HIGHWAY 7 CORRIDOR & VAUGHAN NORTH-SOUTH LINK PUBLIC TRANSIT IMPROVEMENTS

SUMMARY LISTING OF EA COMPLIANCE DOCUMENTATION
FOR H2-VMC SEGMENT
EDGELEY BOULEVARD TO BOWES ROAD
December 2018

The H2-VMC segment of the Highway 7 Corridor Transitway (Edgeley Boulevard to Bowes Road) has been built and in operation since December 2017. This Annual Compliance Report has been prepared by York Region. All compliance items in last year's 2017 Annual Compliance Report that were identified as being completed, closed or not applicable to the H2-VMC segment have been removed from this 2018 Annual Compliance Report. Numbers for the remaining items relate back to the 2017 Annual Compliance Report for easy cross reference.

Completion Status	Notes
On-going / In progress	Work has begun on this item but not completed
Completed	All work completed for this item.
No Action Required	No further action required to address this item
Does not apply to this segment	Does not apply to segment H2-VMC.
Future Work (no colour)	No work has begun on this item.
Information added (bold and underline)	Information added for the current annual compliance report period

Glossary

AADT – Annual Average Daily Traffic
AAQC – Ambient Air Quality Criteria
ACR – Annual Compliance Report
AODA - Accessibility for Ontarians with Disabilities Act
AQ – Air Quality
BHF – Built Heritage Features
BRT – Bus Rapid Transit
CAH - Controlled-Access Highway
CEAA – Canadian Environmental Assessment Agency
CLU – Cultural Landscape Units
CMP – Compliance Monitoring Program
CN – Canadian National Railway
CoA – Certificate of Approval
CP – Canadian Pacific Railway
CPAC – Cycling and Pedestrian Advisory Committee
DBCR – Design Basis and Criteria Report
DD – Detail Design
DFO – Fisheries and Oceans Canada
DSC - Development Services Committee
EA – Environmental Assessment
EAA – Environmental Assessment Act
EAAB – Environmental Assessment and Approvals Branch
EBL – Eastbound Left
EBR – Eastbound Right
EBT – Eastbound Through
ERS – Emergency Response Services
GhG – Greenhouse Gases
Gov't – Government
GTA – Greater Toronto Area
H2 – vivaNext segment on Highway 7 from West of Pine Valley Dr to Yonge St, excluding the H2-VMC segment
H2-VMC – vivaNext segment on Highway 7 from West of Edgeley Blvd to East of Bowes Road
HADD – Harmful Alternation, Disruption or Destruction
Hwy - Highway
IFC – Issued For Construction
LOS – Level of Service
LRT – Light Rail Rapid Transit
LRTP – Long Range Transportation Plan
MNR – Ministry of Natural Resources
MOE – Ministry of the Environment
MOECC - Ministry of the Environment and Climate Change
MECP - Ministry of the Environment, Conservation and Parks
MTCS – Ministry of Tourism, Culture, and Sport
MTO – Ministry of Transportation
NBL – Northbound Left
NBT – Northbound Through
OE – Owner Engineer
OGS – Oil Grit Separator
OSAA – Ontario Secretariat for Aboriginal Affairs
PCC – Public Consultation Centre
PE – Preliminary Engineering
QSD – Quick Start Design
ROW – Right-of-way
RT – Rapid Transit
RTOR – Right-Turn-On-Red
SBL – Southbound Left
SBR – Southbound Right
SBT – Southbound Through
SWM - Storm Water Management
SWMP – Storm Water Management Plan
TAC – Technical Advisory Committee
TCP – Transportation Conversion Plan
TRCA – Toronto and Region Conservation Authority
TS – Technical Support
TSP - Total Suspended Particles
TTC – Toronto Transit Commission
TYSSE – Toronto York Spadina Subway Extension
WB – Westbound
WBL – Westbound Left
WBT – Westbound Through
VCC – Vaughan Corporate Centre
YR – York Region
YRRTC – York Region Rapid Transit Corporation
YRT – York Region Transit
YSS – Yonge Street Subway
YSSC - Yonge Street Subway Communications

Section 1.0 – Background & Purpose of the Program					
Item	**Mitigation Measure / Commitment to be Monitored**	**Responsible person / agency**	**Stage Condition will be addressed**	**Status and Description of how commitment has been addressed during design**	**Compliance Document Reference**
1	CMP Section 1.0 - "…The ACR documentation will be made available to the MOE, or its' designate upon request, in a timely manner during an on-site inspection or audit …"	York Region	ACR documentation to be provided annually.	Status – Ongoing. Annual Compliance Reports will be provided to MECP annually. **Supporting compliance reference documents are maintained by York Region and available to MECP upon request.**	**June 8, 2018 letter from MECP acknowledging receipt of the 2017 ACR.** **York Region submission of this 2018 ACR.**
1-a	CMP Section 1.1 -The preliminary design for segments H2 and H3 is scheduled to be completed in 2008, leading to the tendering of a detailed design I built contract in 2009. The estimated construction timing for segments H2 and H3 is within the 2013 period (as identified in Section 4.3 of the April 2008 York Region Rapid Transit Steering Committee report, included as supplemental information in Appendix B). Design of segments H1 and H4 has not commenced. The estimated construction timing for segments H1 and H4 is currently scheduled beyond 2013. The schedule for design and construction of segment V1 is described in section 1.2. Design and construction of segment W1 will be funded through the Region's 10 Year Roads Construction Program. The design work has commenced in late 2007, and construction tender is currently scheduled for 2008 with completion in 2009.	York Region		Status – **Completed** **Construction of the H2-VMC segment of the transitway was completed in December 2017. Viva transit service was moved from curbside to median rapidway in December 2017.**	http://www.vivanext.com/project_Hwy7VMC **See project page on vivaNext website regarding completion of construction.**

Section 2.0 - Monitoring of Conditions of Approval					
Item	**MOE Condition of EAA approval**	**Responsible person / agency**	**Stage condition will be addressed**	**Status and description of how the condition has been addressed**	**Compliance Document Reference**
5	1.0 General Conditions 1.1 The Proponent shall comply with all the provisions of the EA submitted to the MOE which are hereby incorporated by reference except as provided in these conditions and as provided in any other approvals or permits that may be issued.	York Region/ECM - (more specific information to be added by ECM with annual compliance reporting for all cells in this column).	Design, Construction and Operation as specified	Status - Ongoing. ACR documentation will be provided to MECP annually. This condition will be addressed once all commitments have been met.	**June 8, 2018 letter from MOECC acknowledging receipt of 2017 ACR.** **York Region submission of this 2018 ACR.**
6	1.2 These proposed conditions do not prevent more restrictive conditions being imposed under other statutes.	York Region	As applicable	Status - **Completed.** **Construction of the H2-VMC segment of the transitway was completed in December 2017. Viva transit service was moved from curbside to median rapidway in December 2017.** More restrictive conditions were not imposed under other statutes.	
7	2.0 Public Record 2.1 [1] Where a document is required for the Public Record, it shall be provided to the Director for filing with the Public Record maintained for this undertaking. Additional copies of such documents will be provided by the Proponent for public access at [2]: a) The Regional Director's Office; b) The Clerks offices of the Regional Municipality of York; c) The Town of Richmond Hill; d) The Town of Markham; and e) The City of Vaughan; f) Richmond Hill Central Library; g) Unionville Library; and h) Ansley Grove Library. These documents may also be provided through other means as considered appropriate by the Proponent and acceptable to the Director. [3]	York Region	Design, Construction and Operation as specified	Status - Ongoing. To be completed with the filing of the last ACR. [1] Annually, ACR will be provided to MECP for filing with the Public Record [1], and placed at offices and libraries for public access [2], and through other means such as the vivanext website [3].	[1] **June 8, 2018 letter from MOECC acknowledging receipt of 2017 ACR.** [2] **January 23, 2018 cover letters provided to Markham, Vaughan, Richmond Hill and York Region Clerks Offices, and Libraries, thereby placing the 2017 ACR on public record at these locations.** [3] http://www.vivanext.com/document_library
12	3.6 The Proponent shall prepare an ACR which describes the results of the CMP and shall do so annually. 3.7 The Proponent shall submit each ACR to the Director for review and comment and for placement on the Public Record. 3.8 The timing of the submission of the ACRs shall be set out in the CMP, including the timing of submission of the first ACR. 3.9 The Proponent shall submit ACRs until all applicable conditions of approval and commitments of the EA are satisfied or until the Director notifies the Proponent that no further reports are warranted. 3.10 When alt conditions have been satisfied, the Proponent shall indicate in the ACR that this is its final submission.	York Region	Design, Construction and Operation as specified	Status – Ongoing. Conditions will be addressed with the submission of ACR's annually until the final ACR.	**June 8, 2018 letter from MOECC acknowledging receipt of 2017 ACR.** **York Region submission of this 2018 ACR.**

