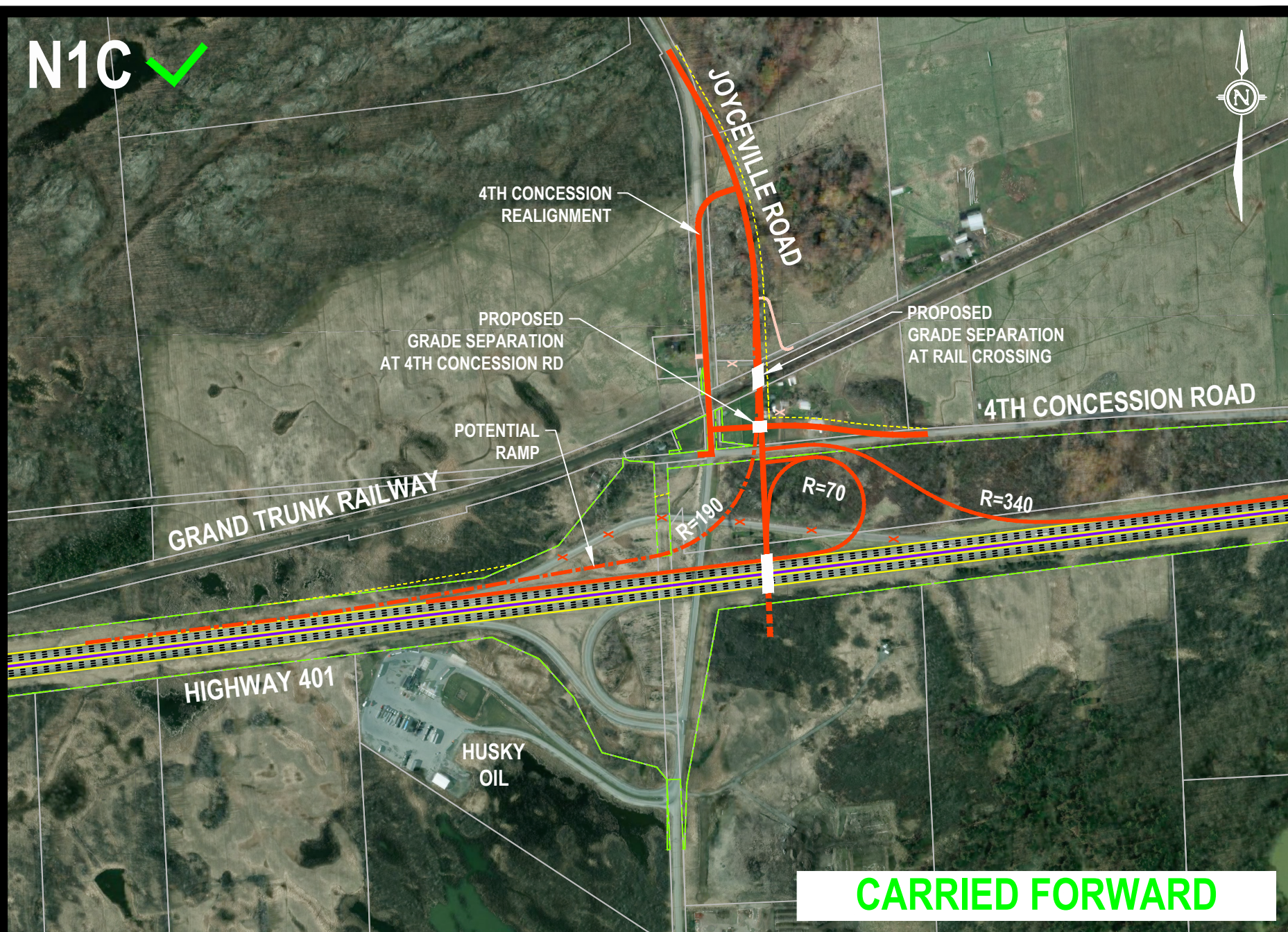
NORTH SIDE ALTERNATIVE N1A - PARCLO A4 WITH 4TH CONCESSION ROAD REALIGNMENT TO EAST

- DESCRIPTION**
- Parclo A-4 interchange configuration
 - Realignment of Joycelville Road, grade separation over rail, and realignment of 4th Concession Road to the east.
- ADVANTAGES**
- Parclo A4 generally considered most preferable interchange configuration with good traffic operations anticipated;
 - Westbound loop on-ramp meets desirable geometric standards;
 - Reduced collision risk with left-turn movement eliminated.
- DISADVANTAGES**
- Major 4th Concession Road realignment separates road infrastructure from Joycelville Road and bisects existing farm land;
 - Greatest impacts to natural environment
 - Displacement of 3 residential properties



