

**NOTES:**

1. LETTERING TO BE BLACK IN COLOUR
2. 19mm CREZON PLYWOOD.
3. REFLECTIVE SHEETING BACKGROUND.
4. PROVINCIAL BRAND (REFER TO GRAPHIC STANDARDS MANUAL).
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

6. COORDINATE PROJECT TITLE WITH TRANSPORTATION AND INFRASTRUCTURE

MASTER  
SPECIFICATIONS

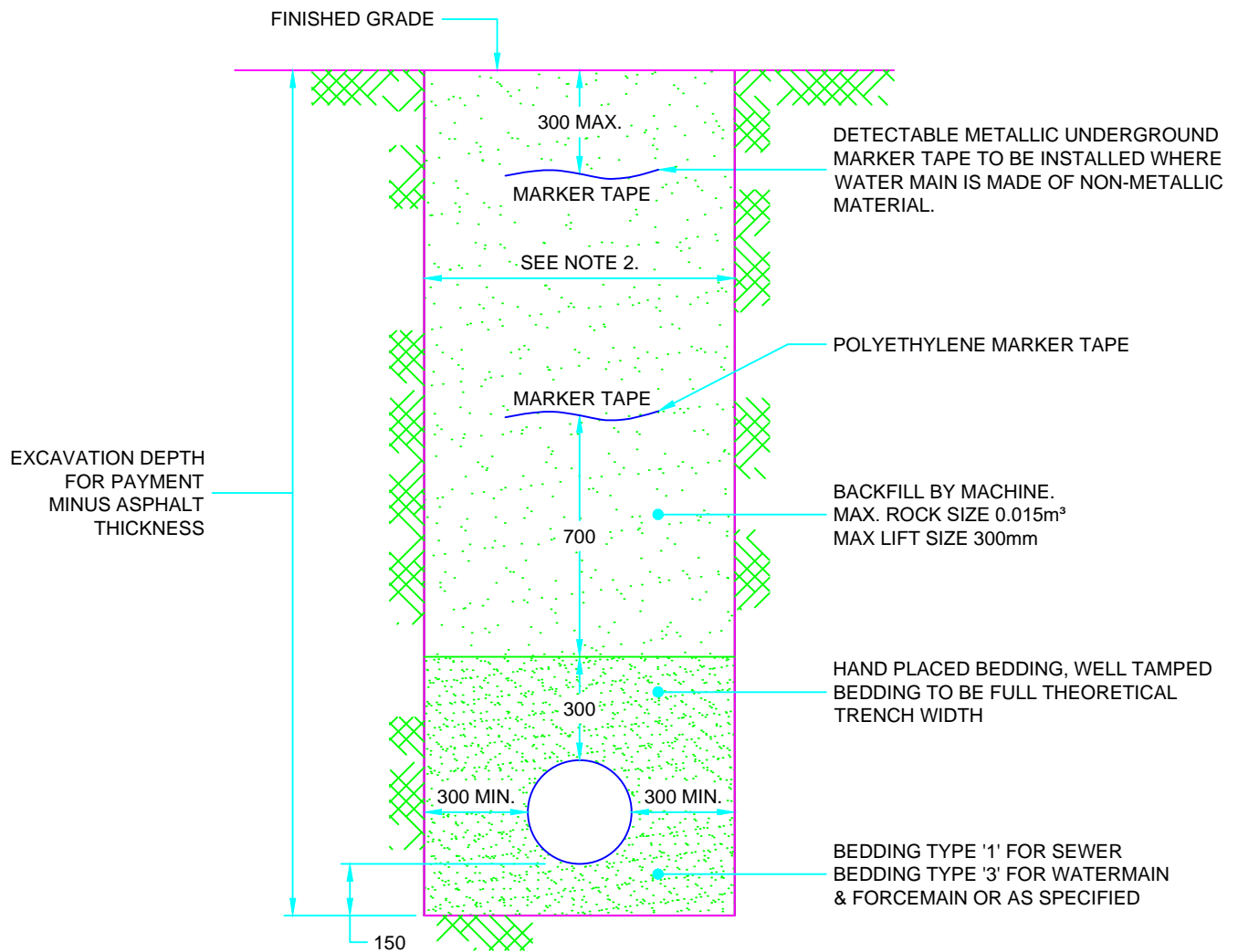
PROJECT SIGN FOR PROVINCIALY  
FUNDED PROJECTS

DRAWING NUMBER 04010

DATE:  
APRIL 2017

SCALE:

N.T.S.



## TRENCH SECTION FOR WATER, SEWER, OR FORCEMAIN

### NOTES:

- BEDDING TYPE SHALL BE AS SPECIFIED IN THE SCHEDULE OF QUANTITIES AND PRICES.
- EXCAVATION WIDTH FOR PAYMENT AS PER LIMITS FOR MEASUREMENT IN CONTRACT DOCUMENT.

DEPTH	MIN. WIDTH
0-4m	1500mm
>4m, <6m	2000mm
≥6m	2500mm

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

MASTER  
SPECIFICATIONS

## SINGLE PIPE TRENCH DETAIL

DRAWING NUMBER

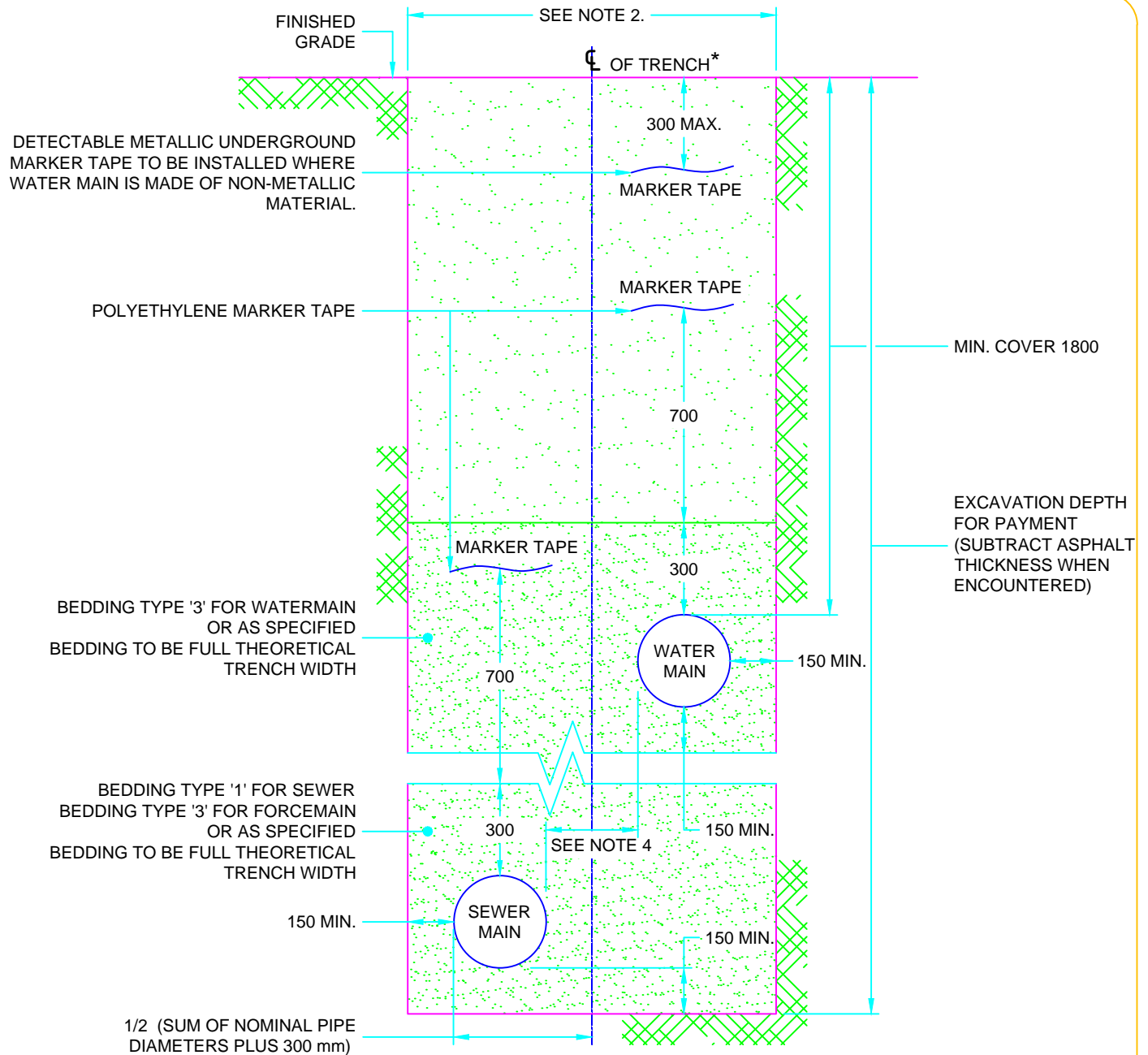
04020

DATE:

MARCH 2020

SCALE:

N.T.S.



## TRENCH SECTION FOR WATER AND SEWER

### NOTES:

- BEDDING TYPE SHALL BE AS SPECIFIED IN THE SCHEDULE OF QUANTITIES AND PRICES.
- EXCAVATION WIDTH FOR PAYMENT AS PER LIMITS FOR MEASUREMENT IN CONTRACT DOCUMENT.
- UNDER NO CIRCUMSTANCES, SHALL ANY FORCEMAIN BE INSTALLED AT ZERO SLOPE.
- \* CL OF TRENCH FOR MEASUREMENT PURPOSES.
- MAINTAIN MINIMUM HORIZONTAL SEPARATION BETWEEN SEWER AND WATERMAIN OF 3.0 m. WHERE NOT ACHIEVABLE, MAINTAIN MINIMUM VERTICAL SEPARATION OF 0.45 m FROM CROWN OF SEWERMAIN.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
- BACKFILL BY MACHINE. MAX LIFT SIZE 300mm.

DEPTH	MIN. WIDTH
0-4m	1500mm
>4m, <6m	2000mm
≥6m	2500mm

MASTER  
SPECIFICATIONS

## DOUBLE PIPE TRENCH DETAIL

DRAWING NUMBER

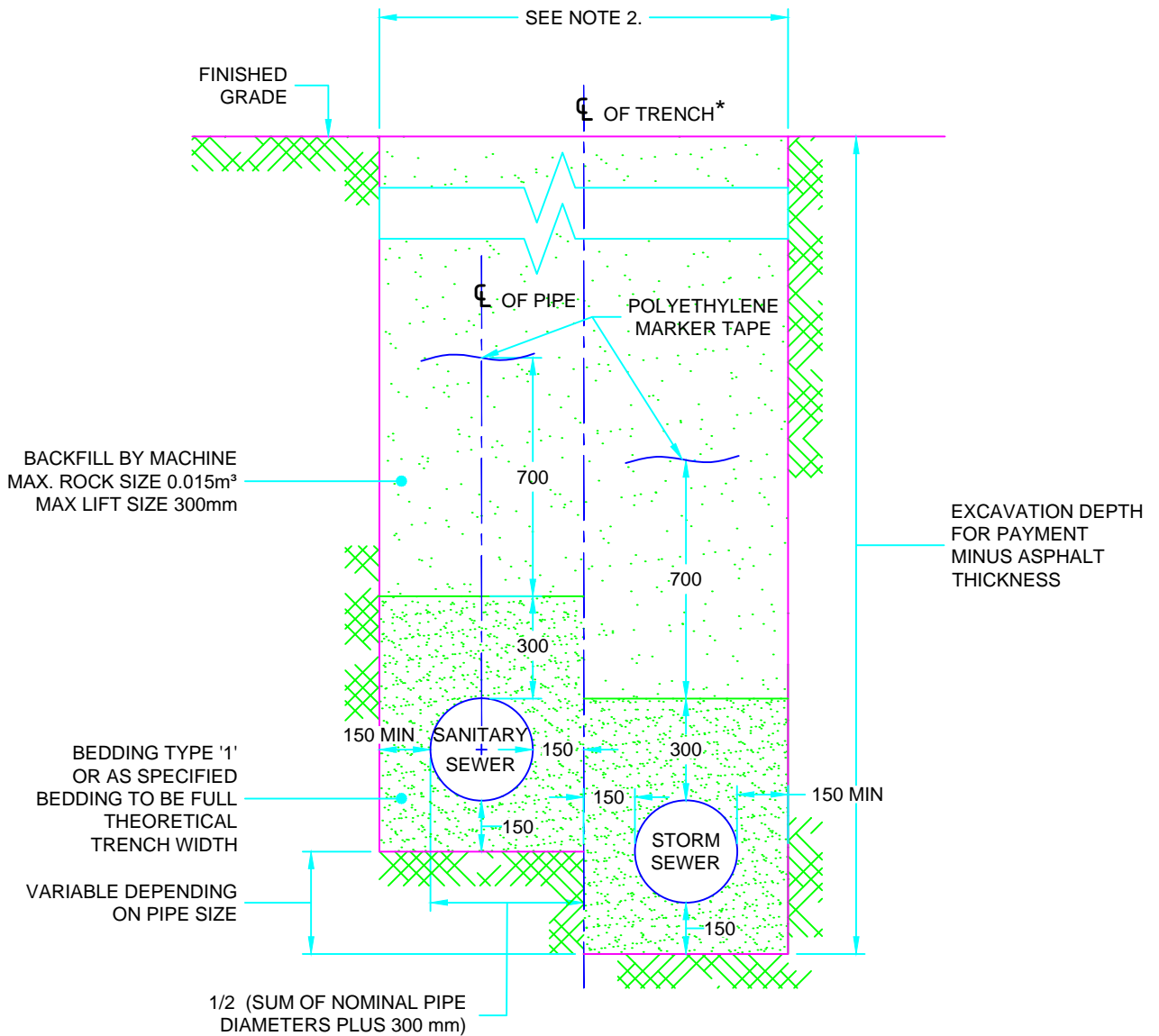
04030

DATE:

MARCH 2020

SCALE:

N.T.S.



## TRENCH DETAIL COMMON SEWER

### NOTES:

1. BEDDING TYPE SHALL BE AS SPECIFIED IN THE SCHEDULE OF QUANTITIES AND PRICES.
2. EXCAVATION WIDTH FOR PAYMENT AS PER LIMITS FOR MEASUREMENT IN CONTRACT DOCUMENTS.
3. \*  $\text{CL}$  OF TRENCH FOR MEASUREMENT PURPOSES.
4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

DEPTH	MIN. WIDTH
0-4m	1500mm
>4m, <6m	2000mm
>6m	2500mm

**MASTER  
SPECIFICATIONS**

## TRENCH DETAIL COMMON SEWER

DRAWING NUMBER

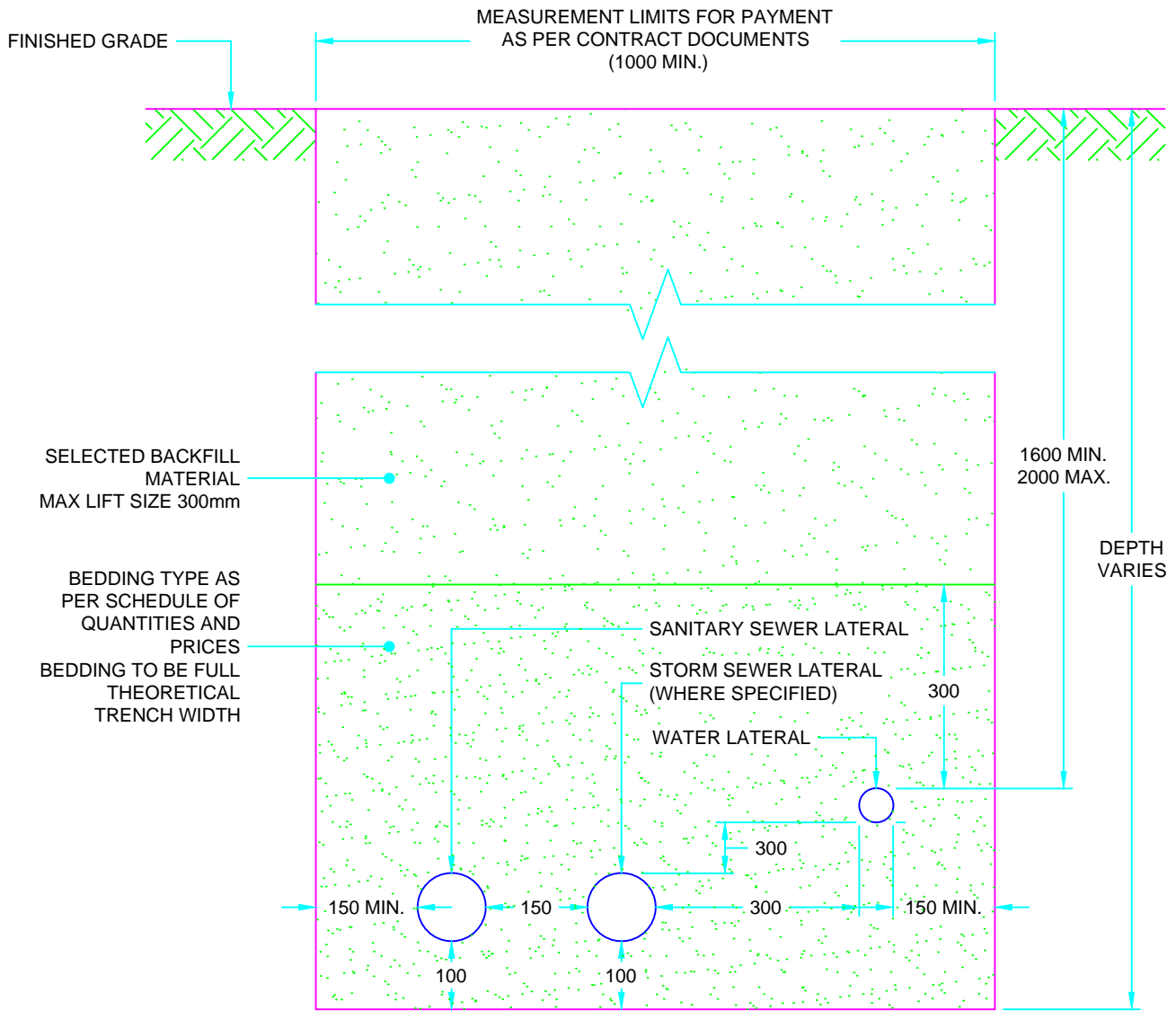
04040

DATE:

MARCH 2020

SCALE:

N.T.S.



## HOUSE SERVICE TRENCH

### NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
2. HOUSE SERVICES ARE TO BOTH TERMINATE AT THE SAME POINT AT THE EDGE OF THE ROAD RIGHT OF WAY. A 38 x 89 WOODEN MARKER POST SHALL BE INSTALLED PLUMB FROM THE END OF THE SERVICE LINES TO 600 ABOVE THE GROUND SURFACE, PAINTED RED ABOVE THE GROUND. FACING THE HOUSE TO BE SERVICED, THE WATER SERVICE SHALL BE LOCATED ON THE RIGHT OF THE SEWER.
3. LOCATION, ALIGNMENT AND ELEVATION OF HOUSE SERVICES LATERALS, SHALL BE CONFIRMED BY CONTRACTOR WITH ENGINEER PRIOR TO CONSTRUCTION.

**MASTER  
SPECIFICATIONS**

## TRENCH DETAIL SERVICE LINES

DRAWING NUMBER

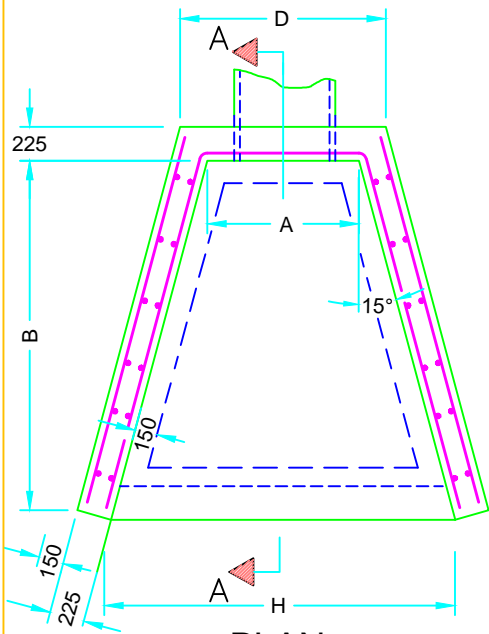
04050

DATE:

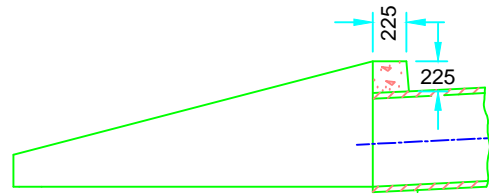
MARCH 2020

SCALE:

N.T.S.

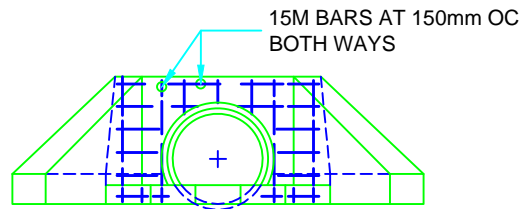


**PLAN**

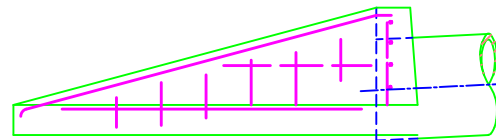


**SECTION A-A**

PIPE DIA	ENDWALL DIMENSIONS							
	A	B	C	D	E	F	G	H
600	1050	2400	2725	1400	300	75	1525	2350
675	1125	2400	2725	1475	300	75	1600	2425
750	1200	2400	2725	1550	300	75	1675	2500
825	1275	2400	2725	1625	300	75	1755	2575
900	1350	2400	2725	1700	300	75	1825	2650
975	1425	2400	2725	1775	375	150	1975	2725
1050	1500	3000	3400	1850	375	150	2050	3100
1200	1650	3000	3400	2000	375	150	2200	3250
1350	1800	3000	3400	2150	375	150	2350	3400
1500	1950	3000	3400	2300	375	150	2500	3550
1650	2100	3000	3400	2450	375	150	2650	3700
1800	2250	3000	3400	2600	375	150	2800	3850
2400	3000	3000	3400	3350	375	150	3550	4600



**FRONT VIEW**



**SIDE VIEW**

**NOTES:**

1. CLASS OF CONCRETE: 25MPa.
2. COVER TO REINFORCING BARS: 75mm ± 20mm.
3. GRANULAR BACKFILL TO BE PLACED TO 300mm MIN THICKNESS ON ALL SIDES.
4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

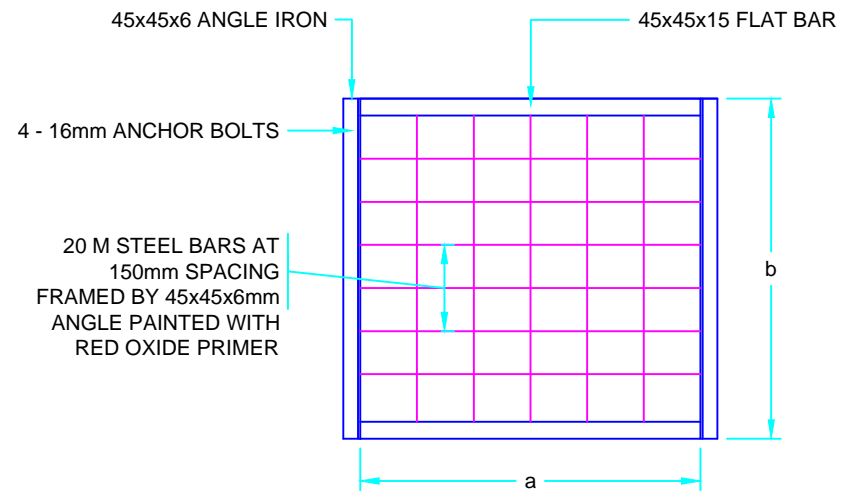
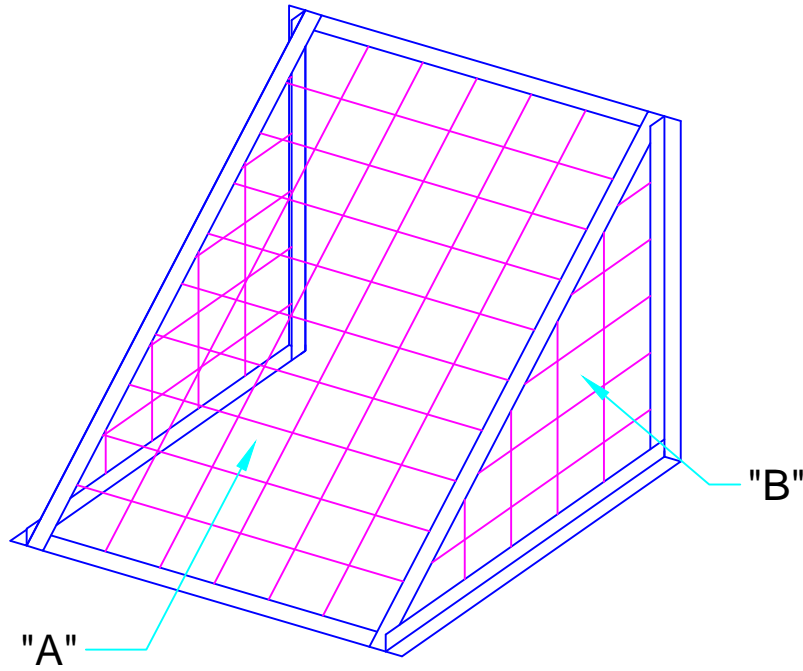
MASTER SPECIFICATIONS

CONCRETE HEADWALL FOR SEWER OR CULVERT PIPE

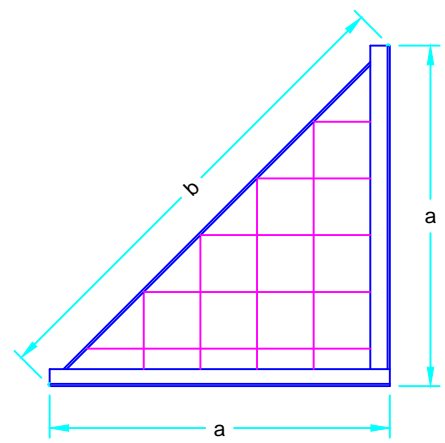
DRAWING NUMBER 04060

DATE: MARCH 2022

SCALE: 1:50



**ELEVATION "A"**



**ELEVATION "B"**

PIPE DIAMETER	DIMENSIONS	
	a	b
600	900	1275
750	1050	1475
900	1200	1700
1050	1350	1900
1200	1500	2125
1350	1650	2325
1500	1800	2550

**NOTES:**

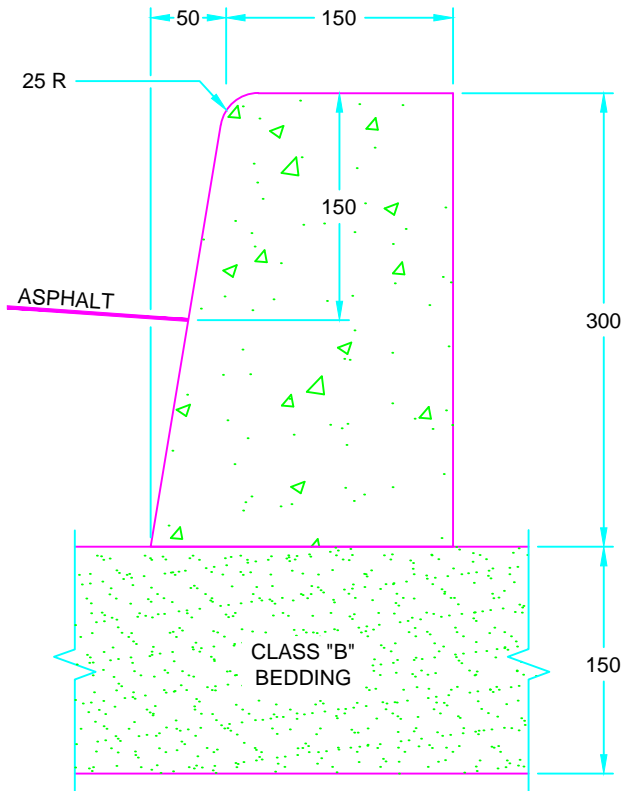
1. ALL JUNCTIONS TO BE SPOT WELDED.
2. FRAMING TO BE 45x45x6 ANGLE EXCEPT WHERE INDICATED.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

**MASTER SPECIFICATIONS**

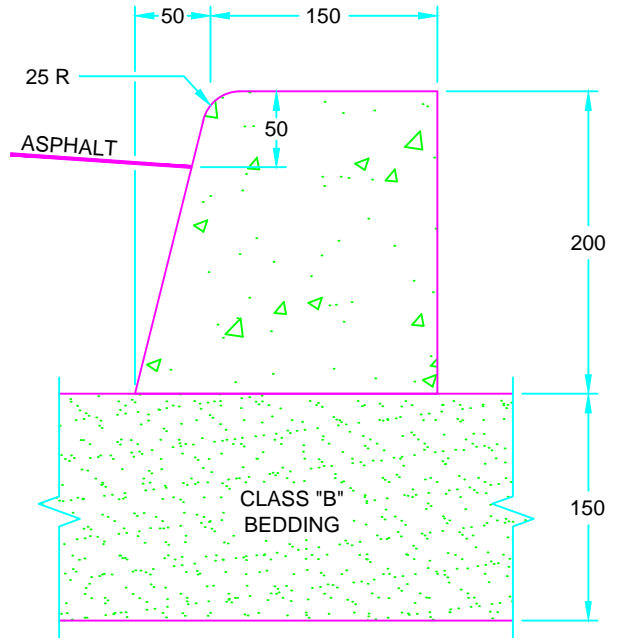
**DEBRIS RACK**

DRAWING NUMBER 04070

DATE: MARCH 2016  
SCALE: N.T.S.



**HIGH BACK**



**LOW BACK**

**NOTES:**

1. CONCRETE TO BE 32 MPa TO MEET CSA A23.1/A23.2, CLASS C-2 EXPOSURE.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
3. LIMIT OF BEDDING TO BE 300 mm EACH SIDE OF CONCRETE STRUCTURE AS DETERMINED BY THE ENGINEER.