Section 5.0 - Actions Required to Address Commitments- Table 5.1 Monitoring During Design					
Item	**Environmental Element**	**Mitigation Measure / Commitment to be Monitored**	**Responsible person / agency**	**Status and Description of how commitment has been addressed during design**	**Compliance Document Reference**
48		Chapter 11, Table 11.3-1, Section 9.6 CMP I.D. # 5.3 - An Erosion and Sediment Control Plan developed to manage the flow of sediment into storm sewers and watercourses [1] and to monitor erosion and sedimentation control measures during construction [2].	York Region	Status – Completed [1], **Completed**[2]; Item [1] An H2 PE DBCR and a VMC Drainage Report completed in March 2013 and on April 05, 2012 respectively outline the requirements on the proposed stormwater management measures throughout the study area. Component Environmental Management Plan for Sediment and Erosion Control included in Contractor's Environmental Management Plan Erosion & Sediment Control drawings prepared for H2VMC Segment based on Drainage Study and above referenced documents. The ESC package was submitted to TRCA as part of the permit approval process, and any comments have been incorporated. Item [2] **Construction monitoring via weekly safety inspections. Construction was completed in December 2017.**	[2] H2-VMC-ENV-CKL-2016 (Weekly Env Checklist) (KED ID# 2016-02) All roadways and boulevards were completed in 2016. Environmental inspections were combined with safety inspections in 2017 therefore a weekly environmental check list was not generated as for previous years.
56		CMP I.D. # 13.3 - Public concerns/ complaints will be address through public consultation centres during detailed design phase [1]. As well, public complaints protocols will address complaints regarding construction [2] and operations [3] of the transitway. The received concerns/ complaints will be circulated to appropriate department for action [4].		Status – [1,2] Completed, [3,4] **Completed** [1] Public meetings were held on November 27 and 28, 2012 including staging methods, pedestrian movement/safety, minimizing impacts and the community liaison strategy for H2-VMC. See item 69-a) [2] The Community Relations Protocol addresses concerns/complaints received during design and construction. See item 69-b [3] **York Region Transit has a feedback form online to deal with comments/complaints during transit operations. A customer service representative reviews all submissions.**	https://www.yrt.ca/TransitFeedback/ **See web link - feedback form on York Region Transit website.**

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Section 5.0 - Actions Required to Address Commitments - Table 5.2 Construction Monitoring										Notes	
Construction and Compliance Monitoring					Specific information to be added by ECM with annual compliance reporting (for all cells in these columns).						
Item	Environmental Effect	Purpose of Monitoring	Monitoring Method	Monitoring Frequency	Changes to Mitigation Protection and/or Monitoring	Agency Responses and Dates	New Mitigation Protection and/or Monitoring	Date of Permit Approval or Authorization		Status and Description of how commitments have been addressed during Construction	Compliance Document Reference
62	Noise generated by construction activities	To ensure noise levels comply with Municipal by-laws and construction equipment complies with NPC-115 noise emission standards.	Site measurements of levels produced by representative equipment/activities [1]	At the time of introduction of equipment/ activities producing significant noise level with potential to disturb sensitive areas.	None	N/A	N/A	N/A		Status – **Completed** **Construction of the H2-VMC segment of the transitway was completed in December 2017. Construction monitoring via weekly safety inspections.**	**Environmental inspections were combined with safety inspections in 2017 therefore a weekly environmental check list was not generated as for previous years.**
63	Effect of construction activities on air quality (dust, odour,)	To confirm that local air quality is not being adversely affected by construction activity	Regular inspections of site dust control measures and construction vehicle exhaust emissions[1]	Monthly during construction seasons.[2]	None	N/A	N/A	N/A		Status – **Completed** **Construction of the H2-VMC segment of the transitway was completed in December 2017. Construction monitoring via weekly safety inspections.**	**Environmental inspections were combined with safety inspections in 2017 therefore a weekly environmental check list was not generated as for previous years.**
65	Effect of construction on water quality and quantity in watercourses	To confirm that water quality is not being adversely affected by construction activity	Monitor sediment accumulation after rain events during construction to ensure that the proposed mitigation measures in the Erosion and Sediment Control Plan have been satisfied.[1]	After first significant rain event [2]	None	N/A	N/A	N/A		Status – **Completed** **Construction of the H2-VMC segment of the transitway was completed in December 2017. Construction monitoring via weekly safety inspections.**	**Environmental inspections were combined with safety inspections in 2017 therefore a weekly environmental check list was not generated as for previous years.**
66	Effect of construction on boulevard trees	To ensure the survival of boulevard trees	Inspection of protective measures and monitoring of work methods near trees{1]	Prior to commencement of work and bi-weekly during work activities.[2]	None	N/A	N/A	N/A		Status – **Completed** **Construction of the H2-VMC segment of the transitway was completed in December 2017. Construction monitoring was via weekly safety inspections. See also item B6 (c) for post construction monitoring of landscape/terrestrial health.**	**Environmental inspections were combined with safety inspections in 2017 therefore a weekly environmental check list was not generated as for previous years.**

Section 5.0 - Actions Required to Address Commitments - Table 5.3 Operations and Maintenance Monitoring										Notes	
Construction and Compliance Monitoring					Specific information to be added by ECM with annual compliance reporting (for all cells in these columns).						
Item	Environmental Effect	Purpose of Monitoring	Monitoring Method	Monitoring Frequency	Changes to Mitigation Protection and/or Monitoring	Agency Responses and Dates	New Mitigation Protection and/or Monitoring	Date of Permit Approval or Authorization		Status and Description of how commitments have been addressed during Construction	Compliance Document Reference
66-a (was 501)	Noise generated by operation and maintenance activities	To ensure noise levels comply with Municipal by-laws	Pass-by and idling measurements of levels produced by representative vehicles/ activities	Initially, after revenue service is introduced and in response to concerns or after any major increase in service frequency	None	N/A	N/A	N/A		**Status – Ongoing** **Noise issues and complaints will be monitored post-construction.**	
66-c (was 503)	Effect of rapid transit operations on GHGs emitted per commuting person-trips	To assess the effectiveness of improved public transit as a commuting choice in reducing GHG emissions in the corridor	Ridership growth surveys and transit mode split data analysis to derive GHG emission reductions.	Findings to be included in the Annual Compliance Reports	None	N/A	N/A	N/A		Status – Future work	
66-i (was 509)	Effect of RT operation and intersection modifications on traffic infiltration through neighbourhood roads	To identify any increase in the use of neighbourhood roads by non-resident traffic as an alternative to left turn access restrictions	"Before and after" traffic volume observations on affected roadways to determine any change in infiltration levels	Before commencement of construction and six months after introduction of RT service						**Status – Does not apply to H2-VMC segment.** **There are no residential communities in this segment where traffic infiltration could be possible.**	
66-m (was 513)	Provision of median crossing for Emergency Response Services vehicles	To ensure the operation of the ERS vehicles	Obtain feedback from ERS staff on performance of access provisions	Initially after completion of access [1] facilities and through regular consultation with the emergency services [2]						Status – **Completed** York Region continues to collaborate with Emergency Response Services on various ongoing VivaNext projects and therefore maintains the same level of communication with ERS which was consistent throughout the design and construction of H2-VMC. ERS is free to continue to provide feedback.. There have been no complications noted.	
66-n (was 514)	Utilization of Community Facilities	To confirm that rapid transit is increasing usage of facilities due to improved access	Obtain registration data from facilities served (up to three)	Review registration data annually for a period of 5 years after start-up						**Status – Does not apply to the H2-VMC segment.** **No Vaughan Community Centres along H2-VMC segment covered by this ACR.**	