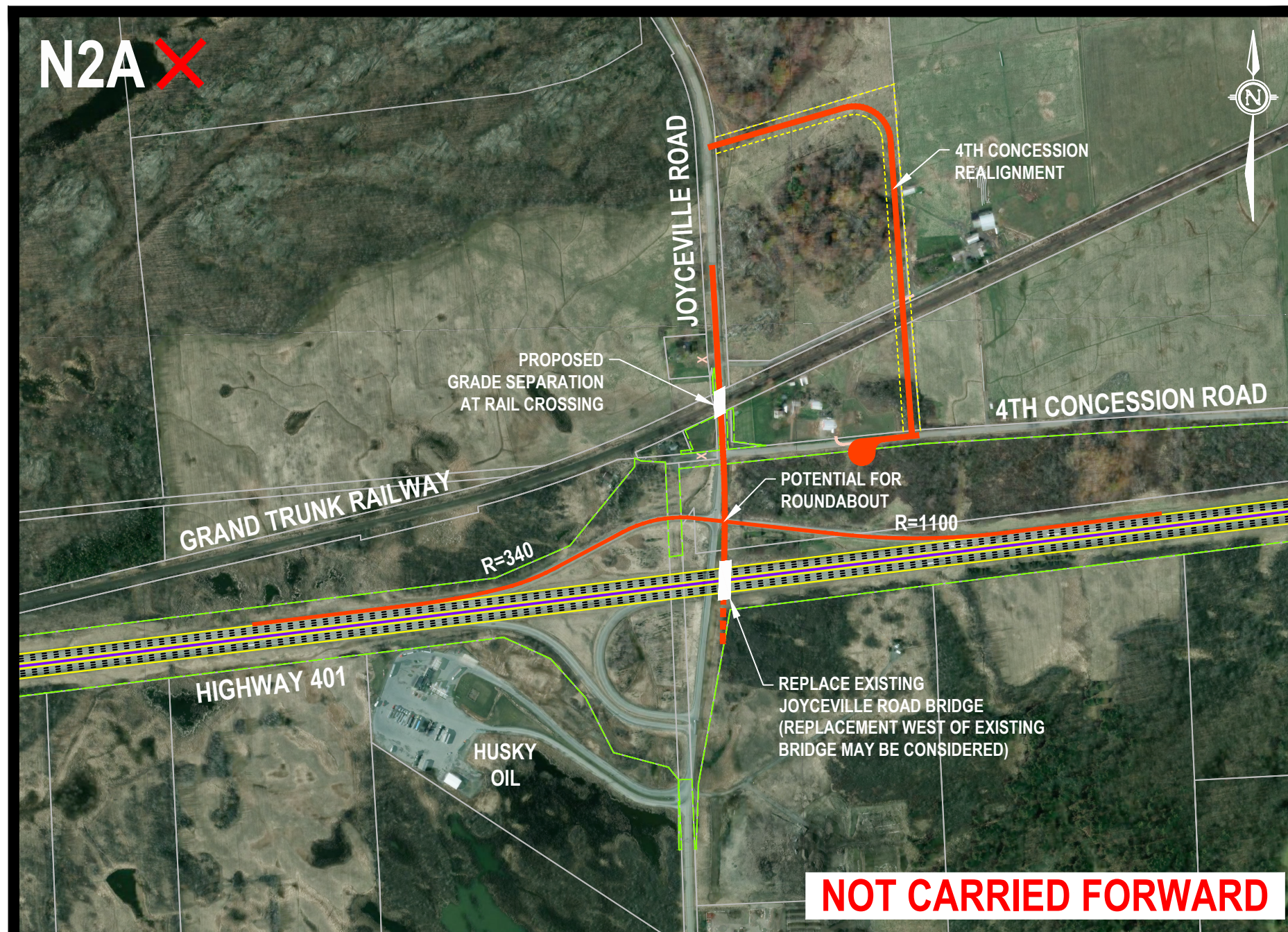
NORTH SIDE ALTERNATIVE N1B - PARCLO A4 WITH 4TH CONCESSION ROAD REALIGNMENT TO WEST

- DESCRIPTION**
- Parclo A-4 interchange configuration
 - Realignment of Joycelville Road, new grade separation over rail, and realignment of 4th Concession Road
- ADVANTAGES**
- Parclo A4 generally considered most preferable interchange configuration with good traffic operations anticipated;
 - 4th Concession Road realignment does not bisect farm property;
 - Less impacts to natural environment compared to Alt N1A and N1C;
 - Reduced collision risk with left-turn movement eliminated;
 - Less out of way travel for 4th Concession Road to Highway 401 movements compared to Alt N1A and N1C
- DISADVANTAGES**
- Loop ramp has less desirable ramp geometry;
 - Displacement of 2 residential properties.



