

APPENDIX F

DRAWING TEMPLATES



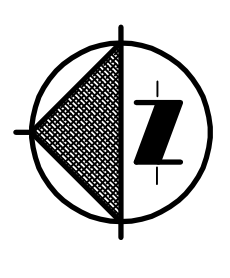
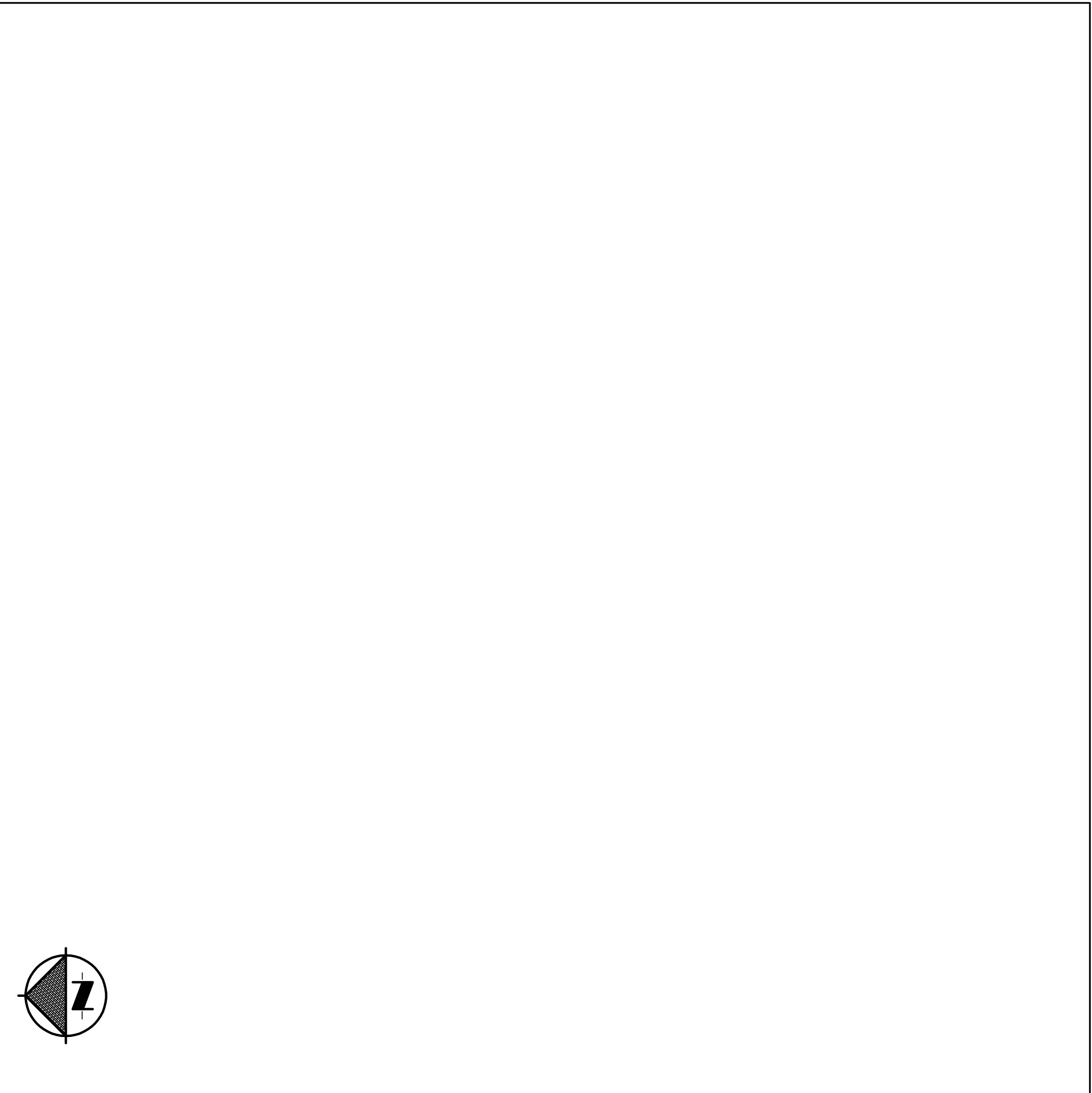
TOWN OF BRADFORD WEST GWILLIMBURY

PROJECT NAME / PHASE NO.

PROJECT NUMBER _____

BWG PROJECT # _____
PLANNING PROJECT # _____

DEVELOPER	
CIVIL	
LANDSCAPE	
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SITE LOCATION
SCALE 1:10,000

ACCEPTED
TOWN OF BRADFORD
WEST GWILLIMBURY
SIGNATURE _____
DATE _____

GENERAL NOTES — GENERAL

- THE NOTES ON THIS SHEET APPLY TO ALL WORKS UNLESS OTHERWISE NOTED ON THE PLAN AND PROFILE DRAWINGS AND/OR SPECIFIC DETAIL DRAWINGS.
- THE STANDARD DRAWINGS OF THE TOWN OF BRADFORD WEST OWMILLBURY, ONTARIO (OWMILLBURY) ARE REFERRED TO AS THE STANDARD DRAWINGS THROUGHOUT THIS CONTRACT.
- ORDER OF PRECEDENCE OF STANDARD DRAWINGS IS FIRSTLY TOWN OF BRADFORD WEST OWMILLBURY STANDARD DRAWINGS, AND SECONDLY ONTARIO PROVINCIAL STANDARD DRAWINGS AND SPECIFICATIONS AS REQUIRED FOR THIS CONTRACT.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL RELEVANT STANDARD DRAWINGS AND SPECIFICATIONS AS REQUIRED FOR THIS CONTRACT.
- ALL DIMENSIONS AND ELEVATIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION AND ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.
- EXISTING SERVICES AND UTILITIES SHOWN ON THESE CONTRACT DRAWINGS ARE BASED ON THE CONTRACTOR'S FIELD SURVEY. THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH AND CHARACTER OF ALL SERVICES AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL INTERPRET THIS INFORMATION AS HE WISHES WITH THE UNDERSTANDING THAT THE OWNER DISCLAIMS ALL RESPONSIBILITY FOR ITS ACCURACY AND/OR SUFFICIENCY. THE CONTRACTOR IS REQUIRED TO NOTIFY THE VARIOUS UTILITY COMPANIES 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK.
- ALL PRIMARY HYDRO, TELECOMMUNICATION CABLE, GAS LINES AND CABLE T.V. SHALL BE STANDARD DRAWINGS.
- THE STREET LIGHTING SYSTEM SHALL BE DESIGNED BY A QUALIFIED CONSULTING ENGINEER IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CANADIAN STANDARDS AND APPROVED BY THE TOWN. STREET LIGHTING SYSTEMS FOR ROADWAYS IN THE TOWN OF BRADFORD WEST OWMILLBURY SHALL MEET THE REQUIREMENTS OF THE HYDRO AUTHORITY.
- ALL SILT CONTROL AND EROSION PROTECTION DEVICES ARE TO BE IN PLACE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN THESE DEVICES COMPLETE AND IN GOOD WORKING ORDER UNTIL CONSTRUCTION IS COMPLETE AND THE GRASS HAS ESTABLISHED GROWTH, SUBJECT TO APPROVAL BY THE TOWN.
- NATIVE MATERIAL SUITABLE FOR BACKFILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.
- GRANULAR MATERIAL USED FOR BACKFILL SHALL BE PLACED IN LAYERS 150mm IN DEPTH MAXIMUM AND COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.
- ALL DISTURBED AREAS ARE TO BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN. ALL GRASS AND VEGETATION COVERED AREAS SHALL BE RESTORED BY PLACING 100mm OF APPROVED TOPSOIL AND NURSERY SOIL OR AS DIRECTED BY THE TOWN.
- FOR GENERAL GRADING NOTES REFER TO GRADING PLANS.