Section 5.0 - Actions Required to Address Commitments - Table 5.3 Operations and Maintenance Monitoring										Notes	
Construction and Compliance Monitoring					Specific information to be added by ECM with annual compliance reporting (for all cells in these columns).						
Item	Environmental Effect	Purpose of Monitoring	Monitoring Method	Monitoring Frequency	Changes to Mitigation Protection and/or Monitoring	Agency Responses and Dates	New Mitigation Protection and/or Monitoring	Date of Permit Approval or Authorization		Status and Description of how commitments have been addressed during Construction	Compliance Document Reference
66-o (was 515)	Change in existing land use patterns to transit-oriented development may not be attainable or may be inappropriate	To confirm that municipal development approvals and zoning are realizing the benefit of improved transit and encouraging development compatible with existing neighbourhoods	Monitor re-development activity to control overall increase in and type of development density	Review municipal data on redevelopment/ development levels annually for a period of 10 years after start-up						**Status – No action required.** **York Region regularly reviews data on transit oriented development/ redevelopment as part of the Regional Centres and Corridors Program.**	https://www.yorklink.ca/citybuilding/# **See YorkLink City building Website** **See also May 2018 Report to Committee of the Whole - 2017 Regional Centres and Corridors Update**
66-p (was 516)	Effect of an increase in business activity on the urban form	To determine whether business activity along the corridor increases and whether resulting intensification meets urban form objectives.	Monitor business activity, urban form and economic conditions in the corridor	Review building applications and permits and economic influences annually for 10 years after start-up						**Status – No further action required.** **York Region regularly reviews data on transit oriented development/ redevelopment as part of the Regional Centres and Corridors Program.**	https://www.yorklink.ca/citybuilding/# **See YorkLink City building Website** **See also May 2018 Report to Committee of the Whole - 2017 Regional Centres and Corridors Update**

Item	Mitigation Measure / Commitment to be Monitored	Responsible person / agency	Status and Description of how commitment has been addressed during design	Compliance Document Reference
67	CMP Section 6.0 - In the event that there is a minor change to the design of the undertaking which does not adversely impact the expected net environmental effects of the undertaking, these changes will be considered minor and documented in the annual compliance report. CMP Section 6.0 – "… A required modification to the transitway alignment and station location in the area of the IBM campus in Markham has been identified. The modified alignment is a local refinement to the undertaking approved in the EA and an amendment report will be submitted specifically documenting the design modification."	York Region	Status – **Completed** **No minor changes to report for 2018.** **Construction of the H2-VMC segment of the transitway was completed in December 2017**	
68	CMP Section 6.0 - In the event that there is a change to the design of the undertaking that results in a material increase in the expected net environmental effects of the undertaking, the process set out in the CMP for modifying the design of the undertaking (including submission of an amendment report to the MOE) will be followed.	York Region	Status- **Completed** **No major changes to report for 2018.** **Construction of the H2-VMC segment of the transitway was completed in December 2017**	

Section 7.0 – Consultation				
Item	**Mitigation Measure / Commitment to be Monitored**	**Responsible person / agency**	**Status and Description of how commitment has been addressed during design**	**Compliance Document Reference**
70	CMP Section 7.2.1 - The findings of the Stage 2 Archaeological Assessment and any subsequent assessments will be circulated to all affected stakeholders and First Nations that have asked to be kept informed of the outcome of any archaeological investigations during the design and construction phases.	York Region	Status – **Completed** Stage 2 Archaeological Assessment completed in 2012, and no further archaeological concern related to affected properties for H2. MTCS provided a letter of concurrence on Stage 2 Archaeological Assessment on January 4, 2013 Notice of Stage 2 Archaeological Assessment finding were sent to the Huron-Wendat First Nation of Wendake, Quebec in February 2013 Reports provided to Huron Wendat First Nation again in 2016. **No response received.**	[2] Correspondence to Huron Wendake First Nation dated November 21, 2016 and Program Update package (ID# H2WE-2016-106)
71	CMP Section 7.2.1 - The Region and/or designate will consult [1] and respond [2] to First Nations concerns regarding its findings on the Stage 2 Archaeological Assessment. The Region and/or designate will obtain any necessary approvals [3] and conduct any additional studies [4] that may be required as a result of the findings and recommendations of the Stage 2 Assessment.	York Region	Status – **Completed** [1] Consult Notice of Stage 2 Archaeological Assessment finding were sent to the Huron-Wendat First Nation of Wendake, Quebec in February 2013 Reports provided to Huron Wendat First Nation again in 2016, awaiting comments. [2] No responses provided [3,4] –see item 70. **No additional studies conducted.**	[2] Correspondence to Huron Wendake First Nation dated November 21, 2016 and Program Update package (ID# H2WE-2016-106)
72	CMP Section 7.2.2 - Notices of public consultation opportunities will be sent to First Nations that wish to be kept informed of the implementation of the undertaking. [1] Should First Nations wish to be kept informed of the study and any additional work the Region will consult and notify First Nations in the manner in which they wish to be notified and/or consulted. This could vary from sending notices to attending meetings. [2]	York Region	Status – **Completed** Hwy 7 EA Notice of submission of CMP for public review and comment. [1] Notices of "Open House" format public consultation opportunities will be provided through newspaper advertising, or as appropriate to meet the commitment. Notices of public consultation opportunities, including newspaper advertising, postcards, individual letters, etc. Notice of Stage 2 Archaeological Assessment finding were sent to the Huron-Wendat First Nation of Wendake, Quebec in February 2013 Reports provided to Huron Wendat First Nation again in 2016. **No response received.**	[2] Correspondence to Huron Wendake First Nation dated November 21, 2016 and Program Update package (ID# H2WE-2016-106)

Section 11.0 – Other Documents required by the Conditions of Approval				
Item	**Mitigation Measure / Commitment to be Monitored**	**Responsible person / agency**	**Status and Description of how commitment has been addressed during design**	**Compliance Document Reference**
81	Ridership Monitoring Program: CMP Section 11.1 - York Region will prepare the results of its Ridership Monitoring Program as committed in Section 5.2.2.3 of the EA and EAA Condition 4.1.[1] The Ridership Monitoring Program will be provided to the City of Toronto, GO Transit, Ministry of Transportation, TTC, the Towns of Markham and Richmond Hill and the City of Vaughan for review.[2]	York Region	Status – **No action required.** The Ridership Monitoring Program described in this item (as committed in Section 5.2.2.3 of the EA and EAA Condition 4.1.[1]) relates to potential future evolution from Bus Rapid Transit to higher capacity Light Rail Rapid Transit. This is not being planned at this time (see Item 13 - 2017 ACR). Upon completion of H2VMC, additional surveys and reporting may be undertaken. Currently, YRT/viva monitors transit ridership on an ongoing basis and reports to York Region Committee of the Whole periodically (monthly or quarterly).	March 5, 2015 memo to Committee of the Whole RE: December 2014 York Region Transit Ridership Statistics (ID# YR-2016-302) February 4, 2016 memo to Committee of the Whole RE: York Region Transit (YRT/Viva) Ridership Statistics – 2015 Fourth Quarter (ID# YR-2016-303)

