SECTION L - STANDARD DRAWINGS

L1.00 LIST OF DRAWINGS

GN - GENERAL NOTES

101 - TYPICAL ROAD CROSS SECTION (RURAL)

102 - TYPICAL ROAD CROSS SECTION (URBAN)

103 - TYPICAL 90^{O} BEND DETAIL

104 - CONCRETE SIDEWALK

105 - TYPICAL DETACHED LOT SERVICE ARRANGEMENT

106 - HEIGHT AND LOCATION OF SIGNS

107 - CHAIN LINK FENCE

108 - STREET LIGHT DETAILS

109 – TYPICAL CUL-DE-SAC, URBAN OR RURAL ROADS

110 – RURAL ENTRANCES

STORM SEWER DESIGN CALCULATION SHEET

SANITARY SEWER DESIGN CALCULATION SHEET

GENERAL NOTES – GENERAL

A THE NOTES ON THIS SHEET APPLY TO ALL WORKS UNDER THIS CONTRACT UNLESS OTHERWISE NOTED ON THE PLAN AND PROFILE DRAWINGS AND/OR SPECIFIC DETAIL DRAWINGS.

B THE STANDARD DRAWINGS OF THE TOWNSHIP OF ADJALA–TOSORONTIO, ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS (OPSS) AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) CONSTITUTE PART OF THE PLANS OF THIS CONTRACT.

C ORDER OF PRECEDENCE OF STANDARD DRAWINGS IS FIRSTLY TOWNSHIP OF ADJALA–TOSORONTIO STANDARD DRAWINGS, AND SECONDLY ONTARIO PROVINCIAL STANDARD DRAWINGS.

D THE STANDARD DRAWINGS INCLUDED WITH THESE PLANS ARE PROVIDED FOR CONVENIENCE ONLY AND ARE NOT TO BE CONSTRUED TO BE A COMPLETE SET FOR THE PURPOSE OF THE CONTRACT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL RELEVANT STANDARD DRAWINGS AND SPECIFICATIONS AS REQUIRED FOR THIS CONTRACT.

E UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN METRES OR MILLIMETERS.

F 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.

G EXISTING SERVICES AND UTILITIES SHOWN ON THESE CONTRACT DRAWINGS ARE BASED ON THE BEST INFORMATION AVAILABLE AND THEIR LOCATIONS ARE NOT GUARANTEED. 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.

H ALL SITE CONTROL AND EROSION PROTECTION DEVICES ARE TO BE IN PLACE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL CONSTRUCTION IS COMPLETE AND THE GRASS HAS ESTABLISHED GROWTH, SUBJECT TO APPROVAL BY THE TOWNSHIP'S ENGINEER.

I NATIVE MATERIAL, SUITABLE FOR BACKFILL, SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.

J GRANULAR MATERIAL USED FOR BACKFILL, SHALL BE PLACED IN LAYERS 150mm IN DEPTH MAXIMUM AND COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.

K ALL DISTURBED AREAS ARE TO BE REINSTATED TO THEIR ORIGINAL CONDITION OR BETTER, AS DETERMINED BY THE ENGINEER. ALL GRASS AND VEGETATION COVERED AREAS SHALL BE RESTORED BY PLACING 100mm OF APPROVED TOPSOIL AND NURSERY SOD FOR A MINIMUM WIDTH OF 2m AND THE BALANCE TO BE SEED AND MULCH.

TOWNSHIP OF ADJALA – TOSORONTIO	
GENERAL NOTES GENERAL	SCALE: N.T.S. STD.DWG. GN–G

GENERAL NOTES – ROAD

A THE ROAD PAVEMENT STRUCTURE SHALL CONSIST OF THE FOLLOWING UPON CONFIRMATION BY A SOILS CONSULTANT:

LOCAL ROAD:	– 40mm HL3 SURFACE COURSE ASPHALT – 50mm HL8 BASE COURSE ASPHALT – 150mm GRANULAR 'A' – 300mm GRANULAR 'B'
BOULEVARD AND DITCHES	– 100mm TOPSOIL, SEED AND MULCH

B NATIVE SUBGRADE SHALL HAVE A CROSS–FALL OF 3% AND THE MATERIAL SHALL BE APPROVED BY A SOILS CONSULATANT AND IS SUBJECT TO APPROVAL BY THE TOWNSHIP'S ENGINEER.

C NATIVE SUBGRADE TO BE COMPACTED TO MINIMUM 95% STANDARD PROCTOR MAXIMUM DRY DENSITY AND SHALL BE PROOF ROLLED.

D ALL FENCING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWNSHIP OF ADJALA–TOSORONTIO DESIGN STANDARDS.

E ALL GRADING MUST CONFORM TO THE TOWNSHIP OF ADJALA–TOSORONTIO LOT GRADING AND DRAINAGE POLICIES CURRENTLY IN EFFECT.

F PROVIDE FROST TAPERS FOR ROAD CROSSING CULVERTS AS PER OPSD 803.030.

G DRIVEWAY CULVERTS TO BE A MINIMUM 450mm DIAMETER CSP, WITH A THICKNESS OF 2mm. LENGTH TO BE 10m MINIMUM, OR 7m WITH HEADWALLS

H RESIDENTIAL DRIVEWAYS TO BE CONSTRUCTED WITH A MINIMUM OF 50mm HL3 ASPHALT ON 150mm GRANULAR "A" OR AS APPROVED BY THE TOWNSHIP ENGINEER.

I ROAD OCCUPANCY PERMIT IS REQUIRED FROM THE COUNTY OF SIMCOE AND/OR THE TOWNSHIP WORKS DEPARTMENT PRIOR TO THE COMMENCEMENT OF ANY WORK IN THEIR RESPECTIVE RIGHT–OF–WAYS. A MINIMUM 48 HOUR NOTICE IS REQUIRED.

TOWNSHIP OF ADJALA – TOSORONTIO	
GENERAL NOTES ROAD	SCALE: N.T.S. STD.DWG. GN–R

GENERAL NOTES – SANITARY SEWERS

A SANITARY SEWER TO BE GENERALLY LOCATED 1.5m FROM THE CENTRELINE OF THE ROAD UNLESS NOTED OTHERWISE.

B FLEXIBLE PIPE SHALL BE PVC DR35 OR APPROVED EQUIVALENT, WITH RUBBER GASKET TYPE JOINTS AND SHALL CONFORM TO CSA (B–182.2,3,4). RIGID PIPE SHALL BE REINFORCED CONCRETE WITH A STRENGTH OF 100N/mm/m CONFORMING TO CSA STANDARD A257.2–M1982 CLASS 100D. PIPE JOINTS TO BE RUBBER GASKET AS PER CSA STANDARD A257.3.

MAXIMUM PIPE DEFLECTION FROM COMBINED LIVE AND DEAD LOADING SHALL NOT EXCEED ANY CSA, OPS OR MANUFACTURERS RECOMMENDED SPECIFICATIONS.

C FLEXIBLE SEWERS 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, 802.031 AND 802.032 AS APPLICABLE. MATERIAL MAY BE REPLACED ONLY BY APPROVAL OF THE ENGINEER.

D NO FLEXIBLE PIPE SEWERS WILL BE INSTALLED WITH A DEPTH OF COVER GREATER THAN 6m UNLESS SPECIFICALLY APPROVED BY THE ENGINEER.

E PRECAST MAINTENANCE HOLES SHALL BE IN ACCORDANCE WITH OPSD 701.010 (1200mm DIAMETER). PRECAST MAINTENANCE HOLES GREATER THAN 5m DEEP SHALL BE CONSTRUCTED WITH A SAFETY PLATFORM IN ACCORDANCE WITH OPSD 404.020. FRAME AND COVER SHALL BE IN ACCORDANCE WITH OPSD 401.01 TYPE "A".

F 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 CROSSFALL ADJUSTMENT SHALL BE MADE USING PRODUCTS SPECIFICALLY MANUFACTURED FOR THAT PURPOSE.

TOWNSHIP OF ADJALA – TOSORONTIO	
GENERAL NOTES SANITARY SEWERS	SCALE: N.T.S. STD.DWG. GN–SAN

GENERAL NOTES – SANITARY SEWERS

G ALL CONNECTIONS TO THE SANITARY MAIN SHALL BE MADE WITH PRE–MANUFACTURED APPROVED TEES.

H MAINTENANCE HOLE BENCHING SHALL CONFORM WITH OPSD 701.021 WITH BENCHING TO THE OBVERT.

I DROP STRUCTURES SHALL CONFORM WITH OPSD 1003.010 AND 1003.020.