GENERAL NOTES — ROADS

- THE ROAD PAVEMENT MINIMUM STRUCTURE SHALL CONSIST OF THE FOLLOWING AND WILL BE CONFIRMED BY A SOILS CONSULTANT AND APPROVED BY THE TOWN:
 - LOCAL ROAD :
 - 40mm HL3 SURFACE COURSE ASPHALT
 - 50mm HL8 BASE COURSE ASPHALT
 - 150mm GRANULAR 'A'
 - 375mm GRANULAR 'B'
 - BOULEVARD AND DITCHES: 100mm TOPSOIL AND SOD.
- NATIVE SUBGRADE SHALL HAVE A CROSS-FALL OF 3% AND THE MATERIAL SHALL BE APPROVED BY A SOILS CONSULTANT AND IS SUBJECT TO APPROVAL BY THE TOWN. DENSITY AND SHALL BE PROOF ROLLED.
- 100mm DIAMETER PERFORATED FILTER CLOTH WRAPPED PLASTIC CORRUGATED SUB-DRAINS SHALL BE REQUIRED TO RUN CONTINUOUS ALONG BOTH SIDES OF ALL ROADS WITH CURBS AND GUTTER.
- CONCRETE CURBS AND GUTTER CONFORMING TO OPSD 600.040 OR 600.070 (TWO STAGE) SHALL BE USED. CONCRETE STRENGTH IS TO BE A MINIMUM OF 30MPa AT 28 DAYS WITH 7% ± 1.5% AIR ENTRAINMENT.
- DRIVEWAY DEPRESSIONS SHALL BE FORMED IN THE CURBS AS PER BNG STANDARD DRAWING B109.
- SIDEWALK CONSTRUCTION SHALL COMPLY WITH OPSD 310.010 AND OPSD 310.030 AND SHALL BE CONSTRUCTED ON 150mm OF GRANULAR 'A' ON A COMPACTED FOUNDATION. CONCRETE STRENGTH IS TO BE A MINIMUM OF 30MPa AT 28 DAYS WITH 7% ± 1.5% AIR ENTRAINMENT.
- ALL FENCING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN OF BRADFORD WEST OWMILLBURY DESIGN STANDARDS.
- ALL GRADING MUST CONFORM TO THE TOWN OF BRADFORD WEST OWMILLBURY LOT GRADING AND DRAINAGE POLICES CURRENTLY IN EFFECT.
- PROVIDE FROST TAPERS FOR ROAD CROSSING CULVERTS AS PER OPSD 803.030.
- DRIVEWAY CULVERTS TO BE MINIMUM 400mm DIAMETER GSP, WITH THICKNESS OF 1.6mm WITH MANUFACTURED END TREATMENT OR EQUIVALENT END PROTECTION.
- RESIDENTIAL DRIVEWAYS TO BE CONSTRUCTED WITH A MINIMUM OF 150mm GRANULAR 'A', OR AS APPROVED BY THE TOWN. DRIVEWAYS ARE TO BE PAVED WITH A MINIMUM 50mm OF HL3 ASPHALT AS PER TOWN STANDARD B109 FROM STREET TO GARAGE, OR TO DWELLING.
- ROAD OCCUPANCY PERMIT IS REQUIRED FROM THE COUNTY OF SIMCOE AND/OR THE TOWN WORKS DEPARTMENT PRIOR TO THE COMMENCEMENT OF ANY WORK IN THEIR RESPECTIVE RIGHT-OF-WAYS. A MINIMUM 48 HOUR NOTICE IS REQUIRED.

GENERAL NOTES — STORM SEWERS

- STORM SEWER TO BE LOCATED TYPICALLY 1.5m TO THE WEST OR SOUTH OF CENTRELINE OF THE ROAD.
- PIPE SHALL BE CONCRETE WITH A MINIMUM DIAMETER OF 300mm AND SHALL CONFORM TO THE REQUIREMENTS OF C.S.A. SPECIFICATION A257.2-M1982 FOR THE CLASSES SHOWN BELOW:
 - NON-REINFORCED CONCRETE PIPE, CSA STANDARD A257.1 CLASS 1,2,3.
 - REINFORCED CONCRETE PIPE, CSA STANDARD A257.2 STRENGTH CLASS 50-6, 65-9, 100-9 AND 140-9.
- ALL STORM SEWERS OVER 450mm DIAMETER SHALL BE CONSTRUCTED WITH REINFORCED CONCRETE PIPE.
- SEWERS SHALL BE CONSTRUCTED WITH BEDDING AS PER OPSD 802.010, AND 802.030, UNLESS OTHERWISE SPECIFIED BY A GEOTECHNICAL CONSULTANT AND APPROVED BY THE TOWN.
- TRENCH BACKFILL SHOULD BE PLACED IN 200mm LIFTS AND COMPACTED TO 95% SPHMOD.
- ALL STORM SEWER MANHOLES TO BE BENCHING IN ACCORDANCE WITH OPSD 701.021.
- DROP STRUCTURES SHALL CONFORM WITH OPSD 1003.010 AND 1003.020.
- MANHOLE TOPS ARE TO BE SET TO BASE COURSE ASPHALT GRADE AND THEN ADJUSTED TO FINAL GRADE, FRAME AND COVER TO BE PER OPSD 401.010, TYPE 'B', GRADE AND COVER TO BE 150mm ABOVE FINISHED GROUND SURFACE. CONCRETE MODULAR ADJUSTMENT RINGS ARE TO BE USED TO ADJUST THE MANHOLE TO FINAL GRADE.
- CATCHBASINS MUST BE OF THE PRECAST TYPE AS SHOWN ON THE OPSD DRAWINGS 705.01 OR 705.02.
- SINGLE CATCHBASIN LEADS SHALL BE HIGH DENSITY POLYETHYLENE PIPE OR PVC PIPE WITH MINIMUM SIZES AS FOLLOWS:
 - DOUBLE CATCHBASIN 250mm DIAMETER
 - DOUBLE CATCHBASIN 300mm DIAMETER
 - REAR LOT CATCHBASIN 250mm DIAMETER
- THE FRAME AND GRATE FOR CATCHBASINS SHALL BE OPSD 400.100. CATCHBASIN GRATES ARE TO BE RAMMED USING HOT-WAX ASPHALT. CATCHBASINS AT LOW POINTS SHALL BE SET TO BASE ASPHALT AND ADJUSTED TO SURFACE COURSE.
- REAR LOT CATCHBASIN LEADS TO BE CONCRETE ENCASED FROM THE PROPERTY LINE TO THE CATCHBASIN. FRAME AND GRATE TO BE "BRIDGE" STYLE AS PER OPSD 400.120.
- WHERE CATCHBASINS ARE CONNECTED DIRECTLY TO SEWERS, PRE-MANUFACTURED TEES SHALL BE USED.
- STORM SERVICES SHALL BE 150mm DIAMETER PVC DR OR 75mm WHITE IN COLOR. ALL OTHER DETAILS ARE SAME AS THOSE FOR SANITARY SERVICE EXCEPT WOOD MARKERS TO BE PAINTED BLACK.

GENERAL NOTES — SANITARY SEWERS

- SANITARY SEWER TO BE GENERALLY LOCATED 1.5m NORTH OR EAST OF THE CENTRELINE OF THE ROAD UNLESS NOTED OTHERWISE.
- PVC PIPE MAY ONLY BE USED ON SANITARY SEWERS UP TO AND INCLUDING 375mm IN DIAMETER. REINFORCED CONCRETE SHALL BE USED FOR SEWERS 450mm DIAMETER AND LARGER.
- REINFORCE CONCRETE SHALL BE STEEL REINFORCED AND CONFORM TO C.S.A. SPECIFICATION A275.2, CLASS 50-D, 65-D, 100-D AND 140-D AS REQUIRED.
- PVC SHALL CONFORM TO C.S.A. SPECIFICATION B182.1 OR B182.2 OR LATEST REVISIONS THEREOF. DIMENSION RATIO (DR) OF PVC SEWER PIPE SHALL NOT EXCEED 35.
- ALL SANITARY SERVICE CONNECTIONS FOR RESIDENTIAL USES SHALL BE CONSTRUCTED OF THE FOLLOWING PIPE MATERIALS AND SPEC:
 - PVC CSA B182.1 DR28 MINIMUM COMPOND 12454-B, 12454-C OR 12364-C, ALL CONFORMING TO ASTM F441.
 - JUNTS: A-A-A-B; BELL AND SPIGOT WITH RUBBER GASKETS, MOC APPROVED SUPPLIER
 - FLEXIBLE PIPE SHALL BE PVC DR35 OR APPROVED EQUIVALENT, WITH RUBBER GASKET TYPE JOINTS AND SHALL CONFORM TO C.S.A. (B-182.3.4). RIGID PIPE SHALL BE REINFORCED CONCRETE CONFORMING TO C.S.A. STANDARD A257.2-M1982 CLASS 1000.
 - DEFLECTION FROM RUBBER GASKETS AND DEAD LOADS SHALL NOT EXCEED ANY C.S.A., OPS OR MANUFACTURERS RECOMMENDED SPECIFICATIONS.
- THE TYPE OF BEDDING SHALL BE SELECTED TO SUIT LOADING AND PROPOSED CONSTRUCTION CONDITIONS. FLEXIBLE SEWER SHALL BE CONSTRUCTED WITH BEDDING AND BACKFILL AS PER OPSD 802.010 (GRANULAR 'A' FOR BEDDING AND COVER MATERIAL). RIGID SEWERS SHALL BE CONSTRUCTED WITH CLASS 'B' BEDDING (GRANULAR 'A' MATERIAL) AS PER OPSD 802.030. COVER AND 602.032 AS APPLICABLE. MATERIAL MAY BE REPLACED ONLY BY APPROVAL OF THE TOWN.
- NO FLEXIBLE PIPE SEWERS WILL BE INSTALLED WITH A DEPTH OF COVER GREATER THAN 6m UNLESS SPECIFICALLY APPROVED BY THE ENGINEER.
- TRENCH BACKFILL SHOULD BE PLACED IN 200mm LIFTS AND COMPACTED TO 95% SPHMOD.
- "CLAY PLUGS" SHALL BE USED IN THE TRENCH AND BE PLACED 2 TO 3 METERS UPSTREAM FROM ANY MANHOLE WHICH IS SUSPECTED OF BEING SUSCEPTIBLE TO HIGH WATER LEVELS OF INFLOW/INFILTRATION.
- SANITARY MANHOLES SHALL BE IN ACCORDANCE WITH OPSD MANHOLE DETAILS. PRECAST MANHOLES SHALL CONFORM TO ASTM SPECIFICATION C478 LATEST REVISION. PRECAST MANHOLES WITH OPENINGS SHALL BE CONSTRUCTED WITH A SAFETY PLATFORM IN ACCORDANCE WITH OPSD 404.020. FRAME AND COVER SHALL BE IN ACCORDANCE WITH OPSD 401.010, TYPE 'A'.
- MAINTENANCE HOLE TOPS (FRAMES) ARE TO BE SET TO BASE COURSE ASPHALT GRADE, AND THEN ADJUSTED TO FINAL GRADE WHEN TOP LIFT OF ASPHALT IS PLACED. GRADE AND COVER TO BE 150mm ABOVE FINISHED GROUND SURFACE. CONCRETE MODULAR ADJUSTMENT RINGS ARE TO BE USED TO ADJUST THE MANHOLE TO FINAL GRADE.
- ALL PIPE CONNECTIONS AT MANHOLES SHALL BE COMPLETED USING KORB-N-SEAL RUBBER GASKETED ASSEMBLIES, OR APPROVED EQUAL. ALL CONNECTIONS TO THE SANITARY MAIN SHALL BE MADE WITH PRE-MANUFACTURED APPROVED TEES.
- MANHOLE BENCHING SHALL CONFORM WITH OPSD 701.021 WITH BENCHING TO THE OBVERT.
- DROP STRUCTURES SHALL CONFORM WITH OPSD 1003.010 AND 1003.020.

