

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

D1.1 In addition to the *General Conditions for Construction*, these Supplemental Conditions are applicable to the Work of the Contract.

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of

- (a) Roadway Construction
 - (i) Plessis Road Asphalt Pavement Reconstruction - Dugald Road to Approx. 300m South, including Dugald Road and Plessis Road Intersection pavement modifications/rehabilitation works
 - (ii) Plessis Road Concrete Reconstruction - Dugald Road to Pandora Avenue West.
 - (iii) Overhead Sign Structure removal and installation
- (b) Underpass Structures
 - (i) Construction of a new two (2) span Through Plate Girder (TPG) railway bridge supported by rock-socketed caisson foundations
 - (ii) Steel sheet pile retaining walls
- (c) Land Drainage Sewers
- (d) Pumping Station
- (e) Dry Pond
- (f) Rail
 - (i) Track construction, shoofly removal
 - (ii) Embankment Works
- (g) Miscellaneous Underground Works
- (h) Landscaping Works
 - (i) Plessis Road – from Pandora Avenue West to 300m south of Dugald Road
 - (ii) Dugald Road – 200m east and 200m west of Plessis Road
 - (iii) Dry pond and Pumping Station sites
- (i) Active Transportation Pathways (ATP)
 - (i) Plessis Road - Dugald Avenue to Pandora Avenue West
- (j) Demolition of three (3) houses on Plessis Road

D2.2 The major components of the Work are as follows:

- (a) Roadway Construction
 - (i) Construction of Temporary Pavements
 - (ii) Removal of Overhead Sign Structures including foundations on Dugald Road
 - (iii) Excavate/Fill as required
 - (iv) Compaction of existing sub-grade
 - (v) Supply and installation of catchbasins and connection pipe (D2.1(a)(ii))
 - (vi) Supply and installation of subdrains (D2.1(a)(ii))
 - (vii) Supply and installation of geotextile
 - (viii) Placement of sub-base and base course

- (ix) Construct 250mm concrete pavement (plain-dowelled) slip-forming (D2.1(a)(ii))
 - (x) Construction of new concrete curb and gutter (D2.1a (i))
 - (xi) Placement of asphalt pavement (D2.1a (i))
 - (xii) Construction of new concrete curbs and sidewalks
 - (xiii) Construction of median slabs and 150mm concrete shoulders(reinforced) (D2.1(a)(ii))
 - (xiv) Construction of overhead sign structure foundation on Dugald Road and supply and installation of overhead sign structure
 - (xv) Removal of temporary works on Bournais and Rougeau
 - (xvi) Boulevard grading
- (b) Underpass Structures
- (i) Installation of rock-socketed caissons
 - (ii) Installation of steel sheet pile retaining walls
 - (iii) Excavate/Fill as required
 - (iv) Construction of concrete abutments and pier cap
 - (v) Fabrication and installation of bronze spherical bearings
 - (vi) Fabrication and installation of steel Through Plate Girder (TPG) spans
 - (vii) Supply and installation of waterproofing membrane
 - (viii) Supply and installation of drains and connection pipes
 - (ix) Reconstruction of main tracks on bridge
 - (x) Installation of fiber optic cable (by others)
 - (xi) Relocation of rail traffic on bridge (by others)
 - (xii) Construction of median and shoulder traffic barriers
 - (xiii) Construction of median slab
 - (xiv) Placement of sidewalk and active transportation pathway (ATP) slabs, concrete caps and cladding on steel sheet piles
 - (xv) Supply and installation of chain link fence and aluminum pedestrian handrail
 - (xvi) Supply and Installation of "Welcome to Transcona" signs
- (c) Land Drainage Sewers
- (i) Construction of approximately 600 m of land drainage sewers by open cut and trenchless methods ranging in size from 300 mm to 1050 mm in diameter.
 - (ii) Installation of new manholes, catchbasins, catch pits, ditch inlets, and sewer service pipe.
 - (iii) Installation of concrete and CSP culverts ranging in size from 400 mm to 1050 mm in diameter.
 - (iv) Abandonment and removal of existing catchbasins, land drainage sewers, manholes culverts, and sewer service pipes.
- (d) Pumping Station
- (i) Construction of cast in place concrete Pumping Station wet well/substructure and rock-socketed caisson foundation.
 - (ii) Construction of masonry and wood superstructure.
 - (iii) Construction of mechanical heating and ventilation systems.
 - (iv) Supply and installation of seven submersible land drainage pumps and associated piping.

- (v) Construction of electrical, control and instrumentation systems.
- (e) Dry Pond
 - (i) Excavation of dry pond site.
 - (ii) Removal of abandoned water pumphouse foundation.
 - (iii) Construction of berm around dry pond using suitable site fill material.
 - (iv) Off-site disposal of surplus fill material.
- (f) Rail
 - (i) North Track Embankment Works
 - i) Construction of north embankment realignment
 - ii) Excavation and benching;
 - iii) Compaction of existing subgrade;
 - iv) Placement of suitable site material for track embankments;
 - v) Placement of sub-ballast
 - vi) Relocation of culverts.
 - (ii) Track Construction, Shoofly Removal
 - i) Construct N. Maintrack at new alignment offset;
 - ii) Install remaining turnouts.
 - iii) Construct track on bridge using previously built track panels.
 - iv) Complete cut-overs and re-establish service on maintracks.
 - v) Remove temporary shoofly, WU01 (South "Malting" Industrial Lead) and WM01 (North Yard Lead) track, respectively and salvage material
 - (iii) Shoofly Embankment Works
 - i) Remove shoofly embankment and shape / reclaim material to form access roads and turnout pads.
 - ii) Stockpile remaining embankment material.
- (g) Miscellaneous Underground Works
 - (i) Construction of approximately 100 m of 200 mm watermain by open cut methods.
 - (ii) Installation of miscellaneous hydrants, watermain valves and bends.
 - (iii) Abandonment and removal of existing watermains, hydrants, valves, and bends.
 - (iv) Construction of approximately 210 m of 150 mm wastewater forcemain by open cut and trenchless methods.
 - (v) Construction of approximately 170 m of gravity wastewater sewers ranging in size from 250 mm to 450 mm in diameter by open cut and trenchless methods.
 - (vi) Installation of wastewater sewer manholes and connections.
 - (vii) Abandonment and removal of existing wastewater sewers and manholes.
- (h) Landscaping Works
 - (i) Site preparation
 - (ii) Supply and installation of seed on amended soil
 - (iii) Supply and installation of sod on topsoil
 - (iv) Supply and installation of trees and shrubs in growing medium
 - (v) Long-term maintenance of plant material
 - (vi) Supply and installation of interlocking paving stones
 - (vii) Supply and installation of site furnishings
- (i) Active Transportation Pathways

- (i) Excavate/Fill as required
- (ii) Compaction of existing sub-grade
- (iii) Installation of geotextile
- (iv) Placement of sub-base and base course
- (v) Placement of asphalt pavement
- (vi) Boulevard grading
- (j) Demolition of Houses
 - (i) Protect services to be maintained
 - (ii) Remove structures
 - (iii) Demolish foundations and remove debris from site
 - (iv) Boulevard Grading

D3. DEFINITIONS

D3.1 When used in this Bid Opportunity:

- (a) “**Contract 1**” means the Plessis Road Twinning and Grade Separation at CN Redditt Subdivision: Rail Shoofly Grade Preparation and Miscellaneous Wastewater Sewer, Watermain and Land Drainage Works;
- (b) “**Contract 2**” means the Plessis Road Twinning and Grade Separation at CN Redditt Subdivision: Shoofly Track Installation and Permanent Track Construction at Mileage 246.64;
- (c) “**Contract 3**” means the Plessis Road Twinning and Grade Separation at CN Redditt Subdivision: Plessis Road Reconstruction, Underpass Structures, Pumping Station, Land Drainage Sewer and Miscellaneous Underground and Landscaping Works;
- (d) “**Contract 4**” means the Plessis Road Twinning and Grade Separation at CN Redditt Subdivision: Imperial Oil Ltd. and Shell Canada Pipelines Relocation Works;
- (e) “**WM-01**” means North Yard Lead Track;
- (f) “**WU-01**” means South “Malting” Industrial Lead Track;
- (g) “**CN**” means Canadian National Railway Company or designated representative definition;
- (h) “**Fabricator**” means a person or entity having a direct contract with the Contractor to construct by combining or assembling diverse, typically standardized parts;
- (i) “**Manufacturer**” means a person or entity having a direct contract with the Contractor to manufacture products not worked to a special design for the Work;
- (j) “**Project**” means the construction of an underpass and bi-directional rail bridge, and relocation and improvement of certain roadways and intersections, involving certain sections of Plessis Road, Pandora Avenue West and Dugald Road in east Winnipeg, including the Work of Contracts 1 to 3;
- (k) “**Protecting Foreman (also referred to as CN Assigned Employee)**” means the CN employee or Contractor employee qualified in the Canadian Rail Operation Rules (CROR) and CN requirements. Protecting Foremen are responsible for protecting employees against Railway traffic. Protecting Foremen are charged solely with the safe movement of trains and are not responsible for the safety of the Contractor, the Contractor’s personnel or the Contractor’s equipment; and
- (l) “**Pumping Station**” means the new Plessis Underpass Land Drainage Pumping Station at (1090 Plessis Road) Plessis Road located immediately west of Plessis Road and south of the CN Redditt Subdivision.
- (m) “**Down Time Related to Railway Operations**” means the time from when the Protecting Foreman advises the Contractor to shut down their operations until they are advised by the Protecting Foreman it is safe to resume their operations.