GENERAL NOTES – SANITARY SERVICE LATERALS

A SANITARY LATERAL CONNECTIONS TO BE LOCATED 2m TO THE RIGHT OF WATER SERVICES AS INDICATED ON THE DRAWINGS.

B PIPE TO BE MINIMUM 125mm DIAMETER PVC SDR 28, RUBBER GASKET TYPE JOINTS, AND SHALL CONFORM TO CSA (B–182.2,3,4), (GREEN IN COLOUR).

C CROWLE FITTINGS SHALL BE INSTALLED ON SERVICES AT STREET LINE.

D MINIMUM DEPTH OF LATERAL AT PROPERTY LINE SHALL BE 2.6m MEASURED FROM THE SEWER OBVERT TO FINISHED GROUND SURFACE ELEVATION, UNLESS NOTED OTHERWISE.

E MINIMUM PIPE SLOPE TO BE 2%, MAXIMUM 8% (SEE OPSD 1006.0220).

F SANITARY LATERAL CONNECTIONS TO BE EXTENDED 2.5m BEYOND STREET LINE INTO THE LOTS.

G THE LOCATION OF THE END OF EACH LATERAL TO BE MARKED 2.5m PAST STREET LINE WITH A 50mmx100mm WOOD MARKER. PAINTED GREEN EXTENDING FROM SERVICE INVERT TO 300mm ABOVE PROPOSED FINISHED GROUND LEVEL.

H ALL CONNECTIONS TO NEW SANITARY MAINS SHALL BE WITH PRE–MANUFACTURED, APPROVED TEES.

TOWNSHIP OF ADJALA – TOSORONTIO	
GENERAL NOTES SANITARY SEWERS	SCALE: N.T.S. STD.DWG. GN–SAN

GENERAL NOTES – STORM SEWER

A STORM SEWER TO BE LOCATED TYPICALLY 1.5m TO THE EAST OR SOUTH OF CENTRELINE OF THE ROAD.

B PIPE SHALL BE CONCRETE WITH A MINIMUM DIAMETER OF 300mm AND SHALL CONFORM TO CSA STANDARD A257.1 WITH A MINIMUM STRENGTH OF CLASS II OR HIGH DENSITY POLYETHYLENE CONFORMING TO CSA B 182.6 (BOSS 2000 HD PE).

C SEWERS SHALL BE CONSTRUCTED WIITH BEDDING AS PER OPSD 802.01, UNLESS APPROVED OTHERWISE BY THE TOWNSHIP ENGINEER.

D 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'.

E SINGLE CATCHBASIN LEADS TO BE 250mm DIAMETER MINIMIM.

F TWIN–INLET CATCHBASIN LEADS TO BE 300mm DIAMETER MINIMUM.

G CATCHBASIN LEADS SHALL BE HIGH DENSITY POLYETHYLENE PIPE (BOSS 2000 OR EQUIVALENT) OR PVC PIPE (ULTRA–RIB OR EQUIVALENT).

H CATCHBASIN GRATES ARE TO BE RAMPED USING HOT–MIX ASPHALT. CATCHBASINS AT LOW POINTS SHALL BE SET TO BASE ASPHALT AND ADJUSTED TO SURFACE COURSE.

I WHERE CATCHBASINS ARE CONNECTED DIRECTLY TO SEWERS, PRE–MANUFACTURED TEES SHALL BE USED.

TOWNSHIP OF ADJALA – TOSORONTIO	
GENERAL NOTES STORM SEWER	SCALE: N.T.S. STD.DWG. GN–STM

GENERAL NOTES – WATERMAINS

A WATERMAIN MATERIAL TO BE POLYVINYL CHLORIDE PVC C-900 CLASS 150 (DR 18). PVC WATERMAIN SHALL INCLUDE #12 TRACER WIRE.

B CAST IRON MECHANICAL JOINT FITTINGS MEETING AWWA SPECIFICATIONS C-907 AND CSA B138.2 SHALL BE USED ON PVC WATERMAIN 150 TO 300mm IN DIAMETER.

C WATERMAIN SHALL BE LOCATED 4.5m FROM STREET LINE OR AS PER STANDARD ROAD CROSS-SECTION.

D A MINIMUM OF 0.5m VERTICAL CLEARANCE BETWEEN THE WATERMAIN AND ALL UTILITIES MUST BE KEPT, WHILE STILL MAINTAINING A MINIMUM DEPTH OF COVER AT ALL TIMES.

E WATERMAIN SHALL BE INSTALLED WITH A MIMIMUM COVER OF 1.8m.

F PVC WATERMAIN BEDDING SHALL CONSIST OF CLEAR SAND, 150mm BELOW AND 300mm ABOVE THE WATERMAIN (REFER TO OPSD 802.010).

G ALL FILL AREAS SHALL BE FILLED TO SUBGRADE PRIOR TO INSTALLATION. FILL AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY PRIOR TO THE INSTALLATION OF THE WATERMAIN.

H PIPE DEFLECTION SHOULD BE USED WHEREVER POSSIBLE TO MINIMIZE THE USE OF BENDS. WHEREVER 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.

I CONCRETE THRUST BLOCKS ARE TO BE INSTALLED AT ALL TEES, BENDS, HYDRANTS, ENDS OF MAINS AND CONNECTIONS 100 mm AND LARGER, AS PER OPSD 1103.01, OR 1103.02 UNLESS NOTED OTHERWISE.

TOWNSHIP OF ADJALA – TOSORONTIO	
GENERAL NOTES WATERMAINS	SCALE: N.T.S. STD.DWG. GN–WM

GENERAL NOTES – WATERMAINS

J AT ALL THRUST BLOCK LOCATIONS IN FILL AREAS, ALL SEGMENTS OF THE FITTING AND THE WATERMAIN SHALL BE TIED USING EMCO UNDERGROUND BELL JOINT CLAMPS OR EQUIVALENT, OR TIE–RODS INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. WHERE THE DEFLECTION ANGLE AT THE THRUST BLOCK IS MORE THAN 45, ADDITIONAL TIE–ROD ASSEMBLIES SHALL BE INSTALLED FOR AT LEAST 10 m EACH SIDE OF THE THRUST BLOCK. IMPORTED GRANULAR FILL (GRANULAR "B" OR EQUIVALENT) IS TO BE USED BEHIND THE THRUST BLOCK AND FOR A MINIMUM DISTANCE OF 2m EACH SIDE OF THE THRUST BLOCK. THE IMPORTED GRANULAR FILL IS TO BE COMPACTED TO A MINIMUM OF 100% STANDARD PROCTOR MAXIMUM DRY DENSITY. PRIOR TO CONSTRUCTION OF THE THRUST BLOCKS, THE CONTRACTOR SHALL OBTAIN THE WRITTEN APPROVAL FOR THE BACKFILL FROM A QUALIFIED GEOTECHNICAL ENGINEER. TIE–RODS AND CLAMPS SHALL BE GIVEN TWO (2) COATS OF BITUMASTIC PAINT.

K FIRE HYDRANTS TO BE CANADA CENTURY, COMPRESSION TYPE COMPLETE WITH PUMPER NOZZLE. HYDRANT TEES TO BE ANCHOR STYLE.

L HYDRANT FLANGE ELEVATIONS SHALL BE SET AT A GRADE THAT WILL GIVE A FLANGE ELEVATION OF 50 mm TO 100 mm ABOVE THE FINAL GRADE.

M HYDRANTS SHALL BE LOCATED A MINIMUM OF 1.2 METRES FROMTHE EDGE OF DRIVEWAYS, OR HOUSE SERVICE LOCATION. OTHER ABOVE GROUND UTILITIES SUCH AS LIGHT STANDARDS, TRANSFORMER OR STREET SIGNS SHALL NOT BE LOCATED ANY CLOSER THAN 3 m TO A HYDRANT.

N HYDRANTS SHALL BE LOCATED ON THE PROJECTION OF A LINE AND OFFSET FROM THE STREET LINE IN ACCORDANCE WITH THE STANDARD CROSS–SECTION.

O HYDRANTS SHALL BE INSTALLED AT THE END OF CUL–DE–SACS AND DEAD END STREETS.

P UNLESS SPECIFIED OR APPROVED BY THE TOWNSHIP ENGINEER, ALL VALVES SHALL BE MUELLER RESILIENT SEAT GATE VALVES WITH VALVE BOX. VALVES SHALL HAVE A NON–RISING STEM AND A 50mm SQUARE OPERATING NUT OPENING COUNTER CLOCKWISE.