GENERAL NOTES — SANITARY SERVICE LATERALS

- DOUBLE SANITARY LATERAL CONNECTIONS TO BE LOCATED AT THE COMMON PROPERTY LINE OR AS INDICATED ON THE DRAWINGS.
- PIPE TO BE MINIMUM 150mm DIAMETER PVC SDR 26, RUBBER GASKET TYPE JOINTS, AND SHALL CONFORM TO C.S.A. (B-182.3.5-9). COLOR TO BE GREEN.
- GROMMET FITTINGS SHALL BE INSTALLED ON SERVICES AT PROPERTY LINE.
- MINIMUM DEPTH OF LATERAL AT PROPERTY LINE SHALL BE 2.7m, MEASURED FROM THE SEWER OBVERT TO FINISHED GROUND SURFACE ELEVATION, UNLESS NOTED OTHERWISE.
- MINIMUM PIPE SLOPE TO BE 2%, MAXIMUM 8% (SEE OPSD 1006.020).
- SANITARY LATERAL CONNECTIONS TO BE EXTENDED 2.5m BEYOND PROPERTY LINE INTO THE LOTS.
- THE LOCATION OF THE END OF EACH LATERAL TO BE MARKED 2.5m PAST PROPERTY LINE. A 50mm DIAMETER GROMMET SHALL BE INSTALLED TO BE GREEN EXTENDING FROM SERVICE INVERT TO 300mm ABOVE PROPOSED FINISHED GROUND LEVEL.
- ALL CONNECTIONS TO NEW SANITARY MAINS SHALL BE WITH PRE-MANUFACTURED, APPROVED TEES.
- ALL CONNECTIONS TO EXISTING SANITARY MAINS SHALL BE MADE WITH APPROVED SADDLES.

GENERAL NOTES — WATERMANS

- WATERMAIN SHALL BE LOCATED AS SHOWN ON THE STANDARD TOWN OF BRADFORD WEST OWMILLBURY ROADWAY CROSS SECTIONS. THIS LOCATION SHALL NORMALLY BE ON THE SOUTH AND EAST SIDE OF THE STREET.
- WATERMAIN SHALL BE LOCATED AS PER APPLICABLE ROAD CROSS-SECTION
- A MINIMUM CLEARANCE BETWEEN THE WATERMAIN AND ALL UTILITIES MUST BE KEPT, WHILE STILL MAINTAINING A MINIMUM DEPTH OF COVER AT ALL TIMES.
- WATERMAIN SHALL BE INSTALLED WITH A MINIMUM COVER OF 1.8m.
- TEMPORARY DEAD-ENDS OF WATERMANS SHALL BE EQUIPPED WITH A TEMPORARY FIRE HYDRANT.
- PVC WATERMAIN SHALL INCLUDE #12 TRACER WIRE. A TRACER WIRE SHALL BE PROVIDED ALONG THE TOP OF ALL WATERMANS. THE WIRE IS TO BE SECURED AT EVERY FITTING AND CONNECTION. TRACER WIRE SHALL BE 1.8m LONGER THAN THE WATERMAIN. TRACING WIRES SHALL BE 1 GAUGE, STANDED COPPER WIRE WITH OUTER PLASTIC COATING.

MECHANICAL JOINT FITTINGS ARE TO BE INSTALLED AT ALL TEES, HORIZONTAL AND VERTICAL, BEFORE HYDRANTS END OF MAINS AND VALVES. ALL HYDRANTS AND VALVES SHALL BE INSTALLED WITH CATHODIC PROTECTION, 175 GRAM ZINC CAPS OR APPROVED EQUIVALENT SHALL BE INSTALLED ON EACH BOLT OF ANY MECHANICAL CONNECTION. CONCRETE THRUST BLOCKS ARE NOT PERMITTED UNLESS APPROVED BY THE TOWN.

CAST IRON MECHANICAL JOINT FITTINGS MEETING AWWA SPECIFICATIONS C-907 AND C.S.A. B182.2 SHALL BE USED ON PVC WATERMAIN 150 TO 300mm IN DIAMETER.

ALL VALVES SHALL BE RESILIENT WEDGE GATE VALVES WITH VALVE BOX UNLESS OTHERWISE NOTED. VALVE BOXES SHALL BE CONCRETE WITH A NON-RISEING STEM AND A 150mm SQUARE OPERATING HUB. OPERATING HUBS SHALL BE 150mm DIAMETER. VALVES SHALL BE OPERATING HUB TYPE, OPERATING HUBS SHALL BE ANCHOR STYLE. HYDRANTS SHALL BE PAINTED IN ACCORDANCE WITH TOWN SPECIFICATIONS.

ALL VALVES IN EXCESS OF 1.8m IN DEPTH SHALL REQUIRE A VALVE STEM EXTENSION.- HYDRANTS SHALL BE CANADA VALVE "CENTURY" COMPRESSION TYPE, COMPLETE WITH 100mm DIAMETER STUB. HYDRANTS SHALL BE 150mm DIAMETER. HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH TOWN SPECIFICATIONS.
- HYDRANT FLANGE ELEVATIONS SHALL BE SET AT A GRADE THAT WILL GIVE A FLANGE ELEVATION OF 50 mm TO 150 mm ABOVE THE FINAL GRADE.
- ALL HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH OPSD 1105.010.

HYDRANTS SHALL BE LOCATED A MINIMUM OF 1.5 METRES FROM THE EDGE OF STANDARD DRIVEWAYS AND 1.5 METRES FROM DRIVEWAYS AND UTILITIES SUCH AS LIGHT STANDARDS. TRANSVERSE TO THE STREET SIGNS SHALL NOT BE LOCATED ANY CLOSER THAN 3m TO A HYDRANT.- PROPERTY LINE IN ACCORDANCE WITH THE STANDARD CROSS-SECTION.
- A MINIMUM HORIZONTAL SEPARATION OF 2.5m SHALL BE MAINTAINED BETWEEN THE WATERMAIN AND ANY SEWER.