Appendix 1 Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements EA – Table 10.4-1 Effects and Mitigation for Mobility													Compliance Monitoring		
GOAL	Environmental Value / Criterion	Environmental Issues / Concerns	Project Phase[1]			Location	Potential Environmental Effects	Proposed Mitigation Measures			Level of Significance after Mitigation	Monitoring and Recommendation	Responsible Person / agency	Status of Description of how commitment has been addressed during design	Compliance Document Reference
			P	C	O			Built-In Positive Attributes and/or Mitigations	Potential Residual Effects	Further Mitigation					
OBJECTIVE A: To improve mobility by providing a fast, convenient, reliable and efficient rapid transit service															
A4	Increase attractiveness of rapid transit service	Travel time and service reliability	✓		✓	Entire Corridor	Adjustments to signal timing to achieve progression and minimize delay to rapid transit.	Micro-simulation of rapid transit operation and general traffic movements during detailed design [1] will be used to optimize signal timing. Transit speed will be increased to maximum achievable with reasonable intersection operation.	Delay to transit or intersecting traffic may be unacceptable. May affect intersection capacity for general traffic movements.	Modification of inter-section signal timing [2].	Moderately significant	Pursue an on-going intersection performance monitoring program [3]	York Region	Status **[3] – No action required.** Status [1],[2] - Completed [1] The Transit Priority Measures Design Report VISSUM Analysis, September 26, 2013, includes completed detail of micro-simulation analysis of the project corridor and Synchro for signal timing [2] The Transit Priority Measures Design Report describes the performance of the rapidway from the perspective of viva, and traffic. [3] Is a future post-construction activity. **Traffic operations are monitored regularly by York Region as part of normal practice. Future signal timing modifications will be implemented as needed.**	https://www.york.ca/wps/portal/yorkhome/transportation/yr/traffic/

Notes: P – Pre construction, C – Construction, O – Operation

Appendix 1 Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements EA – Table 10.4-2 Effects and Mitigation for Mobility													Compliance Monitoring		
GOAL	Environmental Value / Criterion	Environmental Issues / Concerns	Project Phase[1] P	C	O	Location	Potential Environmental Effects	Proposed Mitigation Measures: Built-In Positive Attributes and/or Mitigations	Potential Residual Effects	Further Mitigation	Level of Significance after Mitigation	Monitoring and Recommendation	Responsible Person / agency	Status of Description of how commitment has been addressed during design	Compliance Document Reference
OBJECTIVE B: To protect and enhance the social environment in the corridor															
B1 Cont'd (b)		Effect on community cohesion			✓	Entire corridor	Highway 7 may be perceived as a 'highway-like road, which in turn with the introduction of transit service vehicles, could create an unfriendly environment for pedestrians.	Design transitway to facilitate safe pedestrian road crossings with median refuge. Improved streetscaping in order to create a friendlier pedestrian environment.	During initial operation, vehicle/pedestrian incidents may occur due to the introduction of new traffic facilities and patterns.	Emphasis on education programs, signage, and stricter enforcement.	Negligible	Continue to monitor traffic behaviour and causes of incidents involving pedestrians.	York Region	**Status – No action required. Traffic safety and operations are monitored regularly by York Region as part of normal practice, including pedestrian safety.**	https://www.york.ca/wps/portal/yorkhome/transportation/yr/traffic/trafficsafetyprogram/
(c)		Community facility utilization			✓	Entire corridor	Improved transit access could increase demand on facilities and services within the corridor.	Municipality can expand services and facilities through the increased development charge revenue.	Community facility expansion could impact stable existing communities.	Include mitigation measures in community facility expansion.	Positive effect	Monitoring of registration levels at the various facilities.	York Region	Status – Does not apply to the H2-VMC segment. No Vaughan Community Centres along H2-VMC segment covered by this ACR.	
(bk)	Maintain or improve road traffic and pedestrian circulation (cont'd	Access to minor side streets and properties along the Highway 7 Corridor transit routes	✓	✓	✓	Entire Corridor	Median transitway will eliminate random left turns into minor side streets and properties thereby requiring an alternative access route	In many cases, alternative access can be obtained to a site via another site access or an adjacent roadway with signalized access to Highway 7. The travel patterns for the major traffic generators will be changed. U-turns provided at major intersections for safe manoeuvres into side streets and to properties. Random permissive left turns eliminated thus increasing safety. Develop traffic management plans for construction [1].	Conflict with U-turns and Right may decrease safety.	None necessary	Moderately significant	Monitor traffic and prohibit Right Turns On Red movements from the side street at these locations if necessary [2]	York Region	Status – [1] Complete, **[2] No action required** [1] The permanent signalized intersection facilitate the movement of transit, pedestrians, cyclists, and vehicles. Vehicles will be permitted to U-turn at the signalized intersections. [2] **Traffic operations are monitored regularly by York Region as part of normal practice. Future modifications will be implemented as needed.**	https://www.york.ca/wps/portal/yorkhome/transportation/yr/traffic/
B4 (a)	Minimize adverse noise and vibration effects	Noise effect for BRT and LRT due to widening of Highway 7 Corridor			✓	Entire corridor in proximity of residential uses	Combined effect of median transitway operation and general traffic on the widened Highway 7 Corridor roadways may result in increased noise levels for residents.	Modeling of future traffic activities indicated that expected noise increases in all, but one road segment, will not exceed the 5dB threshold at which mitigation measures are required. BRT and LRT sound level increases are expected to be marginal to none. However, at the future Markham Centre location, the BRT and LRT are predicted to exceed the background noise levels by as much as 8 dBA.	Transitway noise above likely background levels in Civic Mall at future Markham Centre location.	Depending on lower floor building uses, may require noise screening along transitway and/or noise control features in residential design along Civic Mall segment in Markham Centre area.	Insignificant	Undertake confirmation monitoring to verify compliance once the transitway is fully operational. In the event that the future noise level warrants mitigation, appropriate noise reduction measures will be put in place.	York Region	**Status – Does not apply.** **The residual effect identified relates to the BRT in the Markham Centre, which does not apply to the H2-VMC segment.**	

Appendix 1 Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements EA – Table 10.4-2 Effects and Mitigation for Mobility													Compliance Monitoring		
GOAL	Environmental Value / Criterion	Environmental Issues / Concerns	Project Phase[1] P	C	O	Location	Potential Environmental Effects	Proposed Mitigation Measures: Built-In Positive Attributes and/or Mitigations	Potential Residual Effects	Further Mitigation	Level of Significance after Mitigation	Monitoring and Recommendation	Responsible Person / agency	Status of Description of how commitment has been addressed during design	Compliance Document Reference
OBJECTIVE B: To protect and enhance the social environment in the corridor															
B4 (b)		Vibration effect for BRT and LRT due to widening of Highway 7 Corridor			✓	Entire corridor in proximity of residential uses	Combined effect of median transitway operation and general traffic on the widened Highway 7 Corridor roadways may result in increased vibration levels for residents.	Modeling of future traffic activities indicated that expected vibration increases will not exceed the protocol limit of 0.1 mm/sec for LRT. BRT vibration levels are expected to be negligible.	None expected	None necessary	Negligible	Undertake confirmation monitoring to verify compliance once the transitway is fully operational.	York Region	**Status – No action required. LRT is not applicable. BRT vibration determined to be negligible during the EA.**	
B6 (a)	Minimize disruption of community vistas and adverse effects on street and neighbourhood aesthetics	Visual Effects	✓		✓	Entire Corridor	Introduction of transit may reduce visual aesthetics of road	Introduction of a comprehensive landscaping and streetscaping plan for the corridor.[1]	Narrow sections of ROW where property cannot be acquired may limit incorporation of streetscaping		Significant	Monitor redevelopment and acquire property through redevelopment applications [2]	York Region	Status – [1] Completed, [2] **No action required** [1] The March 2013 DBCR incorporates streetscaping recommendations under Streetscape Design Guidelines (Section 3.1). The Streetscape plan was completed 2013. [2] This is post-construction**. York Region reviews and imposes conditions of approval on development applications adjacent to Regional roads, including the requirement for land takings as needed.**	
B6 (c)		Landscaping	✓		✓	Entire Corridor	Landscaping species may not survive in winter months	[1] Choose appropriate species for both winter and other months to maintain greenery throughout the corridor. [2] Place landscaping in planters and incorporate buried irrigation systems.	Species may still not survive	[3] Change species, irrigation patterns, etc.	Insignificant	[4] Monitor health of landscaping continuously	York Region	Status – Completed [1-2], Ongoing [3-4] [1] All species specified are salt and drought tolerant to survive harsh urban conditions found in the corridor and are as per York region design standards. [1] The Streetscape Planting Plan includes planters and irrigation as per YR standard specification (i.e., gator bags for irrigation which are not buried) [3,4] Will be addressed through post-construction monitoring	

