

Project Number:
2007-317P

April/2013

Mayfield Road Improvements

Airport Road to Coleraine Drive –
Class Environmental Assessment



ENVIRONMENTAL STUDY REPORT

Volume 5 of 5
Appendix V - Y

April 18, 2013



 **Region of Peel**
Working for you

APPENDIX V
MEETING NOTES

Meeting Notes



Stantec

Special Meeting - MNR - Watercourse Crossing Review Mayfield Road Class Environmental Assessment Study Airport Road to Coleraine Drive

File: 160210480/45

Date: Monday, April 23, 2012

Place/Time: Room 4-641, 4th Floor, Region of Peel, 10 Peel Centre Drive, Brampton

Next Meeting: TBD

Attendees: Mark Heaton	Ministry of Natural Resources	mark.heaton@ontario.ca
Hitesh Topiwala	Region of Peel	hitesh.topiwala@peelregion.ca
Shari Muscat	Stantec	shari.muscat@stantec.com
John Bayley (PM)	Stantec	john.bayley@stantec.com

Distribution: All Attendees

The meeting commenced at 9:30 a.m.

Item:

Action:

Purpose: To review and discuss the regulated habitat for redbside dace and the potential impacts of culvert/bridge crossings proposed on Mayfield Road in connection with the proposed future widening of Mayfield Road between Airport Road and Coleraine Drive in the City of Brampton/Town of Caledon. In response to the Region of Peel's request for comment on the Natural Environment Report and leading to completion of the project ESR, the focus of this meeting is on the potential impacts of concern to the MNR at two major watercourses; Salt Creek and the Humber West River and the presence of regulated redbside dace (Species at Risk) habitat at both locations.

1.0 INTRODUCTION/PROJECT BACKGROUND (Stantec/Peel)

- 1.1. Introductions were made and pertinent contact information provided.
- 1.2. John Bayley provided a quick introduction of the project and plans presented at the meeting. Study particulars include the following:
 - Project is a Schedule "C" Class EA. Study is presently in Phase 4 of the Class EA process preparing for the completion of the Environmental Study Report (ESR) with the intent to file the ESR by summer 2012.
 - Project Limits: Mayfield Road, Airport Road to Coleraine Drive.
 - The recommended ultimate widening is to six lanes throughout

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most of the project, except widening to four lanes from a point approximately 800 metres west of Coleraine Drive to Coleraine Drive.

- The project includes a portion of the south leg of The Gore Road to approximately 470 m south of Mayfield Road. In this area are the St. Patrick's Church and Cemetery on the southeast corner and a heritage property near the southwest corner located at 11962 The Gore Road.
- The study is recommending protection of a 50 m Road allowance for the Mayfield Road corridor in agreement with Region's Official Plan to 2031 and protection of a 45m road allowance for The Gore Road corridor also in agreement with the Region's Official Plan.
- There are 16 watercourse crossings on Mayfield Road within the study limits. Three crossing locations are in areas where regulated habitat for redbside dace has been identified. The locations are referenced by TRCA as location 3, 6, and 11. Mark Heaton of MNR referred to them in discussion as C-3, C-6 and C-11.

2.0 INITIAL COMMENTARY BY MNR (M.HEATON)

- 2.1. In agreement with the latest "*Draft Guidance for Development Activities in Redside Dace protected Habitat*", February 2011, MNR generally does not support culvert extensions in regulated habitat on existing watercourses and more specifically those which exhibit endangered species habitat.
- 2.2. Mark Heaton advised that a recent study in 2011 has identified Salt Creek as a "recovering" habitat for redbside dace.
- 2.3. Mark Heaton advised that a recent study in 2011 has identified the Humber West River as "occupied" habitat for redbside dace.
- 2.4. Mark Heaton referred also to several ongoing projects in Peel Region and Brampton (Countyside Drive, Boivaird Road, Mississauga Road and Airport Road, etc.) which involve crossings of the same watercourses and inferred that some collaboration with those assignments would be beneficial in determining a reasonable approach to treatment of the respective watercourse crossings on this project.
- 2.5. Hitesh indicated his familiarity with some of the undertakings and will provide pertinent information and contacts for use in finalizing the culvert proposals on Mayfield Road.
- 2.6. Mark confirmed there are three key elements considered in the

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assessment of impacts on regulated habitat:

1. Stream/watercourse
2. Meander Belt
3. 30m vegetated riparian habitat (Setbacks) at either side

2.7. The overall treatment for storm water was reviewed briefly by Stantec and it was confirmed that the study proposes the following general Storm Water Management (SWM) measures:

1. All Regional roadway drainage is captured/conveyed and treated in some form or another
2. No regional road drainage is directed to private lands without capture and treatment
3. SWM ponds are provided for practical contributing drainage areas and where land is available
4. Water Quality enhancement is provided via roadside Oil-Water-Grit Separation (OWGS);
5. Contra flow is provided via sewers to OWGS units
6. Enhanced swales are provided downstream of OWGS units
7. No direct storm sewer connections are made to existing culverts

3.0 WATERCOURSE CROSSING ALTERNATIVES

3.1. John Bayley provided a quick overview of the culvert alternatives that have been considered as part of the Class EA project. A summary table of relative cost comparison was also provided as a quick reference to the assessments completed. The alternatives that have been considered include:

1. Extension of existing culverts (same type, span and height) to match future toe of fill slope grading
2. Widening of existing culverts/bridges to accommodate the proposed minimum roadway and boulevard requirements (~48m total width)
3. Replacement of existing culvert/bridges (same type, span and height) to accommodate the proposed roadway and boulevard requirements (~48m total width)
4. Replacement of existing culvert/bridges (same type and height) to accommodate the proposed roadway and boulevard requirements (~48m total width) with an

Item:	Action:
<p>increase in the overall span assumed to be 150% of the original structure span</p> <p>5. Replacement of the existing culvert/bridges with a new structure to span the entire confined valley including regulated habitat and to accommodate the proposed roadway and boulevard requirements (~48m total width) with a significant multi-span crossing of the valley.</p> <p>6. Other iterations could be considered but this assessment was completed to identify the range of practical alternatives that should be carried forward for evaluation and confirmed in advance of detailed design.</p>	<p>Region/ Stantec</p>
<p>3.2. John added that Stantec's assessment had identified Salt Creek and the Humber West River as confined valleys with a very wide valley span and broad valley floor. The Salt Creek valley width at Mayfield Road is approximately 70 m with a valley floor width of approx. 40m and the Humber West River valley width at Mayfield Road is approx. 138 m with a valley floor width of approx. 96 m. The height of each valley is approximately 6.0 m (+/- 1 m) and 7.5 m (+/- 1 m) respectively. Existing culverts are 9.0 m x 2.6 m rigid frame and 9.0 m x 4.0 m concrete arch.</p>	
<p>3.3. The determination of regulated habitat width for locations 3 (Salt Creek) and 11 (Humber West) has not been completed. TRCA did not require a meander belt analysis at the Salt Creek or Humber West River crossings if the existing culverts were being retained or extended. This will be done when the required Meander Belt widths have been confirmed. Subsequent commentary by MNR suggests that extensions will not be acceptable based on statements in the 2011 Guidance for "<i>Development Activities in Redside Dace Protected Habitat</i>" dated February 2011 as provided by MNR. TRCA will be contacted by the Region to confirm the applicable meander belt width at these locations. Post Meeting Note: Region of Peel has contacted TRCA to obtain Meander Belt information and it has been concluded that an assessment must now be done at Salt Creek and the Humber West River since the culverts will not be retained as was originally planned.</p>	<p>Region/ Stantec</p>
<p>4.0 OTHER COMMENTARY</p>	
<p>4.1. Mark Heaton noted that the SWM facility proposed adjacent to the Humber West River may be within the regulated habitat. This is to be confirmed and considered following determination of the extent of regulated habitat.</p>	<p>Region</p>

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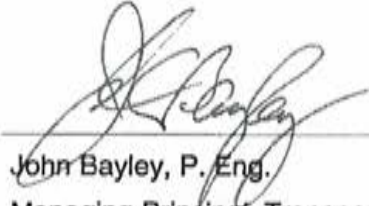
Item:	Action:
4.2. Mark Heaton noted very similar ongoing work at Countryside Drive (City of Brampton) that may have an influence on the recommendations upstream at Mayfield Road including consideration of the acceptable span widths being determined downstream.	
4.3. Shari Muscat advised that Stantec will update the natural Environment report to include up to date references to species inventory.	
5.0 FUTURE APPROVALS AND ACCEPTANCE	
5.1. MNR will need to be satisfied that suitable alternatives have been considered including avoidance options and that a practical approach to the crossings is documented in the ESR. Permitting under Section 17-2c of the Endangered Species Act (ESA) will also be required during the detailed design phase including an overall benefit plan. MNR must issue the permit before the undertakings at Salt Creek and the Humber West River commence.	Region
6.0 SCHEDULE	
6.1. Following confirmation and analysis of the regulated habitat at the Salt Creek and Humber West River crossings, the Region will arrange a follow-up circulation of the plans, additional discussion and a meeting to review the findings if deemed necessary by the MNR.	Region/ Stantec
6.2. The Region of Peel intends to complete the ESR and circulate the Draft in June 2012 for comment prior to placement on the Public Record for review in the summer of 2012.	Region/ Stantec
7.0 OTHER BUSINESS	
7.1. Mark Heaton requested copies of the background documentation and reports for review prior to responding to the May 11, 2011 memo and Natural Environment Report previously submitted. Stantec will prepare a package for delivery during the week of April 23, 2012.	Stantec
8.0 NEXT MEETING	
8.1. Future meeting(s) will be scheduled as necessary. At present there are no specific future meetings planned.	
The meeting adjourned at 10:48 a.m.	

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The foregoing is considered to be a true and representative record of items discussed.
If any discrepancies or inconsistencies are noted, please contact the writer immediately.

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John Bayley, P. Eng.
Managing Principal, Transportation
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Meeting Notes



Stantec

Special Meeting - Cultural Heritage Review Mayfield Road Class Environmental Assessment Study Airport Road to Coleraine Drive

File: 160210480/45

Date: Thursday, March 17, 2011
Place/Time: 3rd Floor Small Boardroom, Region of Peel, 9445 Airport Road, Brampton
Next Meeting: TBD

Attendees:

Solmaz Zia (PM)	Region of Peel	solmaz.zia@peelregion.ca
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Ryan Gulyas	Region of Peel	ryan.gulyas@peelregion.ca
Penny Young	City of Brampton	penelope.young@brampton.ca
Rebecca Sciarra	Archaeological Services Inc.	rsciarra@iasi.to
Peter Carruthers	Archaeological Services Inc.	pcarruthers@iasi.to
John Bayley (PM)	Stantec Consulting	john.bayley@stantec.com

Distribution:

Kathy Cater	Region of Peel	kathy.cater@peelregion.ca
Lori-Ann Thomsen	Region of Peel	lori-ann.thomsen@peelregion.ca
All Attendees		

The meeting commenced at 9:10 a.m.

Item:

Action:

Purpose: To review and discuss the Cultural Heritage Impact Assessment and the intended approach to the Stage 2 Archaeological Investigations arising in response to the Stage 1 assessment and property impact expectations.

1.0 INTRODUCTION/PROJECT BACKGROUND

- 1.1. Introductions were made and contact information provided.
- 1.2. Solmaz Zia introduced the project for the participants new to the details of the project and provided an overview of the intent of the

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meeting. Highlights of the introduction included the following:

- Project is a Schedule "C" Class EA. Study is presently in Phase 3 of the Class EA process preparing for the second PIC.
- Project Limits: Mayfield Road, Airport Road to Coleraine Drive.
- The project traffic study has recommended ultimate widening to six lanes throughout most of the project, except widening to four lanes from a point approximately 800 metres west of Coleraine Drive to Coleraine Drive.
- The project includes a portion of the south leg of The Gore Road to approximately 470 m south of Mayfield Road. In this area are the St. Patrick's Church and Cemetery on the southeast corner and a heritage property near the southwest corner located at 11962 The Gore Road.
- The study is recommending protection of a 50 m Road allowance for the Mayfield Road corridor in agreement with Region's Official Plan to 2031 and protection of a 45m road allowance for The Gore Road corridor also in agreement with the Region's Official Plan.
- Solmaz advised that the Region is taking a slightly different approach to the EA process and various related activities for this project at Mayfield Road since the MOE has been providing an increased involvement on recent Class EA studies. This has required the project team to look into certain matters in greater detail than had been done on past projects.

2.0 HERITAGE IMPACT ASSESSMENT OVERVIEW & DISCUSSION

- Peter provided an overview of roles and the licensing requirements and obligations of archaeologists and heritage planners under the current requirements of the Planning Act and the Environmental Assessment Act. Archaeologists typically follow the guidelines and requirements established by the Ministry of Tourism and Culture.
- A study completed in 2006 by R.J. Burnside for the Region of Peel recommended an initial four lane road section on The Gore Road with intersection turning provisions as required at Mayfield Road. To date, options have assumed an initial 4 lane roadway with turning provisions as an interim requirement with the understanding that a future 6 lane corridor would be protected for.
- Past study has indicated there is potential for encroachment of gravesites into the existing roadway corridor at the St. Patrick's Cemetery. The source of this information was a ground penetrating radar (GPR) study that was completed as part of

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- the 2006 The Gore Road Class EA study. It is believed the GPR results were inconclusive and would not be recognized as a basis for making a conclusion but serves as an indicator that further investigation should be undertaken to confirm the presence or absence of potential gravesite encroachments.
- The subject of gravesite encroachment is further complicated due to the location of an existing dwelling at 11962 The Gore Road. Following a Heritage assessment by Archaeological Services Inc. (ASI), the property has been confirmed to be of heritage significance in the context of the community and its' location. The existing roadway is two lanes wide and passes between the Cemetery and 11962 The Gore Road.
- Possible cross sections for The Gore Road at the frontage to 11962 have been reviewed and it has been identified that it would not be possible to protect both the cemetery and the dwelling 11962 for the future 6 lane corridor or for interim 4 lane cross section options if gravesite encroachment is confirmed.
- The previous study of The Gore Road recommended a four lane cross section on The Gore Road and required a retaining wall and avoidance of the property at 11962 The Gore Road.
- Ryan advised that the Region requires an ultimate 6 lane right of way at the Gore Road and as such the dwelling at 11962 could not be retained in its current location.
- Stantec will prepare and communicate cross sections prepared for the area adjacent to 11962 The Gore Road. A couple of additional cross sections will also be prepared to illustrate the discussions at this meeting including an ultimate 6 lane cross section for The Gore Road.
- Ryan provided an overview of past discussion with the City's former Heritage Coordinator Jim Leonard, noting the discussion had dealt with generalities as opposed to the specifics known at present. It was discussed that the interior of the dwelling had no interior heritage significance and that the exterior was typical of the period architecture.
- Ryan advised that the Region is interested to know if documentation with a photographic record would be an acceptable means of protecting the heritage value of the property. It was discussed that documentation and commemoration is one of the possible methods of protecting heritage but that it is not typically the first choice for heritage preservation recommendations.
- It was noted that discussions with City staff during the past EA for The Gore Road had also included consideration of the potential for relocation and the need to protect the St. Patrick's

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Church and Cemetery. It is believed that relocation of the existing dwelling on the existing property would not be feasible due to the existing topography and proximity to land under the jurisdiction of the TRCA. It is suggested that the potential for filling on the subject land be explored and ruled out before proceeding too much further with assumptions regarding relocation potential.

Region/Stantec

- It was noted that a Ground Penetrating Radar (GPR) study had been undertaken during the previous Class EA for The Gore Road and it was assumed that grave shaft encroachments could exist within the existing Right-of-way. This was not deemed conclusive and as such must be determined before a proper conclusion can be drawn.
- Penny advised that GPR is not recognized as an accepted means of determining subsurface conditions with certainty and would only suggest that excavation or other means is required to determine grave shaft presences with certainty. Since the presence of grave shafts would have a direct impact on the recommended road cross section it was discussed that additional investigation must be undertaken to rule that possibility out.
- John confirmed that a couple of options had been reviewed already by the project team and they along with additional representations discussed in this meeting would be provided for review and comment. The options prepared to date are:
 - 4 lane cross section shown in The Gore Road EA matching existing retaining wall/curb at the Cemetery – avoids #11962;
 - Modified cross section starting with curb matching at the east side - encroaches on the existing dwelling on the west side (#11962) where sidewalk extends beyond the existing building façade.
- Discussion focused on what sorts of options would be available to the project team considering the heritage value of the subject property at 11962 The Gore Road. It was suggested that the following is a short list of options:
 - Protect and preserve the dwelling in its current location;
 - Relocate the dwelling on the existing property;
 - Relocate the dwelling to a suitable local property with heritage context;
 - Relocate the dwelling to another suitable location;
 - Document the existing heritage significance with photographic inventory and Commemorate the dwelling

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before demolition;	
<ul style="list-style-type: none">On inquiry, Rebecca advised that ASI used the City of Brampton's "<i>Criteria for Determining Cultural Heritage Value or Interest</i>" in their assessment of the dwelling at 11962 The Gore Road. Discussion followed regarding the basis of the assessment and it was noted that although this criteria does not have a legislated basis it serves as the City's current evaluation criteria for assessment of heritage resources. Rebecca also commented that the assessment meets the requirements of the Ontario Heritage Act, O. Reg. 9/06	
<ul style="list-style-type: none">It was discussed and concluded that the Region should undertake a Stage 2 Archaeological investigation to determine if grave shafts, in fact, encroach on the existing right of way and if not where they are found in relation to the existing property line?	Region
<ul style="list-style-type: none">Potential Impacts on the Cemetery and through possible exposure by excavations within the existing road right-of-way were discussed and it was noted that the Registrar of Cemeteries would have to be contacted to advise of any intended excavations that might expose existing grave shafts.	ASI
<ul style="list-style-type: none">The method of undertaking exposure of Grave Shafts was discussed and it was suggested by Peter that excavation by an experienced Grade-all operator is the best approach. The excavations would be undertaken carefully and would acknowledge any soil irregularities than might suggest existing or former grave shafts.	
<ul style="list-style-type: none">Peter advised that ASI will provide a quotation to undertake the required archeological investigation to confirm grave shaft location(s) and would provide a summary of the steps leading to identification and suggested mitigation of impacts on grave shafts	ASI/Stantec
<ul style="list-style-type: none">Ryan advised that The Region intends to protect for a 6 lane cross section with a total corridor width of 45 m in the subject area of The Gore Road and that this intent is noted in the Region's Official Plan.	
<ul style="list-style-type: none">An inquiry was made regarding Brampton Transit's requirements on south leg of The Gore Road at Mayfield Road. It was agreed that it would be advisable to confirm Transit's needs on The Gore Road at this location since they could have an impact on the overall road width at this location. Confirmed Transit needs on Mayfield have already been illustrated on the plans for Mayfield Road.	Region/ Brampton

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Item:	Action:
<ul style="list-style-type: none">The Region requested that Stantec prepare cross sections and provide a plan view of the subject area on The Gore Road for distribution to Penny for review.	Stantec
3.0 STAGE 1 ARCHAEOLOGICAL INVESTIGATIONS - RECOMMENDATIONS	
<ul style="list-style-type: none">Following completion of a Stage 1 Archaeological Investigation, the Region is currently preparing for the coordination of Stage 2 archaeological investigations at various properties where property acquisition is anticipated within the study area to determine the presence or absence of archaeological artifacts.Contact is being made by the Region to inform property owners of the anticipated property encroachments, and potential property purchases required to accommodate the future road improvements in the Mayfield Road and The Gore Road corridors.	Region
<ul style="list-style-type: none">Gayle inquired about the specifics of Stage 1 and Stage 2 investigations? In response, it was clarified that Stage 1 assessment is typically a desktop exercise including literature search, review and reporting and a Stage 2 investigation involves fieldwork which includes generally non-destructive excavation or ploughing to expose artifacts that would typically be near the surface. Each of these is a typical approach to initial archaeological assessment.The initial contacts must be made before any property impacts are presented to the public. The process requires that Permissions to Enter are received from the property owners before the investigations are undertaken. If permissions are not granted then those properties not providing PTE will be omitted from the Stage 2 investigations.	Region
4.0 APPROACH TO STAGE 2 ARCHAEOLOGICAL INVESTIGATION	
<ul style="list-style-type: none">Owen indicated that the Region has some questions relating to the nature of investigations at some properties and would provide that information to ASI for review and comment.	Region/ASI
<ul style="list-style-type: none">Owen will provide the Region's observations regarding the proposed Stage 2 investigations ASI (Rebecca) and ASI will review and respond to them following their review.	Region/ASI
<ul style="list-style-type: none">Owen requested a confirmation of the necessary scope for ploughing and advised that they would send the Region's most current ortho-photo to ASI and Stantec to assist in confirming the preferred methodology used at each property.	Region
<ul style="list-style-type: none">ASI had previously provided a topographic photo map of the	

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Item:

Action:

proposed locations which considered the properties where a Stage 2 investigation is recommended and which confirmed the anticipated type of survey (ploughing versus test pitting).

- Owen inquired who would typically coordinate the field ploughing required prior to the investigations. ASI confirmed that they do not undertake ploughing operations but could provide contact information for a contractor who could do it or could coordinate for the Region or that the Region could coordinate the ploughing itself, if desired. It had been assumed by ASI/Stantec that the Region would coordinate the ploughing to this point in time. Region (Owen) will confirm their preference. Owen also inquired about the intrusiveness of contract ploughing and its extent, how it is done and by whom?
- In response to the Region's inquiry ASI confirmed that two distinct types of investigation will be done which are dependent on the nature of the land use and the prevailing conditions. Simply put, the methods are visual survey following ploughing and weathering or specific excavated test pitting by creating and observing small hand excavated holes to a depth of 10 to 30 cm in a square grid pattern of approximately 5.0 m x 5.0 m proportions. The intent is to investigate all properties where the Archaeological Stage 1 assessment has identified a need and to do so entirely within the area required for the road widening and future grading operations for road construction.

Region

5.0 ARRANGEMENTS/PROVISIONS FOR PERMISSIONS TO ENTER

- The Region is presently preparing for meetings to obtain permissions to enter for the properties that require Stage 2 Archaeological investigations.
- Owen stressed the importance of providing clear communications to property owners in order to obtain the PTE's and be certain there is clear understanding of the what will be done and when. This is to avoid problems that might become concerns later as a result of incorrect or incomplete communication of information.
- John inquired about any specific required erosion and sediment controls and any buffer requirements to existing watercourses that might be considered when ploughing for Stage 2 investigations. In response it was suggested that the grading of the areas to be investigated would not create unnecessary erosion potential and as such is not a current concern.
- Owen advised that the Region will prepare a list of properties for ASI to confirm those that have not provided permissions to enter.

Region

Region

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Item:

Action:

6.0 GO FORWARD SCHEDULE

- The general timeline was discussed leading up to the proposed PIC #2. The actions required are as follows:
 - ASI/Stantec confirm approach and budget to Region
 - Region/Project Team review with Damian
 - Region /Project Team review with Councilors
 - Region communicate with Property Owners to obtain PTE's

- Gayle inquired about overall timelines noting the intent to access land in Mid-May; Gayle also asked how long it would take for the field work once started? ASI (Peter) will review the required schedules and provide a response to Gayle through Stantec.

- Penny commented on the process that would be required to address the heritage significance of 11962 The Gore Road. In general, the Municipal Heritage Committee (MHC) will provide feedback to City Staff on matters of Heritage interest. City staff will prepare a report to the committee based on their involvement in discussion/communications with the project team and a delegation can appear at MHC meeting if deemed necessary to present the matters being considered/addressed in the study.

- Ryan suggested that a field review of the cross section impacts and the archaeological investigations may prove to be beneficial for everyone's understanding of the impacts on the property at 11962 The Gore Road. A future on-site meeting will be confirmed by Stantec and the Region

ASI/Stantec

Stantec/Region

7.0 OTHER BUSINESS

- Penny provided an overview of the definitions of "Property of Interest", "Listed properties" and "Designated properties", as well as the relationship to demolition control by-laws and the mechanisms related to the typical notifications associated with heritage properties.

- The Ministry of Tourism and Culture's website was referenced as a valuable source for information related to Archaeology and Heritage resources. The website is provided here for ease of reference:
 - http://www.mtc.gov.on.ca/en/culture/culture_sector.shtml

- Penny requested that she be provided with a copy of the 2006 Class EA Report for The Gore Road and cross sections prepared for the ongoing EA for Mayfield Road which includes

Region/Stantec

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the subject section of The Gore Road.	
<ul style="list-style-type: none">The Region requested ASI/Stantec to provide an updated fee estimate to undertake the work of Archaeological investigation for the determination of grave shaft presence at the St. Patrick's Church frontage on The Gore Road.	ASI/Stantec
<ul style="list-style-type: none">Stantec was asked by the Region to obtain information from the TRCA in relation to the flood lines and potential for earth filling on the property at 11962 The Gore Road.	Stantec/TRCA
<ul style="list-style-type: none">Stantec was asked by the Region to provide cross sections to all present at the meeting to aid in their understanding of the impacts of the cross section and related cross section features.	Stantec

8.0 NEXT MEETING

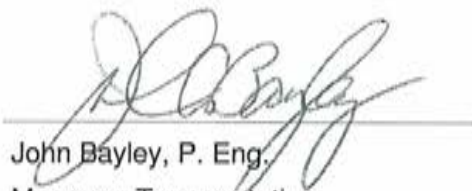
- Future meetings will be scheduled as necessary. At present there are no specific future meetings planned prior to the PIC. Additional meetings, if required, will be established on an as needed basis.
- A field visit is pending confirmation.

Region/Stantec

The meeting adjourned at 12:10 p.m.

The foregoing is considered to be a true and representative record of items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING LTD.



John Bayley, P. Eng.
Manager, Transportation
john.bayley@stantec.com

Meeting Notes



Stantec

Mayfield Road Class Environmental Assessment Study Airport Road to Coleraine Drive

File: 160210480/45

Date: Friday, March 4, 2011

Place/Time: 1st Floor Large Boardroom, Region of Peel, 9445 Airport Road, Brampton

Next: TBD

Meeting:

Attendees:	Kathy Cater	Region of Peel	kathy.cater@peelregion.ca
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	Bill White	Stantec Consulting	bill.white@stantec.com

Distribution: All Attendees

Item:

Action:

PURPOSE: To review the alternative and preferred design concepts for Mayfield Road and to review the draft PIC display boards.

Stantec

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Action:

1.0 INTRODUCTION/PROJECT BACKGROUND

1.1. Solmaz Zia introduced the project for participants new to the project. Highlights include:

- Project is a Schedule "C" Class EA.
- Project Limits: Mayfield Road, Airport Road to Coleraine Drive. The limit of the project also extends along The Gore Road to 470m south of Mayfield Road
- Traffic Study recommended widening to six lanes throughout most of the project, except widening to four lanes from a point 800 metres west of Coleraine Drive to Coleraine Drive by the Horizon Year 2031.
- Designated right-of-way is 50 m.
- Speed limits: 80 and 60 km/hr along the corridor
- A number of alternatives were assessed for the design including consideration of :
 - Alignments,
 - Median Treatment,
 - Profile Adjustment and
 - Drainage Design

1.2. Design Criteria:

- 6.0m Raised median, Openings at existing accesses
- Thru lanes: 3.75m (except through Wildfield)
- Turning lanes: 3.50m (except through Wildfield)
- Sidewalk on north side: 1.50 m
- Multi-use-trail on south side: 3.0 m

1.3. Options examined to date include:

- Concept 1 - Widening equally about centerline
- Concept 2 - Widening to the North
- Concept 3 - Widening to the South
- Concept 4 - Widening about centerline to minimize property impacts
- Concept 4 (Mod) - Modified Widening with Wildfield Revisions (**Presented in detail at this meeting**)

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2.0 GENERAL PROJECT SCHEDULE

- Municipal/Agency Review Meeting – March 4, 2011
- Initial Property Meetings – TBC by Region of Peel
- Public Input Meeting – Mid to Late April 2011
- Draft ESR – Mid - Late May 2011
- ESR Filed – June 2011

3.0 REVIEW OF DESIGN CONCEPTS

- 3.1. John Bayley presented Concept 4 (Mod) Modified Widening with Wildfield Revisions to the group in attendance. Review of the other alternatives was limited to a review of the evaluation matrix discussed later in the meeting.
- 3.2. Each of the respective concepts was made available to the invited parties via a temporary FTP site set up prior to the meeting (FTP established on January 25, 2011). The evaluation of alternative design concepts has been completed and comments on the evaluation and the preferred alternative have been requested from the area municipalities, TRCA, MNR and utility agencies. The alternatives are:
- Concept 1 – Widening equally on both sides of Mayfield.
 - Concept 2 – Widening all to the north of the existing corridor.
 - Concept 3 – Widening all to the south of the existing corridor.
 - Concept 4 – Widening equally on both sides of Mayfield but with features incorporated for Alternatives 2 and 3, where required to address constraints in the design.
 - Concept 4 (Mod) - Modified Widening with Wildfield Revisions (**Presented in detail at this meeting**)
- 3.3. Alternative 4 (Mod) was presented as the preferred design concept, generally as a result of its' having the least property requirements and total property buyouts. This alternative also includes a reduced design speed criteria and posting in the Hamlet of Wildfield and avoids impacts on the St. Patrick's Cemetery on Mayfield Road at The Gore Road and includes modifications to avoid impacts to the cemetery on the South leg of The Gore Road at Mayfield. The reduced design speed permits the reduction of lane widths for left and right turns and through traffic lane widths.

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3.4. Features common to all alternatives include:

- Widening to the north at Mayfield Road – Maissonneuve Drive, east of Airport Road – existing property line at Maissonneuve Development held and all property requirements are on the north side. The offset to the north property line is 25 m and to the south property line is 25 m.
- Mayfield Road is widened to the north in Wildfield at The Gore Road, to avoid St. Patrick's Cemetery.
- All alternatives show the ultimate 6 lane section with the exception of east of the future intersection of the Major MacKenzie Drive extension where only four lanes are required.
- All alternatives are based on a 6.0 m continuous centre left turn lane which will later be converted to a 6.0 m wide raised median (E/P top E/P) (future conversion to centre median to accommodate left turn lanes plus islands), a 3.0 m pathway on south side, and a profile to match existing wherever possible but has been modified in some areas to address sight distance requirements, and other design criteria issues. There are short sections noted on the plans where an interim requirement for hidden driveway signs may be required. In all areas, the existing sight distances are either maintained or improved.
- Drainage requirements at various watercourses have an impact on the road profile due to the overtopping potential for major rainfall events.
- Storm Water Management Ponds: A combination of SWM ponds and oil and grit separators are recommended to control quality runoff to existing creeks/watercourses.
- Property Requirements: The property impacts are identified and landowners of buy-out properties will be contacted prior to the PIC#2.
- Hydro Requirement: Hydro One Brampton requires a 5 m clear zone behind the poles. 2.0 m of ROW behind the poles and 3.0 m aerial easement. This easement is usually obtained in the City's requirement for a 4.5 m buffer strip in front of any future development. Hydro One Network was contacted to be notified of the required Hydro relocation. Stantec is to follow up with Hydro One Network. (A copy of these minutes will be provided to

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Hydro One Network)

- Transit Infrastructure: Identified transit facilities have been incorporated into the preferred design to protect property. Transit Infrastructure is being considered at existing and new intersections.

3.5. Changes to the Plans:

- Several clarifying changes were made to the plans for presentation at the meeting including additional clarification notes regarding the culvert designations, TRCA culvert number designations, extent of restoration at watercourses, increases in text sizes for clarity and references to previous Class EA studies which have been incorporated into the preliminary design of Mayfield Road.

3.6. Construction Staging:

- The Region advised that Construction will commence in 2017 with property acquisition and utility relocations occurring in advance.
- Construction will be phased in and the work will be staged commencing with an interim four lane design and ultimately resulting in a six lane design from Airport Road to the proposed Major Mackenzie Drive extension (location to be confirmed through separate study) and then retaining four lanes from there to Coleraine Drive.
- The present intent is to establish the ultimate right-of-way requirements so that ultimate utility relocations and other property requirements can be established now and addressed efficiently in conjunction with the proposed improvements.
- The Region of Peel has confirmed an intent to proceed first with widening to four lanes commencing at the south side of the right-of-way (Brampton side) and follow that in the future with completion to six lanes, where applicable, on the north side (Caledon side).
- It is anticipated that the initial work will commence at the Airport Road end and proceed in an easterly direction toward Goreway Drive.
- A typical cross section was presented at the meeting which illustrates the proposed interim and ultimate cross sections. (See attached file). This information will also be added to the PIC Displays.

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Item:	Action:
4.0 REVIEW OF DRAWINGS AND COMMENTS FROM AGENCIES, PEEL, BRAMPTON and CALEDON	
4.1. Geometric Design Features:	
<ul style="list-style-type: none">• Kathy Cater requested that location specific cross sections be shown on the plans as opposed to the "typical" cross sections shown. Kathy also indicated that she would like to see the location of hydro on the sections (2 metres from ROW line.)	Stantec
<ul style="list-style-type: none">• Sean Nix inquired about the origin of the illustrated lane taper lengths, parallel lengths and storage lengths and note that those lengths might have to be revised based on updated future traffic needs. Stantec confirmed that the lengths and configurations shown are a combination of the current traffic study completed by iTrans and previous adjacent Class EA study recommendations where applicable. The Region will provide related feedback where necessary.	Region
<ul style="list-style-type: none">• Kathy Cater noted that the Traffic Horizon date in the Region's Official Plan is actually 2031 not 2032 which has been included in the iTRANS study for Mayfield Road. Stantec will revise related ESR references as appropriate.	
<ul style="list-style-type: none">• The road profile design was reviewed in relation to the existing conditions and the sight distance requirements. At crossing No. 3 (Salt Creek - Shaw's Bridge) the profile must be raised to improve the sight distance to the required standard. The raising of the road profile at this location will result in an increase in the upstream water levels as a result of existing roadway overtopping. As a result, Stantec has been asked to consider replacement or enhancement alternatives for the existing bridge. The review may include consideration of additional culverts or Multi-Cell structures, replacing bridge, etc.	Stantec
<ul style="list-style-type: none">• Existing Tee intersections, show opposing (4th) leg with dashed lines to represent where development accesses are desired in the future.	
<ul style="list-style-type: none">• Proposed future signalized intersections have a notation which confirms the intersections that will be signalized.	
<ul style="list-style-type: none">• Future development intersections on Mayfield Road show medians, stop bars, cross-walks, and turn arrows that are dashed lines denoting them as "future".	

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4.2. Storm Water Management & Drainage Features:

- An inquiry was made by the Town of Caledon regarding the storm water modeling for Salt Creek and Humber River. In response, the Region of Peel asked that all comments of a technical nature be provided in a formal response from the both the Town and the City. All written comments will be incorporated into the study and form part of the permanent record for the study. Brampton/
Caledon
- In response to the Region's comments, a general note will be added to the plans at various watercourses to highlight that additional property is required for installation of drainage work that may be required through a future project approval process. The generic notes would highlight the possible property requirements to accommodate quality enhancement measures as a supplement to Oil-Grit Separators (OGS) or other means proposed for quality enhancement. Stantec
- The project team was asked whether oil/grit separator locations could be adjusted to accommodate enhancement measures. In response, it was suggested that adjustment could be made to provide enhanced roadside ditches as outlets but the potential for some untreated drainage exists if the OGS units are moved upstream of the outlet. This will have to be reviewed with the TRCA. Stantec/ Region
- A meeting will be coordinated to discuss TRCA concerns directly prior to completion of the study. Stantec/ Region/
TRCA
- An option being considered is the provision of enhanced parallel outlets downstream of OGS units adjacent to the respective watercourses, providing additional water quality enhancement before the road drainage is outlet the creeks.
- All culverts with a span at 3.0 m or less will be considered for replacement to make permitting, culvert extension joints, and channel modifications easier. This consideration will be noted in the ESR, included in current costs estimates and addressed further at the detail design stage. Stantec
- In consideration of the potential restoration and quality enhancement requirements, the Region of Peel asked Stantec to show the worst case scenario for property required along water courses. Stantec
- The Town of Caledon (David Hurst) questioned the location of the proposed SWM pond at Maissoneuve Drive

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capturing drainage from the intersection area at Airport Rd and also noted that the adjacent Industrial lands require SWM which could be incorporated into an overall SWM facility in lieu of having two facilities on the same general parcel of land. There was also concern expressed in relation to the amount of property required for the facilities in consideration of the value of the land and the limited quantity of industrial land available. Caledon will investigate cost sharing and the potential for a combined facility	Caledon
<ul style="list-style-type: none">• The Town of Caledon (Kant Chawla) questioned the location of the proposed SWM pond at the future Major McKenzie Drive extension west of Coleraine Drive. The City of Brampton (Compton Bobb) also requested clarification of the need for the SWM Pond at the illustrated location.	Region
<ul style="list-style-type: none">• Bob Nieuwenhuysen suggested that the note shown on the SWM pond be revised to indicate that any road construction for a future Major McKenzie will have to accommodate the location of the required SWM facility. It is anticipated that Mayfield Road will be widened long before the Major McKenzie extension is constructed.	Stantec
<ul style="list-style-type: none">• Kathy Cater requested that a cloud be added near the SWM facility and the lane delineation be removed to highlight the SWM location and the possible location for a future Major Mackenzie Drive extension since the road configuration and exact location have not been determined in the studies to date.	Stantec
<ul style="list-style-type: none">• Brampton confirmed that their comments would be documented and forwarded to Solmaz for consideration in the study. Solmaz requested that all comments be provided within the next week or so, since the request for comments had been made about a month or so ago.	Brampton/ Caledon
<ul style="list-style-type: none">• In response to the inquiries regarding the SWM ponds and their locations it was noted that the MOE and MNR are now requiring greater detail regarding proposed SWM facilities during EA studies than what may have been required in the past.	
<ul style="list-style-type: none">• Crossings at culverts No. 3, 6 & 11 have been identified as being on watercourses that have Redside Dace (fish) habitat. Redside Dace are identified as endangered species and as such their habitat must be protected in accordance with the Endangered Species Act. The Natural Environment Report has been updated to recognize this observation and the requirement and	Stantec/ Peel/

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general details for mitigation measures has been noted. The suitability of this information will be reviewed further with TRCA and MNR staff.	TRCA/ MNR
<ul style="list-style-type: none">• Kathy Cater requested that notes be added to the study plans highlighting the requirement for enhancements at the respective culverts.	Stantec
4.3. Property Acquisition – Permission to Enter: <ul style="list-style-type: none">• Owen Chinnery noted that council will have to be notified before residents are approached regarding property purchases. It is anticipated that two to three weeks are required before notifications can be provided. This will have an impact on the schedule for the PIC. The impact is noted in the late April date anticipated in Item 2.0 above and Item 4.4 below.	Region
4.4. Public Information Centre: <ul style="list-style-type: none">• PIC #1 was held in 2009.• It was agreed in principal that PIC #2 would be held in the later part of April following introduction of the property owners to the acquisition process.• The Public Information Package was reviewed and all parties were asked to provide any comments they had made as a result of their independent review of the proposed information package. Extensive discussion occurred on how the evaluation boards should be presented to public.• John Bayley noted that the Class EA process requires that sufficient information be presented to the public to provide a good understanding of the process followed and the decisions made. The study recommendations will be subject to scrutiny and challenge and, as such, the process followed must be defensible and well documented. Stantec will review the information being presented and consider streamlining where possible.• Kathy Cater indicated that the goal of this EA is to receive concept approval for the ultimate 6 lane configuration and establish the approach to implementation of the future improvements to Mayfield Road.• The title of Concept 4 (Mod) will be revised to include "PREFERRED" in the title for clarity.• Concepts 1, 2 & 3 will not be presented in a large format roll plan but will taken to the PIC for reference if needed.	Stantec Stantec

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Item:	Action:
<ul style="list-style-type: none">• The evaluation summary cost estimate will be revised to better enhance the cost comparison including revision to the presentation of property costs.	Stantec
<ul style="list-style-type: none">• An overall "ranking" approach will be applied to the evaluation boards using "relative" ranking as the means to highlight the preferred alternative. This will be accommodated by using full, partial and empty circles as the ranking indicator.	Stantec

4.5. Status of Technical Studies & Related Issues:

- John Bayley briefly summarized the status of various related reports completed for this EA study. The update was generally as follows:
 - **Traffic Study** – Completed in recognition of other related studies in the vicinity and an affecting Mayfield Road. Recommendation 6 lanes from Airport Road to Major MacKenzie Extension and four lanes from there to Coleraine. Turn lanes storage and tapers as recommended.
 - **Roundabouts** – screened out from further consideration based on inconsistency in comparison with improvements elsewhere on Mayfield Road, the complexity and cost in reverting from 4 lanes to 6 lanes in the future and in consideration of property impacts at various locations.
 - **Geometric Design** – geometric design criteria were established early in the study and modified criteria have been used since then to accommodate significant constraints identified in Wildfield. Design speed is reduced to address constraints in that area.
 - **Adjacent Development Planning Status** – Secondary planning documents have been used where provided. Only properties with official status will be noted. Other information is requested if available.
 - **SWM/Drainage Report** – Has been updated to address most recent TRCA comments. Revised document will be prepared and submitted for review and discussion with TRCA. Future meeting will be arranged.
 - **Natural Environment** – Comments on endangered species - Redside Dace have been addressed and incorporated into the Natural Environment report. Revised document will be prepared and submitted for review and discussion with TRCA and MNR. Future meeting will be arranged.

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- **Groundwater/Contaminated Sites** – Report was prepared and submitted. Existing petroleum station east of the Gore Road on the North side of Mayfield road is a noted concern. No specific concerns have been expressed to date by the reviewing agencies.
- **Geotechnical** – Report was prepared and submitted. No specific concerns have been expressed to date by the reviewing agencies.
- **Culverts/Bridges** – Report prepared and submitted. Observations and recommendations are noted in the study and on the plans.
- **Tree Inventory/Landscaping** – completed and considered in the evaluation of alternatives. No specific concerns have been expressed to date by the reviewing agencies.
- **Property Impacts** – Property impacts have been identified in detail and Region real estate staff are presently coordinating contacts with affected landowners.
- **Noise Study** – Noise study has been completed and was submitted to the Region at the meeting. Region to review and provide comments where appropriate.
- **Heritage Assessment** – 11962 The Gore Rd – A draft heritage report has been prepared. Ongoing review and discussion is required to resolve the status of the heritage property at 11962 The Gore Road. The Region has asked that a meeting be set up with the Heritage sub-consultant and heritage staff from the City to review the recommendations and a practical going forward approach to heritage concerns.
- **Stage 2 Archaeological Investigation** – A stage 1 archaeological study was completed and the recommended Stage 2 assessment is being coordinated. The Region is currently coordinating permissions to enter (PTE's) to permit the archaeological investigation (field work) to proceed. The assessment is in support of the land acquisition process and the PTE's are being coordinated with the landowners

Region

Region

Stantec/ Region

Region

5.0 Agency Contacts & Responses

- John Bayley summarized the contacts that have been established so far as part of the study and noted that a response from First Nations has not been received. In response to this item, Kathy Cater asked if the Brampton representatives have a current contact name for First

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Nations. Brampton will look into this and respond.	Brampton
<ul style="list-style-type: none">Responses to TRCA and MNR are pending as noted above. Stantec will submit revised reports in response to their most recent comments. A meeting with TRCA and MNR will be requested as well to review the study and recommendations.	Stantec/ Region
<ul style="list-style-type: none">Other third party utility agencies will also be followed to update them on the study recommendations and invite feedback on the preferred alternative.	Stantec
<ul style="list-style-type: none">Solmaz Zia reiterated the Region's desire to obtain formal responses from the area municipalities as soon as possible to include them in the study and present the information to the public. A time line of one to two weeks was suggested for feedback.	Brampton/ Caledon

6.0 Other Business

- In Wildfield, locations for potential Gateway features will be noted. A chapter in the ESR will also address landscaping opportunities and related features. Stantec
- Kathy Cater suggested presenting some samples of potential entrance features for Wildfield at the PIC. Stantec will review this with their landscape personnel and provide a response. Stantec

7.0 NEXT MEETING

- Future meetings will be scheduled as necessary. At present there are no specific future meetings planned prior to the PIC.

The meeting adjourned at 4:30 p.m.

The foregoing is considered to be a true and representative record of items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING LTD.


John Bayley, P. Eng.
Manager, Transportation
john.bayley@stantec.com

Meeting Notes



Stantec

Mayfield Road Class Environmental Assessment Study Airport Road to Coleraine Drive

File: 160210480/45

Date: Friday, October 22, 2010

Place/Time: Large Boardroom, Region of Peel, 9445 Airport Road, Brampton

Next Meeting: TBD

Attendees:	Kathy Cater	Region of Peel	kathy.cater@peelregion.ca
	Solmaz Zia	Region of Peel	solmaz.zia@peelregion.ca
	Bob Nieuwenhuysen	Region of Peel	bob.nieuwenhuysen@peelregion.ca
	Sean Ballaro	Region of Peel	sean.ballaro@peelregion.ca
	Damian Jamroz	Region of Peel	jamrozd@peelregion.ca
	Imre Tot	Region of Peel	imre.tot@peelregion.ca
	Lori-Ann Thomsen	Region of Peel	lori-ann.thomsen@peelregion.ca
	Gavin Bailey	Region of Peel	gavin.bailey@peelregion.ca
	Tina Detaramani	Region of Peel	Tina.detaramani@peelregion.ca
	Rani Kol	Region of Peel	rani.kol@peelregion.ca
	Ken Burke	Region of Peel	ken.burke@peelregion.ca
	John Bayley	Stantec Consulting	john.bayley@stantec.com
	Dave Hallman	Stantec Consulting	dave.hallman@stantec.com

Distribution: All Attendees

Item:

Action:

1.0 INTRODUCTION/PROJECT BACKGROUND

- Solmaz Zia introduced the project for staff members new to the project. Highlights include:
 - Project is a Schedule "C" Class EA.
 - Project Limits: Mayfield Road, Airport Road to Coleraine Drive.
 - Traffic Study recommended widening to six lanes throughout most of the project, except widening to four lanes from a point 800 metres west of Coleraine Drive to Coleraine Drive.
 - Options examined include:
 - Widening equally about centerline
 - Widening to the north
 - Widening to the south
 - Modified widening about centerline to minimize property impacts

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- Designated right-of-way is 50 m.

2.0 GENERAL PROJECT SCHEDULE

- The overall schedule intends to have a Public Input Centre in December 2010, and the ESR filed in 2011.

3.0 REVIEW OF DESIGN CONCEPTS

- Dave Hallman reviewed the evaluation of alternative design concepts, noting that four concepts have been developed and scrutinized, leading to the selection of a recommended preferred design concept. The four alternatives are:
 - Concept 1 – Widening equally on both sides of Mayfield.
 - Concept 2 – Widening all to the north of the existing corridor.
 - Concept 3 – Widening all to the south of the existing corridor.
 - Concept 4 – Widening equally on both sides of Mayfield but with features incorporated for Alternatives 2 and 3, where required to address constraints in the design.
- Alternative 4 is the recommended preferred design concept, mainly due to having the least property requirements and total property buyouts.
- Features common to all alternatives include widening to the north at:
 - Mayfield Road – Maissonneuve Drive, east of Airport road – existing property line at Maissonneuve Development held and all property requirements are on the north side.
 - Mayfield Road is widened to the north in Wildfield at the Gore Road, to avoid St. Patrick's Cemetery.
 - The Gore Road – All alternatives show the ultimate 6 lane section with the exception of east of the future Major MacKenzie extension intersection, where only four lanes are required.
 - All alternatives are based on a 6 metre continuous left turn lane (future conversion to centre median to accommodate left turn lanes plus islands), a 3.0m pathway on south side, and a profile to match existing wherever possible but varies to address sight lines, and other design criteria issues.
- Construction may be staged in the future but the intent is to establish the ultimate right-of-way requirements so that ultimate utility relocations and other property requirements can be established now.

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4.0 REVIEW OF DRAWINGS AND COMMENTS FROM REGION OF PEEL STAFF

- Reference should be made to the various comments in the attached emails received from Bob Niewenhuysen (Oct 13, 2010) and from the Traffic Division (Oct 21, 2010).
- The following addresses the comments in the attached email messages, as well as other comments received at the meeting:

4.1 Storm Sewer

- Storm sewer has been shown in the centre of the road as a “placeholder”. Stantec will consider moving it to the north or south off the existing roadway to allow for the storm sewer to be constructed first. Since the general drainage in the area flows to the south, consideration will be given to placing the storm sewer on the south side.

Stantec

4.2 Culverts

- As per B. Niewenhuysen’s comments, all culverts with a span at 3.0 m or less will be considered for replacement to make permitting, culvert extension joints, and channel modifications easier. This consideration will be noted in the ESR, included in current costs estimates and addressed further at the detail design stage.

Stantec

- Culvert outlet and end treatment at Maissonneuve Boulevard should be reviewed to permit future opposing street construction noted in secondary plan.

Stantec

4.3 Airport Road Intersection

- B. Niewenhuysen questioned the curve through the Airport Road intersection. It was noted that the design is per the approved Giffels Class EA.

- Stantec to check the Giffels EA. It is noted that the curve through the intersection is a relatively large radius of 1000m

Stantec

4.4 General Intersection Comments

- At all existing Tee intersections, show opposing (4th) leg with dashed lines to represent where development accesses are desired in the future.

Stantec

- At all proposed future signalized intersections, a notation should be made indicating intersection will be signalized.

Stantec

- At future development intersections, medians and stop bars, cross-walks, turn arrows on Mayfield Road should be shown

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as dashed lines denoting as “future”.

- All turn lane storage and parallel lengths should be a minimum of 30m Stantec
- O'Reilly Lane is a private entrance (confirmed by Lori-Ann Thomsen after meeting). Therefore no separate turn lanes should be shown at that location. Stantec
- At Marysfield Drive, proper turn lanes should be shown as opposed to existing dual left turn lanes. Stantec
- At Sta. 13+635, the curve on Mayfield Road ends in the middle of the proposed future development intersection. Stantec to review if intersection can be moved or if curve can be shortened and advise Damian Jamroz and Rani Kol, with a copy to Solmaz Zia. Stantec
- At Mayfield and Clarkway, the islands are greater than 50m apart. Stantec to review and revise the pedestrian crossing skews to lessen the gap between islands. Stantec
- At Coleraine Drive, the plans have been shown to match the recently constructed 4 lane intersection. Stantec to revise intersection to have longer distance between intersection and start of taper on eastbound leg. In addition, the merging lanes on the east leg (eastbound traffic) will be revised to show the right lane merging with the left lane, i.e. (inside lane) will be through lane, with curb lane tapering. Stantec
- Mayfield @ Goreway – NBLT width shown is per approved Class EA for Goreway Drive. Stantec to include NB and SB turn lane storage, if available, from Goreway Drive ESR. Stantec
- Mayfield at The Gore Road – Stantec to check storage lane requirements with traffic study. Stantec
- Mayfield at Clarkway – Stantec to include NB and SB turn lane storage lengths. Stantec
- At all future development accesses, there should be a note reading: Stantec
 - “Location of median and other intersection design details are to be finalized as part of the Secondary Plan Process”;
 - Storage, parallel lane and taper for the left turn and right turn lanes are to be determined via the Traffic Impact Study for the Secondary Plan.

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- In Wildfield, locations for potential Gateway features will be noted. A chapter in the ESR will address landscaping. Stantec
 - At Marysfield Road, the access to 7674 Mayfield Road should be re-aligned with the intersection. Stantec
 - Damian Jamroz to provide details of future new access at GC Jane property, at approximately Sta. 15+280. Peel
 - Stantec requested copies of current secondary plan layouts within the study area to update the plans and identify current planned connections with official "status" and illustrate them on the EA study plans. Peel
- 4.5 Accesses
- It was noted that all existing accesses must be maintained at intersections. In general, islands should be cut back where possible to permit continued property access. Access alternatives will be considered as well. Stantec
- 4.6 SWM Ponds
- It was noted by Stantec that where SWM Ponds were not practical or the drainage area was insufficient, that oil/grit separators are being proposed. There are a total of 5 SWM Ponds that provide both quality and quantity control for road run-off.
 - The SWM Ponds locations and details as shown on the drawings have been submitted to the TRCA.
 - Stantec to review location of proposed SWM Pond on north side of Mayfield Road near Maissoneuve Boulevard. Its current location could interfere with a future access road opposite Maissoneuve Boulevard. Stantec
- 4.7 Property Requirements
- Stantec to review the cross-sections on the south side of Mayfield Road, east of The Gore Road at the cemetery, to ensure there are no excavation or grading requirements at the cemetery. Stantec
 - At Sta. 14+050, Stantec will review property requirements. Stantec
 - Property plans to be revised to take into account revisions noted at this meeting, including Hydro setbacks. Stantec
 - Property requirement at southwest corner of Clarkway to be reviewed. Stantec

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- The Region has initiated their process for presentation of property impacts to affected property owners. The Region wishes to meet with all affected property owners in advance of the scheduled PIC (December 2, 2010). If this cannot be accomplished, the PIC may be delayed until all property acquisition plans have been presented. Peel

4.8 Hydro Requirements

- Kathy Cater indicated that Hydro One Brampton (HOB) has indicated that poles can be 2.0m from the new property line. Caledon Hydro requirements are 5.5m from the new property line. If an overhead easement is required, HOB will advise Peel of requirements.

4.9 General Road Design

- In Wildfield at the Gore Road, the design speed has been dropped to 60 km/h to match the posted speed, in order to minimize lane widths, clear zones etc, such that property requirements can be minimized. It was agreed that the other section where the posted speed is 60 km/hr (Airport Road to Goreway Drive), should also have a design speed of 60 km/hr to keep the design consistent to minimize confusion for drivers. Stantec
- A copy of the official posted speed limits within the study area was provided to Stantec to check the design. Peel is not proposing to change the speed limits at this time. Stantec
- It was noted that the vertical profile has been designed with K Values that are appropriate for stopping sight distance. There was some concern expressed with potential issues with turning sight distances. Due to the high number of existing accesses (± 120), Stantec to check turning sight distances in areas with "low" K Values only. Stantec
- Median at 8014 Mayfield will be reviewed with respect to impacts on driveway Stantec
- Look at super-elevation (Reverse Crown) including "run-up/run-out" and show on Plan in area of curves. Stantec

5.0 STATUS OF TECHNICAL STUDIES Stantec

- Traffic Study – Stantec to send Solmaz up-to-date copy
- Roundabouts – Report submitted
- SWM/Drainage Report – Revised report submitted to Region & TRCA

Stantec

October 22, 2010
Mayfield Road Class EA Study – Project Team Meeting
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- Natural Environment – Revised report submitted to TRCA
- Groundwater/Contaminated Sites – Report submitted
- Geotechnical – Report submitted
- Culverts/Bridges – Report submitted
- Tree Inventory/Landscaping – Report submitted
- Property Impacts – Must be revised based on comments from today's meeting Stantec
- Noise Study – Expected soon – will submit Stantec
- Heritage – 11962 The Gore Road – Expected soon – will submit Stantec
- Stage 2 Archaeological Investigation – Will get schedule update – must get PTE from Peel Stantec Peel

6.0 AGENCY CONTACTS/SUBMISSIONS

- TRCA – Second submission submitted in October 2010
- First Nations – Only original contact as part of Notice of Study/First PIC
- Utilities – To be completed
- Municipalities – Peel to set up in next few weeks.

7.0 PUBLIC INPUT MEETING NO. 2

- It was originally planned for December 2, 2010, but due to property issues, election of new Councilors, it could possibly be scheduled for early January 2011. Peel

The meeting adjourned at 11:30 a.m.

The foregoing is considered to be a true and representative record of items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING LTD.

John Bayley, P. Eng.
Manager, Transportation
john.bayley@stantec.com

Dave Hallman, P. Eng.
Principal, Transportation
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Meeting Notes



Stantec

Mayfield Road Class Environmental Assessment Airport Road to Coleraine Drive

Project Status Meeting
1602-10480/45

Date/Time: Thursday, August 12, 2010
Place: Kitchener Boardroom 102A
Next Meeting: TBD
Attendees: Kathy Cater, Region of Peel
Solmaz Zia, Region of Peel
Dave Emery, Stantec Consulting Ltd.
Dave Hallman, Stantec Consulting Ltd.
Martin Goorts, Stantec Consulting Lt d.
Bill White, Stantec Consulting Ltd.
Garry Leveck, Stantec Consulting Ltd.
Distribution: All Attendees

Item: **Action:**

1.0 Purpose of Meeting

- To review various details of the project to date, confirm the recommended preferred design concept, ensure that all possible mitigative features have been incorporated into the study, confirm future actions required leading up to the PIC #2, to estimate timeline for ESR submission, and to review budget addendum fees.
- To provide Kathy and Solmaz with a tour of our Kitchener Office.

2.0 Alternative and Preferred Design Concepts

- Dave Hallman reviewed the history of the evaluation of alternative design concepts, noting that four concepts have been developed and scrutinized, leading to the selection of a recommended preferred design concept. The four alternatives included:
 1. Widening equally on both sides of Mayfield.
 2. Widening all to the north of the existing corridor.
 3. Widening all to the south of the existing corridor.

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Item:

Action:

4. Widening equally on both sides of Mayfield but with features incorporated for Alternatives 2 and 3, where required to address constraints in the design.
- Alternative 4 is the recommended preferred design concept.
 - Features common to the alternatives include widening to the north at:
 - Maisonneuve development, east of Airport Road
 - The Gore Road, to avoid St. Patrick's Cemetery.
 - All alternatives are based on a 50 metre right-of-way, design speeds equal to "Posted Speed +10 km/hr" (varies along corridor), 3.75 metre thru lanes, a 6 metre continuous left turn lane (future conversion to centre median to accommodate left turn lanes plus islands), a pathway on south side, and a profile to match existing wherever possible but varies to address sight lines, and other design criteria issues.

3.0 Wildfield

- Stantec is to resurrect a previous review of the cross section and alignment elements through Wildfield, to examine potential supplementary mitigative opportunities that currently impact properties on the north side. Features to be included in the review:
 - Reduction in design speed to equal posted speed of 60 km/hr.
 - Narrow lanes to 3.4 metre left turn, 3.5 metre right turn, 2.0 metre centre island, and 3.5 metre thru lanes (centre) and 3.75 metre thru curb lanes.
 - Review area should extend to limits of current 70 km/hr design speed limit (60 km/hr posted speed).
 - Possible monolithic sidewalk and pathway, where appropriate.
 - Ensure provisions are made for hydro!
 - Check with iTrans regarding requirements for right turn lanes.

Stantec

4.0 Storm Water Management (SWM)

- Melissa Ryan presented a summary of Stantec's experience in SWM development and design, and highlighted the approach and results for the Mayfield Road EA:

Item:	Action:
<ul style="list-style-type: none"> ○ Focused on criteria for quality and quantity controls of storm drainage. ○ All attempts were made to avoid existing naturally sensitive areas in the locating of storm water management pond sites. ○ A "wetland approach" was taken in the development of the SWM footprints, noting that this provides flexibility in the detailed design of wet ponds. ○ Where ponds are not necessary or practical, oil and grit separators are recommended to control quality runoff to existing creeks/watercourses. 	
<ul style="list-style-type: none"> • Peel Region requested that Stantec provide the following information related to SWM ponds and drainage patterns: <ul style="list-style-type: none"> ○ Concept of a SWM that would fit one of the 5 typical footprints. ○ Cost estimates for each of the individual 5 SWM pond sites. ○ Drainage map showing where roadway drains to storm ponds, as well as drainage arrows illustrating inflow to SWM ponds and drainage and flow. 	<p>Stantec</p> <p>Stantec</p> <p>Stantec</p>
<ul style="list-style-type: none"> • Stantec to show drainage arrows on roadway plans illustrating direction of ditch flows along edge of right-of-way (both sides). 	<p>Stantec</p>
<p>5.0 New Development Access</p>	
<ul style="list-style-type: none"> • For the 3 future development accesses, Stantec to show "3 lanes outbound and 1 lane inbound". 	
<p>6.0 Landscape Architecture – Wildfield</p>	
<ul style="list-style-type: none"> • Peel Region to provide information to Stantec on what is preferred in terms of possible Gateway features at Wildfield. 	<p>Region</p>
<ul style="list-style-type: none"> • Stantec will, in turn, present the concepts to the ESR in graphical form. 	<p>Stantec</p>
<ul style="list-style-type: none"> • All other landscape features within Wildfield may be provided "verbally" within the ESR text. 	
<ul style="list-style-type: none"> • A cost estimate for landscape treatments should be provided in the ESR. 	<p>Stantec</p>

Item:	Action:
7.0 Hydro	
<ul style="list-style-type: none">• Stantec to illustrate corridors for Hydro One Brampton (south side) and Hydro One Networks (north side) on the preferred alignment plans.	Stantec
<ul style="list-style-type: none">• Stantec to contact Hydro One Brampton and Hydro One Networks to discuss their requirements.	Stantec
8.0 Road Profiles/Culverts	
<ul style="list-style-type: none">• Stantec to complete a review of the proposed road profile concept, ensuring that adequate cover is provided to proposed culvert and bridge extensions/replacements.	Stantec
<ul style="list-style-type: none">• Also, all inverts should be checked, and proposed culverts / structures to be properly illustrated on the plan/profile drawings.	Stantec
<ul style="list-style-type: none">• Also, check freeboard at structures and potential impacts on flood plain.	Stantec
9.0 Property Acquisition	
<ul style="list-style-type: none">• Stantec to provide "Property Plan and Sections" at locations of full property acquisitions (\pm 30).	Stantec
<ul style="list-style-type: none">• Stantec to provide estimate for this work, which was estimated at \$10,000.00, (to be verified).	Stantec
10.0 Schedule	
<ul style="list-style-type: none">• Tentative Dated for PIC #2 and ESR (Draft):<ul style="list-style-type: none">◦ PIC #2: November 18 – 25, 2010◦ Draft ESR: March 15, 2011	
11.0 Status of Outstanding Issues:	
<ul style="list-style-type: none">• The following is a summary of outstanding items, not including the ESR sections and PIC#2 preparation and follow-up:<ul style="list-style-type: none">◦ Noise Analysis and Report – to be completed approximately August 31, 2010.◦ Assessment Impacts of Alternatives include Evaluation Matrix – to be updated based on issues discussed at this meeting.	Stantec

Item:

Action:

- Identify Preliminary Preferred Design – Concept 4 identified to be updated based on issues discussed at this meeting.
- Stage 2 Archaeological Investigation – will commence upon written approval of extra fee estimate submitted to Peel.
- Identify All Utilities and Obtain Approvals for Relocations – to hold meeting with Hydro One Brampton and Hydro One Networks and finalize all utility conflicts.
- Storm Water Management & Hydraulics – update report based on issues discussed at this meeting.
- Landscaping Features and Opportunities – to be updated and finalized based on issues discussed at this meeting.
- Property Plans – to be updated based on issues discussed at this meeting.
- Preliminary Plan for Preferred Alternative – to be updated based on issues discussed at this meeting, including revising to 4 lanes only between Coleraine Drive and new connection to Hwy 427 (at east end of project).
- Draft ESR: March 15, 2011

12.0 Budget and Fee Reveiw

(i) Roundabout Study Fee Balance

- iTrans extra for Traffic Study (\$5K) to be paid by Stantec from current Roundabout Study fee balance (\$9K ±).
- The remaining fee (\$4K ±) may be used by Stantec for other project tasks.

(ii) 4 lanes to 6 lanes Design Fee

- Solmaz is currently processing this extra and a purchase order will be issued to cover this and other extras, including "The Gore Road Design Fee", the "Heritage Report Study at the Gore Road" and the "Stage 2 Analytical Study".
- A total addendum fee, including a contingency allowance, will be processed by Peel Region in the amount of \$150 K.

Region

Item:

Action:

13.0 Office Tour

- The meeting was followed by an office tour.

The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING LTD.



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Dave Hallman, P.Eng.
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Meeting Notes



Stantec

Mayfield Road Class Environmental Assessment Study Airport Road to Coleraine Drive Roundabouts Feasibility Study - Project Team Meeting

File: 160210480/45

Date: Monday, March 1, 2010
Place/Time: Large Boardroom, Region of Peel, 9445 Airport Road, Brampton
Next Meeting: TBD

Attendees:	Solmaz Zia	Region of Peel	solmaz.zia@peelregion.ca
	Imre Tot	Region of Peel	imre.tot@peelregion.ca
	Damian Jamroz	Region of Peel	jamrozd@peelregion.ca
	Sean Ballaro	Region of Peel	sean.ballaro@peelregion.ca
	Gayle Gorman	Region of Peel	gayle.gorman@peelregion.ca
	Lori-Ann Thomsen	Region of Peel	lori-ann.thomsen@peelregion.ca
	Jose Montouto	Region of Peel	montoutoj@peelregion.ca
	Rob Evangelista	Hydro-One Brampton	revangelista@hydroonebrampton.com
	Dave Hallman	Stantec Consulting	dave.hallman@stantec.com

Distribution: All Attendees

Item:

Action:

1.0 PURPOSE OF MEETING/STATUS OF PROJECT

Solmaz Zia reviewed the status of the project as follows:

- Purpose of meeting is to review and receive comments on the Mayfield Road Class EA preliminary alternatives.
- The first PIC was held in June 2009. The alternative design concepts have been developed for the 2nd PIC to be held this spring.
- The traffic study found that 6 lanes are required from Airport Road to west of Coleraine Drive where the new connection to the Hwy 427 bypass will connect to Mayfield Road, and four lanes east of this point to Coleraine Drive.
- The finalized design criterion includes 3.75m through lanes, and 3.5m turn lanes.
- All technical reports are being completed, and will be circulated once the preliminary design finalized.
- A study is being finalized for roundabouts at various intersections. The preliminary findings indicate that individual 2 lane roundabouts are practical alternatives for most of the intersections, but not necessarily for a six lane wide Mayfield Road, nor as a series of roundabouts in an isolated section of the Mayfield Road corridor. Therefore signalized

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intersections are being recommended.

2.0 ALTERNATIVE DESIGN CONCEPTS

Four alternative design concepts have been developed. They include:

- Concept 1 – Widening Equally about existing centerline.
- Concept 2 – Widening to the North
- Concept 3 – Widening to the South
- Concept 4 – Modified "Equal Widening"
- D. Hallman reviewed Concept 4, which consists mainly of widening equal about the centerline, but modified to widen further north or south in some locations to minimize impacts on private property structures.
- It was noted that all four Design Concepts include six lanes, widening to the north through the settlement of The Gore Road to avoid the St. Patrick's Cemetery on the south east corner, a 3.0m multi-use trail on the south side, an area for a sidewalk on the north side, and extensive median breaks with a 6.0m wide two-way left turn lane to allow access to the numerous private driveways. A 6.0m wide two-way left turn lane is wider than required, but allows for installation of future intersections for future side streets as a result of development.
- The design of the Airport Road intersection should be reviewed to ensure it conforms to the Traffic Study and how it relates to the previous Airport Road project recommended design. Stantec
- Peel indicated the buildings at 7905 Mayfield Road, which are listed as having cultural heritage significance, has likely been demolished as part of a development application. Subsequent to the meeting, a review of air photo's and a field visit confirmed that the buildings at 7905 Mayfield are no larger in existence. Concept 4 must be revised, as Mayfield Road was shifted north in this location to avoid/minimize impacts to 7905 Mayfield Road. Mayfield Road in this area will show it being widened equally about centerline, which will reduce impacts on properties to the north for Design Concept 4. Stantec
- The new road connecting Mayfield Road from the new Highway 427 extension should be shown on the alternative design concepts. In addition, the concept drawings should be revised to show the recommended 4 lanes from the new intersection to Coleraine Drive, in accordance with the traffic study. Stantec

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- Hydro-One Brampton (HOB) indicated that their poles are all on the south side of Mayfield Road, and poles on the north side are owned by Hydro-One Networks (HON) in Caledon. In addition they typically require 5.0m from the property line to the centre of their poles.
- Peel's traffic group and other internal comments to be received in 10 business days (March 15, 2010). Peel
- An email confirming transit stop requirements from Brampton Transit was received prior to the meeting. Stantec to update drawings to show stops. Stantec
- Maintain all existing full move accesses to private properties (Minimum length of median is 30m).
- Identify the required daylight property requirements at new accesses and side roads.
- Incorporate the new by-pass (Major Mackenzie extension) into the design

3.0 EVALUATION MATRIX

- The evaluation matrix was briefly reviewed. It was noted that there is very little difference between the 4 design concepts from a traffic, natural environment and social environment perspective.
- The exceptions to the above statement include:
 - Widening to the north has slightly less natural environment impacts as there are slightly less wetlands on the north side. However none of the wetlands are provincially significant, and all concepts can mitigate any natural environment impacts.
 - Widening to the north impacts the parking lot of the business on the north east corner of Mayfield Road/Innis Lake Road. All other alternatives avoid direct impacts to this parking lot.
 - It was noted that the addresses are incorrect for the Built Heritage Features impacted by the improvement on the Gore Road 11873 should be 11962 The Gore Road, and 12031 The Gore Road should be 12052 The Gore Road. Stantec
 - Private property required to be purchased ranges from 20.70 ha to 23.86 ha, Design Concept 4 has the lowest requirement for property acquisition with 20.70 ha required (note property purchase requirements will be revised once Concept 4 is revised per removal of 7905 Mayfield Road).

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- Widening to the north has the least impacts on existing hydro poles, as there are fewer poles on the north side. However this assumes the existing hydro poles on the south side do not need to be relocated for clear zone purposes or other design issues. (i.e. 120 poles impacted on south side as opposed to 195 poles to widen equally about centerline).
- Estimated costs for the 4 Design Concepts range from \$79,100,000 for Concept 4 to \$83,600,000 for Concept 2 (widening to north). Concept 4 is estimated to cost the least, mainly due to less property needing to be acquired.

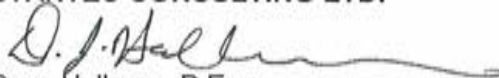
4.0 NEXT STEPS/ANTICIPATED SCHEDULE

- Update drawings based on input from this meeting. Stantec
- Internal (Peel) comments to Stantec by March 15, 2010. Peel
- Investigate the need for a Stage 2 Archaeological Investigation. Stantec
Subsequent to the meeting it was determined that the areas that need a Stage 2 report completed are generally areas outside the existing right-of-way that would be disturbed by road building, and that are agricultural in nature. In general this means "farm fields", but it could also mean in some cases the front yards of older farm houses. Some of the "newer" houses where property is required do not need a Stage 2 investigation, as they have been previously and recently disturbed.
- Reports and drawings to be submitted to TRCA and MNR by March 27, once drawings are updated, subject to receiving comments from Peel. Stantec/Peel
- Comments received from agencies by April 17, 2010. Stantec/Peel
- Submit draft PIC No. 5 Boards by April 17, 2010. Stantec
- PIC No. 2 middle/end of May 2010. Peel/Stantec
- Meet with residents with significant property impacts in first two weeks of May, prior to PIC No. 2. Peel/Stantec

The meeting adjourned at 5:15 p.m.

The foregoing is considered to be a true and representative record of items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING LTD.



Dave Hallman, P.Eng.
Senior Project Manager, Transportation
dave.hallman@stantec.com

Meeting Notes



Stantec

Mayfield Road Class Environmental Assessment Study Airport Road to Coleraine Drive Roundabouts Feasibility Study

File: 160210480/45

Date: Friday, August 28, 2009
Place/Time: Region of Peel Offices, 11 Indell Lane, Brampton/10:00 am – 12:05 pm
Next Meeting: TBD

Attendees:	Solmaz Zia	Region of Peel	Solmaz.Zia@peelregion.ca
	Kathy Cater	Region of Peel	Kathy.Cater@peelregion.ca
	Bob Nieuwenhuysen	Region of Peel	Bob.Nieuwenhuysen@peelregion.ca
	Gary Kocialek	Region of Peel	Gary.Kocialek@peelregion.ca
	Sean Ballaro	Region of Peel	Sean.Ballaro@peelregion.ca
	Eleanor Gillon	Region of Peel	Eleanor.Gillon@peelregion.ca
	Eric Chan	Region of Peel	Eric.Chan@peelregion.ca
	Hitesh Topiwala	Region of Peel	Hitesh.Topiwala@peelregion.ca
	Hashim Ali Hamdani	Region of Peel	Hashim.AliHamdani@peelregion.ca
	Greig Bumstead	HDR/iTRANS	gbumstead@itransconsulting.com
	Gradimir Jonlija	Stantec Consulting Ltd.	gradimir.jonlija@stantec.com
	Garry Leveck	Stantec Consulting Ltd.	garry.leveck@stantec.com

Distribution: All Attendees, Dave Hallman (dave.hallman@stantec.com)

Item:

Action:

1.0 INTRODUCTIONS AND MEETING PURPOSE

- All present introduced themselves, and their association with the Mayfield Road project.
- Solmaz provided a brief overview of the meeting purpose, as follows:
 - Review current status of the addendum work by Stantec, relative to the assessment of roundabout feasibility at 5 intersections;
 - Confirm that the approach to the feasibility study is consistent with the Region's objectives;
 - To offer additional feedback to Stantec in support of a proper outcome of the study;
 - To consider a practical schedule for the roundabout study;
 - To address the integration of the roundabout study into the

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current Class EA Study.

- Solmaz also provided a summary of the history of the Mayfield Road Class EA, indicating that it commenced in September 2007, but was placed on hold, in June 2008, by the Region, pending the results of other associated studies, including the Hwy. 427 Extension Study. The EA Study was reinitiated in January 2009, and the First PIC was held on June 25, 2009.

2.0 ROUNDABOUTS PROJECT: HISTORY ON MAYFIELD ROAD STUDY

- Garry provided background on the Mayfield Roundabout Study, as follows:
 - The original terms of reference for the Mayfield Road Class EA did not include a requirement for a roundabout analysis;
 - Shortly after the project initiation in September 2007, the Region acknowledged the potential importance of modern roundabouts at specific intersections;
 - A proposal to examine four key intersections as sites for possible roundabouts was requested of Stantec, and was submitted on October 4, 2007;
 - For various reasons, including the temporary hold on the Class EA Study, the roundabout study for Mayfield Road was not authorized by the Region;
 - In January 2009, the Mayfield Road Class EA was restarted by the Region of Peel.
 - In June, 2009, the Region reconsidered the need for the roundabout feasibility study, and authorized Stantec to proceed with the addendum work on July 14, 2009. The terms of reference for the roundabout study was consistent with the October 2007 proposal submission, with the only change being the addition of a fifth intersection, being the future connection of Hwy. 427 west of Coleraine Drive;
 - Stantec agreed to complete the study for the same fee as presented in 2007, with the exception of a small addition for the 5th intersection.
 - Vacations in July and August have temporarily delayed progress on the roundabout study.

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3.0 PROJECT OBJECTIVES

- The objectives of the study are summarized in the terms of reference, as follows:
 - Conduct a feasibility study to determine if roundabouts are a practical solution, and assess property requirements and operational/safety impacts;
 - Develop functional designs of roundabouts for each intersection (5 locations);
 - Use micro simulation modeling to assess traffic operations;
 - Submit analysis and design concepts to Peel Region for review, in a summary report.
- Kathy noted that the study is to show the feasibility of roundabouts to the horizon year of 2031, and address the staging potential of 4 lanes versus 6 lanes in the context of differences between signalized intersections and roundabouts.
- In response to Garry's comments about the potential use of VISSIM simulation modeling, in addition to RODEL and SYNCHRO computer analysis, Sean suggested that it was the Region's original expectation to have a VISSIM simulation. Garry advised that he has been talking to his Stantec partners in New Jersey to provide this service, even though it was not specifically included in Stantec's original proposal. Garry will report further on the use of VISSIM modeling, but it is his present intent to do so, regardless of the cost to Stantec. Further discussion to follow.

G. Leveck

4.0 REVIEW OF ORIGINAL TERMS OF REFERENCE

- As noted, the only change to the original terms of reference is the addition of a 5th intersection (Hwy. 427 connection).
- The study will assess the functional utilization of roundabouts under various traffic horizons, up to and including 2031.
- It is the intent of roundabouts to improve traffic flow such that future widenings may be delayed. The study will look at the potential delay of 6 lane widening up to 2031, if practical, but will not indicate a timeline for widening to 6 lanes if it is shown to be "post 2031".
- The question of adding other potential development intersections, mid block, was raised by Kathy. After a brief discussion, it was

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decided that this would be best left to the future, once the location of future intersections are better known. Developers would be requested to provide professional TIS assessments. As a footnote, it was pointed out that the traffic generation from future developments will be accounted for in the traffic analysis.

- It was noted that the study is the first step of Stantec's two stage proposal. The second stage has not been authorized by the Region, which is to address the roundabout study as part of the Class EA process. Once the results of the roundabout study are known, the Region will direct Stantec as to the next steps relative to the Class EA process.

Region

5.0 PRELIMINARY DESIGN CONCEPTS

- Garry presented two concepts that are being considered for the roundabout study:
 - 2 lane divided, with double lane roundabouts;
 - 4 lane divided, with double lane roundabouts.
- The following items were discussed:
 - (i) The Region's current Control Access Bylaw does not provide opportunities to take away property owner's rights to existing accesses, by introducing a centre raised median. Therefore, despite the Region's desire to introduce a raised median on Mayfield Road, it may be difficult to introduce these designs to the public.

Garry advised that the provision of a median will not impact the study of roundabout feasibility, but was illustrated to show how the control of accesses may be applied.

The question of emergency access to residential properties, with raised medians and roundabouts, was noted as a possible concern to residents.

- (ii) The introduction of midblock "U-turn" locations was suggested. This may be possible, but any decisions in this regard are outside of this study and may be policy driven.
- (iii) It was generally agreed that Stantec is on the right track with regards to potential staging of construction of 2 lane and 4 lane designs, along with roundabouts, should they be determined to be feasible.

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- (iv) Garry noted that this study will provide functional level layouts of roundabouts, but will not reach the level of preliminary and/or detailed design beyond the Intersection Control Study phase. Garry also noted that the assessment of roundabout feasibility is an iterative process.
- (v) The quantitative criteria typically used to compare a signalized intersection and a roundabout include:
 - Safety performance for all users
 - Operational performance for motorists
 - Construction costs
 - Lifecycle costs (including operating and injury crash costs)

Quantitative issues may include:

- Fuel consumption/emissions
- Impacts on pedestrians, cyclists, transit and emergency services
- Speed control/traffic calming
- Compatibility with adjacent lane uses
- Aesthetics

6.0 TRAFFIC AND SAFETY APPROVALS

- HDR-iTRANS will provide traffic expertise in accordance with the Stantec proposal, including network analysis and safety assessments.
- Assisting Greig Bumstead will be Steve Keen, who has worked with the Region.

7.0 REGION POLICY DECISION ON ROUNDABOUTS

- Region staff noted that there has been recent activity towards the planning and design of 3 new roundabouts. This illustrates that there is a commitment to the introduction of roundabouts in the Region.

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- Notwithstanding, the selection and use of roundabouts in a major municipality such as Peel is a complex issue overlapping the bounds of technical capability, political will, policy amendments, enhancement of in-house knowledge, and public education. It is not a simple process to say "Okay, we will install roundabouts in Peel Region."

8.0 PROJECT SCHEDULE

- Garry noted that it is difficult to confirm the exact timeline for completion of this study, but an estimate is 6-7 weeks was provided as a tentative timeline.
- Garry will contact Solmaz with an update in a couple of weeks. G. Leveck
- With respect to the current EA, Garry will talk to Dave Hallman about forging ahead on the development of other details, such as design criteria, cross-sections, utilities, boulevard treatments, etc. G. Leveck
- Dave to arrange a coordination meeting with Peel Region. D. Hallman

The meeting adjourned at 12:05 p.m.

The foregoing is considered to be a true and representative record of items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING LTD.



Garry E. Leveck, P. Eng.
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Meeting Notes



Stantec

Mayfield Road Class Environmental Assessment Study Airport Road to Coleraine Drive

File: 160210480/45

Date:	Thursday, April 30, 2009	
Place/Time:	Region of Peel Offices, 11 Indell Lane, Brampton/3:00 p.m. to 4:30 p.m.	
Next Meeting:	TBD	
Attendees:	Jaime Acosta	Region of Peel
	Solmaz Zia	Region of Peel
	Dave Hallman	Stantec Consulting Ltd.
	Garry Leveck	Stantec Consulting Ltd.
Absentees:	K. Cater	Region of Peel
Distribution:	All Attendees/K. Cater	

Item:

Action:

1.0 Purpose

The meeting was requested by Stantec Consulting in order that Peel Region may bring Stantec staff up to date with respect to numerous issues that were not provided, since the project was placed on hold (June 2008). The Region has been reconciling traffic issues, 4-lane versus 6-lane widening needs, roundabout considerations, related traffic studies, and other study-related issues that Stantec has not necessarily been privy to; it was imperative that Stantec be updated before proceeding further with the Class EA.

A lengthy discussion took place regarding numerous issues and constraints that have impeded the "smooth flow" of this study, all of which is too cumbersome to document. Rather, the key elements of the Region's direction to Stantec, as well as other relevant action items, are summarized as an accounting of these meeting minutes.

2.0 Discussion, Direction and Action Items

2.1 Traffic Study and Reporting

- Kathy Cater attended the first 5 minutes of the meeting to comment on her past conversations with iTrans relative to the various traffic studies that have been completed, including the Mayfield Road (June 2008) study.
- It is evident that 5 out of 6 traffic studies recommend 6 lanes on Mayfield Road, between Airport Road and The Gore Road, by the horizon year of 2031. The June 2008 Mayfield Road Traffic Study is the one exception.

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Item:

- Stantec is to request iTrans to update their 2008 study report, and report any negative feedback from iTrans. The Region believes that no extra fees are warranted to iTrans, although Kathy Cater requested that any request by iTrans be reported

Action:
Stantec

2.2 Roundabout Assessment

The Region is now proposing to assess roundabout alternatives as potential solutions to the traffic growth and widening considerations on EA studies, including Mayfield Road.

Stantec is requested to:

- Update their October 2007 fee estimate for the work plan
- Include a "roundabout analysis" for all major intersections along Mayfield Road, and provide comment on provisions for secondary access locations.

Stantec

2.3 6-Lane Widening Concept

Stantec provided an updated fee estimate to consider a 6-lane widening concept in addition to the 4-lane design concept proposed in the original RFP. As opposed to examining two designs (4 and 6 lane), the Region advised that Stantec is to only examine one concept (4 lane or 6 lane) for Mayfield Road, based on the recommended lane requirements of this traffic study

It is noted that the results of the roundabout analysis may have an impact on lane widening requirements, and the authorization of Stantec's recent fee addendum proposal will be subject to the results of the roundabout study.

- Stantec to update fee estimate for a roundabout analysis (It is noted that this roundabout analysis will not be completed by PIC #1).

Stantec

2.4 Public Information Centre Meeting No. 1

The Region would like to convene PIC #1 in June 2009. The context of PIC is to be "Alternative Solutions" only, and focus on the results of traffic analysis. No widening concepts are to be provided, but an indication of lane widening potential is to be provided

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Item:	Action:
<ul style="list-style-type: none">Region to provide Stantec with PIC background data from other recent EA Studies	Region
<ul style="list-style-type: none">Stantec to provide tentative schedule leading up to PIC #1, and provide updated Display Panel outline	Stantec
2.5 Miscellaneous	
<ul style="list-style-type: none">Stantec is to provide an overview of completed activities of the project and relate the completed work to current fee expenditures.	Stantec

The meeting adjourned at 4:30 p.m.

The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING LTD.



Garry E. Leveck, P. Eng.
Vice President, Transportation
garry.levack@stantec.com

Meeting Notes



Stantec

Mayfield Road Class Environmental Assessment Study Airport Road to Coleraine Drive

File: 160210480/45

Date:	Friday, November 21, 2008	
Place/Time:	Region of Peel Offices, 11 Indell Lane, Brampton/1:30 pm – 3:40 pm	
Next Meeting:	TBD	
Attendees:	Kathy Cater	Region of Peel
	Jaime Acosta	Region of Peel
	Solmaz Zia	Region of Peel
	Dave Hallman	Stantec Consulting Ltd.
	Garry Leveck	Stantec Consulting Ltd.
Absentees:	n/a	
Distribution:	All Attendees	

Item:

Action:

1.0 PURPOSE

The meeting was called by the Region of Peel, with three primary objectives:

- (i) To introduce the Region's new Project Manager, Solmaz Zia, who is taking over the project from Sandy Lovisotto, who has returned from an extended leave and transferred to a different department at Peel Region. Jaime Acosta will continue to stay involved and assist Solmaz, where required.
- (ii) To review the status of the project and completed program tasks, in view of the interruption to the project schedule, in June 2008, caused by the Region's need to address other relevant studies that have impacted the Mayfield Road Class EA.
- (iii) To review future project tasks based on the Region's direction to resume activity on the project.

2.0 DISCUSSION

2.1 Introduction

- Solmaz Zia was introduced as the new Project Manager on the project.

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Item:

Action:

2.2 Background Review

Garry suggested that it would be helpful to review the history of the project, from project start to June 2008, which would assist in refreshing everyone's mind about past decisions and project milestones, as well as quickly introduce Solmaz to the project. He provided the following summary of key events:

September 2007

- The project was awarded to Stantec in September 2007. Various field activities were initiated, including a site tour and meeting with TRCA.

October 4, 2007

- In response to a request from the Region, Stantec submitted a budget to assess the feasibility of roundabouts on Mayfield Road, and the possibility of including these intersection alternatives in the EA evaluation process.
- No direction was provided to Stantec to proceed with the roundabout analysis, based on the submitted work plan and fee budget.

November 14, 2007

- In the minutes of the November 14, 2007 meeting, Stantec was requested to provide a proposal that would examine the implications of a 6 lane widening option, in addition to the 4 lane concept specified in the original terms of reference for the project.
- At a subsequent informal meeting, Sandy Lovisotto requested that Stantec also provide a fee estimate for a "high level review" of alternatives for a Bypass of the Wildfield Hamlet.
- A proposed Work Plan and Fee Estimate was provided for the 6-Lane and Wildfield Bypass Addendum Studies on November 28, 2007. No official direction was subsequently provided to Stantec to proceed with either of these two supplementary reviews.

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Item:

Action:

- Direction was provided to iTRANS to finalize the Mayfield Traffic Study, taking into account the alternative Highway 50/427 alignment concepts east of The Gore Road.

November 19, 2007

- In correspondence to Peel Region, Garry recommended that City of Brampton, Town of Caledon and the TRCA be included on the Project Study Team. Sandy Lovisotto agreed to this suggestion.

March 3, 2008

- In the minutes of the meeting held on March 3, 2008, further direction was provided to iTRANS related to the conclusions of the draft traffic study report, including:
 - The timing of 4 lane construction could not be achieved by 2012. Changes required to text of report.
 - The timing of 6 lanes, Airport Road to The Gore Road, will be before 2032, contrary to the initial report conclusions. Changes required to text of report.
- Based on a preliminary geometric assessment, it was shown that both 4 and 6 lane concepts have dramatic impacts on properties in the Wildfield area, due to constraints at St. Patrick's Cemetery.
- It was decided to defer further consideration of the roundabout analysis, and await the results of a Regional Study on the use of roundabouts in Peel.
- It was noted that the Region is considering 55 metre ROW widths on all Regional roads.

April 10, 2008

- No response had been received from the Region on proposals for the 6-Lane Design Review and the Wildfield Bypass evaluation. Stantec stated that it would await further direction, and reminded the Region that the Work Plan and Fee Estimate for the Wildfield Bypass did not include in-depth surveys, environmental reviews, and other studies that are typically associated with a full EA Study.

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Item:

An updated work plan and estimate would be required to integrate this work into the Mayfield Road Schedule "C" Class Environmental Assessment Study.

Action:

April 25, 2008

- This Project Team meeting was called to review the final draft of the iTRANS traffic report and to provide further direction to the Consultant team.
- After detailed review, iTRANS was directed to finalize the Traffic Report.
- Stantec was directed to plan for a Summer 2008 Public Information Centre, which would be "Solutions Oriented" and would not present any design concepts. The PIC would not present any potential Wildfield Bypass dialogue or concepts.
- As the second PIC would be the first opportunity for the public to review concepts, it was agreed that a 3rd PIC would be added to the project Work Plan to present the "preferred design".

June 5, 2008

- Stantec reported that their Markham office Urban Land group had been retained by a developer to prepare a Master Environmental Servicing Plan Study, on the south side of Mayfield, from The Gore Road westerly to a line midway between Goreway Drive and McVean Drive. Stantec suggested that any potential conflict of interest could be avoided on the Mayfield Road project.

June 6, 2008

- A progress update was provided to Jaime Acosta, summarizing the status of project activities. The Region acknowledged that the project would be "on hold" for an indefinite time until they could sort out various traffic study issues that were affecting the decision process.

Stantec

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Item:

June 19, 2008

- Stantec provided the Draft PIC Display Boards for the first Public Information Centre meeting. A date was not set due to a hold on the project announced by the Region.

Action:

2.3 Business Arising From Background Review

Based on the study update provided by Garry, and a general discussion of the key project elements, the following comments, conclusions and recommendations were presented:

- The Highway 50/427 PIC has been delayed until December, with a firm date not yet established. Stantec should attend this meeting. Stantec
- There appears to be discrepancies in the traffic volumes being generated in various studies, including the Master Traffic Study and the Mayfield Road Study. The Region did not recommend that iTRANS revise the current Mayfield Road Study, however.
- Jaime indicated that a Purchase Order had been issued for the Wildfield Bypass Study, in the amount of \$48,400, which increased the Project Fee Value from \$458,470 to \$506,870, including disbursements, but not including GST or the Contingency Allowance. Garry advised that this Purchase Order was never received by Stantec and that formal approval to proceed with the Wildfield Bypass Study was never issued.
- No purchase order was issued for the 6-Lane Design Study, which was submitted to the Region with a "Work Plan and Fee Estimate of \$78,100", not including GST. The Region will need to address this design issue and extra fee. Peel

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Item:

- Kathy indicated that various Councilors have shown recent interest in roundabouts due to their knowledge of international designs. Although the Region is not currently committed to an analysis of roundabouts on Mayfield Road, it was decided that Council may favour a review as part of the Class EA. It was decided that a decision in this matter would be deferred until after the Master Plan PIC, and possibly the first PIC for Mayfield Road (date to be determined). As a footnote, Garry suggested that additional property would be required at roundabout intersections, even with a wider 55 metre ROW, and that roundabouts on a 6 lane corridor have not been constructed in Ontario to date. The introduction of roundabouts on a 4 lane corridor is intended to delay the need for widening to 6 lanes because of increased intersection and corridor capacity.
- It was noted that the Highway 413 study may result in a new corridor within close proximity (north) of Mayfield Road. Therefore, any possible bypass of Wildfield, to the north, would be even closer to the new Highway 413 corridor, which would be a "tough sell". Despite the impacts of the 4 and 6 lane corridor options on Wildfield, it was decided to "stay the course" with respect to assessing widening options within the Wildfield area.
- The Highway 50/427 study recommends a connection, linking Major MacKenzie Drive and Mayfield Road, along an alignment midway between Clarkway Drive and Coleraine Drive. The report proposes 4 lanes on Mayfield, east of the connection point, and 6 lanes west of the connection point.
- A lengthy discussion took place regarding the number of PIC meetings to be held on the project. At a previous meeting, Stantec was directed to include a 3rd PIC because of the decision to provide only a "Solutions-Oriented" approach at PIC #1, with no concepts. Upon further discussion, the Region recommends that the study only include 2 Public Information Centre meetings, and that PIC #1 include some preliminary design concepts (sections) for 4 and 6 lane options, with clear identification of ultimate property acquisition limits.

Action:

Stantec

Stantec

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Item:	Action:
[As clarification, Stantec suggests it is imperative that alternative design concepts be presented for public feedback at the first PIC, if there is to be only 2 meetings with the public. The second PIC would present the preferred concept.]	Stantec
<ul style="list-style-type: none">It was noted that design is underway for The Gore Road into Wildfield. Peel Region will provide Stantec with any plans that are available from this project.	Peel
<ul style="list-style-type: none">It was decided that a public update (Notice of Project Status) is not necessary, at this time, despite the recent hold on the project. It was decided to provide a public update in conjunction with the "Notice of PIC Number One", in 2009.	Stantec
<ul style="list-style-type: none">Kathy suggested that Stantec should ensure that "Project Signoff" is eventually received from TRCA and various utilities (Hydro, Gas, Bell). Stantec advised that they have met with TRCA and will continue liaison with utilities to secure "signoff" on the preferred design concept.	Stantec
<ul style="list-style-type: none">It was suggested that a pre-PIC meeting be held with Brampton and Caledon in the first part of 2009. In addition to direct involvement on the Project Team, this meeting will allow a broader discussion of the project issues. Stantec will coordinate with Region staff at the appropriate time.	Stantec

3.0 ACTION PLAN

The following actions are to be taken by Stantec and Region staff as part of the re-engagement process on the project:

- (i) Stantec to provide an updated Work Plan, Project Schedule and Fee Estimate, recognizing the following:
 - Review of 6 lane conceptual design budget.
 - Include costs for project remobilization including meeting costs, work plan/schedule/fee reviews, and other time and costs related to data review, internal staff engagement, etc.
 - Integration of other study data into project reviews, assessment and presentations (PIC).

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Item:	Action:
<ul style="list-style-type: none">Attendance at other study PICs (Highway 50/427 Master Plan Review) and pre-PIC meetings.	
(ii) Stantec to provide copies of completed study reports to Solmaz.	Stantec
(iii) Peel Region to provide Stantec with a copy of the draft Highway 50/427 Master Plan Study Report.	Solmaz
(iv) Peel Region to provide a copy of the Region's "Roundabout Assessment" report to Stantec.	Solmaz
(v) Peel Region to provide formal written direction to Stantec to proceed with 6-lane study review, and provide an updated Purchase Order for this work and the additional costs for the updated project Work Plan and Schedule.	Peel
(vi) Peel Region to provide any information on The Gore Road design details to Stantec.	Solmaz
(vii) Stantec to coordinate a Project Team Meeting in early 2009 to reintroduce team members to the project, including Brampton, Caledon and TRCA representatives. Stantec to contact these government agencies for staff attendance.	Stantec
(viii) Stantec and Region to monitor impacts from Highway 50/427 Study to determine if the Mayfield Road Traffic Report requires updating. Future action as required.	Stantec Peel

The meeting adjourned at 3:40 p.m.

The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING LTD.



Garry E. Leveck, P. Eng.
Vice President, Transportation
garry.levreck@stantec.com

Meeting Notes



Stantec

Mayfield Road Class Environmental Assessment Study Airport Road to Coleraine Drive

File: 160210480/45

Date:	Friday, April 25, 2008	
Place/Time:	Region of Peel Offices, 11 Indell Lane, Brampton/1:30 pm – 2:45 pm	
Next Meeting:	TBD	
Attendees:	Kathy Cater Jaime Acosta Eleanor Gillon Sean Ballaro Ray Bacquie Garry Leveck	Region of Peel Region of Peel Region of Peel Region of Peel iTRANS Stantec Consulting Ltd.
Absentees:	n/a	
Distribution:	All Attendees, Sandy Livisotto (illness)	

Item:

Action:

1.0 PURPOSE

The meeting was called with two primary objectives:

- (i) To confirm Peel Region acceptance of iTRANS response to questions about draft Traffic Report, so report can be finalized.
- (ii) To receive direction from Peel Region on study process, going forward, which has recently got "bogged down" because of various technical issues (4 lanes, 6 lanes, Wildfield Bypass) and related adjacent studies (Hwy 50/427, Bolton Bypass, Peel Master Plan).

2.0 TRAFFIC STUDY REPORT

- A response to Peel Region questions, on the draft Traffic Report, was provided by iTRANS on March 28, 2008.
- A formal reply to the iTRANS response has not been provided by Sandy due to her leave of absence.
- Eleanor advised that she had talked to Eric and Margie and it appears that there is acceptance of the iTRANS responses.

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Item:	Action:
<ul style="list-style-type: none">Garry reviewed the ITRANS responses to Sandy's questions, and is in general agreement with the reply. There was some discussion of the v/c ratios, particularly where they are very high (>1.0). It was agreed to retain the current descriptor in these cases (>1.0).ITRANS was directed to finalize the Traffic Report. (Stantec will require one (1) hardcopy and a digital version). Region to receive two (2) hard copies.	ITRANS

3.0 STUDY DIRECTION AND COMMENTARY

- 3.1 There was much discussion related to other ongoing adjacent studies. Comments included:
- MTO has decided that Hwy 427 will terminate at Major MacKenzie Drive, at least for the foreseeable future.
 - Eric Chan can be contacted for an update on the Hwy 427 Schedule. Stantec
 - A PIC was held in April for the Peel Master Transportation Plan Study. The next PIC is scheduled for Fall 2008.
 - Filing of the Class EA is tentatively scheduled for late 2008.
 - The Master Plan/Networking Study deals with Phase I and II of the Class EA Study process. Alternative Route Solutions will be presented, with no detail on specific design concepts.
 - There is current planning for a Caledon Bypass Route (also Bolton Bypass), north of Mayfield Road. The timing of this project, in terms of decisions, approvals and construction, is viewed to be longer term, in comparison to the needs of Mayfield Road. Ray suggested that the traffic impacts of this Bypass Study, although they could be significant relative to Mayfield Road volumes, should be overlooked, at this time, due to the uncertainties associated with the Caledon Bypass.
 - A GTA West Study (Toronto to Guelph and Kitchener) is also on the "long term study" radar. However, it was agreed that this study has only indirect impacts on the Mayfield Road EA, and only on the extended horizon period. To ignore this long range study by the province would not be a bad thing, at this time.

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Item:	Action:
3.2 Mayfield Road Study Direction	
Based on various discussion items, the following conclusions and direction was provided to Stantec/iTRANS for the Mayfield Road Study:	
<ul style="list-style-type: none">• iTRANS to finalize Traffic Study Report, which is the foundation of the current Class EA Need and Justification.	iTRANS
<ul style="list-style-type: none">• Stantec to begin planning for a summer PIC for Mayfield Road. The first PIC will be "solutions-oriented", and will not deal with any 4 lane or 6 lane concepts.	Stantec
<ul style="list-style-type: none">• The first PIC will not offer any indication of a possible Wildfield Bypass, even though the addition of this component to the current study is a very real possibility.	Stantec
<ul style="list-style-type: none">• It was agreed by all that the Mayfield Road Class EA Study will require 3 Public Information Centres (PICs) prior to preparing the ESR, Stantec will adjust the Work Program and Fee Estimate accordingly.	Stantec

The meeting adjourned at 2:45 pm.

The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING LTD.



Garry E. Leveck, P. Eng.
Vice President, Transportation
garry.leveck@stantec.com

Meeting Notes



Stantec

Mayfield Road Class Environmental Assessment Study Airport Road to Coleraine Drive

File: 160210480/45

Date: Monday, March 3, 2008
Place/Time: Region of Peel Offices, 11 Indell Lane, Brampton/1:30 pm – 3:20 pm
Next Meeting: TBD
Attendees: Sandy Lovisotto Region of Peel
Jaime Acosta Region of Peel
Eric Chan Region of Peel
Eleanor Gillon Region of Peel
Greig Bumstead iTRANS
Garry Leveck Stantec Consulting Ltd.
Absentees: n/a
Distribution: All Attendees, Kathy Cater, Margie Chung

Item:

Action:

1.0 PURPOSE

The meeting was called with two primary objectives:

- (i) To review the Draft Traffic Study Report for the project, as issued by iTRANS on January 30, 2008.
- (ii) To review the Roundabouts Addendum proposal, as submitted by Stantec on October 4, 2007, and confirm approval to proceed with this extra work in view of the study results from the iTRANS Traffic Report.

2.0 REVIEW OF THE DRAFT TRAFFIC STUDY REPORT: JANUARY 2008

2.1 General

- Various comments have been forwarded to iTRANS (Greig Bumstead), in emails from Stantec (February 4, 2008 and February 20, 2008) and the Region of Peel (consolidation of various responses, issued February 15, 2008). In a lot of cases, the comments relate to text clarification and report structure, however, some comments were key (year for 6 laning, separate left turns, consistency in existing traffic count, impact from Highway 410 extension). Some things were not picked up by iTRANS and were disappointing to see (i.e. changing posted speeds) and some simply could have been avoided by being proofed by iTRANS staff prior to being issued. iTRANS staff will correct.

G. Bumstead

Stantec

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Item:	Action:
<ul style="list-style-type: none">To date, ITRANS has responded in writing to the comments by Stantec, but has not replied to Sandy's email, with comments from Sandy Lovisotto, Eleanor Gillon, Margie Chung, Brian Lakeman and Eric Chung. <p>Greig Bumstead to provide a written response to the Peel Region comments on the Draft report, based on the input from this meeting and ITRANS interpretation of the data.</p>	G. Bumstead
<ul style="list-style-type: none">Garry noted that he had a few additional comments (discussed at meeting) which will be forwarded to Greig by email. Greig to respond accordingly.	G. Leveck G. Bumstead

2.2 Mayfield Road Widening: 4 Lanes and 6 Lanes

- As expressed in Stantec's February 4, 2008 email, some clarification and discussion is warranted with respect to the timing, staging and other link/intersection upgrading requirements associated with the 4 lane and 6 lane options for the corridor. As it stands, the report currently proposes a need for 4 lanes within 5 years (2012) over the entire corridor length, while 6 lanes is not "proposed" in the forecasts up to the 2032 horizon study year. There is general concern with both of these conclusions for the following reasons:
 - 4 lanes cannot be constructed by 2012, considering all property, utility and budgeting issues. A possible staging scenario should be outlined in the report, including possible intersection works.
 - Traffic impacts from the Highway 410 Extension were not considered in the analysis.
 - The implications of the Highway 427 Study will have a bearing on the 4 lane timing, particularly east of The Gore Road.
 - The need for 6 lanes, and the inherent requirement to show "need and justification" for this ultimate condition, is "intuitively obvious" to the Region and **will occur** by 2032, despite what the traffic numbers indicate. We need to deal with this scenario as part of the Class EA, particularly between Airport Road and The Gore Road.

Item:

Action:

- There appears to be some doubt about the validity of the base traffic data, which is the foundation for other traffic volumes and conclusions.
- Although the forecasts are based on development proposals, within a 5 year period, whether they are realistic or not may be questionable. As Jaime pointed out, Caledon is set to "take off" with new development, Bovaird Drive is "becoming saturated" with traffic, and Mayfield Road will be the "next heavily utilized east-west route, particularly with its interchange connection to Highway 410".
- Based on the above, it was agreed that:
 - Eleanor will review the base traffic numbers and advise of any changes, which would be re-entered into the iTRANS traffic model and reporting. E. Gillon
G. Bumstead
 - Eleanor will research traffic impacts from the Highway 410 connection and report to iTRANS. E. Gillon
 - Greig will work to develop a section of the report that unequivocally concludes that Mayfield Road will require a 6 lane platform by the 2032 horizon year, at least to The Gore Road. It was agreed that the need for additional lane capacity, east of The Gore Road, will be dependant on the conclusions from the Highway 427 study. G. Bumstead
 - This approach (6 lane) will be consistent with the decisions arising from the meeting with Kathy Cater on November 14, 2007. The Class EA Study will provide the context for justifying a review of an ultimate 6 lane roadway, including property needs, utility locations (particularly hydro and street lighting), centre medians, turn lanes, etc., and presenting this information to the public, at this time.

2.3 Miscellaneous Comments

- Sandy would like to see the traffic numbers in the report a little more balanced between intersections, where currently there are discrepancies of up to 100 vehicles in the peak hour within the links. Greig agreed to attempt a balancing of figures once he gets updated information (where appropriate) from Eleanor. G. Bumstead

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Item:	Action:
<ul style="list-style-type: none">• iTRANS will review the truck percentage numbers based on feedback from Eleanor on the Highway 410 connection.	G. Bumstead
<ul style="list-style-type: none">• On all intersecting streets, iTRANS should remove all references to combined "through, right and left" movements in the same lane. Designated left turn lanes should be recommended, and Stantec will examine the physical constraints in the functional design.	G. Bumstead
<ul style="list-style-type: none">• Designated right turn lanes should be indicated at all intersections, for Mayfield Road traffic turning on to intersecting roadways.	G. Bumstead
<ul style="list-style-type: none">• Traffic counts at "offset intersections", such as Humber Station/Clarkway, should be illustrated as such. The current graphic gives the impression that it is a cross intersection. iTRANS agreed to adjust.	G. Bumstead

3.0 HIGHWAY 427 STUDY AND PEEL TRANSPORTATION MASTER PLAN STUDY

- Peel Master Plan Study PIC is scheduled for April 2008. Eric Chan to add Stantec to mailing list, as Garry would like to attend meeting. E. Chan
- Sandy suggested that the final Mayfield Traffic Report can continue to be refined, but a complete final document may have to wait until the details of the Master Plan, and the Highway 427 Study, become clearer. The Traffic Report is to be written with an "If statement", should Mayfield Road be the east-west arterial in the Hwy 50/427 Master Plan. This allows us to finalize the report, without surmising the outcome of the other study prematurely
- As discussed previously, the Highway 427 Study provided preliminary concepts for a connection to Mayfield Road east of Wildfield. Garry integrated these ideas into some "kitchen table" concepts that also considered a bypass of Wildfield. These concepts were forwarded to Sandy on November 28, 2007, along with a budget to examine bypass alternatives as part of the Class EA.

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Item:

- Garry presented a preliminary alignment plan of a 4 lane widening through Wildfield, at The Gore Road intersection. The concept clearly illustrates the significant impacts on existing residential properties in the area, based on retaining the south curbline adjacent to the cemetery (southeast corner of intersection). It was generally agreed that a Bypass Study is warranted in conjunction with the Class EA. Sandy will revisit the budget for Stantec and confirm approval.
- As an extension to the discussions regarding the need for 6 lane designs in the future, and possibly earlier at intersections, **and** the uncertainty regarding the status of Mayfield Road east of The Gore Road (Highway 327 Study), Garry suggested that the proposed Roundabout Study should receive no further consideration. He suggested that any additional funding should be directed at the 6 lane evaluation and the Wildfield Bypass assessment. He feels that there is better value in these studies, particularly since roundabouts on 6 lane corridors are not practical, at least in Peel Region. All agreed to eliminate the Roundabout Analysis from further consideration.
- It was noted by Jaime that the Region is now considering 55 metre ROW requirements on all major roadways. This change, which requires further discussion and approval, arises from recent studies of streetscape requirements in Brampton. This information was provided to Stantec, for their further consideration, and to the Mayfield Road Project Team.
- In dealing with property issues, Jaime also noted that Peel would prefer to buy land in Caledon (cheaper price), widen to the Caledon side during the initial 4 lane stages, and subsequently acquire land on the south side (Brampton) through developer dedication, leading to future 6 lane construction. This information may be helpful in Stantec's functional planning.

Action:

S. Lovisotto

Stantec

March 3, 2008
Mayfield Road Class Environmental Assessment Study
Airport Road to Coleraine Drive
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The meeting adjourned at 3:20 pm.

The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING LTD.

A handwritten signature in black ink, appearing to read "Garry E. Leveck". The signature is fluid and cursive, with a large initial "G" and "L".

Garry E. Leveck, P. Eng.
Vice President, Transportation
garry.leveck@stantec.com

Meeting Notes



Stantec

Mayfield Road Class Environmental Assessment Study Airport Road to Coleraine Drive

File: 160210480/45

Date: Wednesday, November 14, 2007
Place/Time: Region of Peel Offices, 11 Indell Lane, Brampton/1:00 pm – 2:15 pm
Next Meeting: TBD
Attendees: Sandy Lovisotto Region of Peel
Kathy Cater Region of Peel
Eric Chan Region of Peel
Ray Bacquie ITRANS
Greig Bumstead ITRANS
Garry Leveck Stantec Consulting Ltd.
Dave Hallman Stantec Consulting Ltd.
Absentees: n/a
Distribution: All Attendees

Item: **Action:**

1.0 PURPOSE

The meeting was called with two purposes in mind:

- (i) To discuss the implications of altering the current terms of reference for the Class EA Study, such that an assessment of both 4 lane and 6 lane widening concepts could be evaluated and presented to the public and agencies.
- (ii) To review the status of concurrent transportation studies, and their associated impact on the Mayfield Road Class EA Study limits and traffic analysis. The relevant studies include the "Highway 50/Highway 427 Transportation Master Plan Study" (currently referred to as the "Highway 50/427 Extension Area Arterial Road Network Study") and the "427 Transportation Corridor Environmental Assessment Study".

2.0 CLASS ENVIRONMENTAL ASSESSMENTS: FOUR LANE VERSUS SIX LANE DESIGN CONCEPTS

- Kathy provided background on recent internal discussions, at Peel Region, with respect to the linkage between Roadway EA Study parameters and the conclusions of the new Peel Region DC Bylaw.

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November 14, 2007
Mayfield Road Class Environmental Assessment Study
Airport Road to Coleraine Drive
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Item:

Action:

- The new DC Bylaw covers a 25 year period to 2032.
- Problems arise when the terms of reference for road widening projects focus on a 4 lane design concept, only to realize later that the Environmental Assessment should perhaps have dealt with a 6 lane design.
- In the past, the public may have been mistakenly lead to believe that 4 lane roadway corridors are the "end point" of Class EA studies. Typically, also, property has been purchased in the past only to accommodate 4 lane designs, despite provisions in the Official Plan for 50 metre rights-of-way. Utilities have not been in a position to install new plant in ultimate locations within the rights-of-way, which has created major problems when the roadways are subsequently widened from 4 to 6 lanes.
- As a result of the above, the Region has been faced with revisiting Environmental Assessments to address plans for four lane to six lane widenings, and have been faced with very expensive relocation costs for utilities. An added problem has been the need to renegotiate land purchases with owners, who may have been involved with acquisitions only a few years earlier.
- Kathy proposed that the Mayfield Road Class EA should examine the 4 lane **and** 6 lane design concepts, and that both concepts should be presented to the public and agencies. The "need and justification" principles, associated with the EA process, would have to be creatively presented to the public, in view of the fact that the traffic analysis may not justify a 6 lane roadway, in certain sections, within the study horizon period.
- For example, the current DC Bylaw proposes Mayfield Road to be 6 lanes, by 2020, between Airport Road and The Gore Road. However, the section between The Gore Road and Coleraine Drive may not require 6 lanes into the foreseeable future beyond 2020. This issue may be further complicated by the Highway 50/427 Transportation Study, as outlined further on in these minutes.
- With respect to expanding the Mayfield Road terms of reference to include a 6 lane review, Sandy expressed initial concern for how this approach could be justified, as well as the potential for Part II Orders that, in turn, may expose the entire project to delays.

Stantec

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Mayfield Road Class Environmental Assessment Study
Airport Road to Coleraine Drive
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Item:

Action:

- Garry suggested that the Region may be much better off in dealing with both the 4 lane and 6 lane concepts, as part of any Regional Road project, because it prepares the public, and abutting property owners in particular, for the eventual reality of a 6 lane cross section. We may not be able to pinpoint precisely the time frame for widening of specific sections of the corridor, but at least the issues and constraints would be brought "to the table".
- Garry also cited an example of a previous Stantec study where cost evaluations for "ultimate versus interim" solutions were presented, so that the client could make an informed decision about the value of throw-away dollars, under the widening scenario, versus the benefits of immediately building the ultimate design. In Stantec's example, the client opted to pay the added cost up front and build the ultimate roadway section.
- A similar scenario occurred, albeit on a smaller scale, with the design and construction of the Mayfield Road bridge at Etobicoke Creek (Snelgrove), which was built to its ultimate 6 lane width despite the current need for only 4 lanes. It was cost effective, and made sense from an approvals perspective, to build the 6 lane structure. As well, all utilities were installed in their ultimate locations.
- In the process of presenting both 4 and 6 lane concepts, it was suggested that a practical staging plan would be desirable, examining the impacts of interim and future widenings on utilities, properties, environmental features, traffic flow, cost and other constraints. After some discussion, it was felt that this could be achieved, with the development of an appropriate set of evaluation criteria. In addition, any staging plans would have to take into account other "external" studies, such as the Highway 50/427 Area Arterial Road Network Study.

3.0 HIGHWAY 50/427 EXTENSION AREA ARTERIAL ROAD NETWORK STUDY

- ITRANS is currently working with the Ministry of Transportation to identify an appropriate Highway 427 extension corridor and interchange locations, as well as its integration with the localized municipal road network.
- Other objectives of the study include the identification of future steps in the highway development process, which will allow adjacent municipalities to plan land development in the area.

Stantec

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Mayfield Road Class Environmental Assessment Study
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Item:

Action:

- The Highway 50/427 study currently has no "approved" status and a draft report (May 2007) remains under review. The MTO is attempting to rationalize the number of interchanges between Rutherford Road and the northerly point of the study (Mayfield Road extension).
- The study proposes three alternative road network layouts for Mayfield Road (east of The Gore Road), which have direct impacts on preliminary design options for this section of Mayfield Road. Depending on alignment decisions east of The Gore Road, as well as other network changes in the area, significant reductions in traffic projections could result, which, in turn, could defer or eliminate widening requirements on Mayfield Road (a copy of each Network Alternative, under consideration in the Highway 50/427 Study, is attached to these minutes).
- The alternative network options have been created, according to iTRANS, to provide continuity within the arterial road network in terms of a Mayfield Road connection to Major MacKenzie Drive and alternative methods of accommodating north-south traffic on Coleraine Drive.