PIPE DEFLECTION SHOULD BE USED, WHEREVER POSSIBLE, TO MINIMIZE THE USE OF JOINTS. WHERE IT IS NECESSARY TO DEFLECT FROM A STRAIGHT LINE, EITHER IN THE VERTICAL OR HORIZONTAL PLANE, THE AMOUNT OF DEFLECTION SHALL NOT EXCEED THE RECOMMENDATIONS OF THE MANUFACTURER.- EACH RESIDENTIAL UNIT SHALL HAVE A SEPARATE 150mm MINIMUM DIAMETER, TYPE K COPPER WATER SERVICE. WHEN SERVICE LINE EXCEEDS 30m IN LENGTH, THE SIZE OF THE LINE SHALL BE INCREASED TO AN APPROPRIATE DIAMETER, OR AS DIRECTED BY THE TOWN.
- SERVICES SHALL BE INSTALLED ACCORDING TO OPSD 1104.010 AND 1104.020.
- THE MAXIMUM SIZE OF CONNECTION THAT CAN BE TAPPED INTO A 150mm DIAMETER WATERMAIN IS 50mm IN DIAMETER. WATER SERVICE CONNECTIONS 75mm IN DIAMETER AND LARGER SHALL BE MADE BY INSTALLING A TEE ON THE SUPPLY MAIN.

THE CURB STOP ON ALL WATER SERVICE CONNECTIONS 50mm IN DIAMETER AND LESS SHALL BE LOCATED AT THE PROPERTY LINE. CURB STOPS TO BE BRASS BALL VALVES. THE CONTROL VALVE SHALL BE LOCATED AT THE PROPERTY LINE. CURB STOPS SHALL BE LOCATED AT THE SUPPLY MAIN WITH THE VALVE BEING SECURED BY MEANS OF ANCHOR TEES, FLANGED FITTINGS OR TEES ROADS.- SERVICES SHALL BE INSTALLED ACCORDING TO OPSD 1104.010 AND 1104.020.
- THE MAXIMUM SIZE OF CONNECTION THAT CAN BE TAPPED INTO A 150mm DIAMETER WATERMAIN IS 50mm IN DIAMETER. WATER SERVICE CONNECTIONS 75mm IN DIAMETER AND LARGER SHALL BE MADE BY INSTALLING A TEE ON THE SUPPLY MAIN.
- THE CURB STOP ON ALL WATER SERVICE CONNECTIONS 50mm IN DIAMETER AND LESS SHALL BE LOCATED AT THE PROPERTY LINE. CURB STOPS TO BE BRASS BALL VALVES. THE CONTROL VALVE SHALL BE LOCATED AT THE PROPERTY LINE. CURB STOPS SHALL BE LOCATED AT THE SUPPLY MAIN WITH THE VALVE BEING SECURED BY MEANS OF ANCHOR TEES, FLANGED FITTINGS OR TEES ROADS.

GENERAL NOTES — WATER SERVICES

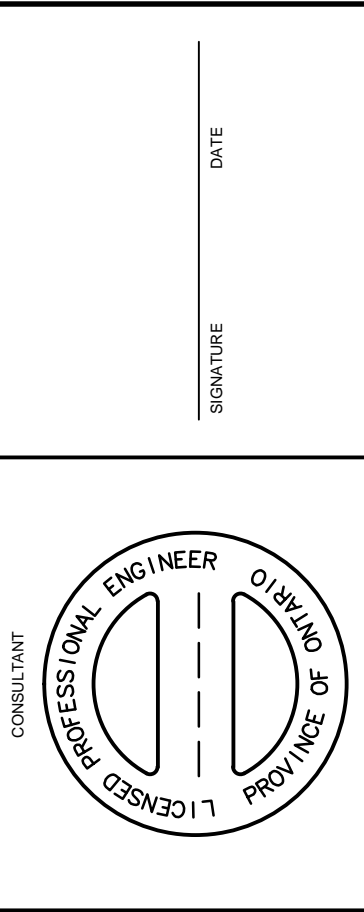
- EACH HOUSEHOLD UNIT SHALL HAVE SEPARATE 19mm MINIMUM DIAMETER, TYPE K COPPER WATER SERVICE.
- WATER SERVICES TO BE LOCATED AT THE CENTRE OF THE LOT. (SEE DWG C101 & C102)
- THE MINIMUM DEPTH OF COVER IS 1.8m.
- WATER SERVICES SHALL BE INSTALLED TO AVOID DRIVEWAY APPROACHES.
- NO COUPLINGS WILL BE ALLOWED BETWEEN THE CURB STOP AND MAIN STOP.
- STAINLESS STEEL SERVICE SADDLES SHALL BE USED WHEN TAPPING INTO THE PVC WATERMAIN.
- A REMOTE READOUT WATER METER WILL BE REQUIRED ON EACH RESIDENCE. MAKE AND MODEL IS TO BE ROCKWELL/SENSUS ECM METER (9/8"/3/4") COMPLETE WITH A REMOTE READER LOCATED ON AN OUTSIDE WALL ADJACENT TO THE HYDRO METER. (SEE DWG D106)

LEGEND

IRON BAR	—
STANDARD IRON BAR	—
EXISTING CURB & GUTTER	—
EXISTING CULVERT	—
EXISTING FENCE	—
EXISTING SIGN	—
PROPOSED STORM MANHOLE	—
PROPOSED SANITARY MANHOLE	—
EXISTING STORM SEWER AND MANHOLE	—
EXISTING SANITARY SEWER AND MANHOLE	—
EXISTING WATERMAIN	—
PROPOSED STORM SEWER AND MANHOLE	—
PROPOSED STORM SEWER AND CATCHBASIN MANHOLE	—
PROPOSED SANITARY SEWER AND MANHOLE	—
PROPOSED WATERMAIN	—
PROPOSED REAR LOT CATCHBASIN	—
PROPOSED SINGLE CATCHBASIN	—
PROPOSED DOUBLE CATCHBASIN	—
PROPOSED DOUBLE CATCHBASIN WITH ID	—
PROPOSED DITCH INLET CATCHBASIN	—
PROPOSED DOUBLE CATCHBASIN WITH ID	—
PROPOSED DOUBLE CATCHBASIN	—
PROPOSED DITCH INLET CATCHBASIN WITH ID	—
PROPOSED DOUBLE CATCHBASIN WITH ID	—
PROPOSED DITCH INLET CATCHBASIN	—
PROPOSED HYDRANT AND VALVE	—
PROPOSED VALVE AND BOX	—
PROPOSED VALVE AND CHAMBER	—
PROPOSED VALVE AND CHAMBER AND STORM SERVICE CONNECTION	—
PROPOSED SINGLE SANITARY AND STORM SERVICE CONNECTION	—

No.	Revision	Date	By	App'd
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No.	Elevation	Description



(CONSULTANTS COMPANY INFO & LOGO)

(PROJECT NAME) GENERAL NOTES

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Date	Date	Sheet No.	- Of -
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LEGEND

- IRON BAR
- STANDARD IRON BAR
- EXISTING CULVERT
- EXISTING FENCE
- EXISTING SIGN
- PROPOSED STORM MANHOLE
- PROPOSED SANITARY MANHOLE
- EXISTING STORM SEWER AND MANHOLE
- EXISTING SANITARY SEWER AND MANHOLE
- EXISTING WATERMAIN
- PROPOSED STORM SEWER AND MANHOLE
- PROPOSED STORM SEWER AND CATCHBASIN MANHOLE
- PROPOSED SANITARY SEWER AND MANHOLE
- PROPOSED WATERMAIN
- PROPOSED REAR LOT CATCHBASIN
- PROPOSED SINGLE CATCHBASIN
- PROPOSED SINGLE CATCHBASIN WITH ICD
- PROPOSED DOUBLE CATCHBASIN
- PROPOSED DOUBLE CATCHBASIN WITH ICD
- PROPOSED DITCH INLET CATCHBASIN
- PROPOSED HYDRANT AND VALVE
- PROPOSED VALVE AND BOX
- PROPOSED VALVE AND CHAMBER
- PROPOSED DOUBLE SANITARY AND STORM SERVICE CONNECTION AND STORM SERVICE CONNECTION
- PROPOSED SIDEWALK
- CHAIN LINK FENCE
- NOISE FENCE WITH GATE(S)
- PRIVACY FENCE
- LIMIT OF PROJECT BOUNDARY
- SPECIFIED HOUSE GRADE
- PROPOSED LOT NUMBER
- PROPOSED LOT NUMBER
- COMMUNITY WALL BOX
- REAR WALKOUT
- BACK SPLIT
- FRONT SPLIT
- ENGINEERED SPILL
- FS=247.23
- MIN. BASEMENT FLOOR SLAB ELEVATION
- PIPE FLOW ARROW
- PROPOSED TRANSFORMER
- PROPOSED LIGHT STANDARD
- JOINT UTILITY ROAD CROSSING
- GAS MAIN
- STREET TREE
- EXISTING TREE
- SUMP PUMP REQUIRED
- CURB DEPRESSION
- EXISTING CONTOUR
- ELEVATION
- PROPOSED ELEVATION
- OVERLAND FLOW ROUTE

