

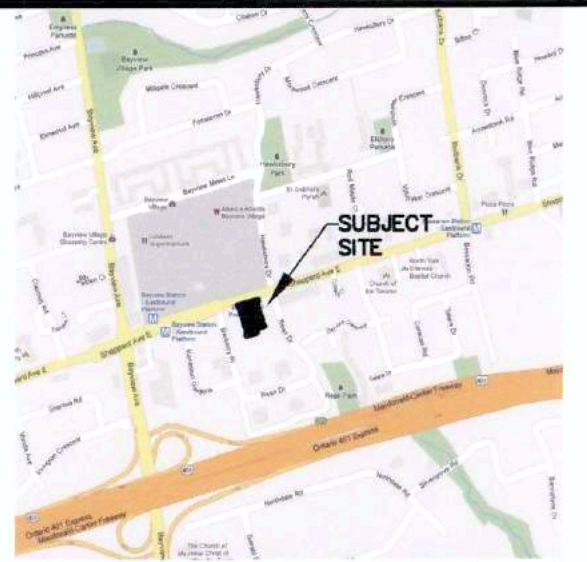
APPENDIX D

PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL RIGHT OF WAY THE CONTRACTOR, DEVELOPER OR CONSULTANT WILL OBTAIN ALL NECESSARY ROAD OCCUPANCY PERMITS FROM THE CITY'S RIGHT-OF-WAY MANAGEMENT UNIT. CONTACT 416-555-5555

THE OWNER IS REQUIRED TO INSTALL AND MAINTAIN A PREMISE ISOLATION VALVE DEVICE FOR ALL APPLICABLE WATER SERVICES IN ACCORDANCE WITH TORONTO MUNICIPAL CODE, CHAPTER B51 WATER SUPPLY, THE BUILDING CODE, AND CSA B64 SERIES STANDARDS.

SHEPPARD AVENUE EAST

ALL PROPOSED SERVICE CONNECTIONS ARE REQUIRED TO BE INSTALLED IN ACCORDANCE WITH CITY SPECIFICATIONS AND STANDARDS. PROPOSED SERVICE CONNECTIONS WITHIN THE RIGHT OF WAY ARE TO BE INSTALLED BY CITY FORCES AT THE OWNER'S EXPENSE. CONTRACTOR TO APPLY FOR AND OBTAIN SERVICE CONNECTION PERMITS FROM THE CITY. SERVICE CONNECTIONS ARE TO BE INSTALLED PRIOR TO THE COMMENCEMENT OF SITE SERVING. CONTRACTOR TO INFORM ENGINEER IMMEDIATELY IF CONFLICTS ARE ENCOUNTERED DURING SERVICE CONNECTION CONSTRUCTION. BOULEVARD TO BE RESTORED TO THE SATISFACTION OF THE CITY. CONTRACTOR TO CONNECT CITY'S INSTALLED WORK INTO CONTROL MANHOLE.



KEY PLAN

LEGEND:

- EXISTING ELEVATION
- DRAINAGE FLOW DIRECTION AND SLOPE
- + 164.35 PROPOSED ELEVATION
- STORM MANHOLE
- AREA DRAIN
- CATCHBASIN
- SANITARY MANHOLE
- VALVE AND BOX
- WATER METER LOCATION
- DOUBLE CHECK DETECTOR ASSEMBLY
- VALVED HYDRANT
- PROP. OVERLAND FLOW DIRECTION
- EXTERIOR DOOR LOCATION
- HYDRO TRANSFORMER
- SIAMSESE CONNECTION
- CROSSING ID
- SUMP PUMP DISCHARGE LOCATION
- VALVE AND CHAMBER

BENCHMARK ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE REFERRED TO CITY OF TORONTO BENCHMARK No. 060049, HAVING A PUBLISHED ELEVATION OF 182.372 METRES.

TOPOGRAPHIC INFORMATION FROM SURVEY PREPARED BY SCHAEFFER DZALDOV BENNETT LTD., PROJECT NO. 11-353-00, DATED DECEMBER 16, 2011.

Toronto ENGINEERING AND CONSTRUCTION SERVICES
ACCEPTED TO BE IN ACCORDANCE WITH THE CITY OF TORONTO STANDARDS
THIS ACCEPTANCE IS NOT TO BE CONSTRUED AS VERIFICATION OF ENGINEERING CONTENT
MANAGER, DEVELOPMENT ENGINEERING
DATE Jan 11/16

NO.	DATE	REVISIONS	BY
6	SEP 23/15	REVISED PER CITY'S COMMENTS	DG
5	SEP 9/15	REVISED PER CITY'S COMMENTS	DG
4	JUL 07/15	REVISED PER CITY'S COMMENTS	DG
3	MAR 9/15	REVISED PER CITY'S COMMENTS	DG
2	MAY 30/14	REVISED PER CITY'S COMMENTS	DG
1	DEC 28/12	ISSUED FOR OPA/ZBA/SPA	DG



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Consulting Engineers - Project Managers
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EMAIL: info@valdor-engineering.com, www.valdor-engineering.com

PROJECT
591&593 SHEPPARD AVE. E
CITY OF TORONTO (NORTH YORK DISTRICT)
CITY FILE 12 298398 NNY 2402, 12 298406 NNY 245A

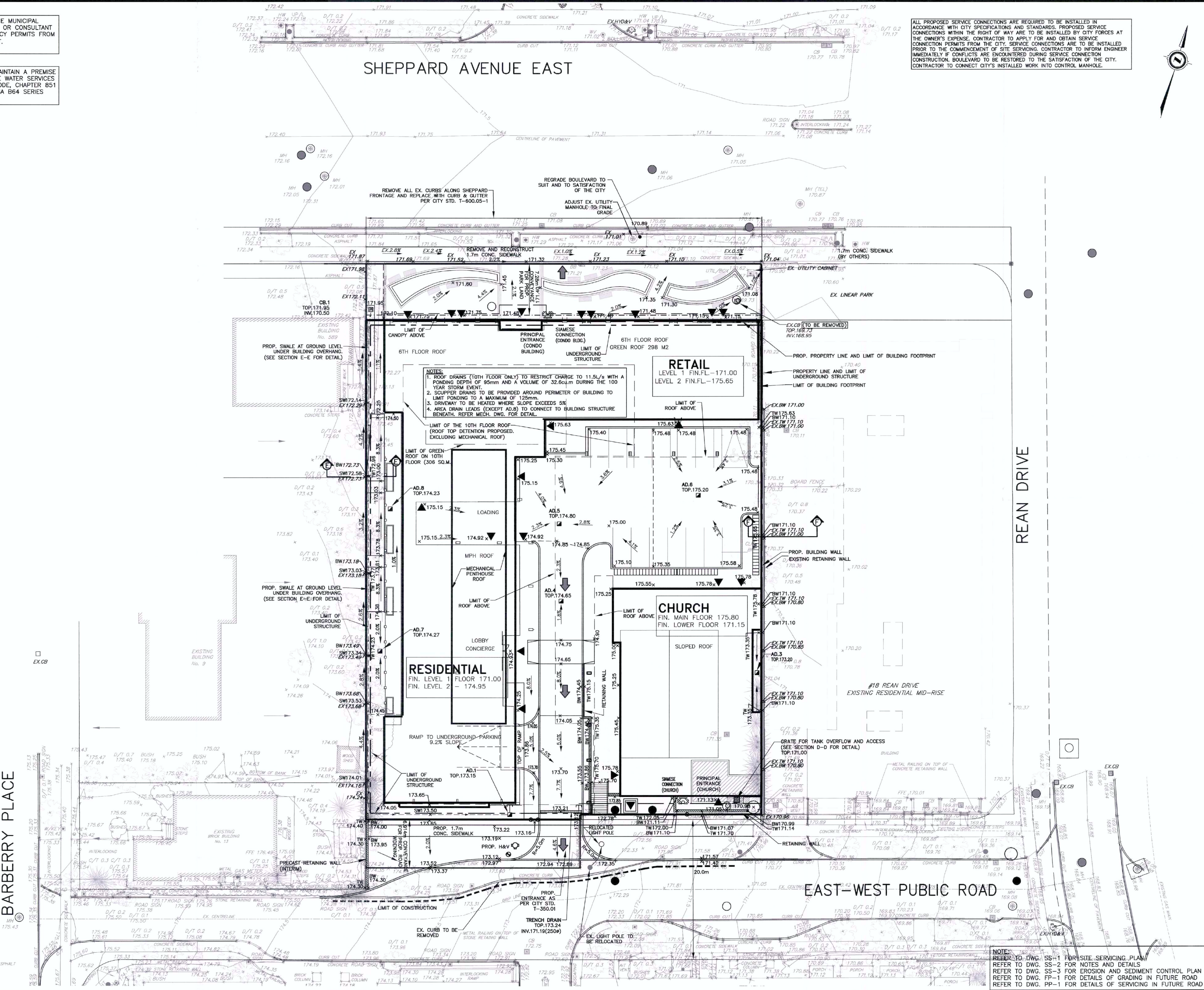
SITE GRADING PLAN

SCALE 1:250	DATE OF DWG. NOV 6/2012	PROJECT NO. 12138
DRAWN BY H.M./S.K.	DRAWING NO. GR-1	
CHKD BY D.G.		

BARBERRY PLACE

REAN DRIVE

EAST-WEST PUBLIC ROAD



NOTES:
REFER TO DWG. SS-1 FOR SITE SERVING PLAN
REFER TO DWG. SS-2 FOR NOTES AND DETAILS
REFER TO DWG. SS-3 FOR EROSION AND SEDIMENT CONTROL PLAN
REFER TO DWG. FP-1 FOR DETAILS OF GRADING IN FUTURE ROAD
REFER TO DWG. PP-1 FOR DETAILS OF SERVING IN FUTURE ROAD

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CROSSING TABLE:

Crossing ID	Invert (m)	Obvert (m)	Clearance (m)
A	170.40 (VWM)	168.50 (SAN)	1.90
B	170.00 (VWM)	168.45 (SAN)	1.55
C	169.20 (VWM)	168.49 (STM)	0.71
D	168.16 (STM)	167.48 (SAN)	0.68
E	±167.64 (EX-STM)	165.91 (SAN)	1.73
F	±166.82 (VWM)	165.66 (SAN)	1.16

SHEPPARD AVENUE EAST

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KEY PLAN
N.T.S.

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- FINISHED GROUND FLOOR ELEVATION
- EXTERIOR DOOR LOCATION
- HYDRO TRANSFORMER
- SIAMSESE CONNECTION
- CROSSING ID
- SUMP PUMP DISCHARGE LOCATION
- VALVE AND CHAMBER

ENVIRONMENTAL COMPLIANCE APPROVALS (MCE)
SANITARY & STORM SEWER APPROVAL No. 1402-AS37E
WATERMAIN APPROVAL No. ECA-2015-DNY-008, DW-2015-DNY-008
BENCHMARK ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE REFERRED TO CITY OF TORONTO BENCHMARK No. 080049, HAVING A PUBLISHED ELEVATION OF 182.372 METRES.
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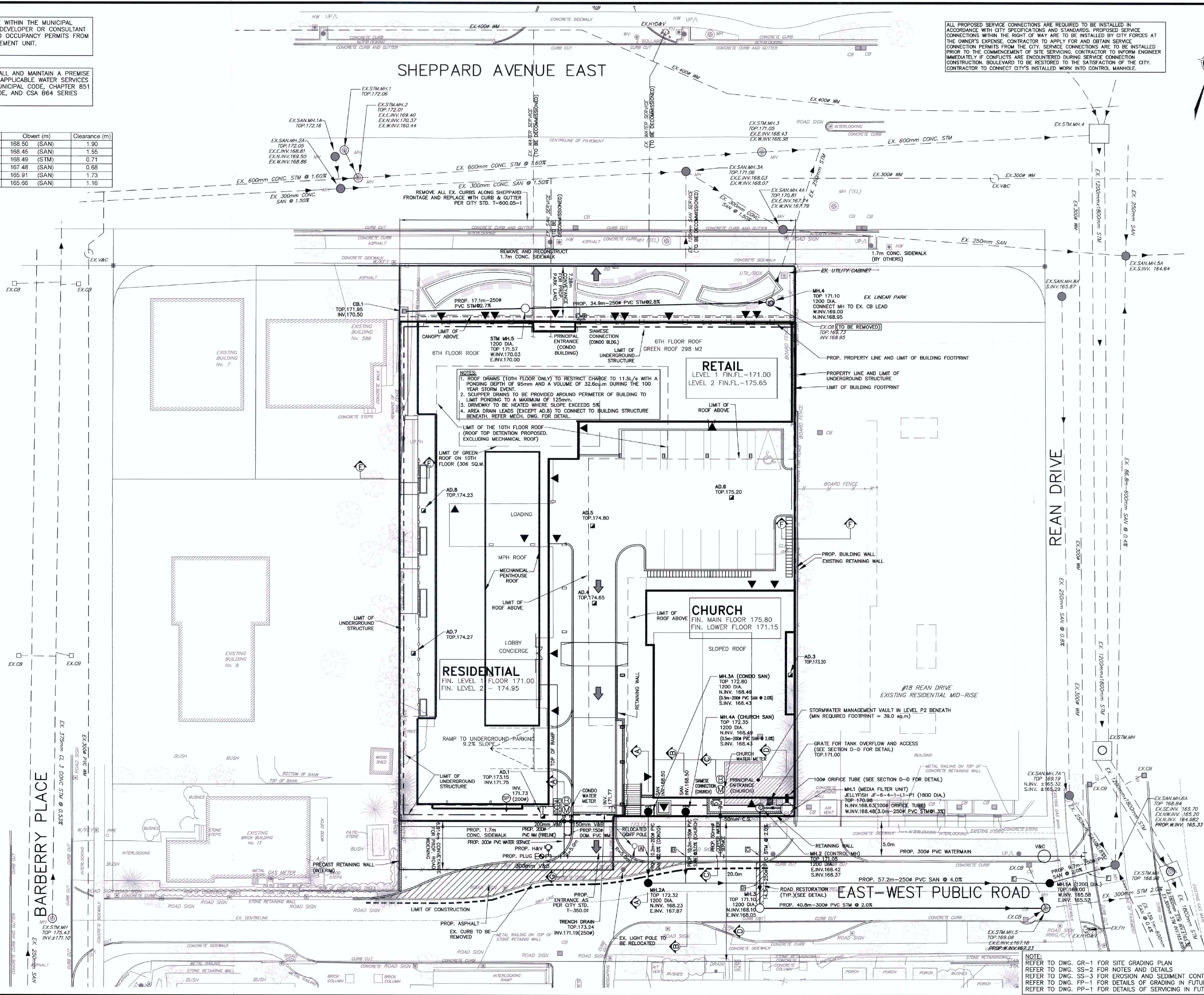
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CITY OF TORONTO (NORTH YORK DISTRICT)
CITY FILE 12 298398 NNY 2402, 12 298406 NNY 245A

SITE SERVING PLAN

SCALE	DATE OF DWG.	PROJECT NO.
1:250	NOV 6/2012	12138
DRAWN BY	DRAWING NO.	
H.M./S.K.		
CHKD BY		
D.G.		

SS-1



GENERAL NOTES

- ALL WORK TO CONFORM TO THE LATEST CITY OF TORONTO STANDARD DRAWINGS AND SPECIFICATIONS AS WELL AS THE LATEST ONTARIO PROVINCIAL STANDARD DRAWINGS AND SPECIFICATIONS.
- ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE CURRENT "OCCUPATIONAL HEALTH AND SAFETY ACT". THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONSTRUCTOR AS DEFINED IN THE ACT.
- ALL TEMPORARY TRAFFIC CONTROL AND SIGNAGE DURING CONSTRUCTION AND SHALL BE IN ACCORDANCE WITH CURRENT ONTARIO TRAFFIC MANUAL FOR BOOK 7 TEMPORARY CONDITIONS FIELD EDITION.
- ALL TRENCHES WITHIN EXISTING R.O.W. SHALL BE BACKFILLED WITH UNSHRINKABLE FILL. TEMPORARY REPAIRS TO UTILITY CUTS WILL BE AS PER MUNICIPAL CONSENT REQUIREMENTS. APPENDIX D. TEMPORARY REPAIRS TO UTILITY CUTS.
- THE CONTRACTOR SHALL RECTIFY ALL DISTURBED AREAS TO THE ORIGINAL CONDITIONS OR BETTER AND TO THE SATISFACTION OF THE EXECUTIVE DIRECTOR OF ENGINEERING & CONSTRUCTION SERVICE DIVISION.
- PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL RIGHT OF WAY, THE CONTRACTOR OR DEVELOPER OR CONSULTANT WILL OBTAIN ALL NECESSARY ROAD OCCUPANCY PERMITS FROM THE CITY'S RIGHT-OF-WAY MANAGEMENT UNIT. CONTACT 416-395-6303.

SANITARY & STORM SEWERS

- MAIN LINE PVC PIPE AS PER SDR-35 CSA B182.2-06 CERTIFIED ASTM D3034-04, F798-03. SERVICE CONNECTION PVC PIPE TO BE AS PER SDR-28 CSA B182.2-06 CERTIFIED ASTM D3034-04.
- BEDDING FOR FLEXIBLE PIPE SHALL BE AS PER OPSD 802.010, 802.013 OR 802.014.
- ULTRA-RIB PIPE IS NOT PERMITTED WITHIN THE MUNICIPAL RIGHT OF WAY.
- MAINTENANCE HOLES AS PER CITY OF TORONTO STANDARD, T-701.010 (1200mm), T-701.011 (1500mm), T-701.012-1 (1800) OR T-701.013 (2400mm). FRAME AND COVER AS PER OPSD 401.010 TYPE A CLOSED (SANITARY) TYPE B OPEN (STORM).
- BENCHING SHALL BE AS PER CITY OF TORONTO STANDARD T-701.021.
- DROP STRUCTURES TO BE AS PER CITY OF TORONTO STANDARD T-1003.01 (EXTERNAL) AND T-1003.01-2 (INTERNAL).
- SANITARY SERVICE CONNECTIONS SHALL BE SINGLE, 150mmØ MINIMUM, PVC CLASS 28 INSTALLED AT 2% AND ANY COLOUR EXCEPT WHITE, FOR SINGLE RESIDENTIAL DWELLINGS.
- SANITARY MAINTENANCE HOLE SHALL HAVE WATERTIGHT FRAME AND COVER IN PONDING AREAS AS PER OPSD 401.030.
- REINFORCED CONCRETE PIPE SHALL BE AS PER CSA A257.2-03 (MINIMUM 650). HEIGHT OF FILL TO BE VERIFIED USING OPSD TABLES 807.010 AND 807.030.
- NON-REINFORCED CONCRETE PIPE 150mm TO 250mm SHALL BE AS PER CSA A257.1-03 CLASS 3. HEIGHT OF FILL TO BE VERIFIED USING OPSD TABLES 807.040.
- BEDDING FOR RIGID PIPE SHALL BE CLASS B AS PER OPSD 802.030, 802.031, 802.032 OR 802.033.
- SINGLE CATCHBASINS SHALL BE AS PER CITY OF TORONTO STANDARD T-705.010 COMPLETE WITH GOSS TRAP, FRAME AND COVER AS PER OPSD 400.070. (NOTE OPSD 400.070 FRAME AND COVER IS REQUIRED WITHIN THE MUNICIPAL RIGHT OF WAY. ON SITE FRAME AND COVERS MAY BE DIFFERENT. THE PROPER OPSD SHOULD BE LISTED)
- DOUBLE CATCHBASIN SHALL BE AS PER CITY OF TORONTO STANDARD T-705.020 COMPLETE WITH GOSS TRAP.
- SERVICE CONNECTIONS AND UTILITY CUTS TO BE BACKFILLED WITH UNSHRINKABLE FILL.
- CS LEADS TO BE 200mm PVC SDR-35 FOR SINGLE CATCHBASINS AND 250mm PVC SDR-35 FOR DOUBLE CATCHBASINS UNLESS OTHERWISE NOTED.
- SEWERS TO BE INSULATED AS PER SEWER INSULATION DETAIL WHERE COVER BETWEEN PROPOSED FINISH GRADE AND INVERT IS LESS THAN 1.2m.
- STORM SEWERS UP TO AND INCLUDING 450mm DIAMETER SHALL BE ULTRA-RIB PVC (OR APPROVED EQUAL) WITH BEDDING AS PER OPSD 802.01, UNLESS OTHERWISE NOTED. CONCRETE PIPE LARGER THAN 450mm DIAMETER TO BE CLASS 100-D WITH CLASS 'B' BEDDING AS PER OPSD 802.03. ALL SEWER PIPE SHALL HAVE RUBBER GASKET JOINTS.
- TRENCH BACKFILL TO BE COMPACTED TO MINIMUM 98% SPMD IN THE LAST 0.6m TO THE SUBGRADE AND BELOW TO 95% SPMD. TRENCHES WITHIN THE PAVED AREA OF EXISTING PUBLIC ROADS SHALL BE VERTICAL TRENCHES AND BE BACKFILLED WITH NON-SHRINKABLE MATERIALS.