4.0 NEXT STEPS IN THE MAYFIELD ROAD CLASS EA STUDY PROCESS

After considerable discussion of the issues associated with moving forward on the Mayfield Road Traffic Study and Class EA Study, the following conclusions and action items were presented:

- iTRANS is to proceed with the traffic modeling on Mayfield Road, taking into account the Highway 50/427 traffic data and related land use growth information, within the study area. The development objectives of the Region of Peel, City of Brampton and Town of Caledon are to be recognized. iTRANS/Stantec
- Lane and intersection requirements on Mayfield Road are to be developed in conjunction with the traffic analysis, providing horizon years for both 4 lane and 6 lane cross sections from Airport Road to The Gore Road. East of The Gore Road, traffic volumes are to be provided for the study horizon years, recognizing that the ultimate 6 lane width may never be required to Coleraine Drive because of the Highway 50/427 study proposals. iTRANS/Stantec
- Peel Region directed Stantec to develop a revised scope and fee estimate for the Mayfield Road Class EA Study, which will Stantec

Stantec

November 14, 2007
Mayfield Road Class Environmental Assessment Study
Airport Road to Coleraine Drive
Page 5 of 6

- | Item: | Action: |
|---|---------|
| include a 6 lane design concept, in addition to the 4 lane design provided for in the original project scope. | |
| <ul style="list-style-type: none"><li>• The revised study parameters shall include the following:<ul style="list-style-type: none"><li>• Four and six lane designs from Airport Road to The Gore Road.<li>• Utility reviews and cost comparisons to assess staging and property impacts.<li>• Lane configurations east of The Gore Road will provide for future needs (possible 4 and 6 lane designs) but will not preclude potential arterial alignments presented in the Highway 50/427 study.<li>• Stantec and iTRANS to develop "Problem Definition" and "Needs and Justification" statements that satisfy the Class EA guidelines and present a defensible rationale for both 6 lane and 4 lane design concepts to the public. A sample Problem and Needs Statement may include the following:<p><i>Transportation network solutions are needed that will support municipal land use and development objectives, as set out in the Region of Peel, City of Brampton and Town of Caledon Official Plans. This includes the recognition of long term network opportunities that may develop over time.</i></p><p><i>Transportation design solutions shall address the projected capacity deficiencies in the Mayfield Road corridor in the both short and long terms and shall enhance the safety and mobility of motorists, pedestrians and cyclists. These transportation solutions should protect for and not preclude adjacent transportation network proposals, within the community.</i></p> | Stantec |
| <ul style="list-style-type: none"><li>• At a subsequent meeting, Sandy advised that the revised scope and fee estimate should include an allowance for examining bypass alternatives around the Wildfield Hamlet. Alternatives should address potential corridors to the north and south of Wildfield. | Stantec |

Stantec

November 14, 2007
Mayfield Road Class Environmental Assessment Study
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The meeting adjourned at 2:15 pm.

The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING LTD.

A handwritten signature in black ink, appearing to read "G. Leveck", written in a cursive style.

Garry E. Leveck, P. Eng.
Vice President, Transportation
garry.leveck@stantec.com

Attachment: Network Alternatives



Legend

- Potential Interchange
- Potential Arterial Alignment
- Potential Hwy 427 Alignment

Exhibit 6.1 Network Alternative 1

iTRANS



Exhibit 6.2 Network Alternative 2a

ITRANS

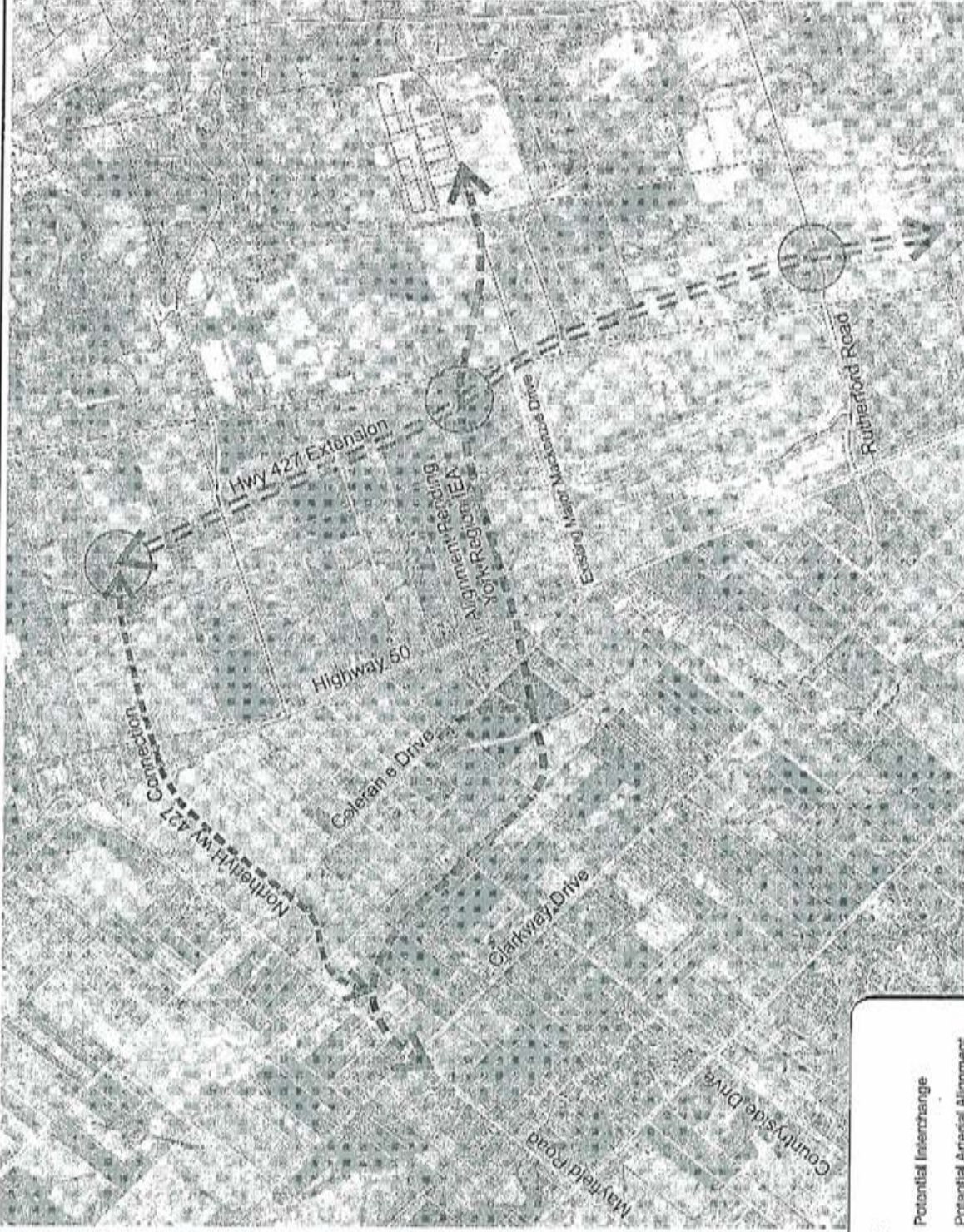


Exhibit 6.3
Network Alternative 2b

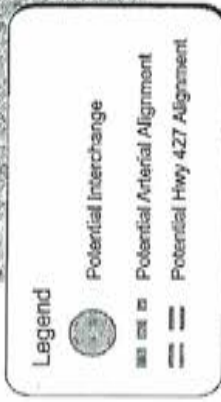


Exhibit 6.4 Network Alternative 3

iTRANS

Meeting Notes



Stantec

Mayfield Road Class EA, Airport Road to Coleraine Drive

File: 1602 10480/45

Date: Tuesday, September 18, 2007

Place/Time: Region of Peel Offices, 11 Indell Lane, Brampton/10:00 a.m.

Next Meeting: To Be Confirmed (Site Reconnaissance)

Attendees:	Sandy Lovisotto	Region of Peel	905-791-7800 Ext. 7838
	Hitesh Topiwala	Region of Peel	905-791-7800 Ext. 7805
	Len Gardiner	Region of Peel	905-791-7800 Ext. 3407 gardinerl@peelregion.ca
	Fred Abalos	Region of Peel	905-791-7800 fred.abalos@peelregion.ca
	David Melton	Region of Peel	905-791-7800 Ext. 7912
	Margie Chung	Region of Peel	905-791-7800 Ext. 7912
	Lori-Ann Thomsen	Region of Peel	lori-ann.thomsen@peelregion.ca
	Joe Gallagher	Region of Peel	905-791-7800 Ext. 7763 joe.gallagher@peelregion.ca
	Greig Bumstead	iTrans	905-882-4100 Ext. 5269 gbumstead@itransconsulting.com
	Garry Leveck	Stantec Consulting Ltd.	519-585-7316 garry.leveck@stantec.com
	Dave Hallman	Stantec Consulting Ltd.	519-585-7444 dave.hallman@stantec.com

Absentees: N/A

Distribution: All Attendees

Item:	Action:
1.0 WELCOME AND INTRODUCTIONS	
a) <u>Sign-In Sheet</u>	All
A "sign-in" sheet was circulated. All Attendees are asked to review the contact information noted above and advise of any errors or revisions.	
b) <u>Meeting Notes</u>	Stantec
Stantec is to record notes of this meeting and any future meetings.	

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d:\w\active\160210480\design\correspondence\45_minutes_of_meetings\min_i18_07_mayfield_airport_coleraine.doc

Stantec

September 18, 2007
Mayfield Road Class EA, Airport Road to Coleraine Drive
Page 2 of 7

Item:

c) Project Team

- The entire Regions project team was at the meeting with the exception that another Traffic Operations staff member may be involved. Peel to confirm.
- Stantec's project team remains as per the proposal submitted in May/2007.

Action:

S. Lovisotto

2.0 PROJECT SCHEDULE TIMING

- A revised project schedule prepared by Stantec was briefly reviewed. It was noted that due to the delayed start to the project, all tasks have been shifted by approximately 3.5 months (i.e. revised start date from June 8 to September 18, 2007). The anticipated end date is now February 2009. In addition, some items may have to be revised to better match seasonal conditions. Two items that will be reviewed are the environmental inventory and PIC No. 2

3.0 STUDY AREA PROFILE AND BACKGROUND INFORMATION

a) Planning

S. Lovisotto advised of the following:

- Project is within the Greenbelt Plan Area
- Project is within the Humber River Watershed
- A Ground Penetrating Radar Study report, on the cemetery at The Gore Road, will be forwarded to Stantec
- The Peel Official Plan can be obtained from the Peel website
- The Gore Road EA report will be provided to Stantec
- Memo dated July 5, 2007 was provided by Peel outlining various planning issues.

S. Lovisotto

Stantec
S. Lovisotto

b) Transportation Planning/Traffic Operations and Development

- The Highway 50/427 Network Master Plan Study is currently underway. Peel will provide copies/updates as the study is finalized.
- M. Chung to provide copies of the Springdale North Secondary Plan to Stantec.
- Traffic growth projections were provided to Stantec in e-mail of September 7, 2007.

S. Lovisotto

M. Chung

Stantec

September 18, 2007
Mayfield Road Class EA, Airport Road to Coleraine Drive
Page 3 of 7

Item:	Action:
<ul style="list-style-type: none">The intersection of Mayfield and Coleraine is currently being widened to its ultimate configuration. S. Lovisotto to provide copies of construction drawings to Stantec.	S. Lovisotto
<ul style="list-style-type: none">Roundabout feasibility at various intersections to be addressed. S. Lovisotto to provide additional information re: scope so work plan and price can be provided by Stantec. It was noted that a roundabout at Mayfield and Coleraine is currently being studied.	Peel/Stantec
<ul style="list-style-type: none">There is a proposed industrial area north of Mayfield near Coleraine. Peel/Stantec to review.	Peel/Stantec
<ul style="list-style-type: none">A study regarding a Carpool Lot at Hwy 50 and Mayfield Road is currently under review. Peel to provide a copy to Stantec when it is in its final stages of completion.	S. Lovisotto
c) Hydrogeological	
<ul style="list-style-type: none">Peel provided a copy of Agreement for Release of Hydrogeological Information/Well Records to Stantec. Stantec to review and return signed copies prior to Peel releasing well records.	Stantec/Peel
d) Infrastructure Assets	
<ul style="list-style-type: none">S. Lovisotto to investigate Stantec access to Region's Bridge website. It was noted there are 5 "major" structures and 20 road crossing culverts within the project limits.	S. Lovisotto
<ul style="list-style-type: none">A copy of a pavement condition report was provided to Stantec. Report to be copied and original copy returned to Peel.	Stantec
<ul style="list-style-type: none">L. Gardiner advised regarding drainage issue on Mayfield Road approximately 500 m west of the Gore Road. The problem appears to be that drainage from Mayfield Road is not draining from private property appropriately. This issue should be investigated as part of this study.	Stantec
<ul style="list-style-type: none">Willy Lising of Peel to be contacted regarding drawings of Airport/Mayfield Road intersection.	Stantec
<ul style="list-style-type: none">Stantec to review needs for Contaminated Site Screening investigations, as per proposal.	Stantec

Stantec

September 18, 2007
Mayfield Road Class EA, Airport Road to Coleraine Drive
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Item:	Action:
4.0 ADDITIONAL INFORMATION	
a) Watershed Plan	
<ul style="list-style-type: none">Stantec should contact the TRCA regarding the relevant Watershed Plans for this project. Sharon Lingertat of the TRCA has advised Stantec that she will be dealing with this project on behalf of the TRCA.	Stantec
b) Regional Drafting Information	
<ul style="list-style-type: none">A CD containing Peel CAD standards was provided to Stantec. Stantec to review and advise of any questions.A Title Plan (property ownership) is also included on the CD. Two (2) paper copies of the Title Plans were also provided.	Stantec
c) City of Brampton/Town of Caledon	
<ul style="list-style-type: none">Stantec to contact and meet with Brampton and Caledon staff to determine their requirements/issues with respect to the project. In particular, cycling policies, trail studies, transit priorities, landscaping features and hydro issues should be reviewed.	Stantec
d) Regional Streetscaping Guidelines	
<ul style="list-style-type: none">A copy of the June 2007 Region of Peel Streetscaping Guidelines was provided to StantecIt was noted that the streetscaping plan must take into account visibility of traffic signs. In addition, roadside safety must also be taken into account with respect to items such as retaining walls.	Stantec
e) Other Issues	
<ul style="list-style-type: none">J. Gallagher indicated that 22 months should be allowed for obtaining property.Mayfield Road is designated to have a 50 m road allowance. It was noted that the 50 m road allowance is to accommodate six lanes. If it is determined that less than six lanes are required, the interim (4 lane) property needs should be identified along with the 50 m road allowance limits.All notification letters to the public must be sent on Peel letterhead. A template is contained on the CD, and Peel envelopes were provided to Stantec.	Stantec

Stantec

September 18, 2007
Mayfield Road Class EA, Airport Road to Coleraine Drive
Page 5 of 7

Item:	Action:
5.0 UNIQUE ASPECTS OF PROJECT	
<ul style="list-style-type: none">It was noted that the settlement of Wildfield may have some unique cultural issues in addition to the cemetery impacts reviewed previously.Well monitoring may be an issue with respect to any excavations that must be undertaken.	Stantec
6.0 PROJECT DELIVERIABLES	
a) Consulting Agreement	
<ul style="list-style-type: none">A draft copy of a Consulting Agreement including WSIB form and Stantec Insurance was provided by Stantec. S. Lovisotto to review and return for signing. A total of 5 copies will be required for signing (2 for Region and 3 for Stantec).	Peel/Stantec
b) Progress Reports	
<ul style="list-style-type: none">Progress Reports 1 – 4, as noted in the Terms of Reference, will be prepared as the project progresses. S. Lovisotto indicated that Progress Report 4 should consist of the Draft ESR.	Stantec
c) Financial Status Reports	
<ul style="list-style-type: none">Stantec provided a sample Consultant Invoice Summary which is proposed to be provided with each invoice.	
d) ESR	
<ul style="list-style-type: none">Five copies of the draft ESR must be providedTen copies of the final ESR must be providedThe final ESR must also be provided in a pdf format that is searchable.The recommended preliminary design should form part of the ESR.	Stantec Stantec Stantec Stantec
e) Property Requirements	
<ul style="list-style-type: none">Property requirements for the recommended design should be summarized in table format in the ESR, and also on the drawings.	Stantec

Stantec

September 18, 2007
Mayfield Road Class EA, Airport Road to Coleraine Drive
Page 6 of 7

Item:	Action:
<ul style="list-style-type: none">The property requirements should be determined taking into account future expansion.	Peel/Stantec
<ul style="list-style-type: none">Properties currently on the market should be identified, at the time of ESR preparation.	Peel/Stantec
f) Construction Cost Estimate	
<ul style="list-style-type: none">A construction cost estimate is required by Peel for budgeting purposes by July 2008. A standard format for the estimates has been provided on the CD.	Stantec
<ul style="list-style-type: none">Peel will provide Stantec with property costs for land acquisition.	Peel
7.0 COMMUNICATION PLAN	
<ul style="list-style-type: none">A mailing list of agencies (including First Nations) is included on the CD. Stantec to review and advise regarding completeness of list.	Stantec
<ul style="list-style-type: none">Peel to look after booking venues for PIC's and all newspaper advertising. Stantec to prepare advertisements for review by Peel.	Peel/Stantec
<ul style="list-style-type: none">Peel to provide names and addresses for all property owners, for Notice mailouts by Stantec.	Peel/Stantec
<ul style="list-style-type: none">Project Filing or PIC's should not occur during summer or approaching Christmas. Stantec will review schedule	Stantec
8.0 COORDINATION OF MEETINGS	
<ul style="list-style-type: none">Peel to provide contacts for Brampton and Caledon. It is anticipated that Brampton contacts will be Andrew Pearce and Haiqing Xu.	S. Lovisotto
<ul style="list-style-type: none">No community groups were identified at the meeting. It is anticipated that Trout Unlimited may be interested in the project.	Stantec
<ul style="list-style-type: none">Stantec to contact utility companies regarding this project.	Stantec
<ul style="list-style-type: none">A site reconnaissance meeting is proposed within the next few weeks. Stantec to advise regarding potential dates and confirm meeting.	Stantec
9.0 COMMUNICATIONS	
<ul style="list-style-type: none">Garry Leveck will be the main contact for Stantec. Garry will copy Dave Hallman with pertinent information as required.	Peel

Stantec

September 18, 2007
Mayfield Road Class EA, Airport Road to Coleraine Drive
Page 7 of 7

Item:

- Sandy Lovisotto will be the main contact for Peel, with copies of correspondence to Carlos Diaz and Hitesh Topiwala, as required.

Action:

Stantec

10.0 NEXT MEETING

- The date of the site reconnaissance meeting to be confirmed.

The meeting adjourned at 12:00 noon.

The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING LTD.



Dave Hallman, P.Eng.
Managing Principal, Transportation
dave.hallman@stantec.com

APPENDIX W
AGENCY CORRESPONDENCE



Stantec

Stantec Consulting Ltd.
49 Frederick Street
Kitchener ON N2H 6M7
Tel: (519) 579-4410

April 18, 2013

File: 160210480/37

Toronto Region Conservation
5 Shoreham Drive
Downsview Ontario
M3N 1S4
Canada

Attention: Ben Krul, Acting Planner II

Dear Ben:

Reference: Mayfield Road Class EA – Airport Road to Coleraine Drive - your file CFN39924

This communication is provided in response to the TRCA's letter and attachment dated December 7, 2012 and in support of our submission of the Final Environmental Study Report (ESR) documents which will be placed on the public record for review on Monday, April 22, 2013. With this communication we have included three (3) sets of bound ESR documents as was requested previously by the TRCA and have provided access by email to a temporary FTP site for the searchable digital (.pdf) version of the document including all appendices in five total volumes.

We have attached our responses to the comments provided in the TRCA's Appendix A in the accompanying table. In addition to those responses we confirm that a detailed summary of the proposed culvert and crossing structures is included in the accompanying ESR in Section 2.0 as Table 2.8.1.1.

In the time since the Draft ESR was circulated, the Region of Peel and their consultants have undertaken additional reviews, completed a supplementary Meander Belt and 100-year Erosion Limit Analysis and reviewed various structure alternatives with the Ministry of Natural Resources for the watercourses at TRCA Crossing ID #3 and #11 which have been confirmed as Redside Dace habitat.

On behalf of the Region of Peel we wish to thank the TRCA for their input and assistance in concluding this study.

Please contact the undersigned if you have any questions.

Sincerely,

STANTEC CONSULTING LTD.

John Bayley, P. Eng.
Practice Leader, Principal, Transportation
Tel: (519) 585-7112
Fax: (519) 579-4239
john.bayley@stantec.com

Enclosures - Appendix "A" w/ Comments
cc: Gino Dela Cruz, Region of Peel

Mayfield Road Improvements Draft ESR – TRCA December 7, 2012 Comments – Appendix A

ESR Section	Comments	Responses
	<p>4) a. Deferred to Detailed Design b. Deferred - Pending consultation with MNR (Incorrect dates appear in the EA) c. Deferred to Detailed Design</p>	<p><i>None Required.</i></p> <p><i>None Required. Dates have been revised and will be confirmed during Detailed Design Phase and through permitting and approvals process.</i></p> <p><i>None Required.</i></p>
	<p>5) Drawing P12A indicates that Crossing 14 is to be a box culvert. Text on page 6.55 indicates an open bottom culvert. Please clarify.</p>	<p><i>Open Bottom Culverts are proposed at all large size replacement locations. All references in the ESR text, tables and drawings to this and other crossings have been revised to Open Bottom Culverts.</i></p>
	<p>8) a. Addressed b. Deferred</p>	<p><i>None Required.</i></p> <p><i>None Required.</i></p>
	<p>Please answer the following:</p> <p>Section 6.1.5 indicates that no impacts are expected. While this section indicates that SWM ponds will not be located within any natural heritage features, they can have a negative impact on receiving watercourses. SWM ponds often discharge to watercourses which are unable to assimilate the increased flows causing excessive erosion. Thermal impacts from SWM ponds can have an adverse effect on receiving watercourses as well. Please indicate how impacts to the receiving watercourses will be mitigated.</p>	<p><i>Specific impacts to receiving watercourses will be investigated further through detailed review and liaison with the TRCA during the detailed design phase of the project. It is acknowledged that some impacts may be realized but should be mitigated to the extent possible. There are few options for alternative enhancement to water quality due to the restricted right-of-way and limited space available at the roadside. Opportunities for quality enhancement and controls should be investigated further in conjunction with ongoing development plans.</i></p>
	<p>Recommendation:</p> <p>2 It is TRCA staff's recommendation that opportunities be</p>	<p><i>Realignments are unavoidable due to necessity to extend</i></p>

Mayfield Road Improvements Draft ESR – TRCA December 7, 2012 Comments – Appendix A

ESR Section	Comments	Responses
	explored to minimize realignments. It has been demonstrated many times that road projects such as this one do not have the options available (ie. land) to appropriately compensate for ecological impacts. Therefore, mitigation through avoidance is greatly preferred.	<i>culverts for widened roadway on skewed watercourse. Realignment will be necessary to fit the existing channel orientation. Opportunities for specific compensation measures shall be investigated further during the detailed design phase.</i>
	16) Borehole logs are missing from the hydrogeology report (Appendix 'F') and geotechnical report (Appendix J). Although it is third submission and their cover letter, (Item 16 of the response table) does indicate that the borehole logs are included in the reports. Please address.	<i>The Hydrogeology report refers to the Auger Probe holes advanced as part of the geotechnical investigation. These logs are included as part of the report included in Appendix J of Volume 3 of 5 in the ESR.</i>
	20) Preliminary geotechnical investigation meant for proposed road improvement works is sufficient at this stage. As widening may entail filling the sides of crossed valleys, future geotechnical work should speak to the level of grading involved as well as to long-term stability of proposed valley slopes at the new inclinations.	<i>Requirements for detailed investigations, in depth assessment and analysis will be deferred to detailed design phase of the undertaking.</i>

Mayfield Road Improvements Draft ESR – TRCA Comments

ITEM #	TRCA Comment (July 3, 2012)	Stantec Responses (October 25, 2012)	TRCA Comments (November 30, 2012)	Stantec Response December 2012
10	a) The proponent completed a meander belt analysis and 100-year erosion limit analysis based on TRCA's standard for crossings 2, 7, 10 and 12. It is noted that due to the road widening, all culverts need to be	a) The preliminary design plans for the recommended design concept and the text of the ESR and related tables includes complete details of the proposed improvements including OGS, enhanced	a) The response is acceptable and no further information is required	<i>None Required.</i>

Mayfield Road Improvements Draft ESR – TRCA Comments

ITEM #	TRCA Comment (July 3, 2012)	Stantec Responses (October 25, 2012)	TRCA Comments (November 30, 2012)	Stantec Response December 2012
	<p>altered. As previously requested, please clearly identify the proposed alterations at each crossing such as culvert extensions, culvert replacements and watercourse realignments.</p> <p>b) In the Meander Belt Analysis Report, it is mentioned that TRCA would require meander belt analyses for watercourses with contributing drainage areas of 50 ha. and greater. TRCA staff would like to clarify that a meander belt analysis may be required depending on site specific conditions such as size of a catchment and history of a watercourse. Please clarify why a meander belt analysis and 100-year erosion limit analysis were not conducted for crossings 3 (drainage area not identified), 5 (377 ha), 6 (402.1 ha), 11 (drainage area not identified), and 14 (595.3 ha).</p>	<p>swales culvert replacements and new bridges as well as watercourse alignment impacts and related provisions.</p> <p>b) The additional meander belt and 100 year erosion limit analyses have been provided in the addendum to the original report and included herewith as Appendix R of the ESR.</p>	<p>b) It is noted that meander belt and 100-yr erosion limit analysis were conducted for the crossing 3, 6 and 11, however, meander belt and 100-yr erosion limit analyses for crossing 5 and 14 have not been conducted. Please note that 100-yr erosion limit analysis is required for crossing 5 and 14. In addition to that, please update Table 2 on page 2.2 of Volume 4 of Mayfield Road Improvements (Airport Road to Coleraine Drive) Class Environmental Assessment Report with the list of water crossings identified by TRCA for meander belt and 100-year erosion limit analysis shown on TRCA's comment dated on December 1, 2010.</p>	<p><i>Additional Meander Belt and 100-year Erosion Limit Analysis was completed in March of 2013 and was submitted to the TRCA on March 25, 2013 under separate cover. The report is included in the ESR as Appendix R and the analysis is noted in Section 2.8.3 on Page 2.35 of the ESR.</i></p>
12	<p>a) The Culvert and Stormwater Management Report indicates that event based hydrologic modelling was used to quantify the peak flow rates upstream of each culvert during the 25-year and 100-year rainfall events using the 1, 6, 12, and 24-hour AES storm distributions for Toronto, Ontario (utilized in the Humber River Watershed</p>	<p>a) Acknowledged and agreed</p>	<p>a) The response is acceptable and no further information is required.</p>	<p><i>None Required.</i></p>

Mayfield Road Improvements Draft ESR – TRCA Comments

ITEM #	TRCA Comment (July 3, 2012)	Stantec Responses (October 25, 2012)	TRCA Comments (November 30, 2012)	Stantec Response December 2012
	<p>modeling) and the highest flow rate was used for the culvert analysis. TRCA recognizes that 25-year and 100-year peak flows were considered in hydraulic assessment to design the crossings as identified in MTO's B-100 Directive.</p> <p>b) Please note that TRCA utilizes the greater peak flow from either the 6 hour or 12 hour AES storms to estimate the 2 to 100 year peak flows for the Humber River watershed. As noted in MNR's Technical Guideline, the Regulatory flood plain is based on the greater of the uncontrolled 100 year or Regional flows for post development conditions. Please conduct a hydrologic analysis to determine the peak flow for the 100 year uncontrolled and the Regional storm events at the crossing locations and utilize the greater flow of the two storm events.</p>	<p>b) Acknowledged and agreed</p>	<p>b) It is noted that currently the predominant land use upstream of the Mayfield Road is agriculture. In Appendix A of Volume 2 of Mayfield Road Improvements (Airport Road to Coleraine Drive) Class Environmental Assessment Report, SWMHYMO parameters are provided for existing and proposed conditions. It is recognized that the Curve Number values for existing land use (agriculture and some open spaces) are higher than for the future land use with TIMP 0.55 and XIMP 0.30. Generally, areas with higher impervious area will have higher Curve Number. Please clarify this and revise and update the hydrology.</p> <p>Please note that the future Regulatory flow estimation for hydraulic analysis should be based on the land use as it is designated in the Official Plan of the Town of Caledon. Please ensure that the calculated Regulatory flows were derived using the designated Official Plan of the Town of Caledon. Please provide a digital copy of the SWMHYMO model used to estimate</p>	<p>12 b. <i>The Curve Number (CN) used in the proposed conditions modelling for this project (using SWMHYMO) only represents the pervious areas. So while the total imperviousness and CN of the catchment will be higher, the CN for only the pervious areas does not necessarily increase. Based on the National Engineering Handbook – Chapter 9 Hydrologic Soil Cover Complexes (United States Department of Agriculture, 2004) the CN for grass in good condition is generally less than most forms of active agriculture.</i></p> <p><i>The Official Plan for the Town of Caledon generally shows a mix of residential, commercial, industrial, and green space land uses. An imperviousness of 55% was assumed for this area.</i></p> <p><i>A digital copy of the modelling has been attached with this submission.</i></p>

Mayfield Road Improvements Draft ESR – TRCA Comments

ITEM #	TRCA Comment (July 3, 2012)	Stantec Responses (October 25, 2012)	TRCA Comments (November 30, 2012)	Stantec Response December 2012
	<p>c) Under proposed conditions, there may be potential increase in the Regulatory flood level. Please clarify how this increase in water level will be mitigated such that there will not be any negative impact in the vicinity of crossings (i.e. upsize the culvert or clearance from landowners to accept the increase in flood level).</p> <p>d) It is recognized that a hydraulic assessment (Culvert Master or HEC-RAS) was completed for 24 culverts under existing condition. However, under proposed condition a hydraulic assessment was conducted for only 13 crossings. Since all culverts will be extended and/or replaced, please provide a hydraulic assessment for all crossings under existing and proposed conditions to determine the impact of the proposed crossing under the Regulatory storm event.</p> <p>e) Please note that TRCA has engineered floodline mapping for Culvert #2 (11+015) and Culvert #11 (14+400) and estimated floodline mapping for</p>	<p>c) All culverts where the regulatory flow was calculated have water levels less than or equal to the existing.</p> <p>d) All culverts will be modelled under proposed conditions. The TRCA previously gave direction (December 1, 2010) to only calculate the Regulatory Flow for areas with a catchment larger than 50 ha.</p> <p>e) Acknowledge and agreed. Table 1.: All culverts have been modeled under existing and proposed conditions. HEC-RAS was</p>	<p>the flows for review.</p> <p>c) Please see the comment below (d).</p> <p>d) TRCA requires a hydraulic analysis for culverts with a catchment area larger than 50 ha and/or drainage system identified as a watercourse by TRCA. The hydraulic analysis should include the existing and proposed conditions using the Regulatory flow. Since, TRCA has identified crossings #2 (Catchment # 120), #10 (Catchment # 1100), and #11 (Catchment # 1110) as watercourses, please provide a hydraulic analysis for these crossings under existing and proposed conditions to determine the impact of the proposed crossing under the Regulatory storm.</p> <p>e) The response is acceptable and no further information is required.</p>	<p><i>None Required.</i></p> <p>12 d) <i>Previous correspondences with the TRCA only requested Regulatory Storm analysis for catchments with more than 50 ha and it was not clear that watercourses identified by the TRCA were also included. It is proposed that these catchments be analyzed during detail design.</i></p>

Mayfield Road Improvements Draft ESR – TRCA Comments

ITEM #	TRCA Comment (July 3, 2012)	Stantec Responses (October 25, 2012)	TRCA Comments (November 30, 2012)	Stantec Response December 2012												
	Culvert #5 (11+800), Culvert #6 (12+300), Culvert # 12 (15+156) and Culvert # 14 (15+955).	used for the crossings at Stations 11+015 and 14+400 for which existing HEC-RAS models were available from the TRCA.														
13	<p>Stormwater Quantity Control:</p> <p>a) Post development peak flows must be controlled to pre-development peak flows for all storms up to and including the 100 year storm (i.e., 2, 5, 10, 25, 50, and 100 year storms). The pre-development peak flows for 2 - 100 year storms should be established based on the unit flow rates for basin F which can be found in Humber Hydrology Update, 2002. Attached are the unit flow rate equations for basin F.</p> <p>b) The target release rates (pre-development flows based on unit flow equations) must be achieved to minimize the negative impacts on the receiving watercourse due to the increase in run-offs volume during post development conditions. Please establish the target release rate for the SWM ponds and please adjust the sizes and design of each pond accordingly, also please provide digital copy of pre and post modeling (input and output)</p>	<p>Stormwater Quantity Control:</p> <p>a) Acknowledged and addressed in the updated reporting</p> <p>b) Acknowledged and addressed in the updated reporting</p>	<p>Stormwater Quantity Control:</p> <p>a) It is noted that the unit flow equations are included in the report, however it appears that the established target flows were not derived using the unit flow equations. Please clarify why these equations were not utilized to establish the target flows.</p> <p>b) Please see above comment 13-a and provide a digital copy of pre and post modelling (input and output)</p>	<p>Stormwater Quantity Control:</p> <p>13 a) <i>The unit flow rate equations shown in the report were incorrect. The units shown in Table 7 should have been L/s/ha instead of L/s. The actual equation used to calculate the allowable flows are as shown below in Table 7. The only difference is that the unit flow rate in L/s/ha is multiplied by the area to get a flow rate for the catchment in L/s. This flow was used for the calculations in the report</i></p> <p align="center">Table 7: Allowable Flow Rates</p> <table border="1"> <thead> <tr> <th>Return Period</th> <th>Flow Rate (L/s)</th> </tr> </thead> <tbody> <tr> <td>2-year</td> <td>Area*9.506-0.719*ln(Area)</td> </tr> <tr> <td>5-year</td> <td>Area*14.652-1.135*ln(Area)</td> </tr> <tr> <td>10-year</td> <td>Area*17+957-1.373*ln(Area)</td> </tr> <tr> <td>25-year</td> <td>Area*22.639-1.741*ln(Area)</td> </tr> <tr> <td>50-year</td> <td>Area*26.566-2.082*ln(Area)</td> </tr> </tbody> </table>	Return Period	Flow Rate (L/s)	2-year	Area*9.506-0.719*ln(Area)	5-year	Area*14.652-1.135*ln(Area)	10-year	Area*17+957-1.373*ln(Area)	25-year	Area*22.639-1.741*ln(Area)	50-year	Area*26.566-2.082*ln(Area)
Return Period	Flow Rate (L/s)															
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Mayfield Road Improvements Draft ESR – TRCA Comments

ITEM #	TRCA Comment (July 3, 2012)	Stantec Responses (October 25, 2012)	TRCA Comments (November 30, 2012)	Stantec Response December 2012		
	<p>c) Please provide tables within the report and list the;</p> <ul style="list-style-type: none"> · pre and post catchment parameters · pre and post development peak flows, volumes · stage/storage/discharge characteristics of facility · required and proposed permanent pool and active storage volumes <p>d) For Stormwater Management Facility Design, please include the following:</p> <ul style="list-style-type: none"> · Supporting calculations for the outlet structure design (size, detention time, location etc) · Supporting calculations and details of the sediment forebay (conformance with MOE manual) · Location and details of the outfall and outfall channel design (see attached guidelines), and, · Supporting calculations and details of the emergency overflow structure <p><u>Erosion Control:</u></p> <p>The erosion control criteria for this site is the 48 hr detention of the run-offs generated from 25 mm of rainfall. Please clarify the erosion control criteria utilized for the sizing of the extended detention portion of the facility.</p>	<p>c) Acknowledged and addressed in the updated reporting.</p> <p>d) The ponds have been conceptually sized on the allowable flow rates. The additional requested information such as forebay design, outfall channel design, emergency overflow design will be subject to refinements in the facility layout and the details, which will be developed during the detailed design stage.</p> <p><u>Erosion Control:</u></p> <p>48 hour extended detention will be provided</p>	<p>c) Please update the requested tables once the target flows are established based on the above comments.</p> <p>d) It is mentioned that this comment will be addressed during detail design stage. It is also noted that some of the diameter orifice sizes are less than 75mm. According to the MOE Stormwater Management Planning and Design Manual (2003), the minimum orifice size is limited to 75mm. Please utilize 75mm diameter of orifice size when the result of the analysis provides a size less than 75mm diameter.</p> <p><u>Erosion Control:</u></p> <p>The response is acceptable and no further information is required.</p>	<table border="1"> <tr> <td>100-year</td> <td>Area*29.912-2.316*ln(Area)</td> </tr> </table> <p align="center">Note: Area is in hectares</p> <p>13 d) <i>The MOE Stormwater Management Planning and Design Manual (2003) states on page 4-58 that a 50 mm orifice is acceptable if it is protected by a perforated riser. It is proposed that perforated risers be used in the ponds.</i></p> <p><i>None Required.</i></p>	100-year	Area*29.912-2.316*ln(Area)
100-year	Area*29.912-2.316*ln(Area)					

Mayfield Road Improvements Draft ESR – TRCA Comments

ITEM #	TRCA Comment (July 3, 2012)	Stantec Responses (October 25, 2012)	TRCA Comments (November 30, 2012)	Stantec Response December 2012
	<p><u>Stormwater Quality Control:</u></p> <p>On site quality control is required to remove suspended solids from impervious surfaces such as streets and driveways. A criteria of 80% total suspended solid removal is required. The stormwater management criteria for this site require an enhanced water quality control. As noted previously, TRCA staff does not support the use of oil grit separator (OGS) in isolation. Therefore, an additional water quality measure such as, but not limited to grass swales is required. Please provide the detail and supporting calculation for the additional water quality control measure.</p>	<p><u>Stormwater Quality Control:</u></p> <p>Enhanced water quality will be provided. OGS units will be combined with additional measures such as grass swales.</p> <p><u>Table2:</u> The ponds are located above the 100-year flood plain. How the ponds specifically tie into the watercourses will be provided during the detailed design development.</p> <p>Enhanced swales are provided and illustrated on the plans and OGS locations are shown with sizing to be provided during detailed design development.</p>	<p><u>Stormwater Quality Control:</u></p> <p>The response is acceptable and during detail design stages, please provide the details how the ponds specifically tie into the watercourses and the sizing calculation for the OGS.</p>	<p><i>None Required.</i></p>
14	<p>There is no response for this comment, however TRCA staff assumes that land acquisition is possible to achieve SWM objectives within the right-of-way, please clarify this.</p>	<p>The required property for development of the required SWM facilities has been identified in the ESR and on the preliminary design plans. Land purchases will be pursued by the Region of Peel through normal land negotiations and expropriation if required.</p>	<p>The response is acceptable and no further information is required.</p>	<p><i>None Required.</i></p>
15	<p>The proposed measures to achieve water quality protection comprise of oil grit separators (OGS) and grass-lined ditches. The locations of OGS units are shown on the plan drawing 4-1,</p>	<p>The proposed measures are included in the ESR tables, various pertinent sections of the text and on the preliminary design drawings included in the ESR. Enhanced grass</p>	<p>The response is acceptable and no further information is required.</p>	<p><i>None Required.</i></p>

Mayfield Road Improvements Draft ESR – TRCA Comments

ITEM #	TRCA Comment (July 3, 2012)	Stantec Responses (October 25, 2012)	TRCA Comments (November 30, 2012)	Stantec Response December 2012
	<p>4-2 and 2-3. The grass-lined roadside ditches with a minimum 0.75 m wide bottom and flat longitudinal slopes to maximize the contact between vegetation and run-offs are acceptable. Please ensure that the grass-lined roadside ditches are located downstream of each of the proposed OGS units.</p>	<p>lined swales are provided at all OGS outlets.</p>		

Bayley, John

From: Bayley, John
Sent: Friday, March 01, 2013 8:50 AM
To: 'Heaton, Mark (MNR)'
Cc: Pomeroy, Mark; Topiwala, Hitesh (Hitesh.Topiwala@peelregion.ca); Dela Cruz, Gino; Ganesh, Steve (Steve.Ganesh@peelregion.ca)
Subject: 160210480 - Mayfield Road Class EA - Redside Dace Stream Crossings
Attachments: let_b27-13_he_a_RedsideDaceCrossingSpans_V3.pdf; Mayfield Road EA - Meeting with MNR.

Good Morning Mark,

We have attached our letter report regarding the recommended structure crossing spans for The TRCA's stream crossing Locations 3 and 11 in association with the proposed Mayfield Road Widening project. This report follows from recent discussions with yourself, Region of Peel Staff and Staff of Stantec Consulting Ltd. held in person on January 25, 2013 and your subsequent email responses to Hitesh Topiwala as well as your discussion of 12 February 2013.

Please review the attached document and provide a confirmation of acceptance/concurrence as soon as you are able. We would like to finalize the ESR for this project to allow the Region to proceed with placing of the ESR on the public record later this month for review and followed shortly by the detailed design phase to begin later in 2013.

If you have any question or wish to discuss this submission please do not hesitate to contact myself or Heather Amirault. We kindly request that you include the above persons in any related e-mail or written communications going forward.

Sincerely,
John

John C. Bayley, P.Eng.
Practice Leader, Principal, Transportation
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Stantec Consulting Ltd.
 49 Frederick Street
 Kitchener ON N2H 6M7
 Tel: (519) 579-4410
 Fax: (519) 579-6733

Stantec

February 28, 2013
 File: 160210480/10

Attention: Mr. Hitesh Topiwala, RPP, PMP, Project Manager
 Transportation Division, Public Works
 Region of Peel
 10 Peel Centre Drive, Suite B, 4th Floor
 Brampton ON L6T 4B9

Dear Mr. Topiwala:

**Reference: Determination of Watercourse Crossing Spans in Redside Dace Habitat
 Mayfield Road, Town of Caledon / City of Brampton, Region of Peel**

Per your request of December 12, 2012 in an email to Mr. John Bayley, P. Eng. of Stantec Consulting (Stantec), this letter outlines the background and methodology used to provide a recommendation for the proposed spans of Mayfield Road Crossings 3 and 11.

The following background reports and correspondence were consulted during the preparation of this letter:

Heaton, M., Feb 6, 2013. Pers.Comm. to H. Topiwala *Re: Mayfield Road ESR (Airport to Coleraine) – crossing 6 is not regulated Redside Dace habitat.*

Stantec Consulting Ltd, June 2012. Letter Addendum: *Mayfield Road Improvements Airport Road to Coleraine Drive Meander Belt and 100-Year Erosion Assessment Humber River Watershed Town of Caledon / City of Brampton, Region of Peel*

Stantec Consulting Ltd, February 2012. Report: *Mayfield Road Improvements Airport Road to Coleraine Drive Meander Belt and 100-Year Erosion Assessment Humber River Watershed Town of Caledon / City of Brampton, Region of Peel*

Stantec Consulting Ltd, October 2010. *Culvert and Stormwater Management Report Mayfield Road EA - Airport Road to Coleraine Drive*

Table 1 presents the name and location of each of the crossings of interest.

**Table 1:
 Location of Mayfield Road Watercourse Crossings
 and Project Reaches**

Crossing ID	Watercourse	Mayfield Road Station	Easting	Northing
3	Salt Creek	11+015	600417	4850203
11	West Humber River	14+400	602535	4852848

**Reference: Determination of Watercourse Crossing Spans in Redside Dace Habitat
 Mayfield Road, Town of Caledon / City of Brampton, Region of Peel**

The channel bankfull widths and 100-year erosion rates were determined for the two (2) watercourses as part of the meander belt addendum (Stantec, June 2012) and are presented in Table 2 below.

**Table 2:
 100-Year Erosion Rate and Meander Belt Width Summary**

Crossing ID	Channel Bankfull Width	100-year Erosion Distance (m)	Existing Belt Width (m)
3	8.0	10.4	56
11	7.5	8.1	55.5

Table 3 presents the existing crossing properties along with the proposed culvert dimensions required to meet Ontario Ministry of Transportation (MTO) standards for conveyance and freeboard.

**Table 3:
 Crossing Size to Meet MTO Standards**

Crossing ID	Existing Culvert			Minimum Allowable Proposed Culvert Size	Freeboard from Spill Point (100-yr Flow) (m)
	Material / Shape	Span (mm)	Height (mm)		
3	Concrete / Box	9000	2600	SAME	1.6
11	Concrete / Arch	9000	4000	SAME	4.4

As shown in Table 3, the existing culverts all convey the 100-year return period flow with ample freeboard. Also, the existing crossings all have a span greater than bankfull width at the two locations.

Table 4 presents the anticipated impacts of the crossings and the proposed mitigation strategies.

**Table 4:
 Proposed Crossing Impacts and Mitigation**

Impact	Mitigation
Longer culvert	<ul style="list-style-type: none"> Install an open bottom crossing structure to improve substrate and allow formation of natural morphology through crossing Increase the structure span to prevent or minimize impacts to habitat
Road footprint and grading in meander belt and regulated habitat areas	<ul style="list-style-type: none"> Reduce impacts by limiting the footprint of the structure through the use of retaining walls to limit fill and disturbance in the riparian area Prepare an Overall Benefit Plan to ensure compliance with the provincial <i>Endangered Species Act</i> (ESA) and demonstrate that compensatory actions will be undertaken for alterations to Redside Dace habitat that will result in an overall benefit to the species

**Reference: Determination of Watercourse Crossing Spans in Redside Dace Habitat
 Mayfield Road, Town of Caledon / City of Brampton, Region of Peel**

The *DRAFT Guidance for Development Activities in Redside Dace Protected Habitat* (MNR, 2011) recommends that crossings in direct habitat should span the valley for confined valleys or span the meander belt for unconfined valleys. The MNR (2002) defines confined river or stream systems as

“ones in which the physical presence of a valley corridor containing a river or stream channel, which may or may not contain flowing water, is visibly discernible (i.e. valley walls are clearly definable) from the surrounding landscape by either field investigations, aerial photography and/or map interpretation. The River or stream channel may be located at the base of the valley slope, in close proximity to the valley slope (i.e. within 15 m) or removed from the valley slope (i.e., a distance greater than 15 m).”

The MNR (2002) defines unconfined river or stream systems as:

“ones in which a river or stream is present but there is no discernible valley slope of bank that can be detected from the surrounding landscape by either field investigations, aerial photography and/or map interpretation.”

Based on the MNR definitions, Crossing 3 is located in an unconfined valley and Crossing 11 is located in a confined valley. As the meander belt width for Crossing 3 is 56 m, and the valley width at Crossing 11 is 110 m wide following the draft guidance document (MNR, 2011) will cost \$3,100,000 for a bridge spanning the meander belt at Crossing 3 and \$2,600,000 for a bridge spanning the valley at Crossing 11. Therefore alternative sizing methods are proposed as outlined below.

Method 1. Provide a crossing span that is double the bankfull width.

Method 2. Provide a crossing span that includes the bankfull width and the 100-year erosion distance.

Table 5 presents the results of each methodology for each of the crossings.

**Table 5:
 Crossing Span Selection**

Crossing ID	2 x Bankfull (m)	Bankfull + 100-yr Erosion Dist. (m)	Factor of Safety (Method 1 / Method 2)
3	16	18.4	2 / 2.3
11	15	15.6	2 / 2.1

In this case, the two methods generate very similar results. The selection of the spans obtained using Method 2 is conservative on many fronts: it allows a span width of more than double the bankfull width; and it incorporates a component of stream stability by using the 100-year erosion distance. The 100-year erosion distance is also inherently conservative in itself as the expected lifespan of the proposed bridge can be expected to be approximately 50 to 60 years.

February 28, 2013

Mr. Hitesh Topiwala, RPP, PMP, Project Manager

Page 4 of 5

**Reference: Determination of Watercourse Crossing Spans in Redside Dace Habitat
Mayfield Road, Town of Caledon / City of Brampton, Region of Peel**

Based on the information outlined in this letter, the proposed spans for Crossings 3 and 11 are presented in Table 6.

**Table 6:
Recommended Minimum Spans for Crossings**

Crossing ID	Proposed Span (m)
3	18.4
11	15.6

As outlined in the MNR's *Endangered Species Act Submission Standards for Activity Review and 17(2)(c) Overall Benefit Permits (2012)*:

The concept of providing an overall benefit to a species involves undertaking actions that contribute to improving the circumstances for the species specified in the permit. Overall benefit is more than no net loss or an exchange of like- for-like... Overall benefit is grounded in the protection and recovery of the species at risk and must include more than steps to minimize adverse effects on the protected species or habitats. The outcome of the overall benefit actions is meant to improve the relative standing of a species after taking into account the residual adverse effects to the species or its habitat that are authorized by the permit (i.e., the completion of all permit conditions achieves a net positive benefit for the species at risk).

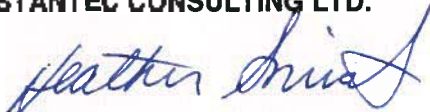
As the proposed bridge spans are less than their respective meander belt / valley widths, Redside Dace habitat will be impacted. An overall benefit plan will be prepared during detailed design as part of the *Endangered Species Act (ESA) Permit Application* to ensure that the proposed crossings do not have a permanent negative impact and that there is an overall benefit for Redside Dace in the local watershed. It should be noted that overall benefit proposals are best drafted with significant input from MNR as the requirements vary substantially from project to project. If requested, Stantec would be pleased to coordinate with MNR during the detailed design process to ensure that all obligations under the *Endangered Species Act* are met.

We trust these recommendations meet with your approval.

Please do not hesitate to contact the undersigned should you have any questions.

Regards,

STANTEC CONSULTING LTD.



Heather Amirault, P. Eng.
Water Resources Engineer
Tel: (519) 585-7453
Fax: (519) 579-8664
heather.amirault@stantec.com

c. Mr. Mark Heaton, Ministry of Natural Resources
Mr. John Bayley, Stantec (Kitchener)

February 28, 2013

Mr. Hitesh Topiwala, RPP, PMP, Project Manager

Page 5 of 5

**Reference: Determination of Watercourse Crossing Spans in Redside Dace Habitat
Mayfield Road, Town of Caledon / City of Brampton, Region of Peel**

References:

Redside Dace Recovery Team. 2010. *Recovery Strategy for Redside Dace (Clinostomus elongatus) in Ontario*. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources, Peterborough, Ontario. vi + 29 pp.

Ministry of Natural Resources (MNR), 2012 *Endangered Species Act Submission Standards for Activity Review and 17(2)(c) Overall Benefit Permits*. Accessed on the World Wide Web at http://www.mnr.gov.on.ca/stdprodconsume/groups/lr/@mnr/@species/documents/document/stdprod_093115.pdf on February 22, 2013.

Ministry of Natural Resources (MNR). 2011. *DRAFT Guidance for Development Activities in Redside Dace Protected Habitat*. Ontario Ministry of Natural Resources, Peterborough, Ontario, ii + 42pp.

Ministry of Natural Resources (MNR), 2002. *Technical Guide – River and Stream Systems: Erosion Hazard Limit*. Ontario Ministry of Natural Resources, Peterborough, Ontario.

Bayley, John

From: Heaton, Mark (MNR) <mark.heaton@ontario.ca>
Sent: Tuesday, March 12, 2013 9:33 AM
To: Bayley, John
Cc: Pomeroy, Mark; Topiwala, Hitesh (Hitesh.Topiwala@peelregion.ca); Dela Cruz, Gino; Ganesh, Steve (Steve.Ganesh@peelregion.ca); Bobak, Eva (MNR)
Subject: RE: 160210480 - Mayfield Road Class EA - Redside Dace Stream Crossings

Hello John,

Letter report reviewed and recommendations are acceptable.

Overall benefit requirements will need to be developed at detailed design stage.

Regards,

Mark Heaton

OMNR Aurora

From: Bayley, John [John.Bayley@stantec.com]
Sent: Friday, March 01, 2013 8:49 AM
To: Heaton, Mark (MNR)
Cc: Pomeroy, Mark; Topiwala, Hitesh (Hitesh.Topiwala@peelregion.ca); Dela Cruz, Gino; Ganesh, Steve (Steve.Ganesh@peelregion.ca)
Subject: 160210480 - Mayfield Road Class EA - Redside Dace Stream Crossings

Good Morning Mark,

We have attached our letter report regarding the recommended structure crossing spans for The TRCA's stream crossing Locations 3 and 11 in association with the proposed Mayfield Road Widening project. This report follows from recent discussions with yourself, Region of Peel Staff and Staff of Stantec Consulting Ltd. held in person on January 25, 2013 and your subsequent email responses to Hitesh Topiwala as well as your discussion of 12 February 2013.

Please review the attached document and provide a confirmation of acceptance/concurrence as soon as you are able. We would like to finalize the ESR for this project to allow the Region to proceed with placing of the ESR on the public record later this month for review and followed shortly by the detailed design phase to begin later in 2013.

If you have any question or wish to discuss this submission please do not hesitate to contact myself or Heather Amirault. We kindly request that you include the above persons in any related e-mail or written communications going forward.

Sincerely,

John

John C. Bayley, P.Eng.
Practice Leader, Principal, Transportation Stantec
49 Frederick Street
Kitchener ON N2H 6M7
Ph: (519) 585-7112
Fx: (519) 579-4239
John.Bayley@stantec.com
stantec.com<<http://www.stantec.com/>>

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ü Please consider the environment before printing this email.

 **TORONTO AND REGION**
Conservation
for The Living City

December 7, 2012

CFN 39924

BY MAIL AND EMAIL (hitesh.topiwala@peelregion.ca)

Mr. Hitesh Topiwala
Region of Peel
10 Peel Centre Drive, Suite B, 4th Floor
Brampton, ON
L6T 4B9

Dear Mr. Topiwala:

**Re: Response to Draft Environmental Study Report (ESR)
Mayfield Road Improvements (Airport Road to Coleraine Drive)
Municipal Class Environmental Assessment (EA)- Schedule C
Humber River Watershed; City of Brampton; Regional Municipality of Peel**

Toronto and Region Conservation Authority (TRCA) staff received the Draft ESR for the above noted project on October 29, 2012.

It is our understanding that this project involves widening Mayfield Road from Airport Road to Coleraine Drive, and that the preferred alignment is concept 4, which involves widening equally about the centreline in most areas, and to the north or south in areas where property impacts are expected.

While staff has no objection in principle to the preferred alternative design, the comments provided in Appendix A must be addressed before filing the EA. Thank you for including the table that clearly identifies all watercourse crossings as well as the existing culvert/bridge sizes, and the proposed extension and replacement sizes in the most recent submission.

Please ensure that the TRCA receives a copy of the Notice of Study Completion and one (1) hard copy and one (1) digital copy, in pdf form, of the final ESR. The final EA document should be accompanied by a covering letter which uses the numbering scheme provided in this letter and identifies how these comments have been addressed.

Should you have any questions or would like to setup a meeting, please contact me at extension 5769 or by email at bkrul@trca.on.ca.

Sincerely,



Ben Krul
Planner II, Environmental Assessment Planning
Planning and Development
BK/



BY EMAIL:

cc: Stantec: John Bayley (john.bayley@stantec.ca)
TRCA: Beth Williston, Senior Manager, Environmental Assessment Planning
Sameer Dhalla, Senior Manager, Water Resources
Quentin Hanchard, Senior Manager, Development, Planning and Regulation
Gary Wilkins, Humber River Watershed Specialist

APPENDIX A

- Please note: All previously addressed comments have been removed from the table. Please refer to the enclosed TRCA staff letter dated October 6, 2011 for previous comments.

ITEM #	TRCA COMMENT (July 3, 2012)	STANTEC'S RESPONSE (October 25, 2012)	TRCA COMMENT (December 7, 2012)
4.	<p>a) Please note that fisheries timing windows should apply to not only in-water work but also near water work, however TRCA defers to MNR regarding fisheries timing windows for this project.</p> <p>b) Table 8 indicates that for warm water watercourses, no in water work should occur between March 15 and June 30. Please note that, for warm water systems, typically no in water or near water work is to take place from April 1 to June 30 however, TRCA staff defers to MNR regarding fisheries timing windows for this project.</p> <p>c) Page 4.6 indicates that the Humber River Fisheries Management Plan identifies that the West Humber River and its tributaries are to be managed as warm water systems. Section 6.7.4 of the Humber River FMP identifies the management zones present in the sub-watershed which include brook trout, reidside dace and rainbow darter. This suggests that certain zones are not to be managed as warm water systems. Please clarify the discrepancy.</p>	<p>a) This comment is acknowledged. The conditions associated with in-stream and near stream works will be identified in the subsequent permitting and approvals phase to be undertaken during detailed design</p> <p>b) This comment is acknowledged. The report will be modified if necessary following MNR comments on the ESR. The conditions associated with in-stream and near stream works will be identified in the subsequent permitting and approvals phase to be undertaken during detailed design.</p> <p>c) Response will be provided in final documentation following any additional ESR review and comments.</p>	<p>a) Deferred to detailed design</p> <p>b) Deferred pending MNR consultation. The incorrect dates continue to appear in the EA document.</p> <p>c) Deferred to detailed design</p>
5.	<p>The Natural Environment Report has recommended the use of open bottom culverts. It appears that, primarily, closed bottom culverts have been proposed. In some locations, it appears that existing open bottom culverts are being replaced with closed bottom box culverts. Please provide a rationale for the decision to install closed bottom culverts when the Natural</p>	<p>With the exception of smaller diameter circular culverts, open bottom culverts and single span bridges have been proposed at all locations. This is unchanged in the current documentation and is presented in more detail in the ESR and accompanying preliminary design drawings.</p>	<p>Drawing P12A indicates that Crossing 14 is to be a box culvert. Text on page 6.55 indicates an open bottom culvert. Please clarify.</p>

ITEM #	TRCA COMMENT (July 3, 2012)	STANTEC'S RESPONSE (October 25, 2012)	TRCA COMMENT (December 7, 2012)
6.	<p>To be addressed during detailed design.</p>	<p>No action required at this time.</p>	<p>a) Addressed. b) Deferred to detailed design.</p>
8.	<p>The mapping provided with the tree inventory is difficult to read, especially the tree numbers. Please provide a clearer map with your future submission.</p> <p>Table 8 identifies a 2 year minimum for post construction monitoring. Such a program is only of value if a contingency plan has been developed to address deficiencies in design and function discovered through monitoring. Please provide a contingency plan in the event that the monitoring program identifies issues of concern. The plan should provide thresholds and triggers for implemented required remediation. It may be beneficial to revisit the length of the monitoring program to ensure a suitable duration once a contingency plan has been developed.</p>	<p>a) PDF versions of the figures are provided with the tree inventory and assessments in Appendix G of the ESR. Their legibility is affected by their original 24"x23' format the plans are legible. b) A contingency plan would be developed at the time of approvals and permitting undertaken during the detailed design stage of the project. Monitoring over a single year or multi years will be a requirement of the approvals and permitting to be provided when the full details of the proposed works are developed. Contingency planning at this stage of the study would be premature.</p>	<p>Section 6.1.5 indicates that no impacts are expected. While this section indicates that SWM ponds will not be located within any natural heritage features, they can have a negative impact on receiving watercourses. SWM ponds often discharge to watercourses which are unable to assimilate the increased flows causing excessive erosion. Thermal impacts from SWM ponds can have an adverse effect on receiving watercourses as well. Please indicate how impacts to the receiving watercourses will be mitigated.</p> <p>TRCA Staff Recommendation: It is important to note that significant detail will be required for any watercourse realignments including bed and bank design, tie-ins to the existing watercourses and ESC measures and isolation techniques. It is recommended</p>

ITEM #	TRCA COMMENT (July 3, 2012)	STANTEC'S RESPONSE (October 25, 2012)	TRCA COMMENT (December 7, 2012)
			that opportunities be explored to minimize realignments. It has been demonstrated many times that road projects such as this one do not have the options available (i.e. land) to appropriately compensate for ecological impacts. Therefore, mitigation through avoidance is greatly preferred.
ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
10	<p><i>Fluvial Geomorphology</i></p> <p>a) The proponent completed a meander belt analysis and 100-year erosion limit analysis based on TRCA's standard for crossings 2, 7, 10 and 12. It is noted that due to the road widening, all culverts need to be altered. As previously requested, please clearly identify the proposed alterations at each crossing such as culvert extensions, culvert replacements and watercourse realignments.</p> <p>b) In the Meander Belt Analysis Report, it is mentioned that TRCA would require meander belt analyses for watercourses with contributing drainage areas of 50 ha. and greater. TRCA staff would like to clarify that a meander belt analysis may be required depending on site specific conditions such as size of a catchment and history of a watercourse. Please clarify why a meander belt analysis and 100-year erosion limit analysis were not conducted for crossings 3 (drainage area not identified), 5 (377 ha), 6 (402.1 ha), 11 (drainage area not identified), and 14 (595.3 ha).</p>	<p>a) The preliminary design plans for the plans for the recommended design concept and the text of the ESR and related tables includes complete details of the proposed improvements including OGS, enhanced swales culvert replacements and new bridges as well as watercourse alignment impacts and related provisions.</p> <p>b) The additional meander belt and 100 yr erosion limit analyses have been provided in the addendum to the original report and included herewith as Appendix R of the ESR.</p>	<p>a) The response is acceptable and no further information is required.</p> <p>b) It is noted that meander belt and 100-yr erosion limit analysis were conducted for the crossing 3, 6 and 11, however, meander belt and 100-yr erosion limit analyses for crossing 5 and 14 have not been conducted. Please note that 100-yr erosion limit analysis is required for crossing 5 and 14. In addition to that, please update Table 2 on page 2.2 of Volume 4 of Mayfield Road Improvements (Airport Road to Coleraine Drive) Class Environmental Assessment Report with the list of water crossings identified by TRCA for meander belt and 100-year erosion limit analysis shown on TRCA's comment dated on December 1, 2010.</p>
11.	Outstanding:	No Response.	Outstanding. Please refer to TRCA letter dated October 6, 2011.

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
12	<p>Preliminary Culvert and Stormwater Management Report</p> <p>a) The Culvert and Stormwater Management Report indicates that event based hydrologic modelling was used to quantify the peak flow rates upstream of each culvert during the 25-year and 100-year rainfall events using the 1, 6, 12, and 24-hour AES storm distributions for Toronto, Ontario (utilized in the Humber River Watershed modeling) and the highest flow rate was used for the culvert analysis. TRCA recognizes that 25-year and 100-year peak flows were considered in hydraulic assessment to design the crossings as identified in MTO's B-100 Directive.</p> <p>b) Please note that TRCA utilizes the greater peak flow from either the 6 hour or 12 hour AES storms to estimate the 2 to 100 year peak flows for the Humber River watershed. As noted in MNR's Technical Guideline, the Regulatory flood plain is based on the greater of the uncontrolled 100 year or Regional flows for post development conditions. Please conduct a hydrologic analysis to determine the peak flow for the 100 year uncontrolled and the Regional storm events at the crossing locations and utilize the greater flow of the two storm events.</p> <p>c) Under proposed conditions, there may be potential increase in the Regulatory flood level. Please clarify how this increase in water level will be mitigated such that there will not be any negative impact in the vicinity of crossings (i.e. upsize the culvert or clearance from landowners to accept the increase in flood level).</p>	<p>a) Acknowledged and agreed.</p> <p>b) Acknowledged and agreed</p> <p>c) All culverts where the regulatory flow was calculated have water levels less than equal to the existing.</p> <p>d) All culverts will be modeled under proposed conditions. The TRCA previously gave direction (December 1, 2010) to only calculate the Regulatory Flow for areas with a catchment larger than 50 ha.</p> <p>e) Acknowledged and agreed. Table 1: All culverts have been modeled under existing and proposed conditions. HEC-RAS was used for the crossings at Stations 11+015 and 14+400 for which existing HEC-RAS models were available from the TRCA.</p>	<p>a) The response is acceptable and no further information is required.</p> <p>b) It is noted that currently the predominant land use upstream of the Mayfield Road is agriculture. In Appendix A of Volume 2 of Mayfield Road Improvements (Airport Road to Coleraine Drive) Class Environmental Assessment Report, SWMHYMO parameters are provided for existing and proposed conditions. It is recognized that the Curve Number values for existing land use (agriculture and some open spaces) are higher than for the future land use with TIMP 0.55 and XIMP 0.30. Generally, areas with higher impervious area will have a higher Curve Number. Please clarify this and revise and update the hydrology.</p> <p>Please note that the future Regulatory flow estimation for hydraulic analysis should be based on the land use as it is designated in the Official Plan for the Town of Caledon. Please ensure that the calculated Regulatory flows were derived using the designated Official Plan for the Town of Caledon. Please provide a digital copy of the SWMHYMO model used to estimate the flows for review.</p> <p>c) Please see the comment below.</p>

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
	<p>d) It is recognized that a hydraulic assessment (Culvert Master or HEC-RAS) was completed for 24 culverts under existing condition. However, under proposed condition a hydraulic assessment was conducted for only 13 crossings. Since all culverts will be extended and/or replaced, please provide a hydraulic assessment for all crossings under existing and proposed conditions to determine the impact of the proposed crossing under the Regulatory storm event.</p> <p>e) Please note that TRCA has engineered floodline mapping for Culvert #2 (11+015) and Culvert #11 (14+400) and estimated floodline mapping for Culvert #5 (11+800), Culvert #6 (12+300), Culvert # 12 (15+156) and Culvert # 14 (15+955).</p>		<p>d) TRCA staff requires a hydraulic analysis for culverts with a catchment area larger than 50 ha. and/or drainage system identified as a watercourse by TRCA. The hydraulic analysis should include the existing and proposed conditions using the Regulatory flow. Since, TRCA has identified crossings #2 (Catchment # 120), #10 (Catchment # 1100), and #11 (Catchment # 1110) as watercourses, please provide a hydraulic analysis for these crossings under existing and proposed conditions to determine the impact of the proposed crossing under the Regulatory storm.</p> <p>e) The response is acceptable and no further information is required.</p>
13.	<p>*The Table 1 in Appendix B lists some existing and proposed crossings details and identifies issues and/or comments and requirements for each crossing:</p> <p>a) Post development peak flows must be controlled to pre-development peak flows for all storms up to and including the 100 year storm (i.e., 2, 5, 10, 25, 50, and 100 year storms). The pre-development peak flows for 2 - 100 year storms should be established based on the unit flow rates for basin F which can be found in Humber Hydrology Update, 2002. Attached are the unit flow rate equations for basin F.</p> <p>b) The target release rates (pre-development flows based on unit flow equations) must be achieved to minimize the negative impacts on the receiving watercourse due to the</p>	<p>a) Acknowledged and addressed in the updated reporting.</p> <p>b) Acknowledged and addressed in the updated reporting.</p> <p>c) Acknowledged and addressed in the updated reporting.</p> <p>d) The ponds have been conceptually sized based on the allowable flow rates. The additional requested information such as forebay design, outfall channel design and emergency overflow design will be subject to refinements in the facility layout and the details which will be developed during the detailed design phase.</p>	<p>a) It is noted that the unit flow equations are included in the report, however it appears that the established target flows were not derived using the unit flow equations. Please clarify why these equations were not utilized to establish the target flows.</p> <p>b) Please see above comment 13-a and provide a digital copy of pre and post modeling (input and output)</p> <p>c) Please update the requested tables once the target flows are established based on the above comments.</p>

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
	<p>increase in runoff volume during post development conditions. Please establish the target release rate for the SWM ponds and please adjust the sizes and design of each pond accordingly, also please provide digital copy of pre and post modeling (input and output)</p> <p>c) Please provide tables within the report and list the:</p> <ul style="list-style-type: none"> • pre and post catchment parameters • pre and post development peak flows, volumes • stage/storage/discharge characteristics of facility • required and proposed permanent pool and active storage volumes <p>d) For Stormwater Management Facility Design, please include the following:</p> <ul style="list-style-type: none"> • Supporting calculations for the outlet structure design (size, detention time, location etc) • Supporting calculations and details of the sediment forebay (conformance with MOE manual) • Location and details of the outfall and outfall channel design (see attached guidelines), and, • Supporting calculations and details of the emergency overflow structure <p>Erosion Control:</p> <p>The erosion control criterion for this site is the 48 hr detention of the runoff generated from 25 mm of rainfall. Please clarify the erosion</p>	<p>Erosion Control: 48 hour extended detention will be provided</p> <p>Stormwater Quality Control: Enhanced water quality will be provided</p> <p>OGS units will be combined with additional measures such as grass swales</p> <p>Table 2: The ponds are located above the 100-year floodplain</p> <p>How the ponds specifically tie into the watercourse will be provided during the detailed design development.</p> <p>Enhanced swales are provided and illustrated on the plans and OGS locations are shown with sizing to be provided during the detailed design development.</p>	<p>d) It is mentioned that this comment will be addressed during detail design stage. It is also noted that some of the diameter orifice sizes are less than 75mm. According to the MOE Stormwater Management Planning and Design Manual (2003), the minimum orifice size is limited to 75mm. Please utilize 75mm diameter of orifice size when the result of the analysis provides a size less than 75mm diameter.</p> <p>Erosion Control: The response is acceptable and no further information is required.</p> <p>Stormwater Quality Control The response is acceptable and during detail design stages, please provide the details how the ponds specifically tie into the watercourses and the sizing calculation for the OGS</p>

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
	<p>control criteria utilized for the sizing of the extended detention portion of the facility.</p> <p>Stormwater Quality Control</p> <p>On site quality control is required to remove suspended solids from impervious surfaces such as streets and driveways. A criteria of 80% total suspended solid removal is required. The stormwater management criteria for this site require an enhanced water quality control. As noted previously, TRCA staff does not support the use of oil grit separator (OGS) in isolation. Therefore, an additional water quality measure such as, but not limited to grass swales is required. Please provide the detail and supporting calculation for the additional water quality control measure.</p>		
14.	<p>*Please refer to the Table 2 in Appendix B that list the proposed SWM facilities, OGS units and TRCA comments for each facility and unit</p> <p>There is no response for this comment, however TRCA staff assumes that land acquisition is possible to achieve SWM objectives within the right-of-way, please clarify this.</p>	<p>The required property for development of required SWM facilities have been identified in the ESR and on the preliminary design plans. Land purchases will be pursued by the Region of Peel through normal land negotiations and expropriation if required.</p>	<p>The response is acceptable and no further information is required.</p>
15.	<p>The proposed measures to achieve water quality protection comprise of oil grit separators (OGS) and grass-lined ditches. The locations of OGS units are shown on the plan drawing 4-1, 4-2 and 2-3. The grass-lined roadside ditches with a minimum 0.75 m</p>	<p>The proposed measures are included in the ESR tables, various pertinent sections of the text and on the preliminary design drawings included in the ESR. Enhanced grass lined swales are provided at all OGS outlets.</p>	<p>The response is acceptable and no further information is required.</p>

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
	wide bottom and flat longitudinal slopes to maximize the contact between vegetation and runoff are acceptable. Please ensure that the grass-lined roadside ditches are located downstream of each of the proposed OGS units.		
Hydrogeology			
15.	The hydrogeology report does not have borehole logs. Please provide a report that includes all borehole logs that were referred to in the hydrology report.	Borehole logs and related analyses are included in the Hydrological and Geotechnical reports provided as Appendices F & J respectively.	The borehole logs are missing from the hydrogeology report (Appendix 'F') and geotechnical report (Appendix J). Item 16 of the response table indicates that the borehole logs are included in the reports but they are not.
General Comments			
20.	As widening may entail filling the sides of crossed valleys, future geotechnical work should speak to the level of grading involved as well as to long-term stability of proposed valley slopes at the new inclinations.	Acknowledged and agreed. Those types of recommendation are typical of geotechnical investigations for road widening projects and in particular those that include the construction of embankments and wing walls to retain soils placed to permit construction of the proposed works.	Preliminary geotechnical investigation meant for proposed road improvement works is sufficient at this stage. As widening may entail filling the sides of crossed valleys, future geotechnical work should speak to the level of grading involved and to the long-term stability of proposed valley slopes at the new inclinations.

***Appendix B from TRCA staff's response letter dated July 3, 2012 has been removed.**

 **TORONTO AND REGION**
Conservation
for The Living City

July 3, 2012

CFN 39924

BY MAIL AND EMAIL (hitesh.topiwala@peelregion.ca)

Mr. Hitesh Topiwala
Region of Peel
10 Peel Centre Drive, Suite B, 4th Floor
Brampton, ON
L6T 4B9

Dear Mr. Topiwala:

Re: Response to Meander Belt, 100 Year Erosion Limit Assessment, Culvert and Stormwater Management Report, Natural Features Report, Tree Inventory and 30% Detailed Drawings Mayfield Road Improvements (Airport Road to Coleraine Drive) Municipal Class Environmental Assessment (EA) - Schedule C Humber River Watershed; City of Brampton; Regional Municipality of Peel

Toronto and Region Conservation Authority (TRCA) staff received the above noted reports and drawings for the above noted project on April 23, 2012.

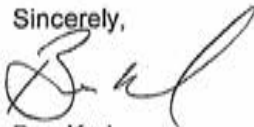
It is our understanding that this project involves widening Mayfield Road from Airport Road to Coleraine Drive, and that the preferred alignment is concept 4, which involves widening equally about the centreline in most areas, and to the north or south in areas where property impacts are expected.

While staff has no objection in principle to the preferred alternative design, the comments provided in Appendix A and B must be addressed before filing the EA. Please ensure the EA includes a table that clearly identifies all watercourse crossings as well as the existing culvert/bridge sizes, and proposed extension and replacement sizes.

Please ensure that the TRCA receives Three (3) copies of the draft ESR document. The draft EA document should be accompanied by a covering letter which uses the numbering scheme provided in this letter and identifies how these comments have been addressed.

Should you have any questions or would like to setup a meeting, please contact me at extension 5769 or by email at bkru@trca.on.ca.

Sincerely,



Ben Krul
Planner II, Environmental Assessment Planning
Planning and Development
BK/

Encl: TRCA letter dated October 6, 2011

BY EMAIL

cc: Stantec: John Bayley (john.bayley@stantec.ca)
TRCA: Beth Williston, Senior Manager, Environmental Assessment Planning
Sameer Dhalla, Senior Manager, Water Resources
Quentin Hanchard, Senior Manager, Development, Planning and Regulation
Gary Wilkins, Humber River Watershed Specialist
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Member of Conservation Ontario



APPENDIX A

- Please note: All previously addressed comments have been removed from the table. Please refer to the enclosed TRCA letter dated October 6, 2011 for previous comments.

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
4.	<p>a) Please note that fisheries timing windows should apply to not only in-water work but also near water work, however TRCA defers to MNR regarding fisheries timing windows for this project.</p> <p>b) Table 8 indicates that for warm water watercourses, no in water work should occur between March 15 and June 30. Please note that, for warm water systems, typically no inwater or near water work is to take place from April 1 to June 30 however, TRCA staff defers to MNR regarding fisheries timing windows for this project.</p> <p>c) Page 4.6 indicates that the Humber River Fisheries Management Plan identifies that the West Humber River and its tributaries are to be managed as warm water systems. Section 6.7.4 of the Humber River FMP identifies the management zones present in the sub-watershed which include brook trout, redeye dace and rainbow darter. This suggests that certain zones are not to be managed as warm water systems. Please clarify the discrepancy.</p>		
5.	<p>The Natural Environment Report has recommended the use of open bottom culverts. It appears that, primarily, closed bottom culverts have been proposed. In some locations, it appears that existing open bottom culverts are being replaced with closed bottom box culverts. Please provide a rationale for the decision to install closed bottom culverts when the Natural Environment Report has recommended open bottom culverts. Please ensure that the rationale includes an analysis of the location specific impacts (ie., ground water upwelling, function of native substrate, needs of fish species, etc.) Additional analysis should also be provided where existing open bottom culverts are being replaced with closed bottom culverts as this is not generally considered a desirable change to aquatic habitat.</p>		
6.			To be addressed during detailed design.

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
4.	<p>a) Please note that fisheries timing windows should apply to not only in-water work but also near water work, however TRCA defers to MNR regarding fisheries timing windows for this project.</p> <p>b) Table 8 indicates that for warm water watercourses, no in water work should occur between March 15 and June 30. Please note that, for warm water systems, typically no inwater or near water work is to take place from April 1 to June 30 however, TRCA staff defers to MNR regarding fisheries timing windows for this project.</p> <p>c) Page 4.6 indicates that the Humber River Fisheries Management Plan identifies that the West Humber River and its tributaries are to be managed as warm water systems. Section 6.7.4 of the Humber River FMP identifies the management zones present in the sub-watershed which include brook trout, redeye dace and rainbow darter. This suggests that certain zones are not to be managed as warm water systems. Please clarify the discrepancy.</p>		
8.	<p>a) The mapping provided with the tree inventory is difficult to read especially the tree numbers. Please provide a clearer map with your future submission.</p> <p>b) Table 8 identifies a 2 year minimum for post construction monitoring. Such a program is only of value if a contingency plan has been developed to address deficiencies in design and function discovered through monitoring. Please provide a contingency plan in the event that the monitoring program identifies issues of concern. The plan should provide thresholds and triggers for implemented required remediation. It may be beneficial to revisit the length of the monitoring program to ensure a suitable duration once a contingency plan has been developed.</p>		

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
Fluvial Geomorphology			
10.	<p>a) The proponent completed a meander belt analysis and 100-year erosion limit analysis based on TRCA's standard for crossings 2, 7, 10 and 12. It is noted that due to the road widening, all culverts need to be altered. As previously requested, please clearly identify the proposed alterations at each crossing such as culvert extensions, culvert replacements and watercourse realignments.</p> <p>b) In the Meander Belt Analysis Report, it is mentioned that TRCA would require meander belt analyses for watercourses with contributing drainage areas of 50 ha. and greater. TRCA staff would like to clarify that a meander belt analysis may be required depending on site specific conditions such as size of a catchment and history of a watercourse. Please clarify why a meander belt analysis and 100-year erosion limit analysis were not conducted for crossings 3 (drainage area not identified), 5 (377 ha), 6 (402.1 ha), 11 (drainage area not identified), and 14 (595.3 ha).</p>		
11.	Outstanding.		
Preliminary Culvert and Stormwater Management Report			
12.	<p>a) The Culvert and Stormwater Management Report indicates that event based hydrologic modelling was used to quantify the peak flow rates upstream of each culvert during the 25-year and 100-year rainfall events using the 1, 6, 12, and 24-hour AES storm distributions for Toronto, Ontario (utilized in the Humber River Watershed modeling) and the highest flow rate was used for the culvert analysis. TRCA recognizes that 25-year and 100-year peak flows were considered in hydraulic assessment to design the crossings as identified in MTO's B-100 Directive.</p>		
	<p>b) Please note that TRCA utilizes the greater peak flow from either the 6 hour or 12 hour AES storms to estimate the 2 to 100 year peak flows for the Humber River watershed. As noted in MNR's Technical Guideline, the Regulatory flood plain is based on the greater of the uncontrolled 100 year or Regional flows for post development conditions. Please conduct a hydrologic analysis to determine the peak flow for the 100 year uncontrolled and the Regional storm events at the crossing locations and utilize the greater flow of the two storm events.</p>		

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
	<p>c) Under proposed conditions, there may be potential increase in the Regulatory flood level. Please clarify how this increase in water level will be mitigated such that there will not be any negative impact in the vicinity of crossings (i.e. upsize the culvert or clearance from landowners to accept the increase in flood level).</p> <p>d) It is recognized that a hydraulic assessment (Culvert Master or HEG RAS) was completed for 24 culverts under existing condition. However, under proposed condition a hydraulic assessment was conducted for only 13 crossings. Since all culverts will be extended and/or replaced, please provide a hydraulic assessment for all crossings under existing and proposed conditions to determine the impact of the proposed crossing under the Regulatory storm event.</p> <p>e) Please note that TRCA has engineered floodline mapping for Culvert #2 (11+015) and Culvert #11 (14+400) and estimated floodline mapping for Culvert #5 (11+800), Culvert #6 (12+300), Culvert # 12 (15+156) and Culvert # 14 (15+955).</p>		
13.	<p>*The Table 1 in Appendix B lists some existing and proposed crossings details and identifies issues and/or comments and requirements for each crossing:</p> <p>a) Post development peak flows must be controlled to pre-development peak flows for all storms up to and including the 100 year storm (i.e., 2, 5, 10, 25, 50, and 100 year storms). The predevelopment peak flows for 2 - 100 year storms should be established based on the unit flow rates for basin F which can be found in Humber Hydrology Update, 2002. Attached are the unit flow rate equations for basin F.</p> <p>b) The target release rates (pre-development flows based on unit flow equations) must be achieved to minimize the negative impacts on the receiving watercourse due to the increase in runoff volume during post development conditions. Please establish the target release rate for the SWM ponds and please adjust the sizes and design of each pond accordingly, also please provide digital copy of pre and post modeling (input and output)</p>		

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
	<p>c) Please provide tables within the report and list the:</p> <ul style="list-style-type: none"> • pre and post catchment parameters • pre and post development peak flows, volumes • stage/storage/discharge characteristics of facility • required and proposed permanent pool and active storage volumes <p>d) For Stormwater Management Facility Design, please include the following:</p> <ul style="list-style-type: none"> • Supporting calculations for the outlet structure design (size, detention time, location etc) • Supporting calculations and details of the sediment forebay (conformance with MOE manual) • Location and details of the outfall and outfall channel design (see attached guidelines), and, • Supporting calculations and details of the emergency overflow structure <p>Erosion Control:</p> <p>The erosion control criterion for this site is the 48 hr detention of the runoff generated from 25 mm of rainfall. Please clarify the erosion control criteria utilized for the sizing of the extended detention portion of the facility.</p> <p>Stormwater Quality Control</p> <p>On site quality control is required to remove suspended solids from impervious surfaces such as streets and driveways. A criteria of 80% total suspended solid removal is required. The stormwater management criteria for this site require an enhanced water quality control. As noted previously, TRCA staff does not support the use of oil grit separator (OGS) in isolation. Therefore, an additional water quality measure such as, but not limited to grass swales is required. Please provide the detail and supporting calculation for the additional water quality control measure.</p>		

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
14.	<p>*Please refer to the Table 2 in Appendix B that list the proposed SWM facilities, OGS units and TRCA comments for each facility and unit</p> <p>There is no response for this comment, however TRCA staff assumes that land acquisition is possible to achieve SWM objectives within the right-of-way, please clarify this.</p>		
15.	<p>The proposed measures to achieve water quality protection comprise of oil grit separators (OGS) and grass-lined ditches. The locations of OGS units are shown on the plan drawing 4-1, 4-2 and 2-3. The grass-lined roadside ditches with a minimum 0.75 m wide bottom and flat longitudinal slopes to maximize the contact between vegetation and runoff are acceptable. Please ensure that the grass-lined roadside ditches are located downstream of each of the proposed OGS units.</p>		
Hydrogeology			
16.	<p>The hydrogeology report does not have borehole logs. Please provide a report that includes all borehole logs that where referred to in the hydrology report.</p>		
General Comments			
20.	<p>As widening may entail filling the sides of crossed valleys, future geotechnical work should speak to the level of grading involved as well as to long-term stability of proposed valley slopes at the new inclinations.</p>		

Appendix B

Comment #12 Cont'd.

Table 1

Recommendation	Station/ Drainage Area/ Catchment Id	Existing Culvert	Proposed culvert	Current Hydraulic Assessment	Suggested Hydraulic Assessment	TRCA's comment for each crossing

	Recommendation	Station/Drainage Area/Catchment Id	Existing Culvert	Proposed culvert	Current Hydraulic Assessment	Suggested Hydraulic Assessment	TRCA's comment for each crossing
1	Replace/Rehabilitate	10+425/ DA: 10.1ha/ 110	CSP Circular Diameter: 1200mm Length: 19.6m	CSP Circular Diameter: 1200mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	The report (Table 4) shows that the size of the proposed culvert is 1200mm dia CSP whereas Plan 4-1 shows that the existing 1200mm dia CSP will be replaced with 675mm STM. Please clarify this discrepancy. Please confirm the length of the proposed culvert. Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow. Please confirm the length of the proposed culvert. Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
2	Replace/Rehabilitate	10+689/ DA 42.8 ha/ 120	CSP Elliptical Span: 2500 Height: 1800mm Length: 30.6	CSP Circular Diameter: 1800mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert. Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
3	Retain	11+015/ DA:--/ 130	Concrete Box Span: 9000mm Height: 2600mm Length: 25m	Concrete Box Span: 9000mm Height: 2600mm Length: Extended	HEC-RAS (available at TRCA) Existing: Yes Proposed: No	HEC-RAS (available at TRCA)	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow. Please update the HEC-RAS model accordingly. Also, please clarify if there will be any negative impact and/or risk to the lands upstream of this crossing once the HEC-RAS model is updated. The HEC-RAS model can be obtained from TRCA.
4	Replace/Rehabilitate	11+603/ DA:5.7h a/ 140	CSP Circular Diameter: 1200mm Length: 21.5m	CSP Circular Diameter: 1200mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert. Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
5	Retain	11+800/ DA:377 ha/ 150	Concrete Box Span: 3660mm Height:	Concrete Box Span: 3660mm Height:	Culvert Master Existing: Yes Proposed:	HEC-RAS	Plan 4-1 shows that the existing 3660mmx1750mm conc.rigid frame will be replaced with 5000mmx2000mm box culvert. However, the report shows that the existing culvert will be retained. Please clarify these

	Recommendation	Station/ Drainage Area/ Catchment Id	Existing Culvert	Proposed culvert	Current Hydraulic Assessment	Suggested Hydraulic Assessment	TRCA's comment for each crossing
			1830mm Length: 29.4m	1830mm Length: Extended	No		discrepancies and develop an existing and proposed condition HEC-RAS model. Please confirm the length of the proposed culvert
	Retain	11+812/ DA:—/ 150	CSP Circular Diameter: 750mm Length: 20.6m	CSP Circular Diameter: 750mm Length: Extended	Culvert Master Existing: Yes Proposed: No	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
6	Retain	12+300/ DA:402. 1ha/ 160	Concrete Box Span: 5500mm Height: 19500mm Length: 37.9m	Concrete Box Span: 5500mm Height: 19500mm Length: Extended	Culvert Master Existing: Yes Proposed: No	HEC-RAS	Please confirm the length of the proposed culvert. Please establish an existing and proposed condition HEC-RAS model.
7	Replace/ Rehabilitate	12+500/ DA:89.6 ha/ 170	CSP Circular Diameter: 1800mm Length: 41.6m	CSP Circular Diameter: 1800mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
	Replace	12+787/ DA:1.4h a/ 180	CSP Circular Diameter: 600mm Length: 23.1m	CSP Circular Diameter: 600mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
	Replace	12+927/ DA:5.4h a/ 190	PVC Circular Diameter: 450mm	PVC Circular Diameter: 600mm	Culvert Master Existing: Yes	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.

	Recommendation	Station/ Drainage Area/ Catchment Id	Existing Culvert	Proposed culvert	Current Hydraulic Assessment	Suggested Hydraulic Assessment	TRCA's comment for each crossing
			Length: 21.6m	Length: Extended	Proposed: Yes		
8	Replace	13+763/ DA:20.3 ha/ 1100	CSP Circular Diameter: 1050mm Length: 24.7m	CSP Circular Diameter: twi900mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	The current 1050mm dia CSP culvert will be replaced with twin 900mm dia CSP culvert Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow. Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
9	Retain	13+970/ DA:35.1 ha/ 1110	PVC Circular Diameter: 915mm Length: 31m	PVC Circular Diameter: 915mm Length: Extended	Culvert Master Existing: Yes Proposed: No	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
10	Retain	14+177/ DA:60 ha/ 1120	PVC Circular Diameter: 1100mm Length: 30.7m	PVC Circular Diameter: 1100mm Length: Extended	Culvert Master Existing: Yes Proposed: No	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
11	Retain	14+400/ DA: - / 1130	Concrete Arch Span: 9000mm Height: 4000mm Length: 25m	Concrete Arch Span: 9000mm Height: 4000mm Length: Extended	HEC-RAS (available at TRCA) Existing: Yes Proposed: No	HEC-RAS (available at TRCA)	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow. Please update the HEC-RAS model accordingly. Also, please clarify if there will be any negative impact and/or risk to the lands upstream of this crossing once the HEC-RAS model is updated. The HEC-RAS model can be obtained from TRCA.

	Recommendation	Station/Drainage Area/Catchment Id	Existing Culvert	Proposed culvert	Current Hydraulic Assessment	Suggested Hydraulic Assessment	TRCA's comment for each crossing
12	Replace	15+156/ DA:560h a/ 1140	Concrete Box Span: 6070mm Height: 1250mm Length: 20.7m	Concrete Box Span: 6000mm Height: 1800mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	HEC-RAS	Please confirm the length of the proposed culvert Existing 6070mmx1250mm conc.rigid frame open will be replaced with 6000mmx1800mm culvert. Please establish an existing and proposed condition HEC-RAS model.
13	Retain	15+249/ DA:17.9 ha/ 1150	CSP Circular Diameter: 1200mm Length: 19.7m	CSP Circular Diameter: 1200mm Length: Extended	Culvert Master Existing: Yes Proposed: No	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
	Retain	15+454/ DA:5.6h a/ 1160	CSP Circular Diameter: 600mm Length: 20m	CSP Circular Diameter: 600mm Length: Extended	Culvert Master Existing: Yes Proposed: No	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
	Retain	15+693/ DA:1.8h a/ 1170	CSP Circular Diameter: 600mm Length: 18.5m	CSP Circular Diameter: 600mm Length: Extended	Culvert Master Existing: Yes Proposed: No	Culvert Master	Please confirm the length of the proposed culvert. Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
	Replace	15+885/ DA:---/ 1180	CSP Circular Diameter: 900mm Length: 30.3m	CSP Circular Diameter: 900mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.

	Recommendation	Station/ Drainage Area/ Catchment Id	Existing Culvert	Proposed culvert	Current Hydraulic Assessment	Suggested Hydraulic Assessment	TRCA's comment for each crossing
14	Replace	15+955/ DA:666h a/ 1190	Concrete Box Span: 4630mm Height: 1590mm Length: 21.7m	Concrete Box Span: 5480mm Height: 1520mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	HEC-RAS	Please confirm the length of the proposed culvert Please establish an existing and proposed condition HEC-RAS model.
15	Retain	16+327/ DA:5.4 ha/ 1200	CSP Circular Diameter: 1200mm Length: 20.1m	CSP Circular Diameter: 1200mm Length: Extended	Culvert Master Existing: Yes Proposed: No	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
16	Replace	16+700/ DA:2.3 ha/ 1210	CSP Circular Diameter: 450mm Length: 20.6m	CSP Circular Diameter: 600mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
	Replace/ Rehabilitate	16+842/ DA:0.9h a/ 1220	CSP Circular Diameter: 450mm Length: 18.7m	CSP Circular Diameter: 600mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
	Replace	16+887/ DA:0.9h a/ 1230	CSP Circular Diameter: 450mm Length: 17.8m	CSP Circular Diameter: 600mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.

Comment #13 Cont'd

Table 2

Station Range	Drainage Area	Road Length	Outlet Culvert Station	SWM Facility and OGS/Comments:
10+000 to 10+680	3.06 ha	680	10+690	<p>SWM Facility 1:</p> <ul style="list-style-type: none"> Please confirm that this pond is outside of the floodplain and ensure that the pond function will not be compromised under 100 year flood level. Please provide details as to how the pond outlet ties into the watercourse. Please refer to TRCA's Outfall Channel design standard.
10+680 to 11+020	1.53 ha	340	11+015	<p>Oil/grit separator west of outlet: SC1</p> <ul style="list-style-type: none"> Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the <i>Storm Outfall and Outfall Channel Design Criteria</i> (see attached)
11+020 to 11+380	1.62 ha	360	11+015	<p>Oil/grit separator west of outlet: SC2</p> <ul style="list-style-type: none"> Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the <i>Storm Outfall and Outfall Channel Design Criteria</i> (see attached)
11+380 to 11+800	1.89 ha	420	11+800	<p>Oil/grit separator west of outlet: SC3</p> <ul style="list-style-type: none"> Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the <i>Storm Outfall and Outfall Channel Design Criteria</i> (see attached)
11+800 to 12+055	1.15 ha	255	11+800	<p>Oil/grit separator west of outlet: SC4 (OGS 4)</p> <ul style="list-style-type: none"> Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the <i>Storm Outfall and Outfall Channel Design Criteria</i> (see attached)
12+055 to 12+920	3.89 ha	865	12+300	<p>SWM Facility 2: SWM 2</p> <ul style="list-style-type: none"> Please confirm that this pond is outside of the floodplain and ensure that the pond function will not be compromised under 100 year flood level.

Station Range	Drainage Area	Road Length	Outlet Culvert Station	SWM Facility and OGS/Comments:
12+920 to 13+760	3.78 ha	840	13+763	<ul style="list-style-type: none"> Please provide details as to how the pond outlet ties into the watercourse. Please refer to TRCA's Outfall Channel design standard.
				<p>SWM Facility 3: SWM 3.</p> <ul style="list-style-type: none"> Please confirm that this pond is outside of the floodplain and ensure that the pond function will not be compromised under 100 year flood level. Please provide details as to how the pond outlet ties into the watercourse. Please refer to TRCA's Outfall Channel design standard.
	???		13+763	<p>Oil/grit separator west of outlet: SC5 (OGS5).</p> <ul style="list-style-type: none"> This unit is shown on Plan 4-2 but not mentioned in the report, please clarify this discrepancies Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the Storm Outfall and Outfall Channel Design Criteria (see attached).
13+760 to 15+135	6.19 ha	1375	14+400	<p>SWM Facility 4: SWM 4.</p> <ul style="list-style-type: none"> Please confirm that this pond is outside of the floodplain and ensure that the pond function will not be compromised under 100 year flood level. Please provide details as to how the pond outlet ties into the watercourse. Please refer to TRCA's Outfall Channel design standard.
15+135 to 15+250	0.52 ha	115	15+249	<p>Oil/grit separator west of outlet: SC6 (OGS6).</p> <ul style="list-style-type: none"> Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the Storm Outfall and Outfall Channel Design Criteria (see attached).
15+250 to 15+695	2.00 ha	445	15+249	<p>Oil/grit separator west of outlet: SC7 (OGS7).</p> <ul style="list-style-type: none"> Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the Storm Outfall and Outfall Channel Design Criteria (see attached).
15+695 to 15+960	1.19 ha	265	15+955	<p>Oil/grit separator west of outlet: SC8 (OGS8).</p> <ul style="list-style-type: none"> Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the Storm Outfall and Outfall Channel Design Criteria (see attached).

Station Range	Drainage Area	Road Length	Outlet Culvert Station	SWM Facility and OGS/Comments:
15+960 to 16+870	4.10 ha	910	15+955	<p>is designed in accordance with standards from the LID manual.</p> <ul style="list-style-type: none"> • Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the Storm Outfall and Outfall Channel Design Criteria(see attached) . <p>SWM Facility 5 east of outlet:SWM 5-</p> <ul style="list-style-type: none"> • Please confirm that this pond is outside of the floodplain and ensure that the pond function will not be compromised under 100 year flood level. • Please provide details as to how the pond outlet ties into the watercourse. Please refer to TRCA's Outfall Channel design standard .

October 6, 2011

CFN 39924

BY MAIL AND EMAIL (hitesh.topiwala@peelregion.ca)

Mr. Hitesh Topiwala
Region of Peel
9445 Airport Road, 3rd Floor
Brampton, ON
L6S 4J3

Dear Mr. Topiwala:

**Re: Response to Meander Belt and 100 Year Erosion Limit Assessment Requirements
Mayfield Road Improvements (Airport Road to Coleraine Drive)
Municipal Class Environmental Assessment (EA) - Schedule C
Humber River Watershed; City of Brampton; Regional Municipality of Peel**

Toronto and Region Conservation Authority (TRCA) staff has met to discuss the watercourse crossing and detailed design requirements for fourteen watercourses crossing along Mayfield Road between Airport Road and Coleraine Drive. It is our understanding that this project involves widening Mayfield Road from Airport Road to Coleraine Drive, and that the preferred alignment is concept 4, which involves widening equally about the centreline in most areas, and to the north or south in areas where property impacts are expected.

On September 2, 2011 Stantec requested TRCA staff defer the requirements for the meander belt and 100 year erosion limit analysis until the detailed design stage. This request was made since the cost of undertaking these studies was not incorporated into their original bid. In general, it is TRCA staff's recommendation that these analyses be completed early in the EA stage, as the results and these analyses will be used to inform the project details through the EA process. This information is critical when determining the preferred structure design and will develop accurate cost estimates for the Region's capital budget process. TRCA staff understands that by completing the appropriate studies during the EA stage, the permit review and approval process is structured and will be generally be expedited as a result.

By completing the meander belt analysis and 100 year erosion limit analyses for each crossing and submitting the draft studies and recommended design options to TRCA staff, the proponent and their consultants, these results will facilitate negotiation when discussing the appropriate structure sizes and designs for each crossing. TRCA staff takes a risk based approach to their review of the study results and recommendations and will use this information to form basis of either supporting or rejecting the preferred design.

With respect to this particular project, TRCA staff has had the opportunity to review the requirements for the fourteen regulated watercourse in our previous letter dated December 1, 2009. Of the fourteen watercourses, TRCA staff had previously requested that meander belt and 100 year erosion limit analysis be completed for eleven of the watercourse locations (2, 3,5,6,7,9,10,11,12,13 and 14.)

As a result of the internal meeting held on September 8, 2011, TRCA senior staff determined that a meander belt and 100 year erosion limit analysis would be required for crossings if they are recommended for replacement. Three watercourse crossings (3, 5, and 6) may not require the analysis as culvert extensions are proposed at these locations. However, a hydraulic analysis is required to show that the proposed extension will not increase flooding risks at these locations (3, 5, and 6). Furthermore, TRCA staff is currently calculating the drainage areas for watercourse crossings 8, 15, and 16. If the

drainage area is less than 50 hectares at each crossing location then the meander belt and 100 year erosion limit analysis will not be required for these crossings as well. Since replacement structures are proposed at crossings 2,7,8,10,12 and 13 analyses should be completed for these crossing. TRCA staff will follow up on the crossing locations 8, 15 and 16, once the drainage areas have been calculated and will indicated whether analyses will be required for these crossings.

TRCA staff looks forward to reviewing your next submission which will include the meander belt and 100 year erosion limit analysis for the above watercourse crossing locations.

Should you have any questions or would like to setup a meeting, please contact me at extension 5769 or by email at bkrul@trca.on.ca.

Sincerely,

Ben Krul
Acting Planner II, Environmental Assessments
Planning and Development
BK/

Encl: Revised Watercourse Crossing Chart

BY EMAIL

cc: Stantec: John Bayley (john.bayley@stantec.ca)
TRCA: Carolyn Woodland, Director, Planning and Development
Beth Williston, Senior Manager, Environmental Assessment Planning
Sameer Dhalla, Senior Manager, Water Resources
Quentin Hanchard, Senior Manager, Development, Planning and Regulation
Dena Lewis, Manager, Planning Ecology
Gary Wilkins, Humber River Watershed Specialist

APPENDIX A

- Please note: All previously addressed comments and TRCA comments and responses from the first submission (October 7, 2009) have been removed from the table

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE	TRCA COMMENT (October 6, 2011)
1.	<p>Table 2 should be updated to include the additional regulated areas, as TRCA regulates all identified watercourse crossings. For example, at Station 2 a watercourse was identified both upstream and downstream of Mayfield Road which will result in both of these sections of watercourse being regulated.</p> <p>It should also be noted that the ELC work identifies wetlands within the study area which will need to also be considered when designing the road.</p>	Table 2 has been updated to reflect the additional regulated areas.	Comment Addressed.
4.	Please provide the correspondence received from MNR to verify the fisheries timing windows at each crossing.	<p>No written correspondence was received from MNR. Timing window information was provided verbally from MNR. Information related to fisheries timing windows has been added to the report in Section 6.</p> <p>Section 6 of the report has been completely updated and includes a quantification of impacts. In summary approx. 1.7 ha of wetland will be lost and a total length of 110 m of watercourse supporting Redside Dace habitat will be impacted (total for all 3 watercourses). The report suggests that specific mitigation measures be dealt with during final design consultation with the approval agencies. An approvals section has also been added.</p>	Please be advised that TRCA staff is unable to confirm the fisheries timing windows identified in table 8 until MNR has provided feedback related to the Endangered Species Act and reddsie dace.
5.	Based on the preliminary drawings, it appears that channel realignments may be required to accommodate the culvert extensions/replacements. Please ensure that the Natural Environment Report, EA and plan drawings clearly identify the watercourses and locations where realignments are required to accommodate the location/angle of proposed culvert structure(s). A discussion should be provided related to impacts and mitigation and at the detailed design stage; natural features (including watercourses and wetlands) should be accurately identified on the drawings.	Discussions with respect to the channel realignments and the potential impact to impact fish habitat had been provided in Section 6.1.4 of the report and the proposed culvert extensions are identified in table 7. The locations of anticipated wetland impacts are now shown on the figures, as well.	Comment Addressed.
6.	Further comments may be provided once details regarding the headwall/retaining wall are provided.	The specific details of headwalls and retaining walls will be addressed further during the detailed design phase of the project. At present, the assumption is that concrete or stone headwalls and retaining walls are provided to assure a reasonable costing perspective and that alternative material and configurations will be investigated and reviewed with the	To be addressed during detailed design.

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE	TRCA COMMENT (October 6, 2011)
		approving agencies during detailed design and permitting phase of the project. The current intent is to identify and confirm the anticipated grading impacts and required property limits in order to initiate discussions related to property acquisition.	
8.	<p>a) Table 7 indicates that aquatic habitat will be restored to pre-construction (or better) condition. In the case of lost wetland area, it is unclear how this will be accomplished. Please provide a plan for compensating for impacts where restoration to pre-construction conditions is not feasible. Please also ensure that impacts are quantified (i.e., wetland area lost, number of trees required for removal, loss of restorable habitat).</p> <p>b) Table 7 also indicates that habitat features such as pool riffle structures will be restored or enhanced. Table 4 identifies features, especially pools, which are immediately downstream of the existing culverts. The extension of the culverts will likely result in the loss of these pools. Please indicate which habitat features will be impacted/removed and indicate how these features will be restored/enhanced. The habitat value of these features should also be assessed to ensure that they are not providing a critical function to the aquatic communities in the area, especially as it relates to reddsides.</p> <p>c) The submitted plans indicate that land is being acquired for stormwater management (SWM) facilities related to the road work. Please provide further analysis of the impacts related to the construction of the SWM facilities, such as the required removal of vegetation communities and the impacts related to any required outfalls. Please also provide further analysis related to the appropriateness of the proposed locations from an ecological perspective.</p>	<p>a) The loss of wetland habitat has been quantified and assessed in Section 6.1.1 of the report. The areas of wetland loss are shown on the revised figures. A compensation plan for the loss of habitat and any habitat restoration or enhancement plans will be provided during the final design phase.</p> <p>b) Table 7 suggests that during the final stage that habitat features such as pools and riffle structures be restored or enhanced. The location and detailed design of these restoration measures will be provided during detailed design and will be a requirement for an ESA permit approval for the development of the roadway within protected reddsides.</p> <p>c) An assessment of the proposed SWM facility locations has been provided in sections 6.1.5.</p>	<p>a) The response letter indicates that a compensation plan will be developed during the final design phase. Please identify this commitment in the EA document. Please also provide an inventory of trees required for removal within TRCA's regulated area.</p> <p>b) It is TRCA's expectation that impacted aquatic habitat will be restored or compensated for. The details of the compensation can be determined during the final design stage. Please identify this commitment in the EA document. Please also note that any compensation plan may require modification based on MNR's interest through the ESA.</p> <p>c) Section 6.1.5 indicates that no impacts are expected. While this section indicates that SWM ponds will not be located within any natural heritage features, they can have a negative impact on receiving watercourses. SWM ponds often discharge to watercourses which are unable to assimilate the increased flows causing excessive erosion. Thermal impacts from SWM ponds can have an adverse effect on receiving watercourses as well. Please indicate how impacts to the receiving watercourses will be mitigated.</p>

**Comments based on submission of additional reports and information.

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE	TRCA COMMENT (October 6, 2011)
Fluvial Geomorphology			
10.	TRCA's summary sheet for structure sizing indicates a number of analyses that must be completed for selected watercourses	No response.	Outstanding.

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE	TRCA COMMENT (October 6, 2011)
	within the study area. For example, a meander belt analysis and 100-year erosion limit analysis must be completed for watercourses 2, 3, 5, 6, 7, 9, 10, 11, 12, 13 and 14. The table also indicates geomorphologic analyses may be required (to be determined) at watercourses 8, 15 and 16. Please complete the required analyses as these may provide input to the proposed culvert sizes. Please also ensure that the EA clearly identifies in the body of the report the proposed works at each crossing, including sizing and locations of culvert replacements, extensions and watercourse realignments.		
11.	Please indicate which culverts should be designed with a low flow channel for fisheries passage and provide information such as dimensions and stone sizing for these proposed channels.	No response.	Outstanding.
Preliminary Culvert and Stormwater Management Report			
12.	Watercourses with an upstream contributing drainage area greater than 50 ha are regulated by the TRCA. For these watercourses please demonstrate that the proposed culvert size and changes to the road profile will maintain or reduce the extent of the regulatory floodplain upstream of the crossing location (will not negatively impact flood levels).	No response.	Outstanding.
13.	The report states that preliminary modeling was completed for the 5 proposed SWM ponds to ensure that they are sufficient to provide the required quality and quantity controls, as per the Humber River Watershed Plan. Please provide the erosion control criteria applied for sizing the extended detention portion of the facility, and the predevelopment flows used to size the flood control portion of the facility (unit flow rates for basin F). Please provide a table in the report showing the amount of storage used during each event modeled and the controlled flow at that storage level.	No response.	Outstanding.
14.	TRCA staff is supportive of the use of SWM ponds to meet stormwater objectives for the road. However, there is limited space available within the right-of-way. Consequently, it is possible that failure to acquire land adjacent to the right-of-way may limit the effectiveness of the proposed SWM strategy. Please comment on opportunities to achieve SWM objectives within the right-of-way should land acquisition not be possible.	No response.	Outstanding.
15.	Please note that the TRCA position regarding use of oil grit separator (OGS) units, regardless of manufacturer, is to recognize the unit as being capable of achieving up to a 50%	No response	Outstanding.

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE	TRCA COMMENT (October 6, 2011)
	total suspended solids (TSS) removal. As TRCA staff requires 80% TSS removal, additional measures must be considered. Please investigate opportunities to implement additional water quality measures downstream of each of the 7 proposed OGS units. Please update plan drawings to show the locations of additional water quality treatment measures.		
Hydrogeology			
16.	The hydrogeology report does not contain the borehole logs. Please provide a copy that has the borehole logs referred to in the report.	No response.	Outstanding.
General Comments			
17.	Please number the watercourse crossings on the preliminary plans.	The reference watercourse numbers provided by the TRCA have been included on the latest study plans along with photographs of the existing culvert ends.	Comment Addressed.
18.	Please ensure that details for all crossings are shown on the plans. For instance, details for the crossings along The Gore Road both north and south of Mayfield Road appear to be missing. If this work is going to be completed as part of The Gore Road widening, please clearly indicate this in the EA.	Where applicable, additional notations and general representations have been added to the plans for public presentation. The Gore Road culvert references have been added to the plans and general impacts noted. A notation will also be included in the Class EA documentation to advise about the related culvert impacts and the potential for inclusion of related improvements in The Gore Road of Mayfield Road widening projects.	Comment Addressed.
19.	Preliminary plans identify the future Major Mackenzie Drive extension. Please re-label this future road as "by others under a separate permitting and review process".	The requested revision to labeling and also the details and notations on the drawings have been made to reflect the preliminary nature of the extension and related future roadway location.	Comment Addressed.



Stantec

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Kitchener ON N2H 6M7
Tel: (519) 579-4410

May 04, 2012

File: 160210480/37

Toronto Region Conservation
5 Shoreham Drive
Downsview Ontario
M3N 1S4
Canada

Attention: Ben Krul, Acting Planner II

Dear Ben:

Reference: Mayfield Road Class EA – Airport Road to Coleraine Drive - your file CFN39924

This communication is provided as a follow-up to our correspondence and the related attachments submitted to the TRCA on May 11, 2011. In addition to this correspondence we also provided various study reports and revised study plans to the TRCA on April 20, 2011.

We have attached with this correspondence an update on three items from TRCA's Appendix "A" provided on December 1, 2010. The updates are additions to the responses we provided in our May 11, 2011 correspondence. Stantec's additional comments are highlighted in red in association with items 4, 10 and 15.

In the absence of a formal response from the TRCA on the previous submission, it is our desire that we will receive an official response from the TRCA in preparation for the finalization of the project Environmental Study Report (ESR).

Please contact the undersigned if you have any questions.

Sincerely,

STANTEC CONSULTING LTD.