NORTH SIDE ALTERNATIVE N1C - PARCLO A4 WITH 4TH CONCESSION ROAD GRADE SEPARATION

- DESCRIPTION**
- Parclo A-4 interchange configuration
 - Major realignment of Joycelville Road, grade separation over rail, and realignment of 4th Concession Road with a new bridge crossing beneath Joycelville Road.
- ADVANTAGES**
- Parclo A4 generally considered most preferable interchange configuration with good traffic operations anticipated;
 - Avoids residential property displacements on west side of Joycelville Road
 - Reduced collision risk with left-turn movement eliminated
 - Less complex construction staging
- DISADVANTAGES**
- High construction cost with additional bridge required;
 - Larger impact to natural environment compared to most alternatives;
 - Further out of way travel for 4th Concession Road to Highway 401 movements compared to Alt N1B



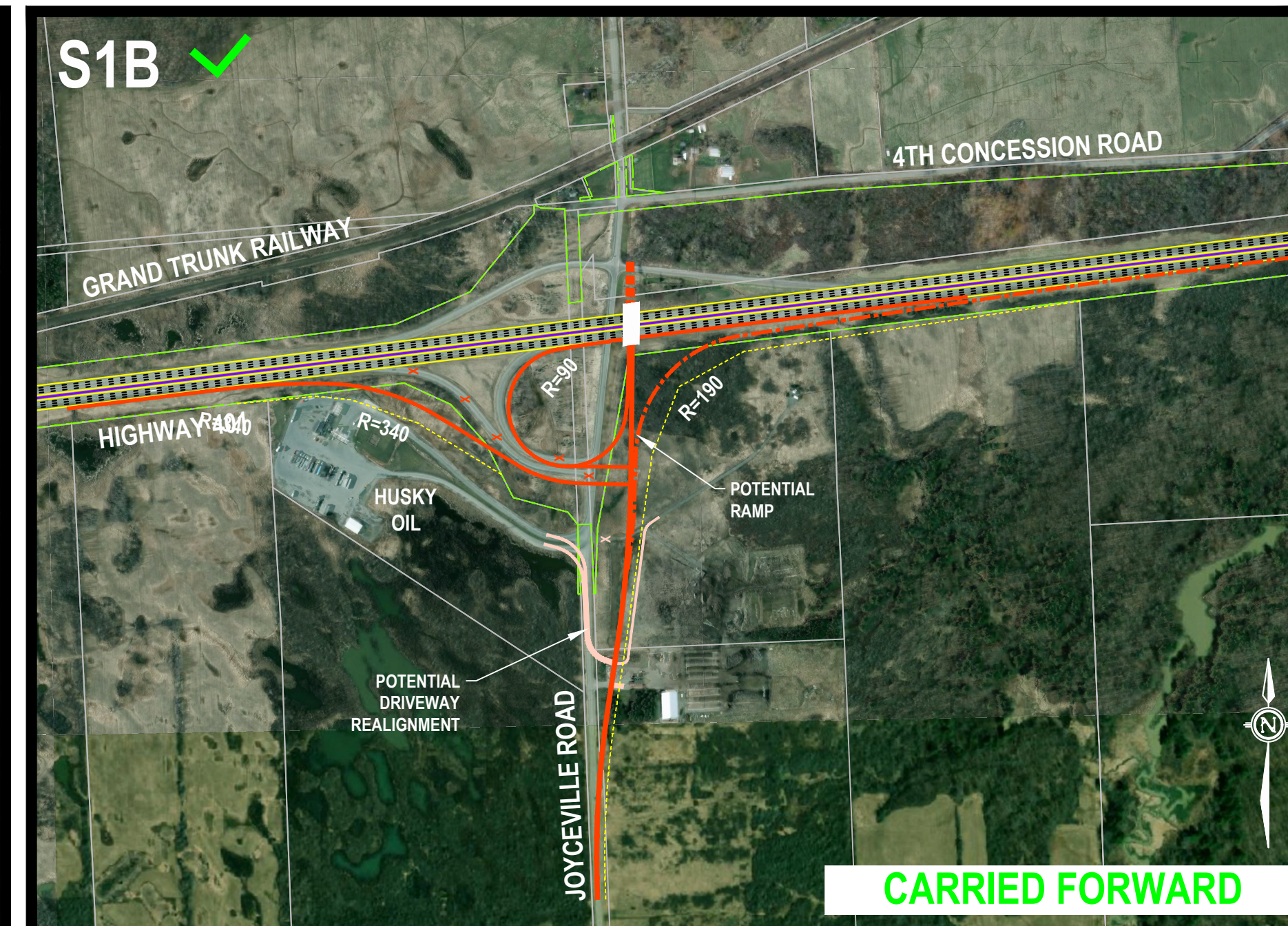
NORTH SIDE ALTERNATIVE N2A - DIAMOND WITH 4TH CONCESSION ROAD REALIGNMENT TO EAST

- DESCRIPTION**
- Maintain existing Diamond interchange configuration
 - Realignment of Joycelville Road, grade separation over rail, and realignment of 4th Concession Road to the east.
- ADVANTAGES**
- Minimizes road reconstruction;
 - Less impacts to natural environment compared to other alternatives;
 - Lower construction cost.
- DISADVANTAGES**
- Northbound left-turn associated with potential operational and increased collision risk relative to other options;
 - Major 4th Concession Road realignment separates road infrastructure from Joycelville Road and bisects existing farm land;
 - Displacement of 2 residential properties