D3.2 Within the text of the Specifications, reference may be made to the following acronyms in relation to codes, standards and organizations:

AABC	Associated Air Balance Council
AASHTO	American Association of State Highway and Transportation Officials
ABMA	American Bearing Manufacturers Association
ACI	American Concrete Institute
ADC	Air Diffusion Council
AGMA	American Gear Manufacturers Association
AHRI	Air-Conditioning, Heating and Refrigeration Institute
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMCA	Air Movement and Control Association International, Inc.
ANSI	American National Standards Institute
APHA	American Public Health Association
API	American Petroleum Institute
AREMA	American Railway Engineering and Maintenance-of-Way Association
ASA	Acoustical Society of America
ASCE	American Society of Civil Engineers
ASCII	American Standard Code for Information Interchange
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASPE	American Society of Plumbing Engineers
ASTM	ASTM International (formerly American Society for Testing and Materials)
ATP	Active Transportation Pathway
AWMAC	Architectural Woodwork Manufacturers Association of Canada
AWPA	American Wood Protection Association
AWS	American Welding Society
AWWA	American Water Works Association
CAN	National Standard of Canada
CBAC	Clay Brick Association of Canada
CBM	Certified Ballast Manufacturers
CCA	Canadian Construction Association
CCMC	Canadian Construction Materials Centre
CEA	Canadian Electricity Association
CEC	Canadian Electrical Code
CEMA	Canadian Electrical Manufacturers Association
CGA	Canadian Gas Association

CGSB	Canadian General Standards Board
CISC	Canadian Institute of Steel Construction
CISPI	Cast Iron Soil Pipe Institute
CITC	Canadian Institute of Timber Construction
CIU	Canadian Institute of Underwriters
CLA	Canadian Lumberman's Association
CLSAB	Canadian Lumber Standards Accreditation Board
CMAA	Crane Manufacturers Association of America
CMHC	Canada Mortgage and Housing Corporation
CPCA	Canadian Paint and Coatings Association
CPCI	Canadian Precast/Prestressed Concrete Institute
CRCA	Canadian Roofing Contractors' Association
CRSI	Concrete Reinforcing Steel Institute
CSA	Canadian Standards Association
CSDMA	Canadian Steel Door Manufacturers Association
CSPI	Corrugated Steel Pipe Institute
CSSBI	Canadian Sheet Steel Building Institute
CTI	Cooling Technology Institute
CWB	Canadian Welding Bureau
CWC	Canadian Wood Council
CWDMA	Canadian Window & Door Manufacturers Association
DIN	Deutsche Industrie Norm
EI	Edison Electric Institute
EEMAC	Electrical Equipment Manufacturers Association of Canada
EFC	Electro-Federation Canada
EIA	Electronic Industries Alliance
EJMA	Expansion Joint Manufacturers Association
ETL	Intertek Testing Services (formerly ETL Testing Laboratories)
FCC	Federal Communications Commission (USA)
FM	Factory Mutual Engineering Corporation
FSA	Fluid Sealing Association
GANNA	Glass Association of North America
IAO	Insurers' Advisory Organization
IAPMO	International Association of Plumbing and Mechanical Officials
IBC	International Building Code (published by ICC)
IBRM	Institute of Boiler and Radiator Manufacturers
ICC	International Code Council
ICEA	Insulated Cable Engineers Association

IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IGMAC	Insulating Glass Manufacturers Association of Canada
ISA	International Society of Automation
ISO	International Organization for Standardization
LTIC	Laminated Timber Institute of Canada
MCAC	Mechanical Contractors Association of Canada
MFMA	Metal Framing Manufacturers Association
MPTA	Mechanical Power Transmission Association
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NAAMM	National Association of Architectural Metal Manufacturers (USA)
NABA	National Air Barrier Association
NACE	NACE International (formerly National Association of Corrosion Engineers)
NAIMA	North American Insulation Manufacturers Association
NBC	National Building Code of Canada
NEBB	National Environmental Balancing Bureau (USA)
NEC	National Electrical Code (USA)
NECA	National Energy Conservation Association
NEMA	National Electrical Manufacturers Association (USA)
NESC	National Electric Safety Code (published by IEEE)
NFPA	National Fire Protection Association (USA)
NLGA	National Lumber Grades Authority
NRC	National Research Council Canada
NSF	National Sanitation Foundation
OECI	Overhead Electrical Crane Institute
OSHA	Occupational Safety & Health Administration (USA)
PCA	Portland Cement Association
PCI	Precast/Prestressed Concrete Institute
PDI	Plumbing and Drainage Institute
RMA	Rubber Manufacturers Association
RSIC	Reinforcing Steel Institute of Canada
SAE	Society of Automotive Engineers
SI	International System of Units
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association (USA)
SSPC	The Society for Protective Coatings
TAC	Transportation Association of Canada
TIAC	Thermal Insulation Association of Canada

UL	Underwriters Laboratories Inc.
ULC	Underwriters Laboratories of Canada
WCB	Workers Compensation Board (Manitoba)

D3.3 Where the edition, version or revision date of a referenced regulation, code or standard is not identified, conform to the latest edition or revision of the referenced regulation, code or standard, including amendments and revisions.

D3.3.1 Where a regulation, code or standard stipulates the edition, version or revision date of a subordinate regulation, code or standard, conform to the stipulated edition, version or revision of the subordinate regulation, code or standard to the extent of the primary regulation, code or standard.

D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is AECOM, represented by:

Barry Biswanger, P.Eng.
Senior Structural Engineer, Transportation
99 Commerce Drive, Winnipeg, Manitoba R3P 0Y7
Telephone No. 204 928-7411
Facsimile No. 204 284-2040

D4.2 At the pre-construction meeting, Barry Biswanger will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D4.3 Bid Submissions must be submitted to the address in B9.8.

D5. CONTRACTOR'S SUPERVISOR

D5.1 At the pre-construction meeting, the Contractor shall identify his/her designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

D5.2 At least two (2) business days prior to the commencement of any Work on the site, the Contractor shall provide the Contract Administrator with a phone number where the supervisor identified in D5.1 or an alternate can be contacted twenty-four (24) hours a day to respond to an emergency.

D6. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE

D6.1 The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor are the property of the City and shall not be appropriated for the Contractors own use, or for the use of any third party.

D6.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.

D6.3 The following shall be confidential and shall not be disclosed by the Contractor to the media or any member of the public without the prior written authorization of the Contract Administrator;

- (a) information provided to the Contractor by the City or acquired by the Contractor during the course of the Work;
- (b) the Contract, all deliverables produced or developed; and
- (c) any statement of fact or opinion regarding any aspect of the Contract.

D6.4 A Contractor who violates any provision of D6 may be determined to be in breach of Contract.

D7. NOTICES

- D7.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.
- D7.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D7.3, D7.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at facsimile number identified in D4.1.
- D7.3 Notwithstanding C21., all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following facsimile number:
- The City of Winnipeg
Chief Financial Officer
Facsimile No.: 204 949-1174
- D7.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:
- The City of Winnipeg
Legal Services Department
Attn: Director of Legal Services
Facsimile No.: 204 947-9155

D8. FURNISHING OF DOCUMENTS

- D8.1 Upon award of the Contract, the Contractor will be provided with five (5) complete sets of the Bid Opportunity. If the Contractor requires additional sets of the Bid Opportunity, they will be supplied to him at cost.

SUBMISSIONS

D9. AUTHORITY TO CARRY ON BUSINESS

- D9.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

D10. SAFE WORK PLAN

- D10.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D10.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>
- D10.3 Notwithstanding D10.1, D10.2, and Appendix "B" CN Safety Requirements and CN Work Permit Form, the Contractor shall conform and operate in accordance with the CN "Safety Guidelines for Contractor's" for works within CN Right of Way.

D11. INSURANCE

D11.1 The City shall provide and maintain the following owner controlled project insurance coverage to remain in place at all times during the performance of the Work and throughout the warranty period:

- (a) Wrap-up liability insurance in an amount of no less than twenty-five million dollars (\$25,000,000) inclusive per occurrence and twenty-five millions dollars (\$25,000,000) general aggregate, covering bodily injury, personal injury, property damage and products and completed operations consistent with industry standard insurance policy wordings. Wrap up liability insurance to also include evidence of contractual liability and cross liability clauses.
 - (i) The Contractor shall be responsible for deductibles up to \$50,000 maximum of any one loss.
 - (ii) The City will carry such insurance to cover the owner, province, federal government, Contractors, Subcontractors and all consultants as insured's. Provision of this insurance by the City is not intended in any way to relieve the Contractor from his obligations under the terms of the Contract. Specifically, losses relating to deductibles for insurance, as well as losses in excess of limits of coverage and any risk of loss that is not covered under the terms of the insurance provided by the City remains with the Contractor.
 - (iii) Wrap-up liability insurance shall be maintained from the date of the commencement of the Work until the date of Total Performance of the work and shall include an additional 24 months completed operation coverage which will take affect after Total Performance.
- (b) Builder's risk insurance, including testing and commission, in the amount of 100% of the underpass project cost and land drainage system including the Pumping Station or as specified by the City to be incorporated into the project, up to a maximum loss limit of \$35,000,000.
 - (i) The policy will insure against all risk of direct loss or damage consistent with industry standard insurance policy wordings, and shall apply to all property in the course of construction, installation, testing and commissioning, reconstruction or repair that is owned by the insureds or owned by others for which the Insured is help responsible. The policy will exclude any and all direct loss to the equipment of the owner, Contractors, Subcontractors or consultants.
 - (ii) The Contractor shall be responsible for deductibles up to \$50,000 maximum of any one loss.
- (c) Project specific contractors pollution liability (CPL) insurance in the amount of at least five million dollars (\$5,000,000) per occurrence and five million dollars (\$5,000,000) aggregate insuring against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder performed by the Contractor, its agents, representatives, employees or Subcontractors. Coverage to include:
 - (i) bodily injury, sickness, disease, mental anguish or shock sustained by any person, including death;
 - (ii) property damage including physical injury to or destruction of tangible property and the resulting loss of use thereof; loss of use of tangible property that has not been physically injured or destroyed; diminution in value; and Natural Resource Damages;
 - (iii) clean-up costs (including restoration/replacement costs);
 - (iv) defense including costs, charges and expenses incurred in the investigation, adjustment or defense of claims for such compensatory damages.
 - (v) transported cargo and Non-Owned Disposal Sites (blanket basis)
 - (vi) The Contractor shall be responsible for deductibles up to \$50,000 maximum of any one loss.

Coverage shall apply to both sudden and gradual pollution conditions, including the further disruption of pre-existing conditions, arising from the services rendered by the Contractor or

others on their behalf. Further, coverage shall apply to conditions on, at, under and emanating from the job site including the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon land, structures thereupon, the atmosphere or any watercourse or body of water, which results in any loss or damages defined above. Coverage shall not contain any "Insured vs. Insured" exclusions preventing the City from bringing a claim against the Contractor, nor any restrictions for property of others in the care, custody or control of the Contractor.

CPL to remain in place during the performance of the Work and for 24 months after completion.

