CITY OF MAPLE RIDGE

DESIGN AND CONSTRUCTION DOCUMENTS

Part 4

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

September 2015
Updated: October 2015

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DRAWING INDEX

MMCD Standard Detail Drawings		CITY OF MAPLE RIDGE Supplementary Standard Detail Drawings	
Retain	Delete	Replace/Add	Description
Concrete and Miscellaneous Details			
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C2			Concrete Sidewalk and Barrier Curb
C3			Concrete Sidewalk and Rollover Curb
C4			Concrete Curbs Narrow Base
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MMCD Standard Detail Drawings		CITY OF MAPLE RIDGE Supplementary Standard Detail Drawings	
Retain	Delete	Replace/Add	Description
		R105	Urban Arterial With Bike Lanes
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		R108	Rural Local
		R109	Rural Arterial and Collector
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		R118	Turnaround
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		R120	Extruded Curb and Asphalt Sidewalk
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		R122	Tactile Strip Placement
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S3			Manhole Connection Details – Drop and Ramp Type
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	S7	S7	Sanitary and Storm Service Connection
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	S9	S9a	Sanitary Sewer Inspection Chamber
		S9b	Storm Sewer Inspection Chamber
S10			Inspection Chamber For 250 to 375 Storm Sewer Connection
	S11	S11	Top Inlet Catch Basin
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S13			Storm Sewer Inlet with Safety Grillage
S14			Concrete Block Endwall
S15			Driveway Culvert with Concrete Block Endwalls
		S100	Side Inlet Catch Basin
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MMCD Standard Detail Drawings		CITY OF MAPLE RIDGE Supplementary Standard Detail Drawings	
Retain	Delete	Replace/Add	Description
		S102	Shallow Catch Basin with Inlet Box
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Waterworks Details			
W1			Typical Thrust Block Arrangements
W2a			Water Service Connection – Service Box
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	W2c	See Part 5 Water Meter Material Specifications and Guidelines WM1-WM8	Meter Installation for 19mm and 25mm Service Connections
	W2d	See Part 5 Water Meter Material Specifications and Guidelines WM1-WM8	19mm Meter Setter and 38mm Fire Service
	W3	W3	Gate Valve
	W4	W4a	Fire Hydrant Assembly
		W4b	Fire Hydrant Access
W5			Test Point Installation
	W6	W6	Air and Vacuum Valve Chamber
W7			Air Valve Assembly – 100mm Valve
	W8	W8	Blow-Off Assembly
W9			Blow – Down Chamber
W10			Waterworks Chamber Drain

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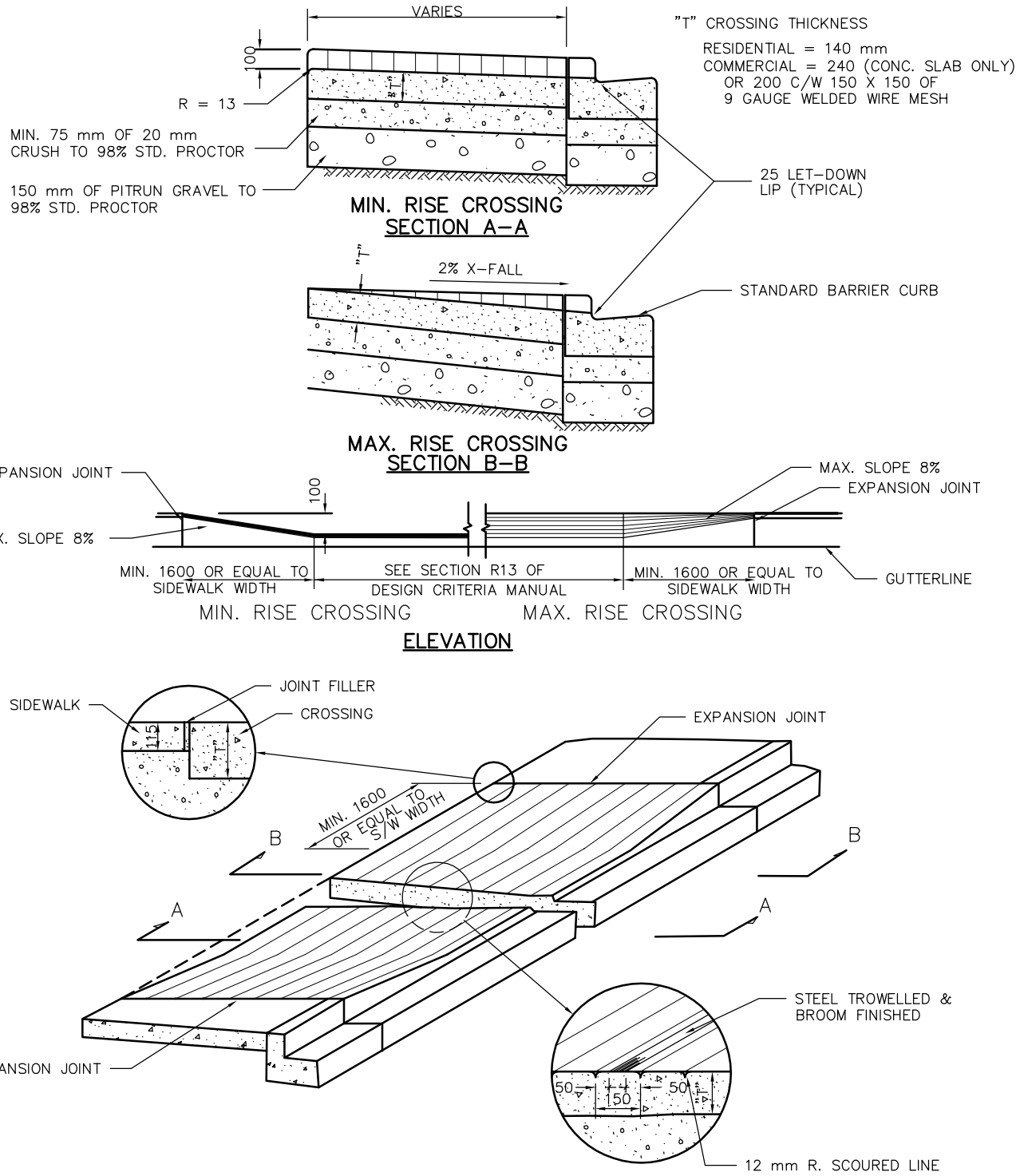


NOTE: IN ISOLATED CASES WHERE NEW CROSSINGS ARE CONSTRUCTED IN EXISTING WALKS, CONCRETE SHALL BE 35 mpa.

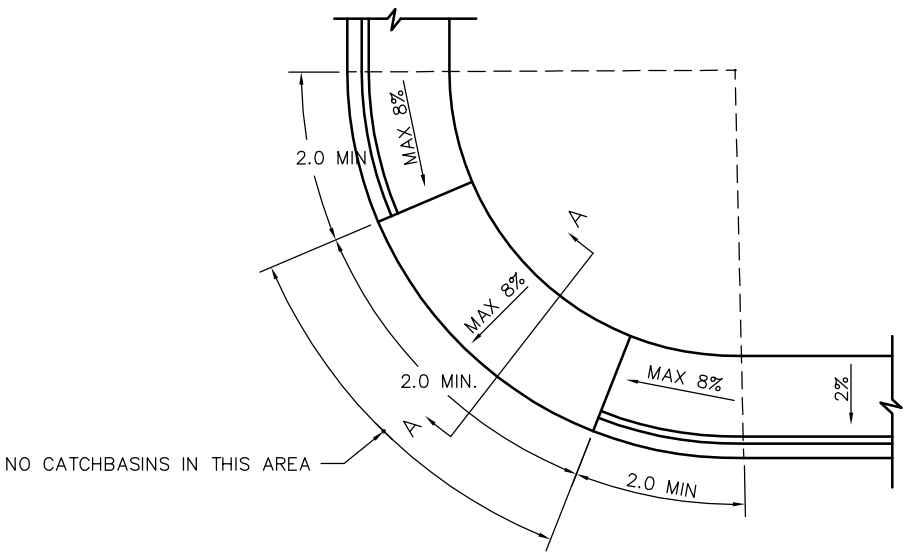
DRIVEWAY CROSSING
FOR BARRIER CURB

NO.	DATE	REVISION
1	Oct-15	REFERENCE CHANGED TO R13

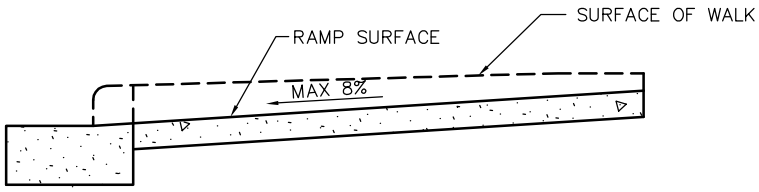
CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

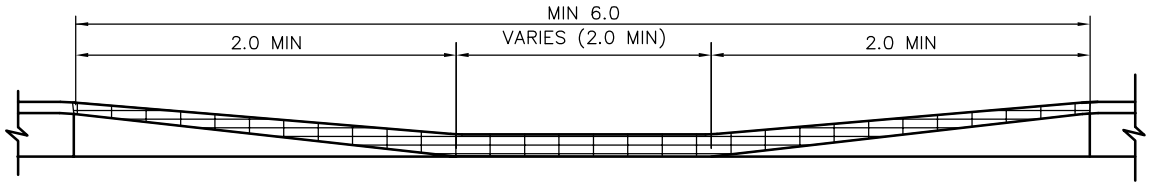
DESIGN: GS	DRAWN: PM	DWG No. C7
DATE: SEP 2015	SCALE: NTS	



PLAN



SECTION A–A



PROFILE OF LETDOWN

NOTES:

1. THIS STANDARD DETAIL APPLIES TO BARRIER CURB AND ROLLOVER CURB CONSTRUCTION WITH SIDEWALK.
2. RAMP TO MEET GUTTER PAN – NO LIP
3. EXPANSION JOINTS REQUIRED EVERY 9 m.
4. RAMP TO HAVE A NON–SKID, BRUSHED SURFACE.

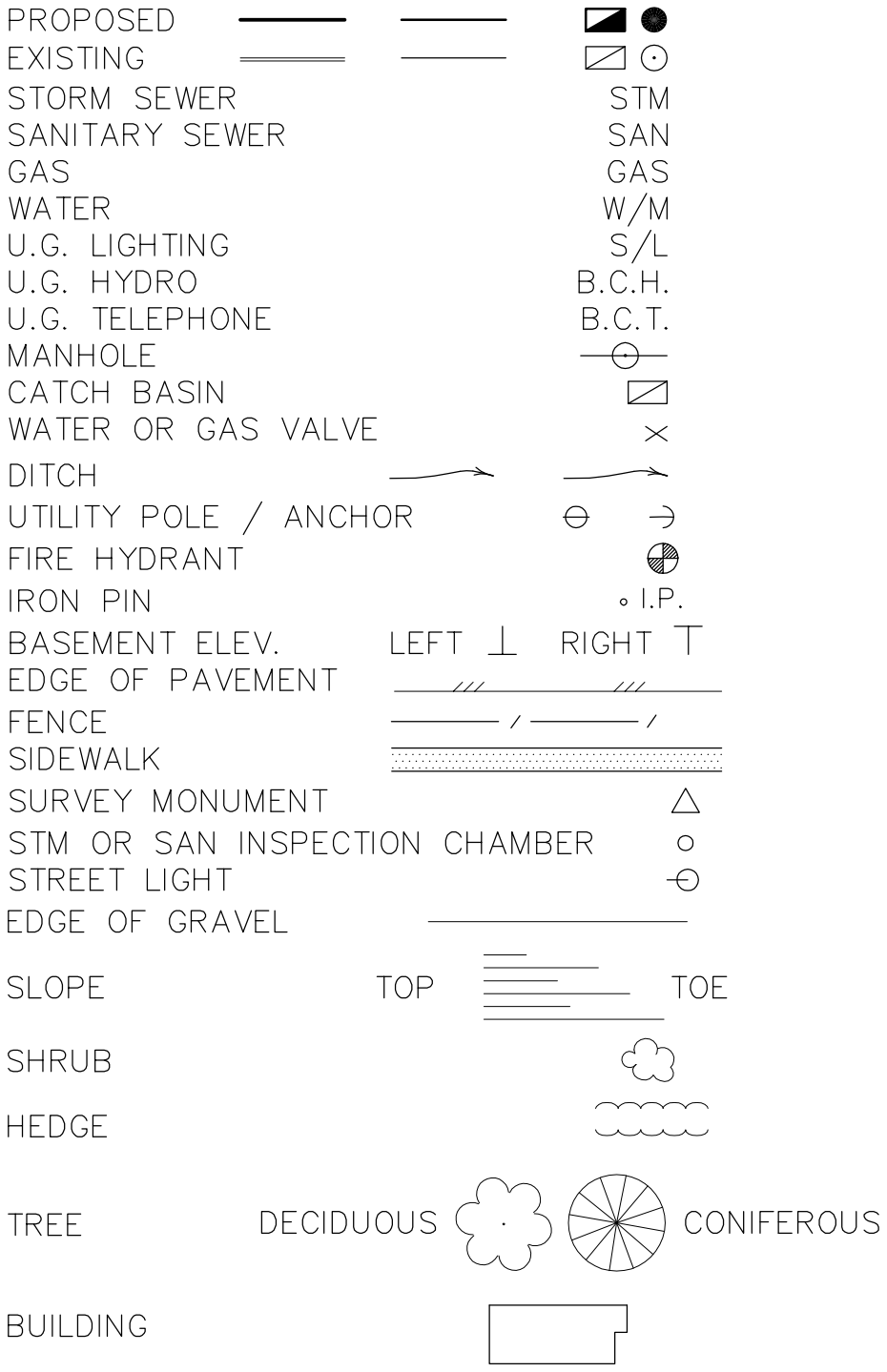
WHEEL CHAIR RAMP

NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: GS	DRAWN: PM	DWG No. C8
DATE: SEP 2015	SCALE: NTS	



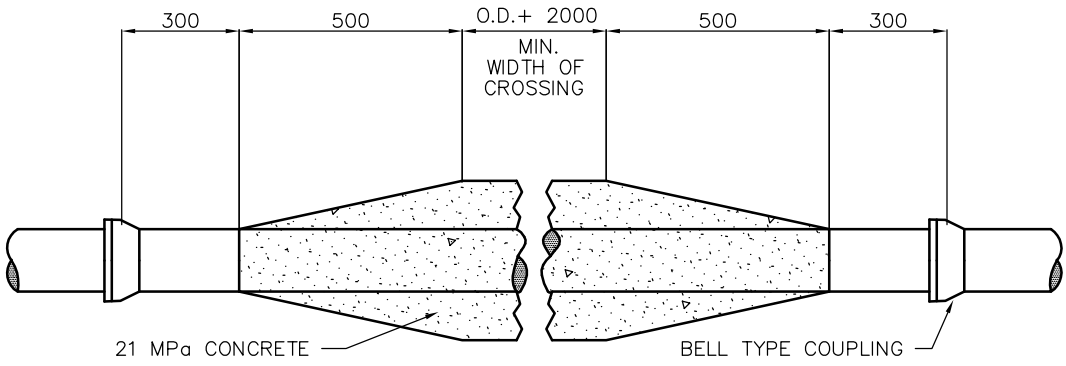
GENERAL LEGEND FOR CONTRACT DRAWINGS

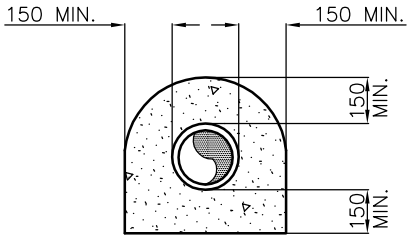
CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

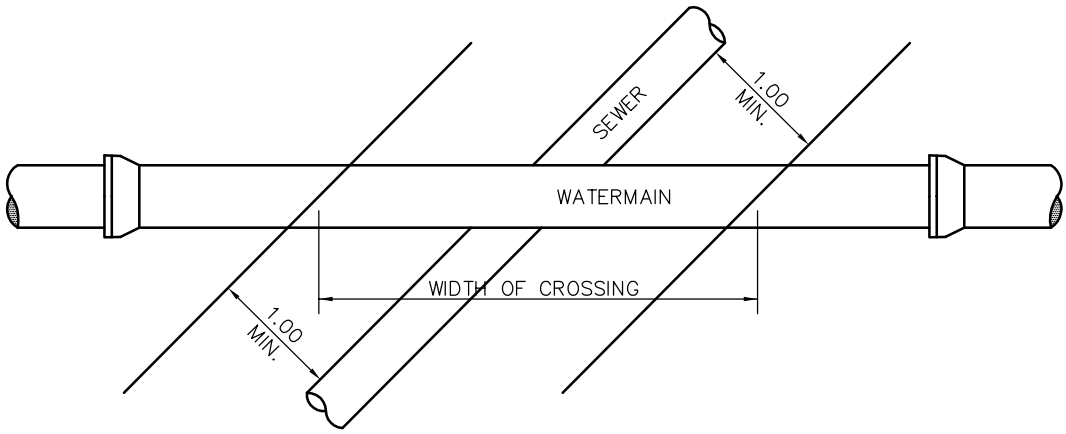
SUPPLEMENTARY STANDARD DETAIL DRAWINGS

NO.	DATE	REVISION

DESIGN: GS	DRAWN: GS	DWG No. G1
DATE: SEP 2015	SCALE: NTS	







NOTE: THIS STANDARD IS APPLICABLE TO WATER MAIN / SEWER SEPARATION ONLY.
WHERE POSSIBLE, NO WATERMAIN PIPE JOINTS WITHIN CONCRETE ENCASEMENT.

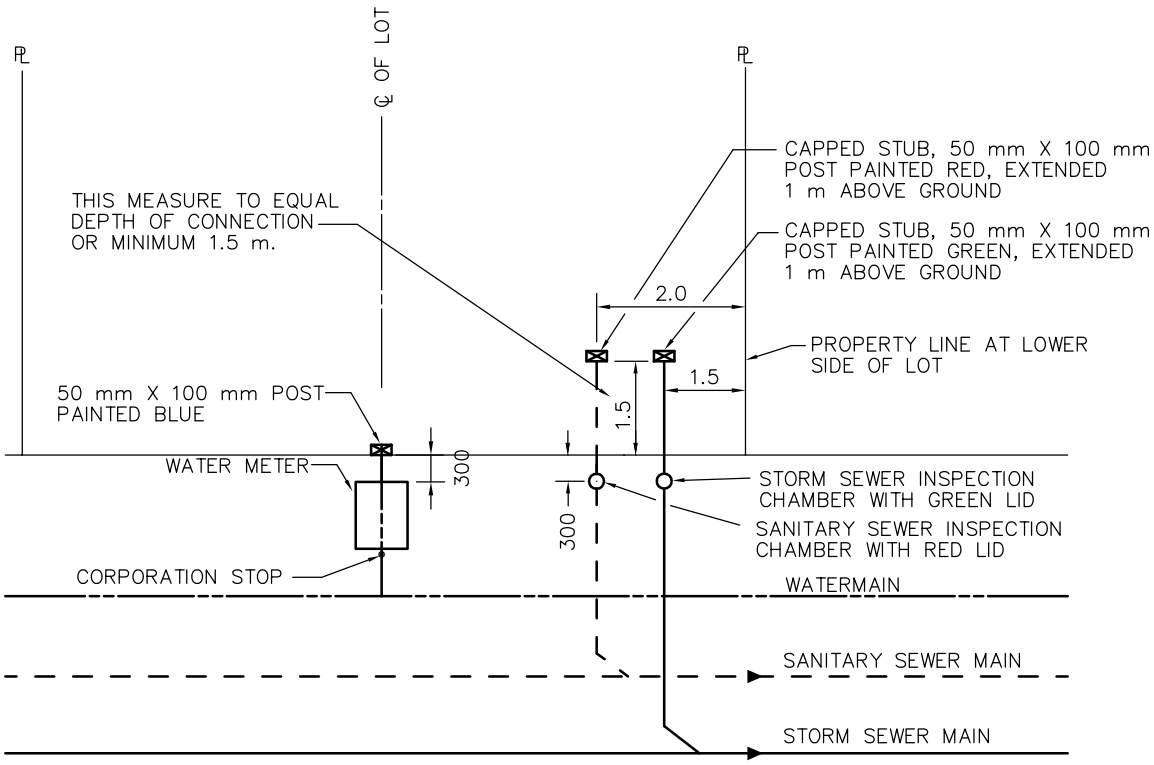
CONCRETE ENCASEMENT FOR WATER / SEWER SEPARATION

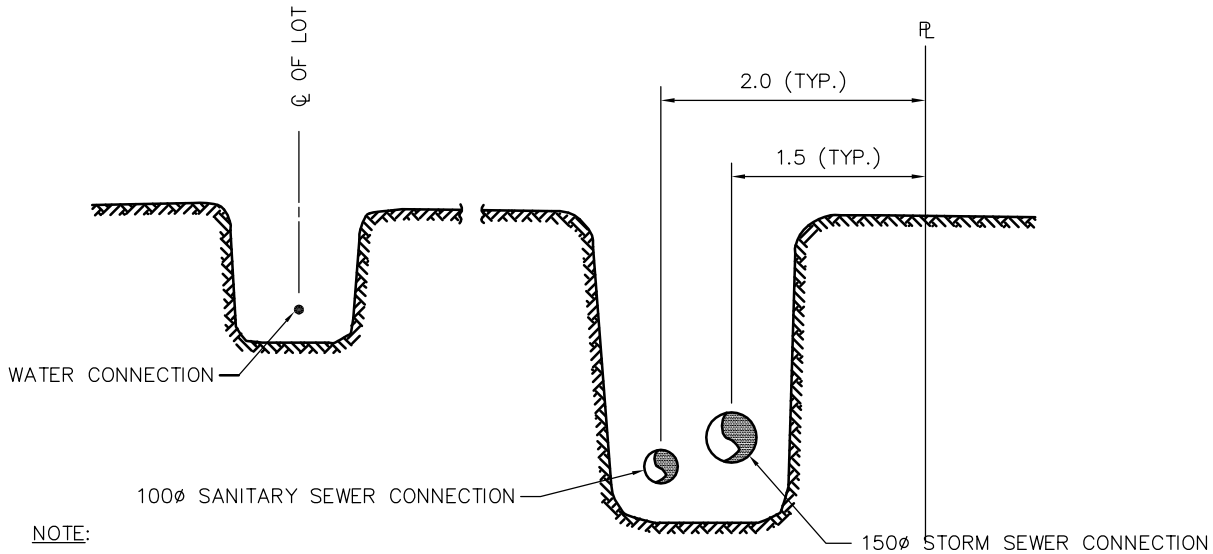
NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: DT	DRAWN: JA	DWG No. G6
DATE: SEP 2015	SCALE:	





NOTE:

FOR WATER CONNECTION SEE DWG. SSD W–7
FOR SANITARY CONNECTION SEE DWG. SSD S–2

LOT SERVICE CONNECTIONS

FOR CONTRACT DRAWINGS

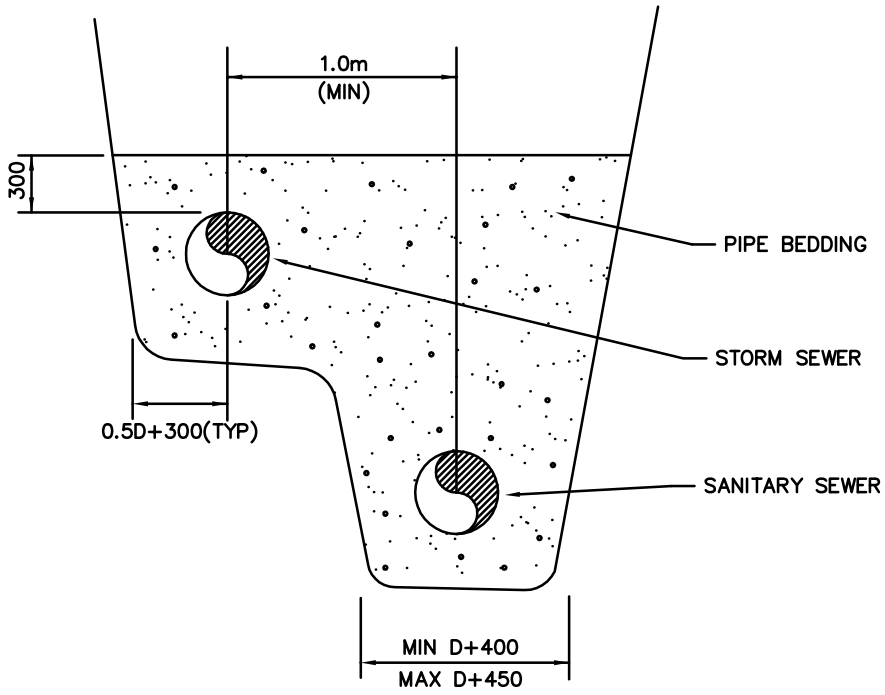
CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

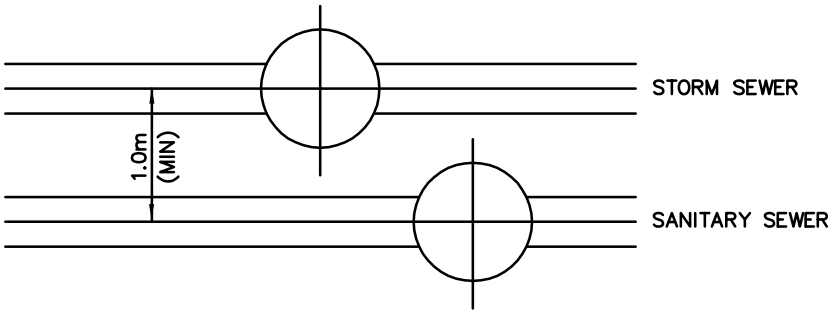
SUPPLEMENTARY STANDARD DETAIL DRAWINGS

NO.	DATE	REVISION

DESIGN:	GS	DRAWN:	GS
DATE:	SEP 2015	SCALE:	NTS

DWG No. G100





NOTE : MINIMUM CLEARANCE BETWEEN MANHOLES IS 300mm

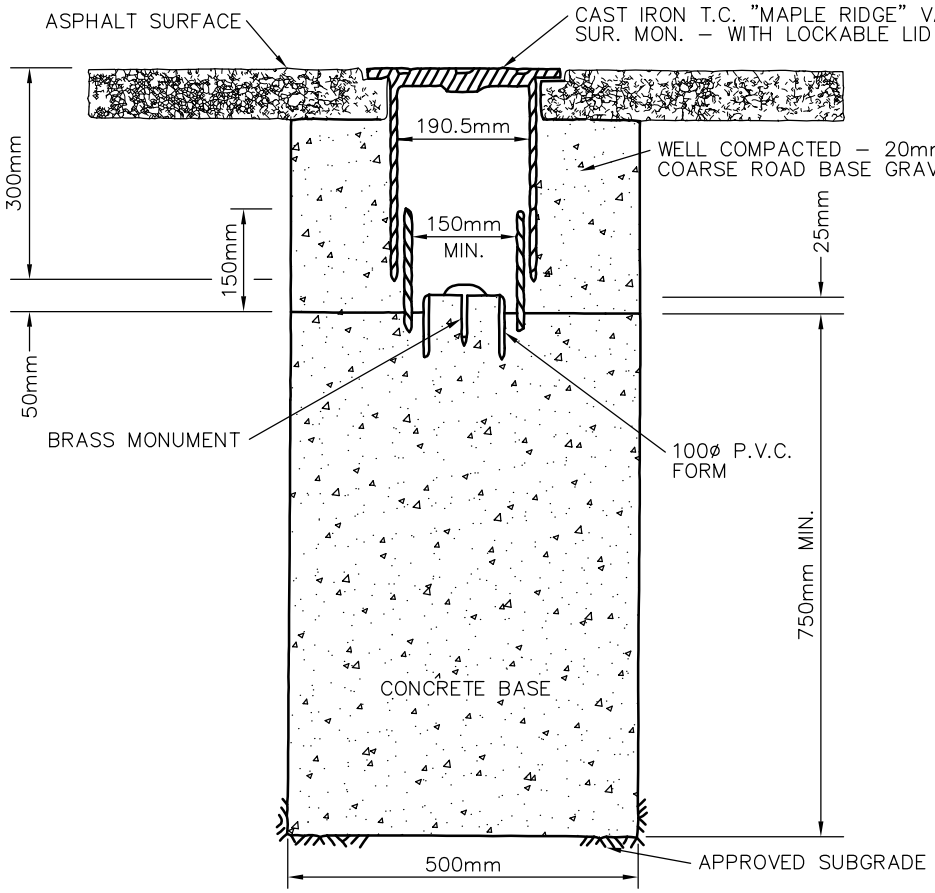
COMMON TRENCH INSTALLATION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

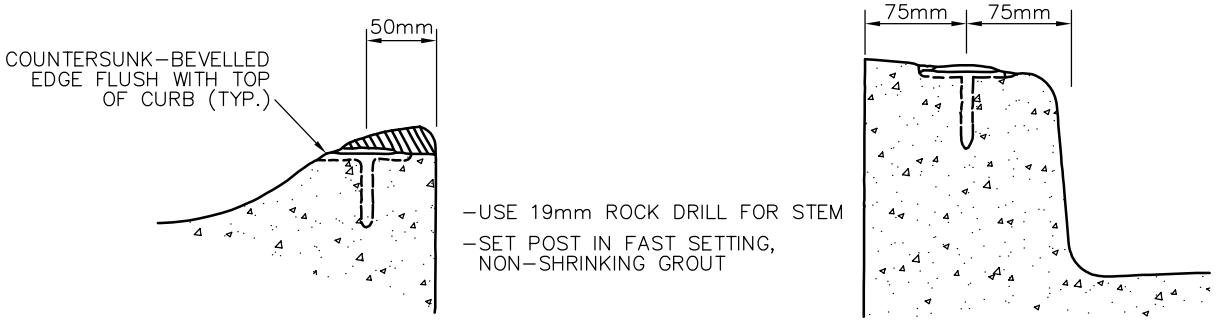
NO.	DATE	REVISION

DESIGN: GS	DRAWN: GS	DWG No. G101
DATE: SEP 2015	SCALE: NTS	



INSTALLATION OF MONUMENT IN ROAD

(P. CON)



ROLL–OVER CURB

BARRIER TYPE CURB

INSTALLATION OF MONUMENT IN EXISTING CURB

(P. ROCK)

NOTES:
1. LOCATIONS OF ALL MONUMENTS TO BE DETERMINED BY THE ENGINEERING DEPARTMENT.
2. ALL BRASS CAPS TO BE INSTALLED WITH INSCRIBED CROWN FACING ASTRONOMIC NORTH.

