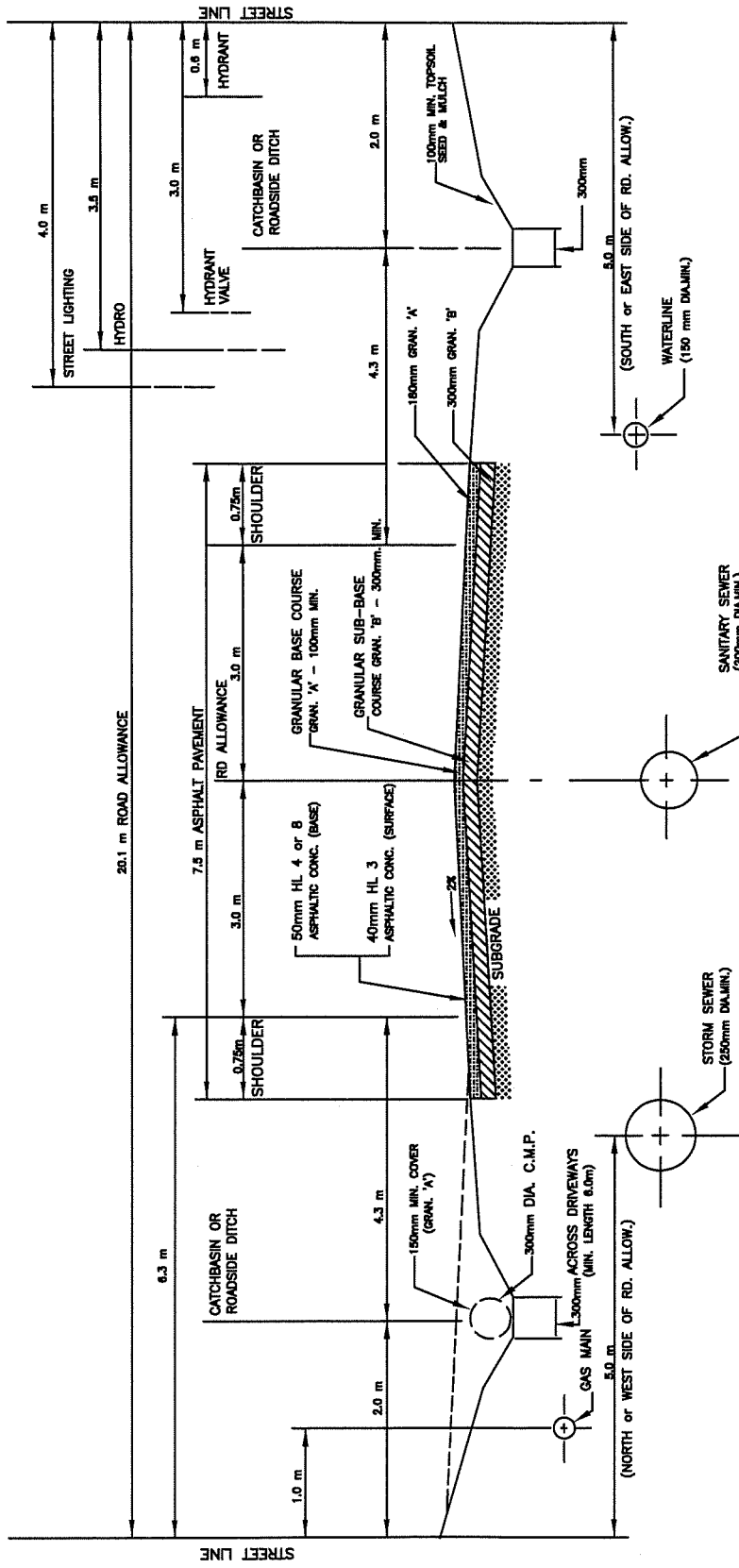


NOTES:

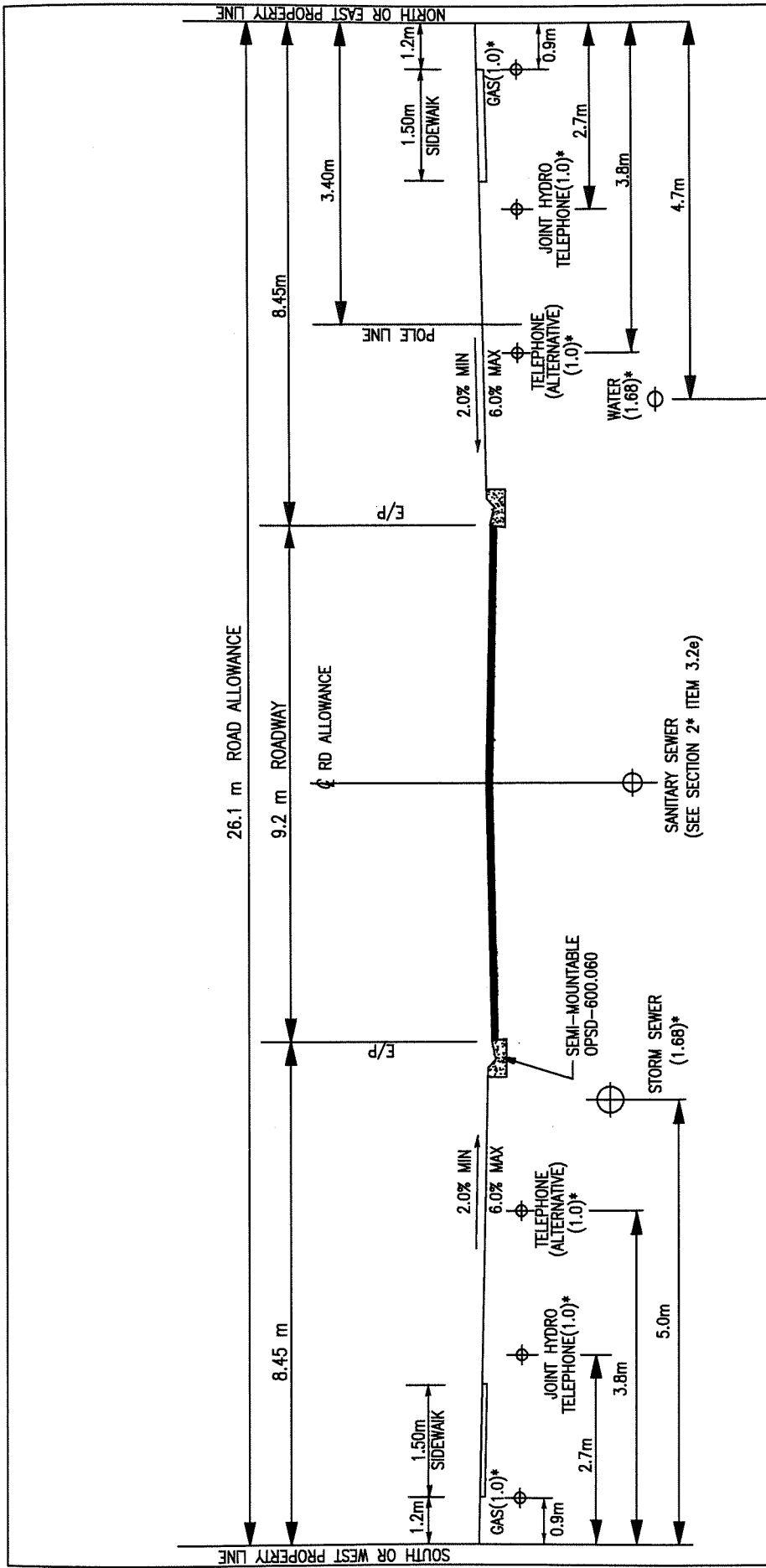
- * MINIMUM DEPTH OF COVER SHOWN BELOW UTILITIES
- ALL DIMENSIONS IN METERS UNLESS SHOWN OTHERWISE
- WATERMANS AND SANITARY SEWERS TO BE LOCATED ON NORTH OR EAST SIDES
- STORM SEWERS TO BE LOCATED ON SOUTH OR WEST SIDES
- TELEPHONE, HYDRO, AND LIGHTING TO BE LOCATED ON COMMON POLE

MUNICIPALITY OF DUTTON DUNWICH	
UTILITY LOCATIONS FOR	
RESIDENTIAL ROADS	
20.1m ROAD ALLOWANCE	
MARCH 2020/REV.	MSD - 1A



STANDARD RIGHT-OF-WAY CROSS-SECTION
 FOR RESIDENTIAL STREETS WITH
 ASPHALTIC CONCRETE PAVEMENT AND ROADSIDE DITCH

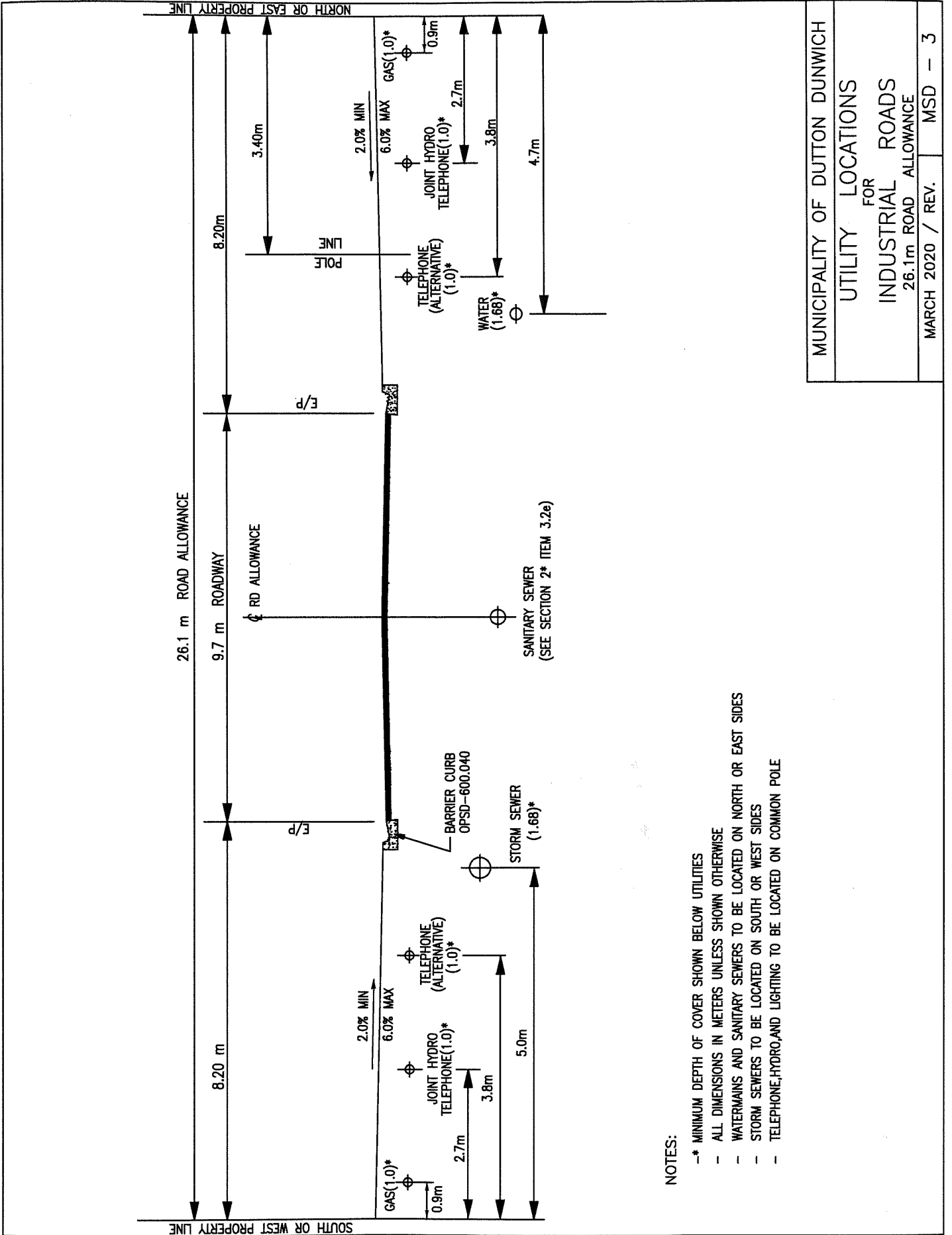
MUNICIPALITY OF DUTTON DUNWICH
STANDARD R.O.W. RESIDENTIAL ASPHALT - DITCHES
MARCH 2020 / REV. MSD - 1B