- D11.2 The Contractor and Sub-contractors shall provide and maintain the following insurance coverage at all times during the performance of the work and throughout the warranty period:
- (a) Commercial general liability insurance, in the minimum amount of ten million dollars (\$10,000,000.00) inclusive. The said commercial general liability insurance shall include coverage for products and completed operations, blanket contractual liability, cross liability, non-owned automobile, and unlicensed motor vehicle liability. The Province of Manitoba, the Federal Government of Canada and their ministers, officers, employees and agents, the City and CN shall be added as additional insured's.
 - (b) Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. The Limit of Liability shall not be less than five million dollars (\$5,000,000) inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence.
 - (c) Property insurance for equipment and tools used on the project that may be owned, rented, leased or borrowed.
 - (d) The Contractor or Subcontractor performing the demolition of the existing buildings will be required to indicate on their evidence of insurance that their operations include demolition operations.
- D11.3 Deductibles shall be borne by the Contractor or Subcontractor.
- D11.4 All policies must be taken out with insurers licensed to carry on business in the Province of Manitoba.
- D11.5 The Contractor shall not cancel, or cause any such policy or policies to lapse without a minimum thirty (30) days prior written notice to the City.
- D11.6 The Contractor shall provide the Contract Administrator with evidence of insurance at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of the Contract. The evidence shall be in a form of a certificate of insurance and must be satisfactory to the City Solicitor.
- D11.7 All policies shall be in a form satisfactory to the City and shall be kept in full force during the Work and throughout the warranty period.

D12. PERFORMANCE SECURITY

- D12.1 The Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:
- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
 - (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in

the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or

- (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.

D12.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.

D12.2 If the bid security provided in his/her Bid was not a certified cheque or draft pursuant to B13.1(c), the Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D13. DETAILED PRICES

D13.1 The Contractor shall provide the Contract Administrator with a detailed price breakdown (Form I: Detailed Prices) for the Pumping Station at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D13.2 The Contractor shall state a price for each item or sub-item of the Work identified on Form I: Detailed Prices. The detailed prices must be consistent with the price(s) provided in the Contractor's Bid.

D14. SUBCONTRACTOR LIST

D14.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D15. EQUIPMENT LIST

D15.1 The Contractor shall provide the Contract Administrator with a complete list of the equipment which the Contractor proposes to utilize (Form K: Equipment List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D16. DETAILED WORK SCHEDULE

D16.1 The Contractor shall provide the Contract Administrator with a detailed work schedule at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D16.2 The detailed work schedule shall consist of the following:

- (a) a critical path method (C.P.M.) schedule for the Work; and
 - (b) a Gantt chart for the Work based on the C.P.M. schedule;
- all acceptable to the Contract Administrator.

D16.3 Further to (a), the C.P.M. schedule shall clearly identify the start and completion dates of all of the following activities/tasks making up the Work as well as showing those activities/tasks on the critical path:

- (a) Roadway Construction
 - (i) Construction of Temporary Pavements;

- (ii) Removal of Overhead Sign Structure;
 - (iii) Excavate/Subgrade compaction ;
 - (iv) Supply and installation of catchbasins/connection pipe ;
 - (v) Supply and installation of subdrains ;
 - (vi) Supply and placement of geotextile, sub-base and base course;
 - (vii) Construct 250mm concrete pavement (plain-dowelled) slip-forming;
 - (viii) Construction of new concrete curb and gutter;
 - (ix) Placement of asphalt pavement;
 - (x) Construction of new concrete curbs and sidewalks;
 - (xi) Construction of concrete median slabs and shoulders;
 - (xii) Construction of new Overhead Sign Structure;
 - (xiii) Removal of temporary works on Bournais and Rougeau; and
 - (xiv) Boulevard grading.
- (b) Underpass Structures
- (i) Installation of rock-socketed caissons;
 - (ii) Installation of steel sheet pile retaining walls;
 - i) Under Bridge
 - ii) North of Bridge
 - iii) South of Bridge
 - (iii) Excavate/Fill as required;
 - (iv) Construction of concrete abutments and pier cap;
 - (v) Fabrication and installation of bronze spherical bearings;
 - (vi) Fabrication and installation of steel Through Plate Girder (TPG) spans;
 - (vii) Supply and installation of waterproofing membrane;
 - (viii) Supply and installation of drains and connection pipes;
 - (ix) Reconstruction of main tracks on bridge;
 - (x) Installation of fiber optic cable (by others);
 - (xi) Relocation of rail traffic on bridge (by others);
 - (xii) Construction of median and shoulder traffic barriers and median slab;
 - (xiii) Placement of sidewalk slabs, concrete caps and cladding on steel sheet piles;
 - (xiv) Supply and installation of chain link fence and aluminum pedestrian handrail; and
 - (xv) Supply and installation of "Welcome to Transcona" signs.
- (c) Land Drainage Sewers
- (i) Construction of land drainage sewers ranging in size from 300 mm to 1050 mm in diameter;
 - (ii) Installation of new manholes, catchbasins, catch pits, ditch inlets, and sewer service pipe;
 - (iii) Installation of concrete and CSP culverts ranging in size from 400 mm to 1050 mm in diameter; and
 - (iv) Abandonment and removal of existing catchbasins, land drainage sewers, manholes culverts, and sewer service pipes.
- (d) Pumping Station

- (i) Construction of cast in place concrete Pumping Station wet well/substructure and rock-socketed caisson foundation;
 - (ii) Construction of masonry and wood superstructure;
 - (iii) Construction of mechanical heating and ventilation systems;
 - (iv) Supply and installation of seven submersible land drainage pumps and associated piping; and
 - (v) Construction of electrical, control and instrumentation systems.
- (e) Dry Pond
 - (i) Excavation of dry pond site;
 - (ii) Removal of abandoned water pumphouse foundation; and
 - (iii) Construction of berm around dry pond using suitable site fill material.
- (f) Rail Construction
 - (i) North track embankment works;
 - (ii) Construct north maintrack at new alignment offset;
 - (iii) Install remaining turnouts;
 - (iv) Construct track on bridge using previously built track panels;
 - (v) Complete cut-overs and re-establish service on maintracks;
 - (vi) Remove temporary shoofly, WU01 and WM01 track and salvage material;
 - (vii) Remove shoofly embankment and shape / reclaim material to form access roads and turnout pads; and
 - (viii) Stockpile remaining embankment material.
- (g) Miscellaneous Underground Works
 - (i) Construction of 200 mm watermain;
 - (ii) Installation of miscellaneous hydrants, watermain valves and bends;
 - (iii) Abandonment and removal of existing watermains, hydrants, valves, and bends;
 - (iv) Construction of 150 mm wastewater forcemain;
 - (v) Construction of gravity wastewater sewers ranging in size from 250 mm to 450 mm in diameter;
 - (vi) Installation of wastewater sewer manholes and connections; and
 - (vii) Abandonment and removal of existing wastewater sewers and manholes.
- (h) Landscaping Works
 - (i) Construction of rest area with paving stones;
 - (ii) Placement of soil amendments, finish grading and seed;
 - (iii) Placement of topsoil, finish grading and sod;
 - (iv) Installation of trees and shrubs;
 - (v) Long term maintenance of plant material; and
 - (vi) Installation of site furnishings.
- (i) Active Transportation Pathways
 - (i) Excavate/Subgrade compaction;
 - (ii) Placement of Geotextile, sub-base and base course;
 - (iii) Placement of asphalt pavement; and
 - (iv) Boulevard grading.
- (j) Demolition of Houses
 - (i) Removal of 1164 Plessis;

- (ii) Removal of 1168 Plessis;
- (iii) Removal of 1172 Plessis; and
- (iv) Boulevard grading.

- D16.4 Further to D16.2(b), the Gantt chart shall show the time on a weekly basis, required to carry out the Work of each trade, or Specification division. The time shall be on the horizontal axis, and the type of trade shall be on the vertical axis.
- D16.5 In addition to all other schedules the Contractor is required to submit a detailed breakdown in 15 min increments of all work to be performed during any main track blocks. This is to be submitted a minimum of seven (7) days prior to the requested block date. Included with this submission will be a list of all equipment and personnel that will be on-site to support the planned work during the block. The equipment and personnel shall be of a sufficient number to provide redundancy such that any failures do not cause the time limits of the block to be exceeded.

D17. ENVIRONMENTAL PROTECTION PLAN

- D17.1 Prior to commencing construction activities or delivery of materials to Site, submit an Environmental Protection Plan for review and approval by Contract Administrator. The Environmental Protection Plan shall present a comprehensive plan to address known or potential environmental issues which may be present during construction. Where applicable, the Environmental Protection Plan shall include sub-contractor activities. The submission of the Environmental Protection Plan to the Contract Administrator shall in no way relieve the Contractor of full responsibility for the success or failure of all environmental management practices and procedures.
- D17.2 The Contractor is advised that at least the following Acts, Regulations, and By-laws apply to the Work:
- (a) Federal
 - (i) Canadian Environmental Assessment Act (CEAA) C.37;
 - (ii) Fisheries Act C.F-14;
 - (iii) Transportation of Dangerous Goods Act and Regulations C.34; and
 - (iv) Navigable Waters Protection Act.
 - (b) Provincial
 - (i) The Dangerous Goods Handling and Transportation Act D12;
 - (ii) The Endangered Species Act E111;
 - (iii) The Environment Act C.E125;
 - (iv) The Fire Prevention Act F80;
 - (v) The Manitoba Heritage Resources Act H39-1;
 - (vi) The Manitoba Noxious Weeds Act N110;
 - (vii) The Manitoba Nuisance Act N120;
 - (viii) The Public Health Act C.P210;
 - (ix) The Workplace Safety and Health Act W210;
 - (x) Current applicable Associated Regulations (Note: Provincial Regulations updated as of September 1999); and
 - (xi) The Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat, Manitoba National Resources, 1996.
 - (xii) The Pesticides and Fertilizer Control Act, C.C.S.M. c.P40
 - (c) Municipal
 - (i) The City of Winnipeg By-law No. 1/2008 and all amendments up to and including 110/2012;

- (ii) The City of Winnipeg By-law No. 1573/77 and all amendments up to and including 154/2012; and
- (iii) Any other applicable Acts, Regulations, and By-laws.