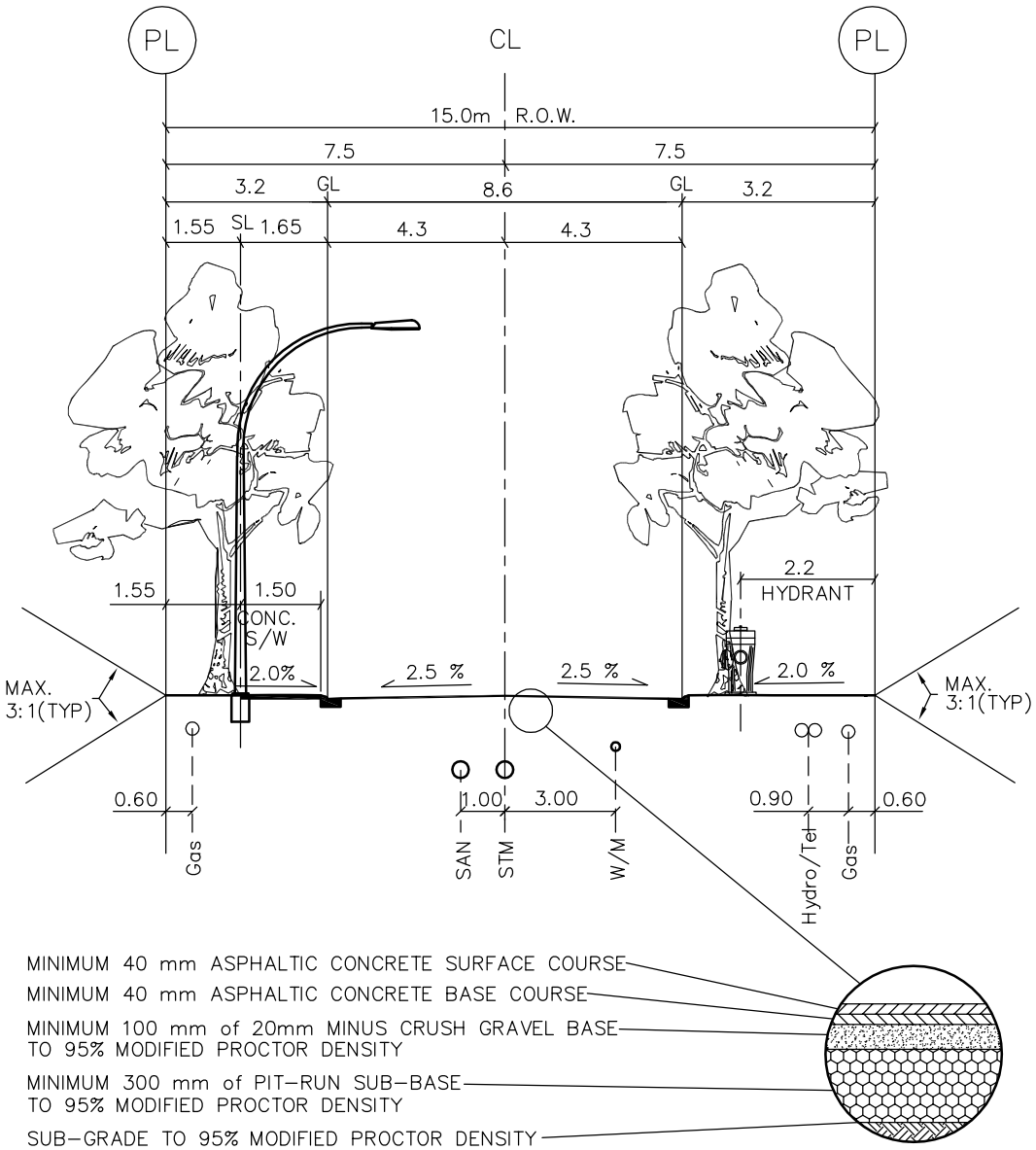
INTEGRATED SURVEY MONUMENT INSTALLATION

NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: GP	DRAWN: JA	DWG No. G102
DATE: SEP 2015	SCALE: NTS	



NOTES:

1. THE STRUCTURAL ROAD ELEMENTS SHOWN ARE THE MINIMUM REQUIREMENTS. BENKELMAN BEAM TEST RESULTS OR AN EQUIVALENT TECHNIQUE SHALL BE USED TO DESIGN THE ROAD STRUCTURE.
2. ALL UTILITY SERVICES AND SERVICE CONNECTIONS SHALL BE INSTALLED PRIOR TO FINAL PAVING.
3. ALL PERMANENT WORKS ON PRIVATE PROPERTY SHALL BE PROTECTED BY A REGISTERED EASEMENT OR RIGHT OF WAY.
4. CURB AND GUTTER SHALL BE ROLL-OVER TYPE, EXCEPT NEXT TO SCHOOLS, PARKS, MULTI FAMILY DEVELOPMENTS OR MAJOR FLOOD PATH SHALL BE BARRIER CURB TYPE.

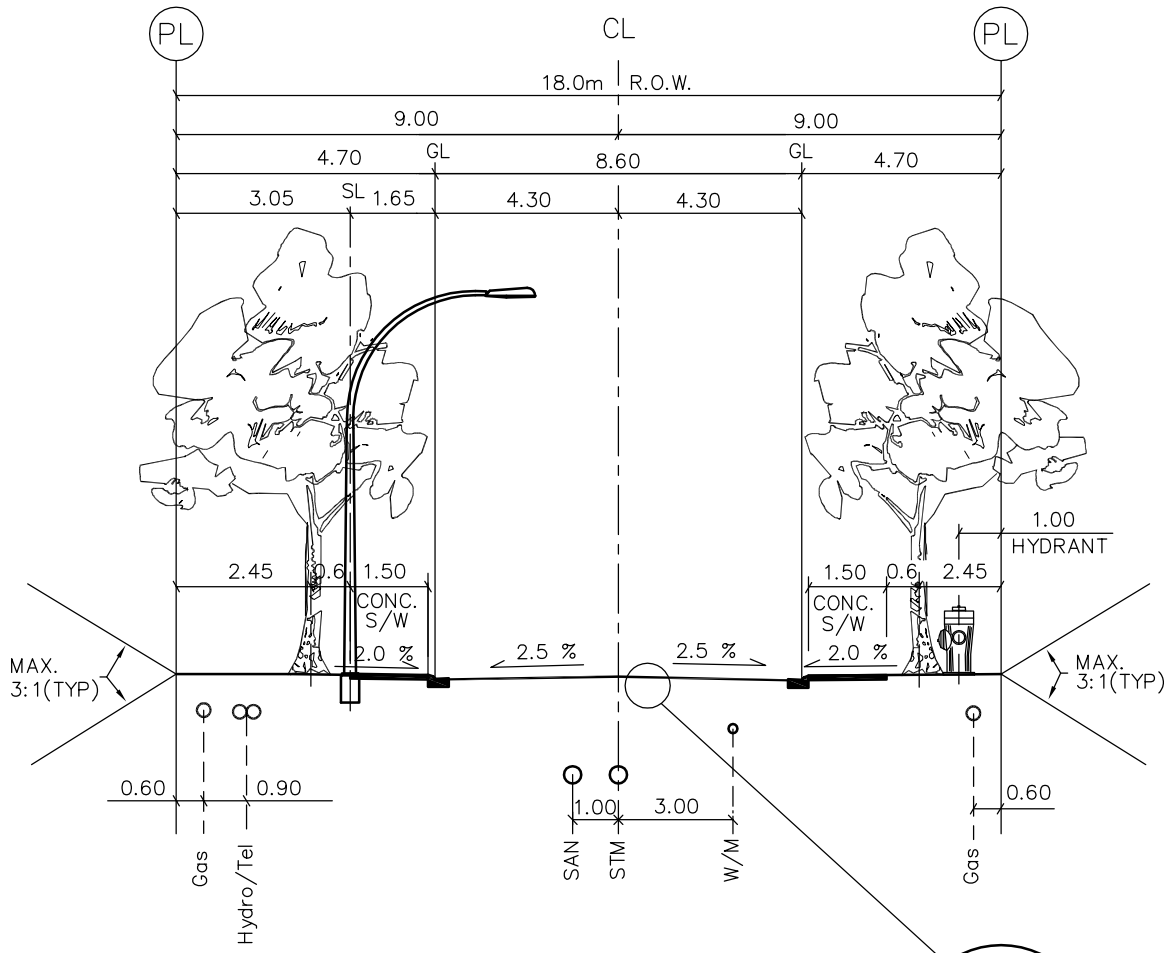
LIMITED URBAN LOCAL

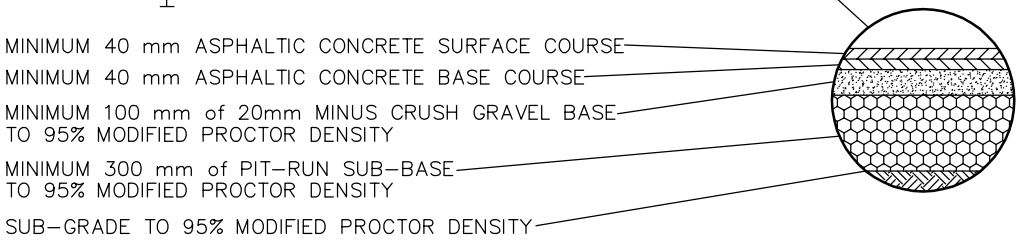
NO.	DATE	REVISION
1	Oct-15	HYDRO/TEL LOCATION REVISED

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: GS	DRAWN: GS	DWG No.
DATE: SEP 2015	SCALE: NTS	R100





NOTES:

1. THE STRUCTURAL ROAD ELEMENTS SHOWN ARE THE MINIMUM REQUIREMENTS. BENKELMAN BEAM TEST RESULTS OR AN EQUIVALENT TECHNIQUE SHALL BE USED TO DESIGN THE ROAD STRUCTURE.
2. ALL UTILITY SERVICES AND SERVICE CONNECTIONS SHALL BE INSTALLED PRIOR TO FINAL PAVING.
3. ALL PERMANENT WORKS ON PRIVATE PROPERTY SHALL BE PROTECTED BY A REGISTERED EASEMENT OR RIGHT OF WAY.
4. CURB AND GUTTER SHALL BE ROLL-OVER TYPE, EXCEPT NEXT TO SCHOOLS, PARKS, MULTI FAMILY DEVELOPMENTS OR MAJOR FLOOD PATH SHALL BE BARRIER CURB TYPE.

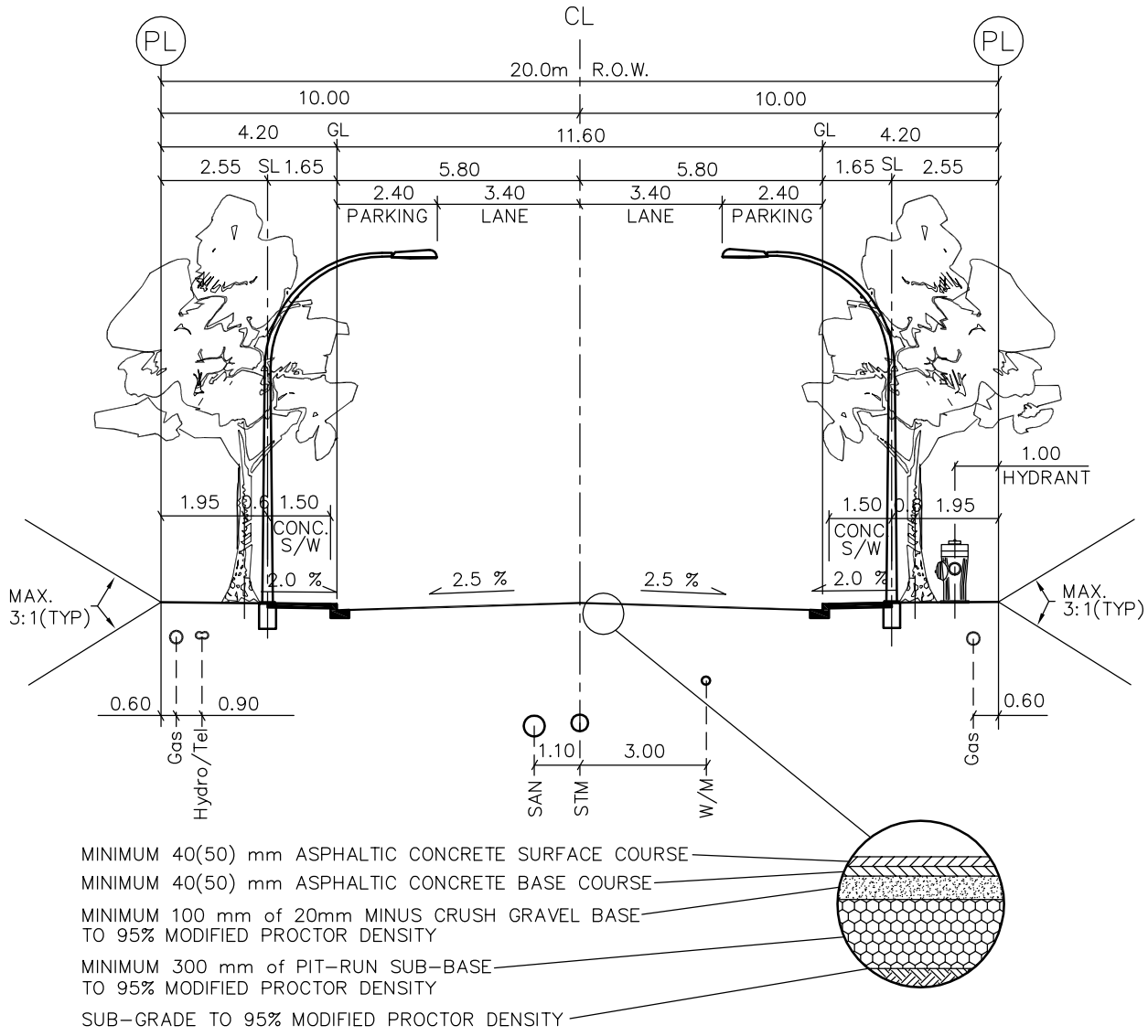
THROUGH URBAN LOCAL

NO.	DATE	REVISION
1	Oct-15	HYDRO/TEL LOCATION REVISED

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: GS	DRAWN: GS	DWG No. R101
DATE: SEP 2015	SCALE: NTS	



NOTES:

1. THE STRUCTURAL ROAD ELEMENTS SHOWN ARE THE MINIMUM REQUIREMENTS. BENKELMAN BEAM TEST RESULTS OR AN EQUIVALENT TECHNIQUE SHALL BE USED TO DESIGN THE ROAD STRUCTURE.
2. ALL UTILITY SERVICES AND SERVICE CONNECTIONS SHALL BE INSTALLED PRIOR TO FINAL PAVING.
3. ALL PERMANENT WORKS ON PRIVATE PROPERTY SHALL BE PROTECTED BY A REGISTERED EASEMENT OR RIGHT OF WAY.
4. PAVEMENT THICKNESS FOR INDUSTRIAL ROAD SHALL BE MINIMUM 50 mm ASPHALTIC CONCRETE SURFACE COURSE AND MINIMUM 50 mm ASPHALTIC CONCRETE BASE COURSE.
5. CURB AND GUTTER SHALL BE BARRIER TYPE CURB.

URBAN COLLECTOR

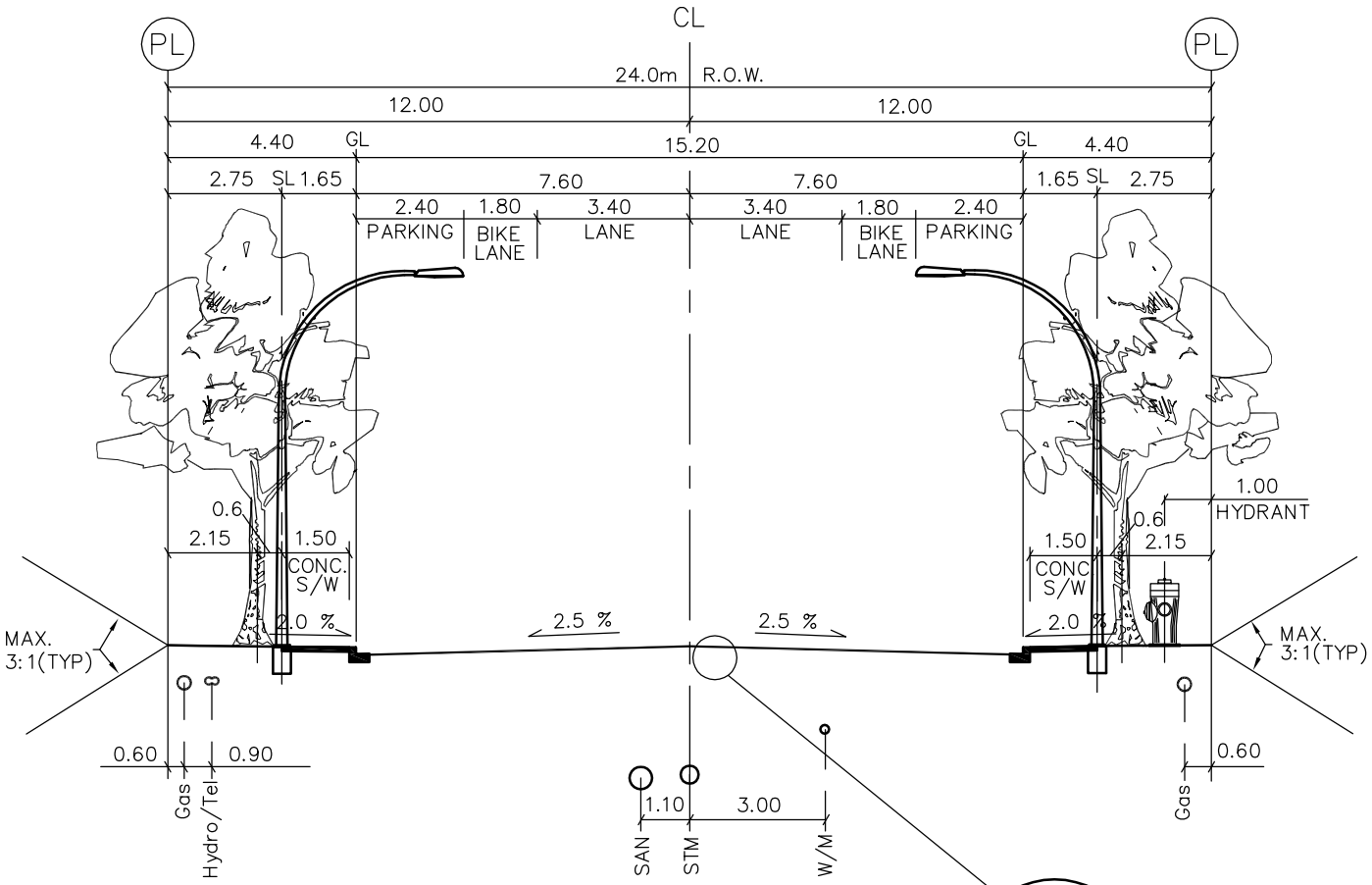
WITHOUT BIKE LANE

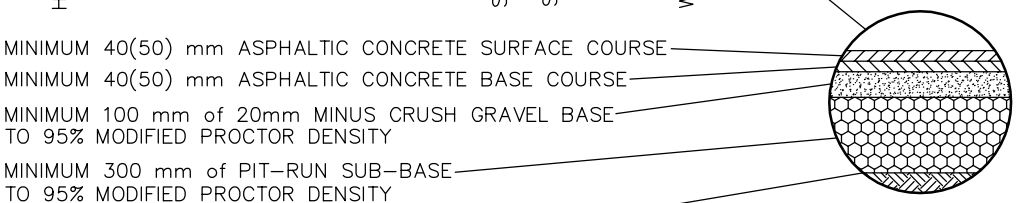
NO.	DATE	REVISION
1	Oct-15	HYDRO/TEL LOCATION REVISED

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: GS	DRAWN: GS	DWG No. R102
DATE: SEP 2015	SCALE: NTS	





NOTES:

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2. ALL UTILITY SERVICES AND SERVICE CONNECTIONS SHALL BE INSTALLED PRIOR TO FINAL PAVING.
3. ALL PERMANENT WORKS ON PRIVATE PROPERTY SHALL BE PROTECTED BY A REGISTERED EASEMENT OR RIGHT OF WAY.
4. PAVEMENT THICKNESS FOR INDUSTRIAL ROAD SHALL BE MINIMUM 50 mm ASPHALTIC CONCRETE SURFACE COURSE AND MINIMUM 50 mm ASPHALTIC CONCRETE BASE COURSE.
5. CURB AND GUTTER SHALL BE BARRIER TYPE CURB.

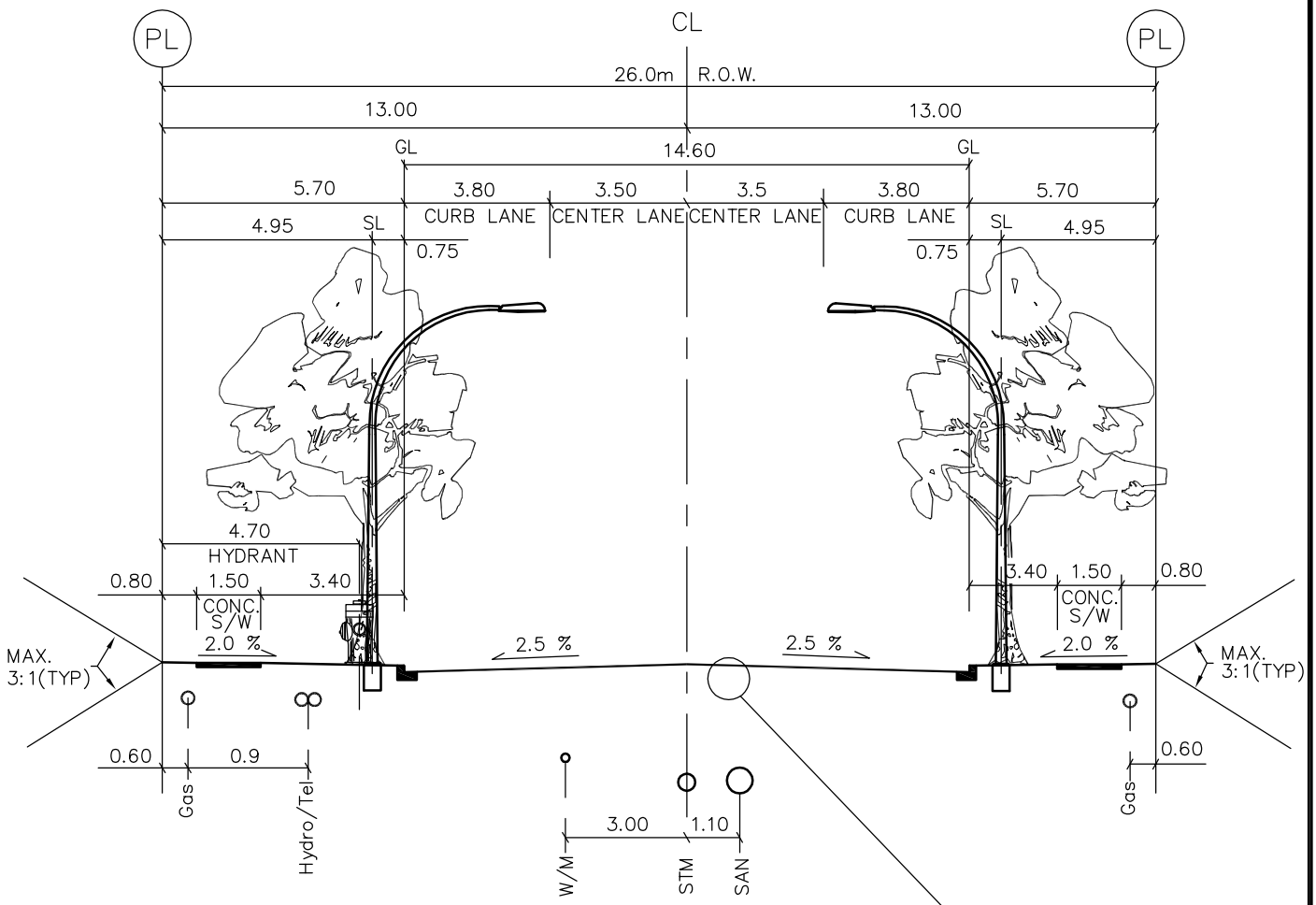
URBAN COLLECTOR
WITH BIKE LANES

NO.	DATE	REVISION
1	Oct-15	HYDRO/TEL LOCATION REVISED

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: GS	DRAWN: GS	DWG No. R103
DATE: SEP 2015	SCALE: NTS	



MINIMUM 50 mm ASPHALTIC CONCRETE SURFACE COURSE

MINIMUM 50 mm ASPHALTIC CONCRETE BASE COURSE

MINIMUM 100 mm of 20mm MINUS CRUSH GRAVEL BASE TO 95% MODIFIED PROCTOR DENSITY

MINIMUM 300 mm of PIT–RUN SUB–BASE TO 95% MODIFIED PROCTOR DENSITY

SUB–GRADE TO 95% MODIFIED PROCTOR DENSITY

NOTES:

1. THE STRUCTURAL ROAD ELEMENTS SHOWN ARE THE MINIMUM REQUIREMENTS. BENKELMAN BEAM TEST RESULTS OR AN EQUIVALENT TECHNIQUE SHALL BE USED TO DESIGN THE ROAD STRUCTURE.
2. ALL UTILITY SERVICES AND SERVICE CONNECTIONS SHALL BE INSTALLED PRIOR TO FINAL PAVING.
3. ALL PERMANENT WORKS ON PRIVATE PROPERTY SHALL BE PROTECTED BY A REGISTERED EASEMENT OR RIGHT OF WAY.
4. CURB AND GUTTER SHALL BE BARRIER TYPE CURB.