John Bayley, P. Eng.
Managing Leader, Transportation
Tel: (519) 585-7112
Fax: (519) 579-4239
john.bayley@stantec.com

Enclosures - Appendix "A" w/ Revised Comments

cc: Hitesh Topiwala, Region of Peel

APPENDIX A

ITEM	TRCA COMMENT (October 7, 2009)	HOW COMMENT IS BEING ADDRESSED OCTOBER 2010	TRCA COMMENT (December 1, 2010)	RESPONSE TO December 1, 2010 COMMENTS
1.	Several discrepancies exist between Table 2 in the report and the Summary Sheet for Structure Sizing (Culvert, Bridge) and Pipe Crossing of Watercourses (Water, Sewer) provided by TRCA. For example, at Location #2, TRCA's summary sheet indicates that a watercourse is located both upstream and downstream of Mayfield Road. Table 2, however, only identifies the watercourse downstream. Please revise Table 2 so that it corresponds with TRCA's summary sheet (attached).	Comment noted. Table 2 has been revised to correspond with TRCA's summary sheet.	Table 2 should be updated to include the additional regulated areas, as TRCA regulates all identified watercourse crossings. For example, at Station 2 a watercourse was identified both upstream and downstream of Mayfield Road which will result in both of these sections of watercourse being regulated. It should also be noted that the ELC work identifies wetlands within the study area which will need to also be considered when designing the road.	<i>Table 2 has been updated to reflect the additional regulated areas.</i>
2.	Table 7 indicates that "enhanced erosion control measures" will be installed. Please clarify what is meant by "enhanced erosion control measures".	Comment noted. The reference to 'enhanced erosion control measures' in Table 7 has been replaced with 'appropriate erosion control measures'.	Comment addressed.	<i>No additional action required. Past comments were addressed satisfactorily.</i>
3.	Table 7 indicates that any stranded fish in isolated work areas will be captured and released. Please confirm that MNR has been contacted and that they have approved this approach as it relates to reddsides dace.	Comment noted. Table 7 has been updated to recommend that MNR should be contacted during the final design stage to confirm the appropriate relocation strategy for those watercourses with the potential to contain reddsides dace.	Comment addressed.	<i>No additional action required. Past comments were addressed satisfactorily.</i>
4.	Please contact MNR to confirm which tributaries will be managed for reddsides dace. In order to ensure accuracy, please indicate in the ESR which timing windows are being applied to each specific watercourse after consulting with MNR.	Both the MNR and the ROM have been contacted to confirm the presence of reddsides dace within the study area. Table 7 in the report identifies the appropriate timing windows for each watercourse.	Please provide the correspondence received from MNR to verify the fisheries timing windows at each crossing.	<i>No written correspondence was received from MNR. Timing window information was provided verbally from MNR. Information related to fisheries timing windows has been added to the report in Section 6. Section 6 of the report has been completely updated and includes a 'quantification' of impacts. In summary approx 1.7 ha of wetland will be lost and a total length of 110 m of watercourse supporting Redside Dace habitat will be impacted (total for all 3 watercourses). The report suggests that specific mitigation measures be dealt with during final design in consultation with the approval agencies. An approvals section has also been added. Update May 4, 2012: A meeting was held on April 23, 2012 with MNR and Region of Peel. MNR (M.Heaton) provided updated requirements including the document "Draft Guidance for Development Activities in Redside Dace Protected Habitat., February 2011. Crossings C-3, C-6 and C-11 have been identified as protected habitat for Redside dace. Following a study completed by MNR in late 2011, Crossing C-3 has been identified as recovering habitat and C-11 has been identified as occupied habitat.</i>
5.	The culvert inspection report indicates that in some locations the watercourse will be channelized, but it is unclear what this means. Please provide additional information to clarify what "channelizing" the watercourses entails.	This comment by our structural engineer was in response to the fact that the flows in the creek are being blocked somewhat by vegetation. However a more appropriate comment is "flow characteristics of channel to be reviewed as part of detail design". It is important	Based on the preliminary drawings, it appears that channel realignments may be required to accommodate the culvert extensions/replacements. Please ensure that the Natural Environment Report, EA and plan drawings clearly identify the watercourses and locations where realignments are	<i>Discussions with respect to the channel realignments and the potential impact to fish habitat has been provided in Section 6.1.4 of the report and the proposed culvert extensions are identified in Table 7. The locations of anticipated wetland impacts are now shown on the figures,</i>

ITEM	TRCA COMMENT (October 7, 2009)	HOW COMMENT IS BEING ADDRESSED OCTOBER 2010	TRCA COMMENT (December 1, 2010)	RESPONSE TO December 1, 2010 COMMENTS
		to note that all culverts will be extended/replaced based on the preferred design alternative.	required to accommodate the location/angle of proposed culvert structure(s). A discussion should be provided related to impacts and mitigation and at the detailed design stage; natural features (including watercourses and wetlands) should be accurately identified on the drawings.	as well.
6.	The culvert inspection report indicates that gabion will be installed in several locations. Gabion is not preferred by TRCA staff. Please explore other options, such as the installation of riverstone/natural stone armouring where needed.	This comment by our structural engineer was in response to the fact that the existing culvert should be longer/extended under existing conditions. The option of extending the culvert or installing gabions to create a retaining or head wall structure was presented to address the fact that the culvert is not long enough. The comment will be revised to read "extend culvert or install headwall/retaining walls". However, please keep in mind that in every case the culverts will be extended and/or replaced.	Further comments may be provided once details regarding the headwall/retaining wall are provided.	<i>The specific details of headwalls and retaining walls will be addressed further during the detailed design phase of the project. At present, the assumption is that concrete or stone headwalls and retaining walls are provided to assure a reasonable costing perspective and that alternative material and configurations will be investigated and reviewed with the approving agencies during the detailed design and permitting phase of the project. The current intent is to identify and confirm the anticipated grading impacts and required property limits in order to initiate discussions related to property acquisition.</i>
7.	The Natural Environment Report mentions the "Culvert and Stormwater Management Report", however, we have not received this information. Please provide TRCA with a copy of the report for review.	2 Copies of the "Culvert and Stormwater Management Report, Mayfield Road EA – Airport Road to Coleraine Drive" by Stantec and dated September 2010 is included with this submission.	Comment addressed.	<i>No additional action required. Past comments were addressed satisfactorily.</i>
8.	The recommended mitigation and enhancement measures are based on generalizations and do not appear to correspond to a chosen preferred alternative. The scope of the proposed construction is still unknown and, as such, it is difficult to ascertain whether or not the mitigation measures for an unknown alternative are reasonable. Although the recommended mitigation seems reasonable as an overview, once alternatives have been considered, and a preferred alternative has been decided upon, further consideration, discussion and TRCA review will likely need to be given to mitigating a more specific set of impacts related to construction.	Table 7 has been scoped to address the specific mitigation measures for the preferred alternative.	<p>a) Table 7 indicates that aquatic habitat will be restored to pre-construction (or better) condition. In the case of lost wetland area, it is unclear how this will be accomplished. Please provide a plan for compensating for impacts where restoration to pre-construction conditions is not feasible. Please also ensure that impacts are quantified (i.e., wetland area lost, number of trees required for removal, loss of restorable habitat).</p> <p>b) Table 7 also indicates that habitat features such as pool riffle structures will be restored or enhanced. Table 4 identifies features, especially pools, which are immediately downstream of the existing culverts. The extension of the culverts will likely result in the loss of these pools. Please indicate which habitat features will be impacted/removed and indicate how these features will be restored/enhanced. The habitat value of these features should also be assessed to ensure that they are not providing a critical function to the aquatic communities in the area, especially as it relates to reddsides.</p> <p>c) The submitted plans indicate that land is being acquired for stormwater management (SWM) facilities related to the road work. Please provide further</p>	<p>a) <i>The loss of wetland habitat has been quantified and assessed in Section 6.1.1 of the report. The areas of wetland loss are shown on the revised figures. A compensation plan for the loss of habitat and any habitat restoration or enhancement plans will be provided during the final design phase.</i></p> <p>b) <i>Table 7 suggests that during the final stage that habitat features such as pools and riffle structures be restored or enhanced. The location and detailed design of these restoration measures will be provided during the final design stage and will be a requirement for an ESA permit approval for the development of the roadway within protected reddsides.</i></p> <p>c) <i>An assessment of the proposed SWM facility locations has been provided in section 6.1.5.</i></p>

ITEM	TRCA COMMENT (October 7, 2009)	HOW COMMENT IS BEING ADDRESSED OCTOBER 2010	TRCA COMMENT (December 1, 2010)	RESPONSE TO December 1, 2010 COMMENTS
			analysis of the impacts related to the construction of the SWM facilities, such as the required removal of vegetation communities and the impacts related to any required outfalls. Please also provide further analysis related to the appropriateness of the proposed locations from an ecological perspective.	
9.	Please revise Section 2.6, Toronto and Region Conservation Authority Policies, to read, "A decision regarding the approval of an application for a Permit from the TRCA is lead by Ontario Regulation 166/06 and is guided by the <i>Valley and Stream...</i> "	Comment noted. Section 2.6 has been revised as recommended.	Comment addressed.	No additional action required. Past comments were addressed satisfactorily.

**Comments based on submission of additional reports and information.

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE TO December 1, 2010 COMMENTS
Fluvial Geomorphology		
10.	TRCA's summary sheet for structure sizing indicates a number of analyses that must be completed for selected watercourses within the study area. For example, a meander belt analysis and 100-year erosion limit analysis must be completed for watercourses 2, 3, 5, 6, 7, 9, 10, 11, 12, 13 and 14. The table also indicates geomorphologic analyses may be required (to be determined) at watercourses 8, 15 and 16. Please complete the required analyses as these may provide input to the proposed culvert sizes. Please also ensure that the EA clearly identifies in the body of the report the proposed works at each crossing, including sizing and locations of culvert replacements, extensions and watercourse realignments.	<p><i>Fluvial Geomorphology will be addressed in greater detail during the detailed design phase of the project.</i></p> <p><i>Update May 4, 2012: A Meander Belt and 100 Year Erosion Analysis was prepared for the crossings identified by TRCA where replacements were being proposed. The report dated, February 2012 was provided under separate cover for review and comment by the TRCA. Subsequent to the April 23, 2012 meeting with MNR it appears that culvert extensions will not be permitted on watercourses that contain protected habitat for Redside Dace. The Region of Peel has also requested confirmation of available meander belt analyses for Crossings 3, 6 and 11, if available from the TRCA. The Region of Peel and Stantec are currently negotiating the delivery of additional analyses.</i></p>
11.	Please indicate which culverts should be designed with a low flow channel for fisheries passage and provide information such as dimensions and stone sizing for these proposed channels.	<i>This comment should be carried forward to detailed design and will be included in the ESR documentation.</i>
Preliminary Culvert and Stormwater Management Report		
12.	Watercourses with an upstream contributing drainage area greater than 50 ha are regulated by the TRCA. For these watercourses please demonstrate that the proposed culvert size and changes to the road profile will maintain or reduce the extent of the regulatory floodplain upstream of the crossing location (will not negatively impact flood levels).	<i>Of the 9 sites identified as having a drainage area of greater than 50 ha, 2 have been shown to overtop the existing road way and have a grade increased under the proposed road profile. These culverts will result in an increase in the Regulatory floodline given the current design. An increase in the proposed culvert sizes would mitigate this increase in flood elevations. Refer to the attached table for details.</i>
13.	The report states that preliminary modeling was completed for the 5 proposed SWM ponds to ensure that they are sufficient to provide the required quality and quantity controls, as per the Humber River Watershed Plan. Please	<i>The erosion control criteria applied for the sizing the extended detention portion of the facility was to retain the 25 mm rainfall</i>

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE TO December 1, 2010 COMMENTS
	provide the erosion control criteria applied for sizing the extended detention portion of the facility, and the predevelopment flows used to size the flood control portion of the facility (unit flow rates for basin F). Please provide a table in the report showing the amount of storage used during each event modeled and the controlled flow at that storage level.	event for a minimum of 48 hours. Pre-development flows, proposed flows, and proposed storage volumes are shown in the attached table.
14.	TRCA staff is supportive of the use of SWM ponds to meet stormwater objectives for the road. However, there is limited space available within the right-of-way. Consequently, it is possible that failure to acquire land adjacent to the right-of-way may limit the effectiveness of the proposed SWM strategy. Please comment on opportunities to achieve SWM objectives within the right-of-way should land acquisition not be possible.	<i>The proposed SWM facilities are located on undeveloped/agricultural areas and it is not anticipated that there will be a failure to acquire this land. Should future land acquisitions fail, water quantity control could be provided through underground storage and water quality control could be provided using a treatment train approach.</i>
15.	Please note that the TRCA position regarding use of oil grit separator (OGS) units, regardless of manufacturer, is to recognize the unit as being capable of achieving up to a 50% total suspended solids (TSS) removal. As TRCA staff requires 80% TSS removal, additional measures must be considered. Please investigate opportunities to implement additional water quality measures downstream of each of the 7 proposed OGS units. Please update plan drawings to show the locations of additional water quality treatment measures.	<p><i>It is proposed to provide a treatment train approach to water quality. Additional measures are required downstream of each of the proposed oil and grit separator units, such as grass swales, filter strips, check dams, and settlement/sediment basins. The exact configuration will depend on the available property. The outlet designs are currently being reviewed to consider expanded parallel ditches at the road side and relocation of the proposed OGS units to a suitable distance upstream of the respective outlets to permit construction of suitable enhanced ditches to improve additional removal of suspended solids (TSS removal). If the parallel roadside outlets cannot be accommodated then an extended outlet swale will be proposed parallel to the existing outlet watercourses. The related general details will be provided on the plans for presentation to the public.</i></p> <p><i>Update May 4, 2012: A review of the opportunities for additional enhanced swales associated with the proposed OGS units was completed and the direction of roadway drainage including some sections of contra (reverse) flow that were established on the storm sewer profile to ensure maximum capture and treatment for roadway drainage for the minor drainage system. The revised plans, submitted under separate cover to the TRCA, illustrate the addition of enhanced swales for each of the proposed OGS units along Mayfield Road.</i></p>
Hydrogeology		
16.	The hydrogeology report does not contain the borehole logs. Please provide a copy that has the borehole logs referred to in the report.	<i>The requested Borehole logs have been included with the replacement report appended to this response.</i>
General Comments		
17.	Please number the watercourse crossings on the preliminary plans.	<i>The reference watercourse numbers provided by the TRCA have been included on the latest study plans along with photographs of the existing culvert ends.</i>
18.	Please ensure that details for all crossings are shown on the plans. For instance, details for the crossings along The Gore Road both north and south of Mayfield Road appear to be missing. If this work is going to be completed as part of The Gore Road widening, please clearly indicate this in the EA.	<i>Where applicable, additional notations and general representations have been added to the plans for public presentation. The Gore Road culvert references have been added to the plans and general impacts noted. A notation will</i>

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE TO December 1, 2010 COMMENTS
19.	Preliminary plans identify the future Major Mackenzie Drive extension. Please re-label this future road as "by others under a separate permitting and review process".	<p><i>also be included in the Class EA documentation to advise about the related culvert impacts and the potential for inclusion of related improvements in The Gore Road or Mayfield Road widening project(s).</i></p> <p><i>The requested revision to labeling and also the details and notations on the drawing have been made to reflect the preliminary nature of the extension and related future roadway location.</i></p>

APPENDIX A

ITEM	TRCA COMMENT (October 7, 2009)	HOW COMMENT IS BEING ADDRESSED OCTOBER 2010	TRCA COMMENT (December 1, 2010)	RESPONSE TO December 1, 2010 COMMENTS
1.	Several discrepancies exist between Table 2 in the report and the Summary Sheet for Structure Sizing (Culvert, Bridge) and Pipe Crossing of Watercourses (Water, Sewer) provided by TRCA. For example, at Location #2, TRCA's summary sheet indicates that a watercourse is located both upstream and downstream of Mayfield Road. Table 2, however, only identifies the watercourse downstream. Please revise Table 2 so that it corresponds with TRCA's summary sheet (attached).	Comment noted. Table 2 has been revised to correspond with TRCA's summary sheet.	Table 2 should be updated to include the additional regulated areas, as TRCA regulates all identified watercourse crossings. For example, at Station 2 a watercourse was identified both upstream and downstream of Mayfield Road which will result in both of these sections of watercourse being regulated. It should also be noted that the ELC work identifies wetlands within the study area which will need to also be considered when designing the road. Comment addressed.	Table 2 has been updated to reflect the additional regulated areas.
2.	Table 7 indicates that "enhanced erosion control measures" will be installed. Please clarify what is meant by "enhanced erosion control measures".	Comment noted. The reference to "enhanced erosion control measures" in Table 7 has been replaced with "appropriate erosion control measures".	Comment addressed.	No additional action required. Past comments were addressed satisfactorily.
3.	Table 7 indicates that any stranded fish in isolated work areas will be captured and released. Please confirm that MNR has been contacted and that they have approved this approach as it relates to roadside dace.	Comment noted. Table 7 has been updated to recommend that MNR should be contacted during the final design stage to confirm the appropriate relocation strategy for those watercourses with the potential to contain roadside dace.	Comment addressed.	No additional action required. Past comments were addressed satisfactorily.
4.	Please contact MNR to confirm which tributaries will be managed for roadside dace. In order to ensure accuracy, please indicate in the ESR which timing windows are being applied to each specific watercourse after consulting with MNR.	Both the MNR and the ROM have been contacted to confirm the presence of roadside dace within the study area. Table 7 in the report identifies the appropriate timing windows for each watercourse.	Please provide the correspondence received from MNR to verify the fisheries timing windows at each crossing.	No written correspondence was received from MNR. Timing window information was provided verbally from MNR. Information related to fisheries timing windows has been added to the report in Section 6. Section 6 of the report has been completely updated and includes a "verification" of impacts. In summary, approx 1.7 ha of wetland will be lost and a total length of 110 m of watercourse supporting Roadside Dace habitat will be impacted (total for all 3 watercourses). The report suggests that specific mitigation measures be dealt with during final design in consultation with the approval agencies. An approvals section has also been added.
5.	The culvert inspection report indicates that in some locations the watercourse will be channelized, but it is unclear what this means. Please provide additional information to clarify what "channelizing" the watercourses entails.	This comment by our structural engineer was in response to the fact that the flows in the creek are being blocked somewhat by vegetation. However a more appropriate comment is "flow characteristics of channel to be reviewed as part of detail design". It is important	Based on the preliminary drawings, it appears that channel realignments may be required to accommodate the culvert extensions/replacements. Please ensure that the Natural Environment Report, EA and plan drawings clearly identify the watercourses and locations where realignments are	Update May 4, 2012: A meeting was held on April 20, 2012 with MNR and Region of Peel, MNR (M-Heaton) provided updated requirements including the document "Draft Guidance for Development Activities in Roadside Dace Protected Habitat, February 2011. Crossings C-3, C-8 and C-11 have been identified as protected habitat for Roadside dace. Following a study completed by MNR in late 2011, Crossing C-3 has been identified as recovering habitat and C-11 has been identified as occupied habitat.
				Discussions with respect to the channel realignments and the potential impact to fish habitat has been provided in Section 6.1.4 of the report and the proposed culvert extensions are identified in Table 7. The locations of anticipated wetland impacts are now shown on the figures.

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19.	Preliminary plans identify the future Major Mackenzie Drive extension. Please re-label this future road as "by others under a separate permitting and review process".	<p>also be included in the Class EA documentation to advise about the related culvert impacts and the potential for inclusion of related improvements in The Gore Road or Mayfield Road widening project(s).</p> <p>The requested revision to labeling and also the details and notations on the drawing have been made to reflect the preliminary nature of the extension and related future roadway location.</p>

Item 12

Station ID	Catchment Number	Catchment Area (ha)	Culvert No.	Existing CL Low Point (m)	Proposed CL Low Point (m)	Proposed Elevation Difference (m)	Regional Storm Flow Rate (m ³ /s)	Existing road overtopping during Regional Storm?	Comments
11+015	130	N/A	3	226.506	226.446	-0.06	90.70	No	Regulatory floodplain will be maintained or reduced
11+800 and 11+812	150	377.0	5	223.425	224.212	0.79	29.17	Yes	Regulatory floodplain will be increased
12+300	160	402.1	6	222.637	223.221	0.58	30.05	No	Regulatory floodplain will be maintained or reduced
12+500	170	89.6	7	225.330	225.331	0.00	8.52	No	Regulatory floodplain will be maintained or reduced
14+177	1120	60.0	12	221.018	220.873	-0.15	6.04	Yes	Regulatory floodplain will be maintained or reduced
14+400	1130	N/A	13	218.174	218.223	0.05	122.83	No	Regulatory floodplain will be maintained or reduced
15+156	1140	560.0	14	222.387	222.495	0.11	36.57	Yes	Regulatory floodplain will be increased
15+885	1180	70.7	18	224.374	224.197	-0.18	6.85	No	Regulatory floodplain will be maintained or reduced
15+955	1190	595.3	19	223.110	223.038	-0.07	41.02	Yes	Regulatory floodplain will be maintained or reduced

Item 13

SWM Facility	Drainage Area		Storm event								Regional Storm
			25 mm	2-year	5-year	10-year	25-year	50-year	100-year		
1	3.8	Existing Peak Flow (m ³ /s)	0.051	0.101	0.170	0.222	0.292	0.348	0.405	0.433	
		Proposed Peak Flow (m ³ /s)	0.031	0.049	0.070	0.089	0.114	0.132	0.150	0.301	
		Maximum Storage Volume (m ³)	354	556	757	880	1035	1151	1266	2017	
2	3.9	Existing Peak Flow (m ³ /s)	0.064	0.126	0.215	0.281	0.369	0.44	0.509	0.55	
		Proposed Peak Flow (m ³ /s)	0.031	0.048	0.066	0.085	0.109	0.127	0.146	0.356	
		Maximum Storage Volume (m ³)	496	773	1054	1226	1443	1608	1770	3158	
3	3.8	Existing Peak Flow (m ³ /s)	0.062	0.123	0.209	0.273	0.359	0.428	0.495	0.534	
		Proposed Peak Flow (m ³ /s)	0.038	0.06	0.094	0.118	0.147	0.17	0.192	0.38	
		Maximum Storage Volume (m ³)	440	689	918	1068	1257	1399	1540	2343	
4	6.2	Existing Peak Flow (m ³ /s)	0.101	0.199	0.335	0.442	0.582	0.689	0.803	0.872	
		Proposed Peak Flow (m ³ /s)	0.061	0.096	0.15	0.189	0.237	0.274	0.31	0.628	
		Maximum Storage Volume (m ³)	726	1137	1516	1763	2073	2307	2539	3826	
5	4.1	Existing Peak Flow (m ³ /s)	0.067	0.133	0.226	0.296	0.389	0.463	0.536	0.579	
		Proposed Peak Flow (m ³ /s)	0.044	0.07	0.11	0.137	0.171	0.196	0.221	0.419	
		Maximum Storage Volume (m ³)	467	732	968	1125	1324	1472	1621	2373	

Bayley, John

From: Bobak, Eva (MNR) <Eva.Bobak@ontario.ca>
Sent: Monday, March 26, 2012 4:33 PM
To: Bayley, John; hitesh.topiwala@peelregion.ca
Cc: Heaton, Mark (MNR)
Subject: Mayfield Road Class EA

Mr. Bayley,

Further to your memo dated May 11, 2011, we would appreciate the opportunity to be advised on the Natural Environment Report.

MNR would be pleased to meet with you within the next few weeks to receive an update as well as an opportunity to discuss the project in relation to the Endangered Species Act.

Please contact Mark Heaton (mark.heaton@ontario.ca) to arrange a meeting.

Thank you.

Eva Bobak
Ministry of Natural Resources
Aurora District Office
Tel 905.713.7398
Fax 905.713.7361
eva.bobak@ontario.ca



Stantec

Stantec Consulting Ltd.
49 Frederick Street
Kitchener ON N2H 6M7
Tel: (519) 579-4410

May 11, 2011
File: 160210480/37

Southern Region
Aurora District Office
50 Bloomington Road
Aurora, ON
L4G 0L8
Canada

Attention: Mark Heaton, Management Biologist

Dear Mr. Heaton:

Reference: Mayfield Road Class EA – Airport Road to Coleraine Drive

It is my understanding that this file is under your jurisdiction.

I would like to introduce myself as the new Project Manager representing Stantec on behalf of our client The Regional Municipality of Peel. I have replaced Mr. Dave Hallman as the Consultant Project Manager for this assignment and I would also like to advise you that Mr. Hitesh Topiwala has replaced Solmaz Zia as the Region of Peel's Project Manager during her maternity leave.

This correspondence is in response to previous communications between the MNR and the Region of Peel regarding the above noted ongoing Class EA study. We have included with this correspondence one (1) copy of the Natural Environment Report dated April 2011 and a set of drawings for your perusal. We understand that the Ministry will review the report and drawings and provide any comments that should be incorporated and/or addressed in the Class EA Study report.

The Region of Peel intends to proceed to a second Public Information Centre (PIC) in the near future (tentatively in June 2011) and wishes to ensure that the MNR's comments have been received and addressed in the study documentation to be presented at that meeting.

If deemed necessary following your review of the report and preliminary design drawings, Stantec and the Region of Peel would be pleased to meet with MNR staff to discuss any concerns that may arise. We have similarly forwarded the Natural Environment Report, concept drawings and specific commentary to the Toronto and Region Conservation Authority (TRCA) in response to their past communications and have invited similar comment from them. Their new project designate is Mr. Ben Krul, Acting Planner II, replacing Sharon Lingertat as our contact on the project.

We confirm that the recommended alternative will be Preliminary Design Concept 4 (MOD) – Modified alignment to minimize property impacts (i.e. widening equally about centerline in most areas, but widened to the north or south in certain areas to minimize property impacts). This concept also includes revisions to the overall planned road width in the settlement of Wildfield to minimize the impacts on existing identified heritage resources. We have attached copies of the updated preliminary plans for your reference and files.

Stantec

May 11, 2011
MNR, Mark Heaton
Page 2 of 2

Reference: Mayfield Road Class EA, Airport to Coleraine

Over the course of the study, we have received some feedback from yourself via the Region of Peel and also from Melinda Thompson-Black, Species at Risk Biologist at the MNR. We have copied Melinda on this covering letter as a courtesy.

We trust the enclosed information will permit the MNR to provide comments and confirm any concerns and/or requirements that may relate to the proposed project and related future construction activity. Where appropriate, the MNR's comments will be included in the study documentation. We would like to receive the MNR's response to this submission before the end of May 2011 if at all possible. Please contact the undersigned if you have any questions or wish to discuss the project details further.

Sincerely,

STANTEC CONSULTING LTD.



John Bayley, P. Eng.
Managing Leader, Transportation
Tel: (519) 585-7112
Fax: (519) 579-4239
john.bayley@stantec.com

Enclosures

cc: Melinda Thompson-Black, Species at Risk Biologist, Ministry of Natural Resources
Hitesh Topiwala, Region of Peel

Ministry of Aboriginal Affairs

160 Bloor St. East, 9th Floor
 Toronto, ON M7A 2E6
 Tel: (416) 326-4740
 Fax: (416) 325-1066
www.aboriginalaffairs.gov.on.ca

Ministère des Affaires Autochtones

160, rue Bloor Est, 9^e étage
 Toronto ON M7A 2E6
 Tél. : (416) 326-4740
 Téléc. : (416) 325-1066
www.aboriginalaffairs.gov.on.ca



DEC 23 2011

RECEIVED

JAN 03 2012

Reference: 552

Mr. Hitesh Topiwala, RPP, PMP
 Project Manager, Transportation Division
 Public Works, Region of Peel
 10 Peel Centre Drive, 4th Floor
 Brampton, ON L6T 4B9

PUBLIC WORKS
REGION OF PEEL

**Re: Notice of Public Information Centre (PIC) #2
 Municipal Class Environmental Assessment
 Mayfield Road (R.R. #14) Improvements from Airport Road to Coleraine Drive**

Dear Mr. Topiwala:

Thank you for your inquiry dated November 2, 2011 regarding the above-noted project.

As a member of the government review team, the Ministry of Aboriginal Affairs (MAA) identifies First Nation and Métis communities who may have the following interests in the area of your project:

- reserves;
- land claims or claims in litigation against Ontario;
- existing or asserted Aboriginal or treaty rights, such as harvesting rights; or
- an interest in your project's potential environmental impacts.

MAA is not the approval or regulatory authority for your project, and receives very limited information about projects in the early stages of their development. In circumstances where a Crown-approved project may negatively impact a claimed Aboriginal or treaty right, the Crown may have a duty to consult the Aboriginal community advancing the claim. The Crown often delegates procedural aspects of its duty to consult to proponents. Please note that the information in this letter should not be relied on as advice about whether the Crown owes a duty to consult in respect of your project, or what consultation may be appropriate. Should you have any questions about your consultation obligations, please contact the appropriate ministry.

You should be aware that many First Nations either have or assert rights to hunt and fish in their traditional territories. For First Nations, these territories typically include lands and waters outside of their reserves.

In some instances, project work may impact aboriginal archaeological resources. If any Aboriginal archaeological resources could be impacted by your project, you should contact your regulating or approving Ministry to inquire about whether any additional Aboriginal communities should be contacted. Aboriginal communities with an interest in archaeological resources may include communities who are not presently located in the vicinity of the proposed project.

With respect to your project, and based on the brief materials you have provided, we can advise that the project appears to be located in an area where First Nations may have existing or asserted rights or claims in MAA's land claims process or litigation, that could be impacted by your project. Contact information is below:

Six Nations of the Grand River Territory P.O. Box 5000 Ohsweken, Ontario NOA 1M0	Chief William K. Montour (519) 445-2201 (Fax) 445-4208 wkm@sixnations.ca arleenmaracle@sixnations.ca
Haudenosaunee Confederacy Chiefs Council 2634 6th Line Road RR 2 Ohsweken, Ontario NOA 1M0	Chief Allen MacNaughton (519) 755-2769
Mississaugas of the New Credit First Nation 2789 Mississauga Rd., R.R. #6 HAGERSVILLE, Ontario NOA 1H0	Chief Bryan LaForme (905) 768-1133 (Fax) 768-1225 bryanlaforme@newcreditfirstnation.com

The Government of Canada sometimes receives claims that Ontario does not receive, or with which Ontario does not become involved. For information about possible claims in the area, MAA recommends you contact the following federal contacts:

Ms. Janet Townson Claims Analyst, Ontario Team Specific Claims Branch Indian and Northern Affairs Canada 1310-10 Wellington St. Gatineau, QC K1A 0H4 Tel: (819) 953-4667 Fax: (819) 997-9873	Mr. Sean Darcy Manager Assessment and Historical Research Indian and Northern Affairs Canada 10 Wellington St. Gatineau, QC K1A 0H4 Tel: (819) 997-8155 Fax: (819) 997-1366
---	--

For federal information on litigation contact:

Mr. Marc-André Millaire
 Litigation Team Leader for Ontario
 Litigation Management and Resolutions Branch
 Indian and Northern Affairs Canada
 10 Wellington St.
 Gatineau, QC K1A 0H4
 Tel: (819) 994-1947
 Fax: (819) 953-1139

Additional details about your project or changes to it that suggest impacts beyond what you have provided to date may necessitate further consideration of which Aboriginal communities may be affected by or interested in your undertaking. If you think that further consideration may be required, please bring your inquiry to whatever government body oversees the regulatory process for your project.

The information upon which the above comments are based is subject to change. First Nation or Métis communities can make claims at any time, and other developments can occur that could result in additional communities being affected by or interested in your undertaking.

Yours truly,

A handwritten signature in black ink, appearing to read 'Pam Wheaton', written in a cursive style.

Pam Wheaton
Director, Aboriginal and Ministry Relationships Branch
Aboriginal Relations and Ministry Partnerships Division

07-4350-10



Trans-Northern Pipelines Inc.

45 VOGELL ROAD, SUITE 310
RICHMOND HILL, ONTARIO L4B 3P6
TEL: (905) 770-3353 FAX: (905) 770-8675

11-11-11

Public Works, Region of Peel
10 Peel Centre Drive, 4th Floor
Brampton, Ontario
L6T 4B9

Attention: Hitesh Topiwala

Dear Mr. Topiwala:

SUBJECT: Mayfield Road Improvements from Airport Road to Coleraine Drive

Thank you for your letter dated November 2, 2011 for the above-noted project. We would like to inform you that Trans-Northern does not have any facilities at these locations; therefore, we have no further comment.

Yours truly,

TRANS-NORTHERN PIPELINES INC.

Alex Hare for
Satish Kumar.
Coordinator, Crossings & Facilities

October 6, 2011

CFN 39924

BY MAIL AND EMAIL (hitesh.topiwala@peelregion.ca)

Mr. Hitesh Topiwala
Region of Peel
9445 Airport Road, 3rd Floor
Brampton, ON
L6S 4J3

Dear Mr. Topiwala:

**Re: Response to Meander Belt and 100 Year Erosion Limit Assessment Requirements
Mayfield Road Improvements (Airport Road to Coleraine Drive)
Municipal Class Environmental Assessment (EA) - Schedule C
Humber River Watershed; City of Brampton; Regional Municipality of Peel**

Toronto and Region Conservation Authority (TRCA) staff has met to discuss the watercourse crossing and detailed design requirements for fourteen watercourses crossing along Mayfield Road between Airport Road and Coleraine Drive. It is our understanding that this project involves widening Mayfield Road from Airport Road to Coleraine Drive, and that the preferred alignment is concept 4, which involves widening equally about the centreline in most areas, and to the north or south in areas where property impacts are expected.

On September 2, 2011 Stantec requested TRCA staff defer the requirements for the meander belt and 100 year erosion limit analysis until the detailed design stage. This request was made since the cost of undertaking these studies was not incorporated into their original bid. In general, it is TRCA staff's recommendation that these analyses be completed early in the EA stage, as the results and these analyses will be used to inform the project details through the EA process. This information is critical when determining the preferred structure design and will develop accurate cost estimates for the Region's capital budget process. TRCA staff understands that by completing the appropriate studies during the EA stage, the permit review and approval process is structured and will be generally be expedited as a result.

By completing the meander belt analysis and 100 year erosion limit analyses for each crossing and submitting the draft studies and recommended design options to TRCA staff, the proponent and their consultants, these results will facilitate negotiation when discussing the appropriate structure sizes and designs for each crossing. TRCA staff takes a risk based approach to their review of the study results and recommendations and will use this information to form basis of either supporting or rejecting the preferred design.

With respect to this particular project, TRCA staff has had the opportunity to review the requirements for the fourteen regulated watercourse in our previous letter dated December 1, 2009. Of the fourteen watercourses, TRCA staff had previously requested that meander belt and 100 year erosion limit analysis be completed for eleven of the watercourse locations (2, 3,5,6,7,9,10,11,12,13 and 14.)

As a result of the internal meeting held on September 8, 2011, TRCA senior staff determined that a meander belt and 100 year erosion limit analysis would be required for crossings if they are recommended for replacement. Three watercourse crossings (3, 5, and 6) may not require the analysis as culvert extensions are proposed at these locations. However, a hydraulic analysis is required to show that the proposed extension will not increase flooding risks at these locations (3, 5, and 6). Furthermore, TRCA staff is currently calculating the drainage areas for watercourse crossings 8, 15, and 16. If the

drainage area is less than 50 hectares at each crossing location then the meander belt and 100 year erosion limit analysis will not be required for these crossings as well. Since replacement structures are proposed at crossings 2,7,8,10,12 and 13 analyses should be completed for these crossing. TRCA staff will follow up on the crossing locations 8, 15 and 16, once the drainage areas have been calculated and will indicated whether analyses will be required for these crossings.

TRCA staff looks forward to reviewing your next submission which will include the meander belt and 100 year erosion limit analysis for the above watercourse crossing locations.

Should you have any questions or would like to setup a meeting, please contact me at extension 5769 or by email at bkrul@trca.on.ca.

Sincerely,

Ben Krul
Acting Planner II, Environmental Assessments
Planning and Development
BK/

Encl: Revised Watercourse Crossing Chart

BY EMAIL

cc: Stantec: John Bayley (john.bayley@stantec.ca)
TRCA: Carolyn Woodland, Director, Planning and Development
Beth Williston, Senior Manager, Environmental Assessment Planning
Sameer Dhalla, Senior Manager, Water Resources
Quentin Hanchard, Senior Manager, Development, Planning and Regulation
Dena Lewis, Manager, Planning Ecology
Gary Wilkins, Humber River Watershed Specialist

 **TORONTO AND REGION**
Conservation
for The Living City

July 3, 2012

CFN 39924

BY MAIL AND EMAIL (hitesh.topiwala@peelregion.ca)

Mr. Hitesh Topiwala
Region of Peel
10 Peel Centre Drive, Suite B, 4th Floor
Brampton, ON
L6T 4B9

Dear Mr. Topiwala:

Re: Response to Meander Belt, 100 Year Erosion Limit Assessment, Culvert and Stormwater Management Report, Natural Features Report, Tree Inventory and 30% Detailed Drawings Mayfield Road Improvements (Airport Road to Coleraine Drive) Municipal Class Environmental Assessment (EA) - Schedule C Humber River Watershed; City of Brampton; Regional Municipality of Peel

Toronto and Region Conservation Authority (TRCA) staff received the above noted reports and drawings for the above noted project on April 23, 2012.

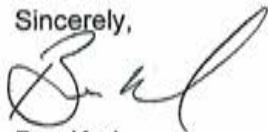
It is our understanding that this project involves widening Mayfield Road from Airport Road to Coleraine Drive, and that the preferred alignment is concept 4, which involves widening equally about the centreline in most areas, and to the north or south in areas where property impacts are expected.

While staff has no objection in principle to the preferred alternative design, the comments provided in Appendix A and B must be addressed before filing the EA. Please ensure the EA includes a table that clearly identifies all watercourse crossings as well as the existing culvert/bridge sizes, and proposed extension and replacement sizes.

Please ensure that the TRCA receives Three (3) copies of the draft ESR document. The draft EA document should be accompanied by a covering letter which uses the numbering scheme provided in this letter and identifies how these comments have been addressed.

Should you have any questions or would like to setup a meeting, please contact me at extension 5769 or by email at bkru@trca.on.ca.

Sincerely,



Ben Krul
Planner II, Environmental Assessment Planning
Planning and Development
BK/

Encl: TRCA letter dated October 6, 2011

BY EMAIL

cc: Stantec: John Bayley (john.bayley@stantec.ca)

TRCA: Beth Williston, Senior Manager, Environmental Assessment Planning
Sameer Dhalla, Senior Manager, Water Resources
Quentin Hanchard, Senior Manager, Development, Planning and Regulation
Gary Wilkins, Humber River Watershed Specialist

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Member of Conservation Ontario



APPENDIX A

- Please note: All previously addressed comments have been removed from the table. Please refer to the enclosed TRCA letter dated October 6, 2011 for previous comments.

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
4.	<p>a) Please note that fisheries timing windows should apply to not only in-water work but also near water work, however TRCA defers to MNR regarding fisheries timing windows for this project.</p> <p>b) Table 8 indicates that for warm water watercourses, no in water work should occur between March 15 and June 30. Please note that, for warm water systems, typically no inwater or near water work is to take place from April 1 to June 30 however, TRCA staff defers to MNR regarding fisheries timing windows for this project.</p> <p>c) Page 4.6 indicates that the Humber River Fisheries Management Plan identifies that the West Humber River and its tributaries are to be managed as warm water systems. Section 6.7.4 of the Humber River FMP identifies the management zones present in the sub-watershed which include brook trout, reidside dace and rainbow darter. This suggests that certain zones are not to be managed as warm water systems. Please clarify the discrepancy.</p>		
5.	<p>The Natural Environment Report has recommended the use of open bottom culverts. It appears that, primarily, closed bottom culverts have been proposed. In some locations, it appears that existing open bottom culverts are being replaced with closed bottom box culverts. Please provide a rationale for the decision to install closed bottom culverts when the Natural Environment Report has recommended open bottom culverts. Please ensure that the rationale includes an analysis of the location specific impacts (ie., ground water upwelling, function of native substrate, needs of fish species, etc.) Additional analysis should also be provided where existing open bottom culverts are being replaced with closed bottom culverts as this is not generally considered a desirable change to aquatic habitat.</p>		
6.	To be addressed during detailed design.		

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
4.	<p>a) Please note that fisheries timing windows should apply to not only in-water work but also near water work, however TRCA defers to MNR regarding fisheries timing windows for this project.</p> <p>b) Table 8 indicates that for warm water watercourses, no in water work should occur between March 15 and June 30. Please note that, for warm water systems, typically no inwater or near water work is to take place from April 1 to June 30 however, TRCA staff defers to MNR regarding fisheries timing windows for this project.</p> <p>c) Page 4.6 indicates that the Humber River Fisheries Management Plan identifies that the West Humber River and its tributaries are to be managed as warm water systems. Section 6.7.4 of the Humber River FMP identifies the management zones present in the sub-watershed which include brook trout, reidside dace and rainbow darter. This suggests that certain zones are not to be managed as warm water systems. Please clarify the discrepancy.</p>		
8.	<p>a) The mapping provided with the tree inventory is difficult to read especially the tree numbers. Please provide a clearer map with your future submission.</p> <p>b) Table 8 identifies a 2 year minimum for post construction monitoring. Such a program is only of value if a contingency plan has been developed to address deficiencies in design and function discovered through monitoring. Please provide a contingency plan in the event that the monitoring program identifies issues of concern. The plan should provide thresholds and triggers for implemented required remediation. It may be beneficial to revisit the length of the monitoring program to ensure a suitable duration once a contingency plan has been developed.</p>		

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
Fluvial Geomorphology			
10.	<p>a) The proponent completed a meander belt analysis and 100-year erosion limit analysis based on TRCA's standard for crossings 2, 7, 10 and 12. It is noted that due to the road widening, all culverts need to be altered. As previously requested, please clearly identify the proposed alterations at each crossing such as culvert extensions, culvert replacements and watercourse realignments.</p> <p>b) In the Meander Belt Analysis Report, it is mentioned that TRCA would require meander belt analyses for watercourses with contributing drainage areas of 50 ha. and greater. TRCA staff would like to clarify that a meander belt analysis may be required depending on site specific conditions such as size of a catchment and history of a watercourse. Please clarify why a meander belt analysis and 100-year erosion limit analysis were not conducted for crossings 3 (drainage area not identified), 5 (377 ha), 6 (402.1 ha), 11 (drainage area not identified), and 14 (595.3 ha).</p>		
11. Outstanding.			
Preliminary Culvert and Stormwater Management Report			
12.	<p>a) The Culvert and Stormwater Management Report indicates that event based hydrologic modelling was used to quantify the peak flow rates upstream of each culvert during the 25-year and 100-year rainfall events using the 1, 6, 12, and 24-hour AES storm distributions for Toronto, Ontario (utilized in the Humber River Watershed modeling) and the highest flow rate was used for the culvert analysis. TRCA recognizes that 25-year and 100-year peak flows were considered in hydraulic assessment to design the crossings as identified in MTO's B-100 Directive.</p> <p>b) Please note that TRCA utilizes the greater peak flow from either the 6 hour or 12 hour AES storms to estimate the 2 to 100 year peak flows for the Humber River watershed. As noted in MNR's Technical Guideline, the Regulatory flood plain is based on the greater of the uncontrolled 100 year or Regional flows for post development conditions. Please conduct a hydrologic analysis to determine the peak flow for the 100 year uncontrolled and the Regional storm events at the crossing locations and utilize the greater flow of the two storm events.</p>		

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
	<p>c) Under proposed conditions, there may be potential increase in the Regulatory flood level. Please clarify how this increase in water level will be mitigated such that there will not be any negative impact in the vicinity of crossings (i.e. upsize the culvert or clearance from landowners to accept the increase in flood level).</p> <p>d) It is recognized that a hydraulic assessment (Culvert Master or HEG RAS) was completed for 24 culverts under existing condition. However, under proposed condition a hydraulic assessment was conducted for only 13 crossings. Since all culverts will be extended and/or replaced, please provide a hydraulic assessment for all crossings under existing and proposed conditions to determine the impact of the proposed crossing under the Regulatory storm event.</p> <p>e) Please note that TRCA has engineered floodline mapping for Culvert #2 (11+015) and Culvert #11 (14+400) and estimated floodline mapping for Culvert #5 (11+800), Culvert #6 (12+300), Culvert # 12 (15+156) and Culvert # 14 (15+955).</p> <p>*The Table 1 in Appendix B lists some existing and proposed crossings details and identifies issues and/or comments and requirements for each crossing:</p>		
13.			<p>a) Post development peak flows must be controlled to pre-development peak flows for all storms up to and including the 100 year storm (i.e., 2, 5, 10, 25, 50, and 100 year storms). The predevelopment peak flows for 2 - 100 year storms should be established based on the unit flow rates for basin F which can be found in Humber Hydrology Update, 2002. Attached are the unit flow rate equations for basin F.</p> <p>b) The target release rates (pre-development flows based on unit flow equations) must be achieved to minimize the negative impacts on the receiving watercourse due to the increase in runoff volume during post development conditions. Please establish the target release rate for the SWM ponds and please adjust the sizes and design of each pond accordingly, also please provide digital copy of pre and post modeling (input and output)</p>

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
	<p>c) Please provide tables within the report and list the:</p> <ul style="list-style-type: none"> • pre and post catchment parameters • pre and post development peak flows, volumes • stage/storage/discharge characteristics of facility • required and proposed permanent pool and active storage volumes <p>d) For Stormwater Management Facility Design, please include the following:</p> <ul style="list-style-type: none"> • Supporting calculations for the outlet structure design (size, detention time, location etc) • Supporting calculations and details of the sediment forebay (conformance with MOE manual) • Location and details of the outfall and outfall channel design (see attached guidelines), and, • Supporting calculations and details of the emergency overflow structure <p>Erosion Control:</p> <p>The erosion control criterion for this site is the 48 hr detention of the runoff generated from 25 mm of rainfall. Please clarify the erosion control criteria utilized for the sizing of the extended detention portion of the facility.</p> <p>Stormwater Quality Control</p> <p>On site quality control is required to remove suspended solids from impervious surfaces such as streets and driveways. A criteria of 80% total suspended solid removal is required. The stormwater management criteria for this site require an enhanced water quality control. As noted previously, TRCA staff does not support the use of oil grit separator (OGS) in isolation. Therefore, an additional water quality measure such as, but not limited to grass swales is required. Please provide the detail and supporting calculation for the additional water quality control measure.</p>		

ITEM #	TRCA COMMENT (July 3, 2012)	RESPONSE	TRCA COMMENT
	*Please refer to the Table 2 in Appendix B that list the proposed SWM facilities, OGS units and TRCA comments for each facility and unit		
14.	There is no response for this comment, however TRCA staff assumes that land acquisition is possible to achieve SWM objectives within the right-of-way, please clarify this.		
15.	The proposed measures to achieve water quality protection comprise of oil grit separators (OGS) and grass-lined ditches. The locations of OGS units are shown on the plan drawing 4-1, 4-2 and 2-3. The grass-lined roadside ditches with a minimum 0.75 m wide bottom and flat longitudinal slopes to maximize the contact between vegetation and runoff are acceptable. Please ensure that the grass-lined roadside ditches are located downstream of each of the proposed OGS units.		
Hydrogeology			
16.	The hydrogeology report does not have borehole logs. Please provide a report that includes all borehole logs that where referred to in the hydrology report.		
General Comments			
20.	As widening may entail filling the sides of crossed valleys, future geotechnical work should speak to the level of grading involved as well as to long-term stability of proposed valley slopes at the new inclinations.		

Appendix B

Comment #12 Cont'd.

Recommendation	Station/ Drainage Area/ Catchment Id	Existing Culvert	Proposed culvert	Current Hydraulic Assessment	Suggested Hydraulic Assessment	TRCA's comment for each crossing

	Recommendation	Station/ Drainage Area/ Catchment Id	Existing Culvert	Proposed culvert	Current Hydraulic Assessment	Suggested Hydraulic Assessment	TRCA's comment for each crossing
1	Replace/ Rehabilitate	10+425/ DA: 10.1ha/ 110	CSP Circular Diameter: 1200mm Length: 19.6m	CSP Circular Diameter: 1200mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	The report (Table 4) shows that the size of the proposed culvert is 1200mm dia CSP whereas Plan 4-1 shows that the existing 1200mm dia CSP will be replaced with 675mm STM. Please clarify this discrepancy. Please confirm the length of the proposed culvert. Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow. Please confirm the length of the proposed culvert. Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
2	Replace/ Rehabilitate	10+689/ DA 42.8 ha/ 120	CSP Elliptical Span: 2500 Height: 1800mm Length: 30.6	CSP Circular Diameter: 1800mm Length: Extended Concrete Box Span: 9000mm Height: 2600mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert. Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
3	Retain	11+015/ DA:-/ 130	Concrete Box Span: 9000mm Height: 2600mm Length: 25m	Concrete Box Span: 9000mm Height: 2600mm Length: Extended	HEC-RAS (available at TRCA) Existing: Yes Proposed: No	HEC-RAS (available at TRCA)	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow. Please update the HEC-RAS model accordingly. Also, please clarify if there will be any negative impact and/or risk to the lands upstream of this crossing once the HEC-RAS model is updated. The HEC-RAS model can be obtained from TRCA.
4	Replace/ Rehabilitate	11+603/ DA:5.7h a/ 140	CSP Circular Diameter: 1200mm Length: 21.5m	CSP Circular Diameter: 1200mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert. Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
5	Retain	11+800/ DA:377 ha/ 150	Concrete Box Span: 3660mm Height:	Concrete Box Span: 3660mm Height:	Culvert Master Existing: Yes Proposed:	HEC-RAS	Plan 4-1 shows that the existing 3660mmx1750mm conc.rigid frame will be replaced with 5000mmx2000mm box culvert. However, the report shows that the existing culvert will be retained. Please clarify these

Recommendation	Station/ Drainage Area/ Catchment id	Existing Culvert	Proposed culvert	Current Hydraulic Assessment	Suggested Hydraulic Assessment	TRCA's comment for each crossing
		1830mm Length: 29.4m	1830mm Length: Extended	No		discrepancies and develop an existing and proposed condition HEC-RAS model. Please confirm the length of the proposed culvert
Retain	11+812/ DA:--/ 150	CSP Circular Diameter: 750mm Length: 20.6m	CSP Circular Diameter: 750mm Length: Extended	Culvert Master Existing: Yes Proposed: No	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
6 Retain	12+300/ DA:402. 1ha/ 160	Concrete Box Span: 5500mm Height: 19500mm Length: 37.9m	Concrete Box Span: 5500mm Height: 19500mm Length: Extended	Culvert Master Existing: Yes Proposed: No	HEC-RAS	Please confirm the length of the proposed culvert. Please establish an existing and proposed condition HEC-RAS model.
7 Replace/ Rehabilitate	12+500/ DA:89.6 ha/ 170	CSP Circular Diameter: 1800mm Length: 41.6m	CSP Circular Diameter: 1800mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
Replace	12+787/ DA:1.4h a/ 180	CSP Circular Diameter: 600mm Length: 23.1m	CSP Circular Diameter: 600mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
Replace	12+927/ DA:5.4h a/ 190	PVC Circular Diameter: 450mm	PVC Circular Diameter: 600mm	Culvert Master Existing: Yes	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.

	Recommendation	Station/ Drainage Area/ Catchment Id	Existing Culvert	Proposed culvert	Current Hydraulic Assessment	Suggested Hydraulic Assessment	TRCA's comment for each crossing
8	Replace	13+763/ DA:20.3 ha/ 1100	Length: 21.6m CSP Circular Diameter: 1050mm Length: 24.7m	Length: Extended CSP Circular Diameter: twin900mm Length: Extended	Proposed: Yes Culvert Master Existing: Yes Proposed: Yes	Culvert Master	The current 1050mm dia CSP culvert will be replaced with twin 900mm dia CSP culvert Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow. Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
9	Retain	13+970/ DA:35.1 ha/ 1110	PVC Circular Diameter: 915mm Length: 31m	PVC Circular Diameter: 915mm Length: Extended	Culvert Master Existing: Yes Proposed: No	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
10	Retain	14+177/ DA:60 ha/ 1120	PVC Circular Diameter: 1100mm Length: 30.7m	PVC Circular Diameter: 1100mm Length: Extended	Culvert Master Existing: Yes Proposed: No	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
11	Retain	14+400/ DA:--/ 1130	Concrete Arch Span: 9000mm Height: 4000mm Length: 25m	Concrete Arch Span: 9000mm Height: 4000mm Length: Extended	HEC-RAS (available at TRCA) Existing: Yes Proposed: No	HEC-RAS (available at TRCA)	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow. Please update the HEC-RAS model accordingly. Also, please clarify if there will be any negative impact and/or risk to the lands upstream of this crossing once the HEC-RAS model is updated. The HEC-RAs model can be obtained from TRCA.

Recommendation	Station/ Drainage Area/ Catchment Id	Existing Culvert	Proposed culvert	Current Hydraulic Assessment	Suggested Hydraulic Assessment	TRCA's comment for each crossing
12 Replace	15+156/ DA:560h a/ 1140	Concrete Box Span: 6070mm Height: 1250mm Length: 20.7m	Concrete Box Span: 6000mm Height: 1800mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	HEC-RAS	Please confirm the length of the proposed culvert. Existing 6070mmx1250mm conc.rigid frame open will be replaced with 6000mmx1800mm culvert. Please establish an existing and proposed condition HEC-RAS model.
13 Retain	15+249/ DA:17.9 ha/ 1150	CSP Circular Diameter: 1200mm Length: 19.7m	CSP Circular Diameter: 1200mm Length: Extended	Culvert Master Existing: Yes Proposed: No	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
Retain	15+454/ DA:5.6h a/ 1160	CSP Circular Diameter: 600mm Length: 20m	CSP Circular Diameter: 600mm Length: Extended	Culvert Master Existing: Yes Proposed: No	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
Retain	15+693/ DA:1.8h a/ 1170	CSP Circular Diameter: 600mm Length: 18.5m	CSP Circular Diameter: 600mm Length: Extended	Culvert Master Existing: Yes Proposed: No	Culvert Master	Please confirm the length of the proposed culvert. Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
Replace	15+885/ DA:---/ 1180	CSP Circular Diameter: 900mm Length: 30.3m	CSP Circular Diameter: 900mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.

	Recommendation	Station/Drainage Area/Catchment Id	Existing Culvert	Proposed culvert	Current Hydraulic Assessment	Suggested Hydraulic Assessment	TRCA's comment for each crossing
14	Replace	15+955/ DA:666h a/ 1190	Concrete Box Span: 4630mm Height: 1590mm Length: 21.7m	Concrete Box Span: 5480mm Height: 1520mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	HEC-RAS	Please confirm the length of the proposed culvert Please establish an existing and proposed condition HEC-RAS model.
15	Retain	16+327/ DA:5.4 ha/ 1200	CSP Circular Diameter: 1200mm Length: 20.1m	CSP Circular Diameter: 1200mm Length: Extended	Culvert Master Existing: Yes Proposed: No	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
16	Replace	16+700/ DA:2.3 ha/ 1210	CSP Circular Diameter: 450mm Length: 20.6m	CSP Circular Diameter: 600mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
	Replace/ Rehabilitate	16+842/ DA:0.9h a/ 1220	CSP Circular Diameter: 450mm Length: 18.7m	CSP Circular Diameter: 600mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.
	Replace	16+887/ DA:0.9h a/ 1230	CSP Circular Diameter: 450mm Length: 17.8m	CSP Circular Diameter: 600mm Length: Extended	Culvert Master Existing: Yes Proposed: Yes	Culvert Master	Please confirm the length of the proposed culvert Please conduct a hydraulic analysis for pre and post conditions using the Regulatory peak flow.

Comment #13 Cont'd

Table 2

Station Range	Drainage Area	Road Length	Outlet Culvert Station	SWM Facility and OGS/Comments:
10+000 to 10+680	3.06 ha	680	10+690	<p>SWM Facility 1:</p> <ul style="list-style-type: none"> Please confirm that this pond is outside of the floodplain and ensure that the pond function will not be compromised under 100 year flood level. Please provide details as to how the pond outlet ties into the watercourse. Please refer to TRCA's Outfall Channel design standard.
10+680 to 11+020	1.53 ha	340	11+015	<p>Oil/grit separator west of outlet: SC1</p> <ul style="list-style-type: none"> Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the Storm Outfall and Outfall Channel Design Criteria (see attached)
11+020 to 11+380	1.62 ha	360	11+015	<p>Oil/grit separator west of outlet: SC2</p> <ul style="list-style-type: none"> Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the Storm Outfall and Outfall Channel Design Criteria (see attached)
11+380 to 11+800	1.89 ha	420	11+800	<p>Oil/grit separator west of outlet: SC3</p> <ul style="list-style-type: none"> Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the Storm Outfall and Outfall Channel Design Criteria (see attached)
11+800 to 12+055	1.15 ha	255	11+800	<p>Oil/grit separator west of outlet: SC4 (OGS 4)</p> <ul style="list-style-type: none"> Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the Storm Outfall and Outfall Channel Design Criteria (see attached)
12+055 to 12+920	3.89 ha	865	12+300	<p>SWM Facility 2: SWM 2</p> <ul style="list-style-type: none"> Please confirm that this pond is outside of the floodplain and ensure that the pond function will not be compromised under 100 year flood level.

Station Range	Drainage Area	Road Length	Outlet Culvert Station	SWM Facility and OGS/Comments:
12+920 to 13+760	3.78 ha	840	13+763	<p>SWM Facility 3: SWM 3:</p> <ul style="list-style-type: none"> Please provide details as to how the pond outlet ties into the watercourse. Please refer to TRCA's Outfall Channel design standard. Please confirm that this pond is outside of the floodplain and ensure that the pond function will not be compromised under 100 year flood level. Please provide details as to how the pond outlet ties into the watercourse. Please refer to TRCA's Outfall Channel design standard.
???	???		13+763	<p>Oil/grit separator west of outlet: SC5 (OGS5)</p> <ul style="list-style-type: none"> This unit is shown on Plan 4-2 but not mentioned in the report, please clarify this discrepancies Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the <i>Storm Outfall and Outfall Channel Design Criteria</i> (see attached)
13+760 to 15+135	6.19 ha	1375	14+400	<p>SWM Facility 4: SWM 4:</p> <ul style="list-style-type: none"> Please confirm that this pond is outside of the floodplain and ensure that the pond function will not be compromised under 100 year flood level. Please provide details as to how the pond outlet ties into the watercourse. Please refer to TRCA's Outfall Channel design standard.
15+135 to 15+250	0.52 ha	115	15+249	<p>Oil/grit separator west of outlet: SC6 (OGS6):</p> <ul style="list-style-type: none"> Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the <i>Storm Outfall and Outfall Channel Design Criteria</i> (see attached)
15+250 to 15+695	2.00 ha	445	15+249	<p>Oil/grit separator west of outlet: SC7 (OGS7):</p> <ul style="list-style-type: none"> Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the <i>Storm Outfall and Outfall Channel Design Criteria</i> (see attached)
15+695 to 15+960	1.19 ha	265	15+955	<p>Oil/grit separator west of outlet: SC8 (OGS8):</p> <ul style="list-style-type: none"> Please provide preliminary calculations for the sizing of the OGS unit. Please provide details of the proposed grass-lined roadside ditches and ensure it is designed in accordance with standards from the LID manual. Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the <i>Storm Outfall and Outfall Channel Design Criteria</i> (see attached)

Station Range	Drainage Area	Road Length	Outlet Culvert Station	SWM Facility and OGS/Comments:
15+960 to 16+870	4.10 ha	910	15+955	<p>is designed in accordance with standards from the LID manual.</p> <ul style="list-style-type: none"> • Please provide details of how the outlet ties into the watercourse. Please refer the TRCA's the <i>Storm Outfall and Outfall Channel Design Criteria</i> (see attached) .
				<p>SWM Facility 5 east of outlet: SWM 5.</p> <ul style="list-style-type: none"> • Please confirm that this pond is outside of the floodplain and ensure that the pond function will not be compromised under 100 year flood level. • Please provide details as to how the pond outlet ties into the watercourse. Please refer to TRCA's Outfall Channel design standard.

September 29, 2011

CFN 39924

BY MAIL AND EMAIL (hitesh.topiwala@peelregion.ca)

Mr. Hitesh Topiwala
Region of Peel
9445 Airport Road, 3rd Floor
Brampton, ON
L6S 4J3

Dear Mr. Topiwala:

**Re: Response to Meander Belt and 100 Year Erosion Limit Assessment Requirements
Mayfield Road Improvements (Airport Road to Coleraine Drive)
Municipal Class Environmental Assessment (EA) - Schedule C
Humber River Watershed; City of Brampton; Regional Municipality of Peel**

Toronto and Region Conservation Authority (TRCA) staff has met to discuss the watercourse crossing and detailed design requirements for fourteen watercourses crossing along Mayfield Road between Airport Road and Coleraine Drive. It is our understanding that this project involves widening Mayfield Road from Airport Road to Coleraine Drive, and that the preferred alignment is concept 4, which involves widening equally about the centreline in most areas, and to the north or south in areas where property impacts are expected.

On September 2, 2011 Stantec requested TRCA staff defer the requirements for the meander belt and 100 year erosion limit analysis until the detailed design stage. This request was made since the cost of undertaking these studies was not incorporated into their original bid. In general, it is TRCA staff's recommendation that these analyses be completed early in the EA stage, as the results and these analyses will be used to inform the project details through the EA process. This information is critical when determining the preferred structure design and will develop accurate cost estimates for the Region's capital budget process. TRCA staff understands that by completing the appropriate studies during the EA stage, the permit review and approval process is structured and will be generally be expedited as a result.

By completing the meander belt analysis and 100 year erosion limit analyses for each crossing and submitting the draft studies and recommended design options to TRCA staff, the proponent and their consultants, these results will facilitate negotiation when discussing the appropriate structure sizes and designs for each crossing. TRCA staff takes a risk based approach to their review of the study results and recommendations and will use this information to form basis of either supporting or rejecting the preferred design.

With respect to this particular project, TRCA staff has had the opportunity to review the requirements for the fourteen regulated watercourse in our previous letter dated December 1, 2009. Of the fourteen watercourses, TRCA staff had previously requested that meander belt and 100 year erosion limit analysis be completed for eleven of the watercourse locations (2, 3,5,6,7,9,10,11,12,13 and 14.)

As a result of the internal meeting held on September 8, 2011, TRCA senior staff determined that a meander belt and 100 year erosion limit analysis would be required for crossings if they are recommended for replacement. Three watercourse crossings (3, 5, and 6) may not require the analysis as culvert extensions are proposed at these locations. However, a hydraulic analysis is required to show that the proposed extension will not increase flooding risks at these locations (3, 5, and 6). Furthermore, TRCA staff is currently calculating the drainage areas for watercourse crossings 8, 15, and 16. If the drainage area is less than 50 hectares at each crossing location then the meander belt and 100 year erosion limit analysis will not be required for these crossings as well. Since replacement structures are

proposed at crossings 2,7,8,10,12 and 13 analyses should be completed for these crossing. TRCA staff will follow up on the crossing locations 8, 15 and 16, once the drainage areas have been calculated and will indicated whether analyses will be required for these crossings.

TRCA staff looks forward to reviewing your next submission which will include the meander belt and 100 year erosion limit analysis for the above watercourse crossing locations.

Should you have any questions or would like to setup a meeting, please contact me at extension 5769 or by email at bkrul@trca.on.ca.

Sincerely,

Ben Krul
Acting Planner II, Environmental Assessments
Planning and Development
BK/

Encl: Revised Watercourse Crossing Chart

BY EMAIL

cc: Stantec:John Bayley (john.bayley@stantec.ca)
TRCA: Carolyn Woodland, Director, Planning and Development
Beth Williston, Senior Manager, Environmental Assessment Planning
Sameer Dhalla, Senior Manager, Water Resources
Quentin Hanchard, Senior Manager, Development, Planning and Regulation
Dena Lewis, Manager, Planning Ecology
Gary Wilkins, Humber River Watershed Specialist

APPENDIX A

- Please note: All addressed comments and TRCA comments and responses from the first submission have been removed from the table

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE	TRCA COMMENT (September 29, 2011)
1.	<p>Table 2 should be updated to include the additional regulated areas, as TRCA regulates all identified watercourse crossings. For example, at Station 2 a watercourse was identified both upstream and downstream of Mayfield Road which will result in both of these sections of watercourse being regulated.</p> <p>It should also be noted that the ELC work identifies wetlands within the study area which will need to also be considered when designing the road.</p>	Table 2 has been updated to reflect the additional regulated areas.	Comment Addressed.
4.	Please provide the correspondence received from MNR to verify the fisheries timing windows at each crossing.	<p>No written correspondence was received from MNR. Timing window information was provided verbally from MNR. Information related to fisheries timing windows has been added to the report in Section 6.</p> <p>Section 6 of the report has been completely updated and includes a quantification of impacts. In summary approx. 1.7 ha of wetland will be lost and a total length of 110 m of watercourse supporting Redside Dace habitat will be impacted (total for all 3 watercourses). The report suggests that specific mitigation measures be dealt with during final design consultation with the approval agencies. An approvals section has also been added.</p>	Please be advised that TRCA staff is unable to confirm the fisheries timing windows identified in table 8 until MNR has provided feedback related to the Endangered Species Act and reidside dace.
5.	Based on the preliminary drawings, it appears that channel realignments may be required to accommodate the culvert extensions/replacements. Please ensure that the Natural Environment Report, EA and plan drawings clearly identify the watercourses and locations where realignments are required to accommodate the location/angle of proposed culvert structure(s). A discussion should be provided related to impacts and mitigation and at the detailed design stage; natural features (including watercourses and wetlands) should be accurately identified on the drawings.	Discussions with respect to the channel realignments and the potential impact to impact fish habitat had been provided in Section 6.1.4 of the report and the proposed culvert extensions are identified in table 7. The locations of anticipated wetland impacts are now shown on the figures, as well.	Comment Addressed.
6.	Further comments may be provided once details regarding the headwall/retaining wall are provided.	The specific details of headwalls and retaining walls will be addressed further during the detailed design phase of the	To be addressed during detailed design.

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE	TRCA COMMENT (September 29, 2011)
		<p>project. At present, the assumption is that concrete or stone headwalls and retaining walls are provided to assure a reasonable costing perspective and that alternative material and configurations will be investigated and reviewed with the approving agencies during detailed design and permitting phase of the project. The current intent is to identify and confirm the anticipated grading impacts and required property limits in order to initiate discussions related to property acquisition.</p>	
8.	<p>a) Table 7 indicates that aquatic habitat will be restored to pre-construction (or better) condition. In the case of lost wetland area, it is unclear how this will be accomplished. Please provide a plan for compensating for impacts where restoration to pre-construction conditions is not feasible. Please also ensure that impacts are quantified (i.e., wetland area lost, number of trees required for removal, loss of restorable habitat).</p> <p>b) Table 7 also indicates that habitat features such as pool riffle structures will be restored or enhanced. Table 4 identifies features, especially pools, which are immediately downstream of the existing culverts. The extension of the culverts will likely result in the loss of these pools. Please indicate which habitat features will be impacted/removed and indicate how these features will be restored/enhanced. The habitat value of these features should also be assessed to ensure that they are not providing a critical function to the aquatic communities in the area, especially as it relates to redbreasted dace.</p> <p>c) The submitted plans indicate that land is being acquired for stormwater management (SWM) facilities related to the road work. Please provide further analysis of the impacts related to the construction of the SWM facilities, such as the required removal of vegetation communities and the impacts related to any required outfalls. Please also provide further analysis related to the appropriateness of</p>	<p>a) The loss of wetland habitat has been quantified and assessed in Section 6.1.1 of the report. The areas of wetland loss are shown on the revised figures. A compensation plan for the loss of habitat and any habitat restoration or enhancement plans will be provided during the final design phase.</p> <p>b) Table 7 suggests that during the final stage that habitat features such as pools and riffle structures be restored or enhanced. The location and detailed design of these restoration measures will be provided during detailed design and will be a requirement for an ESA permit approval for the development of the roadway within protected redbreasted dace habitat.</p> <p>c) An assessment of the proposed SWM facility locations has been provided in sections 6.1.5.</p>	<p>a) The response letter indicates that a compensation plan will be developed during the final design phase. Please identify this commitment in the EA document. Please also provide an inventory of trees required for removal within TRCA's regulated area.</p> <p>b) It is TRCA's expectation that impacted aquatic habitat will be restored or compensated for. The details of the compensation can be determined during the final design stage. Please identify this commitment in the EA document. Please also note that any compensation plan may require modification based on MNR's interest through the ESA.</p> <p>c) Section 6.1.5 indicates that no impacts are expected. While this section indicates that SWM ponds will not be located within any natural heritage features, they can have a negative impact on receiving watercourses. SWM ponds often discharge to watercourses which are unable to assimilate the increased flows causing excessive erosion. Thermal impacts from SWM ponds can have an adverse effect on receiving watercourses as well. Please indicate how impacts to the receiving watercourses will be mitigated.</p>

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE	TRCA COMMENT (September 29, 2011)
	the proposed locations from an ecological perspective.		

**Comments based on submission of additional reports and information.

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE	TRCA COMMENT (September 29, 2011)
Fluvial Geomorphology			
10.	TRCA's summary sheet for structure sizing indicates a number of analyses that must be completed for selected watercourses within the study area. For example, a meander belt analysis and 100-year erosion limit analysis must be completed for watercourses 2, 3, 5, 6, 7, 9, 10, 11, 12, 13 and 14. The table also indicates geomorphologic analyses may be required (to be determined) at watercourses 8, 15 and 16. Please complete the required analyses as these may provide input to the proposed culvert sizes. Please also ensure that the EA clearly identifies in the body of the report the proposed works at each crossing, including sizing and locations of culvert replacements, extensions and watercourse realignments.		Outstanding.
11.	Please indicate which culverts should be designed with a low flow channel for fisheries passage and provide information such as dimensions and stone sizing for these proposed channels.		Outstanding.
Preliminary Culvert and Stormwater Management Report			
12.	Watercourses with an upstream contributing drainage area greater than 50 ha are regulated by the TRCA. For these watercourses please demonstrate that the proposed culvert size and changes to the road profile will maintain or reduce the extent of the regulatory floodplain upstream of the crossing location (will not negatively impact flood levels).		Outstanding.
13.	The report states that preliminary modeling was completed for the 5 proposed SWM ponds to ensure that they are sufficient to provide the required quality and quantity controls, as per the Humber River Watershed Plan. Please provide the erosion control criteria applied for sizing the extended detention portion of the facility, and the predevelopment flows used to size the flood control portion of the facility (unit flow rates for basin F).		Outstanding.

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE	TRCA COMMENT (September 29, 2011)
	Please provide a table in the report showing the amount of storage used during each event modeled and the controlled flow at that storage level.		
14.	TRCA staff is supportive of the use of SWM ponds to meet stormwater objectives for the road. However, there is limited space available within the right-of-way. Consequently, it is possible that failure to acquire land adjacent to the right-of-way may limit the effectiveness of the proposed SWM strategy. Please comment on opportunities to achieve SWM objectives within the right-of-way should land acquisition not be possible.		Outstanding.
15.	Please note that the TRCA position regarding use of oil grit separator (OGS) units, regardless of manufacturer, is to recognize the unit as being capable of achieving up to a 50% total suspended solids (TSS) removal. As TRCA staff requires 80% TSS removal, additional measures must be considered. Please investigate opportunities to implement additional water quality measures downstream of each of the 7 proposed OGS units. Please update plan drawings to show the locations of additional water quality treatment measures.		Outstanding.
Hydrogeology			
16.	The hydrogeology report does not contain the borehole logs. Please provide a copy that has the borehole logs referred to in the report.		Outstanding.
General Comments			
17.	Please number the watercourse crossings on the preliminary plans.	The reference watercourse numbers provided by the TRCA have been included on the latest study plans along with photographs of the existing culvert ends.	Comment Addressed.
18.	Please ensure that details for all crossings are shown on the plans. For instance, details for the crossings along The Gore Road both north and south of Mayfield Road appear to be missing. If this work is going to be completed as part of The Gore Road widening, please clearly indicate this in the EA.	Where applicable, additional notations and general representations have been added to the plans for public presentation. The Gore Road culvert references have been added to the plans and general impacts noted. A notation will also be included in the Class EA documentation to advise about the related culvert impacts and the potential for inclusion of related improvements in The Gore Road of Mayfield Road widening projects.	Comment Addressed.
19.	Preliminary plans identify the future Major Mackenzie Drive	The requested revision to labeling and also the details and	Comment Addressed.

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE	TRCA COMMENT (September 29, 2011)
	extension. Please re-label this future road as "by others under a separate permitting and review process".	notations on the drawings have been made to reflect the preliminary nature of the extension and related future roadway location.	



Stantec

Stantec Consulting Ltd.
49 Frederick Street
Kitchener ON N2H 6M7
Tel: (519) 579-4410

May 11, 2011
File: 160210480/37

Toronto Region Conservation
5 Shoreham Drive
Downsview Ontario
M3N 1S4
Canada

Attention: Ben Krul, Acting Planner II

Dear Ben:

Reference: Mayfield Road Class EA – Airport Road to Coleraine Drive - your file CFN39924

I would like to introduce myself as the new Project Manager representing Stantec on behalf of our client The Regional Municipality of Peel. I have replaced Mr. Dave Hallman as the Consultant Project Manager for this assignment and I would also like to advise you that Mr. Hitesh Topiwala has replaced Solmaz Zia as the Region of Peel's Project Manager during her maternity leave. It is my understanding that this file has been similarly directed to you by our previous contact Sharon Lingertat.

This communication is in response to the Toronto and Region Conservation Authority (TRCA) correspondence dated December 1, 2010 (see attached). We have also attached a copy of the Natural Environment Report updated to include information requested by the TRCA and dated April 2011.

In the subject correspondence, the TRCA commented that staff had no objection in principle with the recommended alternative alignment but advised that the EA needs to discuss how impacts to the watercourses and natural features will be minimized. It was also suggested that the EA should clearly identify proposed works at each watercourse crossing (i.e. culvert extensions/replacements, sizing, whether the watercourse requires realignment), as well as vegetation and/or aquatic enhancement of the study area as a result of the loss of restorable habitat due to the road widening.

We confirm that the recommended alternative will be Preliminary Design Concept 4 (MOD) – Modified alignment to minimize property impacts (i.e. widening equally about centerline in most areas, but widened to the north or south in certain areas to minimize property impacts). This concept also includes revisions to the overall road width in the settlement of Wildfield to minimize the impacts on existing identified heritage resources. We have attached copies of the updated preliminary plans for your reference and files.

Stantec

May 11, 2011
TRCA, Ben Krul
Page 2 of 2

Reference: Mayfield Road Class EA, Airport to Coleraine

We have attached with this correspondence our responses to the comments provided in Appendix "A" of the December 1, 2010 correspondence. Stantec's comments are highlighted in italics.

We trust the enclosed information adequately addresses the comments from the TRCA's December 1, 2010 correspondence. Please contact the undersigned if you have any questions.

Sincerely,

STANTEC CONSULTING LTD.

A handwritten signature in blue ink, appearing to read "J. Bayley".

John Bayley, P. Eng.
Managing Leader, Transportation
Tel: (519) 585-7112
Fax: (519) 579-4239
john.bayley@stantec.com

Enclosures

cc: Hitesh Topiwala, Region of Peel

December 1, 2010

CFN 39924

BY MAIL AND EMAIL (dave.hallman@stantec.com)

Mr. Dave Hallman
Stantec Consulting Ltd.
49 Frederick Street
Kitchener, ON N2H 6M7

Dear Mr. Hallman:

Re: Response to Draft Natural Environment Report, Culvert and Stormwater Management Report, Hydrogeology Report, Mitigation Table and Preferred Alignment Plans Mayfield Road Improvements (Airport Road to Coleraine Drive) Municipal Class Environmental Assessment (EA) - Schedule C Humber River Watershed; City of Brampton; Regional Municipality of Peel

Toronto and Region Conservation Authority (TRCA) staff received the draft Natural Environment report dated April 2010, Culvert and Stormwater Management Report dated October 2010, Hydrogeological Investigation Report dated February 2010, a response to our comments provided on October 7, 2009, recommended mitigation table, a completed watercourse crossing table and preferred alignment plans on October 21, 2010 and on October 28, 2010. It is our understanding that this project involves widening Mayfield Road from Airport Road to Coleraine Drive, and that the preferred alignment is concept 4 which involves widening equally about the centreline in most areas, and to the north or south in areas where property impacts are expected.

Staff has reviewed the information and comments are provided in Appendix A. While staff has no objection in principle to the preferred alternative alignment, the EA needs to discuss how impacts to the watercourses and natural features will be minimized. The EA should also clearly identify proposed works at each watercourse crossing (i.e., culvert extensions/replacements, sizing, whether the watercourse requires realignment), as well as vegetation and/or aquatic enhancement of this study area as a result of the loss of restorable habitat due to the road widening.

Please ensure that TRCA staff receives four (4) hard copies and one (1) digital copy (in .pdf form) of the draft EA. The draft EA document should be accompanied by a covering letter which uses the numbering scheme provided in this letter and identifies how these comments have been addressed.

Should you have any questions or would like to setup a meeting, please contact me at extension 5717 or by email at slingertat@trca.on.ca.

Yours truly,



Sharon Lingertat
Planner II, Environmental Assessments
Planning and Development

BY EMAIL

cc: Peel: Solmaz Zia (Solmaz.Zia@peelregion.ca)
TRCA: Beth Williston, Manager, Environmental Assessment Planning
Quentin Hanchard, Manager, Development, Planning and Regulation
Gary Wilkins, Humber River Watershed Specialist

APPENDIX A

ITEM	TRCA COMMENT (October 7, 2009)	RESPONSE	TRCA COMMENT (December 1, 2010)
1.	Several discrepancies exist between Table 2 in the report and the Summary Sheet for Structure Sizing (Culvert, Bridge) and Pipe Crossing of Watercourses (Water, Sewer) provided by TRCA. For example, at Location #2, TRCA's summary sheet indicates that a watercourse is located both upstream and downstream of Mayfield Road. Table 2, however, only identifies the watercourse downstream. Please revise Table 2 so that it corresponds with TRCA's summary sheet (attached).	Comment noted. Table 2 has been revised to correspond with TRCA's summary sheet.	Table 2 should be updated to include the additional regulated areas, as TRCA regulates all identified watercourse crossings. For example, at Station 2 a watercourse was identified both upstream and downstream of Mayfield Road which will result in both of these sections of watercourse being regulated. It should also be noted that the ELC work identifies wetlands within the study area which will need to also be considered when designing the road. Comment addressed.
2.	Table 7 indicates that "enhanced erosion control measures" will be installed. Please clarify what is meant by "enhanced erosion control measures".	Comment noted. The reference to "enhanced erosion control measures" in Table 7 has been replaced with "appropriate erosion control measures".	Comment addressed.
3.	Table 7 indicates that any stranded fish in isolated work areas will be captured and released. Please confirm that MNR has been contacted and that they have approved this approach as it relates to roadside dace.	Comment noted. Table 7 has been updated to recommend that MNR should be contacted during the final design stage to confirm the appropriate relocation strategy for those watercourses with the potential to contain roadside dace.	Comment addressed.
4.	Please contact MNR to confirm which tributaries will be managed for roadside dace. In order to ensure accuracy, please indicate in the ESR which timing windows are being applied to each specific watercourse after consulting with MNR.	Both the MNR and the ROM have been contacted to confirm the presence of roadside dace within the study area. Table 7 in the report identifies the appropriate timing windows for each watercourse.	Please provide the correspondence received from MNR to verify the fisheries timing windows at each crossing.
5.	The culvert inspection report indicates that in some locations the watercourse will be channelized, but it is unclear what this means. Please provide additional information to clarify what "channelizing" the watercourses entails.	This comment by our structural engineer was in response to the fact that the flows in the creek are being blocked somewhat by vegetation. However a more appropriate comment is "flow characteristics of channel to be reviewed as part of detail design". It is important to note that all culverts will be extended/replaced based on the preferred design alternative.	Based on the preliminary drawings, it appears that channel realignments may be required to accommodate the culvert extensions/replacements. Please ensure that the Natural Environment Report, EA and plan drawings clearly identify the watercourses and locations where realignments are required to accommodate the location/angle of proposed culvert structure(s). A discussion should be provided related to impacts and mitigation and at the detailed design stage; natural features (including watercourses and wetlands) should be accurately identified on the drawings.
6.	The culvert inspection report indicates that gabion will be installed in several locations. Gabion is not preferred by TRCA staff. Please explore other options, such as the installation of riverstone/natural stone armouring where needed.	This comment by our structural engineer was in response to the fact that the existing culvert should be longer/extended under existing conditions. The option of extending the culvert or installing gabions to create a retaining or head wall structure was presented to address the fact that the culvert is not long enough. The comment will be revised to read "extend culvert or install headwall/retaining walls". However, please keep in mind that in every case the culverts will be extended and/or replaced.	Further comments may be provided once details regarding the headwall/retaining wall are provided.

ITEM	TRCA COMMENT (October 7, 2009)	RESPONSE	TRCA COMMENT (December 1, 2010)
7.	<p>The Natural Environment Report mentions the "Culvert and Stormwater Management Report", however, we have not received this information. Please provide TRCA with a copy of the report for review.</p>	<p>2 Copies of the "Culvert and Stormwater Management Report, Mayfield Road EA - Airport Road to Coleraine Drive" by Stantec and dated September 2010 is included with this submission.</p>	<p>Comment addressed.</p>
8.	<p>The recommended mitigation and enhancement measures are based on generalizations and do not appear to correspond to a chosen preferred alternative. The scope of the proposed construction is still unknown and, as such, it is difficult to ascertain whether or not the mitigation measures for an unknown alternative are reasonable. Although the recommended mitigation seems reasonable as an overview, once alternatives have been considered, and a preferred alternative has been decided upon, further consideration, discussion and TRCA review will likely need to be given to mitigating a more specific set of impacts related to construction.</p>	<p>Table 7 has been scoped to address the specific mitigation measures for the preferred alternative.</p>	<p>a) Table 7 indicates that aquatic habitat will be restored to pre-construction (or better) condition. In the case of lost wetland area, it is unclear how this will be accomplished. Please provide a plan for compensating for impacts where restoration to pre-construction conditions is not feasible. Please also ensure that impacts are quantified (i.e., wetland area lost, number of trees required for removal, loss of restorable habitat).</p> <p>b) Table 7 also indicates that habitat features such as pool riffle structures will be restored or enhanced. Table 4 identifies features, especially pools, which are immediately downstream of the existing culverts. The extension of the culverts will likely result in the loss of these pools. Please indicate which habitat features will be impacted/removed and indicate how these features will be restored/enhanced. The habitat value of these features should also be assessed to ensure that they are not providing a critical function to the aquatic communities in the area, especially as it relates to redside dace.</p>
9.	<p>Please revise Section 2.6, Toronto and Region Conservation Authority Policies, to read, "A decision regarding the approval of an application for a Permit from the TRCA is lead by Ontario Regulation 166/06 and is guided by the Valley and Stream..."</p>	<p>Comment noted. Section 2.6 has been revised as recommended.</p>	<p>c) The submitted plans indicate that land is being acquired for stormwater management (SWM) facilities related to the road work. Please provide further analysis of the impacts related to the construction of the SWM facilities, such as the required removal of vegetation communities and the impacts related to any required outfalls. Please also provide further analysis related to the appropriateness of the proposed locations from an ecological perspective.</p> <p>Comment addressed.</p>

**Comments based on submission of additional reports and information.

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE
10.	TRCA's summary sheet for structure sizing indicates a number of analyses that must be completed for selected watercourses within the study area. For example, a meander belt analysis and 100-year erosion limit analysis must be completed for watercourses 2, 3, 5, 6, 7, 9, 10, 11, 12, 13 and 14. The table also indicates geomorphologic analyses may be required (to be determined) at watercourses 8, 15 and 16. Please complete the required analyses as these may provide input to the proposed culvert sizes. Please also ensure that the EA clearly identifies in the body of the report the proposed works at each crossing, including sizing and locations of culvert replacements, extensions and watercourse realignments.	
11.	Please indicate which culverts should be designed with a low flow channel for fisheries passage and provide information such as dimensions and stone sizing for these proposed channels.	

APPENDIX A

ITEM	TRCA COMMENT (October 7, 2009)	HOW COMMENT IS BEING ADDRESSED OCTOBER 2010	TRCA COMMENT (December 1, 2010)	RESPONSE TO December 1, 2010 COMMENTS
1.	Several discrepancies exist between Table 2 in the report and the Summary Sheet for Structure Sizing (Culvert, Bridge) and Pipe Crossing of Watercourses (Water, Sewer) provided by TRCA. For example, at Location #2, TRCA's summary sheet indicates that a watercourse is located both upstream and downstream of Mayfield Road. Table 2, however, only identifies the watercourse downstream. Please revise Table 2 so that it corresponds with TRCA's summary sheet (attached).	Comment noted. Table 2 has been revised to correspond with TRCA's summary sheet.	Table 2 should be updated to include the additional regulated areas, as TRCA regulates all identified watercourse crossings. For example, at Station 2 a watercourse was identified both upstream and downstream of Mayfield Road which will result in both of these sections of watercourse being regulated. It should also be noted that the ELC work identifies wetlands within the study area which will need to also be considered when designing the road.	<i>Table 2 has been updated to reflect the additional regulated areas.</i>
2.	Table 7 indicates that "enhanced erosion control measures" will be installed. Please clarify what is meant by "enhanced erosion control measures".	Comment noted. The reference to 'enhanced erosion control measures' in Table 7 has been replaced with 'appropriate erosion control measures'.	Comment addressed.	<i>No additional action required. Past comments were addressed satisfactorily.</i>
3.	Table 7 indicates that any stranded fish in isolated work areas will be captured and released. Please confirm that MNR has been contacted and that they have approved this approach as it relates to reddsides.	Comment noted. Table 7 has been updated to recommend that MNR should be contacted during the final design stage to confirm the appropriate relocation strategy for those watercourses with the potential to contain reddsides.	Comment addressed.	<i>No additional action required. Past comments were addressed satisfactorily.</i>
4.	Please contact MNR to confirm which tributaries will be managed for reddsides. In order to ensure accuracy, please indicate in the ESR which timing windows are being applied to each specific watercourse after consulting with MNR.	Both the MNR and the ROM have been contacted to confirm the presence of reddsides within the study area. Table 7 in the report identifies the appropriate timing windows for each watercourse.	Please provide the correspondence received from MNR to verify the fisheries timing windows at each crossing.	<i>No written correspondence was received from MNR. Timing window information was provided verbally from MNR. Information related to fisheries timing windows has been added to the report in Section 6. Section 6 of the report has been completely updated and includes a 'quantification' of impacts. In summary approx 1.7 ha of wetland will be lost and a total length of 110 m of watercourse supporting Redside Dace habitat will be impacted (total for all 3 watercourses). The report suggests that specific mitigation measures be dealt with during final design in consultation with the approval agencies. An approvals section has also been added.</i>
5.	The culvert inspection report indicates that in some locations the watercourse will be channelized, but it is unclear what this means. Please provide additional information to clarify what "channelizing" the watercourses entails.	This comment by our structural engineer was in response to the fact that the flows in the creek are being blocked somewhat by vegetation. However a more appropriate comment is "flow characteristics of channel to be reviewed as part of detail design". It is important to note that all culverts will be extended/replaced based on the preferred design alternative.	Based on the preliminary drawings, it appears that channel realignments may be required to accommodate the culvert extensions/replacements. Please ensure that the Natural Environment Report, EA and plan drawings clearly identify the watercourses and locations where realignments are required to accommodate the location/angle of proposed culvert structure(s). A discussion should be provided related to impacts and mitigation and at the detailed design stage; natural features (including watercourses and wetlands) should be accurately identified on the drawings.	<i>Discussions with respect to the channel realignments and the potential impact to fish habitat has been provided in Section 6.1.4 of the report and the proposed culvert extensions are identified in Table 7. The locations of anticipated wetland impacts are now shown on the figures, as well.</i>
6.	The culvert inspection report indicates that gabion will be installed in several locations. Gabion is not preferred by TRCA staff. Please explore other options, such as the installation of riverstone/natural stone armouring where	This comment by our structural engineer was in response to the fact that the existing culvert should be longer/extended under existing conditions. The option of extending the culvert or installing gabions to create a	Further comments may be provided once details regarding the headwall/retaining wall are provided.	<i>The specific details of headwalls and retaining walls will be addressed further during the detailed design phase of the project. At present, the assumption is that concrete or stone headwalls and retaining walls are provided to assure</i>

ITEM	TRCA COMMENT (October 7, 2009)	HOW COMMENT IS BEING ADDRESSED OCTOBER 2010	TRCA COMMENT (December 1, 2010)	RESPONSE TO December 1, 2010 COMMENTS
	needed.	retaining or head wall structure was presented to address the fact that the culvert is not long enough. The comment will be revised to read "extend culvert or install headwall/retaining walls". However, please keep in mind that in every case the culverts will be extended and/or replaced.		<i>a reasonable costing perspective and that alternative materials and configurations will be investigated and reviewed with the approving agencies during the detailed design and permitting phase of the project. The current intent is to identify and confirm the anticipated grading impacts and required property limits in order to initiate discussions related to property acquisition.</i>
7.	The Natural Environment Report mentions the "Culvert and Stormwater Management Report", however, we have not received this information. Please provide TRCA with a copy of the report for review.	2 Copies of the "Culvert and Stormwater Management Report, Mayfield Road EA – Airport Road to Coleraine Drive" by Stantec and dated September 2010 is included with this submission.	Comment addressed.	<i>No additional action required. Past comments were addressed satisfactorily.</i>
8.	The recommended mitigation and enhancement measures are based on generalizations and do not appear to correspond to a chosen preferred alternative. The scope of the proposed construction is still unknown and, as such, it is difficult to ascertain whether or not the mitigation measures for an unknown alternative are reasonable. Although the recommended mitigation seems reasonable as an overview, once alternatives have been considered, and a preferred alternative has been decided upon, further consideration, discussion and TRCA review will likely need to be given to mitigating a more specific set of impacts related to construction.	Table 7 has been scoped to address the specific mitigation measures for the preferred alternative.	<p>a) Table 7 indicates that aquatic habitat will be restored to pre-construction (or better) condition. In the case of lost wetland area, it is unclear how this will be accomplished. Please provide a plan for compensating for impacts where restoration to pre-construction conditions is not feasible. Please also ensure that impacts are quantified (i.e., wetland area lost, number of trees required for removal, loss of restorable habitat).</p> <p>b) Table 7 also indicates that habitat features such as pool riffle structures will be restored or enhanced. Table 4 identifies features, especially pools, which are immediately downstream of the existing culverts. The extension of the culverts will likely result in the loss of these pools. Please indicate which habitat features will be impacted/removed and indicate how these features will be restored/enhanced. The habitat value of these features should also be assessed to ensure that they are not providing a critical function to the aquatic communities in the area, especially as it relates to reddsides.</p> <p>c) The submitted plans indicate that land is being acquired for stormwater management (SWM) facilities related to the road work. Please provide further analysis of the impacts related to the construction of the SWM facilities, such as the required removal of vegetation communities and the impacts related to any required outfalls. Please also provide further analysis related to the appropriateness of the proposed locations from an ecological perspective.</p>	<p>a) <i>The loss of wetland habitat has been quantified and assessed in Section 6.1.1 of the report. The areas of wetland loss are shown on the revised figures. A compensation plan for the loss of habitat and any habitat restoration or enhancement plans will be provided during the final design phase.</i></p> <p>b) <i>Table 7 suggests that during the final stage that habitat features such as pools and riffle structures be restored or enhanced. The location and detailed design of these restoration measures will be provided during the final design stage and will be a requirement for an ESA permit approval for the development of the roadway within protected reddsides.</i></p> <p>c) <i>An assessment of the proposed SWM facility locations has been provided in section 6.1.5.</i></p>
9.	Please revise Section 2.6, Toronto and Region Conservation Authority Policies, to read, "A decision regarding the approval of an application for a Permit from the TRCA is lead by Ontario Regulation 166/06 and is guided by the Valley and Stream..."	Comment noted. Section 2.6 has been revised as recommended.	Comment addressed.	<i>No additional action required. Past comments were addressed satisfactorily.</i>

**Comments based on submission of additional reports and information.

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE TO December 1, 2010 COMMENTS
Fluvial Geomorphology		
10.	TRCA's summary sheet for structure sizing indicates a number of analyses that must be completed for selected watercourses within the study area. For example, a meander belt analysis and 100-year erosion limit analysis must be completed for watercourses 2, 3, 5, 6, 7, 9, 10, 11, 12, 13 and 14. The table also indicates geomorphologic analyses may be required (to be determined) at watercourses 8, 15 and 16. Please complete the required analyses as these may provide input to the proposed culvert sizes. Please also ensure that the EA clearly identifies in the body of the report the proposed works at each crossing, including sizing and locations of culvert replacements, extensions and watercourse realignments.	<i>Fluvial Geomorphology will be addressed in greater detail during the detailed design phase of the project.</i>
11.	Please indicate which culverts should be designed with a low flow channel for fisheries passage and provide information such as dimensions and stone sizing for these proposed channels.	<i>This comment should be carried forward to detailed design and will be included in the ESR documentation.</i>
Preliminary Culvert and Stormwater Management Report		
12.	Watercourses with an upstream contributing drainage area greater than 50 ha are regulated by the TRCA. For these watercourses please demonstrate that the proposed culvert size and changes to the road profile will maintain or reduce the extent of the regulatory floodplain upstream of the crossing location (will not negatively impact flood levels).	<i>Of the 9 sites identified as having a drainage area of greater than 50 ha, 2 have been shown to overtop the existing road way and have a grade increased under the proposed road profile. These culverts will result in an increase in the Regulatory floodline given the current design. An increase in the proposed culvert sizes would mitigate this increase in flood elevations. Refer to the attached table for details.</i>
13.	The report states that preliminary modeling was completed for the 5 proposed SWM ponds to ensure that they are sufficient to provide the required quality and quantity controls, as per the Humber River Watershed Plan. Please provide the erosion control criteria applied for sizing the extended detention portion of the facility, and the predevelopment flows used to size the flood control portion of the facility (unit flow rates for basin F). Please provide a table in the report showing the amount of storage used during each event modeled and the controlled flow at that storage level.	<i>The erosion control criteria applied for the sizing the extended detention portion of the facility was to retain the 25 mm rainfall event for a minimum of 48 hours. Pre-development flows, proposed flows, and proposed storage volumes are shown in the attached table.</i>
14.	TRCA staff is supportive of the use of SWM ponds to meet stormwater objectives for the road. However, there is limited space available within the right-of-way. Consequently, it is possible that failure to acquire land adjacent to the right-of-way may limit the effectiveness of the proposed SWM strategy. Please comment on opportunities to achieve SWM objectives within the right-of-way should land acquisition not be possible.	<i>The proposed SWM facilities are located on undeveloped/agricultural areas and it is not anticipated that there will be a failure to acquire this land. Should future land acquisitions fail, water quantity control could be provided through underground storage and water quality control could be provided using a treatment train approach.</i>
15.	Please note that the TRCA position regarding use of oil grit separator (OGS) units, regardless of manufacturer, is to recognize the unit as being capable of achieving up to a 50% total suspended solids (TSS) removal. As TRCA staff requires 80% TSS removal, additional measures must be considered. Please investigate opportunities to implement additional water quality measures downstream of each of the 7 proposed OGS units. Please update plan drawings to show the locations of additional water quality treatment measures.	<i>It is proposed to provide a treatment train approach to water quality. Additional measures are required downstream of each of the proposed oil and grit separator units, such as grass swales, filter strips, check dams, and settlement/sediment basins. The exact configuration will depend on the available property. The outlet designs are currently being reviewed to consider expanded parallel ditches at the road side and relocation of the proposed OGS units to a suitable distance upstream of the respective outlets to permit construction of suitable enhanced ditches to improve additional removal of suspended solids (TSS removal). If the parallel roadside outlets cannot be accommodated then an extended outlet swale will be proposed parallel to the existing outlet watercourses. The related general details will be provided on the plans for presentation to the public.</i>
Hydrogeology		
16.	The hydrogeology report does not contain the borehole logs. Please provide a copy that has the borehole logs referred to in the report.	<i>The requested Borehole logs have been included with the replacement report appended to this response.</i>
General Comments		

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE TO December 1, 2010 COMMENTS
17.	Please number the watercourse crossings on the preliminary plans.	<i>The reference watercourse numbers provided by the TRCA have been included on the latest study plans along with photographs of the existing culvert ends.</i>
18.	Please ensure that details for all crossings are shown on the plans. For instance, details for the crossings along The Gore Road both north and south of Mayfield Road appear to be missing. If this work is going to be completed as part of The Gore Road widening, please clearly indicate this in the EA.	<i>Where applicable, additional notations and general representations have been added to the plans for public presentation. The Gore Road culvert references have been added to the plans and general impacts noted. A notation will also be included in the Class EA documentation to advise about the related culvert impacts and the potential for inclusion of related improvements in The Gore Road or Mayfield Road widening project(s).</i>
19.	Preliminary plans identify the future Major Mackenzie Drive extension. Please re-label this future road as "by others under a separate permitting and review process".	<i>The requested revision to labeling and also the details and notations on the drawing have been made to reflect the preliminary nature of the extension and related future roadway location.</i>



Stantec

Stantec Consulting Ltd.
49 Frederick Street
Kitchener ON N2H 6M7
Tel: (519) 579-4410

May 11, 2011
File: 160210480/37

Southern Region
Aurora District Office
50 Bloomington Road
Aurora, ON
L4G 0L8
Canada

Attention: Mark Heaton, Management Biologist

Dear Mr. Heaton:

Reference: Mayfield Road Class EA – Airport Road to Coleraine Drive

It is my understanding that this file is under your jurisdiction.

I would like to introduce myself as the new Project Manager representing Stantec on behalf of our client The Regional Municipality of Peel. I have replaced Mr. Dave Hallman as the Consultant Project Manager for this assignment and I would also like to advise you that Mr. Hitesh Topiwala has replaced Solmaz Zia as the Region of Peel's Project Manager during her maternity leave.

This correspondence is in response to previous communications between the MNR and the Region of Peel regarding the above noted ongoing Class EA study. We have included with this correspondence one (1) copy of the Natural Environment Report dated April 2011 and a set of drawings for your perusal. We understand that the Ministry will review the report and drawings and provide any comments that should be incorporated and/or addressed in the Class EA Study report.

The Region of Peel intends to proceed to a second Public Information Centre (PIC) in the near future (tentatively in June 2011) and wishes to ensure that the MNR's comments have been received and addressed in the study documentation to be presented at that meeting.

If deemed necessary following your review of the report and preliminary design drawings, Stantec and the Region of Peel would be pleased to meet with MNR staff to discuss any concerns that may arise. We have similarly forwarded the Natural Environment Report, concept drawings and specific commentary to the Toronto and Region Conservation Authority (TRCA) in response to their past communications and have invited similar comment from them. Their new project designate is Mr. Ben Krul, Acting Planner II, replacing Sharon Lingertat as our contact on the project.

We confirm that the recommended alternative will be Preliminary Design Concept 4 (MOD) – Modified alignment to minimize property impacts (i.e. widening equally about centerline in most areas, but widened to the north or south in certain areas to minimize property impacts). This concept also includes revisions to the overall planned road width in the settlement of Wildfield to minimize the impacts on existing identified heritage resources. We have attached copies of the updated preliminary plans for your reference and files.

May 11, 2011
MNR, Mark Heaton
Page 2 of 2

Reference: Mayfield Road Class EA, Airport to Coleraine

Over the course of the study, we have received some feedback from yourself via the Region of Peel and also from Melinda Thompson-Black, Species at Risk Biologist at the MNR. We have copied Melinda on this covering letter as a courtesy.

We trust the enclosed information will permit the MNR to provide comments and confirm any concerns and/or requirements that may relate to the proposed project and related future construction activity. Where appropriate, the MNR's comments will be included in the study documentation. We would like to receive the MNR's response to this submission before the end of May 2011 if at all possible. Please contact the undersigned if you have any questions or wish to discuss the project details further.

Sincerely,

STANTEC CONSULTING LTD.



John Bayley, P. Eng.
Managing Leader, Transportation
Tel: (519) 585-7112
Fax: (519) 579-4239
john.bayley@stantec.com

Enclosures

cc: Melinda Thompson-Black, Species at Risk Biologist, Ministry of Natural Resources
Hitesh Topiwala, Region of Peel

Southern Region
Aurora District Office
50 Bloomington Road
Aurora, ON L4G 0L8



Ministry of
Natural Resources

Ministère des
Richesses Naturelles

March 30, 2011

Solmaz Zia, P. Eng.
Project Manager, Project Planning & Studies
Region of Peel, Public Works
9445 Airport Road, 3rd Floor
Brampton, ON, L6S 4J3

Re: Mayfield Road Class EA, Airport Road to Coleraine Drive - Endangered Species Act

Dear Mr. Zia,

The Ministry of Natural Resources (MNR) has reviewed the study area for the above noted Class EA. Both Salt Creek and the West Humber River in this area have been identified by MNR as potential recovery habitat for Redside Dace. Additionally, MNR has records of Bobolink in the vicinity of the study area. These species receive protection under the *Endangered Species Act 2007* and thus, a permit may be required if the work you are proposing could cause harm to these species or their habitats.

Natural heritage features recorded in your area include several identified wetlands.

This species at risk information is highly sensitive and is not intended for any person or project unrelated to this undertaking. Please do not include any specific information in reports that will be available for public record. As you complete your fieldwork in these areas, please report all information related to any species at risk to the NHIC and to our office. This will assist with updating our database.

If you have any questions or comments, please do not hesitate to contact me at 905-713-7425.

Sincerely,

A handwritten signature in black ink that reads "Melinda Thompson-Black".

Melinda Thompson-Black
Species at Risk Biologist
Ontario Ministry of Natural Resources, Aurora District

APPENDIX A

ITEM	TRCA COMMENT (October 7, 2008)	HOW COMMENT IS BEING ADDRESSED OCTOBER 2010	TRCA COMMENT (December 1, 2010)	RESPONSE TO December 1, 2010 COMMENTS
1.	Several discrepancies exist between Table 2 in the report and the Summary Sheet for Structure Sizing (Culvert, Bridge) and Pipe Crossing of Watercourses (Water, Sewer) provided by TRCA. For example, at Location #2, TRCA's summary sheet indicates that a watercourse is located both upstream and downstream of Mayfield Road. Table 2, however, only identifies the watercourse downstream. Please revise Table 2 so that it corresponds with TRCA's summary sheet (attached).	Comment noted. Table 2 has been revised to correspond with TRCA's summary sheet.	Table 2 should be updated to include the additional regulated areas, as TRCA regulates all identified watercourse crossings. For example, at Station 2 a watercourse was identified both upstream and downstream of Mayfield Road which will result in both of these sections of watercourse being regulated. It should also be noted that the ELC work identifies wetlands within the study area which will need to also be considered when designing the road. Comment addressed.	Table 2 has been updated to reflect the additional regulated areas.
2.	Table 7 indicates that "enhanced erosion control measures" will be installed. Please clarify what is meant by "enhanced erosion control measures".	Comment noted. The reference to "enhanced erosion control measures" in Table 7 has been replaced with "appropriate erosion control measures".	Comment addressed.	No additional action required. Past comments were addressed satisfactorily.
3.	Table 7 indicates that any stranded fish in isolated work areas will be captured and released. Please confirm that MNR has been contacted and that they have approved this approach as it relates to roadside dace.	Comment noted. Table 7 has been updated to recommend that MNR should be contacted during the final design stage to confirm the appropriate relocation strategy for those watercourses with the potential to contain roadside dace.	Comment addressed.	No additional action required. Past comments were addressed satisfactorily.
4.	Please contact MNR to confirm which tributaries will be managed for roadside dace. In order to ensure accuracy, please indicate in the ESR which timing windows are being applied to each specific watercourse after consulting with MNR.	Both the MNR and the ROM have been contacted to confirm the presence of roadside dace within the study area. Table 7 in the report identifies the appropriate timing windows for each watercourse.	Please provide the correspondence received from MNR to verify the fisheries timing windows at each crossing.	No written correspondence was received from MNR. Timing window information was provided verbally from MNR. Information related to fisheries timing windows has been added to the report in Section 6. Section 6 of the report has been completely updated and includes a "quantification" of impacts. In summary, approx 1.7 ha of wetland will be lost and a total length of 110 m of watercourse supporting Redside Dace habitat will be impacted (total for all 3 watercourses). The report suggests that specific mitigation measures be dealt with during final design in consultation with the approval agencies. An approvals section has also been added.
5.	The culvert inspection report indicates that in some locations the watercourse will be channelized, but it is unclear what this means. Please provide additional information to clarify what "channelizing" the watercourses entails.	This comment by our structural engineer was in response to the fact that the flows in the creek are being blocked somewhat by vegetation. However a more appropriate comment is "low characteristics of channel to be reviewed as part of detail design". It is important to note that all culverts will be extended/replaced based on the preferred design alternative.	Based on the preliminary drawings, it appears that channel realignments may be required to accommodate the culvert extensions/replacements. Please ensure that the Natural Environment Report, EA and plan drawings clearly identify the watercourses and locations where realignments are required to accommodate the location/angle of proposed culvert structure(s). A discussion should be provided related to impacts and mitigation and at the detailed design stage: natural features (including watercourses and wetlands) should be accurately identified on the drawings.	Discussions with respect to the channel realignments and the potential impact to fish habitat has been provided in Section 6.1.4 of the report and the proposed culvert extensions are identified in Table 7. The locations of anticipated wetland impacts are now shown on the figures, as well.
6.	The culvert inspection report indicates that gabion will be installed in several locations. Gabion is not preferred by TRCA staff. Please explore other options, such as the installation of riverstone/natural stone armouring where	This comment by our structural engineer was in response to the fact that the existing culvert should be longer/extended under existing conditions. The option of extending the culvert or installing gabions to create a	Further comments may be provided once details regarding the headwall/retaining wall are provided.	The specific details of headwalls and retaining walls will be addressed further during the detailed design phase of the project. At present, the assumption is that concrete or stone headwalls and retaining walls are provided to assure

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	needed.	retaining or head wall structure was presented to address the fact that the culvert is not long enough. The comment will be revised to read "extend culvert or install headwall/retaining walls". However, please keep in mind that in every case the culverts will be extended and/or replaced.		a reasonable costing perspective and that alternative materials and configurations will be investigated and reviewed with the approving agencies during the detailed design and permitting phase of the project. The current intent is to identify and confirm the anticipated grading impacts and required property limits in order to initiate discussions related to property acquisition.
7.	The Natural Environment Report mentions the "Culvert and Stormwater Management Report", however, we have not received this information. Please provide TRCA with a copy of the report for review.	2 Copies of the "Culvert and Stormwater Management Report, Mayfield Road EA - Airport Road to Coleraine Drive" by Stantec and dated September 2010 is included with this submission.	Comment addressed.	No additional action required. Past comments were addressed satisfactorily.
8.	The recommended mitigation and enhancement measures are based on generalizations and do not appear to correspond to a chosen preferred alternative. The scope of the proposed construction is still unknown and, as such, it is difficult to ascertain whether or not the mitigation measures for an unknown alternative are reasonable. Although the recommended mitigation seems reasonable as an overview, once alternatives have been considered, and a preferred alternative has been decided upon, further consideration, discussion and TRCA review will likely need to be given to mitigating a more specific set of impacts related to construction.	Table 7 has been scoped to address the specific mitigation measures for the preferred alternative.	<p>a) Table 7 indicates that aquatic habitat will be restored to pre-construction (or better) condition. In the case of lost wetland area, it is unclear how this will be accomplished. Please provide a plan for compensating for impacts where restoration to pre-construction conditions is not feasible. Please also ensure that impacts are quantified (i.e., wetland area lost, number of trees required for removal, loss of restorable habitat).</p> <p>b) Table 7 also indicates that habitat features such as pool riffle structures will be restored or enhanced. Table 4 identifies features, especially pools, which are immediately downstream of the existing culverts. The extension of the culverts will likely result in the loss of these pools. Please indicate which habitat features will be impacted/removed and indicate how these features will be restored/enhanced. The habitat value of these features should also be assessed to ensure that they are not providing a critical function to the aquatic communities in the area, especially as it relates to roadside drape.</p> <p>c) The submitted plans indicate that land is being acquired for stormwater management (SWM) facilities related to the road work. Please provide further analysis of the impacts related to the construction of the SWM facilities, such as the required removal of vegetation communities and the impacts related to any required cutfills. Please also provide further analysis related to the appropriateness of the proposed locations from an ecological perspective.</p>	<p>a) The loss of wetland habitat has been quantified and assessed in Section 6.1.1 of the report. The areas of wetland loss are shown on the revised figures. A compensation plan for the loss of habitat and any habitat restoration or enhancement plans will be provided during the final design phase.</p> <p>b) Table 7 suggests that during the final stage that habitat features such as pools and riffle structures be restored or enhanced. The location and detailed design of these restoration measures will be provided during the final design stage and will be a requirement for an ESA permit approval for the development of the roadway within protected roadside drape habitat.</p> <p>c) An assessment of the proposed SWM facility locations has been provided in section 6.1.5.</p>
9.	Please revise Section 2.6, Toronto and Region Conservation Authority Policies, to read, "A decision regarding the approval of an application for a Permit from the TRCA is lead by Ontario Regulation 166/06 and is guided by the Valley and Stream..."	Comment noted. Section 2.6 has been revised as recommended.	Comment addressed.	No additional action required. Past comments were addressed satisfactorily.

**Comments based on submission of additional reports and information.

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE TO December 1, 2010 COMMENTS
<p>Fluvial Geomorphology</p> <p>10. TRCA's summary sheet for structure sizing indicates a number of analyses that must be completed for selected watercourses within the study area. For example, a meander belt analysis and 100-year erosion limit analysis must be completed for watercourses 2, 3, 5, 6, 7, 9, 10, 11, 12, 13 and 14. The table also indicates geomorphologic analyses may be required (to be determined) at watercourses 8, 15 and 16. Please complete the required analyses as these may provide input to the proposed culvert sizes. Please also ensure that the EA clearly identifies in the body of the report the proposed works at each crossing, including sizing and locations of culvert replacements, extensions and watercourse realignments.</p>	<p>Fluvial Geomorphology will be addressed in greater detail during the detailed design phase of the project.</p>	<p>This comment should be carried forward to detailed design and will be included in the ESR documentation.</p>
<p>11. Please indicate which culverts should be designed with a low flow channel for fisheries passage and provide information such as dimensions and stone sizing for these proposed channels.</p>	<p>Preliminary Culvert and Stormwater Management Report</p> <p>Watercourses with an upstream contributing drainage area greater than 50 ha are regulated by the TRCA. For these watercourses please demonstrate that the proposed culvert size and changes to the road profile will maintain or reduce the extent of the regulatory floodplain upstream of the crossing location (will not negatively impact flood levels).</p>	<p>Of the 9 sites identified as having a drainage area of greater than 50 ha, 2 have been shown to overlap the existing road way and have a grade increased under the proposed road profile. These culverts will result in an increase in the Regulatory floodline given the current design. An increase in the proposed culvert sizes would mitigate this increase in flood elevations. Refer to the attached table for details.</p>
<p>12. The report states that preliminary modelling was completed for the 5 proposed SWMM ponds to ensure that they are sufficient to provide the required quality and quantity controls, as per the Humber River Watershed Plan. Please provide the erosion control criteria applied for sizing the extended detention portion of the facility, and the predevelopment flows used to size the flood control portion of the facility (unit flow rates for basin F). Please provide a table in the report showing the amount of storage used during each event modelled and the controlled flow at that storage level.</p>	<p>The erosion control criteria applied for the sizing the extended detention portion of the facility was to retain the 25 mm rainfall event for a minimum of 48 hours. Pre-development flows, proposed flows, and proposed storage volumes are shown in the attached table.</p>	<p>The proposed SWMM facilities are located on undeveloped/agricultural areas and it is not anticipated that there will be a failure to acquire this land. Should future land acquisitions fail, water quantity control could be provided through underground storage and water quality control could be provided using a treatment train approach.</p>
<p>13. TRCA staff is supportive of the use of SWMM ponds to meet stormwater objectives for the road. However, there is limited space available within the right-of-way. Consequently, it is possible that failure to acquire land adjacent to the right-of-way may limit the effectiveness of the proposed SWMM strategy. Please comment on opportunities to achieve SWMM objectives within the right-of-way should land acquisition not be possible.</p>	<p>It is proposed to provide a treatment train approach to water quality. Additional measures are required downstream of each of the proposed oil and grit separator units, such as grass swales, filter strips, check dams, and settlement/settlement basins. The exact configuration will depend on the available property. The outlet designs are currently being reviewed to consider expanded parallel ditches at the road side and relocation of the proposed OGS units to a suitable distance upstream of the respective outlets to permit construction of suitable enhanced ditches to improve additional removal of suspended solids (TSS removal). If the parallel roadside outlets cannot be accommodated then an extended outlet swale will be proposed parallel to the existing outlet watercourses. The related general details will be provided on the plans for presentation to the public.</p>	<p>The requested Borehole logs have been included with the replacement report appended to this response.</p>
<p>14. Please note that the TRCA position regarding use of oil grit separator (OGS) units, regardless of manufacturer, is to recognize the unit as being capable of achieving up to a 50% total suspended solids (TSS) removal. As TRCA staff requires 80% TSS removal, additional measures must be considered. Please investigate opportunities to implement additional water quality measures downstream of each of the 7 proposed OGS units. Please update plan drawings to show the locations of additional water quality treatment measures.</p>	<p>The requested Borehole logs have been included with the replacement report appended to this response.</p>	<p>The requested Borehole logs have been included with the replacement report appended to this response.</p>
<p>Hydrogeology</p>	<p>15. The hydrogeology report does not contain the borehole logs. Please provide a copy that has the borehole logs referred to in the report.</p>	<p>The requested Borehole logs have been included with the replacement report appended to this response.</p>
<p>General Comments</p>	<p>The requested Borehole logs have been included with the replacement report appended to this response.</p>	<p>The requested Borehole logs have been included with the replacement report appended to this response.</p>

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE TO December 1, 2010 COMMENTS
17.	Please number the watercourse crossings on the preliminary plans.	The reference watercourse numbers provided by the TRCA have been included on the latest study plans along with photographs of the existing culvert ends.
18.	Please ensure that details for all crossings are shown on the plans. For instance, details for the crossings along The Gore Road both north and south of Mayfield Road appear to be missing. If this work is going to be completed as part of The Gore Road widening, please clearly indicate this in the EA.	Where applicable additional notations and general representations have been added to the plans for public presentation. The Gore Road culvert references have been added to the plans and general impacts noted. A notation will also be included in the Class EA documentation to advise about the related culvert impacts and the potential for inclusion of related improvements in The Gore Road or Mayfield Road widening project(s).
19.	Preliminary plans identify the future Major Mackenzie Drive extension. Please re-label this future road as "by others under a separate permitting and review process".	The requested revision to labeling and also the details and notations on the drawing have been made to reflect the preliminary nature of the extension and related future roadway location.

December 22, 2010
Project No. 07-4350

Hydro One Networks Inc.
West Central Zone 2

40 Olympic Drive
Box 585
Dundas, On
L9H 7P5
Attn, Scheduling

Re: Mayfield Road from Airport Road to Coleraine Drive in the City of Brampton, Town of Caledon and Region of Peel

Dear Sir / Madam,

The Region of Peel is undertaking a Class C Environmental Assessment (EA) Study for the above noted project.

Please be advised that Stantec is undertaking the EA including the preliminary design on behalf of the Municipality of Peel for the identification of utility relocations involved with this project.

As per the EA recommendation, widening of Mayfield Road to 6 and 4 lanes is proposed which requires a number of Hydro poles relocation.

We are at the third phase of the EA and the preliminary design for the noted corridor has been developed. We will mail 1 set of our preliminary design drawings under separate cover. Please review them and provide us with the existing plants along the noted road and your future plans for this corridor.

We request that you provide us with a preliminary estimate for the proposed relocation.

We would like to offer a meeting with you to review the conceptual relocation requirements. Please advise when your staff is available to meet with us.

The anticipated detailed design schedule is summer 2011 and utility relocation is 2014.

Your co-operation in providing the information is anticipated and appreciated.

If you have any questions, do not hesitate to contact the undersigned.

Public Works

9445 Airport Road, 3rd Floor, Brampton, ON. L6S 4J3
Telephone: 905-791-7800 / www.peelregion.ca

Regards,



Solmaz Zia, P.Eng.
Project Manager
Transportation Program Planning
Public Works, Region of Peel
Tel: (905) 791-7800 ext. 7845
Fax: 905-791-1442
Solmaz.Zia@peelregion.ca

CC: John Bayley, Stantec
Dave Hallman, Stantec

Public Works

9445 Airport Road., 3rd Floor, Brampton, ON. L6S 4J3
Telephone: 905-791-7800 / www.peelregion.ca

 **TORONTO AND REGION**
Conservation
for The Living City

December 1, 2010

CFN 39924

BY MAIL AND EMAIL (dave.hallman@stantec.com)

Mr. Dave Hallman
Stantec Consulting Ltd.
49 Frederick Street
Kitchener, ON N2H 6M7

Dear Mr. Hallman:

Re: Response to Draft Natural Environment Report, Culvert and Stormwater Management Report, Hydrogeology Report, Mitigation Table and Preferred Alignment Plans Mayfield Road Improvements (Airport Road to Coleraine Drive) Municipal Class Environmental Assessment (EA) - Schedule C Humber River Watershed; City of Brampton; Regional Municipality of Peel

Toronto and Region Conservation Authority (TRCA) staff received the draft Natural Environment report dated April 2010, Culvert and Stormwater Management Report dated October 2010, Hydrogeological Investigation Report dated February 2010, a response to our comments provided on October 7, 2009, recommended mitigation table, a completed watercourse crossing table and preferred alignment plans on October 21, 2010 and on October 28, 2010. It is our understanding that this project involves widening Mayfield Road from Airport Road to Coleraine Drive, and that the preferred alignment is concept 4 which involves widening equally about the centreline in most areas, and to the north or south in areas where property impacts are expected.

