

- 1 Sanitary sewer leaving building at invert elevation
- 2 Storm sewer leaving building at invert elevation
- 3 Fire Department siamese connection.
- 4 Typical non-freeze hose bib.
- 5 Existing fire hydrant.
- 6 New storm manhole, with 143 mm Ø OFFICE PLATE
- 7 New sanitary manhole.
- 8 Existing storm sewer on street.
- 9 Existing sanitary sewer on street.
- 10 Existing water main on street.
- 11 Incoming gas main by Gas Company.
- 12 Proposed location of new gas meter by Gas Company. Exact location to be determined at site with Owner's representative and Gas Company official.
- 13 Existing sanitary manhole at invert
- 14 Existing storm manhole at invert elevation
- 15 Existing capped water service at property line.
- 16 Incoming Fire Service, valve and box at property line.
- 17 Incoming domestic service, valve and box at property line.
- 18 Concrete thrust blocks on water main change of direction.
- 19 Incoming electrical service.
- 20 Mechanical room location.
- 21 Transformer vault location.
- 22 Electrical room location.
- 23 250 storm drain @ invert elevation 189.350 with approved drop connection arrangements with 24 mm Ø OFFICE PLATE
- 24 450 dia. storm drain @ invert elevation 189.35.
- 25 150 dia. sanitary drain @ invert elevation 190.50 drop to 188.69 with approved drop connection arrangement.
- 26 250 dia. storm drain @ invert elev. 189.35 - 107 mm Ø OFFICE PLATE

**STORM WATER MANAGEMENT REQUIREMENTS**

- Downspouts to splash caps only (STD S-46 or equal). All roof leaders shall not be connected to storm sewers.
- Unless otherwise approved by the Director of Engineering, the downspout flow shall be directed towards the side yard swale draining to the street only.

INSTALLATION OF OFFICE PLATES AS SHOWN

**APPROVAL SUBJECT TO:**

- M.T.C. APPROVAL
- Regional Health Department Approval
- York Region Approval

**SITE PLAN DRAIN NOTES**

- 1 All manholes and catchbasins shall be installed in accordance with the regulations and specifications.
- 2 All inverts and elevations to be checked and verified before commencing any work.
- 3 All watermains and water services are to have a minimum cover of 5 ft./1525mm with a minimum horizontal spacing of (4 ft./1249mm) from all other utilities.
- 4 All watermains and water service materials and construction methods must correspond to the current P.U.C. standards and specifications.
- 5 Watermains and/or water service materials must be ductile iron pipe "ANSI" class 2 cement lined with tyton joints in 4" and larger and copper type "K" in 2" and smaller sizes.
- 6 CW meter shall be installed in accordance with the Department of Public Works standards.
- 7 Contractors to give a minimum 48 hours notice to township before commencing with any street connection work.
- 8 Any sewers not provided with 1219mm (4 ft.) cover are to be covered with insulation blanket 4" thick rigid fiberglass (4'0") 1219mm wide with ends turned down (6") 150mm.
- 9 All piping for the water, sanitary and storm systems shall meet the specification of A.S.A. & O.S.A.
- 10 All sizes and materials of plumbing pipes and drains shall be in accordance with the plumbing code and with authorities having jurisdiction.
- 11 Buried Water Piping: Pipe and fitting shall be class 52 ductile iron, cement lined or type "K" copper with tyton joint with wrought copper fittings.
- 12 Sanitary Drains Buried Shall be Either:
  - A - Transite equal to Johns Manville (Class 1500) "ring tile" couplings or Crowle cast iron fittings.
  - B - Vitrifired tile pipe with mechanical joints. C.S.A. # A61-1.
  - C - Approved P.V.C. pipe (up to 6" dia.) J.M. & DR35.
  - D - Cast Iron Pipe and fittings where required (med. wt. up to 6" dia.) (ex. H.W. over 6" dia.)
- 13 Storm Drains Buried Shall be Either:
  - A - Concrete - equal to best pipe (reinforced conc. class 4) with rubber gasket joint.
  - B - Transite - equal to Johns Manville (class 15) with "ring tile" couplings.
  - C - Approved P.V.C. pipe (up to 6" dia.) Johns Manville DR35.
  - D - Cast Iron Pipe and fittings where required (as sand drains.)
- 14 Where depth of buried pipes do not exceed 12 ft. of cover, use standard weight piping and fittings, where depth exceed 12 ft. but not over 26 ft. use extra heavy pipe and fittings.
- 15 Provide 4 ft. cover for all drains and wet services to protect against freeze-up.
- 16 Lay all piping on a bed of solid undisturbed earth or where this is not obtainable, on concrete pads, supported by concrete piers extending down to undisturbed bearing. Backfill with and or approved material 6" layers, mechanically compacted to give a min. of 95% modified proctor compaction.
- 17 Where any excavating is necessary in close proximity to or below any footing level, backfill with concrete to the level of the top of the highest adjacent footing. The Architect will determine the strength when conditions exists.