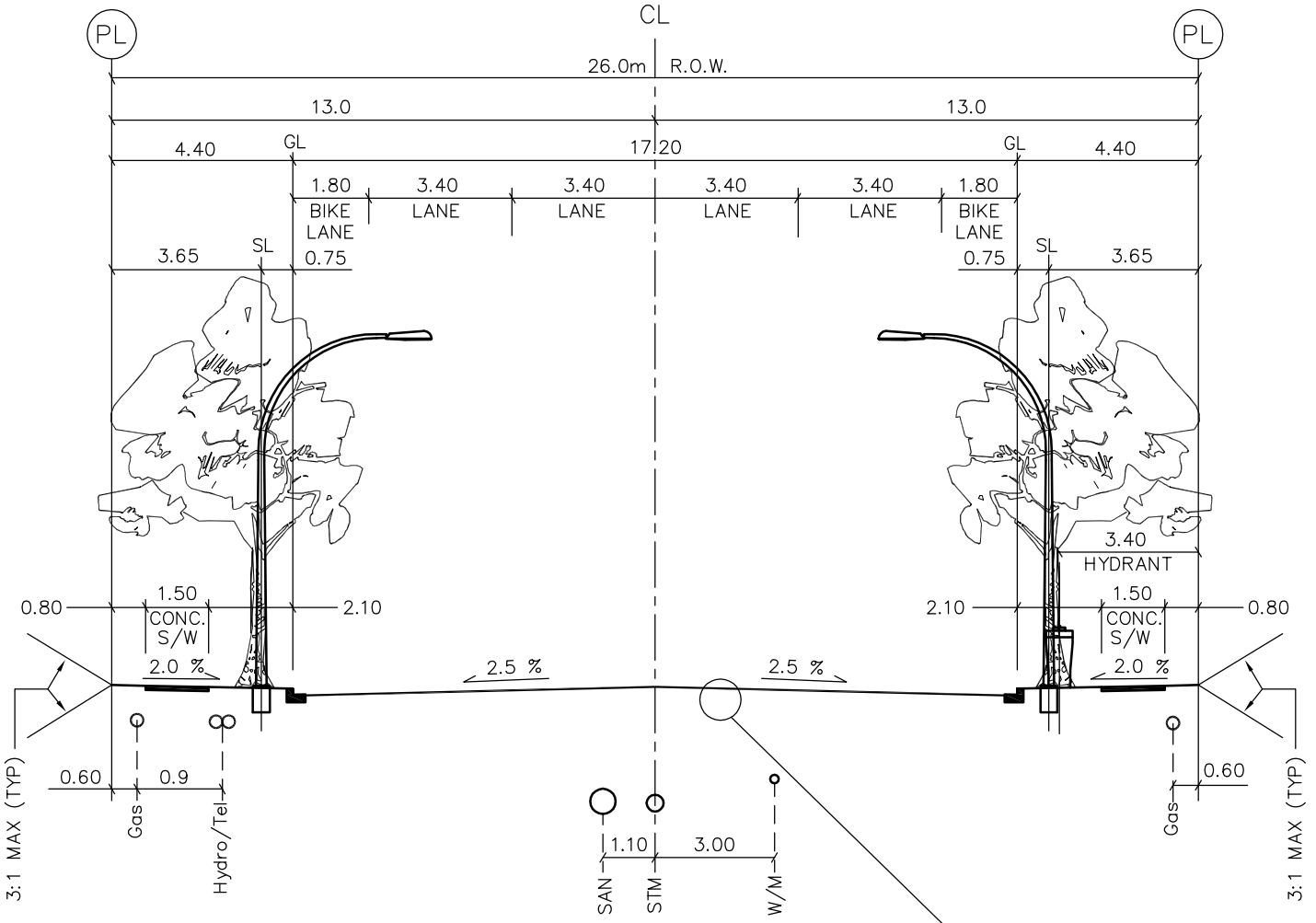
URBAN ARTERIAL
WITHOUT BIKE LANES

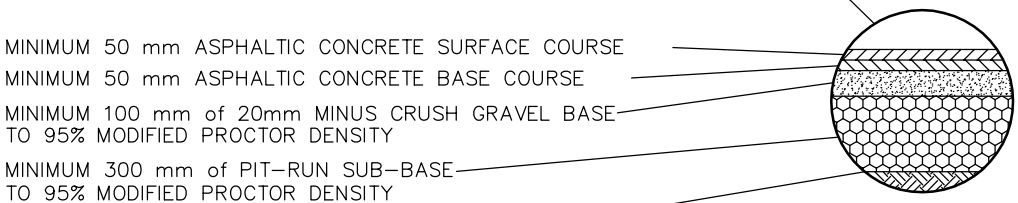
NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: GS	DRAWN: GS	DWG No. R104
DATE: JAN 2012	SCALE: NTS	





NOTES:

1. THE STRUCTURAL ROAD ELEMENTS SHOWN ARE THE MINIMUM REQUIREMENTS. BENKELMAN BEAM TEST RESULTS OR AN EQUIVALENT TECHNIQUE SHALL BE USED TO DESIGN THE ROAD STRUCTURE.
2. ALL UTILITY SERVICES AND SERVICE CONNECTIONS SHALL BE INSTALLED PRIOR TO FINAL PAVING.
3. ALL PERMANENT WORKS ON PRIVATE PROPERTY SHALL BE PROTECTED BY A REGISTERED EASEMENT OR RIGHT OF WAY.
4. CURB AND GUTTER SHALL BE BARRIER TYPE CURB.

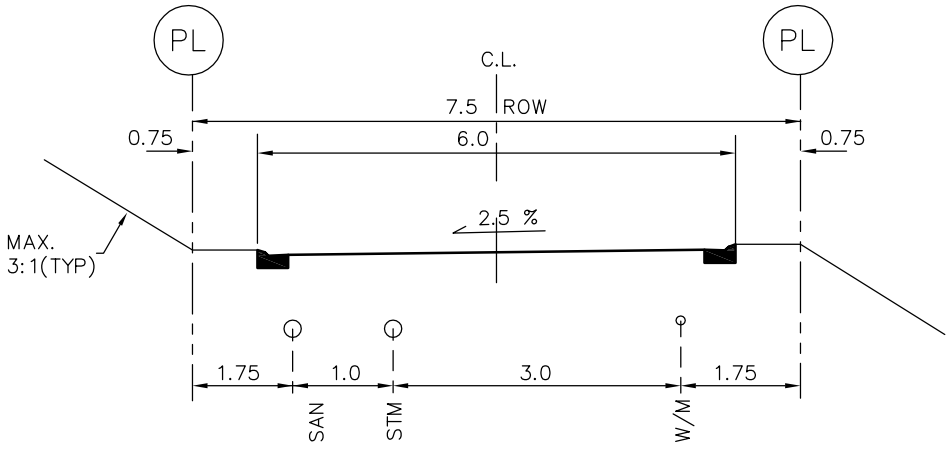
URBAN ARTERIAL
WITH BIKE LANES

NO.	DATE	REVISION
1	Oct-15	HYDRO/TEL LOCATION REVISED

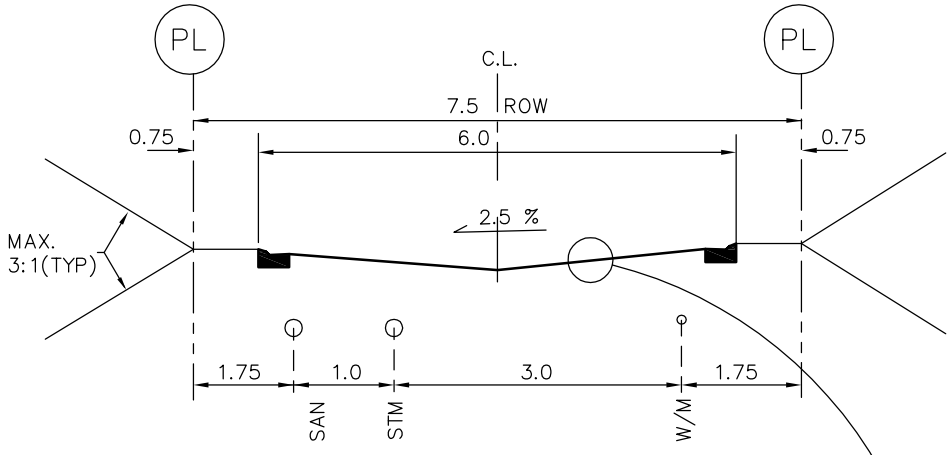
CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: GS	DRAWN: GS	DWG No. R105
DATE: JAN 2012	SCALE: NTS	



TYPE 'A'



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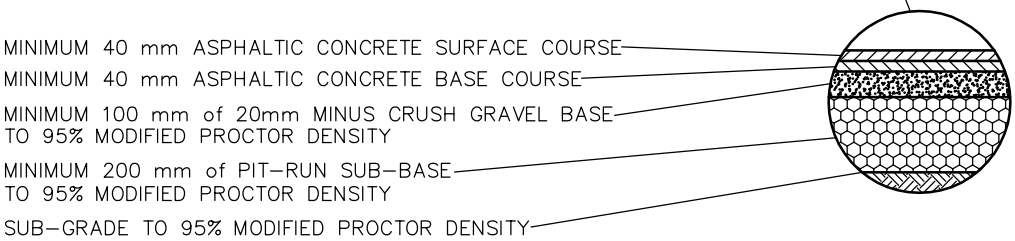


NOTES:

1. THE STRUCTURAL ROAD ELEMENTS SHOWN ARE THE MINIMUM REQUIREMENTS. BENKELMAN BEAM TEST RESULTS OR AN EQUIVALENT TECHNIQUE SHALL BE USED TO DESIGN THE ROAD STRUCTURE.
2. ALL UTILITY SERVICES AND SERVICE CONNECTIONS SHALL BE INSTALLED PRIOR TO FINAL PAVING.
3. ALL PERMANENT WORKS ON PRIVATE PROPERTY SHALL BE PROTECTED BY A REGISTERED EASEMENT OR RIGHT OF WAY.
4. CURB AND GUTTER SHALL BE ROLL-OVER TYPE.

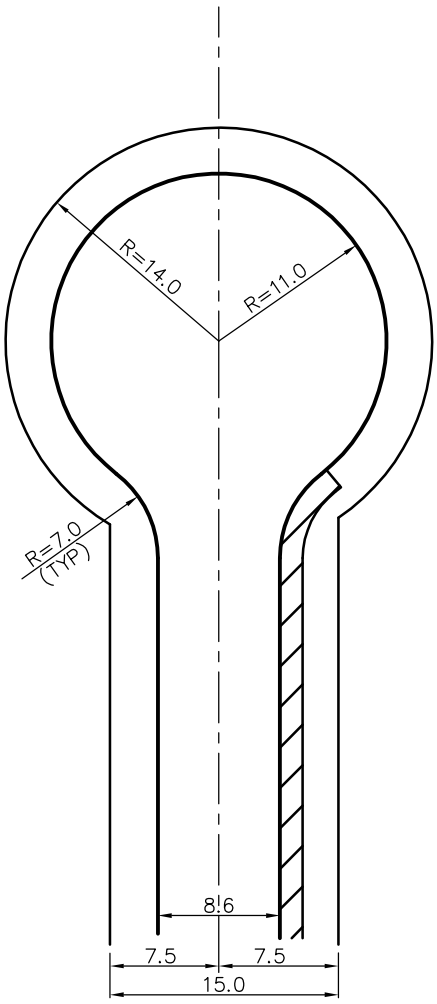
URBAN LANE

NO.	DATE	REVISION
1	Oct-15	UPDATE ROW WIDTH AND ADD TYPE 'B'

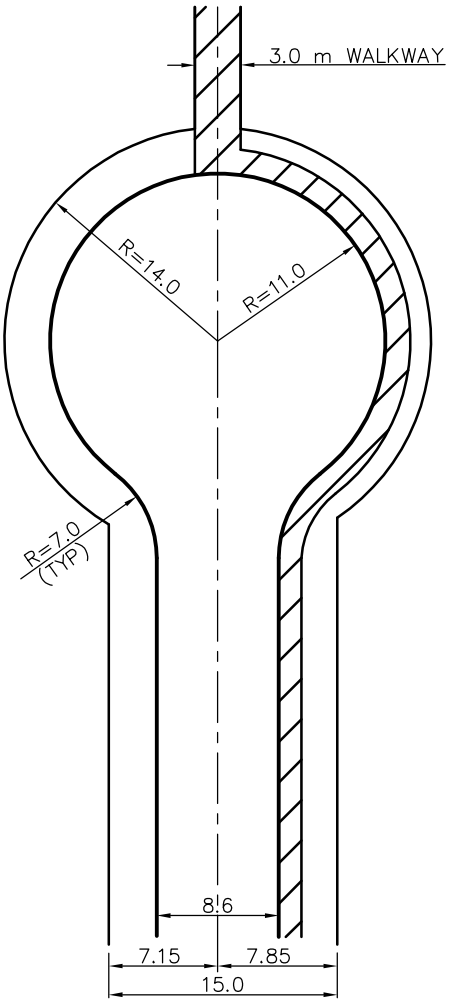
CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: GS	DRAWN: GS	DWG No.
DATE: JAN 2012	SCALE: NTS	R106



CUL-DE-SAC WITHOUT SIDEWALK
TYPE 'A'



CUL-DE-SAC WITH SIDEWALK
TYPE 'B'

NOTES:

1. CUL-DE-SAC SHALL BE CONSTRUCTED TO THE SAME STRUCTURAL REQUIREMENTS AS THE ROAD.
2. CUL-DE-SAC TO BE CROWNED A MINIMUM OF 2%.
3. FOR TYPE 'A', EXTEND SIDEWALK TO NEAREST PROPERTY LINE WITHIN BULB.

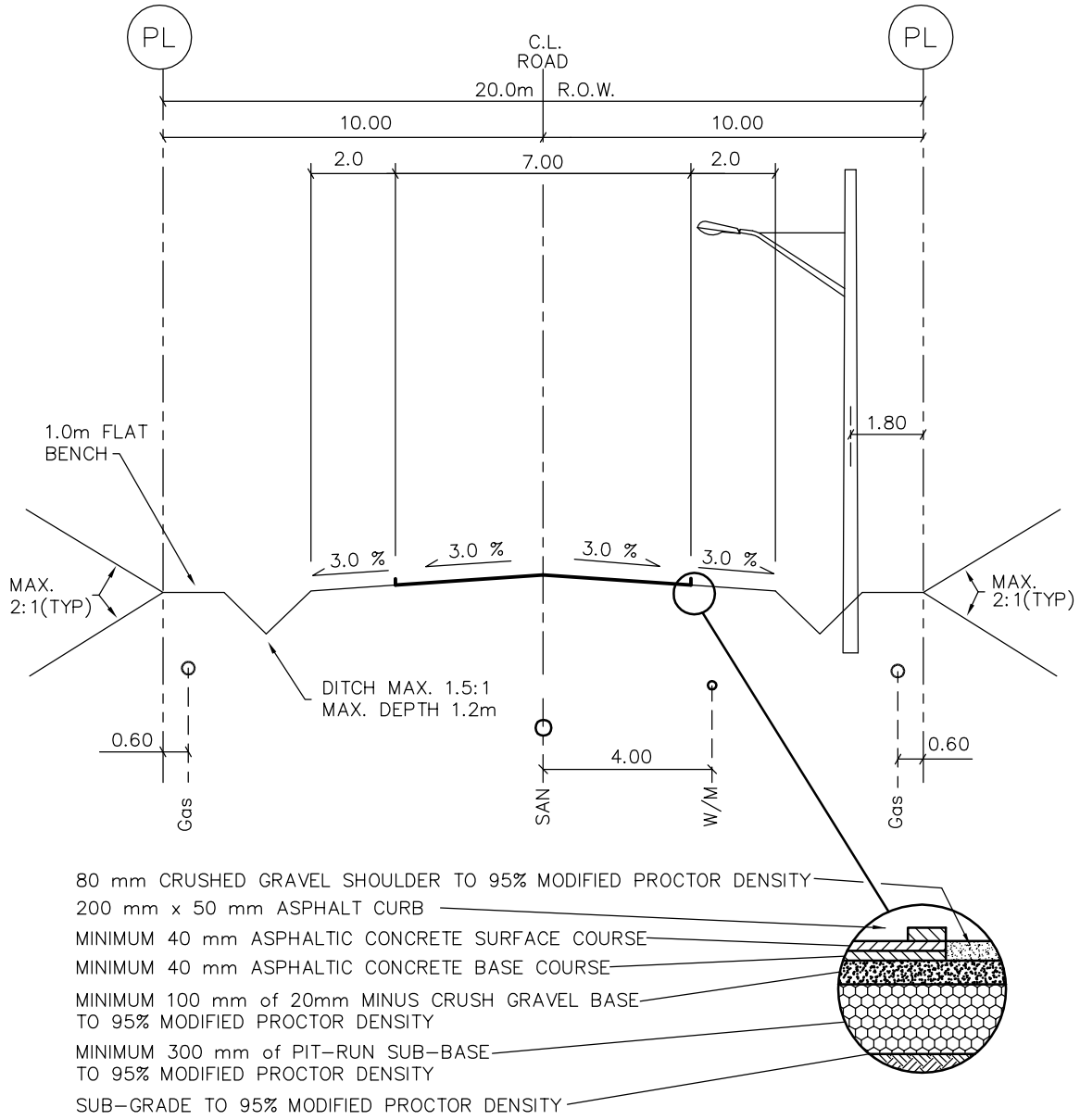
URBAN CUL-DE-SAC
(RESIDENTIAL AREA)

NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: GS	DRAWN: GS	DWG No. R107
DATE: JAN 2012	SCALE: NTS	



NOTES:

1. THE STRUCTURAL ROAD ELEMENTS SHOWN ARE THE MINIMUM REQUIREMENTS. BENKELMAN BEAM TEST RESULTS OR AN EQUIVALENT TECHNIQUE SHALL BE USED TO DESIGN THE ROAD STRUCTURE.
2. ALL UTILITY SERVICES AND SERVICE CONNECTIONS SHALL BE INSTALLED PRIOR TO FINAL PAVING.
3. ALL PERMANENT WORKS ON PRIVATE PROPERTY SHALL BE PROTECTED BY A REGISTERED EASEMENT OR RIGHT OF WAY.
4. DITCHES SHALL BE PIPED PAST UTILITY POLES AND FIRE HYDRANTS WHERE REQUIRED.
5. MAST ARM LIGHTINGS ARE REQUIRED AT INTERSECTIONS, DEAD ENDS AND AS NECESSARY.
6. MMCD R1.

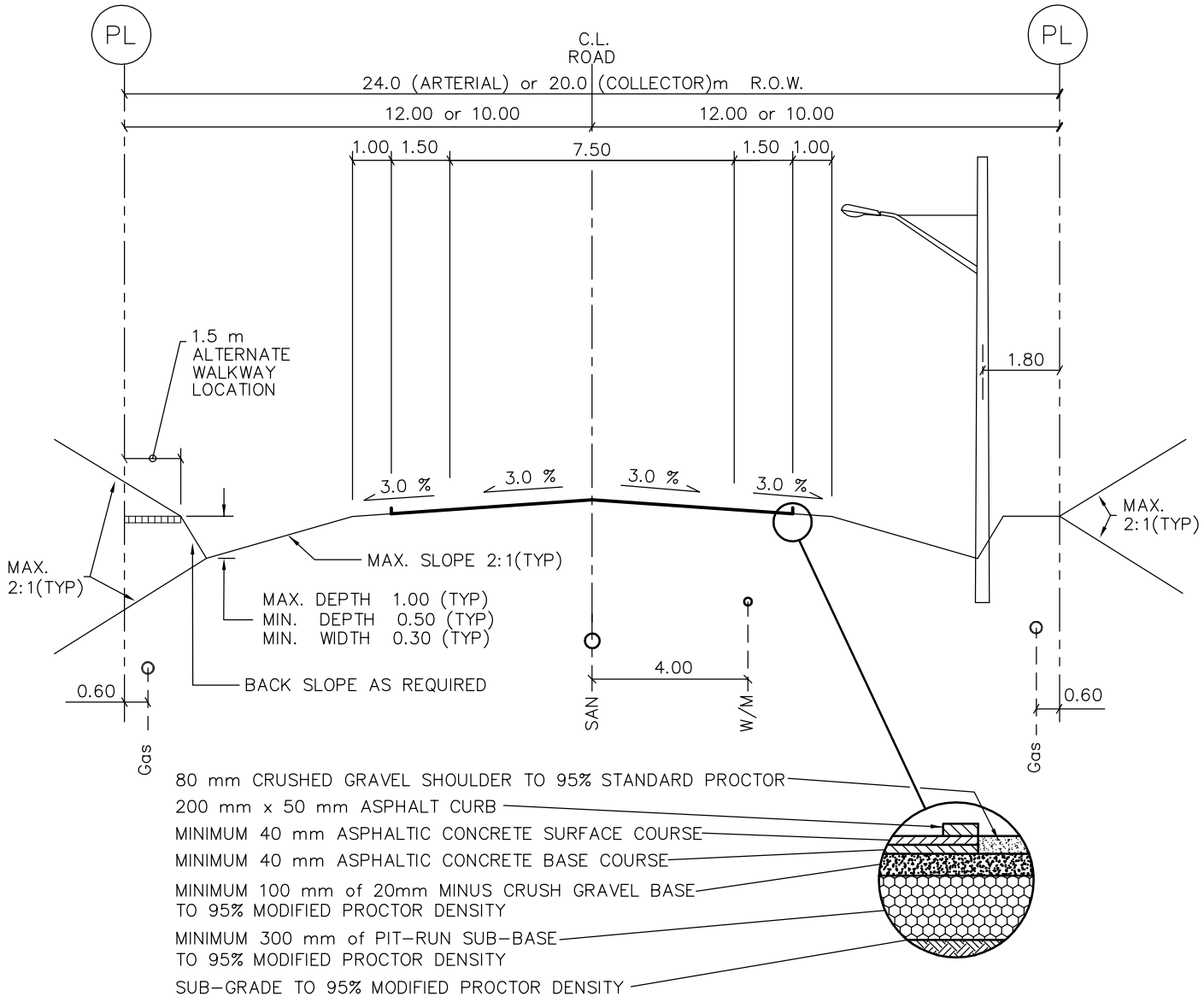
RURAL LOCAL

NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: GS	DRAWN: GS	DWG No. R108
DATE: JAN 2012	SCALE: NTS	



NOTES:

1. THE STRUCTURAL ROAD ELEMENTS SHOWN ARE THE MINIMUM REQUIREMENTS. BENKELMAN BEAM TEST RESULTS OR AN EQUIVALENT TECHNIQUE SHALL BE USED TO DESIGN THE ROAD STRUCTURE.
2. ALL UTILITY SERVICES AND SERVICE CONNECTIONS SHALL BE INSTALLED PRIOR TO FINAL PAVING.
3. ALL PERMANENT WORKS ON PRIVATE PROPERTY SHALL BE PROTECTED BY A REGISTERED EASEMENT OR RIGHT OF WAY.
4. DITCHES SHALL BE PIPED PAST UTILITY POLES AND FIRE HYDRANTS WHERE REQUIRED.
5. MAST ARM LIGHTINGS ARE REQUIRED AT INTERSECTIONS, DEAD ENDS AND AS NECESSARY.