Q VALVES IN EXCESS OF 1.8 m IN DEPTH SHALL REQUIRE A VALVE STEM EXTENSION.

TOWNSHIP OF ADJALA – TOSORONTIO	
GENERAL NOTES WATERMAINS	SCALE: N.T.S. STD.DWG. GN–WM

GENERAL NOTES – WATERMAINS

R THE CONTRACTOR SHALL INFORM THE TOWNSHIP 48 HOURS IN ADVANCE PRIOR TO COMMENCING WORK ON ANY PART OF THE WATER SYSTEM.

S A LEAKAGE TEST SHALL BE PERFORMED ON THE COMPLETED WATER DISTRIBUTION SYSTEM AT A HYDROSTATIC PRESSURE OF 1MPa. THE DURATION OF THE TEST SHALL BE A MINIMUM OF 2 HOURS. MAXIMUM ALLOWABLE LEAKAGE SHALL NOT EXCEED 2.22 L/km OF PIPE/mm OF NOMINAL DIA. PER DAY. THE DEVELOPER SHALL ARRANGE THE TEST FOR SECTIONS OF MAINS AND SHALL INFORM THE TOWNSHIP ENGINEER WHEN A SECTION IS ON TEST AND READY FOR INSPECTION.

T BEFORE BEING PLACED IN SERVICE, WATER SYSTEM SHALL BE SWABBED AND DISINFECTED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE MINISTRY OF THE ENVIRONMENT. CHLORINE MUST BE APPLIED TO THE MAIN SO THAT THE MINIMUM AVAILABLE CHLORINE CONCENTRATION AT ANY POINT IN THE MAIN IS 50 ppm. AT THE END OF 24 HOURS THE CONCENTRATION MUST BE AT LEAST 10 ppm.

U ALL MECHANICAL FITTINGS SHALL HAVE ZINC ANODES INSTALLED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. AS A MINIMUM ZINC PROTECTO CAPS OR SACRIFICIAL WASHERS SHALL BE INSTALLED ON EVERY BOLT.

V A MINIMUM HORIZONTAL SEPARATION OF 2.5m SHALL BE MAINTAINED BETWEEN THE WATERMAIN AND SANITARY SEWER.

TOWNSHIP OF ADJALA – TOSORONTIO	
GENERAL NOTES WATERMAINS	SCALE: N.T.S. STD.DWG. GN–WM

GENERAL NOTES – WATER SERVICES

A EACH HOUSING UNIT SHALL HAVE SEPARATE 25 mm MINIMUM DIAMETER 1,103.2 kPa RATED POLYETHYLENE WATER SERVICE.

B WATER SERVICES TO BE LOCATED AT THE CENTRE OF THE LOT.

C THE MINIMUM DEPTH OF COVER IS 1.8 m.

D WATER SERVICES SHALL BE INSTALLED TO AVOID DRIVEWAY APPROACHES.

E WATER SERVICES SHALL BE INSTALLED TO THE PROPERTY LINE WITH A MUELLER A–220 MAIN STOP, MUELLER A–6006 CURB STOP AND MUELLER A–726 SERVICE BOX OR APPROVED EQUIVALENT.

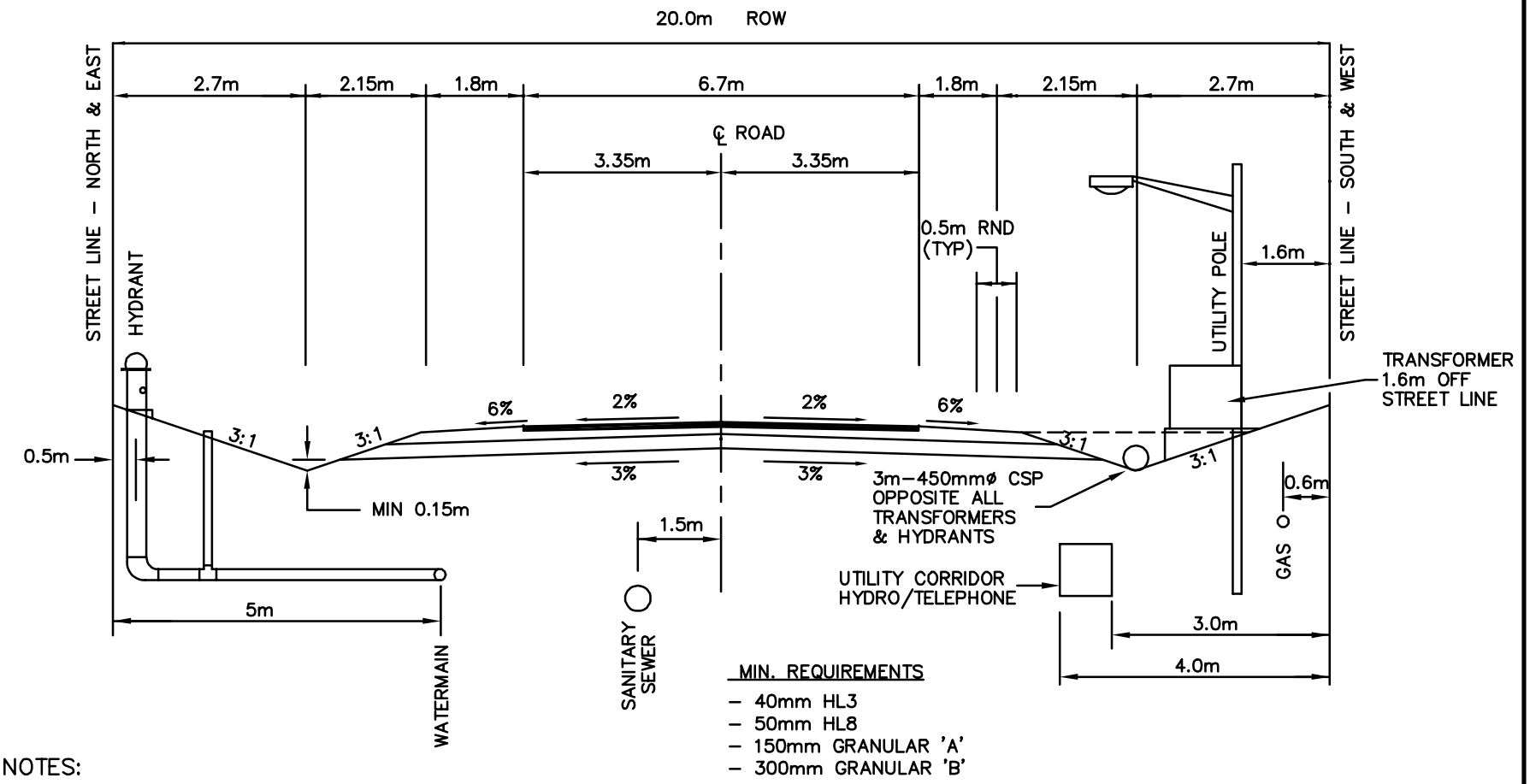
F NO COUPLINGS WILL BE ALLOWED BETWEEN THE CURB STOP AND MAIN STOP.

G STAINLESS STEEL SERVICE SADDLES SHALL BE USED WHEN TAPPING INTO THE PVC WATER MAIN.

H A REMOTE READOUT WATER METER WILL BE REQUIRED ON EACH RESIDENCE. MAKE AND MODEL IS TO BE ROCKWELL/SENSUS ECR METER (5/8"x3/4") COMPLETE WITH A REMOTE READER LOCATED ON AN OUTSIDE WALL, ADJACENT TO THE HYDRO METER.

I INSULATE WATER SERVICES AT DITCH OR UTILITY CROSSINGS WITH STYROFOAM HI–40 OR URECON INSULATION. INSULATION SHALL EXTEND A MINIMUM OF 0.6m BEYOND THE SERVICE PIPE OR UTILITY.