Staff has reviewed the information and comments are provided in Appendix A. While staff has no objection in principle to the preferred alternative alignment, the EA needs to discuss how impacts to the watercourses and natural features will be minimized. The EA should also clearly identify proposed works at each watercourse crossing (i.e., culvert extensions/replacements, sizing, whether the watercourse requires realignment), as well as vegetation and/or aquatic enhancement of this study area as a result of the loss of restorable habitat due to the road widening.

Please ensure that TRCA staff receives four (4) hard copies and one (1) digital copy (in .pdf form) of the draft EA. The draft EA document should be accompanied by a covering letter which uses the numbering scheme provided in this letter and identifies how these comments have been addressed.

Should you have any questions or would like to setup a meeting, please contact me at extension 5717 or by email at slingertat@trca.on.ca.

Yours truly,

Sharon Lingertat
Planner II, Environmental Assessments
Planning and Development

BY EMAIL

cc: Peel: Solmaz Zia (Solmaz.Zia@peelregion.ca)
TRCA: Beth Williston, Manager, Environmental Assessment Planning
Quentin Hanchard, Manager, Development, Planning and Regulation
Gary Wilkins, Humber River Watershed Specialist

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Member of Conservation Ontario



APPENDIX A

ITEM	TRCA COMMENT (October 7, 2009)	RESPONSE	TRCA COMMENT (December 1, 2010)
1.	Several discrepancies exist between Table 2 in the report and the Summary Sheet for Structure Sizing (Culvert, Bridge) and Pipe Crossing of Watercourses (Water, Sewer) provided by TRCA. For example, at Location #2, TRCA's summary sheet indicates that a watercourse is located both upstream and downstream of Mayfield Road. Table 2, however, only identifies the watercourse downstream. Please revise Table 2 so that it corresponds with TRCA's summary sheet (attached).	Comment noted. Table 2 has been revised to correspond with TRCA's summary sheet.	Table 2 should be updated to include the additional regulated areas, as TRCA regulates all identified watercourse crossings. For example, at Station 2 a watercourse was identified both upstream and downstream of Mayfield Road which will result in both of these sections of watercourse being regulated. It should also be noted that the ELC work identifies wetlands within the study area which will need to also be considered when designing the road. Comment addressed.
2.	Table 7 indicates that "enhanced erosion control measures" will be installed. Please clarify what is meant by "enhanced erosion control measures".	Comment noted. The reference to "enhanced erosion control measures" in Table 7 has been replaced with "appropriate erosion control measures".	Comment addressed.
3.	Table 7 indicates that any stranded fish in isolated work areas will be captured and released. Please confirm that MNR has been contacted and that they have approved this approach as it relates to roadside dace.	Comment noted. Table 7 has been updated to recommend that MNR should be contacted during the final design stage to confirm the appropriate relocation strategy for those watercourses with the potential to contain roadside dace.	Comment addressed.
4.	Please contact MNR to confirm which tributaries will be managed for roadside dace. In order to ensure accuracy, please indicate in the ESR which timing windows are being applied to each specific watercourse after consulting with MNR.	Both the MNR and the ROM have been contacted to confirm the presence of roadside dace within the study area. Table 7 in the report identifies the appropriate timing windows for each watercourse.	Please provide the correspondence received from MNR to verify the fisheries timing windows at each crossing.
5.	The culvert inspection report indicates that in some locations the watercourse will be channelized, but it is unclear what this means. Please provide additional information to clarify what "channelizing" the watercourses entails.	This comment by our structural engineer was in response to the fact that the flows in the creek are being blocked somewhat by vegetation. However a more appropriate comment is "flow characteristics of channel to be reviewed as part of detail design". It is important to note that all culverts will be extended/replaced based on the preferred design alternative.	Based on the preliminary drawings, it appears that channel realignments may be required to accommodate the culvert extensions/replacements. Please ensure that the Natural Environment Report, EA and plan drawings clearly identify the watercourses and locations where realignments are required to accommodate the location/angle of proposed culvert structure(s). A discussion should be provided related to impacts and mitigation and at the detailed design stage; natural features (including watercourses and wetlands) should be accurately identified on the drawings.
6.	The culvert inspection report indicates that gabion will be installed in several locations. Gabion is not preferred by TRCA staff. Please explore other options, such as the installation of riverstone/natural stone armouring where needed.	This comment by our structural engineer was in response to the fact that the existing culvert should be longer/extended under existing conditions. The option of extending the culvert or installing gabions to create a retaining or head wall structure was presented to address the fact that the culvert is not long enough. The comment will be revised to read "extend culvert or install headwall/retaining walls". However, please keep in mind that in every case the culverts will be extended and/or replaced.	Further comments may be provided once details regarding the headwall/retaining wall are provided.

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7.	<p>The Natural Environment Report mentions the "Culvert and Stormwater Management Report", however, we have not received this information. Please provide TRCA with a copy of the report for review.</p>	<p>2 Copies of the "Culvert and Stormwater Management Report, Mayfield Road EA - Airport Road to Coleraine Drive" by Siantec and dated September 2010 is included with this submission.</p>	<p>Comment addressed.</p>
8.	<p>The recommended mitigation and enhancement measures are based on generalizations and do not appear to correspond to a chosen preferred alternative. The scope of the proposed construction is still unknown and, as such, it is difficult to ascertain whether or not the mitigation measures for an unknown alternative are reasonable. Although the recommended mitigation seems reasonable as an overview, once alternatives have been considered, and a preferred alternative has been decided upon, further consideration, discussion and TRCA review will likely need to be given to mitigating a more specific set of impacts related to construction.</p>	<p>Table 7 has been scoped to address the specific mitigation measures for the preferred alternative.</p>	<p>a) Table 7 indicates that aquatic habitat will be restored to pre-construction (or better) condition. In the case of lost wetland area, it is unclear how this will be accomplished. Please provide a plan for compensating for impacts where restoration to pre-construction conditions is not feasible. Please also ensure that impacts are quantified (i.e., wetland area lost, number of trees required for removal, loss of restorable habitat).</p> <p>b) Table 7 also indicates that habitat features such as pool riffle structures will be restored or enhanced. Table 4 identifies features, especially pools, which are immediately downstream of the existing culverts. The extension of the culverts will likely result in the loss of these pools. Please indicate which habitat features will be impacted/removed and indicate how these features will be restored/enhanced. The habitat value of these features should also be assessed to ensure that they are not providing a critical function to the aquatic communities in the area, especially as it relates to reseed date.</p> <p>c) The submitted plans indicate that land is being acquired for stormwater management (SWM) facilities related to the road work. Please provide further analysis of the impacts related to the construction of the SWM facilities, such as the required removal of vegetation communities and the impacts related to any required cutfalls. Please also provide further analysis related to the appropriateness of the proposed locations from an ecological perspective.</p>
9.	<p>Please revise Section 2.6, Toronto and Region Conservation Authority Policies, to read, "A decision regarding the approval of an application for a Permit from the TRCA is lead by Ontario Regulation 166/06 and is guided by the Valley and Stream..."</p>	<p>Comment noted. Section 2.6 has been revised as recommended.</p>	<p>Comment addressed.</p>

**Comments based on submission of additional reports and information.

ITEM	TRCA COMMENT (December 1, 2010)	RESPONSE
Fluvial Geomorphology		
10.	TRCA's summary sheet for structure sizing indicates a number of analyses that must be completed for selected watercourses within the study area. For example, a meander belt analysis and 100-year erosion limit analysis must be completed for watercourses 2, 3, 5, 6, 7, 9, 10, 11, 12, 13 and 14. The table also indicates geomorphologic analyses may be required (to be determined) at watercourses 8, 15 and 16. Please complete the required analyses as these may provide input to the proposed culvert sizes. Please also ensure that the EA clearly identifies in the body of the report the proposed works at each crossing, including sizing and locations of culvert replacements, extensions and watercourse realignments.	
11.	Please indicate which culverts should be designed with a low flow channel for fisheries passage and provide information such as dimensions and stone sizing for these proposed channels.	
Preliminary Culvert and Stormwater Management Report		
12.	Watercourses with an upstream contributing drainage area greater than 50 ha are regulated by the TRCA. For these watercourses please demonstrate that the proposed culvert size and changes to the road profile will maintain or reduce the extent of the regulatory floodplain upstream of the crossing location (will not negatively impact flood levels).	
13.	The report states that preliminary modeling was completed for the 5 proposed SWM ponds to ensure that they are sufficient to provide the required quality and quantity controls, as per the Humber River Watershed Plan. Please provide the erosion control criteria applied for sizing the extended detention portion of the facility, and the predevelopment flows used to size the flood control portion of the facility (unit flow rates for basin F). Please provide a table in the report showing the amount of storage used during each event modeled and the controlled flow at that storage level.	
14.	TRCA staff is supportive of the use of SWM ponds to meet stormwater objectives for the road. However, there is limited space available within the right-of-way. Consequently, it is possible that failure to acquire land adjacent to the right-of-way may limit the effectiveness of the proposed SWM strategy. Please comment on opportunities to achieve SWM objectives within the right-of-way should land acquisition not be possible.	
15.	Please note that the TRCA position regarding use of oil grit separator (OGS) units, regardless of manufacturer, is to recognize the unit as being capable of achieving up to a 50% total suspended solids (TSS) removal. As TRCA staff requires 80% TSS removal, additional measures must be considered. Please investigate opportunities to implement additional water quality measures downstream of each of the 7 proposed OGS units. Please update plan drawings to show the locations of additional water quality treatment measures.	
Hydrogeology		
16.	The hydrogeology report does not contain the borehole logs. Please provide a copy that has the borehole logs referred to in the report.	
General Comments		
17.	Please number the watercourse crossings on the preliminary plans.	
18.	Please ensure that details for all crossings are shown on the plans. For instance, details for the crossings along The Gore Road both north and south of Mayfield Road appear to be missing. If this work is going to be completed as part of The Gore Road widening, please clearly indicate this in the EA.	
19.	Preliminary plans identify the future Major Mackenzie Drive extension. Please re-label this future road as "by others under a separate permitting and review process".	

Prior to proceeding with construction of a watercourse crossing, a permit must be obtained from TRCA as these works constitute alteration to a watercourse and/or development in a regulated area. Where crossings are proposed as a component of land development or infrastructure projects, proponents should address TRCA objectives and policies with respect to crossings throughout the development process.

OBJECTIVES

1. Minimize the total number of crossings in valley and stream corridors.
2. Situate crossings, where required, at appropriate locations.
3. Improve existing watercourse crossings where possible.
4. Ensure no significant increase in upstream and downstream flooding.
5. Protect or enhance the physical and ecological function of the watercourse and valley corridor.
6. Protect all natural features to the extent possible and provide restoration where protection is not possible.
7. Implement adequate erosion and sediment control during and after construction.

SUBMISSION REQUIREMENTS

The following outlines the tasks that must be undertaken and the information that must be provided by crossing proponents, at various stages of the development process, for crossings associated with land development projects. Specific requirements for crossings not associated with land development are provided in subsequent sections.

It is recommended that proponents meet with TRCA staff prior to submission at each stage to identify pertinent issues and study requirements. The level of detail required for the submission may be adjusted at this point to reflect the project scale and degree of complexity. Meetings also provide an opportunity for TRCA staff to provide the proponent with available data for the study area.

1. **Studies/reports submitted in support of secondary plan approval (i.e. OP and OPAs) and studies/reports submitted prior to draft plan approval (i.e. MESSPs, FSSs, Block Plans)**
 - i. Carry out preliminary air photo/map analysis and field reconnaissance to determine appropriate road crossing locations. Locations should be selected to avoid geomorphic constraints such as meander bends, actively eroding or unstable reaches and confluences, as well as wooded areas, wetlands, Areas of Natural and Scientific Interest and Environmentally Significant Areas. The total number of crossing should be minimized.
 - ii. Conduct a site walk with TRCA and municipal staff to confirm proposed crossing locations.
 - iii. Summarize preliminary analysis and document the crossing locations in the resulting document/report. Information to be provided includes:
 - Key plan with orthophoto base illustrating location of subject lands, watercourses, natural features and proposed crossings.
 - Summary of site walk observations and discussions.

- Rationale for proposed crossing locations and discussion of potential impacts.
- Description of design criteria for crossings to be addressed at concept and detailed design stages.

2. Studies/reports in support of draft plan approval (i.e. FSRs)

Note: If the draft plan of subdivision and supporting material are being submitted in an area without prior planning history (i.e. no approved MESP or FSS), or if there is prior planning history but the previous documentation does not address watercourse crossings and crossing locations, the submission requirements listed under heading 1 above must be addressed at this stage, in addition to the following:

- i. Develop concept designs for each crossing which specify the type, length, orientation, and opening size of the crossing structure. Concept designs must address the requirements of the TRCA and other agencies, including hydraulic, geomorphic, aquatic, and terrestrial concerns. These requirements are summarized as follows:

Hydraulic Requirements

- To ensure that there is no significant impact on upstream and downstream flood levels, an hydraulic analysis must be performed for the proposed conditions. HEC-RAS analysis is required for crossings with an upstream drainage area of greater than 50 hectares. If available, an original copy of the existing conditions hydraulic model can be obtained from TRCA staff. At the discretion of staff, analysis of crossings of smaller watercourses (drainage area less than 50 hectares) may use nomograph-based calculations performed manually or with specialized software

Note: All supporting hydraulic calculations and drawings are to be submitted, stamped and signed by a professional engineer.

Geomorphic Requirements

- For new and replacement crossing structures, bridge or structural abutments should ideally be located outside the meander belt of the watercourse. Meander belt width is to be determined according to the protocol set out in the document "TRCA Belt Width Delineation Procedures".
- If the meander belt width cannot be spanned due to site-specific constraints, the structure should be designed such that abutments are outside the 100-year erosion limit of the watercourse. The 100-year erosion limit must be determined by analysis of a minimum of 25 years of historical data, which may include aerial photography, maps, topographic surveys, cross-section transects, and erosion pin measurements. The analysis should determine the average rate of channel migration over the period of record for the first two major meander bends immediately upstream, and immediately downstream, of the proposed crossing. The 100-year erosion limit will be determined by extending rate of migration at the most active bend over a 100-year time span, and offsetting the resulting distance from both sides of the bankfull channel.

- If sufficient historical data is not available, a conservative 100-year erosion limit may be determined based on a multiple of the bankfull channel width. In watercourses where there is evidence of active channel erosion and/or hydraulic analysis indicates that the bankfull flow competence (velocity and shear stress) is greater than that of the bed and/or bed materials, the 100-year erosion limit will be 10 times the bankfull channel width, offset from both sides of the bankfull channel. In watercourses where there is no evidence of active channel erosion and hydraulic analysis indicates that the bankfull flow competence is less than that of the bed and bank material, the 100-year erosion will be 2 times the bankfull channel width, applied to both sides of the bankfull channel.
- If the meander belt width or 100-year erosion limit used overlaps the valley wall toe of slope, a stable slope allowance must also be provided. The stable slope analysis is determined by calculating a 3:1 slope from the outside of the meander belt width or 100-year erosion limit, or through an approved slope stability study.

***Note:** It is strongly recommended that geomorphic analyses be prepared by a professional engineer or professional geoscientist qualified to practice fluvial geomorphology. Comparative analysis of air photos and maps must be performed using GIS or CAD software. All air photos, maps and surveys must be registered to a common base map and corrected for distortion if necessary.*

Aquatic Requirements

- All water crossings must address the requirements for fish and fish habitat, including maintaining groundwater upwelling and discharge, preserving biological connections between stream flow and the channel bed, including fish passage, maintain natural sediment transport processes, and to minimize disturbance to the watercourse.
- Channel realignment, hardening, or other modifications should be avoided in the design of crossing structures. If channel modifications are proposed, suitable justification must be provided.
- Should alteration to the channel be anticipated, *Fisheries Act* approvals may be required. See *Fisheries Act* submission requirements for more detail.

Terrestrial Requirements

- Adequate passage must be provided, either under or over crossing structures and associated earthworks, for all wildlife potentially using the valley corridor. An ecological assessment is required to identify wildlife species in the corridor and to confirm that the crossing concept design will provide the required passage.

Other Requirements

- Crossing designs must account for recreational activities and trails within valley lands, as per municipal requirements. The span and rise of the structure opening should accommodate expected recreational uses.
- Crossings must maintain navigability of the watercourse as per Transport Canada requirements and may require *Navigable Waters Protection Act* approval in this regard.

- ii. Summarize concept designs in the resulting document/report and outline how the various requirements have been met. Supporting plans/figures, calculations and studies to be provided include:
 - Key plan illustrating site location, location of watercourse, regional flood and fill lines, and the location of the proposed crossing.
 - Concept drawings illustrating the proposed preliminary configuration of the structure in plan, profile and cross-section.
 - Hydraulic calculation results, including digital and hard copies of the input and output model files (if applicable), summary table comparing the existing and proposed flood elevations and flow velocities for the 2 year to Regional storm events, and a plan showing the hydraulic cross-sections used in the analysis.
 - Geomorphic analysis results, including a plan illustrating the delineated meander belt width and/or 100-year erosion limit, and plan(s) summarizing historic information used in 100-year erosion limit analysis, if applicable.
 - Ecological assessment results, including a species inventory for the valley corridor and justification of the proposed opening size for terrestrial passage.

3. Studies/reports in support of permit application for alteration to a watercourse and/or construction in a regulated area

Note: If the permit application and supporting documentation are being submitted for a land development project without a previously approved draft plan of subdivision, or if the draft plan of subdivision and supporting material do not adequately address crossing requirements, submission requirements listed under heading 2 above must be addressed at this stage, in addition to the following:

- i. Develop detailed designs for each crossing. The type, length, orientation, and opening size of crossing structures determined at the concept design stage should be confirmed. Inlet and outlet design, grading, landscaping and restoration, in-water works, and erosion and sediment control should be finalized at this stage.
- ii. Prepare a submission package consisting of a design brief and appropriate plans/drawings that document the detailed design for the crossing and associated works. Any changes from the concept plan should also be documented and justified. Supporting material and documentation for the submission should include:
 - Key plan illustrating site location, location of watercourse, and location of the proposed crossing.
 - Detailed design drawings showing the configuration of the structure in plan, profile and cross-section. Drawings should show the alignment of the channel, floodlines, and meander belt width and/or 100-year erosion limit, as appropriate.
 - Hydraulic analysis results and plan. If changes are made to the configuration of the structure from the concept design, or if additional detail requires modifications to the calculations or modelling, these must be documented and reflected in the results.

- Erosion and sediment control plan, showing location of control measures, detail drawings for control measures, construction access, notes on construction procedure and phasing, and notes on maintenance of control measures. Details for in-water works and 'working in the dry' should also be included if applicable.
- Landscape and restoration plan indicating species and quantities for trees, shrubs and seed mixes, and location, size and condition of plant material (see also TRCA Standard Restoration Guidelines).
- Tree removal/preservation plan identifying vegetation type within the work area, location of trees to be removed and preserved, and protection measures for the remaining stand.
- Letter of Intent and DFO Application for Authorization, if applicable. See Fisheries Act submission requirements for more detail.

CROSSINGS PROPOSED UNDER ENVIRONMENTAL ASSESSMENT PROCESS

New crossings proposed under the Municipal Class Environmental Assessment or full Environmental Assessment processes are required to meet the requirements listed above. EA documents should address the submission requirements under headings 1 and 2, above, while requirements under heading 3 should be addressed at the permit application/detailed design stage.

REPLACEMENT CROSSING STRUCTURES

In most cases submissions for replacement structures are not expected to address the requirements under heading 1, above, as the location of the crossing has already been fixed. However, if realignment of the roadway is proposed, those requirements must be considered in determining the new alignment.

In general, it is expected that submissions for replacement structures will consist of permit applications with a design brief and detailed design drawings. Nonetheless, submissions for replacement structures must address all of the requirements listed under headings 2 and 3 above. The proponent may make reference to existing studies (e.g. hydraulics) rather than preparing new analyses, if it can be shown that the existing studies remain relevant.

CROSSING STRUCTURE EXTENSIONS

TRCA will endeavour to achieve all of its objectives for extensions of existing structures. However, it is recognized that the objectives would in many cases require replacement of structures which is often not possible. As a result, TRCA staff will communicate requirements for structure extensions to proponents on a site-specific basis.



Stantec

Stantec Consulting Ltd.
49 Frederick Street
Kitchener ON N2H 6M7
Tel: (519) 579-4410

FILE COPY

October 19, 2010

File: 160210480/30 31

Toronto Region Conservation
5 Shoreham Drive
Downsview Ontario
M3N 1S4
Canada

Attention: Sharon Lingertat, Planner

Dear Sharon:

Reference: Mayfield Road Class EA – Airport Road to Coleraine Drive - your file CFN39924

Further to your letter of October 7, 2009 regarding your review of the Draft Natural Environment Report and the CSP Culvert Inspection report you received in September 2009, we enclose the following:

- Two (2) copies each of the alternative Design Concepts (1 through 4 inclusive) where Mayfield Road is proposed to ultimately be widened to six lanes. Please Note that *Design Concept 4 is considered to be the preferred alternative at this time*, and a profile is included with this drawing. Please note that a plan of The Gore Road is also included, which is common to all four design concepts.
- Two (2) copies of a REVISED DRAFT report entitled "*Mayfield Road Improvements (Airport Road to Coleraine Drive) Class Environmental Assessment, Natural Environment Report*", dated April 2010;
- Two (2) copies of a Stantec Report entitled "*Culvert & Stormwater Management Report, Mayfield Road EA – Airport Road to Coleraine Drive*" dated September 2010.
- Two copies of a Stantec Report entitled "Hydrogeological Investigation, Mayfield Road Improvements, (Airport Road to Coleraine Drive) Class EA", dated February 2010.
- Two (2) copies of your Summary Table Dated November 27, 2007, updated where appropriate (updates shown in red).
- Two (2) copies of Appendix A updated to address the TRCA's comments.

In general, the 4 alternative design concepts consist of six lane widenings as follows:

Concept 1 – Widening equally about the existing centerline;

Concept 2 – Widening to the north;

Reference: Mayfield Road Class EA, Airport to Coleraine

Concept 3 – Widening to the south; and

Concept 4 – Modified alignment to minimize property impacts (i.e. widening equally about centerline in most areas, but widened to north or south in areas to minimize property impacts).

Please note that preliminary design has been completed on the preferred Concept 4 only. As a result the drawings for Concept 4 contain more detail than Concepts 1-3, which are at a functional design stage.

Also attached are two (2) copies of Table 7 excerpted from the Natural Environment Report outlining the standard mitigation measures for this project.

We trust the enclosed information addresses your comments from your October 7, 2009 correspondence. We would appreciate a response by November 5, 2010 if possible. Please contact the undersigned if you have any questions.

Sincerely,

STANTEC CONSULTING LTD.



Dave Hallman, P. Eng.
Principal, Transportation
Tel: (519) 585-7444
Fax: (519) 579-4239
dhallman@stantec.com

Enclosures

cc: Solmaz Zia, Region of Peel (No drawings or reports included)

John Bayley, Stantec Consulting

**MAYFIELD ROAD IMPROVEMENTS
(AIRPORT ROAD TO COLERAINE
DRIVE) CLASS ENVIRONMENTAL
ASSESSMENT**

NATURAL ENVIRONMENT REPORT

DRAFT

Prepared for:
Regional Municipality of Peel
10 Peel Centre Drive, 4th Floor
Brampton, Ontario
L6T 4B9

Prepared by:
Stantec Consulting Ltd.
49 Frederick Street
Kitchener, Ontario
N2H 6M7

File No. 160210480
April 2010



Stantec



**Culvert and Stormwater
Management Report
Mayfield Road EA - Airport Road to
Coleraine Drive**

Prepared for:

Region of Peel

Prepared by:

Stantec Consulting Ltd.
49 Frederick Street
Kitchener ON N2H 6M7

Project 1602-10480

October 2010

SUMMARY SHEET FOR STRUCTURE SIZING (CULVERT, BRIDGE) AND PIPE CROSSING OF WATERCOURSES (WATER, SEWER)

Mayfield Road (Airport Road to Coleraine Drive)

DATE CHART LAST REVISED: Tuesday, November 27, 2007 (Stantec Sept 7, 2010)
 DATE OF SITE VISIT: Wednesday, November 21, 2007
 PROJECT NAME: Mayfield Road (Airport Road to Coleraine Drive)
 PROPONENT: Region of Peel
 TRCA PROJECT MANAGER: Sharon Lingertat, TRCA
 MUNICIPAL PROJECT MANAGER: Sandy Lovisotto, Region of Peel
 CONSULTANT PROJECT MANAGER: Gary Leveck, Stantec Consulting Ltd.
 TRCA FILE #: 39924

GEOGRAPHIC AREA		Location #1	Location #2	Location #3	Location #4	Location #5	Location #6	Location #7	Location #8	Location #9	Location #10
TRCA to complete	Watercourse Location (refer to attached map for corresponding location number) Location (between x and y streets)	Mayfield Road (east of Airport Rd.)	Mayfield Road (between Airport Rd. and Innis Lake Rd.)	Mayfield Road (west of Innis Lake Rd.)	Mayfield Road (east of Innis Lake Rd.)	Mayfield Road (east of Innis Lake Rd.)	Mayfield Road (west of Centreville Creek Rd.)	Mayfield Road (west of Centreville Creek Rd.)	Mayfield Road (east of Centreville Creek Rd.)	Mayfield Road (west of The Gore Rd.)	Mayfield Road (east of The Gore Rd.)
ONTARIO REG. 166/06 - "DEVELOPMENT, INTERFERENCE WITH WETLANDS & ALTERATIONS TO SHORELINES & WATERCOURSES"											
TRCA to complete	Within a Regulated Area	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes
	Within a Wetland/Area of Interference? (Y/N)	No	No	No	No	No	No	No	No	No	No
	Within a Watercourse? (Y/N)	No	Yes - watercourse located both north and south of Mayfield Rd.	Yes - watercourse located both north and south of Mayfield Rd.	No	Yes - watercourse located both north and south of Mayfield Rd.	Yes - watercourse located both north and south of Mayfield Rd.	Yes - watercourse located both north and south of Mayfield Rd.	Yes - identified as a watercourse on the south of Mayfield Rd. only - it will also be important to maintain flows on the north side as this is considered a headwater drainage feature	Yes - watercourse located both north and south of Mayfield Rd.	Yes - watercourse located both north and south of Mayfield Rd.
	Within a Regional Storm Floodplain? (Y/N) (<50 ha upstream drainage >50ha* upstream drainage) * Regional Storm Floodplain	No	No	Yes	No	Yes	Yes	No	No	No	No
	Hydraulic Capacity of existing structure is (adequate/inadequate) to convey Regional Storm?										
PROPOSED STRUCTURE DETAILS											
Proponent to complete	Proposed Structure (L x W x H and type) Open or Closed Footed?	1200 mm dia. CSP	1800 mm dia. CSP	9000 x 2500 Box	1200 mm dia. CSP	1750 mm CSP	1500 mm x 1750 mm Box	1800 mm dia. CSP	two 900 mm dia CSP's	910 mm dia. CSP	1100 mm dia. CSP
	Extension only proposed? (Y/N)	No	No	Yes	No	Yes	Yes	No	No	Yes	Yes
	Removal, Replacement only proposed?	No	No	No	No	No	No	No	No	No	No
	Removal, Replacement and Lengthening Proposed? (Y/N)	Yes	Yes	No	Yes	No	No	Yes	Yes	No	No
REQUIREMENTS											
TRCA to complete	Hydraulic Analysis Required? (Y/N)	No	Yes - if extending or replacing	Yes - if extending or replacing	No	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	ibid	Yes - if extending or replacing	Yes - if extending or replacing
	Meander Bell Analysis Required? (Y/N)	No	Yes - if extending or replacing	Yes - if extending or replacing	No	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	ibid	Yes - if extending or replacing	Yes - if extending or replacing
	100-year Erosion Limit Required? (Y/N)	No	Yes - if extending or replacing	Yes - if extending or replacing	No	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	ibid	Yes - if extending or replacing	Yes - if extending or replacing
	Groundwater Upwellings (will dictate open footed culvert) (Y/N)	No	ibid	ibid	No	ibid	ibid	ibid	ibid	ibid	ibid
	Open Footed Required? (Y/N)	No	ibid	ibid	No	ibid	ibid	ibid	ibid	ibid	ibid
	Geotechnical Report Required	No	ibid	Yes	No	Yes	Yes	Yes	ibid	ibid	ibid
	Terrestrial Passage Required? (Y/N)	No	No	ibid	No	ibid	ibid	ibid	ibid	ibid	ibid
	Embedment and substrates for Aquatic Passage Required? (Y/N)	No	No	Yes	No	Yes	Yes	No	No	No	No
	Net Benefit of Proposed crossing?	No	ibid	ibid	No	ibid	ibid	ibid	ibid	ibid	ibid
PIPE CROSSING DETAILS											
Proponent to complete	Pipe Crossing Above or Below Culvert, as required?	Below	N/A	N/A	Below	N/A	Above	Above	N/A	Above	Above
	Geotechnical Report confirms (Open Cut/Tunnel) for pipe crossing, as required?	Open	N/A	N/A	Open	N/A	Open	Open	N/A	Open	Open
	Distance between invert of creek and invert of pipe (m), as required?	1 m	N/A	N/A	1m	N/A	3m	2.5m	N/A	0.5m	1.5m
	Minor Trench Underwatering or Major Dewatering Anticipated, as required?	Yes	N/A	N/A	Yes	N/A	Yes	Yes	N/A	Yes	Yes
SUMMARY OF APPROVALS REQUIRED											
TRCA to complete	Ontario Regulation 166/06 permit required (Y/N)	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
	a) site grading	n/a	Yes	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes
	b) temporary/permanent placement of material	n/a	Yes	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes
	c) construction of a structure	n/a	Yes	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes
	d) change to a structure	n/a	Yes	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes
	Interfere with or Alter a Wetland (Y/N)	No	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes
	Interfere with or Alter a Shoreline (Y/N)	n/a	No	No	n/a	No	No	No	No	No	No
	Interfere with or Alter a Watercourse (Y/N)	n/a	Yes	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes
	Mt HADD? (Y/N/TBD)	n/a	Yes	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes
	HADD (Y/N/TBD)	n/a	ibid	ibid	n/a	ibid	ibid	ibid	ibid	ibid	ibid
Proponent to complete	MNR contacted? (PROPOONENT WILL FILL IN)? N?										
Proponent to complete	Transport Canada contacted for navigable waterway? (Y/N)	n/a	n/a	No	n/a	No	No	No	n/a	n/a	No
ADDITIONAL NOTES											
											Cemetery located on the south side of Mayfield Road.

DATE CHART LAST REVISED: Tuesday, November 27, 2007 (Stantec Sept 7, 2010)
 DATE OF SITE VISIT: Wednesday, November 21, 2007
 PROJECT NAME: Mayfield Road (Airport Road to Coleraine Drive)
 PROPONENT: Region of Peel
 TRCA PROJECT MANAGER: Sharon Lingertal, TRCA
 MUNICIPAL PROJECT MANAGER: Sandy Lovisotto, Region of Peel
 CONSULTANT PROJECT MANAGER: Garry Leveck, Stantec Consulting Ltd.
 TRCA FILE # 39924

GEOGRAPHIC AREA							
TRCA to complete	Watercourse Location (refer to attached map for corresponding location number) Location (between x and y streets)	Location #11	Location #12	Location #13	Location #14	Location #15	Location #16
		Mayfield Road (east of The Gore Rd.)	Mayfield Road (west of Clarkway Dr.)	Mayfield Road (east of The Gore Rd.)	Mayfield Road (east of The Gore Rd.)	Mayfield Road (west of Coleraine Dr.)	Mayfield Road (west of Coleraine Dr.)
ONTARIO REG. 166/06 - "DEVELOPMENT, INTERFERENCE WITH WETLANDS & ALTERATIONS TO SHORELINES & WATERCOURSES"							
TRCA to complete	Within a Regulated Area	Yes	Yes	Yes	Yes	No	No
	Within a Wetland/Area of Interference? (Y/N)	No	No	No	No	No	No
	Within a Watercourse? (Y/N)	Yes - watercourse located both north and south of Mayfield Rd.	Yes - watercourse located both north and south of Mayfield Rd.	Yes - watercourse located both north and south of Mayfield Rd.	Yes - watercourse located both north and south of Mayfield Rd.	Yes - identified as a headwater drainage feature on the south side of Mayfield Rd.	Yes - identified as a headwater drainage feature on the south side of Mayfield Rd.
	Within a Regional Storm Floodplain? (Y/N) (<50 ha upstream drainage > 50 ha* upstream drainage) * Regional Storm Floodplain Hydraulic Capacity of existing structure is (adequate/inadequate) to convey Regional Storm?	Yes	Yes	Yes	Yes	No	No
PROPOSED STRUCTURE DETAILS							
Proponent to complete	Proposed Structure (L x W x H and type) Open or Closed Footed?	3000 x 11000 Arch	6070 x 1250 box	900 mm dia CSP	5400 x 1525 Box	1200 mm dia CSP	600 mm dia CSP
	Extension only proposed? (Y/N)	Yes	Yes	No	No	Yes	No
	Removal, Replacement only proposed?	No	No	No	No	No	No
	Removal, Replacement and Lengthening Proposed? (Y/N)	No	No	Yes	Yes	No	Yes
REQUIREMENTS							
TRCA to complete	Hydraulic Analysis Required? (Y/N)	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	td	td
	Meander Belt Analysis Required? (Y/N)	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	td	td
	100-year Erosion Limit Required? (Y/N)	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	td	td
	Groundwater Upwellings (will dictate open footed culvert) (Y/N)	td	td	td	td	td	td
	Open Footed Required? (Y/N)	td	td	td	td	td	td
	Geotechnical Report Required	Yes	Yes	Yes	Yes	td	td
	Terrestrial Passage Required? (Y/N)	td	td	td	td	td	td
	Embedment and substrates for Aquatic Passage Required? (Y/N)	Yes	Yes	No	Yes	No	No
	Net Benefit of Proposed crossing?	td	td	td	td	td	td
PIPE CROSSING DETAILS							
Proponent to complete	Pipe Crossing Above or Below Culvert, as required?	Above	N/A	N/A	Above	Above	Above
	Geotechnical Report confirms (Open Cut/Tunnel) for pipe crossing, as required?	Open	N/A	N/A	Open	Open	Open
	Distance between invert of creek and invert of pipe (m), as required?	1.5m	N/A	N/A	0.5m	0.5m	0.5m
	Minor Trench Underwatering or Major Dewatering Anticipated, as required?	Yes	N/A	N/A	Yes	Yes	Yes
SUMMARY OF APPROVALS REQUIRED							
TRCA to complete	Ontario Regulation 166/06 permit required (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
	a) site grading	Yes	Yes	Yes	Yes	Yes	Yes
	b) temporary/permanent placement of material	Yes	Yes	Yes	Yes	Yes	Yes
	c) construction of a structure	Yes	Yes	Yes	Yes	Yes	Yes
	d) change to a structure	Yes	Yes	Yes	Yes	Yes	Yes
	Interfere with or Alter a Wetland (Y/N)	Yes	Yes	no	Yes	no	no
	Interfere with or Alter a Shoreline (Y/N)	no	no	no	no	no	no
	Interfere with or Alter a Watercourse (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
	Mt HADD? (Y/N/TBD)	Yes	Yes	Yes	Yes	Yes	Yes
	HADD (Y/N/TBD)	td	td	td	td	td	td
Proponent to complete	MNR contacted? (PROponent WILL FILL IN)?						
Proponent to complete	Transport Canada contacted for navigable waterway? (Y/N)	No	No	n/a	No	n/a	n/a
ADDITIONAL NOTES							

**HYDROGEOLOGICAL
INVESTIGATION
MAYFIELD ROAD IMPROVEMENTS
(AIRPORT ROAD TO COLERAINE
DRIVE) CLASS EA
REGIONAL MUNICIPALITY OF
PEEL**

Prepared for:
Regional Municipality of Peel
10 Peel Centre Drive, 4th Floor
Brampton ON L6T 4B9

Prepared by:
Stantec Consulting Ltd.
49 Frederick Street
Kitchener ON N2H 6M7

160210480
February 2010



Stantec

APPENDIX A (from TRCA Letter October 7, 2009) Mayfield Road Class EA, Airport Rd to Coleraine Dr.

ITEM NO.	OCTOBER 7/09 TRCA COMMENT	HOW COMMENT IS BEING ADDRESSED OCTOBER 2010
1.	Several discrepancies exist between Table 2 in the report and the Summary Sheet for Structure Sizing (Culvert, Bridge) and Pipe Crossing of Watercourses (Water, Sewer) provided by TRCA. For example, at Location #2, TRCA's summary sheet indicates that a watercourse is located both upstream and downstream of Mayfield Road. Table 2, however, only identifies the watercourse downstream. Please revise Table 2 so that it corresponds with TRCA's summary sheet (attached).	Comment noted. Table 2 has been revised to correspond with TRCA's summary sheet.
2.	Table 7 indicates that "enhanced erosion measures" will be installed. Please clarify what is meant by "enhanced erosion control measures".	Comment noted. The reference to 'enhanced erosion control measures' in Table 7 has been replaced with 'appropriate erosion control measures'.
3.	Table 7 indicates that any stranded fish in isolated work areas will be captured and released. Please confirm that MNR has been contacted and that they have approved this approach as it relates to redside dace.	Comment noted. Table 7 has been updated to recommend that MNR should be contacted during the final design stage to confirm the appropriate relocation strategy for those watercourses with the potential to contain redside dace.
4.	Please contact MNR to confirm which tributaries will be managed for redside dace. In order to ensure accuracy, please indicate in the ESR which timing windows are being applied to each specific watercourse after consulting with MNR.	Both the MNR and the ROM have been contacted to confirm the presence of redside dace within the study area. Table 7 in the report identifies the appropriate timing windows for each watercourse.
5.	The Culvert Inspection Report indicates in some locations the watercourse will be channelized, but it is unclear what this means. Please provide additional information to clarify what "channelizing" the watercourse entails.	This comment by our structural engineer was in response to the fact that the flows in the creek are being blocked somewhat by vegetation. However a more appropriate comment is "flow characteristics of channel to be reviewed as part of detail design". It is important to note that all culverts will be extended/replaced based on the preferred design alternative.
6.	The Culvert Inspection Report indicates that gabion will be installed in several locations. Gabion is not preferred by TRCA staff. Please explore other options, such as the installation of riverstone/natural stone armouring where needed.	This comment by our structural engineer was in response to the fact that the existing culvert should be longer/extended under existing conditions. The option of extending the culvert or installing gabions to create a retaining or head wall structure was presented to address the fact that the culvert is not long enough. The comment will be revised to read "extend culvert or install headwall/retaining walls". However, please keep in mind that in every case the culverts will be extended and/or replaced.

APPENDIX A (from TRCA Letter October 7, 2009) Mayfield Road Class EA, Airport Rd to Coleraine Dr.

ITEM NO.	OCTOBER 7/09 TRCA COMMENT	HOW COMMENT IS BEING ADDRESSED OCTOBER 2010
7.	The Natural Environment Report mentions the "Culvert and Stormwater Management Report"; however, we have not received this information. Please provide TRCA with a copy of the report for review.	2 Copies of the "Culvert and Stormwater Management Report, Mayfield Road EA – Airport Road to Coleraine Drive" by Stantec and dated September 2010 is included with this submission.
8.	The recommended mitigation and enhancement measures are based on generalizations and do not appear to correspond to a chosen preferred alternative. The scope of the proposed construction is still unknown and, as such, it is difficult to ascertain whether or not the mitigation measures for an unknown alternative are reasonable. Although the recommended mitigation seems reasonable as an overview, once alternatives have been considered, and a preferred alternative has been decided upon, further consideration, discussion and TRCA review will likely need to be given to mitigating a more specific set of impacts related to construction.	Table 7 has been scoped to address the specific mitigation measures for the preferred alternative.
9.	Please revise Section 2.6, Toronto and Region Conservation Authority Policies, to read, "A decision regarding the approval of an application for a Permit from the TRCA is lead by Ontario Regulation 166/06 and is guided by the <i>Valley and Stream...</i> "	Comment noted. Section 2.6 has been revised as recommended.

Table 7 Mayfield Road Class EA – Airport Road to Coleraine Drive

Potential Impact	Recommended Mitigation and Enhancement Measures
1. Aquatic Habitat, Fisheries and Water Quality	
<p>Direct loss, alteration, or disruption of fish habitat</p>	<ul style="list-style-type: none"> • Minimize the footprint of any required culvert extensions associated with road widening during the design process to minimize the length of watercourse (fish habitat) affected by culvert / bridge extensions; • Ensure sufficient fish passage is provided through all culvert replacements or extensions where direct fish habitat exists; • Countersunk and backfill any new or extended culverts with natural substrate (bed material), ensuring that a low flow channel is maintained through natural substrate material to allow for fish passage; • Restore vegetation and aquatic habitat (substrate) to pre-construction condition (or better), ensuring that any habitat features (pools, riffles, structure) are restored or enhanced; • Any Harmful Alteration, Disruption or Destruction (HADD) of fish habitat that may result from the proposed roadway improvements will require prior Authorization from DFO. A compensation plan will be required for review and approval and should be discussed with TRCA staff on behalf of DFO; • Opportunities to enhance riparian vegetation through the planting of other hanging grasses, shrubs and trees will improve stream cover, reduce temperature impacts, and provide allochthonous inputs (food source for various fish species).
<p>Increased turbidity and siltation in downstream areas resulting in "smothered" plants and animals due to the deposition of silt and increased turbidity of surface watercourses</p>	<ul style="list-style-type: none"> • Ensure appropriate erosion control measures are installed and maintained throughout all phases of construction to protect exposed surfaces, control run-off and minimize the deposition of silt or suspended sediments within downstream habitats; • Worksite isolation and dewatering plans should be prepared to identify appropriate isolation methods, siltation controls and dewatering measures to be implemented. ; • Any pumped water resulting from dewatering activities should be discharged to settling areas or through filter media before entering the surface water bodies; • Utilize suitable backfill material along banks and footings; • Stage construction activity to minimize the frequency and duration of any in-water work, as much as feasible;

Potential Impact	Recommended Mitigation and Enhancement Measures
	<ul style="list-style-type: none"> • Re-vegetate all disturbed areas as soon as possible following disturbance to stabilize the area and minimize erosion potential.
Impacts on Redside dace	<ul style="list-style-type: none"> • Improve water quality through SWM and erosion control; • Restore riparian vegetation cover through the planting of overhanging grasses, forbs and shrubs, to provide cover, shade and a source of food (insects); • No in-water work should occur between September 15th and June 30th for all tributaries containing, historically containing or draining to redside dace or its habitat. While dace spawn in May, the coldwater timing window is typically applied by MNR to ensure that no unstable construction areas are prone to erosion through the winter months and during spring freshet, which reduces the risk of a sediment event in redside dace habitat areas. A review of the particular activity may assist in negotiating the timing window.
Stress on fish communities	<ul style="list-style-type: none"> • Any fish that may occur within isolated work areas should be captured and released in accordance with appropriate MNR protocols. MNR should be consulted to confirm the appropriate fish relocation plan for watercourses potentially containing redside dace.
Reduced water quality in downstream habitat areas	<ul style="list-style-type: none"> • Incorporate SWM measures into the design of the new roadways and intersection improvements to maintain pre-development quantity and quality of stormwater run-off; • Implement provisions during construction for quick and effective spill control, containment and response, ensuring cleanup materials are stored on-site for easy access; • Implement accurate reporting protocols to ensure quick and accurate reporting of all spills; • Ensure all equipment entering the water (if deemed necessary) is properly washed and degreased prior to entering the watercourse; • Ensure refuelling stations are located outside of the floodplain and at least 30 m from the watercourse; • Establish and maintain erosion and control measures throughout all phases of construction.
Timing effects of construction on aquatic species	<ul style="list-style-type: none"> • Staging of work to avoid spawning and breeding activity • No in-water work should occur between September 15th and June 30th in the West Humber River or any of its tributaries supporting Redside dace in accordance with

Potential Impact	Recommended Mitigation and Enhancement Measures
	<p>MNR Fisheries timing windows</p> <ul style="list-style-type: none"> • All other watercourses are to be managed as warmwater systems and no in-water work should occur between March 15th and June 30th.
<p>2. Terrestrial Habitat and Species</p>	
<p>Removal or disturbance of significant trees or ground flora</p>	<ul style="list-style-type: none"> • Minimize tree removal and bank disturbance during construction; • Stabilize all disturbed areas upon completion of any grading works through re-vegetation of the disturbed areas utilizing native plant species (ex. seed and mulch, compost mix, tree and shrub planting); • Direct roadway improvements away from sensitive areas, such as wetlands or pools, where feasible.
<p>Stress on biological communities</p>	<ul style="list-style-type: none"> • The stress on wildlife is not anticipated to increase significantly due to the existing high traffic volumes already occurring in the area • Avoid construction impacts during sensitive wildlife periods, such as breeding seasons for various fish and bird species
<p>Introduction of exotic species through disturbance</p>	<ul style="list-style-type: none"> • Use only native species for all re-vegetation work
<p>Interference with ecological corridors and linkages</p>	<ul style="list-style-type: none"> • The existing roadway already represents an interference point to the linkage function along the various watercourses • Maintain culvert diameter to maintain existing wildlife movement and migration along corridors

We thank you for your attention to this matter, and we look forward to your assistance in the identification of pertinent issues for this roadway corridor. If this letter should have been directed to another person or department in your organization, we would appreciate your help in forwarding it internally, on our behalf.

Sincerely,



Sandy Lovisotto, P.Eng.
Project Manager, Roads Planning
Environment, Transportation and Planning Services

RECEIVED

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ETPS

encl.

c. Mr. Garry Leveck, Stantec Consulting Ltd.

~~This project does not appear to have any direct consequence to the policies and/or mandate of this agency. Therefore, we will not be providing any input and we will not require further notices or correspondence.~~

Please add the following for any future mailings:
Date: October 31/07 Name: CRAIG CAMPBELL
Title: Director, Public Works & Engineering.
Agency: TOWN OF CALEDON
Address: 6311 OLD CHURCH RD
CALEDON, ON, L7C 1J6

As well, please add

Huiging Xu
Senior Transportation Planner
Town of Caledon

Environment, Transportation and Planning Services

11 Indell Lane, Brampton, ON L6T 3Y3
Tel: 905-791-7800 www.peelregion.ca



October 29, 2007

Your file / votre référence

Our file / Notre référence

5010-1
#192491

Garry Leveck
Project Manager
Stantec Consulting Ltd.
49 Frederick Street
Kitchener, ON
N2H 6M7

Dear Mr. Leveck:

**RE: Mayfield Road, from East of Airport Road to West of Coleraine Drive Class
Environmental Assessment Study**

Thank you for your letter of October 9, 2007 regarding the above project.

For all provincial and/or municipal undertakings, Indian and Northern Affairs Canada requests that the proponent of such projects make efforts directly from the initiation of a project to identify and notify all potentially interested First Nation communities. It is recommended that this identification and notification occur at the earliest planning stages of the undertaking and if requested by any First Nation(s), maintain communication with such communities. To assist with identifying First Nations and other Aboriginal groups within the vicinity of a specific proposed project, Indian and Northern Affairs Canada can provide the following information sources:

- The Chiefs of Ontario website (<http://www.chiefs-of-ontario.org>) provides a directory of contact information for all First Nations and Chiefs, as well as a map of the locations of all Ontario First Nations.
- Natural Resources Canada produced provincial maps, showing all First Nation reserve lands, are available for purchase at:
http://cccm.nrcan.gc.ca/english/canada_lands_index_e.asp
- Natural Resources Canada's online *Historical Indian Treaties* map, showing historical First Nation treaties across Canada, is available at:
<http://atlas.nrcan.gc.ca/site/english/maps/historical/indiantreaties/historicaltreaties>

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- A search by place name at the Canadian Geographical Names database (http://geonames.nrcan.gc.ca/search/search_e.php) will generate a map which shows any nearby Indian reserve lands in grey.
- The Métis Nation of Ontario (<http://www.metisnation.org/>) may be able to provide information regarding Métis interests with respect to a particular project.
- The Ontario Federation of Indian Friendship Centres website provides a list of all friendship centres in Ontario, at: <http://www.ofifc.org/Centres/OfficeList.asp?Region='ON'>
- For enquiries regarding land claims in Ontario, please contact the Director General of the Comprehensive Claims Branch at (819) 994-7521, the Director General of Specific Claims Branch at (819) 994-2323 and the Director General of Litigation Management and Resolution Branch at (819) 997-3582.

If, however, the proponent believes that the proposed project is likely to also trigger a requirement for a federal environmental assessment under the *Canadian Environmental Assessment Act* (CEAA), we advise that the proponent contact the Canadian Environmental Assessment Agency early in the planning process, and provide a project description to them. The Agency will notify federal agencies, including INAC, of the proposed project as appropriate, in accordance with the requirements of the *Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements*. INAC will, in turn, provide input to the Agency regarding our interest in the project and/or First Nation contact information wherever warranted.

Thank you for your time and consideration.

Sincerely,

Miranda Lesperance
 Environment Officer
 Environment Unit
 INAC - Ontario Region
 25 St. Clair Avenue E. 8th Floor
 Toronto, Ontario M4T 1M2
lesperancem@inac.gc.ca

cc: Sandy Lovisotto, Regional Municipality of Peel

This letter has been distributed electronically. If you require a signed copy, please contact the author at the address provided above.

Canada¹³¹³



October 22, 2007

NOV - 2 2007

Sandy Lovisotto, P. Eng.
Project Manager
Region of Peel
10 Peel Centre Drive
Brampton, Ontario
L6T 4B9

Dear Ms. Lovisotto:

**Subject: Notice of Study Commencement
Class Environmental Assessment
Mayfield Road from Airport Road to Coleraine Drive**

The Union of Ontario Indians is in receipt of your notice received in October 2007 with respect to the above noted initiative of the Region of Peel. Your notice outlines some minor details related to your Class Environmental Assessment to assess concerns with increased traffic growth.

This letter re-confirms that under no circumstance should any of the correspondence exchanged between representatives from this organization and the Region of Peel related to the above noted initiative be characterized or construed as a consultation with this organization, its member First Nations or the members of those First Nations. This letter shall serve as evidence that there was no consultation.

We maintain that Aboriginal and treaty rights and any First Nations' interest in its traditional territory, including its resources, cannot be abrogated, derogated or infringed in any way by any government legislation, regulation, policy or initiative.

Section 35 of the *Constitution Act, 1982* recognizes and affirms Aboriginal and treaty rights, and in doing so, it protects both the content of these rights and requires a process of consultation and accommodation.

According to recent decisions of the Supreme Court of Canada, in order to trigger constitutional obligations around meaningful consultation and accommodation, First Nations are not required to prove the existence of section 35 rights in a court of law. Instead, First Nations must demonstrate a "prima facie" case for the existence of a section 35 right.

UNION OF ONTARIO INDIANS

Head Office: Nipissing First Nation, P.O. Box 711, North Bay, ON P1B 8J8 Phone: (705) 497-9127 Fax: (705) 497-9135



In light of the high standard that has been set in law and by the Courts for governments to consult with First Nations, we are recommending that you meet with all Anishinabek First Nation communities whose traditional territory may be affected by this initiative. It is only through direct discussions with Anishinabek First Nation communities that you will be able to work towards the development of a meaningful consultation process with each individual First Nation.

However, your correspondence on the above issue is not satisfaction of any legal obligation of the government to consult with First Nations.

Yours truly,


A: Allan Dokis
Intergovernmental Affairs Director

Copy to: G. Leveck, P.Eng., Stantec Consulting



October 17, 2007

Ms. Sandy Lovisotto
Project Manager
Regional Municipality of Peel
10 Peel Center Drive
Brampton, Ontario L6T 4B9

Dear Ms. Lovisotto

Re: Notice of Study Commencement- Mayfield Road, from East of Airport Road to West of Coleraine Drive Class Environmental Assessment Study

Six Nations of the Grand River (Six Nations) has received the Region of Peel's Notice of Study Commencement for the Mayfield Road, from East of Airport Road to West of Coleraine Drive, Class Environmental Assessment.

Six Nations' cultural, sustenance and other rights are recognized by the Province of Ontario by way of the 1701 Treaty of Ft. Albany. Six Nations' rights and interests in relation to lands six miles either side of the Grand River (the Grand River Tract) was also confirmed by way of treaty, through the Haldimand Proclamation of October 25, 1784. Six Nations remains concerned about the overall pace and scope of development within the Grand River Tract and region. We are of the view that the cumulative effect of this development has and is increasingly infringing our Treaty rights and impacting our claims and interests.

At this time, Six Nations has no concerns regarding the above noted project. For further information, please do not hesitate to contact Lonny Bomberry at (519) 753-0665 ext. 12. We thank the City of Brampton for providing us notification of this project.

Respectfully,

Councillor George Montour, Chair
Six Nations Lands and Resources Committee
SIX NATIONS OF THE GRAND RIVER

CC: Mr. Lonny Bomberry, Director: Six Nations Lands and Resources
Mr. Leroy Hill, Secretary: Confederacy Council of the Grand River
Minister David Ramsay, Ontario Ministry of Aboriginal Affairs and Natural Resources
Minister Chuck Strahl, Indian and Northern Affairs Canada
Mr. Khurram Tunio, M. Eng P.Eng., Senior Project Engineer

This letter is without prejudice to the positions that Six Nations has and may take in respect to its claims and litigation in relation to the Six Nations Tract/ Haldimand Proclamation Lands.

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C

October 15, 2007

Mr. Garry E. Leveck, P. Eng
Stantec Consulting Ltd.
49 Frederick Street
Kitchener, ON N2H 6M7

OCT 18 2007

Dear Mr. Leveck:

**RE: Class Environmental Assessment – Notice of Study Commencement
Mayfield Road – Airport Road to Coleraine Drive
Region of Peel**

Thank you for your letter dated October 9, 2007 informing us of the commencement of the above noted project. Please keep the Board informed of the status of this project and provide us with any information you have available so that we may monitor its progress and provide comments as necessary.

If you require any further information please contact me at 905-890-1010, ext. 2217.

Yours truly,



Paul Mountford, MCIP RPP
Intermediate Planning Officer
Planning and Accommodation Department

c. Steve Hare, Peel District School Board
Sandy Lovisotto, Region of Peel

Mayfield-Airport Comm.doc

Trustees

Janet McDougald, Chair
Ruth Thompson, Vice-Chair
Valerie Arnold-Judge
Beryl Ford
David Green
Steve Kavanagh

Brad MacDonald
Suzanne Nurse
Don Stephens
Allison Van Wagner
Jeff White
Rick Williams

Director of Education and Secretary
Jim Grieve

**Associate Director,
Instructional Support Services**
Judith Nyman

**Associate Director,
Operational Support Services**
Wayne McNally

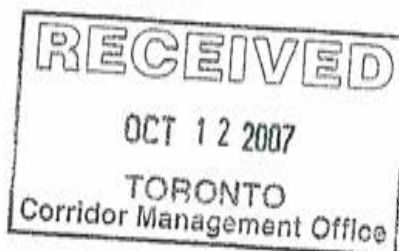
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CANADA
AWARDS FOR
EXCELLENCE


GOLD FACTORY QUALITY 2006



October 9, 2007
Project: 07-4350

Mr. Ted Lagakos
Corridor Management Technician
Ministry of Transportation
7th Floor, Atrium Tower
1201 Wilson Avenue
Downsview ON M3M 1J8

Attn: Mr. Ted Lagakos

Re: Mayfield Road, from East of Airport Road to West of Coleraine Drive
Class Environmental Assessment Study

The Regional Municipality of Peel has initiated a Schedule 'C' Class Environmental Assessment Study to determine improvement alternatives for Mayfield Road, between Airport Road and Coleraine Drive. A copy of the project "Notice of Study Commencement" is enclosed for your reference.

At this time, we are contacting various government agencies, community groups, utility commissions and other regulatory authorities to advise of the project start-up and to request any initial comments, including any requests for future contact and discussion of project specifics.

Please note that there will be two Public Information Centre (PIC) meetings during the study, which will assist the Project Team in determining a preferred design concept. You will be notified of these meetings, unless you direct that your agency has no further interest in this project.

In view of the time frame associated with this study, we request that any initial comments be directed to the following, no later than **October 31, 2007**.

Stantec Consulting Ltd.
49 Frederick Street
Kitchener, Ontario, N2H 6M7
Attention: Garry E. Leveck, P.Eng., Project Manager

We recognize that this EA Study may not be of any consequence to the policies and/or mandate of your agency. Should this be the case, we would still appreciate your response, either by personal correspondence or by returning a copy of this letter, dated and signed in the area provided below.

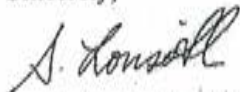
Environment, Transportation and Planning Services

11 Indell Lane, Brampton, ON L6T 3Y3
Tel: 905-791-7800 www.peelregion.ca

*deleted on
agency list
11/03/11
AB*

We thank you for your attention to this matter, and we look forward to your assistance in the identification of pertinent issues for this roadway corridor. If this letter should have been directed to another person or department in your organization, we would appreciate your help in forwarding it internally, on our behalf.

Sincerely,



Sandy Lovisotto, P.Eng.
Project Manager, Roads Planning
Environment, Transportation and Planning Services

encl.

c. Mr. Garry Leveck, Stantec Consulting Ltd.

.....
This project does not appear to have any direct consequence to the policies and/or mandate of this agency. Therefore, we will not be providing any input and we will not require further notices or correspondence.

Date: OCT 15/07 Name: TED LAGAKOS.
Title: PROJECT MANAGER
Agency: MINISTRY OF TRANSPORTATION
Address: 121 WILSON AVE
EDWARDSVIEW, ONT
M3M 1J8.

Environment, Transportation and Planning Services

11 Indell Lane, Brampton, ON L6T 3Y3
Tel: 905-791-7800 www.peelregion.ca



October 9, 2007
Project: 07-4350

~~Mr. Naren Doshi~~ *Jan Woods OMB SMID*
Director of Airport Planning
Greater Toronto Airport Authority
Lester B. Pearson International Airport
3111 Convair Drive, P.O. Box 6031
Toronto AMF ON L5P 1B2

Attn: **Mr. Naren Doshi**

Re: **Mayfield Road, from East of Airport Road to West of Coleraine Drive**
Class Environmental Assessment Study

The Regional Municipality of Peel has initiated a Schedule 'C' Class Environmental Assessment Study to determine improvement alternatives for Mayfield Road, between Airport Road and Coleraine Drive. A copy of the project "Notice of Study Commencement" is enclosed for your reference.

At this time, we are contacting various government agencies, community groups, utility commissions and other regulatory authorities to advise of the project start-up and to request any initial comments, including any requests for future contact and discussion of project specifics.

Please note that there will be two Public Information Centre (PIC) meetings during the study, which will assist the Project Team in determining a preferred design concept. You will be notified of these meetings, unless you direct that your agency has no further interest in this project.

In view of the time frame associated with this study, we request that any initial comments be directed to the following, no later than **October 31, 2007**.

Stantec Consulting Ltd.
49 Frederick Street
Kitchener, Ontario, N2H 6M7
Attention: Garry E. Leveck, P.Eng., Project Manager

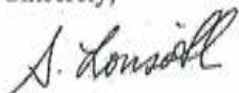
We recognize that this EA Study may not be of any consequence to the policies and/or mandate of your agency. Should this be the case, we would still appreciate your response, either by personal correspondence or by returning a copy of this letter, dated and signed in the area provided below.

Environment, Transportation and Planning Services

11 Indell Lane, Brampton, ON L6T 3Y3
Tel: 905-791-7800 www.peelregion.ca

We thank you for your attention to this matter, and we look forward to your assistance in the identification of pertinent issues for this roadway corridor. If this letter should have been directed to another person or department in your organization, we would appreciate your help in forwarding it internally, on our behalf.

Sincerely,



Sandy Lovisotto, P.Eng.
Project Manager, Roads Planning
Environment, Transportation and Planning Services

encl.

c. Mr. Garry Leveck, Stantec Consulting Ltd.

This project does not appear to have any direct consequence to the policies and/or mandate of this agency. Therefore, we will not be providing any input and we will not require further notices or correspondence.

Date: November 1, 2007 Name: OKLA SMID
Title: Manager, Land Use Planning
Agency: GTAA
Address: Toronto Pearson International Airport
P.O. Box 6031
3111 CONJACK DR.
TORONTO ONT, ON
L5P 1B2

Environment, Transportation and Planning Services

11 Indell Lane, Brampton, ON L6T 3Y3
Tel: 905-791-7800 www.peelregion.ca

TORONTO AND REGION
Conservation
 for The Living City

October 7, 2009

CFN 39924

BY MAIL AND EMAIL (Solmaz.Zia@peelregion.ca)

Ms. Solmaz Zia
 Project Manager
 Regional Municipality of Peel
 9445 Airport Road, 3rd Floor
 Brampton, ON L6S 4J3

Dear Ms. Zia:

**Re: Response to Natural Environmental Report and CSP Culvert Inspection Reports
 Mayfield Road Improvements (Airport Road to Coleraine Drive)
 Municipal Class Environmental Assessment (EA) - Schedule C
 Humber River Watershed; City of Brampton; Regional Municipality of Peel**

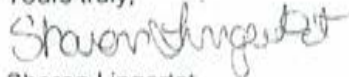
Toronto and Region Conservation Authority (TRCA) staff received the draft Natural Environmental report and the CSP Culvert Inspections report on September 1, 2009. The Notice of Commencement was received in October 2007 and a site visit was held on November 21, 2007 with staff from Stantec Consulting and Peel Region where 14 watercourse crossings were identified. It is our understanding that the Region of Peel has now re-commenced this EA in order to examine the alternatives to improve Mayfield Road from Airport Road to Coleraine Drive.

Staff has reviewed the reports and comments are provided in Appendix A. It should be noted that an assessment of alternatives, and a description of the preferred alternative have not been included in the reports. As such, it is our expectation that staff will have an opportunity to review and provide comments on the draft EA, once prepared. Additional review will be required once a preferred alternative solution and design have been determined.

Please ensure that TRCA staff receives four (4) hard copies and one (1) digital copy (in .pdf form) of any future reports, including the draft EA document. For future submissions, please include a cover letter which uses the numbering scheme provided in this letter, and identifies how these comments have been addressed.

Should you have any questions please contact me at extension 5717 or by email at slingertat@trca.on.ca.

Yours truly,



Sharon Lingertat
 Planner II, Environmental Assessments
 Planning and Development



Encl: Summary Sheet for Structure Sizing (Culvert, Bridge) and Pipe Crossing of Watercourses (Water, Sewer)
Mayfield Road Improvements (map)

BY EMAIL

cc: Stantec: Dave Hallman (dave.hallman@stantec.com)
TRCA: Carolyn Woodland, Director, Planning and Development
Beth Williston, Manager, Environmental Assessments
Quentin Hanchard, Development, Planning and Regulation
Gary Wilkins, Humber River Watershed Specialist

Appendix A

1. Several discrepancies exist between Table 2 in the report and the Summary Sheet for Structure Sizing (Culvert, Bridge) and Pipe Crossing of Watercourses (Water, Sewer) provided by TRCA. For example, at Location #2, TRCA's summary sheet indicates that a watercourse is located both upstream and downstream of Mayfield Road. Table 2, however, only identifies the watercourse downstream. Please revise Table 2 so that it corresponds with TRCA's summary sheet (attached).
2. Table 7 indicates that "enhanced erosion control measures" will be installed. Please clarify what is meant by "enhanced erosion control measures".
3. Table 7 indicates that any stranded fish in isolated work areas will be captured and released. Please confirm that MNR has been contacted and that they have approved this approach as it relates to reddsides.
4. Please contact MNR to confirm which tributaries will be managed for reddsides. In order to ensure accuracy, please indicate in the ESR which timing windows are being applied to each specific watercourse after consulting with MNR.
5. The culvert inspection report indicates that in some locations the watercourse will be channelized, but it is unclear what this means. Please provide additional information to clarify what "channelizing" the watercourses entails.
6. The culvert inspection report indicates that gabion will be installed in several locations. Gabion is not preferred by TRCA staff. Please explore other options, such as the installation of riverstone/natural stone armouring where needed.
7. The Natural Environment Report mentions the "Culvert and Stormwater Management Report", however, we have not received this information. Please provide TRCA with a copy of the report for review.
8. The recommended mitigation and enhancement measures are based on generalizations and do not appear to correspond to a chosen preferred alternative. The scope of the proposed construction is still unknown and, as such, it is difficult to ascertain whether or not the mitigation measures for an unknown alternative are reasonable. Although the recommended mitigation seems reasonable as an overview, once alternatives have been considered, and a preferred alternative has been decided upon, further consideration, discussion and TRCA review will likely need to be given to mitigating a more specific set of impacts related to construction.
9. Please revise Section 2.6, Toronto and Region Conservation Authority Policies, to read, "A decision regarding the approval of an application for a Permit from the TRCA is lead by Ontario Regulation 166/06 and is guided by the *Valley and Stream...*"

SUMMARY SHEET FOR STRUCTURE SIZING (CULVERT, BRIDGE) AND PIPE CROSSING OF WATERCOURSES (WATER, SEWER)

Mayfield Road (Airport Road to Coleraine Drive)

DATE CHART LAST REVISED: Tuesday, November 27, 2007
 DATE OF SITE VISIT: Wednesday, November 21, 2007
 PROJECT NAME: Mayfield Road (Airport Road to Coleraine Drive)
 PROPONENT: Region of Peel
 TRCA PROJECT MANAGER: Sharon Lingertal, TRCA
 MUNICIPAL PROJECT MANAGER: Sandy Lovisotto, Region of Peel
 CONSULTANT PROJECT MANAGER: Gary Leveck, Stantec Consulting Ltd.
 TRCA FILE #: 39924

GEOGRAPHIC AREA		Location #1	Location #2	Location #3	Location #4	Location #5	Location #6	Location #7	Location #8	Location #9	Location #10
TRCA to complete	Watercourse Location (refer to attached map for corresponding location number) Location (between x and y streets)	Mayfield Road (east of Airport Rd.)	Mayfield Road (between Airport Rd. and Innis Lake Rd.)	Mayfield Road (west of Innis Lake Rd.)	Mayfield Road (east of Innis Lake Rd.)	Mayfield Road (east of Innis Lake Rd.)	Mayfield Road (west of Centreville Creek Rd.)	Mayfield Road (west of Centreville Creek Rd.)	Mayfield Road (east of Centreville Creek Rd.)	Mayfield Road (west of The Gore Rd.)	Mayfield Road (east of The Gore Rd.)
ONTARIO REG. 186/05 - "DEVELOPMENT, INTERFERENCE WITH WETLANDS & ALTERATIONS TO SHORELINES & WATERCOURSES"											
TRCA to complete	Within a Regulated Area	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes
	Within a Wetland/Area of Interference? (Y/N)	No	No	No	No	No	No	No	No	No	No
	Within a Watercourse? (Y/N)	No	Yes - watercourse located both north and south of Mayfield Rd.	Yes - watercourse located both north and south of Mayfield Rd.	No	Yes - watercourse located both north and south of Mayfield Rd.	Yes - watercourse located both north and south of Mayfield Rd.	Yes - watercourse located both north and south of Mayfield Rd.	Yes - identified as a watercourse on the south of Mayfield Rd. only - it will also be important to maintain flows on the north side as this is considered a headwater drainage feature	Yes - watercourse located both north and south of Mayfield Rd.	Yes - watercourse located both north and south of Mayfield Rd.
	Within a Regional Storm Floodplain? (Y/N) (<30 ha upstream drainage >50ha* upstream drainage) * = Regional Storm Floodplain Hydraulic Capacity of existing structure is (adequate/inadequate) to convey Regional Storm?	No	No	Yes	No	Yes	Yes	No	No	No	No
PROPOSED STRUCTURE DETAILS											
Proponent to complete	Proposed Structure (L x W x H and type) Open or Closed Footed? Extension only proposed? (Y/N) Removal, Replacement only proposed? Removal, Replacement and Lengthening Proposed? (Y/N)										
REQUIREMENTS											
TRCA to complete	Hydraulic Analysis Required? (Y/N)	No	Yes - if extending or replacing	Yes - if extending or replacing	No	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	td	Yes - if extending or replacing	Yes - if extending or replacing
	Meander Belt Analysis Required? (Y/N)	No	Yes - if extending or replacing	Yes - if extending or replacing	No	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	td	Yes - if extending or replacing	Yes - if extending or replacing
	100-year Erosion Limit Required? (Y/N)	No	Yes - if extending or replacing	Yes - if extending or replacing	No	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	td	Yes - if extending or replacing	Yes - if extending or replacing
	Groundwater Upwellings (will dictate open footed culvert) (Y/N)	No	td	td	No	td	td	td	td	td	td
	Open Footed Required? (Y/N)	No	td	td	No	td	td	td	td	td	td
	Geotechnical Report Required?	No	td	Yes	No	Yes	Yes	Yes	td	td	Yes
	Terrestrial Passage Required? (Y/N)	No	td	td	No	td	td	td	td	td	td
	Embedment and substrates for Aquatic Passage Required? (Y/N)	No	td	td	No	td	td	td	td	td	td
	Net Benefit of Proposed crossing?	No	td	td	No	td	td	td	td	td	td
PIPE CROSSING DETAILS											
Proponent to complete	Pipe Crossing Above or Below Culvert, as required? Geotechnical Report confirms (Open Cut/Tunnel) for pipe crossing, as required? Distance between invert of creek and obvert of pipe (m), as required? Minor Trench Underwatering or Major Dewatering Anticipated, as required?										
SUMMARY OF APPROVALS REQUIRED											
TRCA to complete	Ontario Regulation 198/05 permit required? (Y/N)	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
	a) site grading	n/a	Yes	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes
	b) temporary/permanent placement of material	n/a	Yes	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes
	c) construction of a structure	n/a	Yes	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes
	d) change to a structure	n/a	Yes	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes
	Interfere with or Alter a Wetland (Y/N)	n/a	No	No	n/a	No	No	No	No	No	No
	Interfere with or Alter a Shoreline (Y/N)	n/a	No	No	n/a	No	No	No	No	No	No
	Interfere with or Alter a Watercourse (Y/N)	n/a	Yes	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes
	Mit HADD? (Y/N/TBD)	n/a	td	td	n/a	td	td	td	td	td	td
	HADD (Y/N/TBD)	n/a	td	td	n/a	td	td	td	td	td	td
Proponent to complete	MNR contacted? (PROPOONENT WILL FILL IN) (Y/N)?										
Proponent to complete	Transport Canada contacted for navigable waterway? (Y/N)										
ADDITIONAL NOTES											
											Cemetery located on the south side of Mayfield Road.

DATE CHART LAST REVISED: Tuesday, November 27, 2007
 DATE OF SITE VISIT: Wednesday, November 21, 2007
 PROJECT NAME: Mayfield Road (Airport Road to Coleraine Drive)
 PROPONENT: Region of Peel
 TRCA PROJECT MANAGER: Sharon Lingertat, TRCA
 MUNICIPAL PROJECT MANAGER: Sandy Lovisotto, Region of Peel
 CONSULTANT PROJECT MANAGER: Garry Leveck, Stantec Consulting Ltd.
 TRCA FILE #: 39924

GEOGRAPHIC AREA		Location #11	Location #12	Location #13	Location #14	Location #15	Location #16
TRCA to complete	Watercourse Location (refer to attached map for corresponding location number) Location (between x and y streets)	Mayfield Road (east of The Gore Rd.)	Mayfield Road (west of Clarkway Dr.)	Mayfield Road (east of The Gore Rd.)	Mayfield Road (east of The Gore Rd.)	Mayfield Road (west of Coleraine Dr.)	Mayfield Road (west of Coleraine Dr.)
ONTARIO REG. 195/06 - "DEVELOPMENT, INTERFERENCE WITH WETLANDS & ALTERATIONS TO SHORELINES & WATERCOURSES"							
TRCA to complete	Within a Regulated Area	Yes	Yes	Yes	Yes	No	No
	Within a Wetland Area of Interference? (Y/N)	No	No	No	No	No	No
	Within a Watercourse? (Y/N)	Yes - watercourse located both north and south of Mayfield Rd.	Yes - watercourse located both north and south of Mayfield Rd.	Yes - watercourse located both north and south of Mayfield Rd.	Yes - watercourse located both north and south of Mayfield Rd.	Yes - identified as a headwater drainage feature on the south side of Mayfield Rd.	Yes - identified as a headwater drainage feature on the south side of Mayfield Rd.
	Within a Regional Storm Floodplain? (Y/N) (<50 ha upstream drainage >50ha* upstream drainage) * - Regional Storm Floodplain Hydraulic Capacity of existing structure is (adequate/inadequate) to convey Regional Storm?	Yes	Yes	Yes	Yes	No	No
PROPOSED STRUCTURE DETAILS							
Proponent to complete	Proposed Structure (L x W x H and type) Open or Closed Footed? Extension only proposed? (Y/N) Removal, Replacement only proposed? Removal, Replacement and Lengthening Proposed? (Y/N)						
REQUIREMENTS							
TRCA to complete	Hydraulic Analysis Required? (Y/N)	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	td	td
	Meander Belt Analysis Required? (Y/N)	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	td	td
	100-year Erosion Limit Required? (Y/N)	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	Yes - if extending or replacing	td	td
	Groundwater Upwellings (will dictate open footed culvert)? (Y/N)	td	td	td	td	td	td
	Open Footed Required? (Y/N)	td	td	td	td	td	td
	Geotechnical Report Required	Yes	Yes	Yes	Yes	td	td
	Terrestrial Passage Required? (Y/N)	td	td	td	td	td	td
	Embedment and substrates for Aquatic Passage Required? (Y/N)	td	td	td	td	td	td
	Net Benefit of Proposed crossing?	td	td	td	td	td	td
PIPE CROSSING DETAILS							
Proponent to complete	Pipe Crossing Above or Below Culvert, as required? Geotechnical Report confirms (Open Cut/Tunnel) for pipe crossing, as required? Distance between invert of creek and overtop of pipe (m), as required? Minor Trench Unwatering or Major Dewatering Anticipated, as required?						
SUMMARY OF APPROVALS REQUIRED							
TRCA to complete	Ontario Regulation 195/06 permit required? (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
	a) site grading	Yes	Yes	Yes	Yes	Yes	Yes
	b) temporary/permanent placement of material	Yes	Yes	Yes	Yes	Yes	Yes
	c) construction of a structure	Yes	Yes	Yes	Yes	Yes	Yes
	d) change to a structure	Yes	Yes	Yes	Yes	Yes	Yes
	Interfere with or Alter a Wetland (Y/N)	no	no	no	no	no	no
	Interfere with or Alter a Shoreline (Y/N)	no	no	no	no	no	no
	Interfere with or Alter a Watercourse (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
	Mit HADD? (Y/N/TBD)	td	td	td	td	td	td
	HADD (Y/N/TBD)	td	td	td	td	td	td
Proponent to complete	MNR contacted? (PROPOONENT WILL FILL IN) Y? N?						
Proponent to complete	Transport Canada contacted for navigable waterway? (Y/N)						
ADDITIONAL NOTES							

Mayfield Road (Airport to Coleraine) - approximations



1:10,817

- Legend**
- Watershed Boundary
 - Local Boundary
 - Regional Boundary
 - Watercourse, TRCA
 - Regulation Line

The 2002 aerial photograph was prepared from a satellite image & was not taken by the TRCA. The TRCA takes no responsibility for the accuracy of the aerial photograph or the data derived from it. For further information about the data or this map, please contact the TRCA at 416-291-1000, ext. 1474/1475.

Produced by: Toronto and
York Region Libraries
with the Ministry of Natural
Resources & Forestry's Photo
Library, 2007

Other photographs: 2002 and 2005
Paul Stone, Nicholas

Mayfield Road (Airport to Coleraine) - approximations



1:10,817

Legend

- Watershed Boundary
- Local Boundary
- Regional Boundary
- Watercourses, TRCA
- Regulation Line

This document is for general information only and should not be used as a basis for any decision. The T.R.C.A. takes no responsibility for the accuracy of the information provided. For further information about the data or the map, please contact the T.R.C.A. at 1-800-387-6342. Prepared by: TerraNova Inc. Digitized by: TerraNova Inc. with the Ministry of Agriculture, Food and Rural Affairs. © TerraNova Inc. 2007. © TerraNova Inc. 2007 and 2008. Photo: Peter J. Smith.

APPENDIX A (from TRCA Letter October 7, 2009) Mayfield Road Class EA, Airport Rd to Coleraine Dr.

ITEM NO.	OCTOBER 7/09 TRCA COMMENT	HOW COMMENT IS BEING ADDRESSED April 2010
1.	Several discrepancies exist between Table 2 in the report and the Summary Sheet for Structure Sizing (Culvert, Bridge) and Pipe Crossing of Watercourses (Water, Sewer) provided by TRCA. For example, at Location #2, TRCA's summary sheet indicates that a watercourse is located both upstream and downstream of Mayfield Road. Table 2, however, only identifies the watercourse downstream. Please revise Table 2 so that it corresponds with TRCA's summary sheet (attached).	Comment noted. Table 2 has been revised to correspond with TRCA's summary sheet.
2.	Table 7 indicates that "enhanced erosion measures" will be installed. Please clarify what is meant by "enhanced erosion control measures".	Comment noted. The reference to "enhanced erosion control measures" in Table 7 has been replaced with "appropriate erosion control measures".
3.	Table 7 indicates that any stranded fish in isolated work areas will be captured and released. Please confirm that MNR has been contacted and that they have approved this approach as it relates to redside dace.	Comment noted. Table 7 has been updated to recommend that MNR should be contacted during the final design stage to confirm the appropriate relocation strategy for those watercourses with the potential to contain redside dace.
4.	Please contact MNR to confirm which tributaries will be managed for redside dace. In order to ensure accuracy, please indicate in the ESR which timing windows are being applied to each specific watercourse after consulting with MNR.	Both the MNR and the ROM have been contacted to confirm the presence of redside dace within the study area. Table 7 in the report identifies the appropriate timing windows for each watercourse.
5.	The Culvert Inspection Report indicates in some locations the watercourse will be channelized, but it is unclear what this means. Please provide additional information to clarify what "channelizing" the watercourse entails.	This comment by our structural engineer was in response to the fact that the flows in the creek are being blocked somewhat by vegetation. However a more appropriate comment is "flow characteristics of channel to be reviewed as part of detail design".
6.	The Culvert Inspection Report indicates that gabion will be installed in several locations. Gabion is not preferred by TRCA staff. Please explore other options, such as the installation of riverstone/natural stone armouring where needed.	This comment by our structural engineer was in response to the fact that the existing culvert should be longer/extended under existing conditions. The option of extending the culvert or installing gabions to create a retaining or head wall structure was presented to address the fact that the culvert is not long enough. The comment will be revised to read "extend culvert or install headwall/retaining walls". However, please keep in mind that in almost every case the culverts will be extended or replaced.

DRAFT

APPENDIX A (from TRCA Letter October 7, 2009) Mayfield Road Class EA, Airport Rd to Coleraine Dr.

ITEM NO.	OCTOBER 7/09 TRCA COMMENT	HOW COMMENT IS BEING ADDRESSED April 2010
7.	<p>The Natural Environment Report mentions the "Culvert and Stormwater Management Report"; however, we have not received this information. Please provide TRCA with a copy of the report for review.</p>	<p>4 Copies of the "Culvert and Stormwater Management Report, Mayfield Road EA – Airport Road to Coleraine Drive" by Stantec and dated March 2010 is included with this submission.</p>
8.	<p>The recommended mitigation and enhancement measures are based on generalizations and do not appear to correspond to a chosen preferred alternative. The scope of the proposed construction is still unknown and, as such, it is difficult to ascertain whether or not the mitigation measures for an unknown alternative are reasonable. Although the recommended mitigation seems reasonable as an overview, once alternatives have been considered, and a preferred alternative has been decided upon, further consideration, discussion and TRCA review will likely need to be given to mitigating a more specific set of impacts related to construction.</p>	<p>Table 7 has been scoped to address the specific mitigation measures for the preferred alternative.</p>
9.	<p>Please revise Section 2.6, Toronto and Region Conservation Authority Policies, to read, "A decision regarding the approval of an application for a Permit from the TRCA is lead by Ontario Regulation 166/06 and is guided by the <i>Valley and Stream...</i>"</p>	<p>Comment noted. Section 2.6 has been revised as recommended.</p>

DRAFT



Ontario Realty Corporation
Société immobilière
de l'Ontario

1 Dundas Street West
Suite 2000
Toronto, Ontario
Tel: 416-327-3937

1, rue Dundas Ouest
Bureau 2000
Toronto, Ontario
Fax: 416-212-1131

July 3, 2009

To Solmaz Zia and Dave Hallman

RE: Notice of Public Information Centre #1 – Municipal Class EA Mayfield Road

Thank you for circulating Ontario Realty Corporation (ORC) on your Notice of Public Information Centre. The ORC is the strategic manager of the government's real property with a mandate of maintaining and optimizing value of the portfolio, while ensuring real estate decisions reflect public policy objectives of the government.

Our preliminary review of your notice and supporting information indicates that ORC-managed property is not within your study area. We have no other concerns with this undertaking. Please remove ORC from your circulation list with respect to this project.

Thank you for the opportunity to provide initial comments on this undertaking. If you have any questions I can be reached at the contacts below.

Sincerely,

A handwritten signature in black ink that reads "L. Myslicki".

Lisa Myslicki
Environmental Coordinator
Ontario Realty Corporation - Professional Services
1 Dundas Street West,
Suite 2000, Toronto, Ontario
M5G 2L5
(416) 212-3768
lisa.myslicki@ontariorealty.ca

Hallman, Dave

From: Lindsay, Julius (ORC) [Julius.Lindsay@ontariorealty.ca]
Sent: Friday, July 03, 2009 2:34 PM
To: solmaz.zia@peelregion.ca; Hallman, Dave
Subject: Mayfield Road, from East of Airport Road to West of Coleraine Drive Class EA
Attachments: Class EA for Mayfield Road.pdf

Please See Attached.

<<Class EA for Mayfield Road.pdf>>

Julius Lindsay

Reporting Specialist

Professional Services

Ontario Realty Corporation

NB Effective immediately our address will be :

1 Dundas Street West, Suite 2000

Toronto, Ontario M5G 2L5

New e-mail address will be julius.lindsay@ontariorealty.ca Please update your records immediately.

P please consider the environment before printing this e-mail.

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June 19, 2009

Ms. Solmaz Zia, P.Eng
Region of Peel
9445 Airport Road
3rd Floor
Brampton, ON L6S 4J3

JUN 24 2009

Dear Ms. Zia:

**RE: Class Environmental Assessment – Notice of PIC #1
Mayfield Road – East of Airport Road to west of Coleraine Drive
Region of Peel**

Thank you for your letter dated June 16, 2009 informing us of the PIC #1 on June 25, 2009 for the above noted project. Please keep the Board informed of the status of this project and provide us with any information you have available so that we may monitor its progress and provide comments as necessary.

If you require any further information please contact me at 905-890-1010, ext. 2217.

Yours truly,

Paul Mountford, MCIP RPP
Intermediate Planning Officer
Planning and Accommodation Department

- c. S. Hare, Peel District School Board
- D. Hallman, Stantec Consulting

Mayfield-Airport PIC1.doc

Trustees
Janet McDougald, Chair
Ruth Thompson, Vice-Chair
Valerie Arnold-Judge
Beryl Ford
David Green
Steve Kavanagh

Brad MacDonald
Suzanne Nurse
Don Stephens
Allison Van Wagner
Jeff White
Rick Williams

Director of Education and Secretary
Jim Grieve

Associate Director,
Instructional Support Services
Judith Nyman

Associate Director,
Operational Support Services
Carla Kisko

 **TORONTO AND REGION**
Conservation
for The Living City

November 28, 2007

CFN: 39924

BY MAIL AND EMAIL (garry.leveck@stantec.com)

Mr. Garry Leveck
Project Manager
Stantec Consulting Ltd.
49 Frederick Street
Kitchener, ON N2H 6M7

Dear Mr. Leveck:

Re: Site Visit - November 21, 2007
Mayfield Road Improvements (Airport Road to Coleraine Drive)
Municipal Class Environmental Assessment (EA) - Schedule C
Humber River; City of Brampton/Town of Caledon; Regional Municipality of Peel

On November 21, 2007 Toronto and Region Conservation Authority (TRCA) staff met with Stantec Consulting and Peel Region staff on site to examine the Regulated Areas and watercourse features within the study area. Results of the site visit can be found in the attached summary table. A map identifying the site locations along with the *Evaluation, Classification and Management of Headwater Drainage Features: Interim Guidelines* are attached for your reference.

Please ensure that the EA contains discussion of each of these watercourse features, and their proposed culvert or bridge expansions or extensions, including the following reports.

- Natural features report (baseline conditions, impacts to the terrestrial and aquatic features)
- Stormwater Management report (water quality, water quantity, erosion control, minimizing fill placement within the flood plain)
- Fluvial geomorphology report (meander belt widths, 100 year erosion limits)
- Hydraulic model and hydrologic model
- Geotechnical Report
- Hydrogeology Report

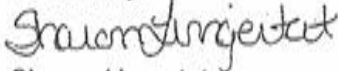
A list of preliminary technical study requirements were also included in our letter dated October 29, 2007, Appendix 2.

Member of Conservation Ontario



Should you have any questions or require any additional information please contact me at extension 5717 or by email at slingertat@trca.on.ca.

Yours truly,



Sharon Lingertat
Acting Planner II, Environmental Assessment Review
Planning and Development

SL/

- Encl:
- TRCA Regulation Map (approximations)
 - Summary Sheet for Structure Sizing (Culvert, Bridge) and Pipe Crossing of Watercourses (Water, Sewer)
 - TRCA Evaluation, Classification and Management of Headwater Drainage Features: Interim Guidelines, dated March 2007

BY MAIL

cc: Sandy Lovisotto, Regional of Peel
Dave Hallman, Stantec Consulting
Chris Powell, Stantec Consulting
Quentin Hanchard, TRCA, Manager, Development Planning and Regulation
Gary Wilkins, TRCA, Humber River Watershed Specialist

SUMMARY SHEET FOR STRUCTURE SIZING (CULVERT, BRIDGE) AND PIP

Mayfield Road (Airport Road to Coleraine Dr

DATE CHART LAST REVISED: Tuesday, November 27, 2007
 DATE OF SITE VISIT: Wednesday, November 21, 2007
 PROJECT NAME: Mayfield Road (Airport Road to Coleraine Drive)
 PROPONENT: Region of Peel
 TRCA PROJECT MANAGER: Sharon Lingertal, TRCA
 MUNICIPAL PROJECT MANAGER: Sandy Lovisotto, Region of Peel
 CONSULTANT PROJECT MANAGER: Garry Leveck, Stantec Consulting Ltd.
 TRCA FILE #: 36924

Location #1	Location #2	Location #3	Location #4	Location #5
Mayfield Road (east of Airport Rd.)	Mayfield Road (between Airport Rd. and Innes Lake Rd.)	Mayfield Road (east of Innes Lake Rd.)	Mayfield Road (east of Innes Lake Rd.)	Mayfield Road (east of Innes Lake Rd.)
No	Yes	Yes	No	Yes
No	No	No	No	No
No	Yes - water courses cross both with the right of Mayfield Rd.	Yes - water courses cross both with the right of Mayfield Rd.	No	Yes - water courses cross both with the right of Mayfield Rd.
No	No	Yes	No	Yes
PROPOSED STRUCTURE DETAILS				
Proposed Structure (L, W, H and Year)				
Open or Closed Footed?				
Extension only proposed? (Y/N)				
Removal, Replacement only proposed?				
Removal, Replacement and Lengthening Proposed? (Y/N)				
Hydraulic Analysis Required? (Y/N)				
Meander Belt Analysis Required? (Y/N)				
100-year Erosion Limit Required? (Y/N)				
Groundwater Underflow (will discuss open footed culvert) (Y/N)				
Dean Excavated Required? (Y/N)				
Geotechnical Report Required				
Tensar Soil Pad Required? (Y/N)				
Embedment and anchors for Abutment Passage Required? (Y/N)				
Net Benefit of Proposed Crossing?				
Pipe Crossing Above or Below Culvert, as required?				
Geotechnical Report confirms (Open Culvert) for pipe crossing, as required?				
Distance between Invert of crest and above of pipe (m), as required?				
Minor Trench Underlating or Major Dewatering Anticipated, as required?				
SUMMARY OF APPROVALS REQUIRED				
a) site grading				
b) temporary-permanent placement of material				
c) construction of a structure				
d) change to a structure				
interfere with or Alter a Wetland (Y/N)				
interfere with or Alter a Shoreline (Y/N)				
interfere with or Alter a Watercourse (Y/N)				
M1 H4007 (Y/N/T/B)				
M1 H4007 (Y/N/T/B)				
M1V5 contact? (PROPOONENT WILL FILL IN) (Y/N)				
Transport Canada contacted for navigable waterway? (Y/N)				
APPROVAL NOTES				

E CROSSING OF WATERCOURSES (WATER, SEWER)

(ive)

DATE CHART LAST REVISED: Tuesday, November 27, 2007
 DATE OF SITE VISIT: Wednesday, November 21, 2007
 PROJECT NAME: Mayfield Road (Airport Road to Coleraine Drive)
 PROPONENT: Region of Peel
 TRCA PROJECT MANAGER: Sharon Lingertal, TRCA
 MUNICIPAL PROJECT MANAGER: Sandy Lovisotto, Region of Peel
 CONSULTANT PROJECT MANAGER: Garry Leveck, Sianlec Consulting Ltd.
 TRCA FILE #: 30924

WATERCOURSE LOCATION (refer to attached map for corresponding location number)	Location #6 Mayfield Road (west of Centreville Creek Rd.)	Location #7 Mayfield Road (east of Centreville Creek Rd.)	Location #8 Mayfield Road (east of Centreville Creek Rd.)	Location #9 Mayfield Road (west of The Gore Rd.)
WATERCOURSES	Yes No	Yes No	No No	Yes No
PROPOSED STRUCTURE DETAILS Proposed to complete	Yes No	Yes No	No No	Yes No
REQUIREMENTS	Yes No	Yes No	No No	Yes No
PIPE CROSSING DETAILS Proposed to complete	Yes No	Yes No	No No	Yes No
SUMMARY OF APPROVALS REQUIRED TRCA to complete	Yes No	Yes No	No No	Yes No
ADDITIONAL NOTES	Yes No	Yes No	No No	Yes No

DATE CHART LAST REVISED: Tuesday, November 27, 2007
 DATE OF SITE VISIT: Wednesday, November 21, 2007
 PROJECT NAME: Mayfield Road (Airport Road to Coleraine Drive)
 PROPONENT: Region of Peel
 TRCA PROJECT MANAGER: Sharon Lingertal, TRCA
 MUNICIPAL PROJECT MANAGER: Sandy Lewisotto, Region of Peel
 CONSULTANT PROJECT MANAGER: Garry Leveck, Stantec Consulting Ltd.
 TRCA FILE #: 38824

GEOGRAPHIC AREA	Watercourse Location (refer to attached map for corresponding location number)	Location #16 Mayfield Road (west of Coleraine Dr.)
TRCA to complete	Location (between x and y streets)	
TRCA to complete	Within a Regulated Area	No
TRCA to complete	Within a Wetland Area of Interference 7 (N/A)	No
TRCA to complete	N/A - Within a Wetland Area	Yes - Identified as a Wetland Area on the Hydrological Map of Mayfield Rd.
TRCA to complete	Within a Regional Storm Floodplain? (N/A) (450 ft upstream discharge/500ft upstream drainage) Is Regional Storm Floodplain? Hydraulic Capacity of existing structure is (adequate/inadequate) to convey Regional Storm?	No
PROPOSED STRUCTURE DETAILS	Proposed Structure (L x W x H and type) Open or Closed Footed? Extension only proposed? (N/A) Removal, Replacement only proposed? Removal, Replacement and Lengthening Proposed? (N/A)	
REQUIREMENTS	Hydraulic Analysis Required? (N/A)	No
TRCA to complete	Mandator Best Analysis Required? (N/A)	No
TRCA to complete	100-year Erosion Limit Required? (N/A)	No
TRCA to complete	Groundwater Upwells/level dictate open footed culvert? (N/A)	No
TRCA to complete	Open Footed Required? (N/A)	No
TRCA to complete	Geotechnical Report Required?	No
TRCA to complete	Terrestrial Passage Required? (N/A)	No
TRCA to complete	Embedment and substrates for Aquatic Passage Required? (N/A)	No
TRCA to complete	Net Baseline of Proposed crossing?	No
PIPE CROSSING DETAILS	Pipe Crossing Above or Below Culvert, as required? Geotechnical Report confirms (Open Cell/Culvert) for pipe crossing, as required? Distance between Invert of creek and invert of pipe (m), as required? Minor Trench Underlaying or Major Dewatering Anticipated, as required?	
PROPOSED APPROVALS REQUIRED	a) 244 grading b) temporary/permanent placement of material c) construction of a structure d) change to a structure Inverts with or Alter a Wetland (N/A) Inverts with or Alter a Shoreline (N/A) Inverts with or Alter a Watercourse (N/A) RE FACED (N/A/TBD) HAZARD (N/A/TBD) HAZAR COMPOSED? PROPOSEMENT WILL FILL IN? (N/A) Transport Canada contacted for navigable waterway? (N/A)	Yes Yes Yes Yes no Yes No No
TRCA to complete	TRCA to complete	

We thank you for your attention to this matter, and we look forward to your assistance in the identification of pertinent issues for this roadway corridor. If this letter should have been directed to another person or department in your organization, we would appreciate your help in forwarding it internally, on our behalf.

Sincerely,



Sandy Lovisotto, P.Eng.
Project Manager, Roads Planning
Environment, Transportation and Planning Services

RECEIVED

NOV 14 2007

ETPS

encl.

c. Mr. Garry Leveck, Stantec Consulting Ltd.

~~This project does not appear to have any direct consequence to the policies and/or mandate of this agency. Therefore, we will not be providing any input and we will not require further notices or correspondence.~~

Please add the following for any future mailings:

Date: October 31/07 Name: CRAIG CAMPBELL
Title: Director, Public Works & Engineering.
Agency: TOWN OF CALEDON
Address: 6311 OLD CHURCH RD
CALEDON, ON, L7C 1J6

As well, please add

Haigang Xu
Senior Transportation Planner
Town of Caledon

Environment, Transportation and Planning Services

11 Indell Lane, Brampton, ON L6T 3Y3
Tel: 905-791-7800 www.peelregion.ca

 **TORONTO AND REGION**
Conservation
for The Living City

October 29, 2007

CFN: 39924

SENT VIA MAIL & EMAIL (garry.leveck@stantec.com)

Mr. Garry Leveck
Project Manager
Stantec Consulting Ltd.
49 Frederick Street
Kitchener, ON
N2H 6M7

Dear Mr. Leveck:

**Re: Response to Notice of Commencement
Mayfield Road Improvements from Airport Road to Coleraine Drive
Municipal Class Environmental Assessment (EA) - Schedule C
Humber River; City of Brampton/Town of Caledon; Regional Municipality of Peel**

Toronto and Region Conservation Authority (TRCA) staff received the Notice of Commencement for the above-noted Environmental Assessment (EA) application on October 12, 2007. It is the understanding of TRCA staff that this undertaking involves the study of alternatives to improve Mayfield Road from Airport Road to Coleraine Drive to accommodate increased traffic volume.

Staff notes that there are several watercourses within the study area that will need to be confirmed by a TRCA ecologist. Please book a site visit through the TRCA Project Manager to confirm the watercourse features.

Developing the EA

Staff conducted a review of the background mapping and has identified environmental concerns within the study area. These environmental concerns should be identified in the EA document in both the text and on an overlay map, as appropriate. Digital versions of the mapping and available TRCA data will follow under separate cover.

Site and building design should avoid impacts and support sustainable solutions as related to the natural, socio-economic and cultural environment. TRCA staff's environmental concerns in this undertaking are:

Natural Environment

- Aquatic Species and Habitat
- Aquifers
- Regulation Limit
- Regional Storm Flood Plains
- Stream Corridors
- Terrestrial Natural Heritage System

Member of Conservation Ontario



- Valley Corridors
- Watercourses
- Wetlands

For your reference, we are providing *Appendix 1: TRCA Environmental Concerns and EA Document Requirements* and *Appendix 2: Preliminary Technical Study Requirements*. This information should be used in developing the alternatives. Staff will confirm if additional studies are required as the EA progresses.

Selecting the Preferred Alternative

TRCA staff requires that the preferred alternative meets the following criteria:

- Criteria 1: prevents the risk associated with flooding, erosion or slope instability;
- Criteria 2: protects and rehabilitates existing landforms, features and functions;
- Criteria 3: provides for aquatic, terrestrial, and human access;
- Criteria 4: minimizes water/energy consumption and pollution; and,
- Criteria 5: addresses TRCA property and archaeology concerns.

Please book a meeting through the TRCA Project Manager prior to selecting the preferred alternative solution and design. At the meeting, TRCA staff will discuss issues related to our environmental concerns, as outlined in Appendices 1 and 2.


TRCA Project Management Details

1. I am the Project Manager for your file, and can be reached at extension 5717 or by email at slingertat@trca.on.ca.
2. To assist our review of the undertaking, please quote Central File Number (CFN) 39924 on any correspondence, or with any telephone or e-mail inquiries.
3. For your reference, a copy of the *TRCA Environmental Assessment Review Program Service Delivery Standards* is provided in Appendix 3.
4. Please include me on the mailing list and ensure that I receive the following:
 - A. A response to this letter that identifies how TRCA's environmental concerns will be addressed in the EA document
 - B. Notice(s) of Public Information Centres (PICs) and handouts
 - C. Four (4) copies of the double-sided Phase 1 and 2 Report identifying problems and alternative solutions
 - D. Four (4) copies of the double-sided Phase 3 Report identifying alternative designs
 - E. Copies of the Phase 4 Report as per the attached Service Delivery Standards

- i) Four (4) copies of the draft EA document 15 days prior to filing if the Phase 1, 2 and 3 Reports **have been submitted** previously, or;
 - ii) Five (5) copies of the draft EA document 30 days prior to filing if the Phase 1, 2 and 3 Reports **have not been submitted** previously.
- F. Notice of Study Completion
- G. One (1) hard copy of the final EA document
- H. One (1) digital copy of the final EA document and appendices in .pdf form
5. Please include TRCA's Humber River Watershed Specialist Gary Wilkins on the undertaking's mailing list and ensure that he receives all notices of Public Information Centres (PICs). Gary Wilkins' information should be sent to TRCA's Head Office at 5 Shoreham Drive, Downsview, M3N 1S4.

Should you have any questions or require any additional information please contact me at extension 5717 or by email at slingertat@trca.on.ca.

Yours truly,



Sharon Lingertat
Acting Planner II, Environmental Assessment Review
Planning and Development

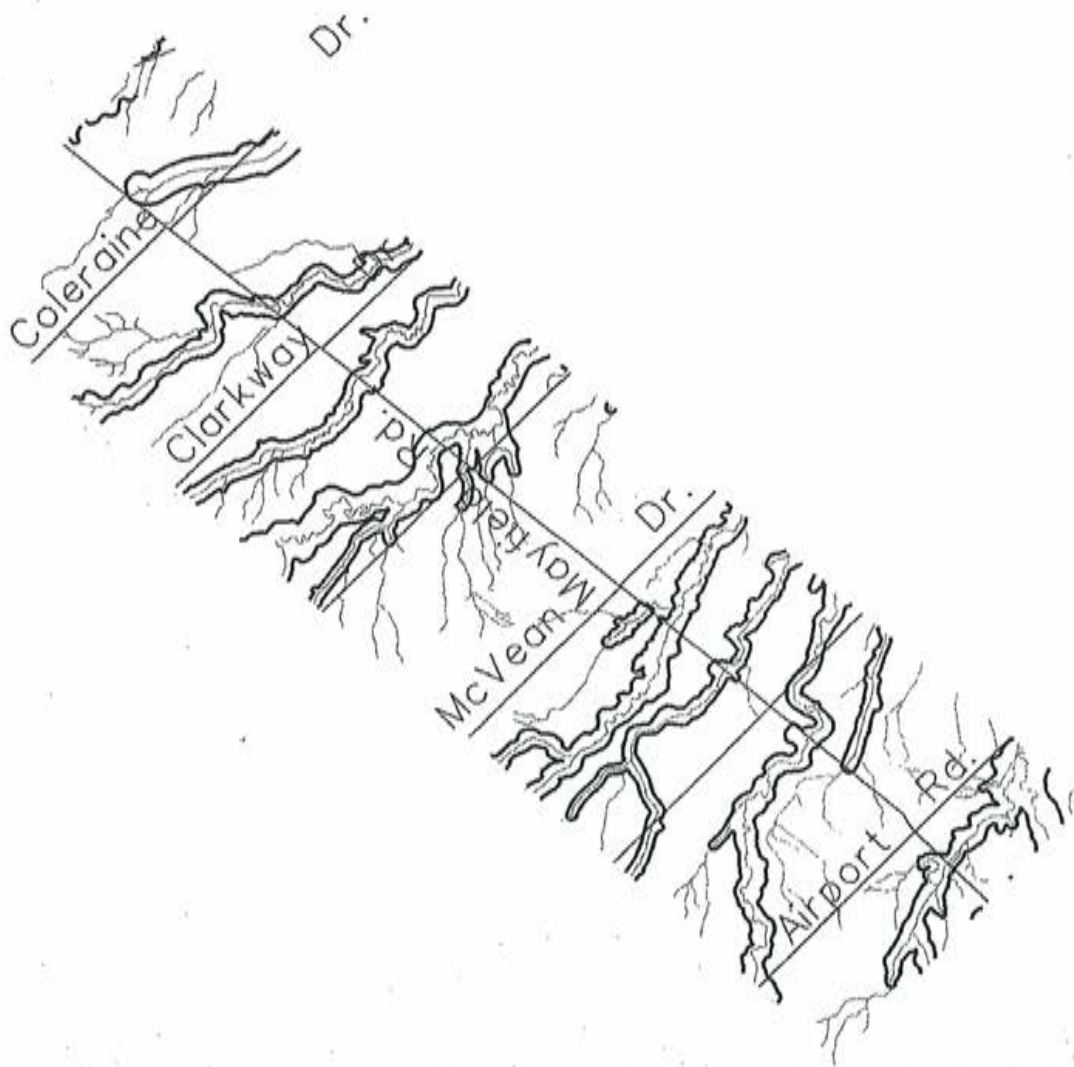
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Encl.

1. Maps (hard copies) - TRCA Regulation Map (approximation)
2. Appendix 1 - TRCA Environmental Concerns and EA Document Requirements
3. Appendix 2 - TRCA Preliminary Technical Study Requirements
4. Appendix 3 - TRCA Environmental Assessment Review Program Service Delivery Standards

BY EMAIL

cc: Sandy Lovisotto, Regional Municipality of Peel (sandy.lovisotto@peelregion.ca)
Beth Williston, TRCA, Manager, Environmental Assessments
Quentin Hanchard, TRCA, Manager, Development Planning and Regulation
Gary Wilkins, TRCA, Humber River Watershed Specialist
Lois Griffin, Chair, Humber Watershed Alliance



APPENDIX 1 - TRCA ENVIRONMENTAL CONCERNS AND EA DOCUMENT REQUIREMENTS	
Environmental Concerns	EA Document Requirements
NATURAL ENVIRONMENT	
<p>Aquatic Species and Habitat</p> <p>Please include the fisheries timing window(s) for construction. Please contact the TRCA in writing and request the timing windows associated with the watercourses in the study area. Please forward a copy of the response to TRCA.</p>	<p>1. Please include a statement in the EA document that the TRCA has a Level 3 Agreement with the Fisheries and Oceans Canada (DFO). The appropriate wording is:</p> <p><i>On July 24, 1998, the TRCA signed a Level 3 Agreement with Fisheries and Oceans Canada (DFO), which established a streamlined approach to addressing issues pertaining to the Federal Fisheries Act. Conservation Authorities with a Level 3 Agreement determine whether the proposal has a potential for a Habitat Alteration, Disruption or Destruction (HADD) of fish habitat. CA staff will work with the proponent to suggest ways to mitigate the HADD and if mitigatable write Letters of Advice on behalf of DFO. If the CA determines that the HADD cannot be mitigated then the CA will provide a skeleton of a Letter of Intent and a DFO application in order for the proponent to prepare a compensation package. Note that only DFO through the Minister of Fisheries and Oceans can authorize compensation regarding a HADD pursuant to Section 35 (2) of the Federal Fisheries Act.</i></p> <p>2. Please include a section in the EA document that indicates which aspects of the undertaking may trigger the Canadian Environmental Assessment Act (CEAA). The CEAA trigger list may be obtained from www.ceaa.gc.ca.</p> <p>Please note that there are two CEAA triggers which are commonly associated with the issuance of TRCA permits. These are the DFO triggers if the undertaking is a HADD and the Navigable Waterways trigger (contact Transport Canada, Sarnia at 519-363-1826).</p> <p>3. If applicable, please include a statement in the EA document that works conducted by a Provincial/Federal Ministry on Provincial/Federal lands are exempted from Ontario Regulation 166/06. Therefore, TRCA staff requires that all concerns be addressed in the selection of the preferred design, as TRCA clearance of the EA document is required.</p>
<p>Aquifers</p> <p>This undertaking could require dewatering of the surficial aquifer system or deep aquifer system.</p> <p>A Permit to Take Water (PTTW) from the Ministry of Environment (MOE) could be required for these works. Please contact the MOE for further information. TRCA may be requested to provide technical input to MOE regarding the ecological impacts of dewatering.</p> <p>TRCA's Valley and Stream Corridor Management Program (VSCMP), Section 4.3 - Infrastructure and Servicing Item 15 should be followed. VSCMP can be sent digitally upon request to the TRCA Project Manager.</p>	<p>(These details on aquifers are to be confirmed at initial meeting with TRCA staff)</p> <ol style="list-style-type: none"> 1. Identify local aquifer conditions (to be confirmed through pump tests). 2. Identify predicted Zone of Influence using measured coefficients. 3. Identify baseline conditions of all natural features within the zone. 4. Provide a hydrogeologic study which includes surficial geology, identification of shallow, deep and perched aquifers; cross-sectional drawings of identified aquifer/aquard systems; assessment of hydrogeologic coefficients, especially hydraulic connectivity (K) based on slug pump tests or step tests. 5. Note which sections of the undertaking (ie. discharge areas) could potentially require permits from TRCA. 6. Please include a copy of Section 4.3 - Infrastructure and Servicing, from the TRCA's Valley and Stream Corridor Management Program which is available digitally from the Project Manager at TRCA upon request.

APPENDIX 1 - TRCA ENVIRONMENTAL CONCERNS AND EA DOCUMENT REQUIREMENTS	
Environmental Concerns	EA Document Requirements
<p>Regional Storm Flood Plains</p>	<p>Portions of the study area are within the Regional Storm Flood Plain.</p> <p>In accordance with Ontario Regulation 166/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses), a permit is required from the TRCA prior to any of the following works taking place:</p> <ul style="list-style-type: none"> b) development, if in the opinion of the authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development. <p>Development is defined as:</p> <ul style="list-style-type: none"> i) the construction, reconstruction, erection or placing of a building or structure (culverts, bridges, outfalls, headwalls etc.) of any kind, ii) site grading, iii) the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere. <p>TRCA's Valley and Stream Corridor Management Program (VSCMP), Section 4.3 - Infrastructure and Servicing should be followed.</p>
	<ul style="list-style-type: none"> 1. Indicate in the text and mapping what areas are within a Region Storm Flood Plain. 2. Discuss in detail how the undertaking design will reflect the relevant portions of the VSCMP in order that impacts to the corridors and areas of concern will be minimized. 3. Note which portions of the undertaking will potentially require permits from TRCA.

APPENDIX 1 - TRCA ENVIRONMENTAL CONCERNS AND EA DOCUMENT REQUIREMENTS	
Environmental Concerns	EA Document Requirements
<p>Regulation Limit</p> <p>TRCA's Valley and Stream Corridor Management Program (VSCMP), Section 4.3 - Infrastructure and Servicing should be followed</p> <p>There are Regulation Limits within the study area.</p> <p>In accordance with Ontario Regulation 166/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses), a permit is required from the TRCA prior to any of the following works taking place:</p> <ul style="list-style-type: none"> a) straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse, or for changing or interfering in any way with a wetland; b) development, if in the opinion of the authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development. <p>Development is defined as:</p> <ul style="list-style-type: none"> i) the construction, reconstruction, erection or placing of a building or structure of any kind, ii) any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure, iii) site grading, iv) the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere. 	<ol style="list-style-type: none"> 1. Indicate in the text and mapping what areas are within the Regulation Limits 2. Discuss in detail how the alternative design will reflect the relevant portions of the VSCMP in order that impacts to the regulated areas and areas of concern will be minimized 3. Note which portions of the project will potentially require permits for Development, Interference with Wetlands and Alterations to Shorelines and Watercourses through TRCA 4. Include a copy of the Regulation Limits in the EA Appendices and reference the information in the text of the EA Document.
<p>Stream Corridors</p> <p>There are stream corridors located in the study area.</p> <p>In accordance with the TRCA's Valley and Stream Corridor Management Program (VSCMP), a 10-metre setback from the meander belt is required for any development.</p>	<ol style="list-style-type: none"> 1. Indicate in the text and mapping what areas are stream corridors. 2. Discuss in detail how the undertaking design will reflect the relevant portions of the VSCMP in order that impacts to the corridors and areas of concern will be minimized. 3. Meander belt delineation studies may be required. 4. Fluvial geomorphology analysis may be required. 5. Aquatic habitat and species studies may be required.

APPENDIX 1 - TRCA ENVIRONMENTAL CONCERNS AND EA DOCUMENT REQUIREMENTS	
Environmental Concerns	EA Document Requirements
<p>Terrestrial Natural Heritage System</p> <p>The study area is located within the Terrestrial Natural Heritage System.</p> <p>TRCA has prepared a Terrestrial Natural Heritage System Strategy (TNHSS) for TRCA's jurisdiction. This system recognizes the need to improve both the quantity and quality of the terrestrial habitats.</p> <p>A model has been used to delineate an improved or "targeted" system to meet these objectives as outlined on the maps included in the TNHSS.</p> <p>A copy of our Terrestrial Natural Heritage Strategy (TNHSS) can be obtained from our website www.trca.on.ca/land_protection/terrestrial/default.asp?load=approach.</p> <p>TRCA's Valley and Stream Corridor Management Program (VSCMP), Section 4.3 - Infrastructure and Servicing Items 14, 16 and 19 should be followed.</p>	<ol style="list-style-type: none"> 3. Indicate in the text and mapping what portions of the study area are within the TNHSS. 4. Please provide a discussion in detail how the EA document undertaking will conform to the requirements of TRCA's Valley and Stream Corridor Management Program (VSCMP) and TNHSS. 5. If applicable, please include a statement in the EA document on the Migratory Bird Convention Act, which is enforced by Environment Canada. Under this legislation tree cutting should not occur during the nesting phase of on-site migratory birds. 6. If applicable please include a statement in the EA document on the Species at Risk Act (SARA). The purpose of this legislation is to prevent wildlife species from being extirpated or extinct, to provide for the recovery of wildlife species that are extirpated, endangered or threatened, as a result of human activity, and to manage species of special concern to prevent them from becoming endangered or threatened.
<p>Valley Corridors</p> <p>There are valley corridors located in the study area.</p> <p>In accordance with the TRCA's Valley and Stream Corridor Management Program (VSCMP), a 10-metre setback from the stable top of bank is required for development.</p> <p>Please note that a portion of this undertaking may be subject to the provisions of the City of Toronto Municipal Code Chapter 658 - the Toronto Ravine Protection Bylaw. Please contact the municipality for permits regarding the removal of trees or significant vegetation.</p>	<ol style="list-style-type: none"> 1. Indicate in the text and mapping what areas are valley corridors. 2. Discuss in detail how the alternative design will reflect the relevant portions of the VSCMP in order that impacts to the corridors and areas of concern will be minimized. 3. One hundred year erosion studies, top of bank staking and/or geotechnical studies may be required.
<p>Watercourses</p> <p>There are watercourses located within the study area.</p> <p>In accordance with Ontario Regulation 166/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses), a permit is required from the TRCA prior to any of the following works taking place:</p> <p>a) straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse, or for changing or interfering in any way with a wetland;</p> <p>Digital photographs and field visits may be required at a later date to confirm these watercourse features.</p> <p>TRCA Valley and Stream Corridor Management Program (VSCMP), Section 4.3 - Infrastructure and Servicing should be followed.</p>	<ol style="list-style-type: none"> 1. Indicate the location of the watercourses in the text and mapping. Discuss in detail how the alternative design will reflect the relevant portions of the VSCMP in order that impacts to the watercourses and areas of concern will be minimized. 2. Note which portions of the alternative design will potentially require permits from TRCA. 3. Book a site visit with the TRCA Project Manager to confirm watercourse features. 4. Include the watercourse summary sheet.