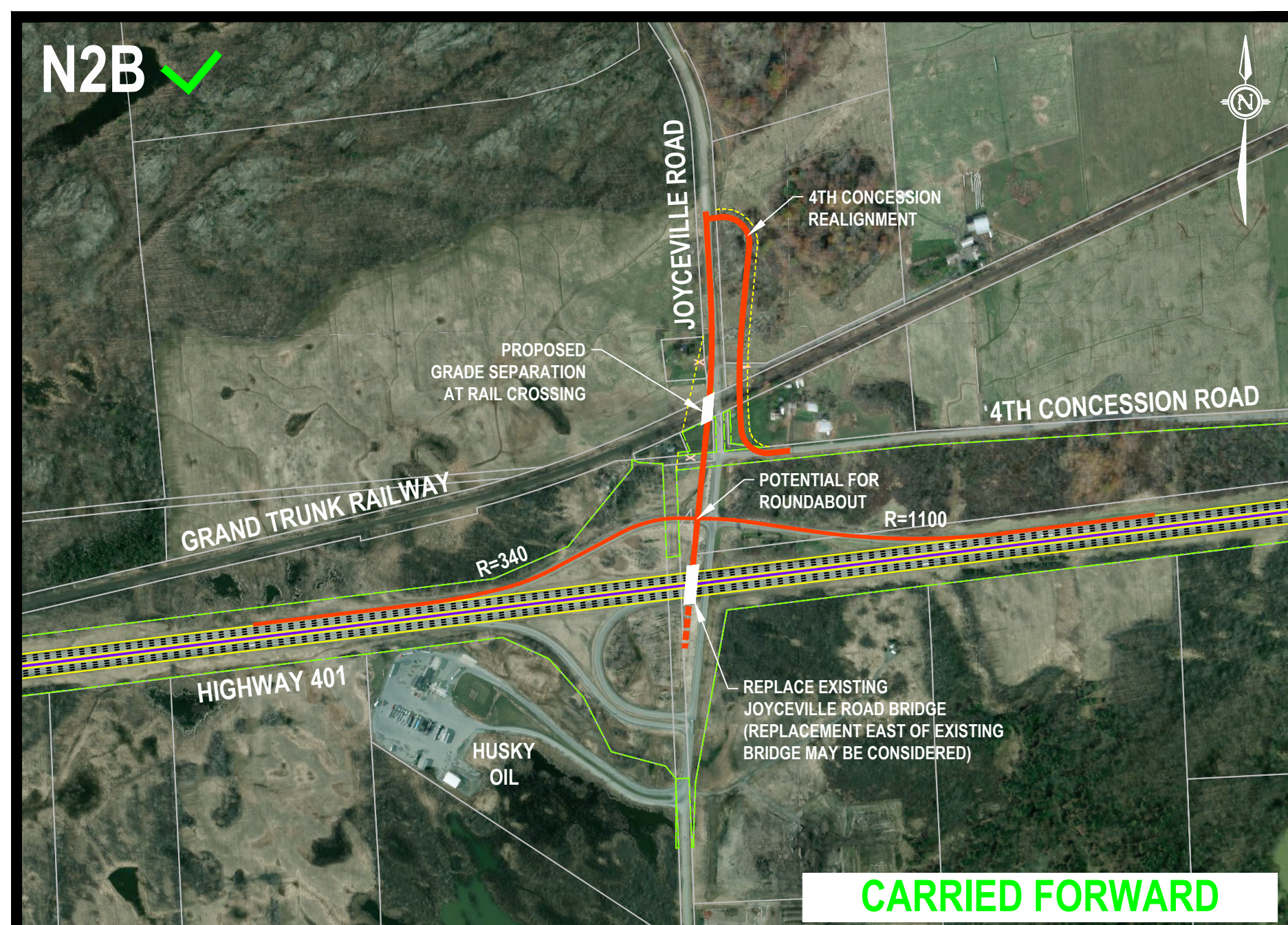
SOUTH SIDE ALTERNATIVE S1A - PARCLO A4

- DESCRIPTION**
- Parclo A-4 interchange configuration (potential directional northbound to eastbound ramp)
 - Slight realignment of Joycelville Road, re-construction of existing ramps with improved geometry, and realignment of private accesses including Husky Oil driveway.
- ADVANTAGES**
- Parclo A4 generally considered most preferable interchange configuration with good traffic operations and reduced collision risk;
 - Less impacts to property and natural environment relative to Alternative S1B
- DISADVANTAGES**
- Major Husky Oil driveway realignment impacts natural environment;
 - High construction cost



