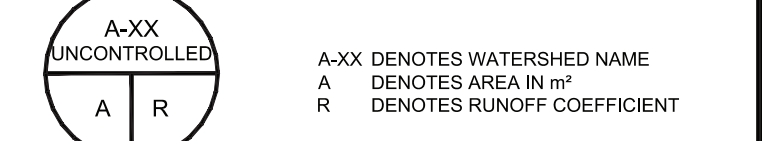
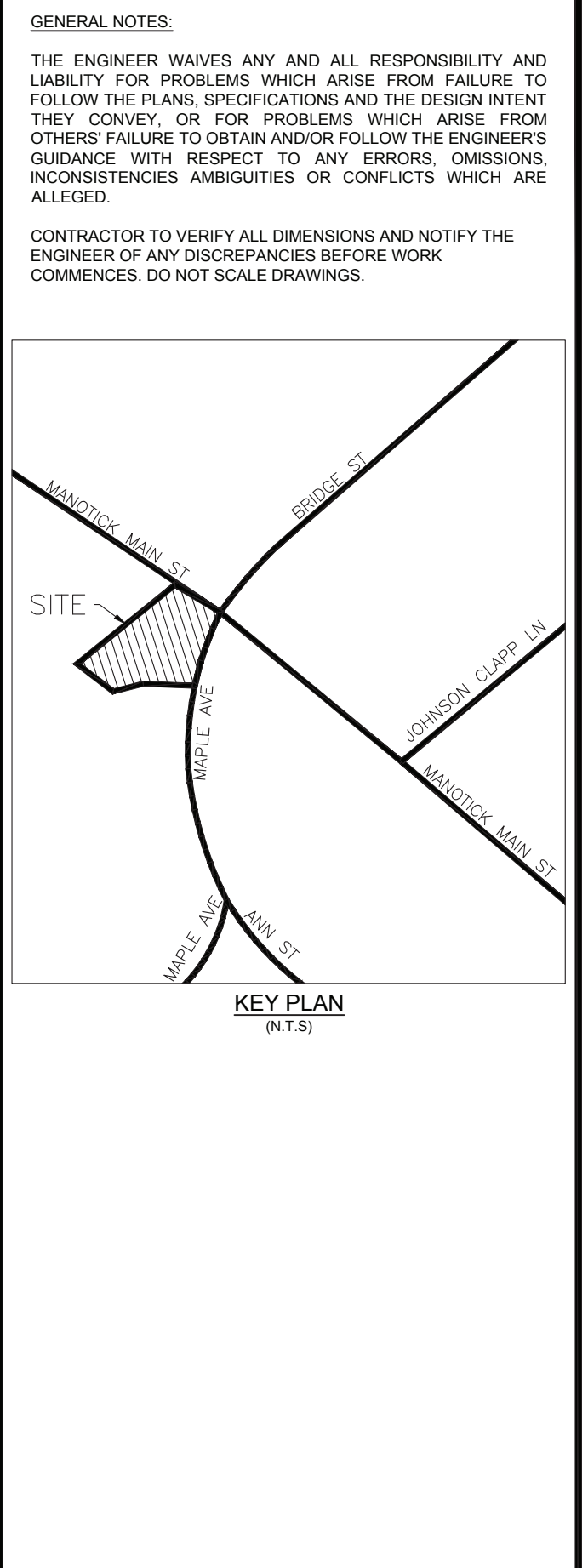
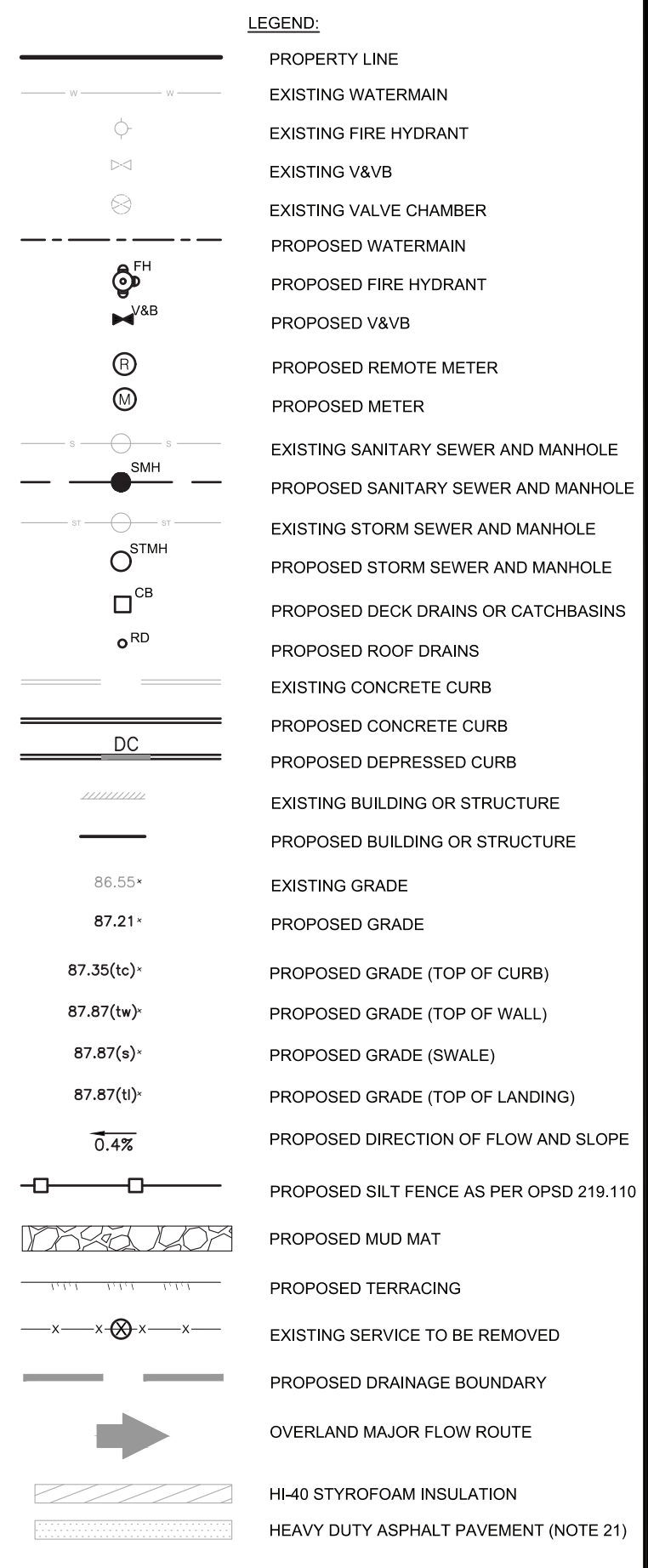