APPENDIX 1 - TRCA ENVIRONMENTAL CONCERNS AND EA DOCUMENT REQUIREMENTS	
Environmental Concerns	EA Document Requirements
<p>Wetlands</p> <p>There are known wetlands in the study area.</p> <p>In accordance with Ontario Regulation 166/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses), a permit is required from the TRCA prior to any of the following works taking place:</p> <p>a) straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse, or for changing or interfering in any way with a wetland ;</p> <p>Boundaries should be confirmed with the respective agencies as follows:</p> <ul style="list-style-type: none"> • Provincially Significant Wetlands (PSW) should be confirmed with the Ministry of Natural Resources (MNR) in Aurora (905-713-7400). • Locally Significant Wetlands (LSW) should be confirmed with the Ministry of Natural Resources (MNR) in Aurora (905-713-7400). • Areas greater than 0.5 hectares classified under TRCA's Ecological Land Classification (ELC) should be confirmed with TRCA <p>There may be additional wetlands determined through field investigations conducted in association with this undertaking. TRCA permits are required for any "interference to a wetland".</p> <p>The Province of Ontario has approved a Provincial Planning Policy Statement for Wetlands. The Ministry of Natural Resources should be contacted directly at <u>905-713-7400</u>.</p> <p>TRCA's Valley and Stream Corridor Management Program (VSCMP), Section 4.3 - Infrastructure and Servicing Items 16 and 17 should be followed.</p>	<ol style="list-style-type: none"> 1. Indicate in the text and mapping what areas are PSWs, LSWs, and areas classified under TRCA's ELC. 2. Detail how the proposal will conform to the requirements of TRCA's Valley and Stream Corridor Management Program (VSCMP), Section 4.3 - Infrastructure and Servicing Items 16 and 17, and the Provincial Policy Statement for wetlands. 3. Book a site visit with the TRCA Project Manager to view possible wetlands. 4. Include the specific section from the PPS on Wetlands and Infrastructure in the Appendices of the EA document and reference the information in the text of the EA Document.

APPENDIX 2

Preliminary Technical Study Requirements

TRCA requires that the preferred alternative meet the following criteria:

- Criteria 1: Prevent risk associated with flooding, erosion or slope instability;
- Criteria 2: Protect and rehabilitate existing landforms and features and functions;
- Criteria 3: Provide for aquatic, terrestrial and human access; and,
- Criteria 4: Minimize water and energy consumption
- Criteria 5: Minimize water and air pollution and thermal variation

In relation to this project, the following studies may be required as a minimum. Staff will confirm additional study requirements as the EA progresses, if additional issues or impacts are identified.

Type of Study or Report
Hydraulic and hydrologic studies to delineate floodlines and flow rates, including detailed topographic mapping and modelling
Fluvial Geomorphology Studies <input type="checkbox"/> 100-year toe erosion limit for slope stability <input type="checkbox"/> Meander belt and erosion limit delineation studies <input type="checkbox"/> Watercourse characterization study
Geotechnical studies <input type="checkbox"/> slope stability (valley and shoreline) <input type="checkbox"/> construction feasibility (tunnelling, footings etc.)
Hydrogeological studies <input type="checkbox"/> report for determining dewatering requirements for watercourse crossings, or impacts on watercourses and natural features <input type="checkbox"/> groundwater upwellings <input type="checkbox"/> Geotechnical report for determining groundwater potential (upwelling and dewatering needs), including slug tests <input type="checkbox"/> Local aquifer conditions study to be confirmed through step and pump tests <input type="checkbox"/> Predicted zone of influence map using measured coefficients <input type="checkbox"/> Hydrogeologic study which includes surficial geology; identification of shallow, deep and perched aquifers; cross-sectional drawings of identified aquifer/aquitard systems, assessment of hydrogeologic coefficients, especially hydraulic conductivity (K) based on slug pump tests or aquifer pumping tests
Legal survey of field verified natural features, including top-of- bank (staked with TRCA)
Stormwater management study including water quality (including temperature), quantity, stream bank erosion and water budget.
Channel Crossings Assessment including terrestrial passage trails, fish
Natural Heritage Study, including <input type="checkbox"/> inventory and mapping of landforms, aquatic and terrestrial resources including areas that are part of the TRCA TNHS <input type="checkbox"/> baseline conditions report within all natural features and functions within the hydrogeological zone of influence <input type="checkbox"/> mitigation, compensation and monitoring strategies for impacted terrestrial and aquatic resources <input type="checkbox"/> assessment and identification of linkages and barriers for aquatic and terrestrial resources
Assessment and identification of local, regional and national trail systems

Type of Study or Report
Assessment and identification of archaeological and built heritage resources
Assessment of TRCA property/programming interests
Erosion and sediment control assessment
Other _____

**TRCA Environmental Assessment Review
Service Delivery Standards**

Part 4: Environmental Assessment Document

Task #	Task Name	Lead Responsibility	Duration ¹	Task Details	TRCA Staff Involvement	
					Required	Optional
4	Environmental Assessment Document					
	Definitions for EA Documents: Municipal Schedule A or equivalent - no report Municipal Schedule B or equivalent - complete Phase 1 and 2 Report - this report is the Project File Municipal Schedule C or equivalent - complete Phase 1, 2, 3 and 4 Reports - the Phase 4 Report is the Environmental Study Report (ESR) Individual EA - complete Phase 1, 2, 3 and 4 Reports - the Phase 4 Report is the Environmental Assessment (EA)					
4.1	Prepare and Submit Phase 1 and 2 Report	Proponent	60	Proponent shall prepare Phase 1 and 2 report and technical appendices, and submit to TRCA Project Manager		
4.2	Circulate Phase 1 and 2 Report	TRCA Project Manager	3 ²	TRCA Project Manager shall circulate Phase 1 and 2 Report and technical appendices This is the draft project file for Schedule B Municipal Class EAs	Planner I Planner II	
4.3	Review Phase 1 and 2 Report	TRCA Project Manager	15	TRCA Project Manager and technical staff shall review Phase 1 and 2 Report and technical appendices	Planner I Planner II	Technical Staff
4.4	Issue TRCA Phase 1 and 2 Report Response Letter	TRCA Project Manager	5	TRCA Project Manager shall provide response letter on the Phase 1 and 2 Report; additional technical studies may be identified	Planner I Planner II	Technical Staff
4.5	Meet on TRCA Phase 1 and 2 Report Comments	Proponent	1 ²	Proponent shall meet with TRCA Project Manager and technical staff to discuss comments on the Phase 1 and 2 Report at the TRCA offices	Planner I Planner II	Technical Staff

Task #	Task Name	Lead Responsibility	Duration ¹	Task Details	TRCA Staff Involvement	
					Required	Optional
4.6	Prepare and Submit Notice of Public Information Centre #1	Proponent	20	Proponent shall submit the Notice of Public Information Centre (PIC) and the TRCA Project Manager will attend, as required		Planner II
4.7	TRCA Response to Notice of Public Information Centre #1	TRCA Project Manager	3	TRCA Project Manager shall respond to the proponent regarding the Notice of PIC and request copies of PIC material for review For Schedule B Municipal Class EAs go to Task 4.18	Planner I Planner II	
4.8	Prepare and Submit Phase 3 Report	Proponent	60	Proponent shall prepare Phase 3 report and revised technical studies, and submit to TRCA Project Manager		
4.9	Circulate Phase 3 Report	TRCA Project Manager	3 ³	TRCA Project Manager shall circulate Phase 3 Report and revised technical studies	Planner I Planner II	
4.10	Review Phase 3 Report	TRCA Project Manager	15	TRCA Project Manager and technical staff shall review Phase 3 Report	Planner I Planner II	Technical Staff
4.11	Issue TRCA Phase 3 Report Response Letter	TRCA Project Manager	5	TRCA Project Manager shall provide a response letter on Phase 3 Report Depending on the scope of the EA, TRCA staff may be prepared to issue preliminary detailed design requirements at this stage	Planner I Planner II	Technical Staff
4.12	Prepare and Submit Notice of Public Information Centre #2	Proponent	20	Proponent shall submit the Notice of PIC and the TRCA Project Manager will attend as required		Planner II
4.13	TRCA Response to Public Information Centre #2	TRCA Project Manager	3	The TRCA Project Manager shall respond to the proponent regarding the Notice of PIC, and handouts or display material that may be provided	Planner I Planner II	
4.14	Prepare and Submit Draft EA Document	Proponent	60	Proponent shall prepare draft EA document and revised technical studies, and submit to TRCA Project Manager		
4.15	Screen and Circulate Draft EA Document	TRCA Project Manager	5 ³	TRCA Project Manager shall: <ul style="list-style-type: none"> review draft EA document discuss with technical staff circulate to technical staff, as required 	Planner I Planner II	

Task #	Task Name	Lead Responsibility	Duration ¹	Task Details	TRCA Staff Involvement	
					Required	Optional
4.16	Review Draft EA Document	TRCA Project Manager	7	TRCA Project Manager and technical staff shall review draft EA document. <i>Note: If the Phase 1, 2 and 3 reports were not submitted then TRCA requires a 30 day review period.</i>	Planner I Planner II	Technical Staff
4.17	Issue TRCA Draft EA Document/Response Letter	TRCA Project Manager	3	TRCA Project Manager shall provide a response letter on draft EA document. Depending on the scope of the EA, TRCA staff may be prepared to issue preliminary detailed design requirements at this stage.	Planner I Planner II	Technical Staff
4.18	Finalize EA Document	Proponent	15	Proponent shall address TRCA comments on the EA document.		
4.19	Issue Notice of Completion and Final EA Document	Proponent	20	Proponent shall submit the Notice of Completion and final EA document to the TRCA Project Manager and one copy of the Notice of Completion to the TRCA Watershed Specialist.		
4.20	Circulate Final EA Document	TRCA Project Manager	5 ²	TRCA Project Manager shall review final EA document and circulate as required.	Planner I Planner II	
4.21	Review Final EA Document	TRCA Project Manager	10	TRCA Project Manager and technical staff shall review final EA document and discuss outstanding issues as required. <i>Note: If the Phase 1, 2 and 3 reports were not submitted then TRCA requires a 30 day review period.</i>	Planner I Planner II	Technical Staff
4.22	Issue TRCA Notice of Completion and EA Document/Response Letter	TRCA Project Manager	5	TRCA Project Manager shall provide a response letter on the final EA document.	Planner I Planner II	Technical Staff

Task #	Task Name	Lead Responsibility	Duration ¹	Task Details	TRCA Staff Involvement	
					Required	Optional
423	Debriefing on Consultant Performance (Exit Questionnaire)	TRCA Project Manager	20	Upon request and for discussion, the TRCA Project Manager will provide the Municipal Project Manager with a summary of performance in relation to the service delivery standards for both the Municipal and TRCA Teams, in an agreed upon format.	Planner I Planner II	

¹ Duration is in non-consecutive business days
² Meetings will be scheduled within 10 days of request
³ Review period commences the day after receipt

 **TORONTO AND REGION**
Conservation
for The Living City

October 29, 2007

CFN: 39924

SENT VIA MAIL & EMAIL (garry.leveck@stantec.com)

Mr. Garry Leveck
Project Manager
Stantec Consulting Ltd.
49 Frederick Street
Kitchener, ON
N2H 6M7

Dear Mr. Leveck:

**Re: Response to Notice of Commencement
Mayfield Road Improvements from Airport Road to Coleraine Drive
Municipal Class Environmental Assessment (EA) - Schedule C
Humber River; City of Brampton/Town of Caledon; Regional Municipality of Peel**

Toronto and Region Conservation Authority (TRCA) staff received the Notice of Commencement for the above-noted Environmental Assessment (EA) application on October 12, 2007. It is the understanding of TRCA staff that this undertaking involves the study of alternatives to improve Mayfield Road from Airport Road to Coleraine Drive to accommodate increased traffic volume.

Staff notes that there are several watercourses within the study area that will need to be confirmed by a TRCA ecologist. Please book a site visit through the TRCA Project Manager to confirm the watercourse features.

Developing the EA

Staff conducted a review of the background mapping and has identified environmental concerns within the study area. These environmental concerns should be identified in the EA document in both the text and on an overlay map, as appropriate. Digital versions of the mapping and available TRCA data will follow under separate cover.

Site and building design should avoid impacts and support sustainable solutions as related to the natural, socio-economic and cultural environment. TRCA staff's environmental concerns in this undertaking are:

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- Aquatic Species and Habitat
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- Criteria 1: prevents the risk associated with flooding, erosion or slope instability;
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Please book a meeting through the TRCA Project Manager prior to selecting the preferred alternative solution and design. At the meeting, TRCA staff will discuss issues related to our environmental concerns, as outlined in Appendices 1 and 2.

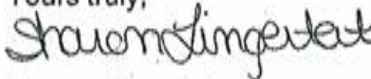
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5. Please include TRCA's Humber River Watershed Specialist Gary Wilkins on the undertaking's mailing list and ensure that he receives all notices of Public Information Centres (PICs). Gary Wilkins' information should be sent to TRCA's Head Office at 5 Shoreham Drive, Downsview, M3N 1S4.

Should you have any questions or require any additional information please contact me at extension 5717 or by email at slingertat@trca.on.ca.

Yours truly,



Sharon Lingertat
Acting Planner II, Environmental Assessment Review
Planning and Development

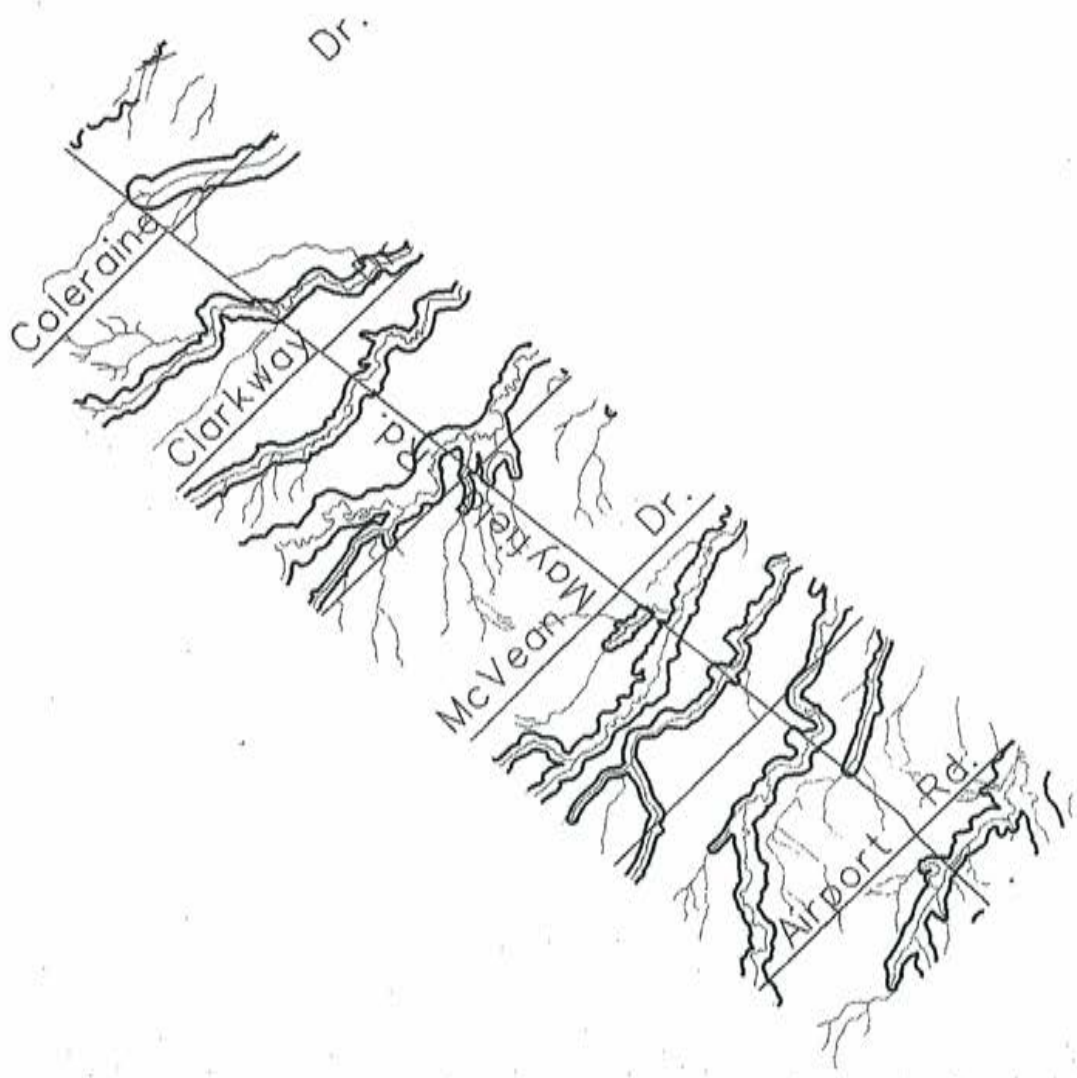
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Encl.

- 1. Maps (hard copies) - TRCA Regulation Map (approximation)
- 2. Appendix 1 - TRCA Environmental Concerns and EA Document Requirements
- 3. Appendix 2 - TRCA Preliminary Technical Study Requirements
- 4. Appendix 3 - TRCA Environmental Assessment Review Program Service Delivery Standards

BY EMAIL

cc: Sandy Lovisotto, Regional Municipality of Peel (sandy.lovisotto@peelregion.ca)
Beth Williston, TRCA, Manager, Environmental Assessments
Quentin Hanchard, TRCA, Manager, Development Planning and Regulation
Gary Wilkins, TRCA, Humber River Watershed Specialist
Lois Griffin, Chair, Humber Watershed Alliance



APPENDIX 1 - TRCA ENVIRONMENTAL CONCERNS AND EA DOCUMENT REQUIREMENTS	
Environmental Concerns	EA Document Requirements
NATURAL ENVIRONMENT	
<p>Aquatic Species and Habitat</p> <p>Please include the fisheries timing window(s) for construction. Please contact the TRCA in writing and request the timing windows associated with the watercourses in the study area. Please forward a copy of the response to TRCA.</p>	<p>1. Please include a statement in the EA document that the TRCA has a Level 3 Agreement with the Fisheries and Oceans Canada (DFO). The appropriate wording is:</p> <p><i>On July 24, 1998, the TRCA signed a Level 3 Agreement with Fisheries and Oceans Canada (DFO), which established a streamlined approach to addressing issues pertaining to the Federal Fisheries Act. Conservation Authorities with a Level 3 Agreement determine whether the proposal has a potential for a Harmful Alteration, Disruption or Destruction (HADD) of fish habitat. CA staff will work with the proponent to suggest ways to mitigate the HADD and if mitigatable write Letters of Advice on behalf of DFO. If the CA determines that the HADD cannot be mitigated then the CA will provide a skeleton of a Letter of Intent and a DFO application in order for the proponent to prepare a compensation package. Note that only DFO through the Minister of Fisheries and Oceans can authorize compensation regarding a HADD pursuant to Section 35 (2) of the Federal Fisheries Act.</i></p> <p>2. Please include a section in the EA document that indicates which aspects of the undertaking may trigger the Canadian Environmental Assessment Act (CEAA). The CEAA trigger list may be obtained from www.ceaa.gc.ca.</p> <p>Please note that there are two CEAA triggers which are commonly associated with the issuance of TRCA permits. These are the DFO triggers if the undertaking is a HADD and the Navigable Waterways trigger (contact Transport Canada, Sarnia at 519-383-1826).</p> <p>3. If applicable, please include a statement in the EA document that works conducted by a Provincial/Federal Ministry on Provincial/Federal lands are exempted from Ontario Regulation 166/06. Therefore, TRCA staff requires that all concerns be addressed in the selection of the preferred design, as TRCA clearance of the EA document is required.</p>
<p>Aquifers</p> <p>This undertaking could require dewatering of the surficial aquifer system or deep aquifer system.</p> <p>A Permit to Take Water (PTTW) from the Ministry of Environment (MOE) could be required for these works. Please contact the MOE for further information. TRCA may be requested to provide technical input to MOE regarding the ecological impacts of dewatering.</p> <p>TRCA's Valley and Stream Corridor Management Program (VSCMP), Section 4.3 - Infrastructure and Servicing Item 15 should be followed. VSCMP can be sent digitally upon request to the TRCA Project Manager.</p>	<p>(These details on aquifers are to be confirmed at initial meeting with TRCA staff)</p> <ol style="list-style-type: none"> 1. Identify local aquifer conditions (to be confirmed through pump tests). 2. Identify predicted Zone of Influence using measured coefficients. 3. Identify baseline conditions of all natural features within the zone. 4. Provide a hydrogeologic study which includes surficial geology, identification of shallow, deep and perched aquifers; cross-sectional drawings of identified aquifer/aquifer systems, assessment of hydrogeologic coefficients, especially hydraulic conductivity (K) based on slug pump tests or step tests. 5. Note which sections of the undertaking (ie. discharge areas) could potentially require permits from TRCA. 6. Please include a copy of Section 4.3 - Infrastructure and Servicing, from the TRCA's Valley and Stream Corridor Management Program which is available digitally from the Project Manager at TRCA upon request.

APPENDIX 1 - TRCA ENVIRONMENTAL CONCERNS AND EA DOCUMENT REQUIREMENTS	
Environmental Concerns	EA Document Requirements
<p>Regional Storm Flood Plains</p> <p>Portions of the study area are within the Regional Storm Flood Plain.</p> <p>In accordance with Ontario Regulation 169/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses), a permit is required from the TRCA prior to any of the following works taking place:</p> <p>b) development, if in the opinion of the authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development.</p> <p>Development is defined as:</p> <ul style="list-style-type: none"> i) the construction, reconstruction, erection or placing of a building or structure (culverts, bridges, outfalls, headwalls etc.) of any kind, ii) site grading, iii) the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere. <p>TRCA's Valley and Stream Corridor Management Program (VSCMP), Section 4.3 - Infrastructure and Servicing should be followed.</p>	<ol style="list-style-type: none"> 1. Indicate in the text and mapping what areas are within a Region Storm Flood Plain. 2. Discuss in detail how the undertaking design will reflect the relevant portions of the VSCMP in order that impacts to the corridors and areas of concern will be minimized. 3. Note which portions of the undertaking will potentially require permits from TRCA.

APPENDIX 1 - TRCA ENVIRONMENTAL CONCERNS AND EA DOCUMENT REQUIREMENTS	
Environmental Concerns	EA Document Requirements
<p>Regulation Limit</p> <p>TRCA's Valley and Stream Corridor Management Program (VSCMP), Section 4.3 - Infrastructure and Servicing should be followed</p> <p>There are Regulation Limits within the study area.</p> <p>In accordance with Ontario Regulation 168/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses), a permit is required from the TRCA prior to any of the following works taking place:</p> <ul style="list-style-type: none"> a) straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse, or for changing or interfering in any way with a wetland; b) development, if in the opinion of the authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development. <p>Development is defined as:</p> <ul style="list-style-type: none"> i) the construction, reconstruction, erection or placing of a building or structure of any kind, ii) any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure, iii) site grading, iv) the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere. 	<ol style="list-style-type: none"> 1. Indicate in the text and mapping what areas are within the Regulation Limits 2. Discuss in detail how the alternative design will reflect the relevant portions of the VSCMP in order that impacts to the regulated areas and areas of concern will be minimized 3. Note which portions of the project will potentially require permits for Development, Interference with Wetlands and Alterations to Shorelines and Watercourses through TRCA 4. Include a copy of the Regulation Limits in the EA Appendices and reference the information in the text of the EA Document.
<p>Stream Corridors</p> <p>There are stream corridors located in the study area.</p> <p>In accordance with the TRCA's Valley and Stream Corridor Management Program (VSCMP), a 10-metre setback from the meander belt is required for any development.</p>	<ol style="list-style-type: none"> 1. Indicate in the text and mapping what areas are stream corridors. 2. Discuss in detail how the undertaking design will reflect the relevant portions of the VSCMP in order that impacts to the corridors and areas of concern will be minimized. 3. Meander belt delineation studies may be required. 4. Fluvial geomorphology analysis may be required. 5. Aquatic habitat and species studies may be required.

APPENDIX 1 - TRCA ENVIRONMENTAL CONCERNS AND EA DOCUMENT REQUIREMENTS	
Environmental Concerns	TRCA Programs, Policies and Guidelines
Terrestrial Natural Heritage System	<p>The study area is located within the Terrestrial Natural Heritage System.</p> <p>TRCA has prepared a Terrestrial Natural Heritage System Strategy (TNHSS) for TRCA's jurisdiction. This system recognizes the need to improve both the quantity and quality of the terrestrial habitats.</p> <p>A model has been used to delineate an improved or "targeted" system to meet these objectives as outlined on the maps included in the TNHSS.</p> <p>A copy of our Terrestrial Natural Heritage Strategy (TNHS) can be obtained from our website www.trca.on.ca/land_protection/terrestrial/default.asp?load=approach.</p> <p>TRCA's Valley and Stream Corridor Management Program (VSCMP), Section 4.3 - Infrastructure and Servicing Items 14, 16 and 19 should be followed.</p>
Valley Corridors	<p>There are valley corridors located in the study area.</p> <p>In accordance with the TRCA's Valley and Stream Corridor Management Program (VSCMP), a 10-metre setback from the stable top of bank is required for development.</p> <p>Please note that a portion of this undertaking may be subject to the provisions of the City of Toronto Municipal Code Chapter 658 - the Toronto Ravine Protection Bylaw. Please contact the municipality for permits regarding the removal of trees or significant vegetation.</p>
Watercourses	<p>There are watercourses located within the study area.</p> <p>In accordance with Ontario Regulation 166/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses), a permit is required from the TRCA prior to any of the following works taking place:</p> <p>e) straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse, or for changing or interfering in any way with a wetland;</p> <p>Digital photographs and field visits may be required at a later date to confirm these watercourse features.</p> <p>TRCA Valley and Stream Corridor Management Program (VSCMP), Section 4.3 - Infrastructure and Servicing should be followed.</p>
	EA Document Requirements
	<ol style="list-style-type: none"> Indicate in the text and mapping what portions of the study area are within the TNHSS. Please provide a discussion in detail how the EA document undertaking will conform to the requirements of TRCA's Valley and Stream Corridor Management Program (VSCMP) and TNHSS. If applicable, please include a statement in the EA document on the Migratory Bird Convention Act, which is enforced by Environment Canada. Under this legislation tree cutting should not occur during the nesting phase of on-site migratory birds. If applicable please include a statement in the EA document on the Species at Risk Act (SARA). The purpose of this legislation is to prevent wildlife species from being extirpated or extinct, to provide for the recovery of wildlife species that are extirpated, endangered or threatened, as a result of human activity, and to manage species of special concern to prevent them from becoming endangered or threatened.
	<ol style="list-style-type: none"> Indicate in the text and mapping what areas are valley corridors. Discuss in detail how the alternative design will reflect the relevant portions of the VSCMP in order that impacts to the corridors and areas of concern will be minimized. One hundred year erosion studies, top of bank staking and/or geotechnical studies may be required.
	<ol style="list-style-type: none"> Indicate the location of the watercourses in the text and mapping. Discuss in detail how the alternative design will reflect the relevant portions of the VSCMP in order that impacts to the watercourses and areas of concern will be minimized. Note which portions of the alternative design will potentially require permits from TRCA. Book a site visit with the TRCA Project Manager to confirm watercourse features. Include the watercourse summary sheet.

APPENDIX 1 - TRCA ENVIRONMENTAL CONCERNS AND EA DOCUMENT REQUIREMENTS	
Environmental Concerns	EA Document Requirements
<p>Wetlands</p> <p>There are known wetlands in the study area.</p> <p>In accordance with Ontario Regulation 166/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses), a permit is required from the TRCA prior to any of the following works taking place:</p> <p>a) straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse, or for changing or interfering in any way with a wetland ;</p> <p>Boundaries should be confirmed with the respective agencies as follows:</p> <ul style="list-style-type: none"> • Provincially Significant Wetlands (PSW) should be confirmed with the Ministry of Natural Resources (MNR) in Aurora (905-713-7400). • Locally Significant Wetlands (LSW) should be confirmed with the Ministry of Natural Resources (MNR) in Aurora (905-713-7400). • Areas greater than 0.5 hectares classified under TRCA's Ecological Land Classification (ELC) should be confirmed with TRCA <p>There may be additional wetlands determined through field investigations conducted in association with this undertaking. TRCA permits are required for any "interference to a wetland".</p> <p>The Province of Ontario has approved a Provincial Planning Policy Statement for Wetlands. The Ministry of Natural Resources should be contacted directly at <u>905-713-7400</u>.</p> <p>TRCA's Valley and Stream Corridor Management Program (VSCMP), Section 4.3 - Infrastructure and Servicing Items 16 and 17 should be followed.</p>	<ol style="list-style-type: none"> 1. Indicate in the text and mapping what areas are PSWs, LSWs, and areas classified under TRCA's ELC. 2. Detail how the proposal will conform to the requirements of TRCA's Valley and Stream Corridor Management Program (VSCMP), Section 4.3 - Infrastructure and Servicing Items 16 and 17, and the Provincial Policy Statement for wetlands. 3. Book a site visit with the TRCA Project Manager to view possible wetlands. 4. Include the specific section from the PPS on Wetlands and Infrastructure in the Appendices of the EA document and reference the information in the text of the EA Document.

APPENDIX 2

Preliminary Technical Study Requirements

TRCA requires that the preferred alternative meet the following criteria:

- Criteria 1: Prevent risk associated with flooding, erosion or slope instability;
- Criteria 2: Protect and rehabilitate existing landforms and features and functions;
- Criteria 3: Provide for aquatic, terrestrial and human access; and,
- Criteria 4: Minimize water and energy consumption
- Criteria 5: Minimize water and air pollution and thermal variation

In relation to this project, the following studies may be required as a minimum. Staff will confirm additional study requirements as the EA progresses, if additional issues or impacts are identified.

Type of Study or Report
Hydraulic and hydrologic studies to delineate floodlines and flow rates, including detailed topographic mapping and modelling
Fluvial Geomorphology Studies <input type="checkbox"/> 100-year toe erosion limit for slope stability <input type="checkbox"/> Meander belt and erosion limit delineation studies <input type="checkbox"/> Watercourse characterization study
Geotechnical studies <input type="checkbox"/> slope stability (valley and shoreline) <input type="checkbox"/> construction feasibility (tunnelling, footings etc.)
Hydrogeological studies <input type="checkbox"/> report for determining dewatering requirements for watercourse crossings, or impacts on watercourses and natural features <input type="checkbox"/> groundwater upwellings <input type="checkbox"/> Geotechnical report for determining groundwater potential (upwelling and dewatering needs), including slug tests <input type="checkbox"/> Local aquifer conditions study to be confirmed through step and pump tests <input type="checkbox"/> Predicted zone of influence map using measured coefficients <input type="checkbox"/> Hydrogeologic study which includes surficial geology; identification of shallow, deep and perched aquifers; cross-sectional drawings of identified aquifer/aquitard systems, assessment of hydrogeologic coefficients, especially hydraulic conductivity (K) based on slug pump tests or aquifer pumping tests
Legal survey of field verified natural features, including top-of- bank (staked with TRCA)
Stormwater management study including water quality (including temperature), quantity, stream bank erosion and water budget.
Channel Crossings Assessment including terrestrial passage trails, fish
Natural Heritage Study, including <input type="checkbox"/> inventory and mapping of landforms, aquatic and terrestrial resources including areas that are part of the TRCA TNHS <input type="checkbox"/> baseline conditions report within all natural features and functions within the hydrogeological zone of influence <input type="checkbox"/> mitigation, compensation and monitoring strategies for impacted terrestrial and aquatic resources <input type="checkbox"/> assessment and identification of linkages and barriers for aquatic and terrestrial resources
Assessment and identification of local, regional and national trail systems

Type of Study or Report
Assessment and identification of archaeological and built heritage resources
Assessment of TRCA property/programming interests
Erosion and sediment control assessment
Other _____

**TRCA Environmental Assessment Review
Service Delivery Standards**

Part 4: Environmental Assessment Document

Task #	Task Name	Lead Responsibility	Duration ¹	Task Details	TRCA Staff Involvement	
					Required	Optional
4	<p>Environmental Assessment Document</p> <p>Definitions for EA Documents: Municipal Schedule A or equivalent - no report Municipal Schedule B or equivalent - complete Phase 1 and 2 Report - this report is the Project File Municipal Schedule C or equivalent - complete Phase 1, 2, 3 and 4 Reports - the Phase 4 Report is the Environmental Study Report (ESR) Individual EA - complete Terms of Reference; Complete Phase 1, 2, 3 and 4 Reports - the Phase 4 Report is the Environmental Assessment (EA)</p>					
4.1	Prepare and Submit Phase 1 and 2 Report	Proponent	60	Proponent shall prepare Phase 1 and 2 report and technical appendices, and submit to TRCA Project Manager		
4.2	Circulate Phase 1 and 2 Report	TRCA Project Manager	3 ¹	TRCA Project Manager shall circulate Phase 1 and 2 Report and technical appendices This is the draft project file for Schedule B Municipal Class EAs	Planner I Planner II	
4.3	Review Phase 1 and 2 Report	TRCA Project Manager	15	TRCA Project Manager and technical staff shall review Phase 1 and 2 Report and technical appendices	Planner I Planner II	Technical Staff
4.4	Issue TRCA Phase 1 and 2 Report Response Letter	TRCA Project Manager	5	TRCA Project Manager shall provide a response letter on the Phase 1 and 2 Report; additional technical studies may be identified	Planner I Planner II	Technical Staff
4.5	Meet on TRCA Phase 1 and 2 Report Comments	Proponent	1 ²	Proponent shall meet with TRCA Project Manager and technical staff to discuss comments on the Phase 1 and 2 Report at the TRCA offices	Planner I Planner II	Technical Staff

Task #	Task Name	Lead Responsibility	Duration ¹	Task Details	TRCA Staff Involvement	
					Required	Optional
4.6	Prepare and Submit Notice of Public Information Centre #1	Proponent	20	Proponent shall submit the Notice of Public Information Centre (PIC) and the TRCA Project Manager will attend, as required		Planner II
4.7	TRCA Response to Notice of Public Information Centre #1	TRCA Project Manager	3	TRCA Project Manager shall respond to the proponent regarding the Notice of PIC and request copies of PIC material for review. For Schedule B Municipal Class EAs, go to Task 4.518	Planner I Planner II	
4.8	Prepare and Submit Phase 3 Report	Proponent	60	Proponent shall prepare Phase 3 report and revised technical studies, and submit to TRCA Project Manager		
4.9	Coordinate Phase 3 Report	TRCA Project Manager	3 ²	TRCA Project Manager shall circulate Phase 3 Report and revised technical studies	Planner I Planner II	
4.10	Review Phase 3 Report	TRCA Project Manager	15 ¹	TRCA Project Manager and technical staff shall review Phase 3 Report	Planner I Planner II	Technical Staff
4.11	Issue TRCA Phase 3 Report Response Letter	TRCA Project Manager	5	TRCA Project Manager shall provide a response letter on Phase 3 Report Depending on the scope of the EA, TRCA staff may be prepared to issue preliminary detailed design requirements at this stage.	Planner I Planner II	Technical Staff
4.12	Prepare and Submit Notice of Public Information Centre #2	Proponent	20	Proponent shall submit the Notice of PIC and the TRCA Project Manager will attend as required		Planner II
4.13	TRCA Response to Public Information Centre Notice #2	TRCA Project Manager	3	The TRCA Project Manager shall respond to the proponent regarding the Notice of PIC, and handouts or display material that may be provided	Planner I Planner II	
4.14	Prepare and Submit Draft EA Document	Proponent	60	Proponent shall prepare draft EA document and revised technical studies, and submit to TRCA Project Manager		
4.15	Screen and Circulate Draft EA Document	TRCA Project Manager	5 ³	TRCA Project Manager shall: <ul style="list-style-type: none"> review draft EA document discuss with technical staff circulate to technical staff, as required 	Planner I Planner II	

Task #	Task Name	Lead Responsibility	Duration ¹	Task Details	TRCA Staff Involvement	
					Required	Optional
4.16	Review Draft EA Document	TRCA Project Manager	7	TRCA Project Manager and technical staff shall review draft EA document. <i>Note: If the Phase 1, 2 and 3 reports were not submitted then TRCA requires a 30 day review period.</i>	Planner I Planner II	Technical Staff
4.17	Issue TRCA Draft EA Document Response Letter	TRCA Project Manager	3	TRCA Project Manager shall provide a response letter on draft EA document. Depending on the scope of the EA, TRCA staff may be prepared to issue preliminary, detailed design requirements at this stage.	Planner Planner II	Technical Staff
4.18	Finalize EA Document	Proponent	15	Proponent shall address TRCA comments on the EA document		
4.19	Issue Notice of Completion and Final EA Document	Proponent	20	Proponent shall submit the Notice of Completion and final EA document to the TRCA Project Manager and one copy of the Notice of Completion to the TRCA Watershed Specialist		
4.20	Circulate Final EA Document	TRCA Project Manager	5 ²	TRCA Project Manager shall review final EA document and circulate as required	Planner I Planner II	
4.21	Review Final EA Document	TRCA Project Manager	10	TRCA Project Manager and technical staff shall review final EA document and discuss outstanding issues as required. <i>Note: If the Phase 1, 2 and 3 reports were not submitted then TRCA requires a 30 day review period.</i>	Planner I Planner II	Technical Staff
4.22	Issue TRCA Notice of Completion and EA Document Response Letter	TRCA Project Manager	5	TRCA Project Manager shall provide a response letter on the final EA document	Planner I Planner II	Technical Staff

Task #	Task Name	Lead Responsibility	Duration ¹	Task Details	TRCA Staff Involvement	
					Required	Optional
423	Debriefing/Consultant Performance (Exit Questionnaire)	TRCA Project Manager	20	Upon request and for discussion, the TRCA Project Manager will provide the Municipal Project Manager with a summary of performance in relation to the service delivery standards for both the Municipal and TRCA Teams in an agreed upon format.	Planner/Planner II	

- ¹ Duration is in non-consecutive business days
- ² Meetings will be scheduled within 10 days of request
- ³ Review period commences the day after receipt



October 29, 2007

Your file Votre référence

Our file Notre référence

5010-1
#192491

Garry Leveck
Project Manager
Stantec Consulting Ltd.
49 Frederick Street
Kitchener, ON
N2H 6M7

Dear Mr. Leveck:

RE: Mayfield Road, from East of Airport Road to West of Coleraine Drive Class Environmental Assessment Study

Thank you for your letter of October 9, 2007 regarding the above project.

For all provincial and/or municipal undertakings, Indian and Northern Affairs Canada requests that the proponent of such projects make efforts directly from the initiation of a project to identify and notify all potentially interested First Nation communities. It is recommended that this identification and notification occur at the earliest planning stages of the undertaking and if requested by any First Nation(s), maintain communication with such communities. To assist with identifying First Nations and other Aboriginal groups within the vicinity of a specific proposed project, Indian and Northern Affairs Canada can provide the following information sources:

- The Chiefs of Ontario website (<http://www.chiefs-of-ontario.org>) provides a directory of contact information for all First Nations and Chiefs, as well as a map of the locations of all Ontario First Nations.
- Natural Resources Canada produced provincial maps, showing all First Nation reserve lands, are available for purchase at:
http://cccm.nrcan.gc.ca/english/canada_lands_index_e.asp
- Natural Resources Canada's online *Historical Indian Treaties* map, showing historical First Nation treaties across Canada, is available at:
<http://atlas.nrcan.gc.ca/site/english/maps/historical/indiantreaties/historicaltreaties>

- A search by place name at the Canadian Geographical Names database (http://geonames.nrcan.gc.ca/search/search_e.php) will generate a map which shows any nearby Indian reserve lands in grey.
- The Métis Nation of Ontario (<http://www.metisnation.org/>) may be able to provide information regarding Métis interests with respect to a particular project.
- The Ontario Federation of Indian Friendship Centres website provides a list of all friendship centres in Ontario, at:
<http://www.ofifc.org/Centres/OfficeList.asp?Region='ON'>
- For enquiries regarding land claims in Ontario, please contact the Director General of the Comprehensive Claims Branch at (819) 994-7521, the Director General of Specific Claims Branch at (819) 994-2323 and the Director General of Litigation Management and Resolution Branch at (819) 997-3582.

If, however, the proponent believes that the proposed project is likely to also trigger a requirement for a federal environmental assessment under the *Canadian Environmental Assessment Act* (CEAA), we advise that the proponent contact the Canadian Environmental Assessment Agency early in the planning process, and provide a project description to them. The Agency will notify federal agencies, including INAC, of the proposed project as appropriate, in accordance with the requirements of the *Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements*. INAC will, in turn, provide input to the Agency regarding our interest in the project and/or First Nation contact information wherever warranted.

Thank you for your time and consideration.

Sincerely,

Miranda Lesperance
Environment Officer
Environment Unit
INAC - Ontario Region
25 St. Clair Avenue E. 8th Floor
Toronto, Ontario M4T 1M2
lesperancem@inac.gc.ca

cc: Sandy Lovisotto, Regional Municipality of Peel

This letter has been distributed electronically. If you require a signed copy, please contact the author at the address provided above.

Canada

OCT 25 2007



**Association of Iroquois and Allied Indians
Ontario Environmental Assessment Act
Fax Back Form**

Date: October 25 2007

Ms. Sandy Lovisotto, P. Eng.
Project Manager
(905) 791 1442

Re:

**Mayfield Road, From East of Airport Road to West of Coleraine Drive
Class Environmental Assessment Study**

We are in receipt of documentation produced under the Ontario Environmental Assessment Act for our review and comment. Please accept this letter as a response to your invitation and not an act of consultation. We cannot and do not consider this response letter to be consultation as we are not mandated to consult on behalf of our member nations. Our involvement as a representative for the First Nations occurs when invited by one of our member First Nations to do so. Consultation should always occur with the First Nation(s) specifically impacted.

As an association, we understand that your role in the environmental assessment process is primarily technical and that our concerns, which are Aboriginal rights, socio-economic and indigenous knowledge-based, are to fit within established scientific, technological and policy frameworks established by the Province of Ontario. We are of the view that this framework is invalid as it has been developed without input or consultation with First Nations.

Our organization receives no federal or provincial funding in helping to facilitate a mutual understanding of environmental concerns between proponents and our member First Nations. Based on this lack of understanding, funding and resources, we are only able to state that we do have member First Nations whose traditional hunting and gathering areas may be affected by this project.

Our organization and Member Nations are usually open to participating in sustainable planning processes. However, the current federal and provincial practices in this policy area are left to the goodwill of proponents, in terms of collaborating with First Nations, and in identifying potential First Nation issues and incorporating these into the overall planning processes.

Aboriginal people are listed as "stakeholders" in environmental assessment processes, however this is only partially correct. First Nations people have collective constitutional rights, including land rights, hunting, gathering and fishing rights. The practice and recognition of these rights in southern and central Ontario is an outstanding issue between the provincial and federal governments and our member Nations. Therefore, in proposed land use situations, First Nations can seek legal remedies before the courts, including legal injunctions and other judicial intervention.

Our comments on documents produced under the current Environmental Assessment Act are as follows:

- It is our experience that when First Nations are approached respectfully and referenced in an appropriate way, that this overall approach tends to lead to more positive dialogue.

- We currently do not have the capacity to address the methodology developed for the site selection criteria and technological alternatives, at this particular time. The Proponent should use discretion in considering the selection of a site and technology that may interfere with the exercise of First Nations rights, including treaty and rights to access to wild game, water, plants, fish and ceremonial areas etc. Consideration should be put towards treaty boundary lines, real and potential land claims, and First Nations communities in the surrounding area.
- While the provincial EA legislation and EA practice may put the onus on the Proponent to consult First Nations, federal and provincial Crowns do have a constitutional obligation to uphold the rights of First Nations, and a duty to consult. The provincial and federal governments may not be forthcoming regarding this duty, as this duty currently exists in common law and is not reflected in Ontario EA legislation; which needs to be updated.
- As a safeguard, we suggest that First Nations be directly involved in the development and application of the Terms of Reference to accommodate for any potential First Nation intervention or interests. This approach would be ideal for addressing any First Nation issues that may arise. For example, where there may be archaeological discoveries at a site, First Nations customs vary and the Proponent should be ready to address that situation with the appropriate First Nations, in an innovative or other culturally appropriate manner.
- Based on archeological finds, it may be necessary to consult with other First Nations that have not been presently identified by the Ministry of the Environment or the Ontario Aboriginal Affairs Secretariat. First Nations that currently reside in the Province of Quebec may also have an interest in projects located in Ontario.

We thank you for taking the time to contact our organization and regret that we are not able to provide you with more assistance. If you have further questions or concerns please contact our office at (519) 434-2761.

Sincerely,



Adriana Poulette B.A., M.A.
Senior Policy Analyst and Government Relations Advisor
The Association of Iroquois and Allied Indians

Ministry
of the
Environment

5775 Yonge Street
8th Floor
North York, ON M2M 4J1

Technical Support Section
Central Region

Ministère
de
l'Environnement

5775, rue Yonge
8^e étage
North York, ON M2M 4J1

Région du Centre

RECEIVED
OCT 22 2007



Ontario

Tel: (416) 326-8700
Fax: (416) 325-6345

October 18, 2007

Sandy Lovisotto, P. Eng.
Project Manager
Regional Municipality of Peel
10 Peel Centre Drive
Brampton, ON L6T 4B9

**RE: Mayfield Road from Airport Road to Coleraine Drive
Regional Municipality of Peel
Class Environmental Assessment
Notice of Commencement
Our File: EA 05-02-05**

Dear Ms. Lovisotto:

This letter is our response to your Notice of Commencement for the above noted project. This response acknowledges that the Region of Peel has indicated that its study is following the approved environmental planning process for a **Schedule C** project under the *Municipal Engineers Association Municipal Class Environmental Assessment (Class EA)*.

On the basis of our review of the information submitted, we are providing the following general comments to assist you and your project team members in the proposed undertaking:

Ecosystem Protection and Restoration

- Any impacts to ecosystem form and function must be avoided where possible and the Region of Peel's Environmental Study Report (ESR) should describe mitigation measures and how project planning will protect and enhance the local ecosystem.
- All natural heritage features need to be identified and described in further detail in order to assess potential impacts and to develop appropriate mitigation measures. Our records confirm a number of watercourse crossings are located within or adjacent to the Study Area. We recommend consulting with the Ministry of Natural Resources (MNR), your local conservation authority, and Fisheries and Oceans Canada (DFO) regarding the protection of these sensitive features.

- Our records indicate that there are Rare Species of flora and/or fauna adjacent to the Study Area. MNR should be contacted to determine if special measures or additional study will be necessary to preserve and protect these significant species.
- The municipality's Official Plan policies related to ecosystem protection within the Study Area should be referenced to ensure that all environmental protection policies are satisfied. The ESR should also discuss the levels of growth proposed for the area, how this proposal addresses those levels of growth, and how any proposed road improvements will affect local traffic flows.

Greenbelt Planning Area

- The *Greenbelt Plan* contains policies that protect the Greenbelt's agricultural land base and the ecological features and functions occurring on this landscape. The Study Area is within the Greenbelt planning area, specifically within the Protected Countryside designation. As such, the ESR should demonstrate how the project adheres to the relevant sections of the *Greenbelt Plan*, including Section 4.2.1 - General Infrastructure Policies. A description of measures that prevent and minimize potential impacts should also be included. You may wish to consider consulting with the Ministry of Municipal Affairs & Housing.

Groundwater/Surfacewater

- Our records show that there are several watercourse crossings along the Study Area, therefore the ESR must include a sufficient level of information to demonstrate that there will be no negative impacts on the natural features or ecological functions of the watercourses. Measures should be included in the planning and design process to ensure that any watercourses are protected and restored as part of the proposed road improvements. Opportunities for ecological restoration include activities such as:
 - re-establishing aquatic ecosystem linkages;
 - restoring natural streambanks; and,
 - re-establishing riparian cover.
- Measures should be included in the planning and design process and described in the ESR to ensure that sediment discharge from construction activities and roadway operations will be minimized and that there will be no ecological impacts to local watercourses. Exposed areas should be kept to a minimum at all times in order to minimize the potential for erosion. The MOE *Guidelines for Evaluating Construction Activities Impacting on Water Resources* (Guideline B-6) should be utilized during planning and construction phase of this project.
- Additional stormwater runoff from new pavement can impact receiving watercourses and cause flooding. Quality and quantity control measures to treat stormwater runoff should be considered for all new impervious areas and, where possible, existing road surfaces. We recommend a Stormwater Management Plan/Report be prepared as part of the Class EA process and included in the ESR.

- Strategies to address potential water quantity and erosion impacts related to stormwater into streams should be incorporated into the study documentation, and these measures should ensure that adequate water quality is maintained. The MOE's *Stormwater Management Planning and Design Manual* (2003) should be referenced when designing stormwater control methods.
- Our records indicate that there are a number of groundwater wells in the Study Area. Care should be taken to ensure that those water supplies will not be adversely affected by construction activities. The primary concerns include the contamination and potential disruption of groundwater movement, particularly in the case of shallow wells. Background data should be obtained to define existing water quality and quantity and their relationships, and this information should be included in the ESR.
- De-watering associated with construction activities may temporarily impact local groundwater wells and interfere with baseflow to streams. In addition, the dispersal of pumped water can affect a receiving watercourse. A temporary Permit to Take Water (PTTW) will be required should any de-watering taking exceed 50,000 litres per day. Consultation with the *Permit to Take Water Manual* (April 2005) is recommended. Studies prepared as part of the Class EA process should be carried out to a sufficient level of detail to determine if a PTTW, or any other approvals, will be required for this undertaking. The ESR should clearly identify if a PTTW or any other approvals are expected to be necessary.
- If construction activities are likely to encounter groundwater water, then an assessment of impact is required. The ESR should include a description of the Region of Peel's plans and commitments to prevent and mitigate negative impacts until the aquifer has recovered.
- We recommend preparing a Contingency Plan for dealing with potential adverse effects on surface water (e.g. spills) and groundwater (e.g. well impacts), and including a description of this plan in the ESR.
- We recommend consultation with MNR, the DFO, and your local conservation authority as part of the Class EA planning process to solicit their input on any Groundwater/Surface Water concerns and to determine if any subsequent approvals or permits are required from the agencies.

Dust and Noise

- The ESR should consider the potential impacts of increased noise levels due to potentially higher traffic volumes resulting from this project. The proponent should explore all potential measures to mitigate significant noise impacts during the assessment of alternatives. Please refer to the *MTO/MOE Noise Protocol* (1996).

- Dust and noise control measures should be addressed and included in the construction plans to ensure that nearby residential and other sensitive land uses within the Study Area are not adversely affected during construction activities. If dust suppressants are proposed to be used, we recommend the use of non-chloride based compounds to protect water quality.

Contaminated Soils

- Since the removal and/or movement of soils may be required, they should be tested for contaminants resulting from previous land uses or dumping. If the soils are contaminated, the proponent must decide how and where they are to be disposed of, consistent with *Part XV.1 of the Environmental Protection Act (EPA)* and the Records of Site Condition Regulation (O.Reg. 153/04) which details the new requirements related to site assessment and clean up. More information is available online at our website via the Brownfields link. If contaminated sites are identified within or adjacent to the Study Area, the MOE Halton-Peel District Office in Burlington should be contacted.

Mitigation and Monitoring

- Design and construction report(s) and plans should be based on a best management approach that centres on the prevention of impacts, protection of existing environment, and opportunities for rehabilitation and enhancement of any impacted areas.
- All waste generated during construction activities must receive proper disposal in accordance with MOE requirements.
- Contractors must be made aware of all environmental considerations so that all environmental standards and commitments for both construction and operation work are met. Mitigation measures should be clearly referenced in the ESR and regularly monitored during the construction stage of the project. In addition, we encourage proponents to conduct post-construction monitoring to ensure all mitigation measures have been effective and are functioning properly. The proponent's construction and post-construction monitoring plans should be documented in the ESR.

Class EA Process

- The ESR report should provide clear and complete documentation of the planning process in order to allow traceability of decision-making. It must also demonstrate how the consultation provisions of the Class EA have been fulfilled, including documentation of all public consultation efforts undertaken during the planning process. Additionally, it should identify all concerns that were raised and how they have been addressed throughout the planning process. The Class EA also directs proponents to include copies of comments submitted on the project, and the proponent's responses.

- The Class EA requires the consideration of the effects of each alternative on all aspects of the environment. Therefore, the ESR should include a level of detail (e.g. hydrogeologic investigations) such that all potential impacts can be identified and appropriate mitigation measures be developed.
- Any supporting studies conducted during the Class EA process (e.g. natural environment, hydrology) should be referenced and included as part of the ESR.
- We have listed above several ministry guides available to assist you in planning this project. These are available at <http://www.ene.gov.on.ca> under the publications link. We encourage the proponent to review all the available guides and reference those applicable throughout the ESR.
- Please include, in the ESR, a list of all subsequent permits/approvals that may be required for the implementation of the preferred alternative. The proponent should consider if the proposed project will require approval under the *Canadian Environmental Assessment Act* (CEAA) and document this in the ESR.

First Nation Consultation

Please note that as part of the required stakeholder and agency consultation, proponents are advised to contact the following agencies – to determine potentially affected Aboriginal communities in the project area:

- 1. The Ontario Secretariat for Aboriginal Affairs**
(Contact: Ms. Pam Wheaton, Director, Policy and Relationships Branch, Ontario Secretariat of Aboriginal Affairs, 720 Bay St., 4th Floor, Toronto ON M5G 2K1; fax: 416-326-4017; pam.wheaton@ontario.ca)
- 2. Indian and Northern Affairs of Canada – Specific Claims Branch**
(Contact: Mr. Don Boswell, Senior Claims Analyst, Specific Claims Branch, Department of Indian and Northern Affairs, 10 Wellington St., Room 1310, Gatineau QC K1A 0H4; fax: 819-956-2258; boswelld@inac.gc.ca);
- 3. Indian and Northern Affairs of Canada - Litigation Management and Resolution Branch**
(Contact: Mr. Franklin Roy, Director, Litigation Management and Resolution Branch, Department of Indian and Northern Affairs, 10 Wellington Street, Gatineau QC K1A 0H4; fax: 819-997-1679; royf@inac.gc.ca);
- 4. Indian and Northern Affairs of Canada - Comprehensive Claims Branch**
(Contact: Ms. Louise Trepanier, Director, Claims East of Manitoba, Comprehensive Claims Branch, Department of Indian and Northern Affairs, 10 Wellington St., Room 1310, Gatineau QC K1A 0H4; 819-953-3109; trepanierl@inac.gc.ca)

5. Ministry of the Attorney General – Aboriginal Legal Issues Office

(Contact: Mr. Grant Wedge, Council, Crown Law Office-Civil, Ministry of the Attorney General, 720 Bay Street, 8th Floor, Toronto ON M5G 2K1; fax: 416-326-4181; grant.wedge@ontario.ca)

Once identified, you are advised to provide notification directly to the Aboriginal communities who may be affected by the project and provide them with an opportunity to participate in any planned public consultation sessions and comment on the project.

Thank you for the opportunity to comment on this project. Please ensure that MOE Central Region, **EA and Planning Coordinator**, is placed on the project mailing list and forward our office the Notice of Completion when completed. Should you or any members of your project team have any questions regarding the above, please feel free to contact Chunmei Liu at (416) 326-4886. Chunmei or any of Central Region's EA and Planning Coordinators would be pleased to assist you.

Yours sincerely,



Alex Phillips
Environmental Resource Planner and EA Coordinator
Air, Pesticides and Environmental Planning

- c. John Budz, Halton-Peel District Office, MOE
Central Region EA File
A & P File

Bauman, Cheryl

From: Craigs, Jeremy <CRAIGSJ@tc.gc.ca>
Sent: Friday, October 19, 2007 2:19 PM
To: sandy.lovisoto@peelregion.ca
Cc: Leveck, Garry
Subject: Transport Canada TC EA 1875
Attachments: Annex A Navigable Waters Protection Act Application Addresses.doc; TC Application Form.pdf; TC Application Guide.pdf

Thank you for your letter regarding the above referenced environmental assessment.

We have reviewed the information, and note the following:

Transport Canada is responsible for the administration of the Navigable Waters Protection Act, which prohibits the construction or placement of any "works" in navigable waters without first obtaining approval. If any of the related project elements or activities may cross or affect a potentially navigable waterway, you are requested to prepare and submit an application in accordance with the requirements as outlined in the attached Application Guide. Any questions about the NWPA application process should be directed to Suzanne Shea, NWP Officer at (519) 383-1866.

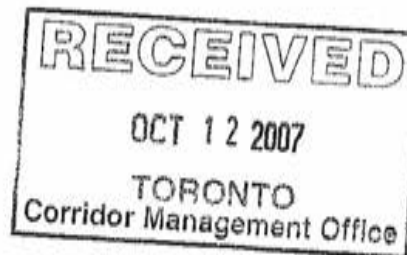
Please note that certain approvals under the Navigable Waters Protection Act or Railway Safety Act trigger the requirement for a federal environmental assessment under the Canadian Environmental Assessment Act. You may therefore wish to consider incorporating CEAA requirements into your provincial environmental assessment.

<<Annex A Navigable Waters Protection Act Application Addresses.doc>> <<TC Application Form.pdf>> <<TC Application Guide.pdf>> Please contact me should you wish to discuss this further.

Regards,
Jeremy Craigs
Environmental Officer
Environment and Engineering
Transport Canada - Ontario Region (PHE)
4900 Yonge Street, North York, ON M2N 6A5
p: 416-952-0502
f: 416-952-0514
P Please consider the environment before printing this email.

RECEIVED

OCT 16 2007



October 9, 2007
Project: 07-4350

Mr. Ted Lagakos
Corridor Management Technician
Ministry of Transportation
7th Floor, Atrium Tower
1201 Wilson Avenue
Downsview ON M3M 1J8

Attn: Mr. Ted Lagakos

Re: Mayfield Road, from East of Airport Road to West of Coleraine Drive
Class Environmental Assessment Study

The Regional Municipality of Peel has initiated a Schedule 'C' Class Environmental Assessment Study to determine improvement alternatives for Mayfield Road, between Airport Road and Coleraine Drive. A copy of the project "Notice of Study Commencement" is enclosed for your reference.

At this time, we are contacting various government agencies, community groups, utility commissions and other regulatory authorities to advise of the project start-up and to request any initial comments, including any requests for future contact and discussion of project specifics.

Please note that there will be two Public Information Centre (PIC) meetings during the study, which will assist the Project Team in determining a preferred design concept. You will be notified of these meetings, unless you direct that your agency has no further interest in this project.

In view of the time frame associated with this study, we request that any initial comments be directed to the following, no later than **October 31, 2007**.

Stantec Consulting Ltd.
49 Frederick Street
Kitchener, Ontario, N2H 6M7
Attention: Garry E. Leveck, P.Eng., Project Manager

We recognize that this EA Study may not be of any consequence to the policies and/or mandate of your agency. Should this be the case, we would still appreciate your response, either by personal correspondence or by returning a copy of this letter, dated and signed in the area provided below.

Environment, Transportation and Planning Services

11 Indell Lane, Brampton, ON L6T 3Y3
Tel: 905-791-7800 www.peelregion.ca

We thank you for your attention to this matter, and we look forward to your assistance in the identification of pertinent issues for this roadway corridor. If this letter should have been directed to another person or department in your organization, we would appreciate your help in forwarding it internally, on our behalf.

Sincerely,



Sandy Lovisotto, P.Eng.
Project Manager, Roads Planning
Environment, Transportation and Planning Services

encl.

c. Mr. Garry Leveck, Stantec Consulting Ltd.

.....
This project does not appear to have any direct consequence to the policies and/or mandate of this agency. Therefore, we will not be providing any input and we will not require further notices or correspondence.

Date: OCT 15/07 Name: TED LAGAKOS.
Title: PROJECT MANAGER
Agency: MINISTRY OF TRANSPORTATION
Address: 120 WILSON AVE
DOWNSVIEW, ONT
M3M 1J8.

Environment, Transportation and Planning Services

11 Indell Lane, Brampton, ON L6T 3Y3
Tel: 905-791-7800 www.peelregion.ca



October 9, 2007
Project: 07-4350

~~Mr. Naren Doshi~~
Director of Airport Planning
Greater Toronto Airport Authority
Lester B. Pearson International Airport
3111 Convair Drive, P.O. Box 6031
Toronto AMF ON L5P 1B2

Ian Woods OH6A SM 10

Attn: Mr. Naren Doshi

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Sincerely,



Sandy Lovisotto, P.Eng.
Project Manager, Roads Planning
Environment, Transportation and Planning Services

encl.

c. Mr. Garry Leveck, Stantec Consulting Ltd.

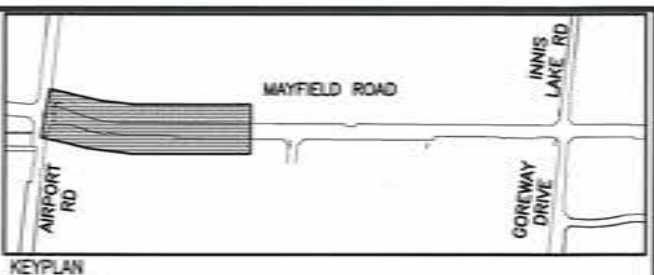
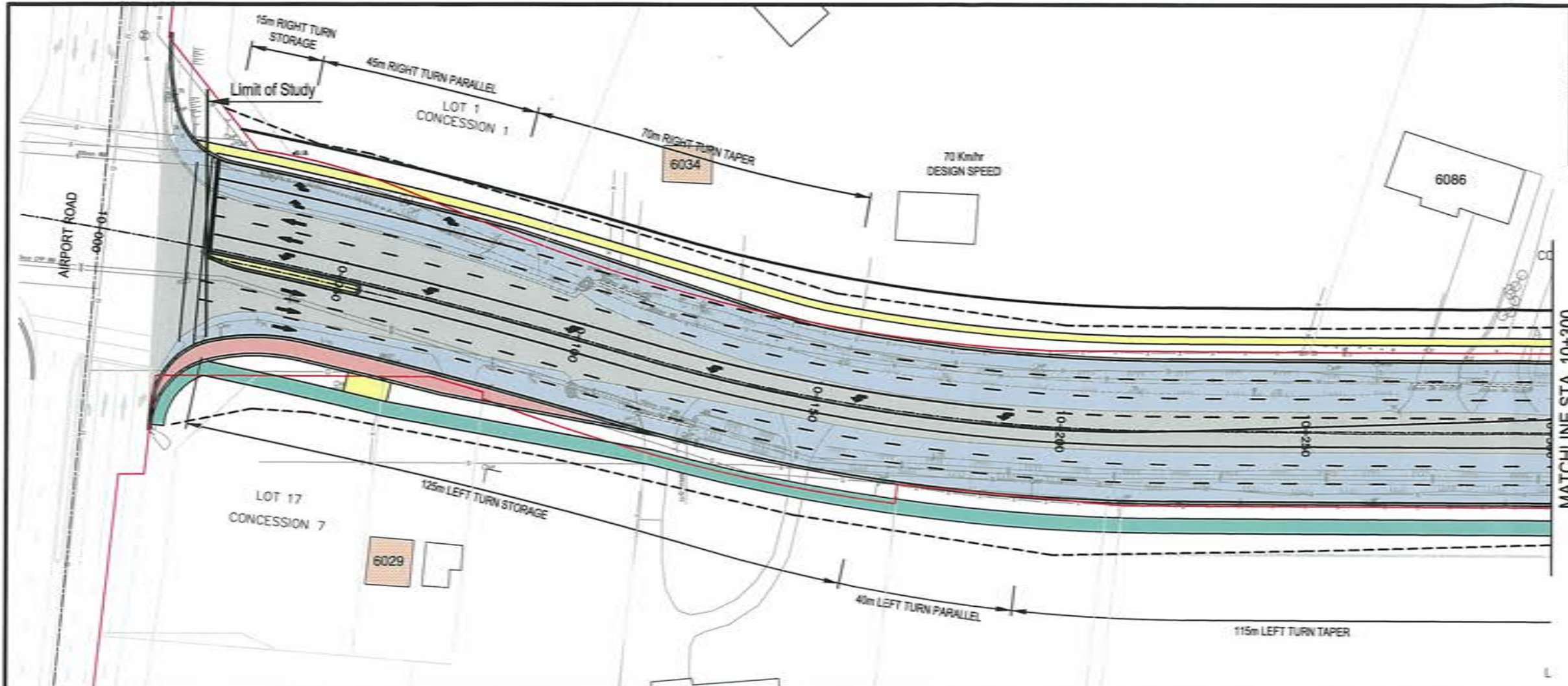
This project does not appear to have any direct consequence to the policies and/or mandate of this agency. Therefore, we will not be providing any input and we will not require further notices or correspondence.

Date: November 1, 2007 Name: OLGA SMID
Title: Manager, Land Use Planning
Agency: GTAA
Address: Toronto Pearson International Airport
P.O. Box 6031
3111 CONJACK DR.
TORONTO ONT, ON
L5P 1B2

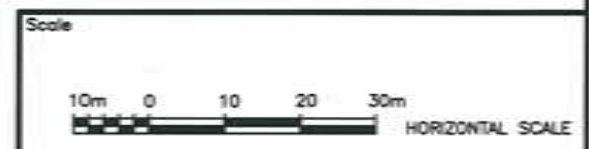
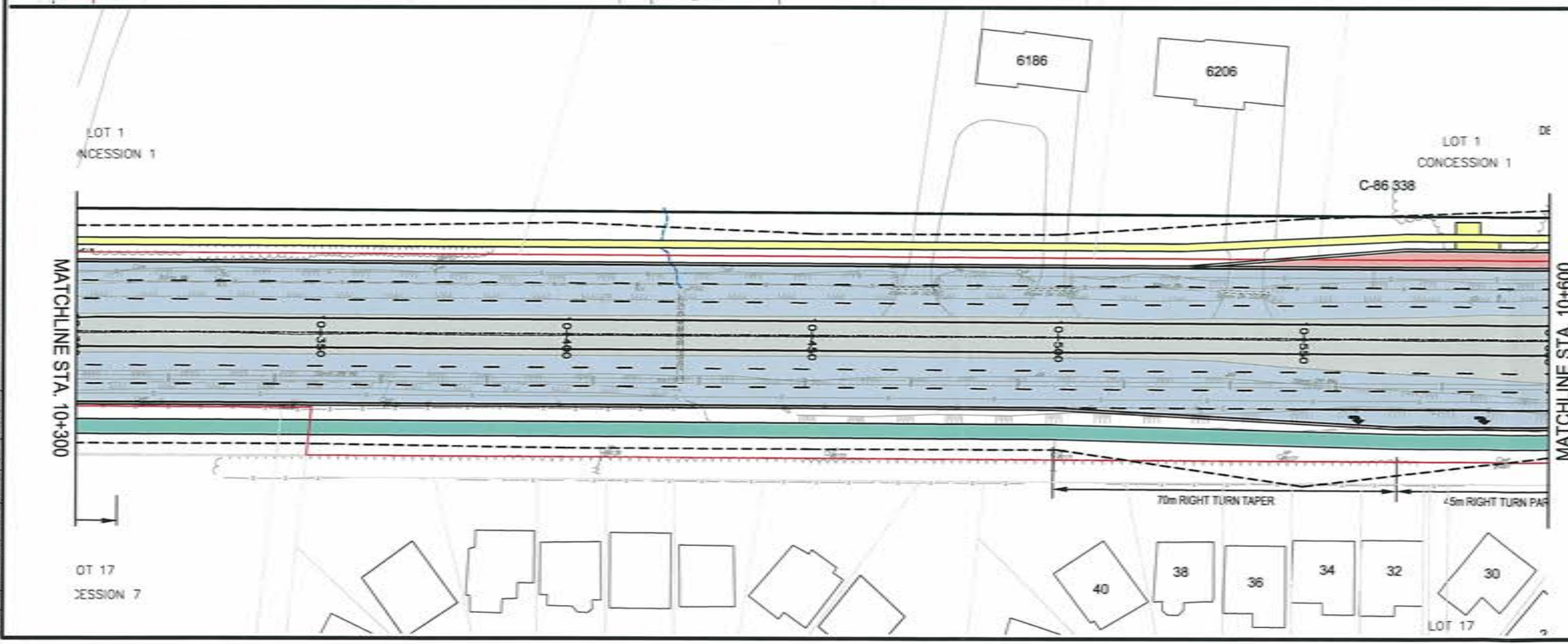
Environment, Transportation and Planning Services

11 Indell Lane, Brampton, ON L6T 3Y3
Tel: 905-791-7800 www.peelregion.ca

APPENDIX X
DESIGN ALTERNATIVES



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



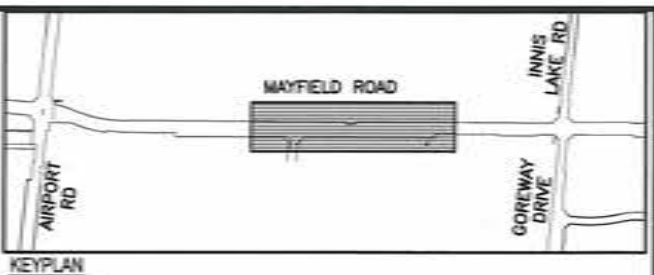
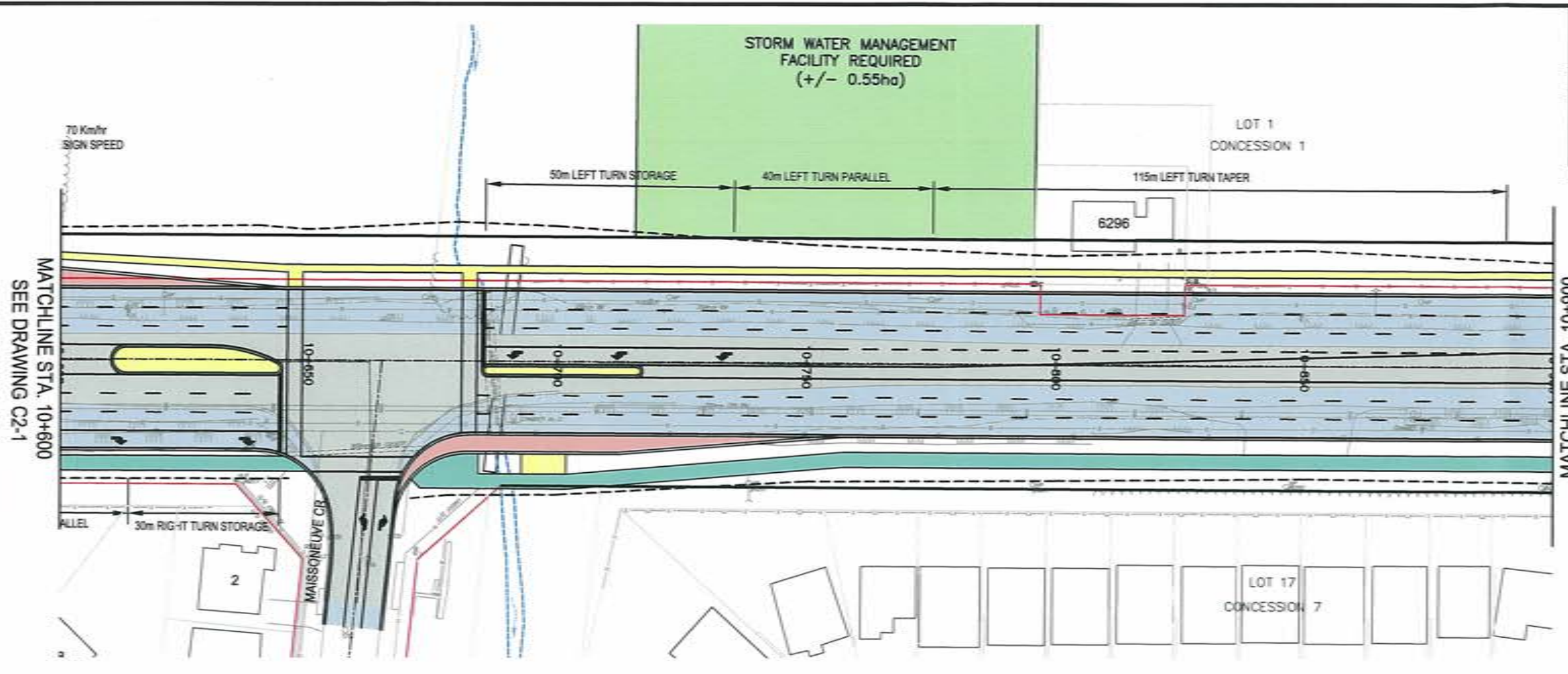
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Region of Peel
Working for you

Drawing Title
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 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
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 STA. 10+000 TO STA. 10+600

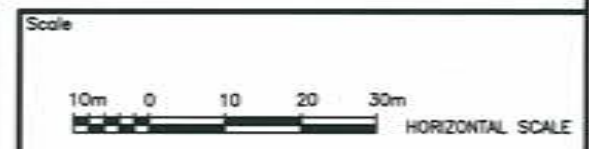
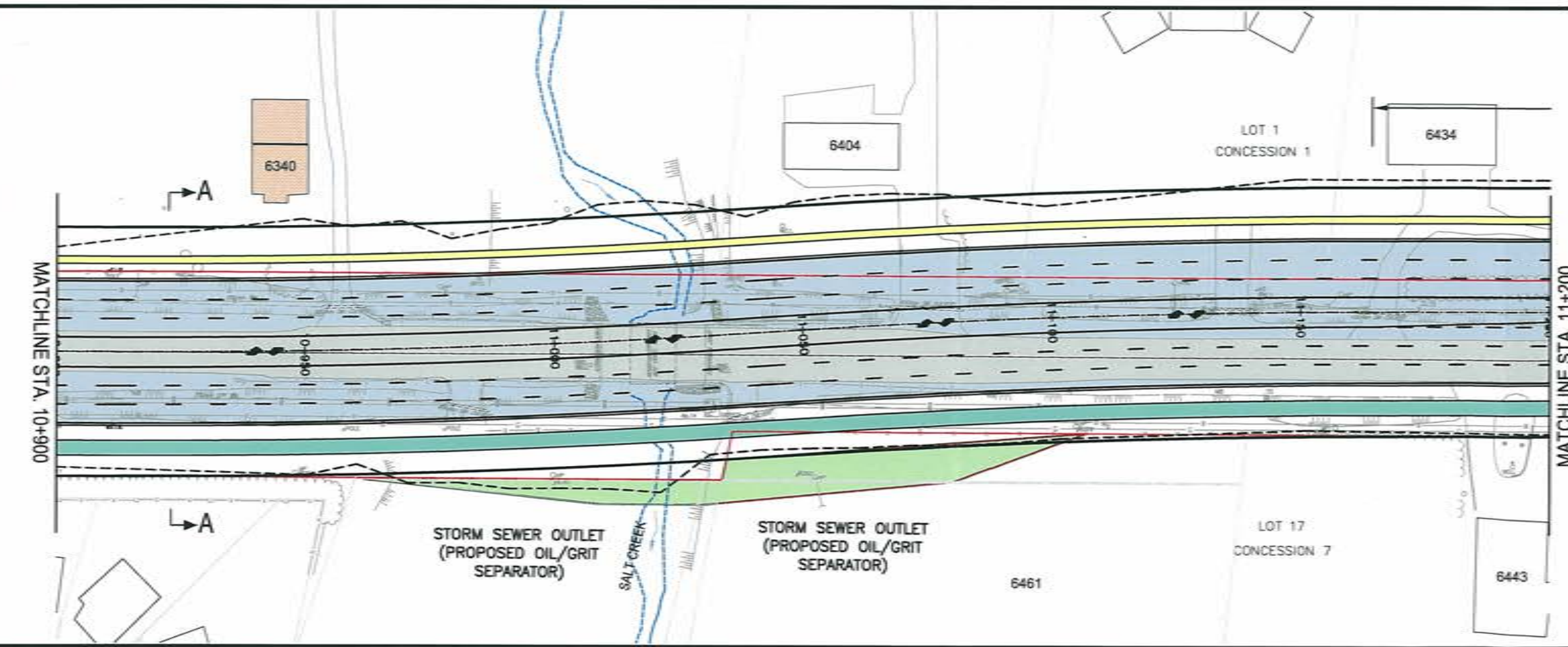
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Date 2012-10-17	Project No. 160210480	

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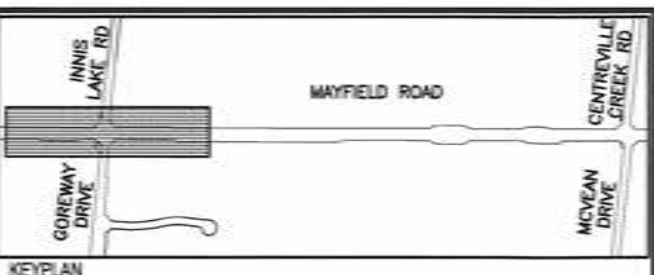
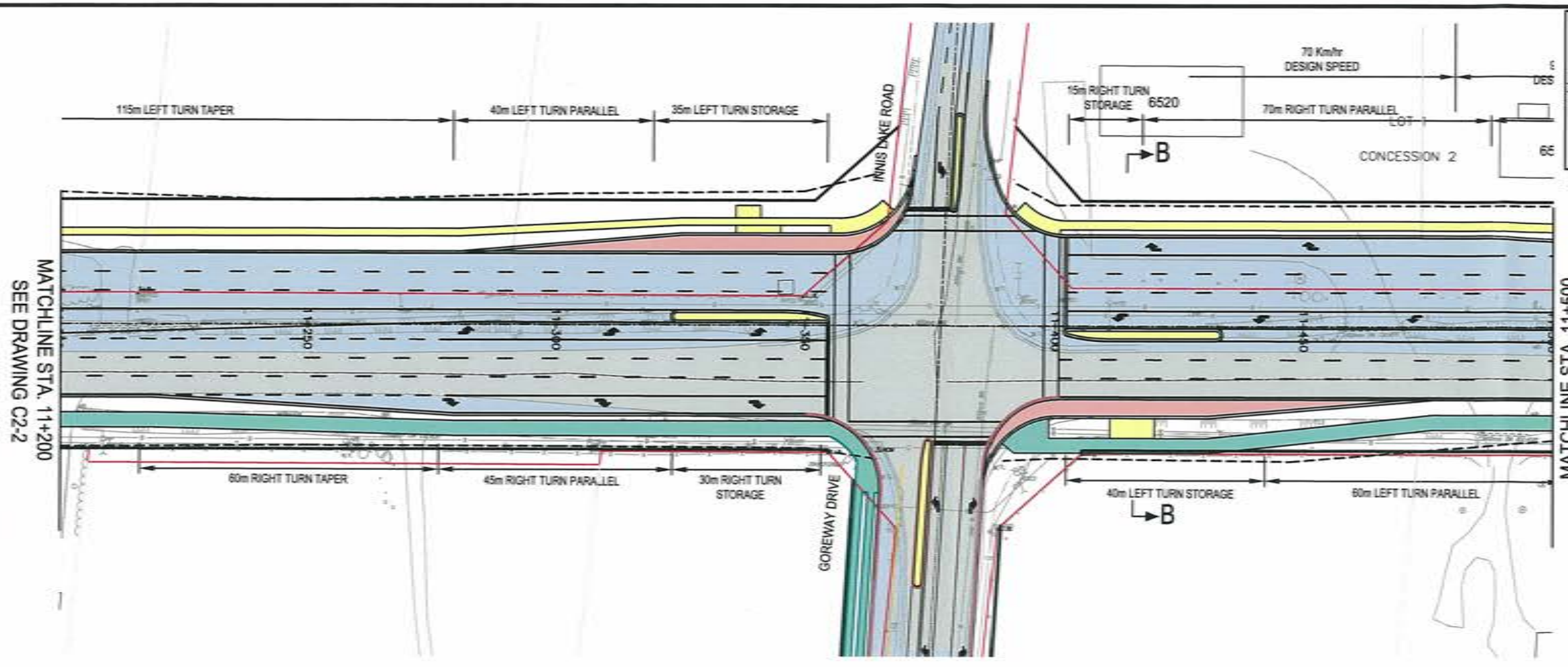
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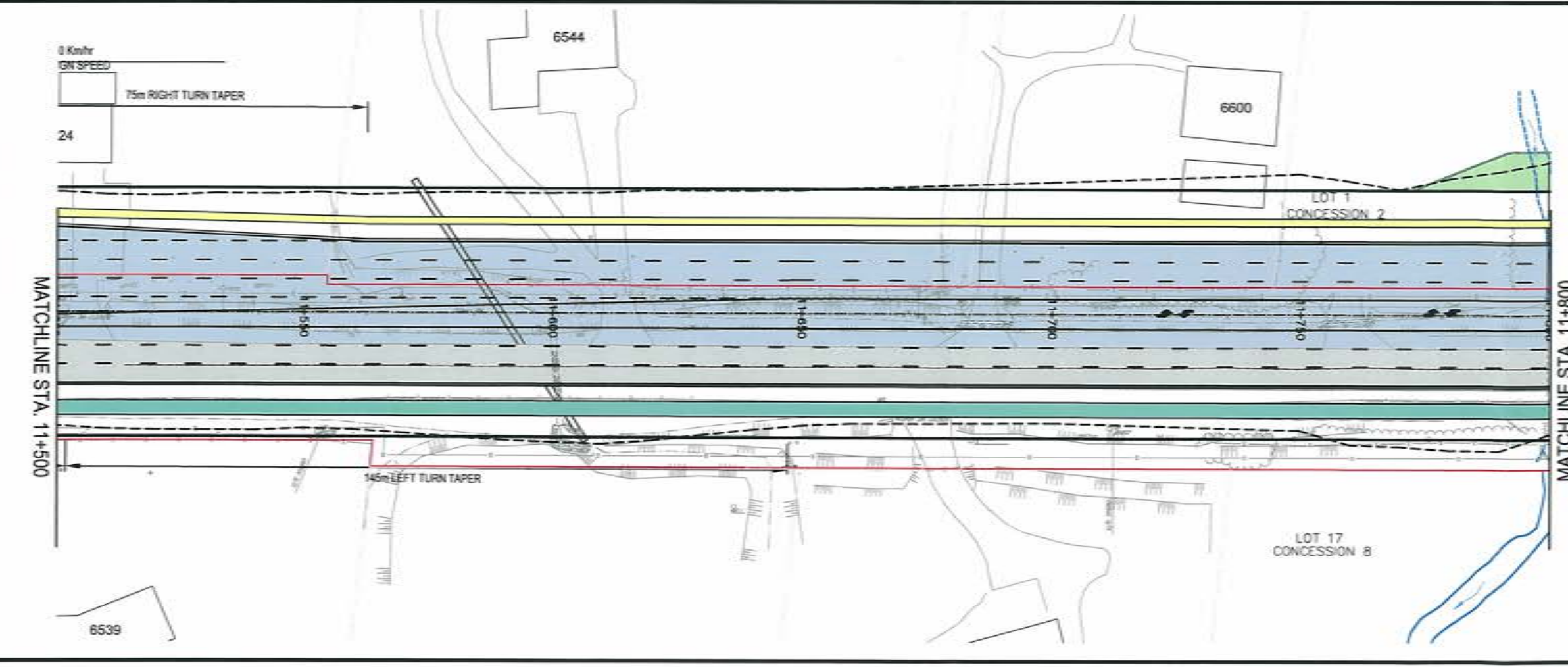
Client
Region of Peel
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Drawing Title
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 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 2
 STA. 10+600 TO STA. 11+200

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Date 2012-10-17	Project No. 160210480	



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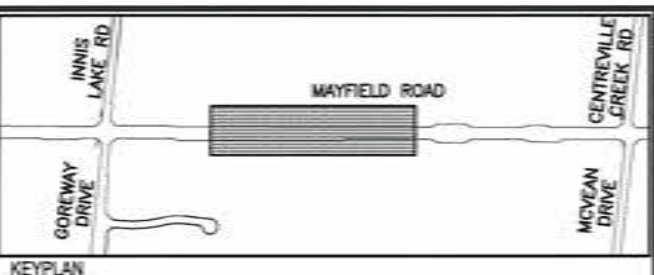
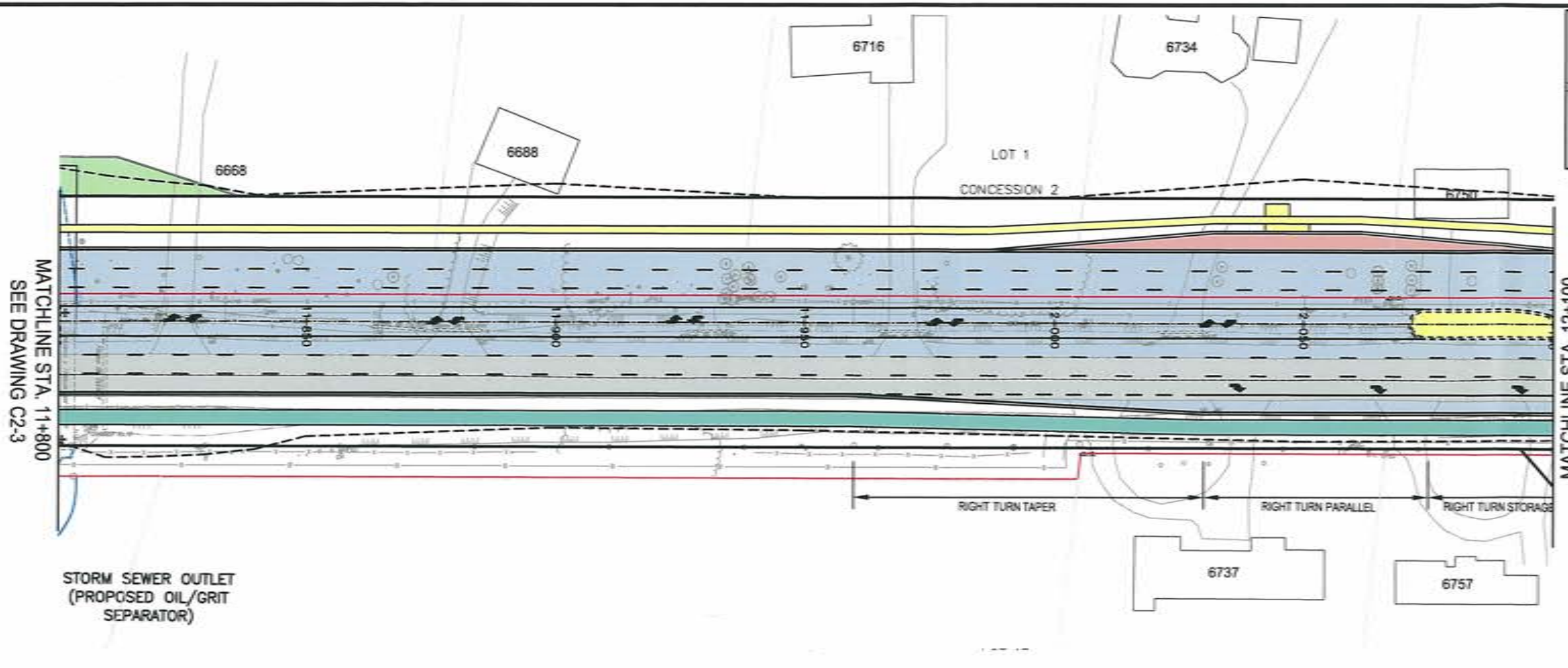


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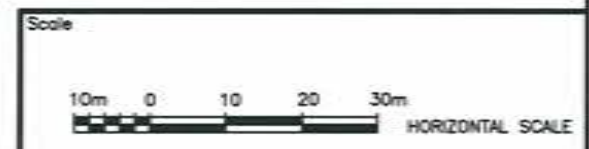
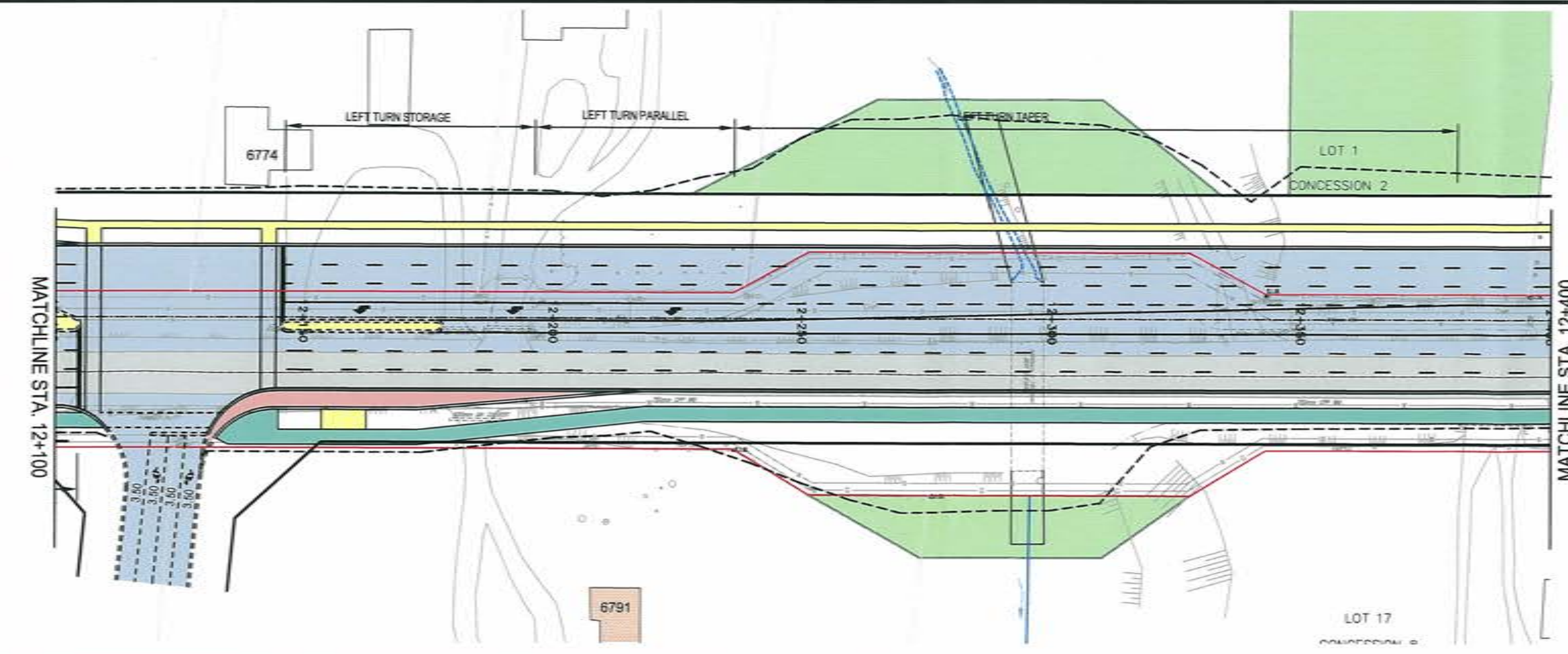
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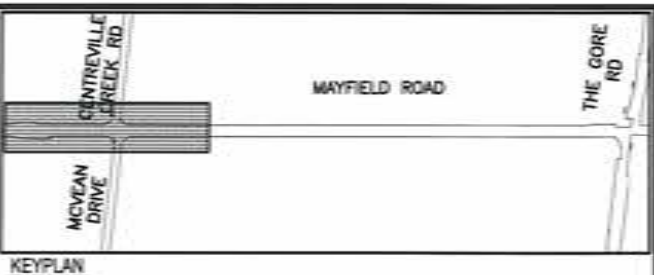
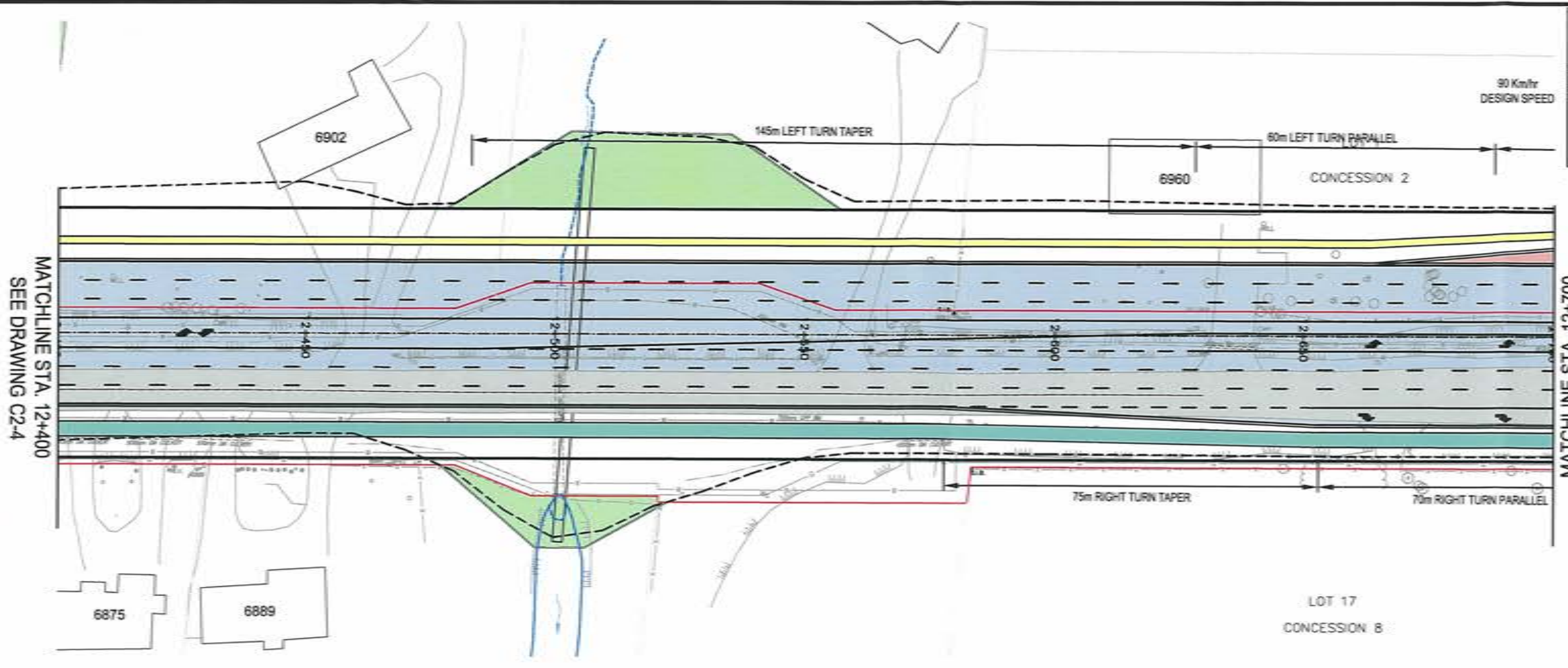


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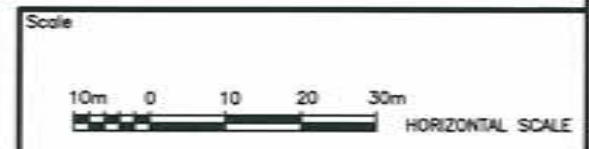
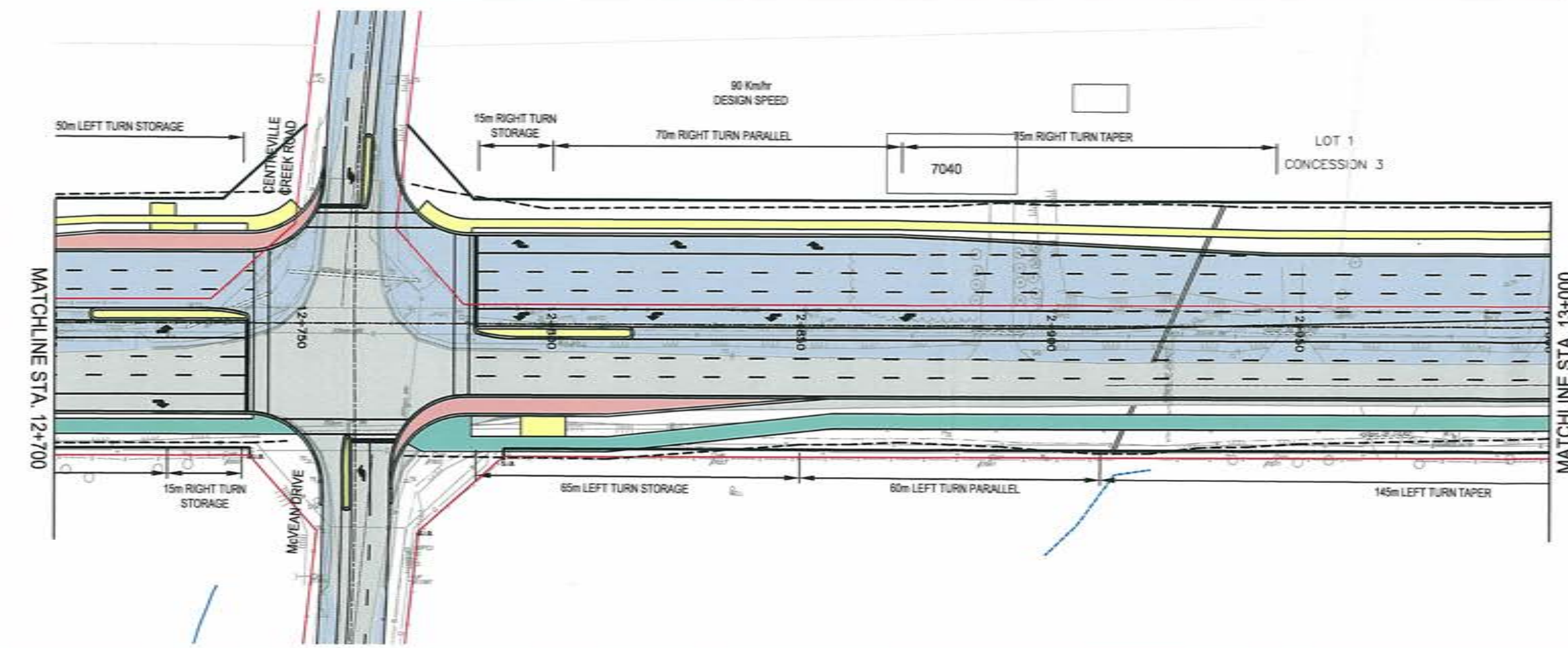
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 ALTERNATIVE CONCEPTS
 CONCEPT 2
 STA. 11+800 TO STA. 12+400

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Date 2012-10-17	Project No. 160210480	

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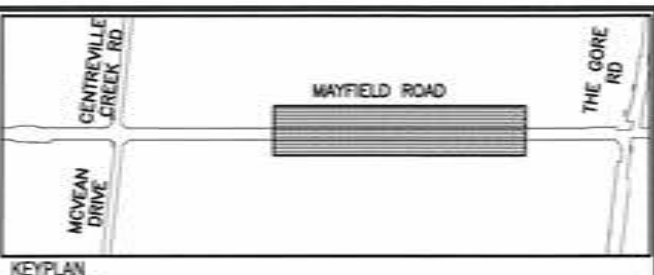
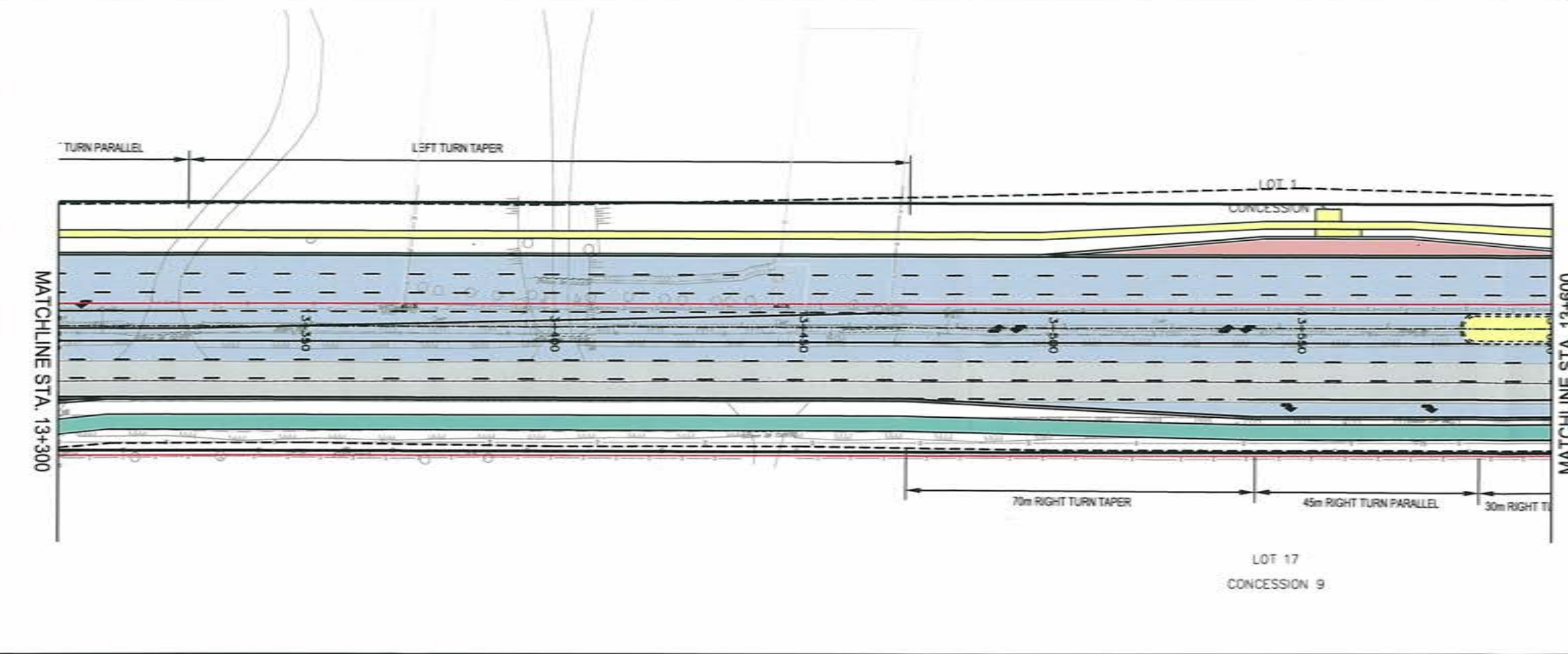
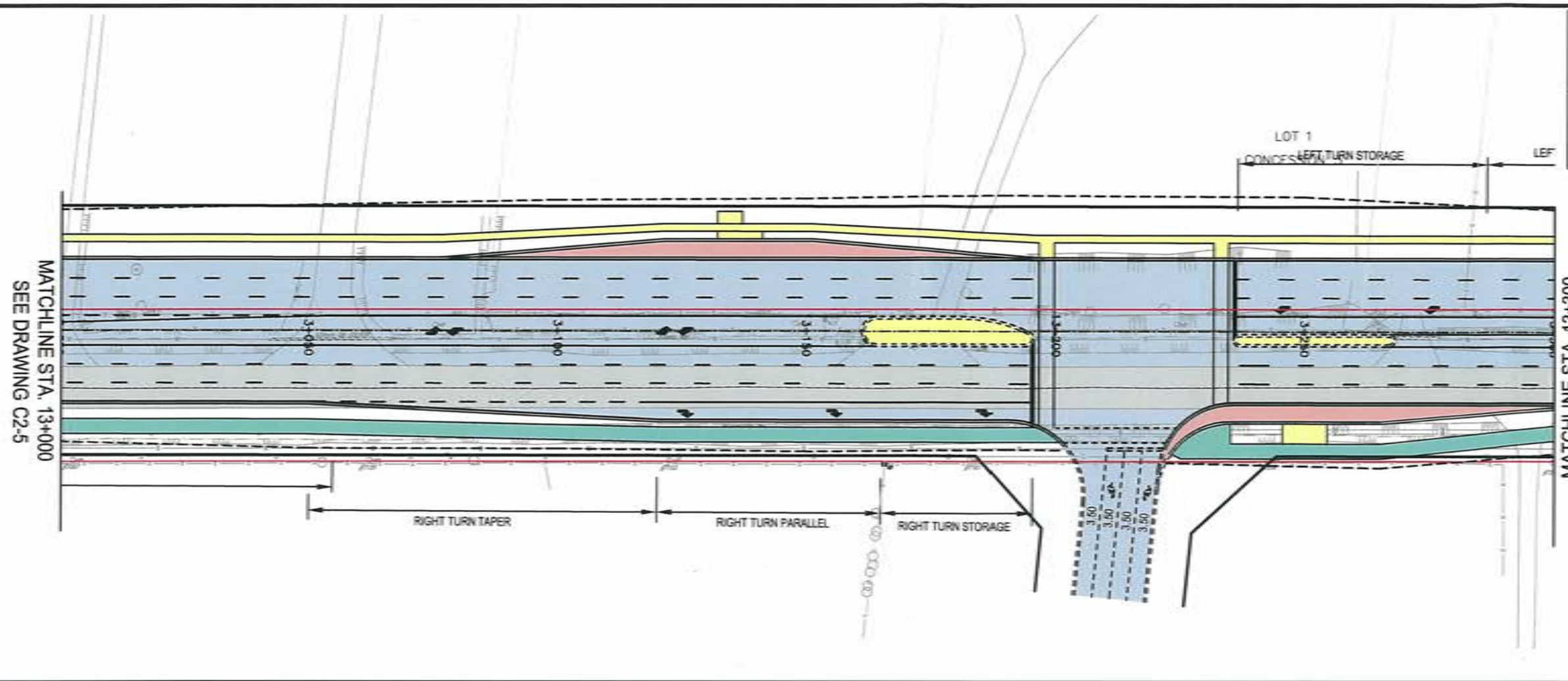
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Date 2012-10-17	Project No. 160210480	

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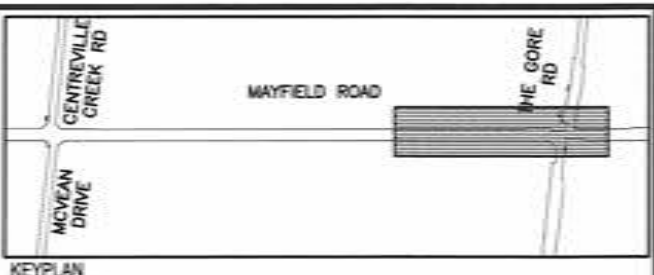
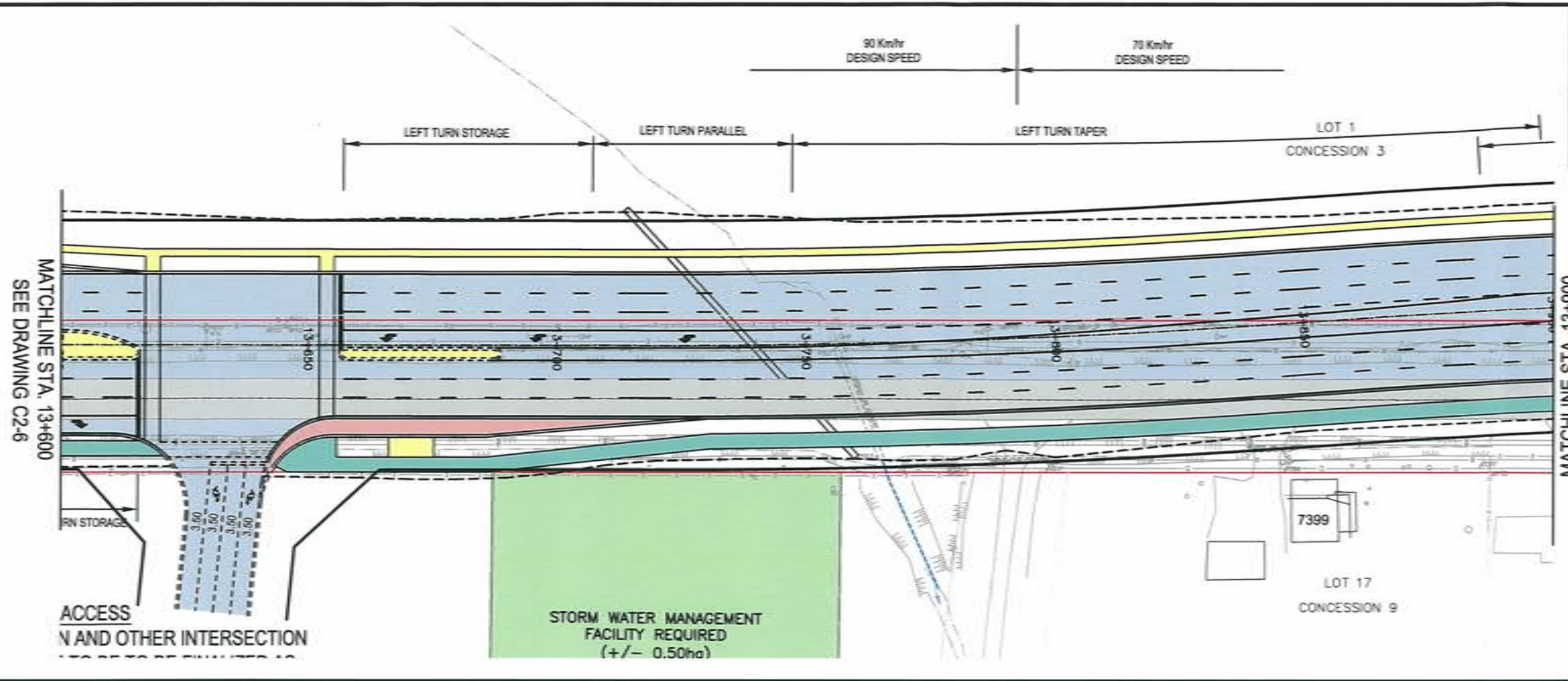
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- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



Client
Region of Peel
Working for you

Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 2
 STA. 13+000 TO STA. 13+600

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C2-6
Date 2012-10-17	Project No. 160210480	