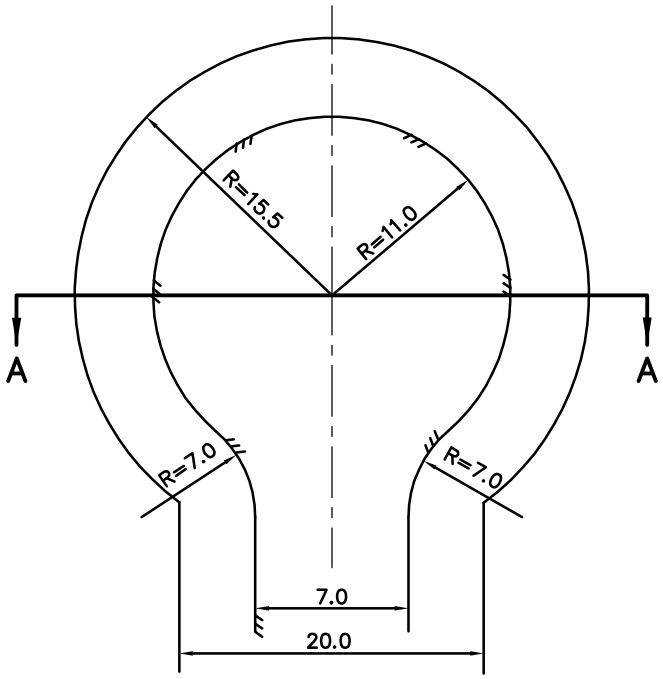
RURAL ARTERIAL AND COLLECTOR

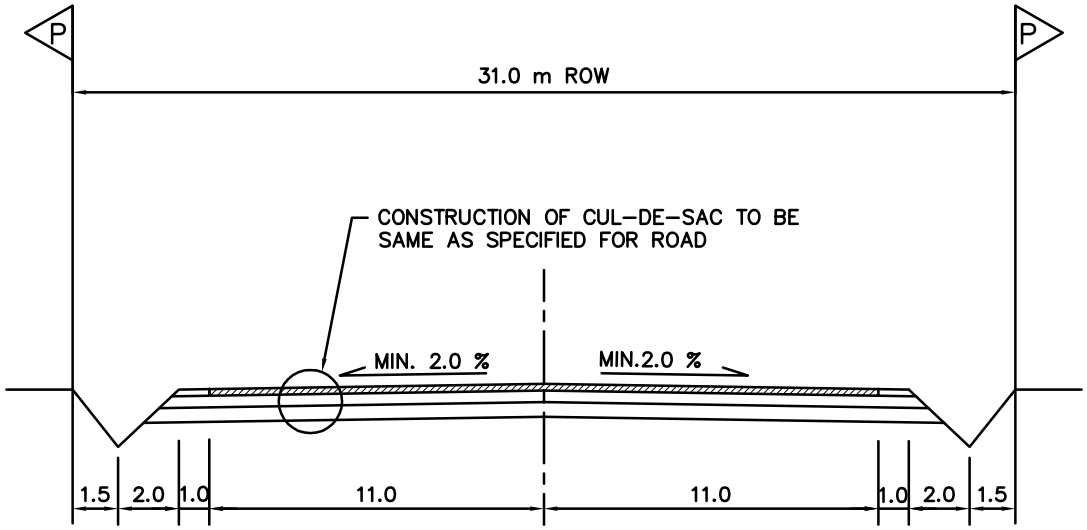
NO.	DATE	REVISION
1	Oct-15	HYDRO/TEL LOCATION REVISED

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: GS	DRAWN: GS	DWG No. R109
DATE: JAN 2012	SCALE: NTS	





SECTION A–A

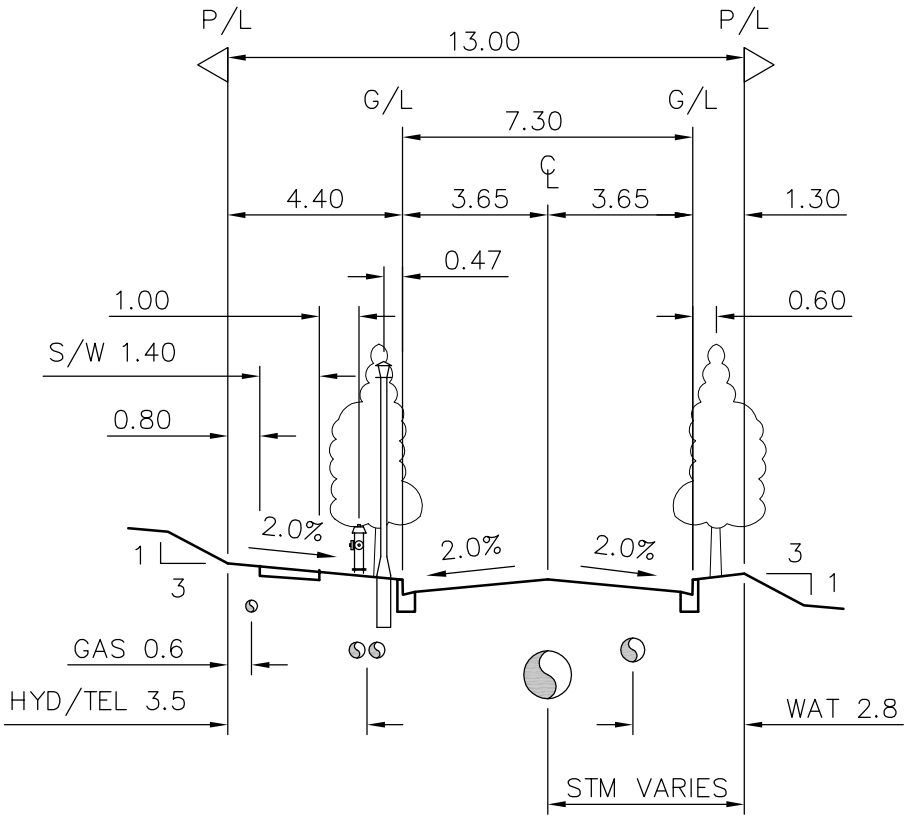
RURAL CUL–DE–SAC

NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

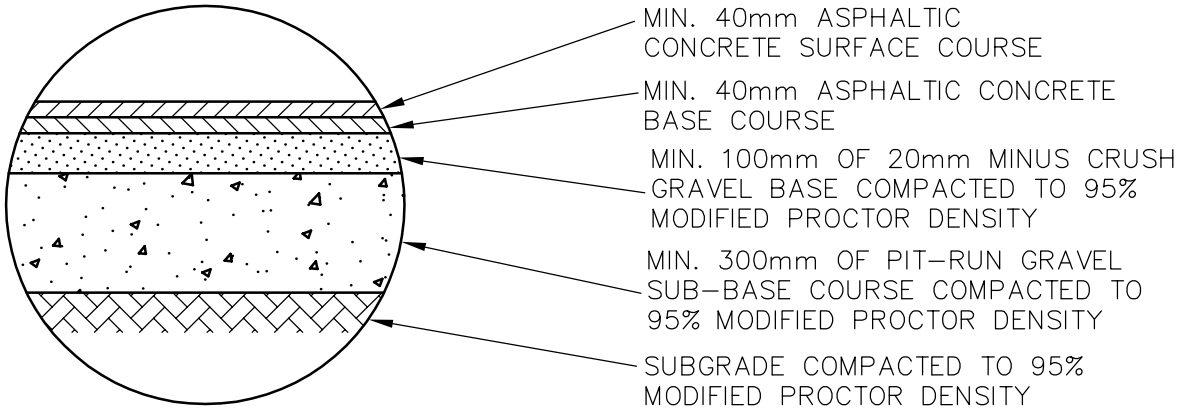
DESIGN: GS	DRAWN: GS	DWG No. R110
DATE: JAN 2012	SCALE: NTS	



NOTES:

1. LIMITED PARKING ON ONE SIDE. FRONTING LOTS > 1000 sqm.
2. LINKAGE ROAD BETWEEN ECOCLUSTERS.

SILVER VALLEY TYPICAL LOCAL



TYPICAL PAVEMENT STRUCTURE DETAIL

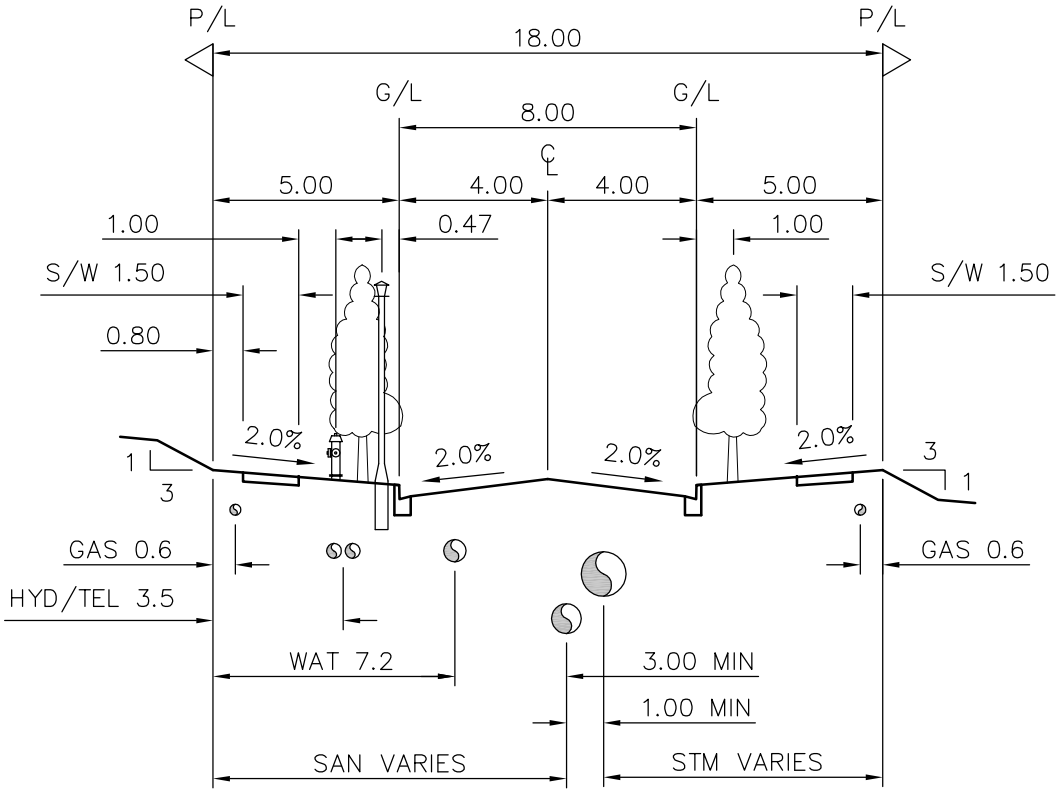
SILVER VALLEY LOCAL 1

NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

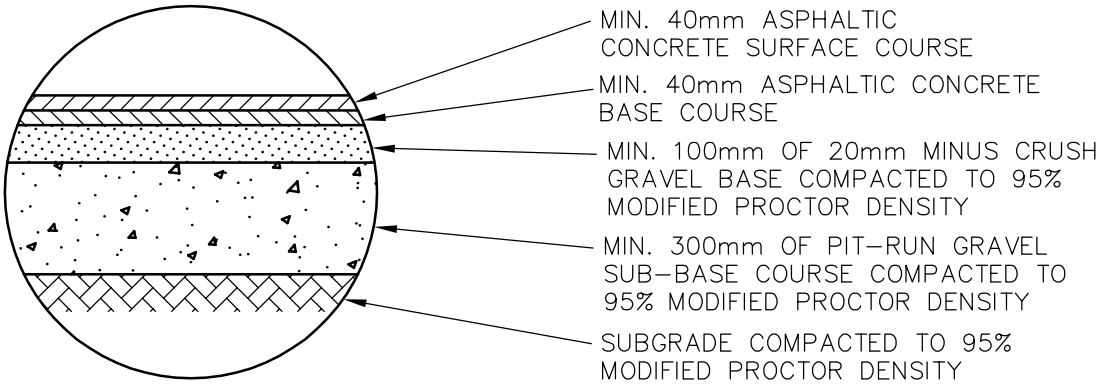
DESIGN: RW	DRAWN: GI	DWG No. R111
DATE: DEC 2010	SCALE: NTS	



NOTES:

1. PARKING BOTH SIDES OF STREET.

SILVER VALLEY TYPICAL LOCAL



TYPICAL PAVEMENT STRUCTURE DETAIL

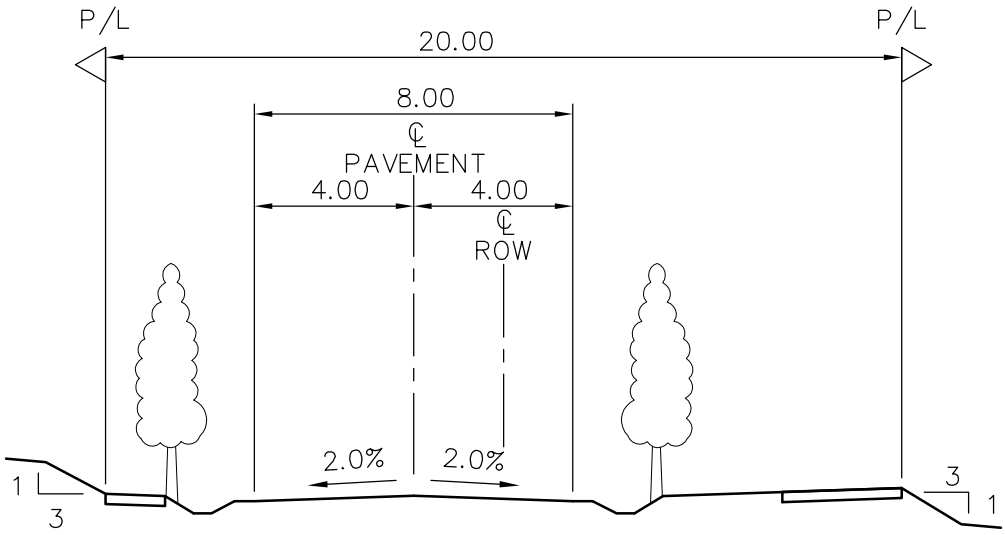
SILVER VALLEY LOCAL 2

NO.	DATE	REVISION

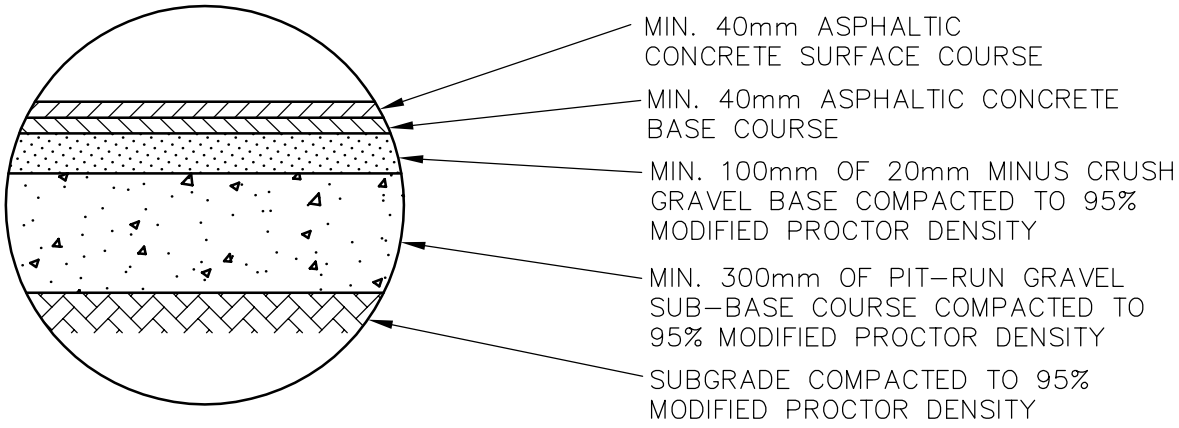
CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: RW	DRAWN: GI	DWG No. R112
DATE: DEC 2010	SCALE: NTS	



SILVER VALLEY TYPICAL RURAL COLLECTOR



TYPICAL PAVEMENT STRUCTURE DETAIL

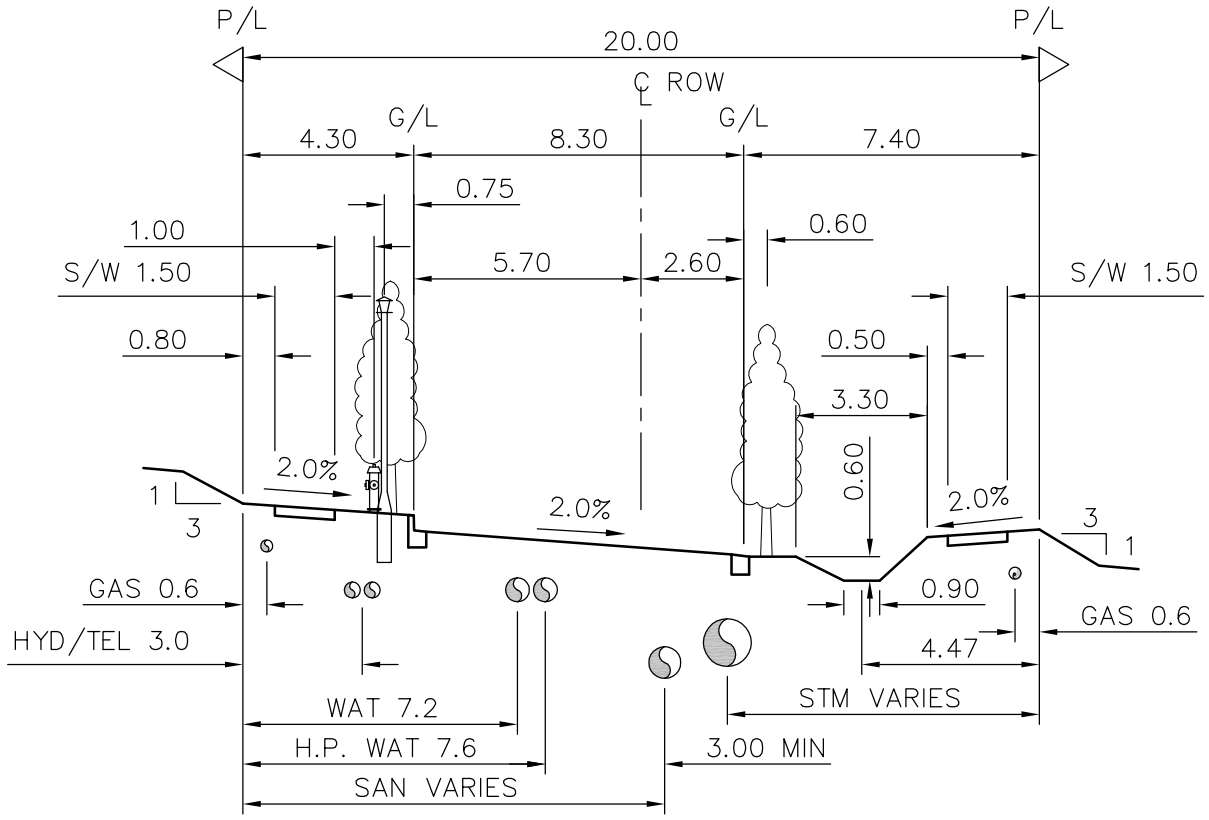
SILVER VALLEY COLLECTOR 1

NO.	DATE	REVISION

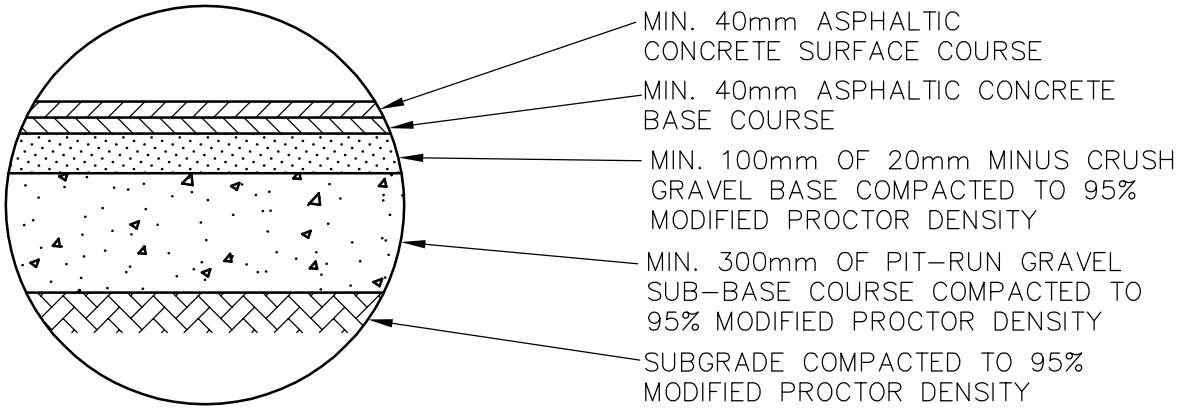
CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: RW	DRAWN: GI	DWG No. R113
DATE: DEC 2010	SCALE: NTS	



SILVER VALLEY TYPICAL COLLECTOR



TYPICAL PAVEMENT STRUCTURE DETAIL

SILVER VALLEY COLLECTOR 2

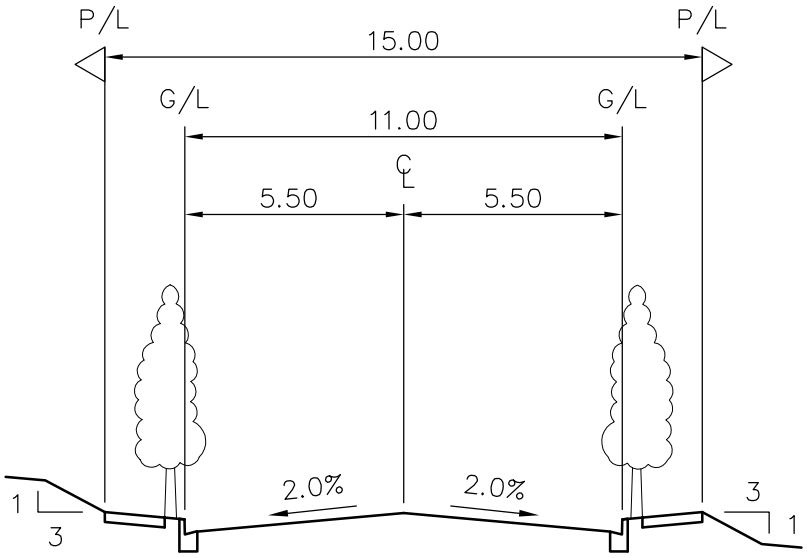
PARKING ONE SIDE

NO.	DATE	REVISION

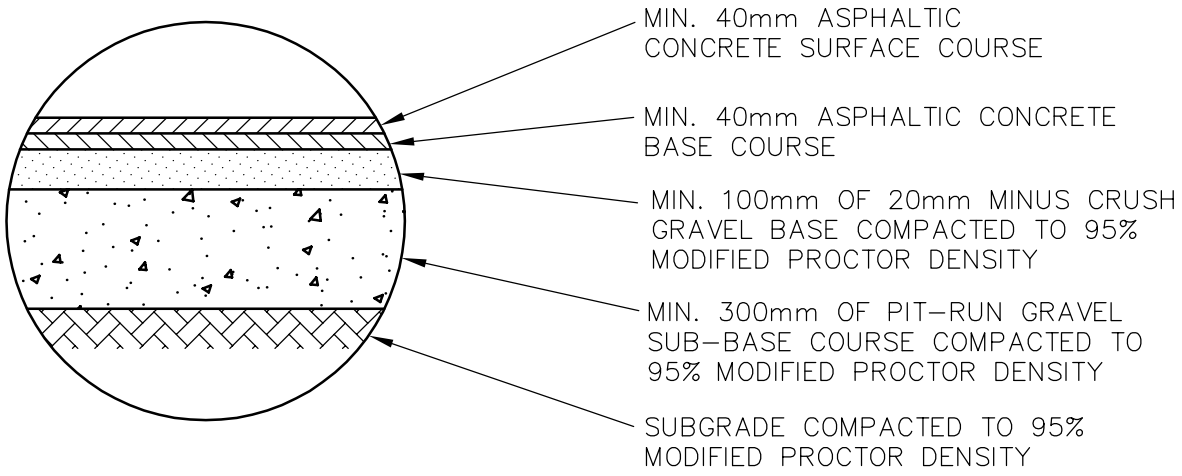
CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: RW	DRAWN: GI	DWG No. R114
DATE: DEC 2010	SCALE: NTS	



SILVER VALLEY TYPICAL RIVER VILLAGE COMMERCIAL



TYPICAL PAVEMENT STRUCTURE DETAIL

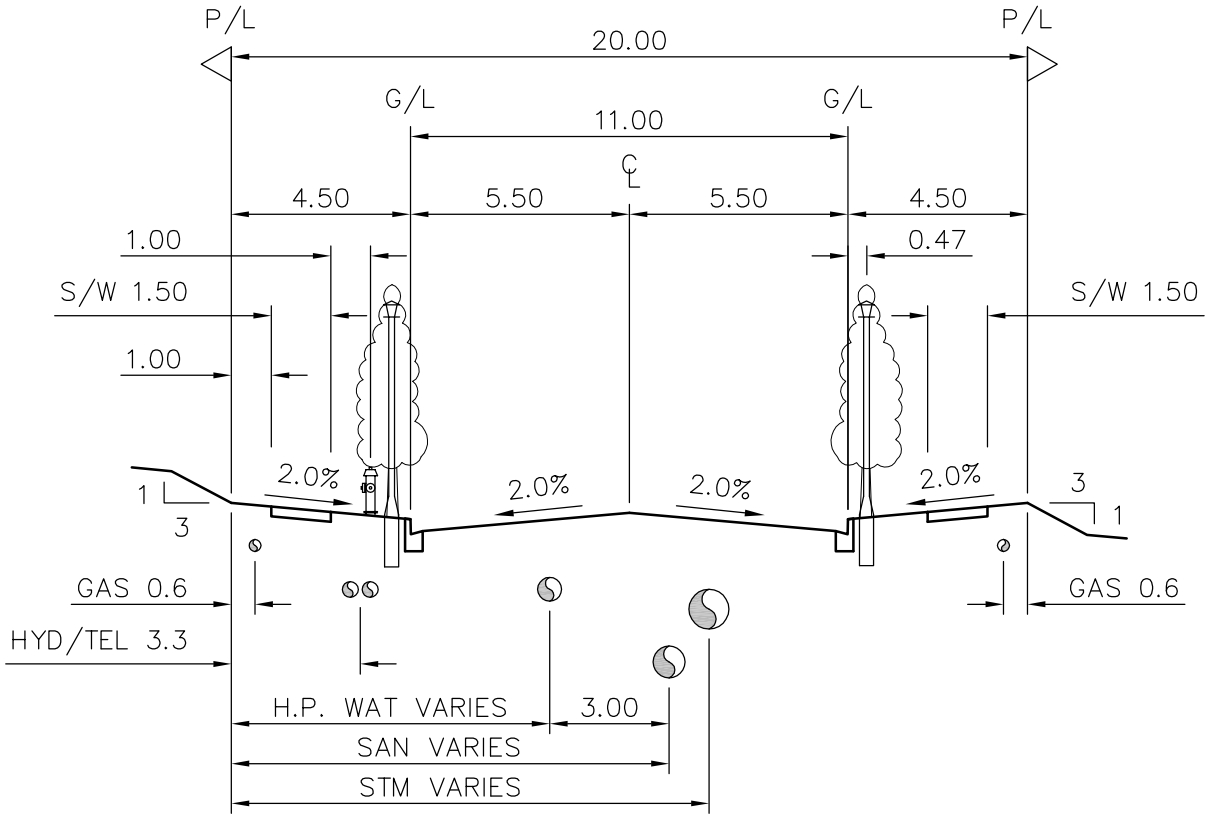
SILVER VALLEY VILLAGE COMMERCIAL

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

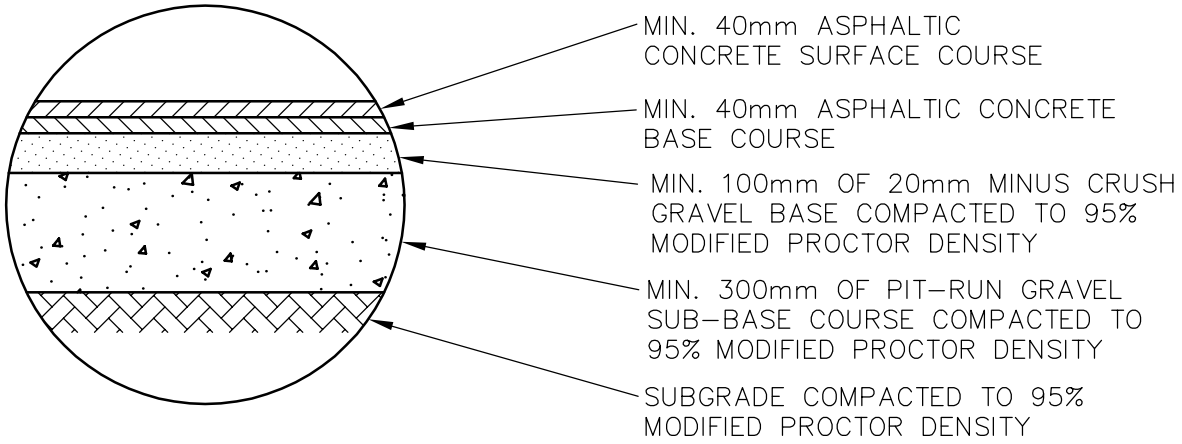
SUPPLEMENTARY STANDARD DETAIL DRAWINGS

NO.	DATE	REVISION

DESIGN: RW	DRAWN: GI	DWG No. R115
DATE: DEC 2010	SCALE: NTS	



SILVER VALLEY TYPICAL ARTERIAL



TYPICAL PAVEMENT STRUCTURE DETAIL

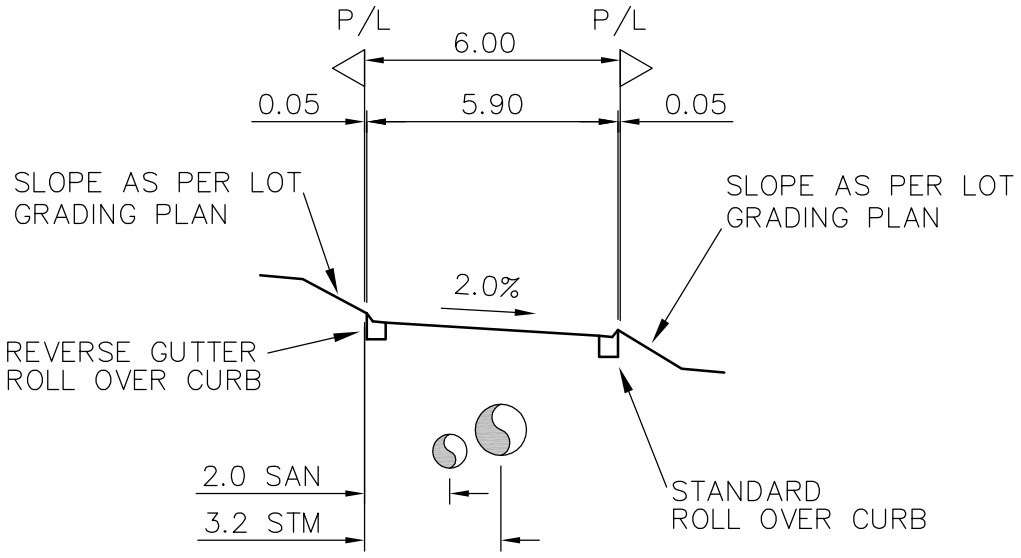
SILVER VALLEY ARTERIAL

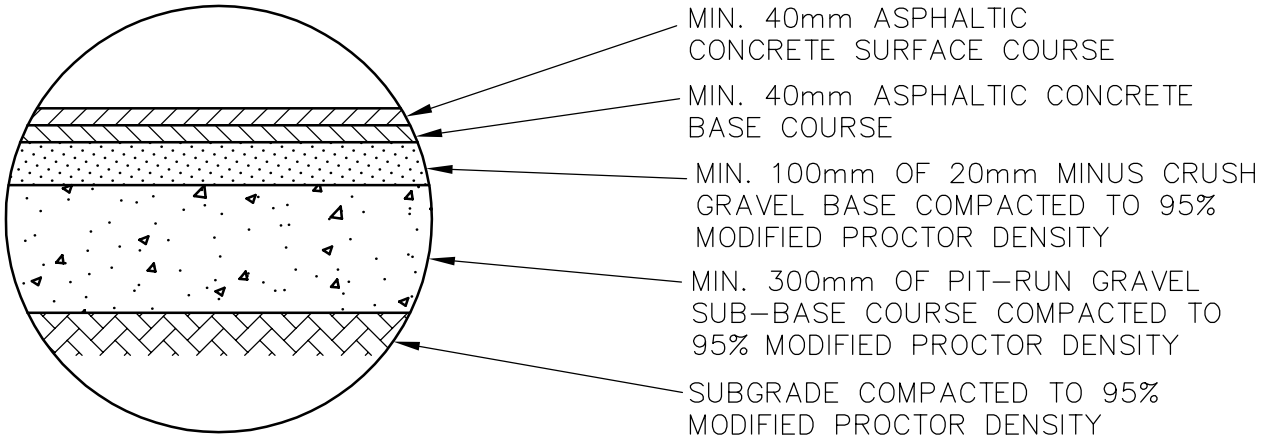
NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: RW	DRAWN: GI	DWG No. R116
DATE: DEC 2010	SCALE: NTS	