**MASTER  
SPECIFICATIONS**

**CONCRETE BARRIER CURB**

DRAWING NUMBER

04080

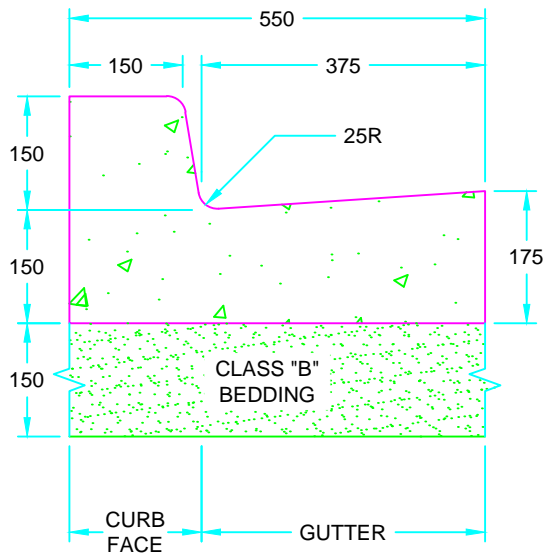
DATE:

FEBRUARY 2019

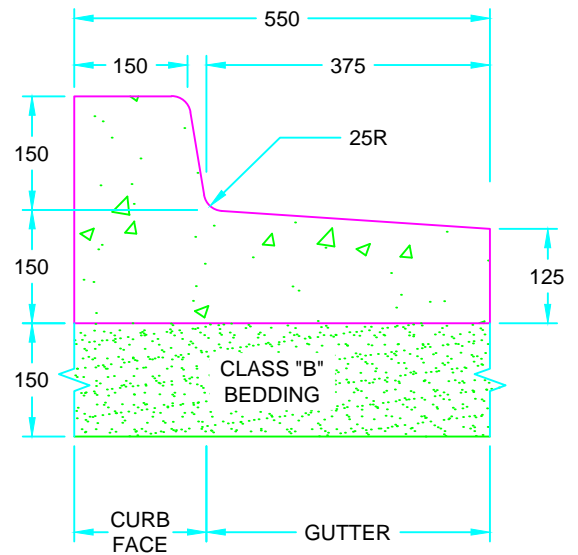
SCALE:

N.T.S.

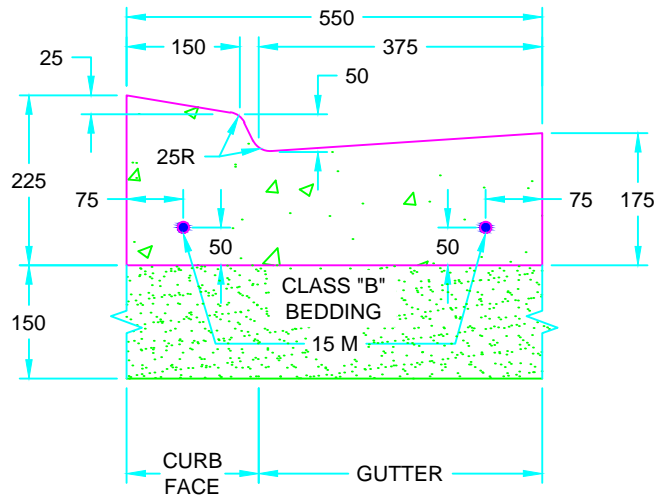




**STANDARD CURB & GUTTER**



**CURB & GUTTER FOR SUPERELEVATION**



**STANDARD DEPRESSED CURB & GUTTER**

**NOTES:**

1. CONCRETE IS TO BE 32 MPa TO MEET CSA A23.1/A23.2, CLASS C-2 EXPOSURE.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
3. LIMIT OF BEDDING TO BE 300 mm EACH SIDE OF CONCRETE STRUCTURE AS DETERMINED BY THE ENGINEER.

**MASTER SPECIFICATIONS**

**CONCRETE CURB & GUTTER**

DRAWING NUMBER

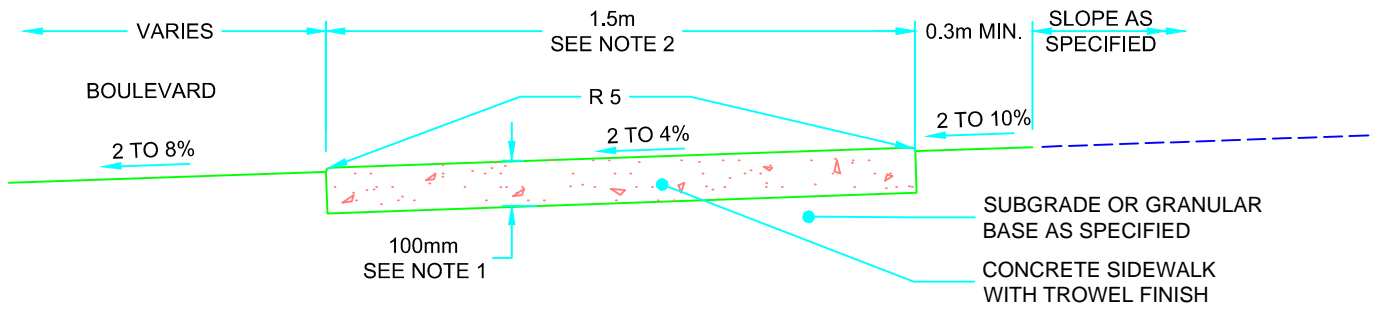
04090

DATE:

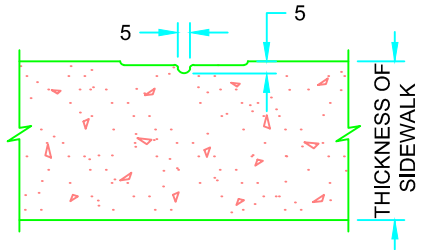
FEBRUARY 2019

SCALE:

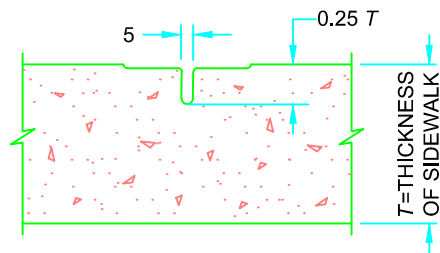
N.T.S.



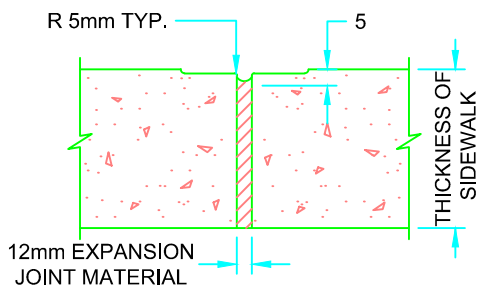
**TYPICAL SECTION**



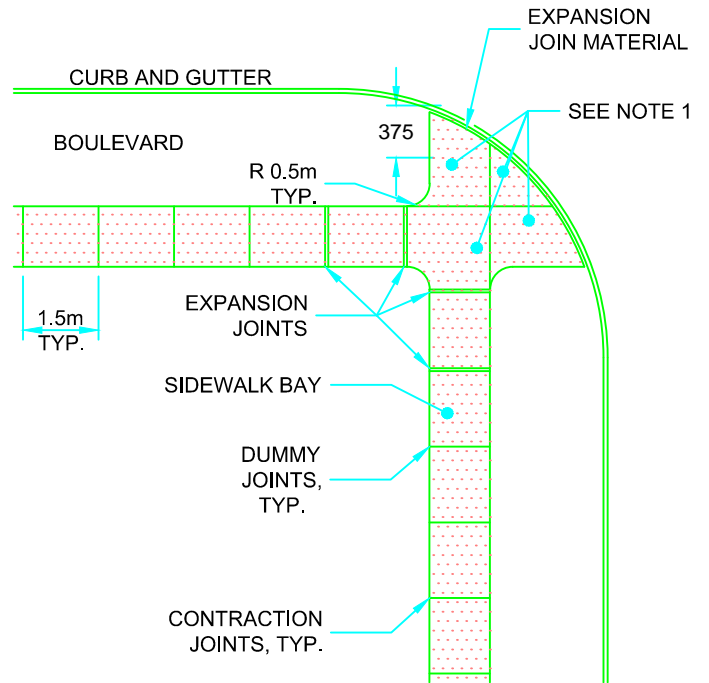
**DUMMY JOINT**



**CONTRACTION JOINT**



**EXPANSION JOINT**



**JOINT LAYOUT**

**NOTES:**

1. SIDEWALK THICKNESS AT RESIDENTIAL DRIVEWAYS SHALL BE 150mm. AT COMMERCIAL AND INDUSTRIAL DRIVEWAYS, THE THICKNESS SHALL BE 200mm.
2. SIDEWALK WIDTH SHALL BE INCREASED TO 2.4m AT SCHOOLS, BUS STOPS, AND OTHER HIGH PEDESTRIAN AREAS. SIDEWALK LENGTH IS PROJECT SPECIFIC AND SHALL BE DETERMINED BY ENGINEER.
3. THIS STANDARD DRAWING TO BE READ IN CONJUNCTION WITH STANDARD DRAWING 04140E.

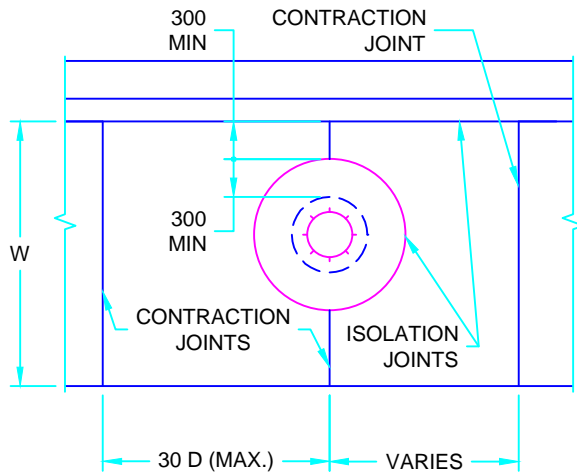
**MASTER SPECIFICATIONS**

**CONCRETE SIDEWALK**

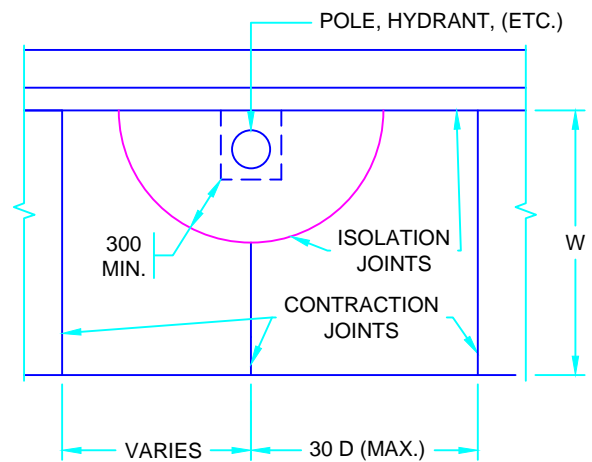
DRAWING NUMBER 04100

DATE: MARCH 2022

SCALE: N.T.S.



**DETAIL COVER BOXOUT**



**DETAIL POLE BOXOUT**

**NOTES:**

1. WHERE CONTRACTION JOINTS ARE NEEDED, THE METHOD USED MUST GUARANTEE THAT AT LEAST 1/4 OF THE DEPTH OF CONCRETE IS INDENTED TO CONTROL DRYING SHRINKAGE CRACKING. SUITABLE METHODS ARE THE USE OF PREFORMED JOINT MATERIALS OR SAW CUTTING ONE QUARTER THE SLAB THICKNESS WITHIN 6 TO 18 HOURS AFTER THE CONCRETE HAS HARDENED BEFORE DRYING SHRINKAGE CRACKS APPEAR. FOR SLIPFORM CONSTRUCTION, THE JOINTS MAY BE FORMED USING A GUILLOTINE OR WIRE TO CUT THE PLASTIC CONCRETE, OR BY SAW CUTTING THE HARDENED CONCRETE.
2. CONTRACTION JOINTS SHALL BE LOCATED AT 24 TO 30 D MAXIMUM. WHERE SIDEWALK WIDTH IS 2.5 m OR GREATER, A CONTRACTION JOINT SHOULD ALSO BE FORMED ALONG THE CENTERLINE OF THE WALK. CONTRACTION JOINT SPACING FOR SIDEWALK SHALL BE APPROXIMATELY THE SAME AS THE WIDTH AND NOT MORE THAN 1.5 TIMES THE WIDTH.
3. CONTRACTION JOINTS IN CURB AND GUTTER SECTIONS SHOULD EXTEND COMPLETELY THROUGH THE CURB HEIGHT AND D/4 INTO THE GUTTER SECTION. WHEN SIDEWALK IS ADJACENT TO CURB, MAKE JOINTS OF CURB AND SIDEWALK ALIGN.
4. IF THE CURB IS INTEGRAL WITH CONCRETE PAVEMENT, CONTRACTION JOINT SPACING IN THE CURB SHOULD MATCH THAT IN THE PAVEMENT.
5. SPACING OF CONTRACTION JOINTS SHOULD VARY TO COINCIDE WITH THE CENTER OF MANHOLES OR OTHER BOX-OUTS.
6. ISOLATION JOINTS SHOULD BE LOCATED ADJACENT TO EXISTING STRUCTURES, (POLES, WALLS, HYDRANTS, BUILDINGS, ETC.) ISOLATION JOINTS SHOULD ALSO BE LOCATED BEFORE AND AFTER CURVE SECTIONS AND AT INTERSECTIONS.
7. ISOLATION JOINT FILLER SHOULD BE 12 mm THICK.
8. CONTRACTION JOINTS SHOULD BE LOCATED WHERE THE PLACING OF CONCRETE MUST BE STOPPED FOR A PERIOD IN EXCESS OF 30 MINUTES.
9. ALL SIDEWALKS SHOULD BE SLOPED AT LEAST 2% TO DRAIN TOWARDS THE STREET.
10. MAXIMUM SLOPE FOR WHEELCHAIR RAMPS SHOULD BE 8%.
11. SIDEWALKS SHOULD BE THICKENED TO 150 mm MINIMUM AT DRIVEWAY ENTRANCES.
12. D = SIDEWALK DEPTH
13. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

**MASTER  
SPECIFICATIONS**

**CONCRETE JOINT NOTES**

DRAWING NUMBER

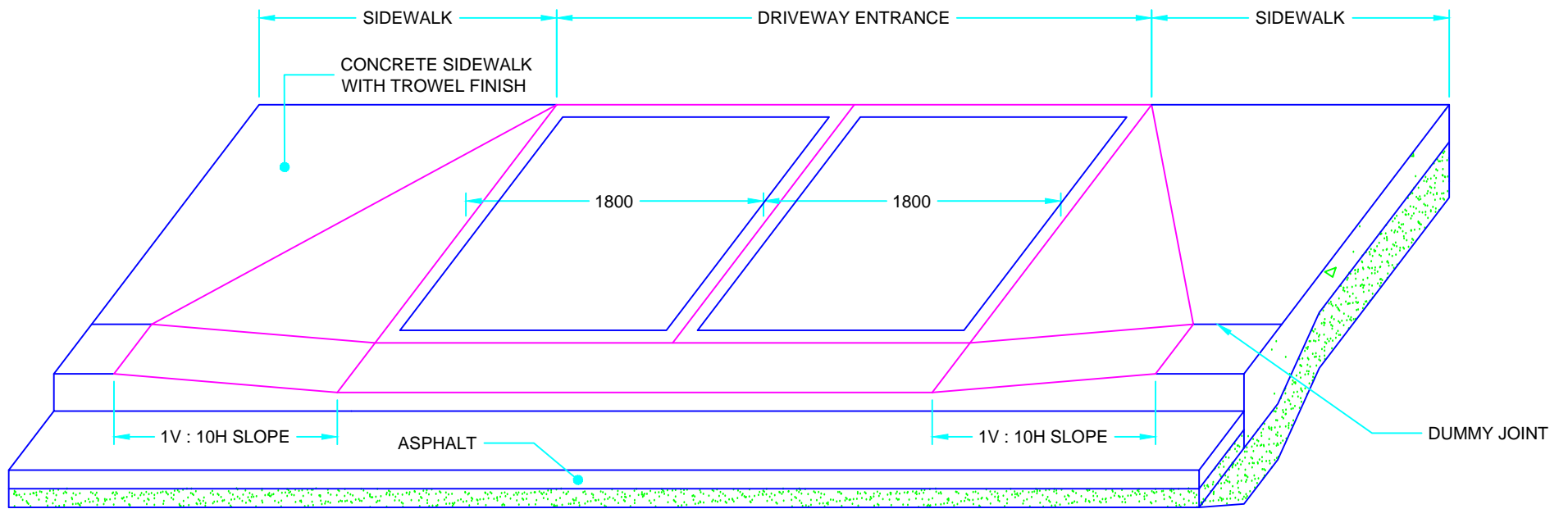
04110

DATE:

MARCH 2016

SCALE:

N.T.S.



**NOTES:**

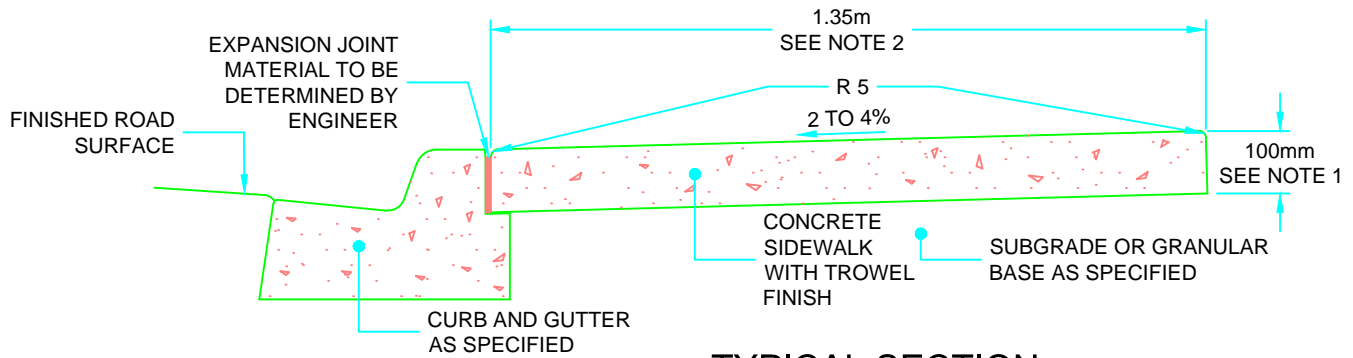
1. DRIVEWAY MINIMUM THICKNESS OF SIDEWALK SHALL BE 150 MILLIMETERS.
2. CONCRETE IS TO BE 32 MPa TO MEET CSA A23.1/23.2, CLASS C-2 EXPOSURE.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

**MASTER  
SPECIFICATIONS**

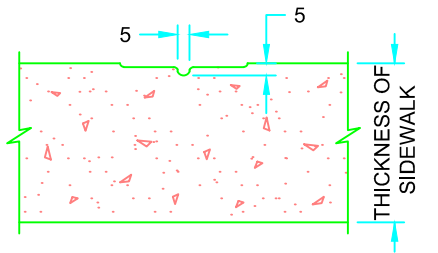
**COMBINED CURB & SIDEWALK  
DRIVEWAY RAMP**

DRAWING NUMBER 04120

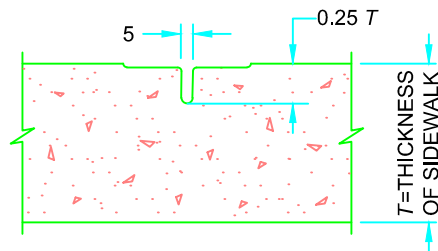
DATE:  
MARCH 2016  
SCALE:  
N.T.S.



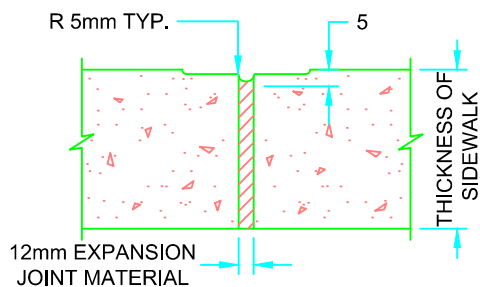
**TYPICAL SECTION**



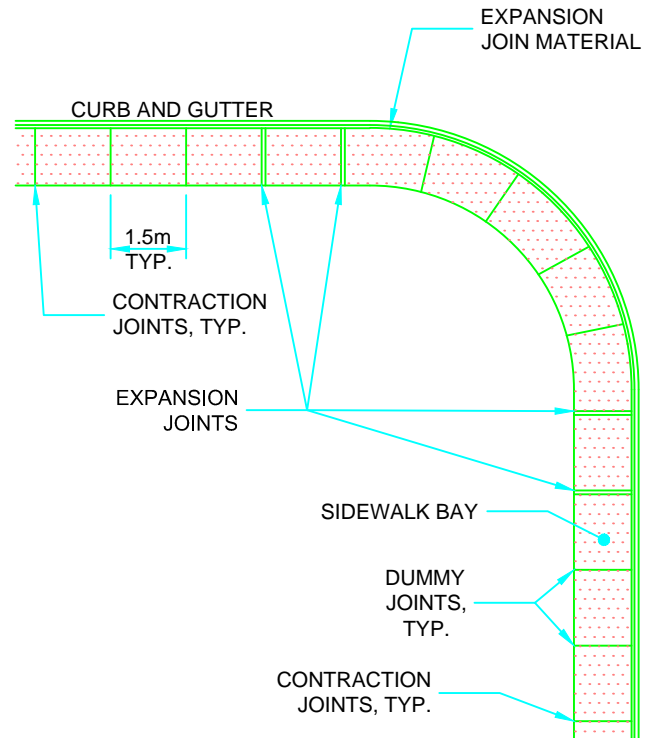
**DUMMY JOINT**



**CONTRACTION JOINT**



**EXPANSION JOINT**



**JOINT LAYOUT**

**NOTES:**

1. SIDEWALK THICKNESS AT RESIDENTIAL DRIVEWAYS SHALL BE 150 MM; AT COMMERCIAL AND INDUSTRIAL DRIVEWAYS, THE THICKNESS SHALL BE 200mm.
2. SIDEWALK WIDTH AND LENGTH ON MAJOR ROADWAYS, AND AT SCHOOLS, BUS STOPS, AND OTHER HIGH PEDESTRIAN AREAS SHALL BE DETERMINED BY ENGINEER.
3. THIS STANDARD DRAWING TO BE READ IN CONJUNCTION WITH STANDARD DRAWING 04150.
4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

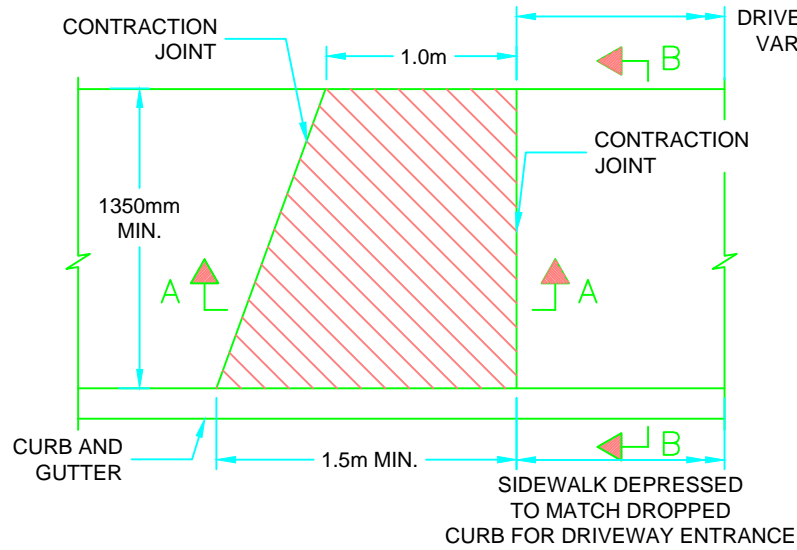
**MASTER SPECIFICATIONS**

**CONCRETE SIDEWALK ADJACENT TO CURB AND GUTTER**

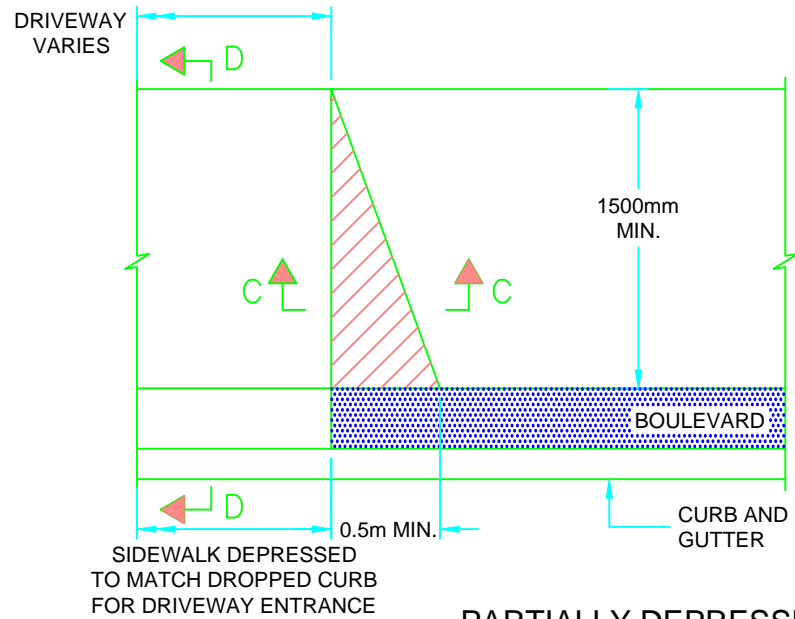
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DATE: FEBRUARY 2019

SCALE: N.T.S.

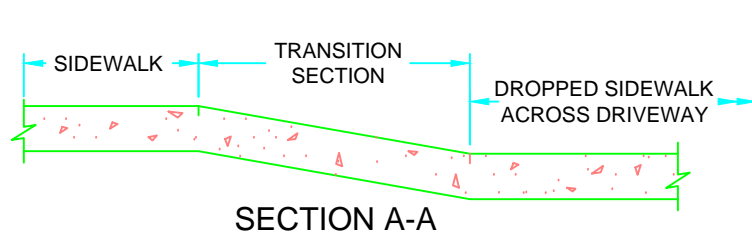


FULLY DEPRESSED

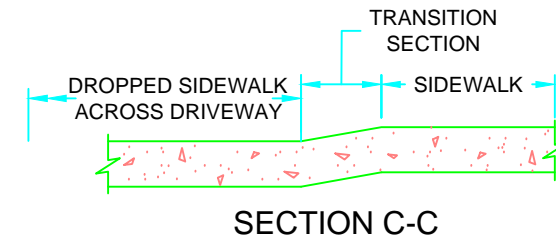


PARTIALLY DEPRESSED

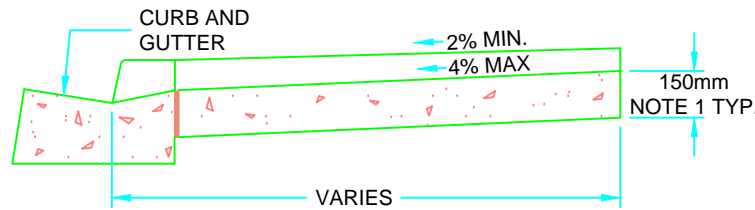
**SIDEWALK AT DRIVEWAY ENTRANCE - PLAN**



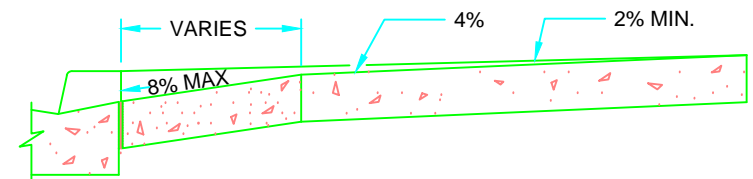
SECTION A-A



SECTION C-C



SECTION B-B



SECTION D-D

**SIDEWALK WITHOUT BOULEVARD**

**SIDEWALK WITH BOULEVARD**

**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. FOR CONTRACTION JOINT DETAIL, SEE STANDARD DRAWING 04100.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

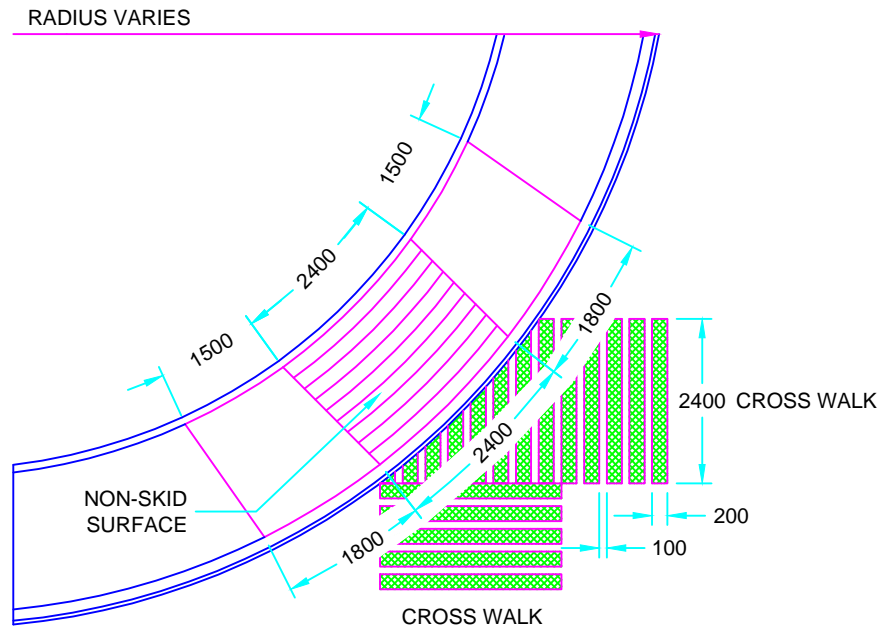
MASTER SPECIFICATIONS

CONCRETE SIDEWALK DRIVEWAY ENTRANCE DETAILS

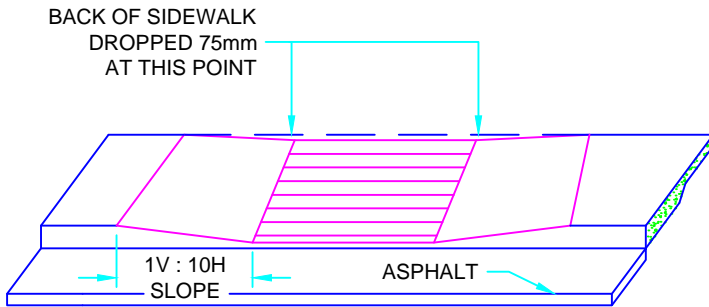
DRAWING NUMBER 04140

DATE: MARCH 2016

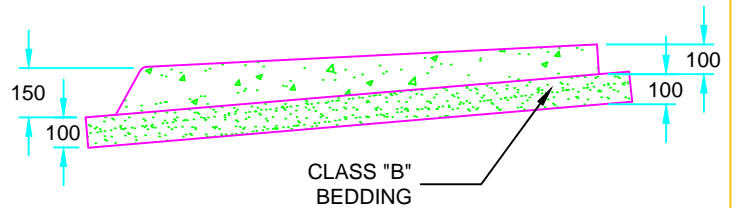
SCALE: N.T.S.