TOWNSHIP OF ADJALA – TOSORONTIO	
GENERAL NOTES WATER SERVICES	SCALE: N.T.S. STD.DWG. GN–WM



NOTES:

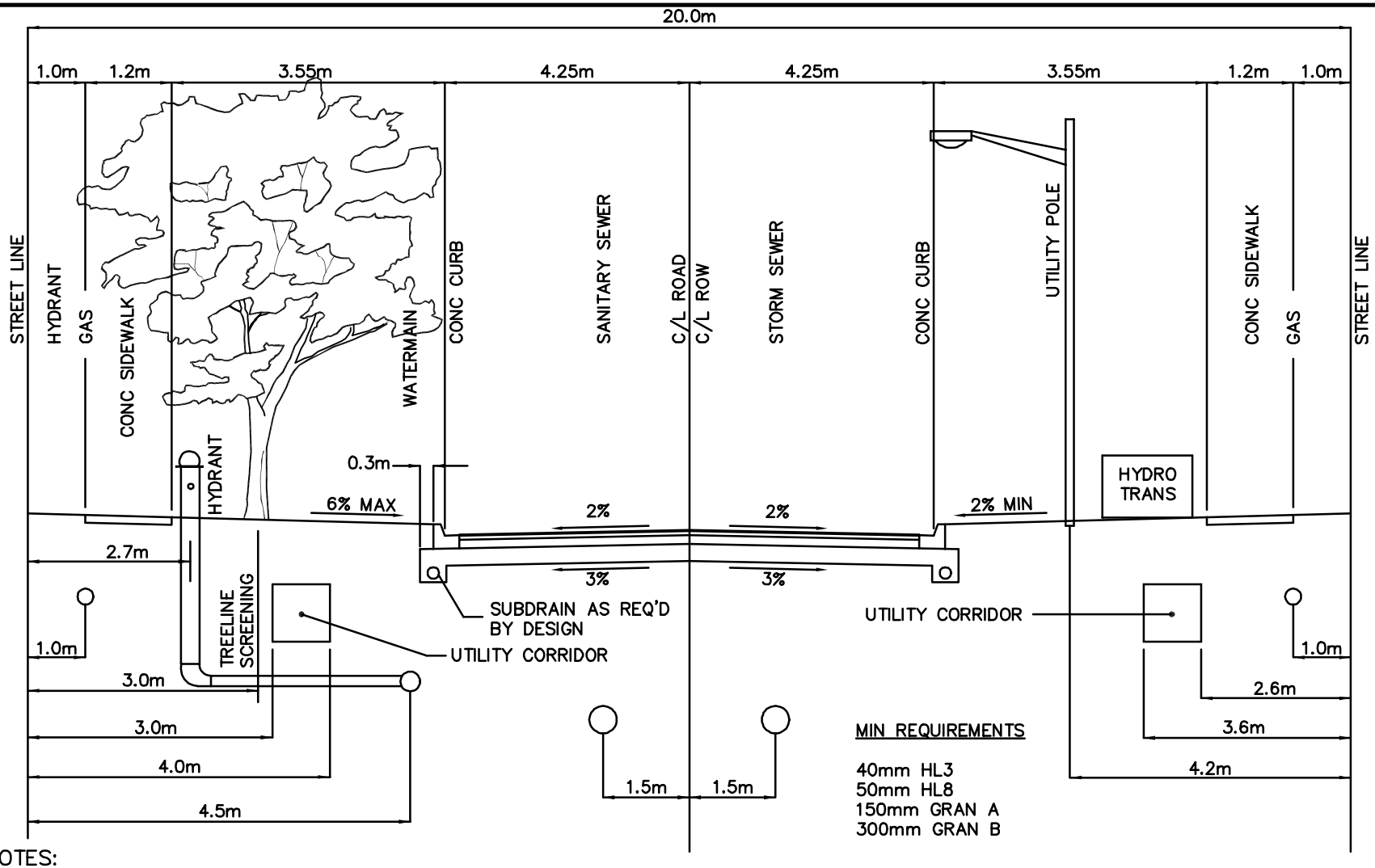
- GRANULAR ROAD BASE TO BE COMPACTED TO 100% S.P.D.
- LIGHTING FIXTURES TO BE H.P. SODIUM (TYPE TO BE APPROVED BY ENGINEER)
- THICKNESS OF ASPHALT AND GRANULAR BASE AS REQUIRED BY DESIGN
- DITCHES & BOULEVARD AREAS TO RECEIVE 100mm TOPSOIL AND SEED & MULCH OR SOD

TOWNSHIP OF ADJALA – TOSORONTIO

TYPICAL ROAD CROSS SECTION 20.0m ROAD ALLOWANCE 6.7m PAVEMENT WIDTH

SCALE: N.T.S.

STD.DWG. No 101



NOTES:

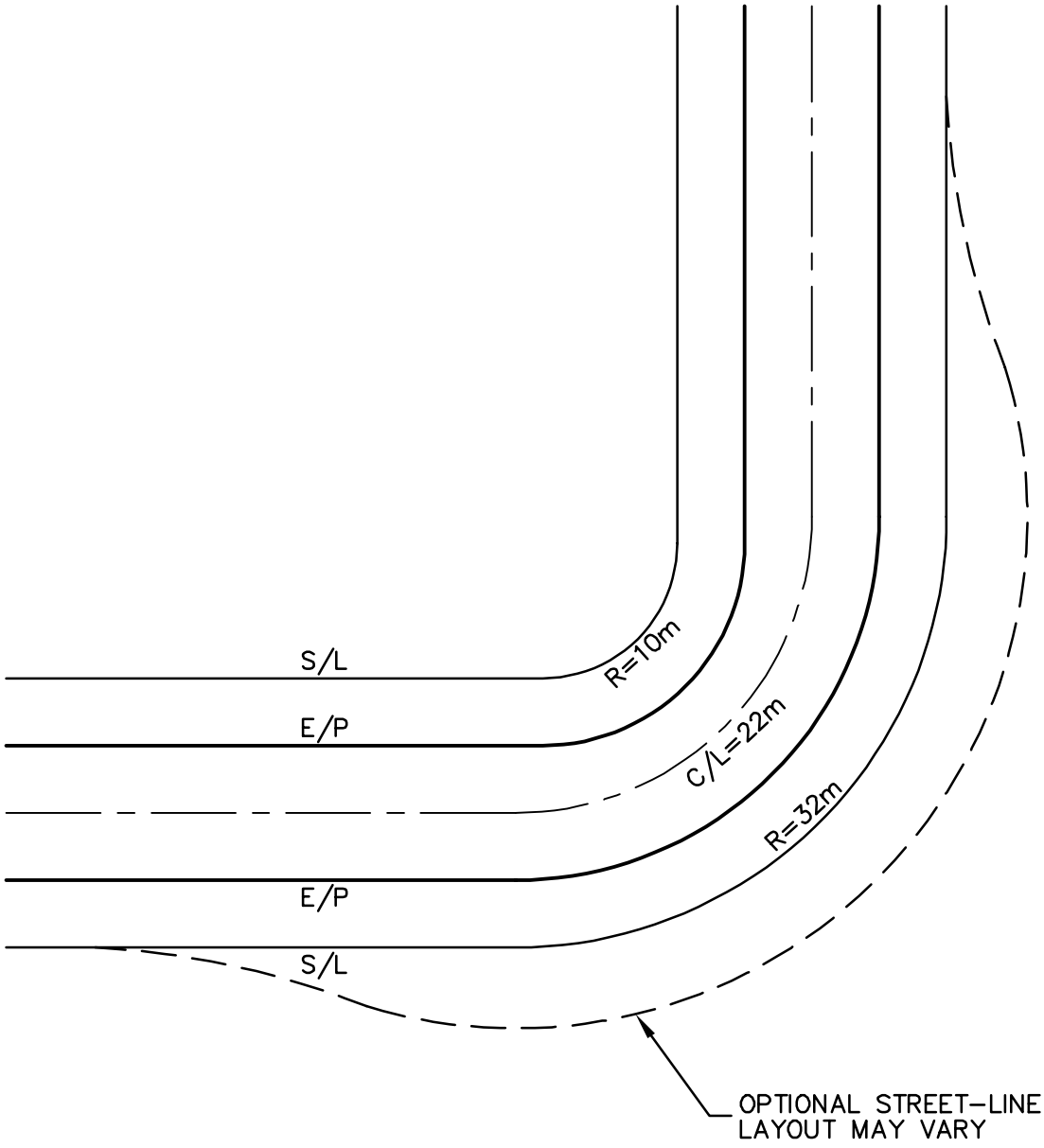
- GRANULAR ROAD BASE TO BE COMPACTED TO 100% S.P.D.
- LIGHTING FIXTURES TO BE H.P. SODIUM (TYPE TO BE APPROVED BY ENGINEER)
- THICKNESS OF ASPHALT AND GRANULAR BASE AS REQUIRED BY DESIGN
- DITCHES & BOULEVARD AREAS TO RECEIVE 100mm TOPSOIL AND SEED & MULCH OR SOD.

TOWNSHIP OF ADJALA – TOSORONTIO

TYPICAL ROAD CROSS SECTION 20.0m ROAD ALLOWANCE URBAN SECTION

SCALE: N.T.S.