GRADING & ROAD / PAVEMENTS

- ALL AREA GRADING AND RESULTING DRAINAGE PATTERNS SHALL NOT ADVERSELY AFFECT ADJACENT LANDS.
- THE STORM DRAINAGE SHALL BE SELF CONTAINED WITHIN THE SUBJECT PROPERTY UNTIL IT CAN BE DISCHARGED, REUSED, INFILTRATED AND/OR EVAPOTRANSPIRED IN A MANNER ACCEPTABLE TO THE CITY.
- MINIMUM GENERALLY ACCEPTED GRADIENT - 2%
- MAXIMUM GENERALLY ACCEPTABLE GRADIENT - 5%
- MAXIMUM ACCEPTABLE SLOPE 3 PARTS HORIZONTAL TO 1 PART VERTICAL.
- NO ALTERATIONS TO EXISTING BOUNDARY ELEVATIONS OR ADJACENT LANDS SHALL BE UNDERTAKEN UNLESS WRITTEN AGREEMENT WITH THE ADJACENT PROPERTY OWNER IS OBTAINED AND SUBMITTED IN A FORMAT ACCEPTABLE TO THE CITY.
- MINIMUM SWALE GRADIENT - 2.0%
- MINIMUM SWALE DEPTH - 150mm
- ALL SWALES TO INCORPORATE EROSION PROTECTION.
- THE MINIMUM GRADIENT ON ANY DRIVEWAY SHALL BE 2% THE MAXIMUM DRIVEWAY GRADIENT IS 8.0%
- RETAINING WALLS SHALL BE CONSTRUCTED ENTIRELY ON THE UPPER PROPERTY SO THAT THE BACKS (IF REQUIRED) DO NOT CROSS PROPERTY BOUNDARIES.
- MAXIMUM PONDING DEPTH 0.3m IN PAVED AREA
- PROPOSED SPOT ELEVATIONS SHOWN ARE ON ASPHALT, LANDSCAPE OR CONCRETE AREAS, UNLESS OTHERWISE NOTED TOP OF CURB ELEVATIONS ARE 0.15m ABOVE ASPHALT ELEVATIONS EXCEPT AT CURB DEPRESSIONS AND WHEEL CHAIR RAMPS.
- WHERE NEW ASPHALT MATCHES EXISTING ASPHALT, GRIND EXISTING ASPHALT A MINIMUM OF 300mm WIDE AND 40mm DEEP FOR KEYING. APPLY HOT RUBBER SEALING COMPOUND IN ACCORDANCE WITH OPSD 1212. ALL SURFACES TO BE TACK COATED WITH SS-1.
- THE CONCRETE CURB, CONCRETE SIDEWALK (IF APPLICABLE) AND ALL RESTORATION ALONG FRONTING ROADWAYS TO THE SITE MUST BE CONSTRUCTED AND CARRIED OUT IN ACCORDANCE WITH ALL APPLICABLE AND CURRENT CITY OF TORONTO STANDARDS.

- CITY OF TORONTO STANDARDS INCLUDE BUT NOT LIMITED TO:
- T-350.01 - URBAN ENTRANCES
 - T-310.010-2 - CONCRETE SIDEWALK WITH BOULEVARD
 - T-310.010-4 - COMBINED CONCRETE CURB AND SIDEWALK
 - T-310.050-1 - VEHICLE ENTRANCE IN COMBINED CURB AND SIDEWALK
 - T-600.11-1 - CONCRETE CURB (BORDERING DRIVEWAY RETURN CURB AT ENTRANCES)
 - T-600.05-1 - CONCRETE CURB AND GUTTER.

16. MINIMUM PAVEMENT REQUIREMENTS FOR DRIVEWAY ENTRANCES ON CITY'S PROPERTY ARE AS FOLLOWS.
- APARTMENTS
 - 100mm HL3
 - 200mm GRANULAR 'A'

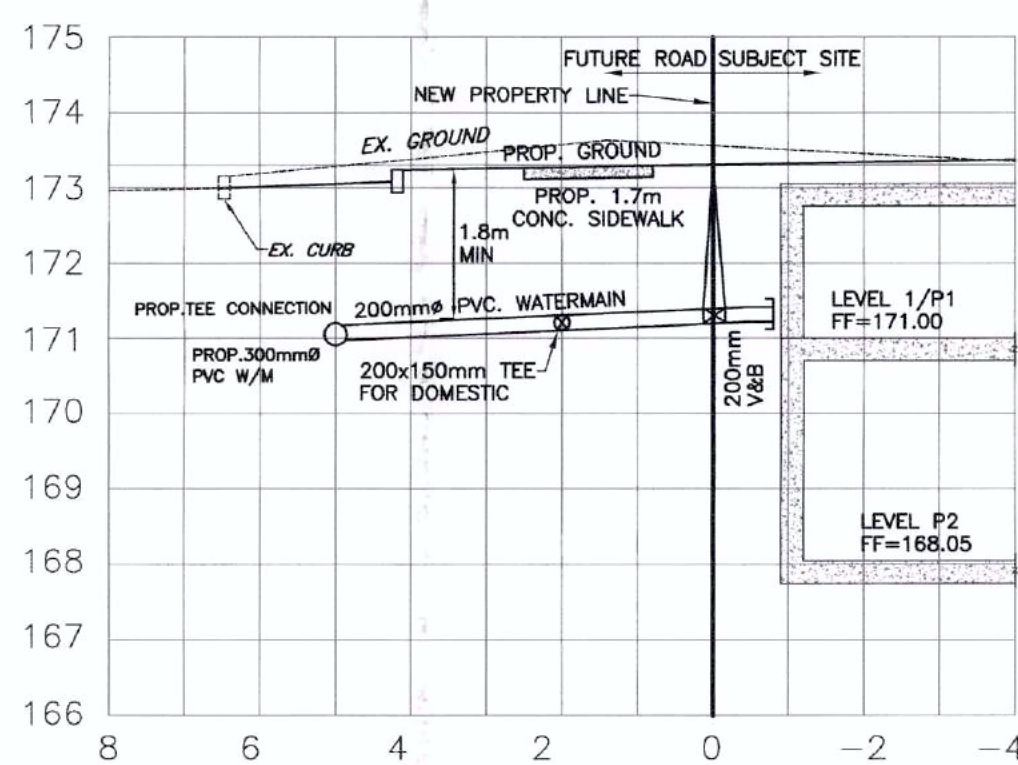
WATERMAINS

- ALL WATERMAIN SERVICE CONNECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH T-1104.01, T-1104.02-1 AND T-1104.02-2.
- WATERMAIN AND WATERMAIN APPURTENANCES SHALL CONFORM TO CITY OF TORONTO MATERIAL / MANUFACTURER SPECIFICATIONS FOR DISTRIBUTION WATERMAINS AND APPURTENANCES REVISION JUNE 2007.
- ALL POLYVINYL CHLORIDE (PVC) PIPES, RANGING IN SIZE FROM 100mm THROUGH 300mm IN DIAMETER, SHALL BE CLASS 150, SDR 18 AND MANUFACTURED IN ACCORDANCE AWWA C900-07 AND TO CSA B137.3-05 AND SHALL HAVE CAST IRON OUTSIDE DIAMETER DIMENSIONS. ALL PVC PIPE LARGER THAN 300mm THROUGH 400mm IN DIAMETER, SHALL BE PRESSURE RATING 235, SDR 18 AND MANUFACTURED IN ACCORDANCE TO AWWA C905-87 STANDARD AND CSA B137.3-05 AND SHALL HAVE CAST IRON OUTSIDE DIAMETER DIMENSIONS.
- BEDDING FOR FLEXIBLE PIPE SHALL BE AS PER OPSD 802.010, 802.013 OR 802.014.
- COVER REQUIRED ON WATERMAIN IS 1.8m MINIMUM.
- PROVISIONS FOR FLUSHING THE WATER LINE PRIOR TO TESTING ETC. MUST BE PROVIDED WITH AT LEAST A 50mm OUTLET ON 100mm AND LARGER LINES AS PER T-1104.03-1. COPPER LINES ARE TO HAVE FLUSHING POINTS AT THE END, THE SAME SIZE AS THE LINE, ON FIRE LINES, FLUSHING OUTLET TO BE 100mm DIAMETER MINIMUM OR A HYDRANT.
- ALL HYDRANTS TO BE AS PER CITY OF TORONTO STANDARD T-1105.01. IT SHALL CONFORM WITH THE MATERIAL SPECIFICATIONS CONTAINED IN CITY OF TORONTO MATERIAL / MANUFACTURER SPECIFICATIONS FOR DISTRIBUTION WATERMAINS AND APPURTENANCES REVISION JUNE 2007.
- WATERMAINS TO BE INSTALLED TO GRADES AS SHOWN ON APPROVED PLANS. COPY OF GRADE SHEET MUST BE SUPPLIED TO INSPECTOR PRIOR TO COMMENCEMENT OF WORK, WHERE REQUESTED BY INSPECTOR.
- SINGLE WATER SERVICE CONNECTIONS SHALL BE A MINIMUM OF 20mmØ AND CONFORM TO ASTM B88-03 (ASTM B88M-03 FOR METRIC SIZES) TYPE "K" SOFT COPPER AS PER T-1104.01.
- ALL CURB AND VALVE BOXES TO BE LOCATED AT STREET LINE.
- MECHANICAL THRUST RESTRAINTS SHALL BE INSTALLED AT ALL JOINTS BETWEEN FITTINGS, BENDS, TEES, CROSSES REDUCERS AND VALVES FOR ALL WATERMAIN SIZES. MECHANICAL RESTRAINTS AT JOINTS SHALL BE INSTALLED WITHIN 6.1m OF EITHER SIDE OF THE VALVE FOR WATERMAINS 300mm DIAMETER OR LARGER. MECHANICAL THRUST RESTRAINTS SHALL CONFORM TO THE MATERIAL SPECIFICATIONS CONTAINED IN CITY OF TORONTO MATERIAL / MANUFACTURER SPECIFICATIONS. SEE CHAPTER 6, MATERIAL SPECIFICATIONS.
- ALL TEES, PLUGS, HORIZONTAL AND VERTICAL BENDS, REDUCERS AND HYDRANTS TO HAVE CONCRETE THRUST BLOCKS AS PER CITY OF TORONTO STANDARD T-1103.01, T-1103.020.
- WATERMAINS MUST FOLLOW THE MINISTRY OF THE ENVIRONMENT PROCEDURES THAT GOVERN THE SEPARATION OF SEWERS AND WATERMAINS F-6-1. A MINIMUM VERTICAL CLEARANCE 0.30m OVER, 0.5m UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING. MUST ALSO MAINTAIN 2.5m HORIZONTAL SEPARATION.
- ALL VALVES LESS THAN 400mm TO BE IN A VALVE AND BOX AS PER CITY OF TORONTO STANDARD T-1101.02-2. ALL VALVES 400mm AND LARGER SHOULD BE IN A CHAMBER.
- SACRIFICIAL ANODES TO BE INSTALLED FOR ALL METAL PIPES AND APPURTENANCES. WATER SERVICES AND FITTINGS AS PER CITY OF TORONTO STANDARD T-1106.04, T-1106.05 AND T-1106.06 CONSTRUCTION SPECIFICATIONS T.S. 7.22 & T.S. 7.23.
- TRACER WIRE INSTALLATION AS PER CITY OF TORONTO CONSTRUCTION SPECIFICATION T.S. 7.40.
- ALL PROPOSED WATER PIPING MUST BE ISOLATED FROM EXISTING LINES IN ORDER TO ALLOW INDEPENDENT PRESSURE TESTING AND CHLORINATING FROM THE EXISTING SYSTEM. FLUSHING, SWABING AND TESTING OF WATERMAIN AS PER ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS, AS WELL AS CITY OF TORONTO SPECIFICATION T.S. 7.30 OR LATEST AMENDMENT.
- AFTER PASSING THE HYDROSTATIC PRESSURE TEST AND LEAKAGE TEST, CHLORINATION CAN PROCEED. SAMPLING OF THE NEW MAINS IS TO BE DONE AT THE REQUIRED LOCATIONS PRIOR TO CONNECTING TO THE CITY WATERMAIN SYSTEM. THE TEE FITTING IS TO BE CUT INTO THE EXISTING WATERMAIN TO MAKE THE CONNECTION. TO MAINTAIN THE PRESSURE IN THE NEW MAIN DURING INSTALLATION OF SERVICE, A 50mm BY-PASS WITH AN APPROVED PRESSURE DIFFERENTIAL BACKFLOW PREVENTER, MOUNTED ABOVE GROUND LEVEL IS TO BE INSTALLED AROUND THE CLOSED ISOLATING VALVE.
- CITY WATER VALVES CAN ONLY BE OPERATED BY CITY STAFF.
- WHERE APPLICABLE A WATER METER CHAMBER SHALL BE LOCATED WITHIN THE PROPERTY OF THE OWNER AND WITHIN 3m OF THE STREETLINE, IN A LOCATION APPROVED BY CITY PRIOR TO CONSTRUCTION.
- WHERE APPLICABLE ALL LANDSCAPING (TREES AND SHRUBS) SHALL BE KEPT 1.5m AWAY FROM THE OUTER PERIMETER OF THE WATER METER CHAMBER.
- ALL REMOTE READOUT UNITS WILL BE INSTALLED AS REQUIRED BY THE CURRENT WATER SUPPLY BY-LAW, CHAPTER 851 AND AS PER CITY OF TORONTO CONSTRUCTION SPECIFICATION SPECIFICATION T.S. 7.50.
- BOTH FIRE AND DOMESTIC WATER SERVICES MUST COMPLY WITH THE CURRENT BUILDING CODE ACT, THE CURRENT WATER SUPPLY BY-LAW, CHAPTER 851 AND CSA B-64 SERIES STANDARDS.
- WATERMAINS TO BE INSTALLED TO GRADE AS SHOWN ON APPROVED PLANS. COPY OF GRADE SHEET MUST BE SUPPLIED TO INSPECTOR PRIOR TO COMMENCEMENT OF WORK, WHEN REQUESTED BY INSPECTOR.
- PIPE JOINT DEFLECTIONS ARE NOT ALLOWED.

WATERMAIN - FILL AREAS

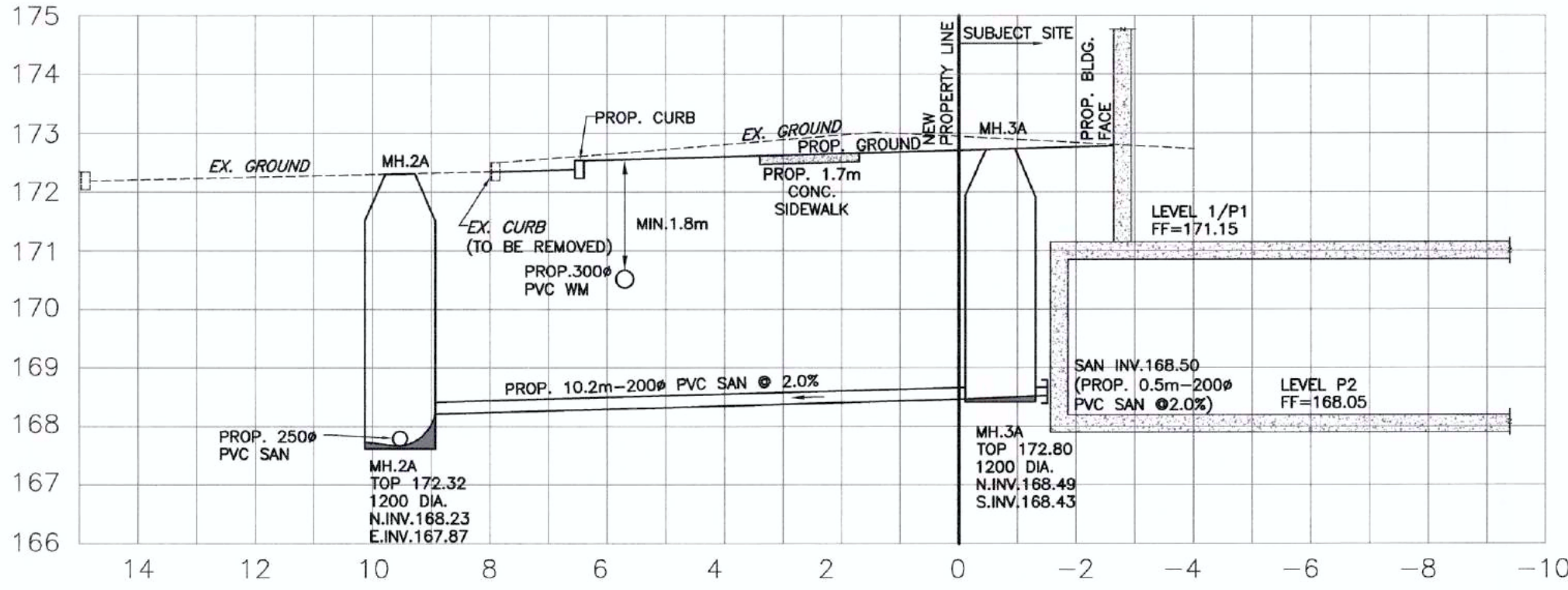
- PIPES ARE NOT TO BE LAID ON FILL UNTIL THE FIELD DENSITY TEST REPORTS HAVE BEEN SUBMITTED AND APPROVED BY THE ENGINEER.
- FILL TO BE PLACED TO MINIMUM OF 600mm ABOVE THE WATERMAIN GRADES AND TO 3.0m MINIMUM OF EACH SIDE PRIOR TO WATERMAIN LAYING COMPACTED TO A MINIMUM OF 100% STANDARD PROCTOR DENSITY IN 300mm LIFTS.
- SOIL DENSITY TESTING SHALL BE TAKEN ALONG CENTRELINE OF THE WATERMAIN AND ON LINES 1.5m ON EITHER SIDE OF SAME AT A MAXIMUM INTERVAL OF 30.0m. TESTS TO BE TAKEN AT EACH 600mm LIFT.
- ALL HYDRANTS, TEES, VALVES, BENDS, PLUGS AND EACH PIPE JOINT ARE TO BE MECHANICALLY RESTRAINED.
- PIPE JOINT DEFLECTIONS ARE NOT ALLOWED.

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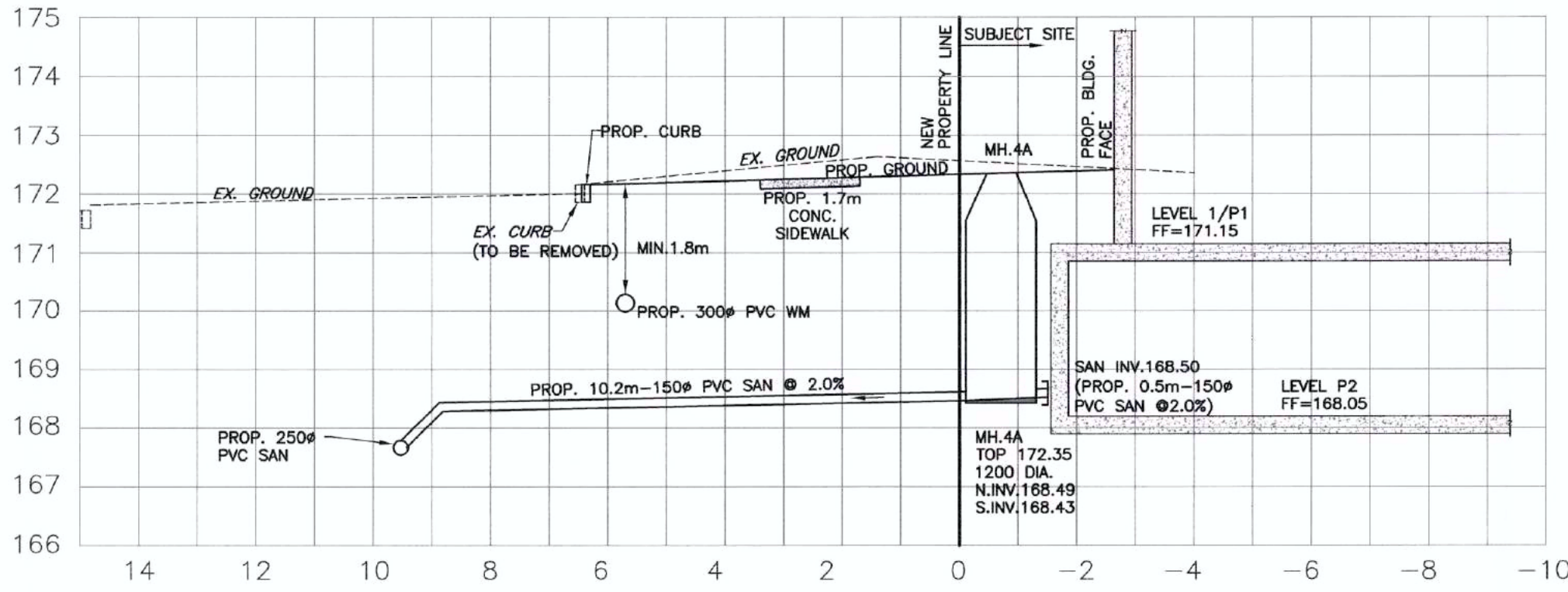
SECTION G-G