TYPICAL PAVEMENT STRUCTURE DETAIL

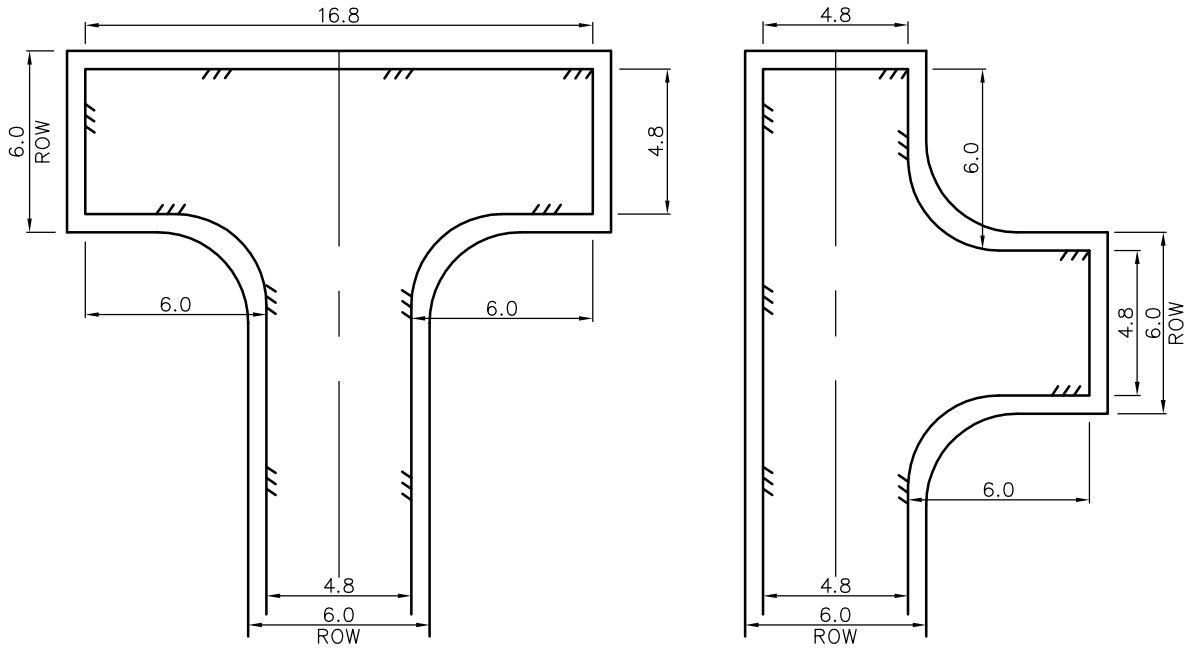
SILVER VALLEY CURBED LANE

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

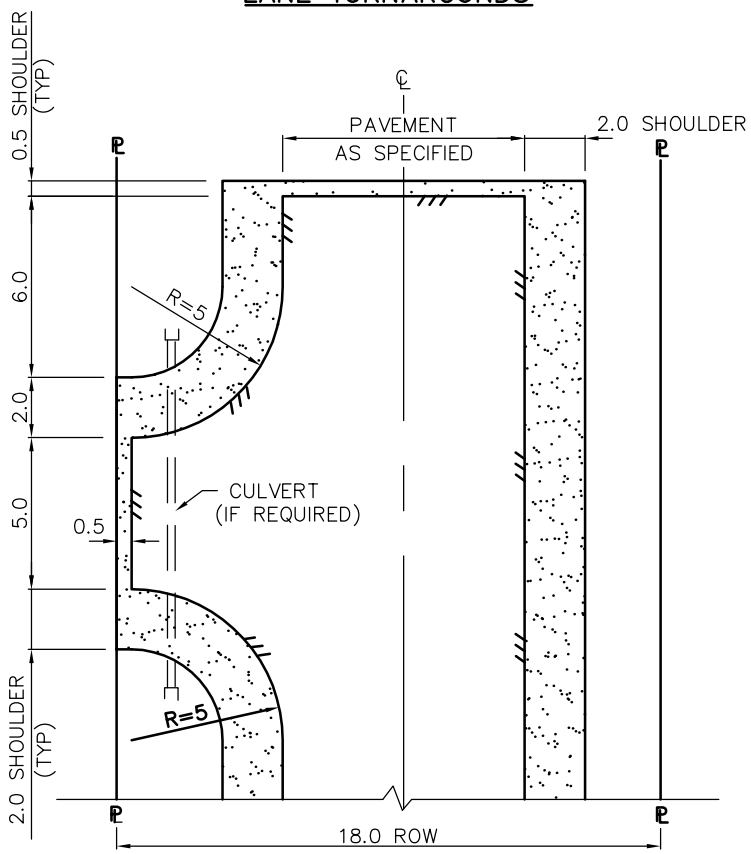
SUPPLEMENTARY STANDARD DETAIL DRAWINGS

NO.	DATE	REVISION

DESIGN: RW	DRAWN: GI	DWG No. R117
DATE: DEC 2010	SCALE: NTS	



LANE TURNAROUNDS



HAMMERHEAD TURNAROUND

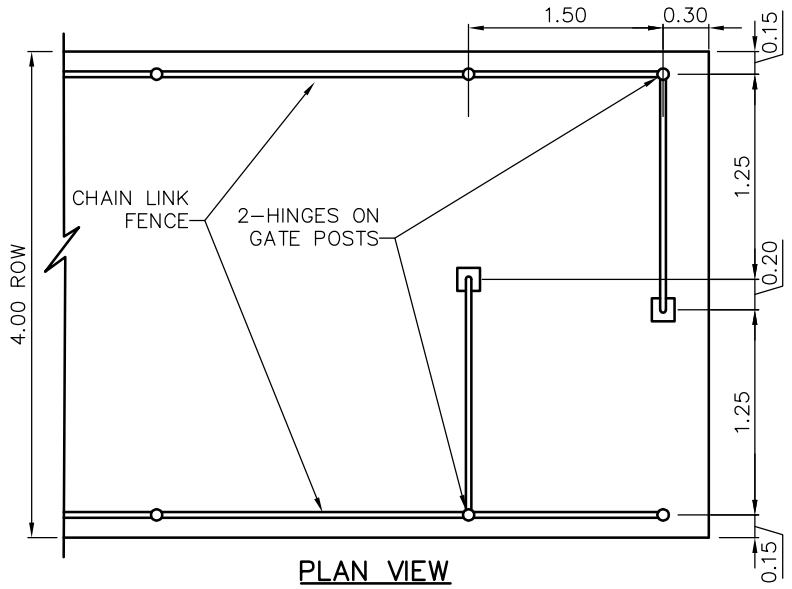
TURNAROUND
(RESIDENTIAL AREA)

NO.	DATE	REVISION

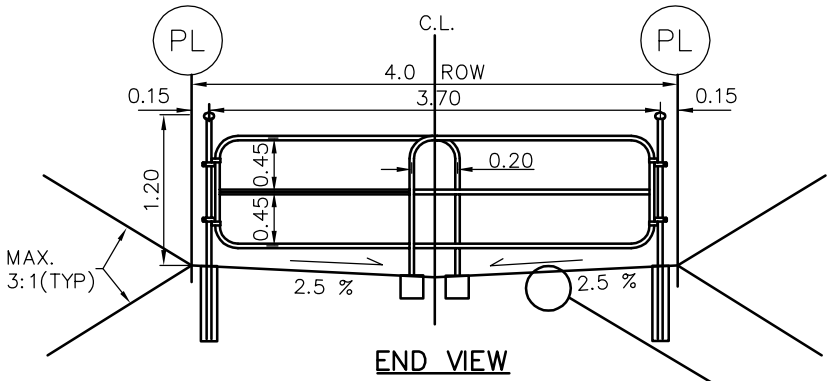
CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

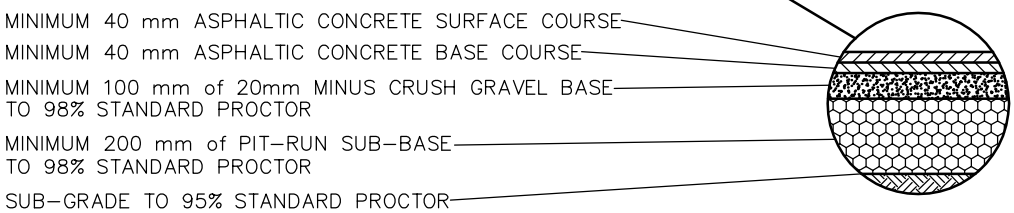
DESIGN: GS	DRAWN: GS	DWG No. R118
DATE: JAN 2012	SCALE: NTS	



PLAN VIEW



END VIEW



NOTES:

1. THE STRUCTURAL ROAD ELEMENTS SHOWN ARE THE MINIMUM REQUIREMENTS. BENKELMAN BEAM TEST RESULTS OR AN EQUIVALENT TECHNIQUE SHALL BE USED TO DESIGN THE ROAD STRUCTURE.
2. ALL UTILITY SERVICES AND SERVICE CONNECTIONS SHALL BE INSTALLED PRIOR TO FINAL PAVING.
3. ALL PERMANENT WORKS ON PRIVATE PROPERTY SHALL BE PROTECTED BY A REGISTERED EASEMENT OR RIGHT OF WAY.
4. CURB AND GUTTER SHALL BE ROLL–OVER TYPE.
5. SWALE AND CB LOCATIONS ARE EITHER CENTER OF ROW OR 0.75m O/S PROPERTY LINE.

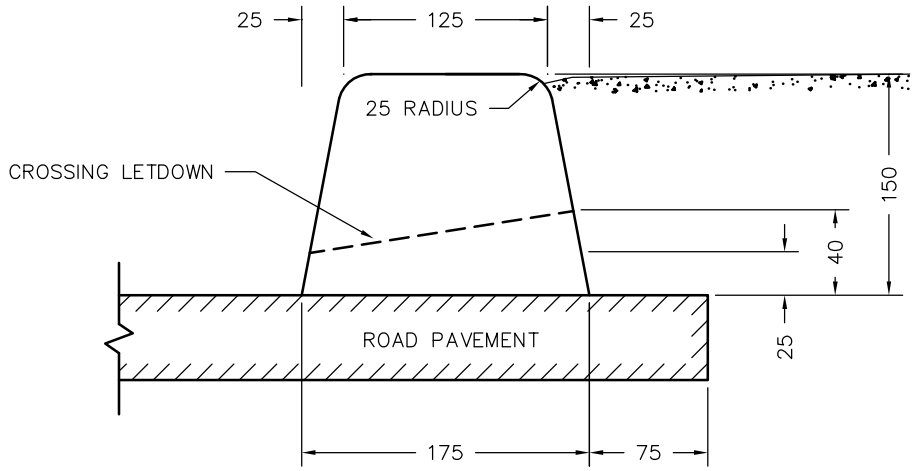
EMERGENCY ACCESS

NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

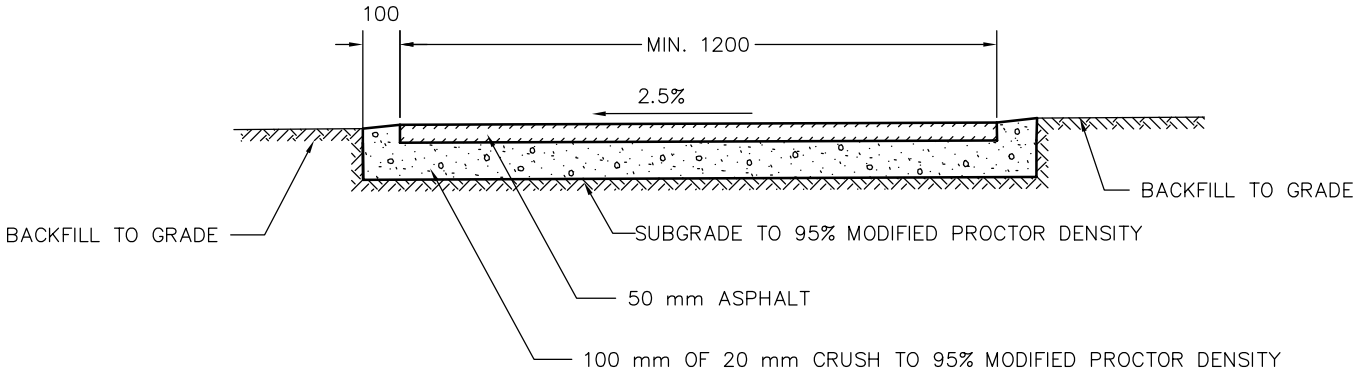
SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: GS	DRAWN: GS	DWG No. R119
DATE: JAN 2012	SCALE: NTS	



USE BONDING AGENT TO BOND CURB TO ASPHALT

EXTRUDED CONCRETE OR ASPHALT CURB



NOTE: REMOVE ALL VEGETATION PRIOR TO INSTALLING BASE.

ASPHALT SIDEWALK

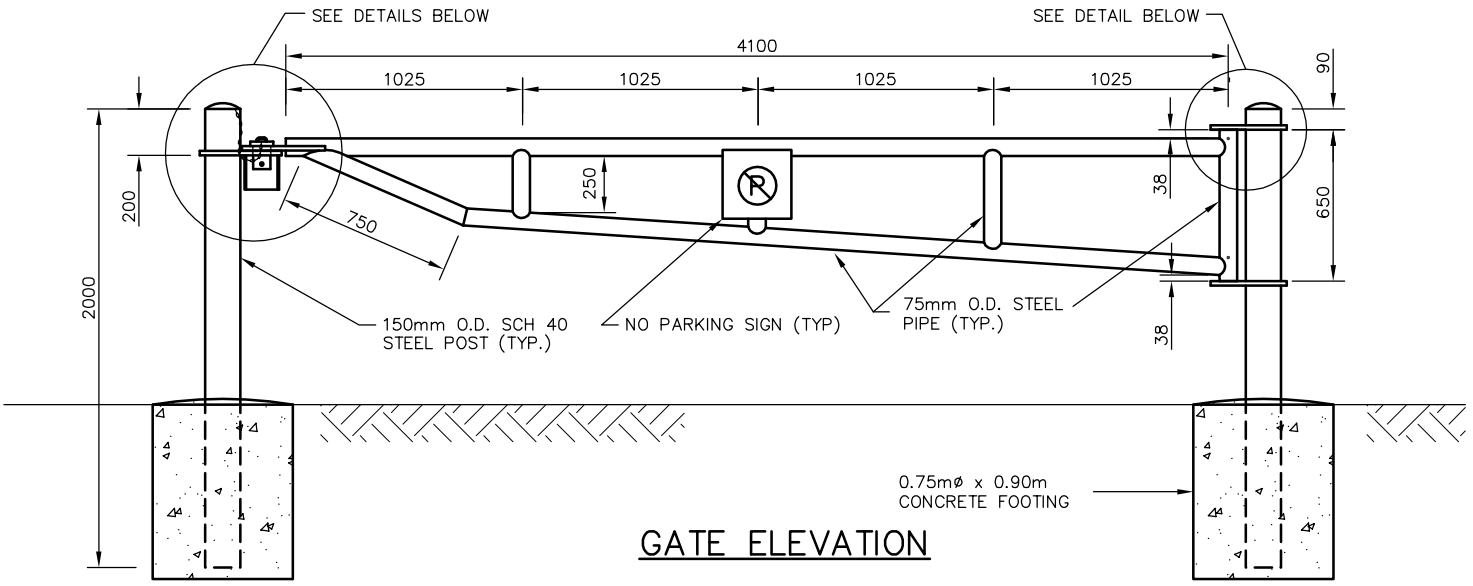
EXTRUDED CURB AND ASPHALT SIDEWALK

NO.	DATE	REVISION

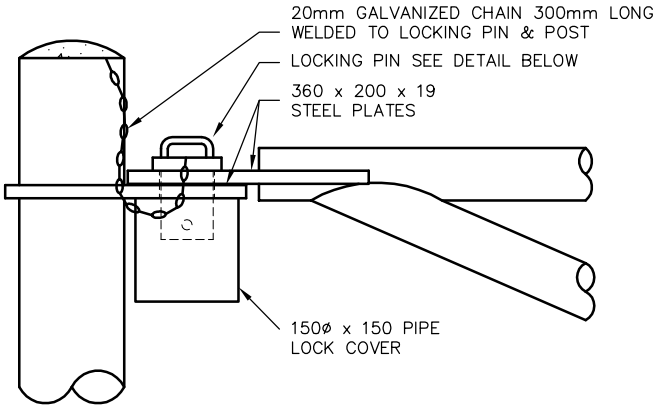
CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

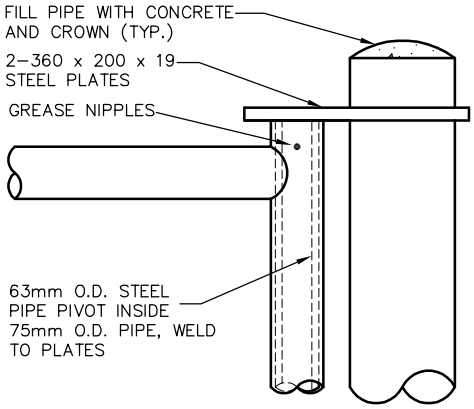
DESIGN: GS	DRAWN: GS	DWG No. R120
DATE: JAN 2012	SCALE: NTS	



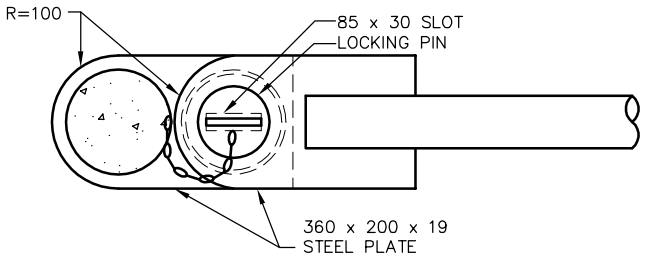
GATE ELEVATION



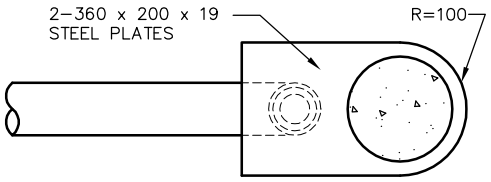
LOCKING DEVICE DETAIL



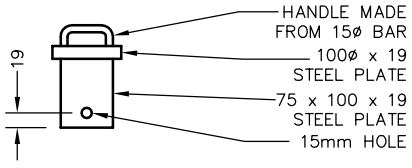
GATE PIVOT DETAIL



LOCKING DEVICE DETAIL – PLAN VIEW



GATE PIVOT DETAIL – PLAN VIEW



LOCKING PIN DETAIL

NOTE:

PAINT WITH 2 COATS YELLOW ENAMEL C/W PRIME COAT.

THIRD TYPICAL POST MAY BE REQUIRED TO TIE GATE OPEN.

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

HEAVY DUTY ACCESS GATE

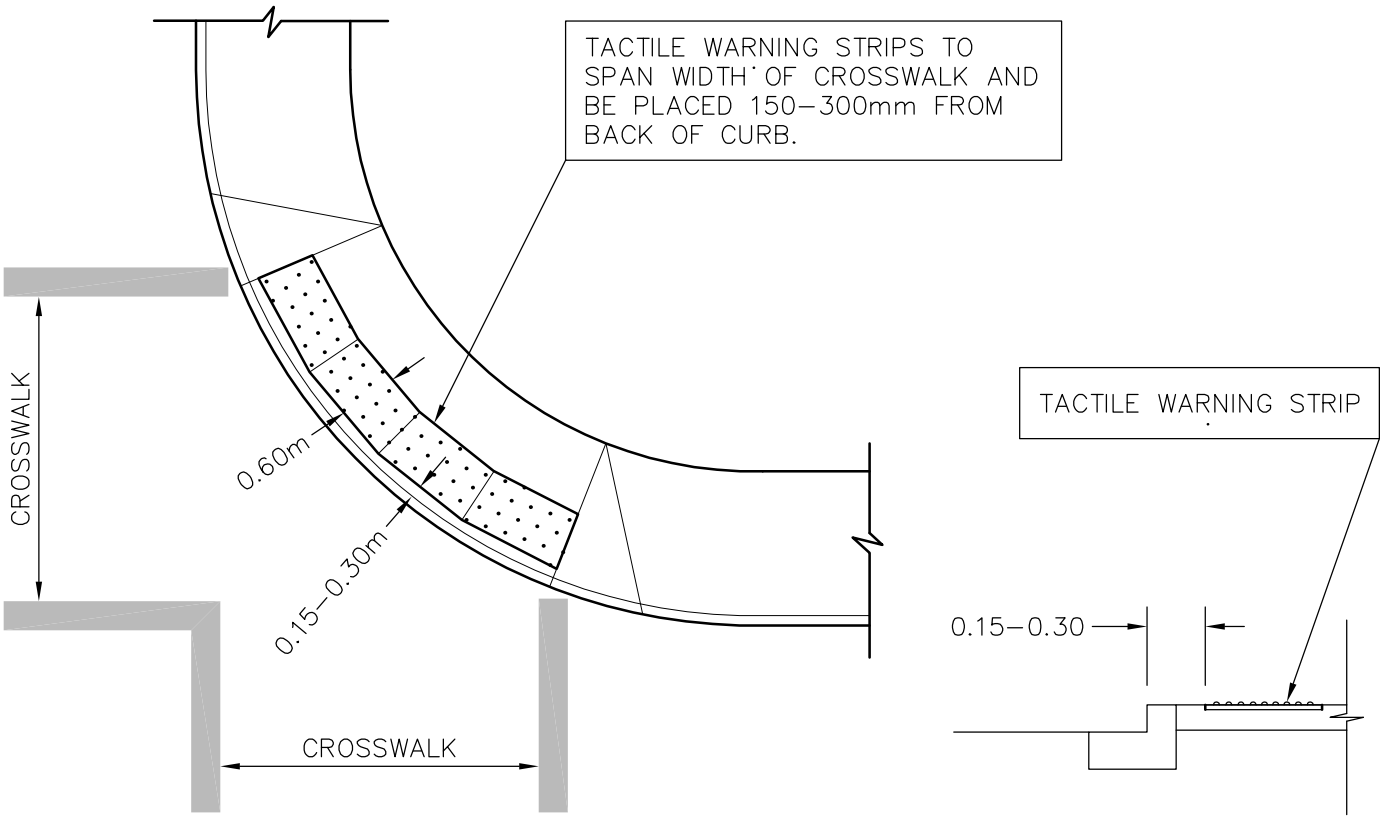
NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN:	BS	DRAWN:	GI
DATE:	OCT 2004	SCALE:	NTS

DWG No. R121



PLAN

DIMENSIONING DETAIL

Note:

Tactile tile products shall be pre–approved by the District of Maple Ridge accessibility committee and/or:

- Tactile tiles shall be cast in place or surface mounted and shall be made of vitrified polymer composite (VPC). The tiles shall be an epoxy polymer composition with ultra violet stabilized coating employing aluminum oxide particles in the truncated domes. To achieve the desired structural integrity the composite must contain a minimum of three full sheets of fiberglass and one woven sheet. the tile shall incorporate an in–line dome pattern of truncated domes 5.1mm (0.2") in height, 22.9mm (0.9") diameter at the base and 10.2mm (0.4") diameter at top of dome spaced 59.7mm (2.35") nominal as measured on a diagonal and 43.2mm (1.70") nominal as measured side by side. for wheelchair safety the field area shall consist of a non–slip surface with a minimum of 40–90° raised points 1.1mm (0.045") high per square inch; The tile shall be sound amplifying and coloured bright yellow (US Federal code 33538).
- Installation of tactile detectable warning shall be by manufacturer trained and certified individuals. the contractor shall upon request provide the engineer with copies of these certificates prior to beginning work. Installations shall have a five (5) year warrranty from the contractor.