**NOTES - GENERAL**

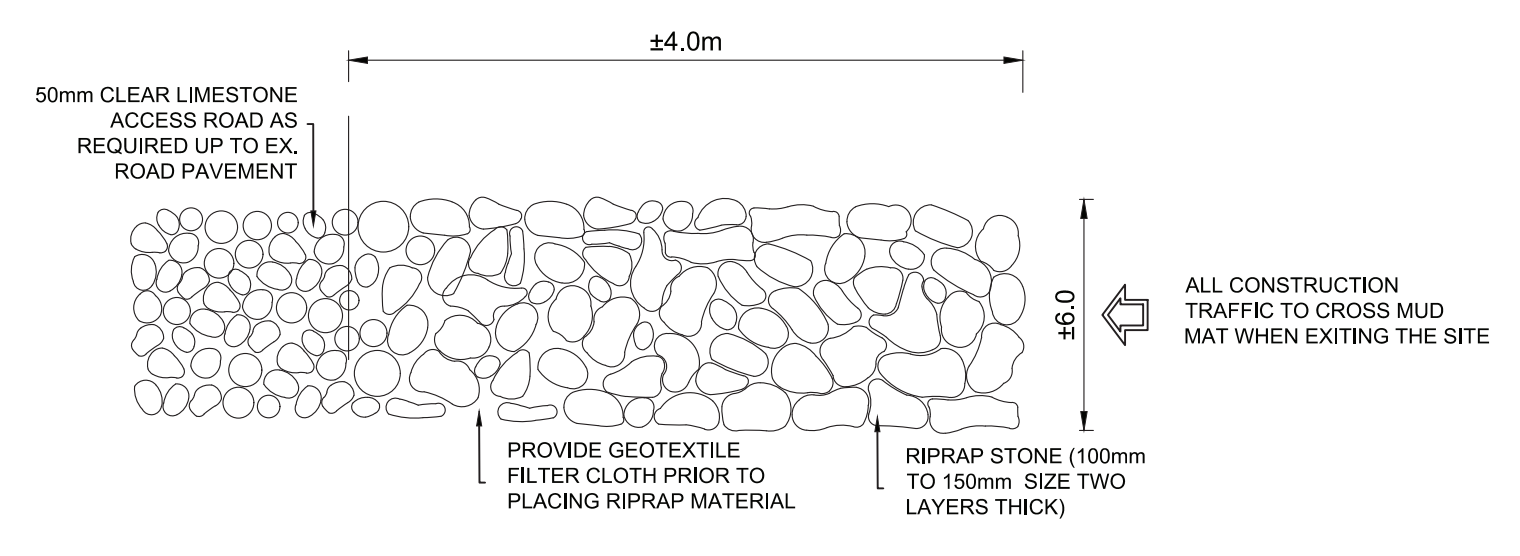
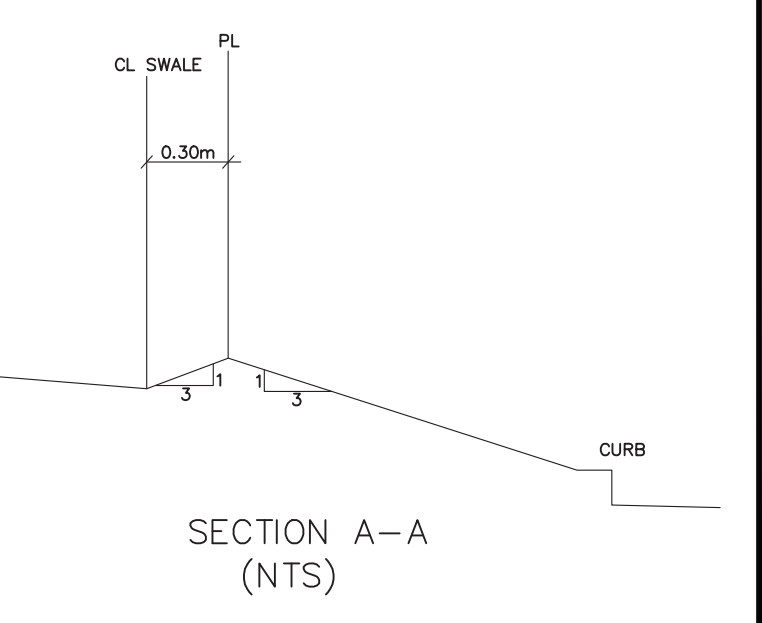
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- THE POSITION OF EXISTING POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES, STRUCTURES AND APPURTENANCES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWING, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM DURING THE COURSE OF CONSTRUCTION. ANY RELOCATION OF EXISTING UTILITIES REQUIRED BY THE DEVELOPMENT OF SUBJECT LANDS IS TO BE UNDERTAKEN AT CONTRACTOR'S EXPENSE.
- THE CONTRACTOR MUST NOTIFY ALL EXISTING UTILITY COMPANY OFFICIALS FIVE (5) BUSINESS DAYS PRIOR TO START OF CONSTRUCTION AND HAVE ALL EXISTING UTILITIES AND SERVICES LOCATED IN THE FIELD OR EXPOSED PRIOR TO THE START OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO HYDRO, BELL, CABLE TV, AND CONSUMERS GAS LINES.
- ALL TRENCHING AND EXCAVATIONS TO BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.
- REFER TO ARCHITECTS PLANS FOR BUILDING DIMENSIONS AND LAYOUT. REFER TO LANDSCAPE PLAN FOR LANDSCAPED DETAILS AND OTHER RELEVANT INFORMATION. ALL INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- TOPOGRAPHIC SURVEY COMPLETED AND PROVIDED BY H.A. KEN SHIPMAN SURVEYING LTD. DATED FEBRUARY 2, 2017. CONTRACTOR TO VERIFY IN THE FIELD PRIOR TO CONSTRUCTION OF ANY WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
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- ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT. PAVEMENT REINSTATEMENT SHALL BE WITH STEP JOINTS OF 500mm WIDTH MINIMUM.
- ALL DISTURBED AREAS OUTSIDE PROPOSED GRADING LIMITS TO BE RESTORED TO ORIGINAL ELEVATIONS AND CONDITIONS UNLESS OTHERWISE SPECIFIED. ALL RESTORATION SHALL BE COMPLETED WITH THE GEOTECHNICAL REQUIREMENTS FOR BACKFILL AND COMPACTION.
- ALL MATERIAL SUPPLIED AND PLACED FOR PARKING LOT AND ACCESS ROAD CONSTRUCTION SHALL BE TO OPSS STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED. CONSTRUCTION TO OPSS 206, 310 & 314. MATERIALS TO OPSS 1001, 1003 & 1010.
- ABUTTING PROPERTY GRADES TO BE MATCHED UNLESS SPECIFIED OTHERWISE.
- MINIMIZE DISTURBANCE TO EXISTING VEGETATION DURING THE EXECUTION OF ALL WORKS.
- REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE DIRECTED FROM THE ENGINEER. EXCAVATE AND REMOVE ALL ORGANIC MATERIAL AND DEBRIS LOCATED WITHIN THE PROPOSED BUILDING, PARKING AND ROADWAY LOCATIONS.
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150 mm - OPSS GRANULAR A COMPACTED TO 100% SPD  
50 mm - H-3 OR SUPERPAVE 12.5 COMPACTED TO 98% MARSHALL DENSITY
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450 mm - OPSS GRANULAR B TYPE II COMPACTED TO 100% SPD  
150 mm - OPSS GRANULAR A COMPACTED TO 100% SPD  
50 mm - H-8 OR SUPERPAVE 19.0 COMPACTED TO 98% MARSHALL DENSITY  
40mm - H-3 OR SUPERPAVE 12.5 COMPACTED TO 98% MARSHALL DENSITY