D17.3 The Environmental Protection Plan shall address the following:

- (a) Name[s] of person[s] responsible for ensuring adherence to Environmental Protection Plan.
- (b) Name[s] and qualifications of person[s] responsible for manifesting hazardous waste to be removed from Site.
- (c) Name[s] and qualifications of person[s] responsible for training Site personnel.
- (d) Erosion and sediment control plan which identifies type and location of erosion and sediment controls to be provided including monitoring and reporting requirements to assure that control measures are in compliance with erosion and sediment control plan, Federal, Provincial, and Municipal laws and regulations.
- (e) Work area plan showing proposed activity in each portion of area and identifying areas of limited use or non-use. Plan to include measures for marking limits of use areas including methods for protection of features including vegetation to be preserved within authorized Work areas.
- (f) Environmental Emergency Response: including procedures, instructions, and reporting in the event of unforeseen spill of regulated substance.
- (g) Non-Hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris.
- (h) Hazardous materials and waste management plan outlining storage, transportation and disposal.
- (i) Air pollution control plan detailing provisions to assure that dust, debris, materials, and trash, do not become air borne and travel off project Site.
- (j) Contaminant prevention plan that: identifies potentially hazardous substances to be used on job site; identifies intended actions to prevent introduction of such materials into air, water, or ground; and details provisions for compliance with Federal, Provincial, and Municipal laws and regulations for storage and handling of these materials.
- (k) Waste water management plan that identifies methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities, such as concrete wash or curing water, clean-up water, dewatering of ground water, hydrostatic test water, and water used in flushing of lines.
- (l) Monitor and report to ensure implementation of environmental protection measures.

D17.4 Fires

- (a) Fires and burning rubbish or waste materials on Site is not permitted.

D17.5 Disposal of Waste

- (a) Dispose all waste at licensed facilities or with licensed haulers.
- (b) All waste disposal grounds receiving debris and construction waste from this project must be operated under the authority of a valid permit issued pursuant to MR 150 (latest edition) Waste Disposal Grounds Regulation under the Environment Act.
- (c) Dispose of all sewage and seepage from the on-site sanitary facilities in accordance with the Onsite Wastewater Management Systems Regulation MR 83/2003.
- (d) Do not bury waste materials on Site.
- (e) Do not dispose of solid or liquid wastes in drains or waterways.

D17.6 Hazardous Waste

D17.6.1 Definitions

- (a) Dangerous Goods: product, substance, or organism that is specifically listed or meets hazard criteria established in the Dangerous Goods Handling and Transportation Act or regulations including hazardous materials and wastes.
- (b) Hazardous Material: product, substance, or organism that is used for its original purpose; and that is either dangerous goods or a material that may cause adverse impact to environment or adversely affect health of persons, animals, or plant life when released into the environment.
- (c) Hazardous Waste: any hazardous material that is no longer used for its original purpose and that is intended for recycling, treatment or disposal.
- (d) Workplace Hazardous Materials Information System (WHMIS): a Canada-wide system designed to give employers and workers information about hazardous materials used in workplace. Under WHMIS, information on hazardous materials is provided on container labels, material safety data sheets (MSDS), and worker education programs. WHMIS is put into effect by combination of federal and provincial laws.

D17.6.2 Materials Management

- (a) Only bring on Site quantity of hazardous materials required to perform Work.
- (b) Maintain MSDSs in proximity to where materials are being used. Communicate this location to personnel who may have contact with hazardous materials.
- (c) Ensure personnel have been trained in accordance with Workplace Hazardous Materials Information System (WHMIS) requirements.

D17.6.3 Storage and Handling

- (a) Store and handle hazardous materials and wastes in accordance with applicable federal and provincial laws, regulations, codes, and guidelines.
 - i) Sign storage areas;
 - ii) Store and handle flammable and combustible materials in accordance with current Manitoba and National Fire Code of Canada requirements;
 - iii) Do not transfer of flammable and combustible liquids in vicinity of open flames or heat-producing devices;
 - iv) Do not use flammable liquids having flash point below 38 degrees C, such as naphtha or gasoline as solvents or cleaning agents;
 - v) Store flammable and combustible waste liquids for disposal in approved containers located in safe, ventilated area. Keep quantities to minimum; and
 - vi) Observe smoking regulations, smoking is prohibited in areas where hazardous materials are stored, used, or handled.
- (b) Keep no more than 100 litres of flammable and combustible liquids such as gasoline, kerosene and naphtha for ready use.
 - i) Store flammable and combustible liquids in approved safety cans bearing the Underwriters' Laboratory of Canada (ULC) Certified Mark or Factory Mutual (FM) Approved Mark;
 - ii) Storage of quantities of flammable and combustible liquids exceeding 100 litres for Work purposes requires the written approval of the Contract Administrator; and
 - iii) Fuel storage exceeding 100 litres shall be a minimum distance of 100 metres from any water body and in compliance with the requirements of the Storage and Handling of Petroleum Products and Allied Products Manitoba Regulation 188/2001 of the Dangerous Goods Handling and Transportation Act.
- (c) Storage requirements for quantities of hazardous materials and wastes in excess of 5 kg for solids, and 5 litres for liquids:
 - i) Store hazardous materials and wastes in closed and sealed containers;

- ii) Label containers of hazardous materials and wastes in accordance with WHMIS;
 - iii) Store hazardous materials and wastes in containers compatible with that material or waste;
 - iv) Segregate incompatible materials and wastes. Ensure that different hazardous materials or hazardous wastes are not mixed;
 - v) Store hazardous materials and wastes in secure storage area with controlled access;
 - vi) Maintain clear egress from storage area;
 - vii) Store hazardous materials and wastes in location that will prevent them from spilling into environment;
 - viii) Store products on spill trays or berms with 110% capacity;
 - ix) Do not store within 30 metres of a waterway or drain;
 - x) Have appropriate emergency spill response equipment available near storage area, including personal protective equipment; and
 - xi) Maintain inventory of hazardous materials and wastes, including product name, quantity, and date when storage began and disposal occurred. Maintain tipping and other disposal receipts.
- (d) Report spills or accidents immediately:
- i) to the Contract Administrator;
 - ii) to Manitoba Conservation Accident Reporting Line at 204-944-4888 in accordance with Manitoba Regulation 439/87 of the Dangerous Goods and Transportation Act; and
 - iii) Submit a written spill report to the Contract Administrator outlining cause and proposed corrective action and Manitoba Conservation as required. Provide copies of reports submitted to Manitoba Conservation to the Contract Administrator.

D17.6.4 Transportation

- (a) Transport hazardous materials and wastes in accordance with the Manitoba Dangerous Goods Handling and Transportation Act.
- i) Ensure that trained personnel handle, offer for transport, or transport dangerous goods;
 - ii) Use licensed carrier authorized by provincial authorities to accept subject material;
 - iii) Label container[s] with legible, visible safety marks as prescribed by federal and provincial regulations;
 - iv) Provide photocopy of shipping documents and waste manifests to the Contract Administrator;
 - v) Track receipt of completed manifest from consignee after shipping dangerous goods. Provide a photocopy of completed manifest to the Contract Administrator; and
 - vi) Report discharge, emission, or escape of hazardous materials immediately to the Contract Administrator and appropriate provincial authority. Take measures to control release.

D17.6.5 Disposal

- (a) Dispose of hazardous waste materials in accordance with applicable federal and provincial acts, regulations, and guidelines.
- i) Recycle hazardous wastes for which there is approved, cost effective recycling process available;
 - ii) Send hazardous wastes to authorized hazardous waste disposal or treatment facilities;

- iii) Burning, diluting, or mixing hazardous wastes for purpose of disposal is prohibited; and
- iv) Disposal of hazardous materials in waterways, storm or sanitary sewers, or in municipal solid waste landfills is prohibited.

D17.6.6 Erosion and Sediment Control

- (a) Develop an erosion control plan to control negative impacts on water and air quality; plan should meet these objectives:
 - i) Prevent loss of soil during construction by storm water run-off and wind erosion;
 - ii) Protect against erosion from stockpiled topsoil aggregates; and
 - iii) Prevent sedimentation of the land drainage system and receiving streams with dust, particulate matter or eroded sediment.
- (b) Supply, install, maintain and remove (as applicable and when no longer required) effective sediment control barriers and erosion control before starting Work that may result in the deposit of sediment into a ditch or water body to avoid potential impacts to fish and fish habitat.
 - i) Erosion and sediment control measures and installations include, as required, silt socks around storm drains, silt fence barriers, erosion control blanket, straw wattles, and geotextile fabric as appropriate; and
 - ii) Routinely inspect all erosion and sediment control measures and installations and immediately repair any deficiencies.

D17.6.7 Work to Adjacent Waterways

- (a) Do not operate construction equipment in waterways and, where possible, avoid operating equipment within 30 metres of the waterway;
- (b) Do not use waterway beds for borrow material;
- (c) Do not dump excavated fill, waste material or debris in ditches or waterway;
- (d) Design and construct temporary crossings to minimize erosion to waterways; and
- (e) Dispose of excavated materials above the high water mark and 30 metres way from a watercourse.

D17.6.8 Drainage

- (a) Provide temporary drainage and pumping as necessary to keep excavations and Site free from water;
- (b) Do not pump water containing suspended materials into waterways, sewer or drainage systems; and
- (c) Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

D17.6.9 Reducing Site Disturbances

- (a) Do not disturb, in any way, the embankment slopes, roadway shoulders, and adjacent ground surfaces areas outside the limits of the construction areas including the approved lay down, staging and access unless written permission has been obtained from the Contract Administrator. Such written permission will be granted only if it can be shown that there is no alternative.
- (b) Minimize disturbance of any undeveloped areas on Site and maintain existing Site grading where indicated and where possible.
 - i) Minimize stripping of topsoil and vegetation;
 - ii) Re-grade and plant vegetation on construction Site as soon as possible; and
 - iii) Avoid soil compaction where possible.

D17.6.10 Pollution Control

- (a) Maintain temporary erosion and pollution control features installed under this contract.

- (b) Maintain construction equipment in good working order. Control emissions from equipment.
- (c) Cover or wet down dry materials and stockpiled soils to prevent blowing dust and debris. Provide dust control for the construction Site, temporary and access roads.
- (d) Bring only clean fill, granular, rip rap and other similar construction materials to the project Site.