Notes: P – Pre-construction, C – Construction, O – Operation

Appendix 1 Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements EA – Table 10.4-3 Effects and Mitigation for Mobility													Compliance Monitoring		
GOAL	Environmental Value / Criterion	Environmental Issues / Concerns	Project Phase[1]			Location	Potential Environmental Effects	Proposed Mitigation Measures			Level of Significance after Mitigation	Monitoring and Recommendation	Responsible Person / agency	Status of Description of how commitment has been addressed during design	Compliance Document Reference
			P	C	O			Built-In Positive Attributes and/or Mitigations	Potential Residual Effects	Further Mitigation					
OBJECTIVE C: To protect and enhance the natural environment in the corridor															
C1 (b)		Sediment laden stormwater entering watercourses during construction		✓		Entire Corridor	Fish kills and loss of aquatic habitat resulting in short-term population decline.	Construction fencing at work areas near watercourses limiting the area of disturbance.[1] Erosion and Sedimentation Control Plan.[2]	Short-term population decline.	None practical	Insignificant	None required	York Region	Status – **Completed [1] ;** Completed [2] [1, 2] Erosion and Sediment Control measures are monitored to ensure they are functioning as intended. Monitoring results are documented in the KED Weekly Environmental Checklist Item can be closed for 2017 as KED has no ongoing work near water courses and all environmental controls removed in 2016 **Construction completed in 2017**	[1] H2VMC-ENV-EMP-R06-2016-07-13-CP (KED ID# 2016-01). H2-VMC-ENV-CKL-2016 (Weekly Env Checklist) (KED ID# 2016-02)
C1 (c)		Sediment-laden stormwater entering watercourses during operation			✓	Entire Corridor	Loss of aquatic habitat resulting in population decline.	Stormwater management facilities such as grassed swales, oil and grit separators, stormwater ponds. Detailed Storm Water Management Plan will be prepared during the detailed design stage. [1]	Short term population decline.	Clean-out facilities as required.	Insignificant	Monitor sediment accumulation in stormwater management facilities.[2]	York Region	Status – Completed [1] **No action required [2] York Region road maintenance practices dictate that all Oil-Grit Separators are inspected annually for sediment accumulation,** A Drainage Study was completed for the detail design phase on April 05, 2012. Item can be closed for 2017 as KED has no ongoing work near water courses and all environmental controls removed in 2016	
C1 (d)		Loss of site-specific habitat.		✓		All watercourses within the entire corridor.	Potential loss of fish habitat as a result of new culverts/bridges, culvert/bridge extensions, and/or culvert/bridge replacements or repairs.	Design transitway cross-sections to avoid modifications at culverts/bridges. Span meander belt or 100-year erosion limit of the watercourse. Avoid in-water work to the extent possible. Minimize the area of in-water alteration to the extent possible. Follow in-water construction timing restriction. Perform all in-water work in the dry using a temporary flow bypass system.	A harmful alteration of fish habitat will likely result from culvert modifications at approximately 25 culverts that convey watercourses that support fish habitat.	Negotiations with regulatory agencies during detail design. Compensate for the harmful alteration of fish habitat. [1]	Insignificant	On-site environmental inspection during in-water work. [2] Post-construction monitoring of fish habitat compensation measures. [3]	York Region	Status – Complete [1] **Completed [2]** **Completed [3]** Item [1] No HADDs were identified and TRCA Permits have now been obtained for each watercourse crossing impacted [2] On-site environmental inspection during in-water works continues as shown in weekly checklists. **Construction completed in 2017** **Item [3] Final/Post construction inspection complete.** Item can be closed for 2017 as KED has no ongoing work near water courses and all environmental controls removed in 2016	[2] H2VMC-ENV-EMP-R06-2016-07-13-CP (KED ID# 2016-01) [2] H2-VMC-ENV-CKL-2016 (Weekly Env Checklist) (KED ID# 2016-02) **Letter December 1, 2017 KED Initial Certificate of Accordance. December 8, 2017 Punchlist (deficiencies). Letter January 22, 2018 WSP Certificate of Handover and Substantial Performance. No**

Appendix 1 Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements EA – Table 10.4-3 Effects and Mitigation for Mobility													Compliance Monitoring		
GOAL	Environmental Value / Criterion	Environmental Issues / Concerns	Project Phase[1]			Location	Potential Environmental Effects	Proposed Mitigation Measures			Level of Significance after Mitigation	Monitoring and Recommendation	Responsible Person / agency	Status of Description of how commitment has been addressed during design	Compliance Document Reference
			P	C	O			Built-In Positive Attributes and/or Mitigations	Potential Residual Effects	Further Mitigation					
OBJECTIVE C: To protect and enhance the natural environment in the corridor															
															Punchlist deficiency related to this compliance item.
C1 (e)	Minimize adverse effects on Aquatic Ecosystems (cont'd)	Fish mortality		✓		All watercourses within the entire corridor.	Fish may be injured or killed by dewatering.	Design transitway cross-sections to avoid modifications at culverts/bridges. Avoid in-water work to the extent possible. [1] Perform all in-water work in the dry using a temporary flow bypass system. [2] Capture fish trapped during dewatering of the work zone and safely release upstream. [3] Prohibit the entry of heavy equipment into the watercourse.	None expected.	None	Negligible	[4] On-site environmental inspection during in-water work.	York Region	Status – **Completed.** [1] Perform all in-water work in the dry [2] Capture fish trapped during dewatering of the work zone and safely release upstream. [3] Prohibit the entry of heavy equipment into the watercourse. [4] On-site environmental inspection during in-water work. Weekly inspection Checklist section 4.0 Compliance for Permits, Authorizations, and Licenses. All roadways and boulevards were completed in 2016. Environmental inspections were combined with safety inspections in 2017 therefore weekly environmental check list is not generated as previous years. **Construction completed in 2017**	H2VMC-ENV-EMP-R06-2016-07-13-CP (KED ID# 2016-01) [3,4] H2-VMC-ENV-CKL-2016 (Weekly Env Checklist) (KED ID# 2016-02)
C1 (f)		Barriers to fish movement.		✓	✓	All watercourses within the entire corridor.	Culvert/bridge extension, repair or replacement may create a barrier to fish movement.	Use open footing culverts or countersink closed culverts a minimum of 20% of culvert diameter. Span the watercourse, meander belt or floodplain with new structures where warranted by site conditions.	Culvert extensions will be designed to avoid the creation of a barrier to fish movement.	Negotiations with regulatory agencies during detail design. [1]	Negligible	On-site environmental inspection during in-water work. [2]	York Region	Status – Complete [1]; **Complete [2]** [1] Meeting on June 24, 2010, TRCA staff. Permits have been obtained by TRCA for this segment. [2] On-site environmental inspection during in-water work. Weekly inspection Checklist section 4.0 Compliance for Permits, Authorizations, and Licenses. All roadways and boulevards were completed in 2016. Environmental inspections were combined with safety inspections in 2017 therefore weekly environmental check list is not generated as previous years. **Construction completed in 2017**	[2] H2VMC-ENV-EMP-R06-2016-07-13-CP (KED ID# 2016-01)