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



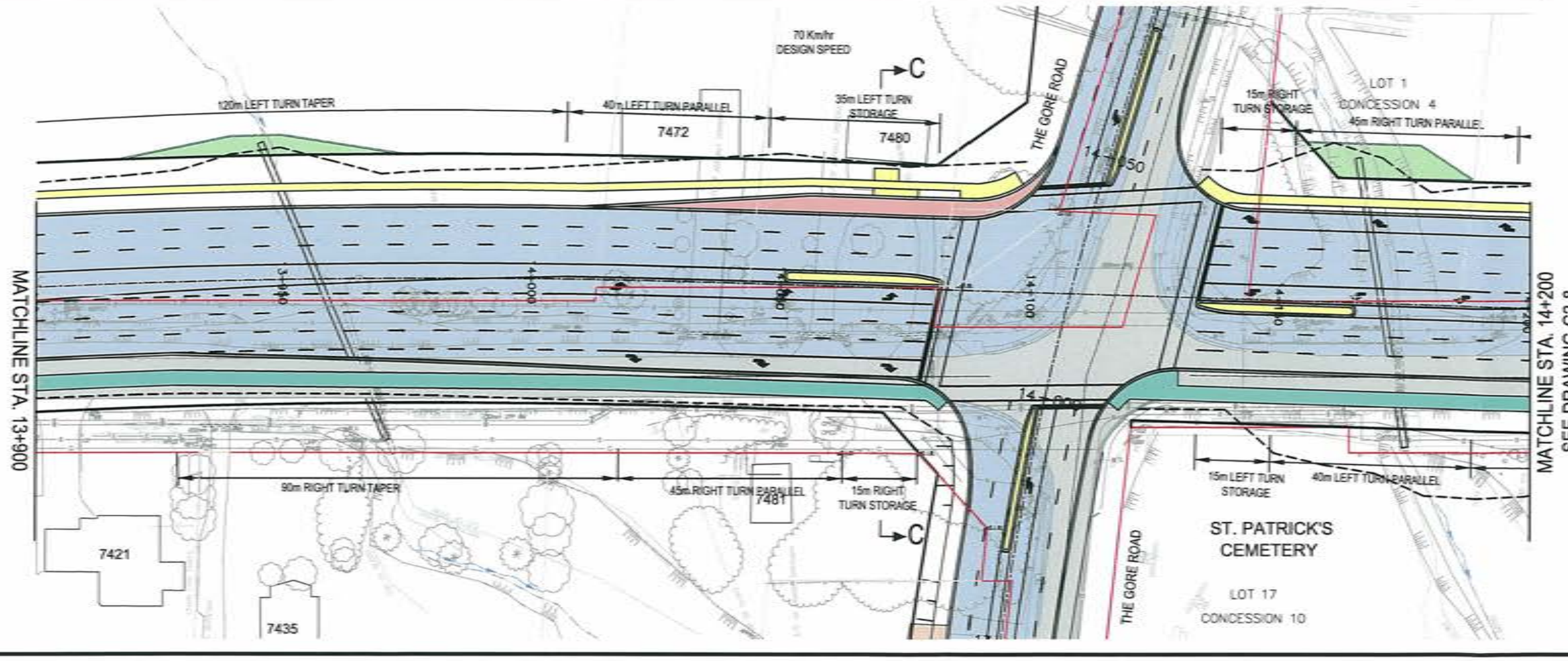
Client

Region of Peel
Working for you

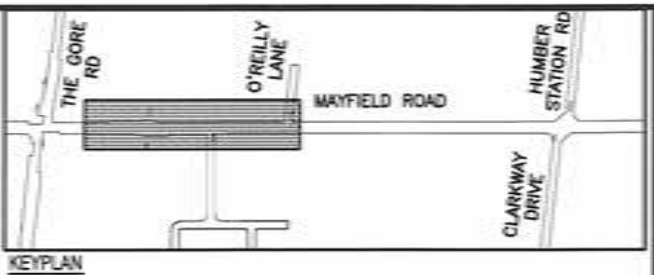
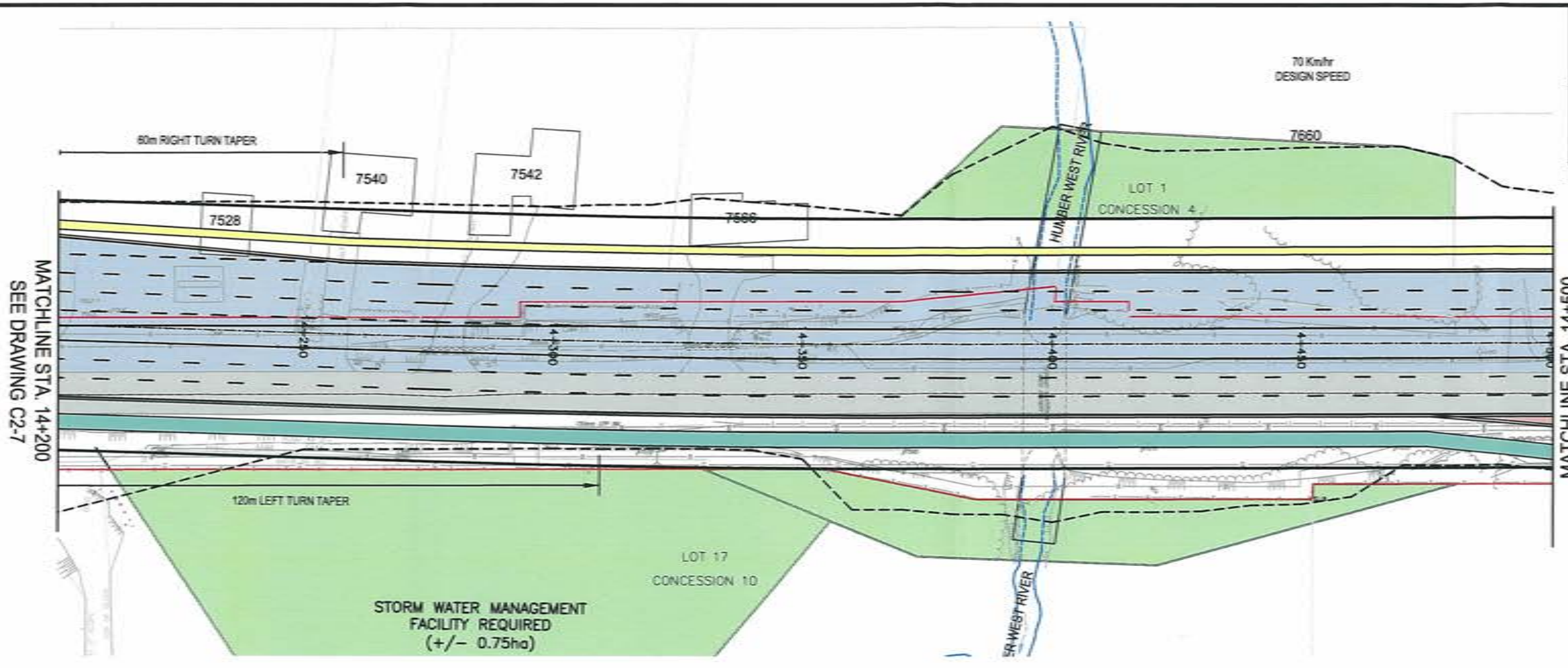
Drawing Title

MAYFIELD ROAD
AIRPORT ROAD TO COLERAINE DRIVE
CLASS EA STUDY REPORT
ALTERNATIVE CONCEPTS
CONCEPT 2
STA. 13+600 TO STA. 14+200

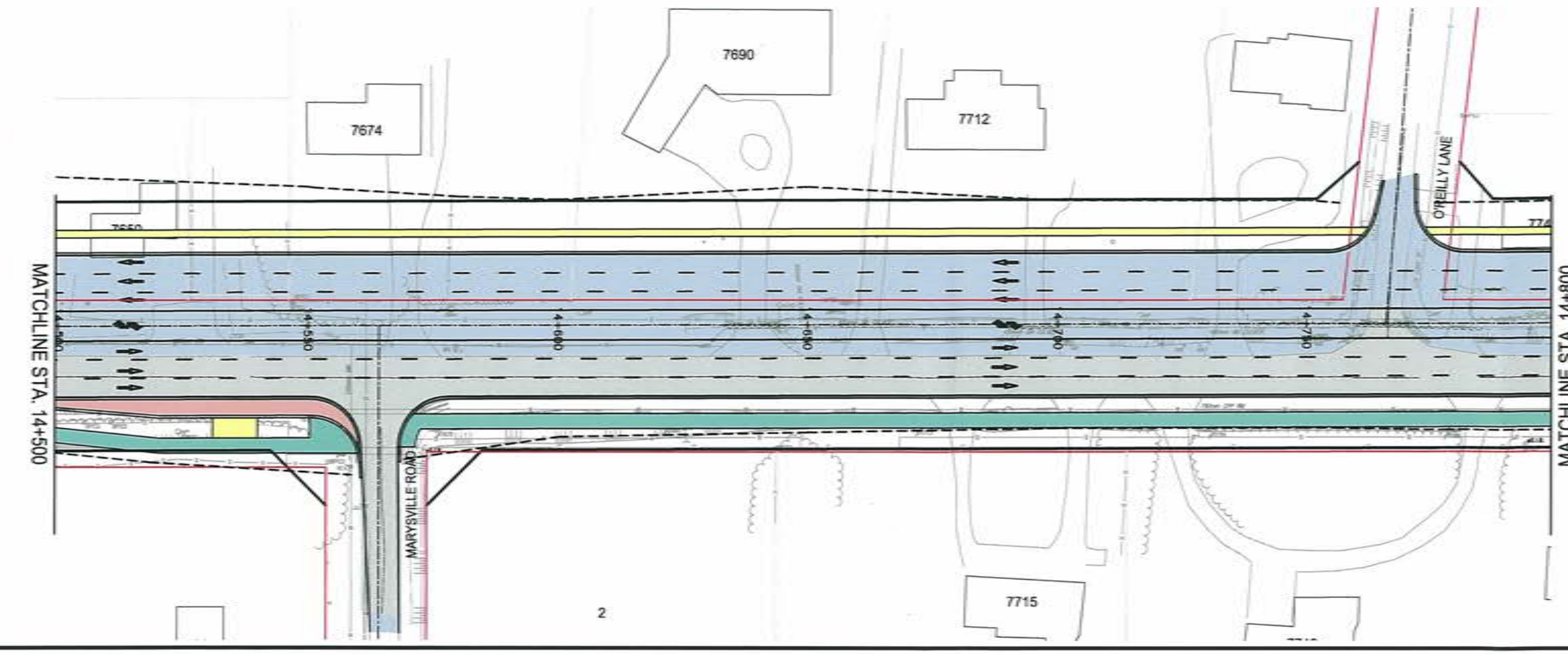
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Date 2012-10-17	Project No. 160210480	



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2012/10/17 10:22 AM by: white_bill (ditchener)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

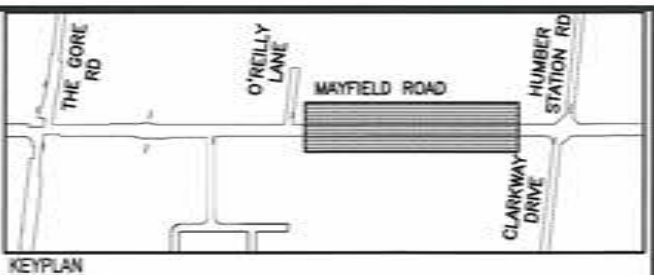
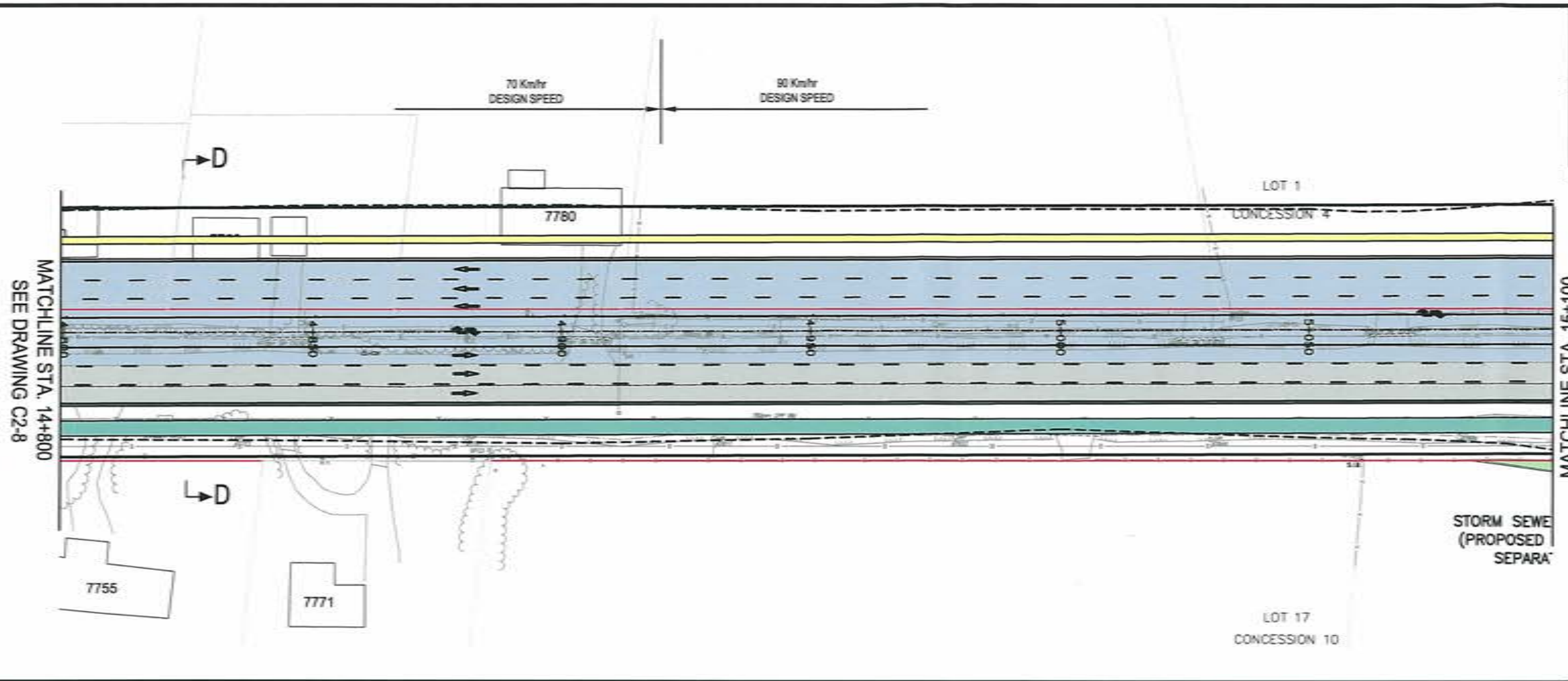


Client
Region of Peel
Working for you

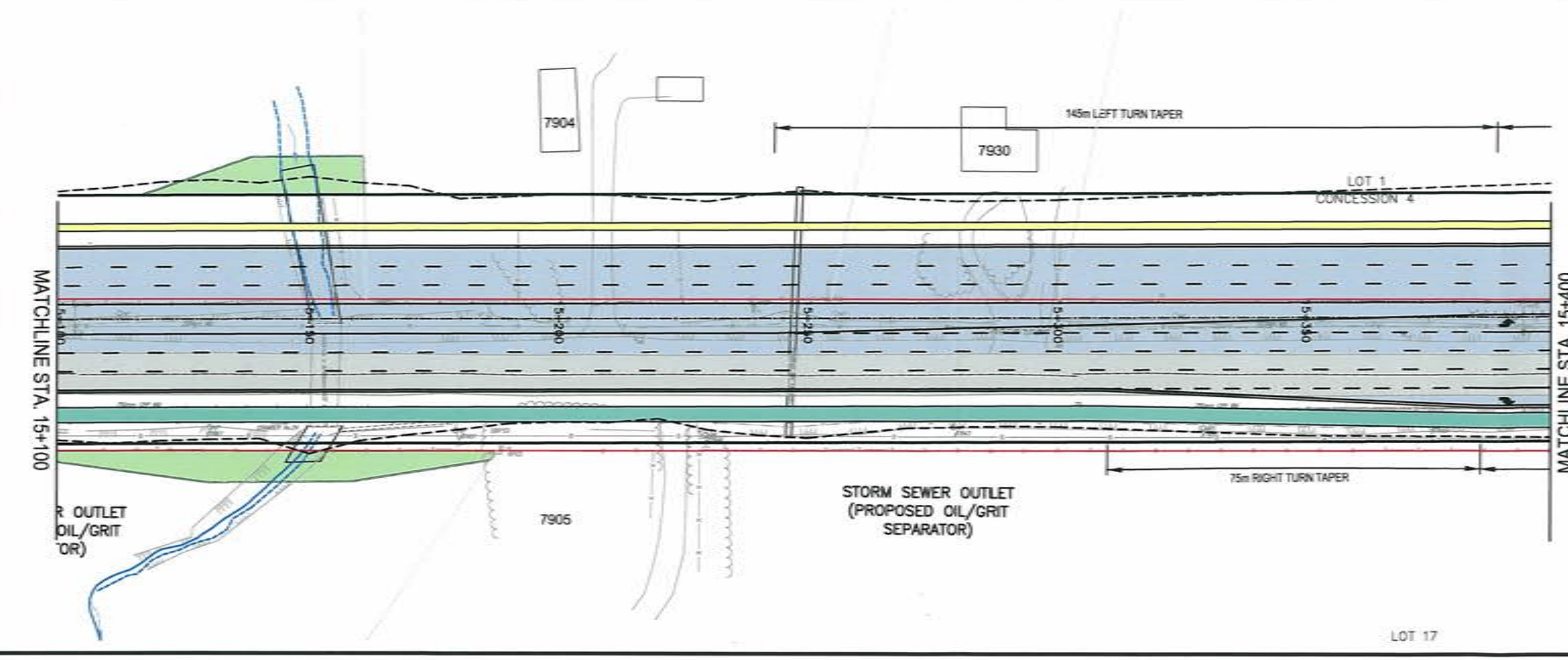
Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 2
 STA. 14+200 TO STA. 14+800

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C2-8
Date 2012-10-17	Project No. 160210480	

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 2012/10/17 10:23 AM bwhite_bill (ditchener)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

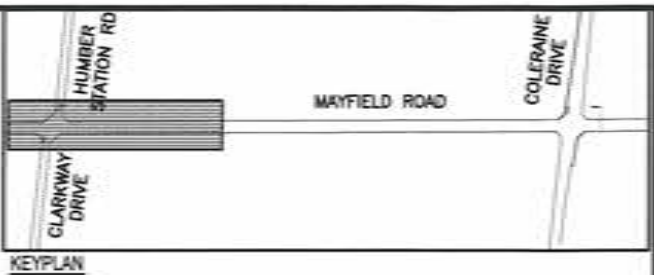
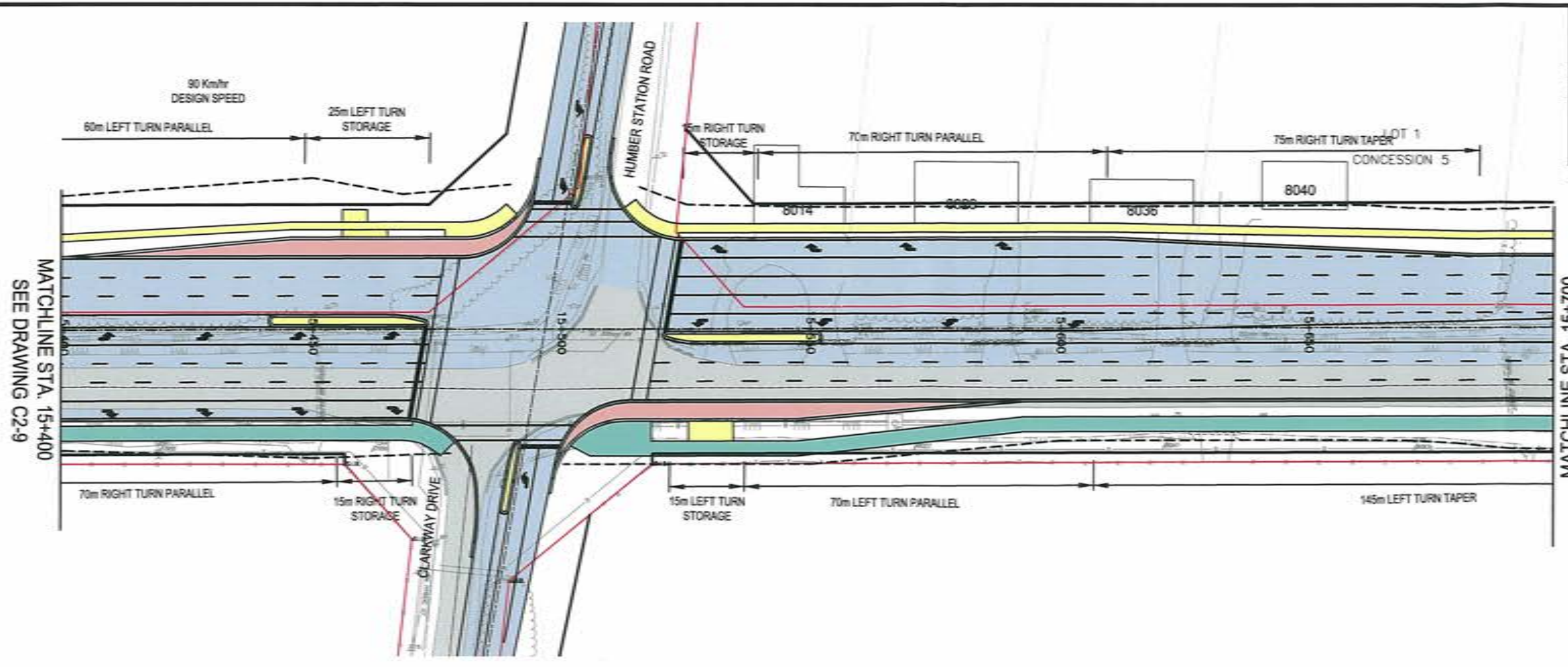


Client
Region of Peel
Working for you

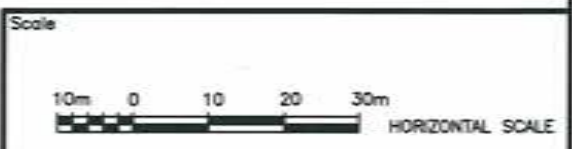
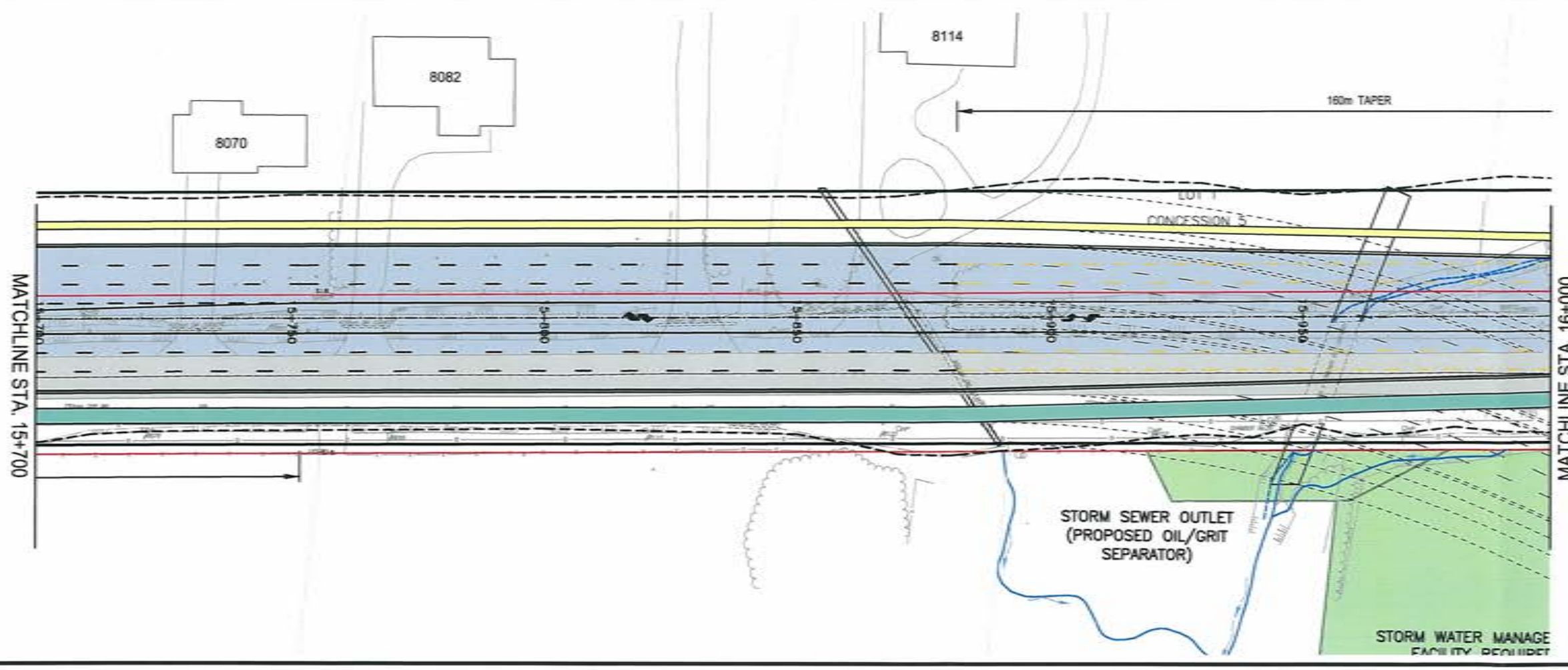
Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 2
 STA. 14+800 TO STA. 15+400

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C2-9
Date 2012-10-17	Project No. 160210480	

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 2012/10/17 10:24 AM by: white_bill (bitcramer)



- LEGEND**
- EXISTING RIGHT OF WAY
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 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



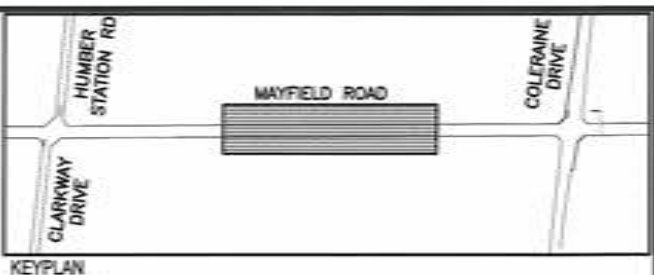
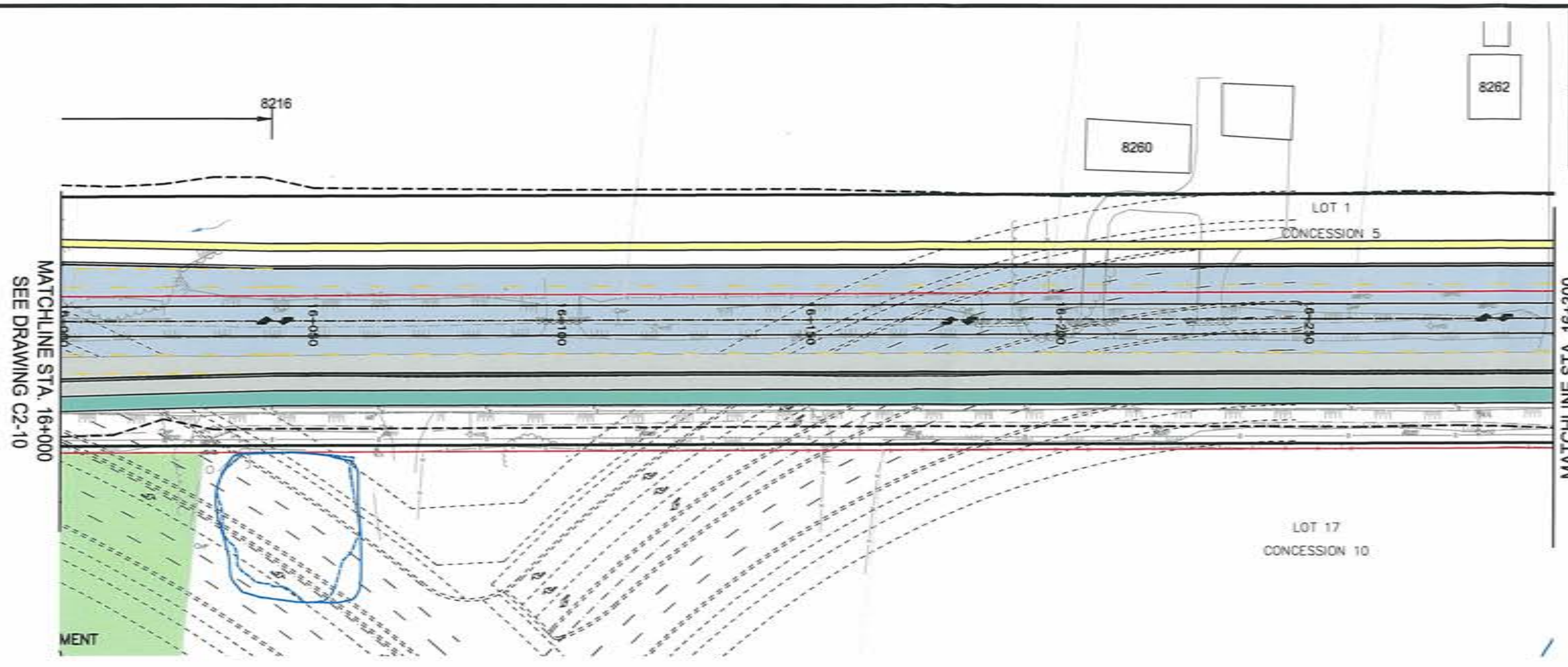
Client
Region of Peel
Working for you

Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 2
 STA. 15+400 TO STA. 16+000

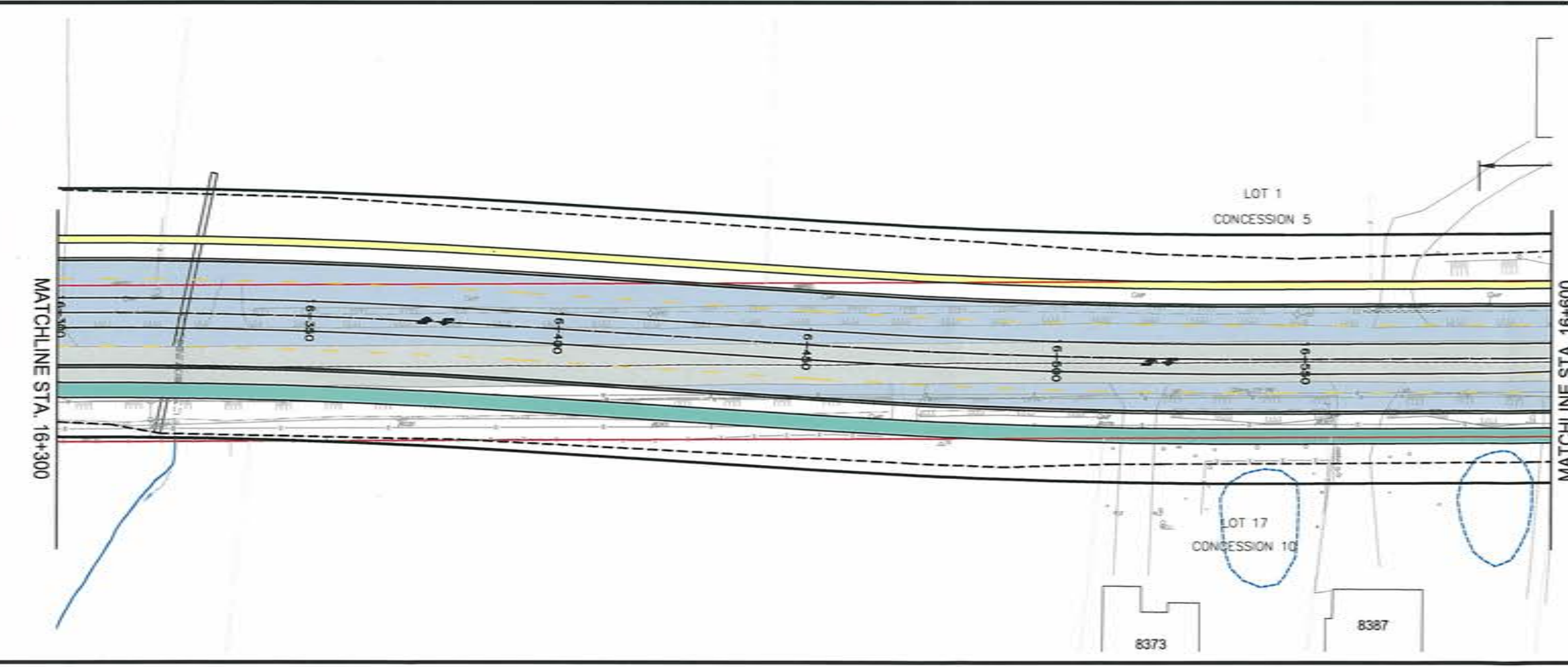
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Date 2012-10-17	Project No. 160210480	

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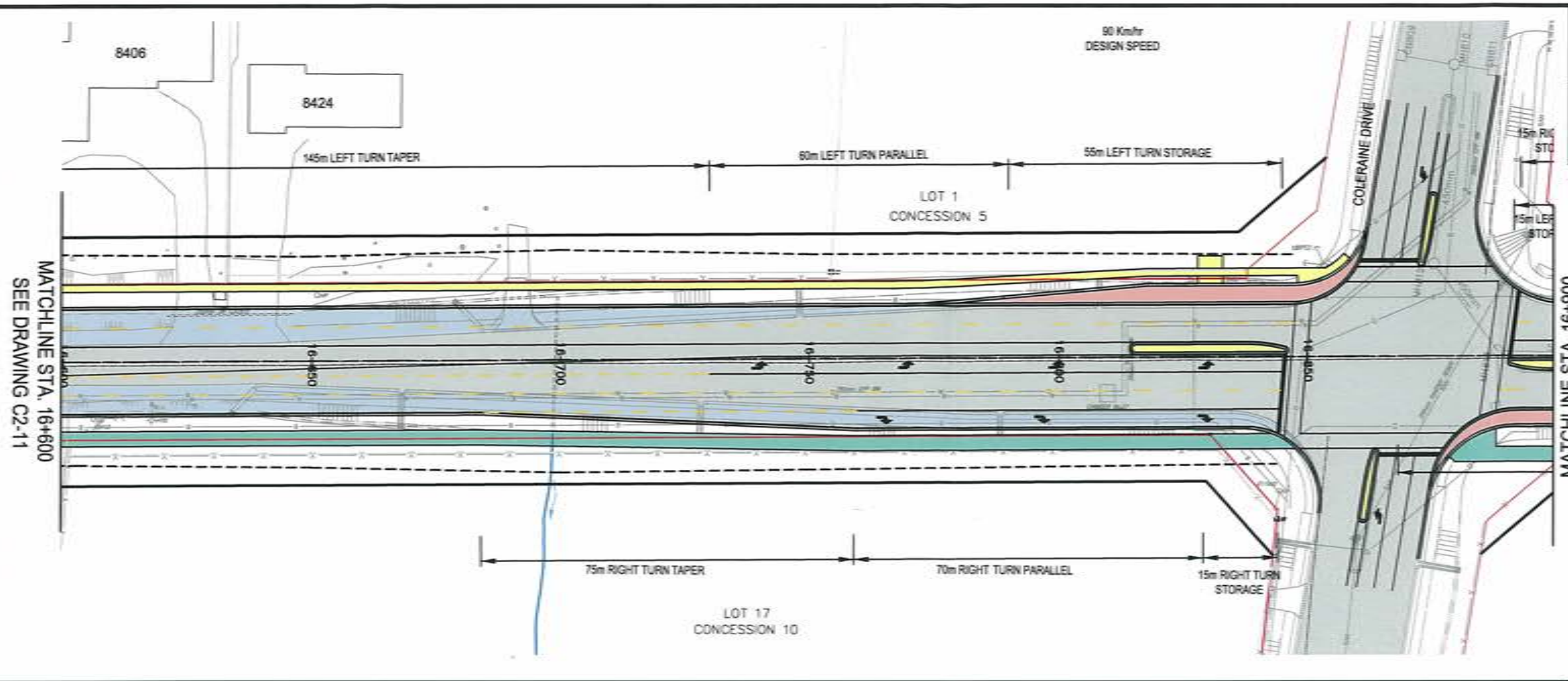
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 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



Client
Region of Peel
Working for you

Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 2
 STA. 16+000 TO STA. 16+600

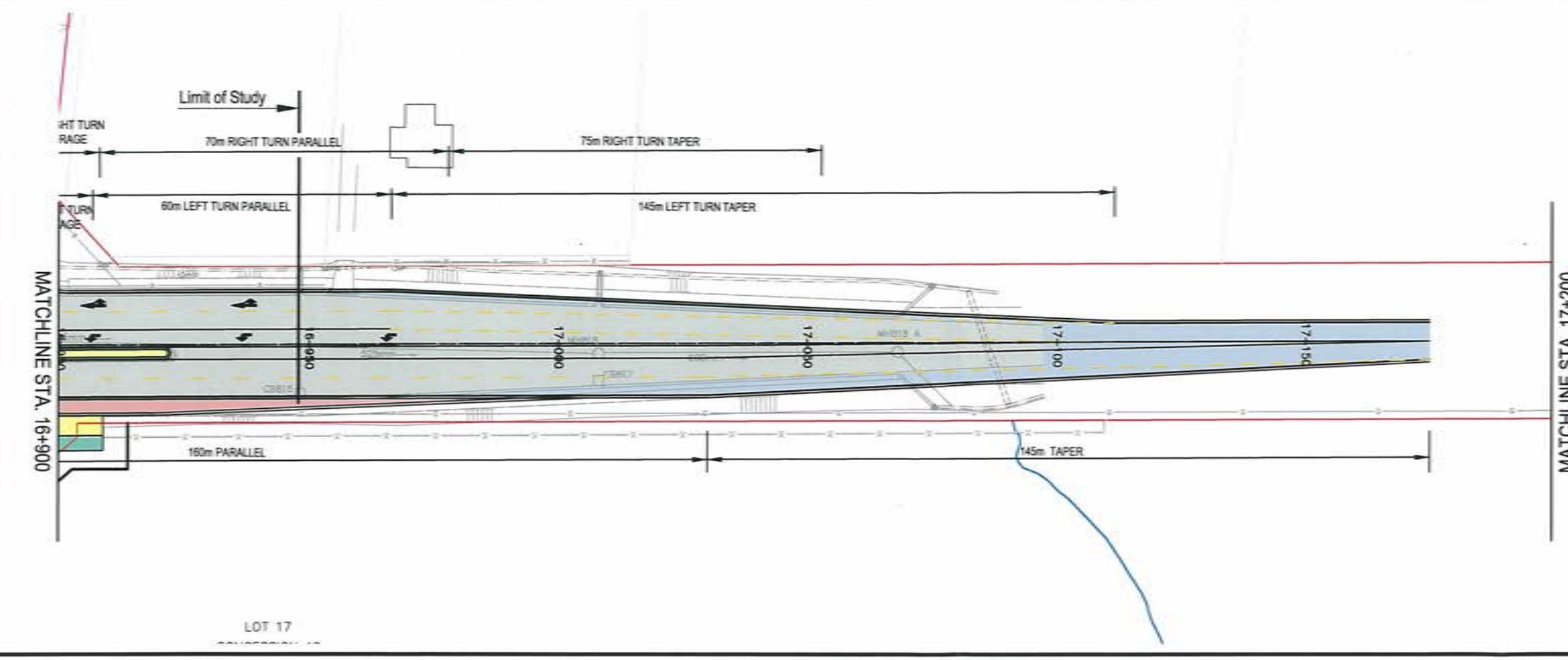
Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C2-11
Date 2012-10-17	Project No. 160210480	



KEYPLAN

LEGEND

- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- - - APPROXIMATE GRADING LIMIT
- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
- PROPOSED 3.0m MULTI-USE PATHWAY
- PROPOSED CONC. BUS BAY
- PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
- BUILT HERITAGE FEATURE



Scale

HORIZONTAL SCALE

Client

Region of Peel
Working for you

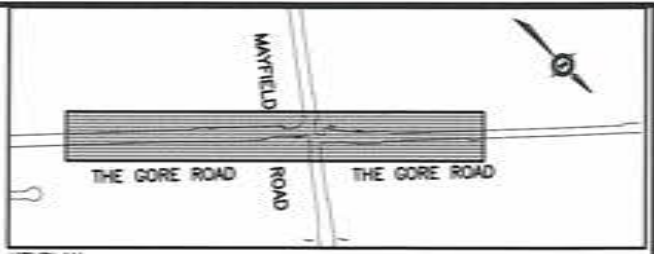
Drawing Title

MAYFIELD ROAD
AIRPORT ROAD TO COLERAINE DRIVE
CLASS EA STUDY REPORT
ALTERNATIVE CONCEPTS
CONCEPT 2
STA. 16+600 TO STA. 17+200

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C2-12
Date 2012-10-17	Project No. 160210480	

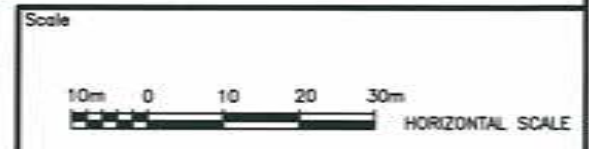
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2012/10/17 10:26 AM bywhite, bill (altchener)

FUTURE DEVELOPMENT ACCESS
INTERSECTION IMPROVEMENTS TO BE
FINALIZED AS PART OF DEVELOPMENT
ACCESS DESIGN



LEGEND

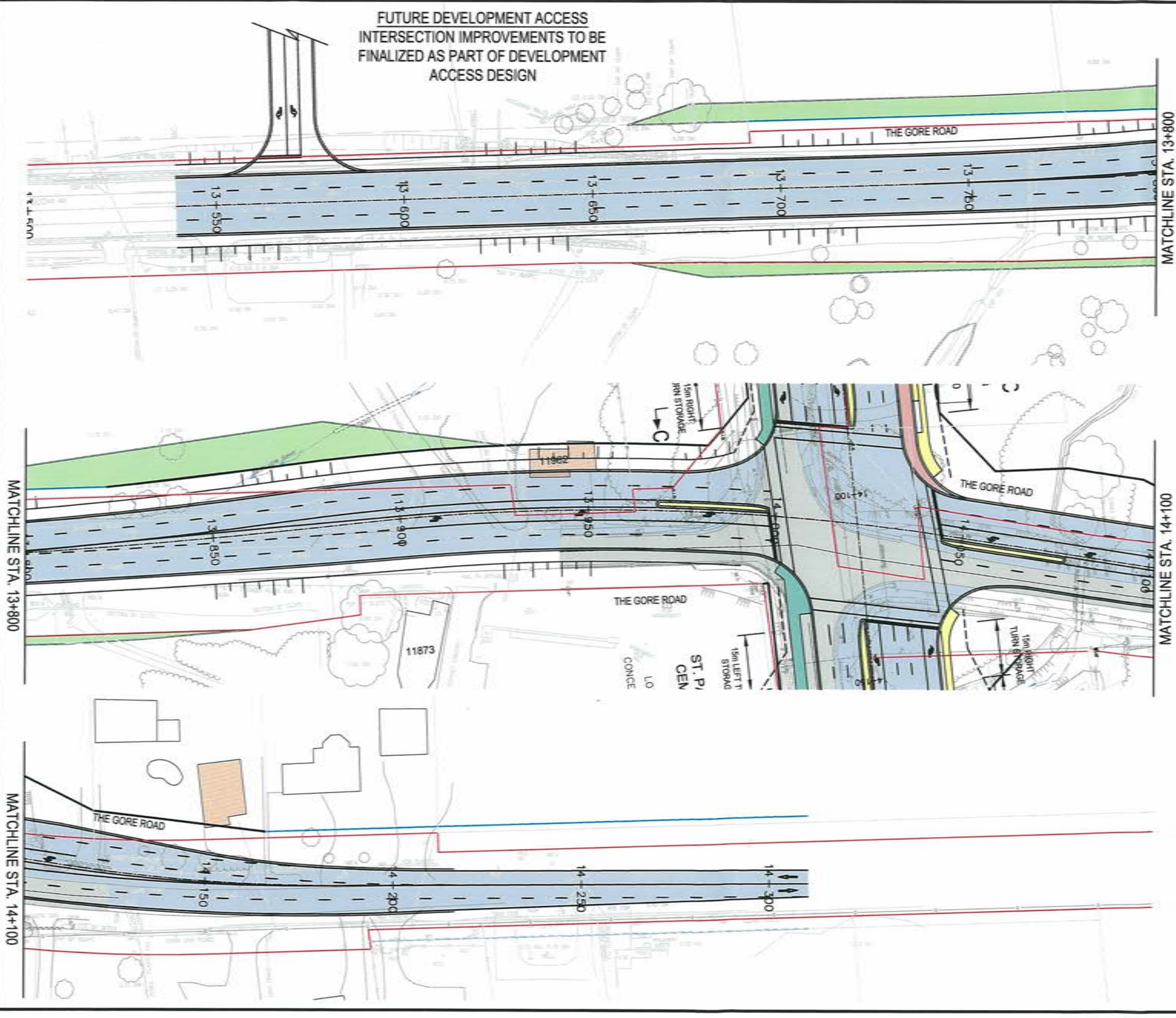
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- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
- PROPOSED 3.0m MULTUSE PATHWAY
- PROPOSED CONC. BUS BAY
- PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
- BUILT HERITAGE FEATURE



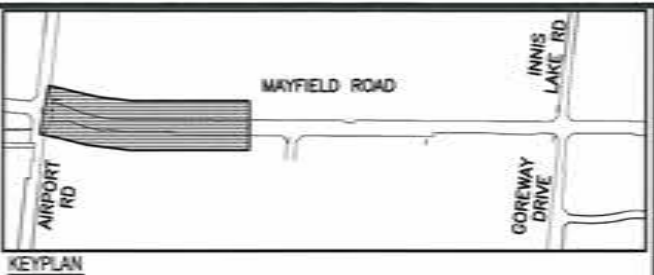
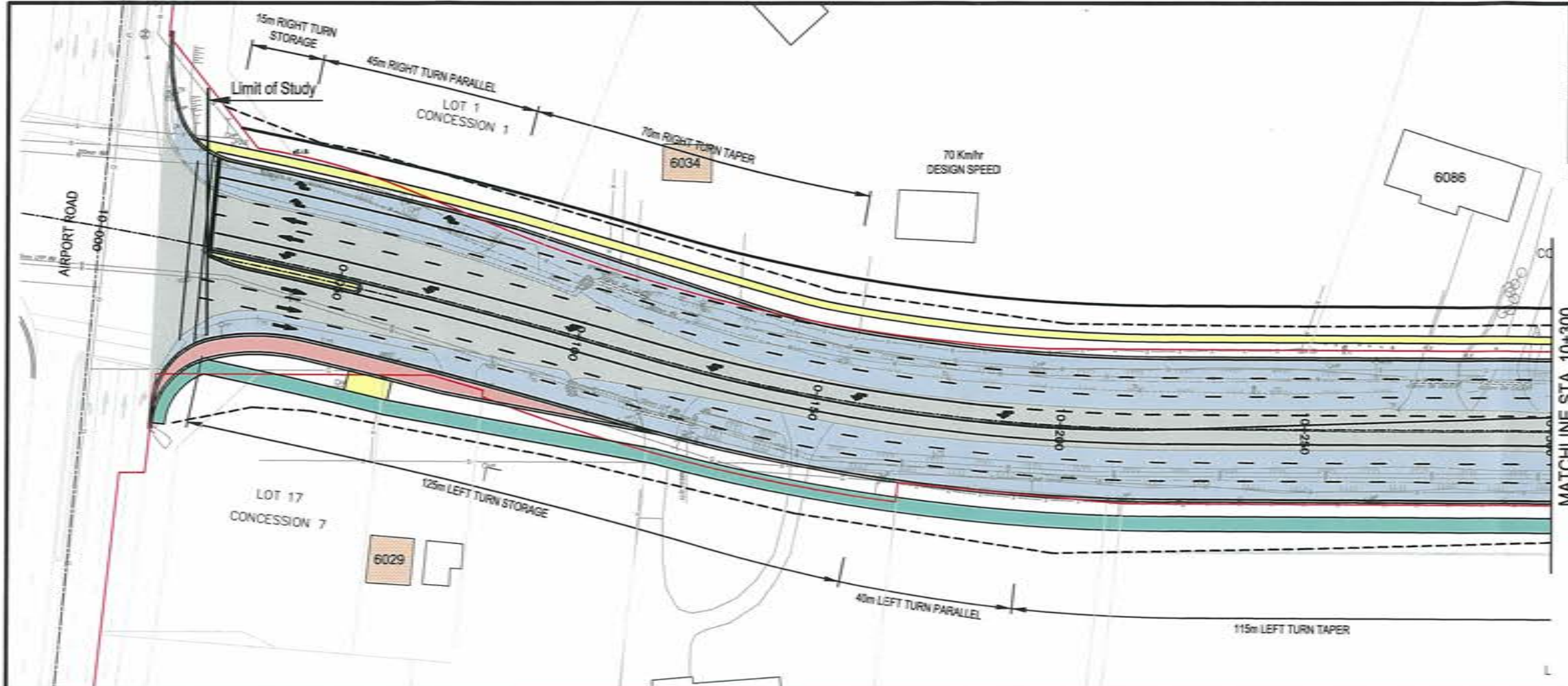
Client
Region of Peel
Working for you

Drawing Title
**MAYFIELD ROAD
AIRPORT ROAD TO COLERAINE DRIVE
CLASS EA STUDY REPORT
ALTERNATIVE CONCEPTS
CONCEPT 2
STA. 13+550 TO STA. 14+700**

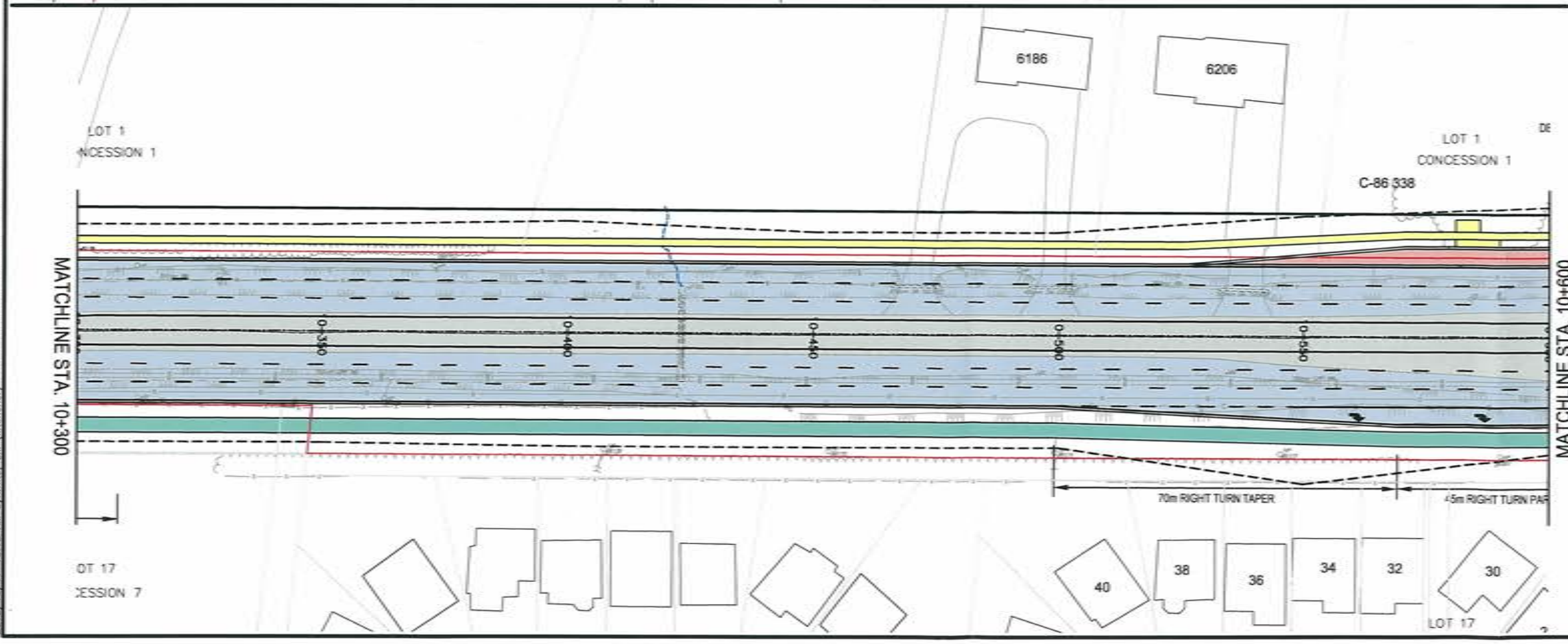
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Date 2012-10-17	Project No. 160210480	



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 2012/10/17 AM 11:27 Bill Hill (bill.hill@stantec.com)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

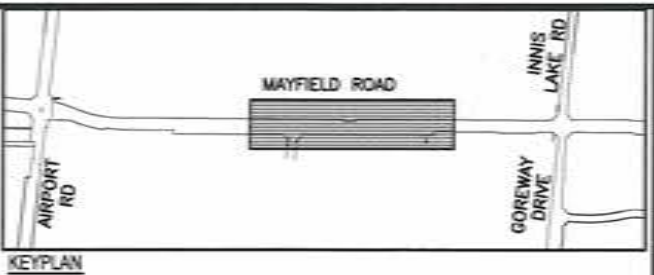
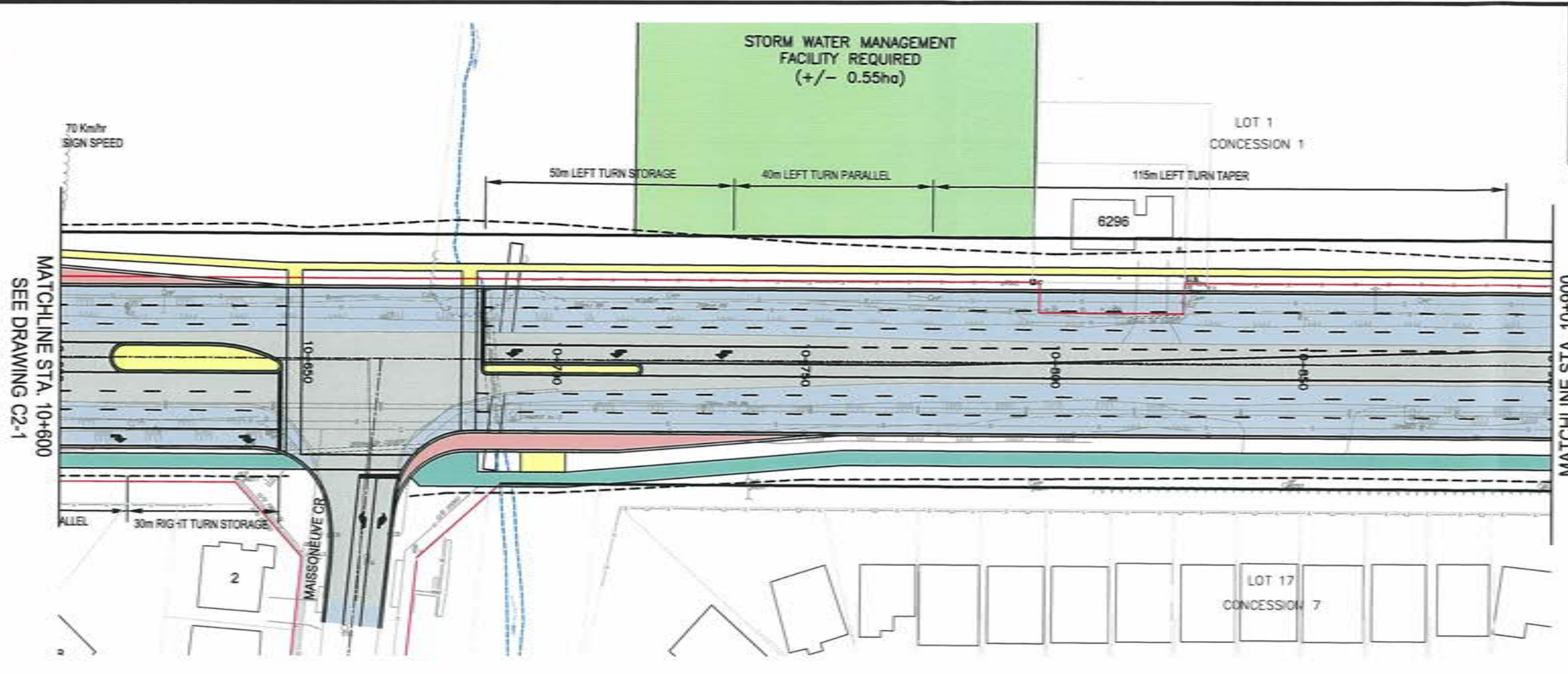


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Working for you

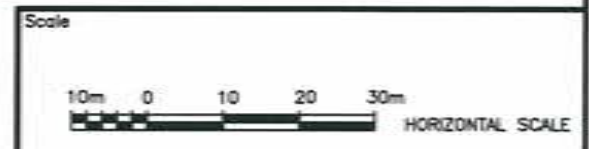
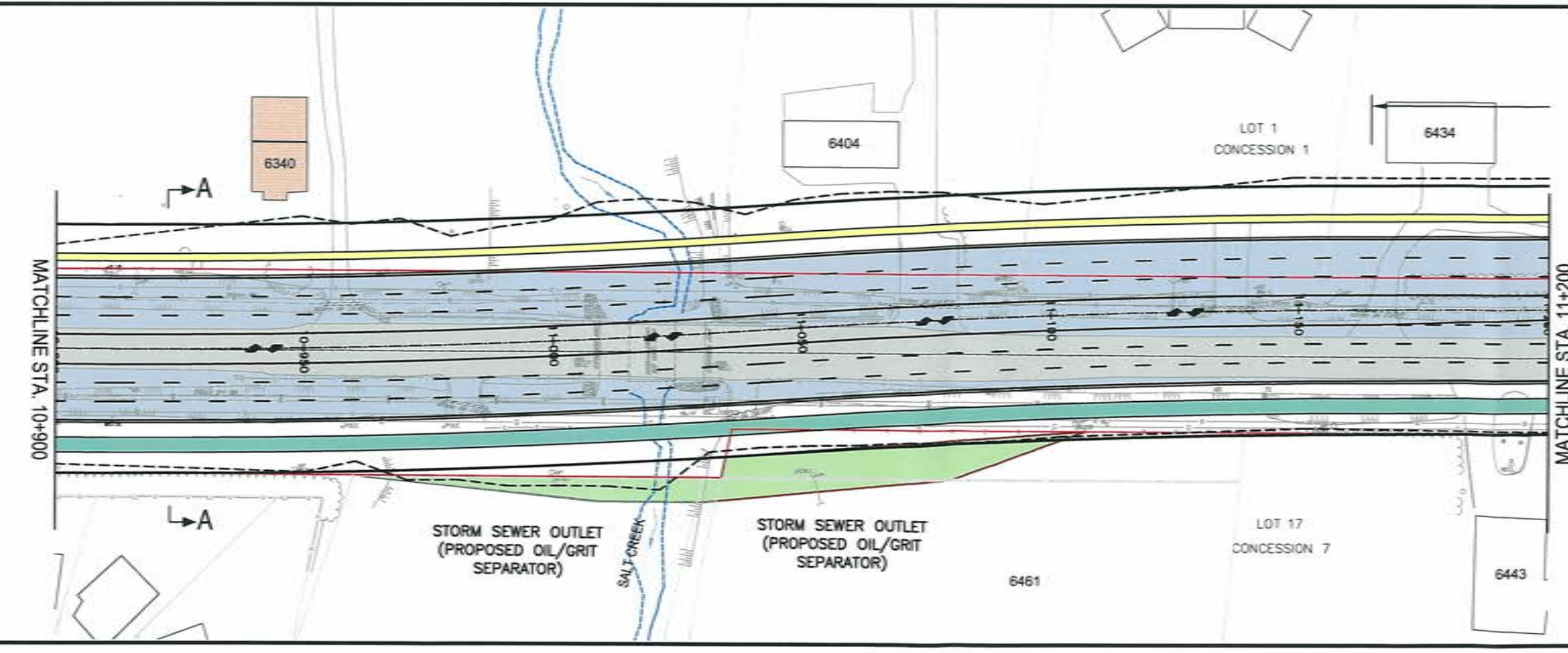
Drawing Title
**MAYFIELD ROAD
AIRPORT ROAD TO COLERAINE DRIVE
CLASS EA STUDY REPORT
ALTERNATIVE CONCEPTS
CONCEPT 2
STA. 10+000 TO STA. 10+600**

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C2-1
Date 2012-10-17	Project No. 160210480	

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2012/10/17 10:18 AM by: white_bill (dickens)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

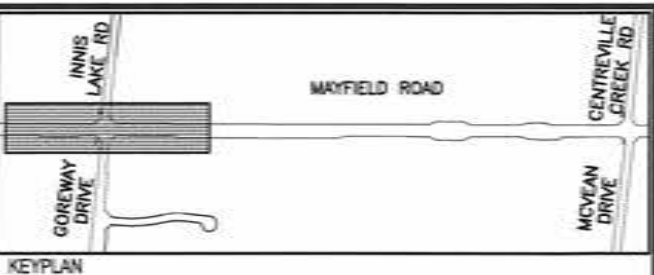
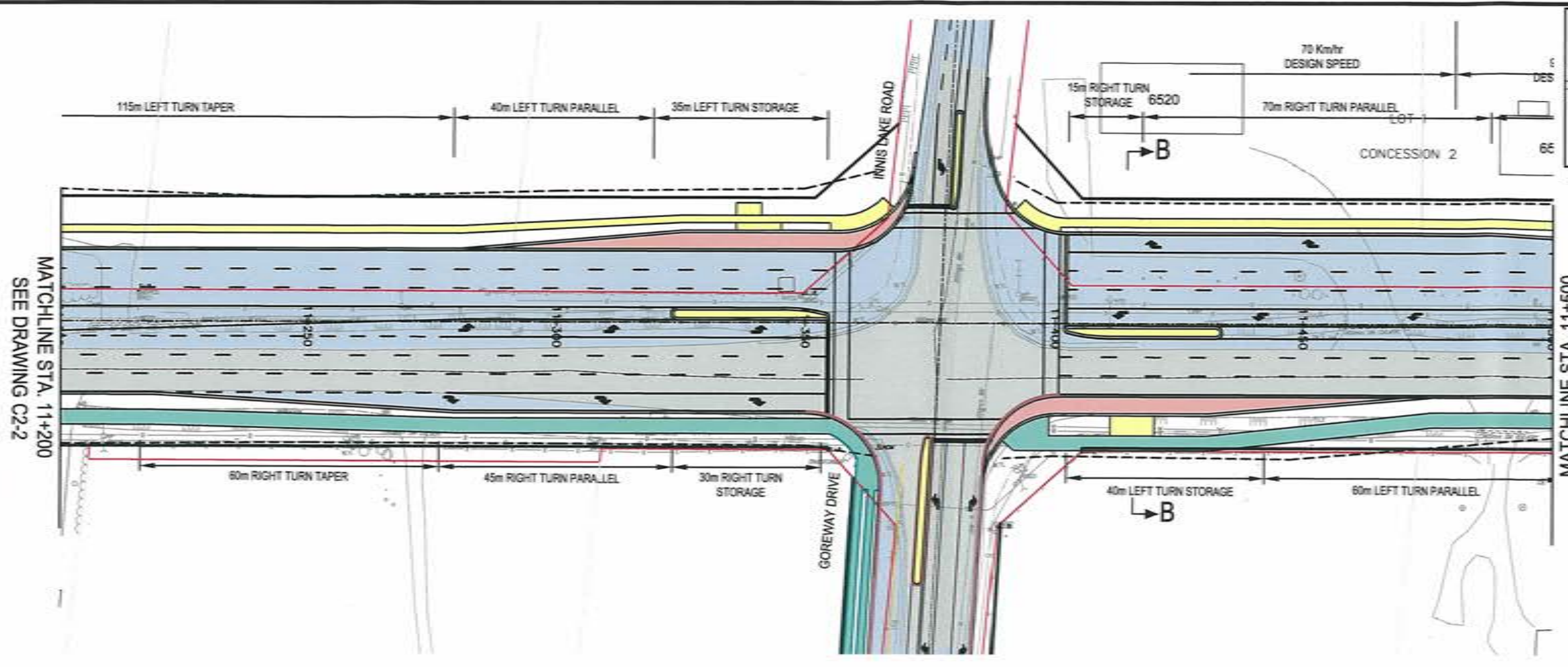


Client
Region of Peel
Working for you

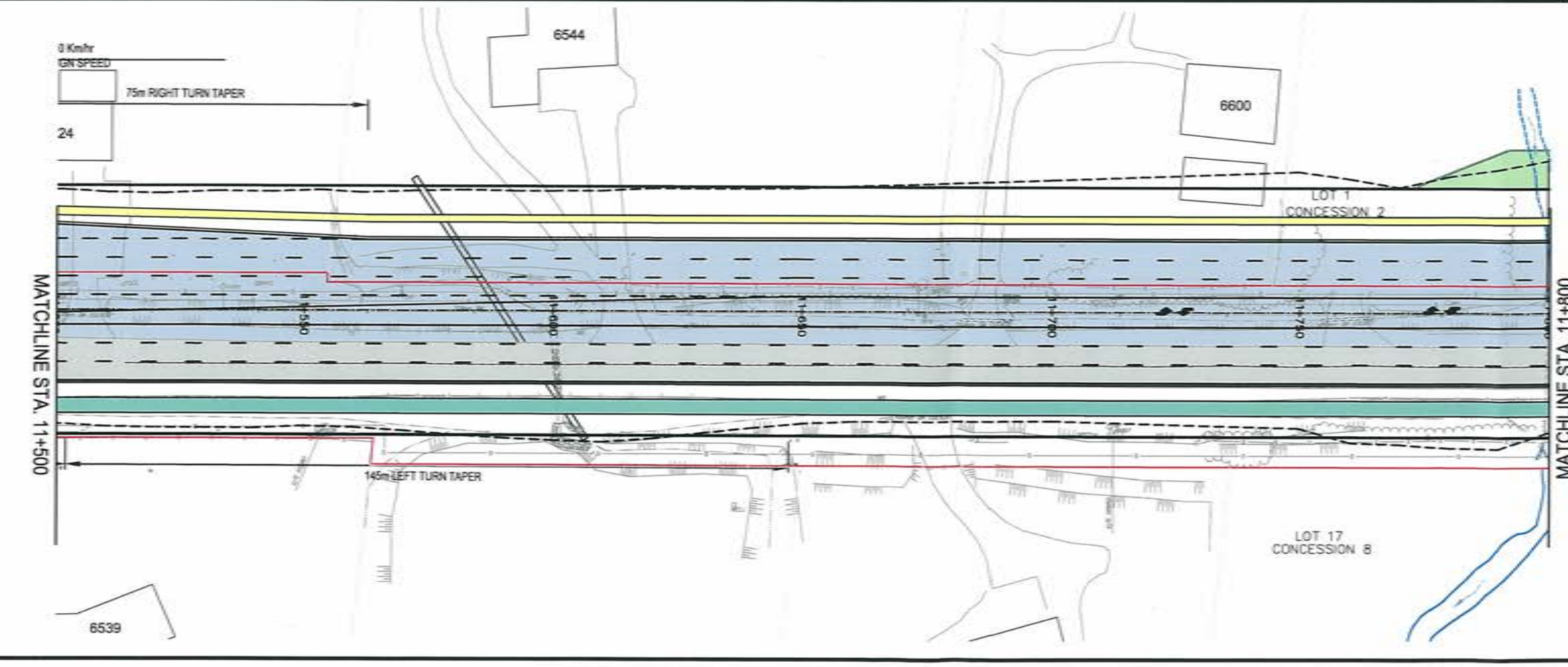
Drawing Title
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 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 2
 STA. 10+600 TO STA. 11+200

Drawn By M.R.W.	Checked By J.C.B.	Drawing Number C2-2
Date 2012-10-17	Project No. 160210480	

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 2012/10/17 10:19 AM by: white, bil. (kitchener)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

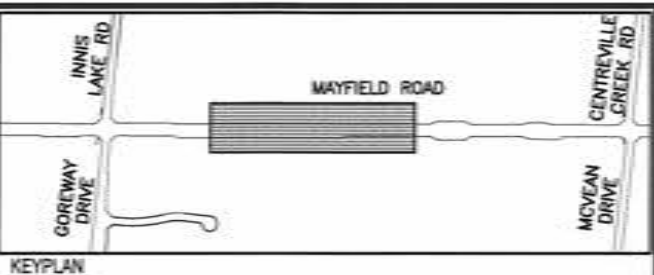
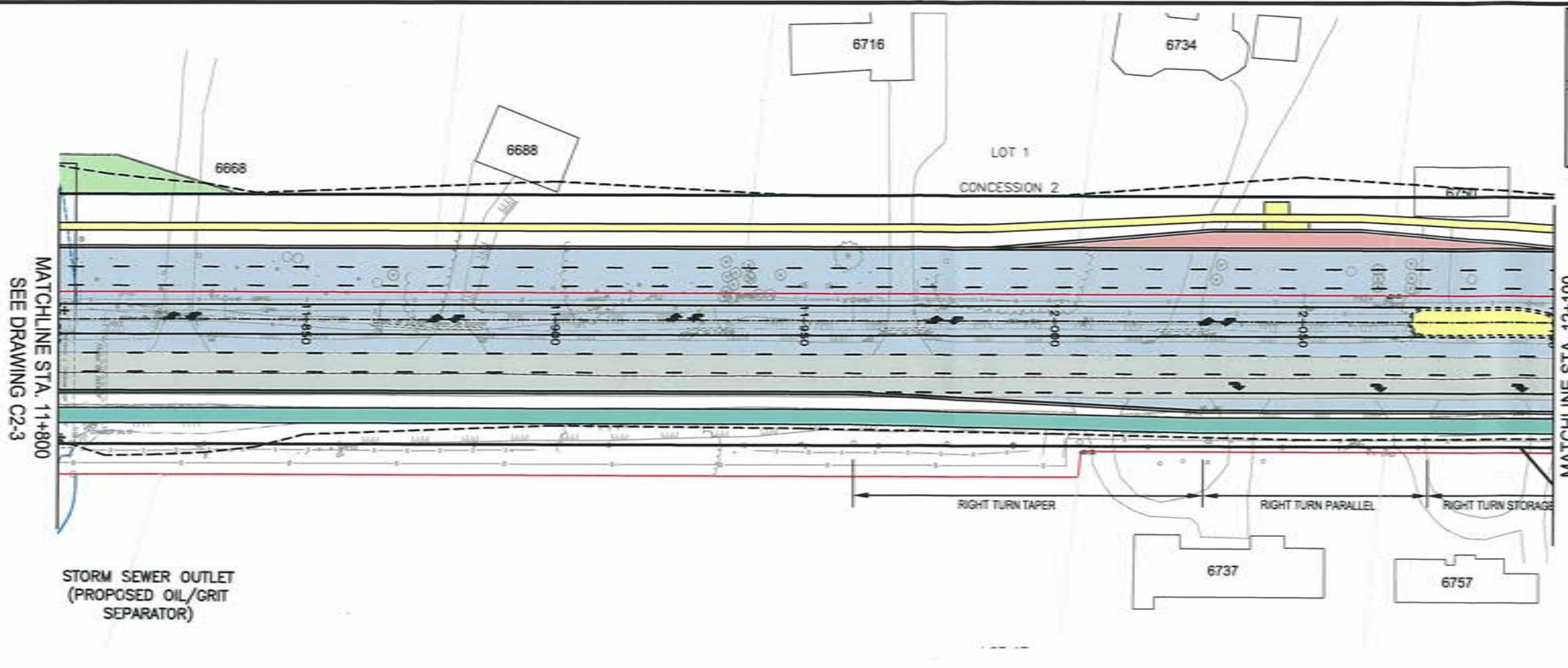


Client
Region of Peel
Working for you

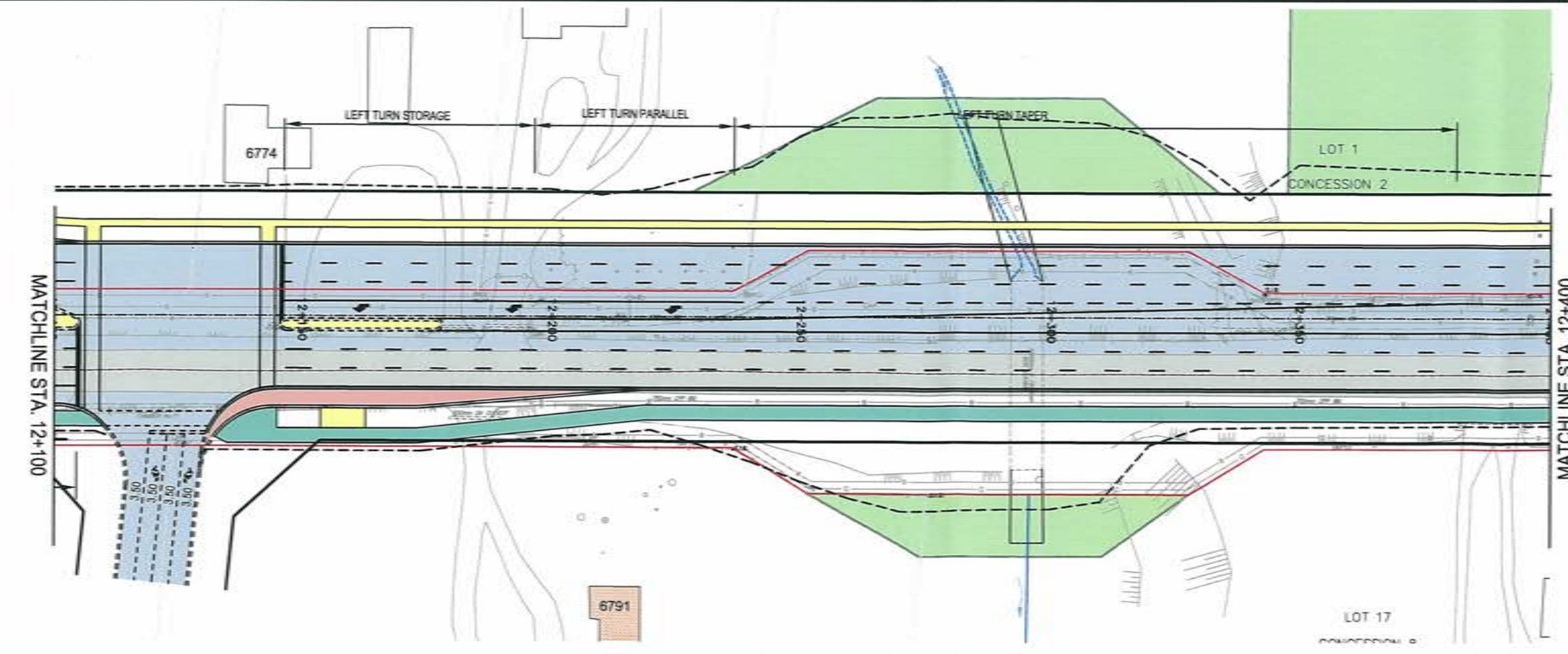
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 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 2
 STA. 11+200 TO STA. 11+800

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C2-3
Date 2012-10-17	Project No. 160210480	

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 2012/10/17 10:20 AM by: jcb (jcb)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

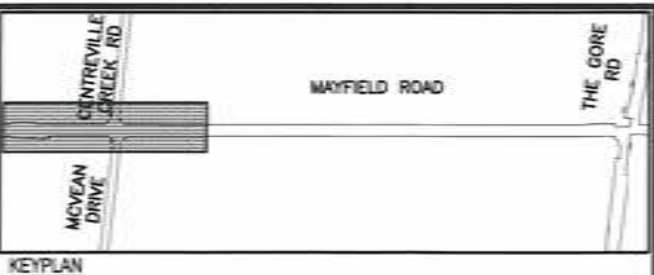
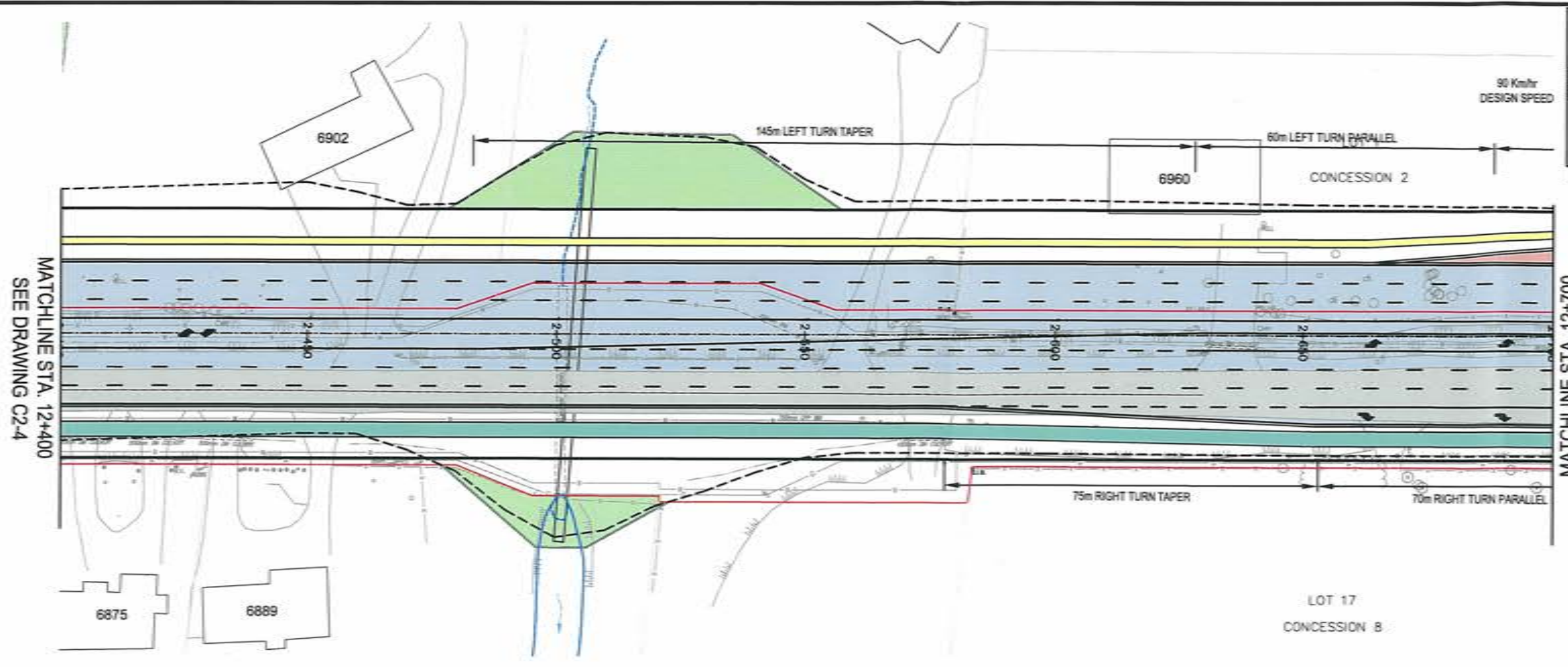


Client
Region of Peel
Working for you

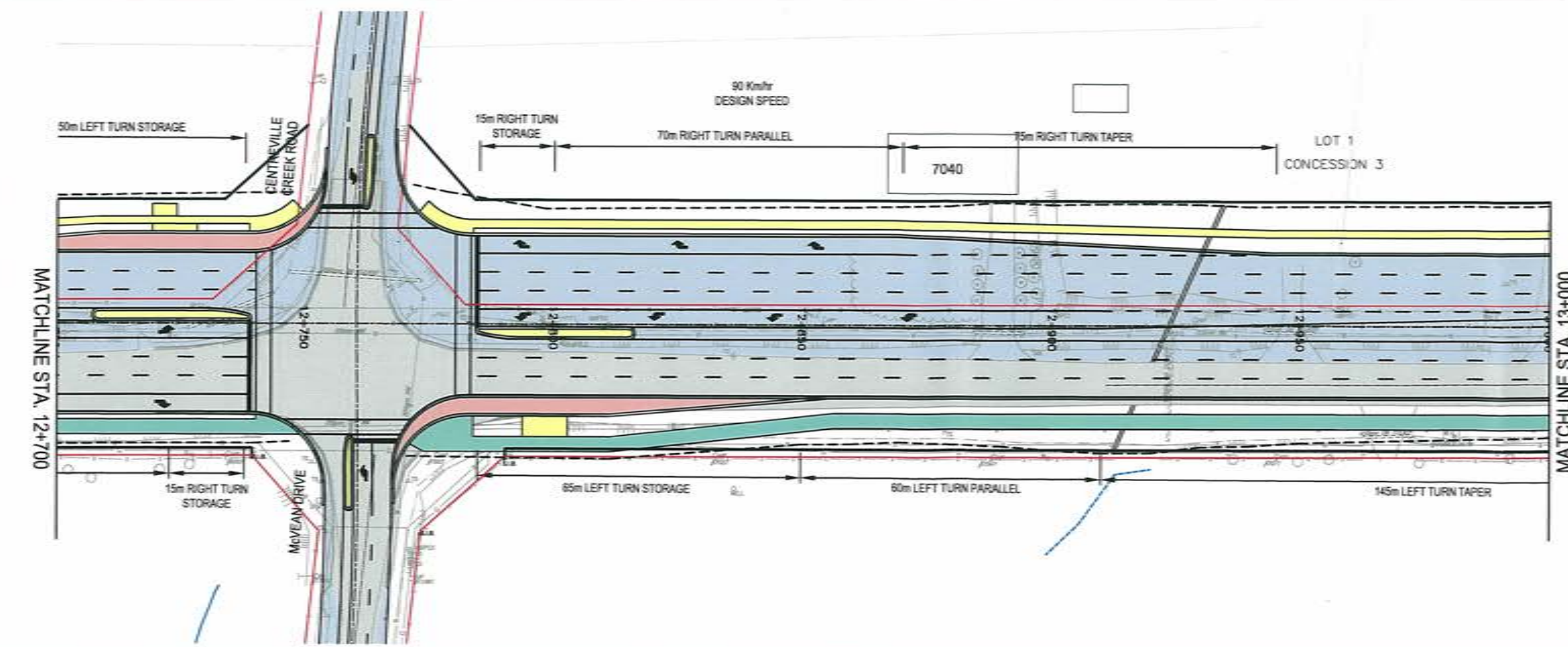
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 CONCEPT 2
 STA. 11+800 TO STA. 12+400

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C2-4
Date 2012-10-17	Project No. 160210480	

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 2012/10/17 10:20 AM by:whiter_full (ditchman)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



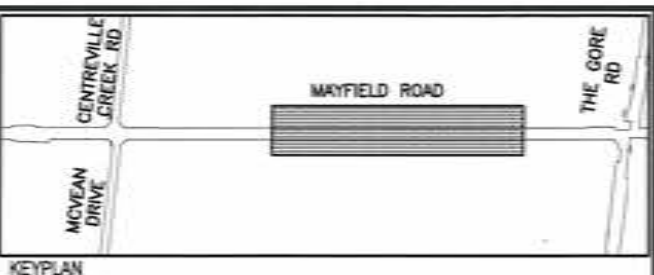
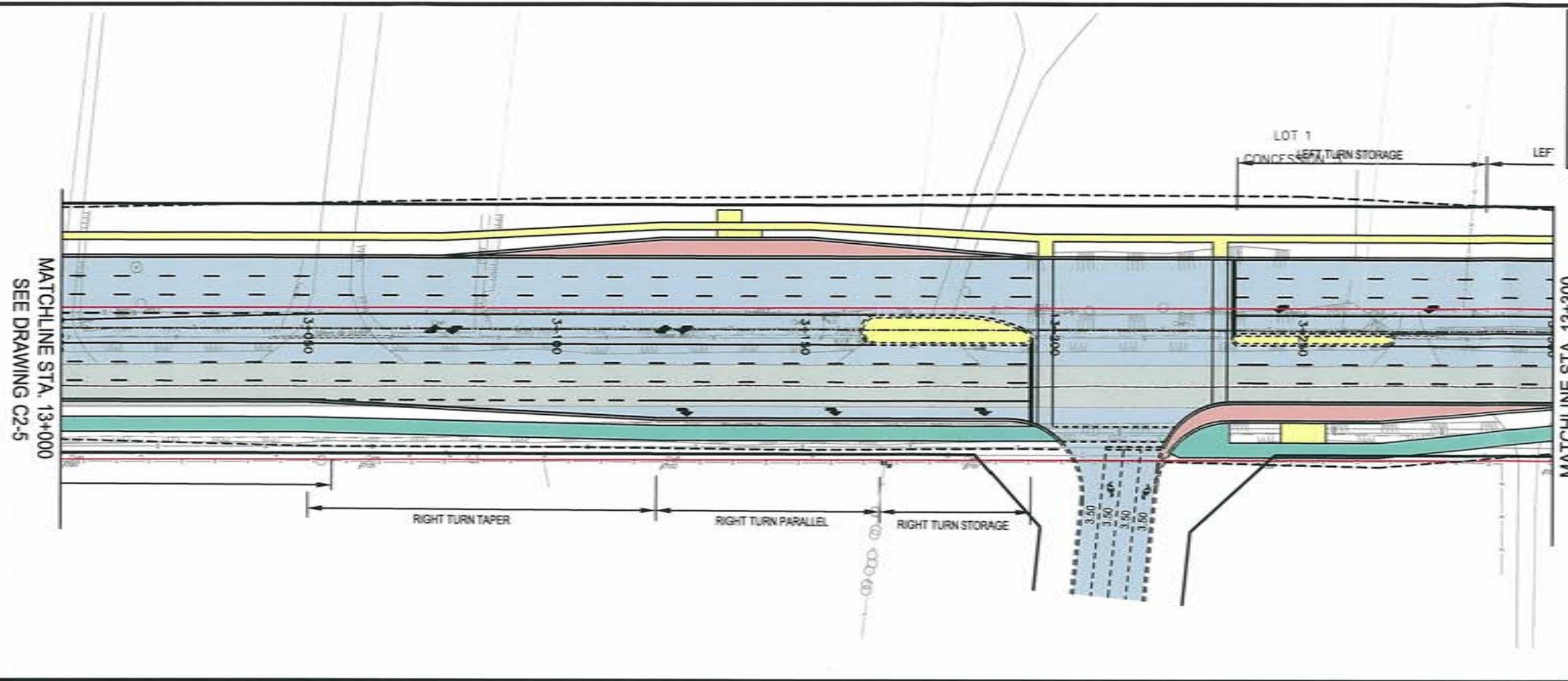
Client
Region of Peel
Working for you

Drawing Title
MAYFIELD ROAD
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 STA. 12+400 TO STA. 13+000

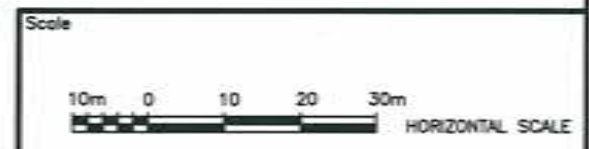
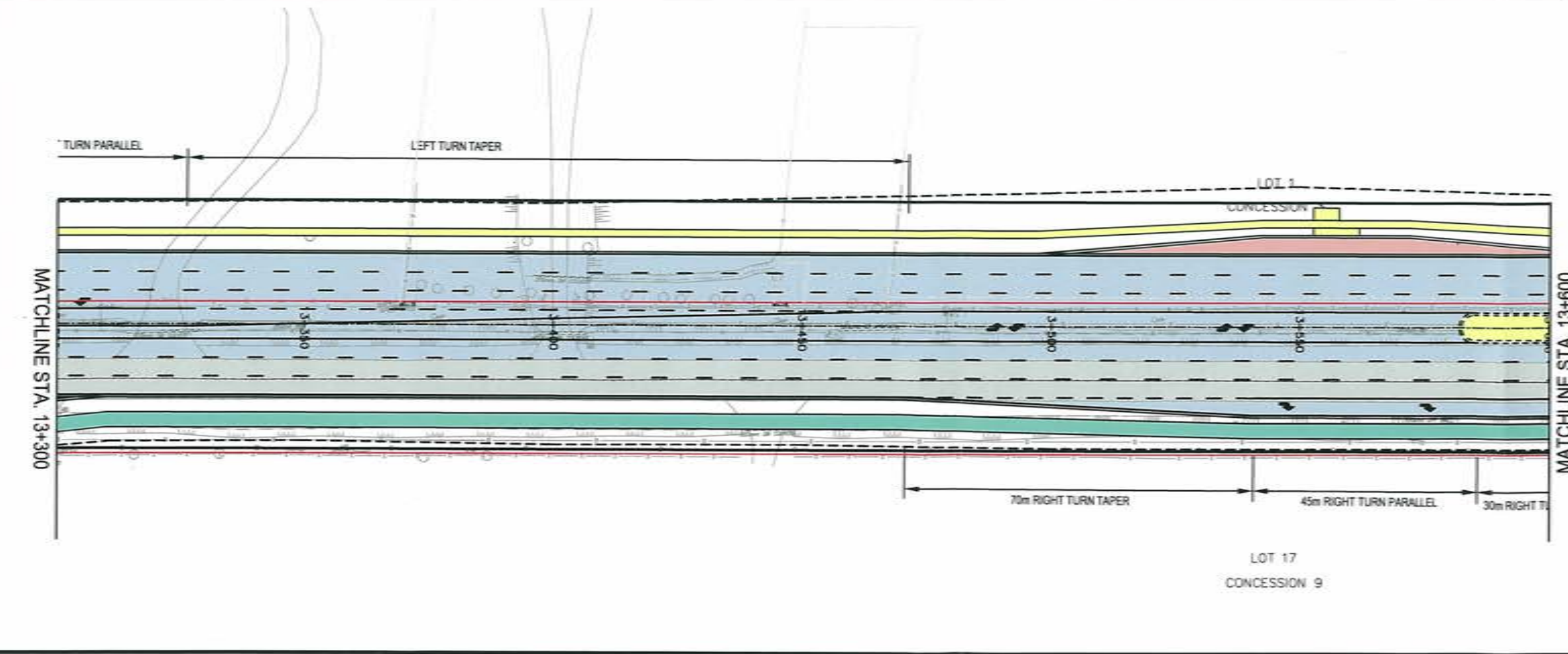
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Date 2012-10-17	Project No. 160210480	

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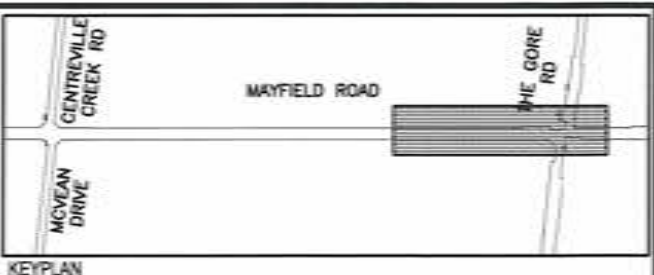
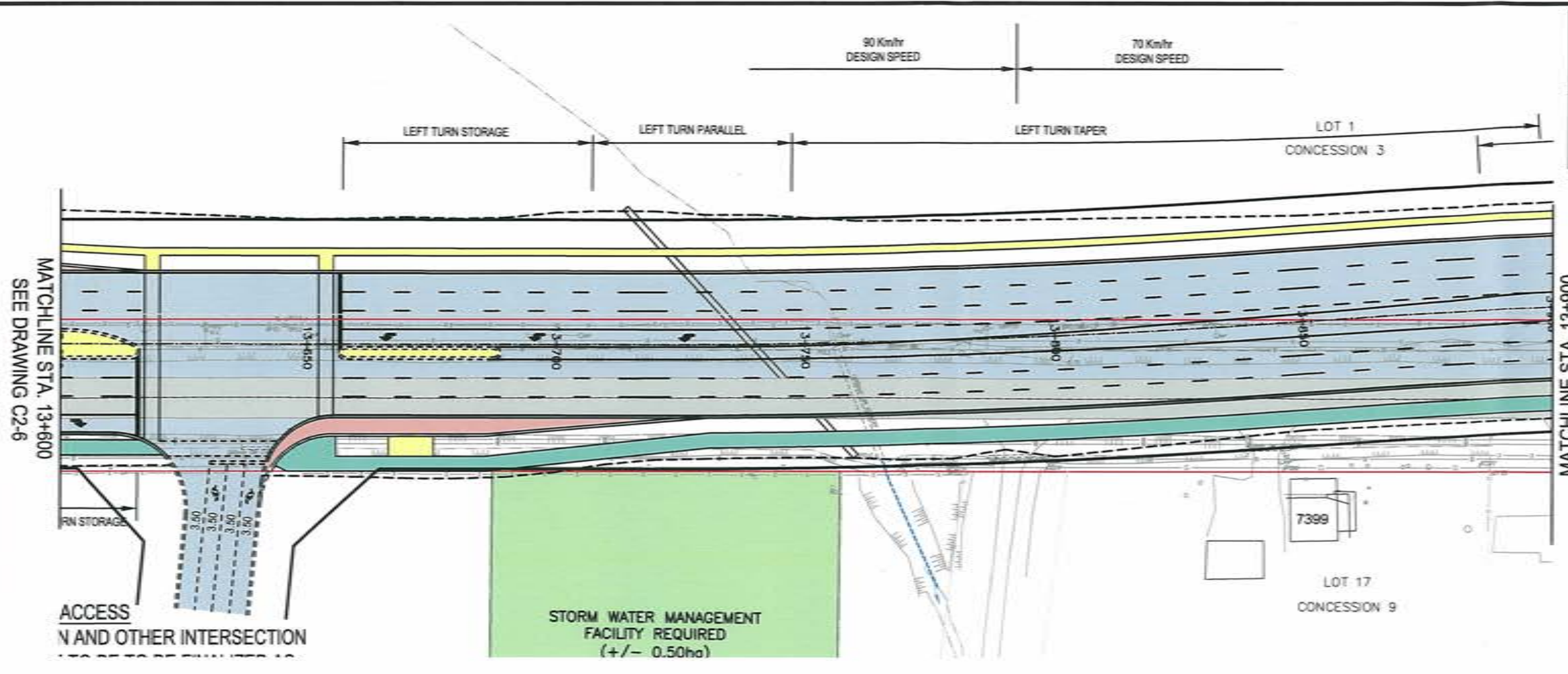
- LEGEND**
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 - PROPOSED RIGHT OF WAY
 - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



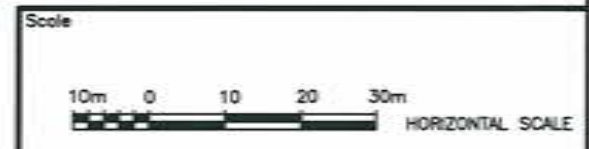
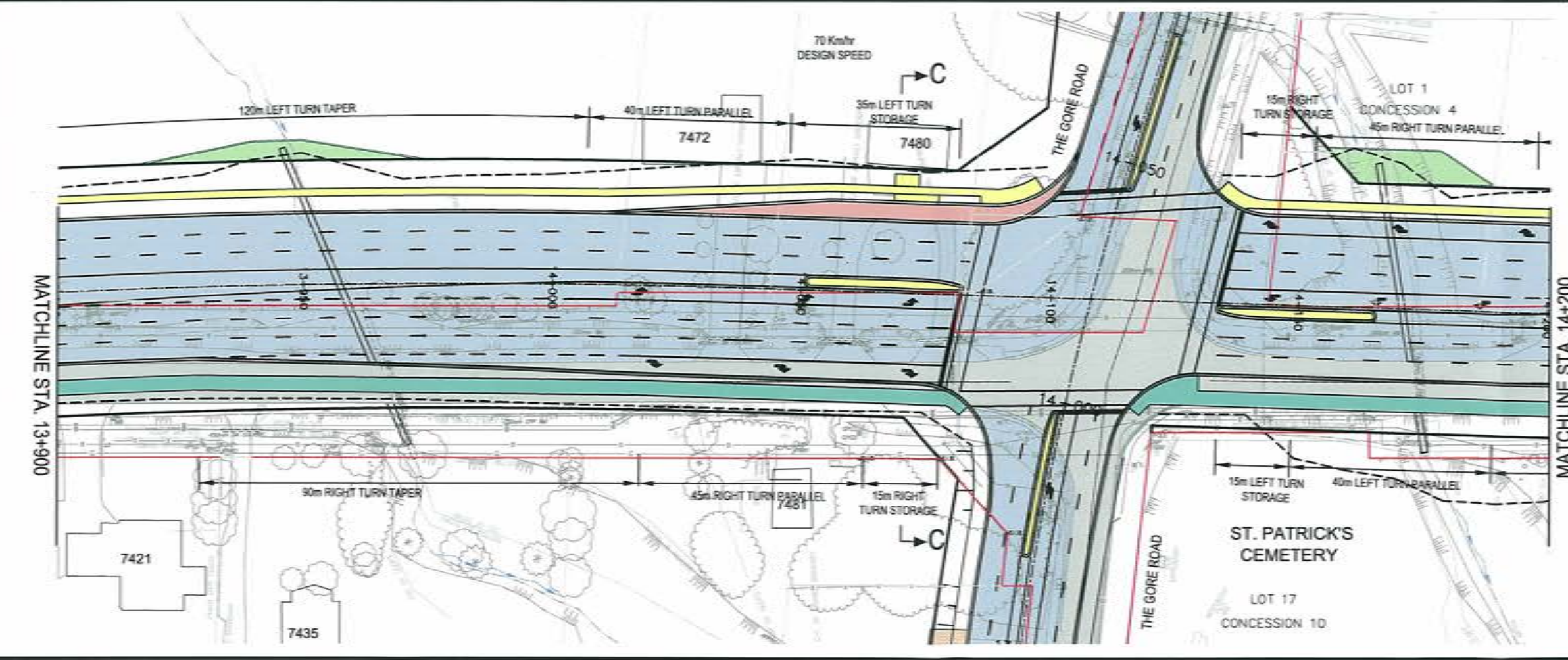
Client
Region of Peel
Working for you

Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 2
 STA. 13+000 TO STA. 13+600

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C2-6
Date 2012-10-17	Project No. 160210480	



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

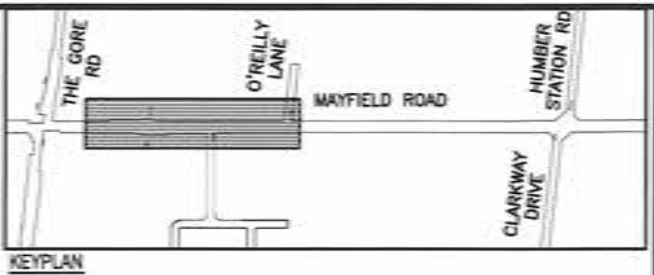
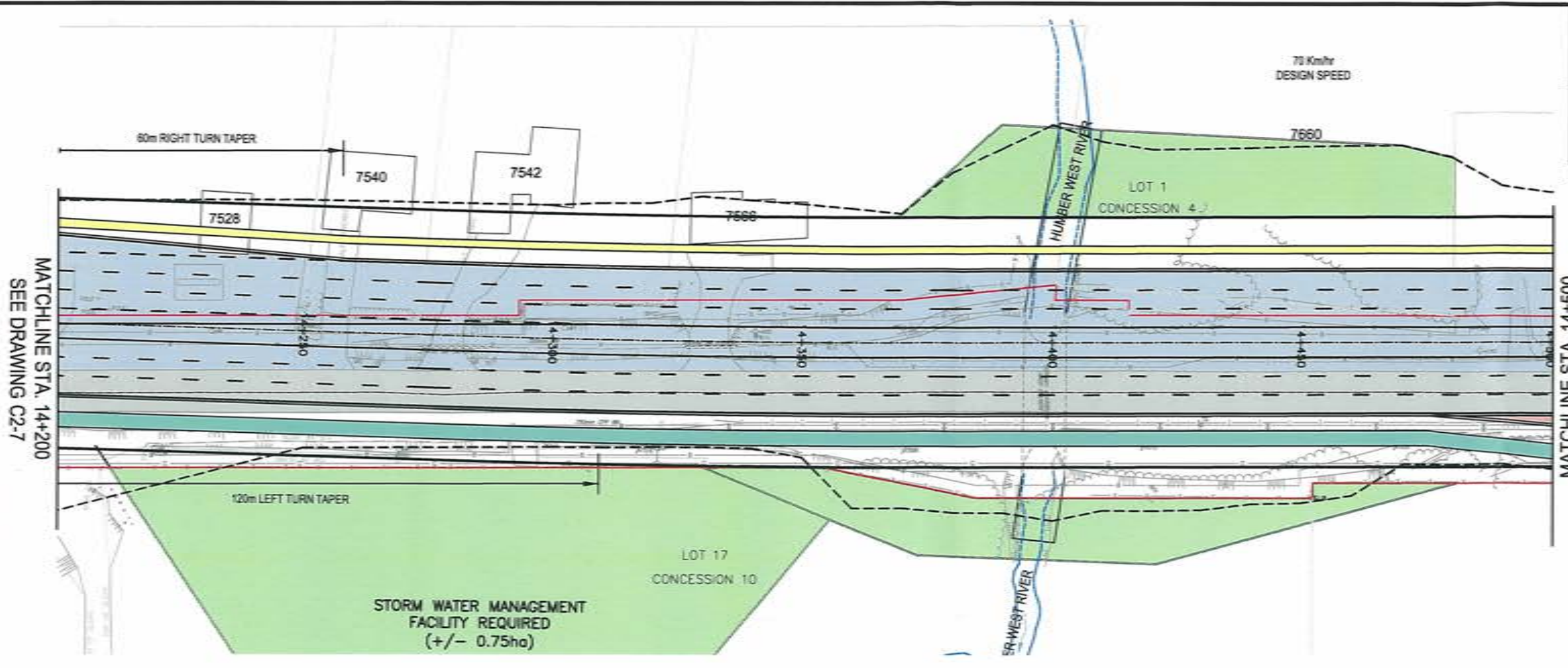


Client
Region of Peel
Working for you

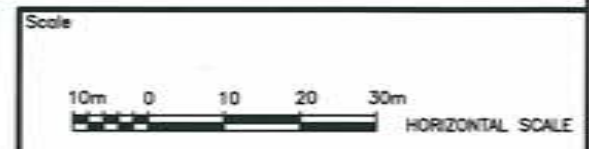
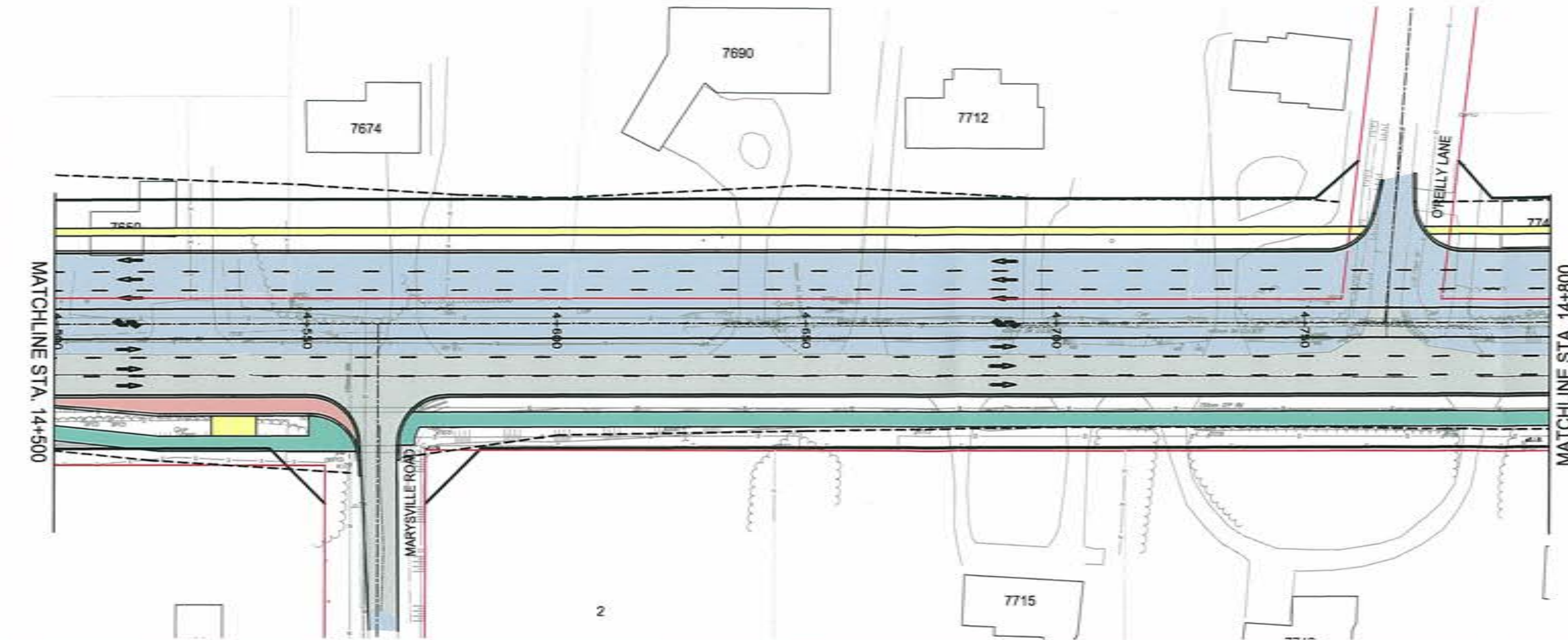
Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 2
 STA. 13+600 TO STA. 14+200

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C2-7
Date 2012-10-17	Project No. 160210480	

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 2012/10/17 10:22 AM brwhite_bill (dcthenet)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

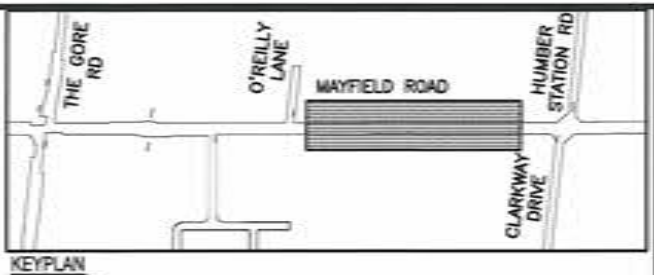
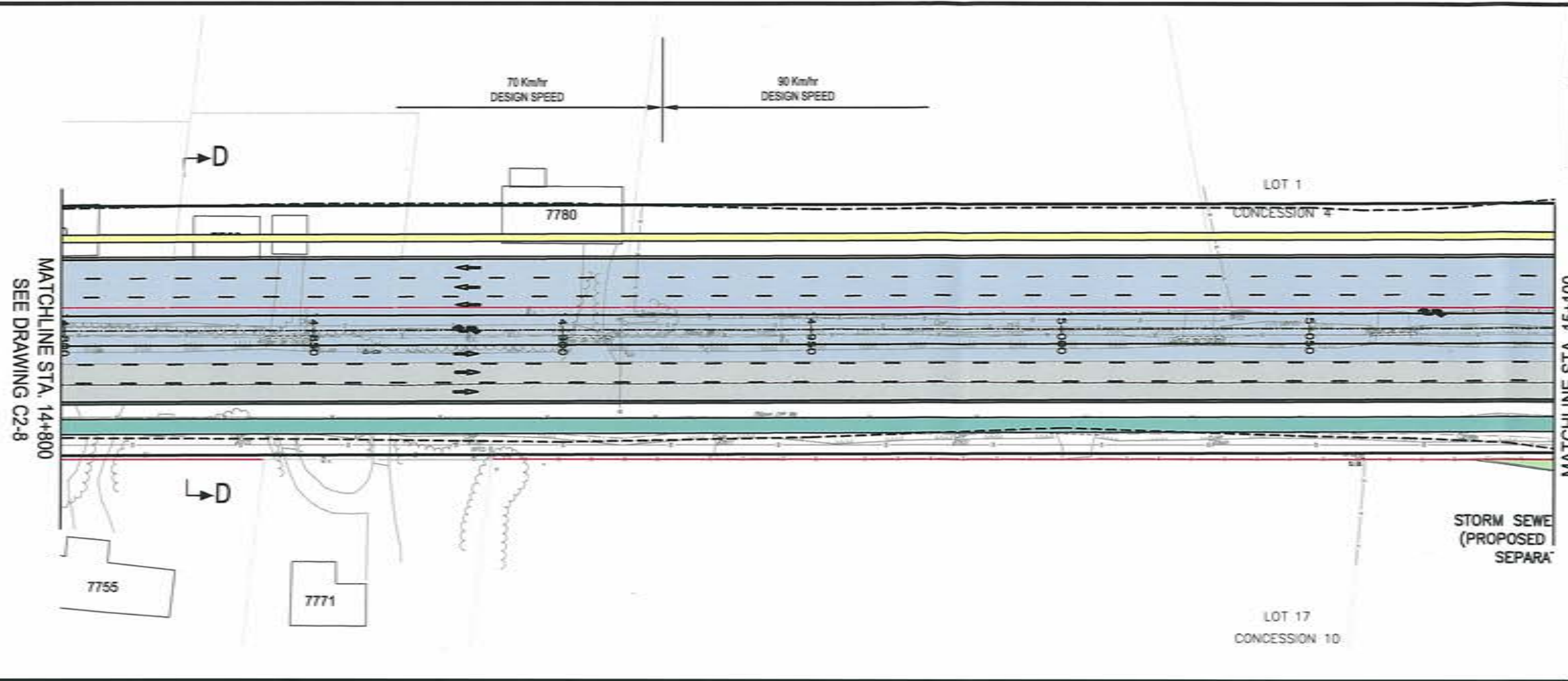


Client
Region of Peel
Working for you

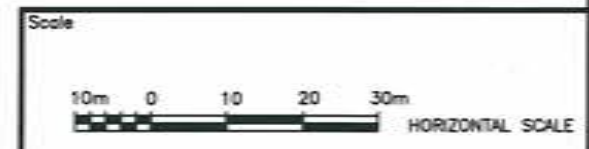
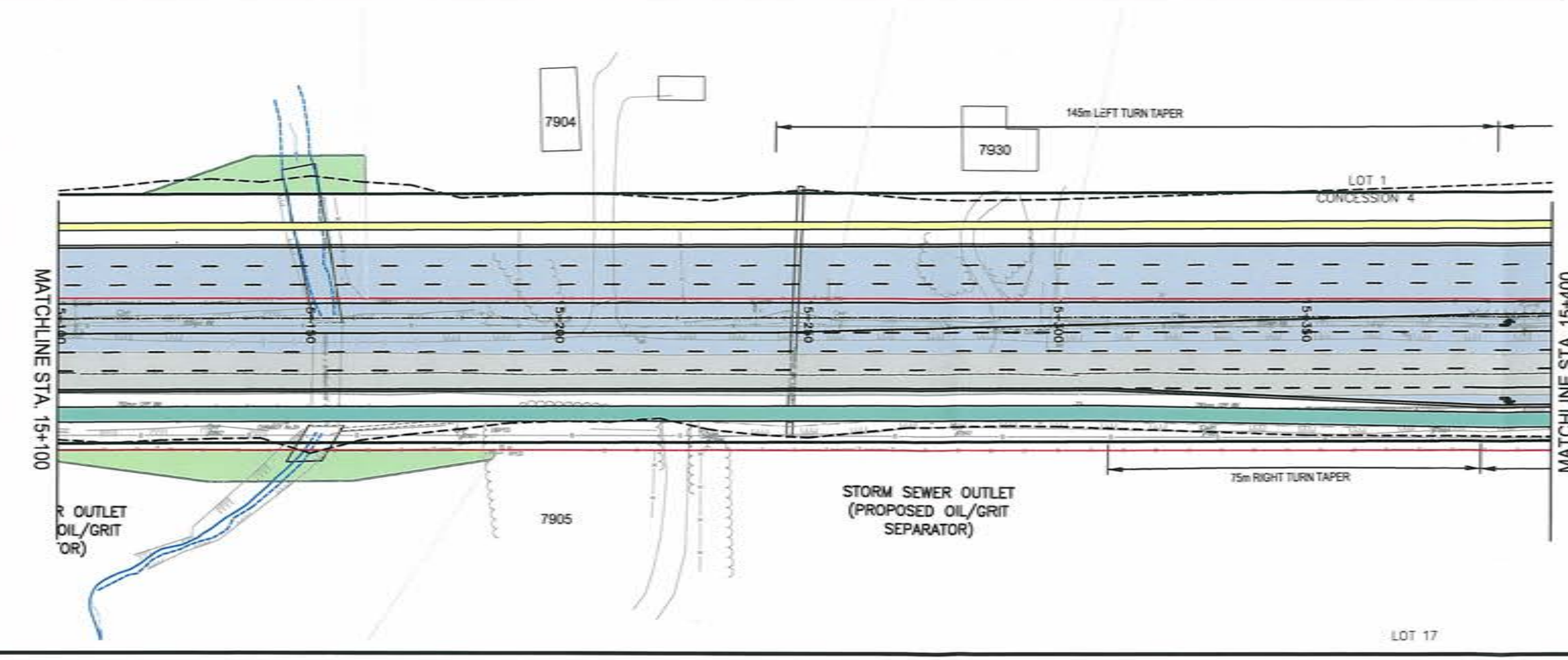
Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 2
 STA. 14+200 TO STA. 14+800

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C2-8
Date 2012-10-17	Project No. 160210480	

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 2012/10/17 10:23 AM by white_bill (kitchener)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULT-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



Client

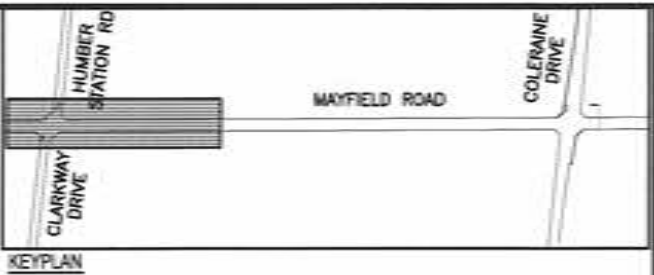
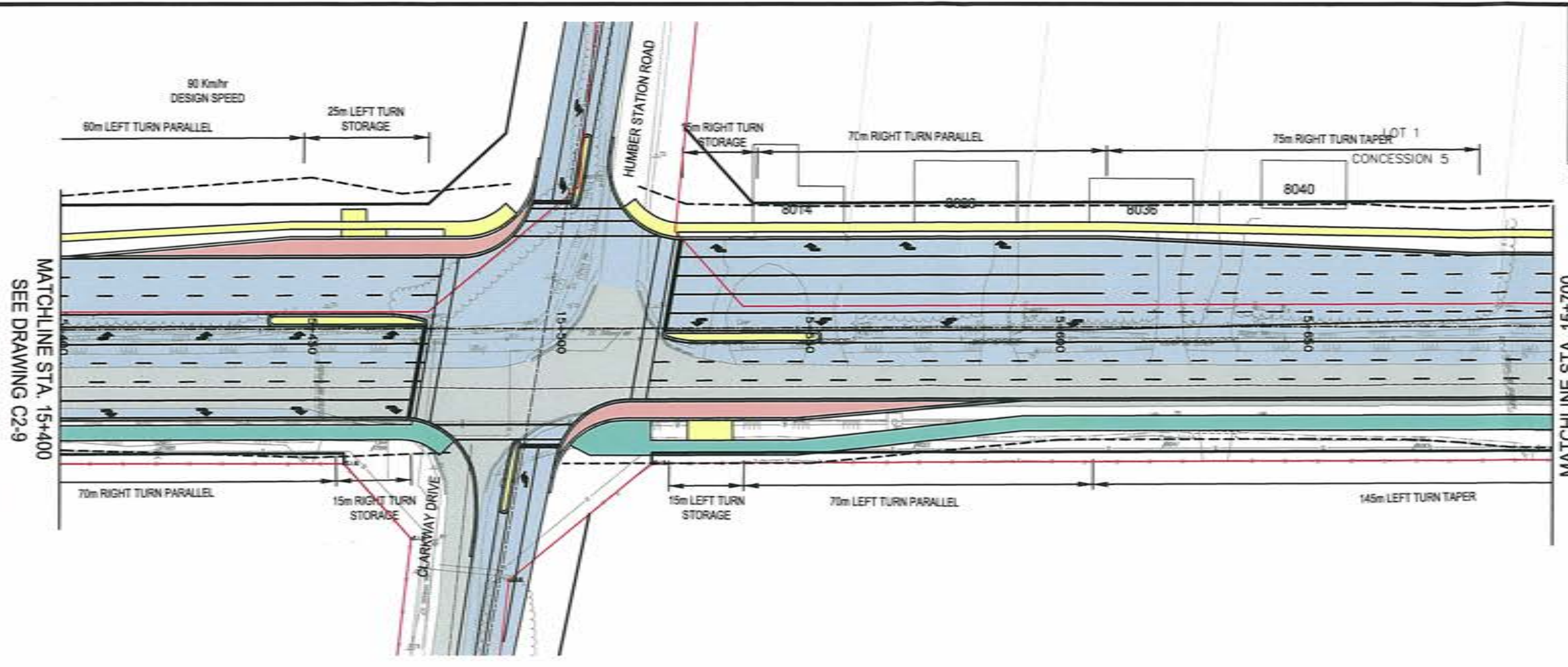
Region of Peel
Working for you