NOTES:

- * MINIMUM DEPTH OF COVER SHOWN BELOW UTILITIES
- ALL DIMENSIONS IN METERS UNLESS SHOWN OTHERWISE
- WATERMANS AND SANITARY SEWERS TO BE LOCATED ON NORTH OR EAST SIDES
- STORM SEWERS TO BE LOCATED ON SOUTH OR WEST SIDES
- TELEPHONE, HYDRO, AND LIGHTING TO BE LOCATED ON COMMON POLE

MUNICIPALITY OF DUTTON DUNWICH	
UTILITY LOCATIONS FOR RESIDENTIAL ROADS 26.1m ROAD ALLOWANCE	
MARCH 2020/REV.	MSD - 2



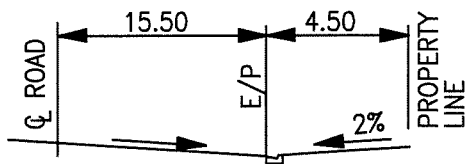
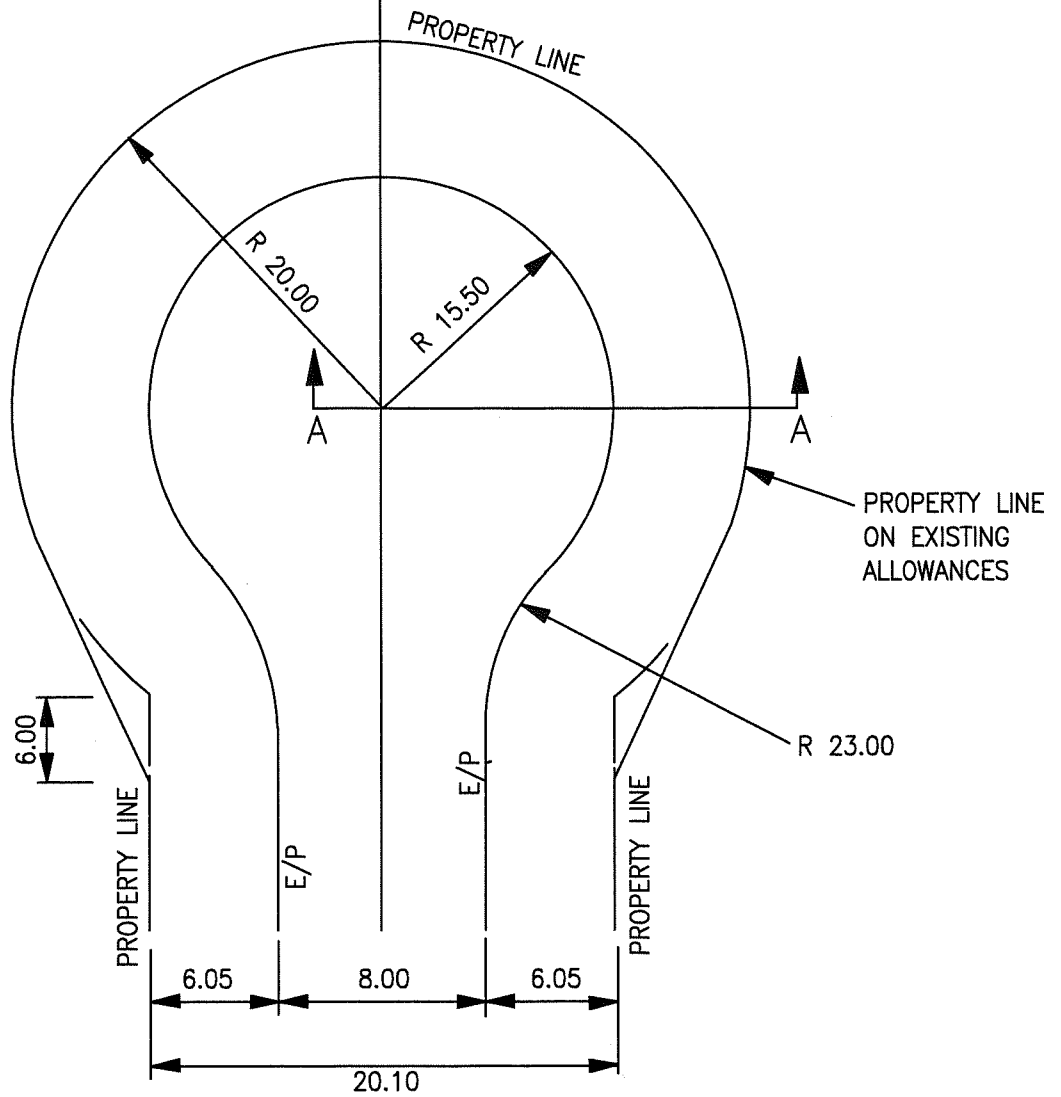
NOTES:

- * MINIMUM DEPTH OF COVER SHOWN BELOW UTILITIES
- ALL DIMENSIONS IN METERS UNLESS SHOWN OTHERWISE
- WATERMANS AND SANITARY SEWERS TO BE LOCATED ON NORTH OR EAST SIDES
- STORM SEWERS TO BE LOCATED ON SOUTH OR WEST SIDES
- TELEPHONE, HYDRO, AND LIGHTING TO BE LOCATED ON COMMON POLE

MUNICIPALITY OF DUTTON DUNWICH

UTILITY LOCATIONS
FOR
INDUSTRIAL ROADS
26.1m ROAD ALLOWANCE

MARCH 2020 / REV. MSD - 3

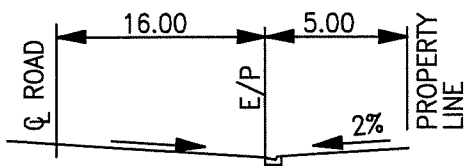
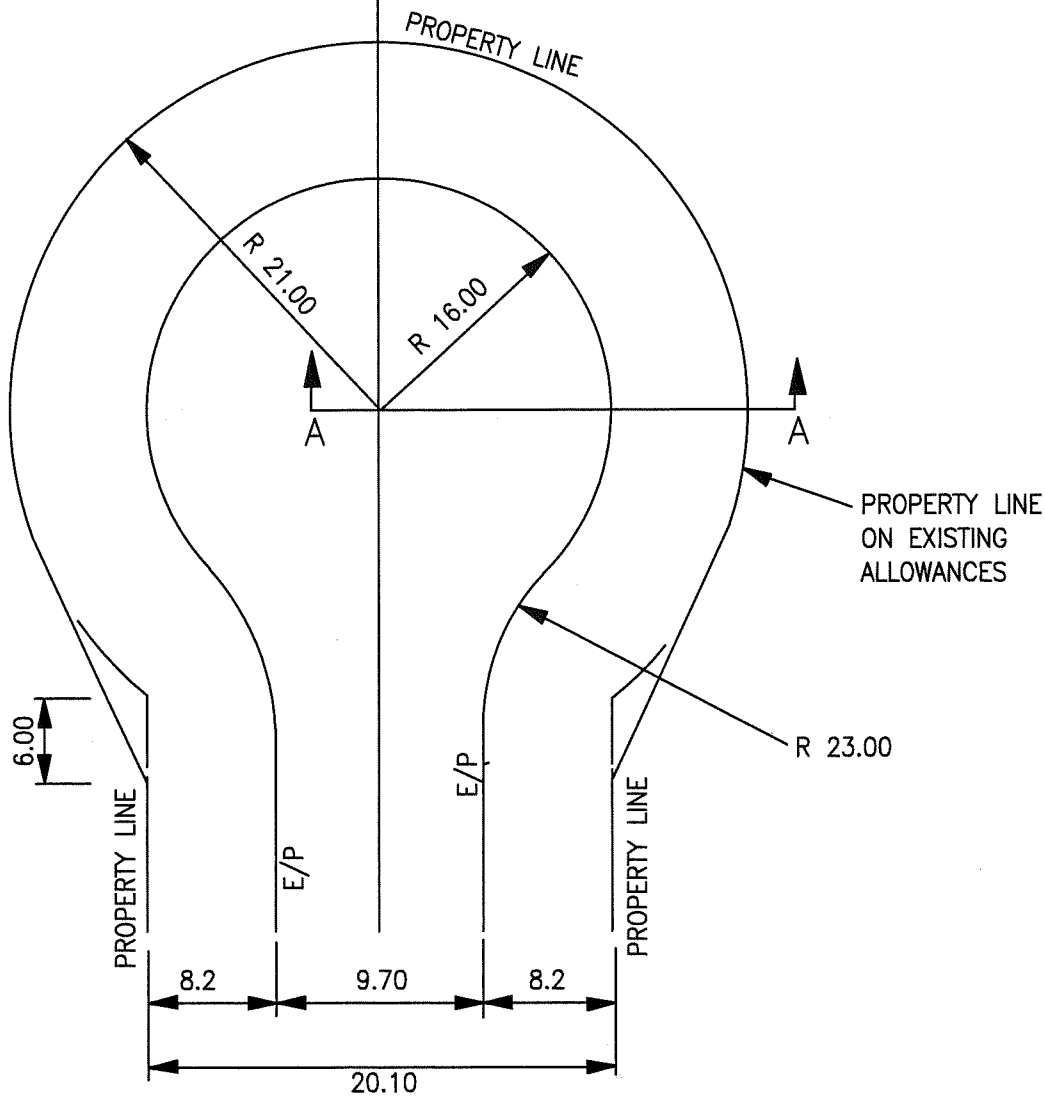


SECTION A-A

NOTES:

1. ALL DIMENSIONS IN METRES UNLESS SHOWN OTHERWISE
2. A 1.50 m WIDE SIDEWALK SHALL BE INSTALLED IF DIRECTED BY THE TOWNSHIP.
3. CURB AND GUTTER PER OPSD-600.060