STD.DWG. No 102

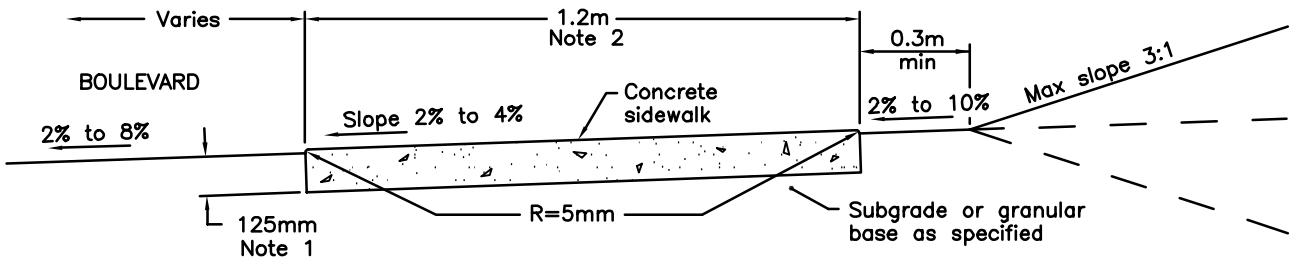


TOWNSHIP OF ADJALA – TOSORONTIO

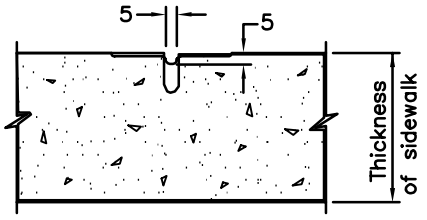
TYPICAL 90° BEND DETAIL

SCALE: N.T.S.

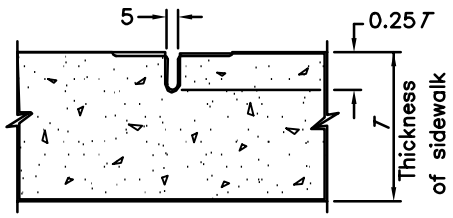
STD.DWG. No 103



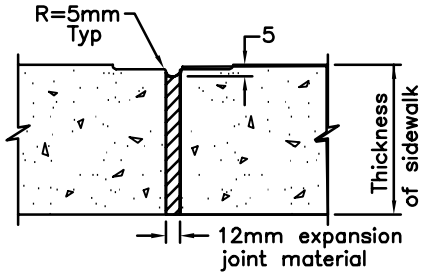
TYPICAL SECTION



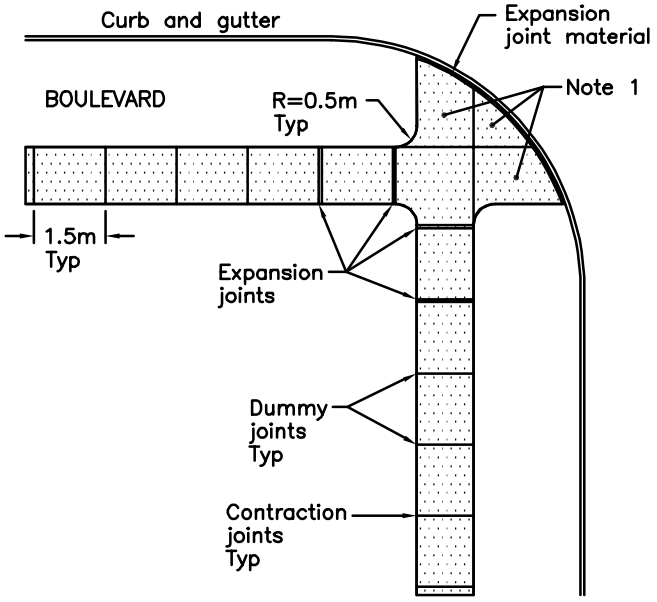
DUMMY JOINT



CONTRACTION JOINT



EXPANSION JOINT



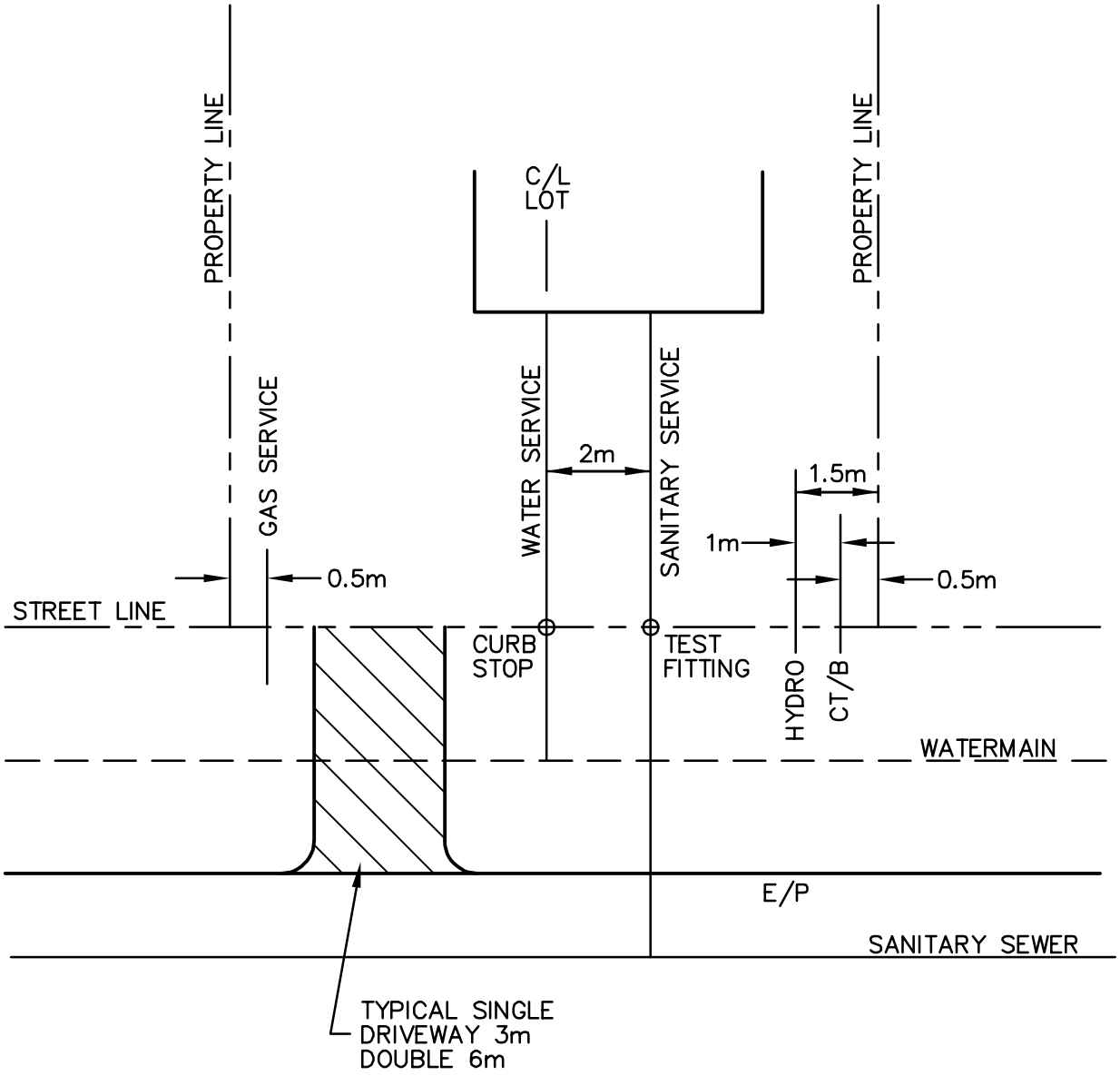
JOINT LAYOUT

NOTES:

1 Sidewalk thickness at residential driveways and adjacent to curb shall be 150mm. At commercial and industrial driveways, the thickness shall be 200mm.