**PLAN VIEW**



**RAMP ELEVATION**



**TYPICAL RAMP SECTION**

**NOTES:**

1. CONCRETE TO BE 32 MPa TO MEET CSA A23.1/23.2, CLASS C-2 EXPOSURE.
2. 150 C-C NON-SKID RIBBED SURFACE SHALL BE EDGED ON PARAPLEGIC RAMPS.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

**MASTER SPECIFICATIONS**

**COMBINED CONCRETE CURB SIDEWALK**

DRAWING NUMBER

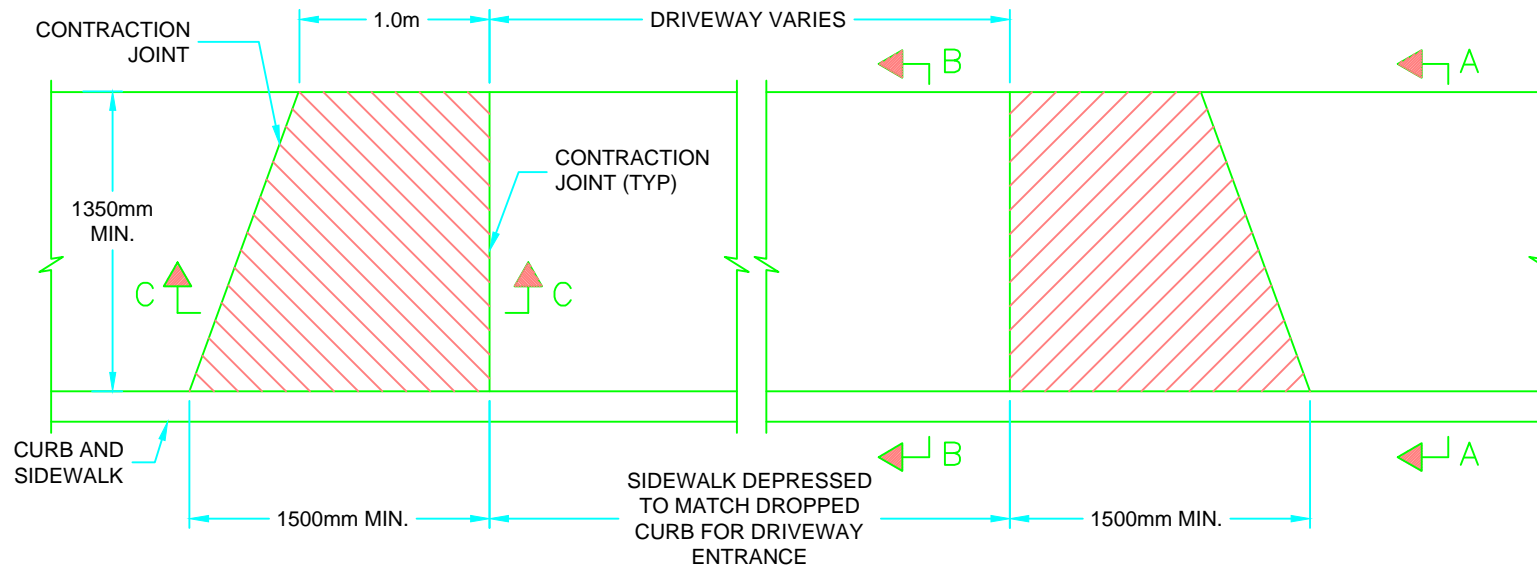
04141

DATE:

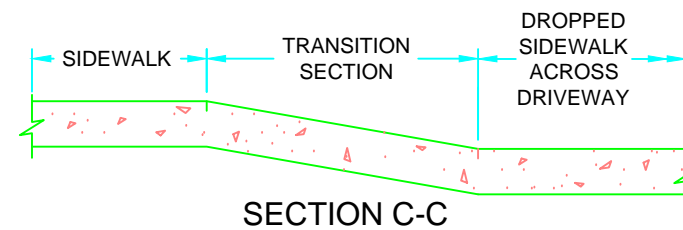
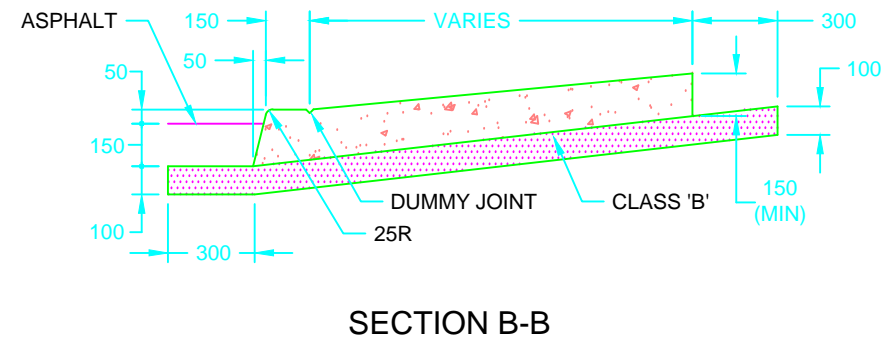
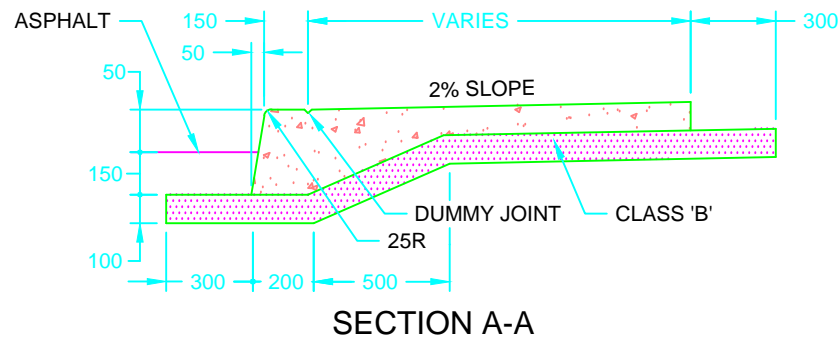
APRIL 2019

SCALE:

N.T.S.



### SIDEWALK AT DRIVEWAY ENTRANCE - PLAN



#### 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. FOR CONTRACTION JOINT DETAIL, SEE STANDARD DRAWING 04100.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

MASTER  
SPECIFICATIONS

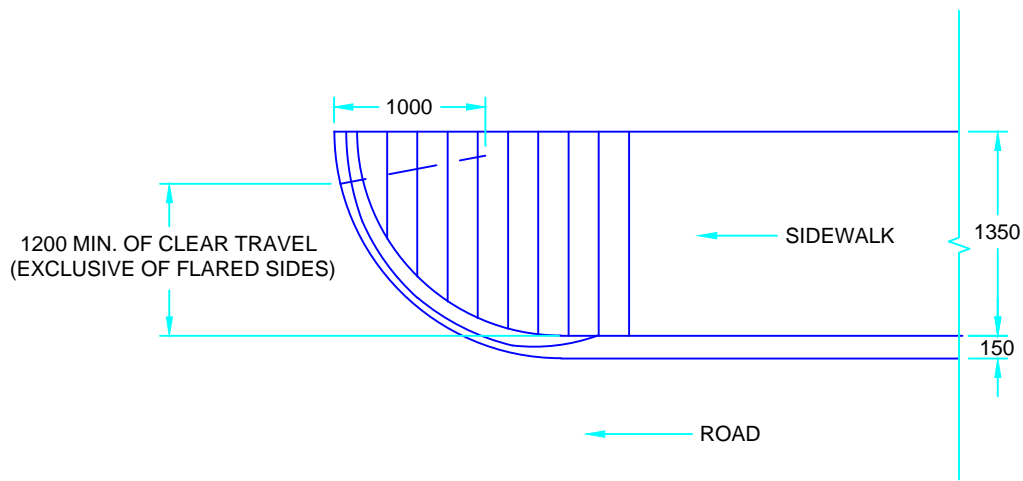
COMBINED CONCRETE  
CURB & SIDEWALK

DRAWING NUMBER 04141

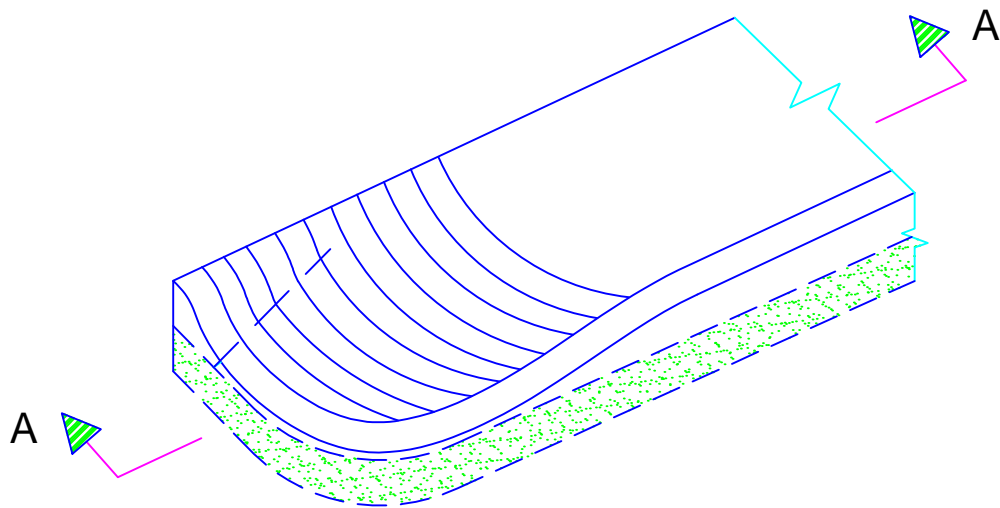
DATE:  
MARCH 2016

SCALE:  
N.T.S.

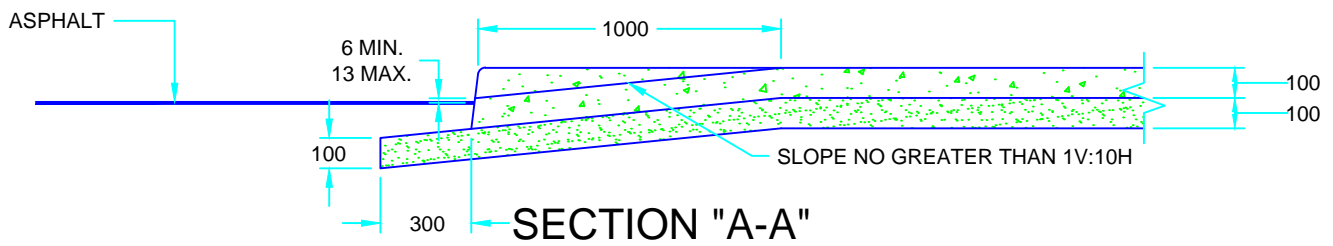




**PLAN VIEW**



**PARALLEL RAMP**



**NOTES:**

1. CONCRETE IS TO BE 32MPa TO MEET CSA A23.1/A23.2, CLASS C-2 EXPOSURE.
2. 150mm O.C. NON-SKID SURFACE SHALL BE EDGED ON PARALLEL RAMP.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

**MASTER  
SPECIFICATIONS**

**PARALLEL CURB RAMP**

DRAWING NUMBER

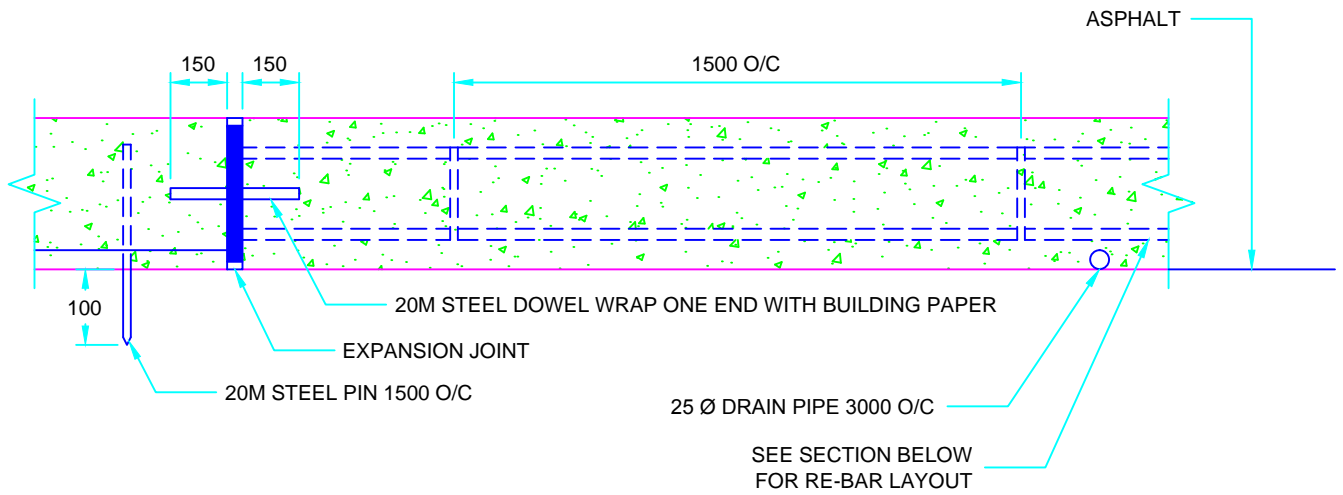
04160

DATE:

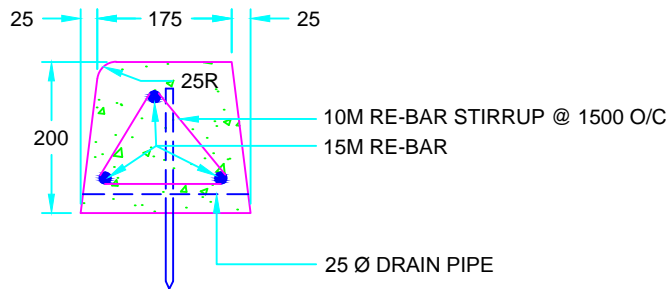
FEBRUARY 2019

SCALE:

N.T.S.



## TYPICAL ELEVATION



## TYPICAL SECTION

### NOTES:

1. CONCRETE IS TO BE 32 MPa TO MEET CSA A23.1/A23.2, C-2 EXPOSURE.
2. JOINTS ARE TO BE SPACED EVERY 3 m.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

MASTER  
SPECIFICATIONS

## TRAFFIC ISLAND CURB

DRAWING NUMBER

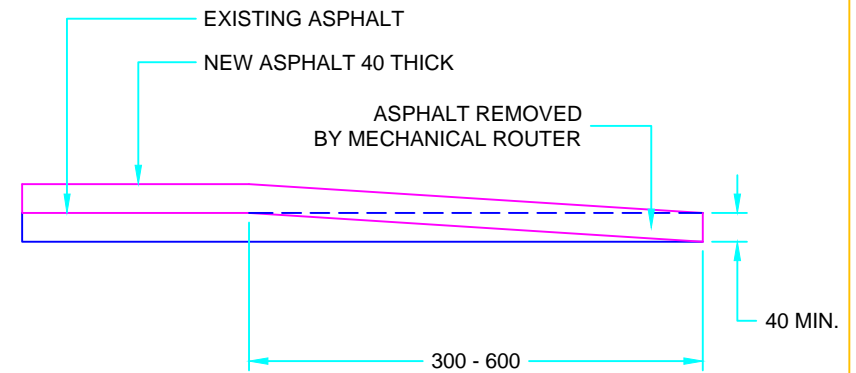
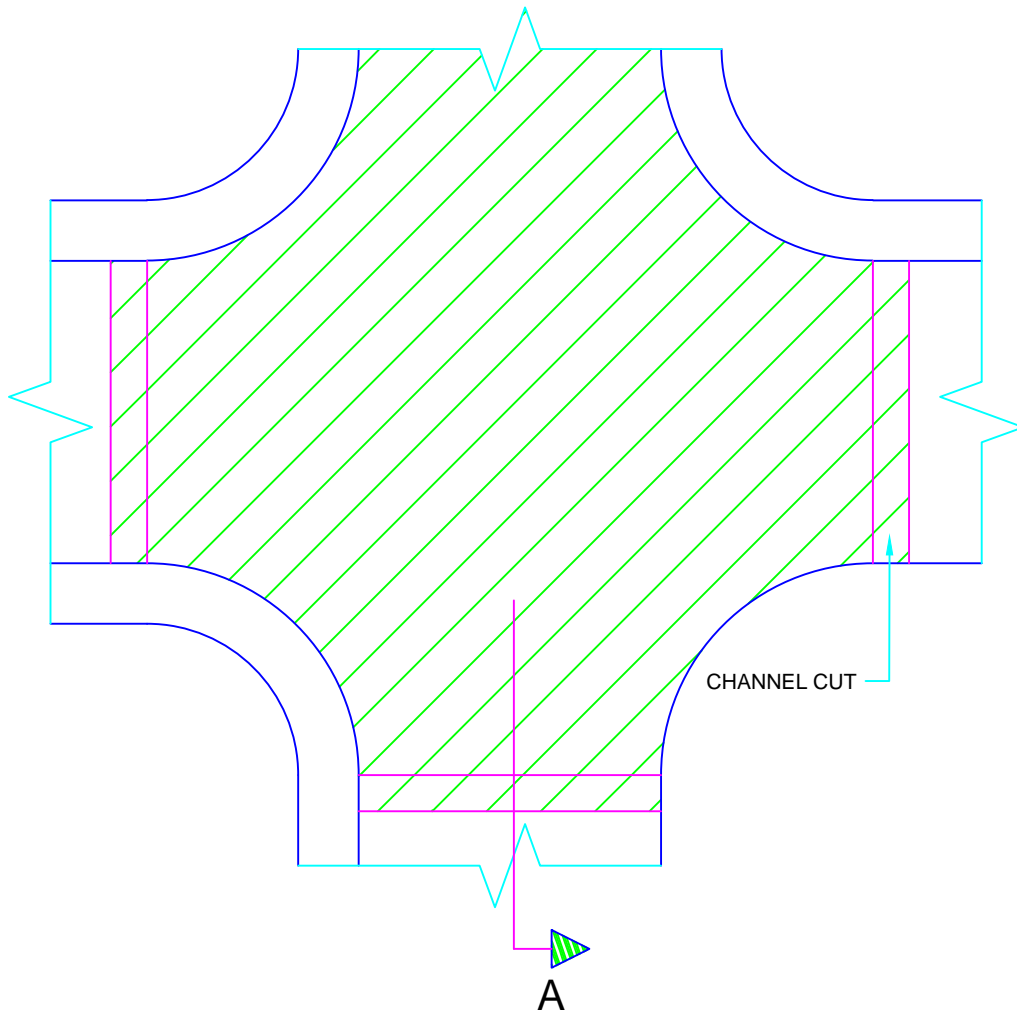
04170

DATE:

MARCH 2016

SCALE:

N.T.S.



**SECTION A**  
CUTTING OUT A 300 - 600 WIDE STRIP OF EXISTING ASPHALT

**NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

**MASTER  
SPECIFICATIONS**

**CHANNEL CUT**

DRAWING NUMBER 04180

DATE:  
MARCH 2016

SCALE:  
N.T.S.

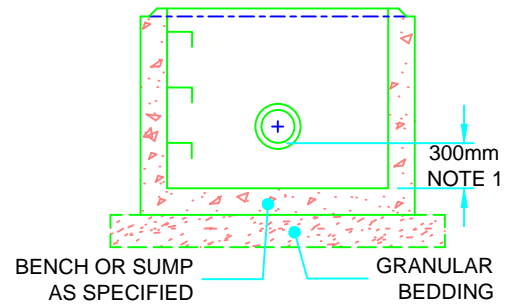
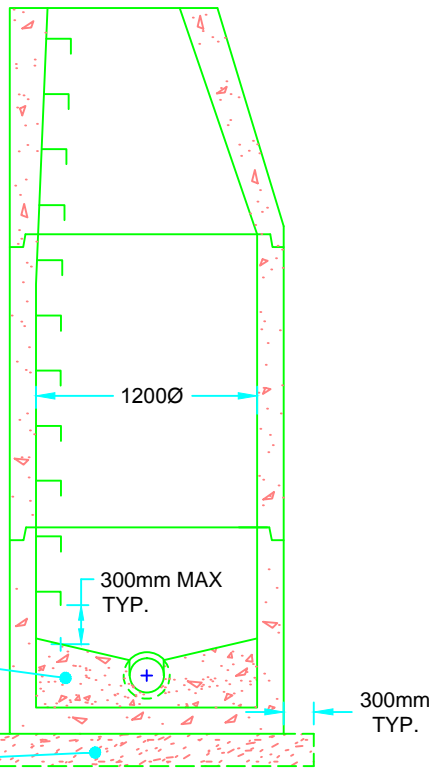
TAPERED TOP SEE ALTERNATIVES C

RISER SECTIONS AS REQUIRED

MONOLITHIC BASE WITH INLET AND OUTLET OPENINGS TO SUIT SEE ALTERNATIVES A AND B

BENCH OR SUMP AS SPECIFIED

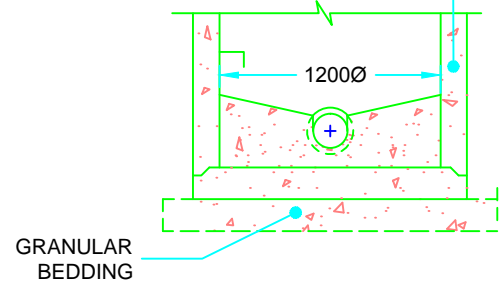
GRANULAR BEDDING



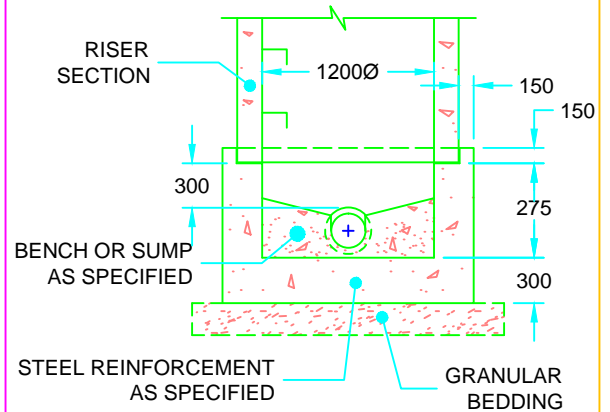
### SUMP DETAIL

### ALTERNATIVES:

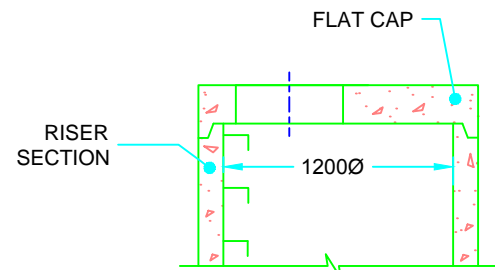
BOTTOM RISER SECTION WITH INLET AND OUTLET OPENINGS TO SUIT



### A PRECAST SLAB BASE



### B CAST-IN-PLACE BASE



### C PRECAST FLAT CAP

### NOTES:

1. THE SUMP IS MEASURED FROM THE LOWEST INVERT.
2. GRANULAR BACKFILL SHALL BE PLACED TO A MINIMUM THICKNESS OF 300mm ALL AROUND THE MAINTENANCE HOLE.
3. PRECAST CONCRETE COMPONENTS SHALL BE ACCORDING TO STANDARD DRAWING 04220.
4. STRUCTURES EXCEEDING 5.0m IN DEPTH SHALL INCLUDE SAFETY PLATFORM ACCORDING TO STANDARD DRAWING 04270.
5. PIPE SUPPORT SHALL BE ACCORDING TO STANDARD DRAWING 04260.
6. BENCHING AND PIPE OPENING DETAILS SHALL BE ACCORDING TO STANDARD DRAWING 04320.
7. FOR ADJUSTMENT UNIT AND FRAME INSTALLATION, SEE STANDARD DRAWING 04250.
8. ALL DIMENSIONS ARE NOMINAL.
9. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

MASTER SPECIFICATIONS

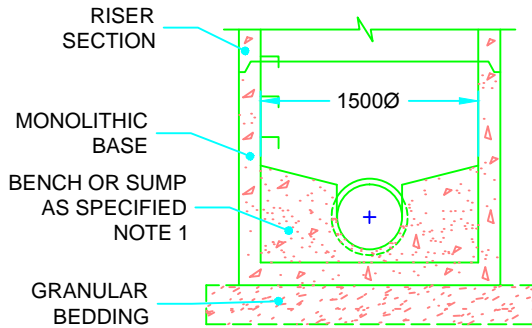
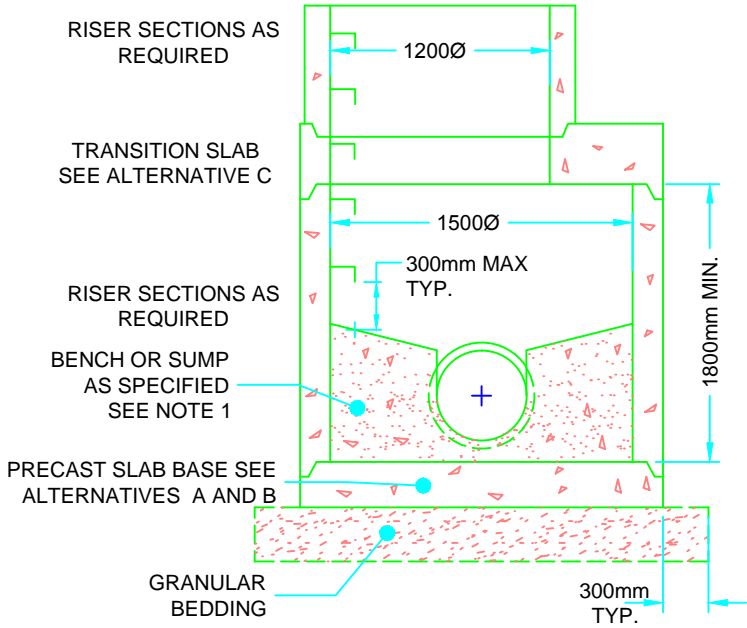
## PRECAST CONCRETE MAINTENANCE HOLE 1200mm DIAMETER

DRAWING NUMBER 04190

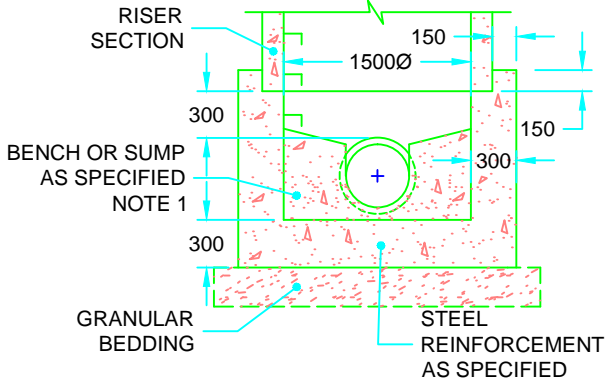
DATE: MARCH 2016

SCALE: N.T.S.

# ALTERNATIVES



**A PRECAST MONOLITHIC BASE**



**B CAST-IN-PLACE BASE**

**NOTES:**

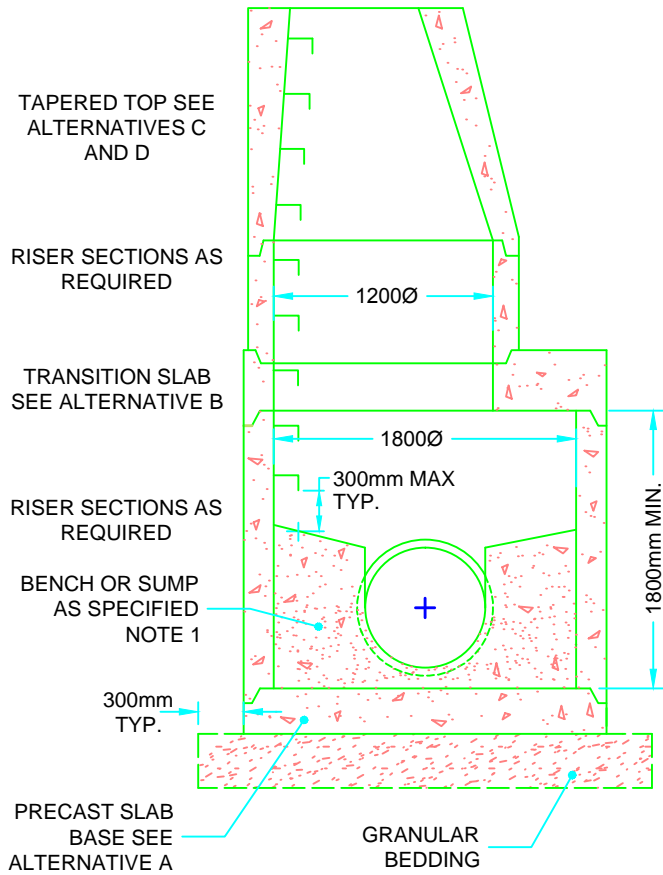
1. FOR SUMP DETAIL SEE STANDARD DRAWING 04190.
2. GRANULAR BACKFILL SHALL BE PLACED TO A MINIMUM THICKNESS OF 300mm ALL AROUND THE MANHOLE.
3. PRECAST CONCRETE COMPONENTS SHALL BE ACCORDING TO STANDARD DRAWINGS 04230.
4. STRUCTURES EXCEEDING 5.0m IN DEPTH SHALL INCLUDE SAFETY PLATFORM ACCORDING TO STANDARD DRAWING 04270.
5. PIPE SUPPORT SHALL BE ACCORDING TO STANDARD DRAWING 04260.
6. BENCHING AND PIPE OPENING DETAILS SHALL BE ACCORDING TO STANDARD DRAWING 04320.
7. ADJUSTMENT UNIT AND FRAME INSTALLATION SHALL BE ACCORDING TO STANDARD DRAWING 04250.
8. ALL DIMENSIONS ARE NOMINAL.
9. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

**MASTER SPECIFICATIONS**

**PRECAST CONCRETE MANHOLE**  
1500mm DIAMETER

DRAWING NUMBER 04200

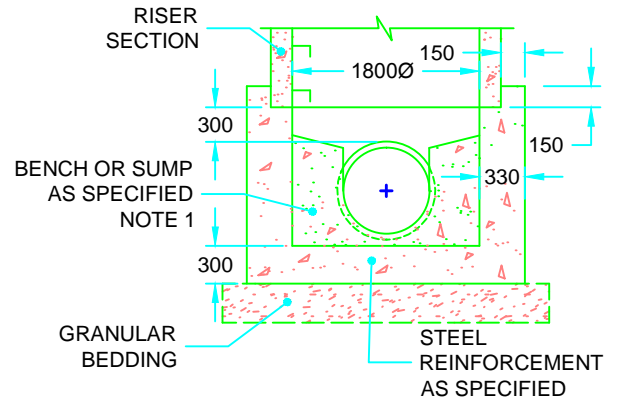
DATE: MARCH 2016  
SCALE: N.T.S.