WATER SERVICE CONNECTION (CONDO)
SCALE: 1:100



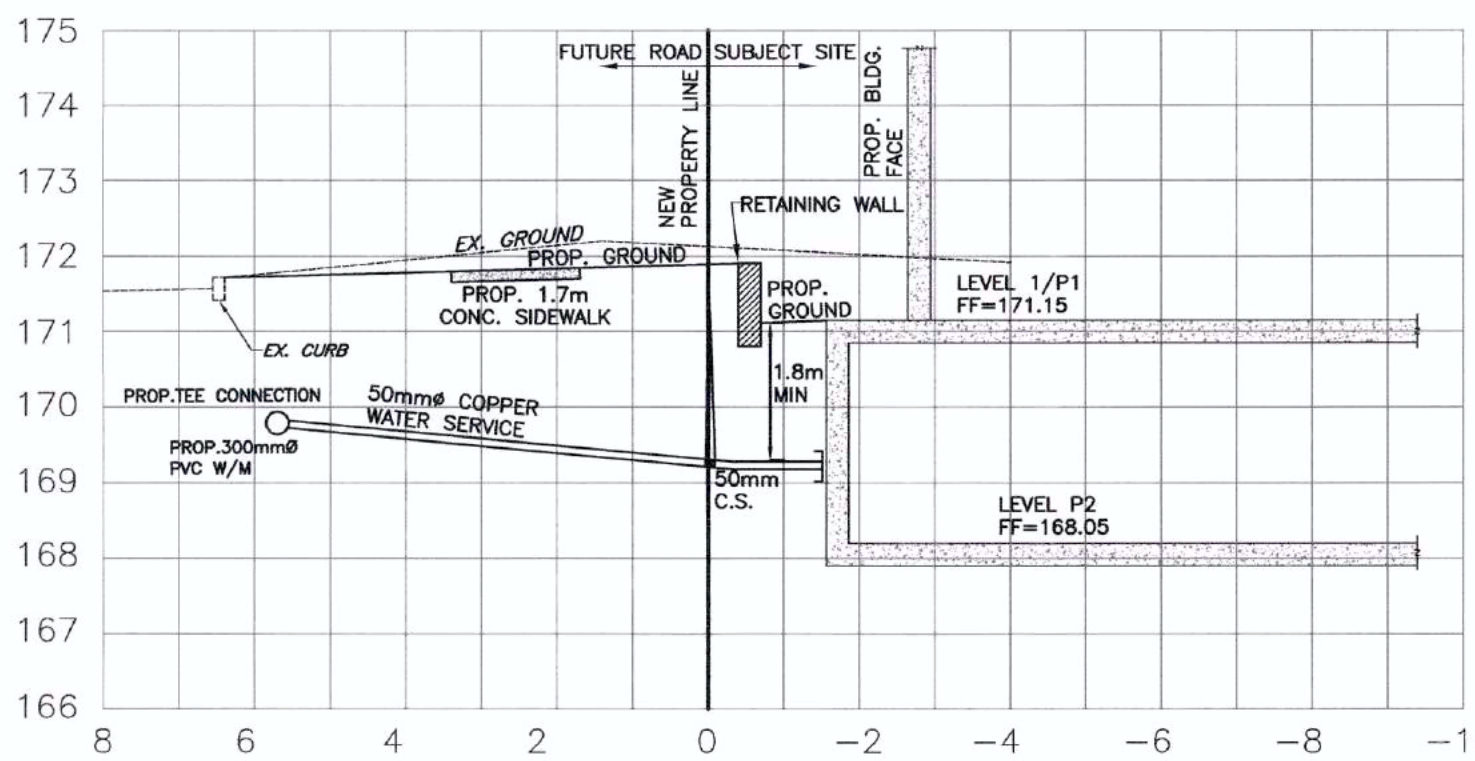
SECTION A-A

SANITARY SERVICE CONNECTION (CONDO)
SCALE: 1:100



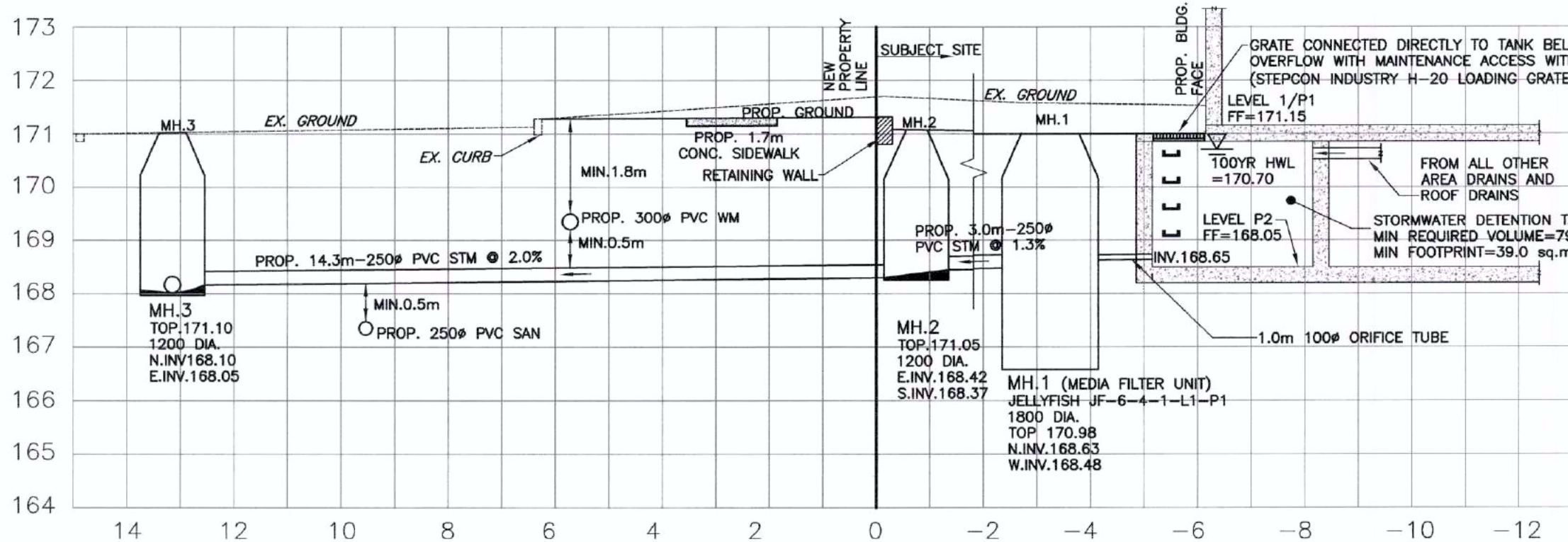
SECTION B-B

SANITARY SERVICE CONNECTION (CHURCH)
SCALE: 1:100



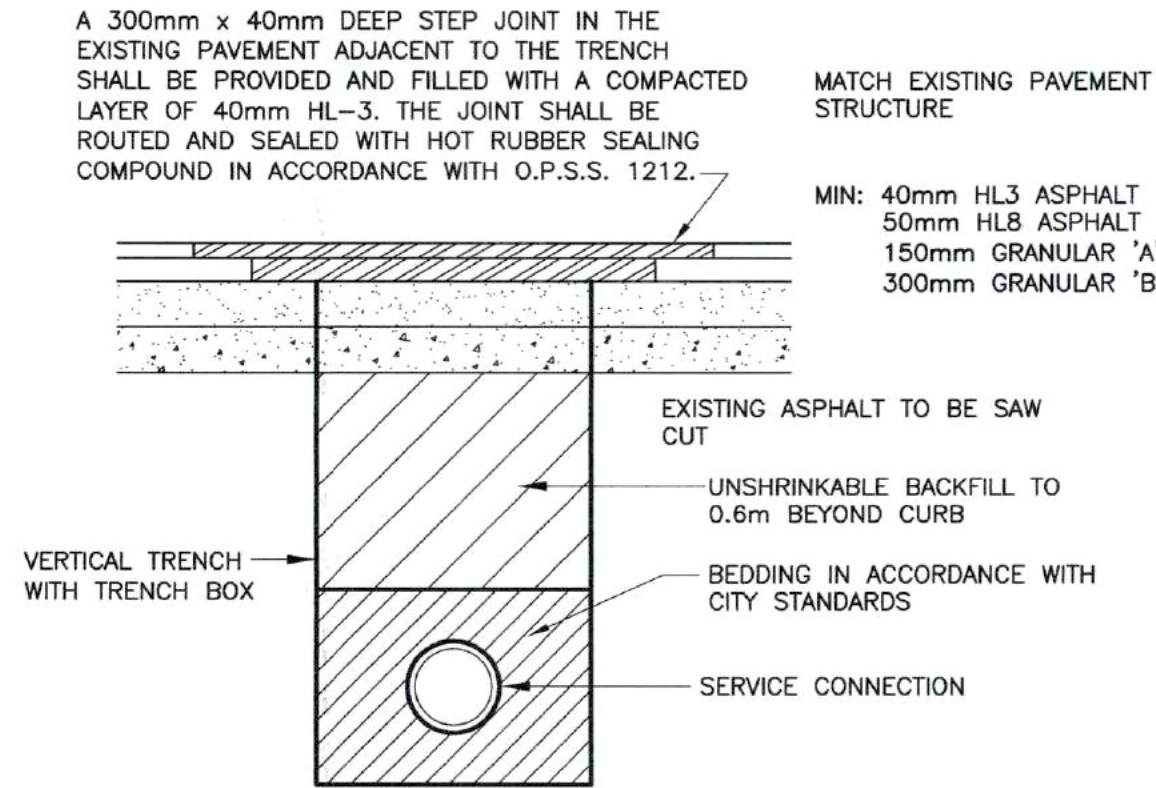
SECTION C-C

WATER SERVICE CONNECTION (CHURCH)
SCALE: 1:100



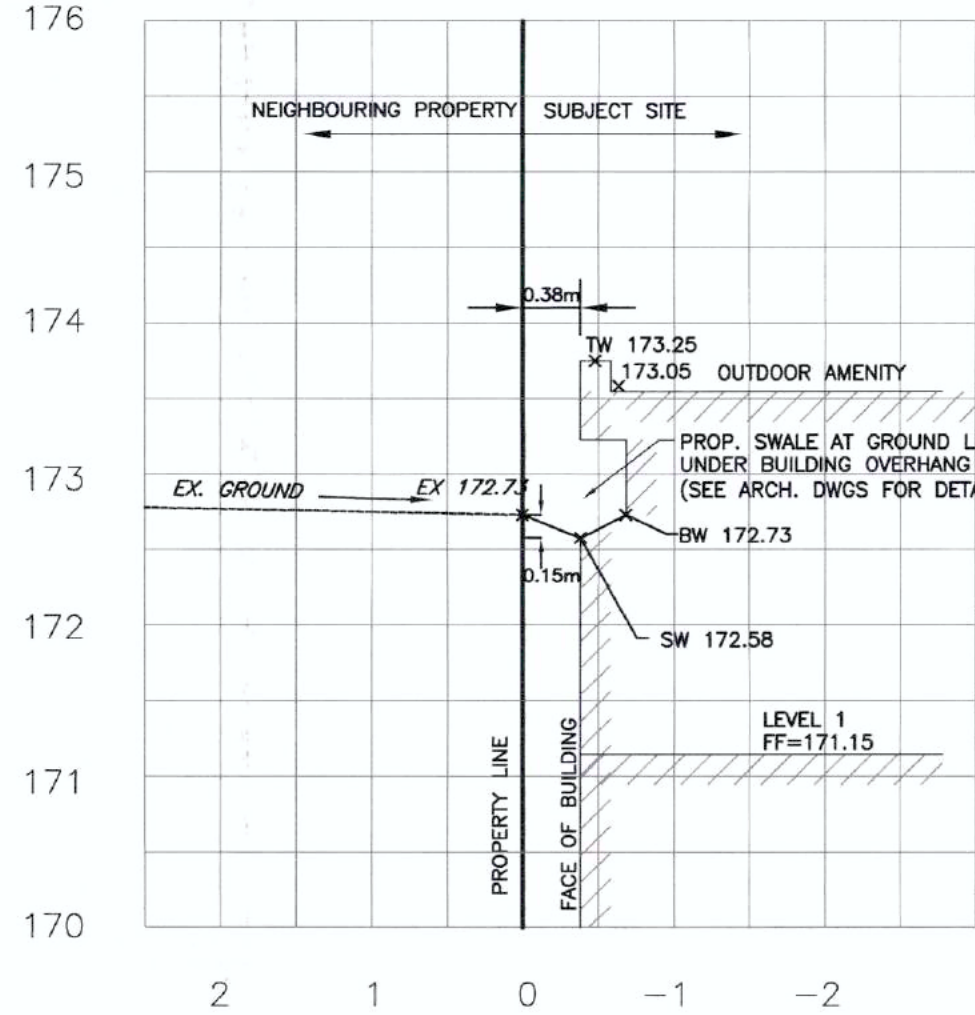
SECTION D-D

STORM SERVICE CONNECTION & ORIFICE DETAIL
SCALE: 1:100



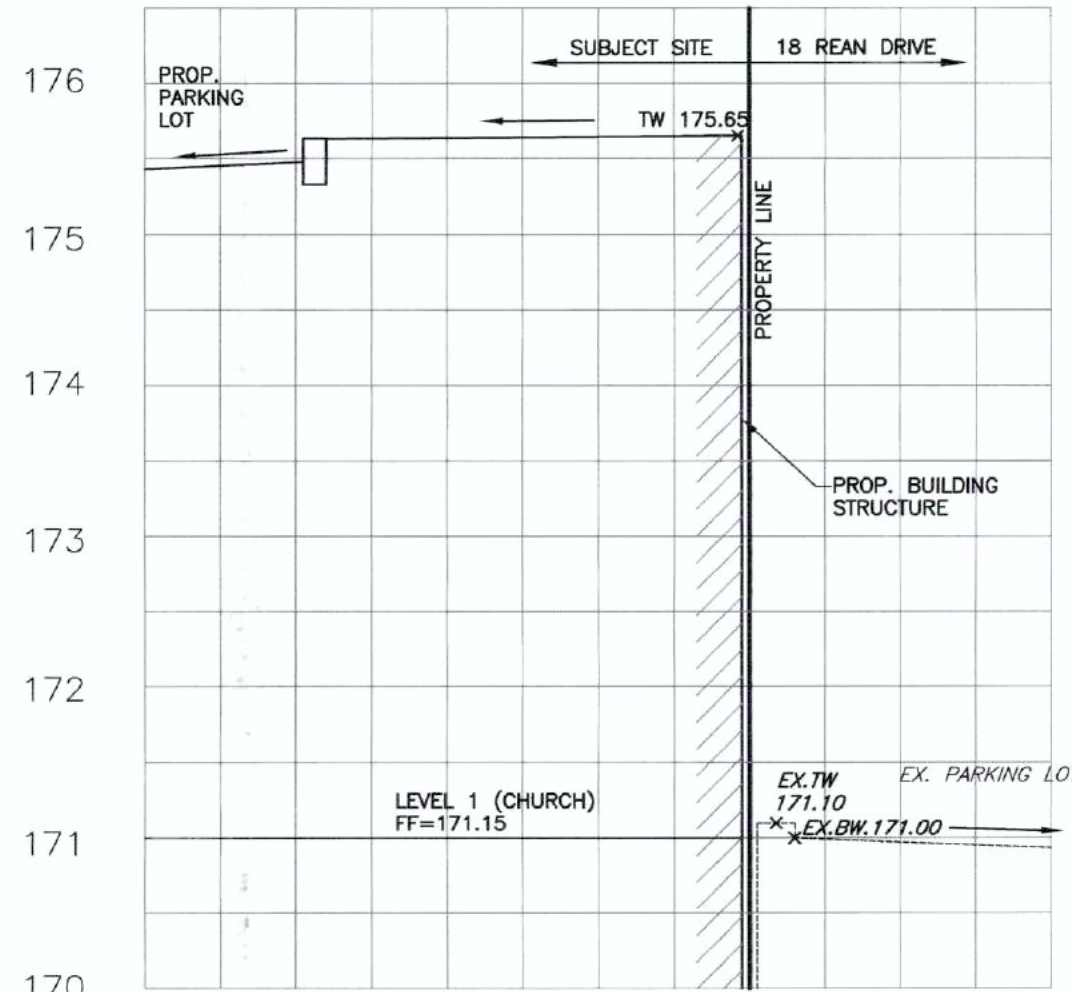
ROAD RESTORATION

SCALE: N.T.S.



SECTION E-E

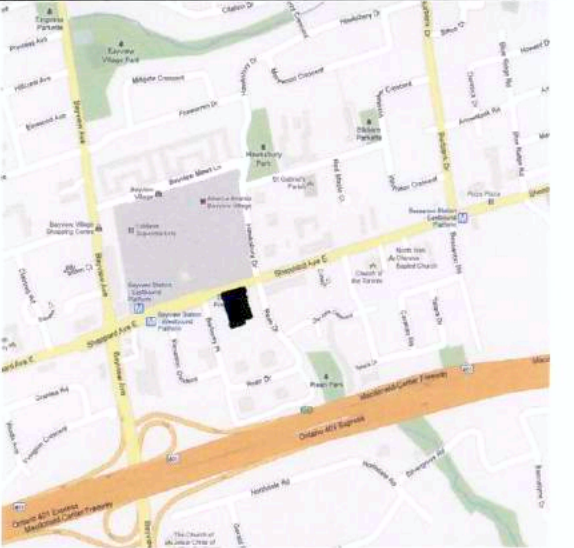
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SECTION F-F

SCALE: 1:50

NOTE:
REFER TO DWG. GR-1 FOR SITE GRADING PLAN
REFER TO DWG. SS-1 FOR SITE SERVING PLAN
REFER TO DWG. SS-3 FOR EROSION AND SEDIMENT CONTROL PLAN
REFER TO DWG. FP-1 FOR DETAILS OF GRADING IN FUTURE ROAD
REFER TO DWG. PP-1 FOR DETAILS OF SERVING IN FUTURE ROAD



KEY PLAN

N.T.S.

- LEGEND:
- EXISTING ELEVATION
 - DRAINAGE FLOW DIRECTION AND SLOPE
 - PROPOSED ELEVATION
 - STORM MANHOLE
 - CATCHBASIN
 - SANITARY MANHOLE
 - VALVE AND BOX
 - WATER METER LOCATION
 - DOUBLE CHECK DETECTOR ASSEMBLY
 - VALVED HYDRANT
 - PROP. OVERLAND FLOW DIRECTION
 - FINISHED GROUND FLOOR ELEVATION
 - EXTERIOR DOOR LOCATION
 - HYDRO TRANSFORMER
 - SIAMESE CONNECTION
 - PROPOSED SILT FENCE

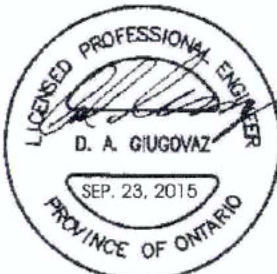
ENVIRONMENTAL COMPLIANCE APPROVALS (MCE)
SANITARY & STORM SEWER APPROVAL NO. 1402-AS376
WATERMAIN APPROVAL NO. ECA-2015-DWY-058, DW-2015-DWY-006

BENCHMARK
ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE REFERRED TO CITY OF TORONTO BENCHMARK NO. 060049, HAVING A PUBLISHED ELEVATION OF 182.372 METRES.

TOPOGRAPHIC INFORMATION FROM SURVEY PREPARED BY SCHAEFFER DIALDOV BENNETT LTD., PROJECT NO. 11-353-00, DATED DECEMBER 16, 2011.

Toronto ENGINEERING AND CONSTRUCTION SERVICES
ACCEPTED TO BE IN ACCORDANCE WITH THE CITY OF TORONTO STANDARDS
THIS ACCEPTANCE IS NOT TO BE CONSTRUED AS VERIFICATION OF ENGINEERING CONTENT
MANAGER, DEVELOPMENT ENGINEERING
DATE Jan 11/16

NO.	DATE	REVISIONS	BY
5	SEP 23/15	REVISED PER CITY'S COMMENTS	DG
4	SEP 9/15	REVISED PER CITY'S COMMENTS	DG
3	JUL 7/15	REVISED PER CITY'S COMMENTS	DG
2	MAR 9/15	REVISED PER CITY'S COMMENTS	DG
1	MAY 30/14	REVISED PER CITY'S COMMENTS	DG

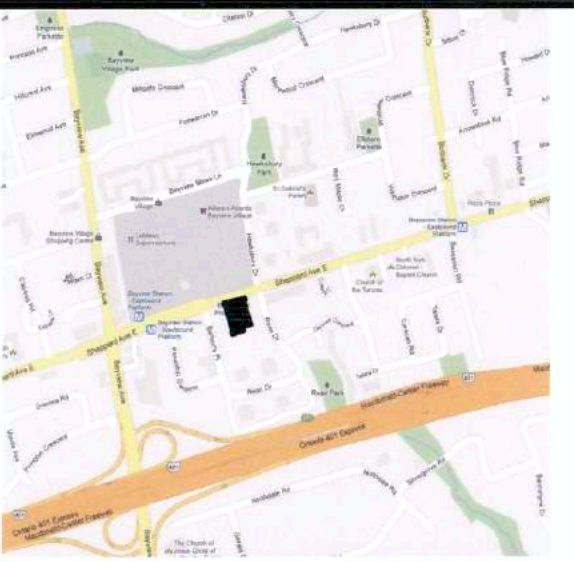


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PROJECT
591&593 SHEPPARD AVE. E
CITY OF TORONTO (NORTH YORK DISTRICT)
CITY FILE 12 298398 NNY 2402, 12 298406 NNY 245A

NOTES AND DETAILS

SCALE	DATE OF DWG.	PROJECT NO.
SEE DETAIL	NOV 6/2012	12138
DRAWN BY	DRAWING NO.	SS-2
S.K.		
CHKD BY		
D.G.		



KEY PLAN

N.T.S.