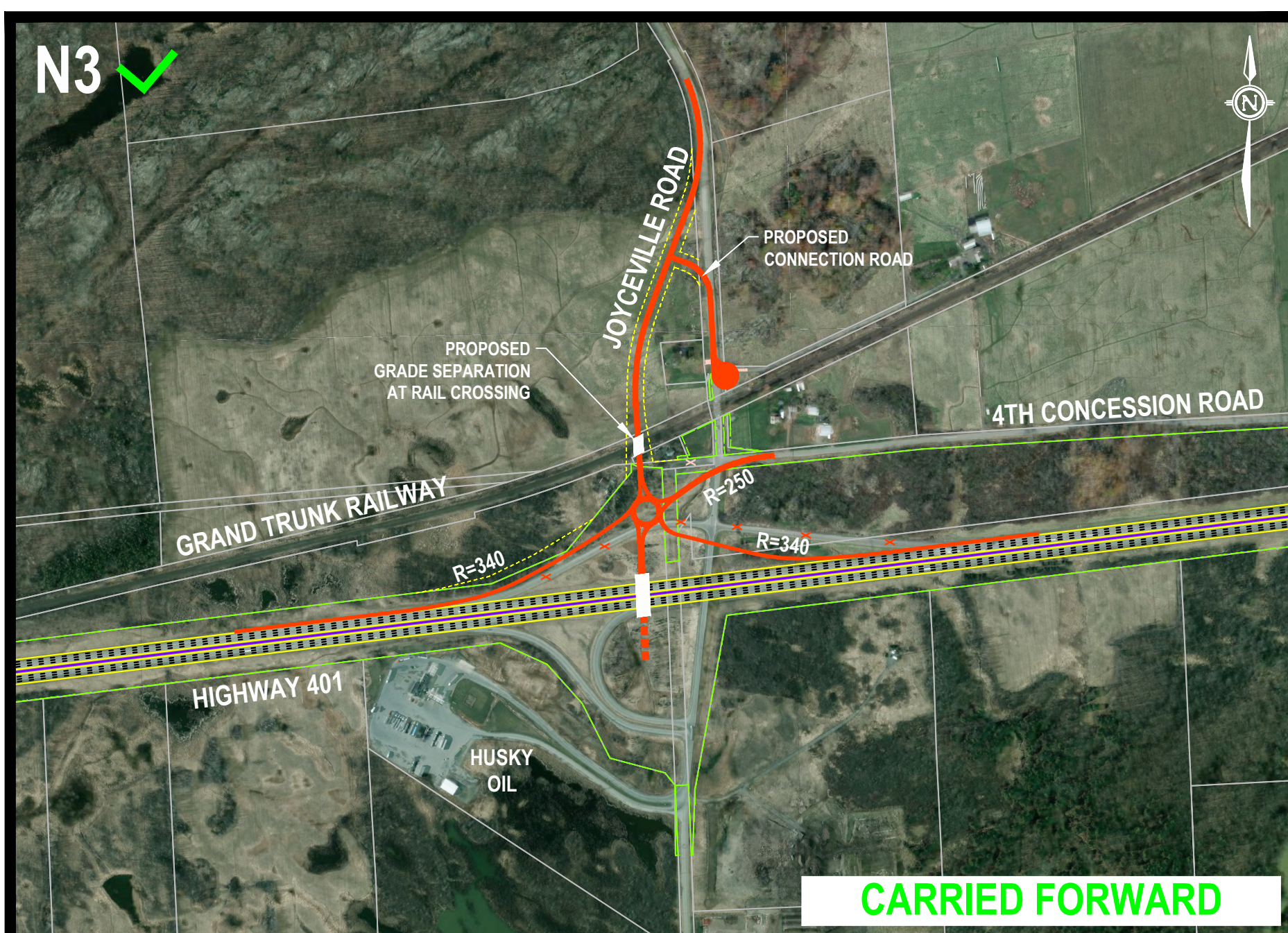
SOUTH SIDE ALTERNATIVE S1B - PARCLO A4 WITH JOYCEVILLE ROAD REALIGNMENT TO EAST

- DESCRIPTION**
- Parclo A-4 interchange configuration (potential directional northbound to eastbound ramp)
 - Moderate realignment of Joycelville Road, re-construction of existing ramps with improved geometry and desirable ramp radii
 - Realignment of private accesses and Husky Oil driveway following existing roadway.
- ADVANTAGES**
- Parclo A4 generally considered most preferable interchange configuration with good traffic operations and reduced collision risk;
 - Eastbound loop on-ramp meets desirable standard for loop ramps;
 - Husky Oil driveway realignment generally follows existing roadway;
- DISADVANTAGES**
- More significant property and environmental impacts relative to other options;
 - High construction cost