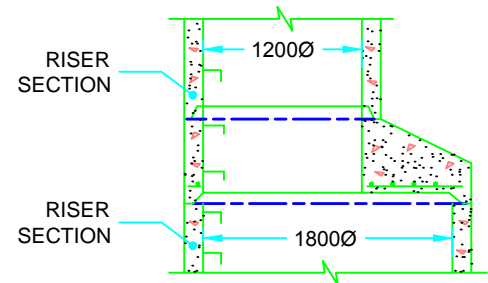
**NOTES:**

1. FOR SUMP DETAIL SEE STANDARD DRAWING 04190.
2. GRANULAR BACKFILL SHALL BE PLACED TO A MINIMUM THICKNESS OF 300mm ALL AROUND THE MAINTENANCE HOLE.
3. PRECAST CONCRETE COMPONENTS SHALL BE ACCORDING TO STANDARD DRAWING 04240.
4. STRUCTURES EXCEEDING 5.0m IN DEPTH SHALL INCLUDE SAFETY PLATFORM ACCORDING TO STANDARD DRAWING 04270.
5. PIPE SUPPORT SHALL BE ACCORDING TO STANDARD DRAWING 04260 .
6. BENCHING AND PIPE OPENING DETAILS SHALL BE ACCORDING TO STANDARD DRAWING 04320.
7. FOR ADJUSTMENT UNIT AND FRAME INSTALLATION, SEE STANDARD DRAWING 04250.
8. ALL DIMENSIONS ARE NOMINAL.
9. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

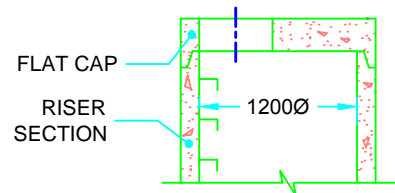
**ALTERNATIVES**



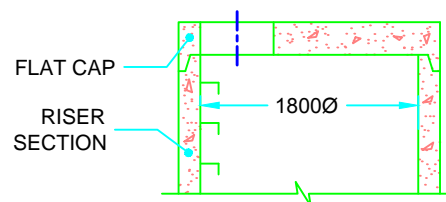
**A CAST-IN-PLACE BASE**



**B TAPERED TRANSITION SLAB**



**C 1200mm PRECAST FLAT CAP**



**D 1800mm PRECAST FLAT CAP**

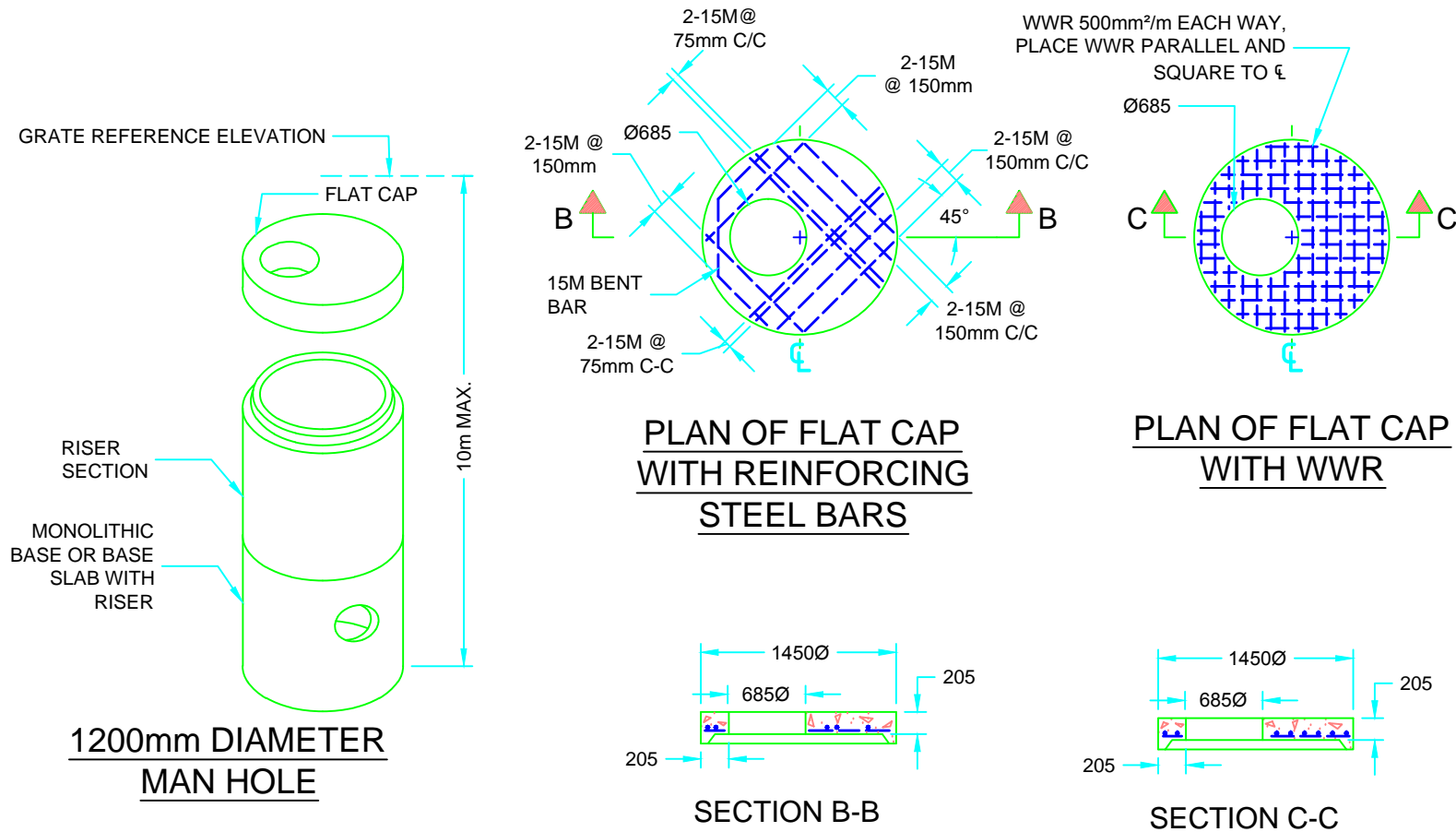
**MASTER SPECIFICATIONS**

**PRECAST CONCRETE MAINTENANCE HOLE**  
1800mm DIAMETER

DRAWING NUMBER 04210

DATE: MARCH 2016

SCALE: N.T.S.



**1200mm DIAMETER  
MAN HOLE**

**NOTES:**

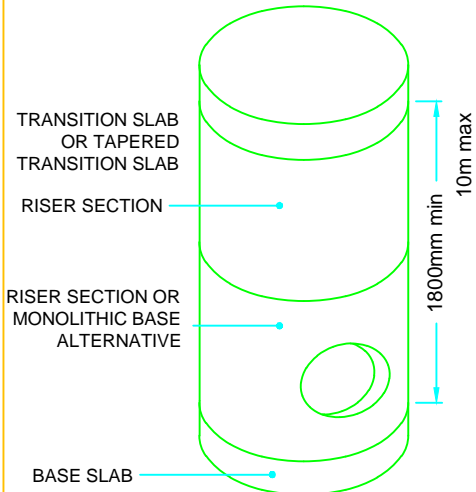
1. CENTER REINFORCING STEEL IN RISER  $\pm 20$ mm. ALL OTHER REINFORCING STEEL SHALL HAVE 25mm MINIMUM COVER.
2. STEPS SHALL BE ACCORDING TO STANDARD DRAWING 04280.
2. ALL DIMENSIONS ARE NOMINAL.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

MASTER  
SPECIFICATIONS

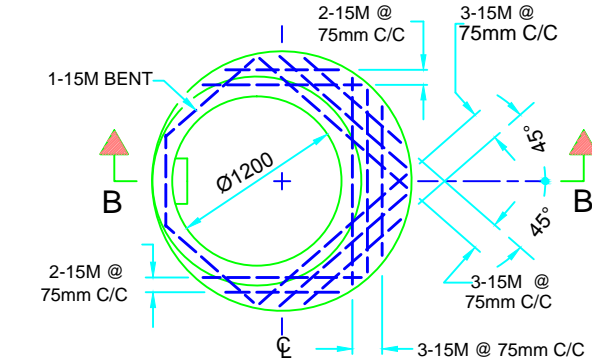
PRECAST CONCRETE MAN HOLE  
COMPONENTS  
1200mm DIAMETER

DRAWING NUMBER 04220

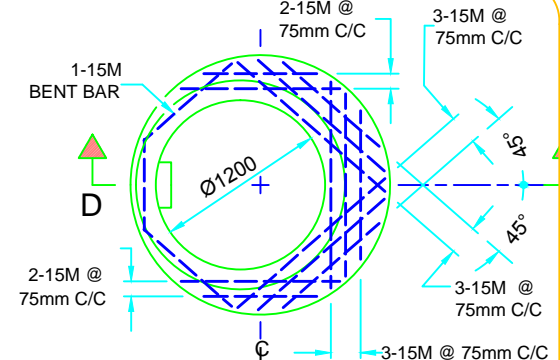
DATE:  
MARCH 2016  
SCALE:  
N.T.S.



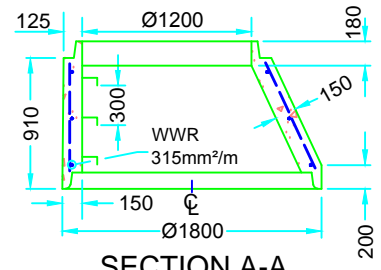
**1500 TO 1200MM DIAMETER MAINTENANCE HOLE**



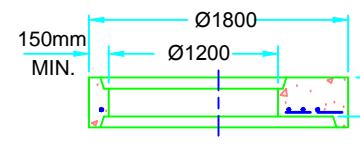
**PLAN OF TRANSITION SLAB WITH REINFORCING STEEL BARS**



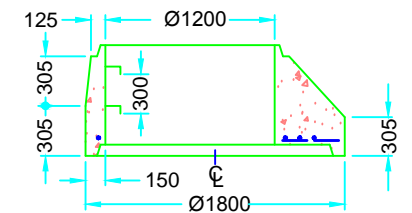
**PLAN OF TAPERED TRANSITION SLAB WITH REINFORCING STEEL BARS**



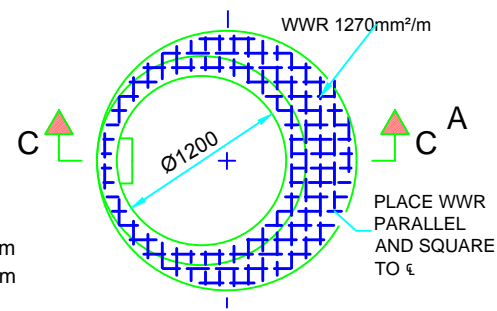
**SECTION A-A**



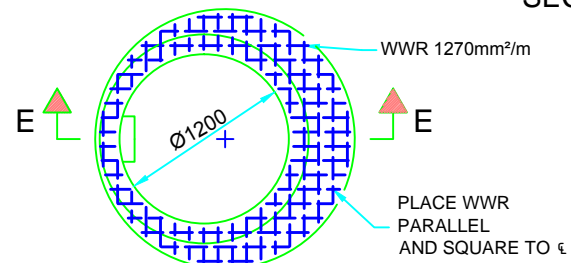
**SECTION B-B**



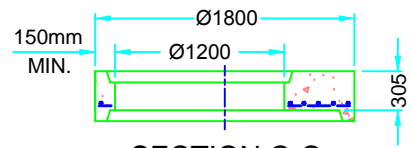
**SECTION D-D**



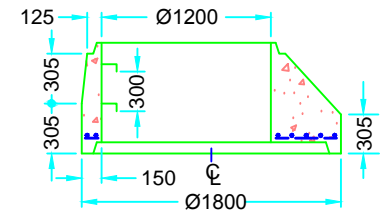
**PLAN OF TRANSITION SLAB WITH WWR**



**PLAN OF TAPERED TRANSITION SLAB WITH WWR**



**SECTION C-C**



**SECTION E-E**

**NOTES:**

1. THIS STANDARD DRAWING SHALL BE READ IN CONJUNCTION WITH STANDARD DRAWING 04200.
2. CENTER REINFORCING IN TRANSITION CONE ±25mm ALL OTHER REINFORCING STEEL SHALL HAVE 25mm MINIMUM COVER.
3. STEPS SHALL BE ACCORDING TO STANDARD DRAWING 04280.
4. ALL DIMENSIONS ARE NOMINAL.
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

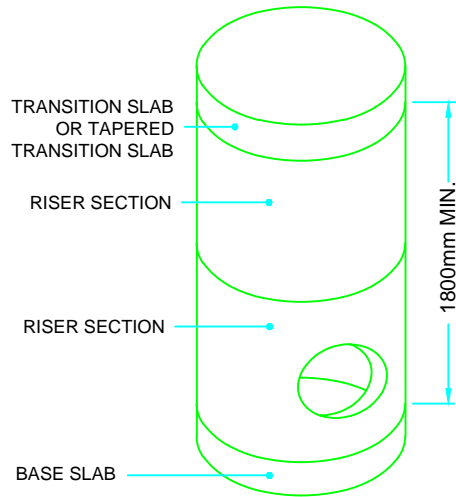
**MASTER SPECIFICATIONS**

**PRECAST CONCRETE MAN HOLE COMPONENTS**  
1500mm DIAMETER TRANSITION CONE AND SLABS

DRAWING NUMBER 04230

DATE: MARCH 2016  
SCALE: N.T.S.

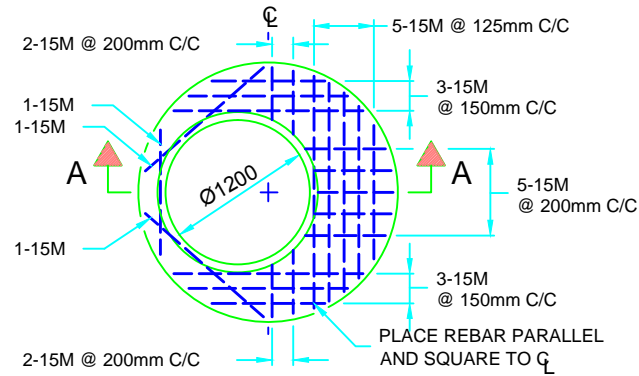




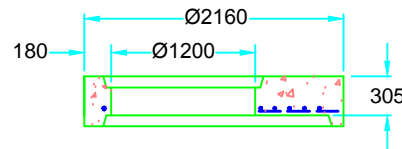
**1800 to 1200mm DIAMETER  
MAN HOLE**

**NOTES:**

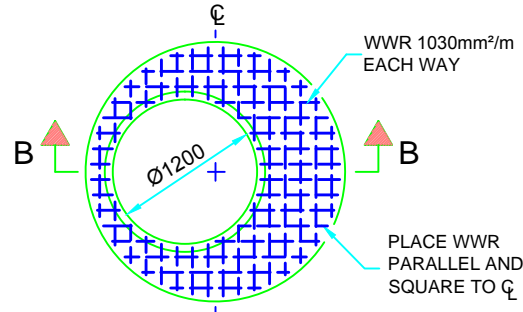
1. THIS STANDARD DRAWING SHALL BE READ IN CONJUNCTION WITH STANDARD DRAWING 04210.
2. ALL REINFORCING STEEL SHALL HAVE 25mm MINIMUM COVER.
3. STEPS SHALL BE ACCORDING TO STANDARD DRAWING 04280.
4. ALL DIMENSIONS ARE NOMINAL.
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.



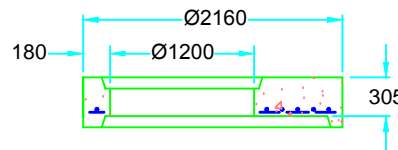
**PLAN OF TRANSITION SLAB WITH  
REINFORCING STEEL BARS**



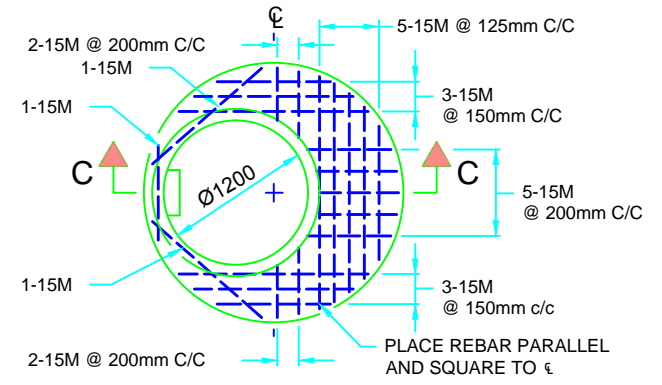
**SECTION A-A**



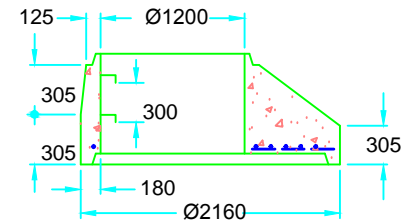
**PLAN OF TRANSITION SLAB  
WITH WWR**



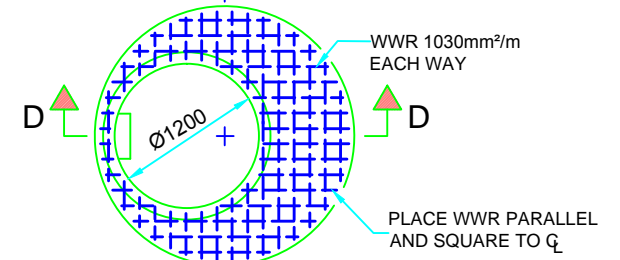
**SECTION B-B**



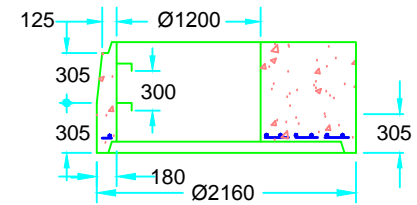
**PLAN OF TAPERED TRANSITION SLAB  
WITH REINFORCING STEEL BARS**



**SECTION C-C**



**PLAN OF TAPERED TRANSITION SLAB WITH WWR**



**SECTION D-D**

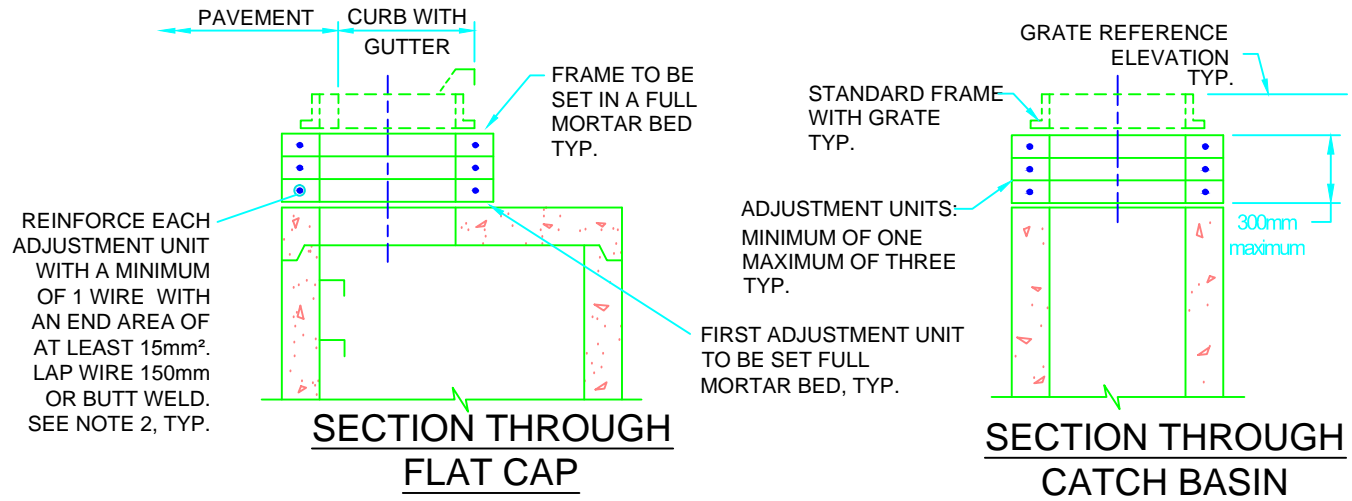
**MASTER  
SPECIFICATIONS**

**PRECAST CONCRETE MAN HOLE  
COMPONENTS**  
1800mm DIAMETER TRANSITION SLABS

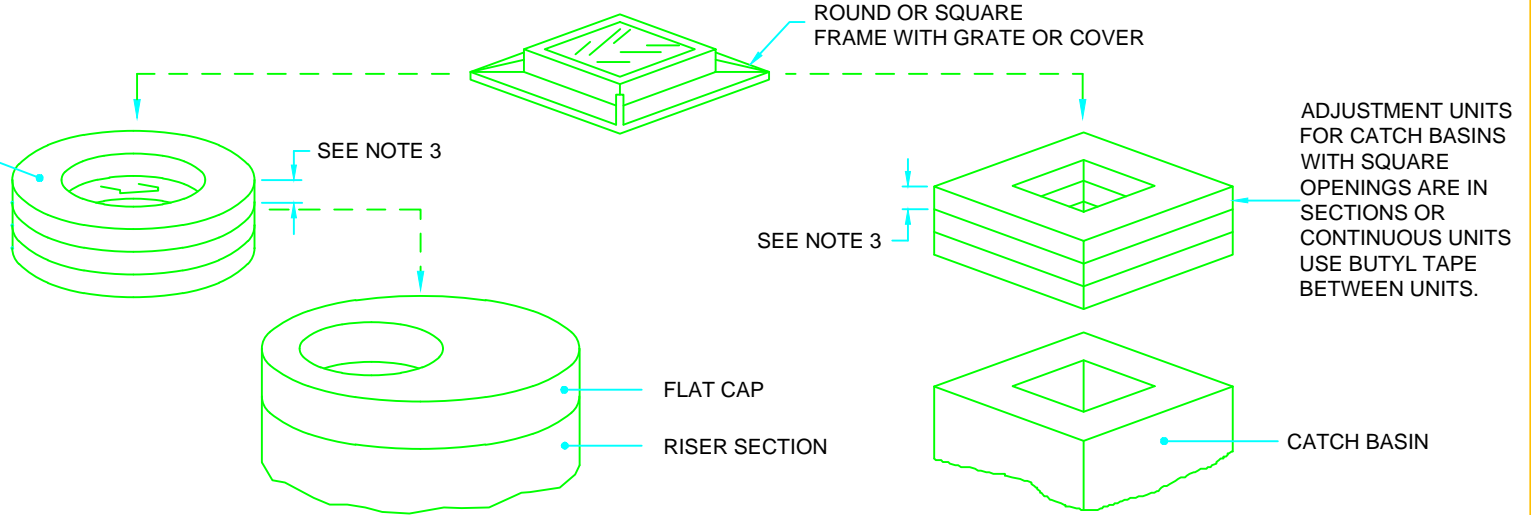
DRAWING NUMBER 04240

DATE:  
MARCH 2016

SCALE:  
N.T.S.



ADJUSTMENT UNITS FOR MAN HOLES WITH ROUND OPENINGS ARE IN SECTIONS OR CONTINUOUS UNITS. USE BUTYL TAPE BETWEEN UNITS.



ADJUSTMENT UNITS FOR CATCH BASINS WITH SQUARE OPENINGS ARE IN SECTIONS OR CONTINUOUS UNITS USE BUTYL TAPE BETWEEN UNITS.

**NOTES:**

1. CENTER REINFORCING IN ADJUSTMENT UNIT  $\pm 10\text{mm}$ .
2. ROUND AND SQUARE ADJUSTMENT UNITS ARE AVAILABLE TO A MAXIMUM OF 300mm.
3. ADJUSTMENT UNITS SHALL NOT EXTEND BEYOND THE OUTSIDE EDGE OF THE STRUCTURE.
4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

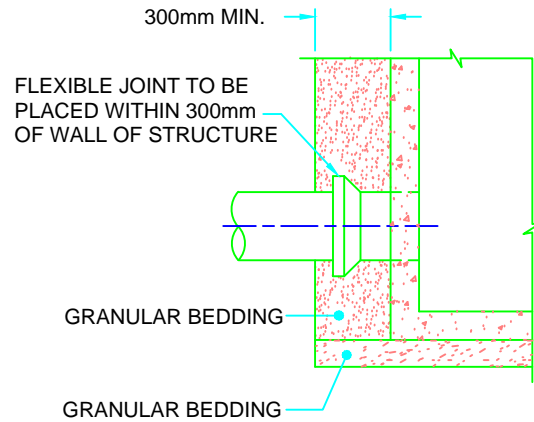
**MASTER SPECIFICATIONS**

**PRECAST CONCRETE ADJUSTMENT UNITS FOR MAN HOLES, CATCH BASINS, AND VALVE CHAMBERS**

DRAWING NUMBER 04250

DATE: MARCH 2016

SCALE: N.T.S.



ELEVATION

FLEXIBLE JOINT RIGID  
AND FLEXIBLE PIPE

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

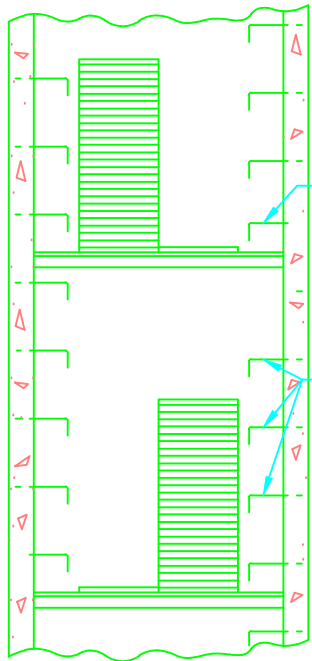
MASTER  
SPECIFICATIONS

SUPPORT FOR PIPE AT CATCH BASIN  
OR MAINTENANCE HOLE

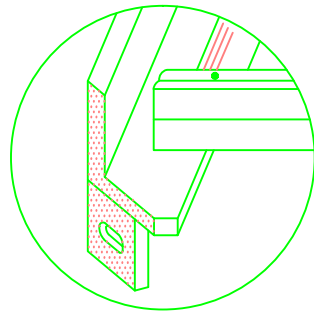
DRAWING NUMBER 04260

DATE:  
FEBRUARY 2019

SCALE:  
N.T.S.



**SECTION A-A  
GRATING OPEN**

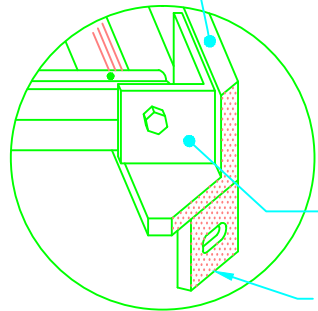


**DETAIL A**

ONE RUNG AT  
GRATE LEVEL,  
TYP.

THREE RUNG  
ABOVE GRATE,  
TYP.

SUPPORT, TYP.



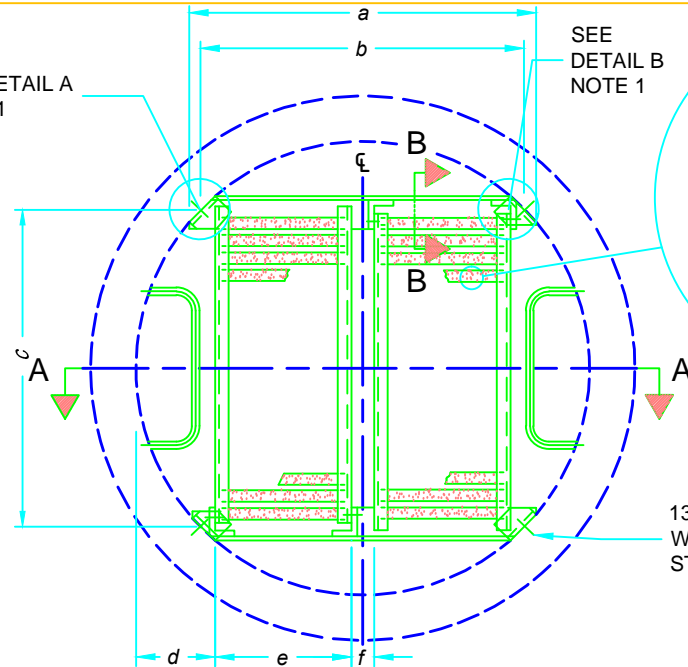
**DETAIL B**

HINGE  
BRACKET

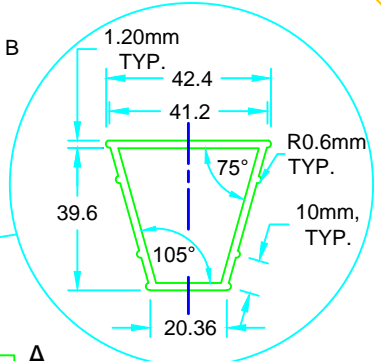
MOUNTING  
BRACKET,  
TYP.

SEE DETAIL A  
NOTE 1

SEE  
DETAIL B  
NOTE 1

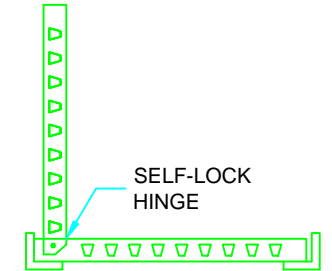


**DETAIL OF GRATING  
AND BOLT-ON SUPPORT PLAN**

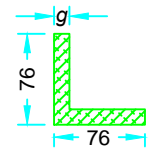


**GRATING RUNG  
DETAIL**

13mm DIA. X 95mm LONG  
WEDGE ANCHOR, STAINLESS  
STEEL, TYP.