**NOTES - EROSION AND SEDIMENT CONTROL**

- PRIOR TO START OF CONSTRUCTION:
  - INSTALL SILT FENCE ALONG THE PERIMETER OF THE PROPERTY LINE (SEE PLAN FOR LOCATION).
  - INSTALL SILT SACK FILTERS IN ALL THE STRUCTURES NOTED ON THE DRAWING.
  - INSPECT MEASURES IMMEDIATELY AFTER INSTALLATION.
- DURING CONSTRUCTION:
  - MINIMIZE THE EXTENT OF DISTURBED AREAS AND THE DURATION OF EXPOSURE AND IMPACTS TO EXISTING GRADING.
  - PERIMETER VEGETATION TO REMAIN IN PLACE UNTIL PERMANENT STORM WATER MANAGEMENT IS IN PLACE. OTHERWISE, IMMEDIATELY INSTALL SILT FENCE WHEN THE EXISTING SITE IS DISTURBED AT THE PERIMETER.
  - PROTECT DISTURBED AREAS FROM OVERLAND FLOW BY PROVIDING TEMPORARY SWALES TO THE SATISFACTION OF THE FIELD ENGINEER. TIE-IN TEMPORARY SWALE TO EXISTING C/S AS REQUIRED.
  - PROVIDE TEMPORARY COVER SUCH AS SEEDING OR MULCHING IF DISTURBED AREA WILL NOT BE REHABILITATED WITHIN 30 DAYS.
  - INSPECT SILT FENCES, SILT SACK FILTERS AND CATCH BASIN SUMP WEEKLY AND WITHIN 24 HOURS AFTER A STORM EVENT. CLEAN AND REPAIR WHEN NECESSARY.
  - DRAWING TO BE REVIEWED AND REVISED AS REQUIRED DURING CONSTRUCTION.
  - EROSION CONTROL FENCING TO BE ALSO INSTALLED AROUND THE BASE OF ALL STOCKPILES AS SHOWN.
  - DO NOT LOCATE TOPSOIL PILES AND EXCAVATION MATERIAL CLOSER THAN 2.5m FROM ANY PAVED SURFACE, OR ONE WHICH IS TO BE PAVED BEFORE THE PILE IS REMOVED. ALL TOPSOIL PILES ARE TO BE SEEDING IF THEY ARE TO REMAIN ON SITE LONG ENOUGH FOR SEEDS TO GROW (LONGER THAN 30 DAYS).
  - CONTROL WIND-BLOWN DUST OFF SITE BY SEEDING TOPSOIL PILES AND OTHER AREAS TEMPORARILY (PROVIDE WATERING AS REQUIRED AND TO THE SATISFACTION OF THE ENGINEER).
  - NO ALTERNATE METHODS OF EROSION PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY THE FIELD ENGINEER.
  - CITY ROADWAY AND SIDEWALK TO BE CLEANED OF ALL SEDIMENT FROM VEHICULAR TRACKING AS REQUIRED.
  - PROVIDE GRAVEL ENTRANCE (MUD MAT) WHEREVER EQUIPMENT LEAVES THE SITE TO PROVIDE MUD TRACKING ONTO PAVED SURFACES. IN THE EVENT ADDITIONAL EGRESS POINTS ARE REQUIRED THEY SHOULD BE CONSTRUCTED IN ACCORDANCE WITH THE MUD MAT DETAIL (SEE TYPICAL DETAIL).
  - DURING WET CONDITIONS, TIRES OF ALL VEHICLES/EQUIPMENT LEAVING THE SITE ARE TO BE SCRAPPED.
  - ANY MUD/MATERIAL TRACKED ONTO THE ROAD SHALL BE REMOVED IMMEDIATELY BY HAND OR RUBBER TIRE LOADER.
  - TAKE ALL NECESSARY STEPS TO PREVENT BUILDING MATERIAL, CONSTRUCTION DEBRIS OR WASTE BEING SPILLED OR TRACKED ONTO ADJUTING PROPERTIES OR PUBLIC STREETS DURING CONSTRUCTION AND PROCEED IMMEDIATELY TO CLEAN UP ANY AREAS SO AFFECTED.
  - ALL EROSION CONTROL STRUCTURE TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN STABILIZED EITHER BY PAVING OR RESTORATION OF VEGETATIVE GROUND COVER.
  - THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE. DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.