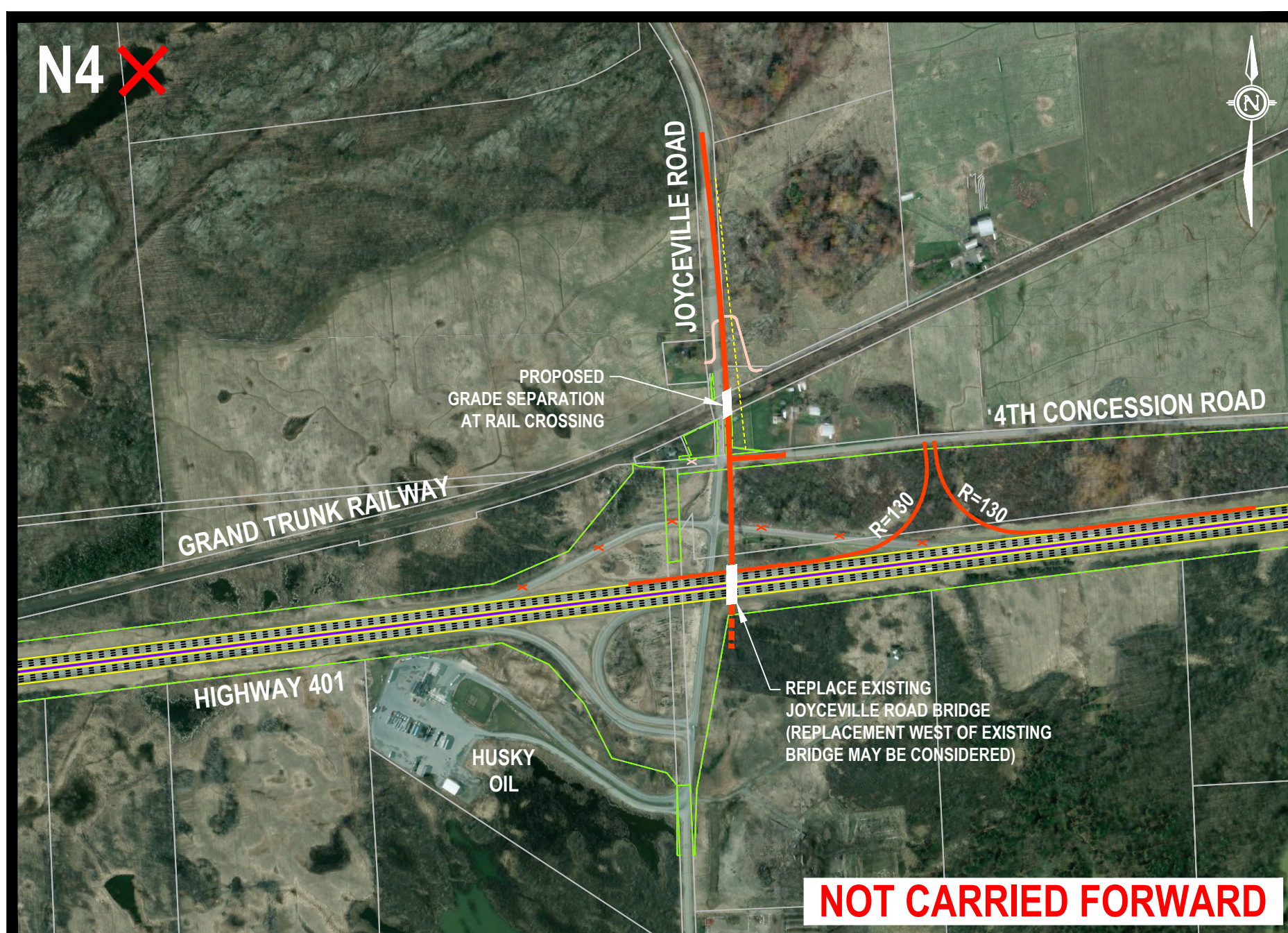
NORTH SIDE ALTERNATIVE N2B - DIAMOND WITH 4TH CONCESSION ROAD REALIGNMENT TO WEST

- DESCRIPTION**
- Maintain existing Diamond interchange configuration
 - Realignment of Joycelville Road, grade separation over rail, and realignment of 4th Concession Road to the west.
- ADVANTAGES**
- Minimizes road reconstruction;
 - 4th Concession Road realignment does not bisect farm property;
 - Less impacts to natural environment compared to other alternatives;
 - Less out of way travel for 4th Concession Road to Highway 401 movements compared to Alt N2A.
- DISADVANTAGES**
- Northbound left-turn associated with potential operational and increased collision risk relative to other options;
 - Displacement of 2 residential properties