**OPEN POSITION  
SIDE VIEW**



**SECTION B-B**

MH Diameter	No of Grates	a	b	c	d	e	f	g
1200	2	900	850	850	225	352	65	10
1500	2	1128	1078	1078	311	419	65	12
1800	3	1344	1293	1293	308	360	65	12
2400	4	1774	1724	1724	401	360	65	12

**NOTES:**

- ALL HINGE BRACKETS AND MOUNTING BRACKETS SHALL BE WELDED ALL AROUND TO SUPPORT ANGLE.
- ALL ALUMINUM IN CONTACT WITH CONCRETE SHALL BE THOROUGHLY COATED WITH ASPHALT PAINT.
- MAINTENANCE HOLE DEPTH BETWEEN 5.0m AND 10.0m, GRATE SHALL BE PLACED AT MIDPOINT. MAN HOLE DEPTH BETWEEN 10.0m AND 15.0m, GRATES SHALL BE PLACED AT THIRD-POINTS.
- ALL FASTENERS SHALL BE 304 STAINLESS STEEL.
- ALL WELDING SHALL BE ACCORDING TO CSA W47.2 AND W59.2.
- ALL ALUMINUM COMPONENTS SHALL BE 6000 SERIES STRUCTURAL ALUMINUM.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

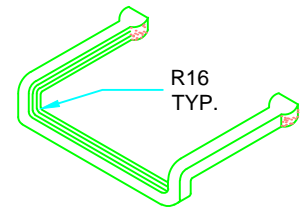
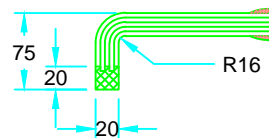
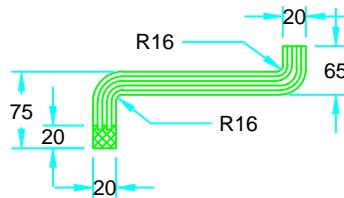
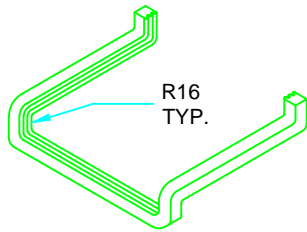
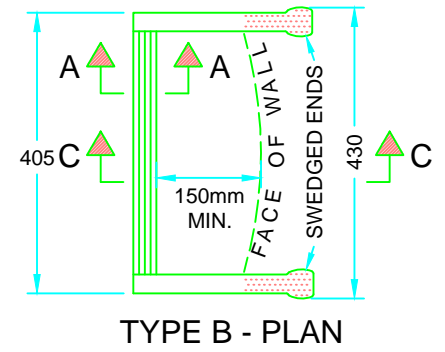
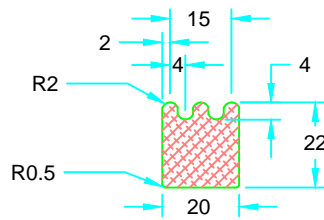
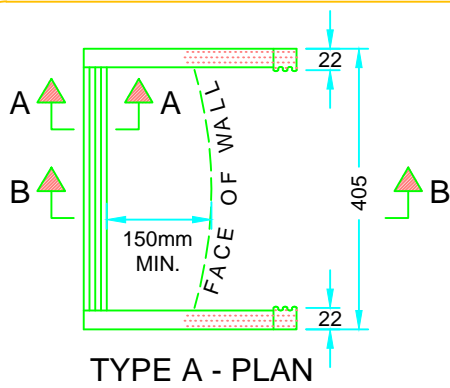
**MASTER  
SPECIFICATIONS**

**ALUMINUM SAFETY PLATFORM FOR  
CIRCULAR MAN HOLES**

DRAWING NUMBER 04270

DATE:  
MARCH 2016

SCALE:  
N.T.S.



AUXILIARY VIEW

SECTION B-B

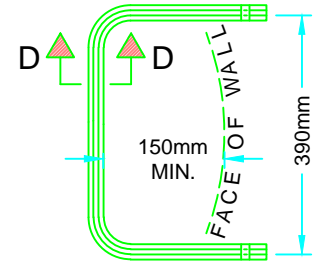
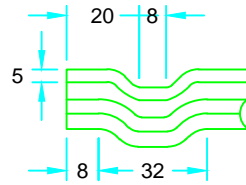
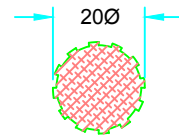
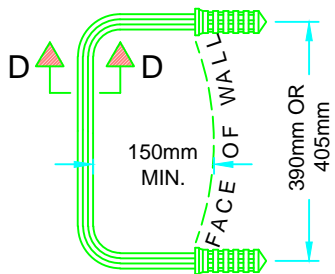
SECTION C-C

AUXILIARY VIEW

TYPE A

TYPE B

### RECTANGULAR ALUMINUM

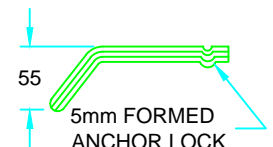
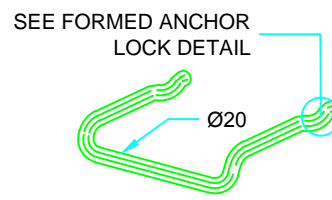
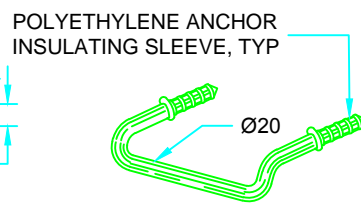
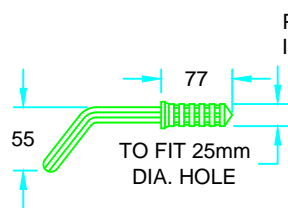


TYPE A - PLAN

SECTION D-D

FORMED ANCHOR LOCK DETAIL

TYPE B - PLAN



SIDE VIEW

AUXILIARY VIEW

AUXILIARY VIEW

SIDE VIEW

TYPE A

TYPE B

### CIRCULAR ALUMINUM

#### NOTES:

1. ALL ALUMINUM COMPONENTS SHALL BE 6000 SERIES STRUCTURAL ALUMINUM.
2. ALL ALUMINUM IN CONTACT WITH CONCRETE SHALL BE THOROUGHLY COATED WITH ASPHALT PAINT.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

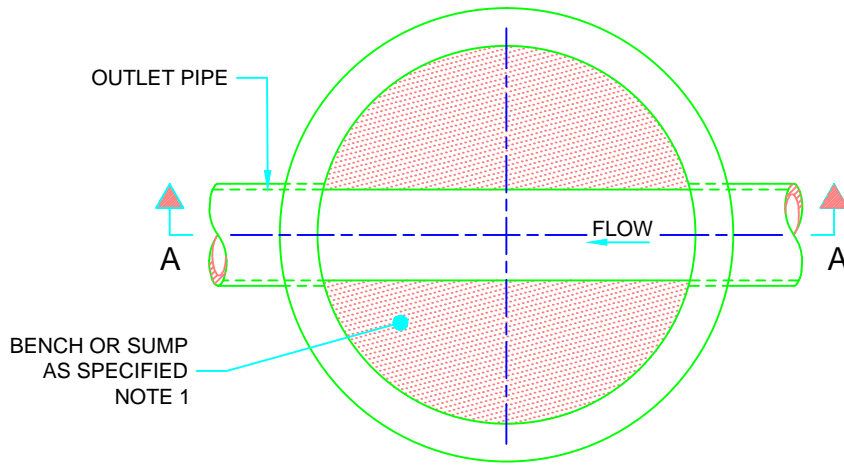
MASTER SPECIFICATIONS

### MAINTENANCE HOLE STEPS - SOLID

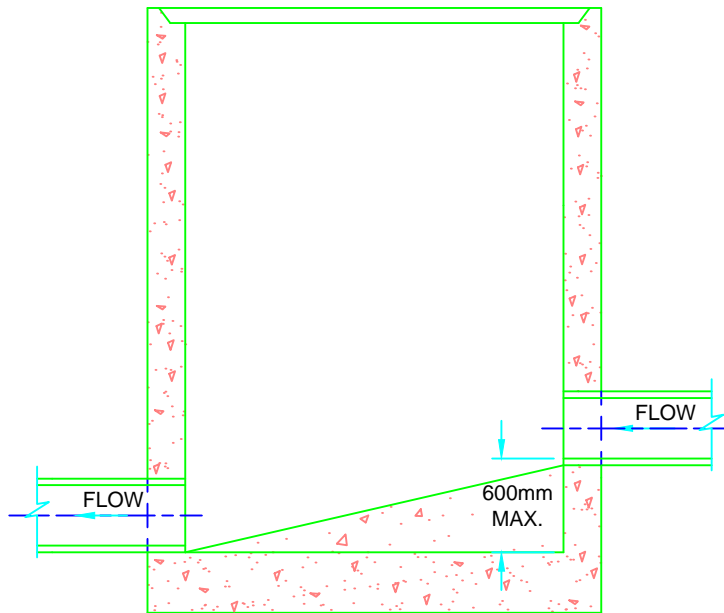
DRAWING NUMBER 04280

DATE: MARCH 2016

SCALE: N.T.S.



PLAN



SECTION A-A

**NOTES:**

1. FOR SUMP DETAIL SEE STANDARD DRAWING 04190.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH STANDARD DRAWING 04320.
3. FROM ATLANTIC CANADA WASTEWATER GUIDELINES MANUAL FOR COLLECTION, TREATMENT AND DISPOSAL (2006)
4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

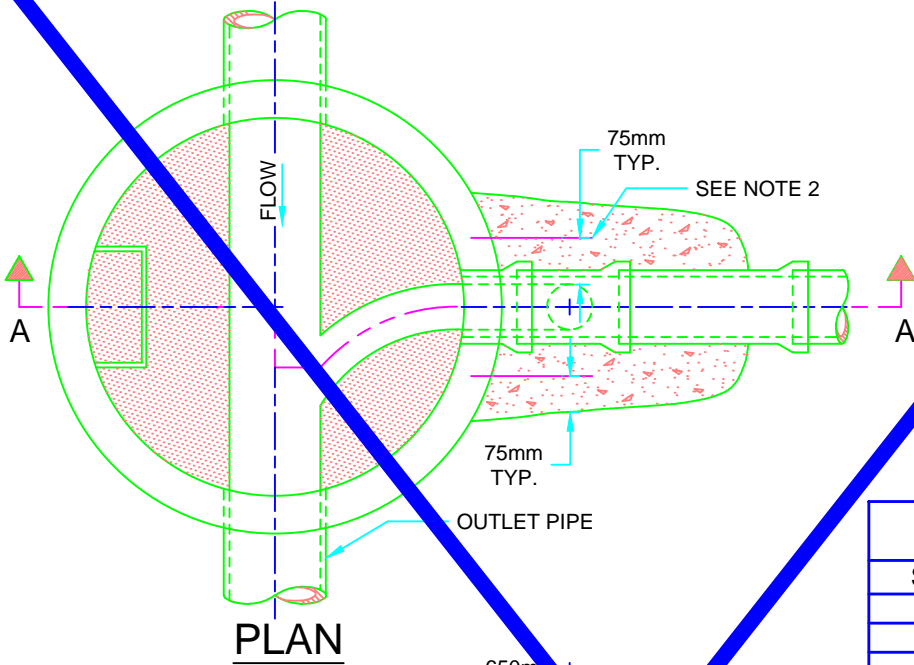
MH TYPE	MIN INVERT DROP <sup>(3)</sup>
STRAIGHT RUN	15mm
45° TURN	30mm
90° TURN	60mm

**MASTER  
SPECIFICATIONS**

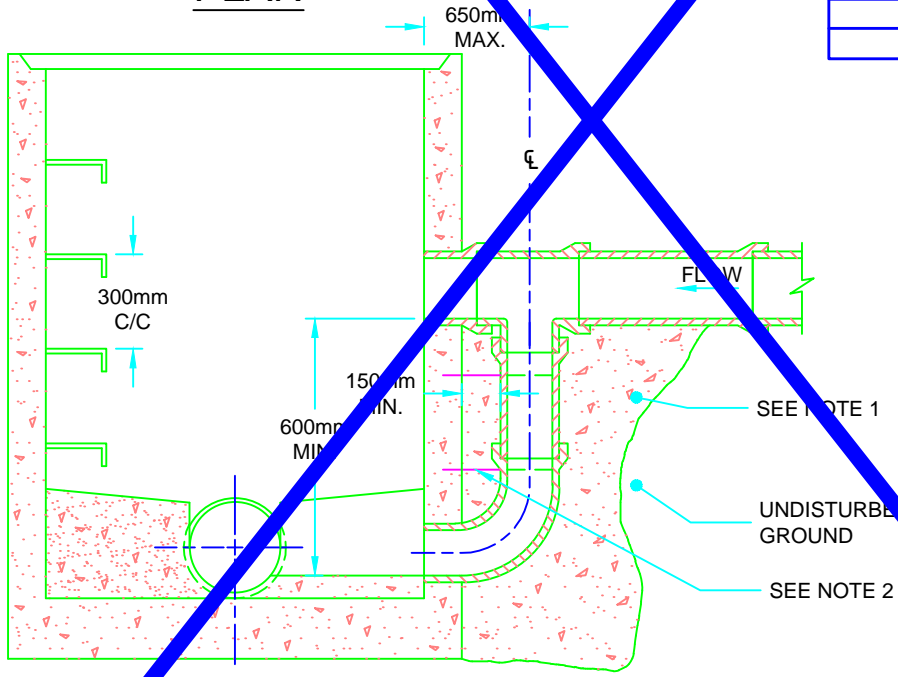
**CAST-IN-PLACE MAINTENANCE  
HOLE BACKDROP STRUCTURE**

DRAWING NUMBER 04290

DATE: MARCH 2016  
SCALE: N.T.S.



SIZE OF DROP PIPE	
SEWER ID	DROP PIPE ID
200	200
250	200
300	250
375	300



N.A.

SECTION A-A

NOTES

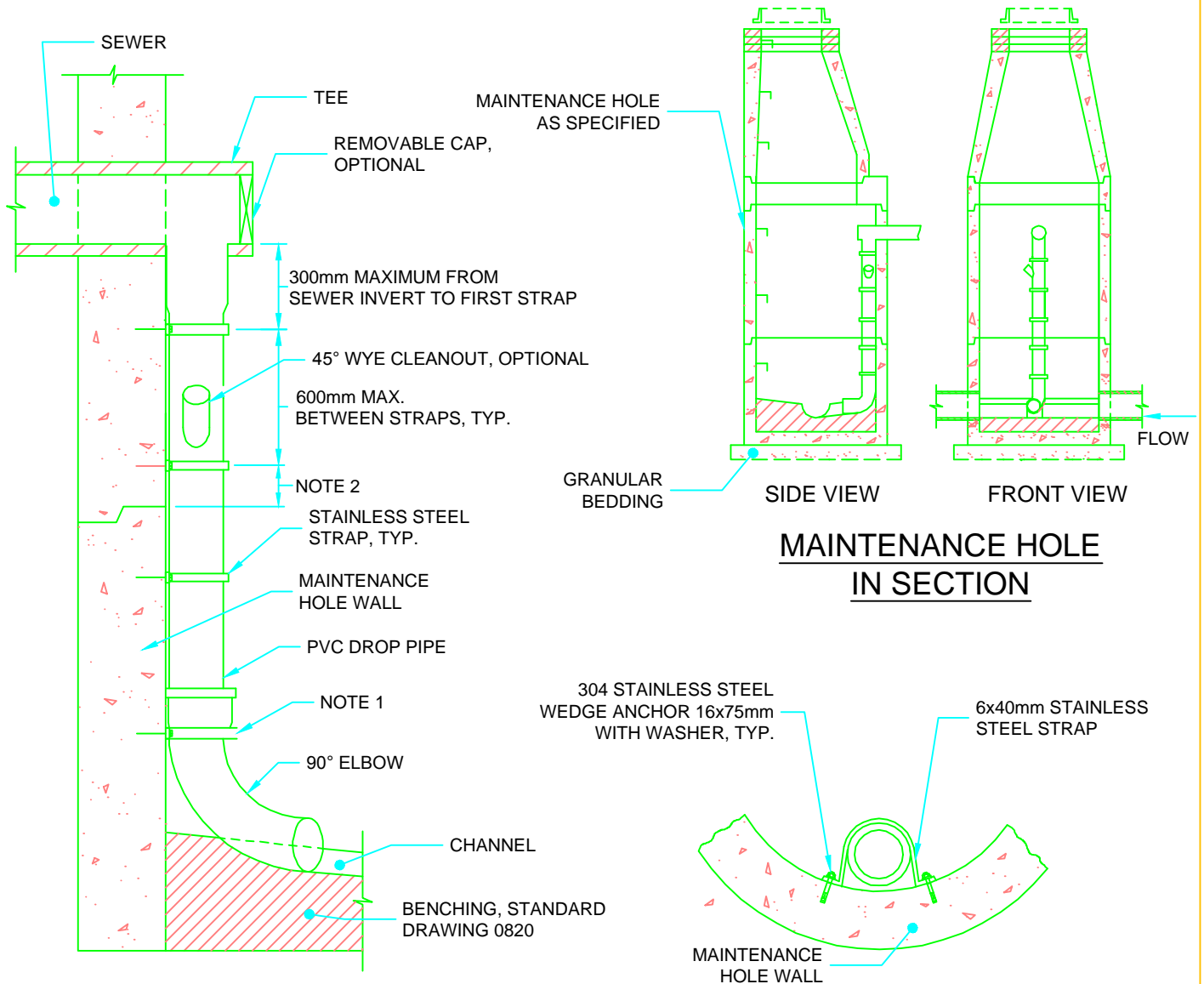
1. CONCRETE SHALL BE PLACED TO UNDISTURBED GROUND AND THE OUTSIDE FACE OF THE MAINTENANCE HOLE, BUT THERE SHALL BE A MINIMUM OF 150mm OF 15MPa CONCRETE AROUND THE DROP PIPE.
2. CONCRETE SHALL BE SECURED TO THE MAINTENANCE HOLE WITH 450mm LONG, 13mm DIAMETER THREADED RODS AND DRILLED EXPANSION ANCHORS DOWN EITHER SIDE OF THE DROP PIPE AT 300mm CENTRES.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

MASTER SPECIFICATIONS

CAST-IN-PLACE MAINTENANCE HOLE DROP STRUCTURE TEE

DRAWING NUMBER 04300

DATE: FEBRUARY 2019  
SCALE: N.T.S.



**INTERNAL DROP STRUCTURE DETAIL**

**FASTENER DETAIL**

**NOTES:**

1. AT THE ELBOW, A STAINLESS STEEL STRAP IS REQUIRED AT BOTTOM OF BELL.
2. STRAPS SHALL NOT BE PLACED WITHIN 150mm OF ANY MAINTENANCE HOLE SECTION JOINT.
3. INTERNAL DROP STRUCTURE SHALL BE USED IN MAN HOLES WITH A MINIMUM HEIGHT OF 600mm FROM THE INLET PIPE INVERT TO THE BOTTOM OF CHANNEL.
4. DROP PIPE SHALL BE ONE SIZE SMALLER THAN THE INCOMING SEWER WITH A MINIMUM 150mm DIAMETER AND MAXIMUM OF 375mm DIAMETER. A MAXIMUM OF 300mm DIAMETER FOR 1500mm MAINTENANCE HOLES.
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

**MASTER  
SPECIFICATIONS**

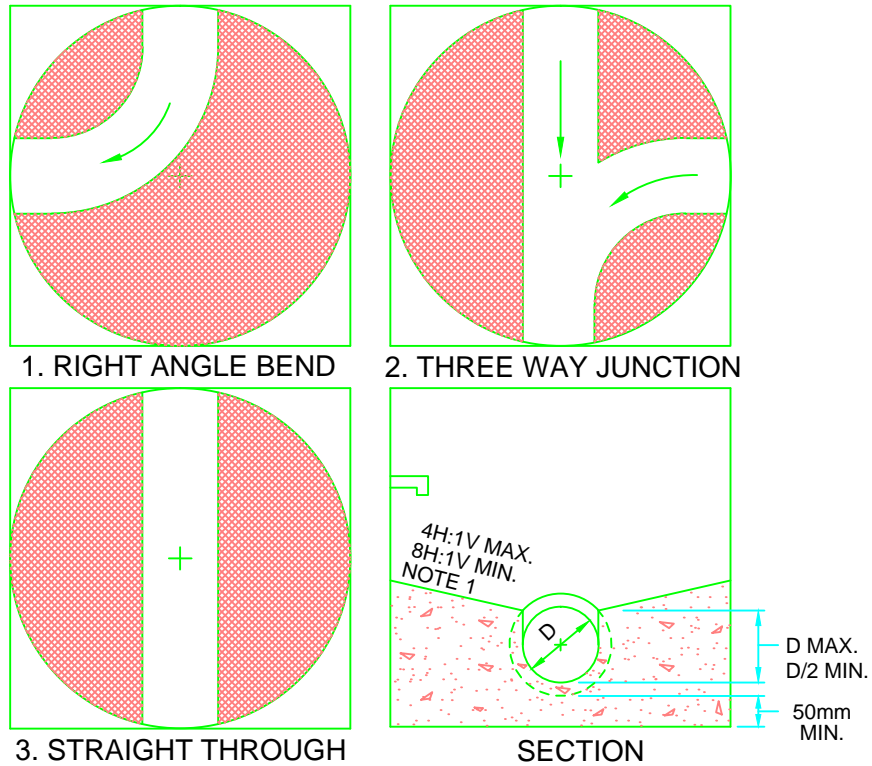
**INTERNAL DROP STRUCTURE FOR NEW  
MAINTENANCE HOLES**

DRAWING NUMBER 04310

DATE: FEBRUARY 2019

SCALE: N.T.S.





MAXIMUM PIPE DIAMETER IN THE WALL IN PRECAST RISER SECTIONS		
MAINTENANCE HOLE DIAMETER	No. 1-2	No. 3
1200	450	900
1500	750	1050
1800	900	1485

**NOTES:**

- SLOPES SHALL BE MAINTAINED FROM THE OUTLET HOLE OPENING FOR TOP OF BENCHING.
- CONCRETE FOR BENCHING SHALL BE 30MPa.
- BENCHING AND CHANNEL SHALL BE GIVEN STEEL TROWEL FINISH
- BENCHING SLOPE AND HEIGHT SHALL BE AS SPECIFIED.
- WHEN SPECIFIED, MAN HOLES THAT ARE 1200mm IN DIAMETER WITH A UNIFORM CHANNEL FOR 200 OR 250mm PIPE MAY BE PREBENCHED AT THE MANUFACTURER WITH STANDARDIZED BENCHING SLOPE AND CHANNEL ORIENTATION.
- ALL DIMENSIONS ARE NOMINAL.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS SHOWN OTHERWISE.
- THERE IS TO BE A MINIMUM CLEARANCE OF 150mm BETWEEN THE FACE OF THE PIPE AND INSIDE OF THE MAINTENANCE HOLE.

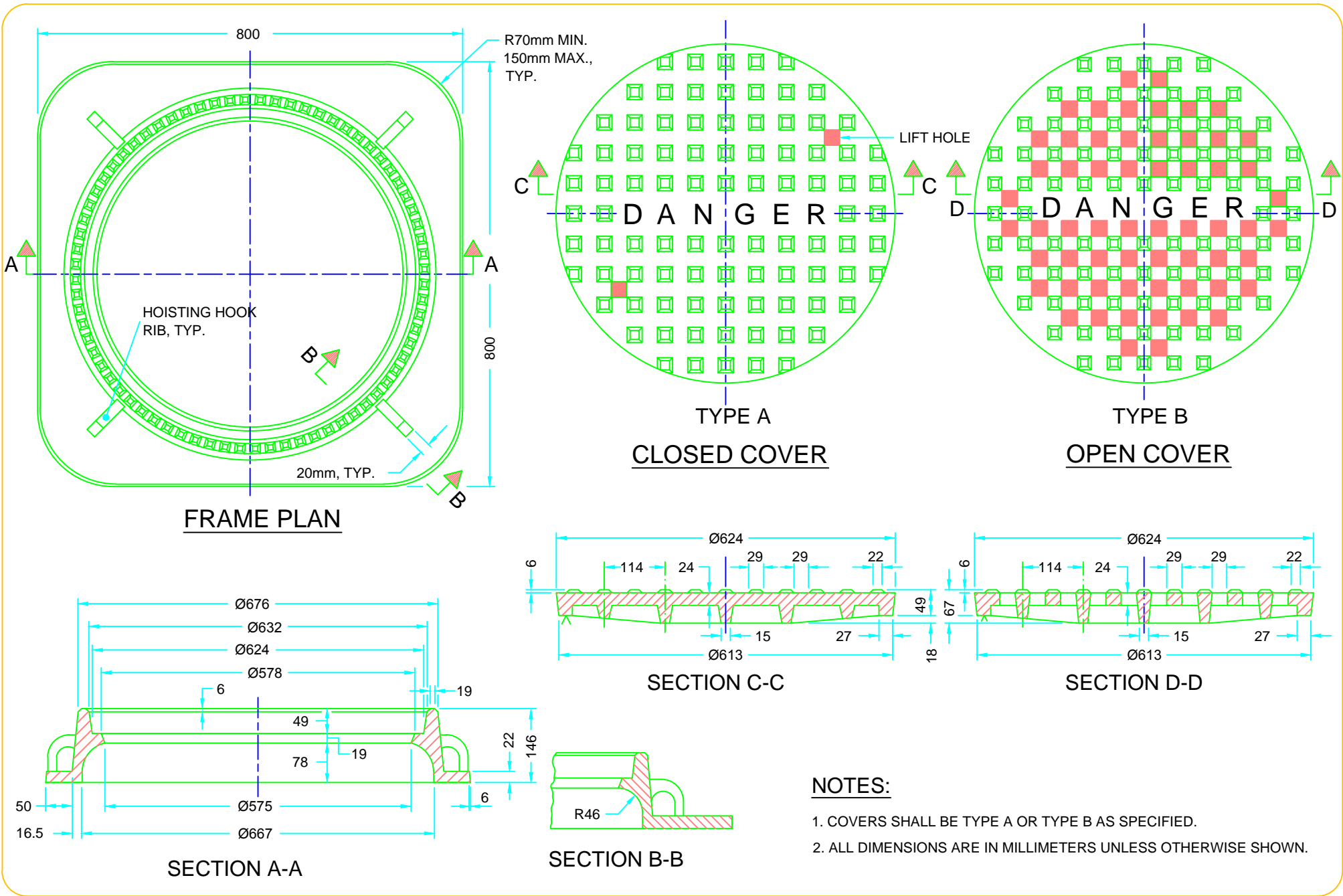
**MASTER SPECIFICATIONS**

**MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES**

DRAWING NUMBER 04320

DATE: FEBRUARY 2021

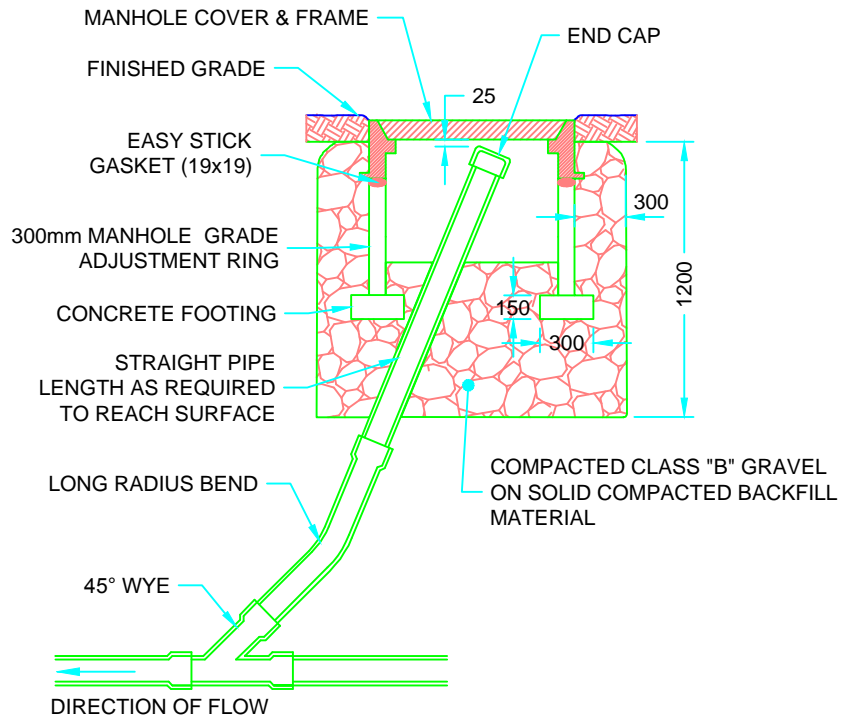
SCALE: N.T.S.



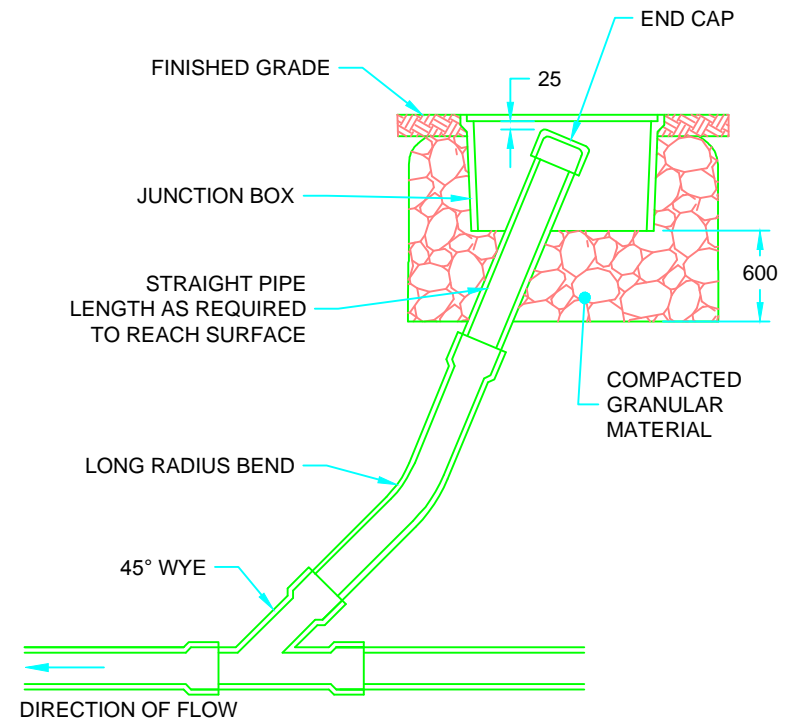
**NOTES:**

- 1. COVERS SHALL BE TYPE A OR TYPE B AS SPECIFIED.
- 2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

<b>MASTER SPECIFICATIONS</b>	<b>CAST IRON, SQUARE FRAME WITH CIRCULAR CLOSED OR OPEN COVER FOR MAINTENANCE HOLES</b>	DRAWING NUMBER 04330	DATE: MARCH 2016
			SCALE: N.T.S.