A-XX DENOTES WATERSHED NAME  
A DENOTES AREA IN m²  
R DENOTES RUNOFF COEFFICIENT

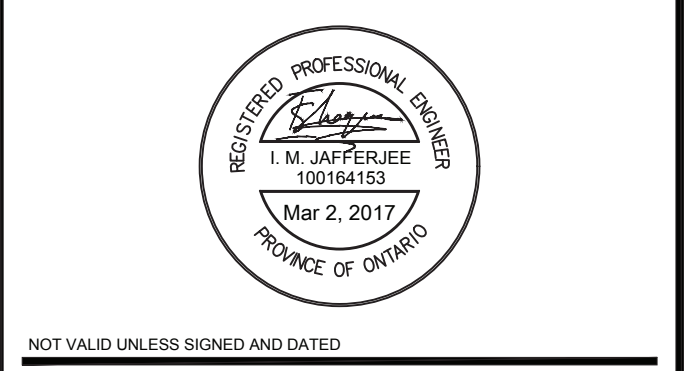


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CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

No.	REVISIONS	BY	DATE
01	ISSUED FOR SPC & ZBA	D.G.	MAR 2, 2017



**MMM GROUP**

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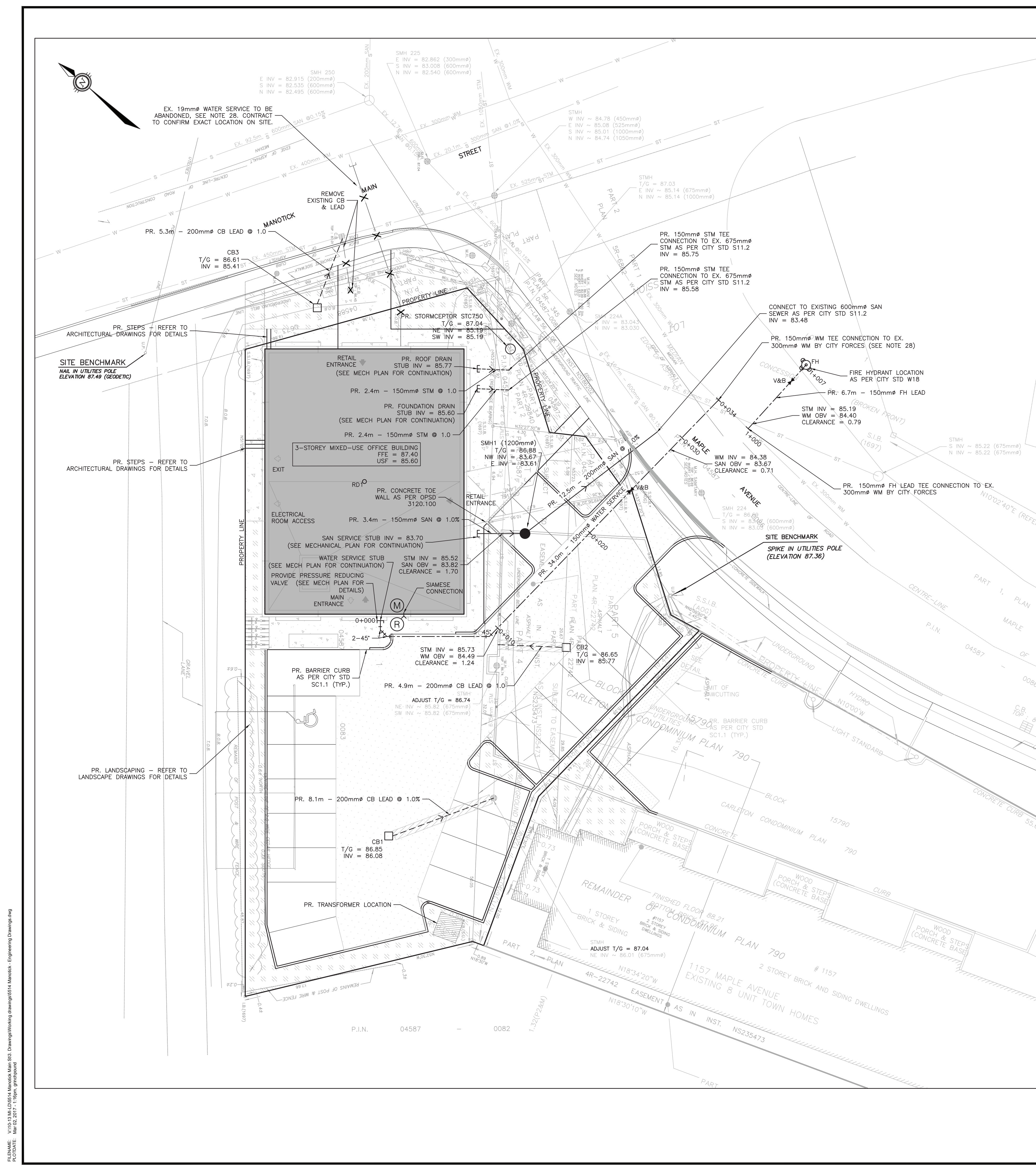
CLIENT: 1846253 ONTARIO INC.  
STEPHEN PHILIP  
5572 CARRISON DRIVE  
MANOTICK, ON K4M 1K7  
TEL: (613) 608-7216