Drawing Title

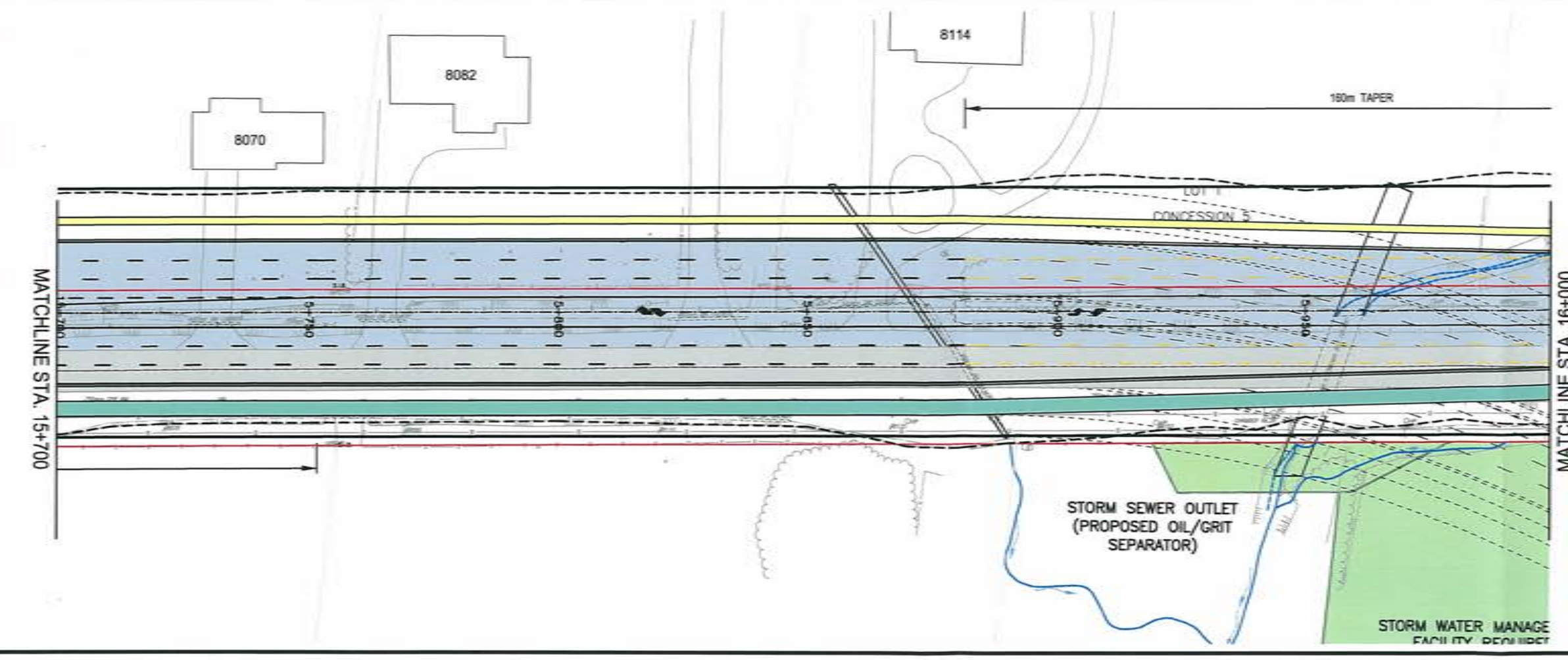
MAYFIELD ROAD
AIRPORT ROAD TO COLERAINE DRIVE
CLASS EA STUDY REPORT
ALTERNATIVE CONCEPTS
CONCEPT 2
STA. 14+800 TO STA. 15+400

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C2-9
Date 2012-10-17	Project No. 160210480	

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2012/10/17 10:24 AM by white_bill (ditchman)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

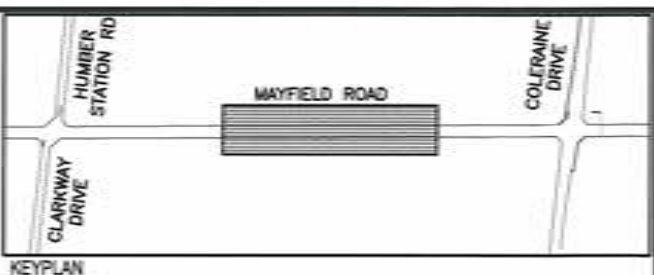
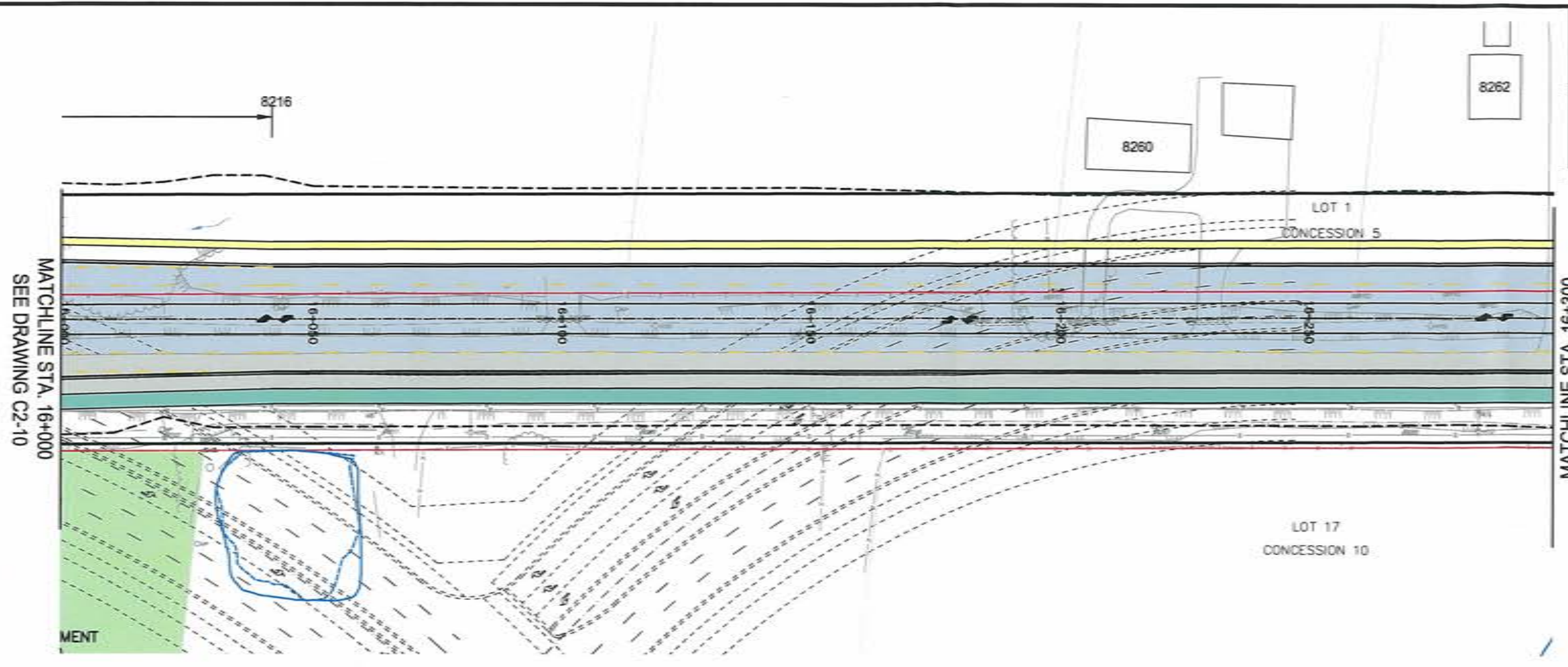


Client
Region of Peel
Working for you

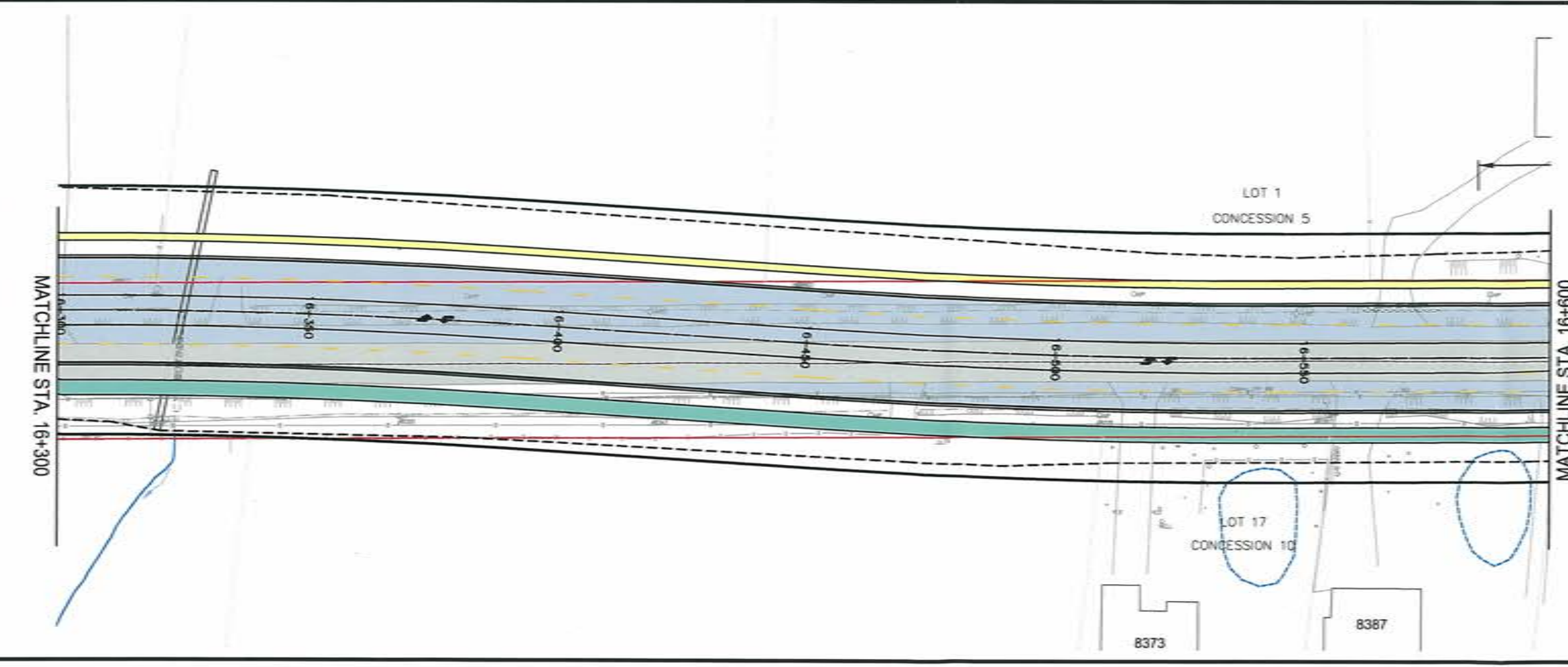
Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 2
 STA. 15+400 TO STA. 16+000

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C2-10
Date 2012-10-17	Project No. 160210480	

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 2012/10/17 10:24 AM by white_bill (ditchener)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

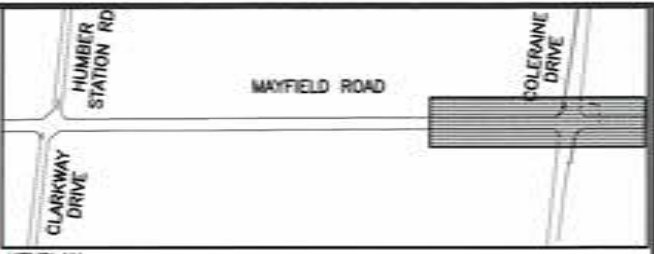
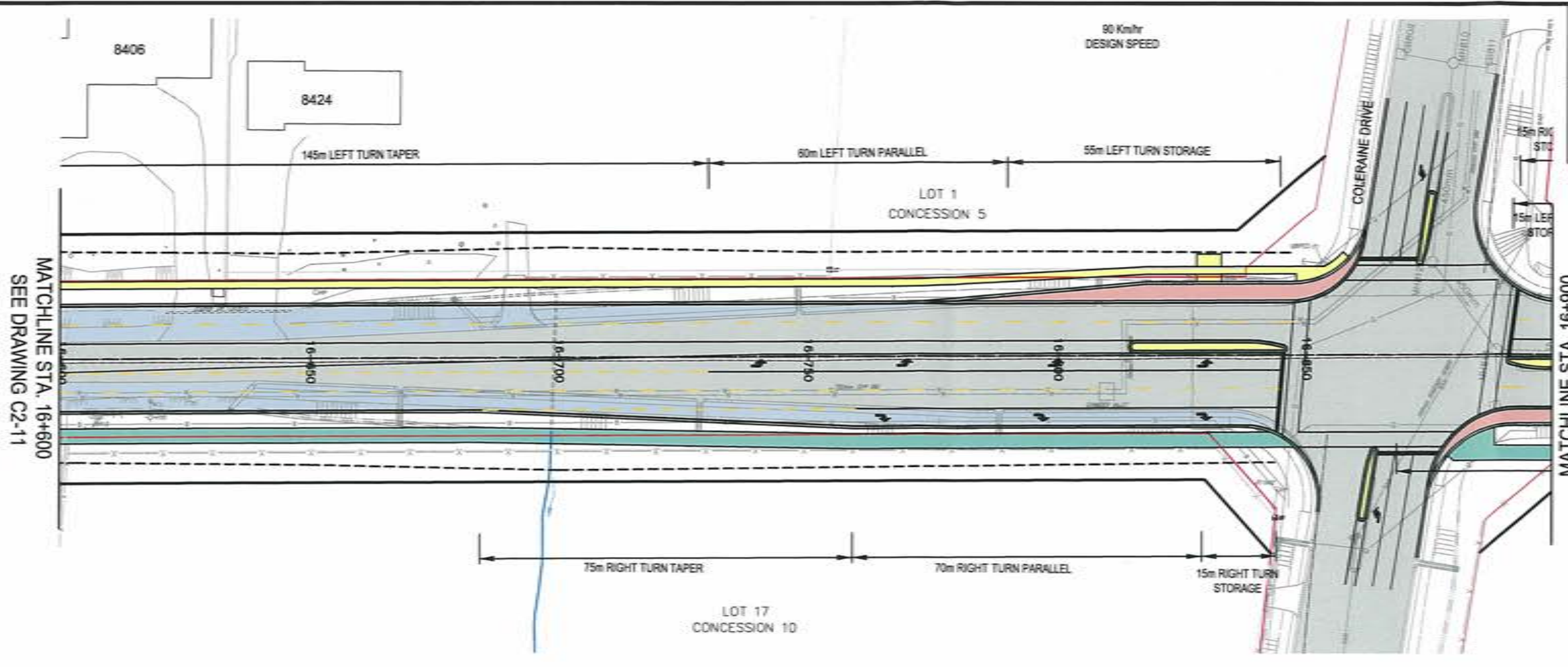


Client
Region of Peel
Working for you

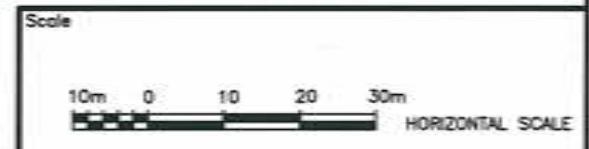
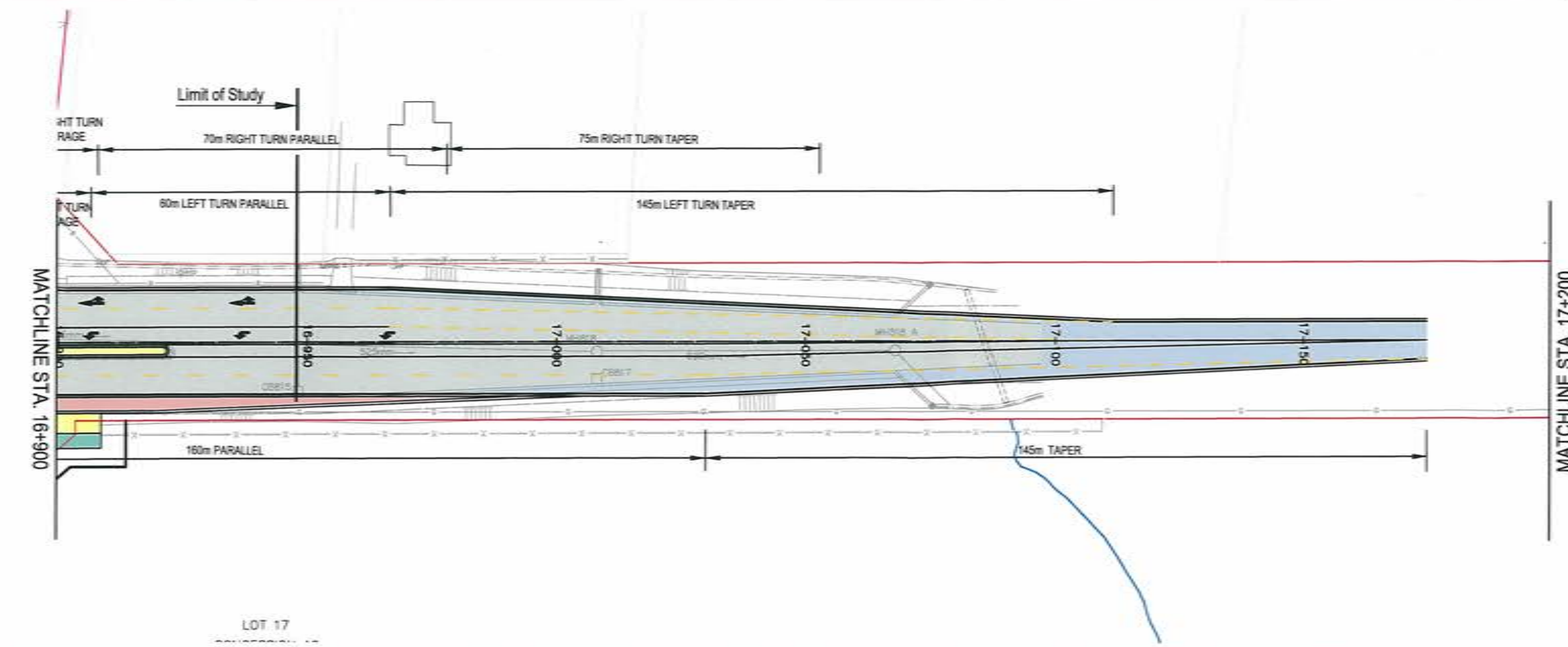
Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 2
 STA. 16+000 TO STA. 16+600

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C2-11
Date 2012-10-17	Project No. 160210480	

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 2012/10/17 10:25 AM bywhite_bill (dickensae)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



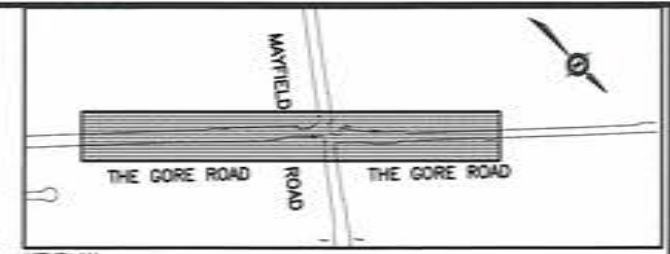
Client
Region of Peel
Working for you

Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 2
 STA. 16+600 TO STA. 17+200

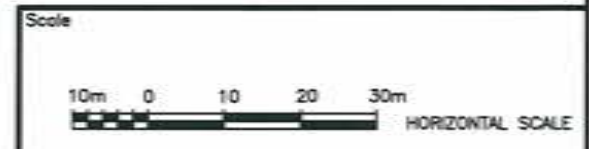
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Date 2012-10-17	Project No. 160210480	

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 2012/10/17 10:26 AM by: jcb (jcb)

FUTURE DEVELOPMENT ACCESS
INTERSECTION IMPROVEMENTS TO BE
FINALIZED AS PART OF DEVELOPMENT
ACCESS DESIGN



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



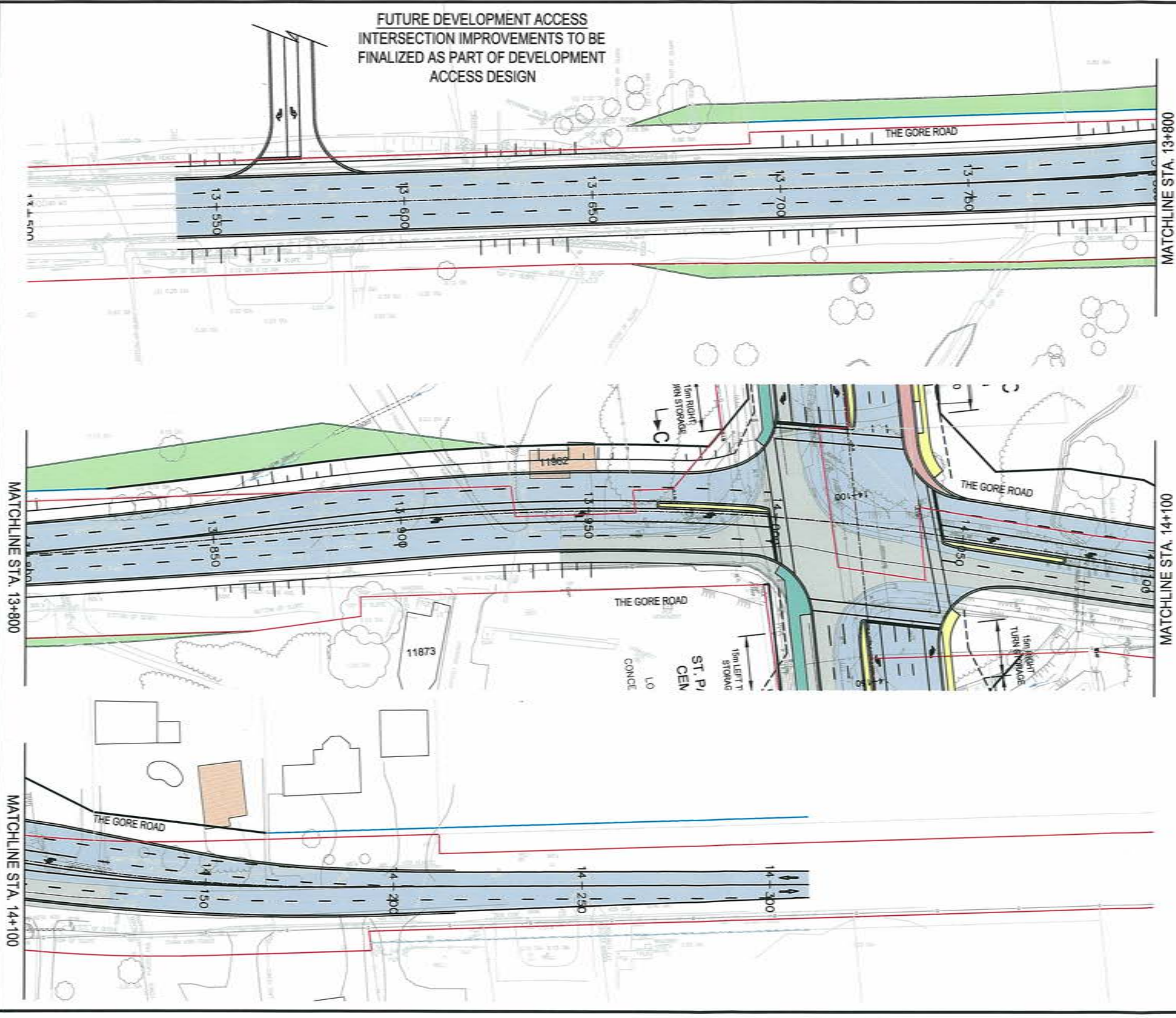
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Region of Peel
Working for you

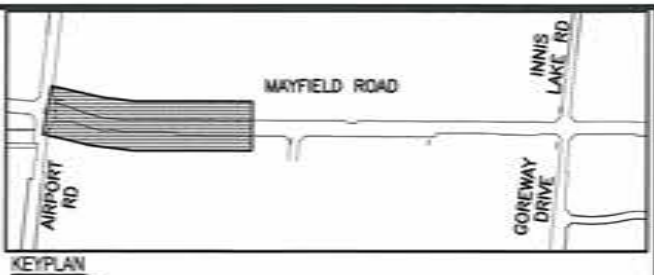
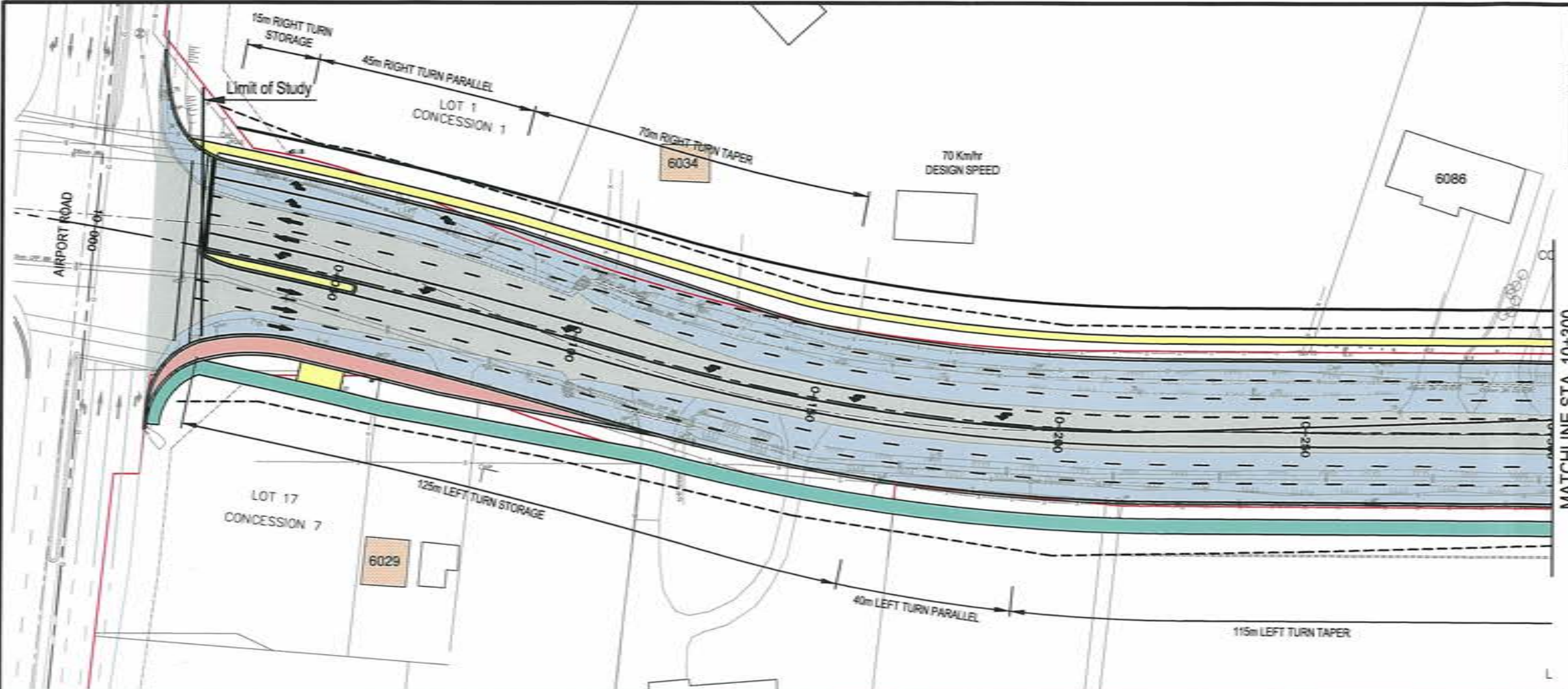
Drawing Title

**MAYFIELD ROAD
AIRPORT ROAD TO COLERAINE DRIVE
CLASS EA STUDY REPORT
ALTERNATIVE CONCEPTS
CONCEPT 2
STA. 13+550 TO STA. 14+700**

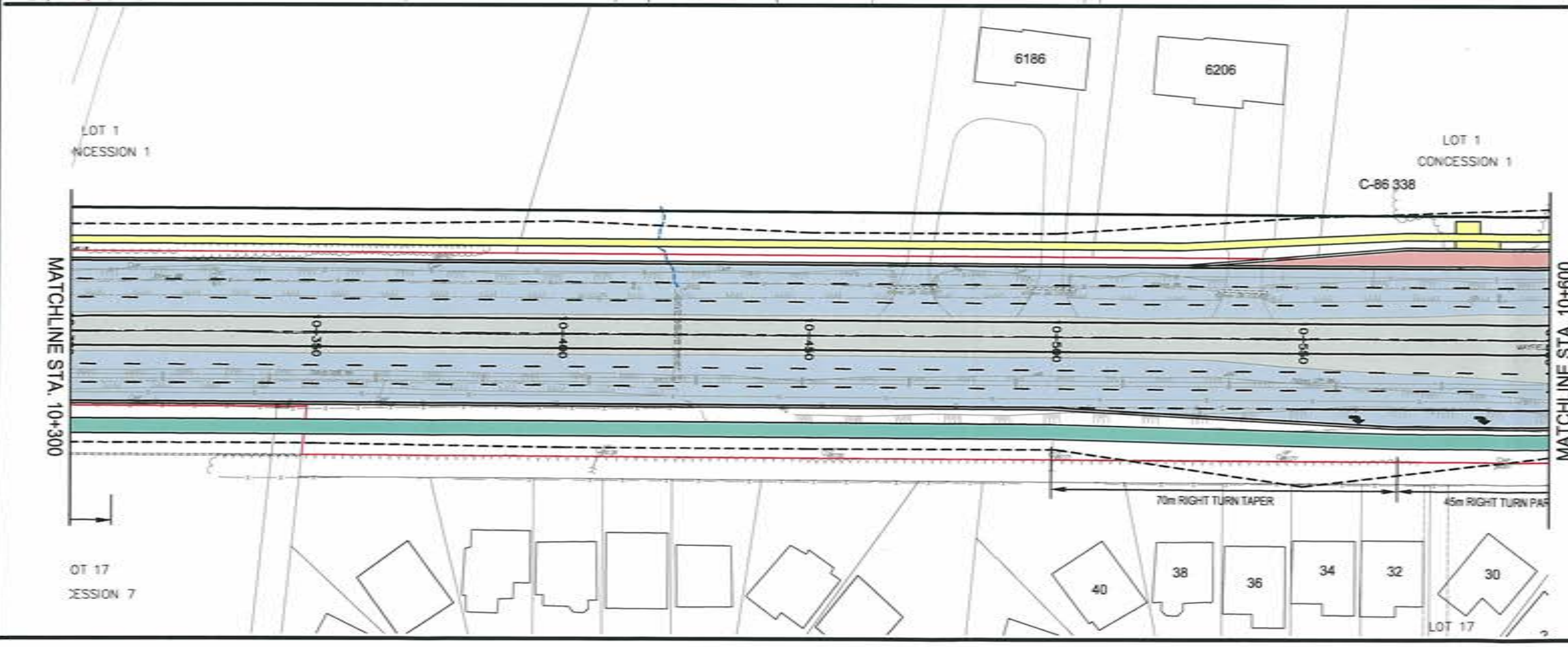
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Date 2012-10-17	Project No. 160210480	



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 2012/10/17 AM 9:27
 by: jcb, wrr, bll (kitchener)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

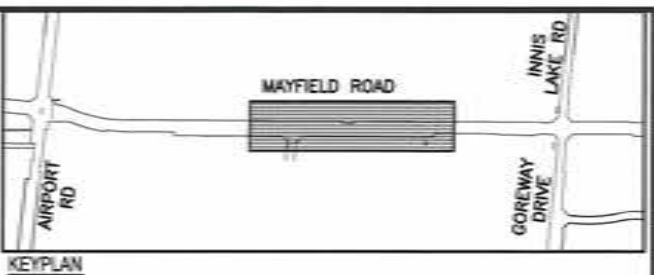
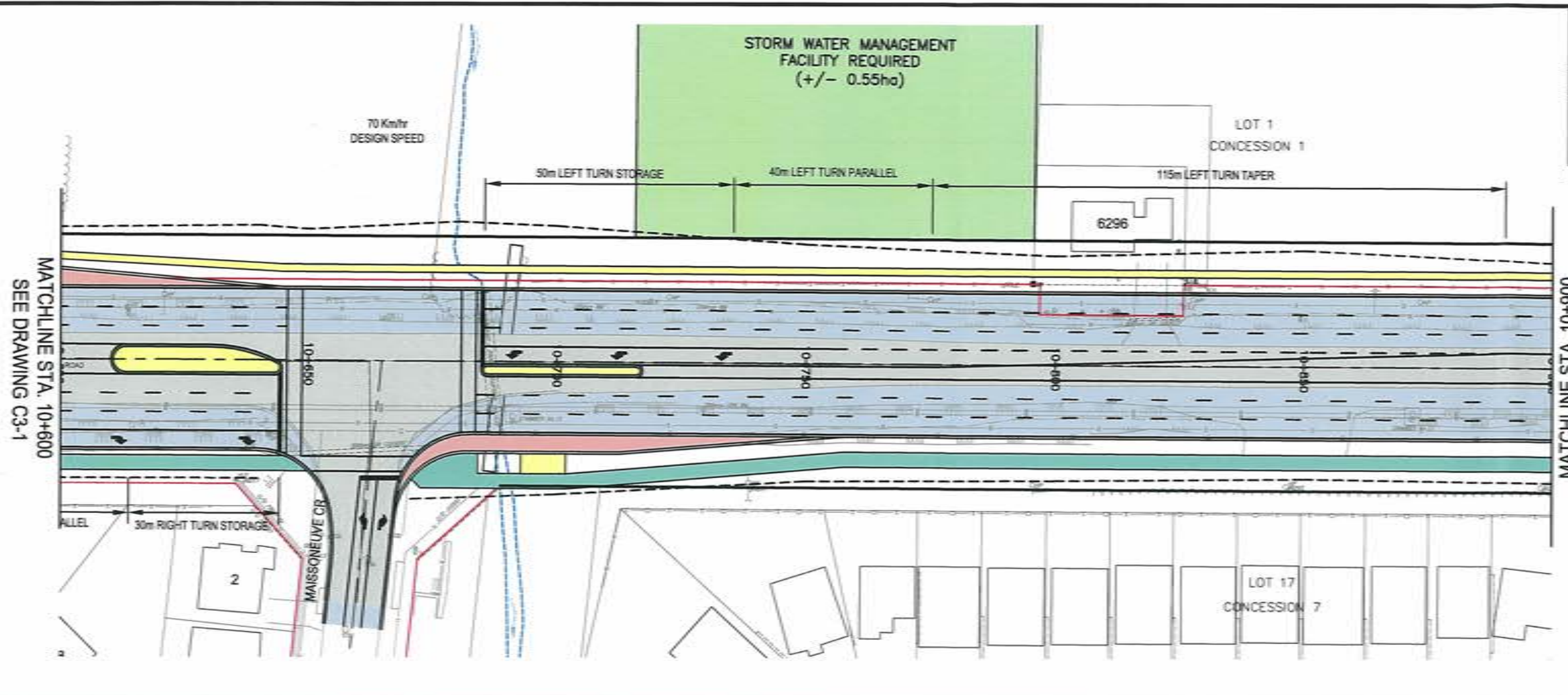


Client
Region of Peel
Working for you

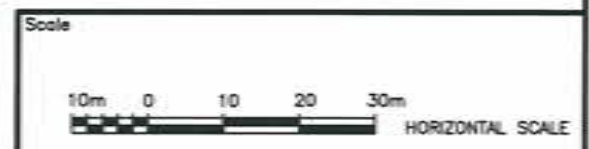
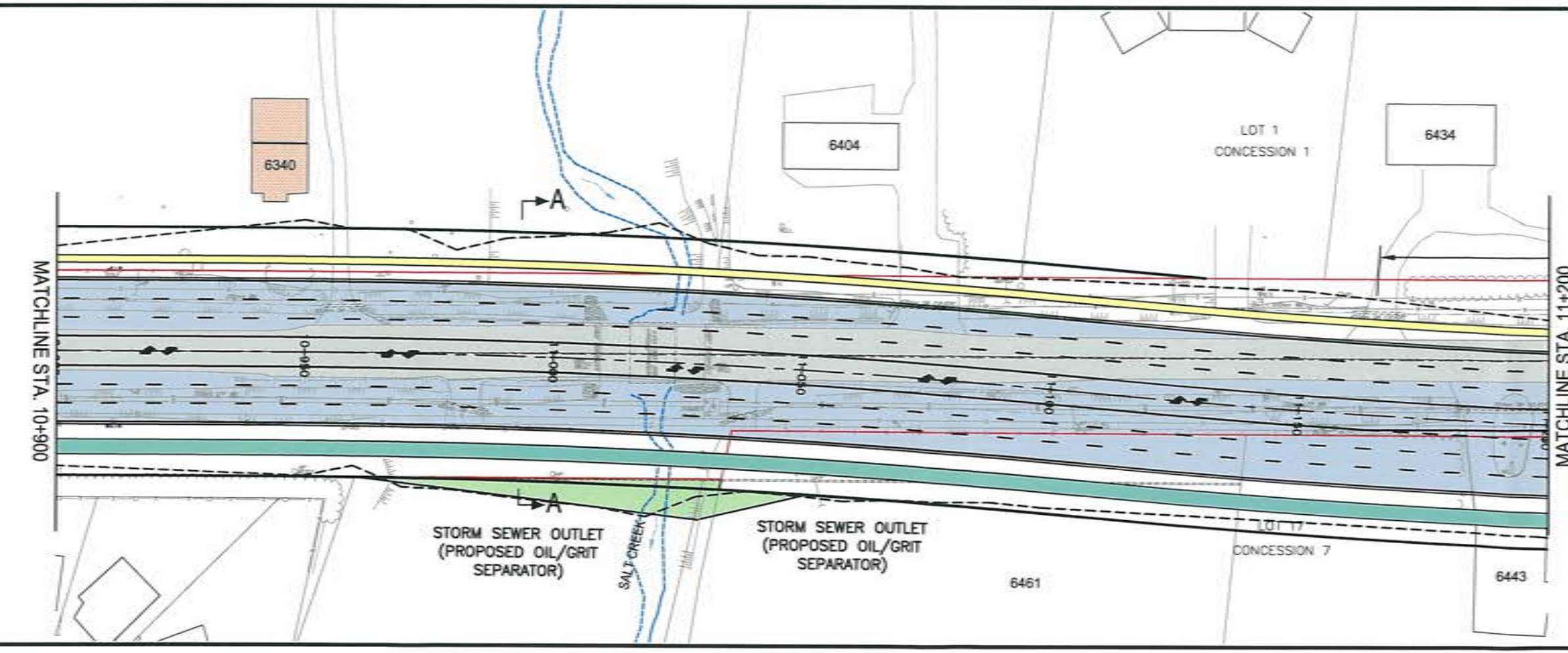
Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 3
 STA. 10+000 TO STA. 10+600

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C3-1
Date 2012-10-17	Project No. 160210480	

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 2012/10/17 10:44 AM by: white_bill (clerk)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



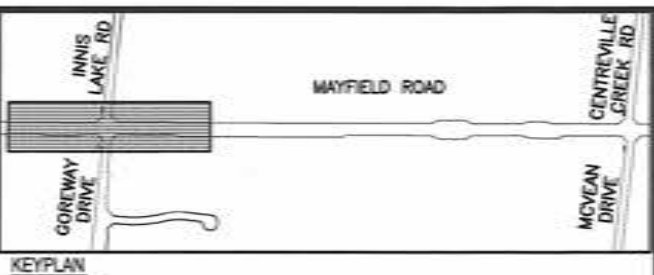
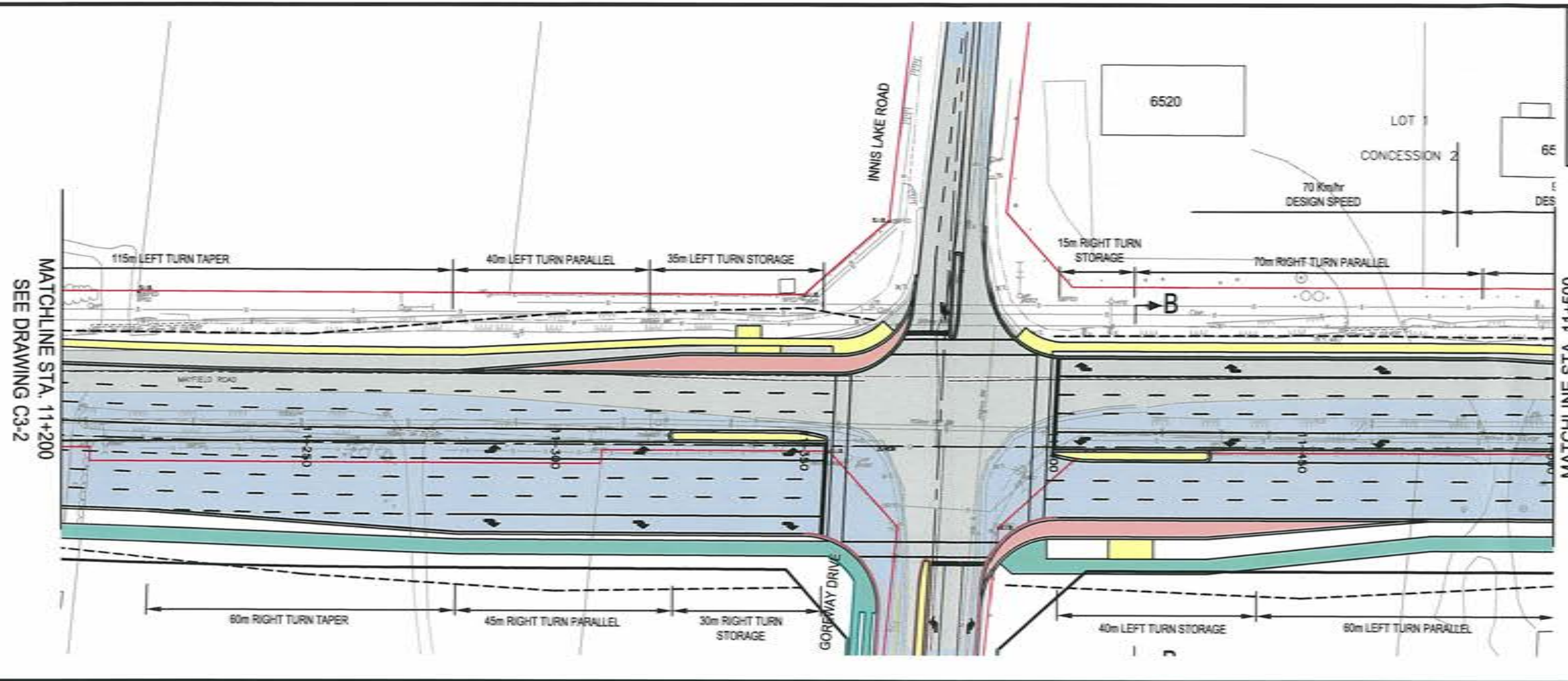
Client
Region of Peel
Working for you

Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 3
 STA. 10+600 TO STA. 11+200

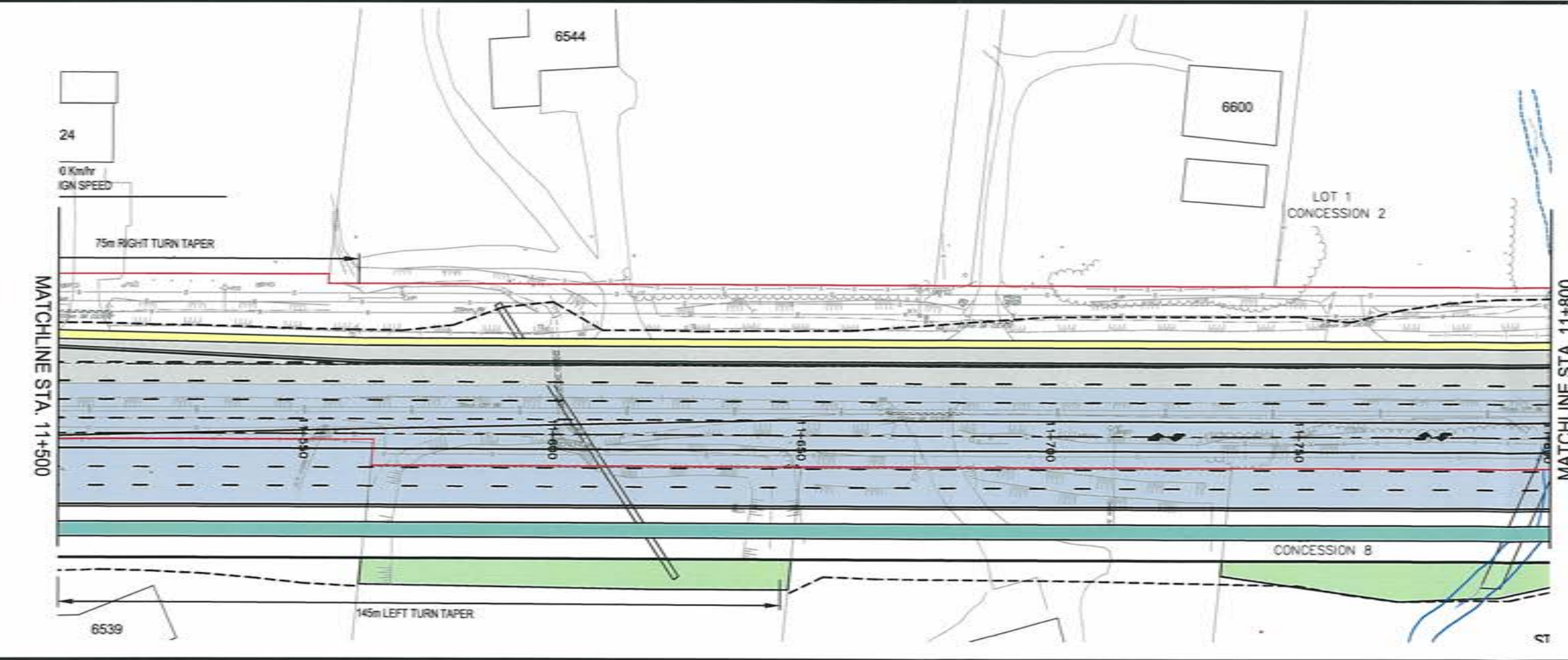
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Date 2012-10-17	Project No. 160210480	

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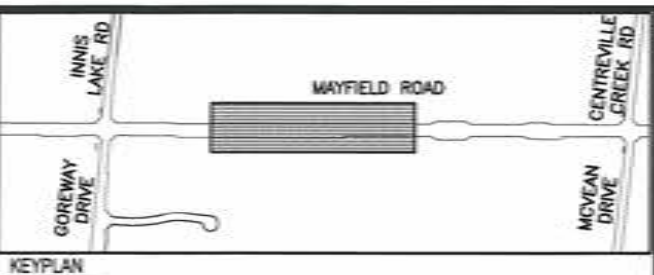
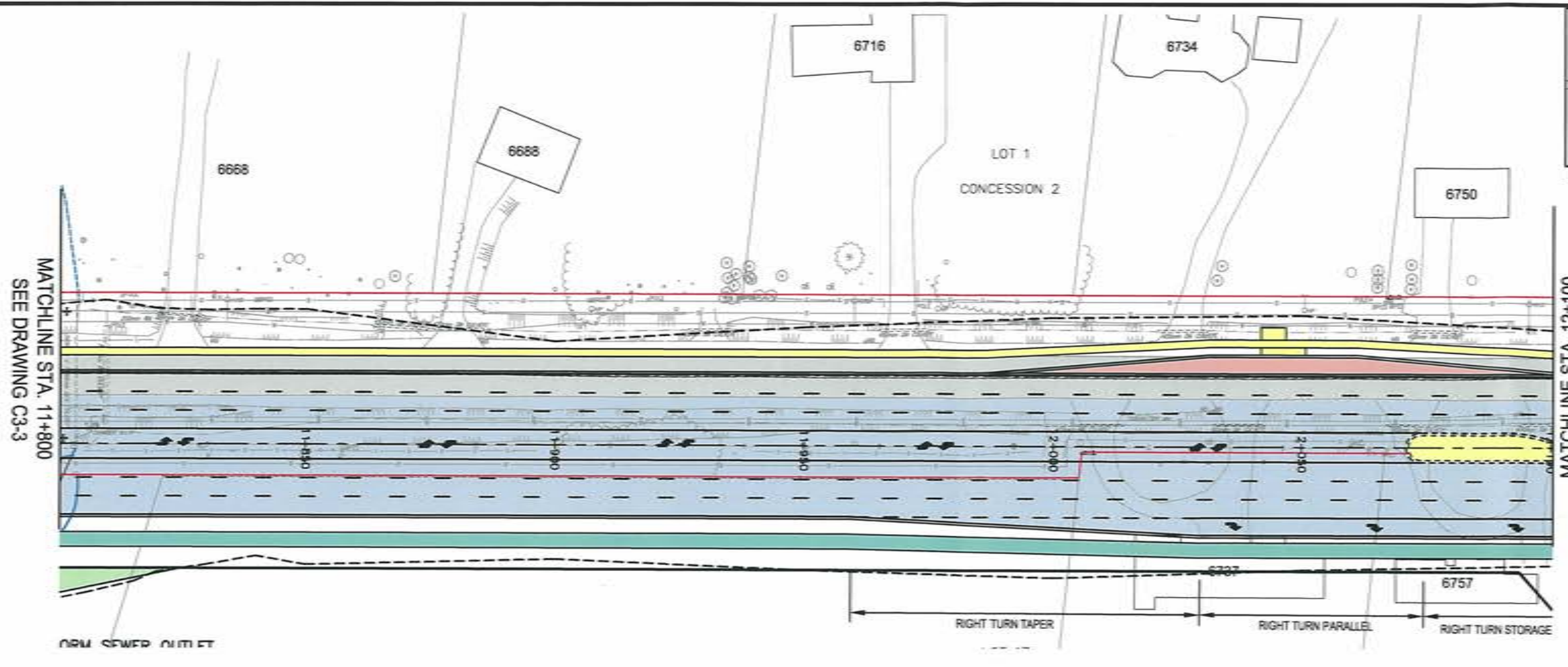
- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



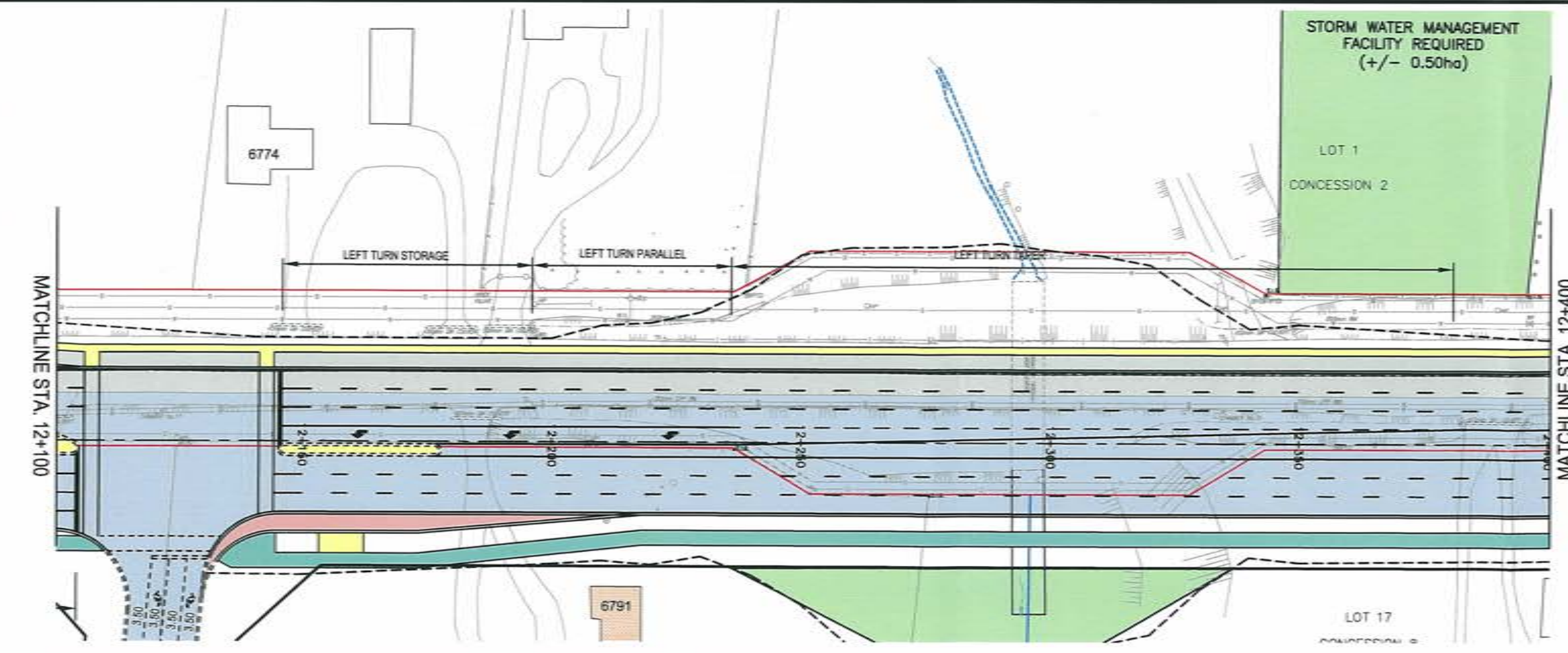
Client
Region of Peel
Working for you

Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 3
 STA. 11+200 TO STA. 11+800

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C3-3
Date 2012-10-17	Project No. 160210480	



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

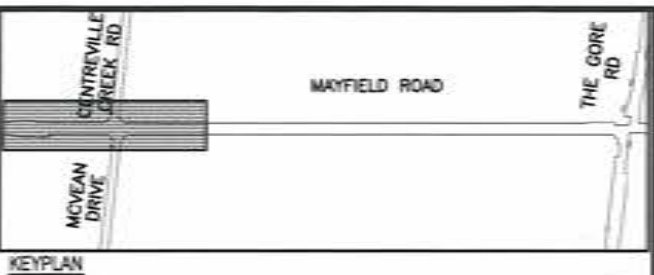
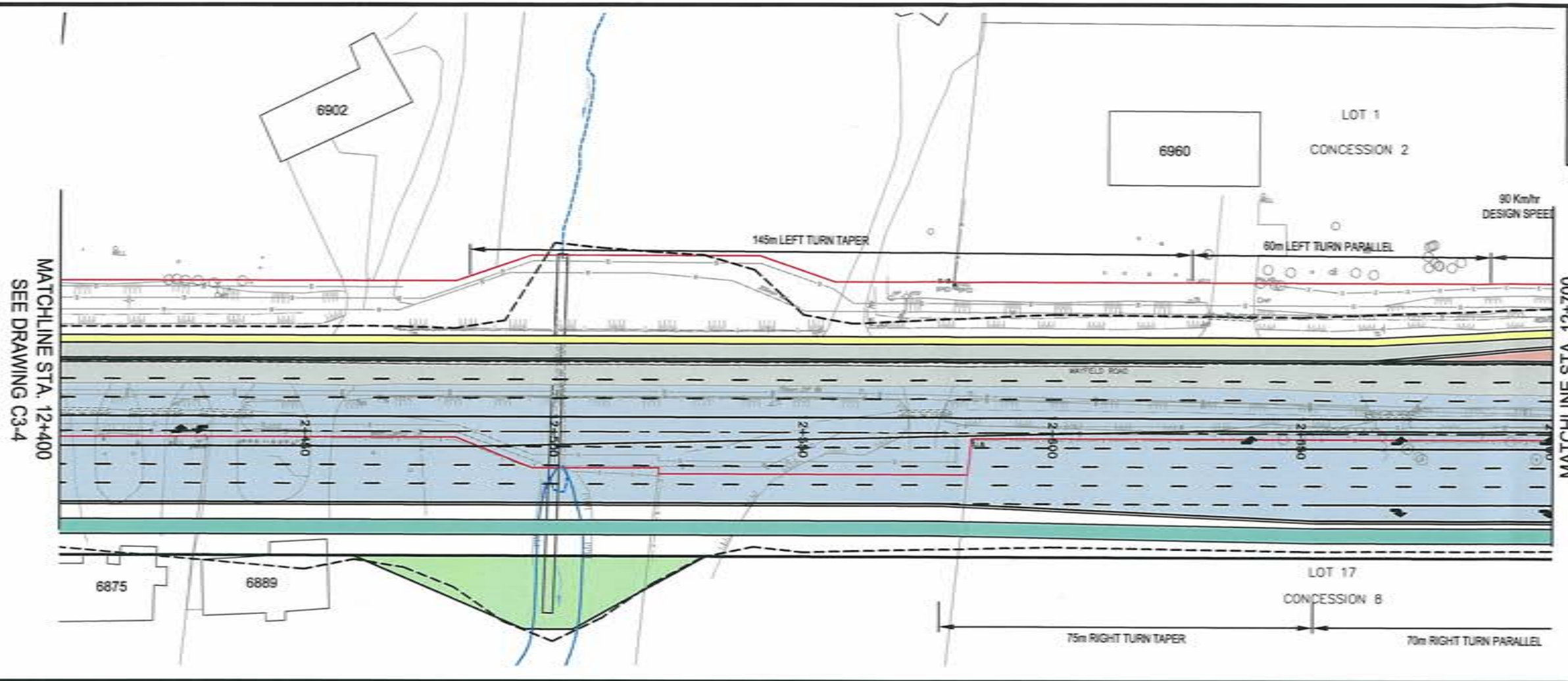


Client
Region of Peel
Working for you

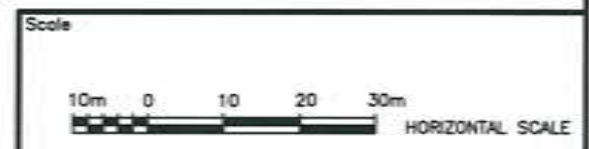
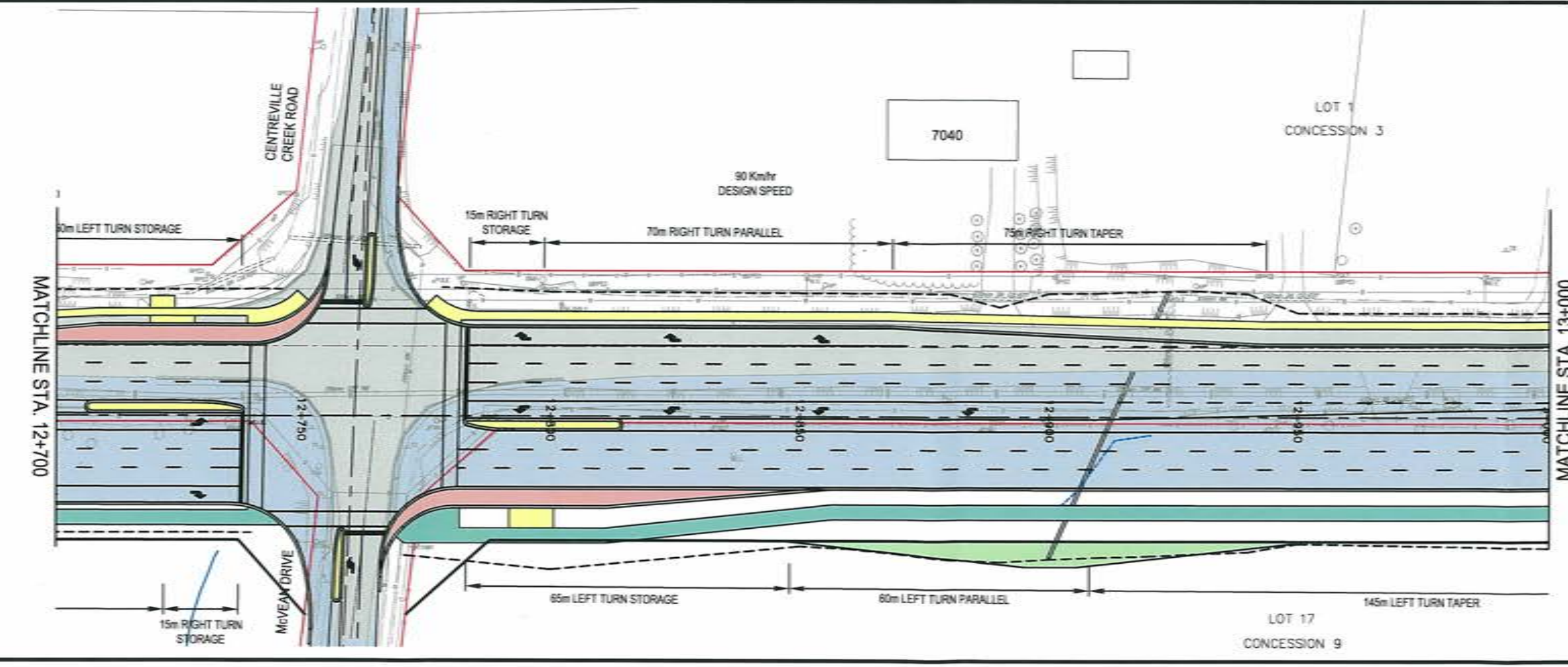
Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 3
 STA. 11+800 TO STA. 12+400

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C3-4
Date 2012-10-17	Project No. 160210480	

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 2012/10/17 10:46 AM bywhite_bill (elchener)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



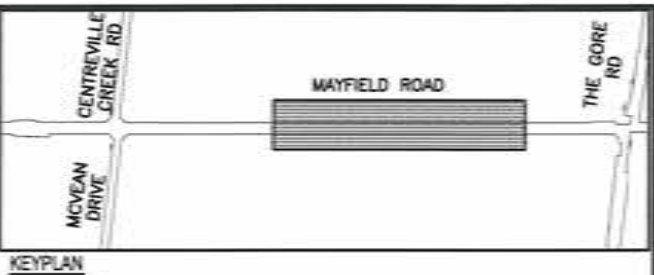
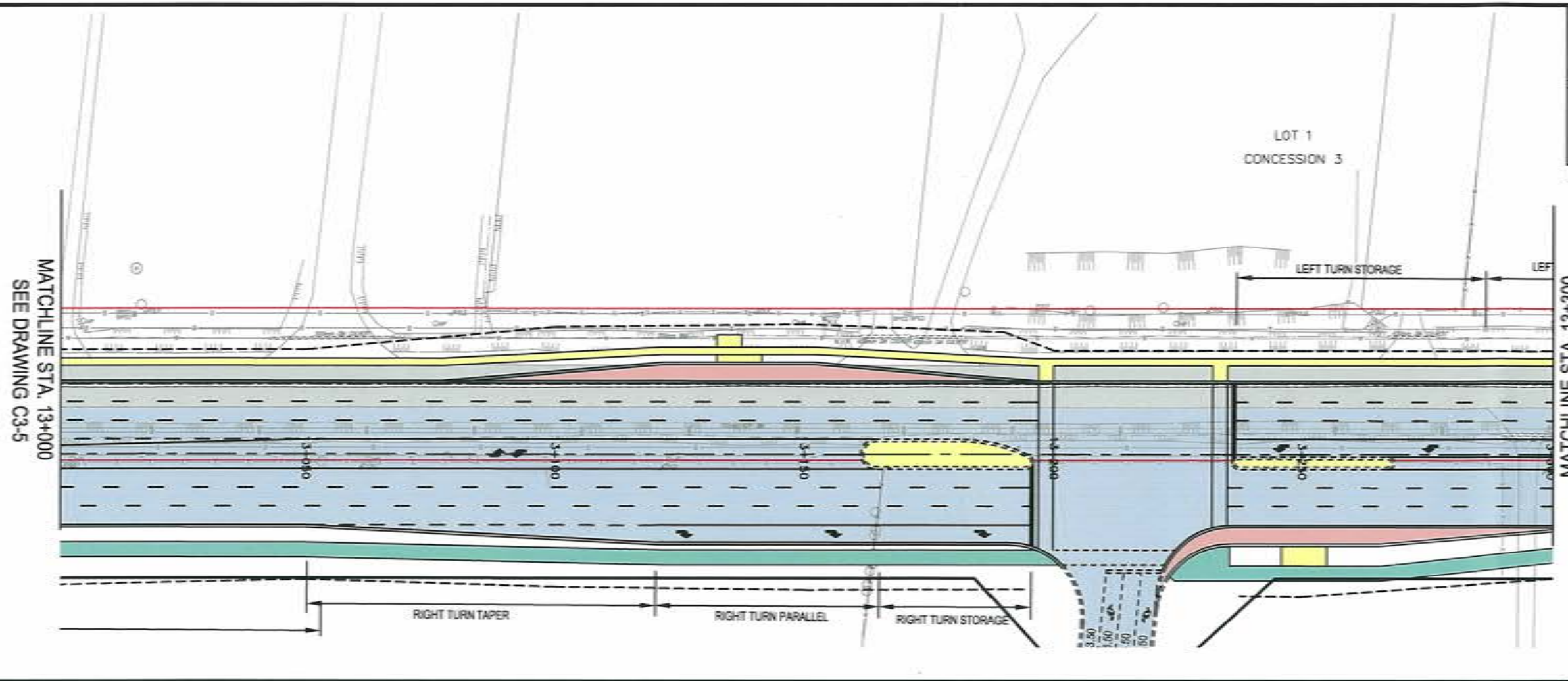
Client
Region of Peel
Working for you

Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 3
 STA. 12+400 TO STA. 13+000

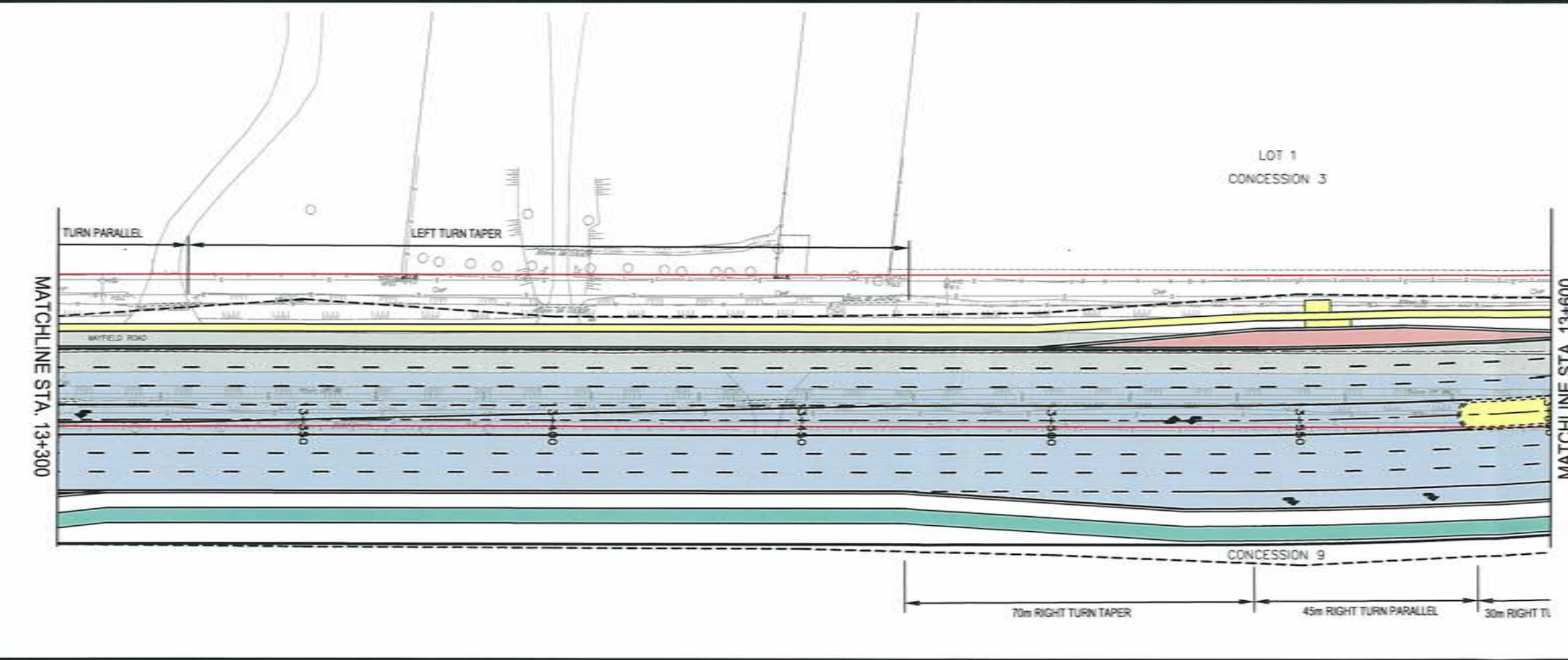
Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C3-5
Date 2012-10-17	Project No. 160210480	

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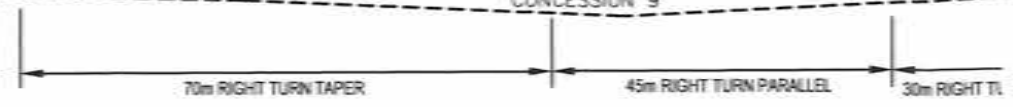
- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

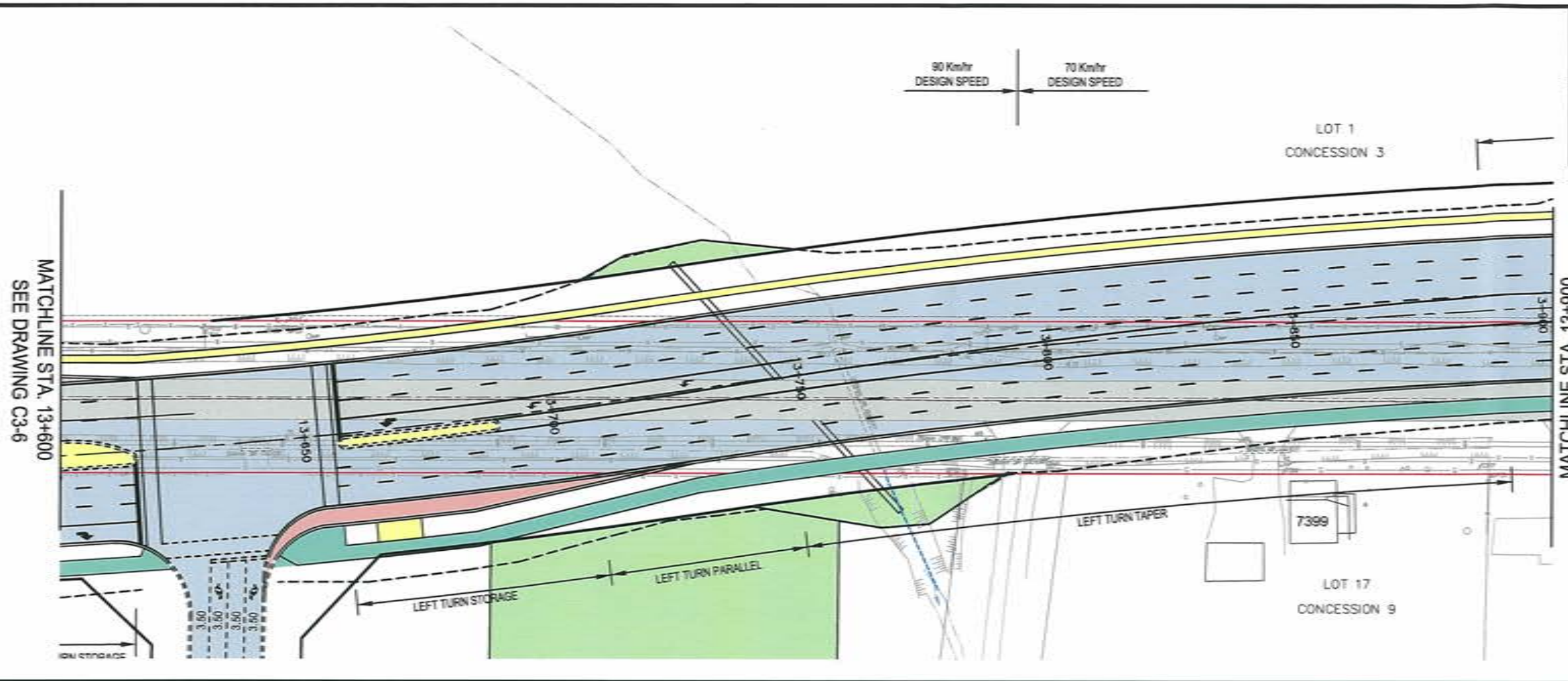
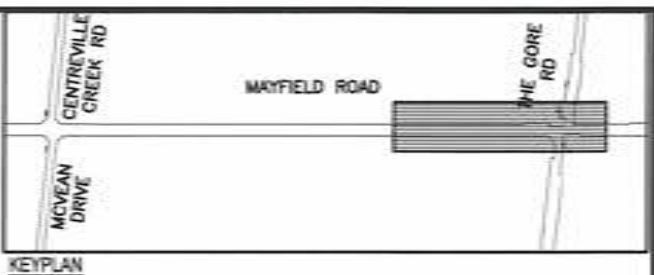


Client
Region of Peel
Working for you

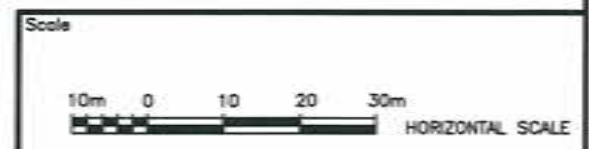
Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 3
 STA. 13+000 TO STA. 13+600

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C3-6
Date 2012-10-17	Project No. 160210480	





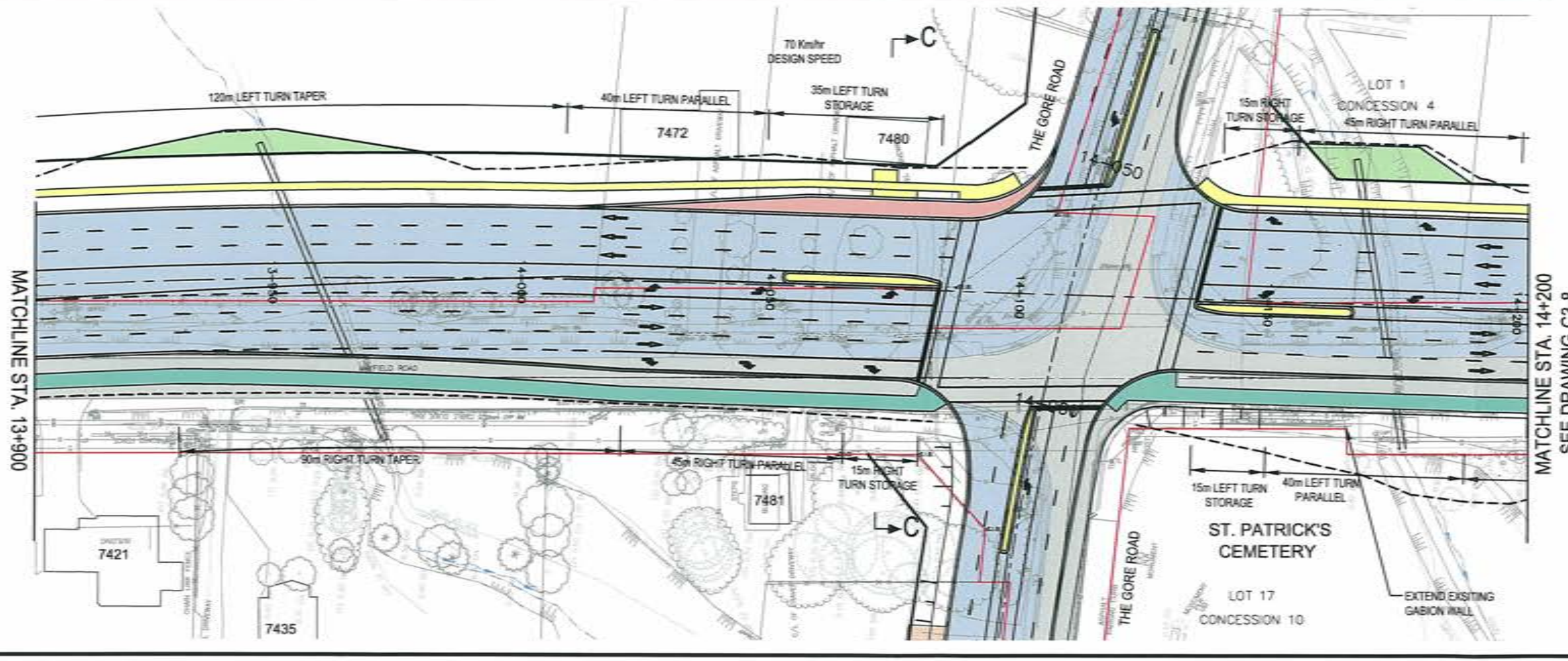
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- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



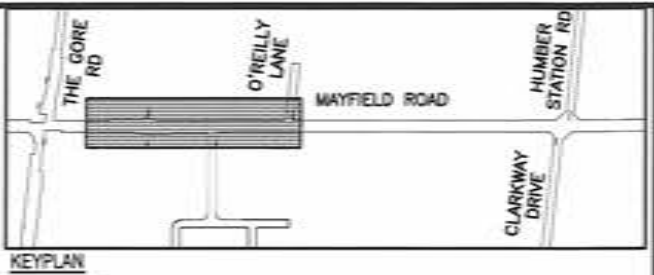
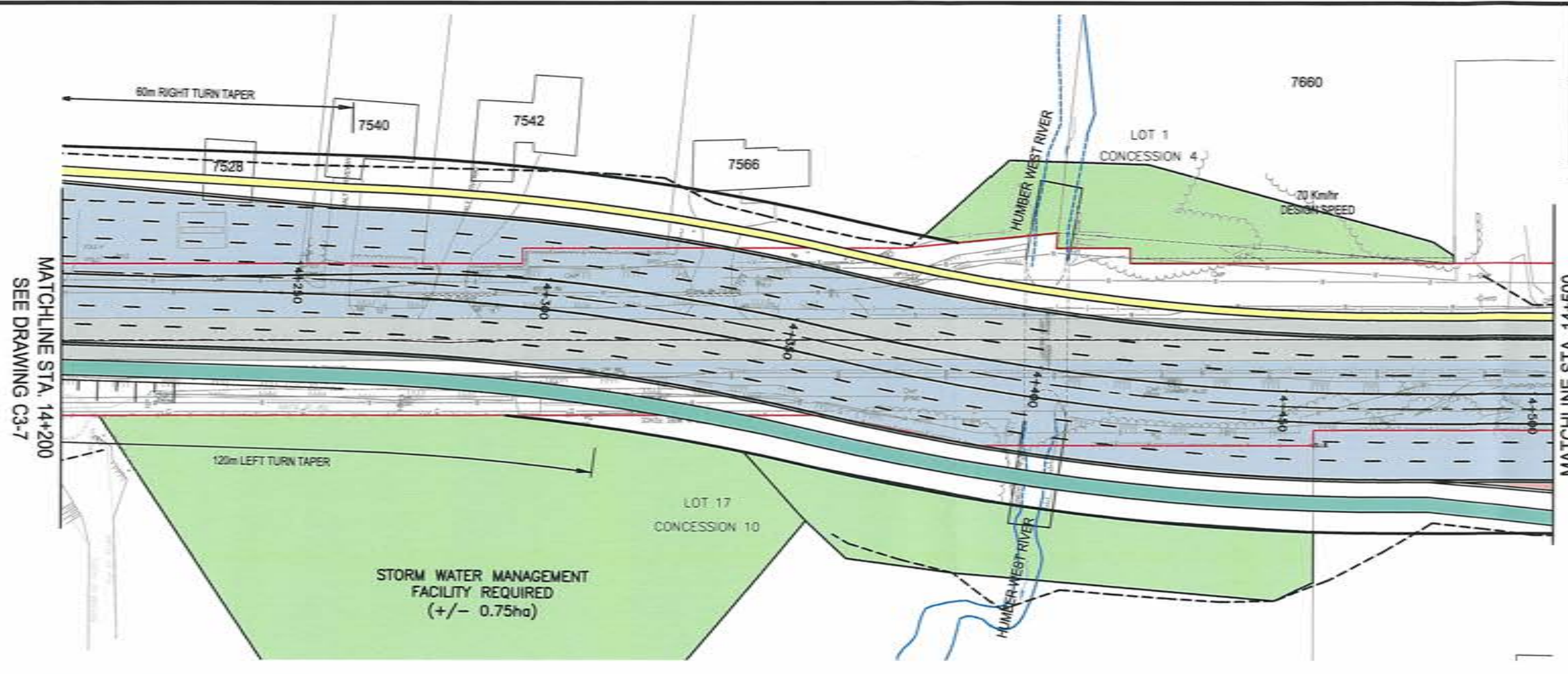
Client
Region of Peel
Working for you

Drawing Title
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 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 3
 STA. 13+600 TO STA. 14+200

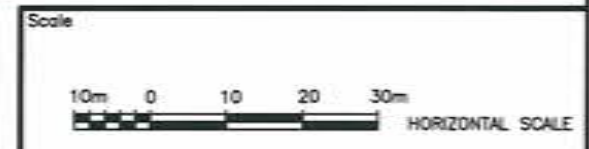
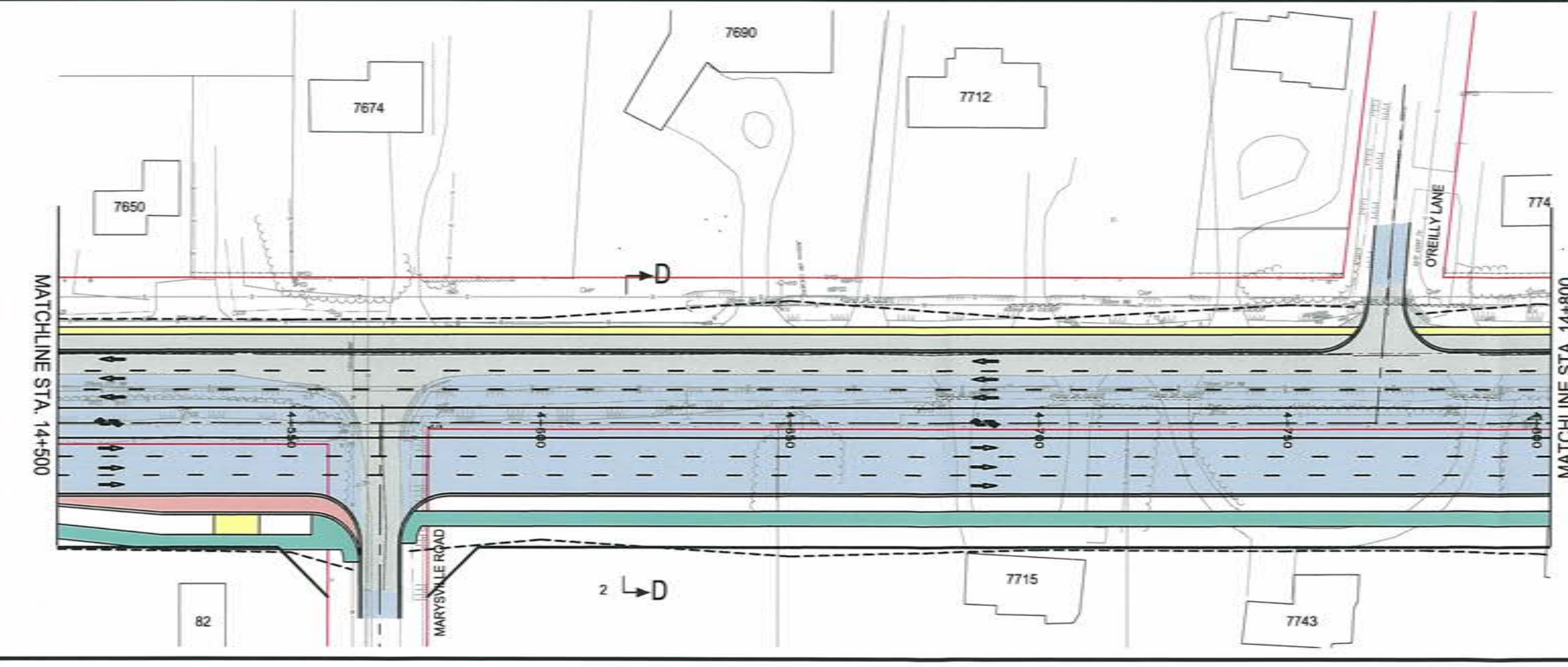
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Date 2012-10-17	Project No. 160210480	



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- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



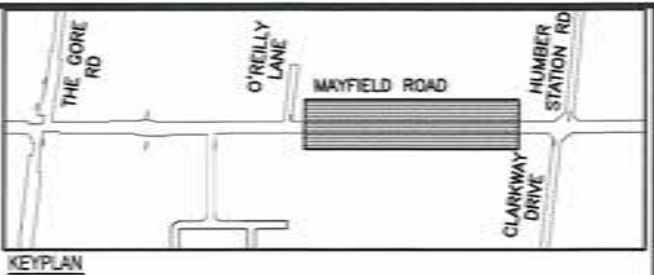
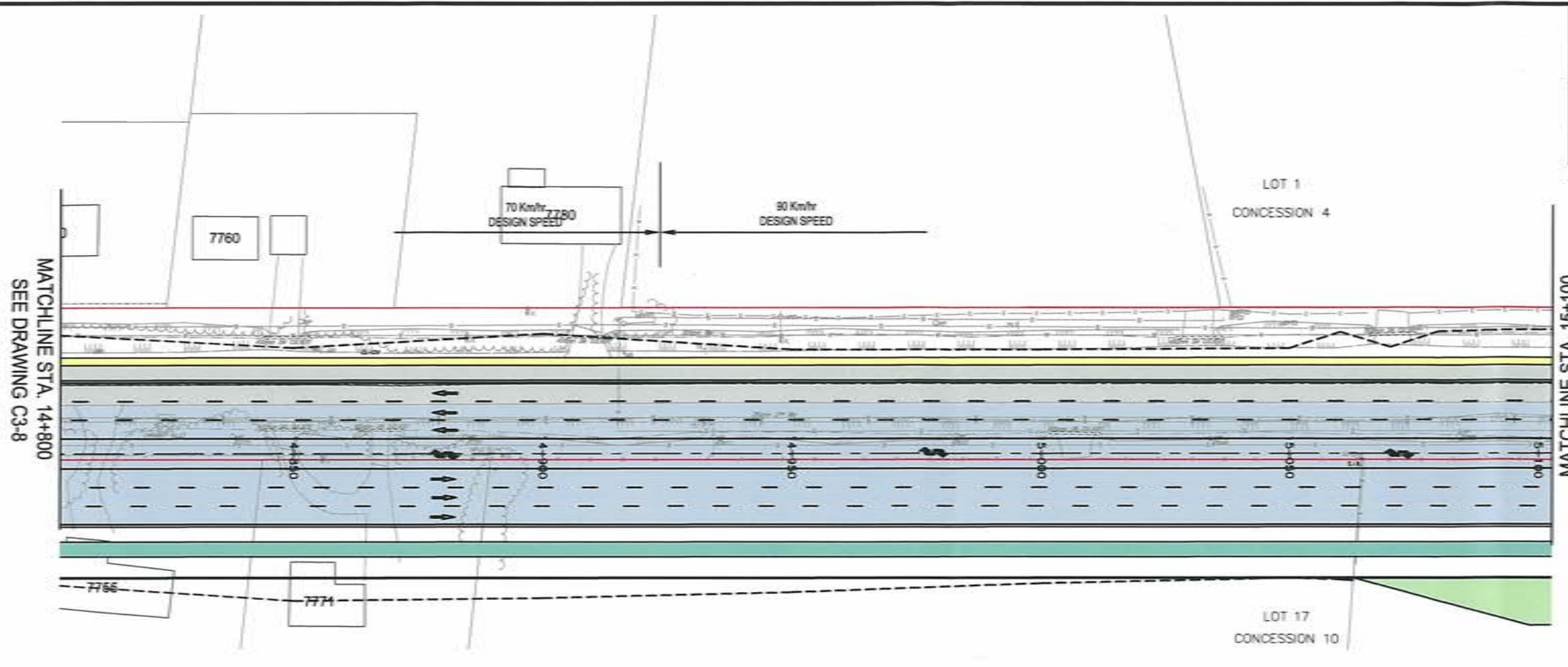
Client
Region of Peel
Working for you

Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 3
 STA. 14+200 TO STA. 14+800

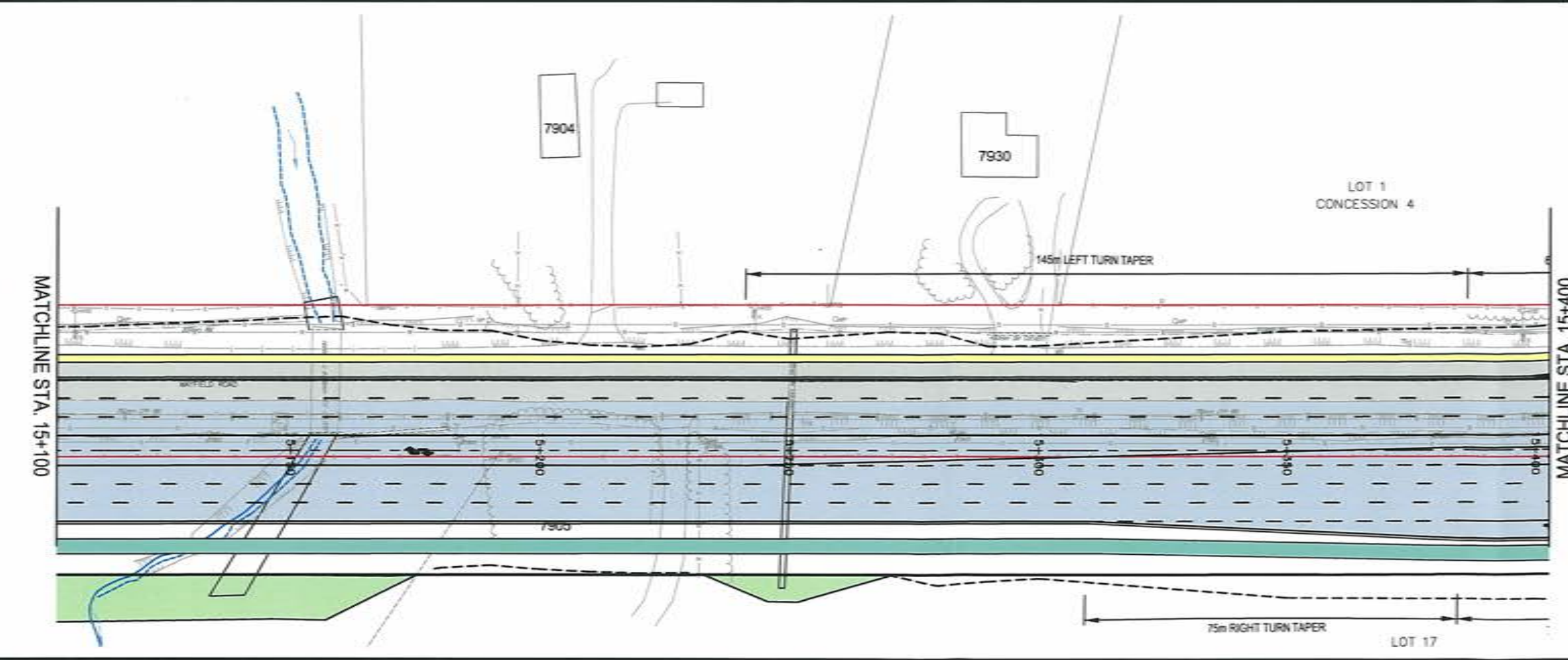
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Date 2012-10-17	Project No. 160210480	

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- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

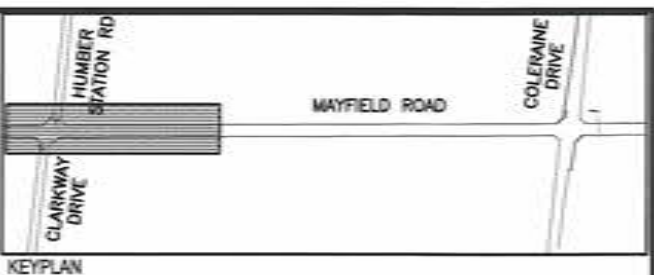
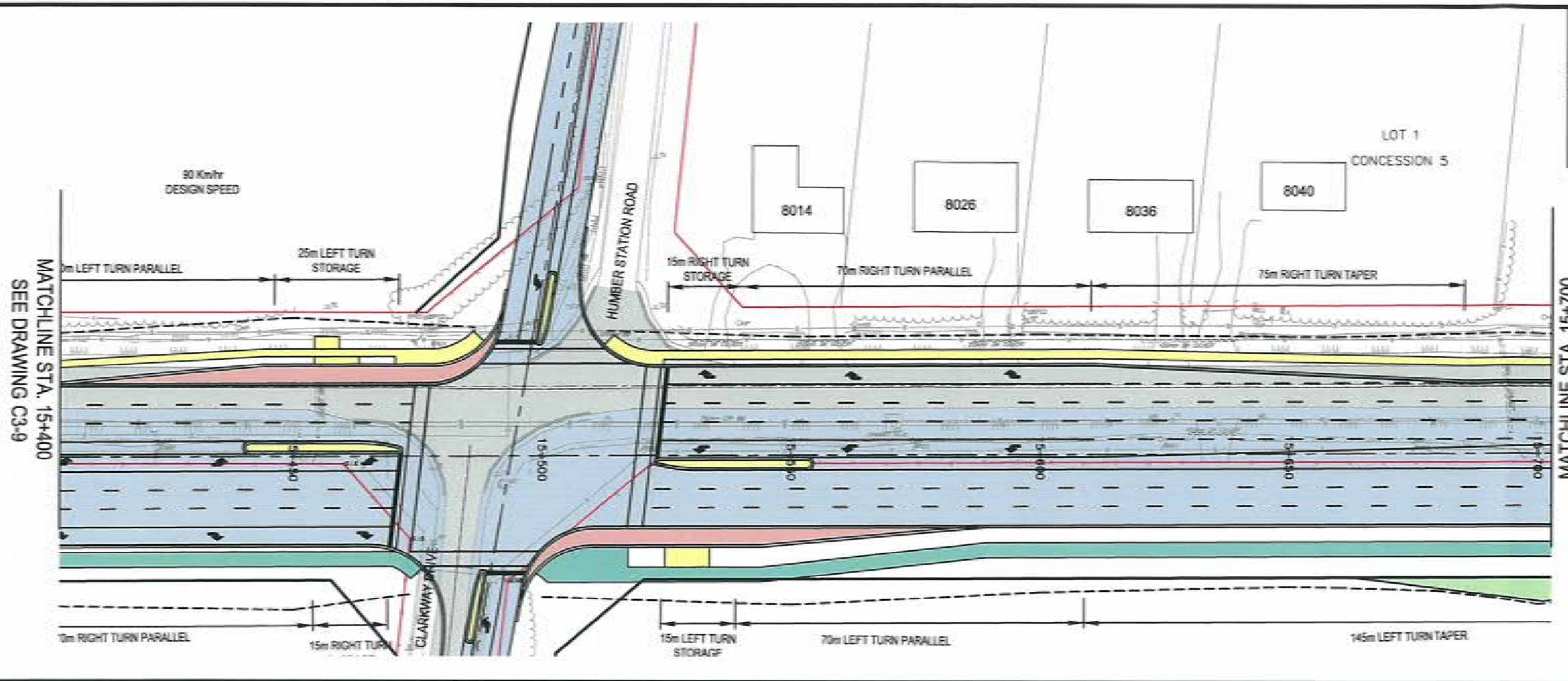


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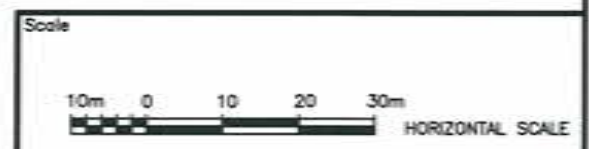
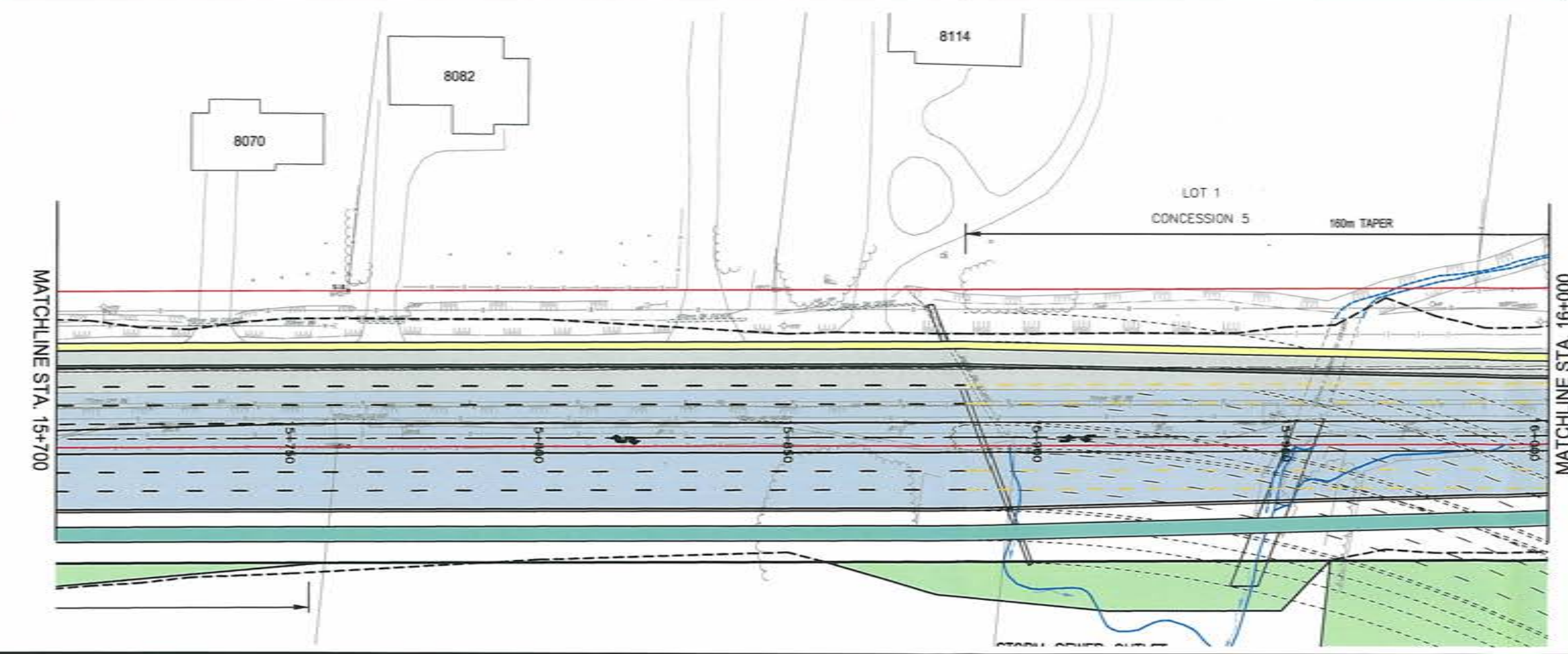
Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 3
 STA. 14+800 TO STA. 15+400

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C3-9
Date 2012-10-17	Project No. 160210480	

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 2012/10/17 10:30 AM by: white, bill (ditchener)



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULT-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

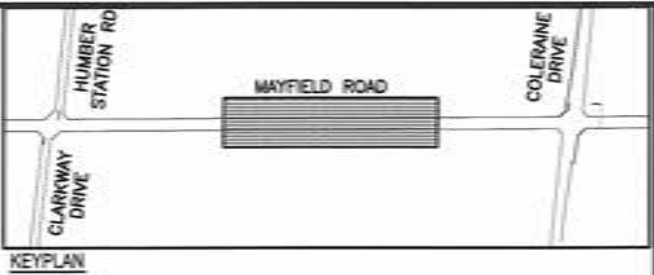
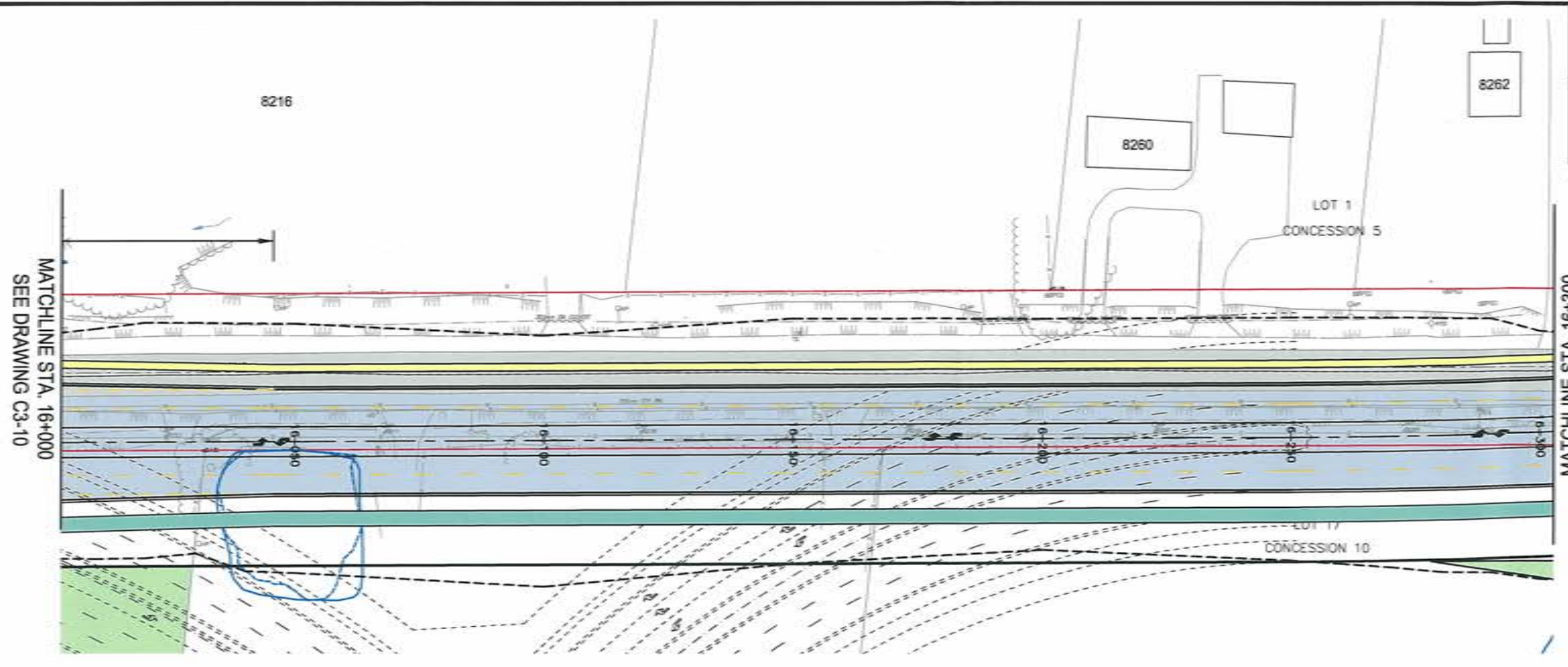


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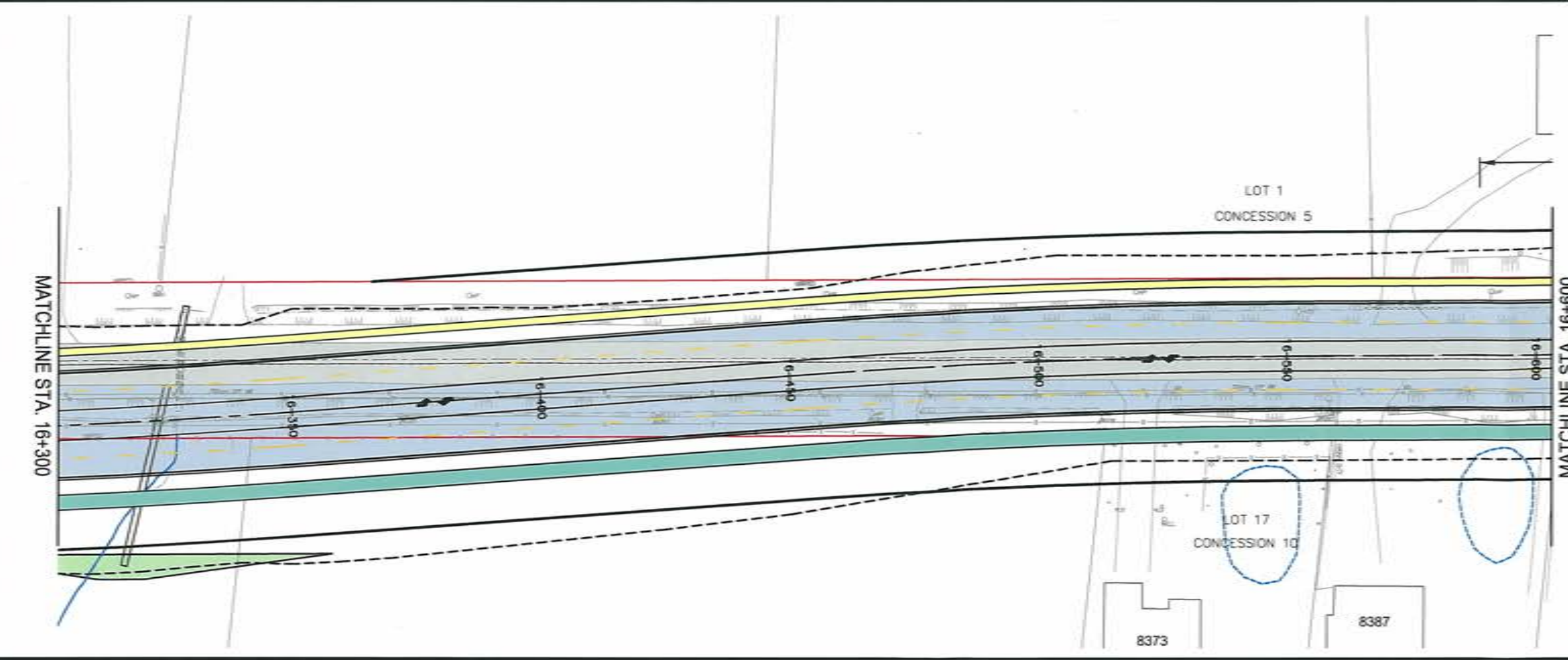
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 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 3
 STA. 15+400 TO STA. 16+000

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C3-10
Date 2012-10-17	Project No. 160210480	

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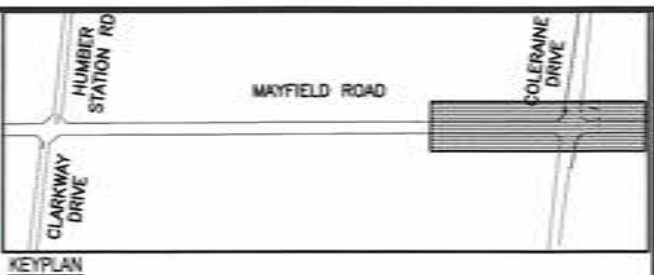
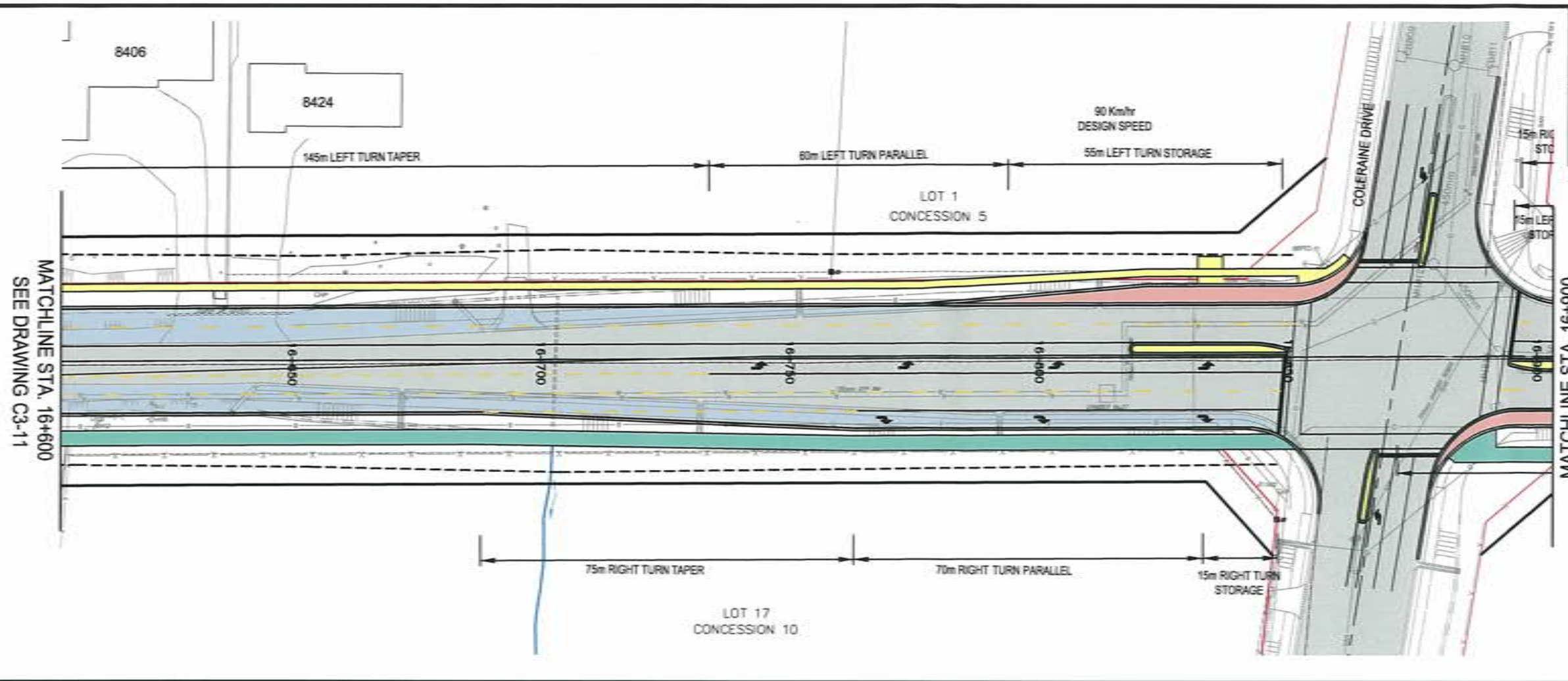
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 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



