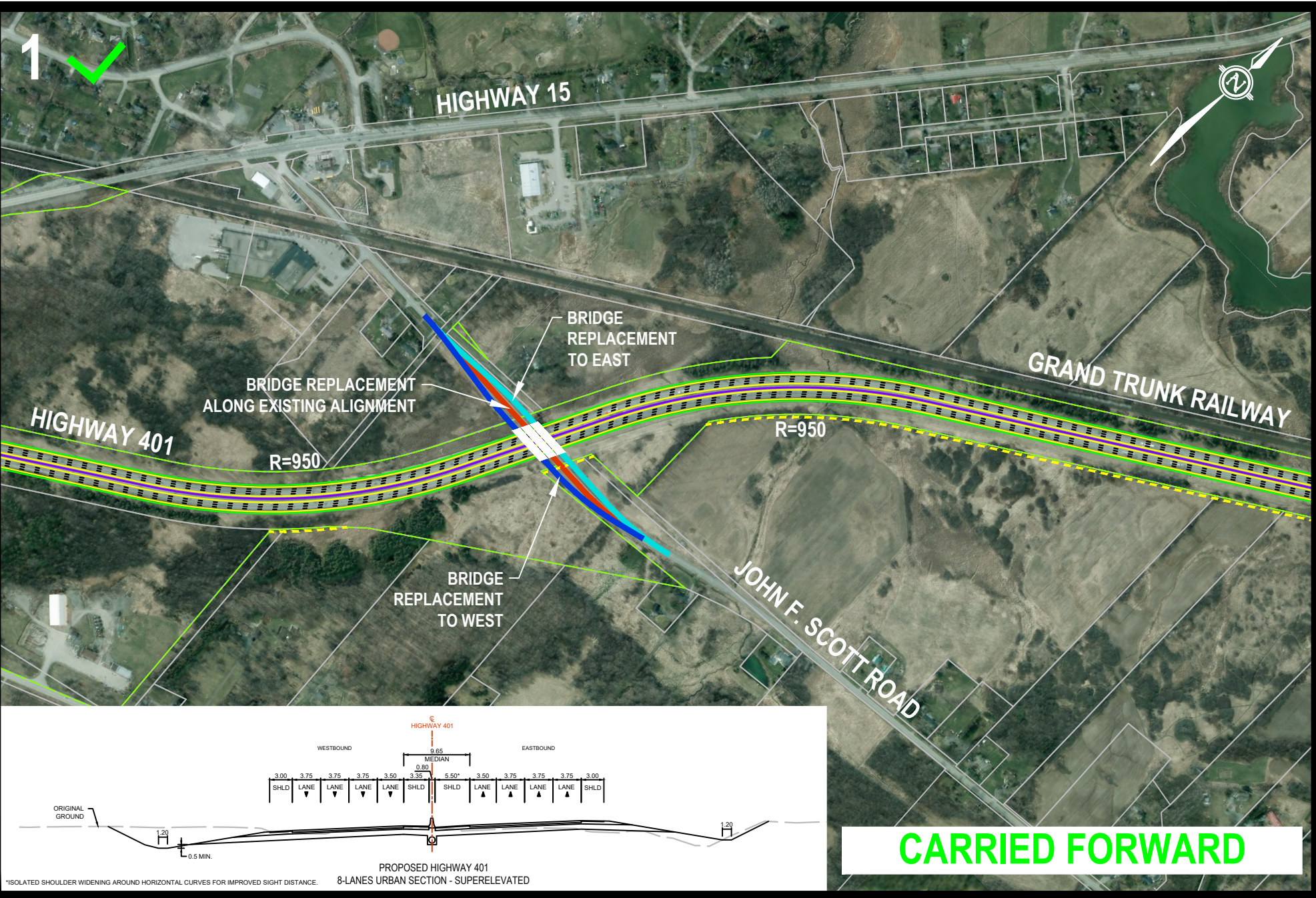


HIGHWAY 401 ALIGNMENT AT JOHN F. SCOTT ROAD - LONG LIST ALTERNATIVES



ALTERNATIVE 1 - MAINTAIN EXISTING ALIGNMENT WITH URBAN MEDIAN

DESCRIPTION:

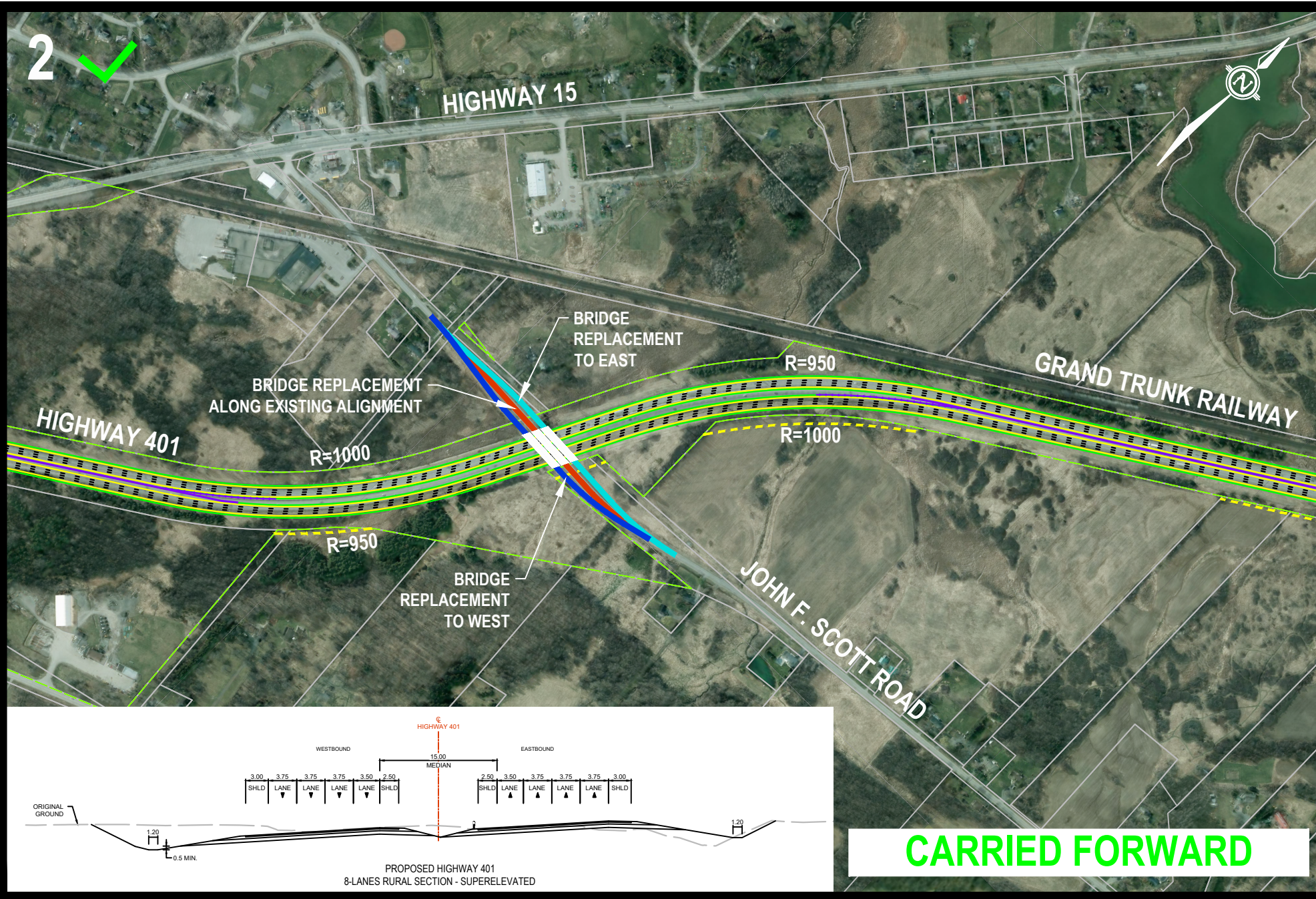
- Maintain existing Highway 401 alignment with minor adjustments only (provide R=950 m horizontal curves) and 9.65 m urban median (tall wall concrete barrier)
- Widen Highway 401 to the outside with 5.5 m inside shoulder for improved sight distance
- Replace John F. Scott underpass in same general location as existing bridge (replacement along either existing alignment, to east or to west)

ADVANTAGES

- No notably property or environmental impacts anticipated
- Lowest construction cost and complexity of construction staging with Highway 401 centerline generally maintained

DISADVANTAGES

- Sight distance meets requirement for design speed of 120 km/h only
- Wide 5.5 m inside shoulder is greater than the desirable maximum for paved shoulder (may encourage illegal traffic on shoulder)



ALTERNATIVE 2 - MAINTAIN EXISTING ALIGNMENT WITH 15 m RURAL MEDIAN

DESCRIPTION:

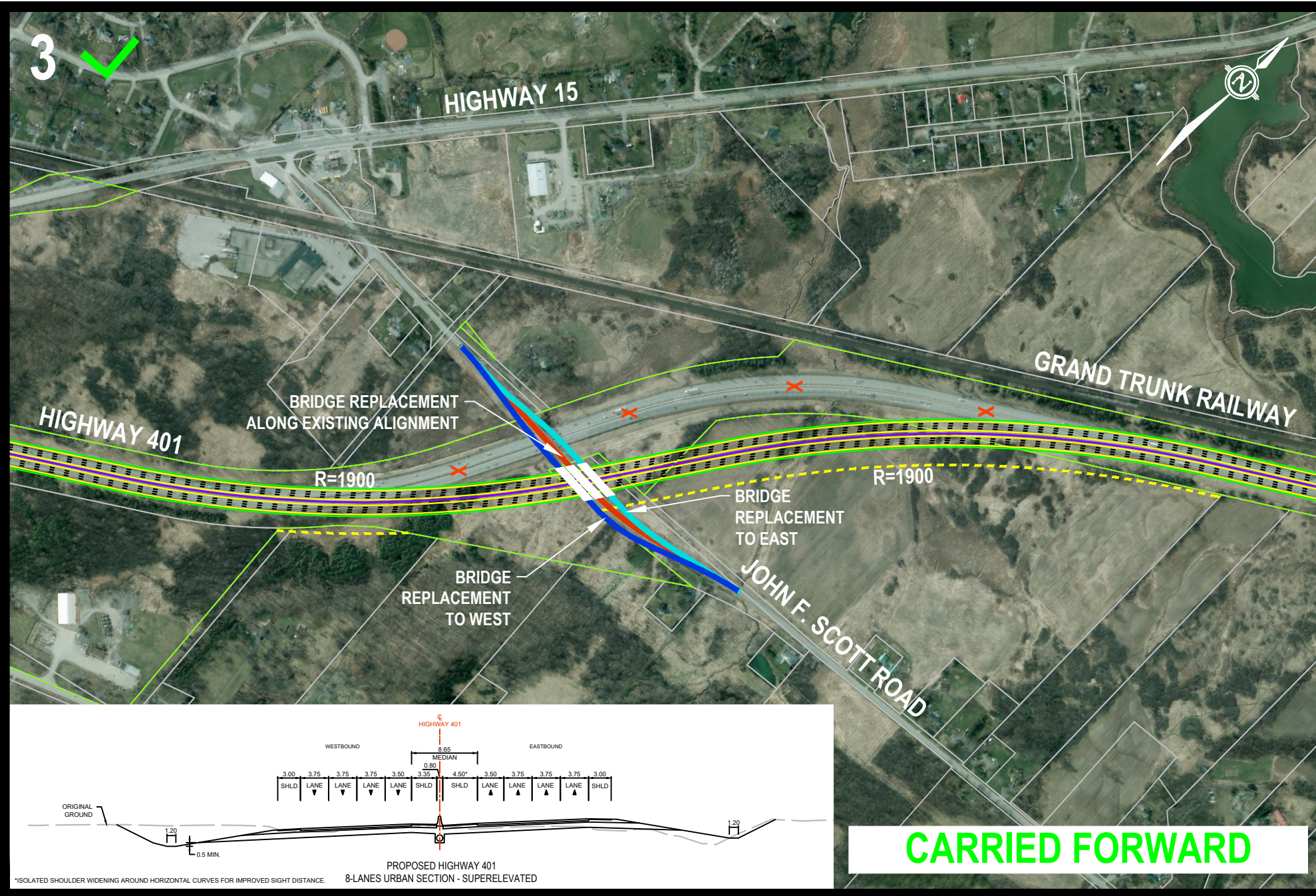
- Realign Highway 401 eastbound lanes to provide 15 m rural (grassed) median with minor realignment of westbound lanes
- Increase two horizontal curves to provide R = 950 m / 1000 m
- Replace John F. Scott underpass in same general location as existing bridge (replacement along either existing alignment, to east or to west)

ADVANTAGES

- Sight distance meets requirement for design speed of 130 km/h
- Existing Highway 401 alignment is generally maintained with minor property requirement
- Lower property and environmental impacts than Alternative 3

DISADVANTAGES

- Partial encroachment into unevaluated wetlands and woodlands south of Highway 401
- Requires high tension four cable guide rail median barrier, which is less desirable than either a rural grassed median or urban median with concrete barrier
- Higher complexity of construction staging
- Higher construction cost than Alternative 1 with partial realignment of Highway 401 and longest bridge span required for John F. Scott bridge replacement



ALTERNATIVE 3 - REALIGNMENT TO SOUTH WITH URBAN MEDIAN

DESCRIPTION:

- Realign Highway 401 to the south with R=1900 m horizontal curves and 8.65 m urban median (tall wall concrete barrier)
- Replace John F. Scott underpass south of existing bridge (replacement along either existing alignment, to east or to west)

ADVANTAGES

- Sight distance meets requirement for design speed of 130 km/h
- Flatter Highway 401 horizontal curves more desirable with potentially reduced collision risk
- John F. Scott bridge replacement can generally be constructed away from existing Highway 401 traffic

DISADVANTAGES

- Significant encroachment into unevaluated wetlands and woodlands south of Highway 401
- Property acquisition required south of Highway 401
- Highest construction cost with major Highway 401 realignment and John F. Scott reconstruction