DESIGNED BY: D.G. DRAWN BY: I.J. APPROVED BY: I.J.

PROJECT: MANOTICK MIXED-USE OFFICE BUILDING  
5514 MANOTICK MAIN ST.,  
MANOTICK, ONTARIO

DRAWING TITLE: EROSION & SEDIMENT CONTROL AND GRADING & DRAINAGE PLAN

PROJECT NO: 17M-00198-00 DRAWING NO: C.01



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40mm - H-3 OR SUPERPAVE 12.5 COMPACTED TO 96% MARSHALL DENSITY

**NOTES: SANITARY SEWER AND MANHOLES**

- ALL WATERMAIN AND WATERMAIN APPURTENANCES, MATERIALS, CONSTRUCTION AND TESTING METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA AND MINISTRY OF ENVIRONMENT STANDARDS AND SPECIFICATIONS.
- THE WATERMAIN SHALL BE POLY VINYL CHLORIDE (PVC) CLASS 150 OR 18 MEETING AWWA SPECIFICATION C900.
- ALL WATERMAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m BELOW FINISHED GRADE, WHERE WATERMANS CROSS OVER OTHER UTILITIES. A MINIMUM 0.25m CLEARANCE SHALL BE MAINTAINED; WHERE WATERMANS CROSS UNDER OTHER UTILITIES, A MINIMUM 0.50m CLEARANCE SHALL BE MAINTAINED, WHERE THE MINIMUM SEPARATION CANNOT BE ACHIEVED, THE WATERMAIN SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25 AND W25.2, WHERE 2.4m MINIMUM DEPTH CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W22.
- WATERMAIN BEDDING TO BE AS PER CITY OF OTTAWA STANDARD W17.
- VALVE AND VALVE BOX TO BE AS PER CITY OF OTTAWA STANDARD W24.
- FIRE HYDRANTS TO BE AS PER CITY OF OTTAWA STANDARD W19.
- CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS AS PER CITY OF OTTAWA STANDARD W40 & W42.
- ALL CONNECTIONS OF NEW WATERMAIN TO EXISTING WATERMAIN & ALL BLANKINGS OF EXISTING MAINS AND SERVICES SHALL BE PERFORMED BY CITY OF OTTAWA FORCES. THE CONTRACTOR SHALL PROVIDE EXCAVATION, BACKFILL AND REINSTATEMENT. THE CONTRACTOR SHALL CONSTRUCT WATER SERVICES APPURTENANCES AS PER CITY OF OTTAWA STANDARDS & SHALL COORDINATE AND PAY ALL RELATED COST OF CONNECTION, INSPECTION AND DISINFECTION BY CITY FORCES.

**NOTES: STORM SEWERS AND STRUCTURES**

- ALL SANITARY SEWER, SANITARY SEWER APPURTENANCES AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
- SANITARY SEWER PIPE SIZE 150mm DIAMETER AND GREATER TO BE PVC SDR-35 (UNLESS SPECIFIED OTHERWISE) WITH RUBBER GASKET TYPE JOINTS IN CONFORMANCE WITH CSA B-182.2.3.4.
- SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
- ALL WORK SHALL BE PERFORMED, AS APPLICABLE IN ACCORDANCE WITH OPSS 407, AND 410.
- ALL SANITARY MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSD 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24.
- ALL STORM SEWER MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
- STORM SEWERS 450mm DIAMETER AND SMALLER SHALL BE PVC SDR-35, WITH RUBBER GASKET PER CSA A-257.3, STORM SEWERS 525mm DIAMETER AND LARGER SHALL BE CONCRETE CLASS CL-1000.
- SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
- ALL STORM MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSD 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24.1.
- CATCH BASINS TO BE AS PER OPSD 705.010 WITH FRAME AND COVERS TO OPSD 400.010. ALL CATCH BASIN MANHOLES TO BE OPSD 701.010 WITH FRAME AND COVER TO CITY OF OTTAWA STANDARD S25 AND S28.1.
- ALL CATCH-BASIN LEADS TO BE MINIMUM 200mm DIAMETER AT MINIMUM 1.0% SLOPE UNLESS OTHERWISE SPECIFIED.
- ROOF DRAINS SHALL BE BY WATTS DRAINAGE. DRAINS SHALL BE SELECTED BASED ON THE RELEASE RATES.