D17.6.11 CN Environmental Requirements

- (a) Carry out all measures which CN, in its sole discretion considers necessary to keep the work free and clear of all environmental contaminants or residue results from the Contractor's occupation or use of the CN's premises (Premises), such condition to be confirmed by a post-termination environmental inspection/audit of the Premises to be carried out by CN. The Contractor shall be solely responsible for the cost of all work carried out to correct any environmental contamination which occurs on the Premises, or which occurs on other lands as a result of the Contractor's occupation or use of the Premises.
- (b) CN shall have the right to enter upon the Premises, at all reasonable times and from time to time, in order to inspect the Premises and conduct or require the Contractor to conduct, at the Contractor's expense, such tests as may be required to verify the condition of the Premises.
- (c) The Contractor shall be responsible to notify CN of all environmental contamination that the Contractor suspects is occurring on or escaping onto the Premises from adjacent lands or resulting from third party occupation.
- (d) If the Contractor fails to correct any environmental contamination to the satisfaction of CN and any public authority having jurisdiction, CN may perform such work by its employees or agents. CN may charge the Contractor from time to time for all the costs incurred by CN in correcting such environmental contamination, plus fifteen per cent (15%) for overhead, and the Contract shall pay CN's invoice or invoices for such costs within ten (10) days of receipt of each invoice. In the event such remedial work is carried out by any public authority, the cost of such work shall be borne by the Contractor.
- (e) Upon completion of the contract, the Contractor shall leave the Premises in a clean and tidy condition, free of any environmental contamination resulting from or occurring during the Contractor's occupation or use of the Premises. If the Contractor has installed any facility on or under the Premises, the Contractor shall remove such facility. The Contractor shall have the burden of proving that any environmental contamination has not resulted from or occurred during its occupation or use of the Premises.
- (f) The responsibility of the Contractor to CN with respect to the environmental obligations contained herein shall continue to be enforceable by CN.

D18. WORK PRACTICES ON ASBESTOS-CEMENT PIPE

- D18.1 Further to C.6.26(d), the Contractor's attention is directed to the possible health dangers associated with working with asbestos cement pipe and all work associated with the existing AC watermains shall conform to the following publications:
- D18.2 The Contractor shall state in the "job specific safe work plan" the proposed procedure for working on AC Pipe. Contractor shall also provide proof of asbestos handling training or certification.
- D18.3 Further to D17 – Environmental Protection Plan, the Contractor shall dispose of all asbestos containing waste materials at a disposal site licenced to accept asbestos.

SCHEDULE OF WORK

D19. COMMENCEMENT

- D19.1 The Contractor shall not commence any Work until he/she is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.
- D19.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D9;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the twenty-four (24) hour emergency response phone number specified in D5.2;
 - (iv) the Safe Work Plan specified in D10;
 - (v) evidence of the insurance specified in D11;
 - (vi) the performance security specified in D12;
 - (vii) the detailed prices specified in D13;
 - (viii) the Subcontractor list specified in D14;
 - (ix) the equipment list specified in D15;
 - (x) the detailed work schedule specified in D16; and
 - (xi) the Environmental Protection Plan specified in D17; and
 - (xii) the job specific safe work plan specified in D18
 - (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.
 - (c) The Contractor has provided proof of CN Contractor Safety Training for each individual proposed to work on the Site to the Contract Administrator and;
 - (d) The Contractor has completed the CN Work Permit Application (Appendix B) and submitted with the permit fee to the Contract Administrator.
- D19.3 The Contractor shall commence the Work on the Site within seven (7) days of receipt of the letter of intent.
- D19.3.1 Work on 1164 Plessis Road and work on properties north of Kernaghan Avenue, (1225 and 1249 Plessis Road) shall not commence until the Contract Administrator confirms that arrangements have been made for access and/or possession. The City of Winnipeg is anticipating agreements will be in place by January 30, 2014.
- D19.4 The City intends to award this Contract by February 21, 2014.
- D19.4.1 If the actual date of award is later than the intended date, the dates specified for Critical Stages, Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

D20. RESTRICTED WORK HOURS

- D20.1 All Work shall be carried out between the hours of 0700 and 2200 Monday to Friday and between 0900 and 2100 Saturday.
- D20.2 No Work shall be performed outside the hours stated in D20.1 or on Sunday or Statutory or Civic holidays without written permission from the Contract Administrator. Approval will only be granted if it is in the best interests of the City to do so.
- D20.3 Further to clause 3.10 of CW 1130, the Contractor shall require written permission forty-eight (48) hours in advance from the Contract Administrator for any Work to be performed outside the hours stated in D20.1.

D21. SCHEDULE RESTRICTIONS

D21.1 CN Protecting Foremen

- (a) The Contractor will be required to provide qualified protecting foremen for the project as outlined in Specification E17 Co-ordination of Construction with CN.

D21.2 Privately Owned Forcemain Shutdowns

- (a) The Contractor shall note that the 150 mm forcemain in the Plessis Road right-of-way south of Dugald Road is privately owned. Shutdown of this forcemain to connect the new forcemain is subject to the owner's schedule restrictions.

D21.3 Installation of sewer service pipe thru retaining wall structure

- (a) The sewer service pipe between MH L.20 and CB.35 shall be installed after the retaining wall is constructed.

D21.4 Installation 1050 Culverts under Plessis Road

- (a) Culverts are required to be installed during low flow conditions, after October 1, 2014, with the use of temporary by-pass pumping or during frozen conditions between November 15, 2014 and March 15, 2015.

D21.5 Pumping Station Commissioning

- (a) Commissioning of Pumping Station is required to be completed during non-winter months, prior to November 15, 2014 and after March 15, 2014 to allow commissioning of all pumps and processes. Contractor is to allow a minimum of one month for commissioning of the pump station prior to the opening of the roadway to traffic.

D21.6 Excavation Under Bridge and Shoofly

- (a) Excavation under bridge and shoofly will experience soil rebound for a minimum 5 months after excavation and the Contractor is advised that permanent roadworks may not begin until after this time period has passed or until the Contract Administrator has approved this work.

D22. WORK BY OTHERS

D22.1 Work by others on or near the Site will include but not necessarily be limited to:

- (a) Manitoba Telecom Services – Relocation/protection of existing lines;
- (b) Shaw – Relocation/protection of existing lines;
- (c) Shell Canada Products Limited – Relocation/protection of existing lines. Work is expected to commence on June 2, 2014 on the relocation of the Shell lines around/under the proposed underpass with an anticipated completion date of July 18, 2014;
- (d) Imperial Oil Limited – Relocation/protection of existing lines south of the valve station. Work is expected to commence on February 24, 2014 on the relocation of the Imperial Oil lines under the shoofly embankment with an anticipated completion date of May 23, 2014;
- (e) Imperial Oil Limited – Relocation/protection of existing lines north of the valve station. Work is expected to commence on July 21, 2014 on the relocation of the Imperial Oil line north of the valve station with an anticipated completion date of August 15, 2014;
- (f) Manitoba Hydro – Removal and relocation of existing hydro poles and street lighting;
- (g) Manitoba Hydro – Installation of new street lighting;
- (h) Manitoba Hydro – Relocation of a 12kV line and a 24 kV Feeder;
- (i) CN – Fiber relocation –
- (j) CN – CN Signal and Communication Works; - Signal and communication cable and train movement control signal installation; City of Winnipeg Traffic Services – Erection and

maintenance of temporary traffic control signs. Supply and installation of permanent traffic signs and bases;

- (k) City of Winnipeg Traffic Signals – Removal/modification of existing traffic signals plant and Installation of new Traffic Signals plant;
- (l) Contract 1 – Rail Shoofly Grade Preparation and Miscellaneous Wastewater Sewer, Watermain and Land Drainage Works. Work has commenced with an anticipated Total Performance Date of February 7, 2014; and
- (m) Contract 2 – Shoofly Track Installation and Permanent Track Construction is expected to commence on January 2, 2014 with an anticipated Total Performance date of July 15, 2014. Phase I – Temporary Shoofly track construction for Contract 2 is anticipated to be complete June 27, 2014. Designated work areas on the southwest and northeast corners of Plessis Road and the CN Redditt Subdivision will be required for track assembly.
- (n) Contract 4 - Imperial Oil Ltd. and Shell Canada Pipelines Relocation Works is expected to commence on February 24, 2014 with the above anticipated dates for the Imperial Oil Limited and Shell Canada Products Limited Works. Relocation works to be completed by Contract 4 Contractor with final tie-ins completed by Imperial Oil Limited and Shell Canada Products Limited.

D23. SEQUENCE OF WORK

D23.1 Further to C6.1, the sequence of work shall be as follows:

D23.1.1 The Work shall be divided into six (6) phases. Each Phase shall be subdivided into stages. Stages are further subdivided into major items of work.

D23.1.2 Phase I

- (a) Stage I – Pumping Station
 - i) Install groundwater monitoring/pumping wells, shoring and dewatering system for substructure;
 - ii) Construct cast-in-place substructure;
 - iii) Backfill excavation for substructure;
 - iv) Construct masonry and wood superstructure;
 - v) Install mechanical/HVAC systems;
 - vi) Install building electrical systems;
 - vii) Install process system equipment;
 - viii) Install instrumentation and controls system; and
 - ix) Commission Pumping Station.
- (b) Stage 2 – Miscellaneous Underground Works
 - i) Demolish house at 1172 Plessis;
 - ii) Construct 450 WWS from MH.W4 to MH.W10;
 - iii) Construct 250 WWS from existing MH at MB Housing to MH.W12;
 - iv) Construct 525/600 mm LDS diversion from Paul Martin Drive MH.L10 to MH.L7; and
 - v) Construct 200 WM from near MH.W4 to near MH.L8.
- (c) Stage 3 – Underpass Land Drainage Sewers Construction
 - i) Trenchless installation of 1050 mm LDS from MH.L15 to MH.L14 under shoofly and existing mainline track using only one setup.
- (d) Stage 4 - Construction of Grade for North Track Realignment
 - i) Clearing and grubbing;
 - ii) Excavation and benching;
 - iii) Compaction of existing subgrade;

- iv) Placement of suitable site material for track embankments;
- v) Placement of sub-ballast;
- vi) Relocation of culvert.