MUNICIPALITY OF DUTTON DUNWICH	
RESIDENTIAL CUL-DE-SAC	
MARCH 2020 / REV.	MSD - 4

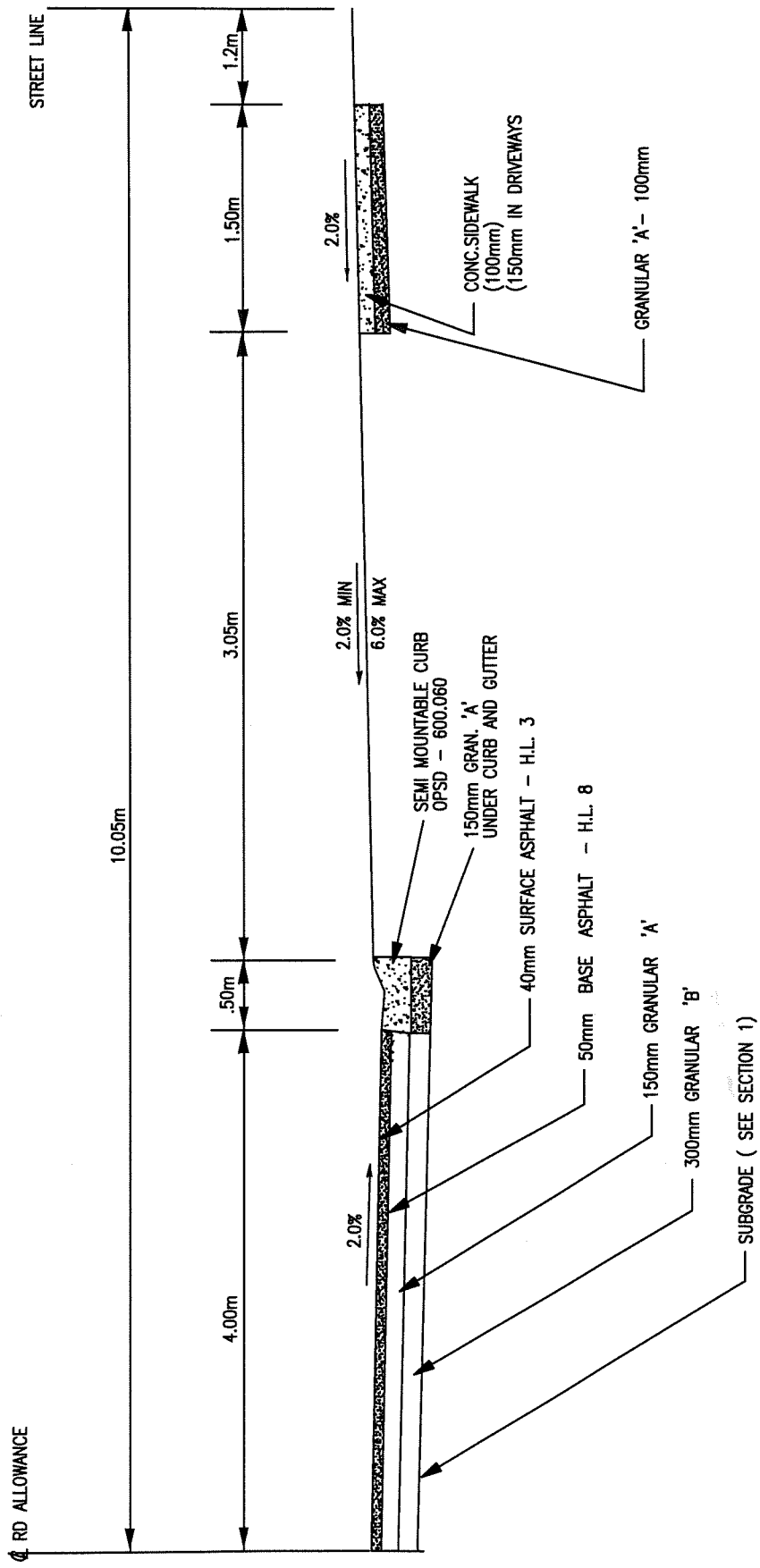


SECTION A-A

NOTES:

1. ALL DIMENSIONS IN METRES UNLESS SHOWN OTHERWISE
2. CURB AND GUTTER PER OPSD-600.040

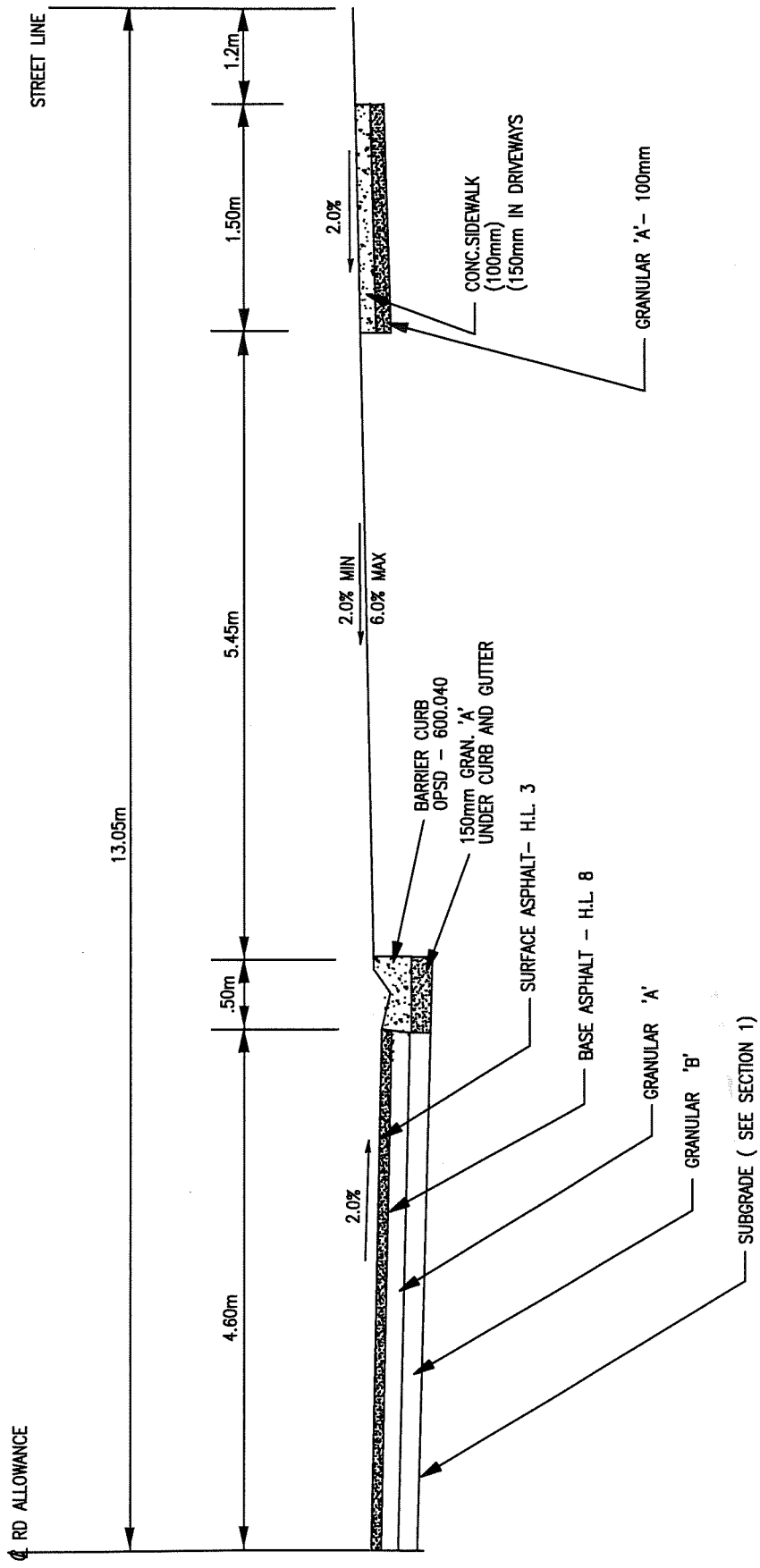
MUNICIPALITY OF DUTTON DUNWICH	
INDUSTRIAL CUL-DE-SAC	
MARCH 2020 / REV.	MSD - 5



NOTES:

- 1 - SEE SERVICING STANDARDS - SECTION 1.
- 2 - CROWN OF ROAD TO BE 2%.
- 3 - 2% OF CROSSFALL TO BE USED IN SIDEWALK CONSTRUCTION.
- 4 - CONCRETE FOR CURBS AND SIDEWALKS TO BE 30 mpa AT 28 DAYS.
- 5 - ALL ASPHALT TO BE COMPACTED TO 97% MARSHALL DENSITY.
- 6 - ALL GRANULAR MATERIALS TO BE COMPACTED TO 100% S.P.M.D.D.

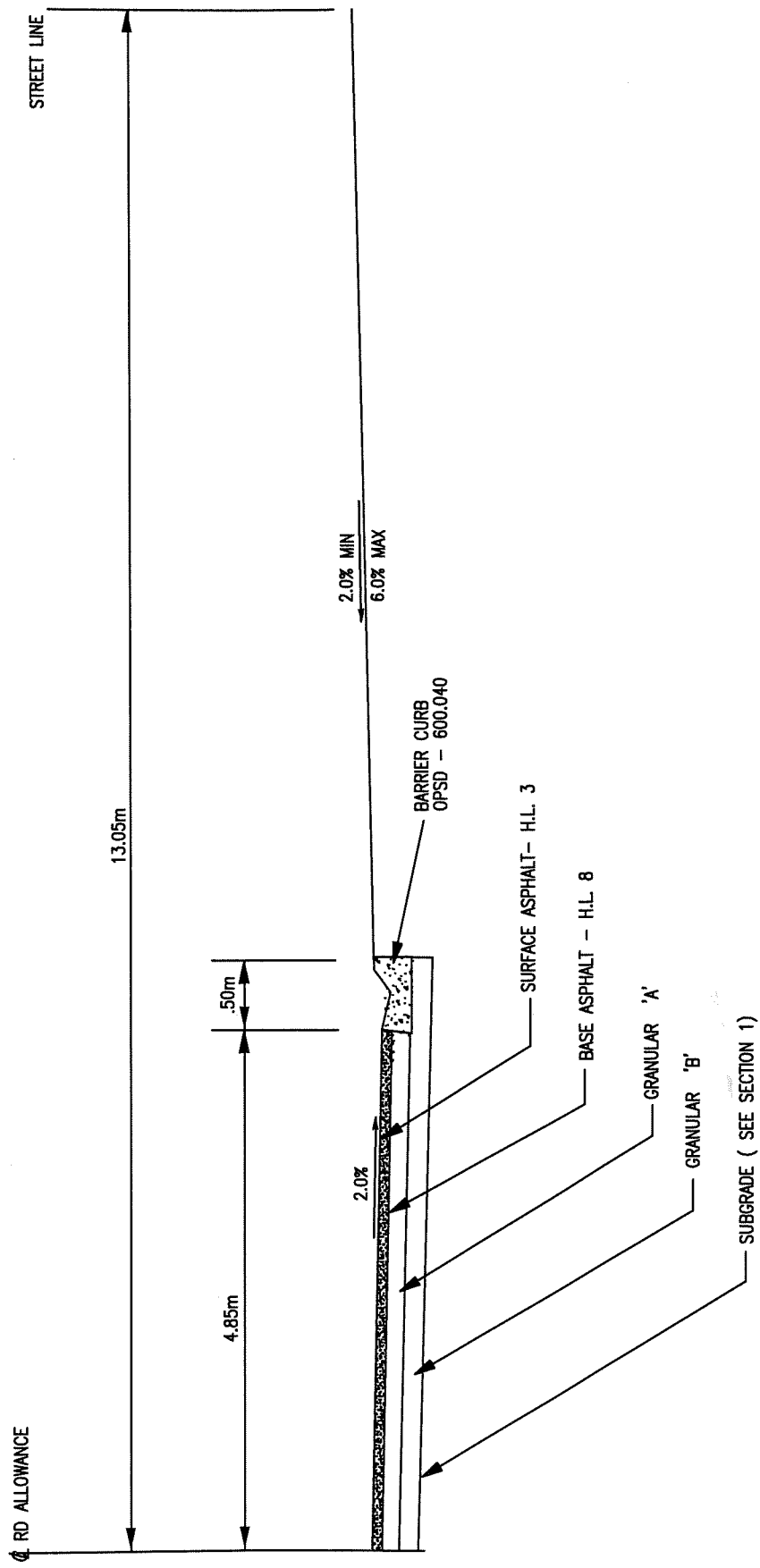
MUNICIPALITY OF DUTTON DUNWICH	
LOCAL AND MINOR-LOCAL ROADWAY	
RESIDENTIAL	
20.1m ROAD ALLOWANCE	
MARCH 2020 / REV.	MSD - 6