### CLEAN OUT IN ASPHALT



### CLEAN OUT IN SIDEWALK OR GRASS USING A PREFAB JUNCTION BOX

#### NOTES:

1. TOP OF BOX TO BE PLACED FLUSH WITH TOP OF SIDEWALK OR FINAL GRADE.
2. COVER TO HAVE NO LOGO ON IT.
3. BOX AS MANUFACTURED BY QUAZITE COMPOSITE OR APPROVED EQUAL.
4. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SHOWN.

MASTER  
SPECIFICATIONS

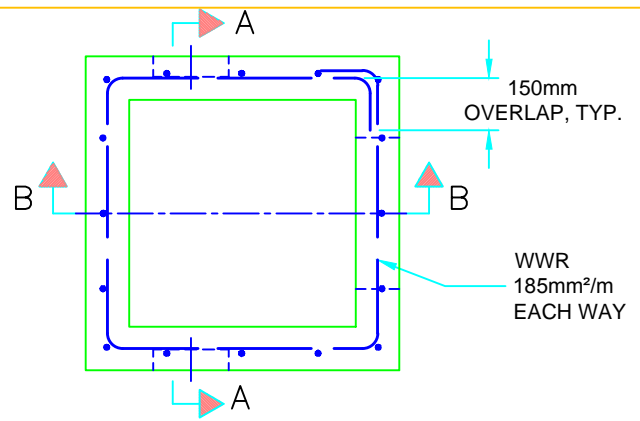
SEWER CLEAN OUT DETAILS

DRAWING NUMBER 04340

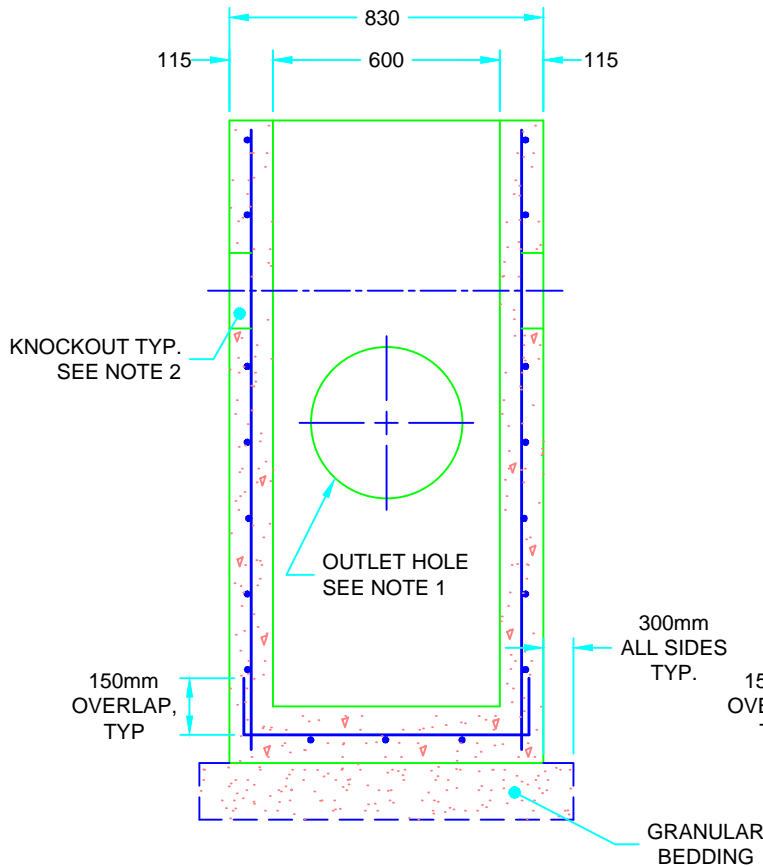
DATE:  
MARCH 2016

SCALE:  
N.T.S.

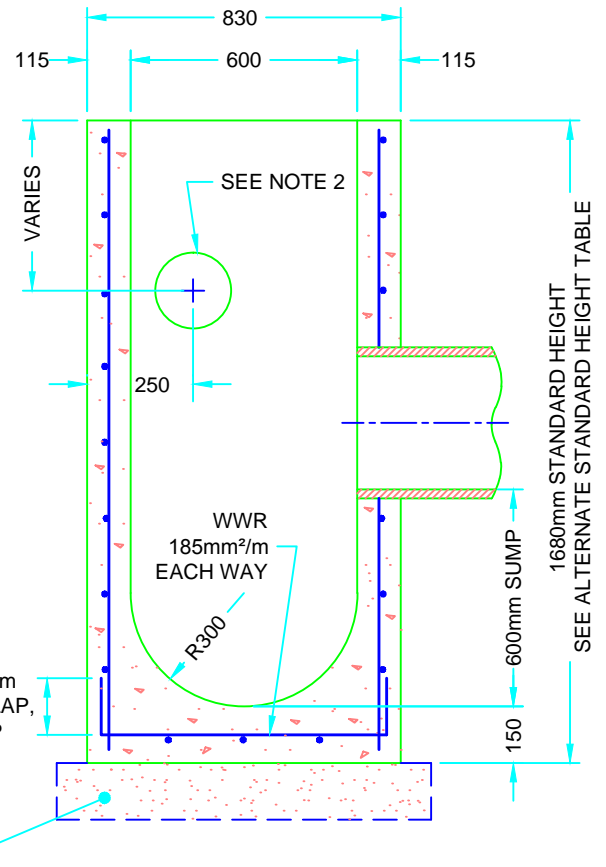
ALTERNATE STANDARD HEIGHTS	
ALTERNATE	DIMENSION
A	1980
B	1830
C	1520
D	1380



**PLAN**



**SECTION A-A**



**SECTION B-B**

**NOTES:**

1. OUTLET HOLE SIZE 525mm DIAMETER MAXIMUM, LOCATION AS REQUIRED.
2. 200mm DIAMETER KNOCKOUT TO ACCOMMODATE SUBDRAIN. KNOCKOUT SHALL BE 60MM DEEP.
3. CENTRE REINFORCING IN BASE SLAB AND WALLS  $\pm 20$ mm.
4. GRANULAR BACKFILL SHALL BE PLACED TO A MINIMUM THICKNESS OF 300mm ALL AROUND THE CATCH BASIN.
5. FRAME, GRATE, AND ADJUSTMENT UNITS SHALL BE INSTALLED ACCORDING TO STANDARD DRAWING 04250.
6. PIPE SUPPORT SHALL BE ACCORDING TO STANDARD DRAWING 04260.
7. ALL DIMENSIONS ARE NOMINAL.
8. ALL DIMENSIONS ARE NOMINAL AND IN MILLIMETERS UNLESS OTHERWISE SHOWN.

**MASTER  
SPECIFICATIONS**

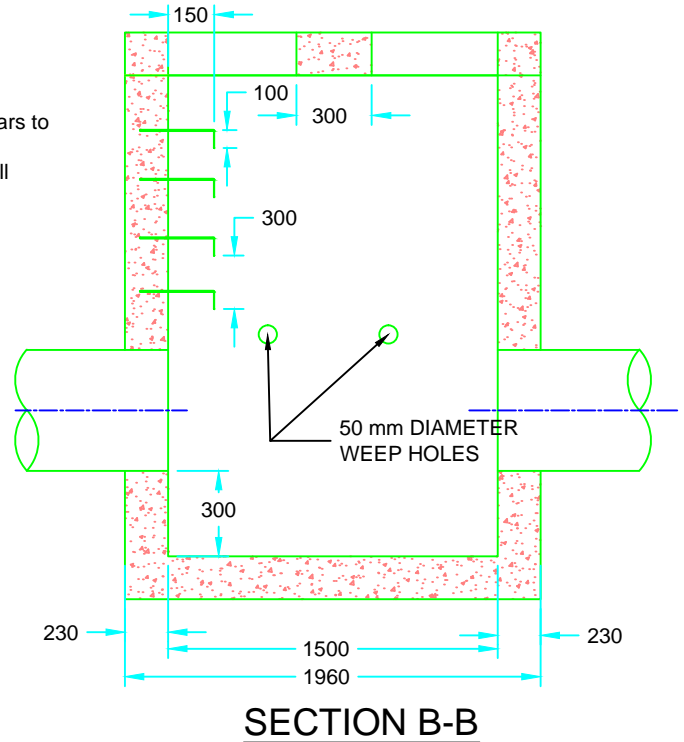
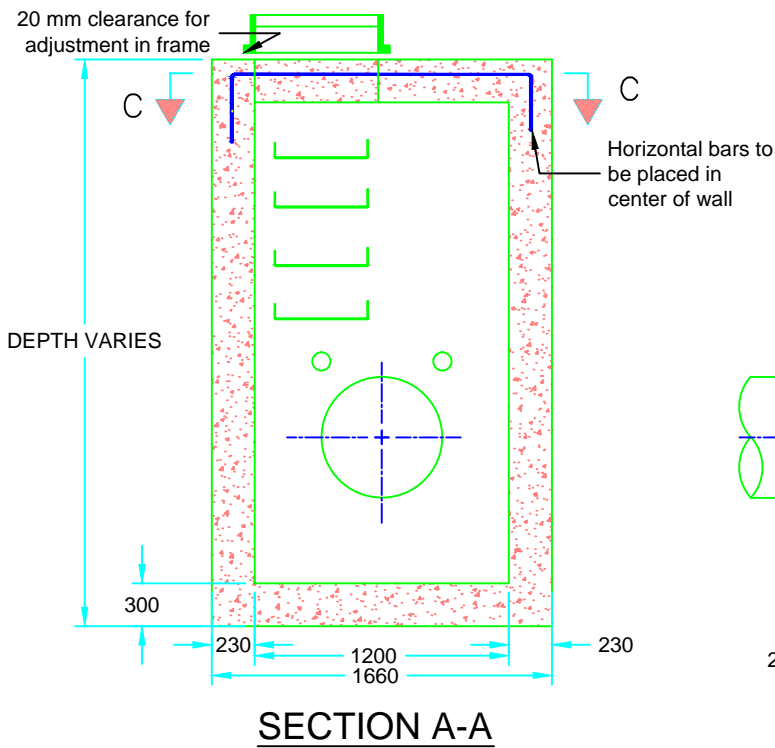
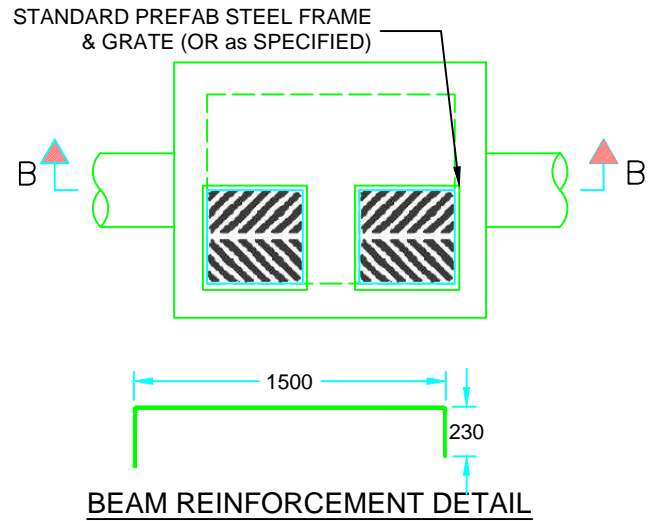
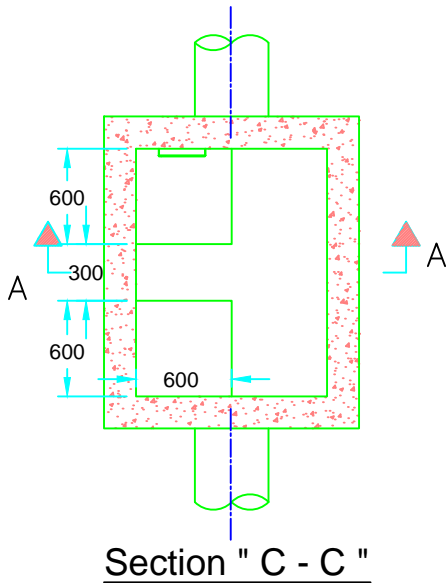
**PRECAST CONCRETE CATCH BASIN**

600 x 600mm

DRAWING NUMBER: 04350

DATE: MARCH 2016

SCALE: N.T.S.



**NOTES:**

1. OUTLET HOLE SIZE 525mm DIAMETER MAXIMUM, LOCATION AS REQUIRED.
2. 200mm DIAMETER KNOCKOUT SHALL ACCOMMODATE SUBDRAIN. KNOCKOUT SHALL BE 60mm DEEP.
3. CENTRE REINFORCING IN BASE SLAB AND WALLS  $\pm 20$ mm.
4. GRANULAR BACKFILL SHALL BE PLACED TO A MINIMUM THICKNESS OF 300mm ALL AROUND THE CATCH BASIN.
5. FRAME, GRATE, AND ADJUSTMENT UNITS SHALL BE INSTALLED ACCORDING TO STANDARD DRAWING 04250.
6. PIPE SUPPORT SHALL BE ACCORDING TO STANDARD DRAWING 04260.
5. ALL DIMENSIONS ARE NOMINAL AND IN MILLIMETERS UNLESS OTHERWISE SHOWN.

ALTERNATE STANDARD HEIGHTS	
ALTERNATE	DIMENSION
A	1980
B	1830

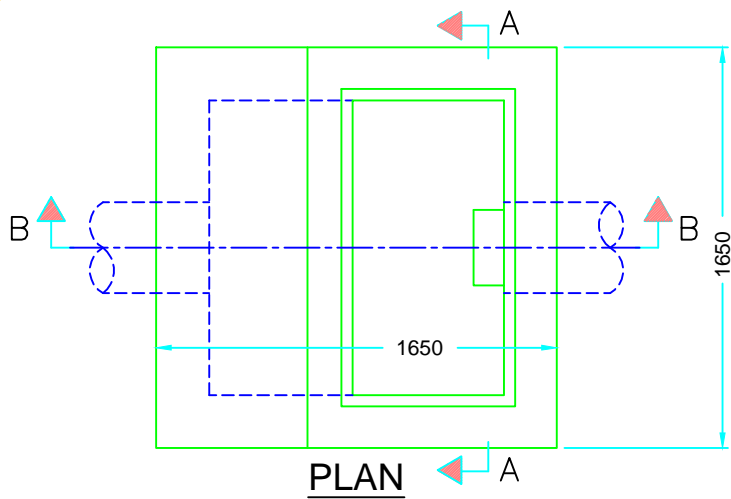
**MASTER SPECIFICATIONS**

**PRECAST CONCRETE TWIN INLET CATCH BASIN  
600 x 1450mm**

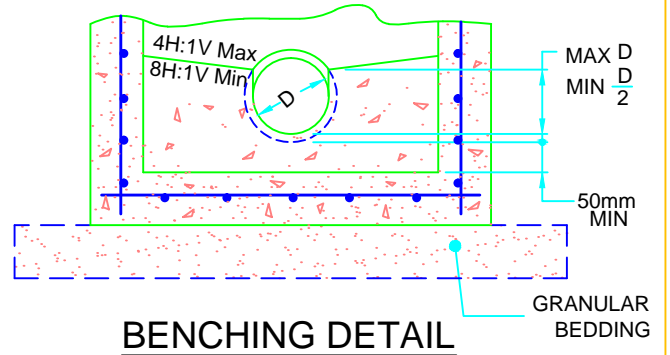
DRAWING NUMBER: 04360

DATE: FEBRUARY 2019

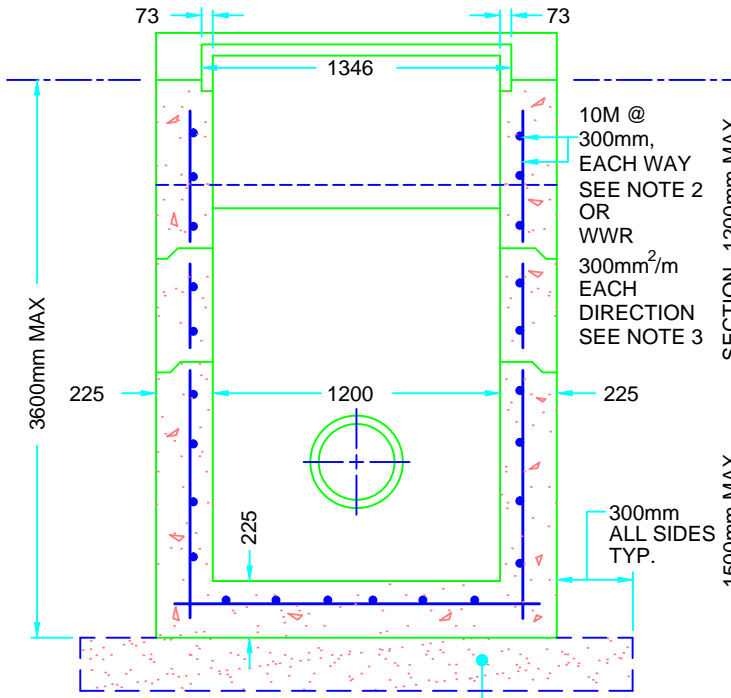
SCALE: N.T.S.



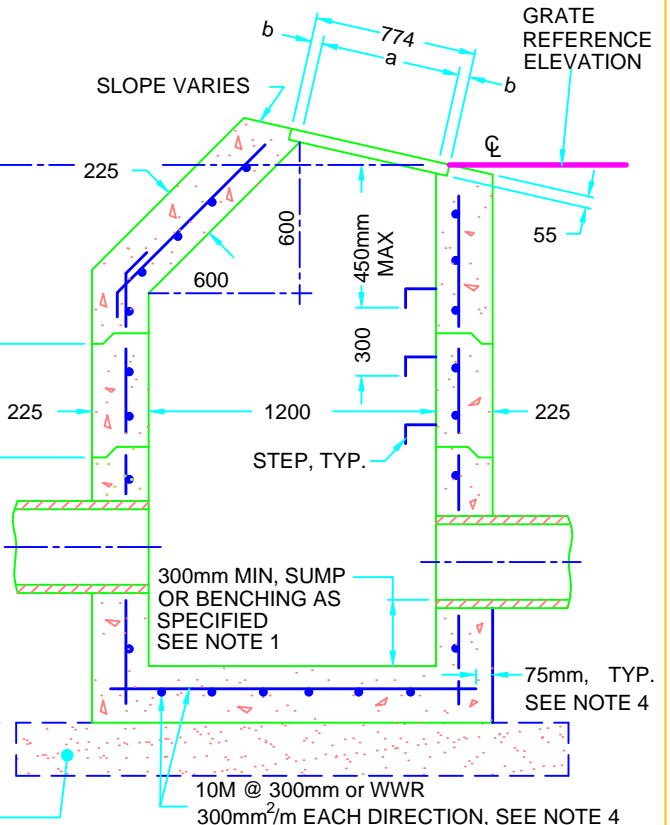
**PLAN**



**BENCHING DETAIL**



**SECTION A-A**



**SECTION B-B**

**NOTES:**

1. THE SUMP IS MEASURED FROM THE LOWEST INVERT. BENCHING AS SHOWN IN BENCHING DETAIL.
2. LAP HORIZONTAL 10M REBAR 300mm. LAPS SHALL BE PLACED AT CORNERS.
3. LAP HORIZONTAL WIRES 300mm OR WELD. WELDS TO DEVELOP 75% OF YIELD STRENGTH OF WIRE. LAPS OR WELDS SHALL BE PLACED AT CORNERS.
4. END REBAR OR WWR IN BASE 75mm FROM OUTSIDE FACE OF WALL.
5. WHERE INLET IS PLACED ACROSS DITCH AND IS ACCESSIBLE TO VEHICULAR TRAFFIC, GRATING SLOPE SHALL BE 6H:1V OR FLATTER.
6. GRANULAR BACKFILL SHALL BE PLACED A MINIMUM THICKNESS OF 300mm ALL AROUND THE DITCH INLET MANHOLE.
7. CONCRETE FOR BENCHING SHALL BE 30MPa.
8. BENCHING SLOPE AND HEIGHT SHALL BE AS SPECIFIED.
9. GRATING SHALL BE ACCORDING TO STANDARD DRAWING 04410.
10. STEPS SHALL BE ACCORDING TO STANDARD DRAWING 04280.
11. MAXIMUM PIPE SIZE: STRAIGHT THROUGH - 1200mm DIA; RIGHT ANGLE PIPES - 700mm DIA.
12. PIPE SUPPORT SHALL BE ACCORDING TO STANDARD DRAWING 04260.
13. CENTER REINFORCING IN WALLS  $\pm 35$ mm. ALL OTHER REINFORCING SHALL HAVE A MINIMUM COVER OF 25mm.
14. ALL DIMENSIONS ARE NOMINAL.
15. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

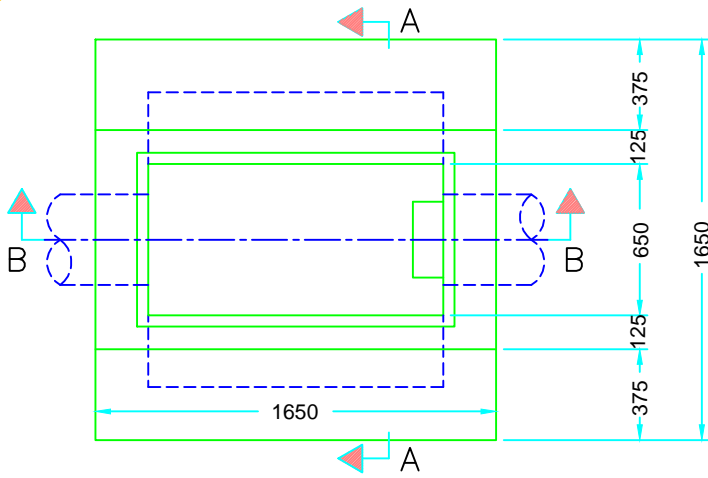
OPENING DIMENSIONS			
TYPE	GRATE		b
	SLOPE	a	
B	2H:1V	670	52
	3H:1V	632	71
	4H:1V	618	78
	6H:1V	608	83
	HOR	600	87

**MASTER SPECIFICATIONS**

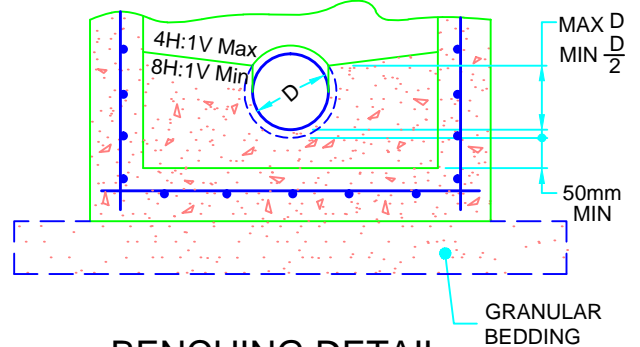
**PRECAST CONCRETE DITCH INLET MAINTENANCE HOLE - TYPE A (1200 x 1200mm)**

DRAWING NUMBER 04370

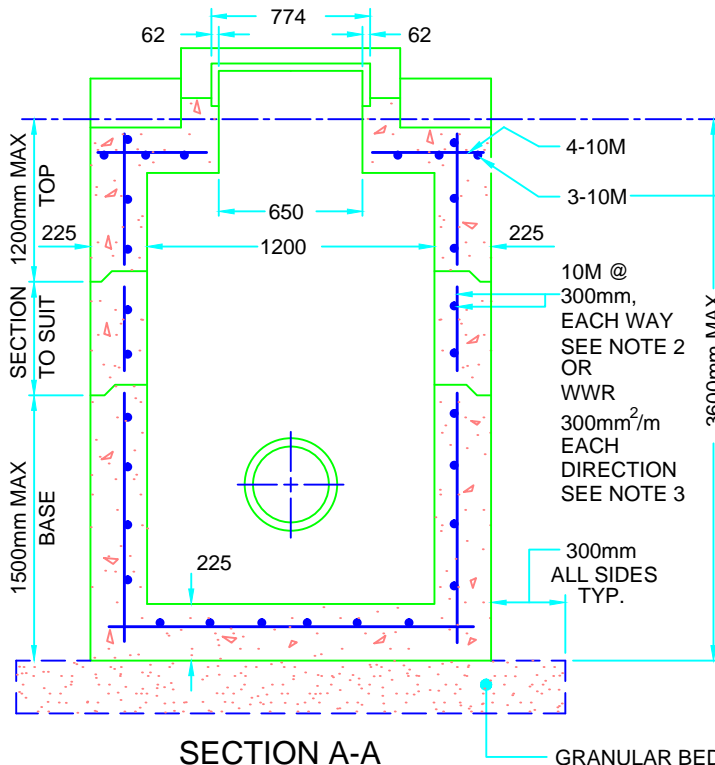
DATE: MARCH 2016  
SCALE: N.T.S.



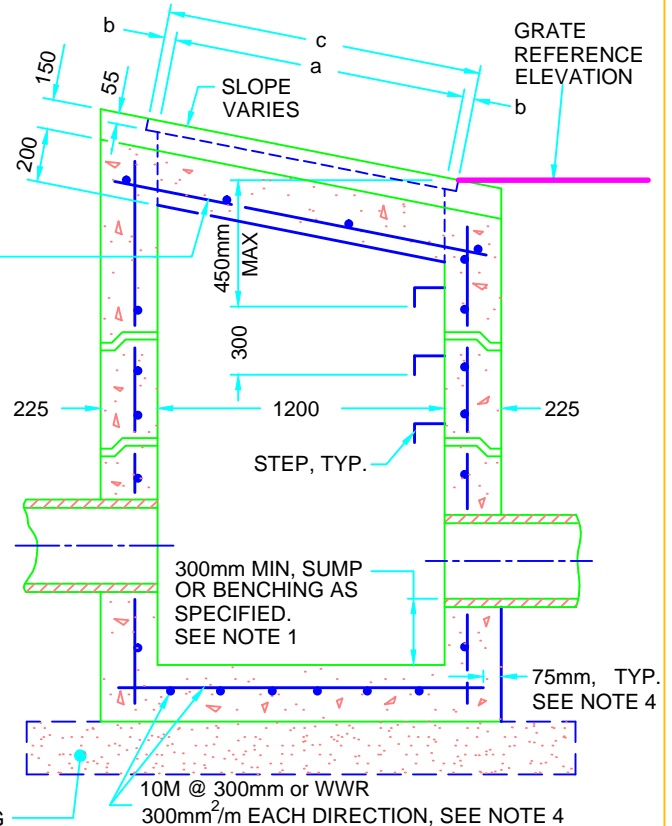
**PLAN**



**BENCHING DETAIL**



**SECTION A-A**



**SECTION B-B**

**NOTES:**

1. THE SUMP IS MEASURED FROM THE LOWEST INVERT. BENCHING AS SHOWN IN BENCHING DETAIL.
2. LAP HORIZONTAL 10M REBAR 300mm. LAPS SHALL BE PLACED AT CORNERS.
3. LAP HORIZONTAL WIRES 300mm OR WELD. WELDS TO DEVELOP 75% OF YIELD STRENGTH OF WIRE. LAPS OR WELDS SHALL BE PLACED AT CORNERS.
4. END REBAR OR WWR IN BASE 75mm FROM OUTSIDE FACE OF WALL.
5. WHERE INLET IS PLACED ACROSS DITCH AND IS ACCESSIBLE TO VEHICULAR TRAFFIC, GRATING SLOPE SHALL BE 6H:1V OR FLATTER.
6. GRANULAR BACKFILL SHALL BE PLACED A MINIMUM THICKNESS OF 300mm ALL AROUND THE DITCH INLET MANHOLE.