D23.1.3 Phase II (To commence after Contract 2, Phase 1 is complete (D22.1(m)))

- (a) Stage 1 – Underpass Substructure and Retaining Walls
 - i) Excavate for abutment and pier construction to limits noted on drawings;
 - ii) Construct rock-socketed caissons, abutments and pier cap;
 - iii) Install steel sheet piles for upper and lower retaining walls under proposed girders/superstructure; and
 - iv) Install sheet piles north of structure with exception of in restricted construction zone north of the bridge shown on the construction drawings.
- (b) Stage 2 – Dry Pond Construction Prior to Rail Shoofly Decommissioning
 - i) Site clearing and grubbing;
 - ii) Prepare site for fill material;
 - iii) Place suitable site material;
 - iv) Excavate surplus site material;
 - v) Remove abandoned Pumping Station foundation, reservoir, and associated piping; and
 - vi) Install pre-cast grated inlet/outlet structure.
- (c) Stage A – Out of Service Maintrack Rail Removal
 - i) Remove and dismantle remaining N.Maintrack and S.Maintrack
 - ◆ Track on new road alignment to be dismantled first.
 - ◆ Remove existing south #10 132# LH on S.Maintrack to N.Maintrack west-cross-over.
 - ◆ Dismantle and stockpile to area designated by CN.
 - ◆ Remove existing #10 132 RH on WM01 Lead.
 - ◆ Dismantle and stockpile to area designated by CN.
 - ◆ Remove existing north #10 132# RH on N.Maintrack to S.Maintrack east cross-over.
 - ◆ Dismantle and stockpile to area designated by CN.
 - ◆ Remove existing WU01 #10 132# RH.
 - ◆ Dismantle and stockpile to area designated by CN.
 - ii) Ballast and rail to be salvaged and stockpiled in area designated by CN.

D23.1.4 Phase III

- (a) Stage A1 – Plessis Road Asphalt Reconstruction - Dugald Road to Approx. 300m South
 - i) Construct temporary pavement along existing southbound lanes;
 - ii) Construct 150 mm WWS Forcemain from former CN Express Terminal Building;
 - iii) Construct east half of two 1050 mm RCP culverts on south side of Dugald Road (Dugald Drain) under Plessis Road by open cut methods.
 - iv) Construct Northbound through lane, left turn lane and shoulder; and
 - v) Construct median islands.
- (b) Stage B1 – Plessis Road Concrete Reconstruction – 390 m south of Kernaghan Avenue to Pandora Avenue W
 - i) Imperial Oil line relocation north of the valve station (work by others) must be completed prior to construction of Northbound lanes south of the Northeast Access Road.

- ii) Construct grade for Northeast Access Road, permanent pavement to be completed after Imperial Oil line relocation north of the valve station (work by others);
 - iii) Construction of temporary pavement along existing southbound lanes;
 - iv) Excavate Northbound lanes to subgrade;
 - v) Construct 375 and 450 LDS from MH.L18 to MH.L16 by open cut methods;
 - vi) Trenchless installation of 1050 mm LDS from MH.L15 to MH.L16;
 - vii) Construct associated catchbasins and sewer service pipe;
 - viii) Construct Northbound through lanes, and left turn lanes and approaches north of the Northeast Access Road;
 - ix) Construct median islands; and
 - x) Construct Active Transportation Pathway from Pandora Avenue W to the Northeast Access Road.
- (c) Stage A2 – Plessis Road Asphalt Reconstruction - Dugald Road to Approx. 300m South
- i) Construct west half of two 1050 mm RCP culverts on south side of Dugald Road (Dugald Drain) under Plessis Road by open cut methods.
 - ii) Construct Southbound through lane;
 - iii) Construct Eastbound to Southbound right turn cut-off and island construction; and
 - iv) Construct Residential approaches and sidewalk.
- (d) Stage B2 – Plessis Road Concrete Reconstruction – 390 m south of Kernaghan Avenue to Pandora Avenue W
- i) Excavate Southbound lanes to subgrade;
 - ii) Construct associated catchbasins and sewer service pipe;
 - iii) Construct insulation on top of existing 150 mm WM between Kernaghan and Pandora;
 - iv) Construct Southbound through lanes and left turn lanes; and
 - v) Construct sidewalk.
- (e) Stage 3 – Dugald Road Rehabilitation and Plessis Road Concrete Reconstruction – Dugald Road to 100m north of Dugald Road
- i) Remove Overhead Sign Structure;
 - ii) Construct 600 RCP culvert under Dugald Road just W of Plessis Road by trenchless methods;
 - iii) Construct 450 mm LDS from CB.52 to MH.L1 by open cut methods;
 - iv) Construct 375 and 450 LDS from MH.L11 to MH.L14 by open cut methods;
 - v) Construct associated catchbasins and sewer service pipe;
 - vi) Construct Dugald Road Eastbound left turn lane to Northbound Plessis Road;
 - vii) Construct new Overhead Sign Structure;
 - viii) Construct Dugald Road Westbound deceleration lane to Northbound Plessis Road;
 - ix) Construct Northbound and Southbound Plessis Road through lanes and turn lanes;
 - x) Construct Dugald Road Westbound acceleration lane from Southbound Plessis Road;
 - xi) Construct Pumping Station discharges to Dry Pond and ditch west of the Pumping Station;
 - xii) Construct Pumping Southwest Access Road; and
 - xiii) Construct Southeast Access Road.

D23.1.5 **Phase IV**

- (a) Stage 1 – Underpass Superstructure and Retaining Walls
 - i) Install superstructure (bearings, steel TPG spans, trainman’s walkway, waterproofing); and
 - ii) Install sheet piles in the restricted construction zone north of bridge after Shell oil lines have been relocated by Contract 4.
- (b) Stage B – Construct Final Configuration Trackage
 - i) Complete existing WM01 track embankment with approved fill / subballast.
 - ii) Construct final North and South Maintrack to tie in limits including on bridge; ballast and surface.
 - ◆ Construct in place 2-#12 136# LH for west N.Maintrack to S.Maintrack X-Over.
 - ◆ Construct in place 1-#12 136# LH for WM01 connection from N.Maintrack.
 - ◆ Construct in place 2-#12 136# RH for new east N.Maintrack to S.Maintrack X-Over.
 - ◆ Construct in place 1-#12 136# RH for new WU01 Connection.
- (c) Stage C – North Maintrack & WM01 Cutover, CN Block required
 - i) WM01
 - ◆ Remove section of WM01.
 - ◆ Cut over temporary WM01 to final alignment.
 - ◆ Ballast and surface.
 - ii) N. Maintrack
 - ◆ Using track panels construct segment of N.Maintrack at location along temporary WM01.
 - ◆ Cut over east and west sections of N.Maintrack.
 - ◆ Ballast and surface.
 - iii) Work to be completed upon completion of cutvoers
 - ◆ Dismantle and stockpile removed track to area designated by CN.
 - ◆ Distress and weld track as required
- (d) Stage D – South Maintrack Cutover
 - i) Remove segment of temporary WM01.
 - ii) Remove portions of N.Shoofly to facilitate west and east cut-overs.
 - iii) S.Maintrack block required to facilitate the following work. N.Maintrack to remain in service during this time:
 - ◆ At temporary WM01 location using track panels:
 - ◆ Connect N.Maintrack and S.Maintrack east crossover turnouts.
 - ◆ Close gap in S.Maintrack.
 - ◆ Cut over east and west S.Maintrack.
 - iv) Work to do upon completion of cut overs.
 - ◆ Dismantle and stockpile removed track to area designated by CN.
 - ◆ Distress and weld track as required.

D23.1.6 **Phase V**

- (a) Stage E – Shoofly Rail Removal
 - i) Remove portion of shoofly at WU01.
 - ii) Build track to connect gap on WU01 at previous shoofly location.
 - ◆ Ballast and surface.

- iii) Cut over WU01 connection
 - ◆ CN block required.
 - ◆ Ballast and surface.
 - iv) Remove remaining temporary track and switches within extents of project.
 - ◆ Ballast to be hauled off site.
 - ◆ Dismantle and stockpile removed track to area designated by CN.
 - v) Weld track as required.
 - vi) Remove shoofly embankment and shape / reclaim material to form access roads and turnout pads;
 - vii) Stockpile remaining embankment material;
 - viii) Clean up site.
- (b) Stage 2 – Retaining Walls and Excavation
- i) Install steel sheetpiles south of bridge structure; and
 - ii) Excavate beneath bridge structure and at shoofly location to subgrade.
- (c) Stage 3 – Dry Pond Construction After Rail Shoofly Decommissioning
- i) Prepare site for fill material;
 - ii) Place suitable site material; and
 - iii) Excavate surplus site material.

D23.1.7

Phase VI

- (a) Stage 1 – Underpass Roadway Reconstruction
- i) Construct associated catchbasins and sewer service pipe; and
 - ii) Construct Southbound Plessis Road from 100m north of Dugald Road to 390m south of Kernaghan Avenue
 - iii) Construct Northbound Plessis Road from 100m north of Dugald Road to south of the Northeast Access Road; and
 - iv) Complete Active Transportation Pathways
- (b) Stage 2 – Miscellaneous Structural Works
- i) Construct concrete cladding on upper and lower retaining walls;
 - ii) Construct drainage, median slab, traffic barriers, concrete caps, and sidewalk/ATP slabs;
 - iii) Install “Welcome to Transcona” signs; and
 - iv) Install pedestrian handrails and chain link fence.
- (c) Stage 3 – Landscaping Works
- i) Construct rest area with paving stones;
 - ii) Install soil amendments, finish grading and seed;
 - iii) Install topsoil, finish grading and sod;
 - iv) Install plant material;
 - v) Install site furnishings; and
 - vi) Long term maintenance of plant material.
- (d) Stage 4 – Miscellaneous Removals
- i) Demolition of house at 1164 Plessis Road;
 - ii) Demolition of house at 1168 Plessis Road; and
 - iii) Removal of raised crosswalks and speed tables on Bournais and Rougeau.
- (e) Stage 5 – Site Restoration
- i) Upon completion of the work and demobilization, the Contractor shall restore laydown area(s) and site access roads.