LEGEND:

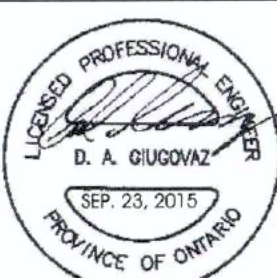
- EXISTING ELEVATION
- DRAINAGE FLOW DIRECTION AND SLOPE
- PROPOSED ELEVATION
- STORM MANHOLE
- AREA DRAIN
- CATCHBASIN
- SANITARY MANHOLE
- VALVE AND BOX
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- VALVED HYDRANT
- PROP. OVERLAND FLOW DIRECTION
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- HYDRO TRANSFORMER
- SIAMESE CONNECTION
- PROPOSED SILT FENCE
- PROPOSED SEDIMENT TRAP

BENCHMARK ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE REFERRED TO CITY OF TORONTO BENCHMARK NO. 060049, HAVING A PUBLISHED ELEVATION OF 182.372 METRES.

TOPOGRAPHIC INFORMATION FROM SURVEY PREPARED BY SCHAEFFER DZALDOV BENNETT LTD., PROJECT NO. 11-353-00, DATED DECEMBER 16, 2011.

City of Toronto ENGINEERING AND CONSTRUCTION SERVICES
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MANAGER, DEVELOPMENT ENGINEERING
DATE Jan 11/16

NO.	DATE	REVISIONS	BY
4	SEP 23/15	REVISED PER CITY'S COMMENTS	DG
3	SEP 9/15	REVISED PER CITY'S COMMENTS	DG
2	JUL 7/15	REVISED PER CITY'S COMMENTS	DG
1	MAR 9/15	REVISED PER CITY'S COMMENTS	DG

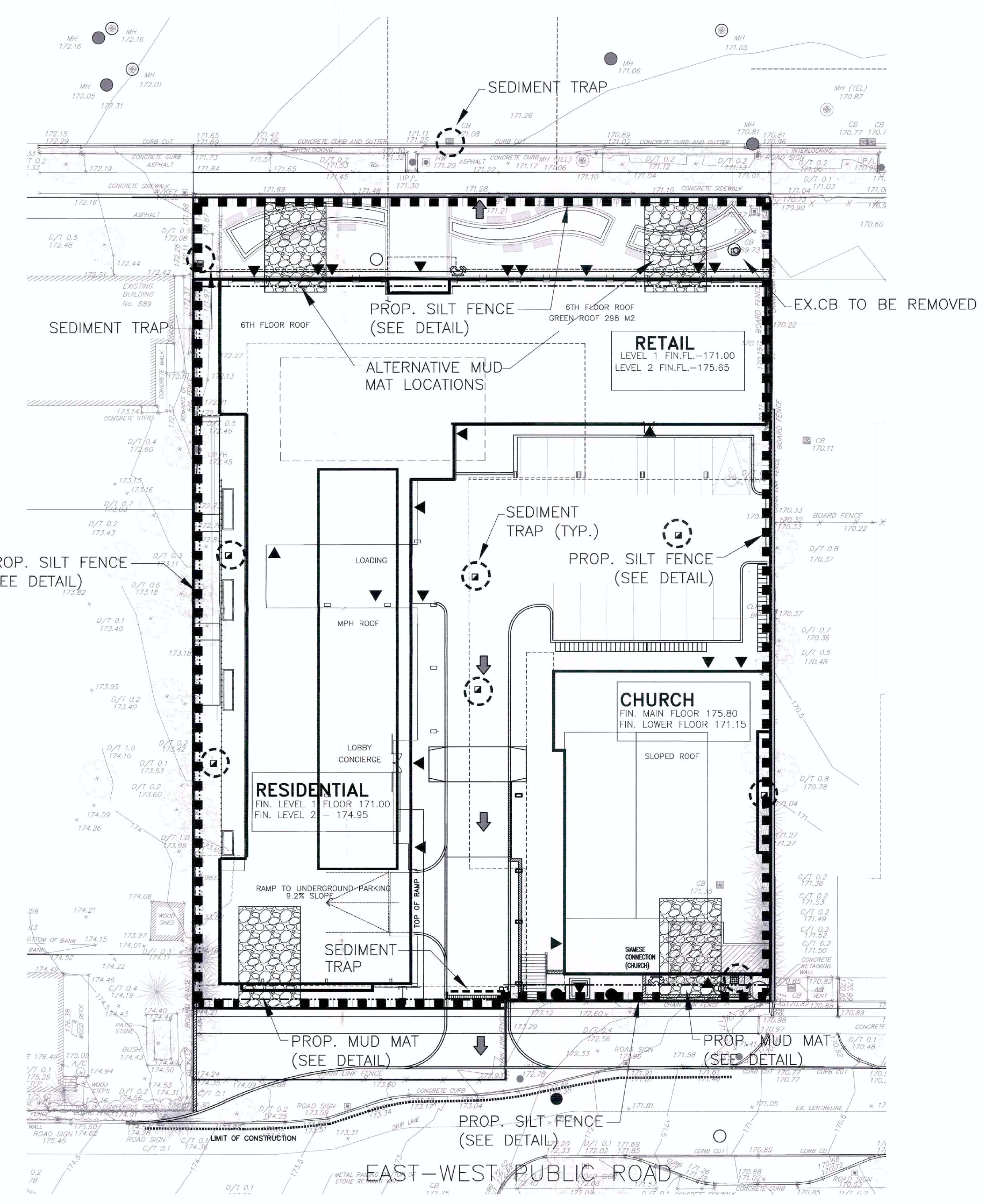


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PROJECT
591&593 SHEPPARD AVE. E
CITY OF TORONTO (NORTH YORK DISTRICT)
CITY FILE 12 298398 NNY 2402, 12 298406 NNY 245A

EROSION AND SEDIMENT CONTROL PLAN

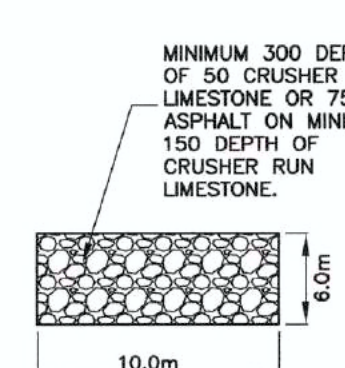
SCALE AS SHOWN	DATE OF DWG. MAR 9/2015	PROJECT NO. 12138
DRAWN BY H.M.	DRAWING NO. SS-3	
CHKD BY D.G.		



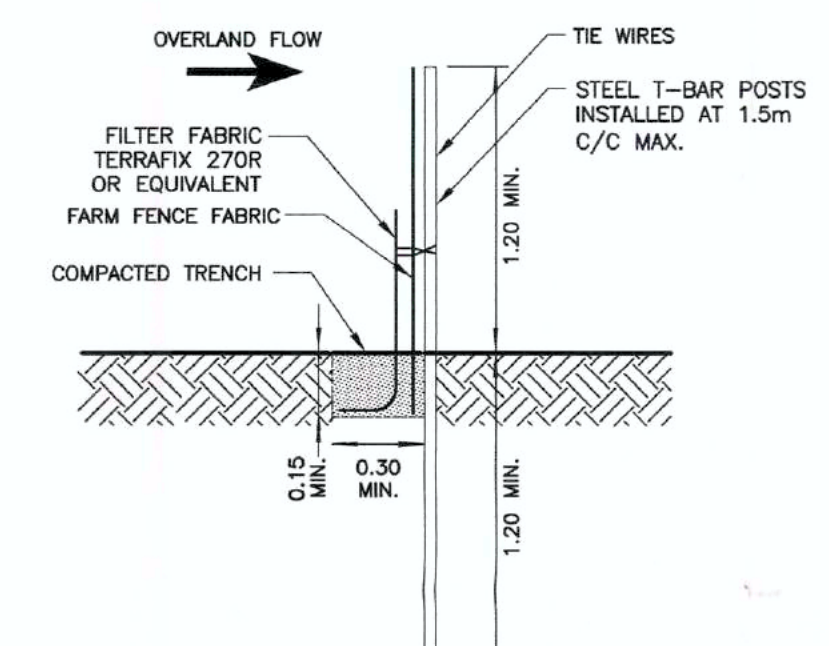
SEDIMENT CONTROL PLAN
SCALE: 1:250

SEDIMENT CONTROL NOTES

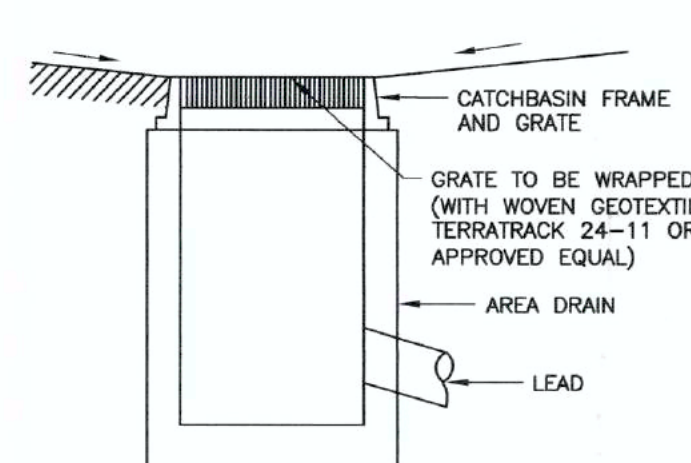
- SEDIMENT BARRIERS, CHECK DAMS, AND TEMPORARY CONSTRUCTION ACCESS TO BE INSTALLED PRIOR TO THE BEGINNING OF CONSTRUCTION.
- ALL SEDIMENT CONTROL DEVICES TO BE ROUTINELY INSPECTED AND MAINTAINED IN PROPER WORKING ORDER UNTIL AREA IS STABILIZED.
- IF NECESSARY, TRUCKS WILL BE WASHED DOWN BEFORE LEAVING THE SITE.
- THE SITE WILL BE WET DOWN IF NECESSARY TO CONTROL DUST.
- ALL CONSTRUCTION EQUIPMENT MUST BE PARKED ON-SITE.
- ALL CONSTRUCTION ACTIVITY WILL COMPLY WITH CITY OF TORONTO NOISE BYLAW.
- SEDIMENT CONTROL FENCE TO BE AS PER CITY OF TORONTO STANDARD T-219.130-1.
- ALL CONSTRUCTION VEHICLES TO ENTER AND EXIT SITE FROM TEMPORARY CONSTRUCTION ACCESS.
- ALL TOPSOIL STOCKPILES TO BE SURROUNDED WITH SEDIMENT CONTROL FENCING.
- FILTER FABRIC TO BE PLACED UNDER GRATES ON ALL CATCHBASINS TO TRAP SEDIMENT. SILT TRAPS ARE TO BE CLEANED REGULARLY AND ARE NOT TO BE REMOVED UNTIL SUCH TIME AS THE CURBS ARE CONSTRUCTED AND THE BOLLIVARIS ARE SODDED OR BACKWARDS GRADED OR SODDED. FILTER FABRIC FOR SILT CONTROL TO BE TERRAFIX 270R OR APPROVED EQUIVALENT.
- FILTER CLOTH WILL BE PLACED ON THE CATCHBASINS ON PUBLIC STREET ACROSS THE PROPERTY'S FRONTAGE.
- IN THE CASE OF ANY CONFLICT WITH ANOTHER PLAN, THIS PLAN PREVAILS ONLY IN RESPECT TO CONSTRUCTION MEASURES AND ACTIVITIES SUCH AS THE CONSTRUCTION ACCESS, SILT FENCE, SECURITY FENCING, SEDIMENT CONTROL, AND MUD MATS.
- STREET WEEDING, CATCH BASIN CLEANING AND DUST CONTROL ARE THE RESPONSIBILITY OF THE DEVELOPER AND MUST BE KEPT UNDER CONTROL ON ALL ROADWAYS TO THE SATISFACTION OF THE CITY.
- THE CONTRACTOR SHALL PREVENT MUD TRUCKING ONTO EXISTING RIGHTS-OF-WAY AND SHALL PROVIDE FOR CLEAN UP AT HIS OWN EXPENSE AS DIRECTED BY ENGINEER.
- CONTRACTOR TO STABILIZE THE SITE AS SOON AS POSSIBLE BY REESTABLISHING VEGETATIVE GROUND COVER AND AVOIDING BARE SOIL. AREAS ALL AREAS (INCLUDING STOCKPILES) WHERE SITE IMPROVEMENTS ARE NOT EXPECTED TO OCCUR IMMEDIATELY SHALL BE REVEGETATED WITH 100mm OF TOPSOIL AND HYDROSEED.
- EROSION AND SEDIMENT CONTROLS ARE TO BE INSTALLED, INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL GUIDELINE FOR URBAN CONSTRUCTION (DEC. 2008) AND THE INSPECTION GUIDE (2008) PREPARED BY THE GREATER GOLDEN HORSESHOE CONSERVATION AUTHORITIES.



NOTE: MUD MAT TO BE INSTALLED AT THE TEMPORARY CONSTRUCTION ACCESS LOCATION.
MUD MAT DETAIL
N.T.S.

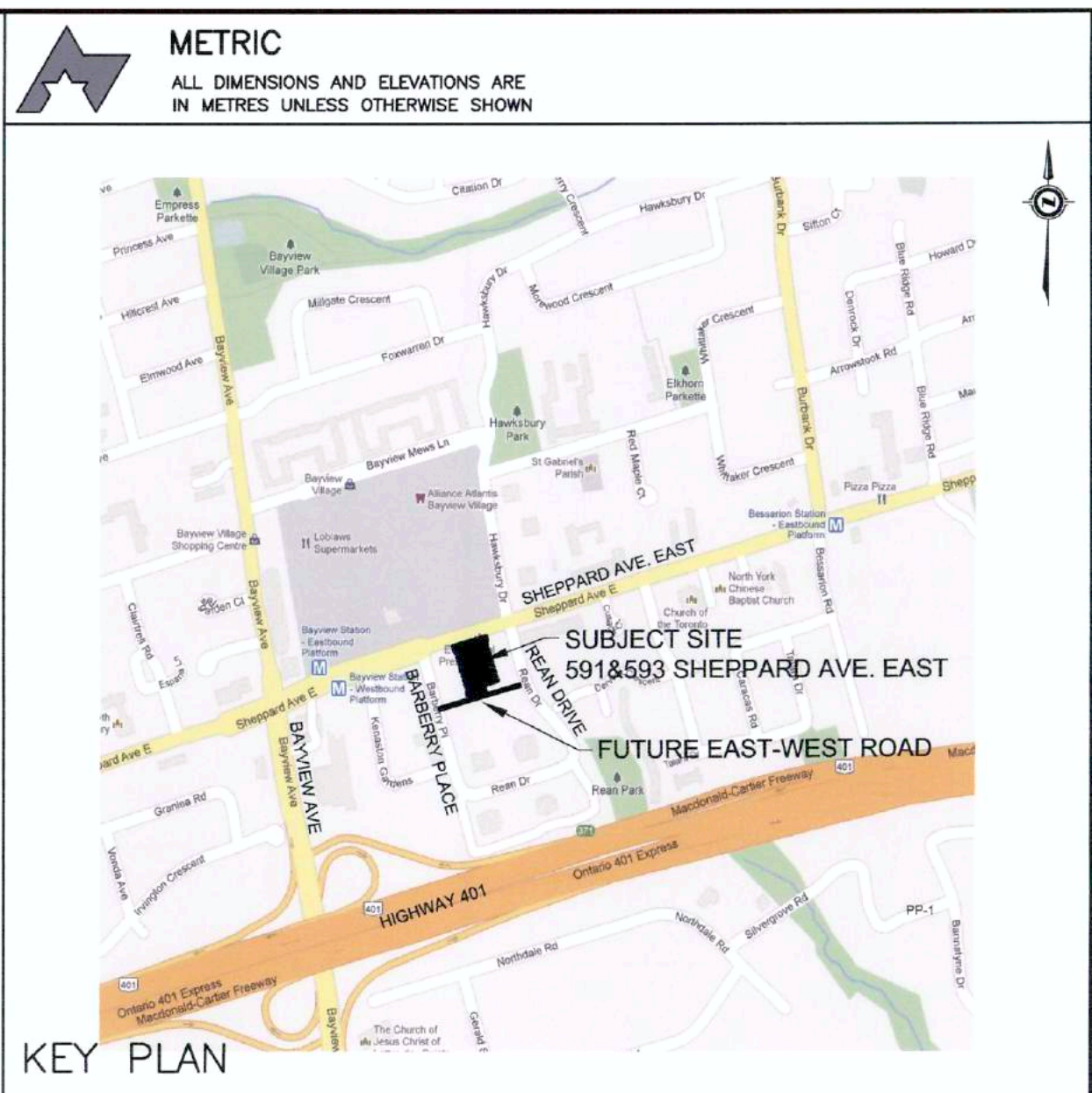
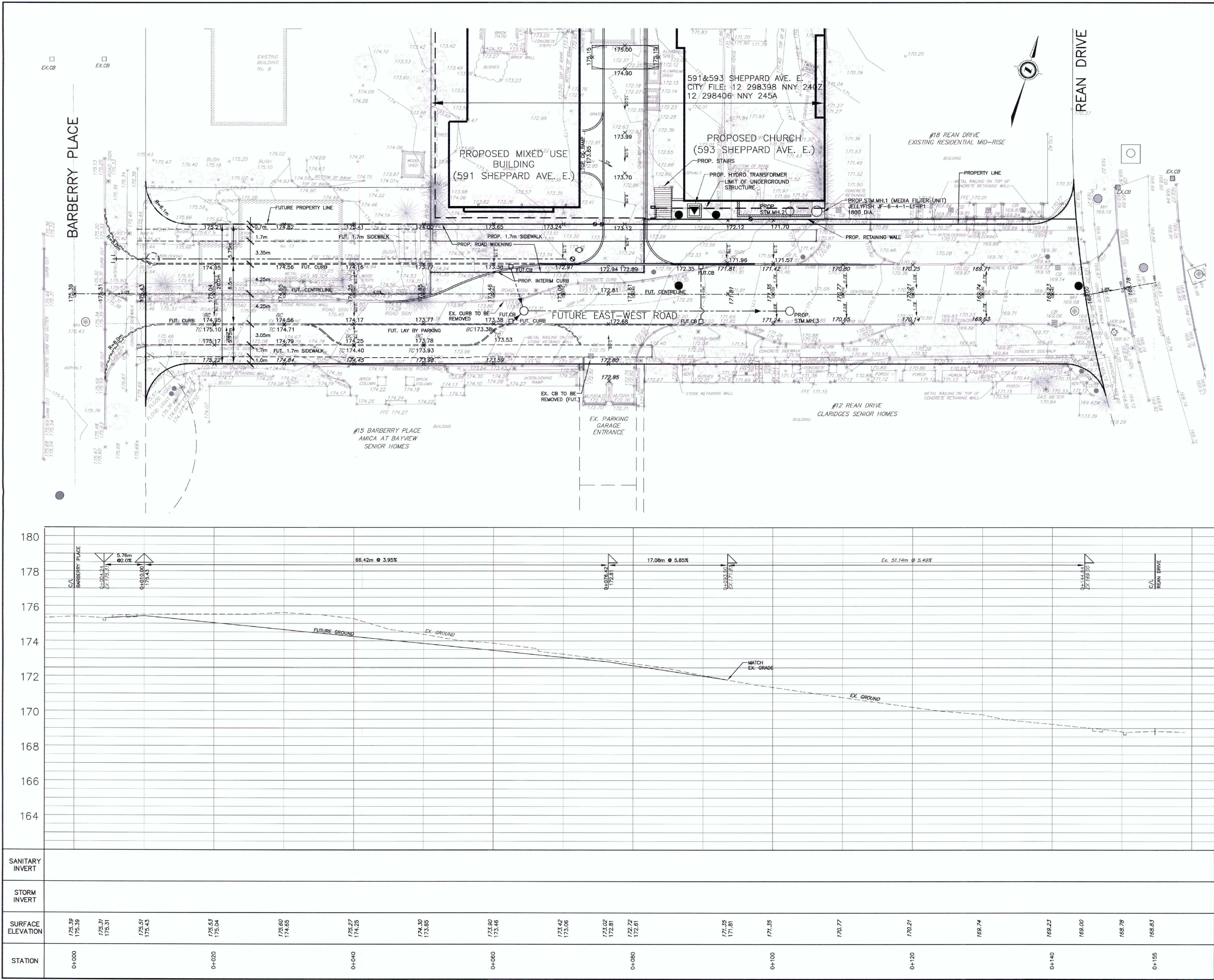


SILT FENCE DETAIL
SCALE N.T.S.
(AS PER CITY STD. T-219.130-1)



STANDARD AREA DRAIN & CATCHBASIN SEDIMENT TRAP
(ON HARD SURFACE)
N.T.S.