7. CONCRETE FOR BENCHING SHALL BE 30MPa.
8. BENCHING SLOPE AND HEIGHT SHALL BE AS SPECIFIED.
9. GRATING SHALL BE ACCORDING TO STANDARD DRAWING 04410.
10. STEPS SHALL BE ACCORDING TO STANDARD DRAWING 04280.
11. MAXIMUM PIPE SIZE: STRAIGHT THROUGH - 200mm DIA; RIGHT ANGLE PIPES - 700mm DIA.
12. PIPE SUPPORT SHALL BE ACCORDING TO STANDARD DRAWING 04260.
13. CENTER REINFORCING IN WALLS  $\pm 35$ mm. ALL OTHER REINFORCING SHALL HAVE A MINIMUM COVER OF 25mm.
14. ALL DIMENSIONS ARE NOMINAL.
15. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

OPENING DIMENSIONS				
TYPE	GRATE	a	b	c
	SLOPE			
C	2H:1V	1341	66	1473
	3H:1V	1265	104	1473
	4H:1V	1237	118	1473
B	6H:1V	1216	65	1346
	8H:1V	1210	68	1346
	10H:1V	1206	70	1346
	HOR	1200	73	1346

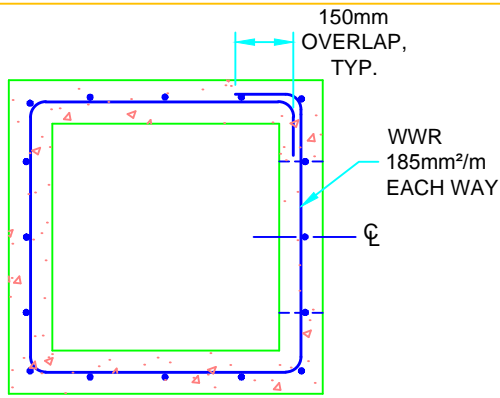
**MASTER SPECIFICATIONS**

**PRECAST CONCRETE DITCH INLET MAINTENANCE HOLE - TYPE B (1200 x 1200mm)**

DRAWING NUMBER 04380

DATE: MARCH 2016

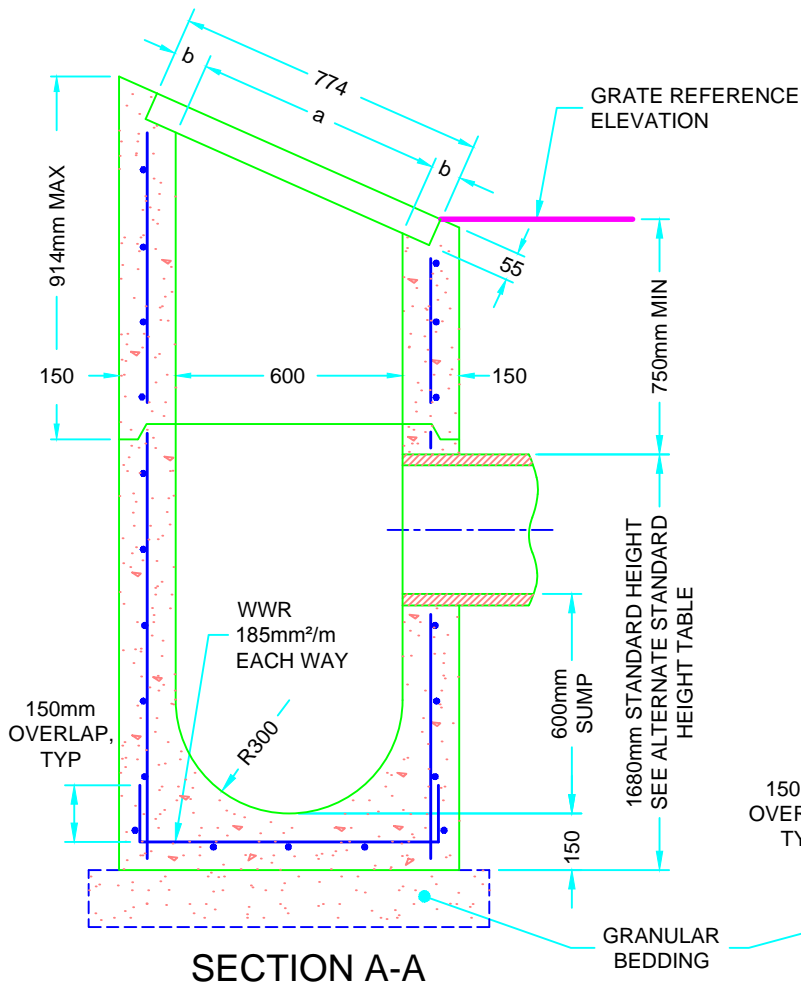
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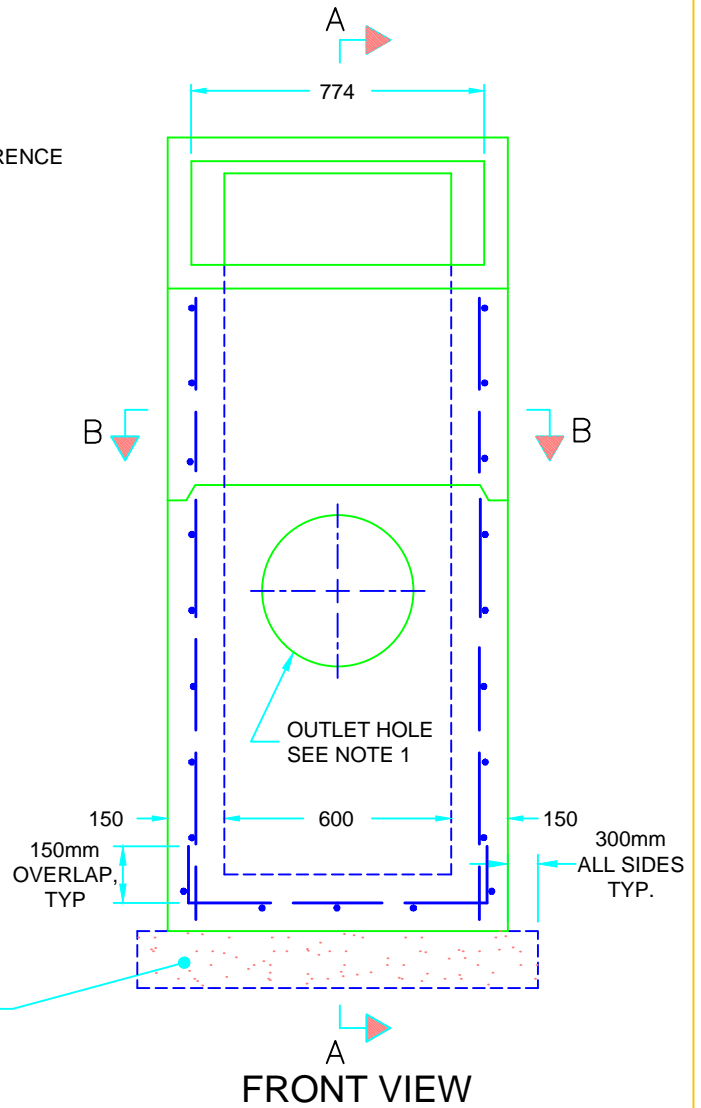
**SECTION B-B**

ALTERNATE STANDARD HEIGHTS	
ALTERNATE	DIMENSION
A	1980
B	1520
C	1380

OPENING DIMENSIONS			
GRATE		a	b
TYPE	SLOPE		
A	2H:1V	670	52
	3H:1V	632	71
	4H:1V	618	78
	6H:1V	608	83
	HOR	600	87



**SECTION A-A**



**FRONT VIEW**

**NOTES:**

1. OUTLET HOLE SIZE 525mm DIAMETER MAXIMUM, LOCATION AS REQUIRED.
2. WHERE INLET IS PLACED ACROSS DITCH AND IS ACCESSIBLE TO VEHICULAR TRAFFIC, GRATING SLOPE SHALL BE 6H:1V OR FLATTER.
3. CENTRE REINFORCING IN WALL AND SLAB  $\pm 25$ mm.
4. GRANULAR BACKFILL SHALL BE PLACED TO A MINIMUM THICKNESS OF 300mm ALL AROUND THE DITCH INLET.
5. GRATING SHALL BE INSTALLED ACCORDING TO STANDARD DRAWING 04410.
6. PIPE SUPPORT SHALL BE ACCORDING TO STANDARD DRAWING 04260.
5. ALL DIMENSIONS ARE NOMINAL AND IN MILLIMETERS UNLESS OTHERWISE SHOWN.

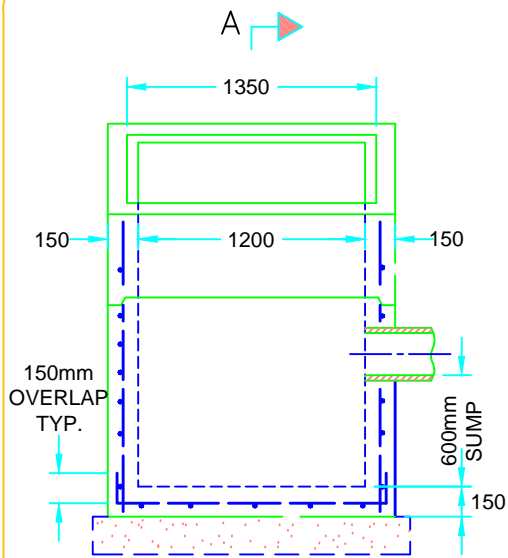
**MASTER SPECIFICATIONS**

**PRECAST CONCRETE DITCH INLET**  
600 x 600mm

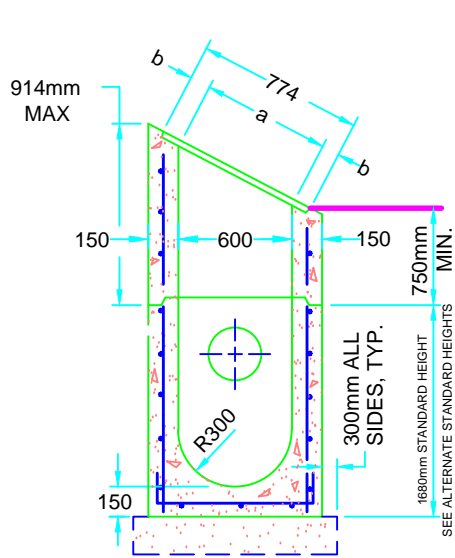
DRAWING NUMBER: 04390

DATE: MARCH 2016  
SCALE: N.T.S.

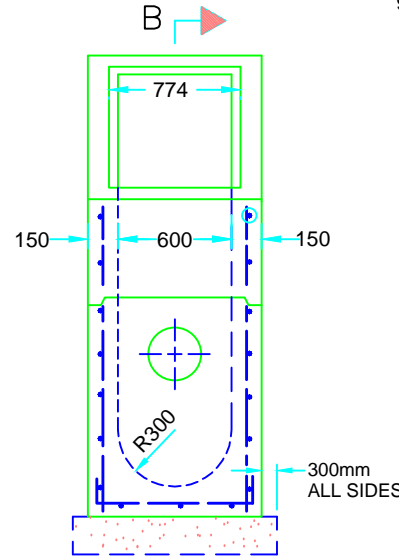




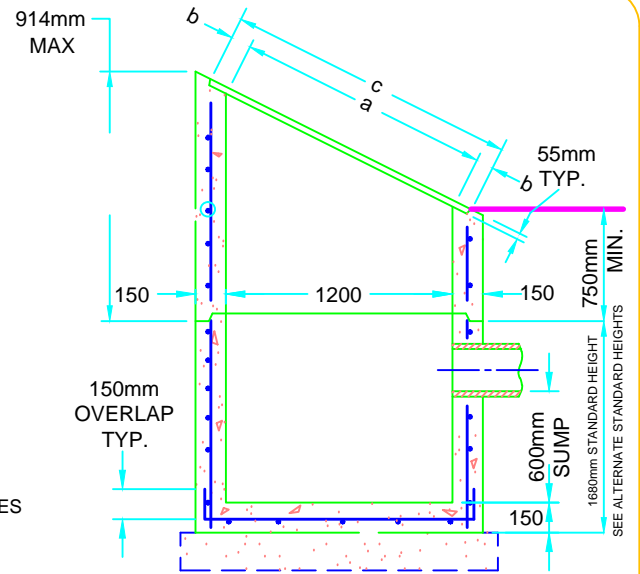
A  
**FRONT VIEW**



**SECTION A-A**



B  
**FRONT VIEW**



**SECTION B-B**

**NOTES:**

1. OUTLET HOLE SIZE 525mm DIAMETER MAXIMUM, LOCATION AS REQUIRED.
2. WHERE INLET IS PLACED ACROSS DITCH AND IS ACCESSIBLE TO VEHICULAR TRAFFIC, GRATING SLOPE SHALL BE 6H:1V OR FLATTER.
3. CENTRE REINFORCING IN WALL AND SLAB  $\pm 25$ mm.
4. LAP RISER HORIZONTAL WIRES 300mm. LAPS SHALL BE PLACED AT CORNERS.
5. GRANULAR BACKFILL SHALL BE PLACED TO A MINIMUM THICKNESS OF 300mm ALL AROUND THE DITCH INLET.
6. GRATING SHALL BE INSTALLED ACCORDING TO STANDARD DRAWING 04410.
7. PIPE SUPPORT SHALL BE ACCORDING TO STANDARD DRAWING 04260.
8. ALL DIMENSIONS ARE NOMINAL AND IN MILLIMETERS UNLESS OTHERWISE SHOWN.

OPENING DIMENSIONS			
GRATE		a	b
TYPE	SLOPE		
B	2H:1V	670	52
	3H:1V	632	71
	4H:1V	618	78
	HOR	600	87

ALTERNATE STANDARD HEIGHTS	
ALTERNATE	DIMENSION
A	1980
B	1520
C	1380

OPENING DIMENSIONS				
GRATE		a	b	c
TYPE	SLOPE			
C	2H:1V	1341	66	1473
	3H:1V	1265	104	1473
	4H:1V	1237	118	1473
B	6H:1V	1216	65	1346
	HOR	1200	73	1346

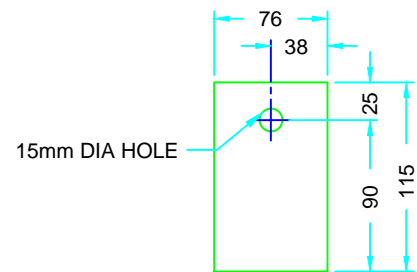
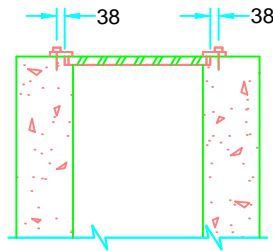
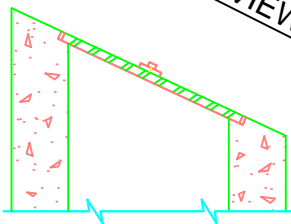
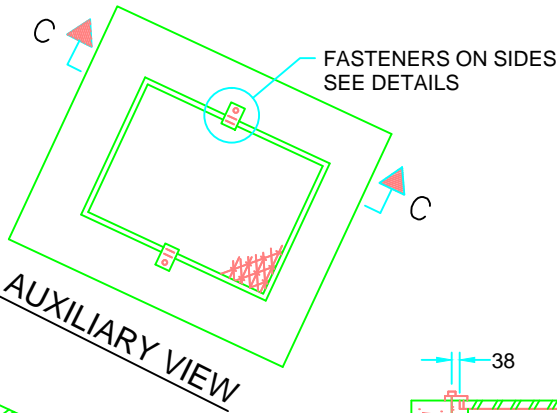
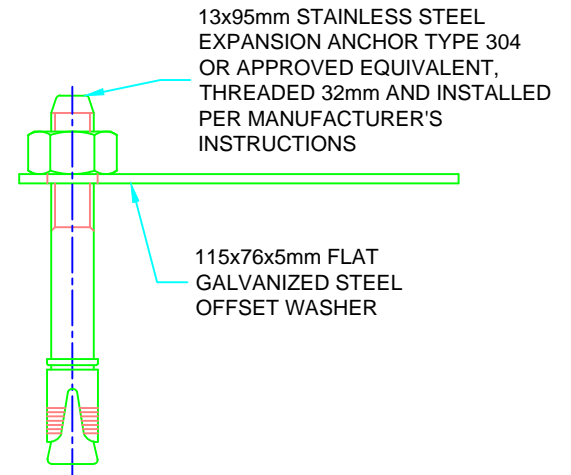
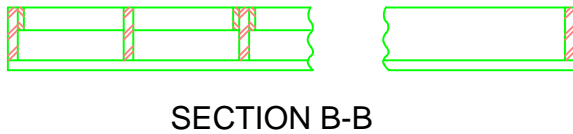
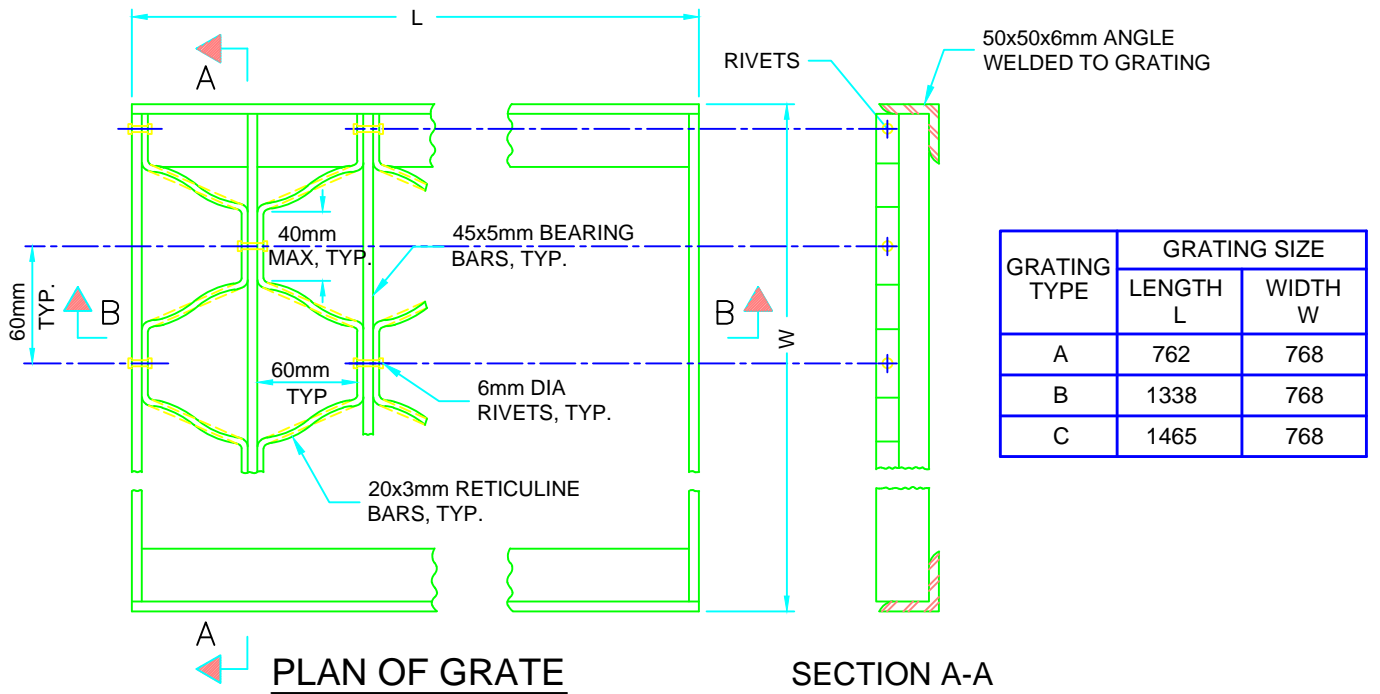
**MASTER SPECIFICATIONS**

**PRECAST CONCRETE DITCH INLETS**  
600 x 1200mm

DRAWING NUMBER 04400

DATE:  
MARCH 2016

SCALE:  
N.T.S.



**NOTES:**

1. FASTENER SHALL BE INSERTED TO MAINTAIN MINIMUM CONCRETE COVER REQUIREMENTS.
2. ALL STEEL COMPONENTS AND RIVETS SHALL BE GALVANIZED.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

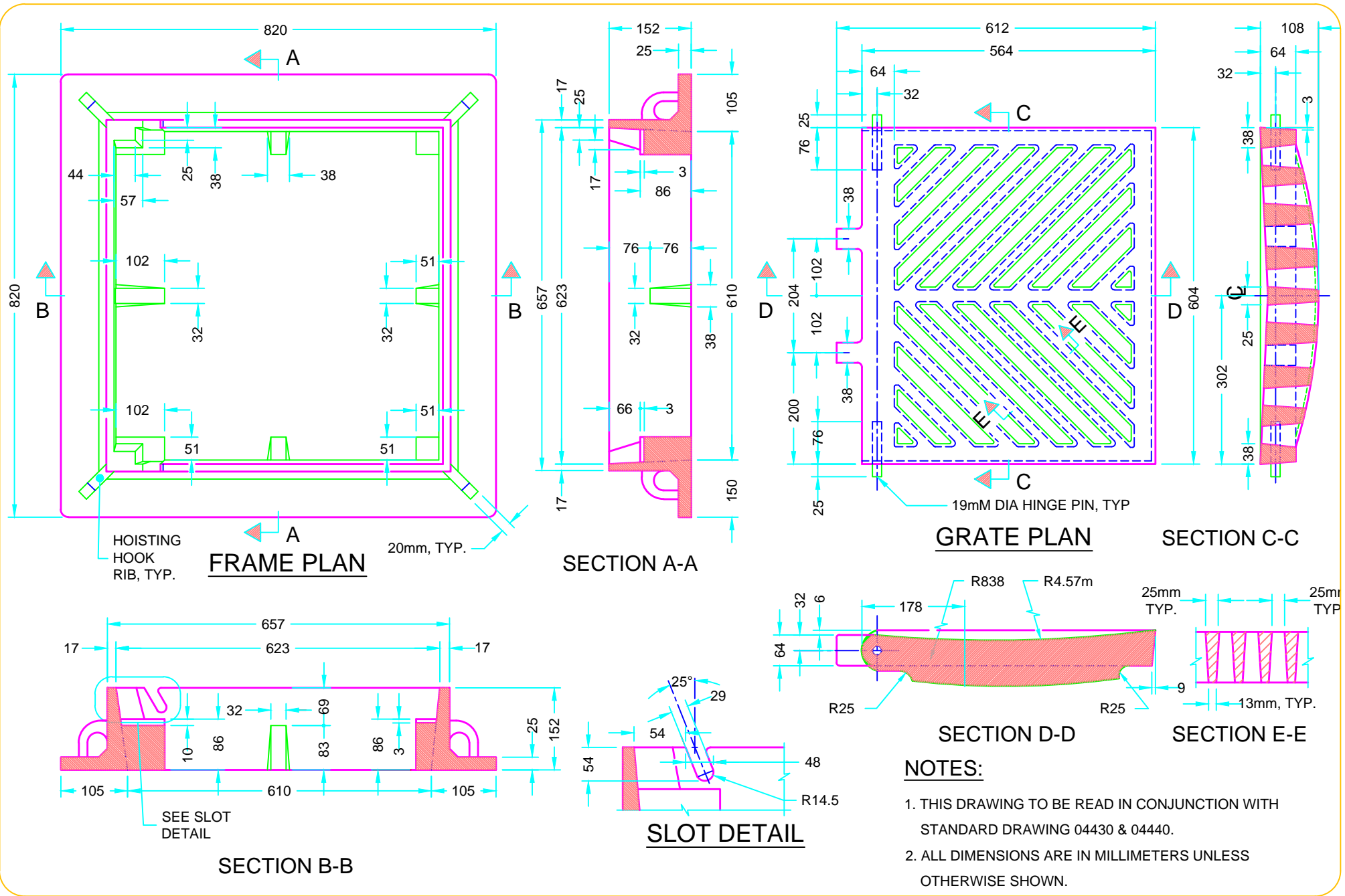
**MASTER SPECIFICATIONS**

**GALVANIZED STEEL HONEYCOMB GRATING FOR DITCH INLETS**

DRAWING NUMBER 04410

DATE: MARCH 2016

SCALE: N.T.S.



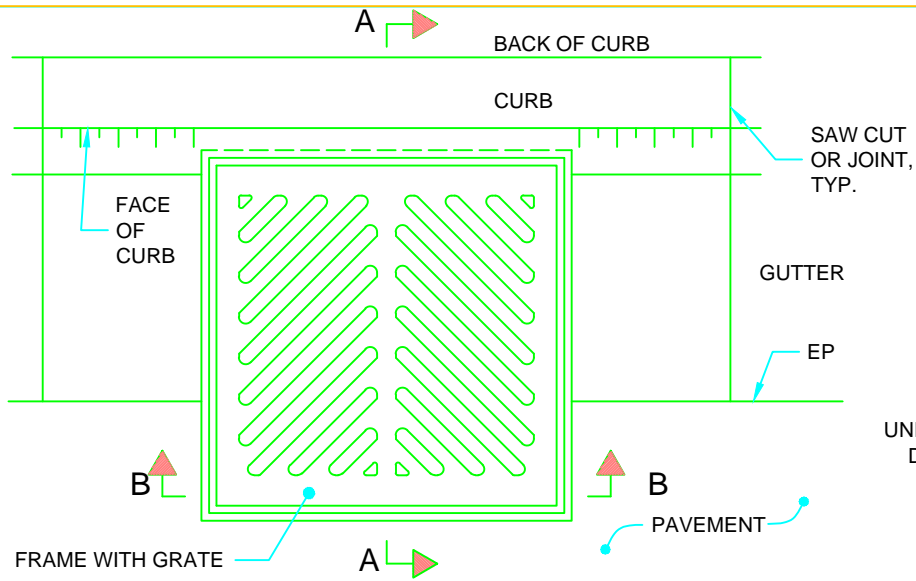
MASTER SPECIFICATIONS

CAST IRON, SQUARE FRAME WITH GRATE FOR CATCH BASINS

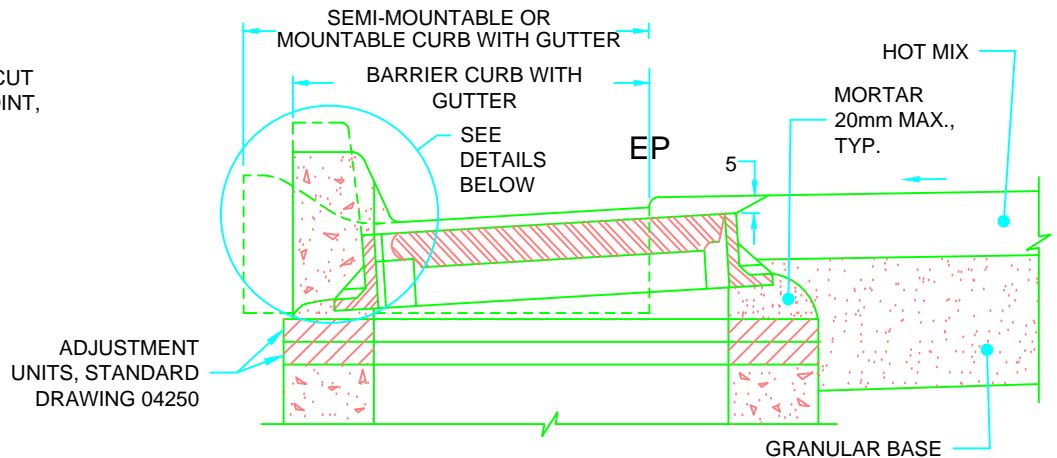
DRAWING NUMBER 04420

DATE: MARCH 2016

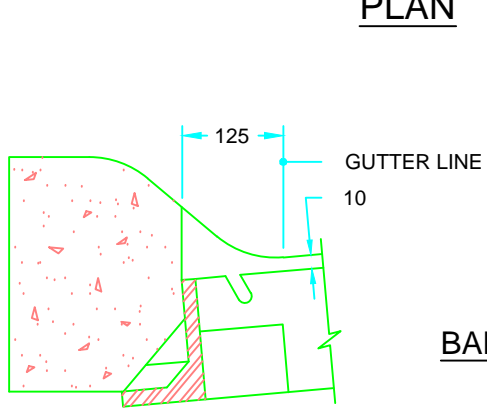
SCALE: N.T.S.



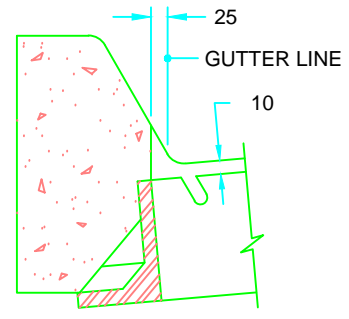
**PLAN**



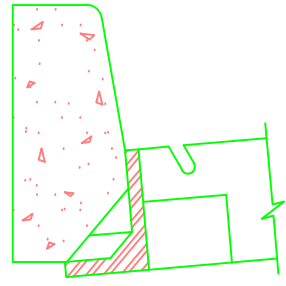
**SECTION A-A**



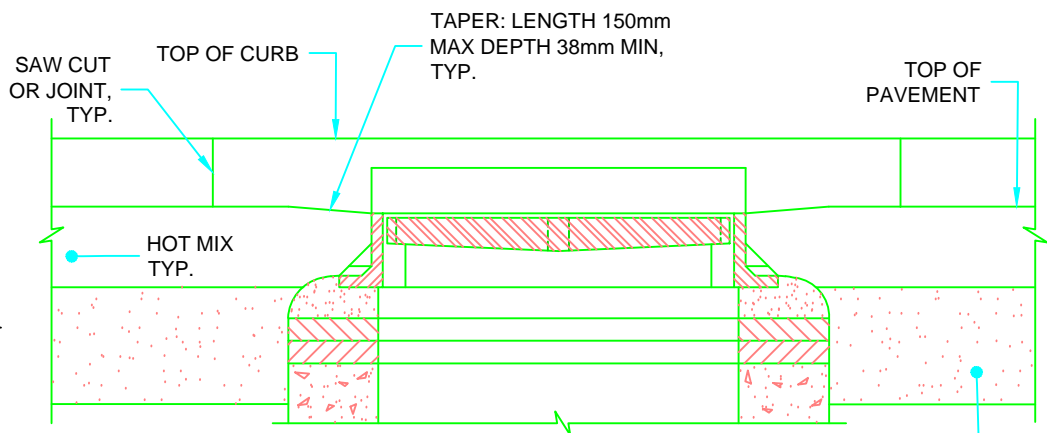
**SEMI-MOUNTABLE OR MOUNTABLE CURB WITH GUTTER**



**BARRIER CURB WITH GUTTER**



**BARRIER CURB**



**SECTION B-B**

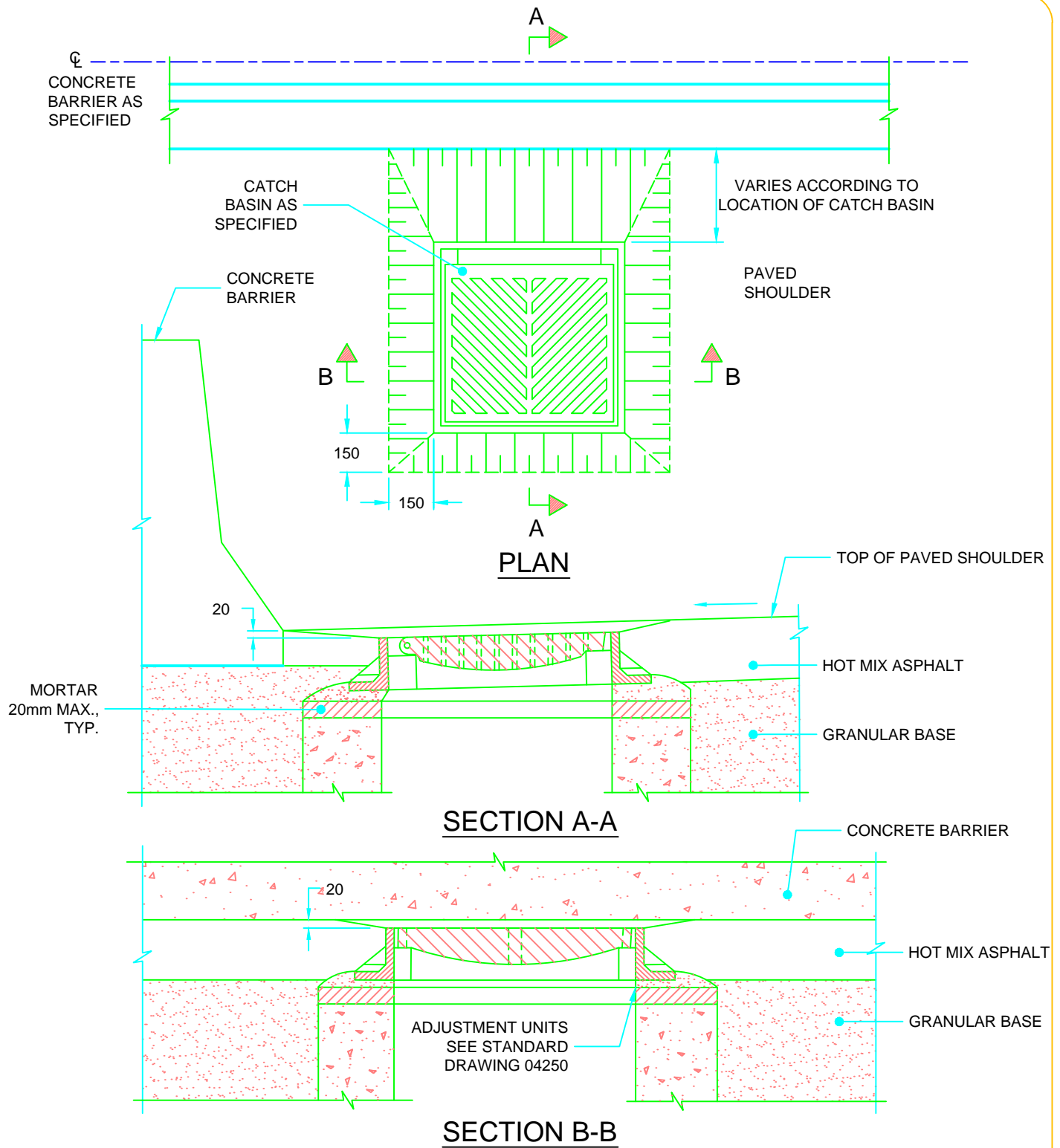
**NOTES:**  
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

MASTER SPECIFICATIONS

CATCH BASIN FRAME WITH GRATE INSTALLATION AT CURB AND GUTTER

DRAWING NUMBER 04430

DATE: MARCH 2016  
SCALE: N.T.S.



