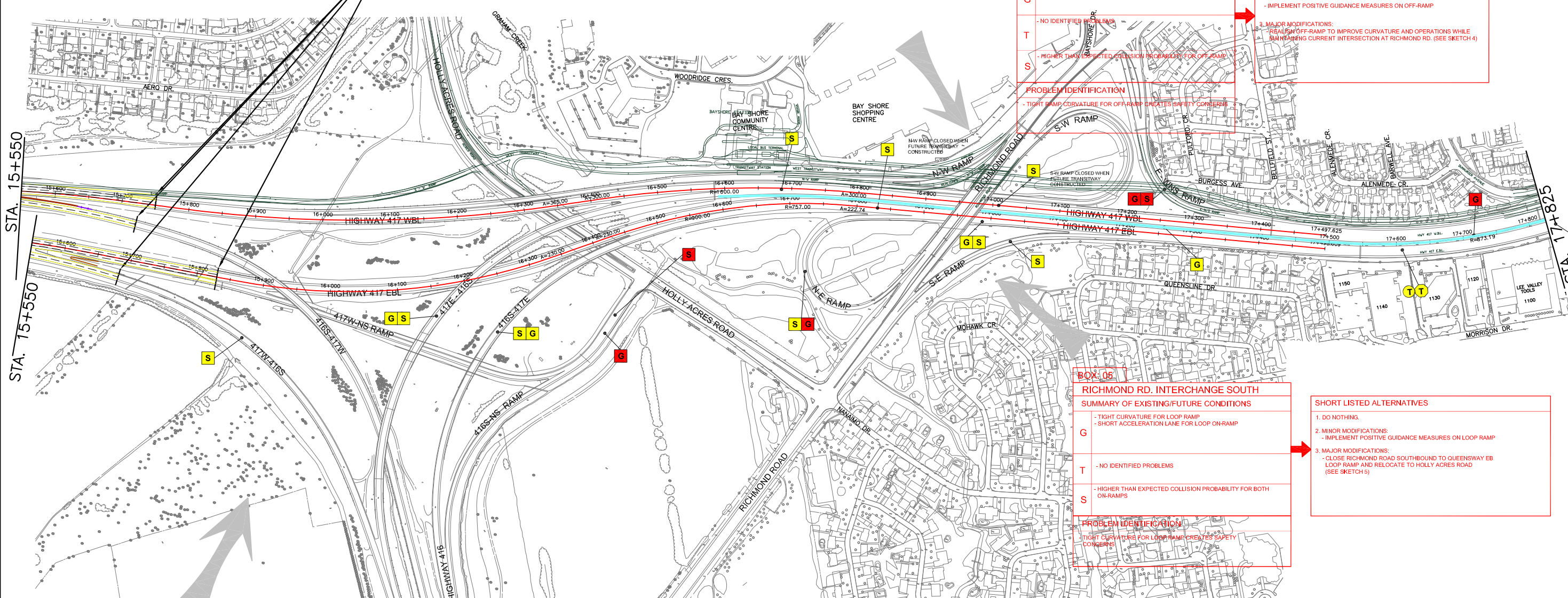


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 MINISTRY OF TRANSPORTATION, ONTARIO
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MATCH TO HIGHWAY 417 PRELIMINARY DESIGN STUDY
 FROM HIGHWAY 7 TO HIGHWAY 416
 WP 458 - 98 - 00



BOX: 04

RICHMOND RD. INTERCHANGE NORTH

SUMMARY OF EXISTING/FUTURE CONDITIONS

- TIGHT CURVATURE FOR WB OFF-RAMP
- NO IDENTIFIED PROBLEMS
- HIGHER THAN EXPECTED COLLISION PROBABILITY FOR OFF-RAMP

PROBLEM IDENTIFICATION

- TIGHT RAMP CURVATURE FOR OFF-RAMP CREATES SAFETY CONCERNS

SHORT LISTED ALTERNATIVES

1. DO NOTHING.
2. MINOR MODIFICATIONS:
 - IMPLEMENT POSITIVE GUIDANCE MEASURES ON OFF-RAMP
3. MAJOR MODIFICATIONS:
 - REALIGN OFF-RAMP TO IMPROVE CURVATURE AND OPERATIONS WHILE MAINTAINING CURRENT INTERSECTION AT RICHMOND RD. (SEE SKETCH 4)

BOX: 05

RICHMOND RD. INTERCHANGE SOUTH

SUMMARY OF EXISTING/FUTURE CONDITIONS

- TIGHT CURVATURE FOR LOOP RAMP
- SHORT ACCELERATION LANE FOR LOOP ON-RAMP
- NO IDENTIFIED PROBLEMS
- HIGHER THAN EXPECTED COLLISION PROBABILITY FOR BOTH ON-RAMPS

PROBLEM IDENTIFICATION

- TIGHT CURVATURE FOR LOOP RAMP CREATES SAFETY CONCERNS

SHORT LISTED ALTERNATIVES

1. DO NOTHING.
2. MINOR MODIFICATIONS:
 - IMPLEMENT POSITIVE GUIDANCE MEASURES ON LOOP RAMP
3. MAJOR MODIFICATIONS:
 - CLOSE RICHMOND ROAD SOUTHBOUND TO QUEENSWAY EB LOOP RAMP AND RELOCATE TO HOLLY ACRES ROAD (SEE SKETCH 5)