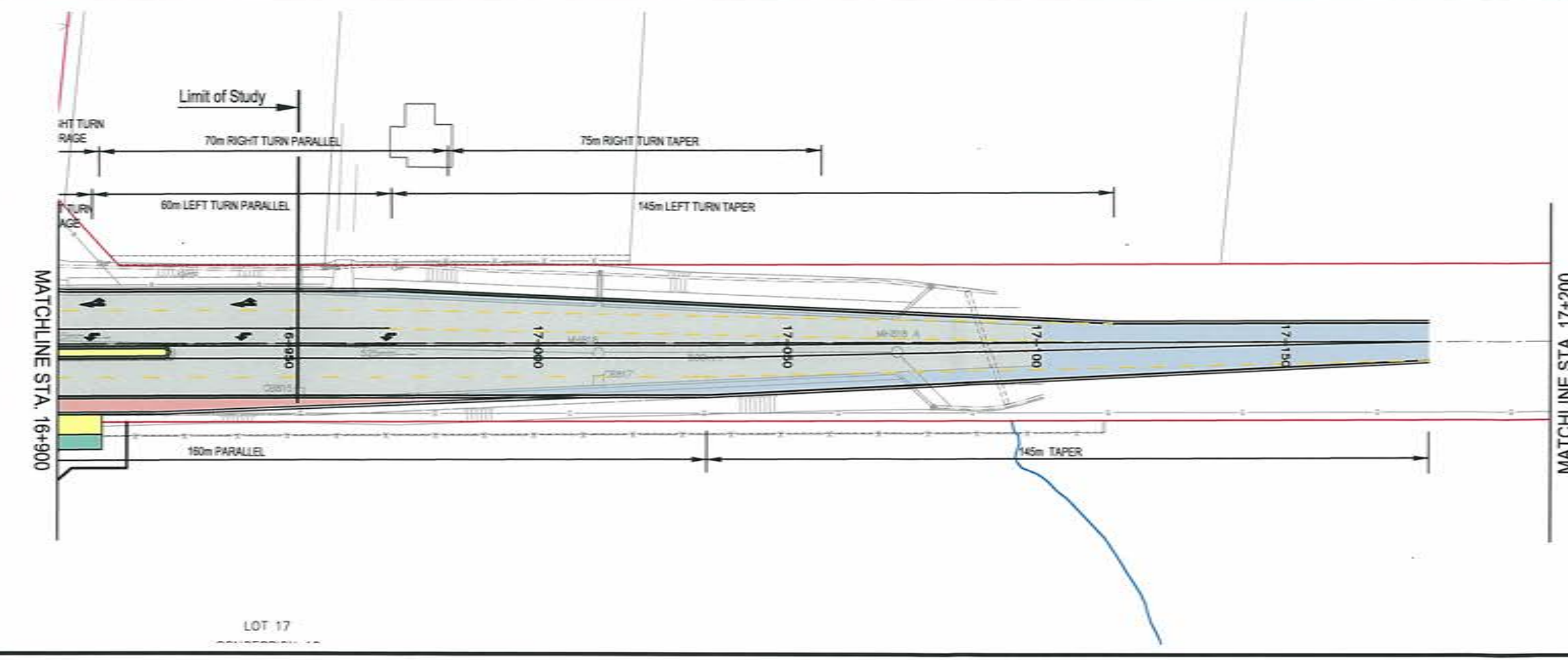
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Region of Peel
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Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 3
 STA. 16+000 TO STA. 16+600

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C3-11
Date 2012-10-17	Project No. 160210480	



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
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 - BUILT HERITAGE FEATURE



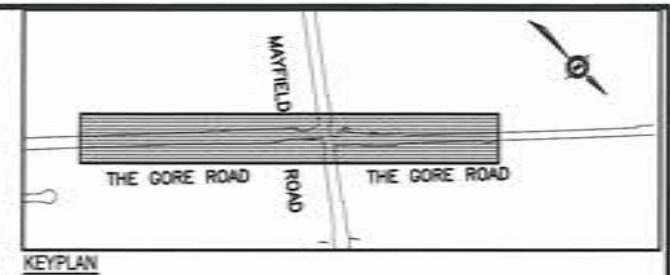
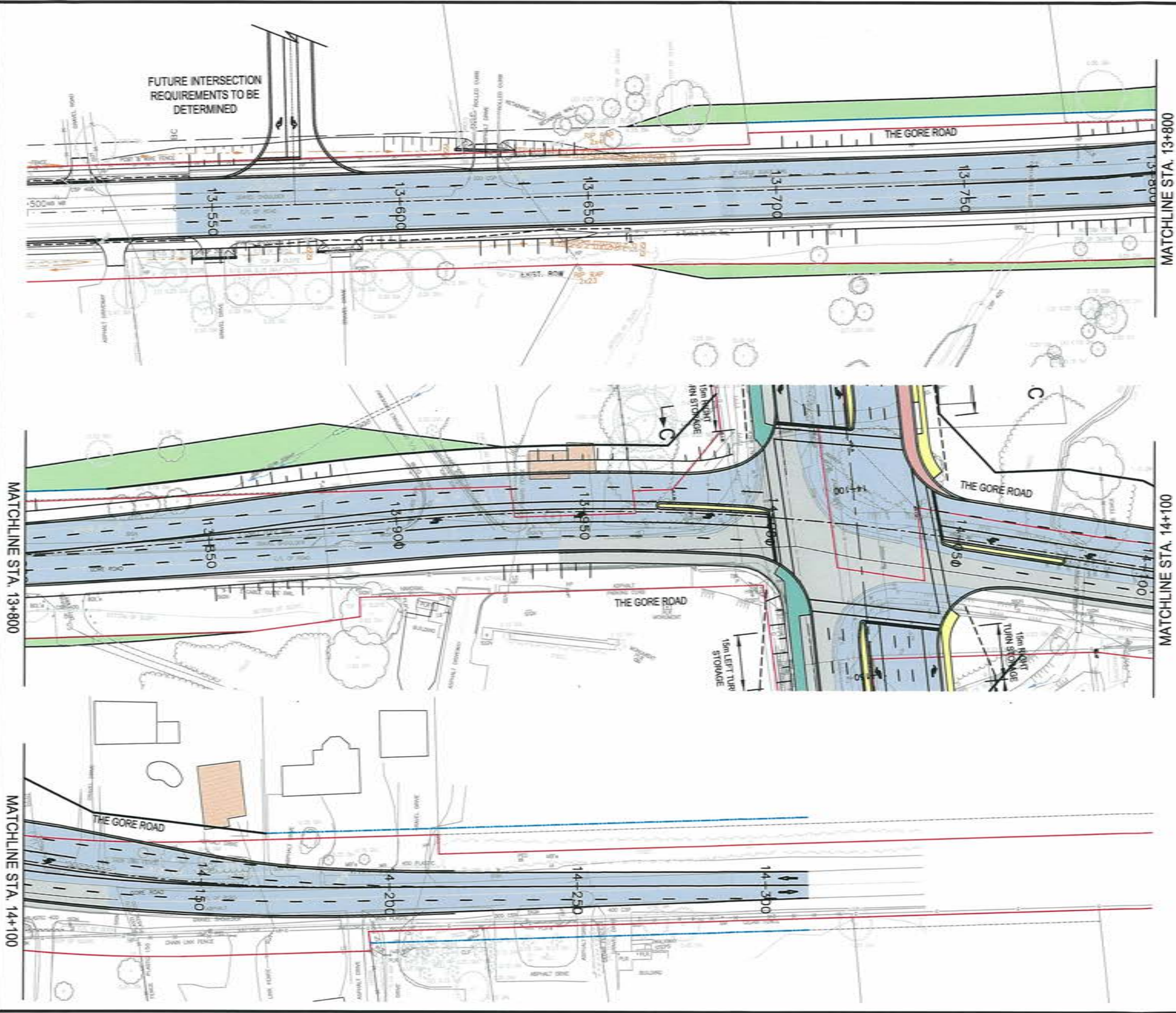
Client
Region of Peel
Working for you

Drawing Title
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 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 3
 STA. 16+600 TO STA. 17+200

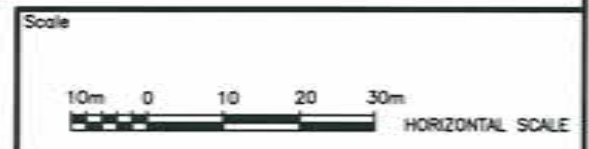
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Date 2012-10-17	Project No. 160210480	

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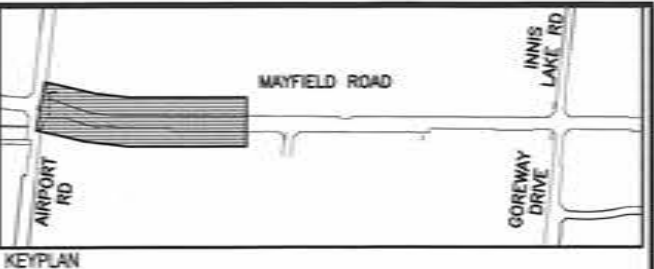
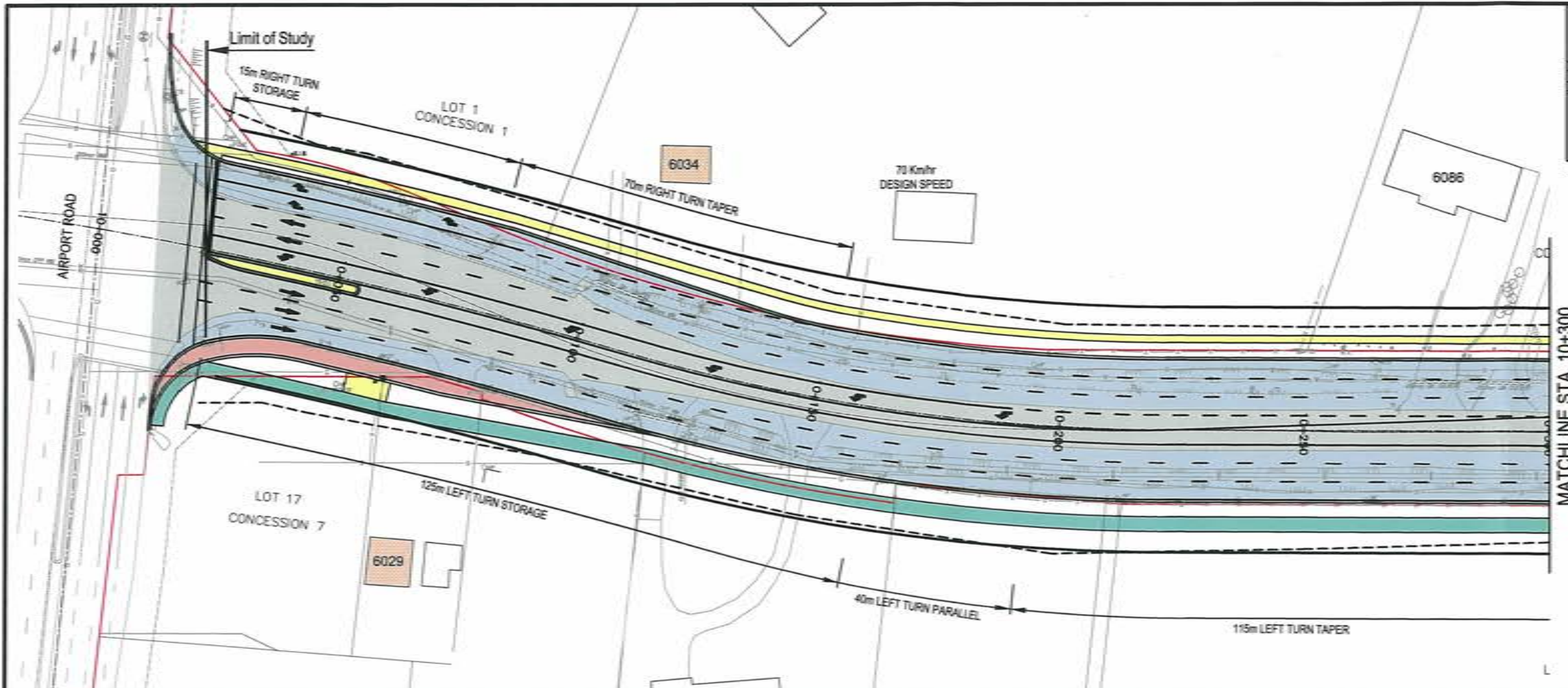
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 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE



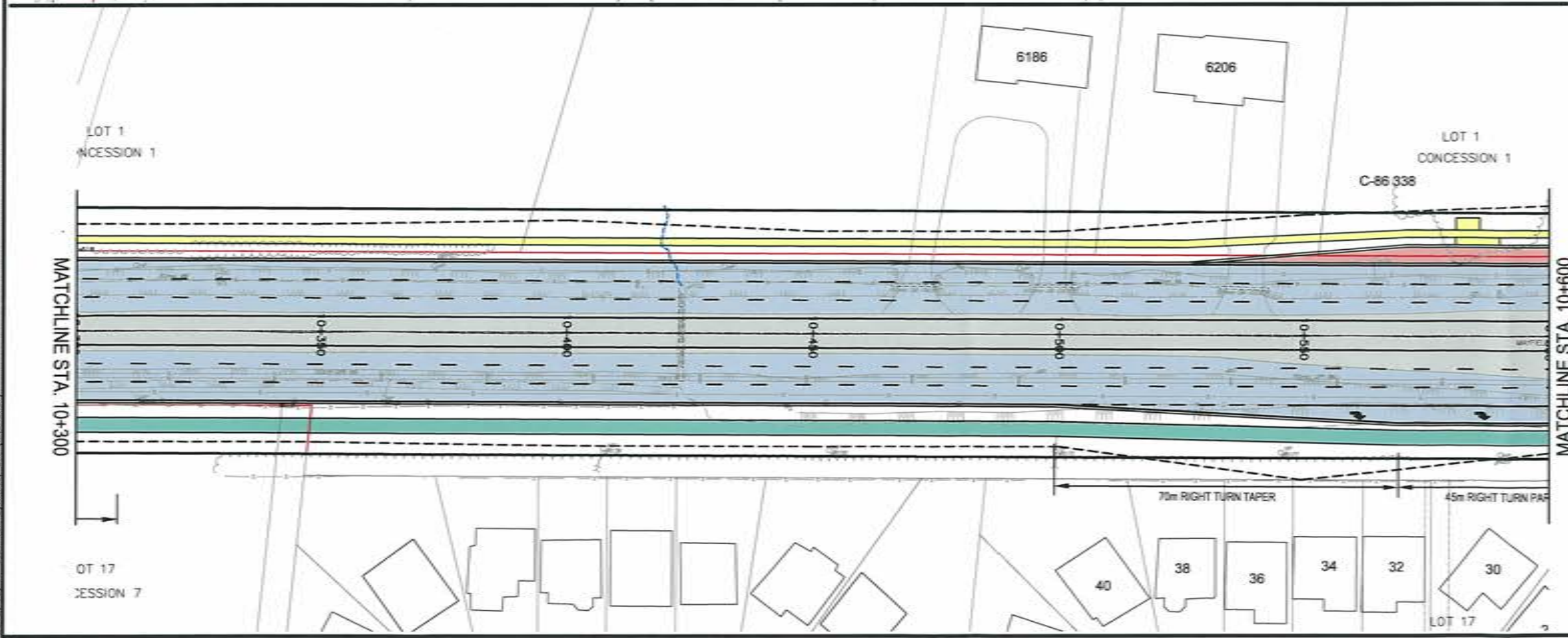
Client
Region of Peel
Working for you

Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 3
 STA. 13+550 TO STA. 14+700

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C3-13
Date 2012-10-17	Project No. 160210450	



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - █ EXISTING PAVEMENT
 - █ PROPOSED PAVEMENT
 - █ PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - █ PROPOSED 3.0m MULTI-USE PATHWAY
 - █ PROPOSED CONC. BUS BAY
 - █ PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - █ BUILT HERITAGE FEATURE



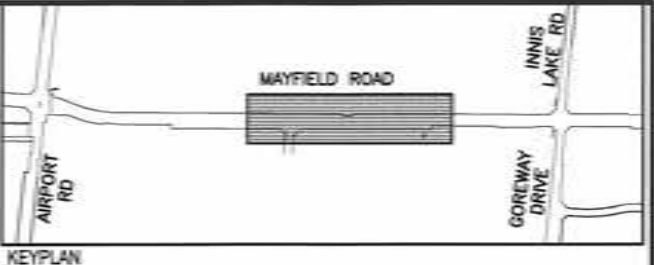
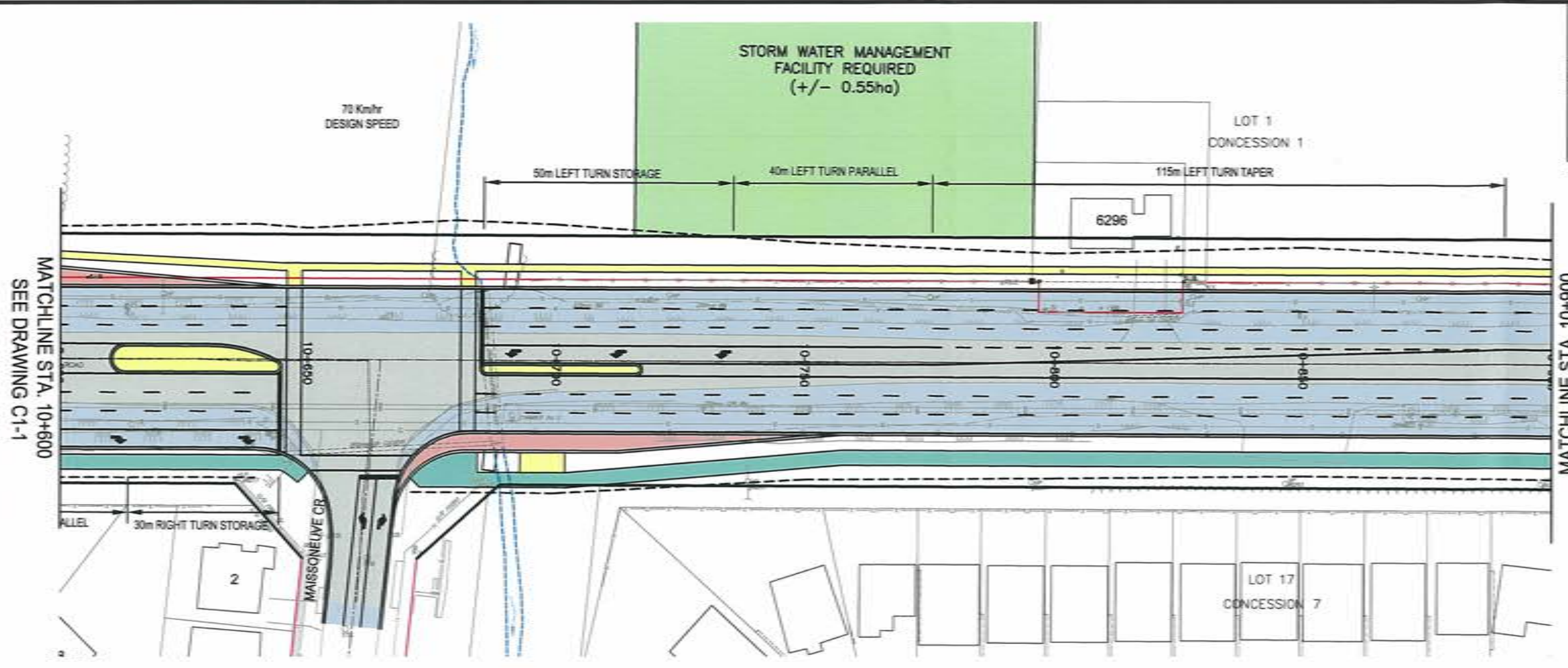
Region of Peel
Working for you

Drawing Title
MAYFIELD ROAD
AIRPORT ROAD TO COLERAINE DRIVE
CLASS EA STUDY REPORT
ALTERNATIVE CONCEPTS
CONCEPT 1
STA. 10+000 TO STA. 10+600

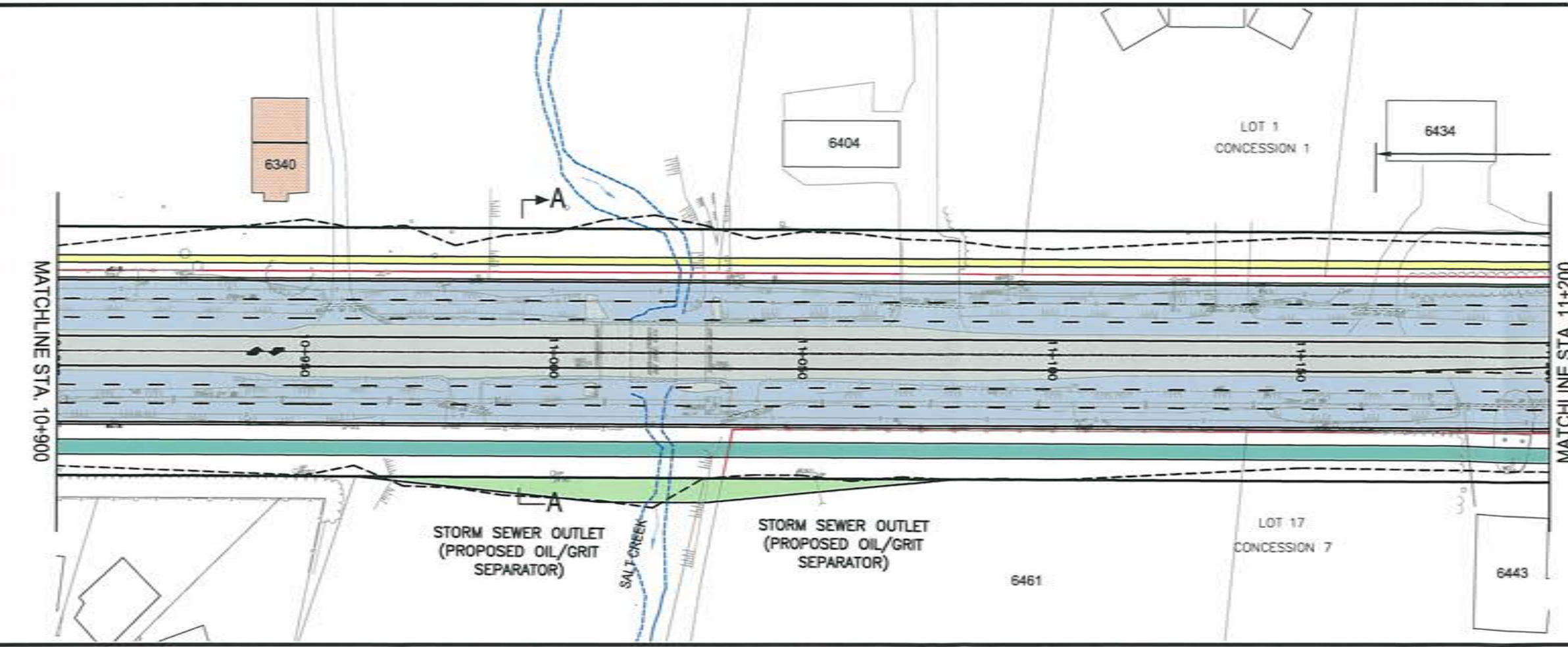
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Date 2012-10-17	Project No. 160210480	

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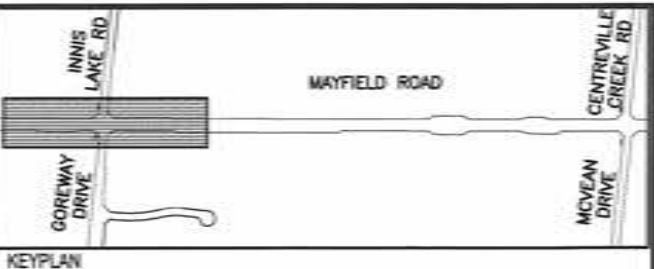
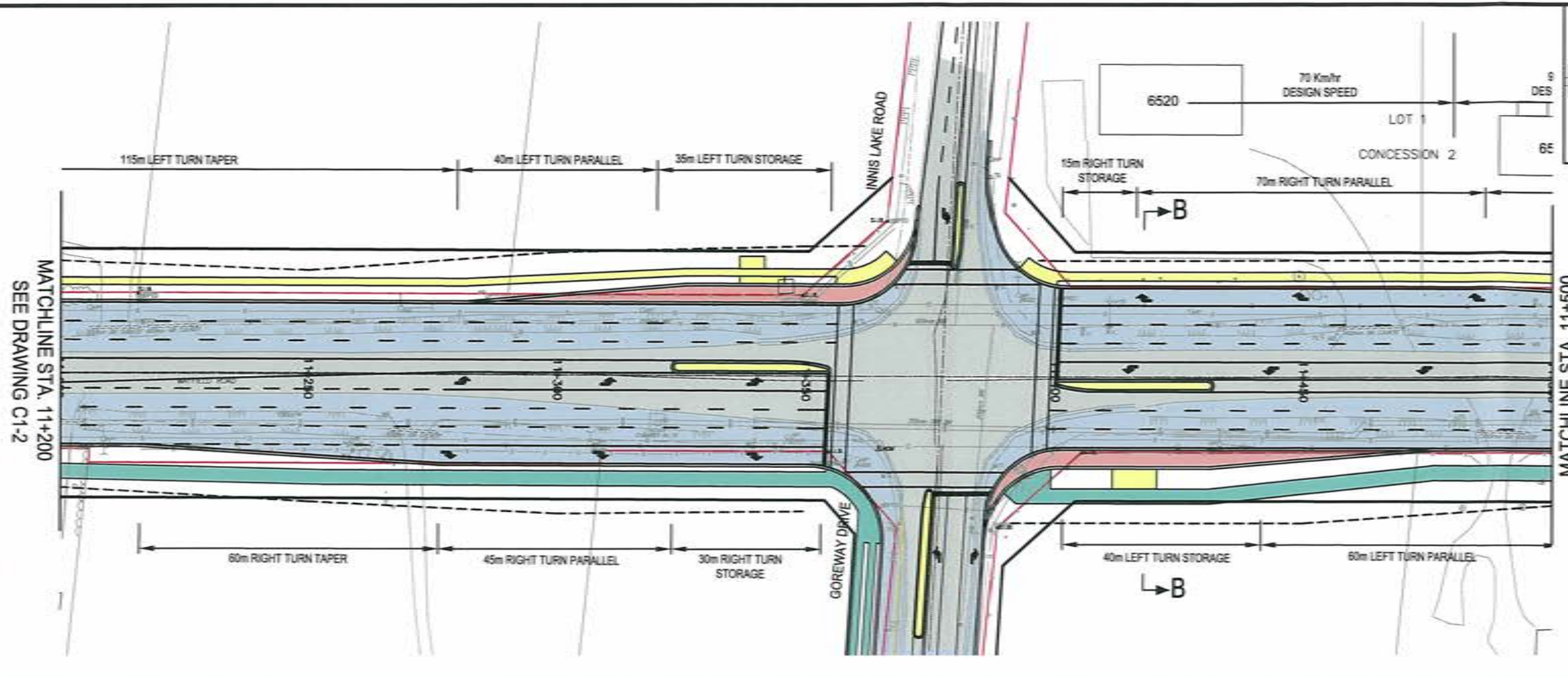
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 - - - APPROXIMATE GRADING LIMIT
 - █ EXISTING PAVEMENT
 - █ PROPOSED PAVEMENT
 - █ PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - █ PROPOSED 3.0m MULTI-USE PATHWAY
 - █ PROPOSED CONC. BUS BAY
 - █ PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - █ BUILT HERITAGE FEATURE



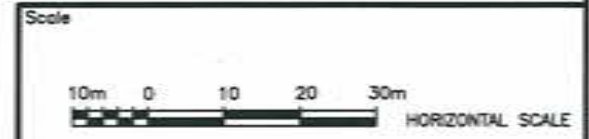
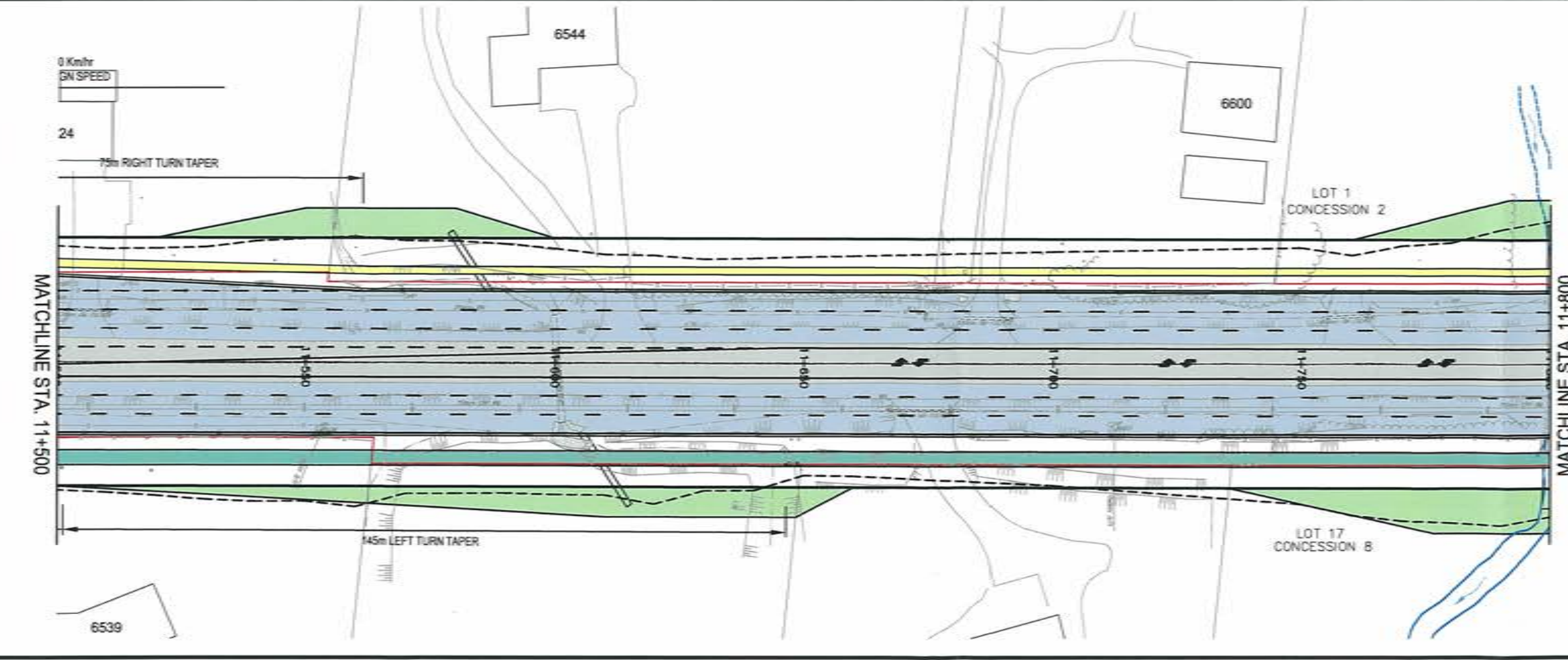
Client
Region of Peel
 Working for you

Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 1
 STA. 10+600 TO STA. 11+200

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C1-2
Date 2012-10-17	Project No. 160210480	



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTUSE PATHWAY
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 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

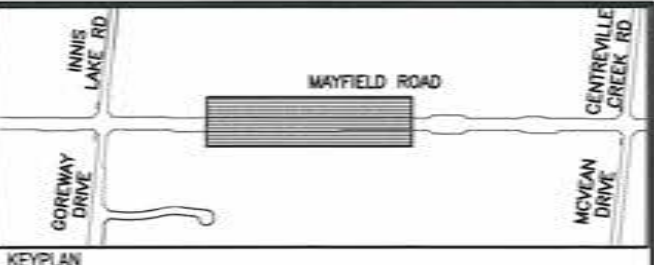
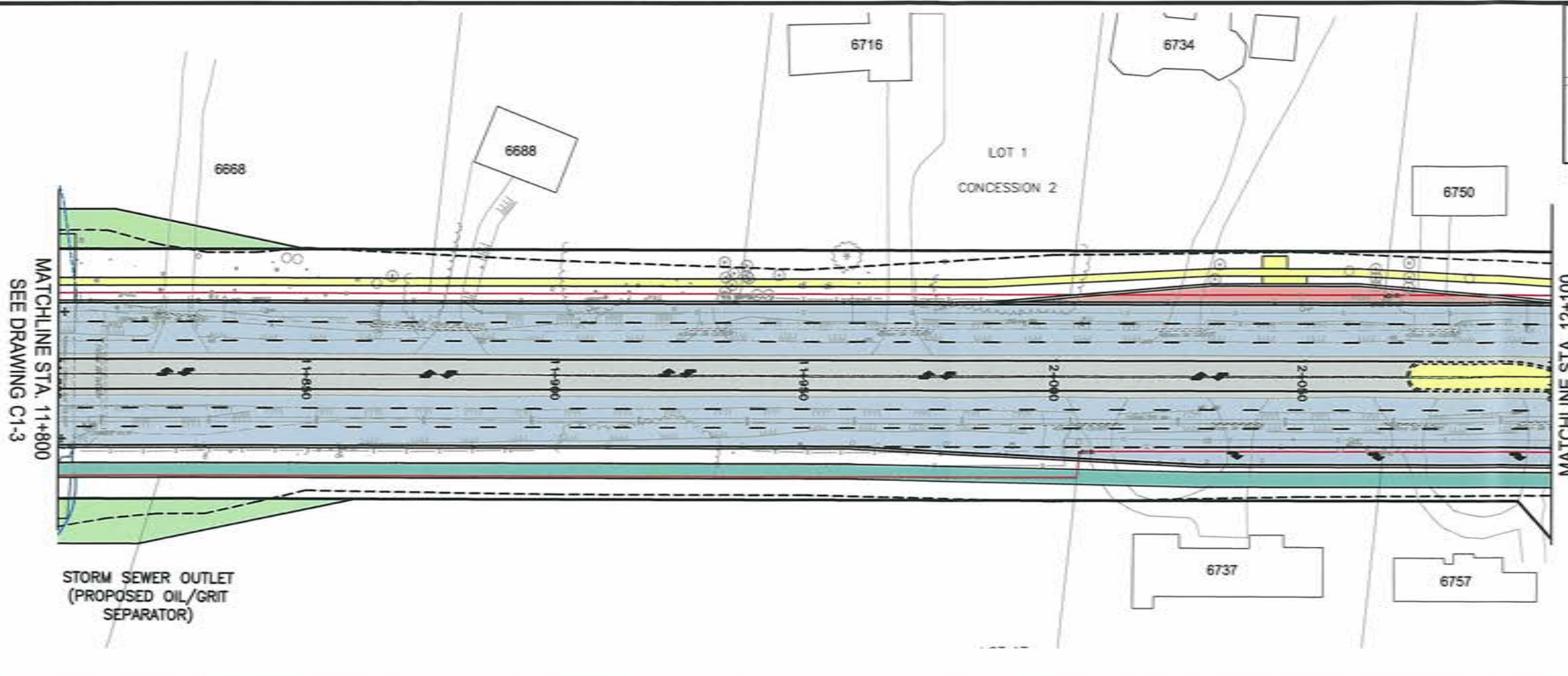


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Region of Peel
Working for you

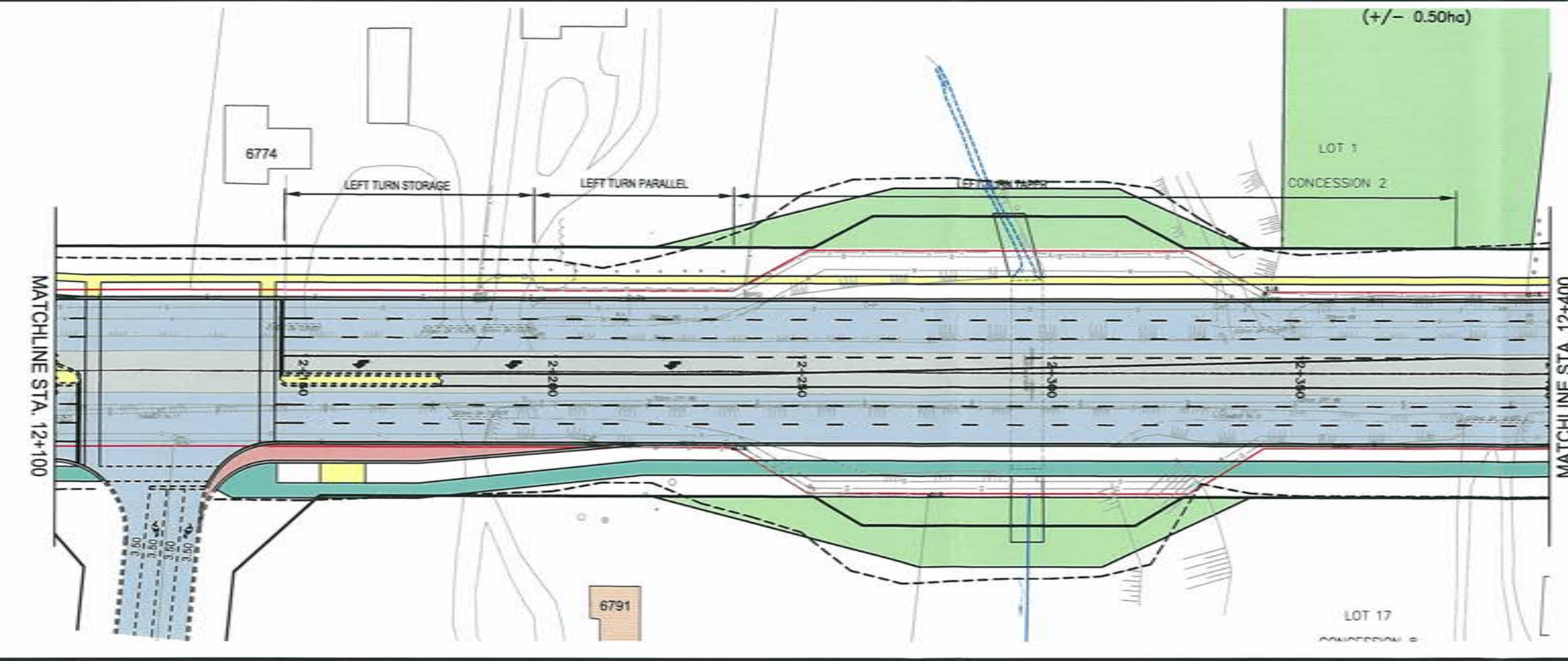
Drawing Title
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 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 1
 STA. 11+200 TO STA. 11+800

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C1-3
Date 2012-10-17	Project No. 160210480	

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- LEGEND**
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 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

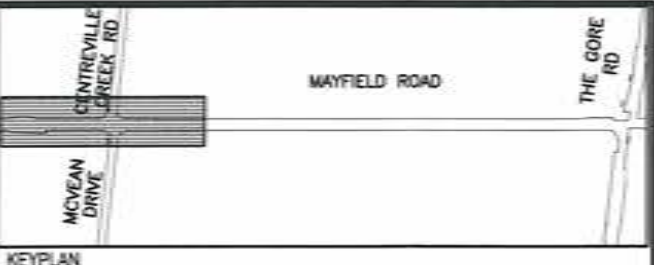
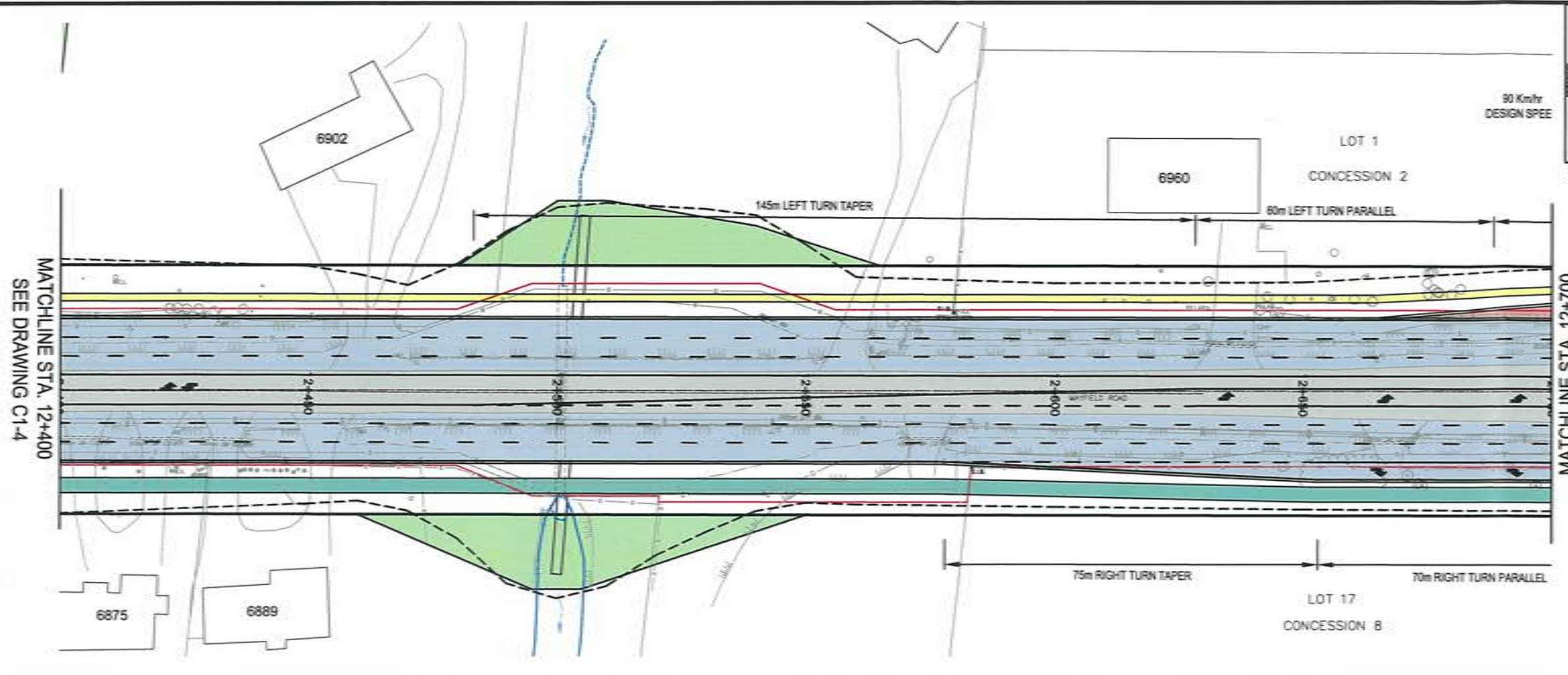


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Working for you

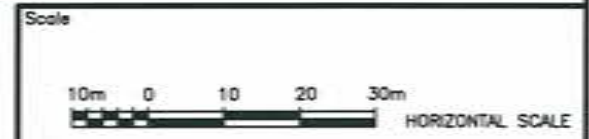
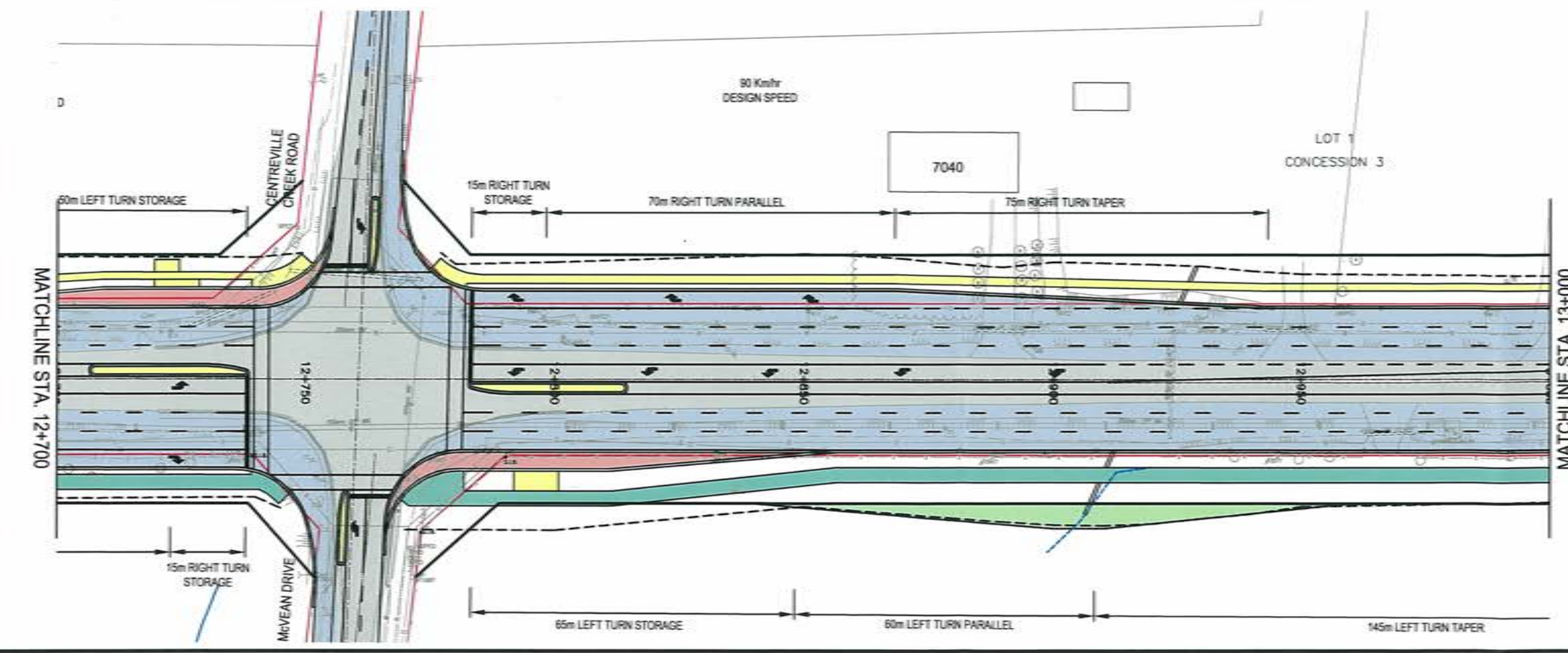
Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 1
 STA. 11+800 TO STA. 12+400

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C1-4
Date 2012-10-17	Project No. 160210480	

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- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
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 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

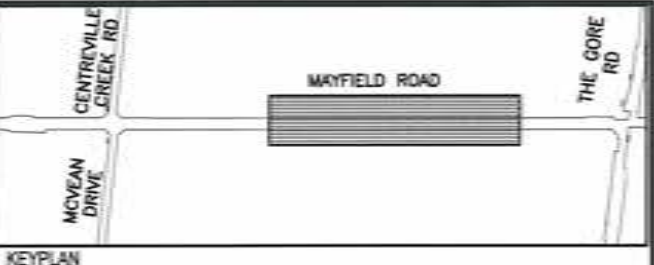
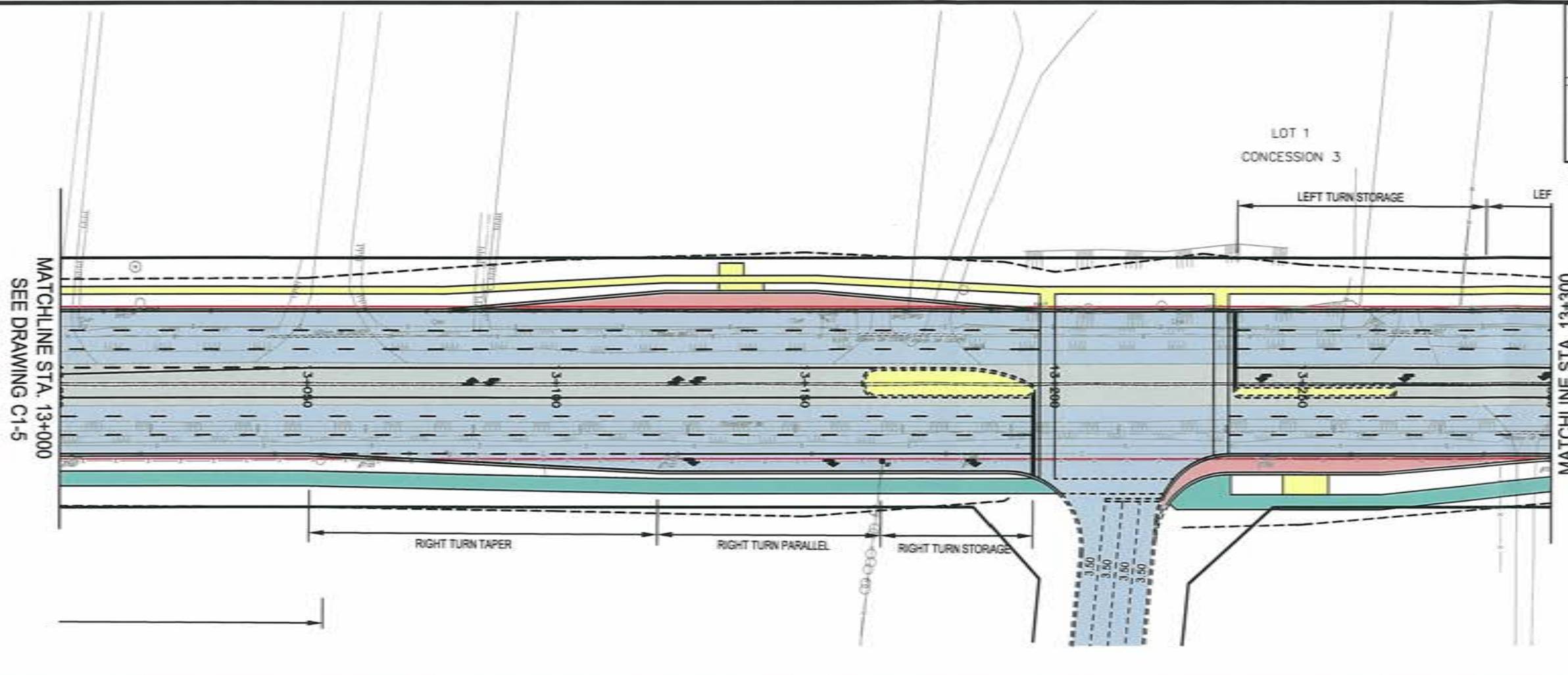


Client
Region of Peel
Working for you

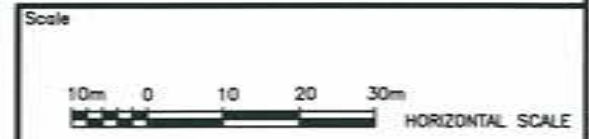
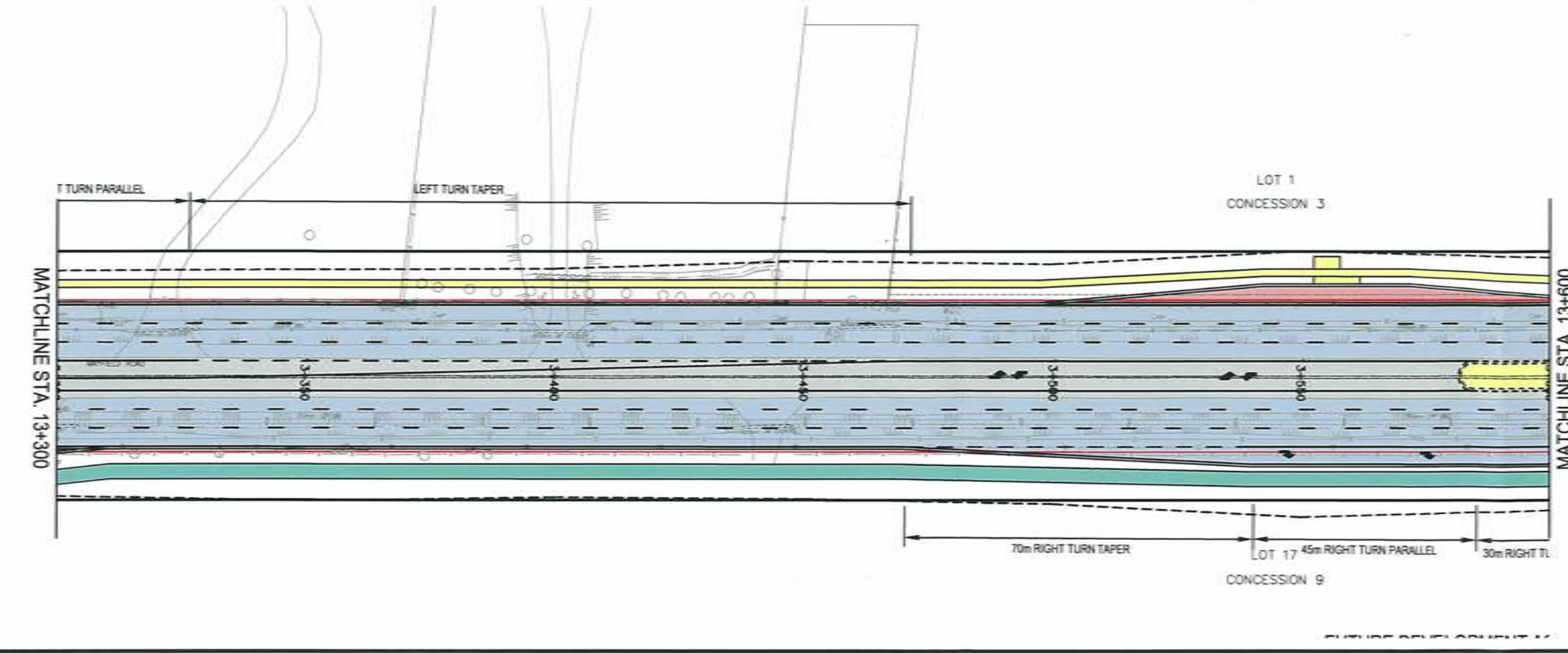
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 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 1
 STA. 12+400 TO STA. 13+000

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C1-5
Date 2012-10-17	Project No. 160210480	

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- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
 - - - APPROXIMATE GRADING LIMIT
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
 - PROPOSED 3.0m MULTI-USE PATHWAY
 - PROPOSED CONC. BUS BAY
 - PROPOSED PROPERTY ACQUISITION OUTSIDE OF RIGHT OF WAY
 - BUILT HERITAGE FEATURE

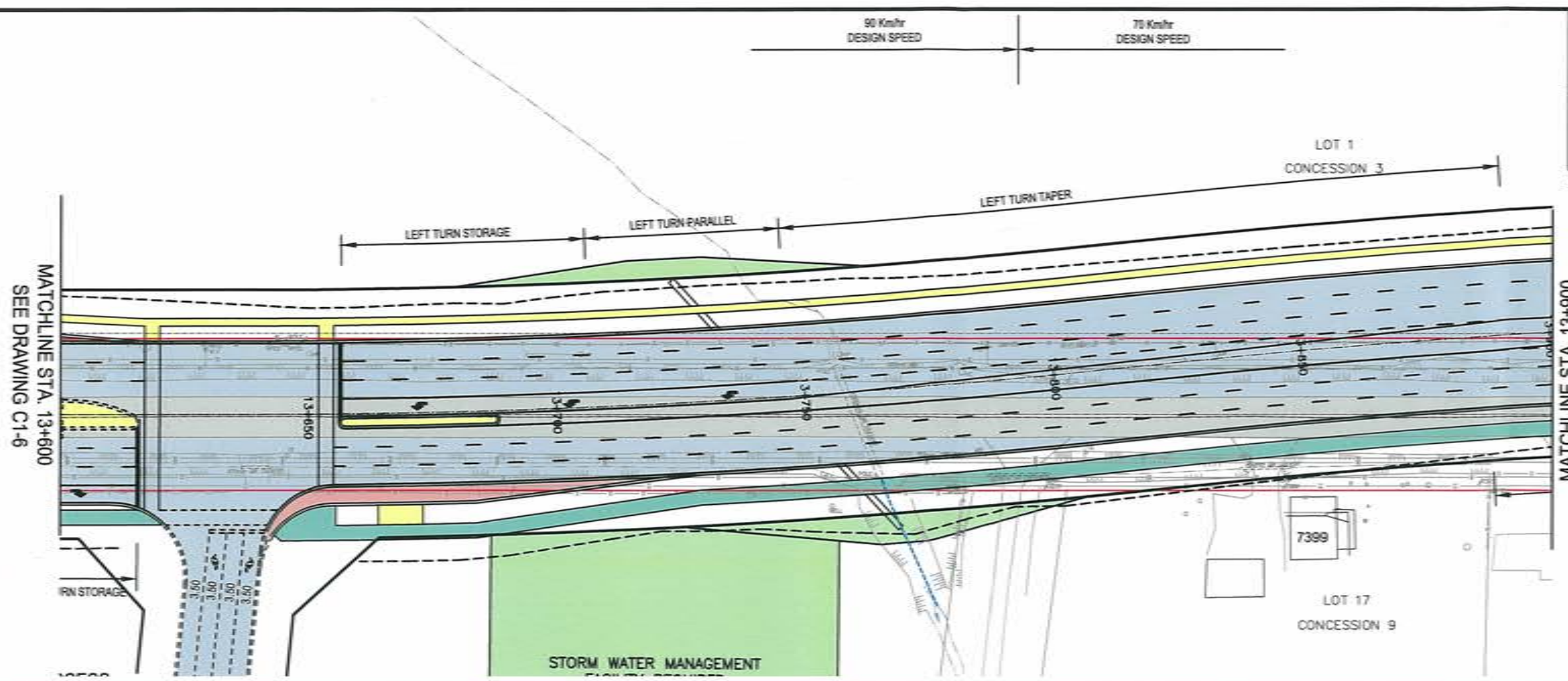
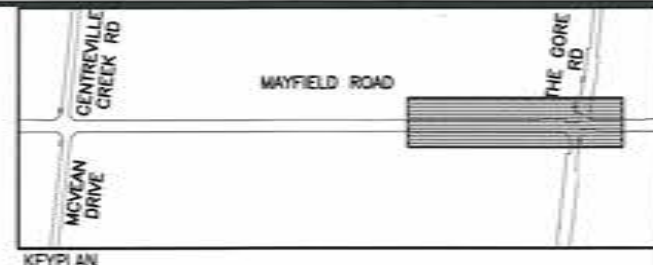


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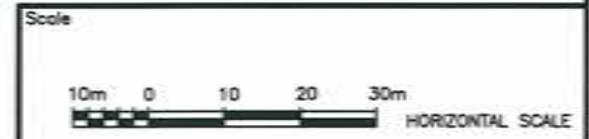
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 ALTERNATIVE CONCEPTS
 CONCEPT 1
 STA. 13+000 TO STA. 13+600

Drawn By W.R.W.	Checked By J.C.B.	Drawing Number C1-6
Date 2012-10-17	Project No. 160210480	

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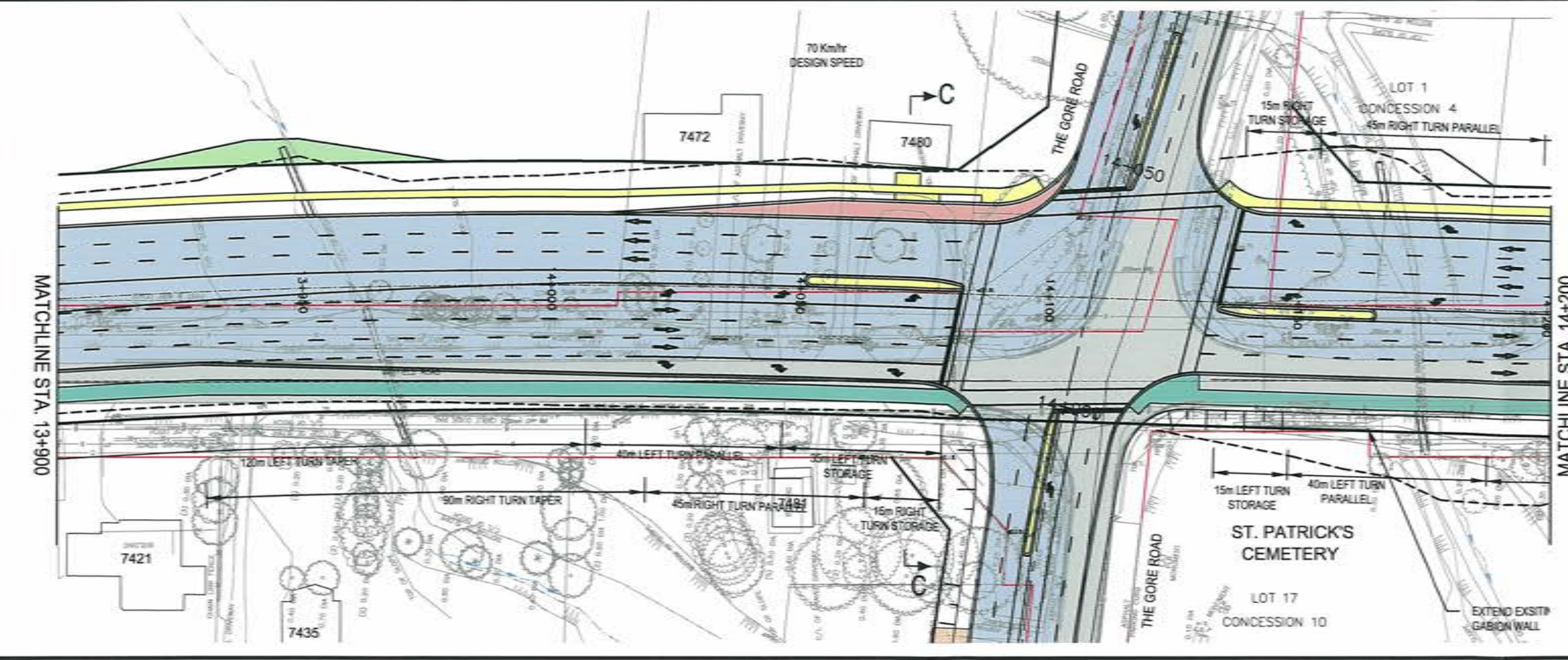
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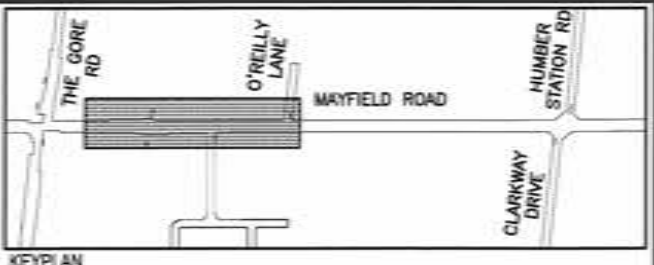
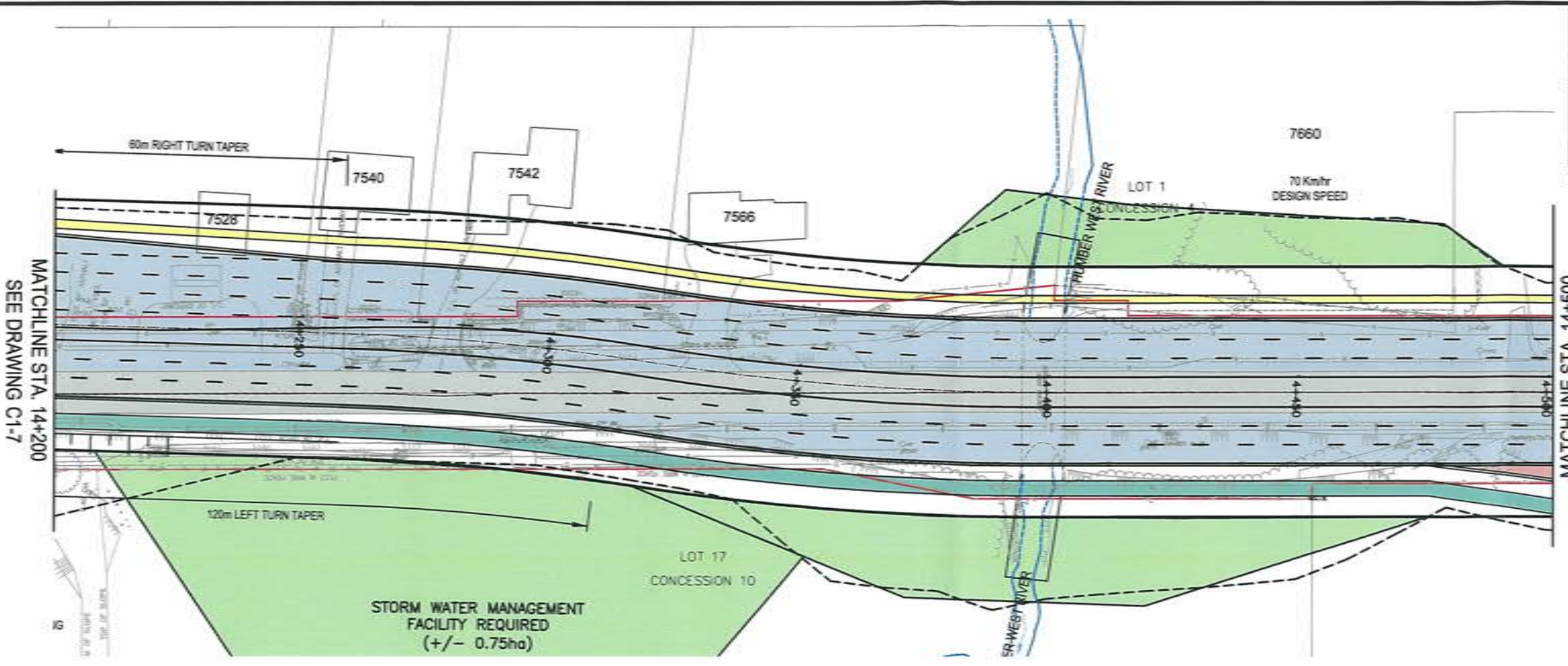
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Region of Peel
Working for you

Drawing Title
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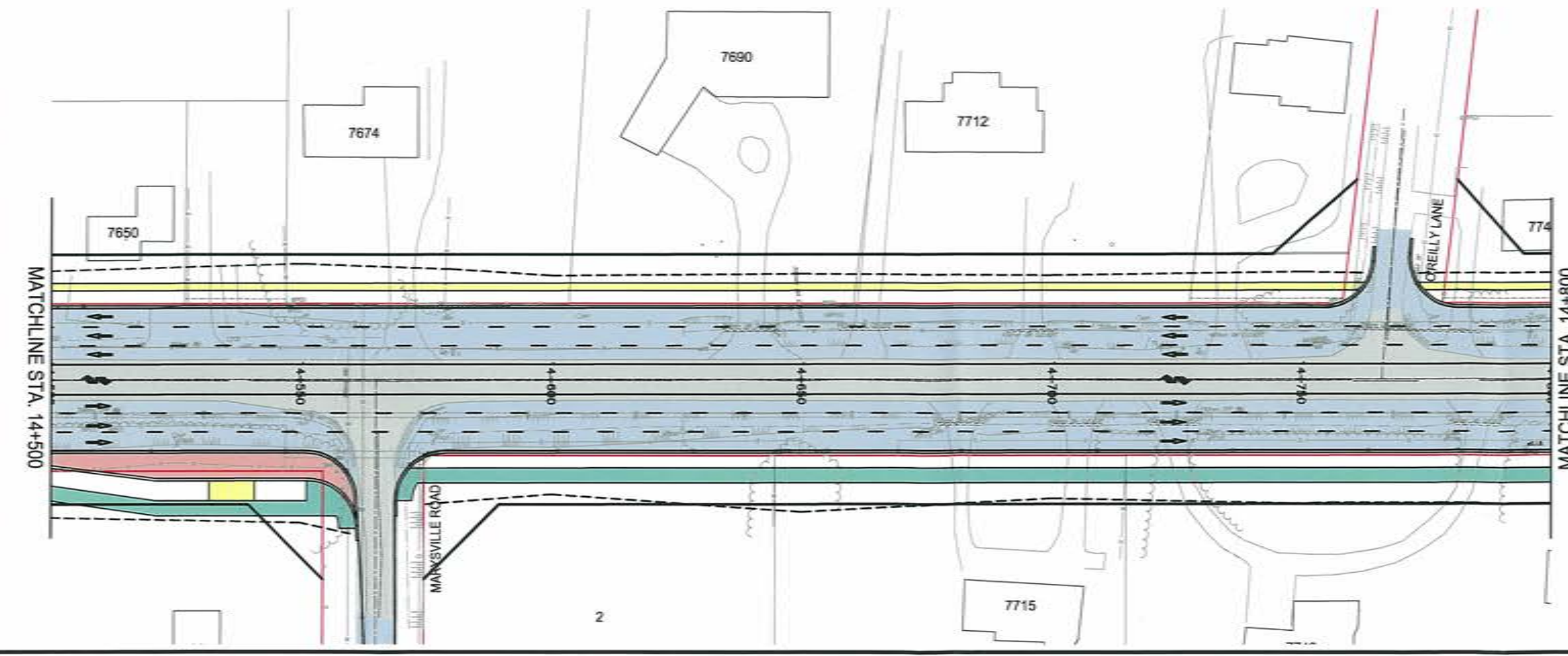
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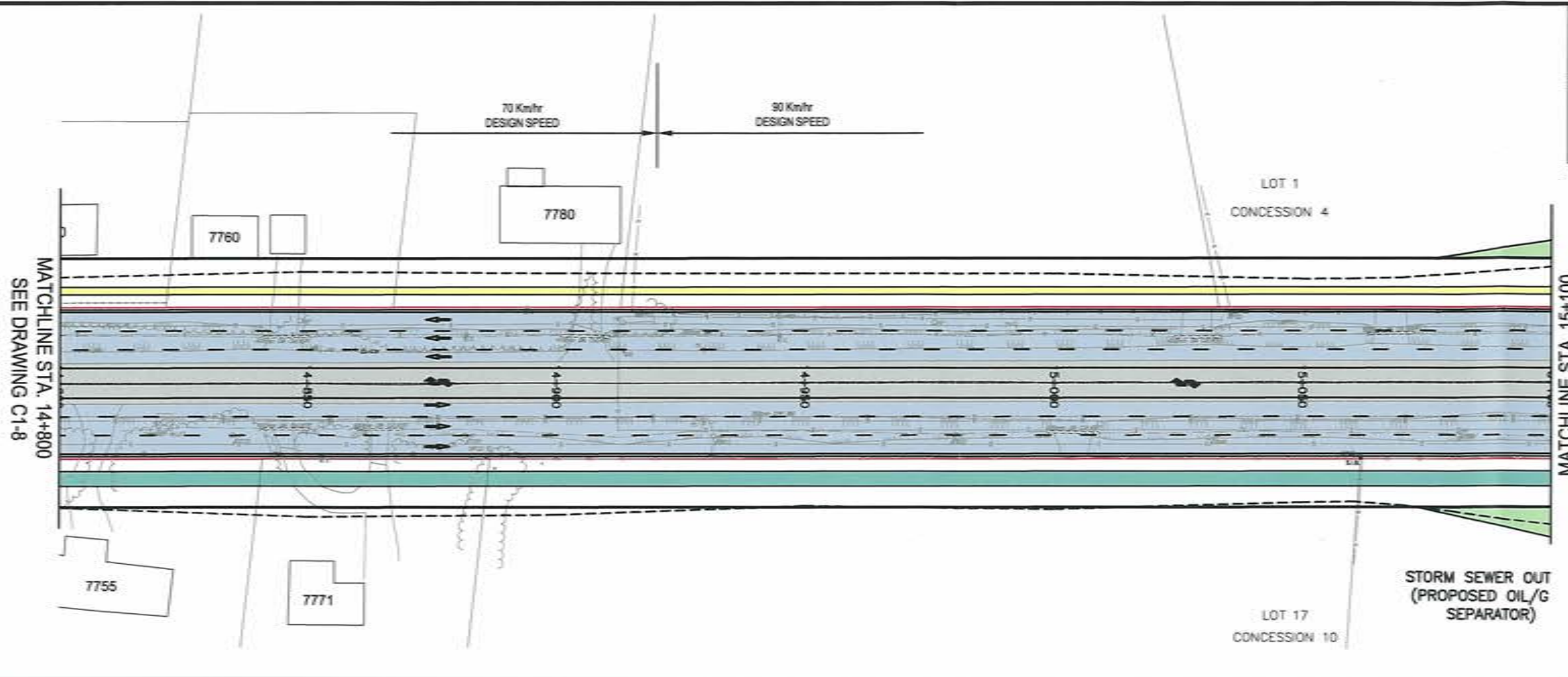
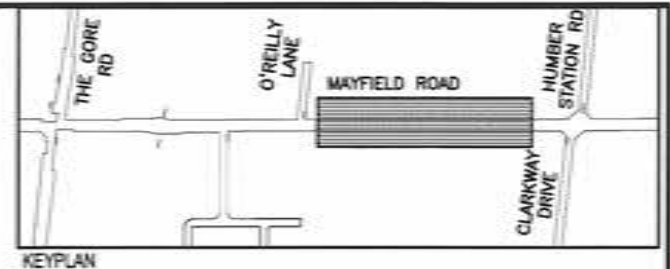


Client: **Region of Peel**
Working for you

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ALTERNATIVE CONCEPTS
CONCEPT 1
STA. 14+200 TO STA. 14+800

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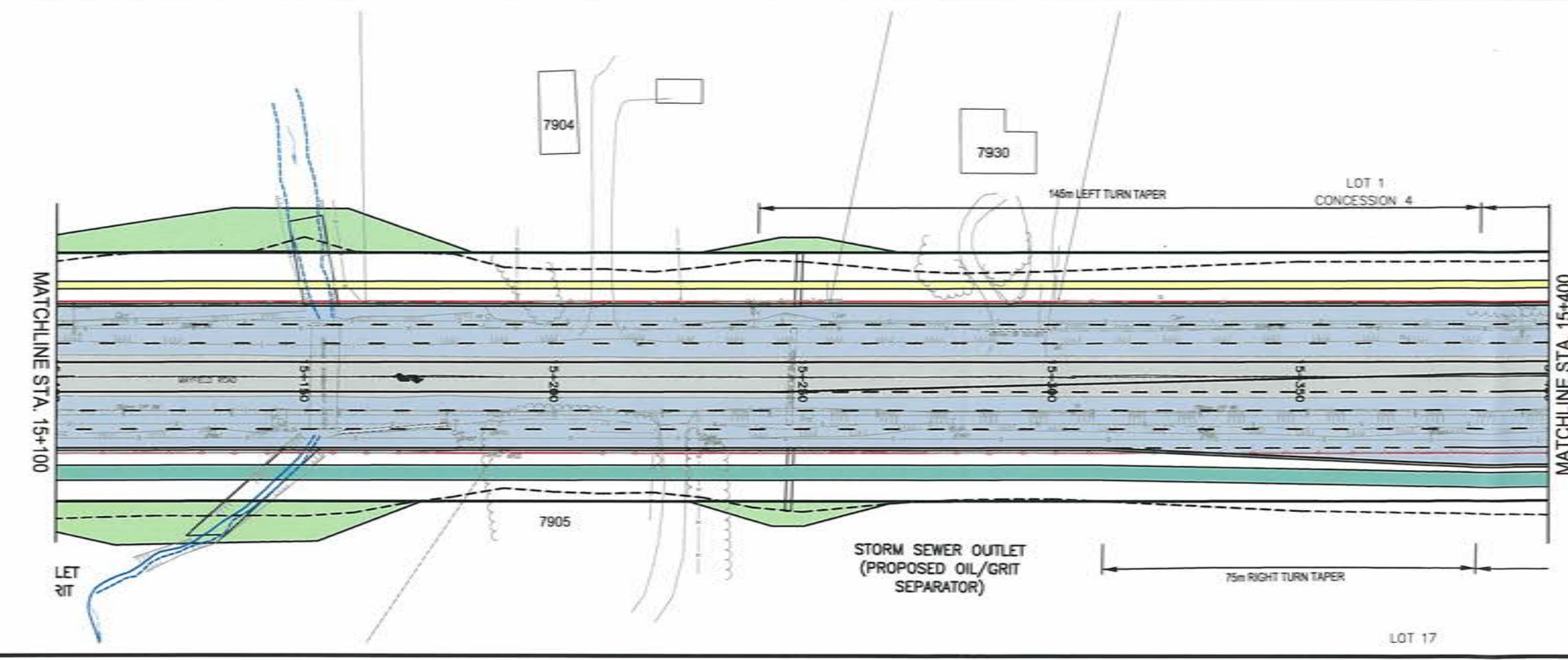
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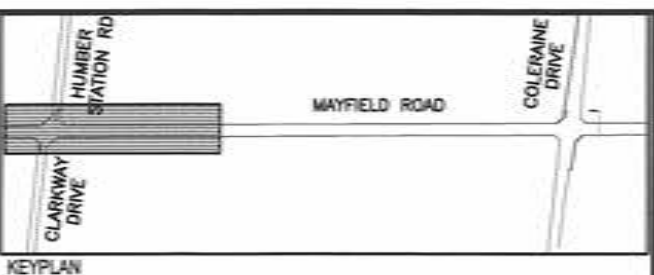
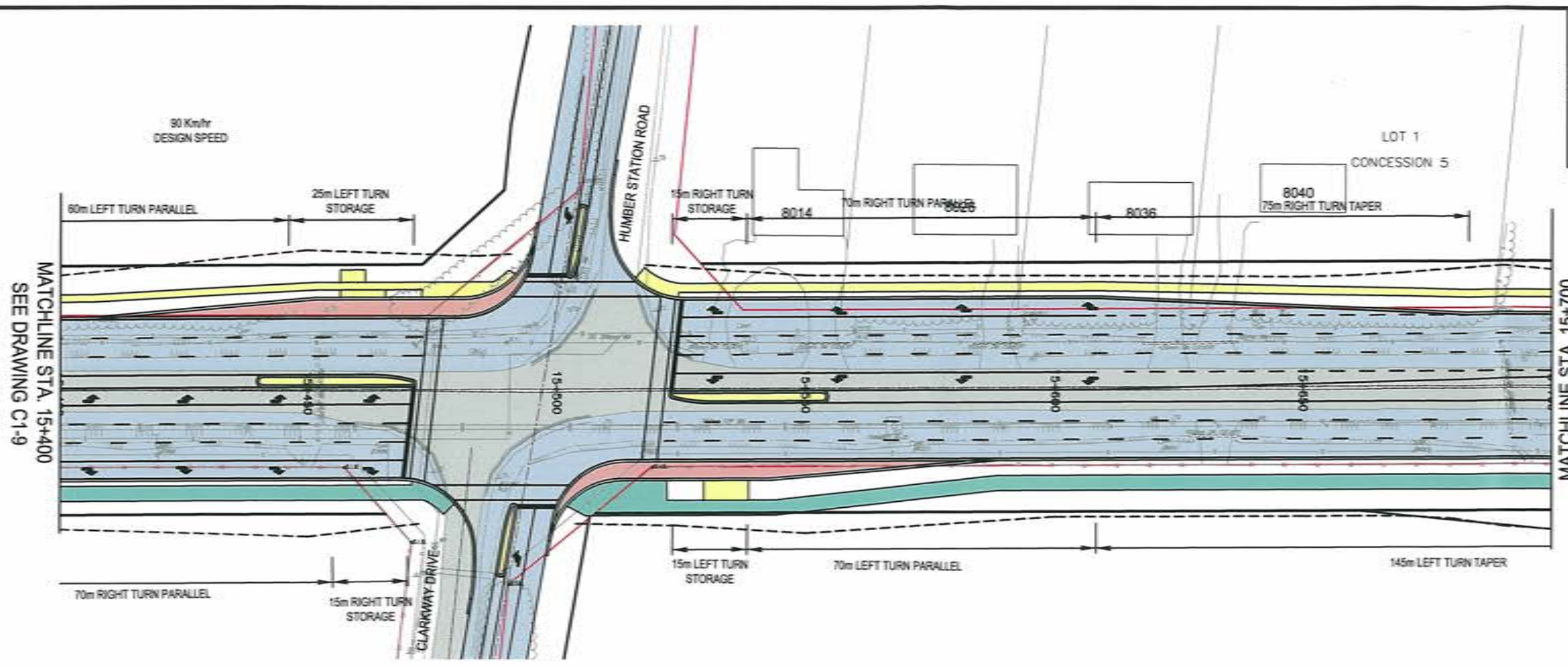
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Drawing Title
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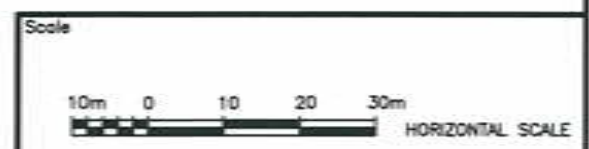
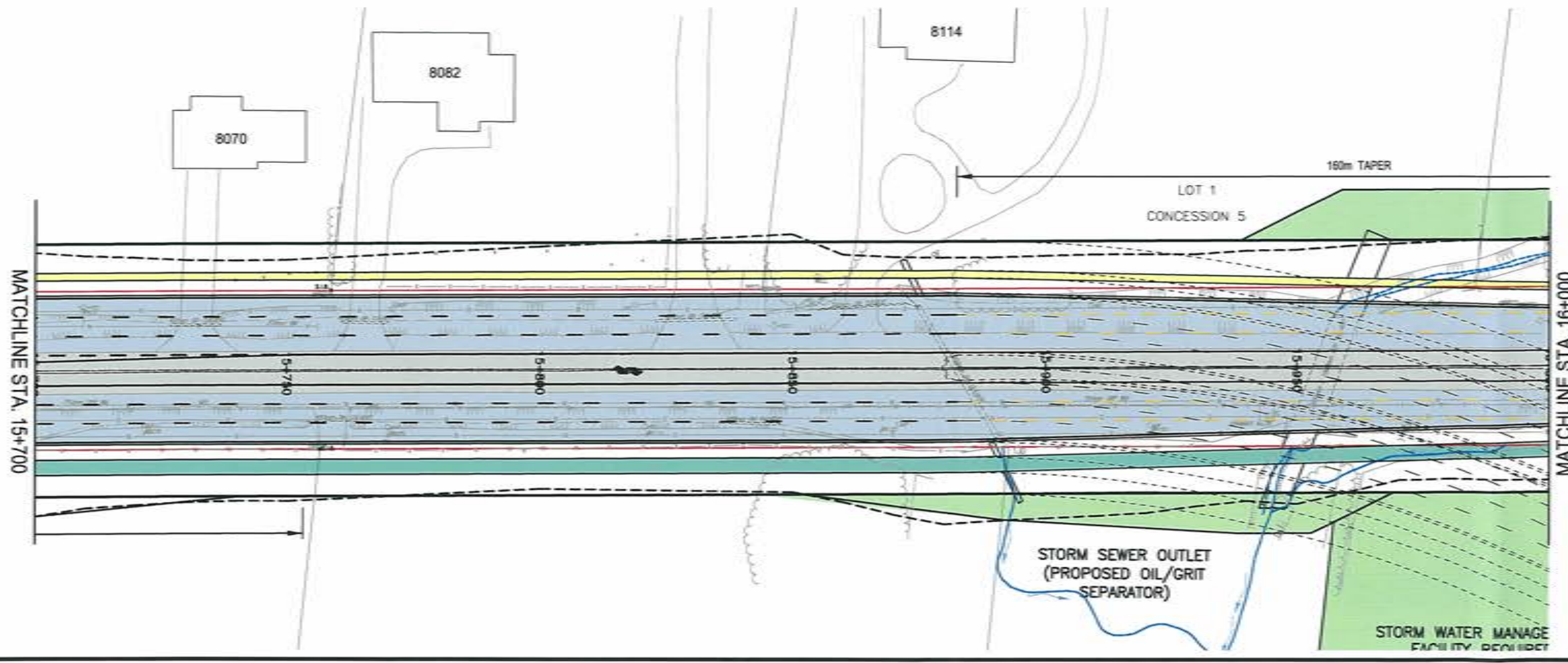
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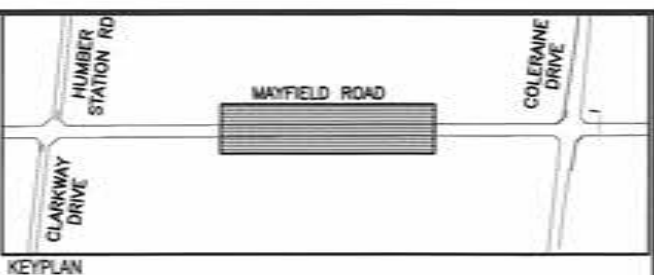
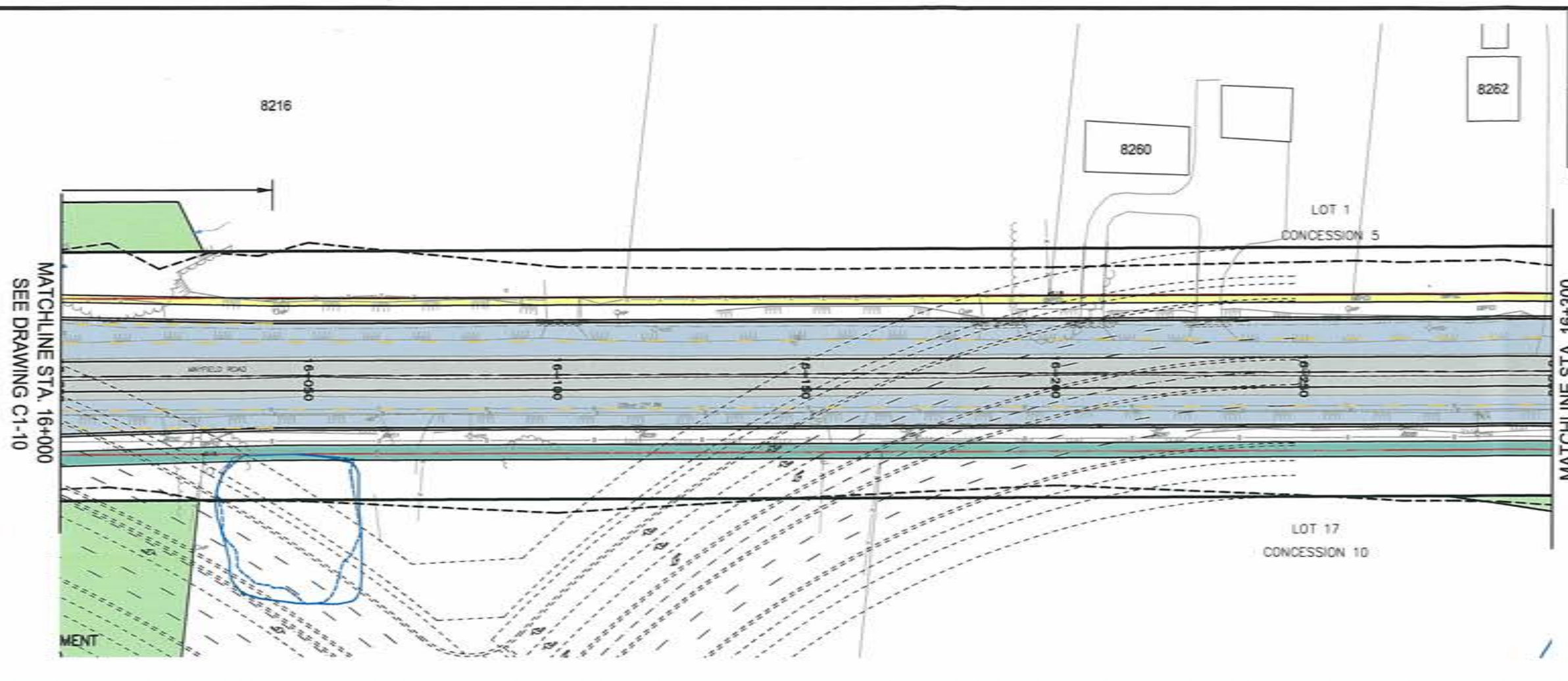
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Drawing Title
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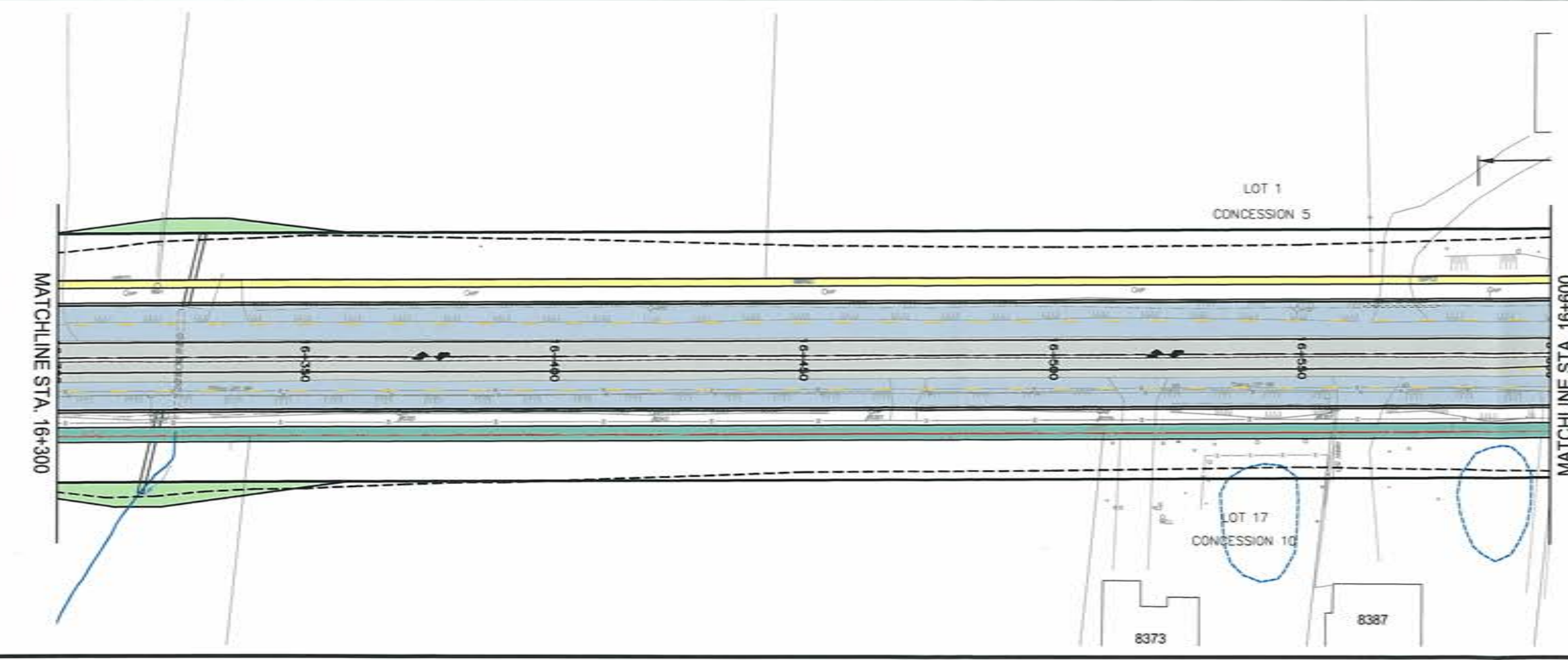
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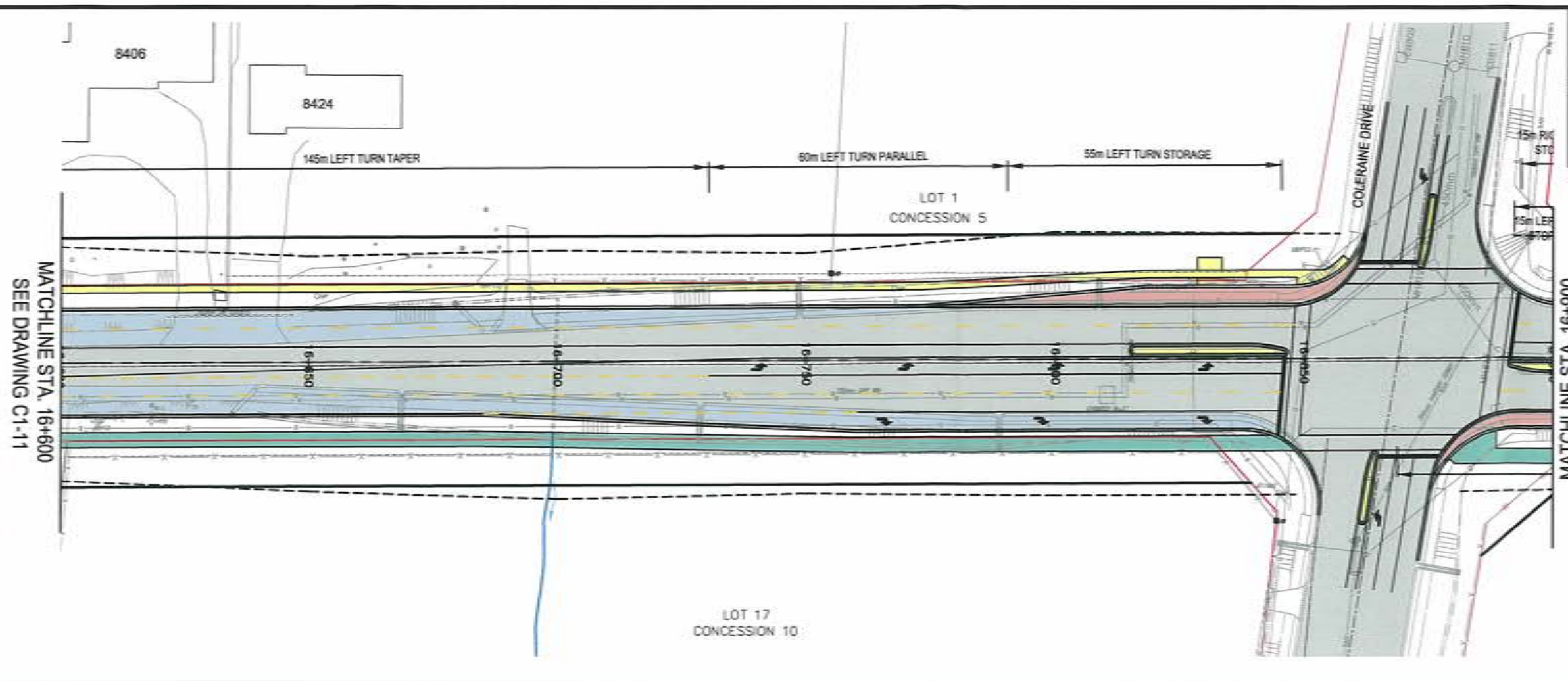
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 - █ BUILT HERITAGE FEATURE



Client
Region of Peel
 Working for you

Drawing Title
MAYFIELD ROAD
 AIRPORT ROAD TO COLERAINE DRIVE
 CLASS EA STUDY REPORT
 ALTERNATIVE CONCEPTS
 CONCEPT 1
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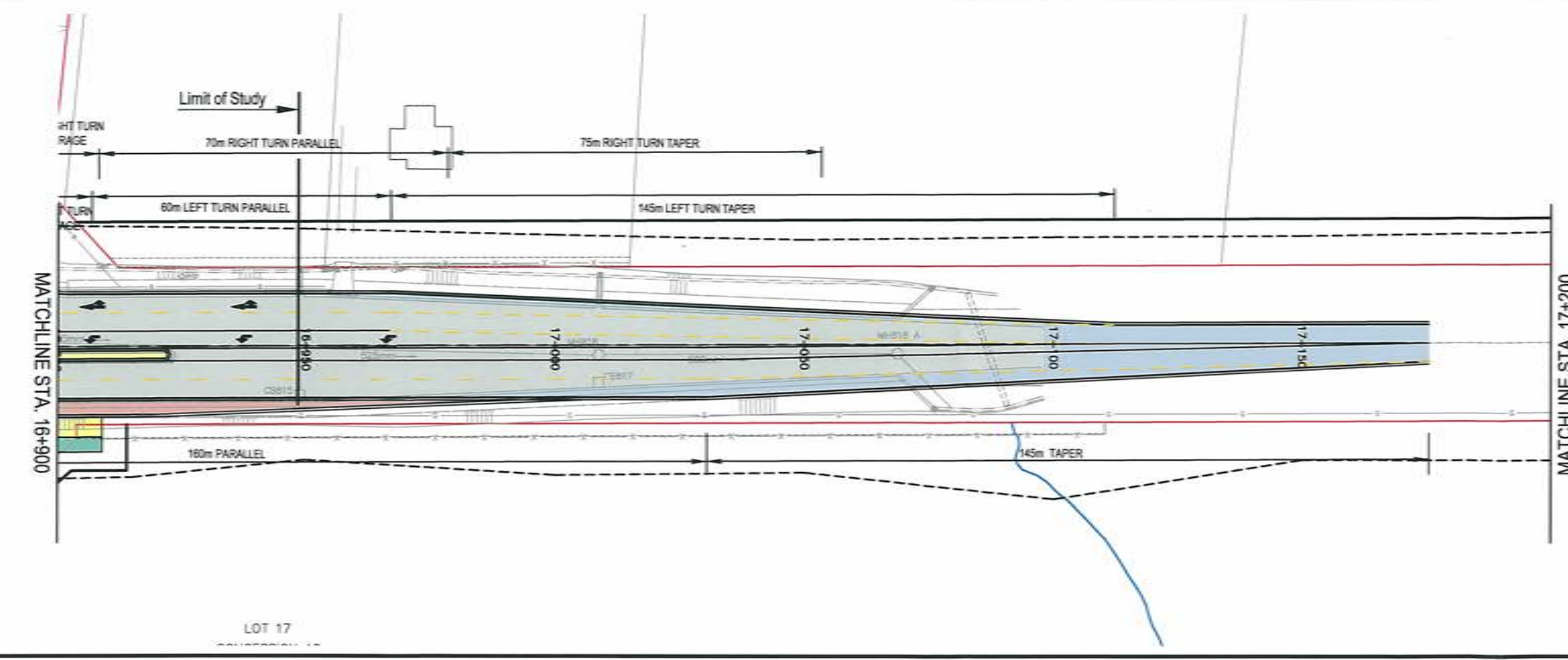
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KEYPLAN

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- PROPOSED RIGHT OF WAY
- - - APPROXIMATE GRADING LIMIT
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- PROPOSED PAVEMENT
- PROPOSED CONCRETE MEDIANS, SIDEWALKS & BUS PADS
- PROPOSED 3.0m MULTI-USE PATHWAY
- PROPOSED CONC. BUS BAY
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- BUILT HERITAGE FEATURE



Scale

HORIZONTAL SCALE

Client

Region of Peel
Working for you

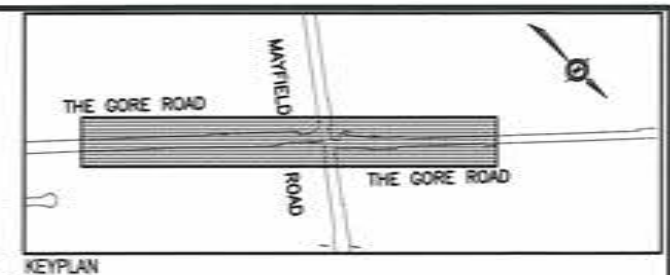
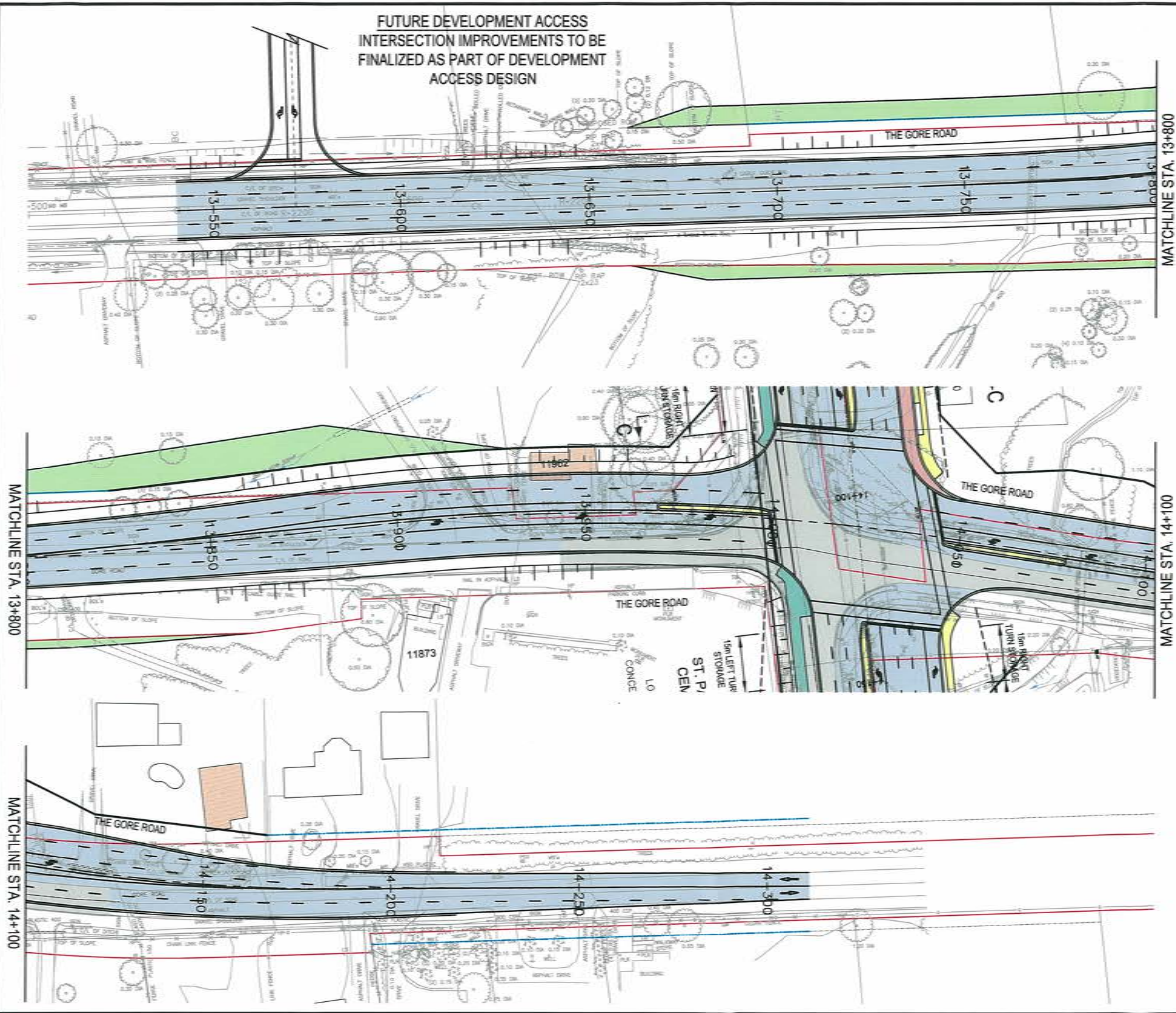
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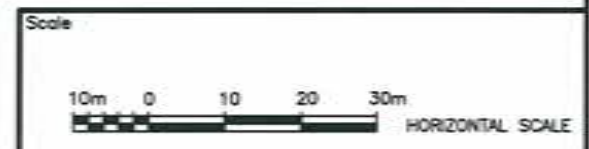
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FUTURE DEVELOPMENT ACCESS
INTERSECTION IMPROVEMENTS TO BE
FINALIZED AS PART OF DEVELOPMENT
ACCESS DESIGN



- LEGEND**
- EXISTING RIGHT OF WAY
 - PROPOSED RIGHT OF WAY
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 - BUILT HERITAGE FEATURE



Client
Region of Peel
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Drawing Title
**MAYFIELD ROAD
AIRPORT ROAD TO COLERAINE DRIVE
CLASS EA STUDY REPORT
ALTERNATIVE CONCEPTS
CONCEPT 1
STA. 13+550 TO STA. 14+700**

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APPENDIX Y

REDSIDE DACE AND BRIDGE SPAN SELECTION



Stantec Consulting Ltd.
 49 Frederick Street
 Kitchener ON N2H 6M7
 Tel: (519) 579-4410
 Fax: (519) 579-6733

Stantec

March 7, 2013
 File: 160210480/10

Attention: Mr. Hitesh Topiwala, RPP, PMP, Project Manager
 Transportation Division, Public Works
 Region of Peel
 10 Peel Centre Drive, Suite B, 4th Floor
 Brampton ON L6T 4B9

Dear Mr. Topiwala:

**Reference: Updated Determination of Watercourse Crossing Spans in Redside Dace Habitat
 Mayfield Road, Town of Caledon / City of Brampton, Region of Peel**

This letter supersedes the letter entitled Determination of Watercourse Crossing Spans in Redside Dace Habitat Mayfield Road, Town of Caledon / City of Brampton, Region of Peel, dated February 28, 2013.

Per your request of December 12, 2012 in an email to Mr. John Bayley, P. Eng. of Stantec Consulting (Stantec), this letter outlines the background and methodology used to provide a recommendation for the proposed spans of Mayfield Road Crossings 3 and 11.

The following background reports and correspondence were consulted during the preparation of this letter:

Heaton, M., Feb 6, 2013. Pers.Comm. to H. Topiwala *Re: Mayfield Road ESR (Airport to Coleraine) – crossing 6 is not regulated Redside Dace habitat.*

Stantec Consulting Ltd, June 2012. Letter Addendum: *Mayfield Road Improvements Airport Road to Coleraine Drive Meander Belt and 100-Year Erosion Assessment Humber River Watershed Town of Caledon / City of Brampton, Region of Peel*

Stantec Consulting Ltd, February 2012. Report: *Mayfield Road Improvements Airport Road to Coleraine Drive Meander Belt and 100-Year Erosion Assessment Humber River Watershed Town of Caledon / City of Brampton, Region of Peel*

Stantec Consulting Ltd, October 2010. *Culvert and Stormwater Management Report Mayfield Road EA - Airport Road to Coleraine Drive*

Table 1 presents the name and location of each of the crossings of interest.

**Table 1:
 Location of Mayfield Road Watercourse Crossings
 and Project Reaches**

Crossing ID	Watercourse	Mayfield Road Station	Easting	Northing
3	Salt Creek	11+015	600417	4850203
11	West Humber River	14+400	602535	4852848

**Reference: Updated Determination of Watercourse Crossing Spans in Redside Dace Habitat
 Mayfield Road, Town of Caledon / City of Brampton, Region of Peel**

The channel bankfull widths and 100-year erosion rates were determined for the two (2) watercourses as part of the meander belt addendum (Stantec, June 2012) and are presented in Table 2 below.

**Table 2:
 100-Year Erosion Rate and Meander Belt Width Summary**

Crossing ID	Channel Bankfull Width	100-year Erosion Distance (m)	Existing Belt Width (m)
3	8.0	10.4	56
11	7.5	8.1	55.5

Table 3 presents the existing crossing properties along with the proposed culvert dimensions required to meet Ontario Ministry of Transportation (MTO) standards for conveyance and freeboard.

**Table 3:
 Crossing Size to Meet MTO Standards**

Crossing ID	Existing Culvert			Minimum Allowable Proposed Culvert Size	Freeboard from Spill Point (100-yr Flow) (m)
	Material / Shape	Span (mm)	Height (mm)		
3	Concrete / Box	9000	2600	SAME	1.6
11	Concrete / Arch	9000	4000	SAME	4.4

As shown in Table 3, the existing culverts all convey the 100-year return period flow with ample freeboard. Also, the existing crossings all have a span greater than bankfull width at the two locations.

Table 4 presents the anticipated impacts of the crossings and the proposed mitigation strategies.

**Table 4:
 Proposed Crossing Impacts and Mitigation**

Impact	Mitigation
Longer culvert	<ul style="list-style-type: none"> Install an open bottom crossing structure to improve substrate and allow formation of natural morphology through crossing Increase the structure span to prevent or minimize impacts to habitat
Road footprint and grading in meander belt and regulated habitat areas	<ul style="list-style-type: none"> Reduce impacts by limiting the footprint of the structure through the use of retaining walls to limit fill and disturbance in the riparian area Prepare an Overall Benefit Plan to ensure compliance with the provincial <i>Endangered Species Act</i> (ESA) and demonstrate that compensatory actions will be undertaken for alterations to Redside Dace habitat that will result in an overall benefit to the species

**Reference: Updated Determination of Watercourse Crossing Spans in Redside Dace Habitat
 Mayfield Road, Town of Caledon / City of Brampton, Region of Peel**

The *DRAFT Guidance for Development Activities in Redside Dace Protected Habitat* (MNR, 2011) recommends that crossings in direct habitat should span the valley for confined valleys or span the meander belt for unconfined valleys. The MNR (2002) defines confined river or stream systems as

“ones in which the physical presence of a valley corridor containing a river or stream channel, which may or may not contain flowing water, is visibly discernible (i.e. valley walls are clearly definable) from the surrounding landscape by either field investigations, aerial photography and/or map interpretation. The River or stream channel may be located at the base of the valley slope, in close proximity to the valley slope (i.e. within 15 m) or removed from the valley slope (i.e., a distance greater than 15 m).”

The MNR (2002) defines unconfined river or stream systems as:

“ones in which a river or stream is present but there is no discernible valley slope of bank that can be detected from the surrounding landscape by either field investigations, aerial photography and/or map interpretation.”

Based on the MNR definitions, Crossing 3 is located in an unconfined valley and Crossing 11 is located in a confined valley. Since the meander belt width for Crossing 3 is 56 m, and the valley width at Crossing 11 is 110 m wide, following the draft guidance document (MNR, 2011) the full meander belt crossing at #3 would cost \$6,720,000 and the full valley span at Crossing 11 would be \$13,200,000 as outlined in Table 5 below.

Table 5: Bridge Spans and Costs per MNR Recommendations

Crossing ID	Valley Type	MNR Crossing Recommendation	Potential Span Per MNR Recommendation	Cost of MNR Span
3	Unconfined	Span meander-belt	56 m	\$6,720,000
11	Confined	Span valley	110 m	\$13,200,000

Based on the costs presented above, alternative sizing methods are proposed:

- Method 1. Provide a crossing span that is double the bankfull width.
- Method 2. Provide a crossing span that includes the bankfull width and the 100-year erosion distance.

Table 6 presents the results of each methodology for each of the crossings.

**Table 6:
 Crossing Span Selection**

Crossing ID	2 x Bankfull (m)	Bankfull + 100-yr Erosion Dist. (m)	Factor of Safety (Method 1 / Method 2)
3	16	18.4	2 / 2.3
11	15	15.6	2 / 2.1

**Reference: Updated Determination of Watercourse Crossing Spans in Redside Dace Habitat
 Mayfield Road, Town of Caledon / City of Brampton, Region of Peel**

In this case, the two methods generate very similar results. The selection of the spans obtained using Method 2 is conservative on many fronts: it allows a span width of more than double the bankfull width; and it incorporates a component of stream stability by using the 100-year erosion distance. The 100-year erosion distance is also inherently conservative in itself as the expected lifespan of the proposed bridge can be expected to be approximately 50 to 60 years. Based on the proposed bridge widths (bankfull width plus the 100-year erosion distance), the cost of the recommended span for Crossing 3 would be \$3,100,000 and the cost of the recommended span for Crossing 11 would be \$2,600,000. These costs are summarized in Table 7.

Table 7: Comparison of Bridge Spans and Costs

Crossing ID	Valley Type	MNR Crossing Recommendation	Potential Span Per MNR Recommendation	Cost of MNR span	Recommended Span	Cost of Recommended Span
3	Unconfined	Span meander-belt	56 m	\$6,720,000	18.4 m	\$3,100,000
11	Confined	Span valley	110 m	\$13,200,000	15.6 m	\$2,600,000

Based on the information outlined in this letter, the proposed spans for Crossings 3 and 11 are presented in Table 8.

**Table 8:
 Recommended Minimum Spans for Crossings**

Crossing ID	Proposed Span (m)
3	18.4
11	15.6

As outlined in the MNR’s *Endangered Species Act Submission Standards for Activity Review and 17(2)(c) Overall Benefit Permits* (2012):

The concept of providing an overall benefit to a species involves undertaking actions that contribute to improving the circumstances for the species specified in the permit. Overall benefit is more than no net loss or an exchange of like- for-like... Overall benefit is grounded in the protection and recovery of the species at risk and must include more than steps to minimize adverse effects on the protected species or habitats. The outcome of the overall benefit actions is meant to improve the relative standing of a species after taking into account the residual adverse effects to the species or its habitat that are authorized by the permit (i.e., the completion of all permit conditions achieves a net positive benefit for the species at risk).

As the proposed bridge spans are less than their respective meander belt / valley widths, Redside Dace habitat will be impacted. An overall benefit plan will be prepared during detailed design as part of the *Endangered Species Act* (ESA) Permit Application to ensure that the proposed crossings do not have a permanent negative impact and that there is an overall benefit for Redside Dace in the local watershed. It should be noted that overall benefit proposals are best drafted with significant input from MNR as the requirements vary substantially from project to project. If requested, Stantec would be pleased to coordinate with MNR during the detailed design process to ensure that all obligations under the Endangered Species Act are met.

Stantec

March 7, 2013
Mr. Hitesh Topiwala, RPP, PMP, Project Manager
Page 5 of 5

**Reference: Updated Determination of Watercourse Crossing Spans in Redside Dace Habitat
Mayfield Road, Town of Caledon / City of Brampton, Region of Peel**

We trust these recommendations meet with your approval.

Please do not hesitate to contact the undersigned should you have any questions.

Regards,

STANTEC CONSULTING LTD.



Heather Amiraault, P. Eng.
Water Resources Engineer
Tel: (519) 585-7453
Fax: (519) 579-8864
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Trevor Chandler, M.Sc.
Fluvial Systems Specialist
Tel: (519) 836-8050
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trevor.chandler@stantec.com

- c. Mr. Mark Heaton, Ministry of Natural Resources
- Mr. Steve Ganesh, Region of Peel
- Mr. Gino Dela Cruz, Region of Peel
- Mr. John Bayley, Stantec (Kitchener)
- Mr. Mark Pomeroy, Stantec (Guelph)

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References:

Redside Dace Recovery Team. 2010. *Recovery Strategy for Redside Dace (Clinostomus elongatus) in Ontario*. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources, Peterborough, Ontario. vi + 29 pp.

Ministry of Natural Resources (MNR), 2012 *Endangered Species Act Submission Standards for Activity Review and 17(2)(c) Overall Benefit Permits*. Accessed on the World Wide Web at http://www.mnr.gov.on.ca/stdprodconsume/groups/tr/@mnr/@species/documents/document/stdprod_093115.pdf on February 22, 2013.

Ministry of Natural Resources (MNR). 2011. *DRAFT Guidance for Development Activities in Redside Dace Protected Habitat*. Ontario Ministry of Natural Resources, Peterborough, Ontario, ii + 42pp.

Ministry of Natural Resources (MNR), 2002. *Technical Guide – River and Stream Systems: Erosion Hazard Limit*. Ontario Ministry of Natural Resources, Peterborough, Ontario.