

REGION OF OTTAWA-CARLETON
RÉGION D'OTTAWA-CARLETON

REPORT
RAPPORT

Our File/N/Réf. **50 23-00-R017-B**
Your File/V/Réf.

DATE 18 April 2000

TO/DEST. Co-ordinator Transportation Committee

FROM/EXP. Director Mobility Services and Corporate Fleet Services
Environment and Transportation Department

SUBJECT/OBJET **MODIFICATIONS TO MERIVALE ROAD (REGIONAL ROAD
17) FROM FALLOWFIELD ROAD (REGIONAL ROAD 12) TO
OLD HIGHWAY 16 (REGIONAL ROAD 73) TO
ACCOMMODATE GROWTH WITHIN THE SOUTH MERIVALE
BUSINESS PARK**

DEPARTMENTAL RECOMMENDATIONS

That the Transportation Committee recommend Council approve:

- 1. the installation of traffic control signals at the intersections of Merivale Road and Leikin Drive, and Merivale Road and Old Highway 16 along with the construction of roadway modifications on Merivale Road from a point approximately 100 m. north of Fallowfield Road to Old Highway 16 as described in the report, and;**
- 2. the proposed road works be jointly funded by the City of Nepean and the Region of Ottawa-Carleton as outlined in the report.**

BACKGROUND

In October 1998, the City of Nepean approved the staged development of the JDS Uniphase (Fitel) to be located on 54 acres in the South Merivale Business Park bounded by Fallowfield Road to the north, Merivale Road to the east, Old Highway 16 to the south, and the Davidson Heights subdivision/NCC lands to the west. From the creation of the park in the early 1990s to the initial stage of the JDS Uniphase development, there were no occupants in the business park so it was expected that the existing transportation infrastructure would be adequate for some time to come. The unexpected growth from JDS Uniphase greatly exceeded earlier traffic volume projections. Recent traffic surveys

and observations completed in January 2000 confirm that this rapid expansion is the main cause for the increased collision frequencies and excessive traffic delays at the intersections.

JDS Uniphase is in the process of completing its third phase and will soon proceed toward the final phase of development. At build out, the development will generate approximately double the current number of shift employees destined for this site. This development, the South Merivale Business Park and the portion of Merivale Road in question, are shown in an area context as Annex A.

It must be emphasized that these roadway modifications alone will not accommodate the future traffic volumes at the business park's build out and cannot be seen as a replacement for full road reconstruction. The main reason why the current roadway geometry has been adequate up until recently can be credited to the excellent transit service provided to the employees of JDS Uniphase. These proposed intersection modifications described in the following paragraphs are intended as an interim treatment that, when combined with the necessary transit service, will be sufficient for the immediate and short-term future.

EXISTING CONDITIONS

This portion of Merivale Road maintains a two-lane, rural cross-section through to Old Highway 16 except at the intersections with Fallowfield Road and with Leikin Drive where a southbound right-turn lane is provided. Ditches of varying widths and depths exist on both sides of this roadway. At Fallowfield Road and Merivale Road, left-turn lanes are provided on the eastbound and westbound approaches to this signalized intersection. The speed limit for both Merivale Road and Fallowfield Road through this area of south Nepean is 80 km./h.

Pedestrians

Currently, there are no sidewalks on either side of Merivale Road or Fallowfield Road in this area.

At present, pedestrian traffic on Merivale Road is almost non-existent. According to an eight-hour traffic volume survey carried out on a Tuesday in June 1999 at the intersection of Merivale Road and Fallowfield Road, only three pedestrians were recorded. The same survey was completed on a Wednesday in January 2000 and no pedestrians were counted.

Pedestrian crossings are assisted at Fallowfield and Merivale Road with the provision of push-buttons that actuate a pedestrian phase in the traffic signal cycle.

Bicycles

This section of Merivale Road is identified in the Transportation Master Plan as a route for on-road cycling facilities, although currently no special accommodations have been provided for cyclists. Marked, two metre cycling lanes are provided for eastbound and westbound cyclists travelling on Fallowfield Road in this area.