**APPROVED**  
TOWN OF MARKHAM  
ENGINEERING DEPARTMENT  
P. O. KELUAR, P.Eng.  
DIRECTOR OF ENGINEERING  
DATE: OCT 17 1986

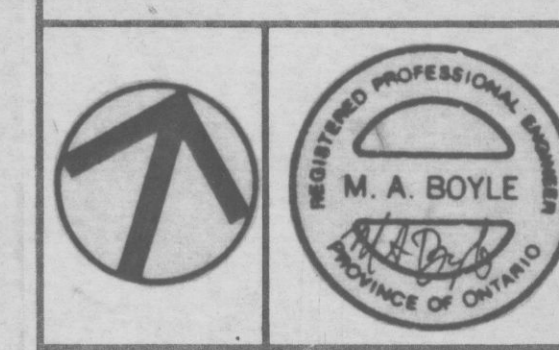
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ENGINEERING DEPARTMENT  
TOWN OF MARKHAM

22 SEPT 86 ISSUED FOR PRICING

NO	DATE	REVISIONS

**BOYLE-LAKEN ENGINEERING LTD**  
TORONTO ONTARIO

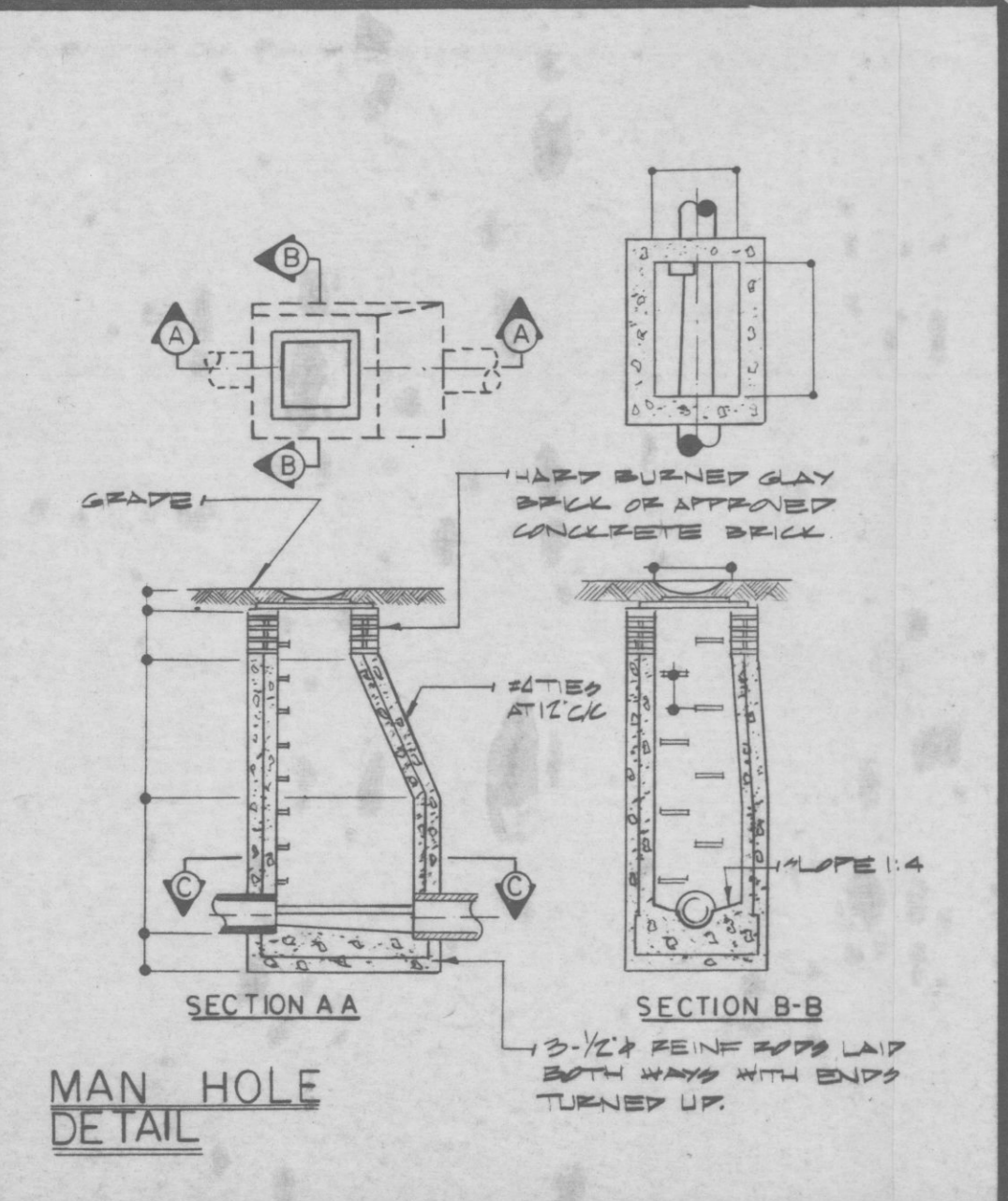
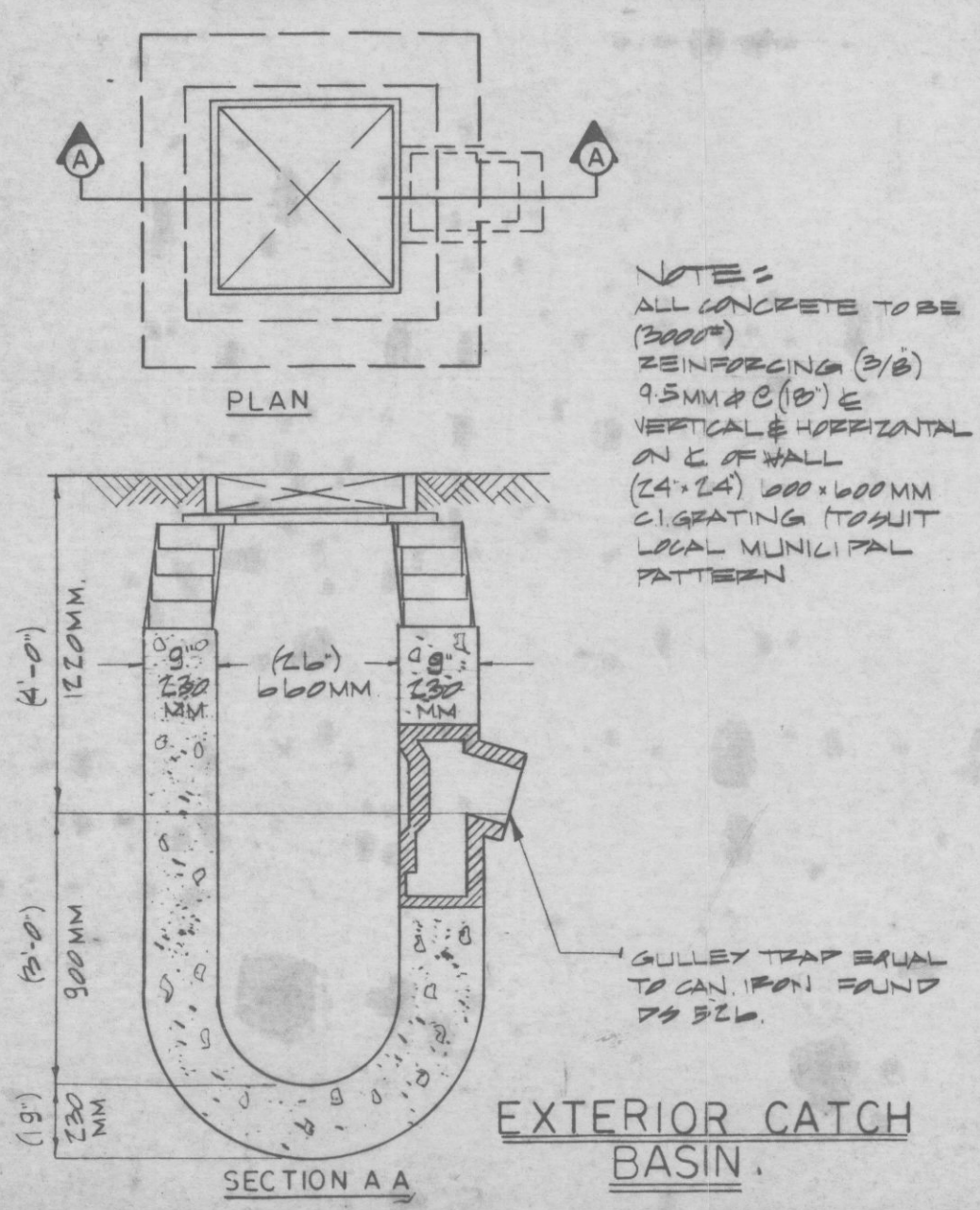
CONTRACTOR SHALL CHECK AND VERIFY ALL CLEARANCES ON THE JOB AND REPORT ALL INTERFERENCE TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNTIL 9:30 AM BY DATE



PROJECT NAME  
**2 STOREY OFFICE BUILDING**  
ATELOO INC.  
MARKHAM, ONTARIO

DRAWING TITLE  
**SITE PLAN MECHANICAL**

DATE	DRAWN	CHECKED	SCALE
SEPT 86	MF	L.A.	1:250
PROJECT NO.	86101	NO.	M-1 OF 6



NOTES:  
ALL CONCRETE TO BE REINFORCED (3/8) 9.5MM @ (10) E VERTICAL & HORIZONTAL ON E OF WALL (24-26) USE 100MM CLEARANCE RESULT LOCAL MUNICIPAL PATTERN

EXTERIOR CATCH BASIN

MAN HOLE & TAIL

W.S. EL. 191.50  
Ø 107 mm

W.S. EL. 193.50  
Ø 143 mm