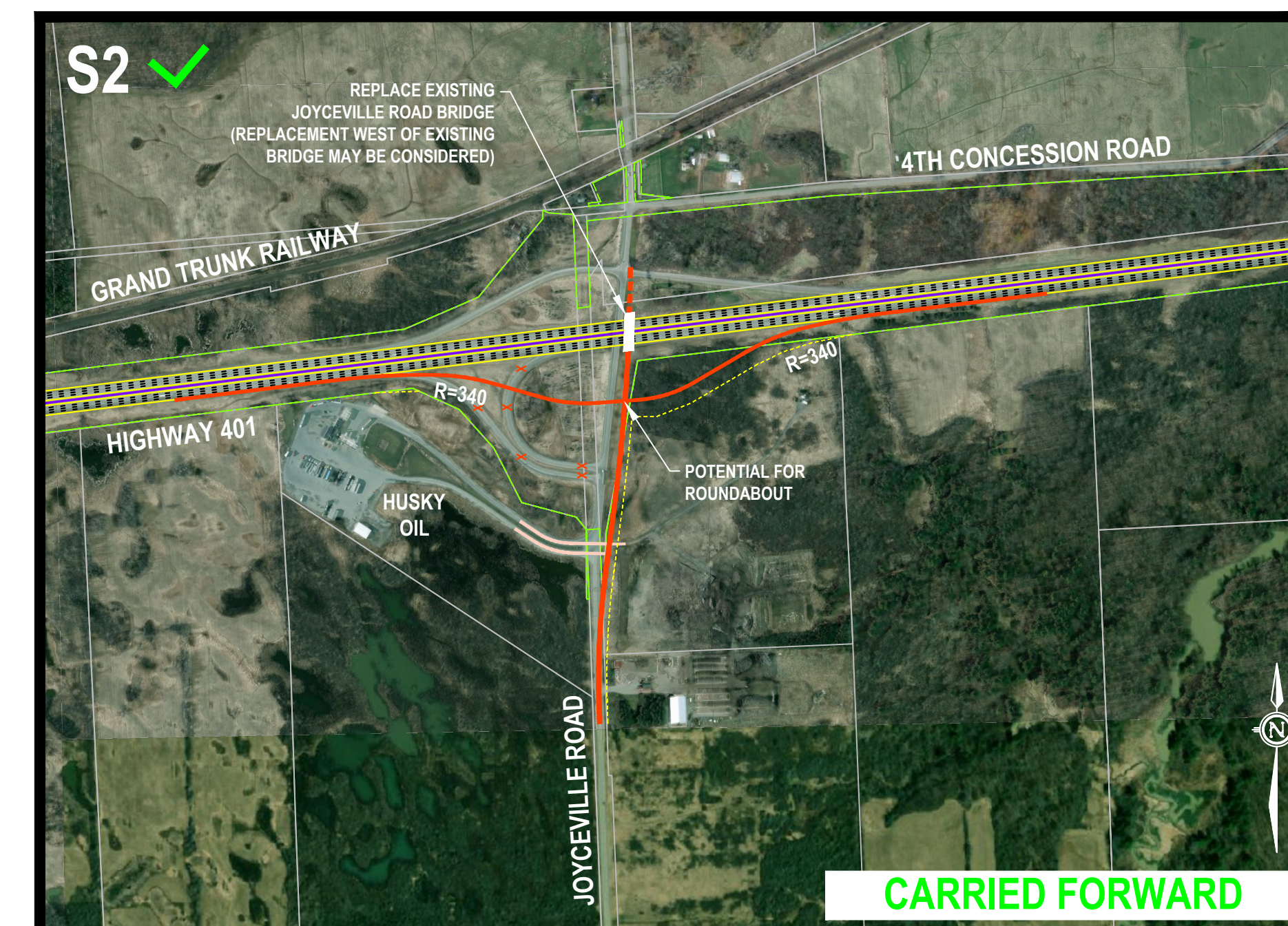
NORTH SIDE ALTERNATIVE N3 - DIAMOND WITH 5-LEG ROUNDABOUT AND JOYCEVILLE ROAD REALIGNMENT TO WEST

- DESCRIPTION**
- Diamond interchange configuration with roundabout and connection to 4th Concession Road
 - Realignment of Joycelville Road, new grade separation over rail
- ADVANTAGES**
- Roundabout eliminates left turn movements and reduces severity of collisions
 - Less impacts to natural environment and residential / agricultural properties compared to other alternatives;
 - Minimal out of way travel between 4th Concession to/from Highway 401
- DISADVANTAGES**
- Potential driver unfamiliarity associated with roundabout at ramp terminal