Over an eight-hour period in June 1999, 20 cyclists were counted on Merivale Road comprised of 15 travelling northbound and 5 travelling southbound.

Transit

Currently there is no regular transit service along this section off Merivale Road; however, OC Transpo provides a special route #171 that directly serves JDS Uniphase employees. This route travels between the Baseline Road Station of the Transitway and coincides with the shift changes at JDS Uniphase. The success of this route has been unparalleled from the perspective of ridership to a suburban business park. It is estimated that 40% of the shift employees take the bus.

Since this special route travels directly to the JDS Uniphase site, no bus stops are provided along Merivale Road in this area.

Operational difficulties have been reported by OC Transpo at the intersection of Leikin Drive and Merivale Road. Often eastbound motorists illegally turn left along the outside of the left-turning bus, leading to frequent hazardous situations. A solution to this difficulty will be discussed further in the design proposal.

Automobiles

As previously mentioned, Merivale Road maintains a rural cross-section throughout this area with auxiliary lanes at the following intersections:

1. Fallowfield and Merivale - southbound right-turn lane, eastbound and westbound left-turn lanes;
2. Leikin Drive and Merivale - southbound right-turn lane; and,
3. Merivale and Old Highway 16 - northbound left-turn lane.

The speed limit along this section of Merivale Road is 80 km/h.

Traffic volume surveys carried out in January 2000 indicate that approximately 5,500 motorists comprising 2,600 southbound and 2,900 northbound travel along this section of Merivale Road over an 8-hour period on weekdays. These volumes represent an increase of 40% for southbound traffic and 30% for northbound traffic when compared to the same survey conducted at this location seven months earlier in June 1999. It must be noted that during current peak volume periods, the intersection of Fallowfield and Merivale Road does not have the capacity to service the traffic demand which causes excessive delays, motorist frustration and a reduced level of safety as well as neighbourhood infiltration.

About 5% of the total vehicular volume consists of heavy trucks.

DESIGN PROPOSAL

The modifications outlined in the following paragraphs are relatively modest in cost, but will be far outweighed by the immediate to short term benefits of improved safety and traffic operations along this section of Merivale Road. Annexes B, C, D and E illustrate the proposed modifications.

Traffic Control Signal Installation

Traffic control signals are proposed for the intersections of Leikin Drive and Merivale Road, and Merivale Road and Old Highway 16. Projected traffic volumes indicate that these locations will soon satisfy the Ministry of Transportation of Ontario traffic signal warrants; however, more importantly, because of the rural character and the higher vehicle speeds, they are necessary for safety purposes.

Roadway Widening

To improve traffic operations, the following intersections will require road widening in the form of additional lanes:

1. Merivale Road and Fallowfield Road - provide an eastbound right-turn lane and a northbound/southbound left-turn lane;
2. Merivale Road and Beckstead Road - provide a northbound left-turn lane; and,
3. Merivale Road and Old Highway 16 - provide a southbound, channelized right-turn lane from Old Highway 16 to northbound Merivale Road.

Pedestrians

As mentioned earlier, pedestrian activity along Merivale Road in this area is extremely light. No sidewalks are planned; however pedestrians will be able to take advantage of the new traffic signals to safely cross the roadway. As with the installation at Fallowfield and Merivale, pedestrian crossings will be assisted with the provision of push-buttons that actuate a pedestrian phase in the traffic signal cycle. Audible signals will also be installed.

Bicycles

As with pedestrians and motorized vehicles, the new traffic signal locations will provide cyclists with protected crossings. At the intersection of Fallowfield and Merivale, the existing bicycle lanes on Fallowfield will be continued around the corners and tapered out.

Transit

Current transit operations will be greatly enhanced by the proposed roadway modifications. The addition of turning lanes at Fallowfield and Merivale will improve traffic operations which, in turn, will reduce the delay for buses.