No.	Elevation	Description
4		
3		
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No.	Revision	Date	By	App'd

CONSULTANT

ACCEPTED
TOWN OF BRADFORD
WEST GWILLIMBURY

SIGNATURE _____ DATE _____

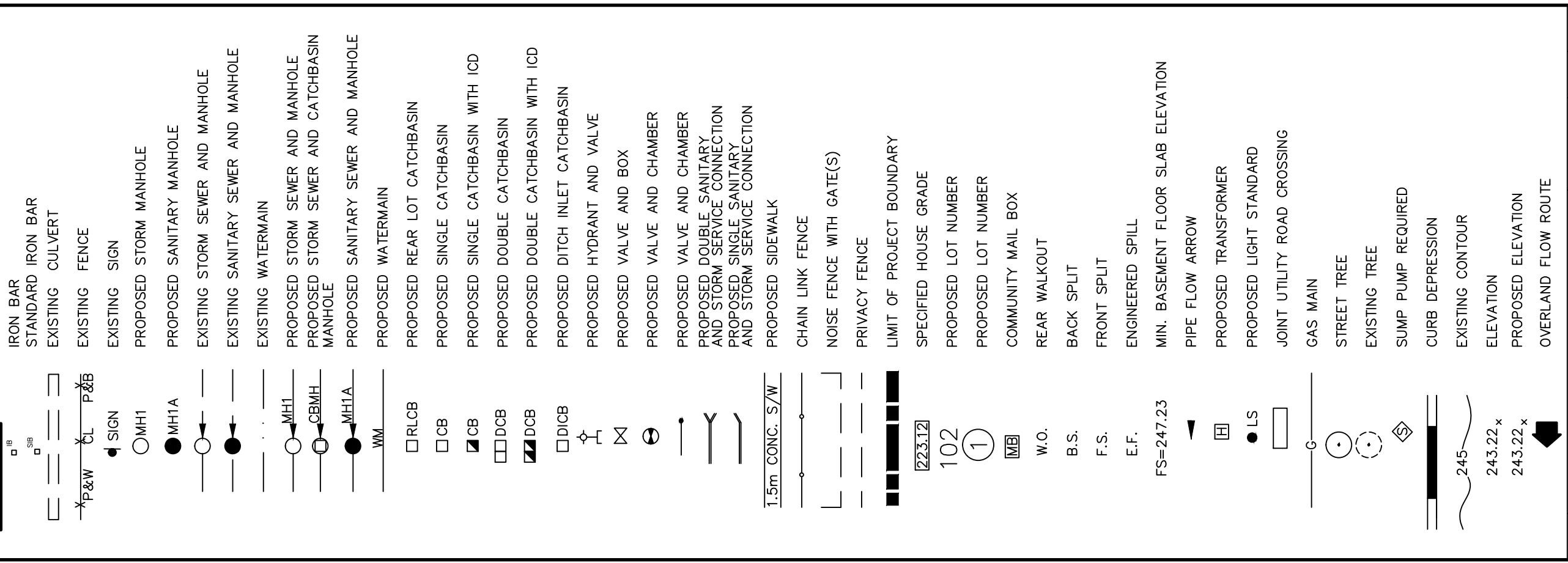


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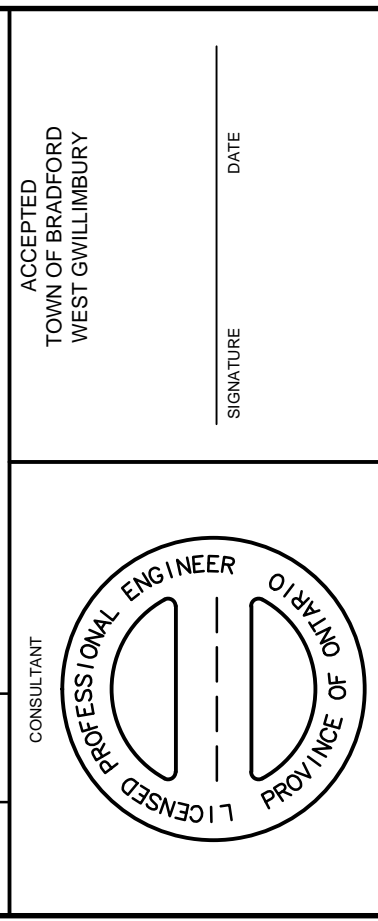
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GENERAL PLAN

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LEGEND



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ACCEPTED
TOWN OF BRADFORD
WEST GWILLIMBURY

SIGNATURE _____ DATE _____

**Bradford west
Gwylimbury**

(CONSULTANTS COMPANY
INFO & LOGO)

(PROJECT NAME)
DRAWING INDEX SHEET

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- DET 4
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- DET 6
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- UCP 2
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- SL 1
- L 1
- L 2
- L 3

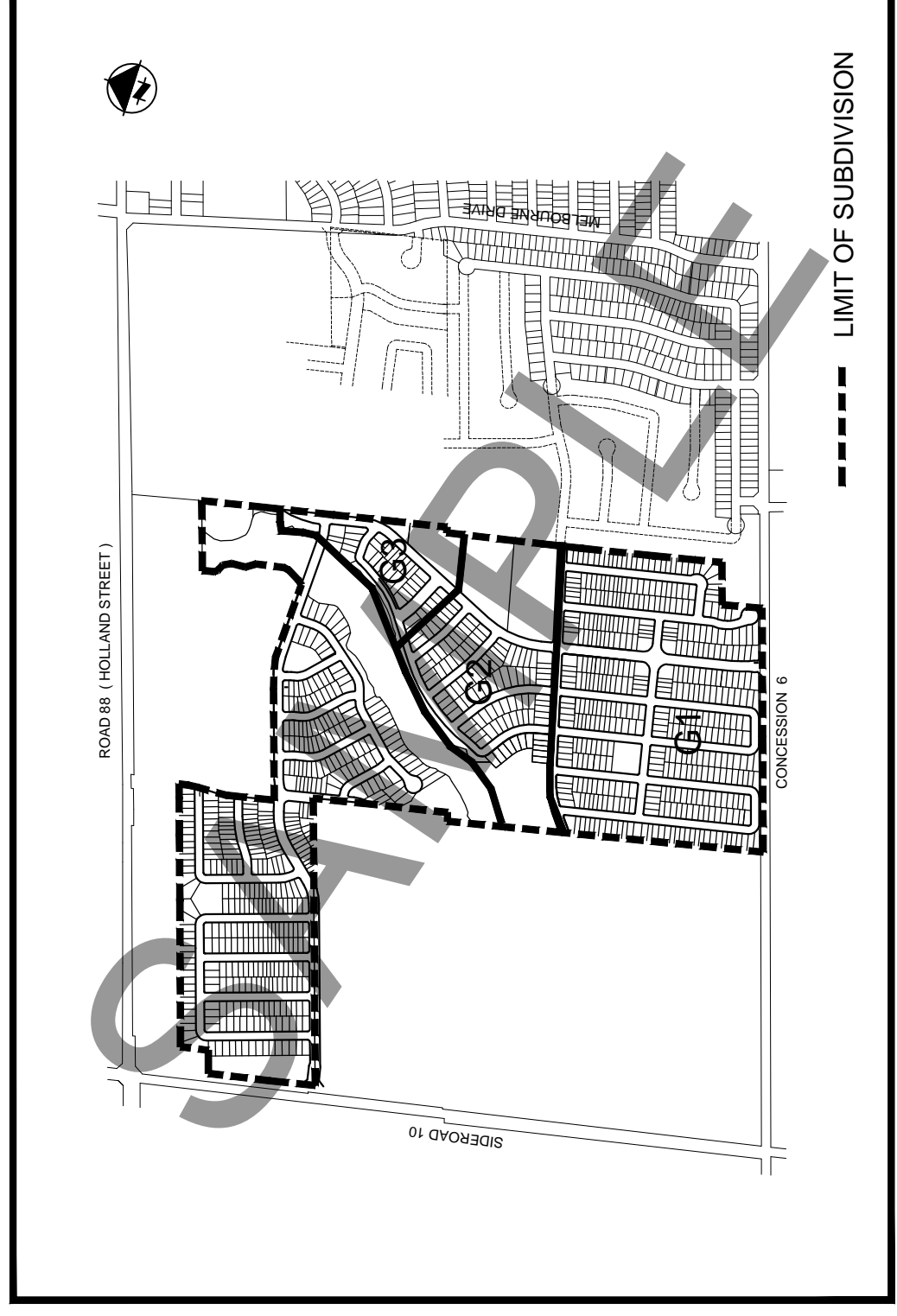
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- STORMWATER MANAGEMENT SECTIONS
- STORMWATER MANAGEMENT SECTIONS
- STORMWATER MANAGEMENT SECTIONS
- STORMWATER MANAGEMENT POND OUTLET CONTROL MANHOLE DETAILS
- ROAD CROSS SECTIONS
- TURNING CIRCLE DETAILS
- CATCHBASIN INLET CONTROL & SERVICE CONNECTION DETAILS
- RETAINING WALL DETAILS
- TEMPORARY SERVICE CONNECTION BLK 180 & BLK 183
- UTILITY COORDINATION PLAN
- UTILITY COORDINATION PLAN
- UTILITY COORDINATION PLAN
- UTILITY COORDINATION PLAN
- UTILITY COORDINATION PLAN
- UTILITY COORDINATION PLAN
- UTILITY COORDINATION PLAN
- UTILITY COORDINATION PLAN
- UTILITY DETAILS
- TRAFFIC SIGNAGE PLAN
- TRAFFIC SIGNAGE PLAN
- TRAFFIC SIGNAGE PLAN
- ELECTRICAL - STREET LIGHTING PLAN
- ELECTRICAL - STREET LIGHTING PLAN
- LANDSCAPING - STREET TREES
- LANDSCAPING - STREET TREES
- LANDSCAPING - ENTRY FEATURES