NOTES:

- 1 - SEE SERVICING STANDARDS - SECTION 1.
- 2 - CROWN OF ROAD TO BE 2%.
- 3 - 2% OF CROSSFALL TO BE USED IN SIDEWALK CONSTRUCTION.
- 4 - CONCRETE FOR CURBS AND SIDEWALKS TO BE 30 MPa AT 28 DAYS.
- 5 - ALL ASPHALT TO BE COMPACTED TO 97% MARSHALL DENSITY.
- 6 - ALL GRANULAR MATERIALS TO BE COMPACTED TO 100% S.P.M.D.D.

MUNICIPALITY OF DUTTON DUNWICH	
COLLECTOR / ARTERIAL ROADWAY	
RESIDENTIAL	
26.1m ROAD ALLOWANCE	
MARCH 2020 / REV.	MSD - 7



NOTES:

- 1 - SEE SERVICING STANDARDS - SECTION 1.
- 2 - CROWN OF ROAD TO BE 2%.
- 3 - 2% OF CROSSFALL TO BE USED IN SIDEWALK CONSTRUCTION.
- 4 - CONCRETE FOR CURBS AND SIDEWALKS TO BE 30 MPa AT 28 DAYS.
- 5 - ALL ASPHALT TO BE COMPACTED TO 97% MARSHALL DENSITY.
- 6 - ALL GRANULAR MATERIALS TO BE COMPACTED TO 100% S.P.M.D.D.

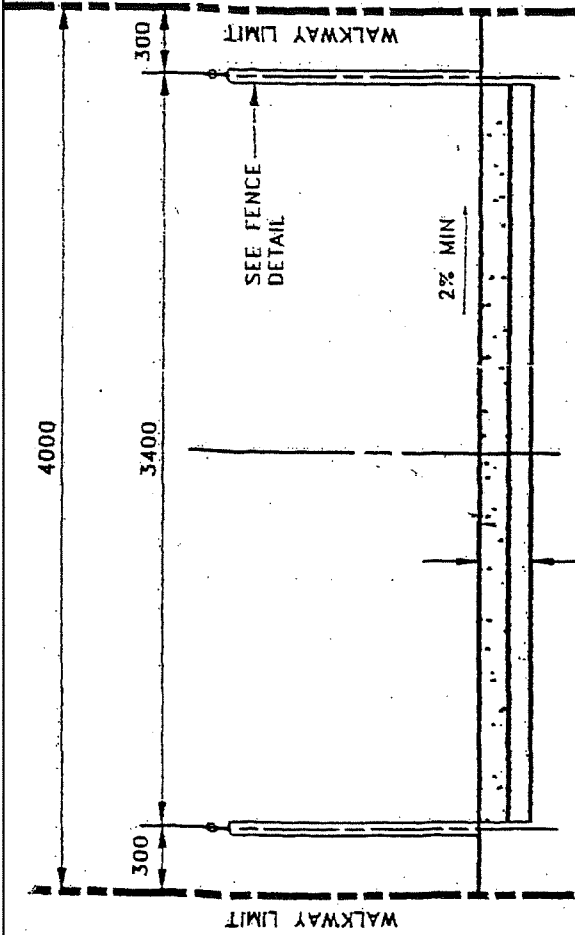
MUNICIPALITY OF DUTTON DUNWICH

INDUSTRIAL ROADWAY
26.1m ROAD ALLOWANCE

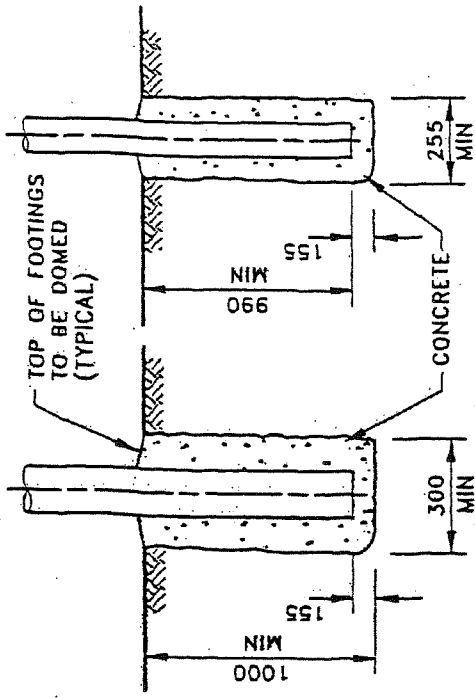
MARCH 2020 / REV.

MSD - 8

END, CORNER, STRAINING
OR GATE POST

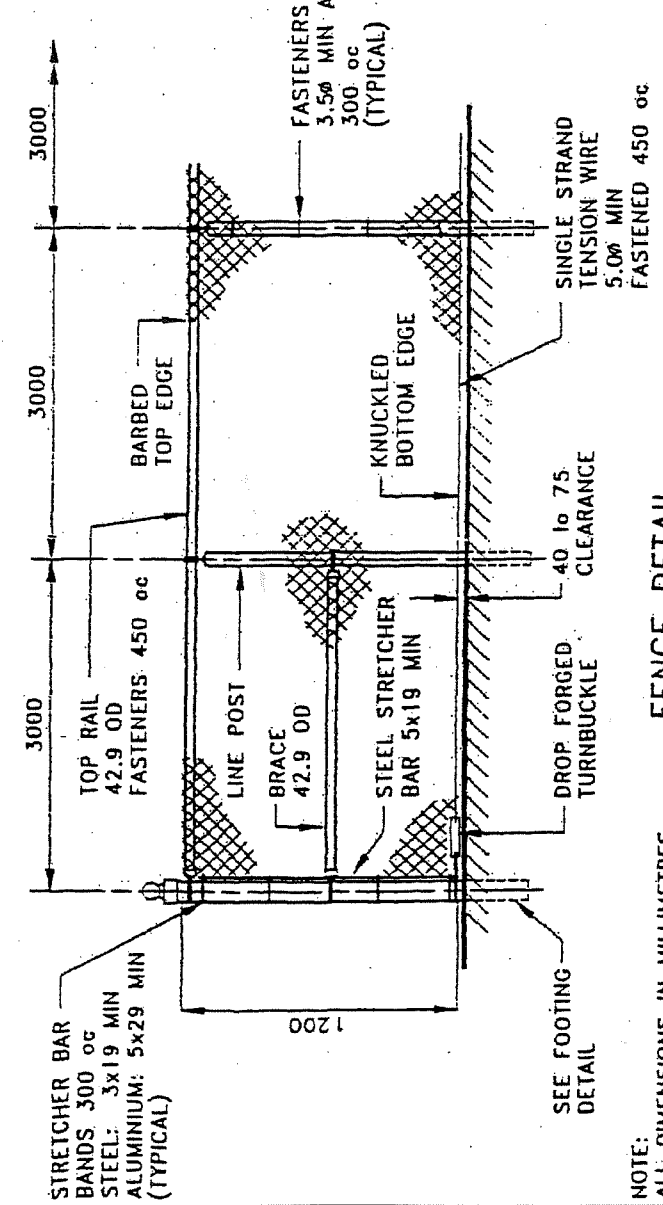


CROSS SECTION



FOOTING DETAIL

DESCRIPTION	OD	LENGTH	
		STANDARD	RET. WALL
LINE	60.3	2700	2000
END, CORNER, STRAINING AND GATE (WITH 5.5m MAX OPENING)	88.9	2900	2300
GATE (WITH 10.0 MAX OPENING)	114.3	2900	-