NOTE:
REFER TO DWG. GR-1 FOR SITE GRADING PLAN
REFER TO DWG. SS-1 FOR SITE SERVING PLAN
REFER TO DWG. SS-2 FOR NOTES AND DETAILS
REFER TO DWG. FP-1 FOR DETAILS OF GRADING IN FUTURE ROAD
REFER TO DWG. PP-1 FOR DETAILS OF SERVING IN FUTURE ROAD



LEGEND	
⊕ H&V	PROP. FIRE HYDRANT & VALVE
⊗ V&B	PROP. VALVE & BOX
⊗ V&C	PROP. VALVE IN CHAMBER
● MH.1A	PROP. SANITARY MANHOLE
● MH.1	PROP. STORM MANHOLE
⊠ CB	FUT. CATCHBASIN
TC	TOP OF CURB
BC	BOTTOM OF CURB
× 172.14	PROPOSED ELEVATION
× 172.14	EXISTING ELEVATION
—	EXISTING CURB
—	PROPOSED CURB
—	FUTURE CURB
—	LIMIT OF PROPERTY LINE
—	LIMIT OF FUTURE PROPERTY LINE
▽	HYDRO TRANSFORMER

ENVIRONMENTAL COMPLIANCE APPROVALS (MOE)
SANITARY & STORM SEWER APPROVAL No. 1402-A53TEG
WATERMAIN APPROVAL No. ECA-2015-DNY-008, DW-2015-DNY-006

BENCHMARK
TOPOGRAPHIC INFORMATION FROM SURVEY PREPARED BY SCHAEFFER DZALDOV BENNETT LTD., PROJECT No. 11-353-00, DATED DECEMBER 16, 2011.
ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE REFERRED TO CITY OF TORONTO BENCHMARK No. 060049, HAVING A PUBLISHED ELEVATION OF 182.372 METRES.

No.	DATE	REVISIONS	INITIALS	SIGNED
4	NOV. 03/15	AS PER CITY COMMENTS		DG
3	SEP. 09/15	AS PER CITY COMMENTS		DG
2	JUL. 08/15	AS PER CITY COMMENTS		DG
1	MAR. 9/15	ISSUED FOR REVIEW		DG

CONSULTANT:

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D. A. GUODAZ
PROFESSIONAL ENGINEER
NOV 3, 2015
PROVINCE OF ONTARIO

Toronto ENGINEERING AND CONSTRUCTION SERVICES

MANAGER, DEVELOPMENT ENGINEERING
NORTH YORK DISTRICT

DATE: *Jan. 11/16*

DRAWING TITLE: **FUNCTIONAL PLAN
FUTURE EAST-WEST ROAD
591&593 SHEPPARD AVE. EAST**

STATION: 0+000 TO 0+155
CITY FILE: 12 298398 NNY 24 OZ, 12 298406 NNY 24 SA

DESIGN:	H.M.	DRAWN:	H.M./S.K.	CHECKED:	D.G.	CONTRACT No.
SCALE:	HORIZONTAL: 1:250 VERTICAL: 1:100		PROJECT NUMBER:	12138		
DATE:	FEBRUARY 2015		DRAWING NUMBER:	FP-1		

Legislation, Regulation and Codes

- 1
- All work within the City right-of-way shall be constructed according to the latest City of Toronto standard drawings and specifications. Ontario Provincial Standard drawings and specifications may, subject to the approval of the City of Toronto, be used where no City standard or specification is available.
- 2
- All work shall be completed according to the current *Occupational Health and Safety Act* and *Regulations for Construction Projects*. The general contractor shall be deemed to be the constructor as defined in the act.
- 3
- All temporary traffic control and signage during construction shall be according to the current *Ontario Traffic Manual Book 7: Temporary Conditions Field Edition*.

Construction Notes

- 1
- All material for sewer, forcemain, watermain, hydrants and appurtenances, shall be according to City of Toronto material/manufacturer specifications as required by Chapter 6, *Material Specifications* from *Design Criteria for Sewers and Watermains* manual.
- 2
- Utility separation shall be according to Appendix 'D' of the City of Toronto Design Criteria for Sewers and Watermains Manual.
- 3
- Service connections and utility cuts made in road pavements shall be backfilled with unshrinkable fill according to TS 4.60.
- 4
- All areas disturbed during construction within the City's right-of-way shall be restored to original or better condition and to the satisfaction of the contract administrator. Grass areas shall be treated with 100 mm of topsoil and shall be sodded according to TS 5.00 and TS 5.10.
- 5
- All existing utilities shown on drawings (plan and profile) are for reference purposes only. The contractor shall satisfy themselves as to the actual location and depth of any utility and shall be liable for all or any damage.
- 6
- Any discrepancies between site conditions and construction drawings must be reported to the City prior to commencement of construction and appropriate action taken to the satisfaction of the contract administrator.
- 7
- All survey stake layout points shall be verified in the field by the contractor prior to construction. Any discrepancies between the drawings and the layout shall be immediately reported to the City.
- 8
- Attention is directed to the possibility of existing private sprinklers and lighting systems within the right-of-way, which are not shown on the plans. Locating, working around and protecting these systems shall be completed at no extra cost to the City.
- 9
- At all locations where the proposed watermain crosses under or above the existing sewers, or utilities, Granular A bedding material is to extend from the lower pipe to the top of the upper pipe. Granular A to be compacted to minimum 98% of maximum dry density.
- 10
- Contractor to provide adequate support during construction and a minimum of 300 mm vertical clearance between new watermain and existing gas mains. Minimum 600 mm vertical clearance between new watermain and gas mains larger than 300 mm diameter.
- 11
- All existing watermains and sewer pipes larger than 300 mm diameter shall be supported according to drawing T-1007.01-4.
- 12
- All dimensions are expressed in metres (m) and pipe sizes are expressed in millimetres (mm) unless otherwise noted.

Contact Information

- 1
- Prior to commencing any work within the municipal right-of-way, the contractor shall apply for a road occupancy permit from the City's right-of-way management unit district office.
- 2
- All TTC traffic is to be maintained during construction of this watermain, sewer or road. In order to co-ordinate all disruptions in service, contractor to contact Mr. Murray Hill 416-393-3302 at least 48 hours prior to commencing construction.
- 3
- Notify Toronto Water, Water Treatment and Supply at 416-397-0187 or send an e-mail message to trunkwater@toronto.ca two weeks prior to excavation near the <size> mm transmission watermain so that a Toronto Water inspector may be present.
- 4
- During the construction of watermain / services or sewer / laterals close to an existing transmission watermain, contractor to notify Toronto Water at 416-397-0187 at least 48 hours prior to construction.

Original Data Source

- 1
- Topographic information from survey prepared by Schaeffer Dzaldiv Bennett Ltd., project No. 11-353-00, dated December 16, 2011.

Road Reconstruction

- 1
- Reconstruction of driveway entrances shall be according to T-310.050-8.
- 2
- Limits of sidewalk / curb reconstruction are approximate, actual limits are to be confirmed in the field by the contract administrator.
- 3
- Chainage is established from the centreline of construction and gutter grades are calculated along the gutter line.
- 4
- Height of curb faces may vary along length of gutter, as shown on profile, or to be confirmed in the field.
- 5
- Adjust all structures (maintenance holes, catch basins, etc.) to suit new design elevations including breaking down and removal of portion of top of structures to allow for minimum 150 mm adjustments.
- 6
- All curb shall be constructed with a ledge at the back of the curb to facilitate future sidewalk construction.
- 7
- Full depth saw-cuts are required at construction limits of existing curb, sidewalk and pavement unless otherwise shown.
- 8
- Saw cut existing pavement, sidewalk, curb, gutter, driveways, walkways, etc. at construction limits to provide a clean joint for the proposed work.
- 9
- Construct pedestrian sidewalk ramps with tactile walking surface indicators according to T-310.030-7, T-310.030-8, T-310.030-9, T-310.030-10 and T-310.030-11.
- 10
- Existing entrance ramps to be re-instated. Vehicular sidewalk ramp shall be according to T-310.050-1.
- 11
- Adjustment of approaches, walkways, and steps may be required. Limits are to be determined in the field by the contract administrator.
- 12
- Existing asphalt thickness may vary, taper to match existing at construction limits (minimum 2.0 m).
- 13
- Filter fabric to be placed under grates on all catchbasins to trap sediment. Silt traps are to be cleaned regularly and are not to be removed until such time as the curbs are constructed and the boulevards are sodded or backyards graded and sodded. Filter fabric for silt control to be Terra Fix 270R or approved equivalent.

Watermains

- 1
- PVC watermains shall be minimum DR 18 Class 235 (AWWA) C900-07.
- 2
- Embedment material for flexible pipe shall be according to OPSD 802.010 and using granular A according to TS 1010 and compacted to minimum 98% of maximum dry density.
- 3
- Minimum cover on watermains shall be 1.8 m.
- 4
- All hydrants shall be constructed according to T-1105.01.
- 5
- Hydrant leads shall be minimum DR 18 Class 235 (AWWA) C900-07.
- 6
- All service connections shall be constructed according to T-1104.01, T-1104.02-1, T-1104.02-3, T-1105.02-1 and T-1105.02-2.
- 7
- Single water service connections shall be a minimum of 19 mm dia. Type "K" soft copper according to T-1104.01. When service length exceeds 30 m, the diameter shall be 25 mm dia.
- 8
- All curb and valve boxes to be located at street line.
- 9
- Mechanical thrust restraints shall be installed at all fittings, bends, tees, crosses, reducers and valves for all watermain sizes. Mechanical restraints at joints shall be installed at every pipe joint 6.1 m of either side of the valve for watermains 100 mm diameter or larger.
- 10
- All tees, plugs, horizontal, vertical bends, reducers and hydrants to have concrete thrust blocks according to T-1103.01 and T-1103.020.
- 11
- Watermains must follow the Ontario Ministry of the Environment procedure F-6-1 that govern the separation of sewers and watermains. A minimum vertical clearance of 0.30 m when crossing over and 0.5 m when crossing under sewers and all other utilities is required. Must also maintain 2.5 m horizontal separation with sewers.
- 12
- All valves less than 400 mm will be in a valve and box according to T-1101.02-2. All valves 400 mm and larger shall be in a chamber.
- 13
- Sacrificial anodes shall be installed on all metallic pipes and appurtenances, water services and fittings according to T-1106.04, T-1106.05, T-1106.06 and TS 7.22.
- 14
- Tracer wire installation shall be according to TS 7.40.
- 15
- Hydrostatic pressure test and leakage testing of the watermain shall be according to TS 441.
- 16
- The new watermain shall be isolated according to T-1104.03-3 or T-1104.03-4 until bacteriological tests are satisfactorily completed.
- 17
- Provisions for flushing the water main prior to testing and so forth must be provided with at least a 50 mm outlet on 100 mm and larger lines according to T-1104.03-1. Copper water services shall have flushing points at the end, the same size as the line. On fire lines, flushing outlet to be 50 mm diameter minimum or a hydrant.
- 18
- Disinfection of the watermain shall be according to TS 7.30 and shall include all new water services 100 mm dia and larger.
- 19
- Toronto Water requires that the new distribution system remain isolated until satisfactory bacteriological sample results are received. EOS Contract Administrator shall notify Toronto Water when sample results have passed in order to proceed with removal of the blow-off and back filling of the access pit.
- 20
- After satisfactory disinfection of the new watermain is achieved, permanent connections to the existing watermain(s) with a filler piece shall be made according to TS 7.70.
- 21
- City in-service water valves, curb stops, fire hydrants can only be operated by Toronto Water staff.
- 22
- All new watermains shall be insulated where the cover is less than 1.65 m according to T-708.01-4.
- 23
- The contractor shall connect or reconnect all stray current drainage cables connected to the TTC electrified rail system encountered during watermain construction.
- 24
- All polyvinyl chloride (PVC) pipes, ranging in size from 100mm through 300mm in diameter, shall be class 235, DR 18 and manufactured in accordance with AWWA C900-07 and to CSA B137.3-05 and shall have cast iron outside diameter dimensions. All PVC pipe larger than 350mm through 600mm in diameter, shall be pressure rating 235, DR 18 and manufactured in accordance with AWWA C905-10 standard and CSA B137.3-05 and shall have cast iron outside diameter dimensions.

Watermain - Fill Areas

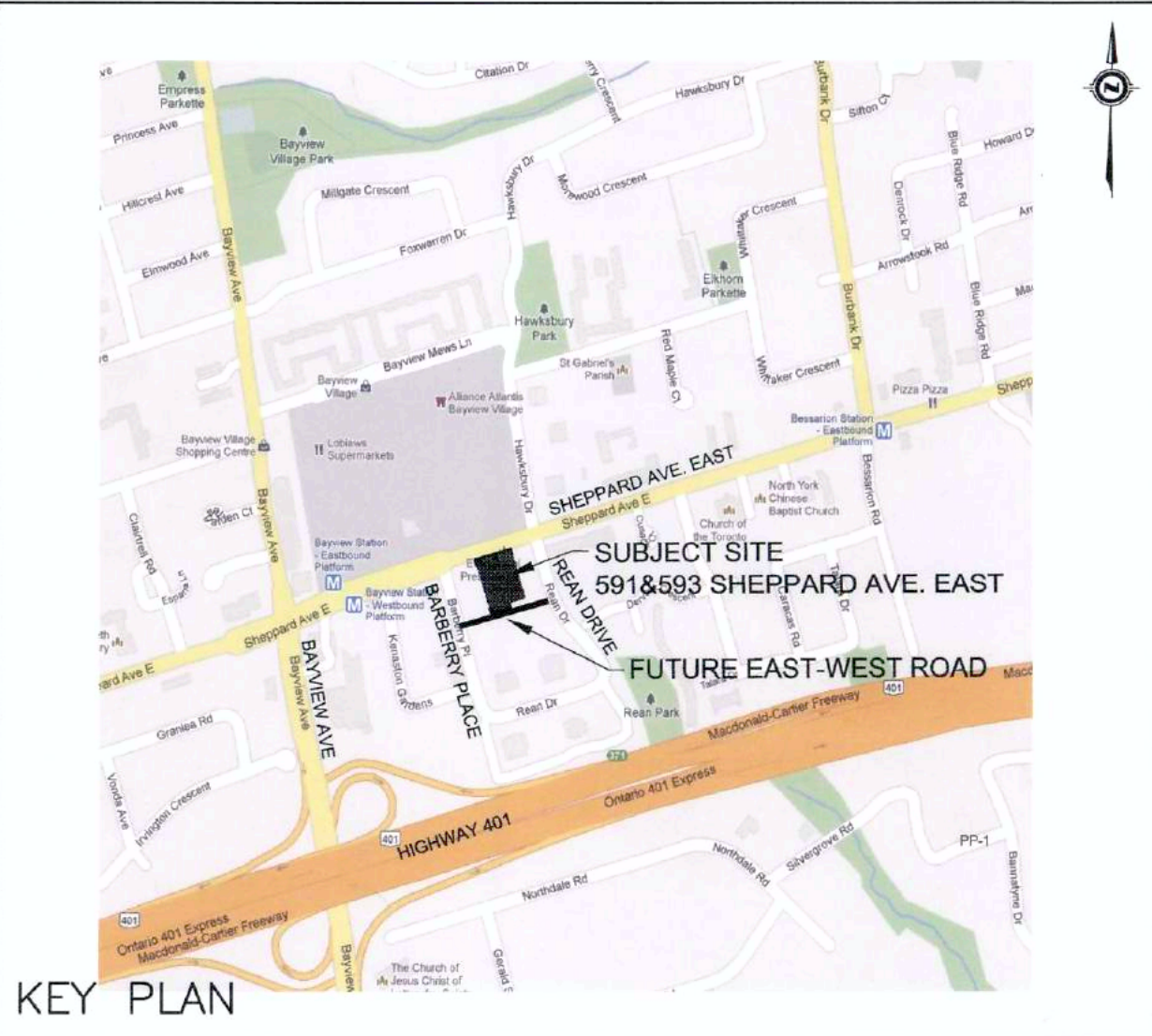
- 1
- Pipes are not to be laid on fill until the field density test reports have been submitted and approved by the engineer.
- 2
- Fill to be placed to a minimum of 600 mm above the watermain grades and to 3 m minimum on each side prior to watermain laying compacted to a minimum of 100 % of maximum dry density in 300 mm lifts.
- 3
- Soil density tests shall be taken along centreline of the watermain and on lines 1.5 m on either side of same at a maximum interval of 30 m. Tests to be taken at each 600 mm lift.
- 4
- All hydrants, tees, valves, bends, plugs and each pipe joint are to be mechanically restrained.
- 5
- Pipe joint deflections are not allowed.

Erosion and Sediment Control

- 1
- Erosion and Sediment Control (ESC) measures will be implemented prior to, and maintained during construction phases, to prevent entry of sediment into the water. All damaged erosion and sediment control measures should be repaired or replaced within 48 hours of inspection or both.
- 2
- All disturbed areas will be minimized to the extent possible, and temporarily or permanently stabilized or restored as the work progresses.
- 3
- The erosion and sediment control strategies outlined on the plans are not static and may need to be upgraded/amended as site conditions change to minimize sediment laden runoff from leaving the work area. If the prescribed measures on the plans are not effective in preventing the release of a deleterious substance, then alternative measures must be implemented immediately to minimize potential ecological impacts and a Toronto Region Conservation Authority enforcement office should be immediately contacted. Additional ESC measures to be kept on site and used as necessary.
- 4
- All activities, including maintenance procedures, will be controlled to prevent the entry of petroleum products, debris, rubble, concrete or other deleterious substances into the water. vehicular refueling and maintenance and refueling will be conducted a minimum of 30 m from the water.
- 5
- All grades within the regulatory flood plan will be maintained or matched.

Sanitary and Storm Sewers

- 1
- Main line PVC pipe shall be DR 35.
- 2
- Sanitary service connections shall be single, 150 mm diameter minimum, PVC DR 28 installed at 2 percent and the colour shall be green, for single residential dwellings.
- 3
- Embedment material for flexible pipe shall be according to OPSD 802.010 and using granular A according to TS 1010 and compacted to minimum 98% of maximum dry density.
- 4
- Bedding for rigid pipe shall be Class B bedding material according to OPSD 802.031 and using Granular A bedding material according to TS 1010 and compacted to minimum 98 % of maximum dry density.
- 5
- Ultra-rib pipe is not permitted within the municipal right-of-way.
- 6
- Maintenance holes shall be according to T-701.010 (1200 mm), T-701.011 (1500 mm), T-701.012-1 (1800 mm) or T-701.013 (2400 mm). Frame and cover shall be according to OPSD 401.010 Type A closed (sanitary) Type B open (storm).
- 7
- Maintenance hole chamber openings must be located on the upstream side of the maintenance hole.
- 8
- Benching details shall be according to T-701.021 or as shown on the drawings.
- 9
- Drop structures shall be according to T-1003.01 (external) and T-1003.01-2 (internal).
- 10
- Sanitary maintenance holes shall have watertight frames and covers in ponding areas according to OPSD 401.030.
- 11
- Reinforced concrete pipe shall be minimum 65-D. Height of fill to be verified using OPSD tables 807.010 and 807.030.
- 12
- Non-reinforced concrete pipe 150 mm to 250 mm shall be Class 3. Height of fill to be verified using OPSD table 807.040.
- 13
- Single catchbasins shall be according to T-705.010 complete with goss trap, where specified. Frame and cover shall be according to OPSD 400.070.
- 14
- Double catchbasins shall be according to T-705.020 complete with goss trap, where specified.
- 15
- Catchbasin leads to be 250 mm PVC DR 35 for single catchbasins and 300 mm PVC DR 35 for double catchbasins.
- 16
- Connection detail for sewer pipe at catchbasins and maintenance holes shall be according to T-708.020.
- 17
- Sewer to be insulated as per sewer insulation detail where cover between proposed finish grade and obvert is less than 1.65m.



ENVIRONMENTAL COMPLIANCE APPROVALS (MOE)

SANITARY & STORM SEWER APPROVAL No. 1402-A53TEG
WATERMAIN APPROVAL No. ECA-2015-DNY-008, DW-2015-DNY-006

BENCHMARK

TOPOGRAPHIC INFORMATION FROM SURVEY PREPARED BY SCHAEFFER DZALDOV BENNETT LTD., PROJECT No. 11-353-00, DATED DECEMBER 16, 2011.

ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE REFERRED TO CITY OF TORONTO BENCHMARK No. 060049, HAVING A PUBLISHED ELEVATION OF 182.372 METRES.