D24. BUILDING CANADA FUND – MAJOR INFRASTRUCTURE COMPONENT

D24.1 Funding for the Plessis Road Twinning and Grade Separation at CN Redditt Subdivision Project (also known as the Plessis Road Underpass Project) is being provided to the City of Winnipeg by the Government of Canada (“Canada”) and The Province of Manitoba (“Manitoba”). As required by the City’s funding agreements with Canada and Manitoba, the Contractor must:

- (a) Establish and maintain for a period of at least six (6) years following the date of substantial completion of the Plessis Road Twinning and Grade Separation at CN Redditt Subdivision Project proper and accurate financial accounts and records, including but not limited to its contracts, invoices, statements, receipts and vouchers, (including supporting documents), prepared in accordance with generally accepted accounting principles, as are necessary to properly account for the services or goods provided by the Contractor to the City;
- (b) Permit The City, Manitoba, Canada, the Auditor General of Canada, and/or their designated representatives, to the extent permitted by law, at all times, to inspect the terms of the Contract and any records and accounts respecting the Project, and to have free access to the Project sites and any documentation relevant for the purpose of audit;
- (c) Permit the City, Canada and/or Manitoba and its agents, and their respective authorized representatives, to monitor the Work and to inspect and audit the accounting and other records relating to the Work for a period of six (6) years following June 30, 2015;
- (d) Indemnify and save Manitoba and its Ministers, officers, employees and agents harmless from and against all claims and demands, losses, costs, damages, actions, suit or other proceedings brought or pursued in any manner in respect of any matter caused by the Contractor or arising from the contract or from the goods or services provided, or required to be provided, by the Contractor, except those resulting from the negligence of any of Manitoba’s Ministers, officers, servants, employees or agents;
- (e) Respect and comply with all applicable legislation and standards, whether federal, provincial or municipal, including (without limitation) labour, environmental, and human rights legislation;
- (f) Consent to the City providing a copy of the Contract to Manitoba and its agent upon request from Manitoba; and
- (g) Consent to the City providing Manitoba and its agents with the results of the City’s inspections and audits of the Work and of the Contractor’s accounts and records.

D25. SUBSTANTIAL PERFORMANCE

D25.1 The Contractor shall achieve Substantial Performance by September 1, 2015.

D25.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D25.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

D26. TOTAL PERFORMANCE

D26.1 The Contractor shall achieve Total Performance by September 15, 2015.

D26.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D26.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

D27. ACCELERATED COMPLETION

D27.1 Description

D27.1.1 This specification shall cover the accelerated completion of the Works of this Contract.

D27.2 Acceleration of Work

D27.2.1 At no risk to the City, the Contractor at his own initiative, means, and expense, may undertake to achieve Substantial Performance in advance of the date specified in D25.

D27.2.2 In recognition of the fact that an early completion of the Works is of benefit to the City, the City will compensate the Contractor for said early completion on a per diem unit price basis, as hereinafter set out, provided that the City will not be liable to pay for any period of acceleration in excess of one hundred (100) Calendar Days.

D27.2.3 It is noted that certain delays on underpass construction, pumping station and track construction Work are normal, due to train traffic delays, site conditions, necessary layout and dimensional changes. The Contract Administrator will attempt to resolve each situation as soon as possible. The Contractor is advised that no extension to the number of Calendar Days will be given for events of this sort which cause construction delay and are resolved within two (2) Working Days of the requirement of change becoming known to both the Contractor and the Contract Administrator.

D27.3 Method of Measurement

D27.3.1 Subject to clause D27.2.2 hereof, accelerated completion will be measured on a unit basis per diem. The number of days to be paid for will be the total number of Calendar Days in advance of the date specified herein for Substantial Performance in D25, with all specified Works completed acceptable to the Contract Administrator.

D27.4 Basis of Payment

D27.4.1 Subject to clause D27.2.2 hereof, accelerated completion will be paid for at the Unit Price per diem specified hereinafter for "Accelerated Completion" which price shall be payment in full for performing all operations undertaken and all other items incidental to the Work included in this Specification. Unit Price per diem will be Ten thousand dollars (\$10,000).

D27.4.2 Payment for this item is not identified on Form B: Prices, and shall not be included thereon. If accelerated completion does occur as specified herein, then payment will be made for this item as an addition to the contract.

D28. LIQUIDATED DAMAGES

D28.1 If the Contractor fails to achieve Substantial Performance or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the following amounts per Calendar Day for each and every Calendar Day following the days fixed herein for same during which such failure continues:

- (a) Substantial Performance – Ten thousand dollars (\$10,000);
- (b) Total Performance – One thousand dollars (\$1,000).

D28.2 The amounts specified for liquidated damages in D28.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve critical stages, Substantial Performance or Total Performance by the days fixed herein for same.

D28.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D29. SCHEDULED MAINTENANCE

- D29.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:
- (a) Maintenance of Sod Area as specified in CW-3510.
 - (b) Maintenance of Trees and Shrubs and Planting Beds as specified in E90.
 - (c) Reflective Crack Maintenance (during warranty period) as specified in CW 3250.
- D29.2 Determination of Substantial Performance and Total Performance shall be exclusive of scheduled maintenance identified herein. All scheduled maintenance shall be completed prior to the expiration of the warranty period. Where the scheduled maintenance cannot be completed during the warranty period, the warranty period shall be extended for such period of time as it takes the Contractor to complete the scheduled maintenance.

CONTROL OF WORK

D30. JOB MEETINGS

- D30.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.
- D30.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

D31. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D31.1 For the purpose of determining Prime Contractor, Contract 1 shall be all underground utility works and the construction of the rail embankments up to the top of the sub-ballast until the date of Total Performance of Bid Opportunity No. 342-2013, Contract 2 shall be the supply and installation of ballast and all track material for the shoofly track construction and the permanent track works, Contract 3 will be all other works relating to the underpass construction and Contract 4 will be the Imperial Oil and Shell Canada pipeline relocation works.
- D31.2 Further to C6.26, the Prime Contractor shall serve as and will have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba) as follows:
- (a) Contractor for Contract 2: from the commencement of the Work of Contract 2 until the commencement on Site of the Work of Contract 3.
 - (b) Contractor for Contract 4: from the commencement of the Work of Contract 4 until the commencement on Site of the Work of Contract 3.
 - (c) Contractor for Contract 3: upon commencement on Site of the Work of Contract 3.
- D31.3 The time and date of the commencement on Site of the Work of Contract 3 shall be the time and date determined by the Contract Administrator and stated in a notice to the contractors.

D32. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

- D32.1 Further to B12.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require updated proof of compliance, as set out in B12.4.

D33. LAYOUT OF WORK

D33.1 Further to City of Winnipeg Specification GC 6.26(h) and CW 1130 the following shall apply:

D33.2 Bridge, Retaining Wall and Pumping Station Work

D33.2.1 The Contract Administrator shall provide the basic centrelines and a benchmark for construction of Bridge, Retaining Wall and Pumping Station Work.

D33.2.2 The Contractor shall be responsible for the true and proper laying out of the Work and for the correctness of the location, levels, dimensions, and alignment of all aspects of the Work. He shall provide all required instruments and competent personnel for performing all layouts.

D33.2.3 The Contract Administrator shall be notified at least one (1) Business Day prior to any Work being commenced in order to have the option to check and review all elevations and layouts at his discretion.

D33.2.4 The Contractor shall carefully protect and preserve all benchmarks, stakes, and other items of the basic data supplied by the Contract Administrator. Any such benchmarks or stakes removed or destroyed by the Contractor, without the consent of the Contract Administrator, shall be replaced by the Contract Administrator at the expense of the Contractor.

D33.3 Roadwork

D33.3.1 Stakes and marks requested immediately following asphalt planing operations may require a maximum of two (2) Business Days for the Contract Administrator to address as a result of required adjustments to final design grades.

MEASUREMENT AND PAYMENT

D34. PAYMENT

D34.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D35. WARRANTY

D35.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire two (2) years thereafter, except where longer warranty periods are specified in the Specifications, unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

D35.2 Notwithstanding C13.2 or D35.1, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Total Performance if:

- (a) a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use.

D35.2.1 In such case, the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin.

FORM H1: PERFORMANCE BOND
(See D11)

KNOW ALL MEN BY THESE PRESENTS THAT

_____ ,
(hereinafter called the "Principal"), and

_____ ,
(hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), in the sum of

_____ dollars (\$_____)

of lawful money of Canada to be paid to the Obligee, or its successors or assigns, for the payment of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has entered into a written contract with the Obligee for

BID OPPORTUNITY NO. 712-2013

PLESSIS ROAD TWINNING AND GRADE SEPARATION AT CN REDDITT SUBDIVISION: PLESSIS ROAD RECONSTRUCTION, UNDERPASS STRUCTURES, PUMPING STATION, LAND DRAINAGE SEWER AND MISCELLANEOUS UNDERGROUND AND LANDSCAPING WORKS

which is by reference made part hereof and is hereinafter referred to as the "Contract".

NOW THEREFORE the condition of the above obligation is such that if the Principal shall:

- (a) carry out and perform the Contract and every part thereof in the manner and within the times set forth in the Contract and in accordance with the terms and conditions specified in the Contract;
- (b) perform the Work in a good, proper, workmanlike manner;
- (c) make all the payments whether to the Obligee or to others as therein provided;
- (d) in every other respect comply with the conditions and perform the covenants contained in the Contract; and
- (e) indemnify and save harmless the Obligee against and from all loss, costs, damages, claims, and demands of every description as set forth in the Contract, and from all penalties, assessments, claims, actions for loss, damages or compensation whether arising under "The Workers Compensation Act", or any other Act or otherwise arising out of or in any way connected with the performance or non-performance of the Contract or any part thereof during the term of the Contract and the warranty period provided for therein;

THEN THIS OBLIGATION SHALL BE VOID, but otherwise shall remain in full force and effect. The Surety shall not, however, be liable for a greater sum than the sum specified above.

AND IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable as Principal, and that nothing of any kind or matter whatsoever that will not discharge the Principal shall operate as a discharge or release of liability of the Surety, any law or usage relating to the liability of Sureties to the contrary notwithstanding.

IN WITNESS WHEREOF the Principal and Surety have signed and sealed this bond the

_____ day of _____, 20____.

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

By: _____ (Seal)
(Attorney-in-Fact)

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT
(PERFORMANCE SECURITY)**
(See D11)

(Date)

The City of Winnipeg
Legal Services Department
185 King Street, 3rd Floor
Winnipeg MB R3B 1J1

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 712-2013

PLESSIS ROAD TWINNING AND GRADE SEPARATION AT CN REDDITT SUBDIVISION: PLESSIS ROAD RECONSTRUCTION, UNDERPASS STRUCTURES, PUMPING STATION, LAND DRAINAGE SEWER AND MISCELLANEOUS UNDERGROUND AND LANDSCAPING WORKS

Pursuant to the request of and for the account of our customer,

(Name of Contractor)

(Address of Contractor)

WE HEREBY ESTABLISH in your favour our irrevocable Standby Letter of Credit for a sum not exceeding in the aggregate

Canadian dollars.