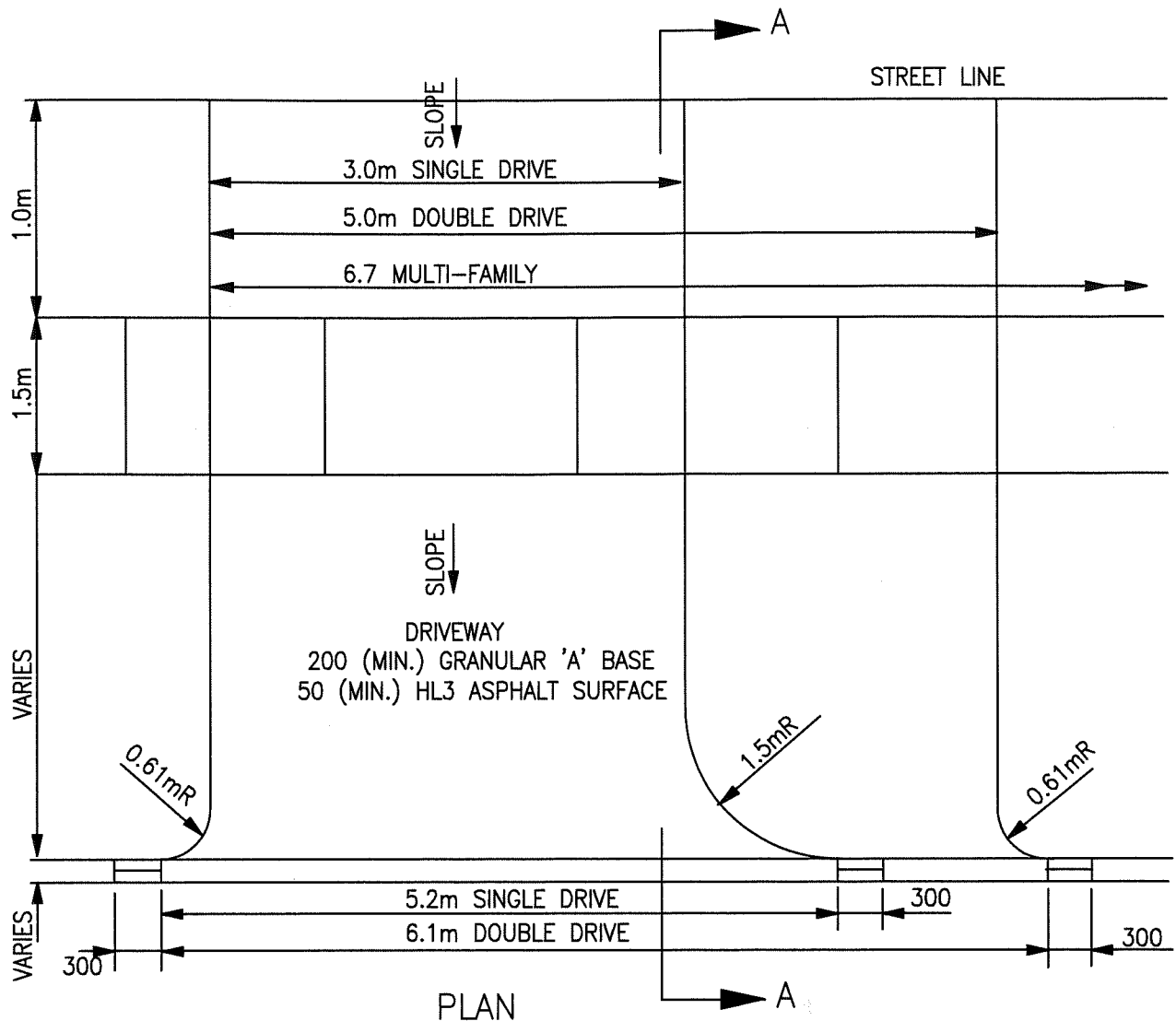
FENCE DETAIL

NOTE:
ALL DIMENSIONS IN MILLIMETRES
UNLESS SHOWN OTHERWISE

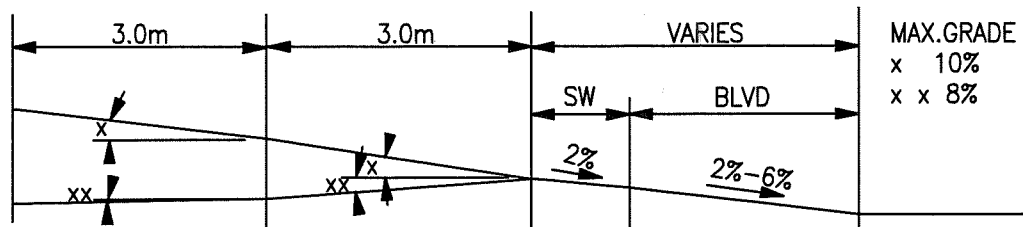
MUNICIPALITY OF DUTTON DUNWICH

WALKWAY DETAILS

MARCH 2020 / REV. MSD - 9



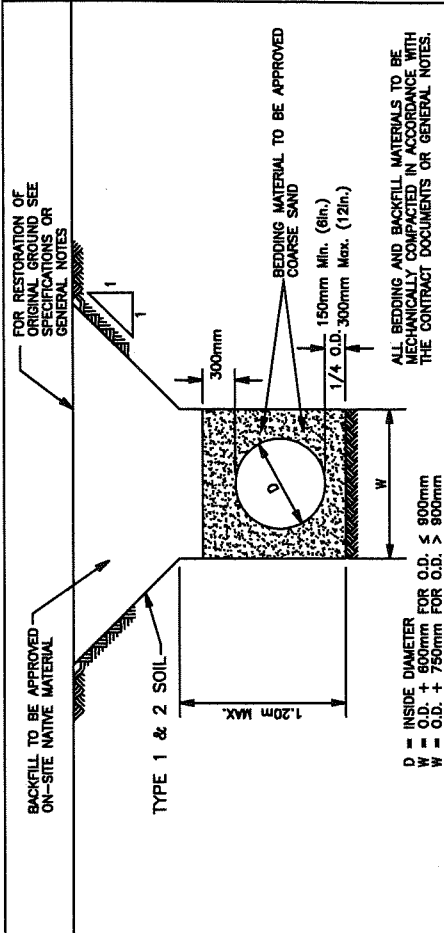
SECTION A-A



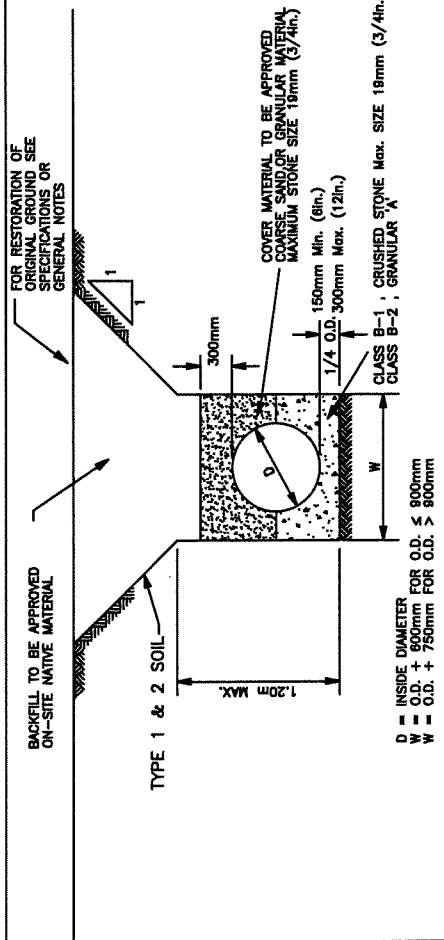
NOTES:

1. RADII OF MULTI-FAMILY DRIVEWAYS AT CURB SHALL BE: INGRESS 3.0m, EGRESS 1.8m.
2. STEEPER SLOPES ARE PERMISSIBLE WHERE BOULEVARD WIDTH IS LESS THAN 1.0m.
3. ASPHALT SURFACE TO EXTEND TO EDGE OF ROADWAY ON ASPHALT & TAR-AND-CHIP ROADWAYS

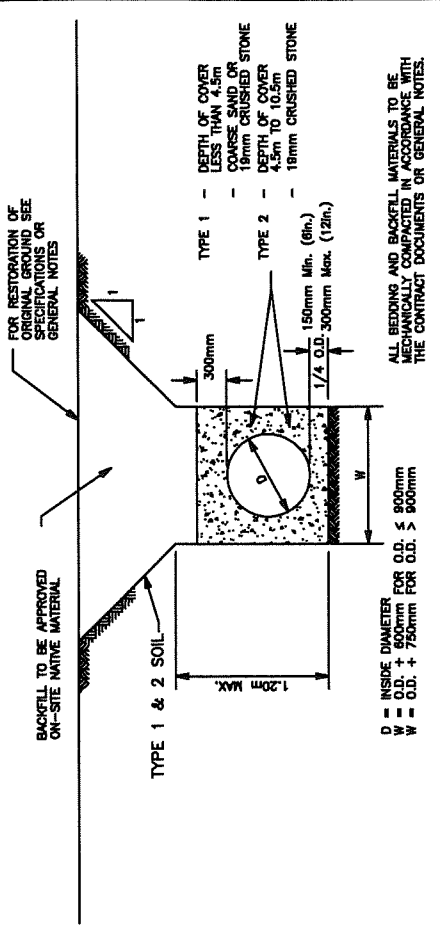
MUNICIPALITY OF DUTTON DUNWICH	
RESIDENTIAL DRIVEWAY ENTRANCE	
MARCH 2020 / REV.	MSD - 10



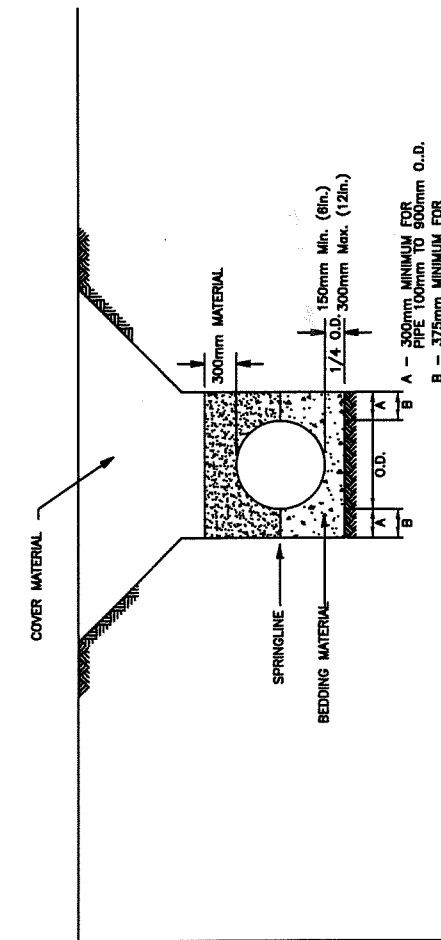
**BEDDING DETAIL FOR
RIGID SEWER PIPE
CLASS C**
N.T.S.



**BEDDING DETAIL FOR
RIGID SEWER PIPE
CLASS B**
N.T.S.

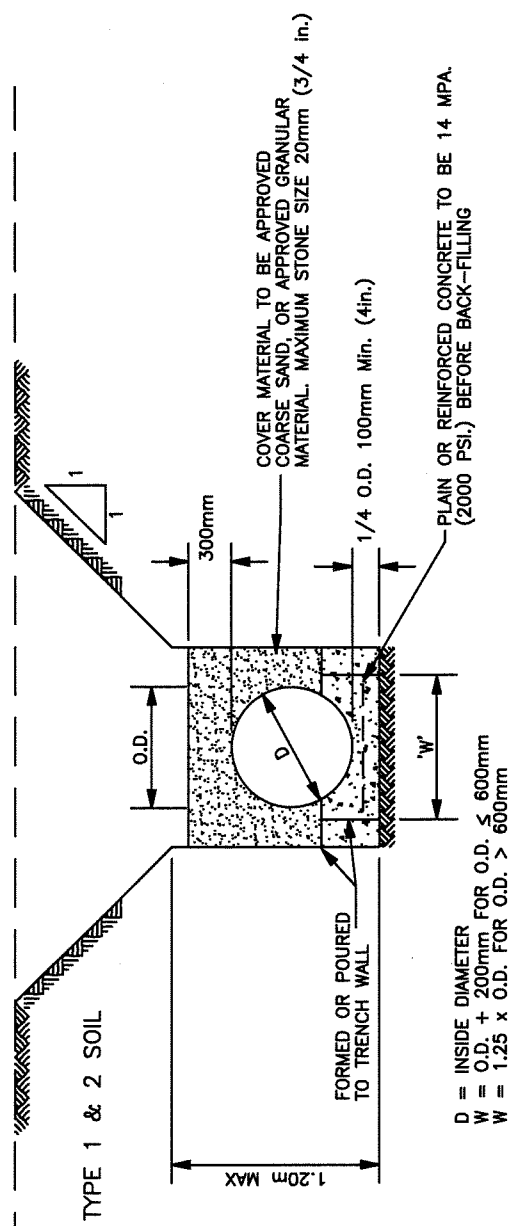


**BEDDING DETAIL FOR
FLEXIBLE SEWER PIPE**
N.T.S.



TRENCH DIMENSIONS FOR ALL PIPE SEWERS
N.T.S.