1	NOV.03, 2015	AS PER CITY COMMENTS			D.G.

CONSULTANT:



VALDOR ENGINEERING INC.
Consulting Engineers - Project Managers
741 ROWNTREE DAIRY ROAD, UNIT 2, WOODBRIDGE, ONTARIO, L4L 5Y9
TEL (905)264-0054, FAX (905)264-0049
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www.valdor-engineering.com



ENGINEERING AND CONSTRUCTION SERVICES

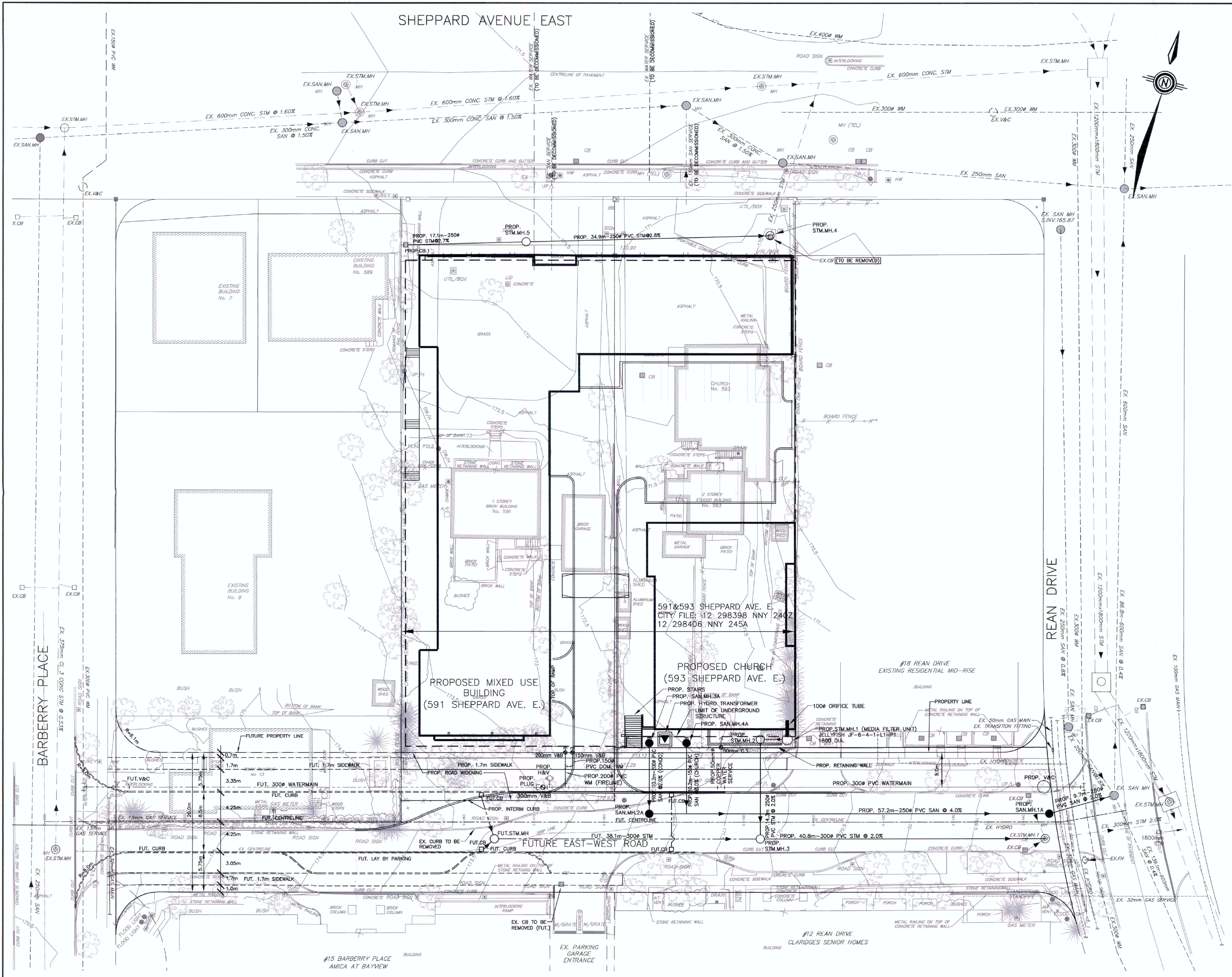


MANAGER, DEVELOPMENT ENGINEERING
NORTH YORK DISTRICT

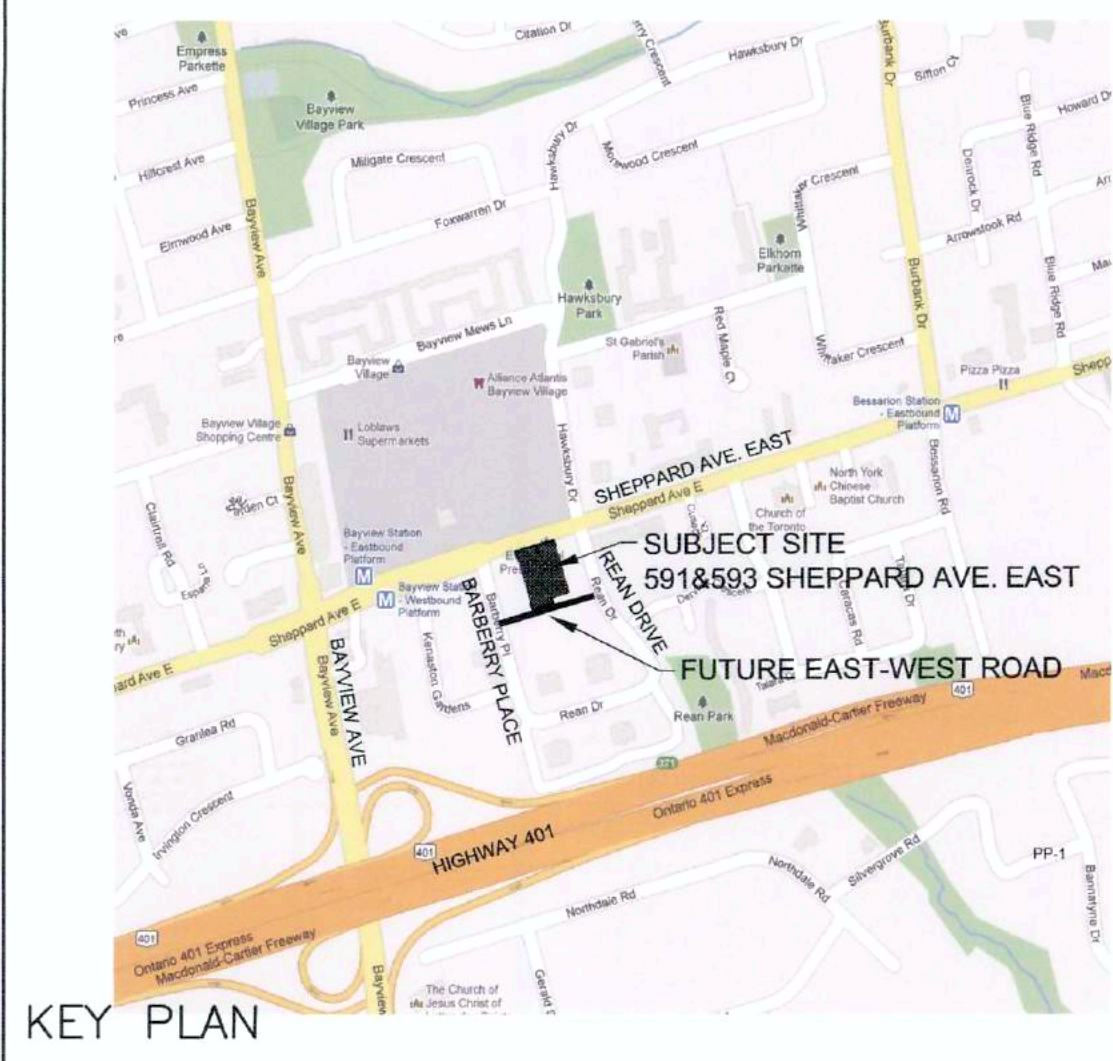
DATE: Jan 11/16

DRAWING TITLE: GENERAL NOTES
FUTURE EAST-WEST ROAD
591&593 SHEPPARD AVE. EAST
CITY FILE: 12 298398 NNY 24 02, 12 298406 NNY 24 5A

DESIGN:	S.K.	DRAWN:	S.K.	CHECKED:	D.G.	CONTRACT No.
SCALE:				PROJECT NUMBER:	12138	DRAWING NUMBER: GN-1
DATE:	JULY 2015					



METRIC
ALL DIMENSIONS AND ELEVATIONS ARE
IN METRES UNLESS OTHERWISE SHOWN



LEGEND

- ⬮ H&V PROP. FIRE HYDRANT & VALVE
- ⬮ V&B PROP. VALVE & BOX
- ⬮ V&C PROP. VALVE IN CHAMBER
- ⬮ MH.1A PROP. SANITARY MANHOLE
- ⬮ MH.1 PROP. STORM MANHOLE
- ⬮ CB FUT. CATCHBASIN
- ⬮ TC TOP OF CURB
- ⬮ BC BOTTOM OF CURB
- ⬮ x172.14 PROPOSED ELEVATION
- ⬮ x172.14 EXISTING ELEVATION
- ⬮ EXISTING CURB
- ⬮ PROPOSED CURB
- ⬮ FUTURE CURB
- ⬮ LIMIT OF PROPERTY LINE
- ⬮ LIMIT OF FUTURE PROPERTY LINE
- ⬮ HYDRO TRANSFORMER

ENVIRONMENTAL COMPLIANCE APPROVALS (MOE)
SANITARY & STORM SEWER APPROVAL No. 1402-A53TEG
WATERMAIN APPROVAL No. ECA-2015-DNY-008, DW-2015-DNY-006

BENCHMARK
TOPOGRAPHIC INFORMATION FROM SURVEY PREPARED BY SCHAEFFER
DZALDOV BENNETT LTD., PROJECT No. 11-353-00, DATED DECEMBER
16, 2011.

ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE REFERRED TO
CITY OF TORONTO BENCHMARK No. 060049, HAVING A PUBLISHED
ELEVATION OF 182.372 METRES.

No.	DATE	AS PER CITY COMMENTS	REVISIONS	INITIALS	SIGNED
1	NOV.03, 2015	AS PER CITY COMMENTS			D.G.

CONSULTANT:
**VALDOR ENGINEERING INC.**
Consulting Engineers - Project Managers
741 ROWNTREE DRIVE, UNIT 2, WOODBRIDGE, ONTARIO, L4L 5P7
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E-MAIL: info@valdor-engineering.com
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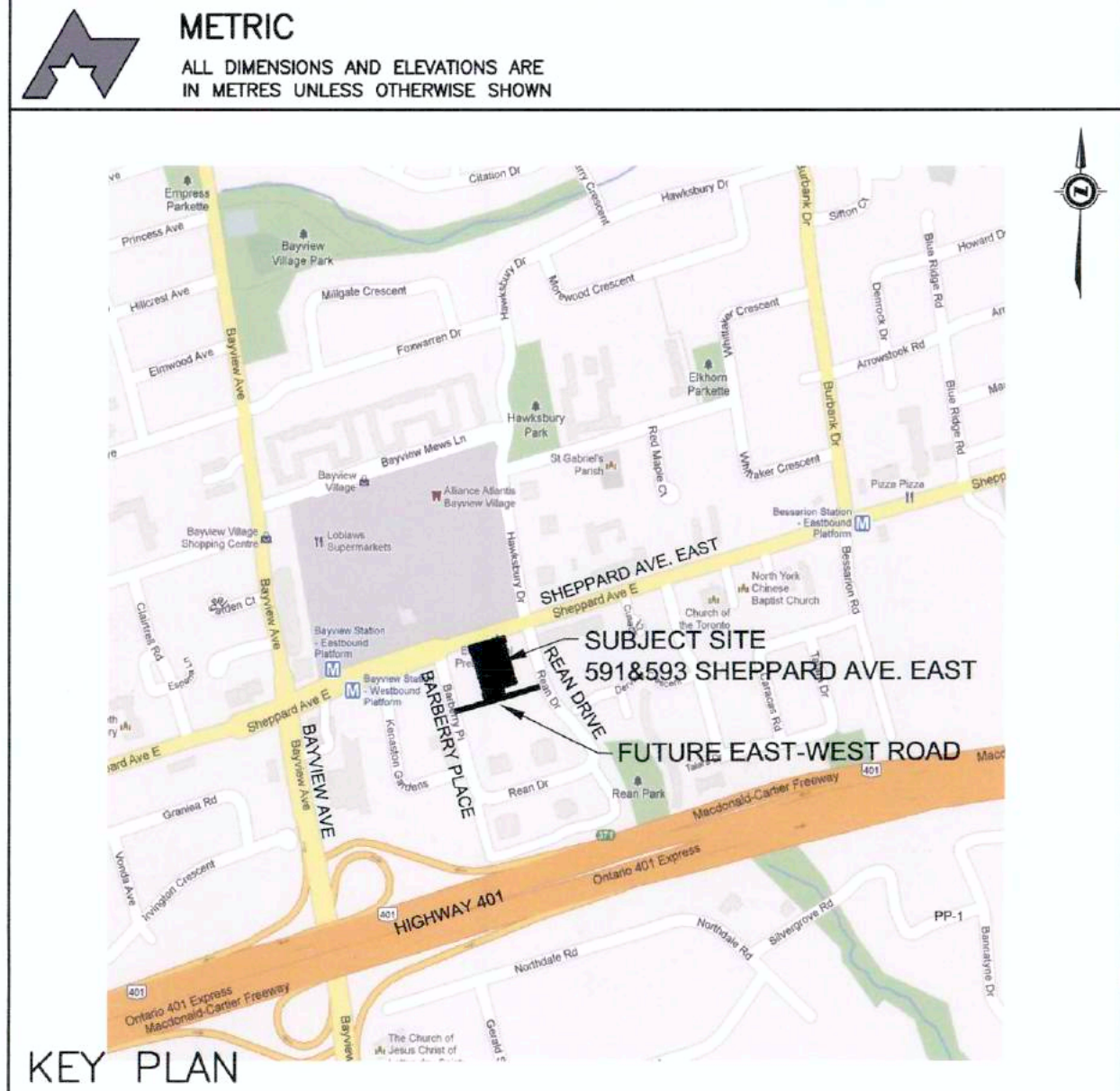
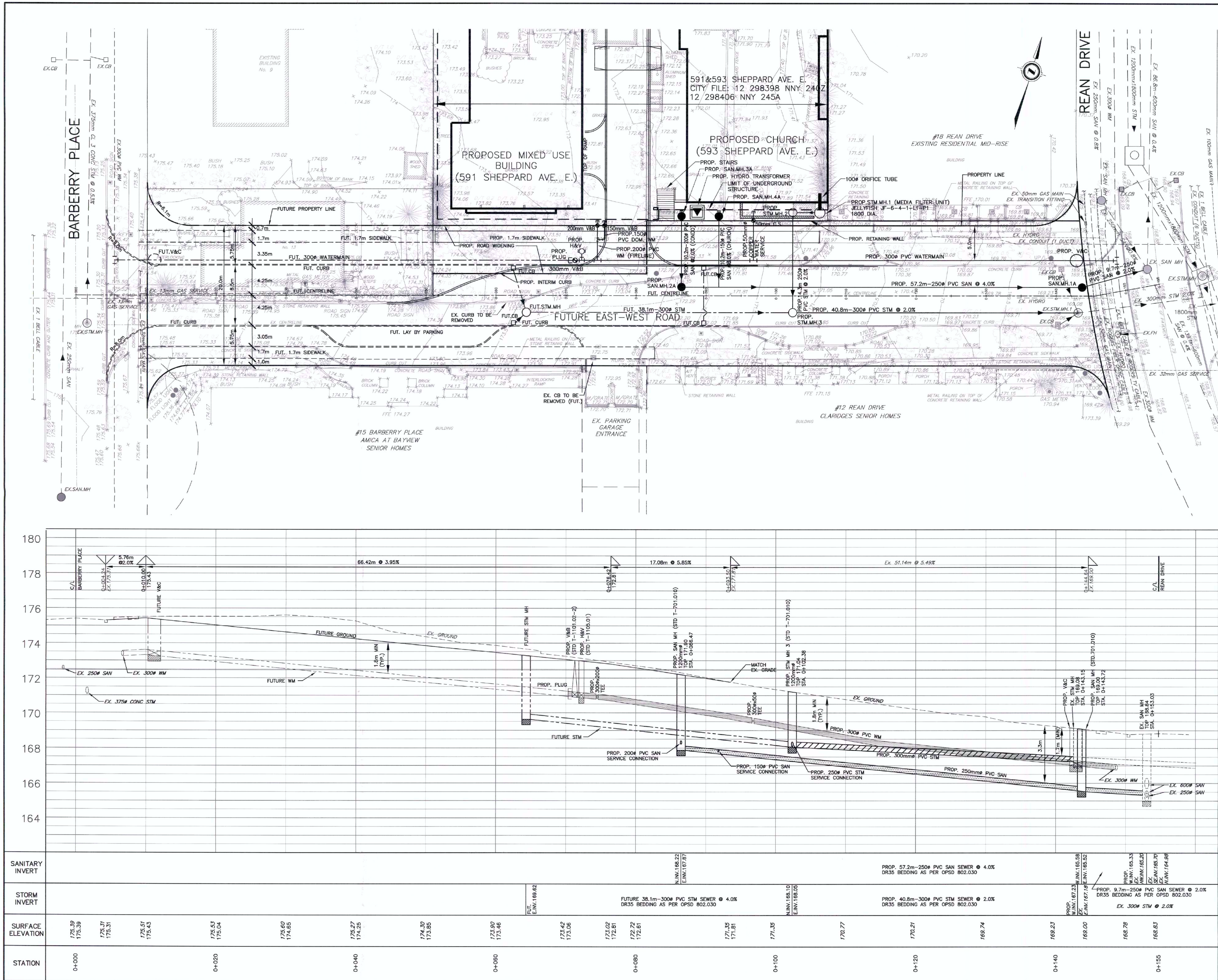


 **ENGINEERING AND
CONSTRUCTION SERVICES**

MANAGER, DEVELOPMENT ENGINEERING
NORTH YORK DISTRICT
DATE: Jan 11/16

DRAWING TITLE:
**GENERAL PLAN
FUTURE EAST-WEST ROAD
591&593 SHEPPARD AVE. EAST**
CITY FILE: 12 298398 NNY 24 02, 12 298406 NNY 24 SA

DESIGN:	S.K.	DRAWN:	S.K.	CHECKED:	D.G.	CONTRACT No.
SCALE:	1:250	PROJECT NUMBER:	12138	DRAWING NUMBER:	GP-1	
DATE:	JULY 2015					



LEGEND	
⊕ H&V	PROP. FIRE HYDRANT & VALVE
⊕ V&B	PROP. VALVE & BOX
⊕ V&C	PROP. VALVE IN CHAMBER
● MH.1A	PROP. SANITARY MANHOLE
● MH.1	PROP. STORM MANHOLE
⊕ CB	FUT. CATCHBASIN
TC	TOP OF CURB
BC	BOTTOM OF CURB
× 172.14	PROPOSED ELEVATION
× 172.14	EXISTING ELEVATION
---	EXISTING CURB
---	PROPOSED CURB
---	FUTURE CURB
---	LIMIT OF PROPERTY LINE
---	LIMIT OF FUTURE PROPERTY LINE
⊕	HYDRO TRANSFORMER

ENVIRONMENTAL COMPLIANCE APPROVALS (MOE)
SANITARY & STORM SEWER APPROVAL No. 1402-A53TEG
WATERMAIN APPROVAL No. ECA-2015-DNY-008, DW-2015-DNY-006

BENCHMARK
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No.	DATE	REVISIONS	INITIALS	SIGNED
4	NOV. 03/15	AS PER CITY COMMENTS		DG
3	SEP. 09/15	AS PER CITY COMMENTS		DG
2	JUL. 08/15	AS PER CITY COMMENTS		DG
1	MAR. 9/15	ISSUED FOR REVIEW		DG

CONSULTANT:

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D. A. GUOZAR
PROFESSIONAL ENGINEER
NOV 3, 2015
PROVINCE OF ONTARIO

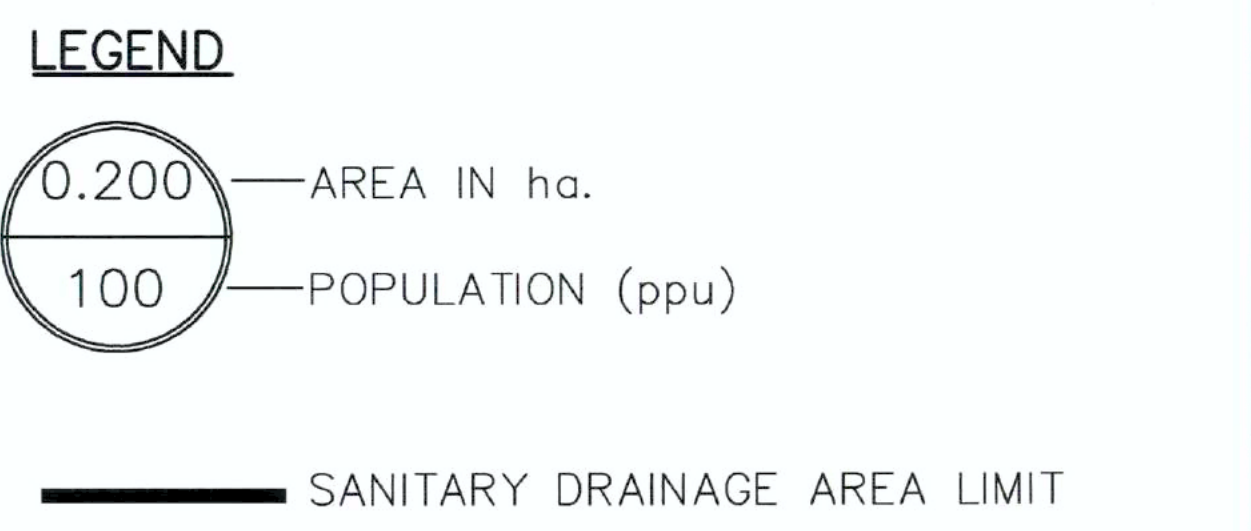
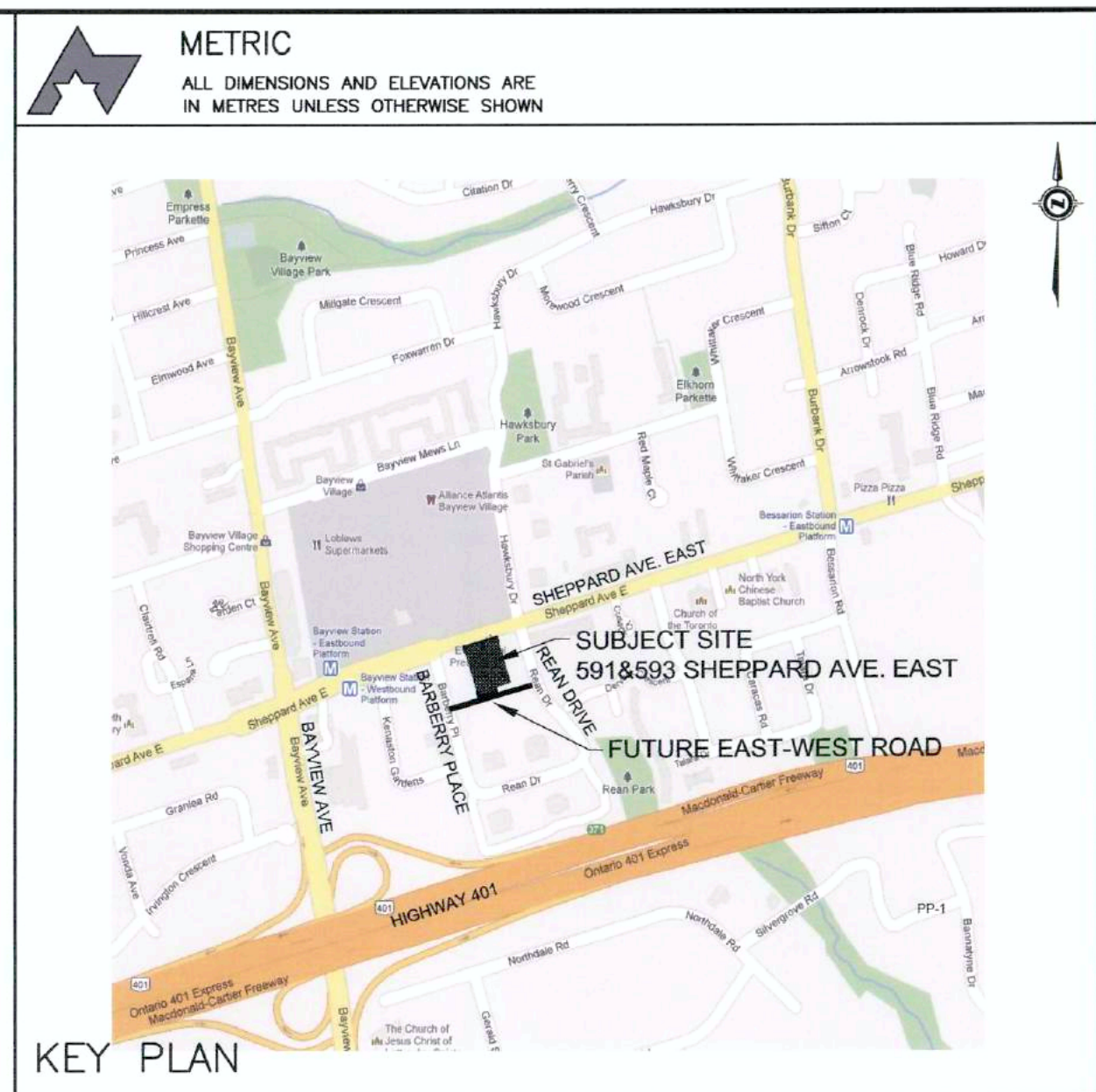
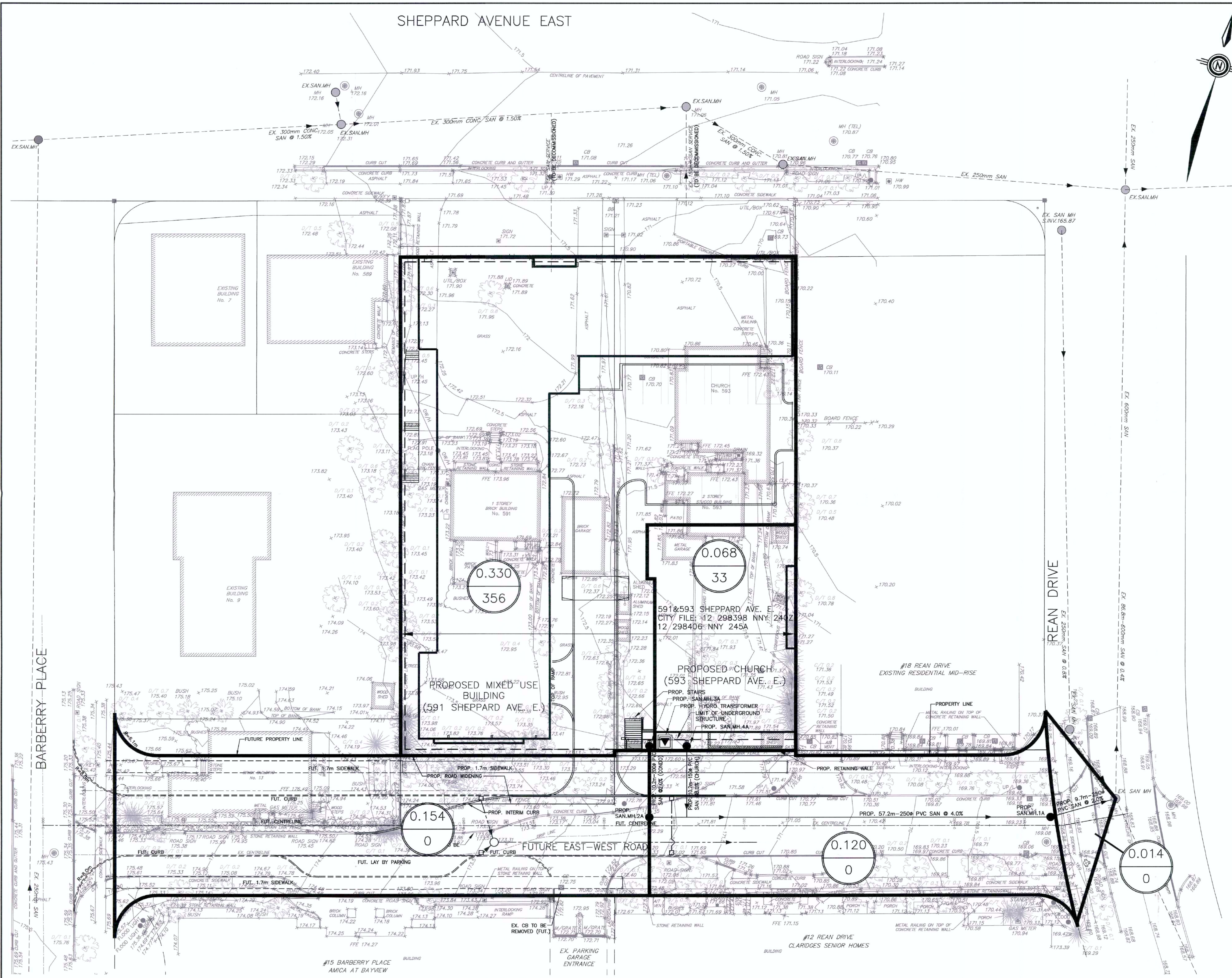
Toronto ENGINEERING AND CONSTRUCTION SERVICES

MANAGER, DEVELOPMENT ENGINEERING
NORTH YORK DISTRICT

DATE: Jan 11/16

DRAWING TITLE: **PLAN & PROFILE
FUTURE EAST-WEST ROAD
591&593 SHEPPARD AVE. EAST**
STATION: 0+000 TO 0+155
CITY FILE: 12 298398 NNY 24 0Z, 12 298406 NNY 24 5A

DESIGN:	H.M.	DRAWN:	H.M./S.K.	CHECKED:	D.G.	CONTRACT No.
SCALE:	HORIZONTAL: 1:250 VERTICAL: 1:100		PROJECT NUMBER:	12138		
DATE:	FEBRUARY 2015		DRAWING NUMBER:	PP-1		



ENVIRONMENTAL COMPLIANCE APPROVALS (MOE)
SANITARY & STORM SEWER APPROVAL No. 1402-A53TEG
WATERMAIN APPROVAL No. ECA-2015-DNY-008, DW-2015-DNY-006

BENCHMARK
TOPOGRAPHIC INFORMATION FROM SURVEY PREPARED BY SCHAEFFER DZALDOV BENNETT LTD., PROJECT No. 11-353-00, DATED DECEMBER 16, 2011.

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No.	DATE	AS PER CITY COMMENTS	REVISIONS	D.G.
1	NOV.03, 2015	AS PER CITY COMMENTS		

CONSULTANT:

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Consulting Engineers - Project Managers
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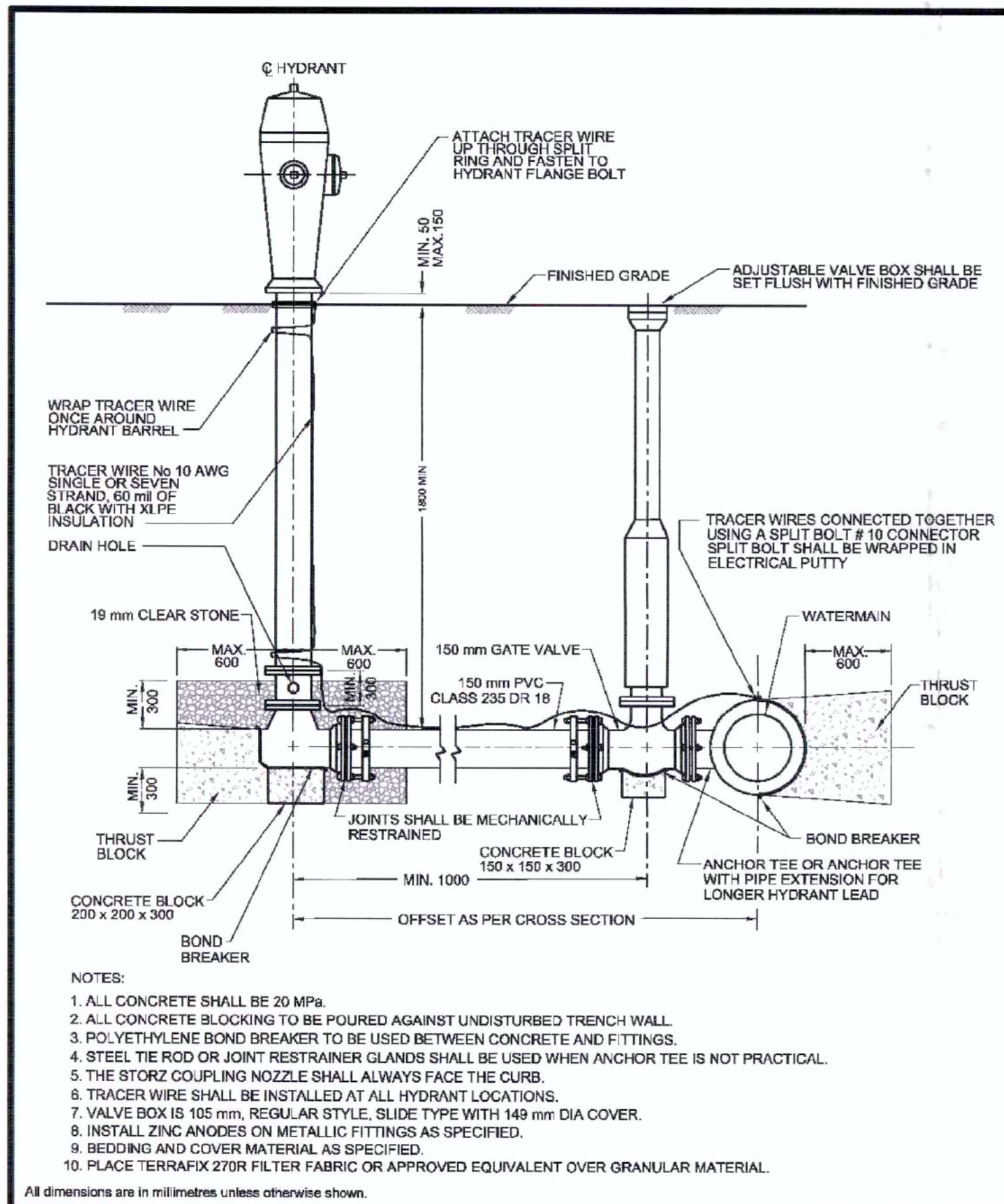
PROFESSIONAL ENGINEER
D. A. GUGOZ
NOV.3, 2015
PROVINCE OF ONTARIO

Toronto ENGINEERING AND CONSTRUCTION SERVICES

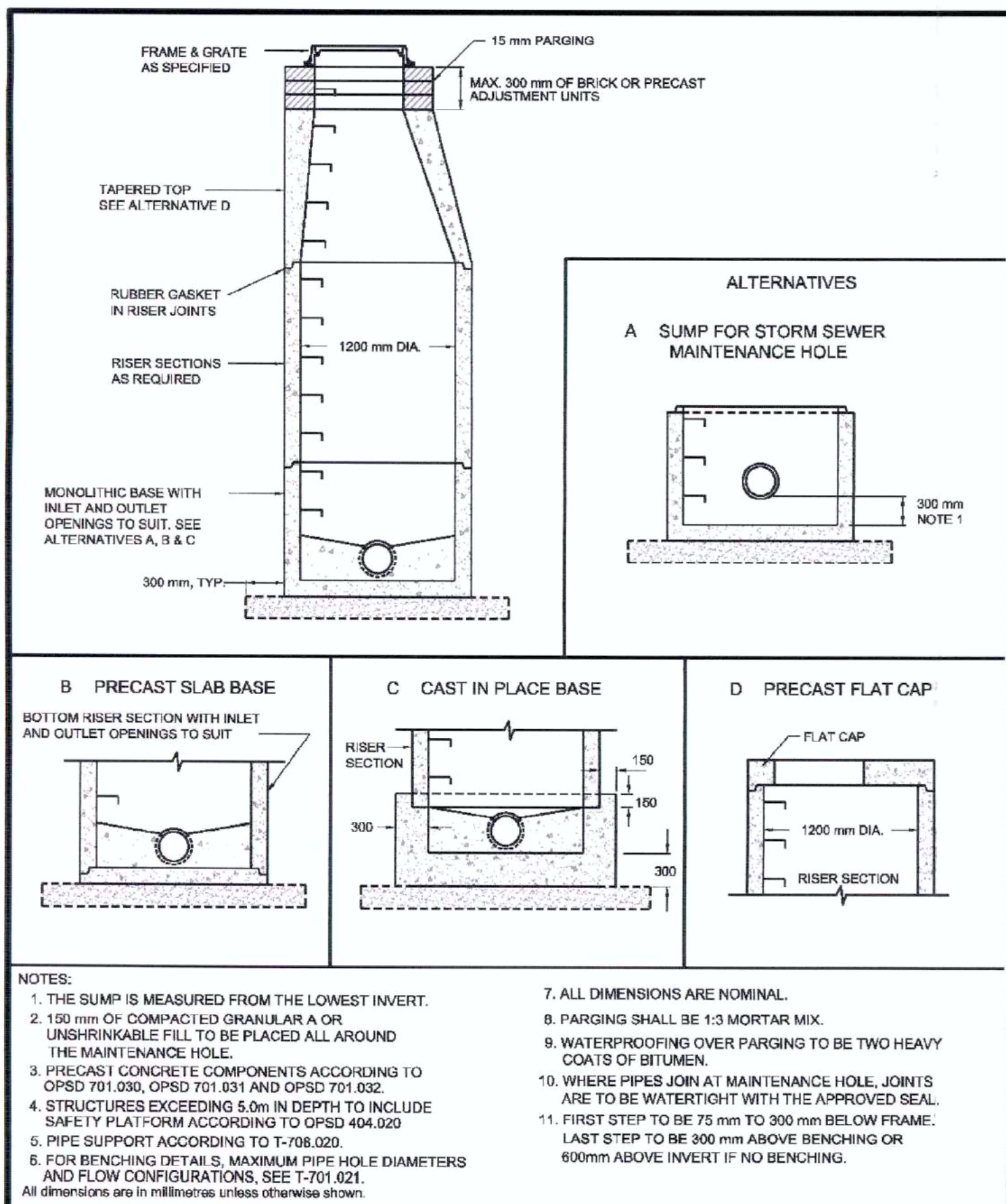
MANAGER, DEVELOPMENT ENGINEERING
NORTH YORK DISTRICT

DATE: Jan 11/16

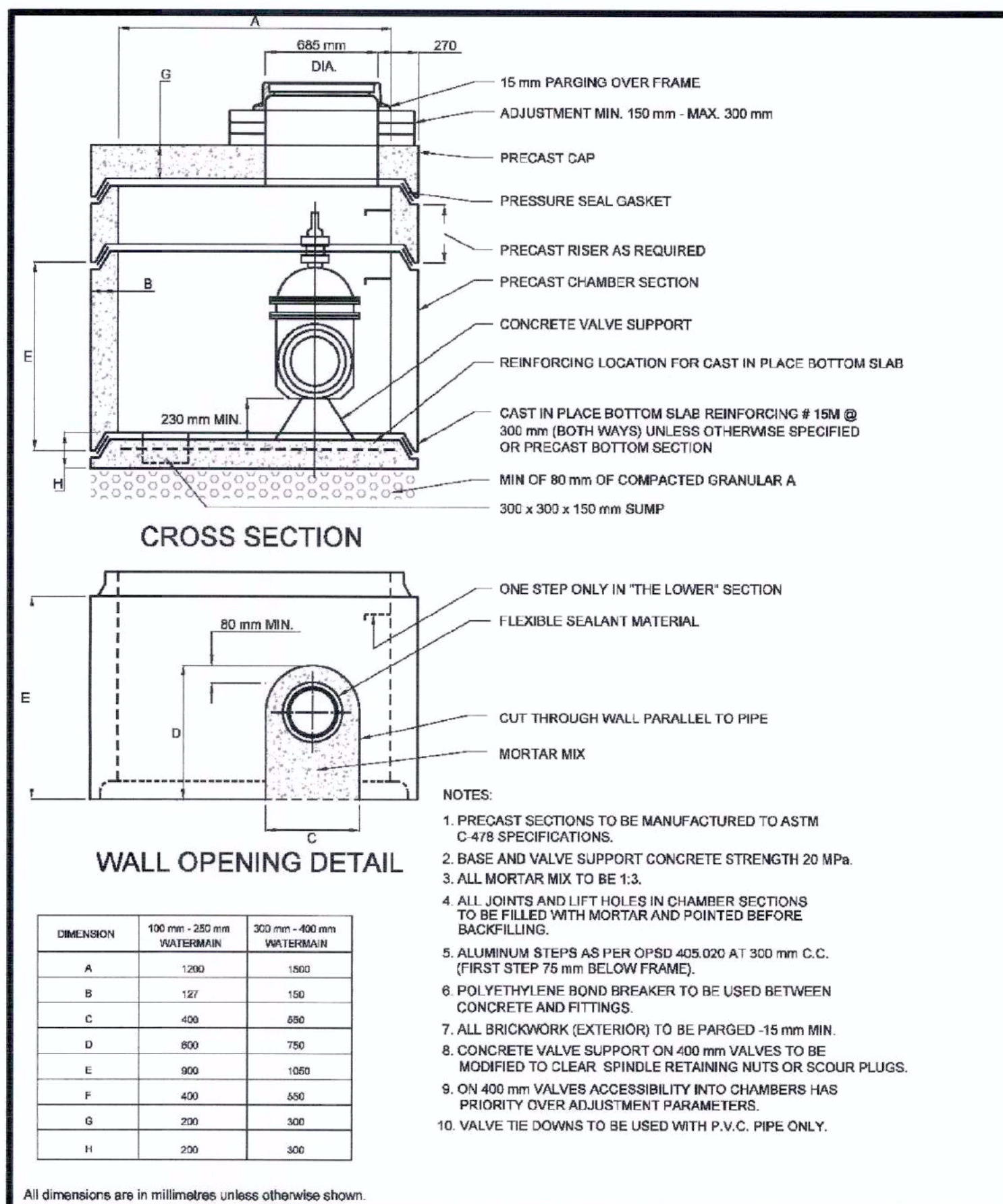
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DESIGN:	S.K.	DRAWN:	S.K.	CHECKED:	D.G.
SCALE:	1:250		PROJECT NUMBER:	12138	
DATE:	JULY 2015		DRAWING NUMBER:	SAN-1	