- IP
- GN
- G 1
- G 3
- STM 1
- STM 2
- STM 3
- STM 4
- SAN 1
- SAN 2
- SAN 3
- SAN 4
- GR 1
- GR 2
- GR 3
- GR 4
- GR 5
- GR 6
- GR 7
- GR 8
- PP 1
- PP 2
- PP 3
- PP 4
- PP 5
- PP 6
- PP 7
- PP 8
- PP 9
- PP 10
- PP 11
- PP 12
- PP 13
- PP 14
- PP 15
- PP 16
- PP 17
- PP 18
- PP 19

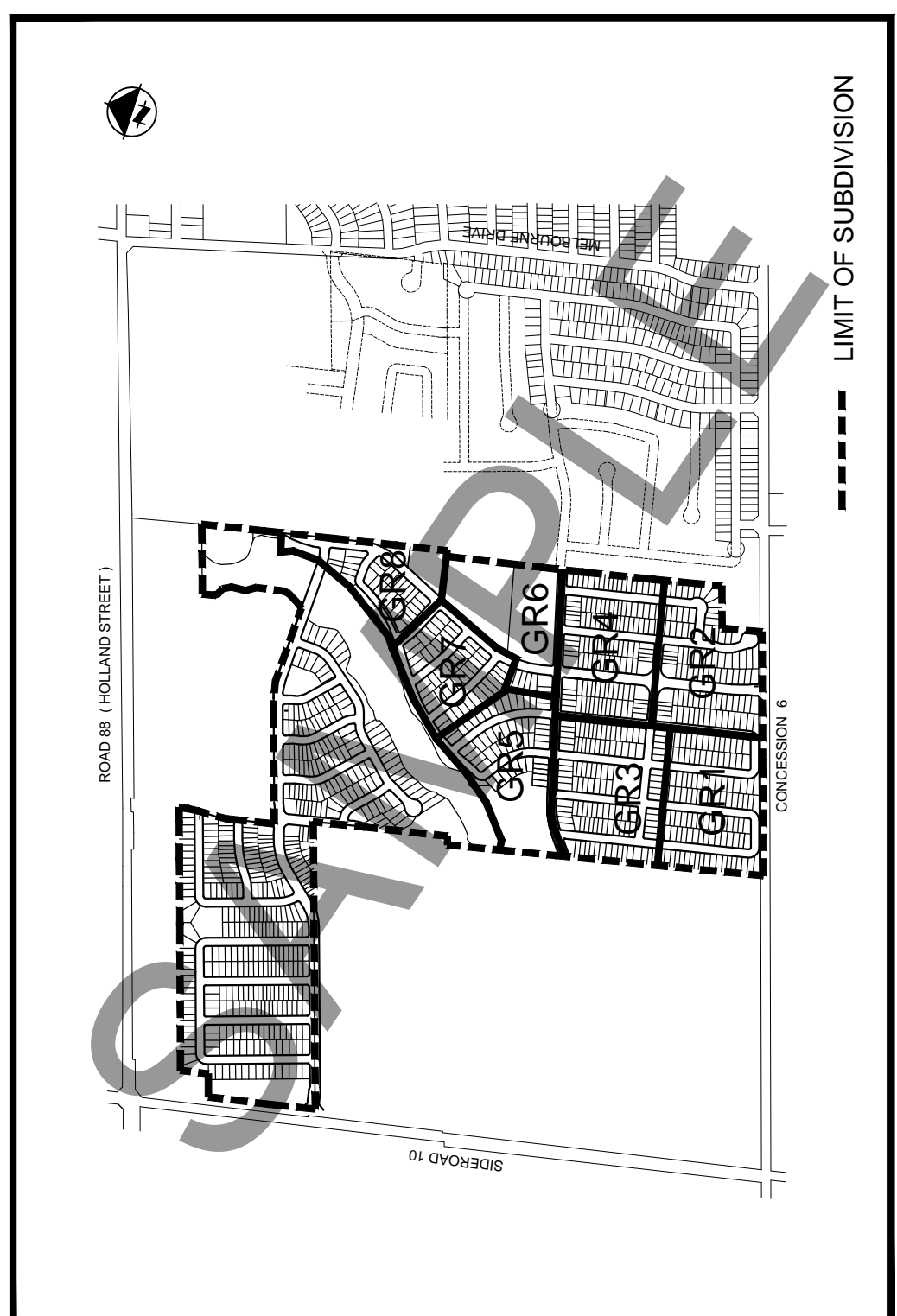
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- STA 1+200 TO STA 1+440
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- STA 0+920 TO STA 1+200
- STA 1+200 TO STA 1+480
- STA 1+480 TO STA 1+780
- STA 1+780 TO STA 2+044.77
- STA 0+000 TO STA 0+240
- STA 0+240 TO STA 0+480
- STA 0+480 TO STA 0+700
- STA 0+700 TO STA 0+953.32
- STA 0+000 TO STA 0+240
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- STA 0+700 TO STA 0+942.84
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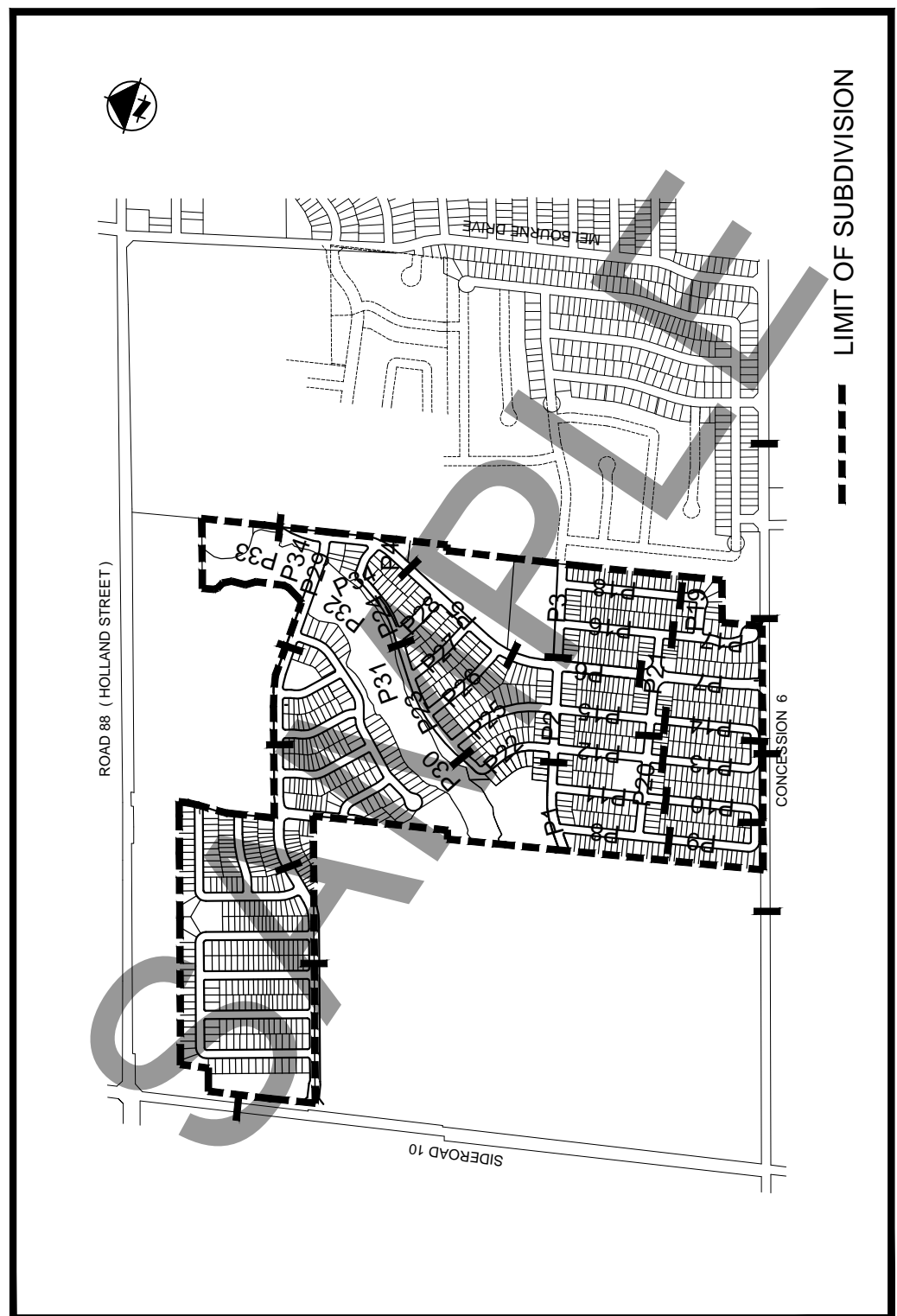
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- DRAWING INDEX
- NOTES
- GENERAL PLAN
- GENERAL PLAN
- GENERAL PLAN
- GENERAL PLAN
- STORM DRAINAGE PLAN
- STORM DRAINAGE PLAN
- EXTERNAL STORM DRAINAGE PLAN
- SANITARY DRAINAGE PLAN
- SANITARY DRAINAGE PLAN
- SANITARY DRAINAGE PLAN
- EXTERNAL SANITARY DRAINAGE PLAN
- GRADING PLAN
- GRADING PLAN
- GRADING PLAN
- GRADING PLAN
- GRADING PLAN
- GRADING PLAN
- GRADING PLAN
- GRADING PLAN
- AISHFORD ROAD
- AISHFORD ROAD
- AISHFORD ROAD
- WEST PARK AVENUE
- WEST PARK AVENUE
- WEST PARK AVENUE
- FARIS STREET
- FARIS STREET
- FARIS STREET
- FARIS STREET
- GWILLIMBURY DRIVE
- GWILLIMBURY DRIVE
- GWILLIMBURY DRIVE
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- MILLIGAN STREET
- MILLIGAN STREET
- BOOTH STREET
- BOOTH STREET