MUNICIPALITY OF DUTTON DUNWICH
PIPE BEDDING
DETAILS
MARCH 2020 / REV. | MSD - 11



TYPE 1 & 2 SOIL

COVER MATERIAL TO BE APPROVED
COARSE SAND, OR APPROVED GRANULAR
MATERIAL. MAXIMUM STONE SIZE 20mm (3/4 in.)

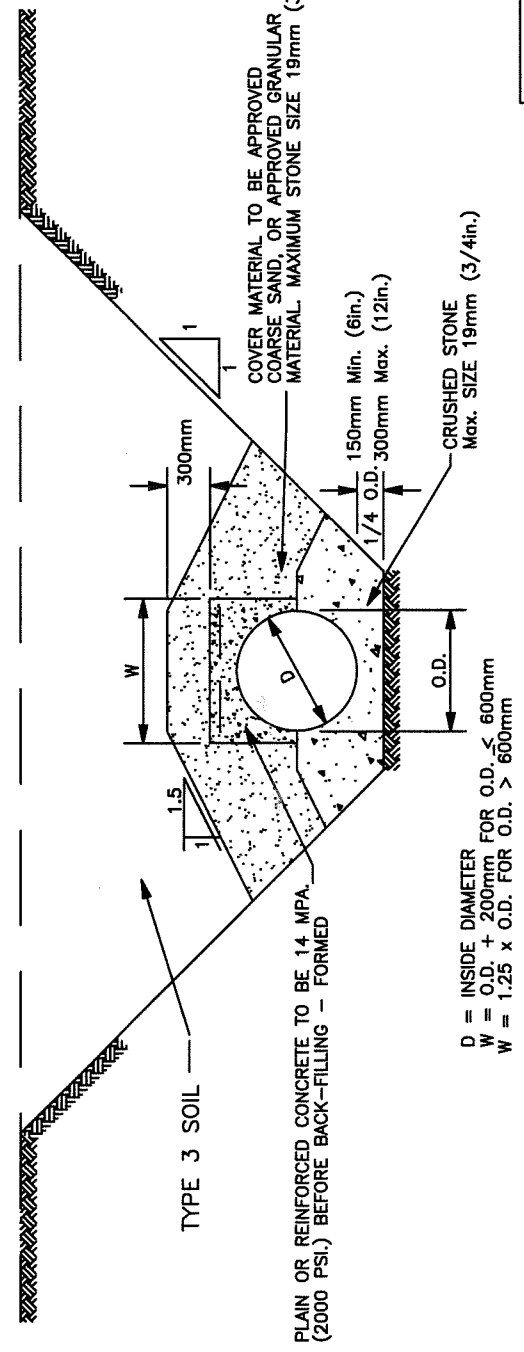
FORMED OR Poured
TO TRENCH WALL

PLAIN OR REINFORCED CONCRETE TO BE 14 MPA.
(2000 PSI.) BEFORE BACK-FILLING

D = INSIDE DIAMETER
W = O.D. + 200mm FOR O.D. ≤ 600mm
W = 1.25 x O.D. FOR O.D. > 600mm

BEDDING DETAIL FOR
CLASS A - 1
N.T.S.

ALL BEDDING MATERIALS TO BE MECHANICALLY
COMPACTED IN ACCORDANCE WITH THE
CONTRACT DOCUMENTS.



TYPE 3 SOIL

COVER MATERIAL TO BE APPROVED
COARSE SAND, OR APPROVED GRANULAR
MATERIAL. MAXIMUM STONE SIZE 19mm (3/4in.)

FORMED OR Poured
TO TRENCH WALL

PLAIN OR REINFORCED CONCRETE TO BE 14 MPA.
(2000 PSI.) BEFORE BACK-FILLING

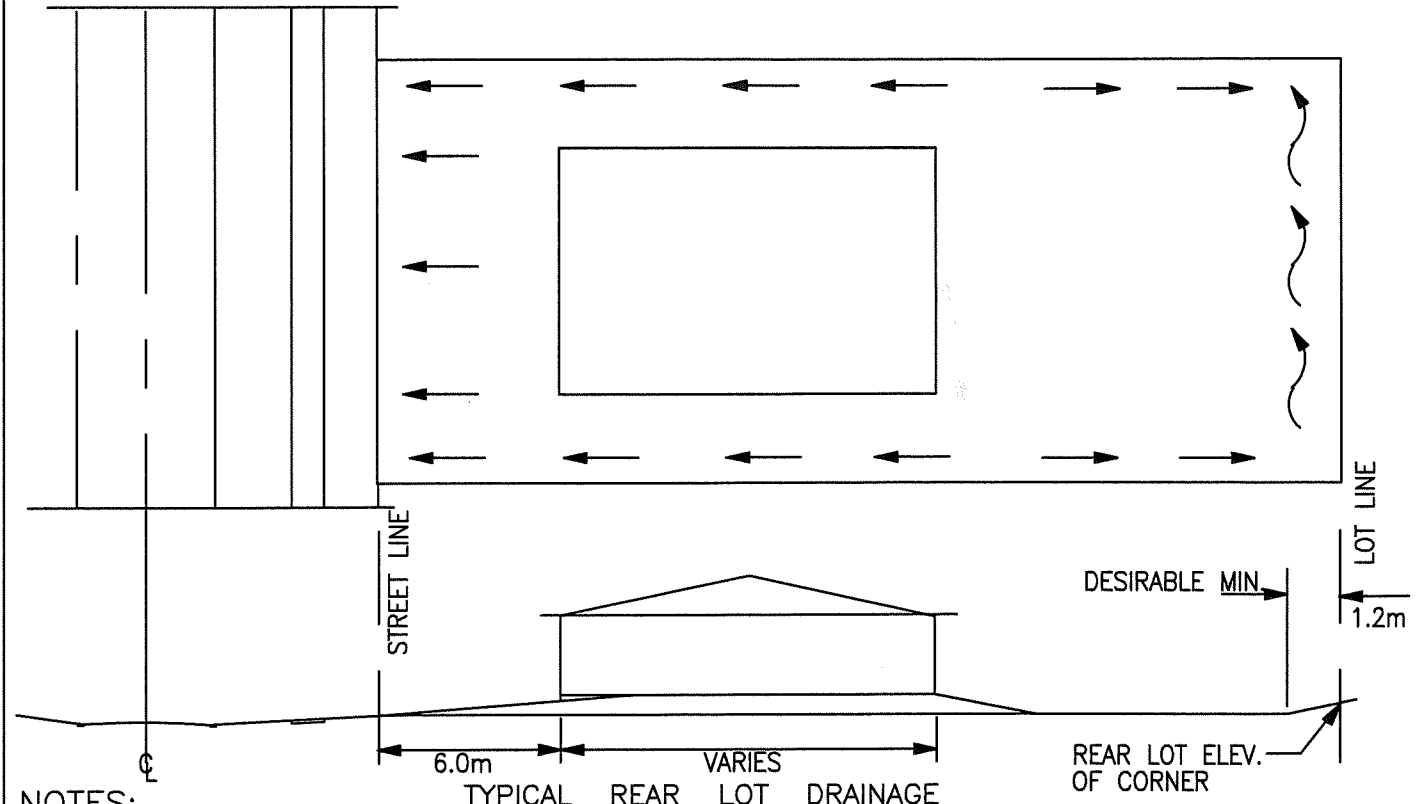
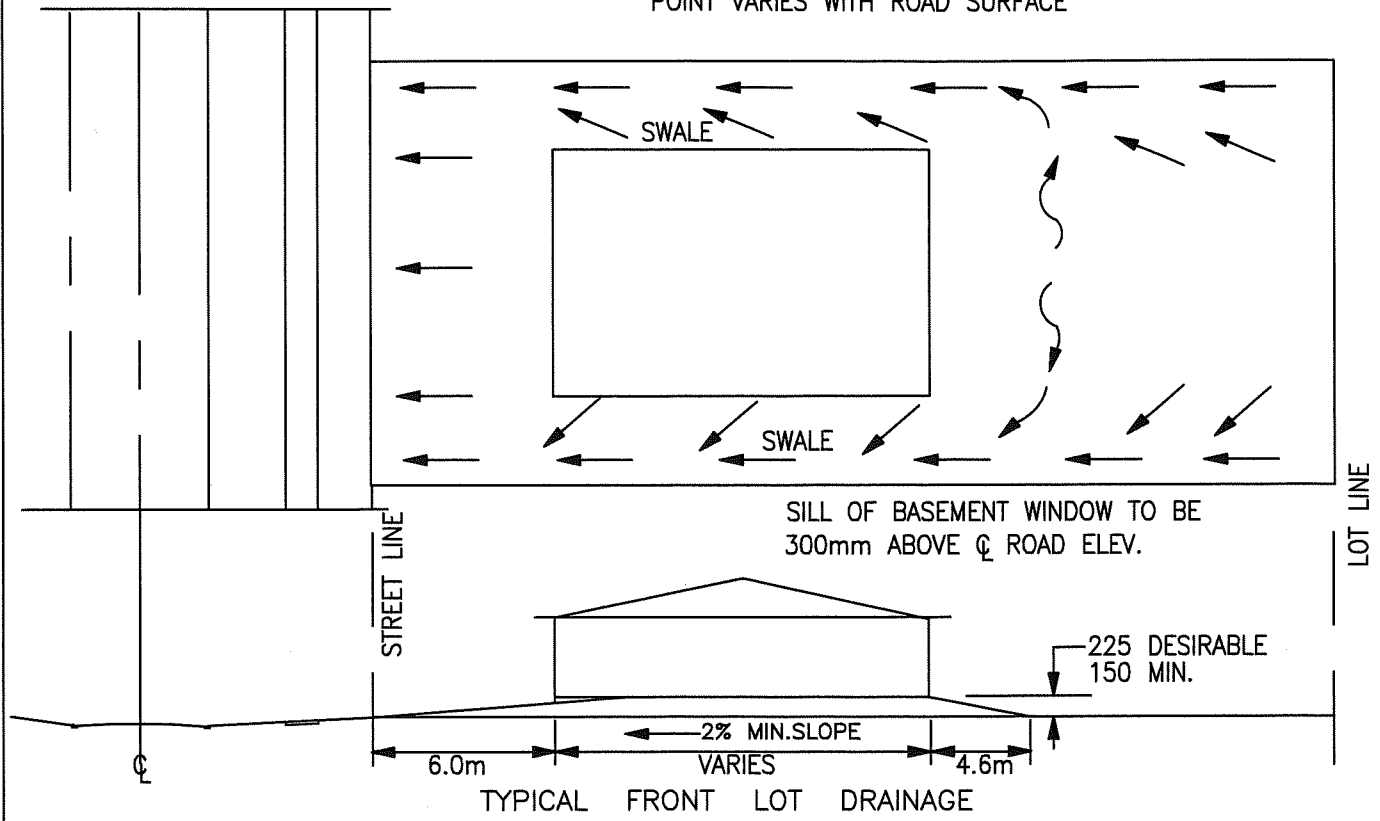
D = INSIDE DIAMETER
W = O.D. + 200mm FOR O.D. ≤ 600mm
W = 1.25 x O.D. FOR O.D. > 600mm

BEDDING DETAIL FOR
CLASS A - 2
N.T.S.