Drainage Area	Deck Drain	5 Year Event		100 Year Event			
		5-YR Peak Flow (L/s)	5-YR Ponding Depth (mm)	5-YR Ponding Volume (m³)	100-YR Peak Flow (L/s)	100-YR Ponding Depth (mm)	100-YR Ponding Volume (m³)
BLDG	RD1	1.4	108	5.6	1.7	135	11.0

RELEASE RATE (L/s)	CB1	CB2
	1.1	7.0
HEAD (m)	1.01	2.03
HYDROVEX TYPE	40SVHV-1	75SVHV-1

**LEGEND:**

	PROPERTY LINE
	EXISTING WATERMAIN
	EXISTING FIRE HYDRANT
	EXISTING V&B
	EXISTING VALVE CHAMBER
	PROPOSED WATERMAIN
	PROPOSED FIRE HYDRANT
	PROPOSED V&B
	PROPOSED REMOTE METER
	PROPOSED METER
	EXISTING SANITARY SEWER AND MANHOLE
	PROPOSED SANITARY SEWER AND MANHOLE
	EXISTING STORM SEWER AND MANHOLE
	PROPOSED STORM SEWER AND MANHOLE
	PROPOSED DECK DRAINS OR CATCHBASINS
	PROPOSED ROOF DRAINS
	EXISTING CONCRETE CURB
	PROPOSED CONCRETE CURB
	PROPOSED DEPRESSED CURB
	EXISTING BUILDING OR STRUCTURE
	PROPOSED BUILDING OR STRUCTURE
	EXISTING GRADE
	PROPOSED GRADE
	PROPOSED GRADE (TOP OF CURB)
	PROPOSED GRADE (TOP OF WALL)
	PROPOSED GRADE (SWALE)
	PROPOSED GRADE (TOP OF LANDING)
	PROPOSED DIRECTION OF FLOW AND SLOPE
	PROPOSED SILT FENCE AS PER OPSD 219.110
	PROPOSED MUD MAT
	PROPOSED TERRACING
	EXISTING SERVICE TO BE REMOVED
	PROPOSED DRAINAGE BOUNDARY
	OVERLAND MAJOR FLOW ROUTE
	H-40 STYROFOAM INSULATION
	HEAVY DUTY ASPHALT PAVEMENT (NOTE 21)

**150mm WATERMAIN SCHEDULE**

CHAINAGES	DESCRIPTION	TOP OF GROUND	TOP OF WATERMAIN
0+000	STUB AT BUILDING	87.39	84.99
0+001	45° BEND	87.42	85.02
0+002	45° BEND	87.43	85.03
0+009	45° BEND	86.93	84.53
0+010	675mm STORM CROSSING	86.89	84.49
0+020		86.81	84.41
0+024	VALVEBOX	86.74	84.34
0+029	600mm SANITARY CROSSING	86.78	84.38
0+030		86.81	84.41
0+034	TEE CONNECTION TO EXISTING 300mm	86.87	84.47

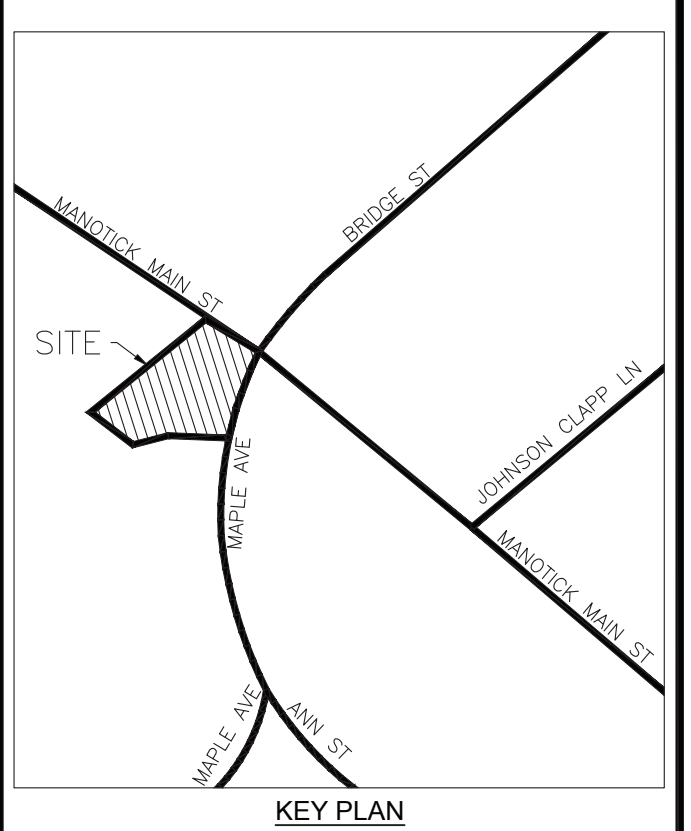
**FIRE HYDRANT LEAD SCHEDULE**

CHAINAGES	DESCRIPTION	TOP OF GROUND	TOP OF WATERMAIN
1+000	TEE CONNECTION TO EXISTING 300mm	86.82	84.42
1+001	675mm STORM CROSSING	86.80	84.40
1+005	VALVEBOX	86.74	84.34
1+007	FIRE HYDRANT	86.70	84.30