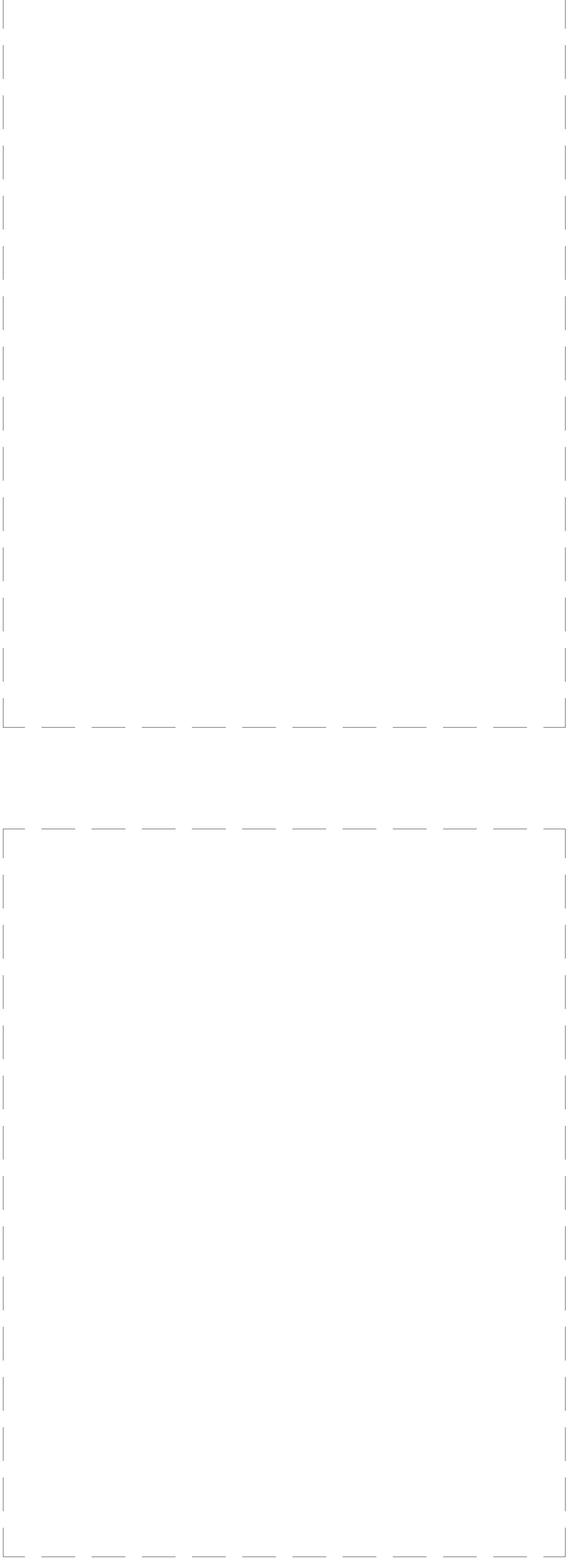
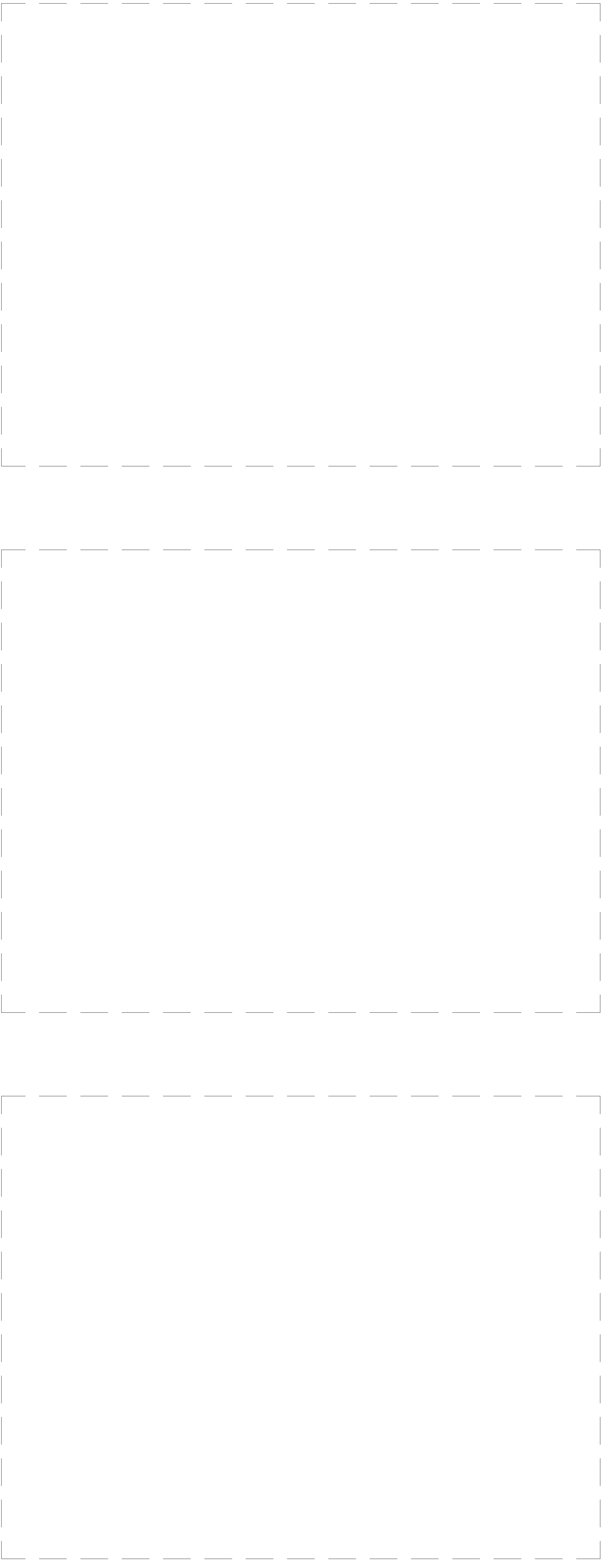
GENERAL PLAN LAYOUT