Along with the proposed traffic signals at Merivale and Leikin, a “bus queue jump with signal priority” feature will be provided so that eastbound left-turning buses will be able to bypass the queue of stopped traffic. This innovation will significantly improve travel times and solve the previously mentioned operational difficulty of illegal eastbound double left-turn traffic.

As development proceeds in this area, additional transit service will be provided where demand warrants.

Automobiles

The proposed addition of the turning lanes and the new traffic signals at the intersections along this section of Merivale Road are designed primarily to improve traffic safety and operational efficiency. Intersections that are currently failing during the peak traffic periods will hopefully operate at a Level of Service E after the proposed modifications and signalization have been completed.

CONFORMITY TO THE TRANSPORTATION MASTER PLAN

The guiding principle from the Transportation Master Plan (TMP) is the provision of a modal hierarchy with the emphasis on walking, cycling and transit usage. This principle is reflected in the following design features.

1. The addition of new traffic signals provides safe crossing opportunities for pedestrians which conforms to section 2.2.2. of the TMP.
2. The provision of a “bus queue jump with signal priority” to the proposed traffic signals at Merivale road and Leikin Drive directly conforms to the Transit Priority principles outlined in section 2.4.3 of the TMP.

FINANCIAL COMMENTS

On 22 December 1999, Regional Council approved the allocation of \$250,000 in the 2000 budget to partner with the City of Nepean who will be contributing \$425,000, for a total estimated project cost of \$675,000. It should be mentioned, however, that at the time of the writing of this report, the Transition Board has yet to approve this Capital project.

Cost Estimates

The following preliminary cost estimates are based on the functional design details for the roadway modifications and are provided solely for the information of the Transportation Committee and Regional Council.

<u>Item</u>	<u>Cost Estimate</u>
Construction	\$330,000.00
Traffic Control Signals	\$200,000.00
Engineering	\$ 75,000.00
Utilities	\$ 10,000.00
Contingencies	<u>\$ 15,000.00</u>
Total Cost before G.S.T	\$630,000.00
G.S.T. @ 7%	\$ 45,000.00
TOTAL ESTIMATED COST	<u>\$675,000.00</u>