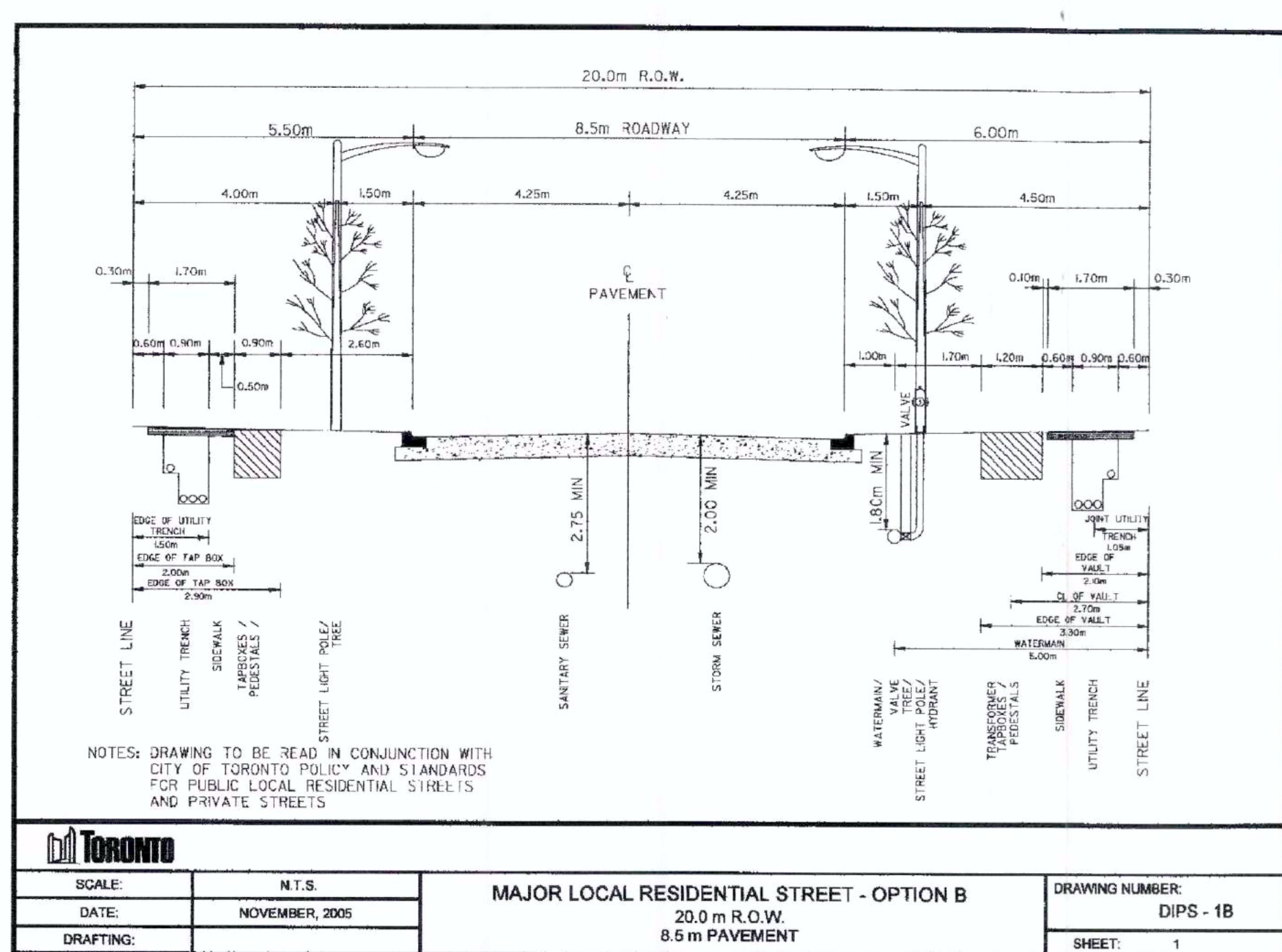
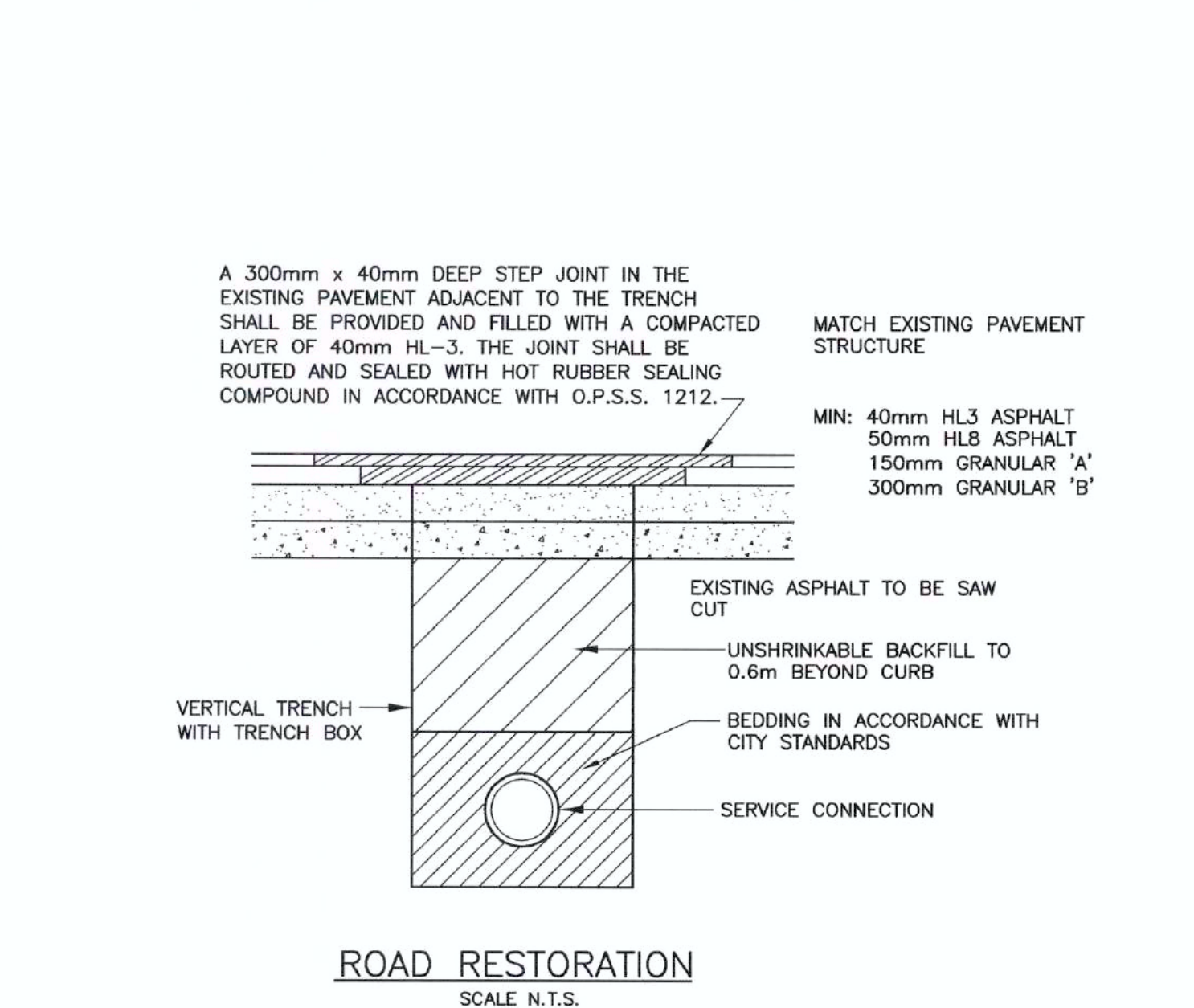
	ENGINEERING AND CONSTRUCTION SERVICES STANDARD DRAWING		REV 1	APR 2013
	HYDRANT SET WITH MECHANICALLY RESTRAINED JOINTS		T-1105.01	
			NTS	SHEET 1



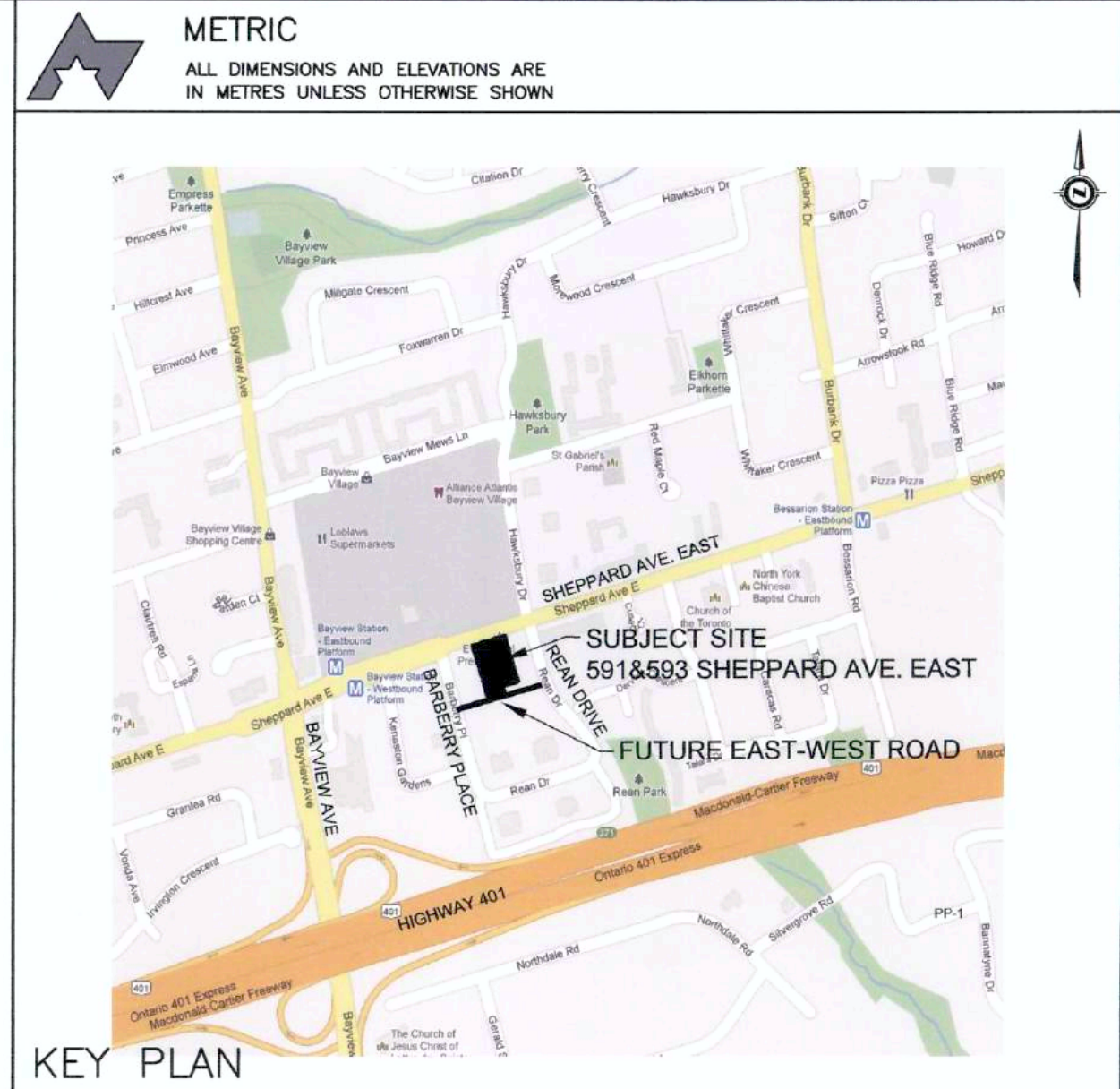
	ENGINEERING AND CONSTRUCTION SERVICES STANDARD DRAWING		REV 3	APR 2014
	PRECAST MAINTENANCE HOLE 1200 mm DIAMETER		T-701.010	
			NTS	SHEET 1



	ENGINEERING AND CONSTRUCTION SERVICES STANDARD DRAWING		REV 2	APR 2014
	CIRCULAR PRECAST VALVE CHAMBER 400 mm DIAMETER WATERMAINS AND SMALLER		T-1101.010	
			NTS	SHEET 1



SCALE:	N.T.S.	MAJOR LOCAL RESIDENTIAL STREET - OPTION B	DRAWING NUMBER:
DATE:	NOVEMBER, 2005	20.0 m R.O.W. 8.5 m PAVEMENT	DIPS - 1B
DRAFTING:			SHEET: 1



ENVIRONMENTAL COMPLIANCE APPROVALS (MOE)
 SANITARY & STORM SEWER APPROVAL No. 1402-A53TEG
 WATERMAIN APPROVAL No. ECA-2015-DNY-008, DW-2015-DNY-006

BENCHMARK
 TOPOGRAPHIC INFORMATION FROM SURVEY PREPARED BY SCHAEFFER DZALDOV BENNETT LTD., PROJECT No. 11-353-00, DATED DECEMBER 16, 2011.

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1	NOV.03, 2015	AS PER CITY COMMENTS	D.G.
No.	DATE	REVISIONS	INITIALS
			SIGNED

CONSULTANT:

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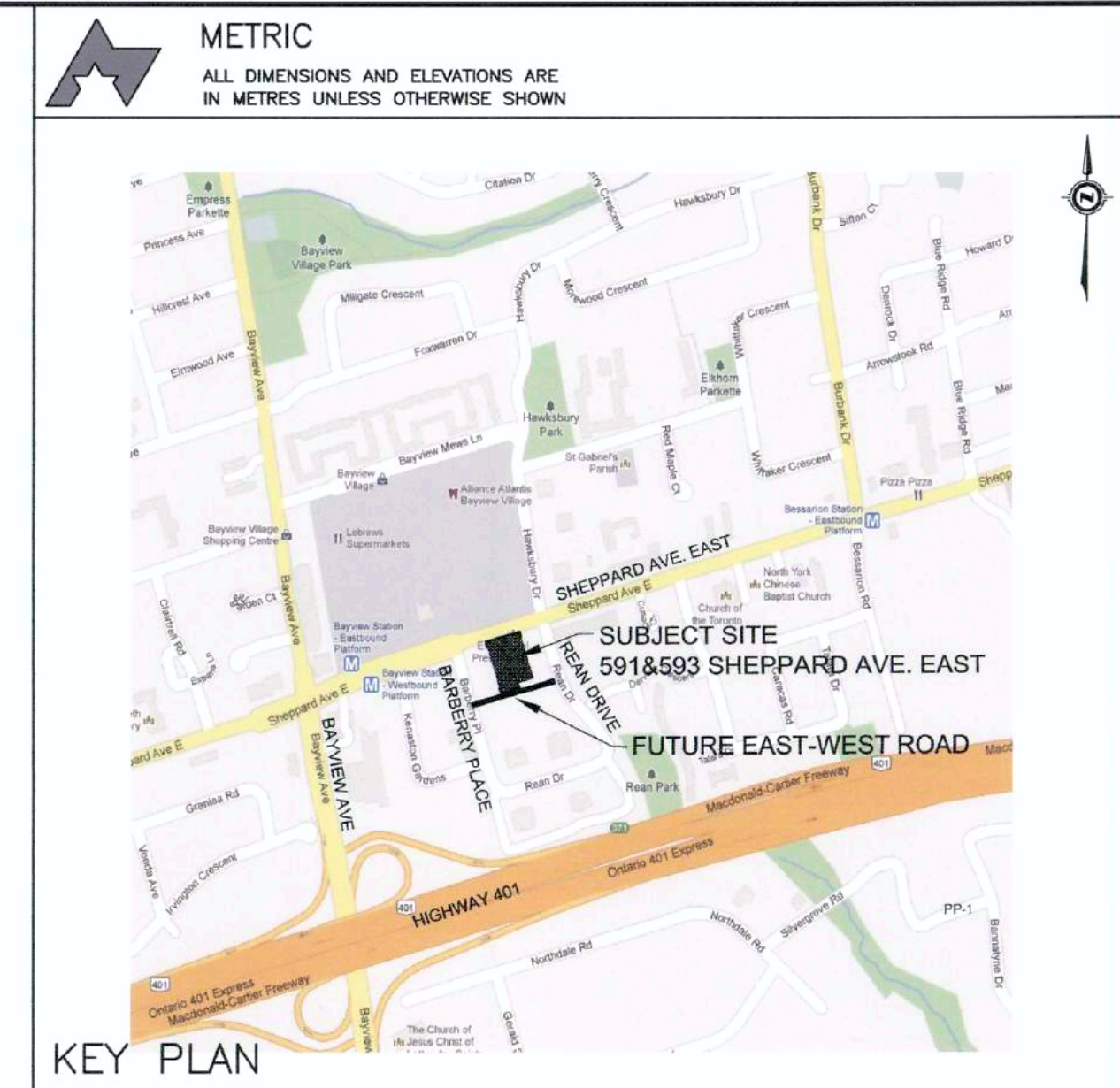
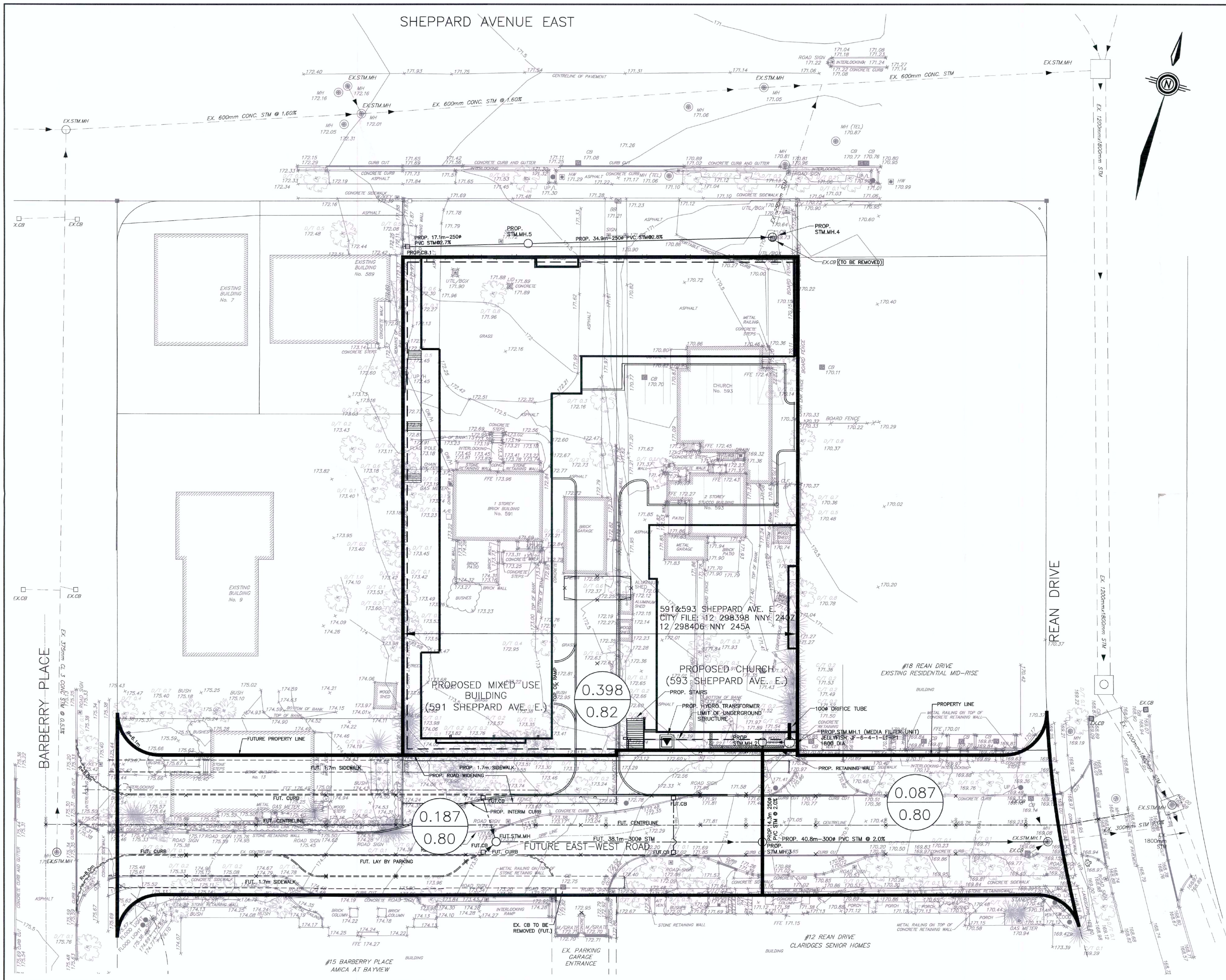
ENGINEERING AND CONSTRUCTION SERVICES

MANAGER, DEVELOPMENT ENGINEERING
NORTH YORK DISTRICT

DATE: Jan 11/16

DRAWING TITLE: **STANDARD DETAILS**
FUTURE EAST-WEST ROAD
591&593 SHEPPARD AVE. EAST
 CITY FILE: 12 298398 NNY 24 02, 12 298406 NNY 24 SA

DESIGN:	S.K.	DRAWN:	S.K.	CHECKED:	D.G.	CONTRACT No.
SCALE:	N.T.S.			PROJECT NUMBER:	12138	DRAWING NUMBER: STD-1
DATE:	JULY 2015					



- LEGEND**
- 0.200 — AREA IN HECTARES
 - 0.50 — RUN-OFF COEFFICIENT
 - AREA BOUNDARY

ENVIRONMENTAL COMPLIANCE APPROVALS (MOE)
SANITARY & STORM SEWER APPROVAL No. 1402-A53TEG
WATERMAIN APPROVAL No. ECA-2015-DNY-008, DW-2015-DNY-006

BENCHMARK
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1	NOV.03, 2015	AS PER CITY COMMENTS				

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PROFESSIONAL ENGINEER
D. A. GUZDAK
NOV. 3, 2015
PROVINCE OF ONTARIO

Toronto ENGINEERING AND CONSTRUCTION SERVICES

MANAGER, DEVELOPMENT ENGINEERING
NORTH YORK DISTRICT

DATE: *Jan 11/16*

DRAWING TITLE: STORM TRIBUTARY AREA PLAN FUTURE EAST-WEST ROAD 591&593 SHEPPARD AVE. EAST CITY FILE: 12 298398 NNY 24 02, 12 298406 NNY 24 0A				
DESIGN: S.K.	DRAWN: S.K.	CHECKED: D.G.	CONTRACT No.	
SCALE: 1:250	PROJECT NUMBER: 12138		DRAWING NUMBER: STM-1	
DATE: JULY 2015				