This Standby Letter of Credit may be drawn on by you at any time and from time to time upon written demand for payment made upon us by you. It is understood that we are obligated under this Standby Letter of Credit for the payment of monies only and we hereby agree that we shall honour your demand for payment without inquiring whether you have a right as between yourself and our customer to make such demand and without recognizing any claim of our customer or objection by the customer to payment by us.

The amount of this Standby Letter of Credit may be reduced from time to time only by amounts drawn upon it by you or by formal notice in writing given to us by you if you desire such reduction or are willing that it be made.

Partial drawings are permitted.

We engage with you that all demands for payment made within the terms and currency of this Standby Letter of Credit will be duly honoured if presented to us at:

(Address)

and we confirm and hereby undertake to ensure that all demands for payment will be duly honoured by us.

All demands for payment shall specifically state that they are drawn under this Standby Letter of Credit.

Subject to the condition hereinafter set forth, this Standby Letter of Credit will expire on

(Date)

It is a condition of this Standby Letter of Credit that it shall be deemed to be automatically extended from year to year without amendment from the present or any future expiry date, unless at least 30 days prior to the present or any future expiry date, we notify you in writing that we elect not to consider this Standby Letter of Credit to be renewable for any additional period.

This Standby Letter of Credit may not be revoked or amended without your prior written approval.

This credit is subject to the Uniform Customs and Practice for Documentary Credit (2007 Revision), International Chamber of Commerce Publication Number 600.

(Name of bank or financial institution)

Per: _____
(Authorized Signing Officer)

Per: _____
(Authorized Signing Officer)

FORM I: DETAILED PRICES
 (See D13)

PLESSIS ROAD TWINNING AND GRADE SEPARATION AT CN REDDITT SUBDIVISION: PLESSIS ROAD RECONSTRUCTION, UNDERPASS STRUCTURES, PUMPING STATION, LAND DRAINAGE SEWER AND MISCELLANEOUS UNDERGROUND AND LANDSCAPING WORKS

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
1.	Pumping Station Excavation, Shoring, Dewatering and Substructure					
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.	Pumping Station Superstructure					
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.	Pumping Station Mechanical and HVAC Systems					
18.						
19.						
20.						
21.						
22.						
23.						
24.						
25.						
26.						

FORM I: DETAILED PRICES
 (See D13)

PLESSIS ROAD TWINNING AND GRADE SEPARATION AT CN REDDITT SUBDIVISION: PLESSIS ROAD RECONSTRUCTION, UNDERPASS STRUCTURES, PUMPING STATION, LAND DRAINAGE SEWER AND MISCELLANEOUS UNDERGROUND AND LANDSCAPING WORKS

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT	
27.	Pumping Station Building Electrical Systems						
28.							
29.							
30.							
31.							
32.							
33.							
34.							
35.							
36.		Pumping Station Instrumentation and Control Systems					
37.							
38.							
39.							
40.							
41.							
42.							
43.							
44.							
45.	Pumping Station Process Systems						
46.							
47.							
48.							
49.							

FORM J: SUBCONTRACTOR LIST
 (See D14)

PLESSIS ROAD TWINNING AND GRADE SEPARATION AT CN REDDITT SUBDIVISION: PLESSIS ROAD RECONSTRUCTION, UNDERPASS STRUCTURES, PUMPING STATION, LAND DRAINAGE SEWER AND MISCELLANEOUS UNDERGROUND AND LANDSCAPING WORKS

<u>Portion of the Work</u>	<u>Name</u>	<u>Address</u>
<u>ROADWORKS:</u>		
<u>Supply of Materials:</u>		
Subdrains		
Geotextile Fabric		
Sub-base and base course		
Concrete		
Asphalt		
<u>Installation/Placement:</u>		
Subdrains		
Geotextile Fabric		
Sub-base and base course		
Concrete		
Asphalt		
<u>UNDERPASS STRUCTURES:</u>		
<u>Supply of Materials:</u>		
Rock-Socketed Caisson Steel Casings		
Steel Sheet Pile Retaining Walls		
Granular Backfill		
Structural Concrete		
Reinforcing Steel		
Spherical Bearings		
Through Plate Girder (TPG) Spans		
Waterproofing Membrane		
Subdrains		
Chain Link Fence		
Aluminum Pedestrian Handrail		
Welcome to Transcona Sign		

FORM J: SUBCONTRACTOR LIST
 (See D14)

PLESSIS ROAD TWINNING AND GRADE SEPARATION AT CN REDDITT SUBDIVISION: PLESSIS ROAD RECONSTRUCTION, UNDERPASS STRUCTURES, PUMPING STATION, LAND DRAINAGE SEWER AND MISCELLANEOUS UNDERGROUND AND LANDSCAPING WORKS

<u>Portion of the Work</u>	<u>Name</u>	<u>Address</u>
<u>Installation/Placement:</u>		
<i>Rock-Socketed Caisson Drilling</i>		
<i>Steel Sheet Pile Retaining Walls</i>		
<i>Granular Backfill</i>		
<i>Structural Concrete</i>		
<i>Reinforcing Steel</i>		
<i>Spherical Bearings</i>		
<i>Through Plate Girder (TPG) Spans</i>		
<i>Waterproofing Membrane</i>		
<i>Subdrains</i>		
<i>Chain Link Fence</i>		
<i>Aluminum Pedestrian Handrail</i>		
<u>UNDERGROUND WORKS:</u>		
<u>Supply of Materials:</u>		
<i>Catchpits, Catchbasins and Manholes</i>		
<i>Frames and Covers</i>		
<i>Culverts – Corrugated Steel Pipe</i>		
<i>Land Drainage Sewer</i>		
<i>Wastewater Sewer</i>		
<i>Forcemain Sewer</i>		
<i>Watermain</i>		
<i>Hydrants</i>		
<i>Valves</i>		
<i>Tees</i>		
<i>Couplers</i>		
<i>Sluice Gate</i>		
<i>Knife Gate</i>		

FORM J: SUBCONTRACTOR LIST
 (See D14)

PLESSIS ROAD TWINNING AND GRADE SEPARATION AT CN REDDITT SUBDIVISION: PLESSIS ROAD RECONSTRUCTION, UNDERPASS STRUCTURES, PUMPING STATION, LAND DRAINAGE SEWER AND MISCELLANEOUS UNDERGROUND AND LANDSCAPING WORKS

<u>Portion of the Work</u>	<u>Name</u>	<u>Address</u>
<i><u>Installation/Placement:</u></i>		
<i>Catchpits, Catchbasins and Manholes</i>		
<i>Frames and Covers</i>		
<i>Culverts – Corrugated Steel Pipe</i>		
<i>Land Drainage Sewer</i>		
<i>Wastewater Sewer</i>		
<i>Forcemain Sewer</i>		
<i>Watermain</i>		
<i>Hydrants</i>		
<i>Valves</i>		
<i>Tees</i>		
<i>Couplers</i>		
<i>Sluice Gate</i>		
<i>Knife Gate</i>		
<i><u>PUMPING STATION</u></i>		
<i><u>Supply of Materials:</u></i>		
<i>Substructure Works</i>		
<i>Superstructure</i>		
<i>Mechanical</i>		
<i>HVAC Systems</i>		
<i>Electrical Systems</i>		
<i>Instrumentation</i>		
<i>Control Systems</i>		
<i>Process Systems</i>		
<i><u>Installation/Placement:</u></i>		
<i>Substructure Works</i>		

FORM J: SUBCONTRACTOR LIST
 (See D14)

PLESSIS ROAD TWINNING AND GRADE SEPARATION AT CN REDDITT SUBDIVISION: PLESSIS ROAD RECONSTRUCTION, UNDERPASS STRUCTURES, PUMPING STATION, LAND DRAINAGE SEWER AND MISCELLANEOUS UNDERGROUND AND LANDSCAPING WORKS

<u>Portion of the Work</u>	<u>Name</u>	<u>Address</u>
<i>Superstructure</i>		
<i>Mechanical</i>		
<i>HVAC Systems</i>		
<i>Electrical Systems</i>		
<i>Instrumentation</i>		
<i>Control Systems</i>		
<i>Process Systems</i>		
<u>DRY POND</u>		
<u>Supply of Materials:</u>		
<i>Precast Ditch Inlet Structure</i>		
<i>Safety Grate</i>		
<i>Safety Railing</i>		
<u>Installation/Placement:</u>		
<i>Precast Ditch Inlet Structure</i>		
<i>Safety Grate</i>		
<i>Safety Railing</i>		
<u>RAIL CONSTRUCTION</u>		
<u>Supply of Materials:</u>		
<i>136 lb Rail</i>		
<i>No. 1 Treated Hardwood Ties</i>		
<i>Splice Bars</i>		
<i>Plates/OTM (Other Track Material)</i>		
<u>Installation/Placement:</u>		
<i>136 lb Rail</i>		
<i>No. 1 Treated Hardwood Ties</i>		
<i>Splice Bars</i>		
<i>Plates/OTM (Other Track Material)</i>		

FORM K: EQUIPMENT
(See D15)

PLESSIS ROAD TWINNING AND GRADE SEPARATION AT CN REDDITT SUBDIVISION: PLESSIS ROAD RECONSTRUCTION, UNDERPASS STRUCTURES, PUMPING STATION, LAND DRAINAGE SEWER AND MISCELLANEOUS UNDERGROUND AND LANDSCAPING WORKS

<p>1. Category/type: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p>2. Category/type: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p>3. Category/type: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>

FORM K: EQUIPMENT
(See D15)

PLESSIS ROAD TWINNING AND GRADE SEPARATION AT CN REDDITT SUBDIVISION: PLESSIS ROAD RECONSTRUCTION, UNDERPASS STRUCTURES, PUMPING STATION, LAND DRAINAGE SEWER AND MISCELLANEOUS UNDERGROUND AND LANDSCAPING WORKS

<p>4. Category/type: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p>5. Category/type: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p>6. Category/type: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>