BOX: 02

HIGHWAY 416 INTERCHANGE

SUMMARY OF EXISTING/FUTURE CONDITIONS

- NARROW SHOULDER WIDTH ON RAMP NB 416 TO EB QUEENSWAY AND RAMP WB QUEENSWAY TO SB 416, RESULTS IN RESTRICTED STOPPING SIGHT DISTANCE
- SHORT WEAVING LENGTH ON HOLLY ACRES RD. OFF-RAMP
- NO IDENTIFIED PROBLEMS
- HIGHER THAN EXPECTED COLLISION PROBABILITY ON RAMPS W-S, S-E & E-S

PROBLEM IDENTIFICATION

- RESTRICTED SIGHT DISTANCE ON RAMP NB 416 TO QUEENSWAY AND RAMP WB QUEENSWAY TO SB 416
- WEAVING ON HOLLY ACRES RD. OFF-RAMP CAUSES SAFETY PROBLEMS

SHORT LISTED ALTERNATIVES

1. DO NOTHING.
2. MINOR MODIFICATIONS:
 - IMPLEMENT POSITIVE GUIDANCE MEASURES ON RAMP NB 416 TO EB QUEENSWAY, AND RAMP WB QUEENSWAY TO SB 416
 - PHYSICALLY SEPARATE (RAISED MEDIAN) 416-HOLLY ACRES AND 417-HOLLY ACRES RAMPS AND PROVIDE SEPARATE SIGNALS (SEE SKETCH 2)
3. MAJOR MODIFICATIONS:
 - NO VIABLE MODIFICATIONS

BOX: 03

HIGHWAY 416 TO RICHMOND RD.

SUMMARY OF EXISTING/FUTURE CONDITIONS

- VERTICAL (CREST) CURVATURE EAST OF RICHMOND RD. RESTRICTS SIGHT DISTANCE FOR LANE ARRANGEMENT CHANGES APPROACHING HWY 416
- OPERATIONAL PROBLEMS WB QUEENSWAY DUE TO RIGHT LANE DROP THROUGH RICHMOND RD. INTERCHANGE
- HIGHER THAN EXPECTED COLLISION PROBABILITY FOR EB & WB QUEENSWAY

PROBLEM IDENTIFICATION

- WB LANE DROP THROUGH RICHMOND RD. INTERCHANGE

SHORT LISTED ALTERNATIVES

1. DO NOTHING.
2. MINOR MODIFICATIONS:
 - MODIFY SIGNING TO IMPROVE NOTIFICATION OF LANE ARRANGEMENT (417WB)
3. MAJOR MODIFICATIONS:
 - EXTEND WB RIGHT LANE WESTERLY (i.e. ELIMINATE LANE DROP)

BOX: 06

RICHMOND RD. TO GREENBANK/PINECREST RD.

SUMMARY OF EXISTING/FUTURE CONDITIONS

- VERTICAL (CREST) CURVATURE RESTRICTS STOPPING SIGHT DISTANCE
- NARROW MEDIAN SHOULDER WIDTH RESULTS IN RESTRICTED STOPPING SIGHT DISTANCE
- EB RIGHT HAND LANE DROP AT PINECREST/GREENBANK
- EB QUEENSWAY CONGESTION DURING PEAK PERIODS BY 2011
- NO IDENTIFIED PROBLEMS

PROBLEM IDENTIFICATION

- INSUFFICIENT THROUGH LANE CAPACITY
- EB RIGHT HAND LANE DROP AT PINECREST CREATES CONGESTION AND OPERATIONAL PROBLEMS

SHORT LISTED ALTERNATIVES

1. DO NOTHING.
2. MINOR MODIFICATIONS:
 - NO VIABLE MODIFICATIONS
3. MAJOR MODIFICATIONS:
 - ADD 1 ADDITIONAL EB THROUGH LANE FROM PINECREST/GREENBANK OFF-RAMP EASTERLY
 - ADD 1 ADDITIONAL WB THROUGH LANE FROM EAST OF PINECREST/GREENBANK TO CONNECT TO EXISTING 4-LANE SECTION WEST OF THIS INTERCHANGE



HIGHWAY 417, FROM HIGHWAY 416 TO ANDERSON ROAD
PRELIMINARY DESIGN STUDY AND ENVIRONMENTAL ASSESSMENT
G.W.P. 663-93-00

CORRIDOR ANALYSIS COMPOSITE PLAN
FROM STA. 15+550 TO STA. 17+825

LEGEND:

G GEOMETRICS—MINOR DEVIATION FROM STANDARDS	T YEAR 2001 TRAFFIC OPERATIONS—CONGESTION	T YEAR 2001 TRAFFIC OPERATIONS—MAJOR CONGESTION	S SAFETY—HIGHER THAN EXPECTED COLLISION PROBABILITY
G GEOMETRICS—MAJOR DEVIATION FROM STANDARDS	T YEAR 2011 TRAFFIC OPERATIONS—CONGESTION	T YEAR 2011 TRAFFIC OPERATIONS—MAJOR CONGESTION	S SAFETY—SIGNIFICANTLY HIGHER THAN EXPECTED COLLISION PROBABILITY
	T YEAR 2021 TRAFFIC OPERATIONS—CONGESTION	T YEAR 2021 TRAFFIC OPERATIONS—MAJOR CONGESTION	

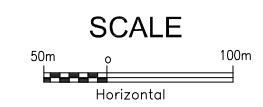


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