Appendix 1 Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements EA – Table 10.4-3 Effects and Mitigation for Mobility													Compliance Monitoring		
GOAL	Environmental Value / Criterion	Environmental Issues / Concerns	Project Phase[1]			Location	Potential Environmental Effects	Proposed Mitigation Measures			Level of Significance after Mitigation	Monitoring and Recommendation	Responsible Person / agency	Status of Description of how commitment has been addressed during design	Compliance Document Reference
			P	C	O			Built-In Positive Attributes and/or Mitigations	Potential Residual Effects	Further Mitigation					
OBJECTIVE C: To protect and enhance the natural environment in the corridor															
C1 (g)		Baseflow alterations		✓	✓	All watercourses within the entire corridor.	New impervious surfaces can lead to changes in the frequency, magnitude, and duration of flows.	Reduce the area of impervious surfaces to the extent possible. Use stormwater management practices that encourage infiltration and recharge of groundwater.[1]	None expected.	None	Negligible	Post-construction inspection of stormwater management facilities to evaluate their effectiveness.[2] On-going maintenance as required.[3]	York Region	Status – Completed [1] **No further action required [2,3]** **Construction completed in December 2017.** **Final/Post construction inspection complete.** **Maintenance as per York Region maintenance practices.** The H2 Design Basis & Criteria Report (DBCR) includes: the Transition zone or the continuity strip (Section 3.15.1) - eco pavers allow for water percolation improving quality and reducing quantity. The median island also includes softscape wherever possible to achieve same. Drainage holes in planting boxes and ecopavers provide for infiltration of water from boulevards Planting plan shows areas which are pervious. The continuity strip and medians are paved in a permeable paver (Eco-Priora) which encourages water infiltration and recharge of ground water. MOECC approved ECAs for storm sewers and OGS units within H2VMC Segment. Item can be closed for 2017 as KED has no ongoing work near water courses and all environmental controls removed in 2016	**Letter December 1, 2017 KED Initial Certificate of Accordance. December 8, 2017 Punchlist (deficiencies). Letter January 22, 2018 WSP Certificate of Handover and Substantial Performance. No Punchlist deficiency related to this compliance item.**
C1 (h)	Minimize adverse effects on Aquatic Ecosystems (cont'd)	Increased temperature		✓	✓	All watercourses within entire corridor	Clearing of riparian vegetation and stormwater management practices can impact temperature regimes.	Minimize the area of stream bank alteration to the extent possible. [1] Use stormwater management practices that encourage infiltration and recharge of groundwater. [2]	Shading provided by culvert/bridge offsets shading lost through the removal of riparian vegetation.	Restore riparian areas disturbed during construction with native vegetation. [3]	Negligible	Post-construction inspection of stormwater management facilities to evaluate their effectiveness. [4] On-going maintenance as required. [5] Post-construction inspection of riparian plantings to confirm survival. [6]	York Region	Status – Completed [1-3] **No further action required [4-6].** **Construction completed in December 2017.** **Final/Post construction inspection complete.** **Maintenance as per York Region maintenance practices.** [1,2,3] Through the TRCA permitting process, the area of disturbance was limited as shown in the approved drawings for each of the watercourse crossings within the H2VMC Segment. As well, restoration plans were prepared and approved by TRCA. Stormwater management principles were also reviewed by the MOE and ECAs have been obtained for works along the H2VMC Segment. Item can be closed for 2017 as KED has no ongoing work near water courses and all environmental controls removed in 2016	**Letter December 1, 2017 KED Initial Certificate of Accordance. December 8, 2017 Punchlist (deficiencies). Letter January 22, 2018 WSP Certificate of Handover and Substantial Performance. No Punchlist deficiency related to this compliance item.**

Appendix 1 Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements EA – Table 10.4-3 Effects and Mitigation for Mobility												Compliance Monitoring		
GOAL	Environmental Value / Criterion	Environmental Issues / Concerns	Project Phase[1] P	C	O	Location	Potential Environmental Effects	Proposed Mitigation Measures: Built-In Positive Attributes and/or Mitigations	Potential Residual Effects	Further Mitigation	Level of Significance after Mitigation	Monitoring and Recommendation	Responsible Person / agency	Status of Description of how commitment has been addressed during design	Compliance Document Reference
OBJECTIVE C: To protect and enhance the natural environment in the corridor															
C2 (a)	Minimize adverse effects on Terrestrial Ecosystems	Loss of wildlife habitat and ecological functions		✓	✓	Entire corridor.	Construction of the transitway and associated facilities may result in the removal of vegetation and ecological functions it supports.	Minimize the area of vegetation removals to the extent possible.[1] Minimize grade changes to the extent possible.[2] Use close cut clearing and trimming to minimize the number of trees to be removed.[3] Delineate work zones using construction fencing/tree protection barrier.[4] Protect trees within the clear zone using guiderail, curbs, etc. to prevent removal.[5]	None expected.	Restore natural areas disturbed using a construction with native vegetation, where feasible.[6] Replace ornamental vegetation as part of landscaping [7].	Negligible	None required.	York Region	Status – **Completed** [1,3,4] **Completed** [5] Complete [2,6,7] [1-5] Environmental Management Plan addressed construction approach and protection requirements. KED Weekly Environmental Checklist verifies that Tree Protection Fencing, minimizing construction area, etc. are followed. [2,6,7] As part of the TRCA permitting process, Edge Management Plans were prepared with restoration with native vegetation / ornamentals (where appropriate). The Arborist Reports shows that trees on private and ROW are to be preserved whenever possible, and grade changes are to be minimized for significant trees. Streetscape Layout and Details and Streetscape Planting Plan show native vegetation and inclusion or ornamental vegetation. [3,4,5] KED Weekly Environmental Checklist verifies that all Tree Protection Fencing is in place and functioning as intended. No impact in 2017 **Construction was completed in December 2017. Environmental inspections were combined with safety inspections in 2017. Final/Post construction inspection complete.**	[3,4,7] H2-VMC-ENV-CKL-2016 (Weekly Env Checklist) (KED ID# 2016-02) **Letter December 1, 2017 KED Initial Certificate of Accordance. December 8, 2017 Punchlist (deficiencies). Letter January 22, 2018 WSP Certificate of Handover and Substantial Performance. No Punchlist deficiency related to this compliance item.**
C2 (b)		Wildlife mortality		✓	✓	Entire corridor.	Removal of wildlife habitat may result in wildlife mortality.	Perform vegetation removals outside of wildlife breeding seasons (typically April 1 to July 31). Perform culvert/bridge extension, repair, and replacement outside of wildlife breeding season.	None expected.	None required.	Negligible	None required.	York Region	Status **– Completed** Weekly Inspection Checklist section 4.3 ii) ensures that trees are not removed prior to completion of a birds nest survey during the nesting season. Environmental Protection Plans were prepared for areas regulated by TRCA which identify timing restrictions for vegetation removals. These drawings were approved by TRCA. No impact in 2017. **Construction was completed in December 2017**	H2VMC-ENV-EMP-R06-2016-07-13-CP (KED ID# 2016-01) H2-VMC-ENV-CKL-2016 (Weekly Env Checklist) (KED ID# 2016-02)

Appendix 1 Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements EA – Table 10.4-3 Effects and Mitigation for Mobility													Compliance Monitoring		
GOAL	Environmental Value / Criterion	Environmental Issues / Concerns	Project Phase[1]			Location	Potential Environmental Effects	Proposed Mitigation Measures			Level of Significance after Mitigation	Monitoring and Recommendation	Responsible Person / agency	Status of Description of how commitment has been addressed during design	Compliance Document Reference
			P	C	O			Built-In Positive Attributes and/or Mitigations	Potential Residual Effects	Further Mitigation					
OBJECTIVE C: To protect and enhance the natural environment in the corridor															
C2 (e)		Disturbance to rare, threatened, or endangered wildlife		✓	✓	Entire corridor.	Three rare species were identified within the study area: rough-legged hawk (non-breeding migrant/ vagrant, extremely rare breeding occurrence by MNR); northern shrike (non-breeding migrant/vagrant, very rare to uncommon breeding occurrence by MNR); and, milk snake ('special concern' by COSEWIC, and 'rare to uncommon' by MNR)	Prevent the harassment of eastern milk snake if encountered during construction.[1] Perform vegetation removals outside of wildlife breeding seasons (typically April 1 to July 31). [2] Perform culvert/bridge extension, repair and replacement outside of wildlife breeding season. [3]	None expected.	None required.	Negligible	None required.	York Region	Status – Completed [1], **Completed** [2-3] [1] The Ministry of Natural Resources (MNR) confirmed on August 15, 2013, that species at risk are not adversely affected, no mitigation is required, and have no further concerns. [2] [3] Environmental Protection Plans were prepared identified timing restrictions for vegetation removals. These drawings were approved by TRCA. [2,3] Monitoring is conducted during construction. No impact in 2017. **Construction was completed in December 2017**.	[1] H2VMC-ENV-EMP-R06-2016-07-13-CP (KED ID# 2016-01)
C2 (f)	Minimize adverse effects on Terrestrial Ecosystems (cont'd)	Disturbance to vegetation through edge effects, drainage modifications, and road salt		✓	✓	Entire corridor.	Clearing of new forest edges may result in sunscald, windthrow, and invasion of exotic species. Ditching, grading, and other drainage modifications may alter local soil moisture regimes. Road salt may result in vegetation mortality and die back.	[1] Minimize the area of vegetation removals to the extent possible. [2] Minimize the grade changes and cut/fill requirements to the extent possible. [3] Use close cut clearing and trimming to minimize encroachment on remaining vegetation. [4] Delineate work zones using construction fencing/ tree protection barrier. [5] Manage the application of road salt to the extent possible. [6] TRCA guidelines for Forest Edge Management Plans & Post-Construction Restoration will be followed. [7] All valley lands disturbed will require restoration with native herbaceous & woody species.	Vegetation communities within the study area are primarily cultural in origin and have been impacted by Highway 7. The transitway represents an incremental encroachment into these already disturbed communities.	Landscape treatments.	Insignificant	None required.	York Region	Status – **Completed [1,3,4]** **Construction is now complete.** **Completed [5] Road Salt Management is part of operations. York Region developed a salt management plan in 2004. Refer to June 2012 report to York Region Transportation Services Committee. See also item C4 (a) below.** Complete [2,6,7] [1,3,4] Environmental Management Plan addressed construction approach and protection requirements. Ongoing construction monitoring / inspection is being done. [2,6,7] As part of the TRCA permitting process, Edge Management Plans were prepared with restoration with native herbaceous & woody species following TRCA guideline. See Arborist Reports and Streetscape Planting Plan	[1,3,4] H2VMC-ENV-EMP-R06-2016-07-13-CP (KED ID# 2016-01) **June 2012 Report of the Transportation Services Committee - WINTER MAINTENANCE PROGRAM**
C3 (c)		Degradation of air quality during construction		✓		Highway 7 Corridor	Some dust is expected during the construction period.	The law requires that all possible pollutant emission mitigation steps possible be taken during construction activities	Some PM emissions locally.	None required.	Negligible	Regular inspection of site dust [1] and construction vehicle exhaust emissions [2] during construction in	York Region	Status – **Completed.** **Construction was completed in December 2017** Fugitive Dust commitments addressed in CEMP attached to the EMP Weekly Inspection Checklist Section 2.0 viii) Dust	H2VMC-ENV-EMP-R06-2016-07-13-CP (KED ID# 2016-01) H2-VMC-ENV-CKL-2016