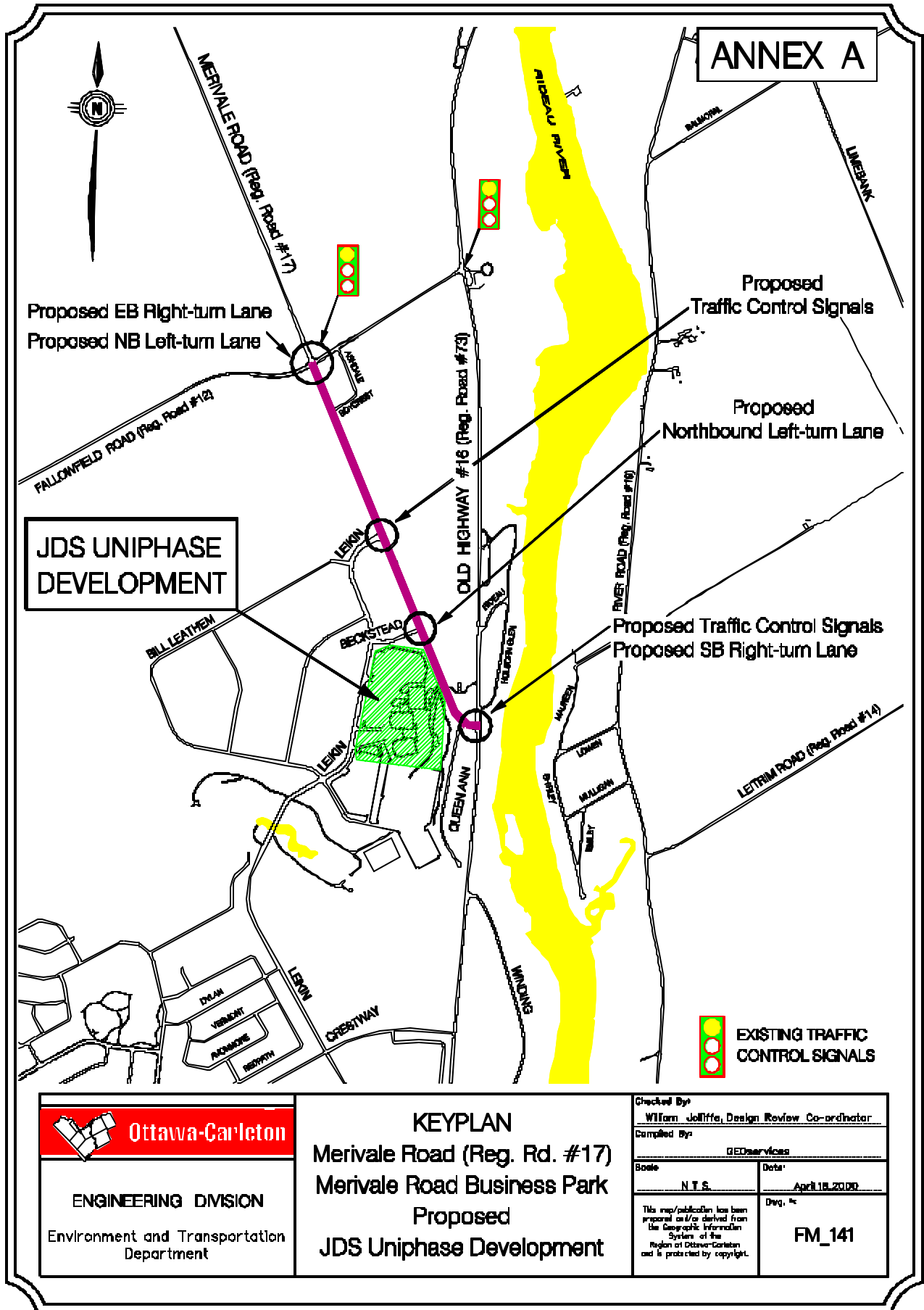
CONSULTATION


Notice of the proposed modifications on Merivale Road to better accommodate the South Merivale Business Park and the expansion of JDS Uniphase has been placed in Le Droit, the Ottawa Citizen and the Ottawa Sun once a week for four consecutive weeks. Sketches of these proposed road works were on display at the Woodroffe Avenue Environmental Study open house held at St. Luke Elementary School in the Barrhaven community on Tuesday, 11 April 2000.

COMMENTS FROM THE REGIONAL CYCLING ADVISORY GROUP

On 20 April 2000, a draft report containing a conceptual drawing of the proposed roadway modifications will be directed to the Regional Cycling Advisory Group for their consideration. Staff has requested that their comments be made available for the Transportation Committee meeting.