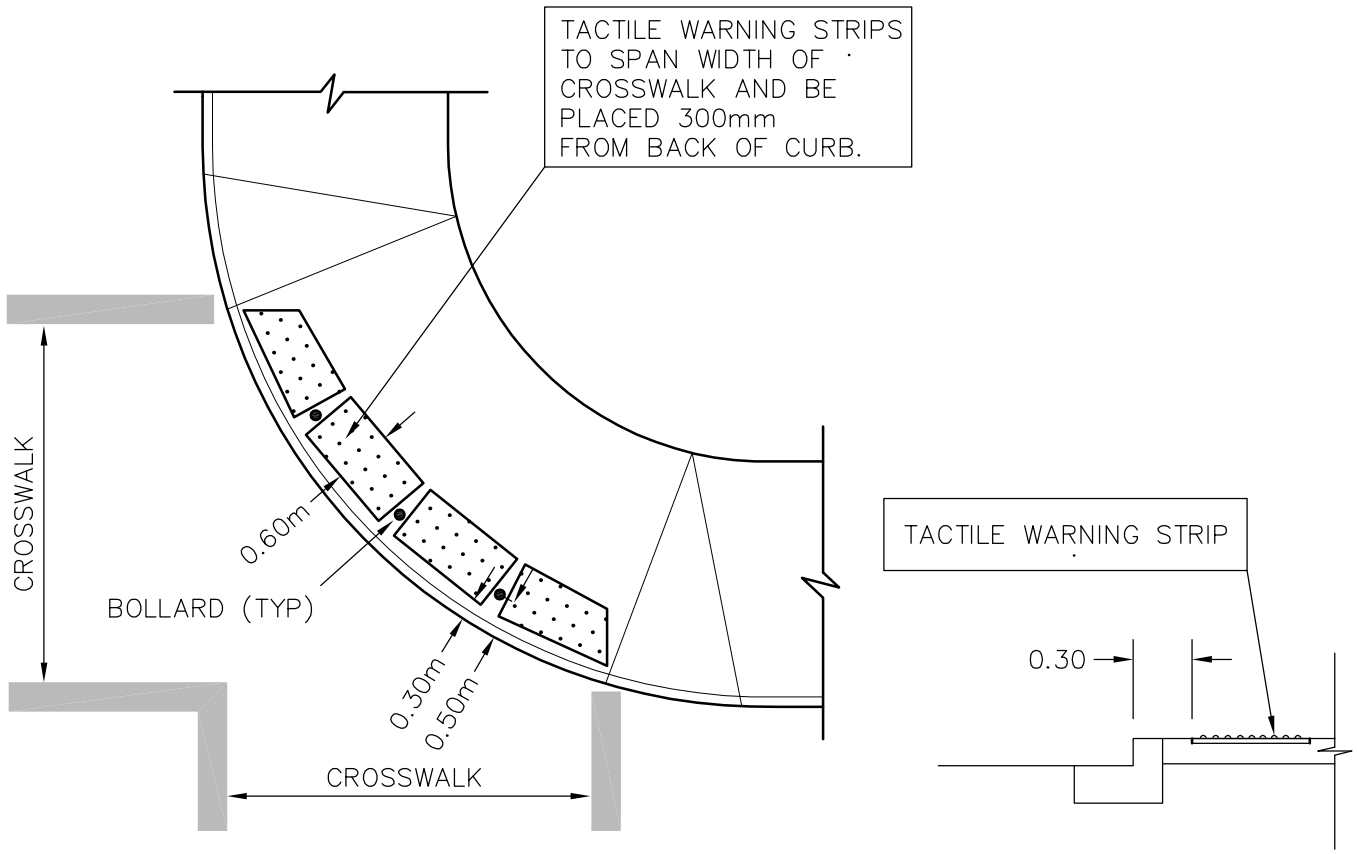
TACTILE STRIP PLACEMENT

NO.	DATE	REVISION
1	JUNE/11	REVISED DIMENSION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: ME	DRAWN: GI	DWG No. R122
DATE: FEB 2011	SCALE: NTS	



PLAN

DIMENSIONING DETAIL

Note:

Tactile tile tile products shall be pre–approved by the District of Maple Ridge accessibility committee and/or:

- Tactile tiles shall be cast in place and shall be made of vitrified polymer composite (VPC). The tiles shall be an epoxy polymer composition with ultra violet stabilized coating employing aluminum oxide particles in the truncated domes. To archive the desired structural integrity the composite must contain a minimum of three full sheets of fiberglass and one woven sheet. The tile shall incorporate an in–line dome pattern of truncated domes 5.1mm (0.2") in height, 22.9mm (0.9") diameter at the base and 10.2mm (0.4") diameter at top of dome spaced 59.7mm (2.35") nominal as measured on a diagonal and 43.2mm (1.70") nominal as measured side by side. for wheelchair safety the field area shall consist of a non–slip surface with a minimum of 40–90° raised points 1.1mm (0.045") high per square inch; The tile shall be sound amplifying and coloured bright yellow (US Federal code 33538)

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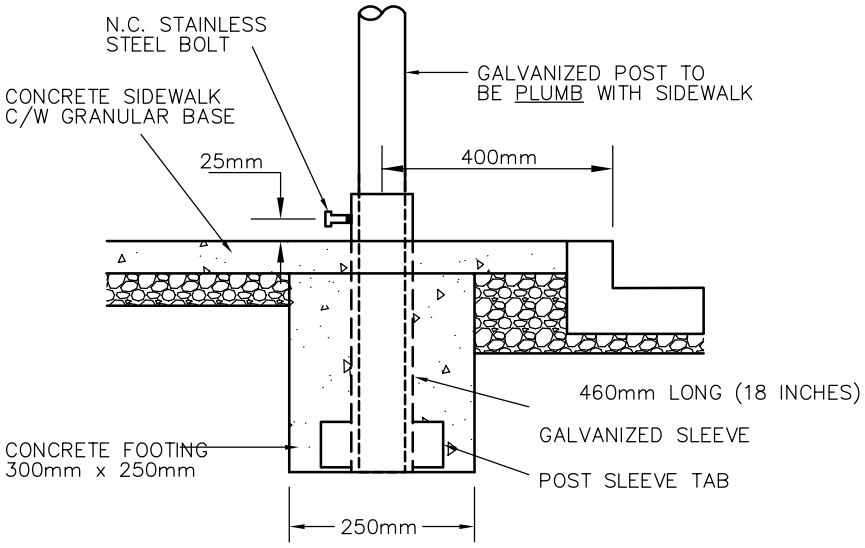
TACTILE STRIP PLACEMENT WITH BOLLARD

NO.	DATE	REVISION
3	JUNE/15	REVISE THE DISTANCE FROM STRIP TO FOC
2	JUNE/13	DOWNTOWN ENHANCEMENT PROJECT
1	JUNE/11	REVISED DIMENSION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: RO	DRAWN: GI	DWG No. R123
DATE: JUNE 2013	SCALE: NTS	



CONCRETE SIDEWALK
INSTALLATION

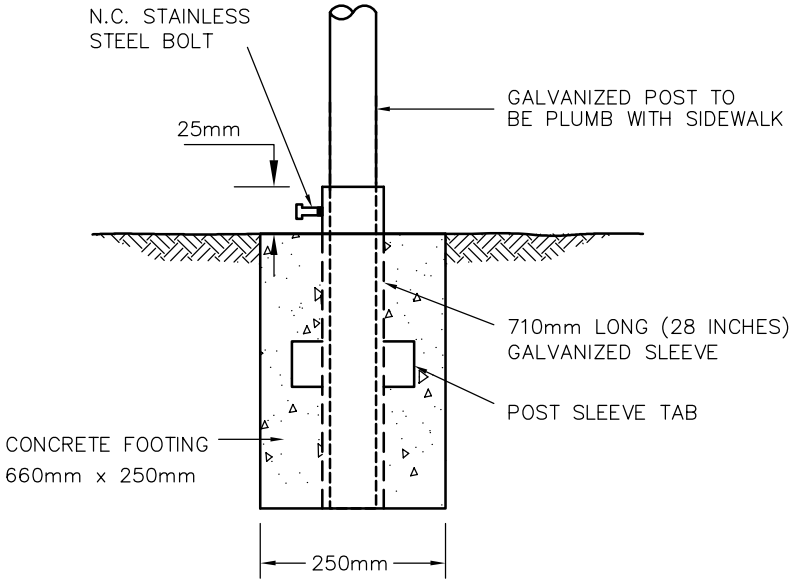
NOTE

PROVIDE MINIMUM 1.2m
SIDEWALK SIGN POST SLEEVE
TO BACK OF SIDEWALK.

SPECIFICATIONS:

Post:
12 Gage Galvanized Steel
Wall thickness: 2.6mm
3.0m Length
Outside Diameter: 60.3mm

Post Sleeve:
460mm & 710mm Lengths
65mm Schedule 40 Galvanized
Stainless Steel Nut: 12.7mm + Bolt
Tab: 50.8mm x 76.2mm x 3.2mm
Wall thickness: 2.6mm



SHOULDER AND ASPHALT
SIDEWALK INSTALLATION

NOTE

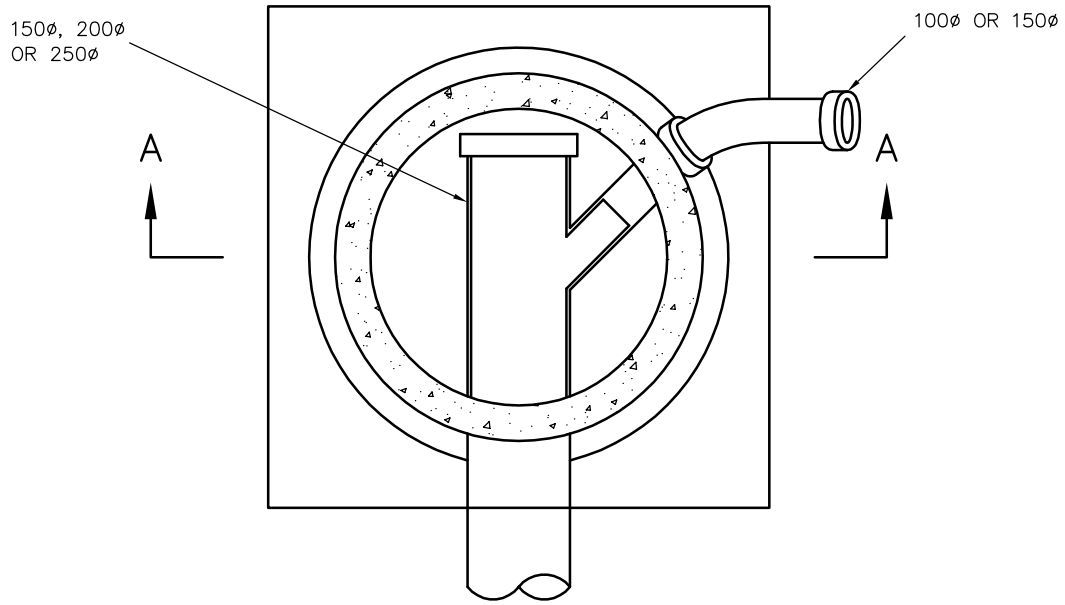
FOR SHOULDER INSTALLATIONS – SIGN POST SLEEVE TO BE INSTALLED 1.80m FROM EDGE OF ASPHALT
FOR ASPHALT SIDEWALK INSTALLATIONS – SLEEVE TO BE INSTALLED AT THE BACK OF WALK

SIGN POLE AND SLEEVE

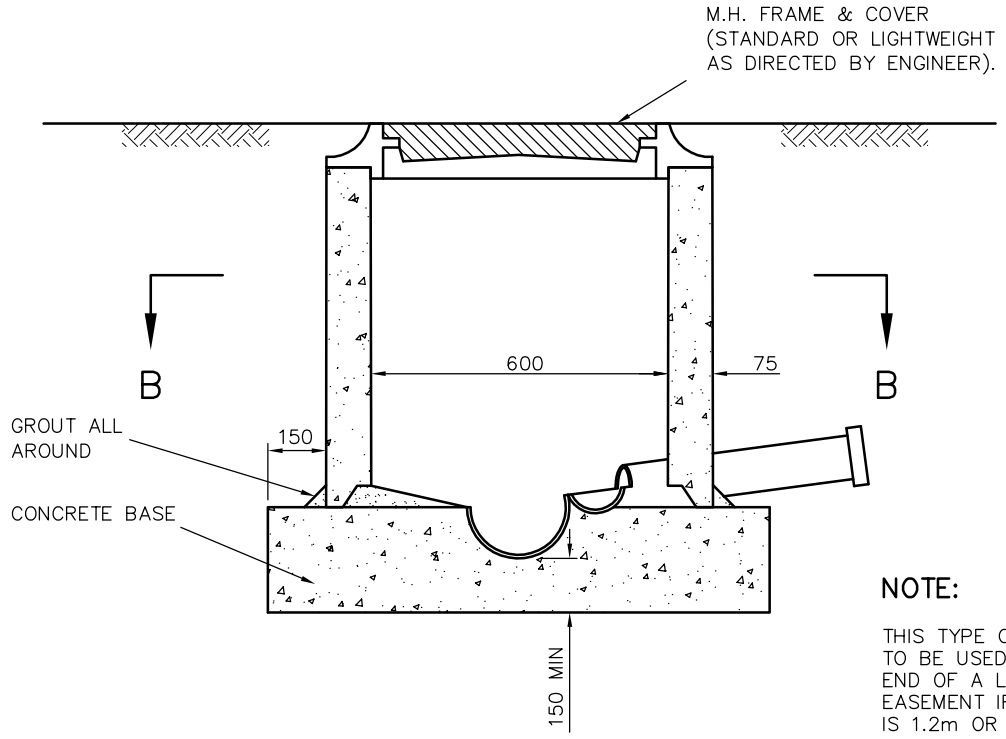
NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT
SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: R.W.	DRAWN: G.I.	DWG No. R124
DATE: FEB 2012	SCALE: NTS	



SECTION B–B



SECTION A–A

NOTE:

THIS TYPE OF CLEAN–OUT TO BE USED ONLY AT THE END OF A LINE IN AN EASEMENT IF THE DEPTH IS 1.2m OR LESS.

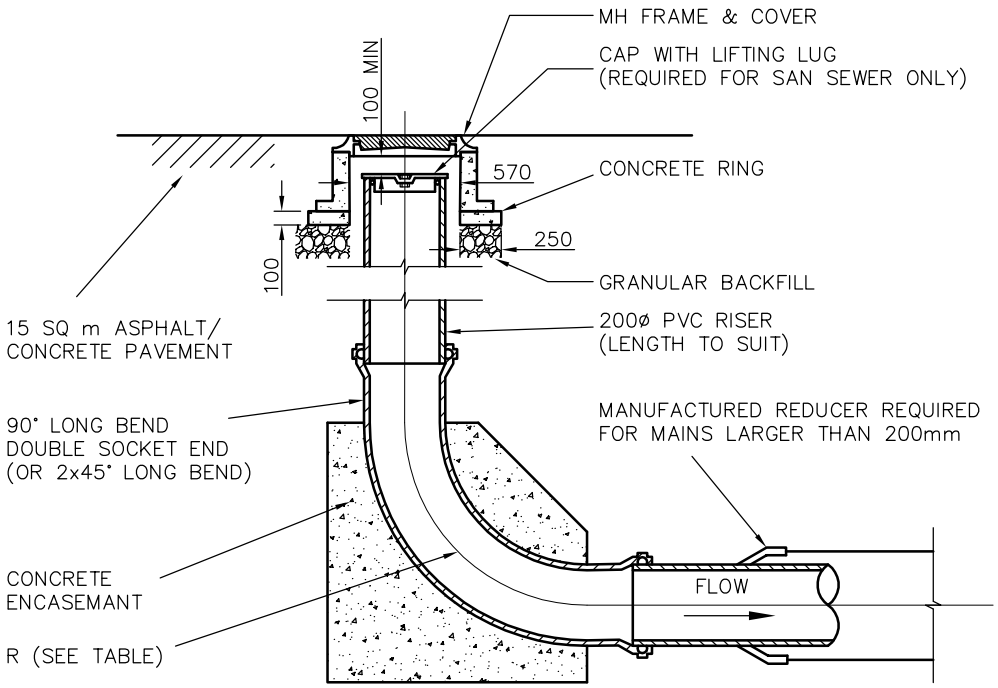
PERMANENT CLEANOUT

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

NO.	DATE	REVISION

DESIGN: RW	DRAWN: GI	DWG No. S6a
DATE: FEB 2012	SCALE: NTS	

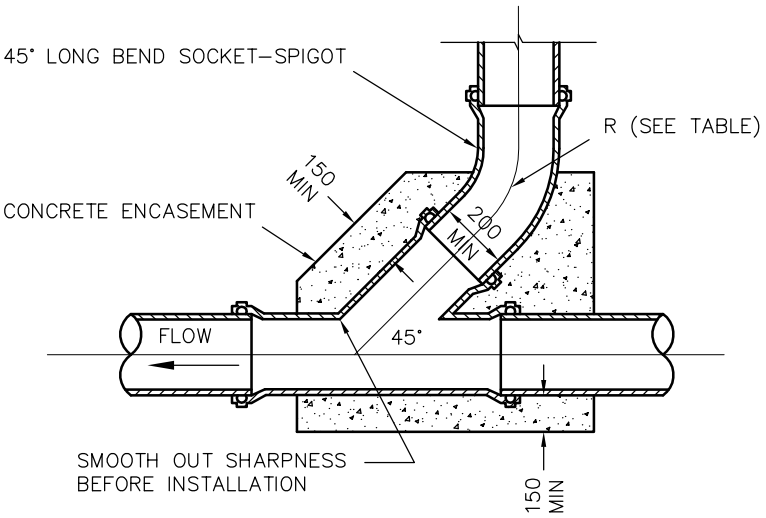


TERMINAL CLEANOUT

NOTES:

1 DEPTH MAX 2.0m, MIN 1.0m

2 BASE–100mm GRAVEL COMPACTED TO 98% STANDARD PROCTOR DENSITY.



MID–BLOCK CLEANOUT

NOMINAL PIPE SIZE mm	200	250	315	355	400	450	500	560	630
MINIMUM RADIUS R–90° (MEASURED TO C.L.) mm	905	1130	1425	1605	1805	2030	2255	2525	2840

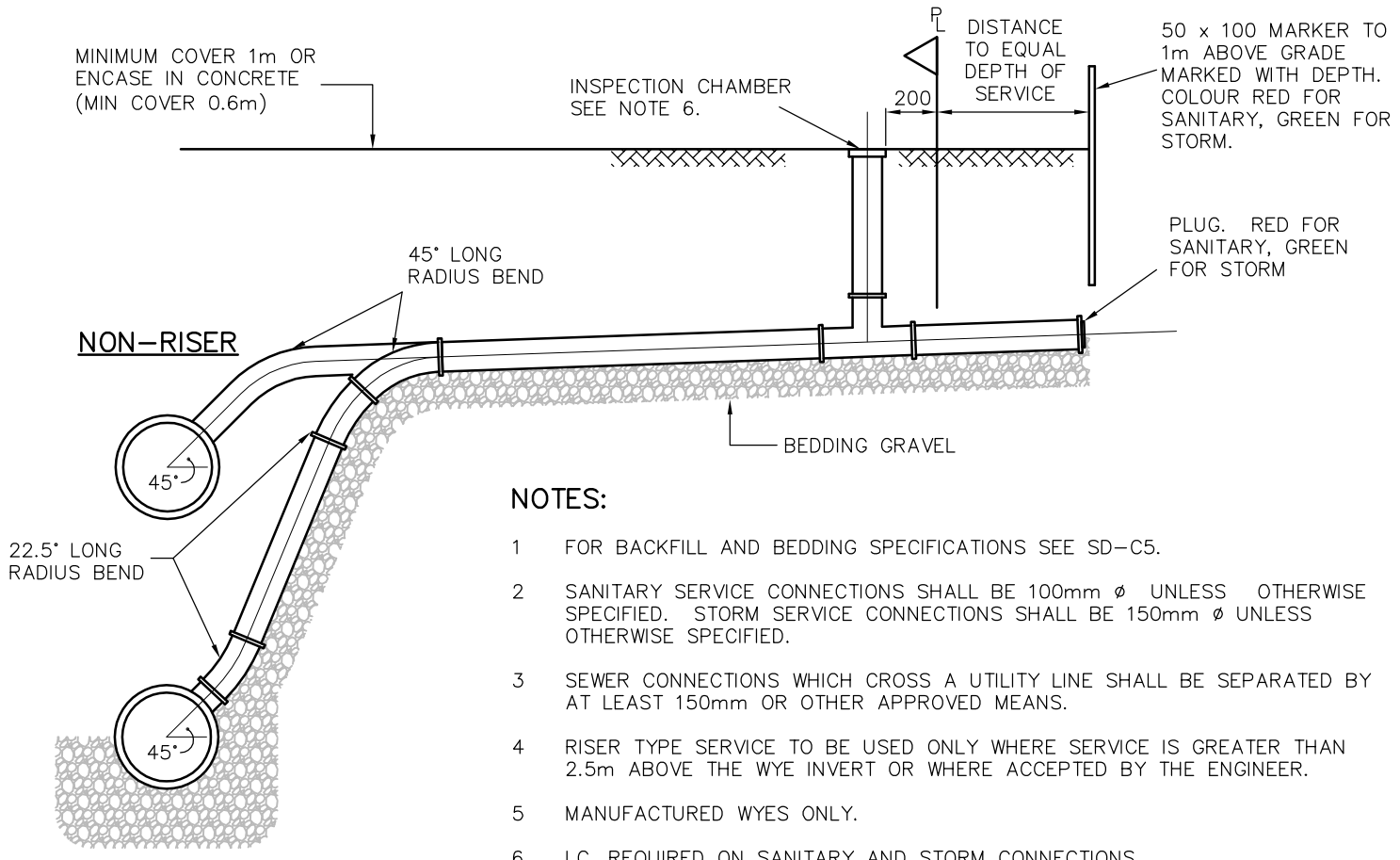
TEMPORARY CLEANOUT

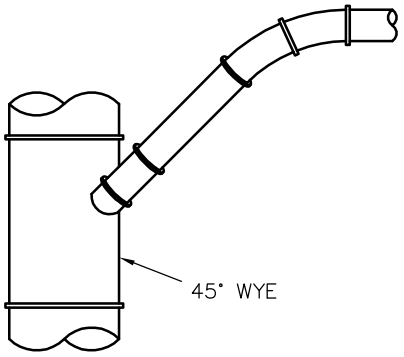
NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: RW	DRAWN: GI	DWG No. S6b
DATE: MARCH 2012	SCALE: NTS	

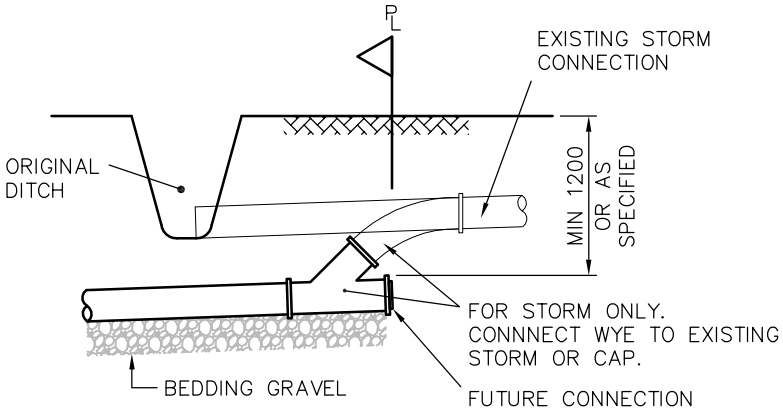




PLAN

NOTES:

1. FOR BACKFILL AND BEDDING SPECIFICATIONS SEE SD-C5.
2. SANITARY SERVICE CONNECTIONS SHALL BE 100mm ø UNLESS OTHERWISE SPECIFIED. STORM SERVICE CONNECTIONS SHALL BE 150mm ø UNLESS OTHERWISE SPECIFIED.
3. SEWER CONNECTIONS WHICH CROSS A UTILITY LINE SHALL BE SEPARATED BY AT LEAST 150mm OR OTHER APPROVED MEANS.
4. RISER TYPE SERVICE TO BE USED ONLY WHERE SERVICE IS GREATER THAN 2.5m ABOVE THE WYE INVERT OR WHERE ACCEPTED BY THE ENGINEER.
5. MANUFACTURED WYES ONLY.
6. I.C. REQUIRED ON SANITARY AND STORM CONNECTIONS.
7. SANITARY I.C. TO BE 100mm ø UNLESS OTHERWISE NOTED.
8. STORM CONNECTION TO BE 150mmø UNLESS OTHERWISE NOTED.
9. SERVICE CONNECTION PIPE TO BE EXTENDED 1.5m INTO PROPERTY LINE OF DISTANCE EQUAL TO DEPTH OF SERVICE.
10. REFER TO DISTRICT OF MAPLE RIDGE STANDARD SPECIFICATIONS FOR DETAILED INFORMATION.



DETAIL FOR TIE-IN TO EXISTING STORM

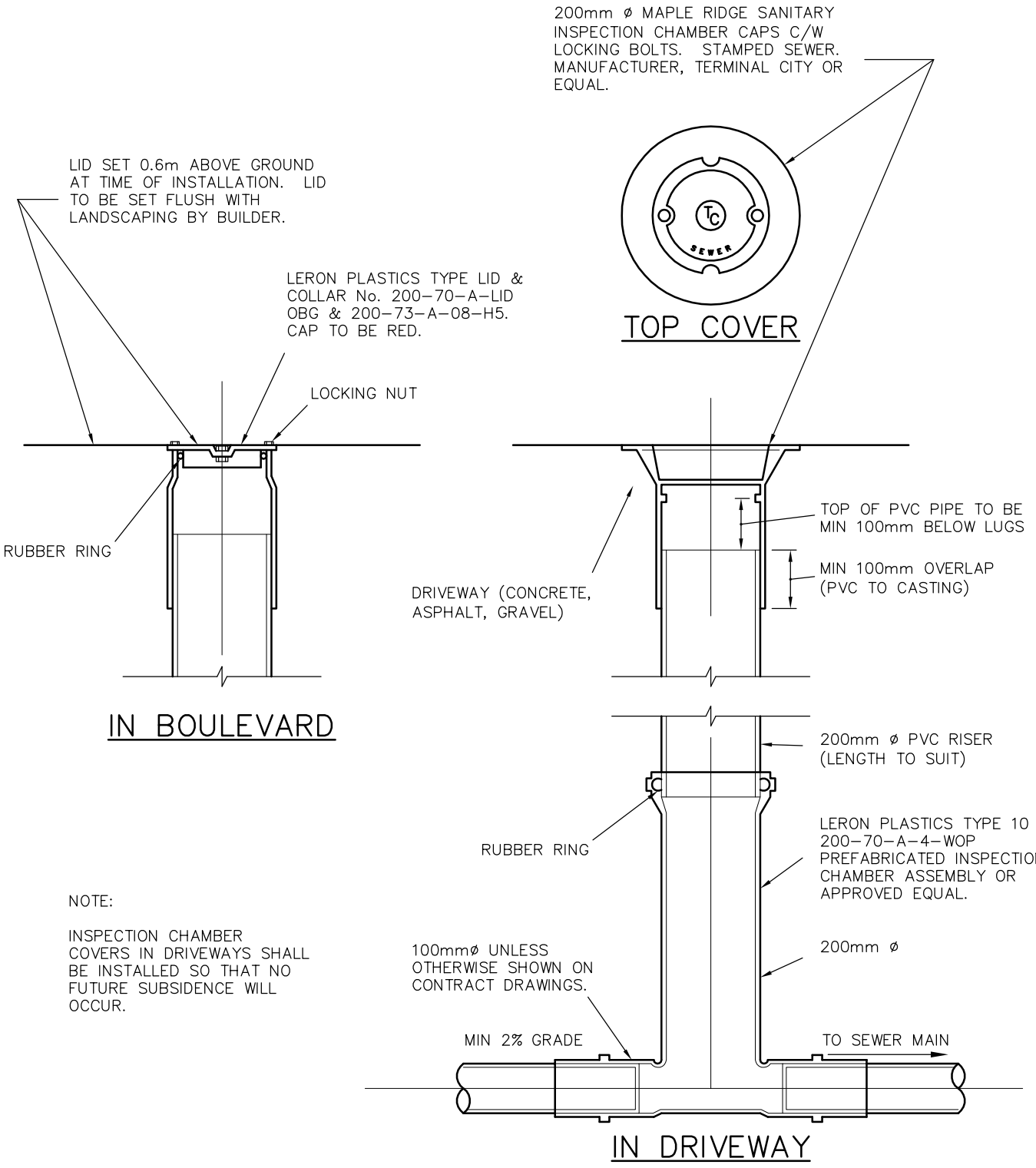
SANITARY AND STORM SERVICE CONNECTION

NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: RW	DRAWN: GI	DWG No. S7
DATE: FEB 2012	SCALE: NTS	



NOTE:

INSPECTION CHAMBER COVERS IN DRIVEWAYS SHALL BE INSTALLED SO THAT NO FUTURE SUBSIDENCE WILL OCCUR.