2 Sidewalk width shall be increased to 1.5m at schools, bus stops and on arterial/collector streets.

TOWNSHIP OF ADJALA – TOSORONTIO	
CONCRETE SIDEWALK	SCALE: N.T.S.
	STD.DWG. No 104

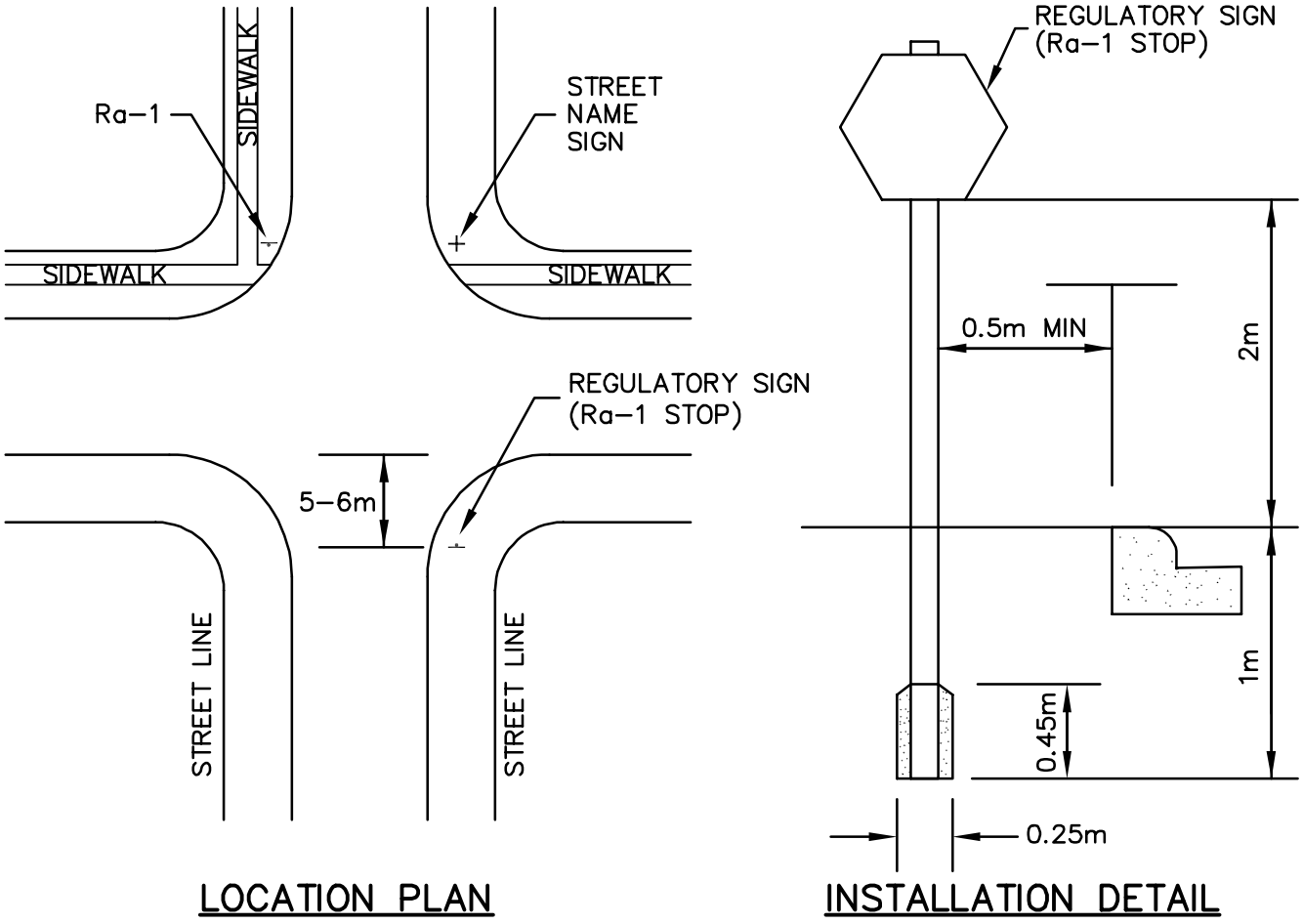


TOWNSHIP OF ADJALA – TOSORONTIO

TYPICAL DETACHED LOT SERVICE ARRANGEMENT

SCALE: N.T.S.

STD.DWG. No 105



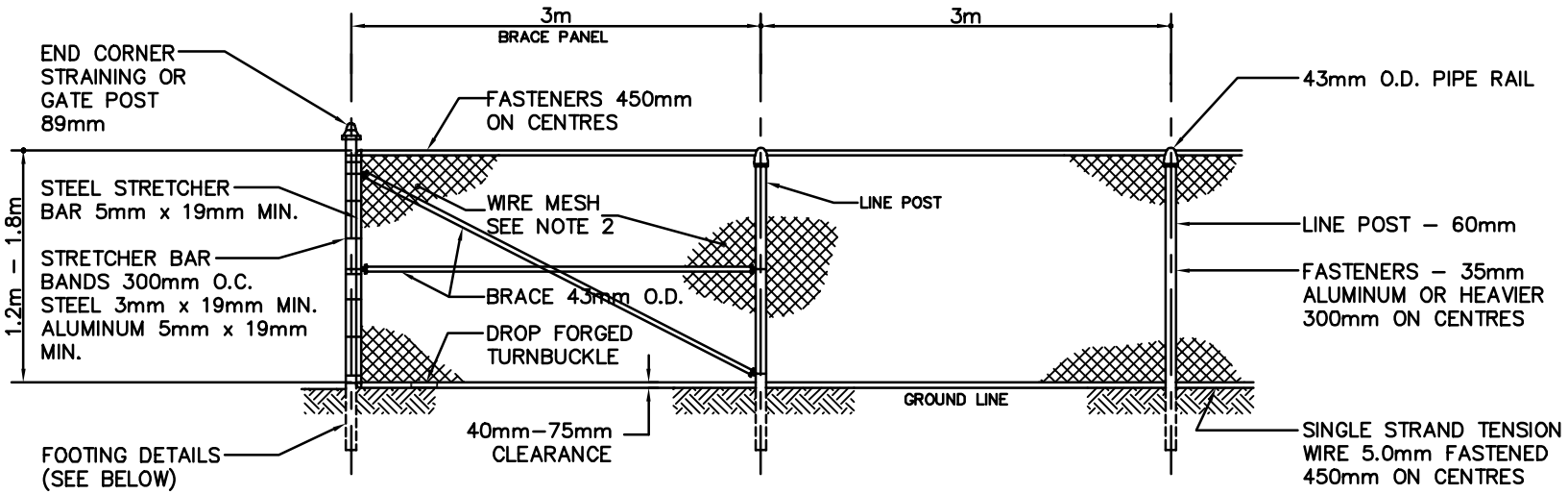
LOCATION PLAN

INSTALLATION DETAIL

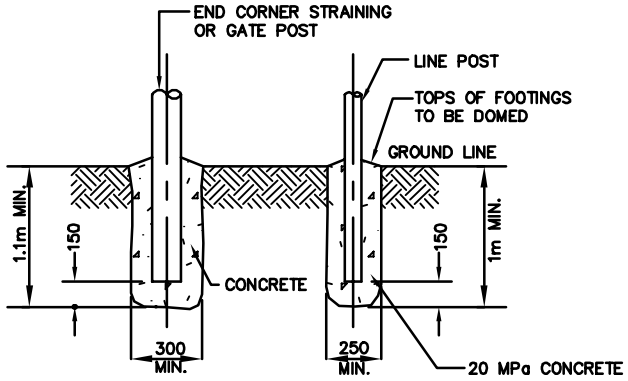
NOTES:

- REGULATORY/WARNING SIGNS AS PER OHTA REG. 615/616 OR AMENDMENTS THEREOF.
- STOP SIGNS (Ra–1) POSTS SHALL BE 60mm x 3.65m GALVANIZED STEEL COMPLETE WITH TOP.
- STOP SIGNS SHALL BE BANDED TO THE POST WITH MINIMUM 12.7mm x 0.76mm STAINLESS STEEL BANDING AND FLARED LEG STAINLESS STEEL BRACKETS (BANDRIT MINI BRACKETS OR EQUIVALENT).
- ALL OTHER REGULATORY/WARNING SIGNS SHALL BE MOUNTED ON 3.66m 80,000 psi U FLANGE POSTS WHICH HAVE THE TOP 1200mm PUNCHED ON 50mm CENTRES WITH 11mm HOLES.
- ALL REGULATORY AND WARNING SIGNS SHALL BE MOUNTED A MINIMUM OF 2m ABOVE FINISHED GROUND ELEVATION IN URBAN AREAS.
- ALL REGULATORY AND WARNING SIGN BLANKS SHALL BE GALVANIZED STEEL AND BE OF HIGH DENSITY GRADE REFLECTORIZED SURFACES.
- STREET NAME SIGNS TO BE WHITE LETTERS ON GREEN REFLECTIVE COATING ON EXTRUDED ALUMINUM BLADES, MINIMUM 600mm LONG.