*Approved by
Doug Brousseau*



 **Ottawa-Carleton**

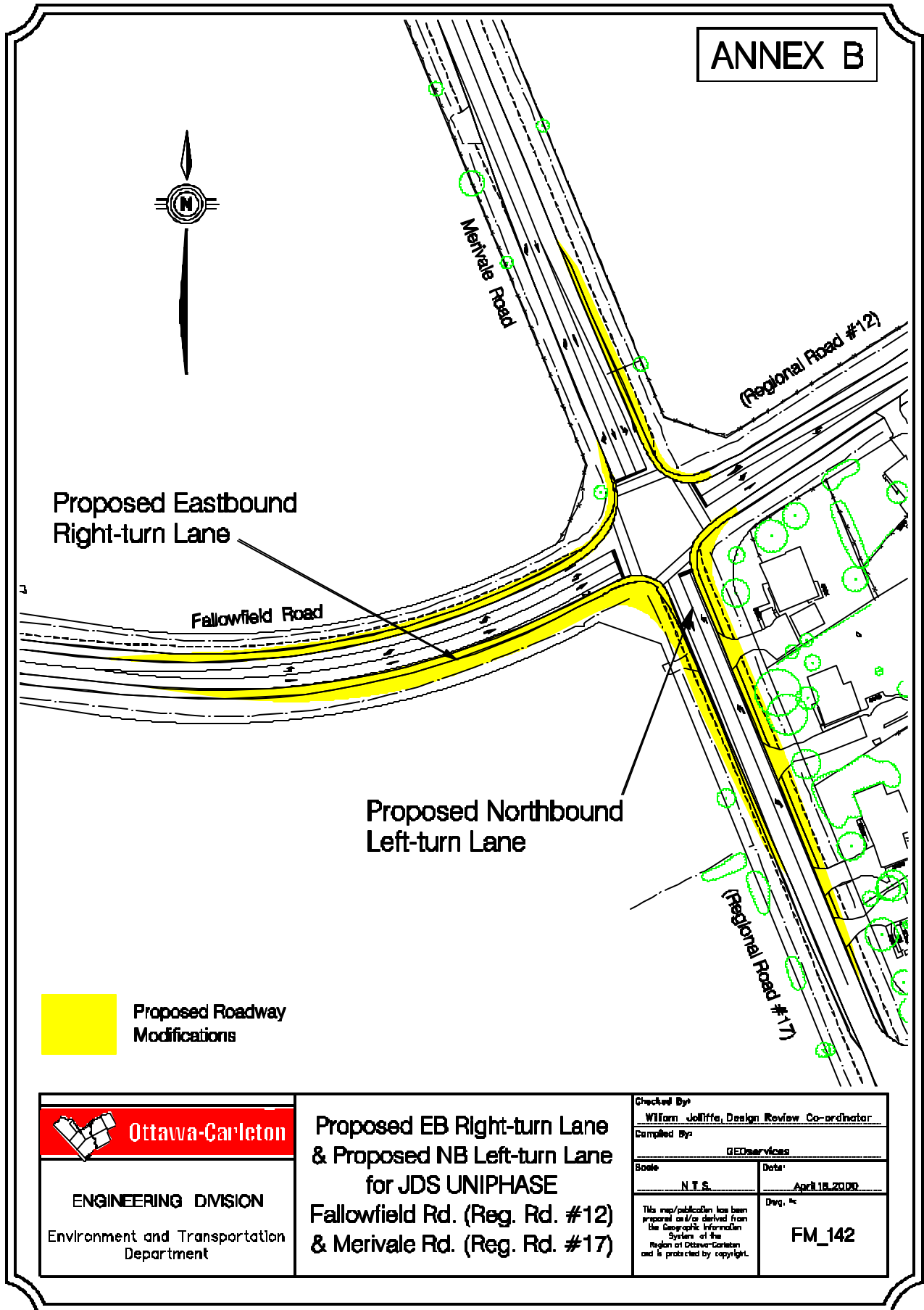
ENGINEERING DIVISION

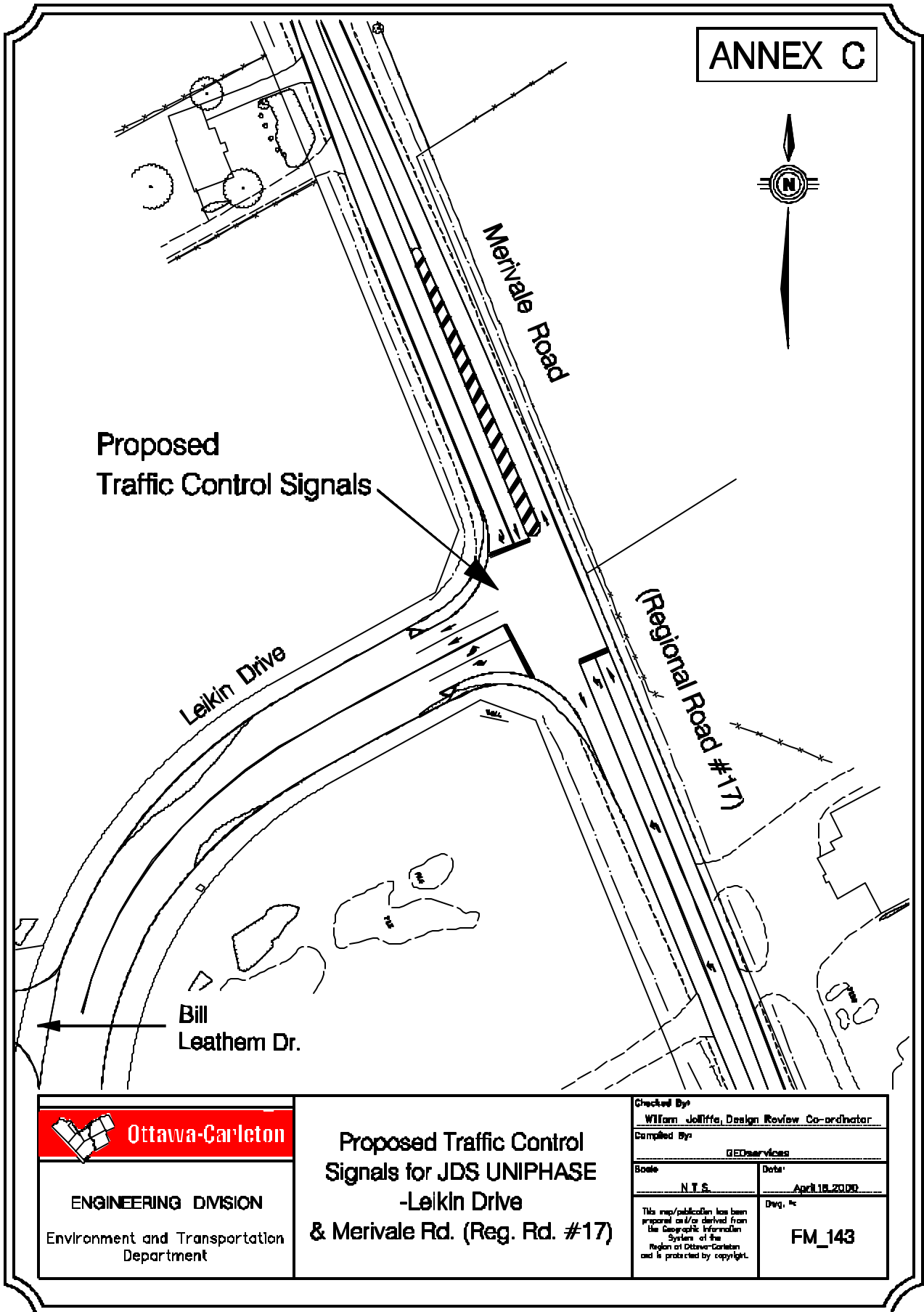
Environment and Transportation
Department


KEYPLAN

Merivale Road (Reg. Rd. #17)
Merivale Road Business Park
Proposed
JDS Uniphase Development