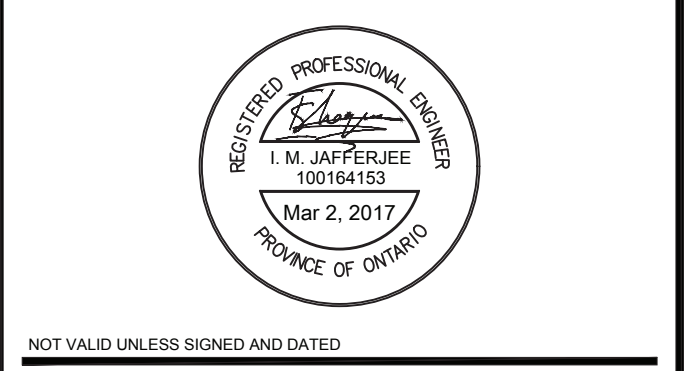
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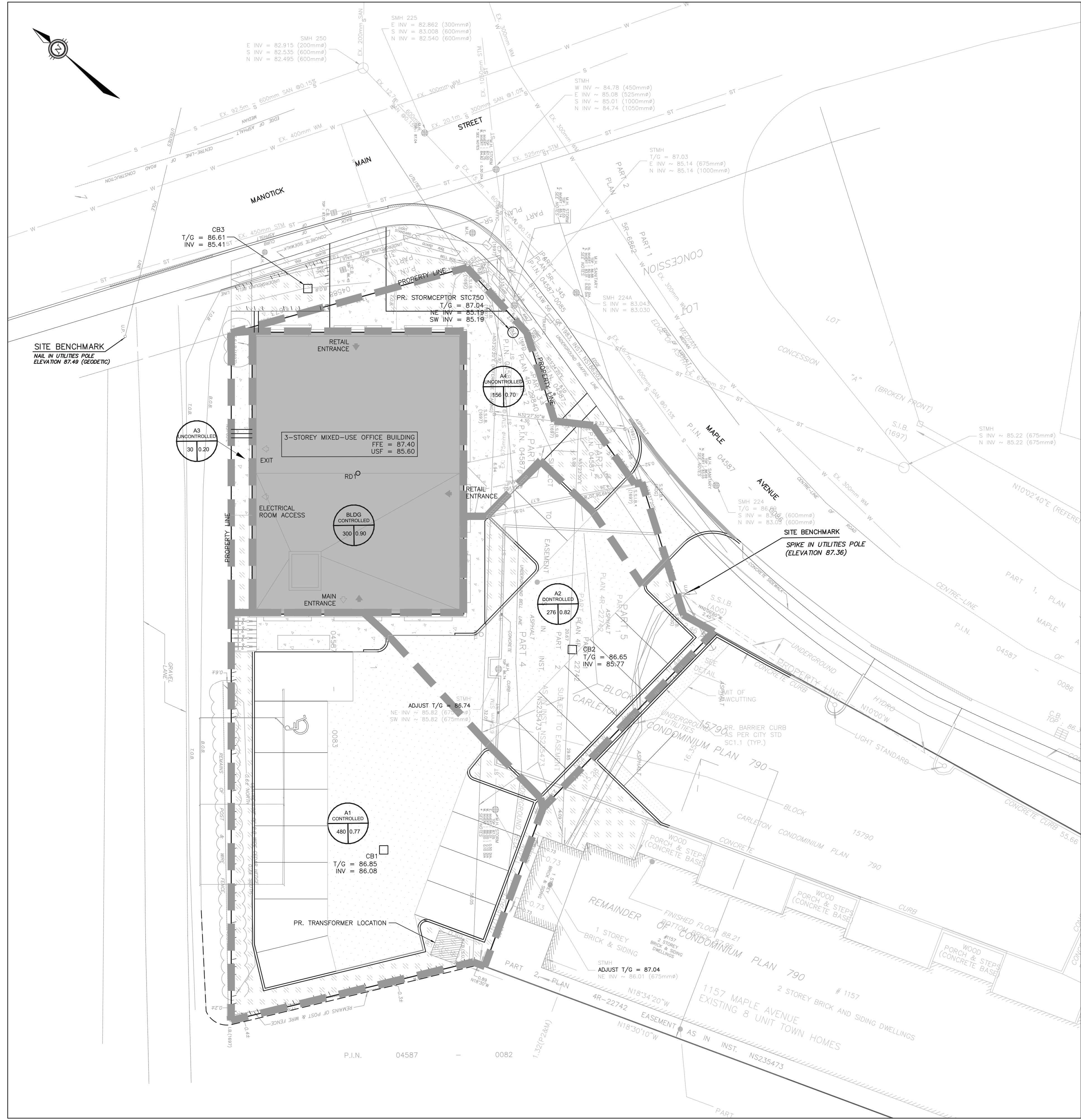
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DESIGNED BY: D.G. DRAWN BY: I.J. APPROVED BY: I.J.

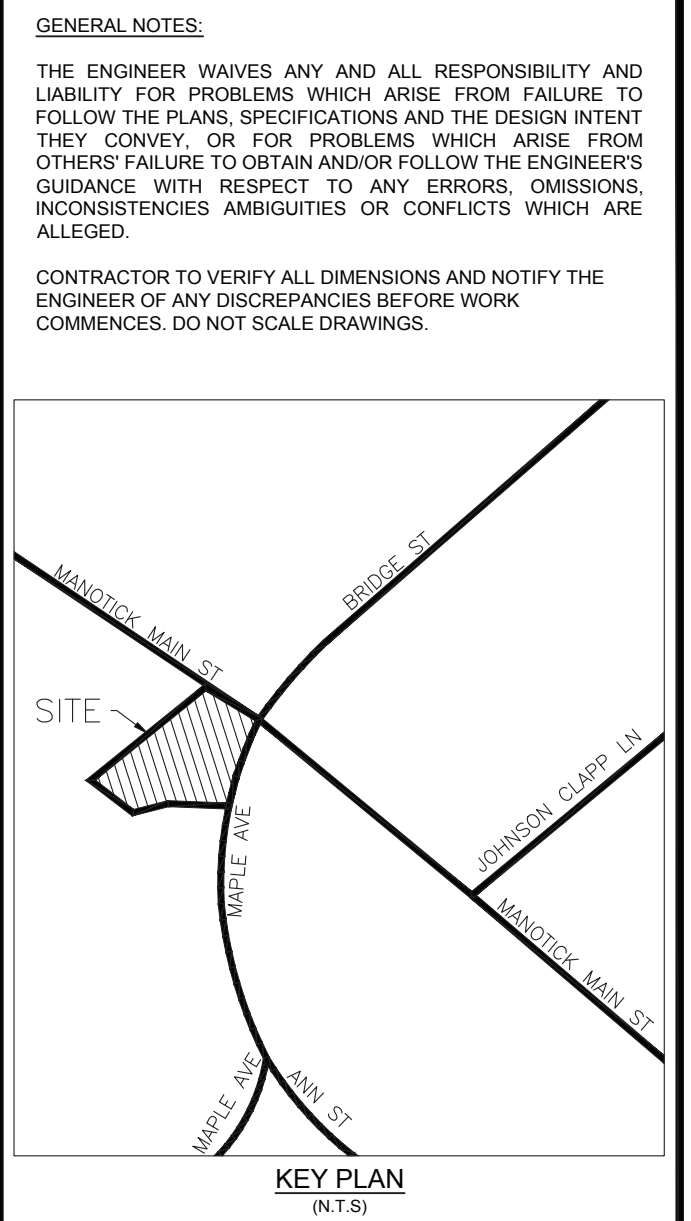
PROJECT: MANOTICK MIXED-USE OFFICE BUILDING  
 5514 MANOTICK MAIN ST.,  
 MANOTICK, ONTARIO