SANITARY SEWER INSPECTION CHAMBER

NO.	DATE	REVISION

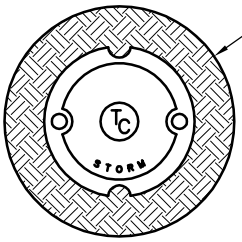
CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN:	RW	DRAWN:	GI
DATE:	FEB 2012	SCALE:	NTS

DWG No. S9a

200mm ø MAPLE RIDGE STORM INSPECTION CHAMBER CAPS C/W LOCKING BOLTS. STAMPED STORM. MANUFACTURER, TERMINAL CITY OR EQUAL.



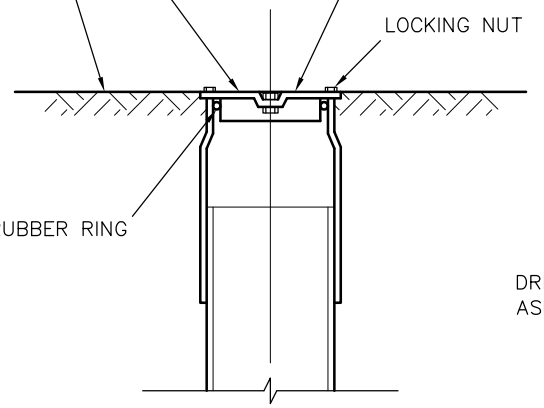
TOP COVER

LID SET 0.6m ABOVE GROUND AT TIME OF INSTALLATION. LID TO BE SET FLUSH WITH LANDSCAPING BY BUILDER.

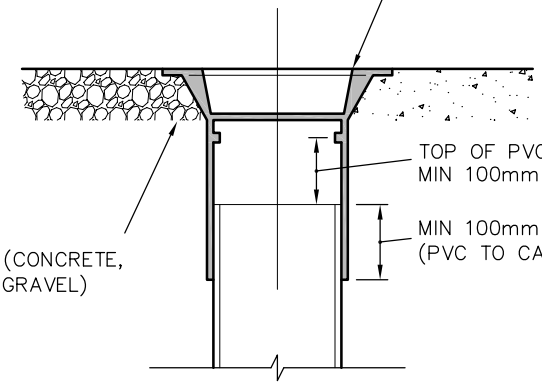
LERON PLASTICS TYPE LID & COLLAR No. 200–70–A–LID OBG & 200–73–A–08–H5. CAP TO BE GREEN.

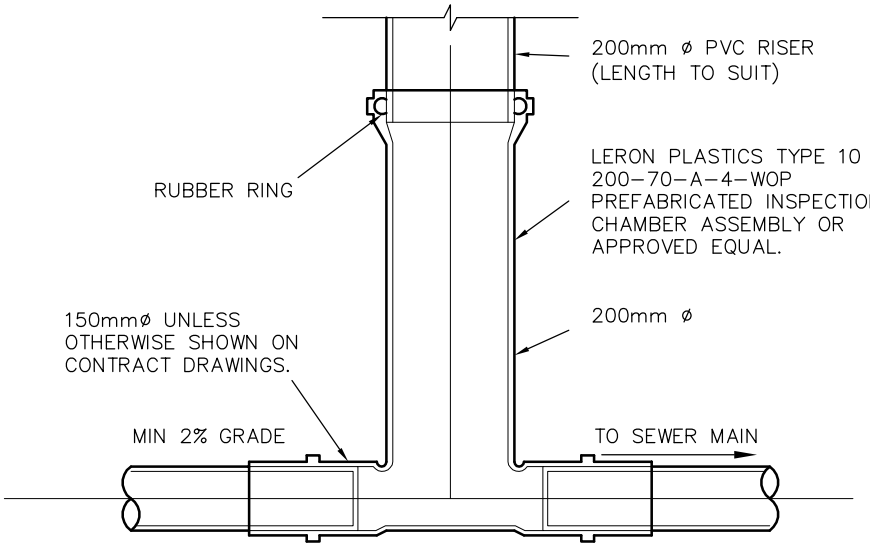
LOCKING NUT

RUBBER RING



IN BOULEVARD





IN DRIVEWAY

NOTE:

INSPECTION CHAMBER COVERS IN DRIVEWAYS SHALL BE INSTALLED SO THAT NO FUTURE SUBSIDENCE WILL OCCUR.

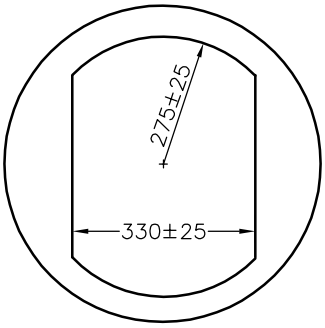
STORM SEWER INSPECTION CHAMBER

NO.	DATE	REVISION

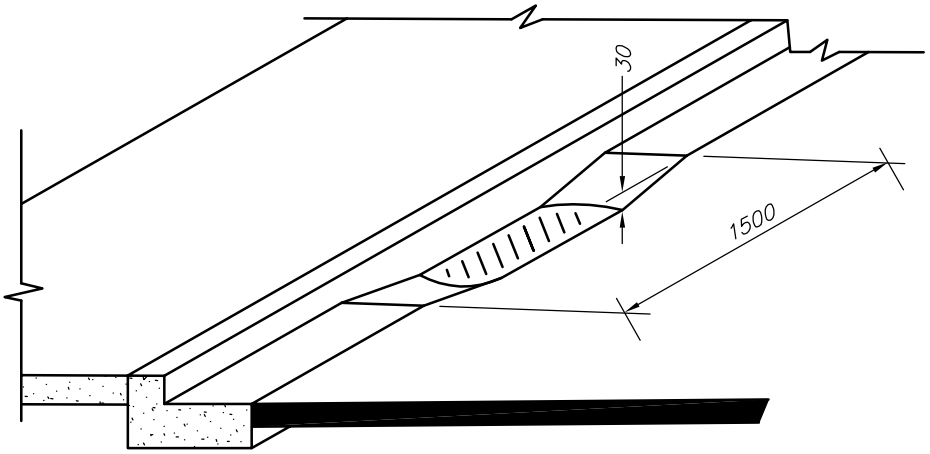
CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

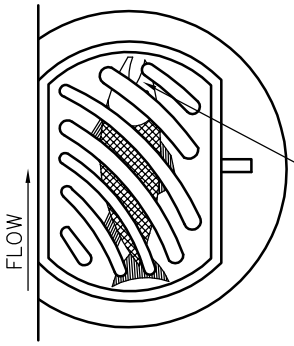
SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN:	RW	DRAWN:	GI	DWG No. S9b
DATE:	FEB 2012	SCALE:	NTS	



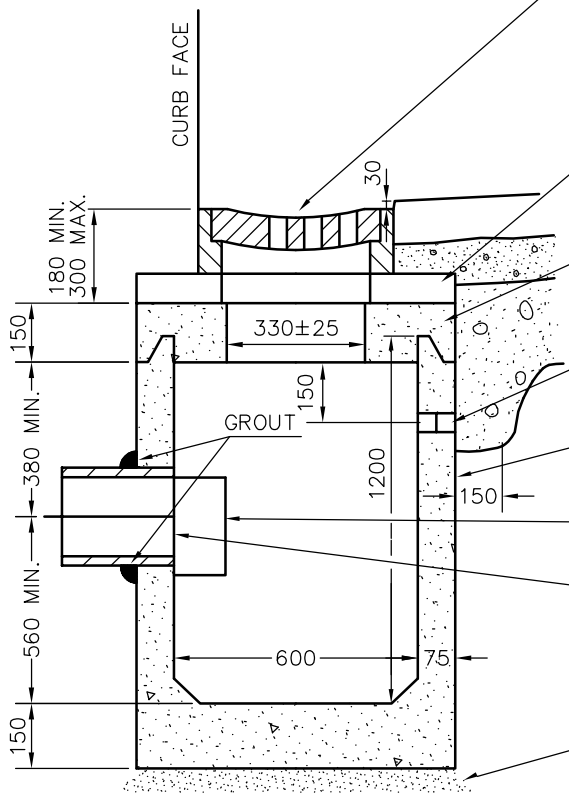
LID





FISH HEAD TO BE POINTED TO DOWN STREAM.

FRAME & GRATE



GRATE & FRAME – DOBNEY TYPE "D", B–23 & B–24 GRATE SHALL BE LEFT OR RIGHT AS REQUIRED. SYMBOL OF FISH TO BE INDENTED ON TOP OF GRATE BY 3mm.

CONC. RINGS, MAXIMUM 4, MINIMUM 1 COURSES LAID IN PORTLAND CEMENT MORTAR WITH INTERIOR JOINTS POINTED & EXTERIOR PARGED.

PRECAST REINFORCED CONCRETE LID MEETING H–20 HIGHWAY LOADING

80ø DRAINAGE HOLE WITH #4 GALVANIZED SCREEN AND DRAIN ROCK SURROUND

PRECAST REINFORCED SPUN CONCRETE SECTION (ASTM C–478)

CAST IRON OR ALUMINUM TRAPPING HOOD

CORE FOR 200ø PIPE @ SIDE TO OBTAIN MAX. COVER TO MAIN USING 2 X 45° BENDS AND APPROPRIATE BENDS TO SUIT GRADE AND DIRECTION.

BASE – 100 mm 19 mm GRAVEL COMPACTED TO 98% STANDARD PROCTOR

TOP INLET CATCH BASIN

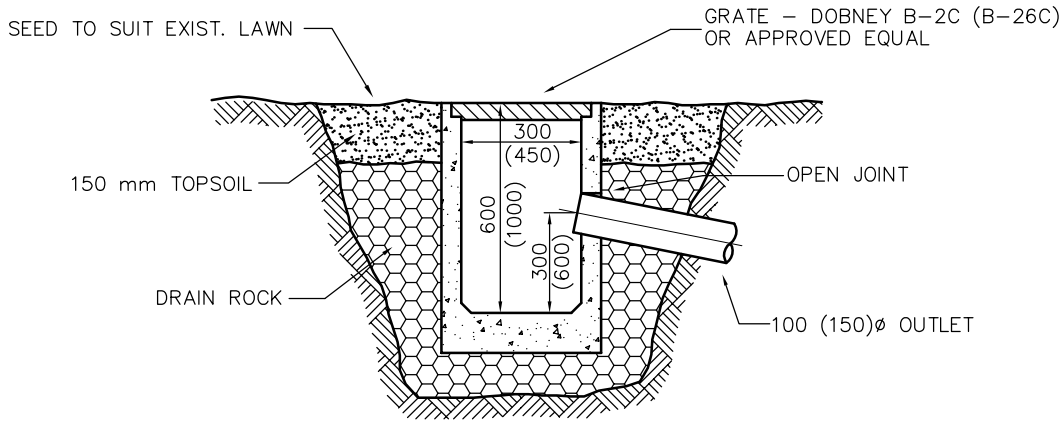
NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

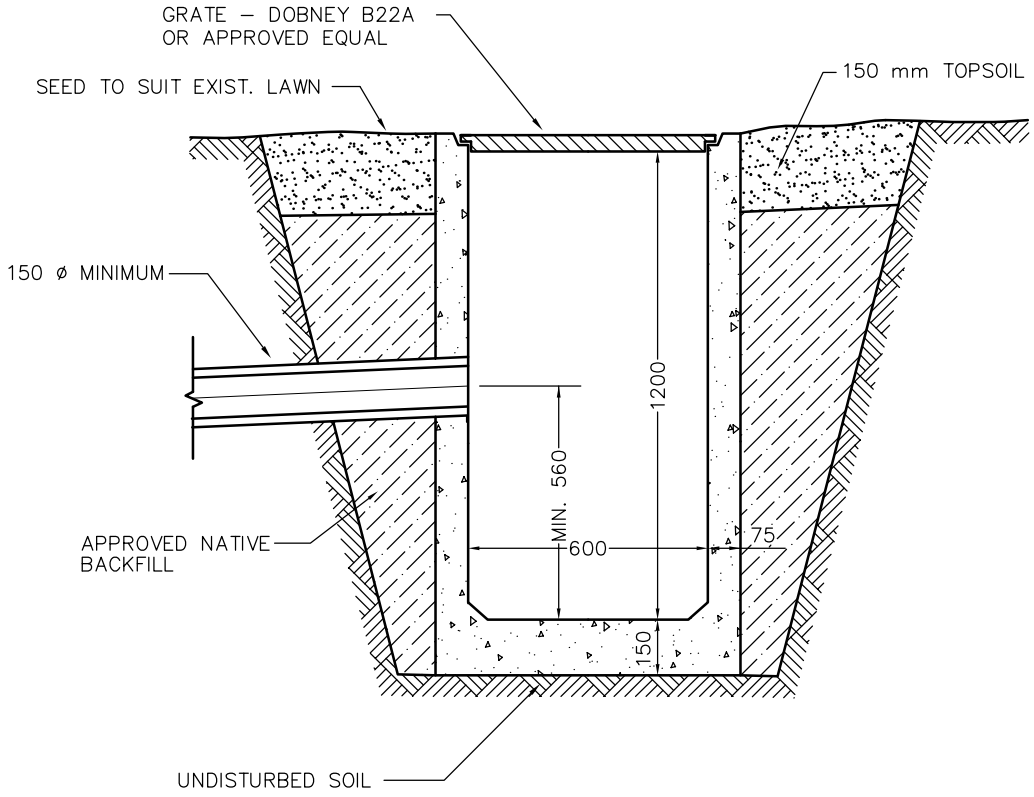
DESIGN:	RW	DRAWN:	GI
DATE:	FEB 2012	SCALE:	NTS

DWG No. S11



300 (450)ø LAWN DRAIN

N.T.S.



LAWN BASIN

N.T.S.

* SYMBOL OF FISH SHALL BE INDENTED ON TOP OF ALL DRAINAGE GRATES, REFER TO SD–D6.
* REFER TO DISTRICT OF MAPLE RIDGE STANDARD SPECIFICATIONS FOR DETAILED SPECIFICATIONS.

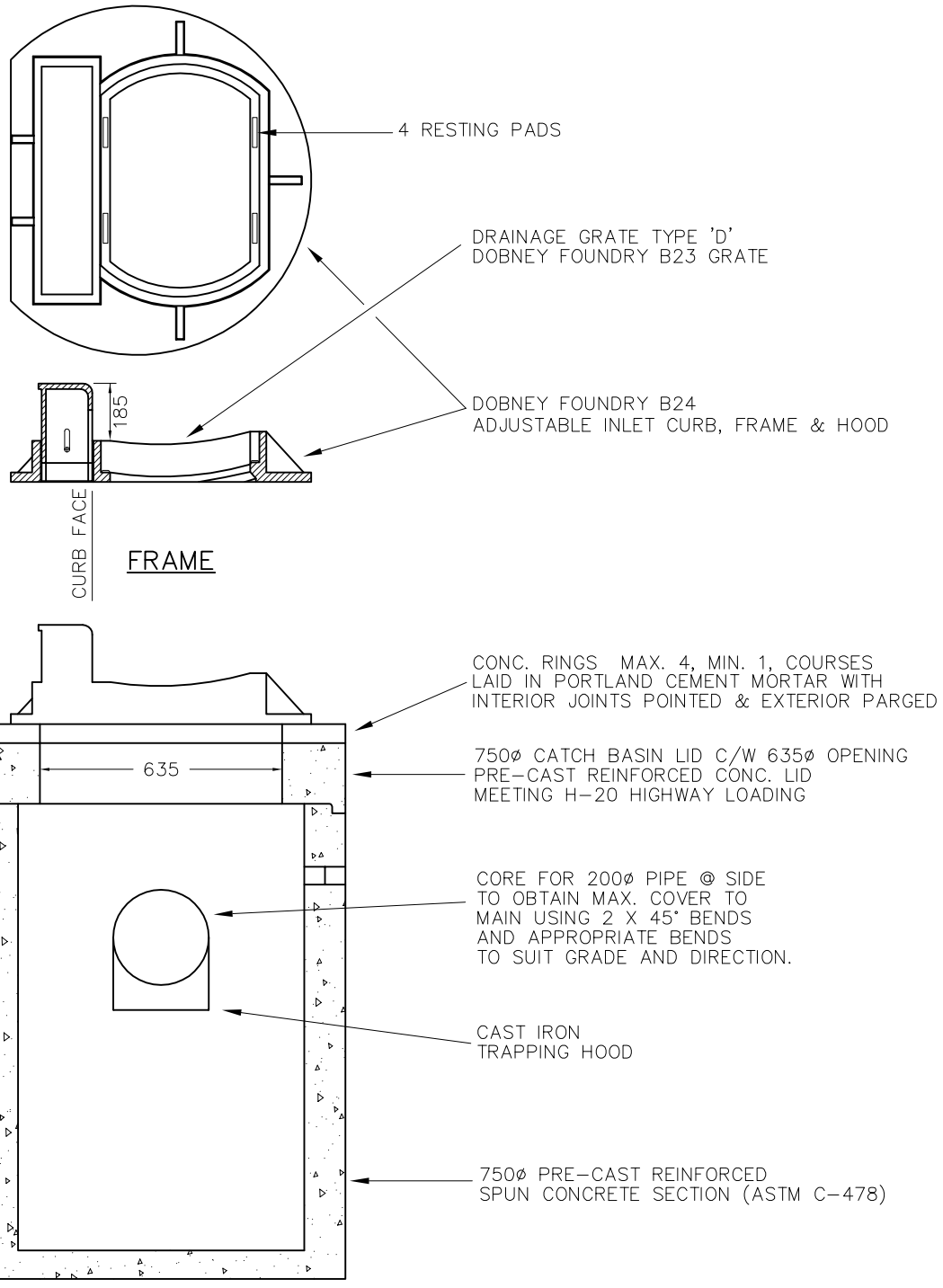
LAWN DRAIN AND LAWN BASIN

NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: RW	DRAWN: GI	DWG No. S12
DATE: FEB 2012	SCALE: NTS	



* REFER DWG. SD-D6 FOR ALL OTHER DETAILED DESCRIPTION NOTES SUCH AS DRAINAGE HOLE, BASE AND GRATE SETTING.

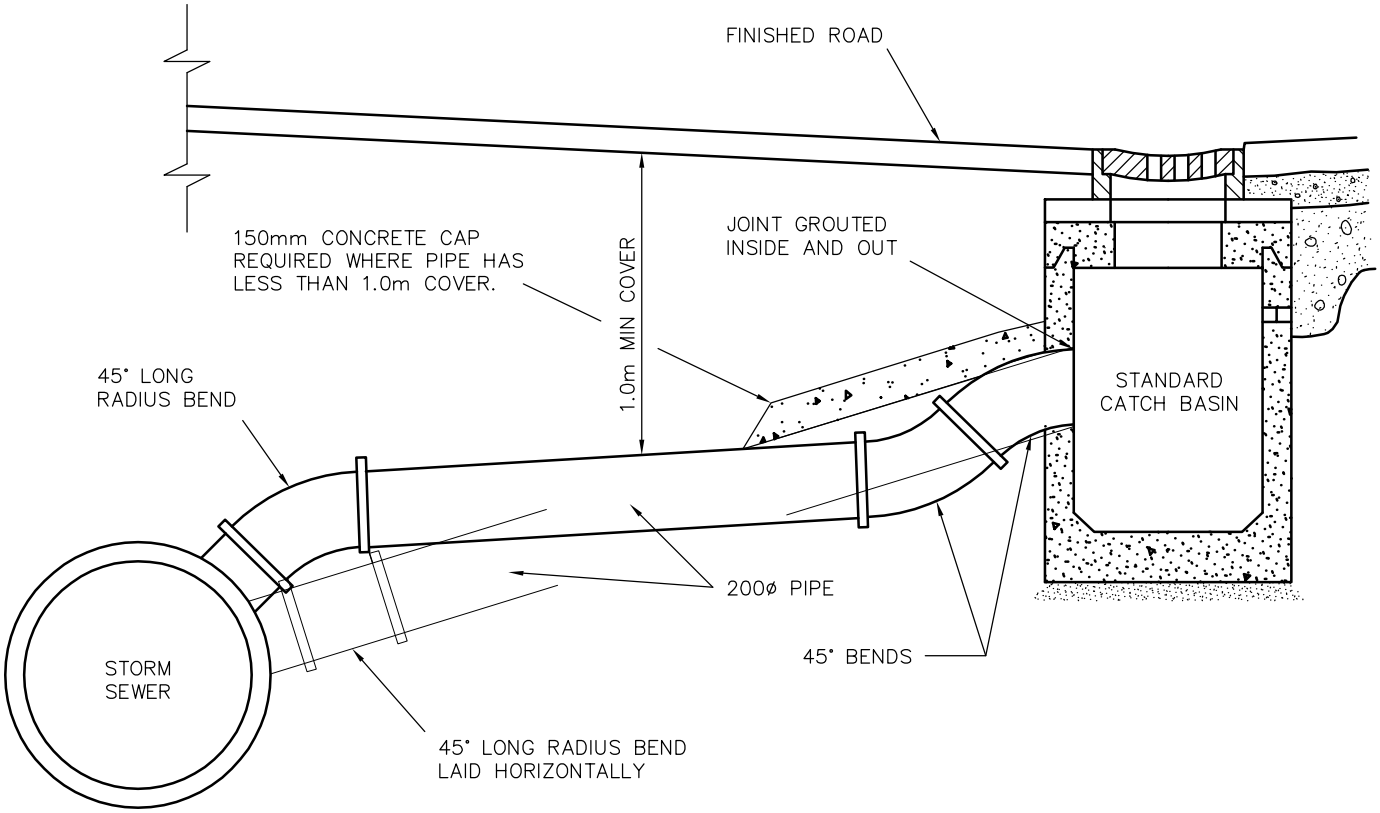
SIDE INLET CATCH BASIN

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

NO.	DATE	REVISION

DESIGN: RW	DRAWN: GI	DWG No. S100
DATE: FEB 2012	SCALE: NTS	



PIPE BEDDING AND CUSHION AS
PER STANDARD DRAWING D1

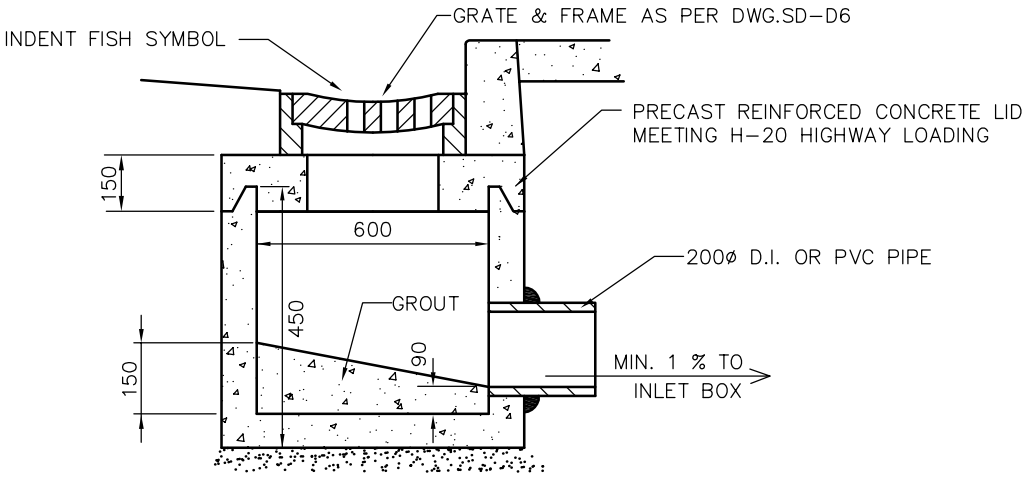
CATCH BASIN LEAD

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

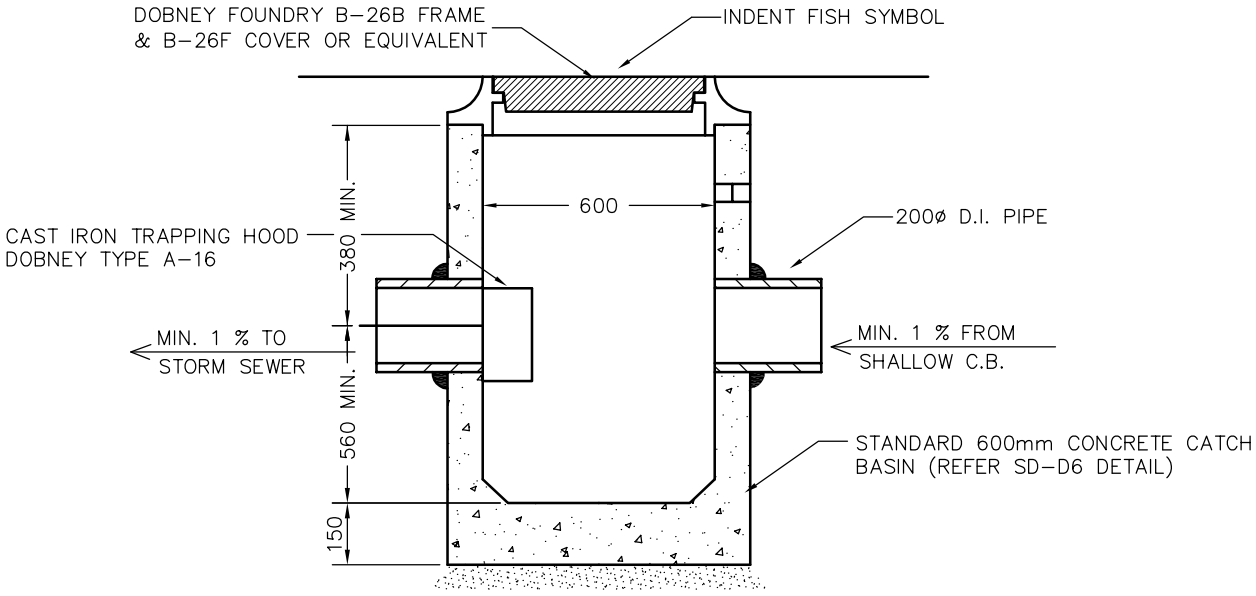
SUPPLEMENTARY STANDARD DETAIL DRAWINGS

NO.	DATE	REVISION

DESIGN: RW	DRAWN: GI	DWG No. S101
DATE: MARCH 2012	SCALE: NTS	



SHALLOW CATCH BASIN



INLET BOX

* REFER TO DWG SD-D6 FOR INDENTED FISH SYMBOL.