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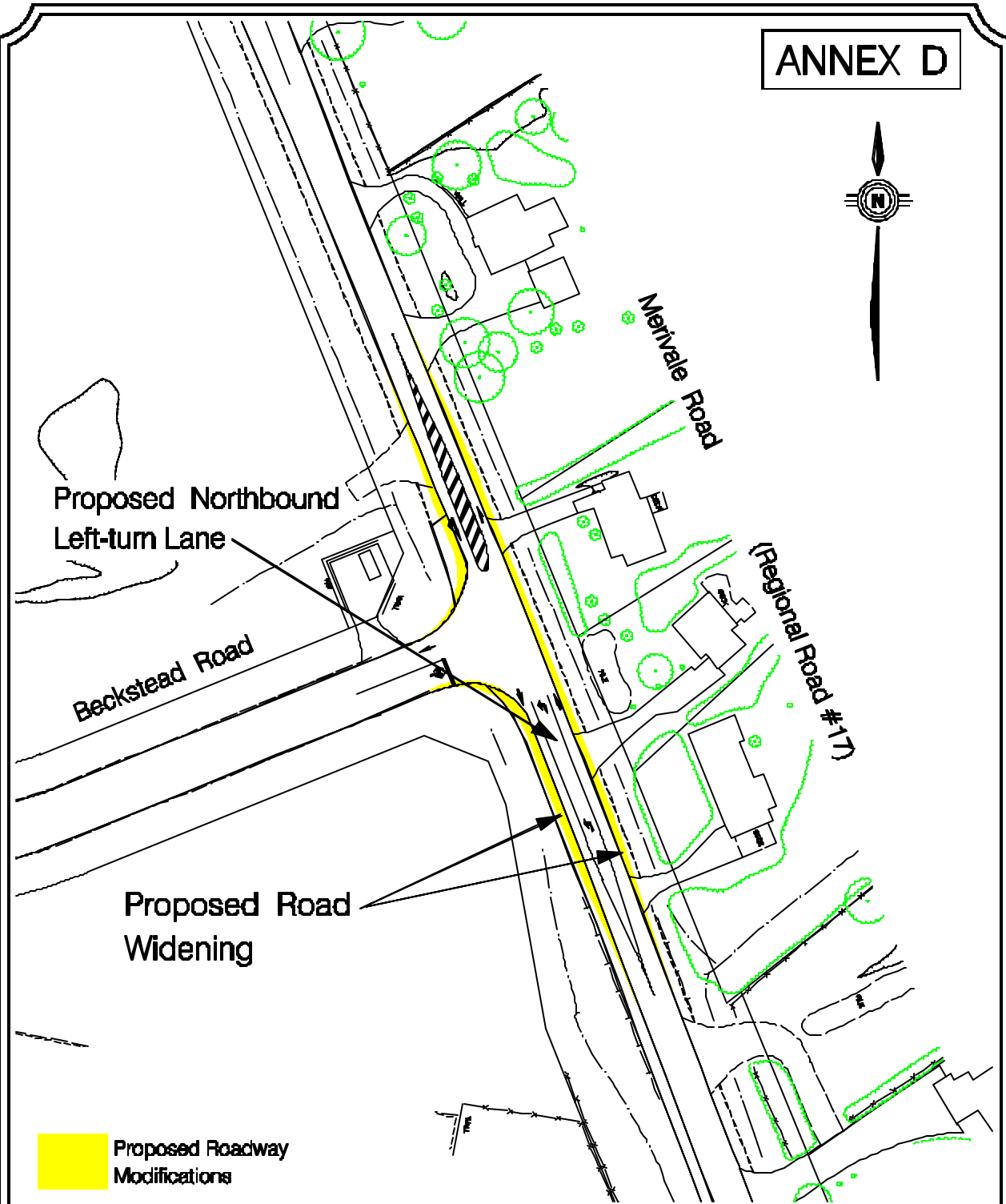
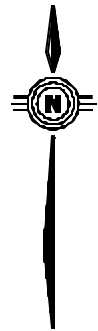
ENGINEERING DIVISION