GRADING PLAN LAYOUT



PLAN & PROFILE LAYOUT



4			
3			
2			
1			
No.	Revision	Date	By

Benchmarks	
No.	Description

ACCEPTED
TOWN OF BRADFORD
WEST GWILLIMBURY

CONTRACTOR
LICENSED PROFESSIONAL ENGINEER
REGISTERED IN THE PROVINCE OF ONTARIO

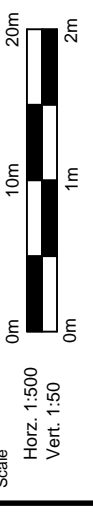
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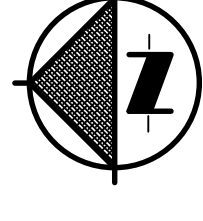
**Bradford
west
Gwillimbury**

(CONSULTANTS COMPANY
INFO & LOGO)

(PROJECT NAME)
STANDARD DETAILS

Checked by:	Project No.
Drawn by:	71-77
Designed by:	Drawing No.
Date:	DET
Scale:	Sheet No.
Horz. 1:500	
Vert. 1:50	





LEGEND

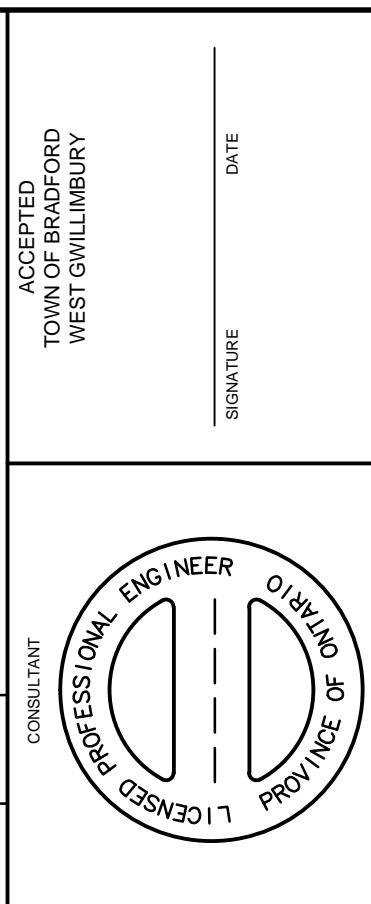
- IRON BAR
- STANDARD IRON BAR
- EXISTING CULVERT
- EXISTING FENCE
- EXISTING SIGN
- EXISTING SIGN
- PROPOSED STORM MANHOLE
- PROPOSED SANITARY MANHOLE
- EXISTING STORM SEWER AND MANHOLE
- EXISTING SANITARY SEWER AND MANHOLE
- EXISTING WATERMAIN
- PROPOSED STORM SEWER AND MANHOLE
- PROPOSED STORM SEWER AND CATCHBASIN MANHOLE
- PROPOSED SANITARY SEWER AND MANHOLE
- PROPOSED WATERMAIN
- PROPOSED REAR LOT CATCHBASIN
- PROPOSED SINGLE CATCHBASIN
- PROPOSED SINGLE CATCHBASIN WITH IC
- PROPOSED DOUBLE CATCHBASIN
- PROPOSED DOUBLE CATCHBASIN WITH IC
- PROPOSED DITCH INLET CATCHBASIN
- PROPOSED HYDRANT AND VALVE
- PROPOSED VALVE AND BOX
- PROPOSED VALVE AND CHAMBER
- PROPOSED VALVE AND CHAMBER
- PROPOSED DOUBLE SANITARY MANHOLE CONNECTION
- PROPOSED SINGLE SANITARY AND STORM SERVICE CONNECTION
- PROPOSED SIDEWALK
- CHAIN LINK FENCE
- NOISE FENCE WITH GATE(S)
- PRIVACY FENCE
- LIMIT OF PROJECT BOUNDARY
- SPECIFIED HOUSE GRADE
- 102
- PROPOSED LOT NUMBER
- COMMUNITY MAIL BOX
- REAR WALKOUT
- W.O.
- B.S.
- F.S.
- E.F.
- ENGINEERED SPILL
- MIN. BASEMENT FLOOR SLAB ELEVATION
- PIPE FLOW ARROW
- PROPOSED TRANSFORMER
- PROPOSED LIGHT STANDARD
- JOINT UTILITY ROAD CROSSING
- GAS MAIN
- STREET TREE
- EXISTING TREE
- SUMP PUMP REQUIRED
- CURB DEPRESSION
- EXISTING CONTOUR
- ELEVATION
- 243.22 x
- 243.22 x
- PROPOSED ELEVATION
- OVERLAND FLOW ROUTE

No.	Revision	Date	By	App'd
4				
3				
2				
1				

No.	Elevation	Description

ROGERS CABLE T.V. APPROVED: _____ SIGNATURE _____ DATE _____	BELL CANADA APPROVED: _____ SIGNATURE _____ DATE _____	ENBRIDGE GAS APPROVED: _____ SIGNATURE _____ DATE _____	POWERSTREAM APPROVED: _____ SIGNATURE _____ DATE _____	CANADA POST APPROVED: _____ SIGNATURE _____ DATE _____
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CONSULTANT



ACCEPTED
TOWN OF BRADFORD
WEST GWILLIMBURY

BRADFORD WEST GWILLIMBURY
 CONSULTANTS COMPANY
 INFO & LOGO

(PROJECT NAME)
 UTILITY CO-ORDINATION PLAN

Checked by: _____	Project No. 71-77
Drawn by: _____	Drawing No. UCP
Designed by: _____	Sheet No. _____
Scale: Hor. 1:500 Vert. 1:50	



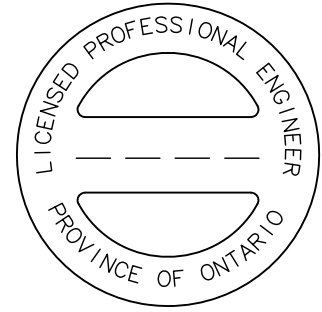
Planning Department

Complies with Zoning By-Law:

Date Reviewed:

Reviewed By:

CONSULTANT



ENGINEERING REVIEW

- ACCEPTED
- ACCEPTED AS NOTED
- REQUIRES RE-SUBMISSION

THIS PLAN HAS BEEN REVIEWED WITH RESPECT TO GENERAL CONFORMANCE WITH THE OVERALL LOT GRADING PLAN AND OUR APPROVAL OF THIS PLAN FOR NO OTHER REASON. WE ACCEPT NO RESPONSIBILITY FOR THE ACCURACY OF THE ELEVATIONS AND DIMENSIONS PROVIDED BY OTHERS.

DATE _____ REVIEWED BY _____
 (TOWN OF BRADFORD WEST GWILLIMBURY USE ONLY)

Page Size:
8.5" x 14" (legal)

DEVELOPER:	MAX BUILDING HEIGHT:	00.0 m	LOT AREA:	00.0 m	SAN INVERT:	000.00 m
	BUILDING HEIGHT:	00.0 m	LOT FRONTAGE:	00.0 m	STM INVERT:	000.00 m
	AVERAGE GRADE:	00.0 m	LOT COVERAGE:	00.0 m	DESIGNED:	##
BUILDER:	3				DRAWN:	##
	2				SCALE:	1:
	1				DATE:	##
CONSULTANT:	No.	Revision	Date	PLAN:	51M-	
	SITING & GRADING PLAN				LOT NO:	00



PLANNING DEPARTMENT

COMPLIES WITH ZONING BY-LAW:

DATE REVIEWED:

REVIEWED BY:

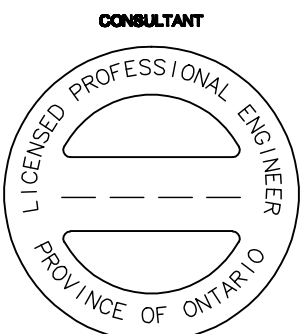
ENGINEERING REVIEW

- ACCEPTED**
- ACCEPTED AS NOTED**
- REQUIRES RE-SUBMISSION**

THIS PLAN HAS BEEN REVIEWED WITH RESPECT TO GENERAL CONFORMANCE WITH THE OVERALL LOT GRADING PLAN AND OUR APPROVAL OF THIS PLAN FOR NO OTHER REASON. WE ACCEPT NO RESPONSIBILITY FOR THE ACCURACY OF THE ELEVATIONS AND DIMENSIONS PROVIDED BY OTHERS.

DATE _____ REVIEWED BY _____
(TOWN OF BRADFORD WEST GWILLIMBURY USE ONLY)

Page Size:
11" x 17" (tabloid)



DEVELOPER: _____

BUILDER: _____

CONSULTANT: _____

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4				DRAWN:	##
3				SCALE:	1:
2				DATE:	##
1				PLAN:	51M-
No.	Revision	Date		LOT NO:	00
SITING & GRADING PLAN					