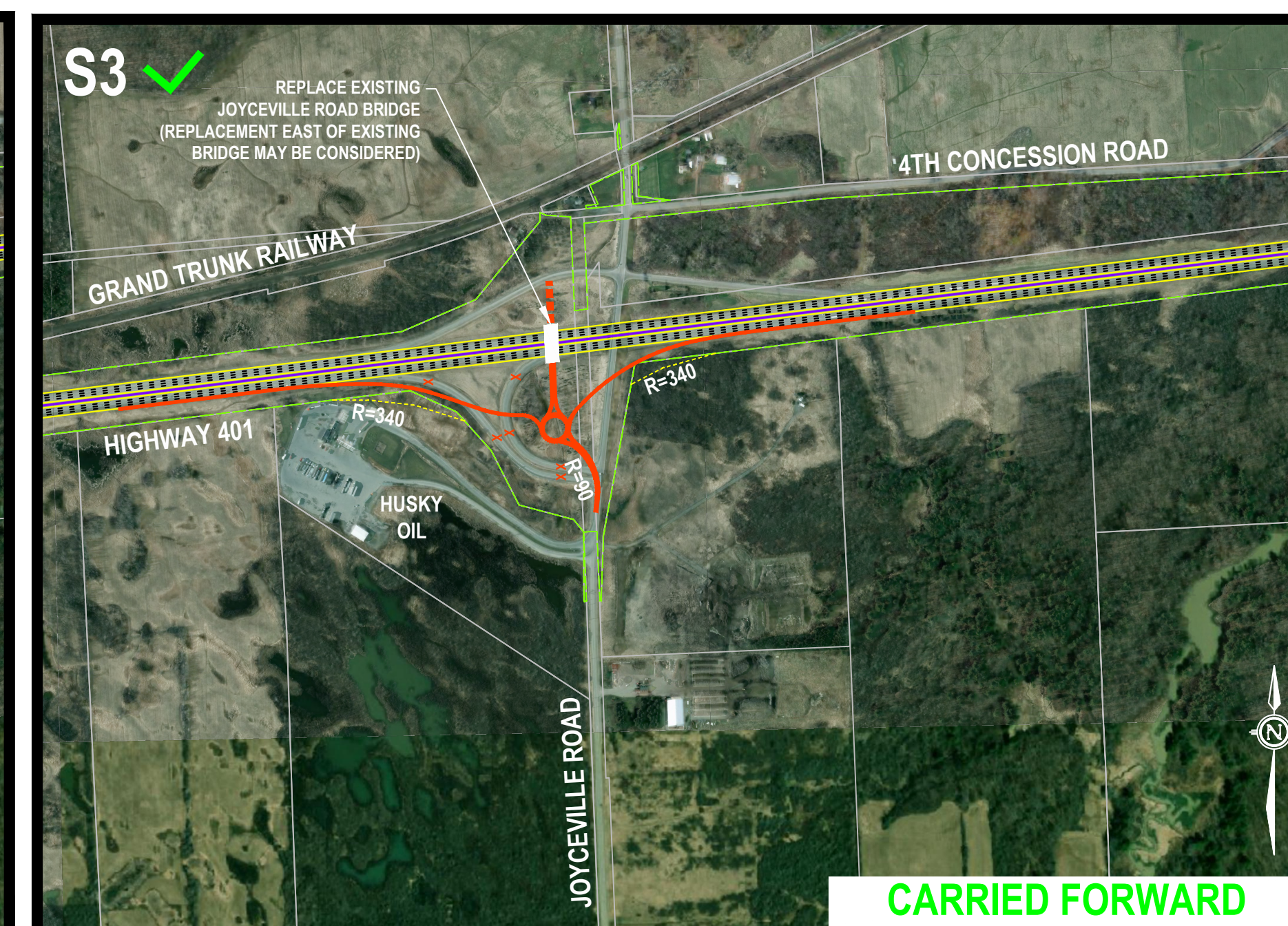
NORTH SIDE ALTERNATIVE N4 - BUTTONHOOK WITH RAMP TERMINAL AT 4TH CONCESSION ROAD

- DESCRIPTION**
- Buttonhook interchange configuration
 - Realignment of Joycelville Road, relocated westbound ramps to 4th Concession Road, and grade separation over rail
- ADVANTAGES**
- Lower impacts to natural environment and property than other alternatives
 - Low construction cost (No realignment of 4th Concession Road);
- DISADVANTAGES**
- Undesirable buttonhook ramp configuration with potential for wrong-way travel;
 - Highway access located away from the main crossing road



SOUTH SIDE ALTERNATIVE S2 - DIAMOND

- DESCRIPTION**
- Diamond interchange configuration
 - Realignment of Joycelville Road and maintenance Husky Oil driveway location.
- ADVANTAGES**
- Minimizes private access realignment;
 - Lower impacts to natural environment
 - Lower construction cost
- DISADVANTAGES**
- Increased collision risk with left turn required for southbound to eastbound movement;
 - Closer intersection / access spacing than Alternatives S1A and S1B



SOUTH SIDE ALTERNATIVE S3 - DIAMOND WITH 5-LEG ROUNDABOUT AND JOYCEVILLE ROAD REALIGNMENT TO WEST

- DESCRIPTION**
- Diamond interchange configuration with Roundabout
 - Realignment of Joycelville Road to the west, and maintenance Husky Oil driveway location.
- ADVANTAGES**
- Roundabout eliminates left turn movements and reduces severity of collisions;
 - Minor impacts to natural environment;
 - Lower construction cost;
 - Lowest property impacts.
- DISADVANTAGES**
- Potential driver unfamiliarity associated with roundabout at ramp terminal.
 - Closer intersection / access spacing than Alternatives S1A and S1B