DRAWING TITLE: SITE SERVICING PLAN

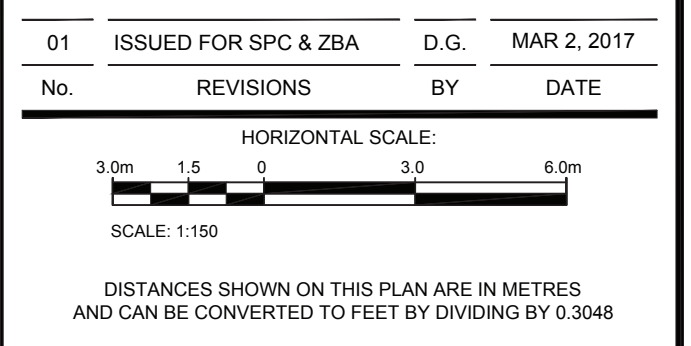
PROJECT NO: 17M-00198-00 DRAWING NO: C.02



- LEGEND:**
- PROPERTY LINE
  - EXISTING WATERMAIN
  - EXISTING FIRE HYDRANT
  - EXISTING VALVE CHAMBER
  - EXISTING VAVB
  - EXISTING VALVE CHAMBER
  - PROPOSED WATERMAIN
  - PROPOSED FIRE HYDRANT
  - PROPOSED VAVB
  - PROPOSED REMOTE METER
  - PROPOSED METER
  - EXISTING SANITARY SEWER AND MANHOLE
  - PROPOSED SANITARY SEWER AND MANHOLE
  - EXISTING STORM SEWER AND MANHOLE
  - PROPOSED STORM SEWER AND MANHOLE
  - PROPOSED DECK DRAINS OR CATCHBASINS
  - PROPOSED ROOF DRAINS
  - EXISTING CONCRETE CURB
  - PROPOSED CONCRETE CURB
  - PROPOSED DEPRESSED CURB
  - EXISTING BUILDING OR STRUCTURE
  - PROPOSED BUILDING OR STRUCTURE
  - EXISTING GRADE
  - PROPOSED GRADE
  - 86.55' PROPOSED GRADE (TOP OF CURB)
  - 87.21' PROPOSED GRADE (TOP OF WALL)
  - 87.87(w) PROPOSED GRADE (SWALE)
  - 87.87(s) PROPOSED GRADE (TOP OF LANDING)
  - 0.4% PROPOSED DIRECTION OF FLOW AND SLOPE
  - PROPOSED SILT FENCE AS PER OPSD 219.110
  - PROPOSED MUD MAT
  - PROPOSED TERRACING
  - EXISTING SERVICE TO BE REMOVED
  - PROPOSED DRAINAGE BOUNDARY
  - OVERLAND MAJOR FLOW ROUTE
  - HI-40 STYROFOAM INSULATION
  - HEAVY DUTY ASPHALT PAVEMENT (NOTE 21)
  - A-XX UNCONTROLLED
  - A DENOTES WATERSHED NAME
  - A DENOTES AREA IN M<sup>2</sup>
  - R DENOTES RUNOFF COEFFICIENT



Drainage Area	Deck Drain	5 Year Event			100 Year Event		
		5-YR Peak Flow (L/s)	5-YR Ponding Depth (mm)	5-YR Ponding Volume (m <sup>3</sup> )	100-YR Peak Flow (L/s)	100-YR Ponding Depth (mm)	100-YR Ponding Volume (m <sup>3</sup> )
BLDG	RD1	1.4	108	5.6	1.7	135	11.0



NOT VALID UNLESS SIGNED AND DATED



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CLIENT: 1846253 ONTARIO INC.  
STEPHEN PHILIP  
5572 CARRISON DRIVE  
MANOTICK, ON K4M 1K7  
TEL: (613) 608-7216

DESIGNED BY: D.G. DRAWN BY: I.J. APPROVED BY: I.J.

PROJECT: MANOTICK MIXED-USE OFFICE BUILDING  
5514 MANOTICK MAIN ST.,  
MANOTICK, ONTARIO

DRAWING TITLE: STORM DRAINAGE AREA PLAN

PROJECT NO. 17M-00198-00 DRAWING NO. C.03

FILENAME: V:\10-13-16\20514 Manotick Main SQ3 - Drainage\Working drawings\6514 Manotick - Engineering Drawings.dwg  
PLOT DATE: Mar 02, 2017 - 1:16pm, gground

D07-12-17-0026