Appendix 1 Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements EA – Table 10.4-3 Effects and Mitigation for Mobility													Compliance Monitoring		
GOAL	Environmental Value / Criterion	Environmental Issues / Concerns	Project Phase[1]			Location	Potential Environmental Effects	Proposed Mitigation Measures			Level of Significance after Mitigation	Monitoring and Recommendation	Responsible Person / agency	Status of Description of how commitment has been addressed during design	Compliance Document Reference
			P	C	O			Built-In Positive Attributes and/or Mitigations	Potential Residual Effects	Further Mitigation					
OBJECTIVE C: To protect and enhance the natural environment in the corridor															
												compliance with MOE's standards and municipal by-laws.		control BMP's in place and effective or not required. All roadways and boulevards were completed in 2016. Environmental inspections were combined with safety inspections in 2017 therefore weekly environmental check list is not generated as previous years	(Weekly Env Checklist) (KED ID# 2016-02)
C4 (a)	Minimize adverse effects on corridor hydro-geological, geological, hydrological and geomorphic conditions	Water quality in shallow groundwater that can affect quality in surface watercourses			✓	Areas located hydraulically down gradient of transit alignment, where receiving surface watercourses are present.	Transitways will require de-icing salt and also will accumulate various chemical substances that can impact the water quality of runoff. Impacted runoff that infiltrates can increase concentrations in shallow groundwater. Potential to affect shallow groundwater that discharges to surface watercourses.	Dilution and other natural processes will attenuate elevated parameters in groundwater.	Potential effects to the water quality of surface water courses. Groundwater quality effects are anticipated to be detectable.	Reduce application of road salt, where possible [1]. Curbs and gutters to convey impacted runoff away from permeable soil areas.[2]	Moderately Significant	None required. Water quality effects are anticipated to remain acceptable.	York Region	Status – **Completed** [1] Completed [2] [1] Road Salt Management is part of operations. **York Region developed a salt management plan in 2004. Refer to June 2012 report to York Region Transportation Services Committee.** [2] Curbs and gutters have been implemented to convey runoff to the storm sewer system. As well, stormwater management principles were also reviewed by the MOECC and ECAs have been obtained for works along the H2VMC Segment.	**June 2012 Report of the Transportation Services Committee - WINTER MAINTENANCE PROGRAM**

Notes: P – Pre-construction, C – Construction, O – Operation

Appendix 1 Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements EA – Table 10.4-4 Effects and Mitigation for Mobility													Compliance Monitoring		
GOAL	Environmental Value / Criterion	Environmental Issues / Concerns	Project Phase[1]			Location	Potential Environmental Effects	Proposed Mitigation Measures			Level of Significance after Mitigation	Monitoring and Recommendation	Responsible Person / Agency	Status of Description of how commitment has been addressed during design	Compliance Document Reference
			P	C	O			Built-In Positive Attributes and/or Mitigations	Potential Residual Effects	Further Mitigation					
OBJECTIVE D: To promote smart growth and economic development in the corridor															
D1 cont'd (b)		Locating higher density and transit-oriented development where it can be served by transitway			✓	New and redevelopment/infill locations	Current landowners could object to implementation of existing land use pattern changes along the transit corridor.	Regional/Municipal land use controls and approval processes to encourage transit-oriented development or re-development in support of OP objectives.	Redevelopment pressure on surrounding areas	Apply Municipal Site Plan approval process	Insignificant	[1] Monitor re-development activity to control overall increase in development density	York Region / Vaughan / Markham / Richmond Hill	**Status – No further action required.** **York Region regularly reviews data on transit oriented development/redevelopment as part of the Regional Centres and Corridors Program.**	https://www.yorklink.ca/citybuilding/# **See YorkLink City building Website** **See also May 2018 Report to Committee of the Whole - 2017 Regional Centres and Corridors Update**
D2	Provide convenient access to social and community facilities in corridor	Potential barrier effects during construction and operation		✓	✓	Entire Corridor	Transitway could be perceived as a barrier in access to future community centres, hospital(s), malls, parks, etc.	Construction Traffic and Pedestrian Management Plan will avoid wherever possible, barriers to entrances/exits to large attractors along Highway 7.[1] Transitway median design will recognize pedestrian access requirements, particularly in proximity to community facilities[{2]	Alternative access routes to facilities may affect adjacent properties	Mark detours and alternative access points clearly [3]	Insignificant	Monitor congestion levels during construction[4] and traffic patterns during operations.[5]	York Region	Status – Completed [1,2] **Completed [3,4],construction is now complete.** **Completed [5] No further action required.** **Traffic operations are monitored regularly by York Region as part of normal practice.**	https://www.york.ca/wps/portal/yorkhome/transportation/yr/traffic/
D3 (a)	Minimize adverse effects on business activities in corridor	The potential for an increase in business activity.	✓	✓	✓	Entire Corridor	Increased pedestrian traffic via the implementation of a rapid transit system will increase the potential for business activity.	A higher density of development on underutilized sites, infill locations and on vacant land should increase the market for some business activity.	Increase in vehicular traffic; increase in workforce/ population.	Encourage intensification meeting urban form objectives.	Insignificant and positive	[1] Monitor building applications/ permits, economic influences (employment rate, etc.)	York Region / Vaughan / Markham / Richmond Hill	**Status – No further action required.** **York Region regularly reviews data on development/redevelopment as part of the Regional Centres and Corridors Program.**	https://www.yorklink.ca/citybuilding/# **See YorkLink City building Website** **See also May 2018 Report to Committee of the Whole - 2017 Regional Centres and Corridors Update**
D3 cont'd (b)		The potential for a decrease in business activity.		✓	✓	Entire corridor	Modification of road access could lead to displacement and/or business loss.	Implement procedures to address requests of affected businesses [1]; Incorporate design solutions and construction methods to minimize number of businesses affected.[2]	Decrease in traffic; decrease in workforce/ population	Encourage alternative compatible development	Moderately significant	Cooperative response to business loss concerns addressed to municipalities. [3]	York Region	Status – Completed [1-2] **Completed** [3] [1] Community liaison procedures and [2] construction staging plans were developed and implemented in construction For design, [2] the Design Basis & Criteria Report describes provisions made with respect to property and minimizing impacts on adjacent lands (DBCR Section 7 Property,) [3] Response to business loss concerns **Construction is now complete.**	