ALL BEDDING MATERIALS TO BE MECHANICALLY
COMPACTED IN ACCORDANCE WITH THE
CONTRACT DOCUMENTS.

MUNICIPALITY OF DUTTON DUNWICH
PIPE BEDDING DETAILS
MARCH 2020 / REV. MSD - 12

2% MIN. SWALE GRADE. LOCATION OF DIVISION POINT VARIES WITH ROAD SURFACE



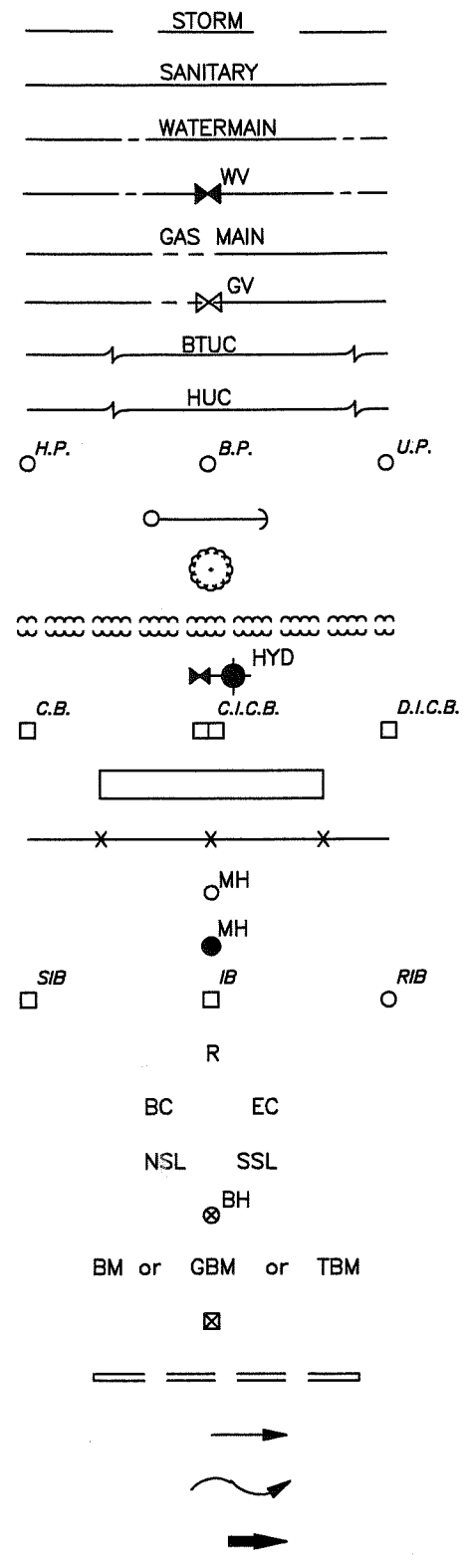
NOTES:

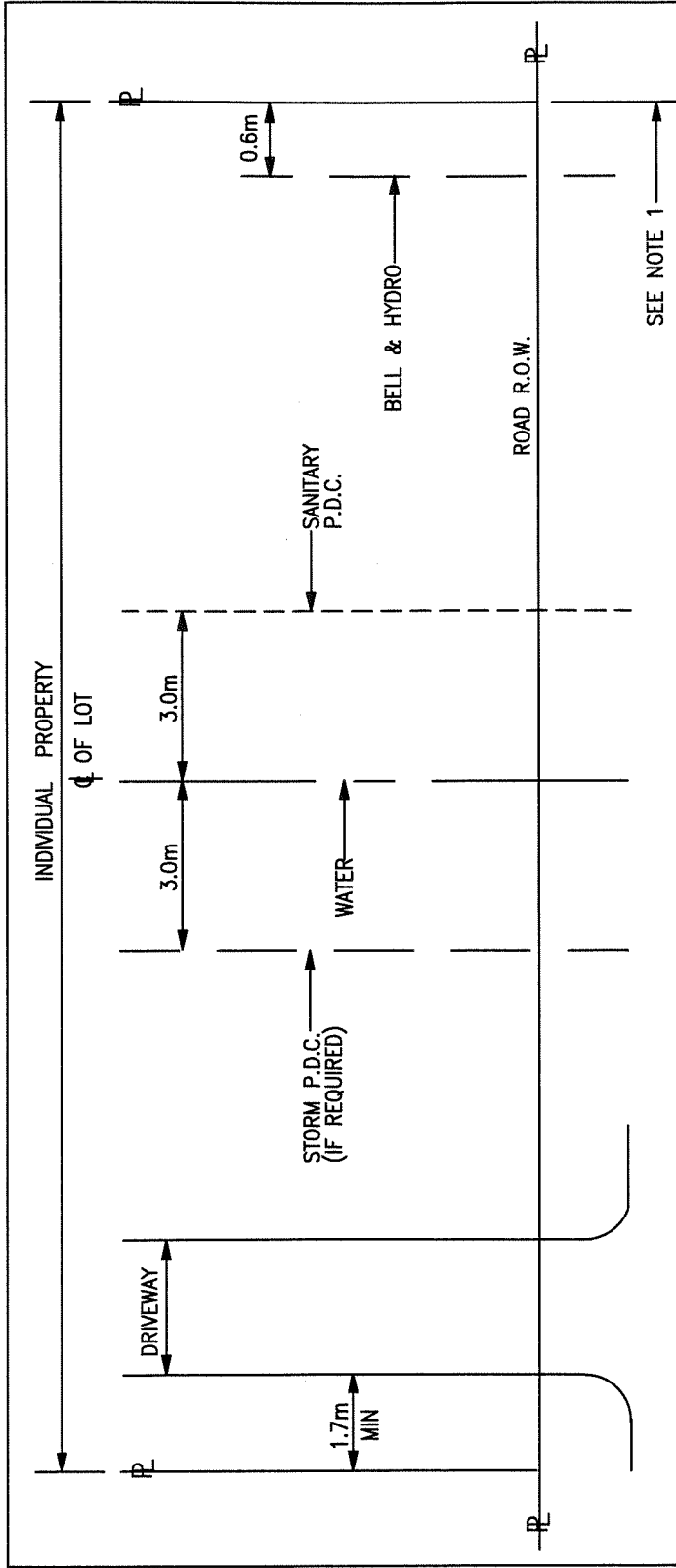
MINIMUM LOT DIMENSIONS, FRONT YARD DEPTHS, AND SIDE YARD WIDTHS TO BE IN ACCORDANCE WITH ZONING BY-LAW.

MUNICIPALITY OF DUTTON DUNWICH	
LOT DRAINAGE PLAN	
MARCH 2020 / REV.	MSD - 13

LEGEND:

- STORM SEWER
- SANITARY(OR COMBINES)SEWER
- WATERMAIN
- WATER VALVE
- GAS MAIN
- GAS VALVE
- BELL CABLE(UNDERGROUND)
- HYDRO CABLE(UNDERGROUND)
- HYDRO,BELL,UTILITY POLES
- GUY ANCHOR
- TREE
- HEDGE,BUSH
- HYDRANT
- CATCH/CURB INLET/DITCH INLET BASIN
- BUILDING
- FENCE
- EXISTING MANHOLE
- PROPOSED MANHOLE
- PROPERTY BARS
- RADIUS
- BEGINNING/END OF CURVE
- NORTH/SOUTH STREET LINE
- BOREHOLE
- BENCH MARK
- HYDRO TOWER
- CULVERT
- DIRECTION OF FLOW/MINOR SWALE
- MAJOR/REAR YARD SWALE
- OVERLAND FLOW ROUTE

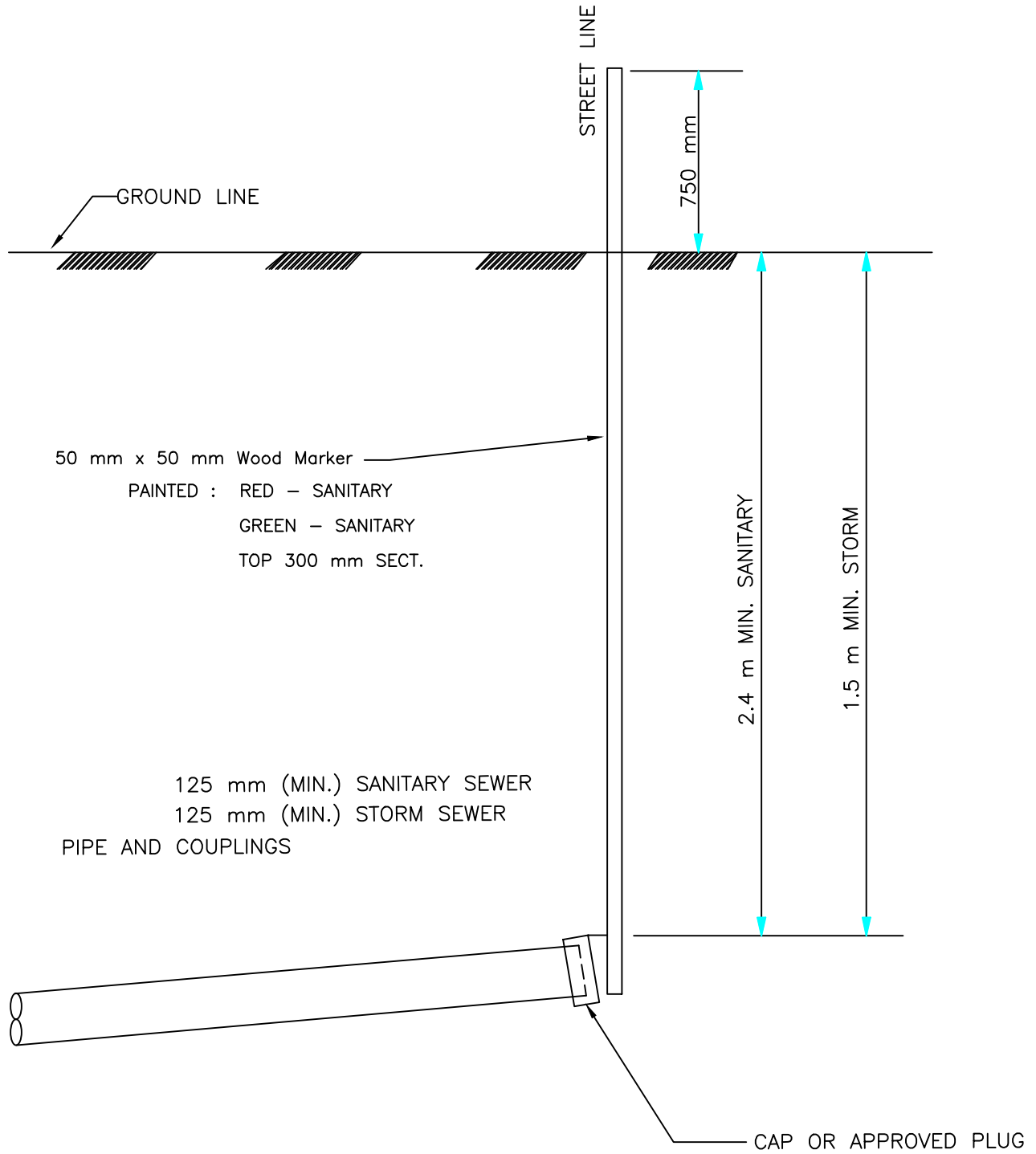




NOTES:

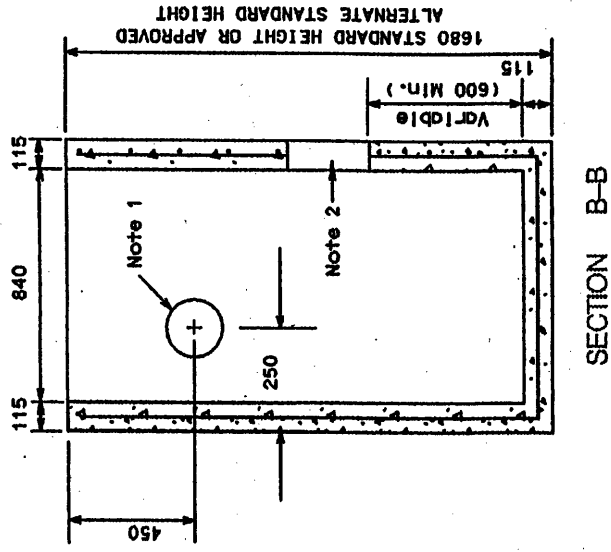
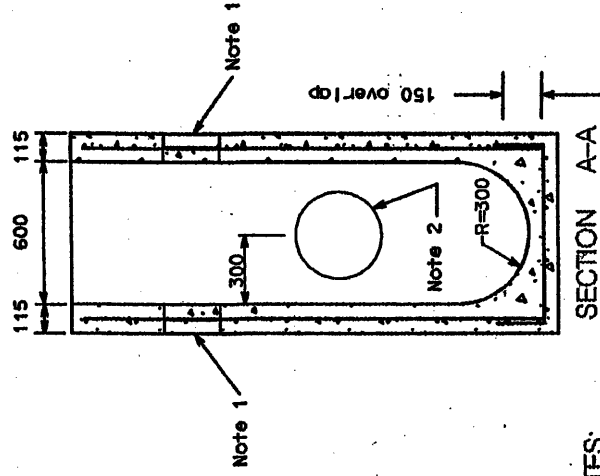
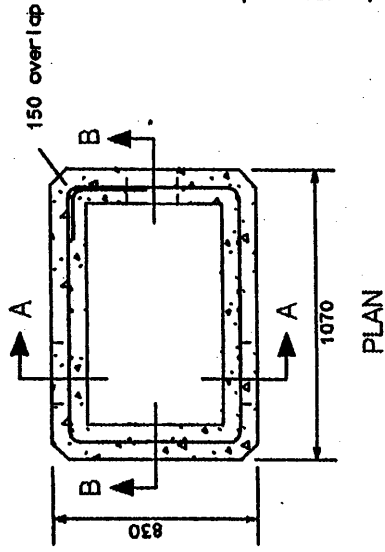
1. ALL HYDRANTS, PADMOUNTS TRANSFORMERS AND STREET LIGHT POLES ARE TO BE INSTALLED ON LOT LINES ONLY AND IN ACCORDANCE WITH MSD 1.
2. DRIVEWAY SHALL BE LOCATED ON THE OPPOSITE SIDE OF THE LOT TO THAT OF A PADMOUNTED TRANSFORMER.
3. WATER SERVICES SHALL BE INSTALLED ON THE CENTRELINE OF SINGLE LOTS, AND 1.0m TO THE RIGHT AND LEFT OF CENTRELINE FOR SEMI-DETACHED LOTS.
4. SANITARY P.D.C. SHALL BE INSTALLED 3.0m RIGHT OF CENTRELINE FOR SINGLE LOTS AND 3.0m RIGHT AND LEFT OF CENTRELINE FOR SEMI-DETACHED LOTS.
5. BELL AND HYDRO TO BE INSTALLED IN COMMON TRENCH 0.6m FROM EITHER PROPERTY LINE.

MUNICIPALITY OF DUTTON DUNNICH	
LOT SERVICING	
MARCH 2020 / REV.	MSD - 15



MUNICIPALITY OF DUTTON DUNWICH

PRIVATE DRAIN CONNECTIONS
 AT STREET LINE



1680 STANDARD HEIGHT OR APPROVED
ALTERNATE STANDARD HEIGHT

Variable
(600 Min.)

NOTES:

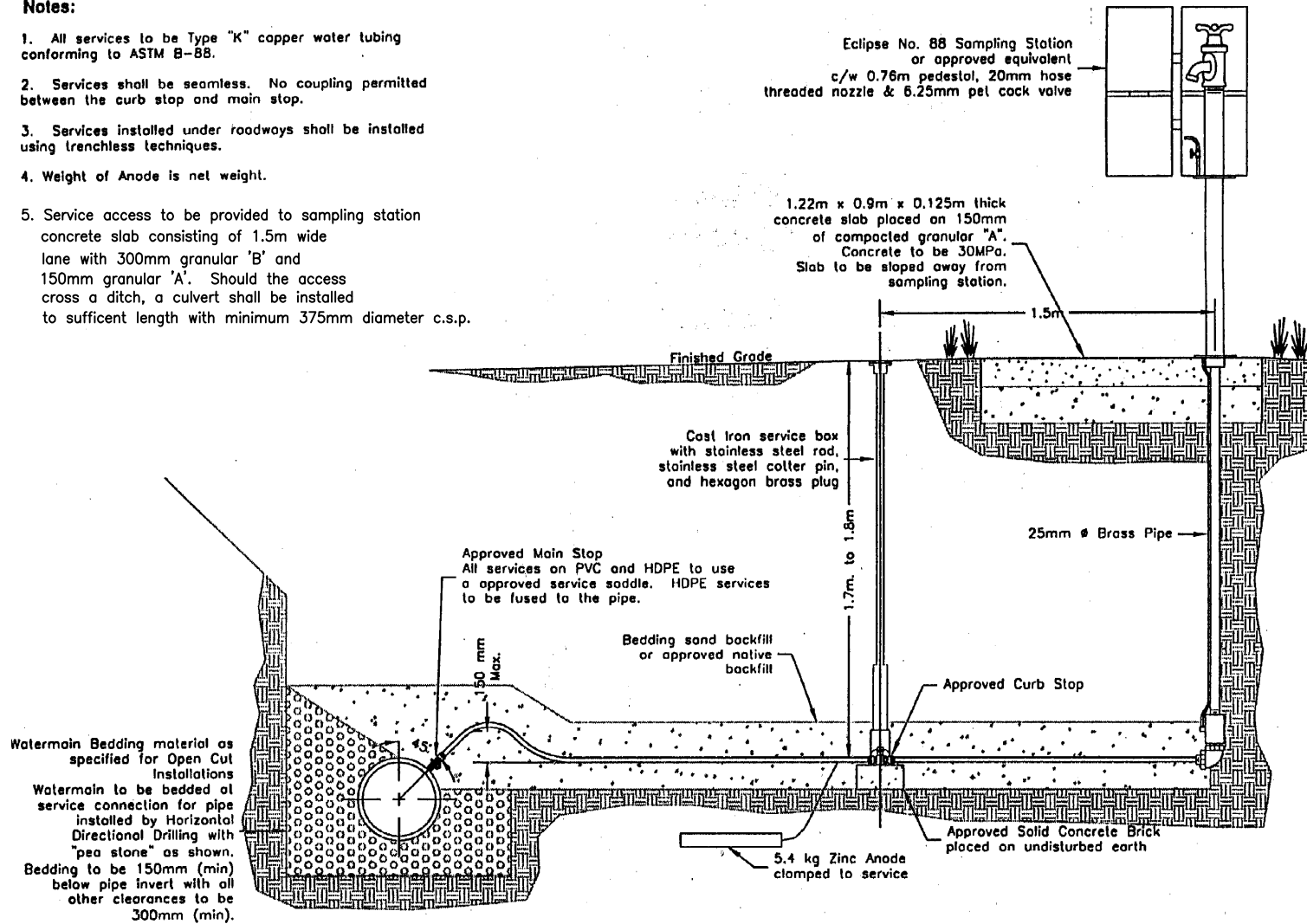
1. 200mm dia. knockout to accommodate subdrain. knockout to be half wall thickness from the outside.
2. Outlet hole size 400mm dia. location as required.
3. All reinforcing steel bars to be 15. Reinforcing steel shall have 50mm cover

A. ALL DIMENSIONS ARE IN MILLIMETERS
UNLESS OTHERWISE SHOWN

4. Granular backfill to be placed and compacted to a min. thickness of 300mm all around
5. Adjustment units shall be installed as per QPSD-704.010.
6. Class of concrete: 30 MPa at 28 days
7. Refer to QPSD-400.09 for catch basin cast iron curb inlet overflow plate details.

Notes:

1. All services to be Type "K" copper water tubing conforming to ASTM B-88.
2. Services shall be seamless. No coupling permitted between the curb stop and main stop.
3. Services installed under roadways shall be installed using trenchless techniques.
4. Weight of Anode is net weight.
5. Service access to be provided to sampling station concrete slab consisting of 1.5m wide lane with 300mm granular 'B' and 150mm granular 'A'. Should the access cross a ditch, a culvert shall be installed to sufficient length with minimum 375mm diameter c.s.p.



Eclipse No. 88 Sampling Station or approved equivalent c/w 0.76m pedestal, 20mm hose threaded nozzle & 6.25mm pet cock valve

1.22m x 0.9m x 0.125m thick concrete slab placed on 150mm of compacted granular "A". Concrete to be 30MPa. Slab to be sloped away from sampling station.

Cast Iron service box with stainless steel rod, stainless steel collar pin, and hexagon brass plug

25mm ϕ Brass Pipe

Approved Main Stop
All services on PVC and HDPE to use a approved service saddle. HDPE services to be fused to the pipe.

Bedding sand backfill or approved native backfill

Approved Curb Stop

Watermain Bedding material as specified for Open Cut Installations
Watermain to be bedded at service connection for pipes installed by Horizontal Directional Drilling with "pea stone" as shown.
Bedding to be 150mm (min) below pipe invert with all other clearances to be 300mm (min).

5.4 kg Zinc Anode clamped to service

MUNICIPALITY OF DUTTON DUNWICH

WATER SAMPLING STATION

MARCH 2020 / REV.

MSD - 18