Environment and Transportation
Department


**Proposed Traffic Control
Signals for JDS UNIPHASE
-Leikin Drive
& Merivale Rd. (Reg. Rd. #17)**

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ANNEX D

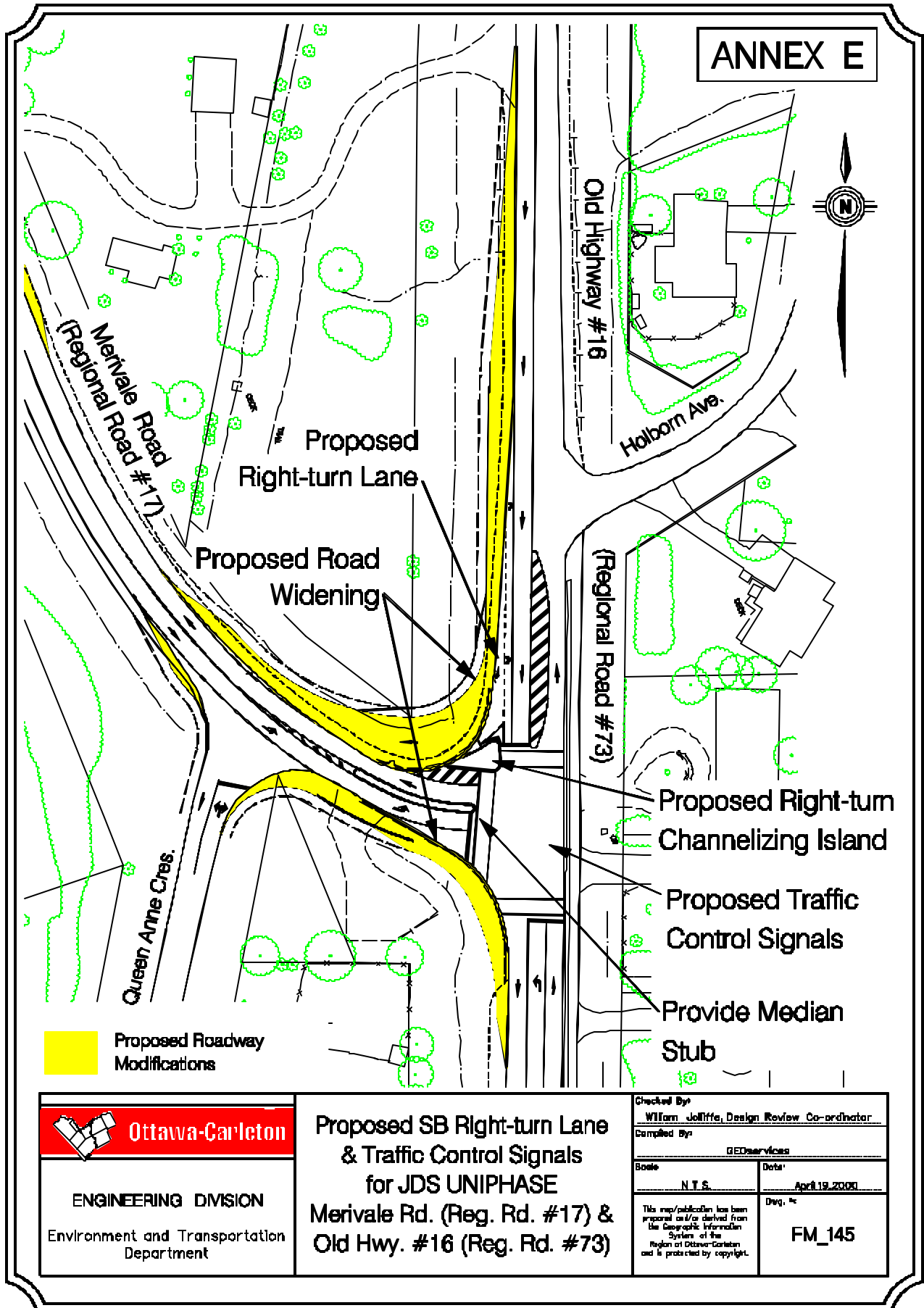


Proposed Roadway Modifications

 <p>Ottawa-Carleton</p>
<p>ENGINEERING DIVISION</p> <p>Environment and Transportation Department</p>

**Proposed NB Left-turn Lane
for JDS UNIPHASE
-Beckstead Road
& Merivale Rd. (Reg. Rd. #17)**


<p>Checked By: William Joffe, Design Review Co-ordinator</p>	
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ANNEX E



 Proposed Roadway Modifications

 <p>Ottawa-Carlton</p>

Proposed SB Right-turn Lane & Traffic Control Signals for JDS UNIPHASE
Merivale Rd. (Reg. Rd. #17) & Old Hwy. #16 (Reg. Rd. #73)

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