D4 (a)	Protect provisions for goods movement in corridor	Ease of Truck Movement			✓	Entire Corridor	Median transitway will restrict truck movement in corridor	Provided U-turns at major intersections to allow for truck access to side streets and properties. Traffic analysis at intersections indicated sufficient capacity for trucks using U-turns.	In areas of 4-lane cross-section, intersections with no station or landscaping in median do not allow sufficient turning width for WB 17 (articulated trucks).	Traffic signs prohibit large truck at these intersections (see next entries). [1] Designate truck routes. [2]	Insignificant	Monitor and widen Highway 7 with right turn tapers at side streets to allow for movement [3]	York Region	Status [1-2] –Completed Status [3] – **No action required** [1,2] The design has accommodated truck turning at all signalized intersections. Therefore, no truck prohibitions or designated truck routes are needed Right turn tapers have been provided at Keele Street where truck volumes are high. [3] Monitoring of other intersections for future right turn lane needs is a post-construction activity. **No action required. Traffic operations are monitored regularly by York Region as part of normal practice.**	https://www.york.ca/wps/portal/yorkhome/transportation/yr/traffic/

Notes: P – Pre-construction, C – Construction, O – Operation

Appendix 2 Action for comments received from the Government Review Team on the Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements Environmental Assessment Final Report					Compliance Monitoring		
Representative	**Name**	**#**	**Comment**	**Response**	**Responsible Agency / Person**	**Status and Description**	**Compliance Document Reference**
		6 (f)	Generally, the impacts were positive or could be mitigated to a minimal level of significance. Given the diversity of the corridor and the form of the transitway, there will be impacts on traffic operations and urban design.	Detailed comment noted. As noted in Table 11.4-2 of the EA report, the Region is committed to monitoring traffic operations after implementation of the undertaking [1]. In addition, a detailed traffic management plan will be developed [2] prior to commencing construction (Section 11.2.2.1).		Status – [1] **No further action required. Traffic operations are monitored regularly by York Region as part of normal practice.** [2] Complete. Traffic management plan was developed in the Detail Design phase. Minutes of City of Vaughan Task Force Meetings record traffic management plan consultation.	https://www.york.ca/wps/portal/yorkhome/transportation/yr/traffic/
		6 (m)	The potential for traffic infiltration in some areas – Traffic infiltration has been identified as a possible problem in certain neighbourhoods, resulting from drivers trying to avoid Hwy 7. This may increase as a result of the constraints introduced by the transitway. The following neighbourhoods may be affected: Monsheen Dr, Willis Rd/Chancellor Dr, New Westminster Dr, and Beverly Glen Blvd. The EA recommends that these neighbourhoods be monitored before and after the implementation of the transitway to determine if additional mitigation measures are required.	Detailed comment noted. York Region will work with the municipalities during monitoring of traffic operations after implementation of the transitway to address issues/concerns including traffic infiltration.		**Status – Does not apply to H2-VMC segment.** **There are no residential communities in this segment where traffic infiltration could be possible.**	
		7 (b)	OSAA recommends that the Proponent continue to contact the relevant First Nations and that follow-up contact be made with all the identified First Nations and Aboriginal organizations.	Comment noted. The Proponent will continue to consult First Nations based on their identified interests/concerns and specific request for additional involvement (as an example, any First Nation that identifies an interest in archaeological findings will be forwarded any future archaeological reports prepared during detailed design).[1]		Status –**Completed** [1] Hwy 7 EA Notice of submission of CMP for public review and comment was provided. The Stage 2 Archaeological (Property) Assessment Report was completed and circulated 2016 status: As of the end of the 2016 construction season, there were no archaeological findings. Reports provided to Huron Wendat First Nation again in 2016. **No comments received. Construction is now complete.**	
		8(b)	Appendix K – it is crucial that construction noise be included in the EA. This is standard practice in EA, to consider the effects of all phases of the project. The changes in the acoustic environment during construction constitute an important potential effect to human health.	As noted in Table 11.4-1 (Construction Monitoring), the Proponent has committed to monitoring noise generated by construction activities to ensure compliance with Municipal By-Laws.(1)		Status –**Completed** Noise monitoring commitment outlined in the site environmental management plan Quantitative Noise Monitoring was carried out at the VMC when piling operations were commenced in 2016 to ensure Noise produced was below the acceptable limits. **Construction is now complete.**	**See 2017 ACR**
		14 (l)	The monitoring frequency in Table 11.4-1 for "effect of construction on water quality and quantity in watercourses" should be revised to indicate that monitoring should occur after every major storm event.	Comment noted and will be carried forward to the design and construction phase of the project.		Status – **Completed** An Environmental Control Plan was developed Inspections **were** carried out weekly to ensure mitigation effectiveness. **Construction is now complete.**	**See 2017 ACR.**

Appendix 2 Action for comments received from the Government Review Team on the Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements Environmental Assessment Final Report					Compliance Monitoring		
Representative	**Name**	**#**	**Comment**	**Response**	**Responsible Agency / Person**	**Status and Description**	**Compliance Document Reference**
		14 (m)	The discussion of water quality and quantity monitoring in Table 11.4-2 is not satisfactory as the monitoring methods and frequency are not appropriate for the monitoring purposes. Specifically, monitoring of sediment accumulation in stormwater management facilities will not indicate the effect of snow and ice removal in corridor watercourses. It is recommended that separate monitoring items be developed for sediment accumulation, stormwater management facilities, and impacts of snow and ice removal. Water quality impacts of snow and ice removal, as well as regular transit operations, should be monitored by measuring chlorides, suspended sediment, and other water quality parameters, at the outlets of the various stormwater management facilities during both storm and snowmelt events. The accumulation of sediment in stormwater management facilities should be monitored by measuring the accumulation at a reasonable interval based on the expected sediment loading and storage capacity of the facility. Table 11.4-2 should be revised accordingly.	The Region will develop a detailed monitoring program covering all aspects noted during detailed design in consultation with TRCA. [1] All required measurements, specifically to assess the effect of the transitway insertion, will be included in the monitoring program. [2]		m) Status – **Completed** [1] An Environmental Control Plan was developed. TRCA was provided with the stormwater management plan. ECAs for the design were obtained. **Construction is now complete.** **[2] Current York Region road maintenance practices dictate that all York Region Oil-Grit Separators are inspected annually for sediment accumulation, servicing and cleaning. York Region monitors water quality via the MOECC's provincial stream water quality monitoring program. York Region is notified of any concerning water quality parameters and chloride levels by the MOE and will work closely with the MOE to address any concerns resulting from transit and maintenance operations.**	

Appendix 3 Action for comments received from the Public on the Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements					Compliance Monitoring		
Representative	**Name**	**#**	**Comment**	**Response**	**Responsible Agency / Person**	**Status and Description of how commitment has been addressed during design**	**Compliance Document Reference**
		5 (i)	*Land Use and Development* Reducing of car use and dependency is achieved by land use that promotes walking and cycling. Compact, mixed-use development reduces car needs. Six to ten lanes of traffic and buildings opening onto parking lots rather than streets works against reducing car dependency and safety for pedestrians and cyclists. Researchers are examining the connection between community design, physical exercise, and transit use, and are finding that pedestrian friendly environments promote walking and the use of transit. Examine land use and transportation through the eyes of children.	As described in Section 9.1.1 – Transitway Elements, a streetscape plan has been developed [1] for the transitway that would be a catalyst for transit-oriented development and attract transit ridership. In addition, as described in Section 12.1.1, York Region is undertaking a number of land use planning initiatives to facilitate the development of both the Regional Centres and Corridors with more intensive development supporting transit ridership.[2]		**Status – No further action required.** **York Region regularly reviews transit oriented development/ redevelopment as part of the Regional Centres and Corridors Program.**	https://www.yorklink.ca/citybuilding/# **See YorkLink City Building Website** **See also May 2018 Report to Committee of the Whole - 2017 Regional Centres and Corridors Update**