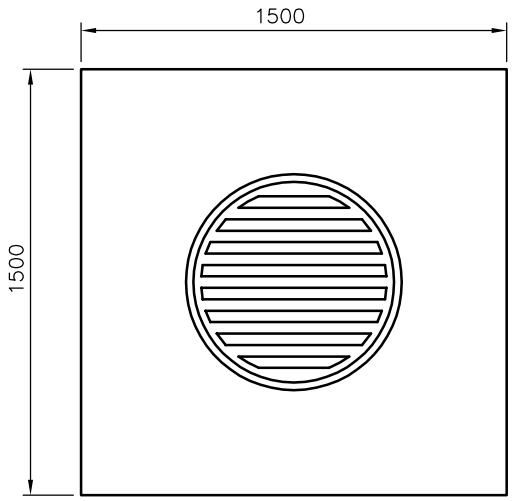
SHALLOW CATCH BASIN WITH INLET BOX

NO.	DATE	REVISION

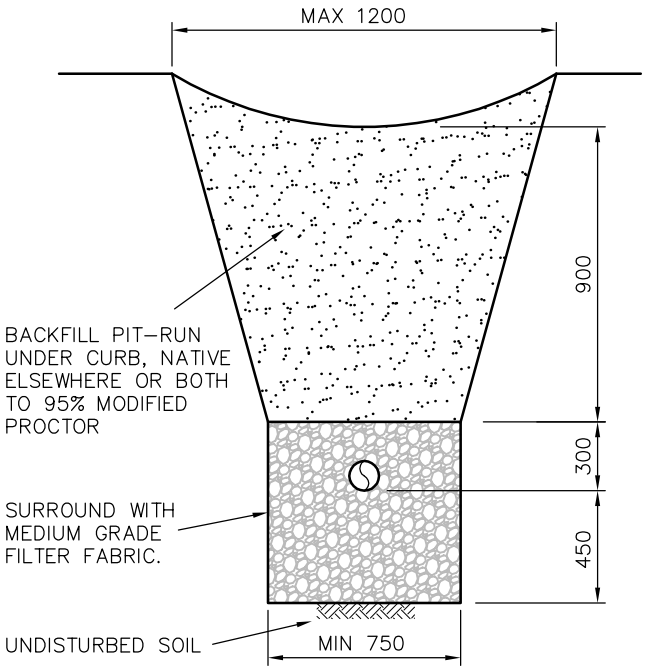
CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

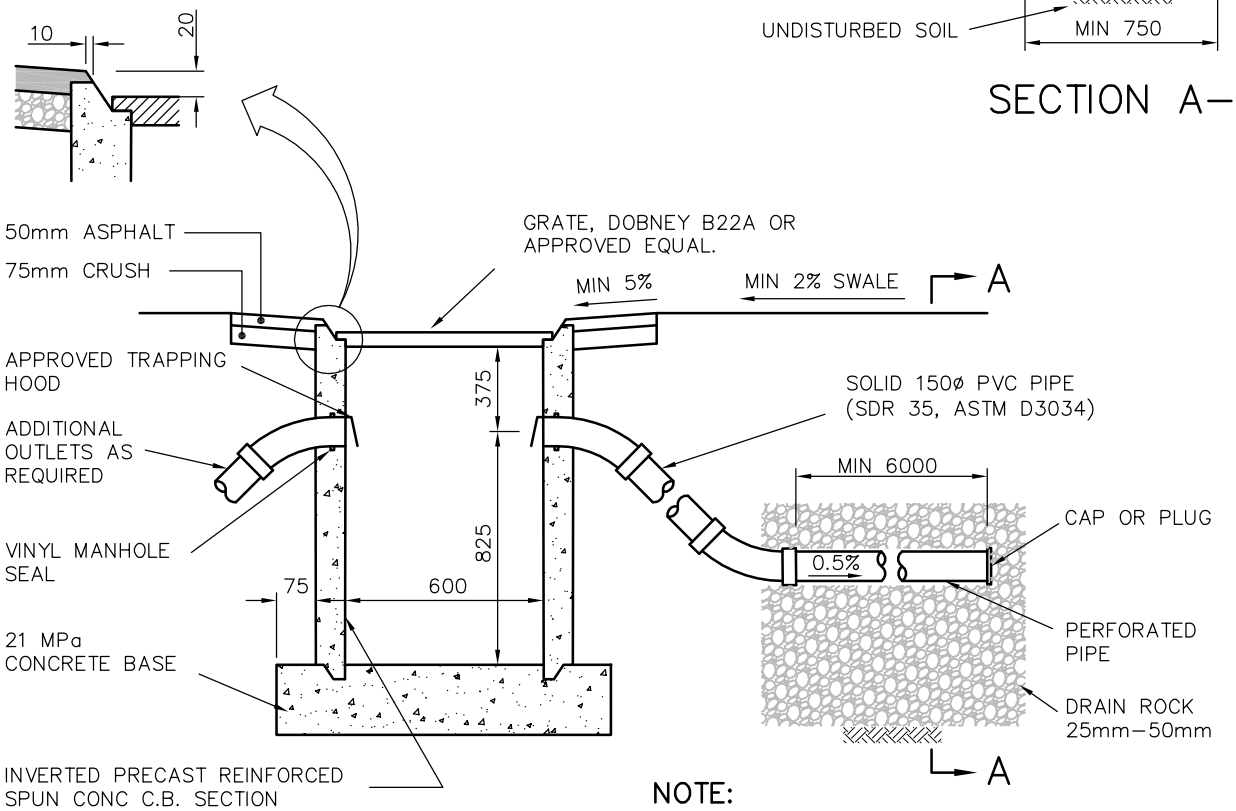
DESIGN: RW	DRAWN: GI	DWG No. S102
DATE: FEB 2012	SCALE: NTS	



PLAN



SECTION A–A



PROFILE

NOTE:

1. DISCHARGE PIPES TO BE PARALLEL TO THE ROAD CENTRELINE.
2. TRENCH DEPTH SHALL BE AS REQUIRED TO REACH A PERVIOUS UNDISTURBED SOIL.
3. MINIMUM TOTAL DEPTH OF DRAIN ROCK TO BE 2.0m.
4. USE ROCK PIT ONLY WITH POSITIVE DRAINAGE OUTLET.

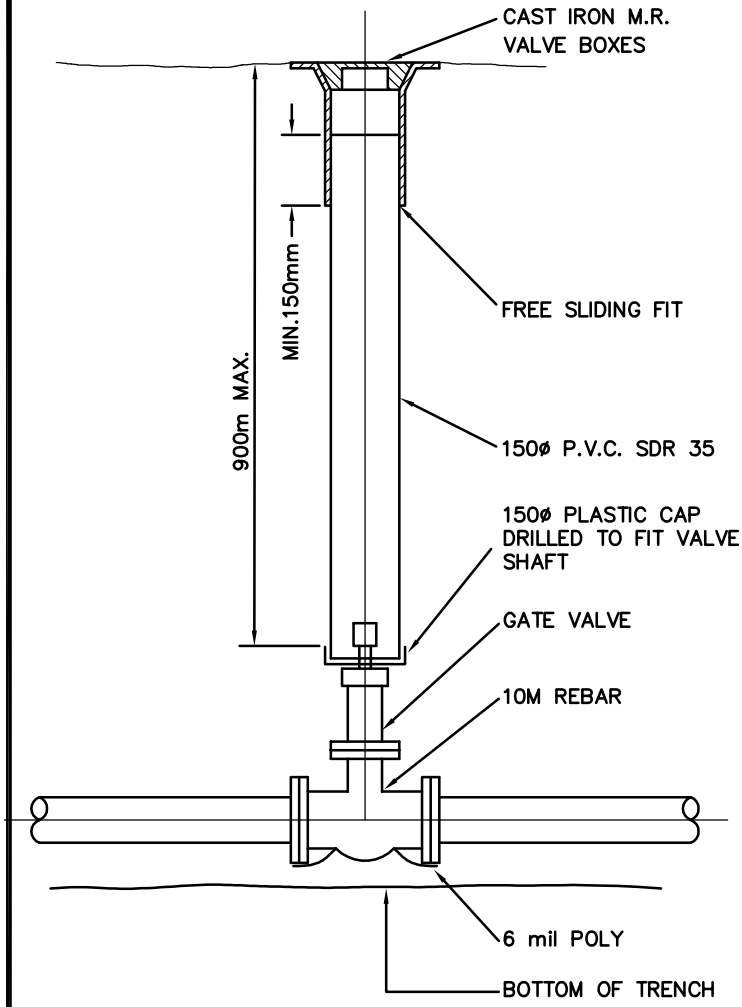
ROCK PIT

NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: RW	DRAWN: GI	DWG No. S103
DATE: MARCH 2012	SCALE: NTS	



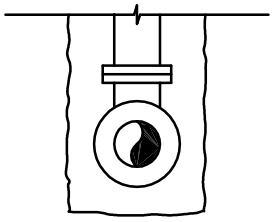
1 IN GRAVELLED AREAS THE VALVE BOX SHALL HAVE 450mm CIRCULAR PAVED APRON TO MATCH EXISTING ELEVATIONS.

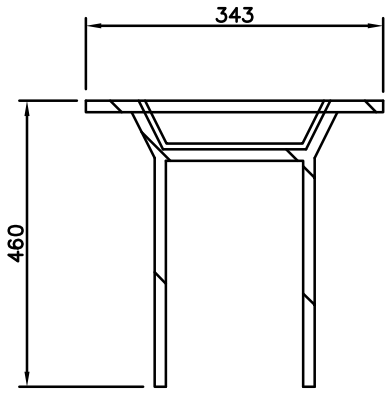
2 GATE VALVE AND VALVE BOX SHALL BE T.C. OR EQUIVALENT.

3 POLYETHYLENE (6 mil) ON INTERFACE OF CONCRETE AND FITTINGS.

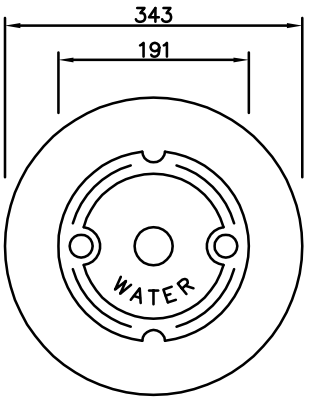
4 BUTTERFLY VALVE RISER ASSEMBLY SIMILAR EXCEPT UNDERGROUND OPERATOR IS SIDE MOUNTED.

5 GATE VALVES ARE TO BE FLANGED TO FITTINGS.





VALVE BOX SECTION



VALVE BOX TOP

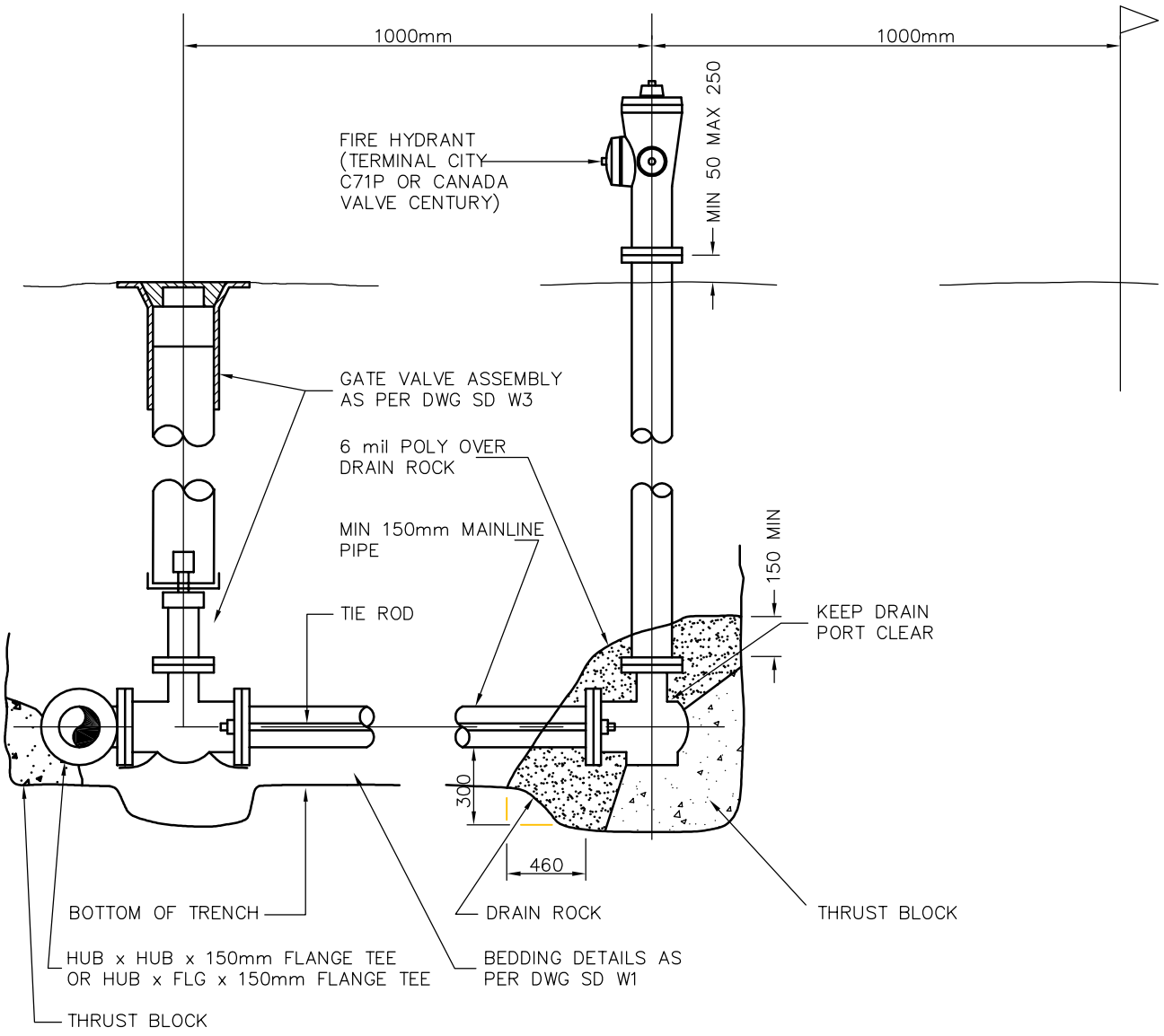
GATE VALVE

NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: D.T.	DRAWN: G.I.	DWG No. W3
DATE: MARCH 2012	SCALE: NTS	



1 DRAIN ROCK – 20mm TO 50mm BROKEN STONE. MINIMUM VOLUME 0.2m^3

2 THRUST BLOCKS FOR HYDRANT RISER SHALL BE CONSIDERED AS 90° BENDS FOR SIZING PURPOSES.

3 TIE RODS – 16mm WROUGHT IRON – HEAT TREATED WITH A YIELD STRENGTH OF 482.6 MPa, COATED TO AWWA SPECIFICATIONS.

4 POLYETHYLENE (6 mil) ON SURFACE BETWEEN CONCRETE AND FITTINGS.

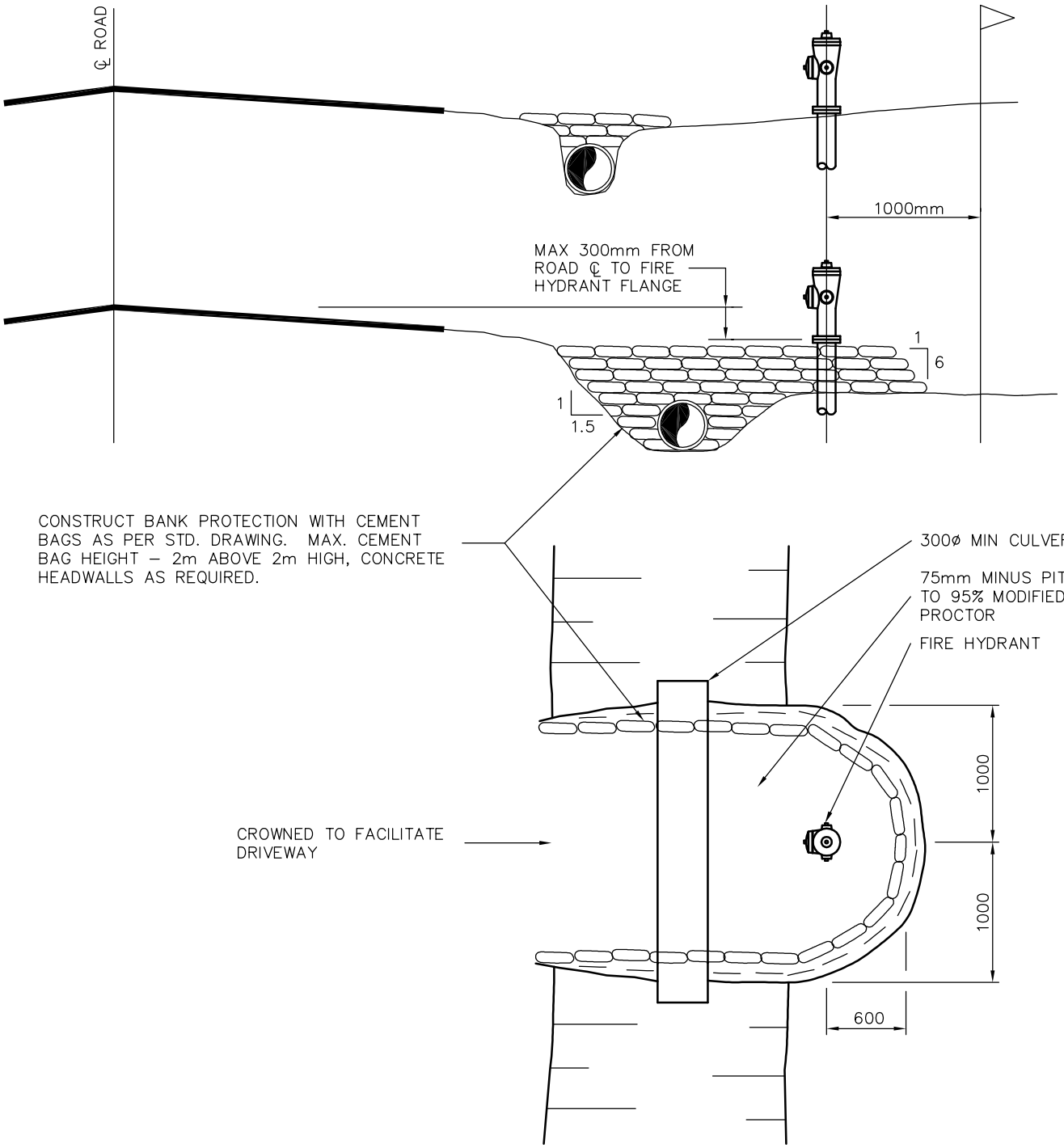
FIRE HYDRANT ASSEMBLY

NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: D.T.	DRAWN: G.I	DWG No. W4a
DATE: MARCH 2012	SCALE: NTS	



1 IN RURAL AREAS WHERE A DITCH IS REQUIRED IN A CUT, THE AREA AS SHOWN ABOVE SHALL BE RETAINED BY SUITABLE SIDESLOPES OR WALLS.

2 IN RURAL AREAS WHERE NO DITCH IS REQUIRED IN A CUT OR FILL, THE FIRE HYDRANT OFFSET FROM PROPERTY LINE WILL BE 1.0m

3 MINIMUM CULVERT LENGTH – 2.5m

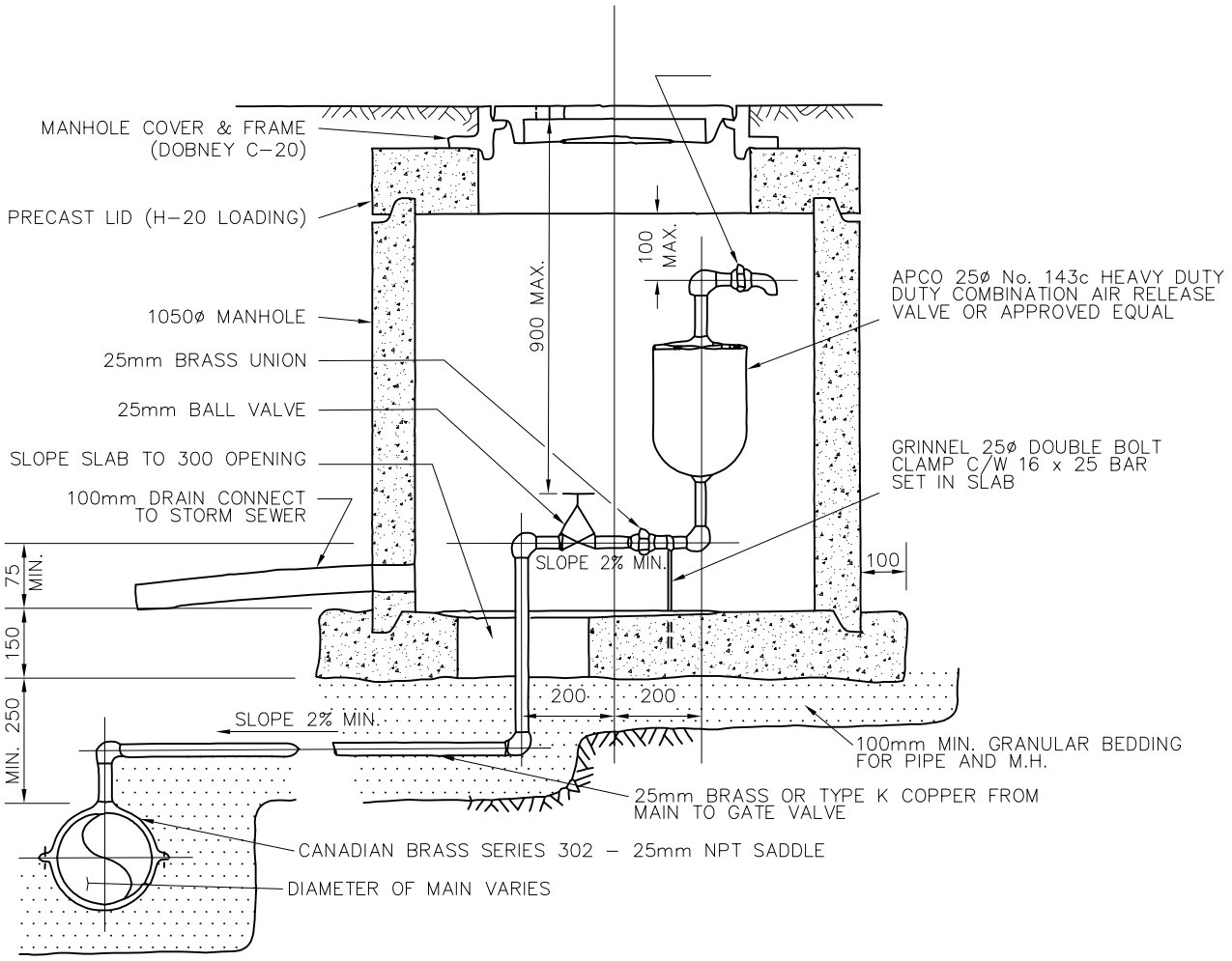
FIRE HYDRANT ACCESS

NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: DT	DRAWN: GI	DWG No.	
DATE: AUG 1997	SCALE: NTS	W4b	



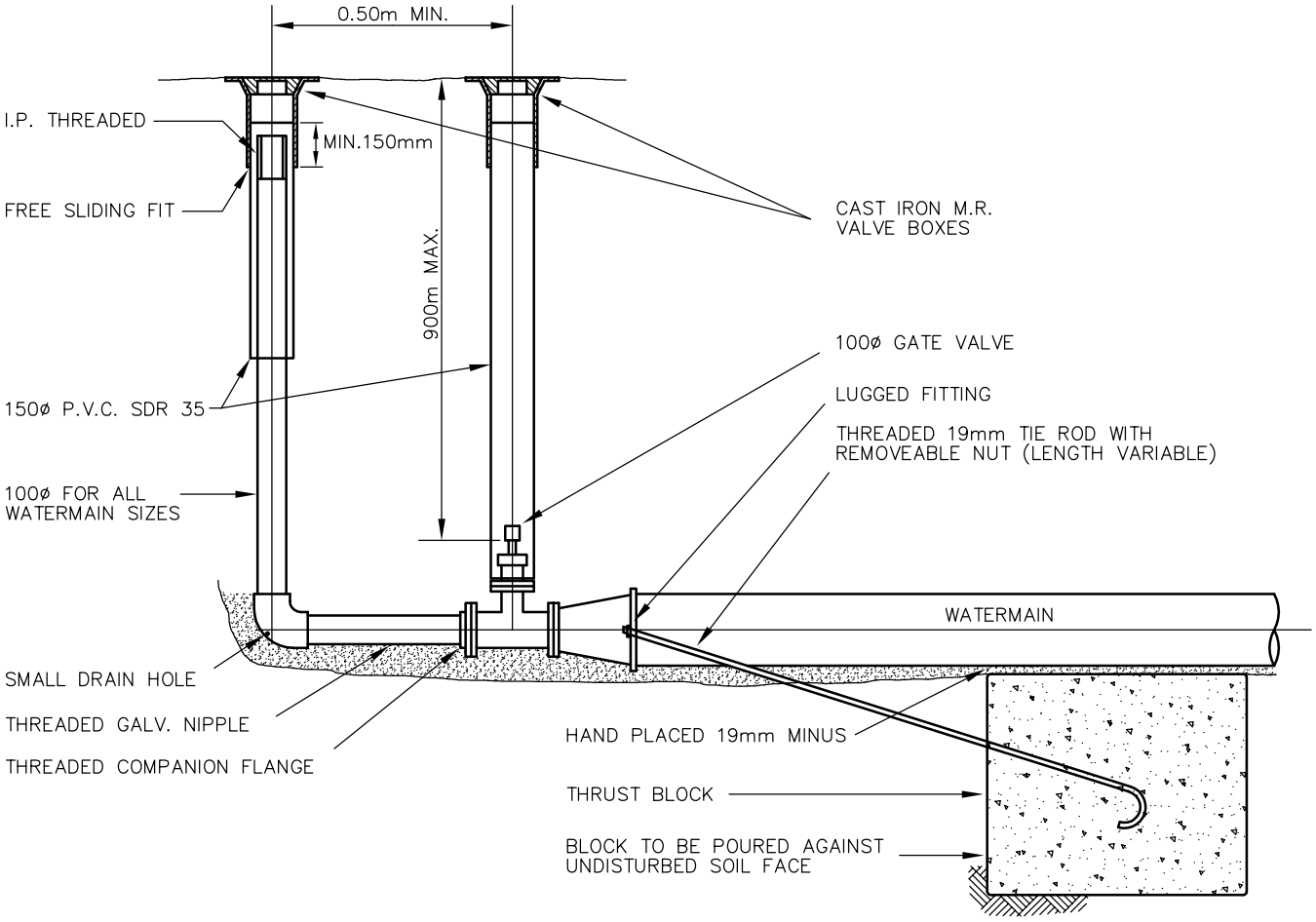
AIR AND VACUUM VALVE CHAMBER

NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: D.B.	DRAWN: G.I.	DWG No. W6
DATE: FEB 2012	SCALE: NTS	



BLOW–OFF ASSEMBLY

NO.	DATE	REVISION

CITY OF MAPLE RIDGE
ENGINEERING DEPARTMENT

SUPPLEMENTARY STANDARD DETAIL DRAWINGS

DESIGN: D.T.	DRAWN: G.I	DWG No. W8
DATE: FEB 2012	SCALE: NTS	