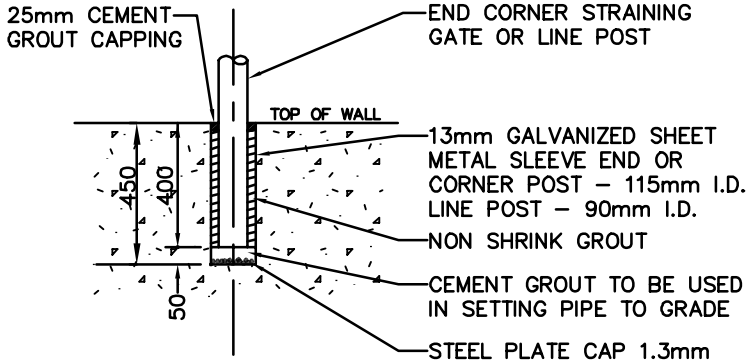
TOWNSHIP OF ADJALA – TOSORONTIO		
LOCATION AND HEIGHT OF SIGNS	SCALE: N.T.S.	
	STD.DWG. No 106	



FENCE DETAILS



IN EARTH OR WALKWAY



ON RETAINING WALL

NOTES

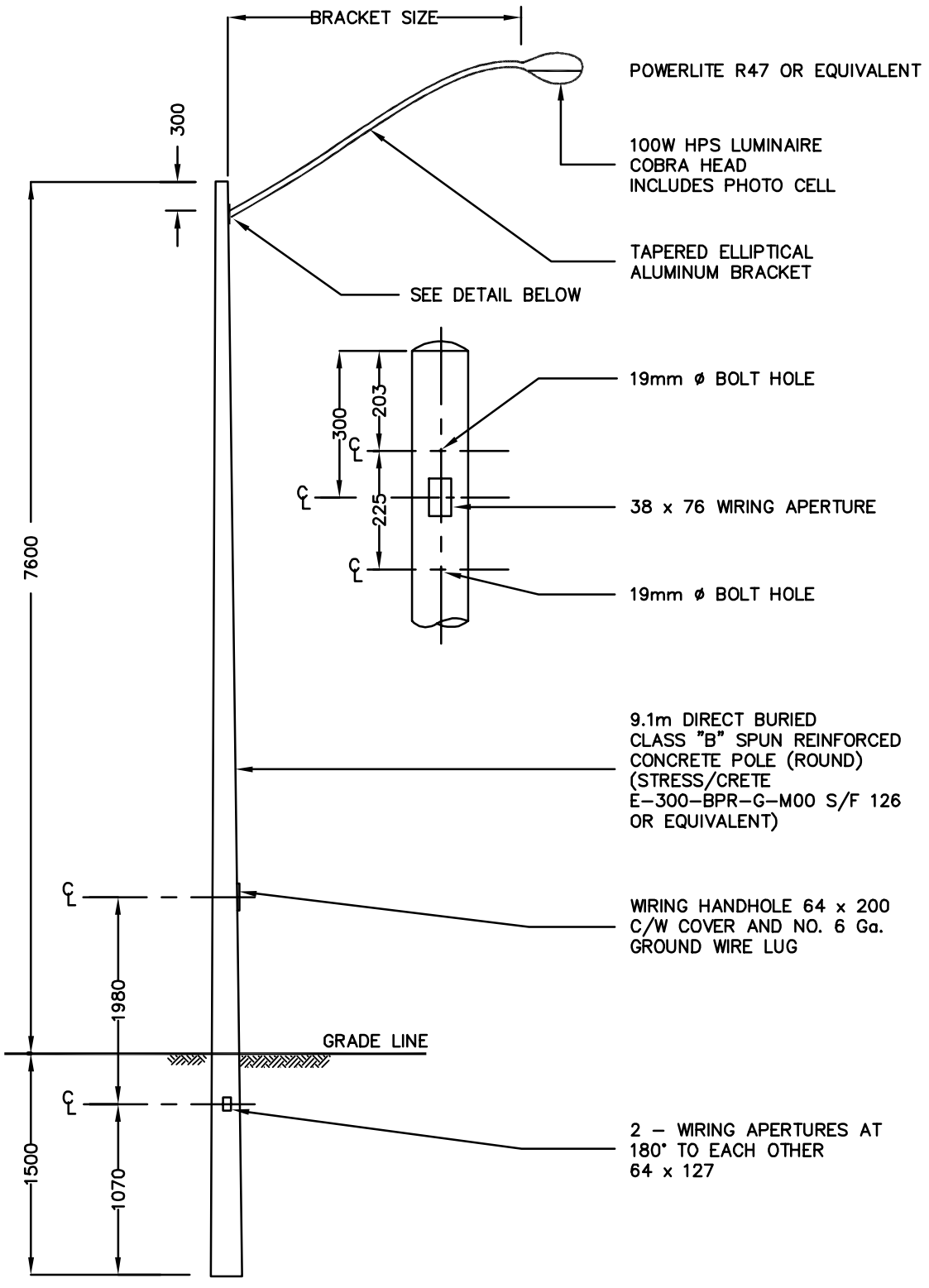
- CHAIN LINK FABRIC TO BE BLACK VINYL COATED 3.5mm O.D. WITH 3.2mm GALVANIZED STEEL CORE WOVEN INTO A 38mm MESH. TOP & BOTTOM SALVAGE TO HAVE A KNUCKLED FINISH. TENSIL STRENGTH OF INDIVIDUAL PICKETS TO STAND TEST OF 550 MPa
- ALL POST RAILS, CONNECTOR & FITTINGS TO BE GALVANIZED & BLACK COATED.

TOWNSHIP OF ADJALA – TOSORONTIO

CHAIN LINK FENCE

SCALE: N.T.S.

STD.DWG. No 107

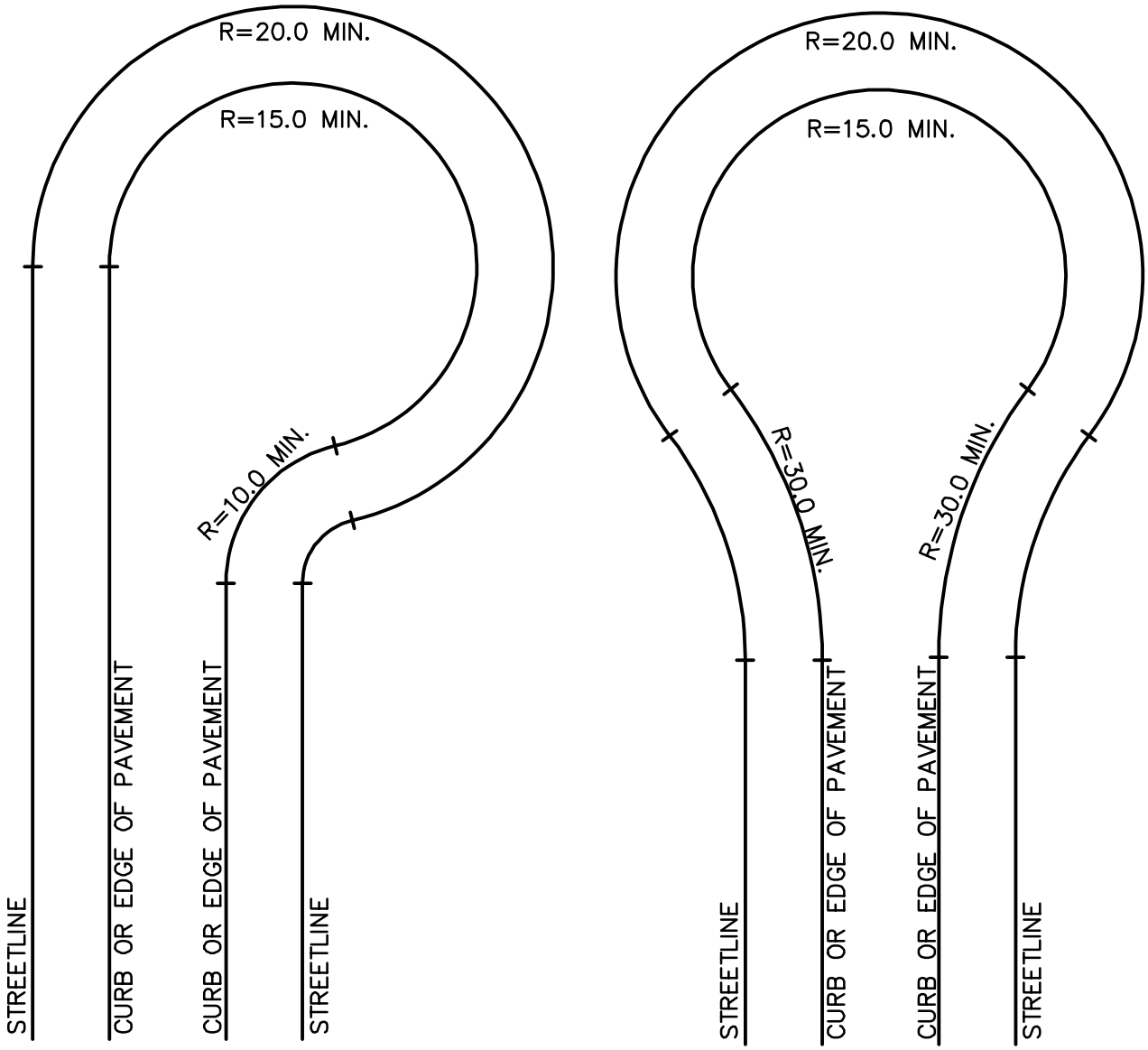


TOWNSHIP OF ADJALA - TOSORONTIO

STREET LIGHT DETAILS

SCALE: N.T.S.

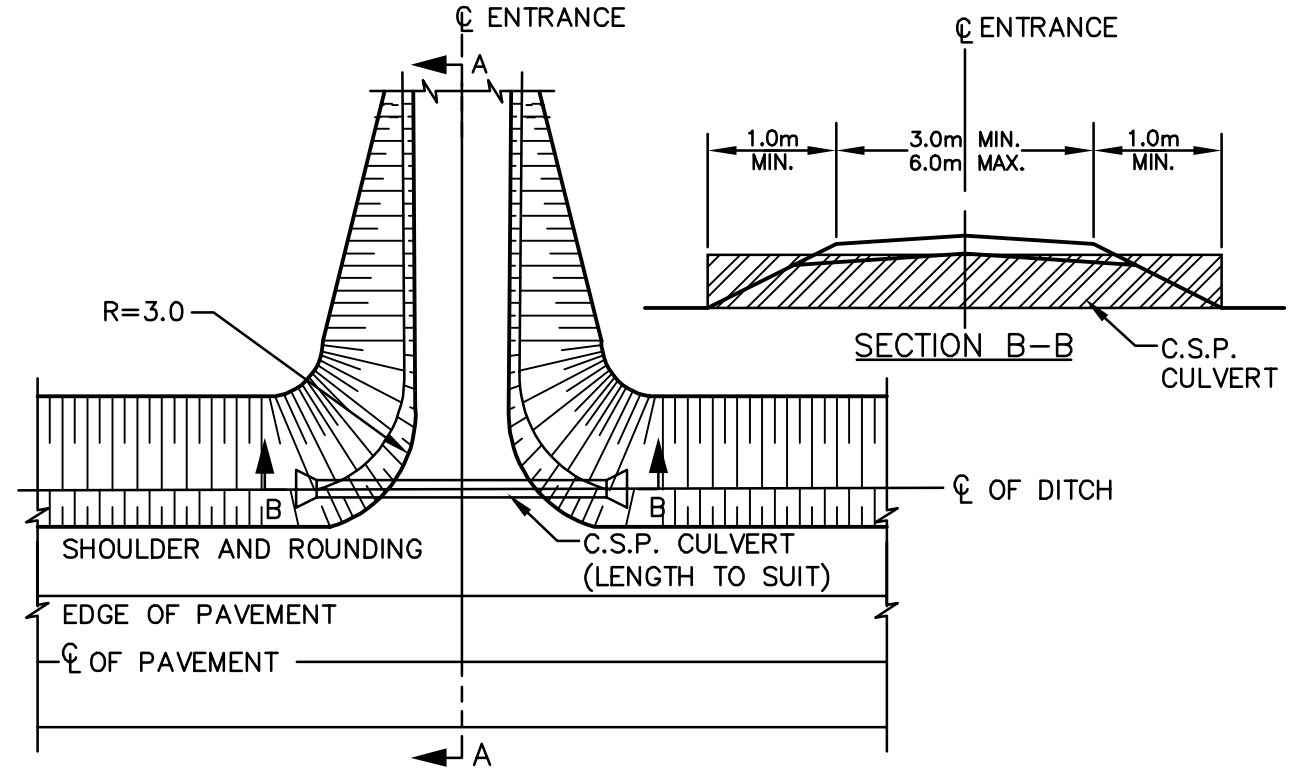
STD.DWG. No 108



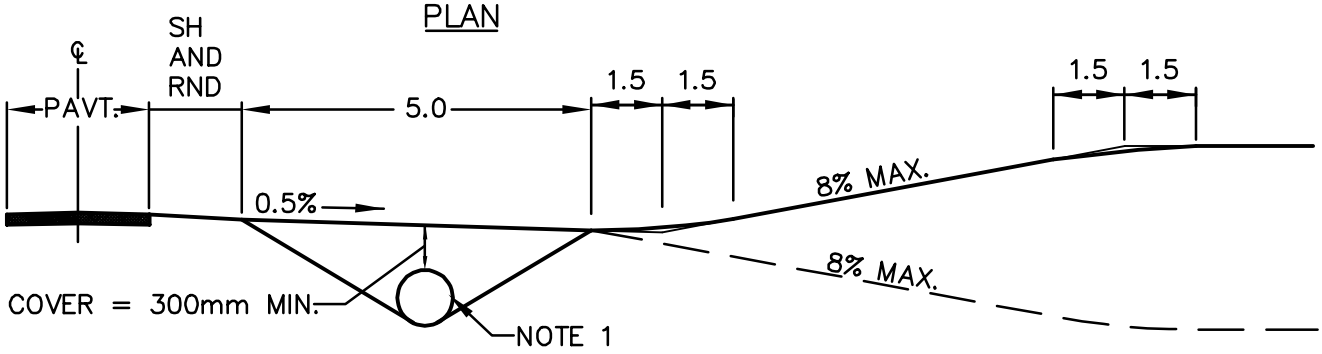
NOTES:

1. MINIMUM 0.5% GUTTER GRADE.
2. BOULEVARD WIDTHS TO BE MAINTAINED.
3. MINIMUM 1.0m SPACING BETWEEN DRIVEWAY CURB DEPRESSIONS.

TOWNSHIP OF ADJALA – TOSORONTIO	
TYPICAL CUL–DE–SAC URBAN OR RURAL ROADS	SCALE: N.T.S. STD.DWG. No 109



PLAN



SECTION A–A

NOTES

1. DRIVEWAY CULVERT TO BE CORRUGATED STEEL PIPE COMPLETE WITH MANUFACTURED END SECTION OR EQUIVALENT END PROTECTION.
2. CULVERT TO BE 400mm MINIMUM DIAMETER AND 1.6mm MINIMUM THICKNESS.
3. DRIVEWAY TO BE CONSTRUCTED WITH 150mm OF 19mm CRUSHER RUN LIMESTONE.
4. ENTRANCES SHALL BE PAVED FROM THE EDGE OF THE TRAVELLED ROAD TO THE STREET LINE, WITH 50mm OF COMPACTED HL3F ASPHALT.

TOWNSHIP OF ADJALA – TOSORONTIO		
RURAL ENTRANCES	SCALE: N.T.S.	
	STD.DWG. No 110	

TOWNSHIP OF ADJALA-TOSORONTIO

STORM SEWER DESIGN SHEET

Sheet No. _____ of _____

Q = ACI

$I_5 = 929.6\ (t+4)^{-0.798}$

T (init.) =10.0 min.

Prepared by:
Checked by:
Project no.:
Date Prepared:

Project / Subdivision ________________

Location / Street	From MH.	To MH.	Area ha.	C	AC	Accum. AC	I mm / hr.	Flow m^3/s	Diameter mm	Length m	Slope %	Cap. m^3/s	Vel. m / s	Sect. Time	Accum. Time	Remarks

TOWNSHIP OF ADJALA-TOSORONTIO

SANITARY SEWER DESIGN SHEET

Sheet No. _____ of _____

P = Population in 1000's
@ 45 p.p.ha. or 3.5 p.p.u.
M = 1 + 14/ (4 + Sq.Rt. P)
Q = 400 l/cap.day (average)
Residential Flow = P x q x M/ 86.4(l/s.)
Infiltration Flow = 0.26 l/s/ha

Prepared by:
Checked by:
Project no.:
Date Prepared:

Project / Subdivision ____________________

Location/Street	From MH.	To MH.	Area	Accum. Area	Pop.	Accum. Pop.	'M'	Res. Flow	Infilt. Flow	Flow (L/s)	Pipe Length	Dia.	Slope %	CAP. (L/s)	Vel. (m/s)	Remarks