**NOTES:**

1. WHEN CATCH BASINS ARE PLACED BACK TO BACK ON BOTH SIDES OF THE CONCRETE BARRIER, BACKFILL SHALL BE UNSHRINKABLE BACKFILL TO THE LIMITS OF EXCAVATION AND WITHIN 150mm OF TOP OF CONCRETE CATCH BASIN STRUCTURE. WHERE CATCH BASINS ARE NOT PLACED BACK TO BACK THEY SHALL BE STAGGERED WITH A MINIMUM SPACING OF 10m.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

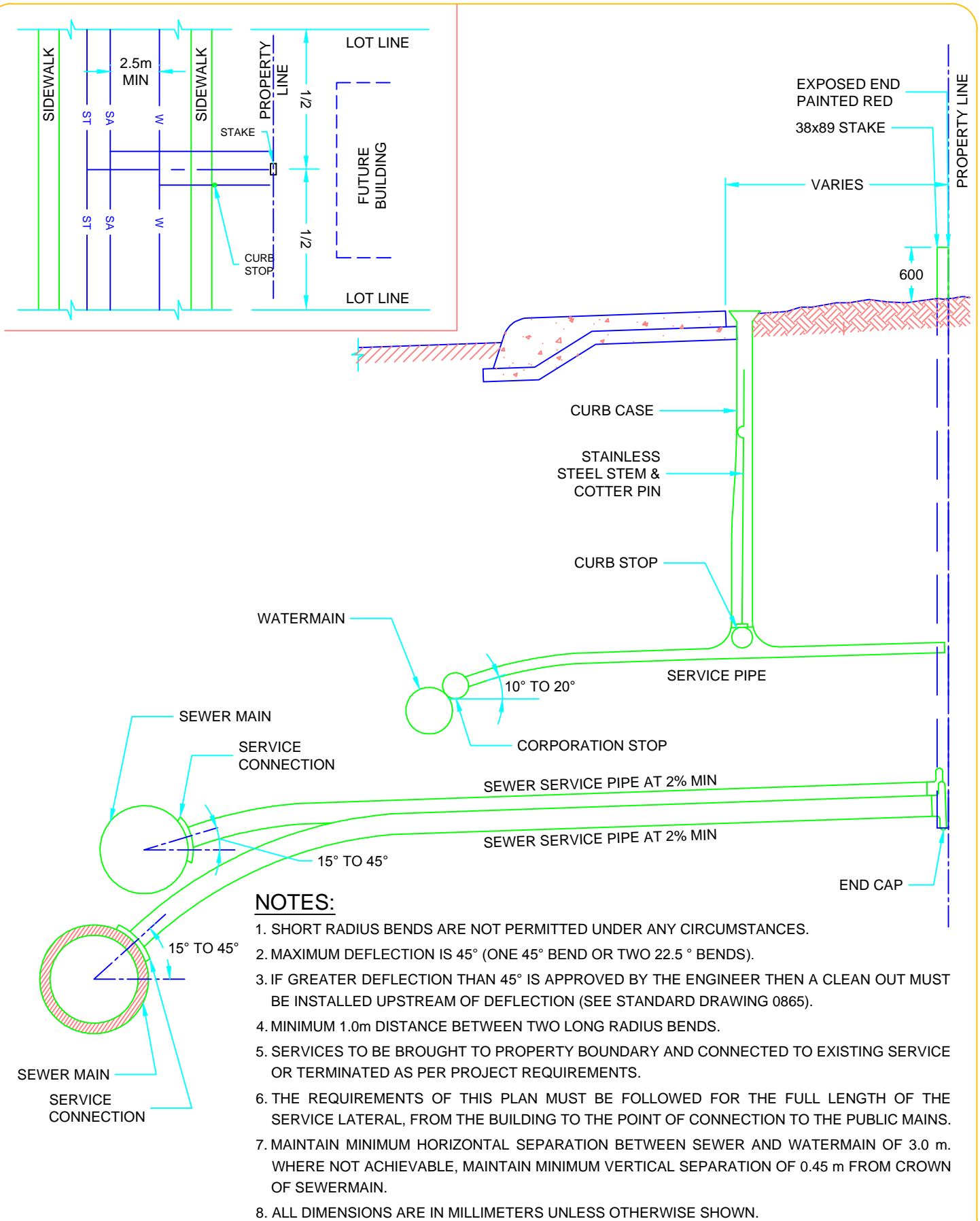
**MASTER  
SPECIFICATIONS**

**CATCH BASIN FRAME WITH GRATE SHOULDER  
INSTALLATION AT CONCRETE BARRIER**

DRAWING NUMBER 04440

DATE: MARCH 2016

SCALE: N.T.S.



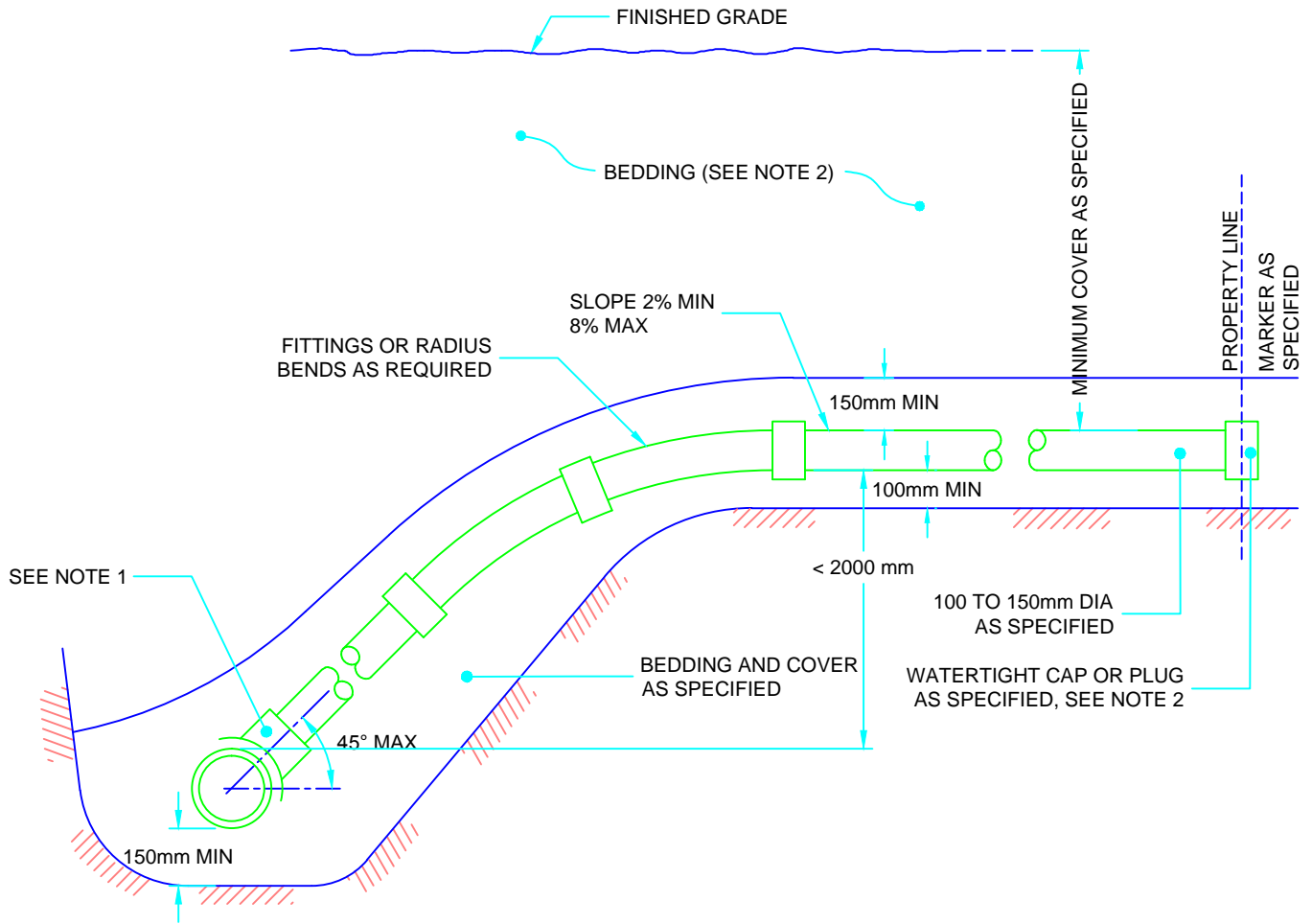
**MASTER SPECIFICATIONS**

**HOUSE SERVICES CONNECTION**

DRAWING NUMBER 04460

DATE: MARCH 2016

SCALE: N.T.S.



**NOTES:**

1. SEWER SERVICE CONNECTIONS TO THE MAIN PIPE SEWER SHALL BE MADE USING FACTORY MADE TEES OR WYES, STRAP-ON-SADDLES, OR OTHER APPROVED SADDLES.
2. BEDDING MATERIAL SHALL BE TYPE 1 FOR PVC, AND TYPE 3 FOR DUCTILE IRON PIPES.
3. CAP OR PLUG AT PROPERTY LINE SHALL BE ADEQUATELY PLACED.
4. MAINTENANCE HOLES SHALL BE USED AT THE MAIN SEWER TO CONNECT SERVICE CONNECTIONS GREATER THAN OR EQUAL TO 200mm.
5. FOR NEW CONSTRUCTION, SADDLES SHALL BE INSTALLED ON THE MAIN PIPE BEFORE THAT PIPE IS LAID.
6. APPROVED CUT-IN TOOL SHALL BE USED FOR FIELD MADE CONNECTIONS.
7. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

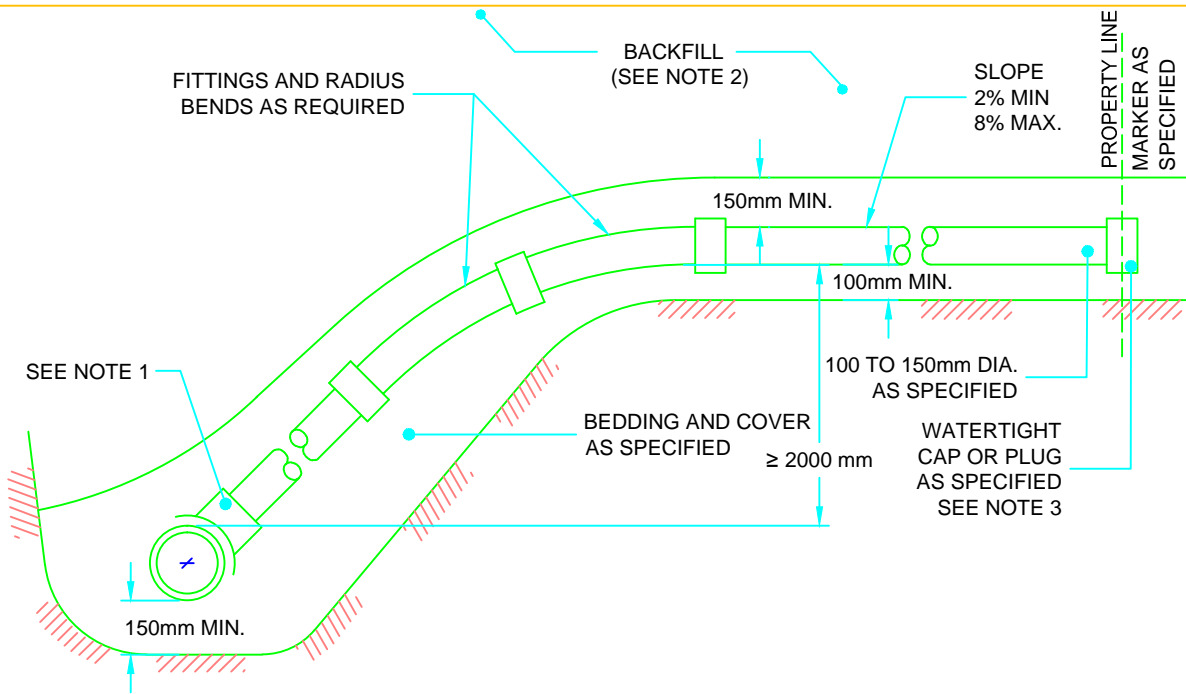
**MASTER SPECIFICATIONS**

**SEWER SERVICE CONNECTIONS FOR FLEXIBLE MAIN PIPE SEWER**

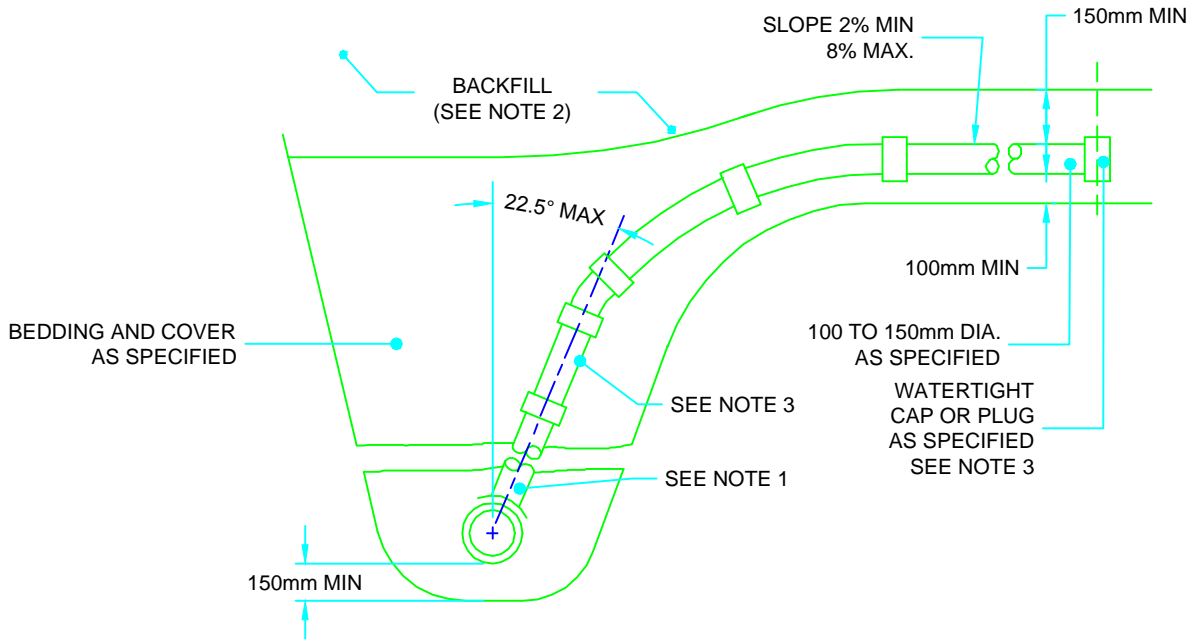
DRAWING NUMBER 04470

DATE: FEBRUARY 2019

SCALE: N.T.S.



### CONNECTION WITHOUT VERTICAL RISER



### CONNECTION WITH VERTICAL RISER

#### NOTES:

1. SEWER SERVICE CONNECTIONS TO THE MAIN PIPE SEWER SHALL BE MADE USING FACTORY MADE TEES, STRAP-ON-SADDLES, OR OTHER APPROVED SADDLES.
2. BEDDING MATERIAL SHALL BE TYPE 1 FOR PVC, AND TYPE 3 FOR DUCTILE IRON PIPES.
3. VERTICAL RISERS SHALL BE AS SPECIFIED.
4. CAP OR PLUG AT PROPERTY LINE SHALL BE ADEQUATELY BRACED.
5. MAINTENANCE HOLES SHALL BE USED AT THE MAIN SEWER TO CONNECT SERVICE CONNECTIONS GREATER THAN OR EQUAL TO 200mm.
6. FOR NEW CONSTRUCTION, SADDLES SHALL BE INSTALLED ON THE MAIN PIPE BEFORE THAT PIPE IS LAID.
7. APPROVED CUT-IN TOOL SHALL BE USED FOR FIELD MADE CONNECTIONS.
8. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

**MASTER  
SPECIFICATIONS**

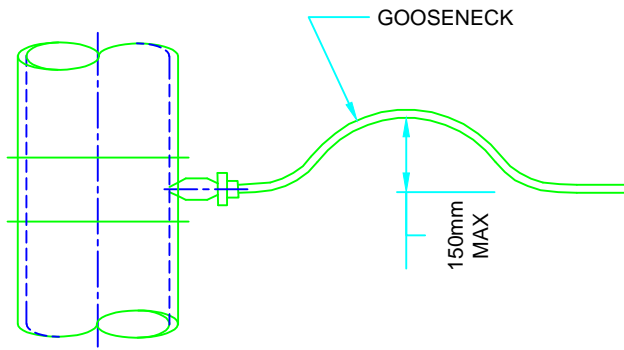
### SEWER SERVICE CONNECTIONS FOR RIGID MAIN PIPE SEWER

DRAWING NUMBER 04480

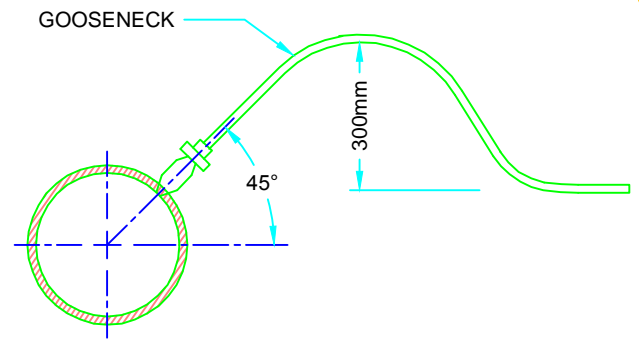
DATE: FEBRUARY 2019

SCALE: N.T.S.

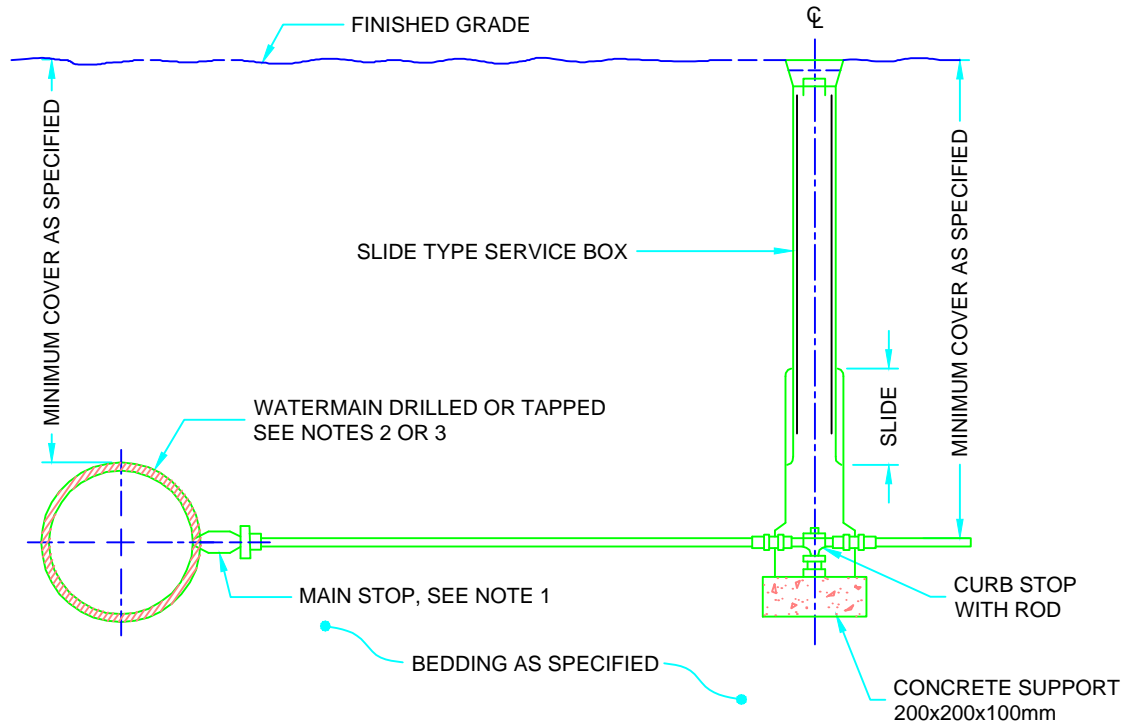




HORIZONTAL GOOSENECK



VERTICAL GOOSENECK OPTION



VERTICAL SECTION

**NOTES:**

1. FOR PLASTIC SERVICE PIPE, INSTALL MAIN STOP AT 45° ABOVE HORIZONTAL WITH A MINIMUM 1.2m LONG GOOSENECK.
2. DIRECT TAP DUCTILE IRON PIPE WITH APPROVED TOOL WITH STANDARD AWWA INLET THREAD.
3. SERVICE CONNECTIONS TO PLASTIC WATERMAINS SHALL BE MADE USING SERVICE SADDLES OR FACTORY MADE TEES.
4. WHEN SPECIFIED, THE VERTICAL GOOSENECK OPTION SHALL BE USED.
5. COUPLINGS SHALL NOT BE PERMITTED UNLESS THE SERVICE LENGTH EXCEEDS 20m BETWEEN THE MAIN STOP AND CURB STOP.
6. ALL WATER SERVICES SHALL BE INSTALLED 90° TO THE LONGITUDINAL AXIS OF THE WATERMAIN.
7. BACKFILL MATERIAL WITHIN 500mm OF SERVICE BOX SHALL BE NATIVE OR IMPORTED, AS SPECIFIED.
8. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

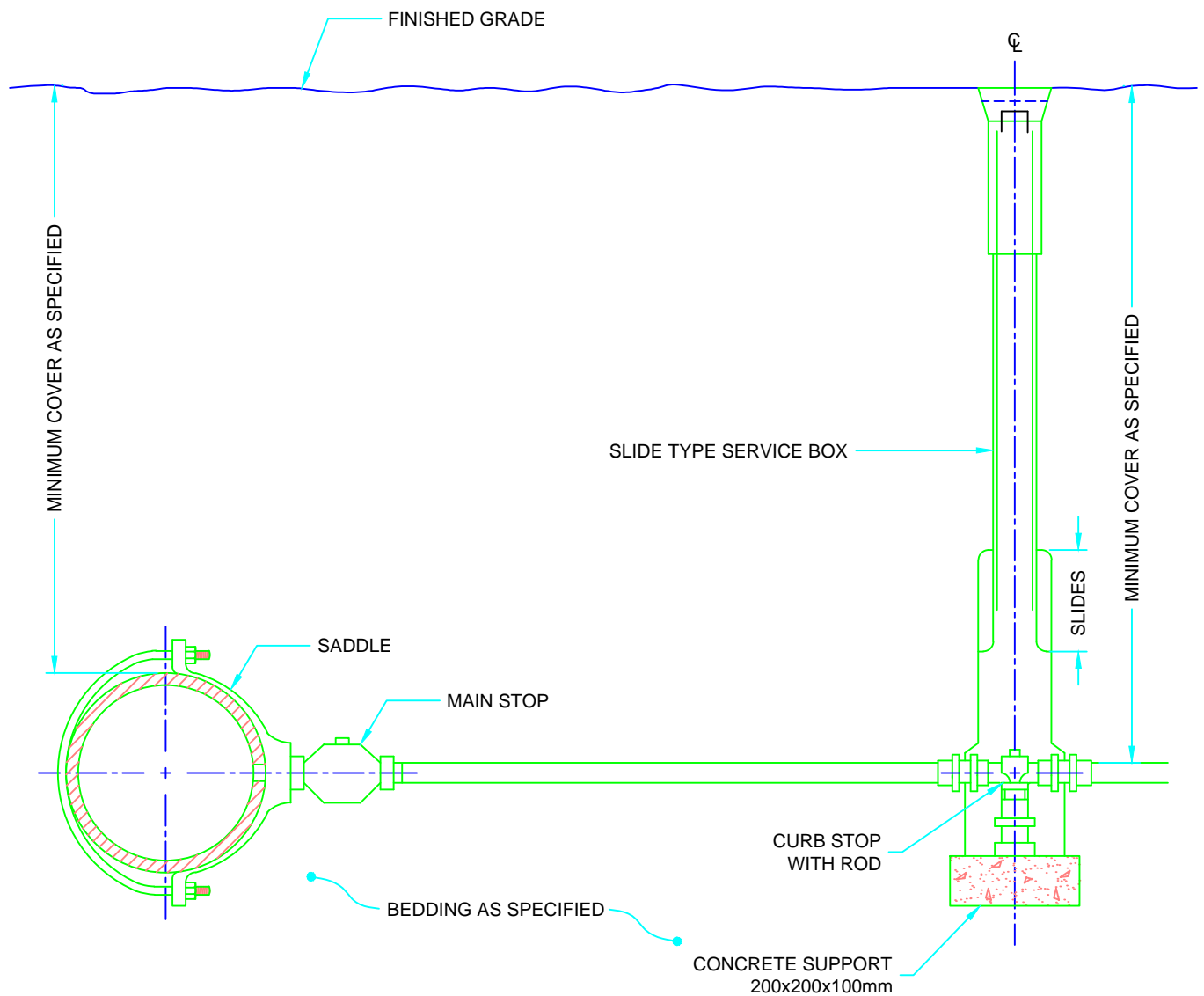
**MASTER  
SPECIFICATIONS**

**WATER SERVICE CONNECTION**  
19 and 25mm DIAMETER SIZES

DRAWING NUMBER 04510

DATE: MARCH 2016

SCALE: N.T.S.



**NOTES:**

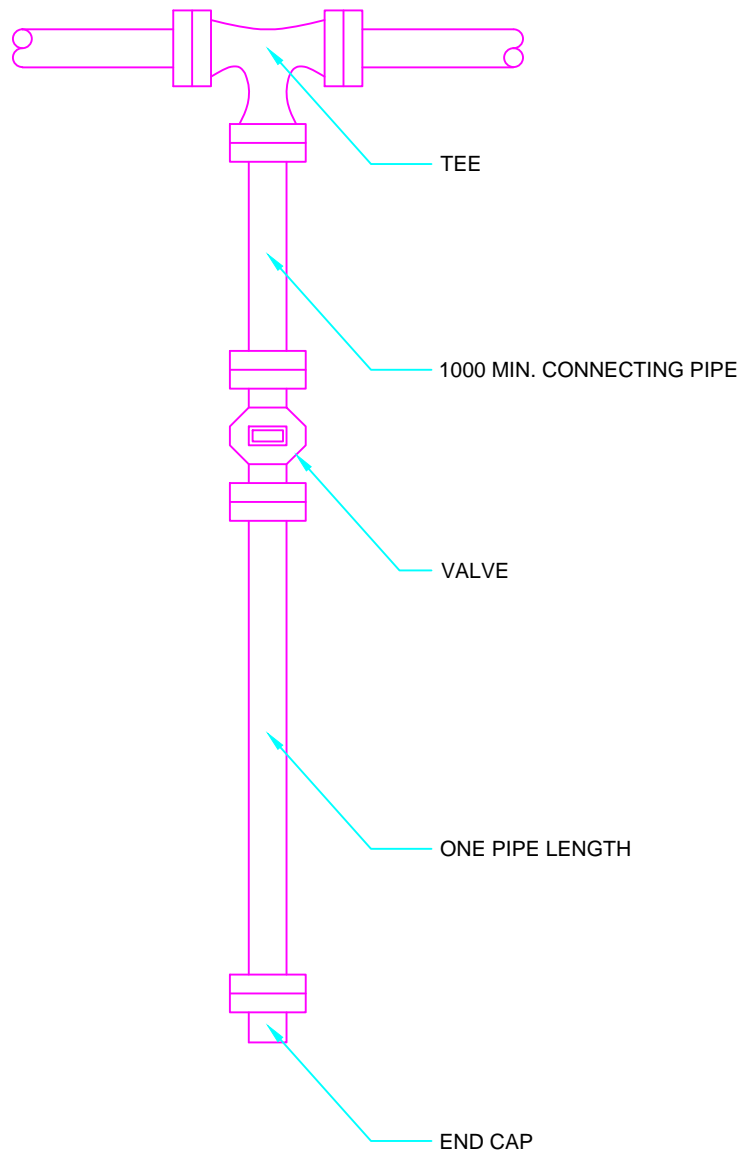
1. COUPLINGS SHALL NOT BE PERMITTED UNLESS THE SERVICE LENGTH EXCEEDS 20m BETWEEN THE MAIN STOP AND CURB STOP.
2. ALL WATER SERVICES SHALL BE INSTALLED 90° TO THE LONGITUDINAL AXIS OF THE WATERMAIN.
3. BACKFILL MATERIAL WITHIN 500mm OF SERVICE BOX SHALL BE NATIVE OR IMPORTED, AS SPECIFIED.
4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

**MASTER  
SPECIFICATIONS**

**WATER SERVICE CONNECTION**  
32, 38, and 50mm DIAMETER SIZES

DRAWING NUMBER 04520

DATE: MARCH 2016  
SCALE: N.T.S.



**NOTES:**

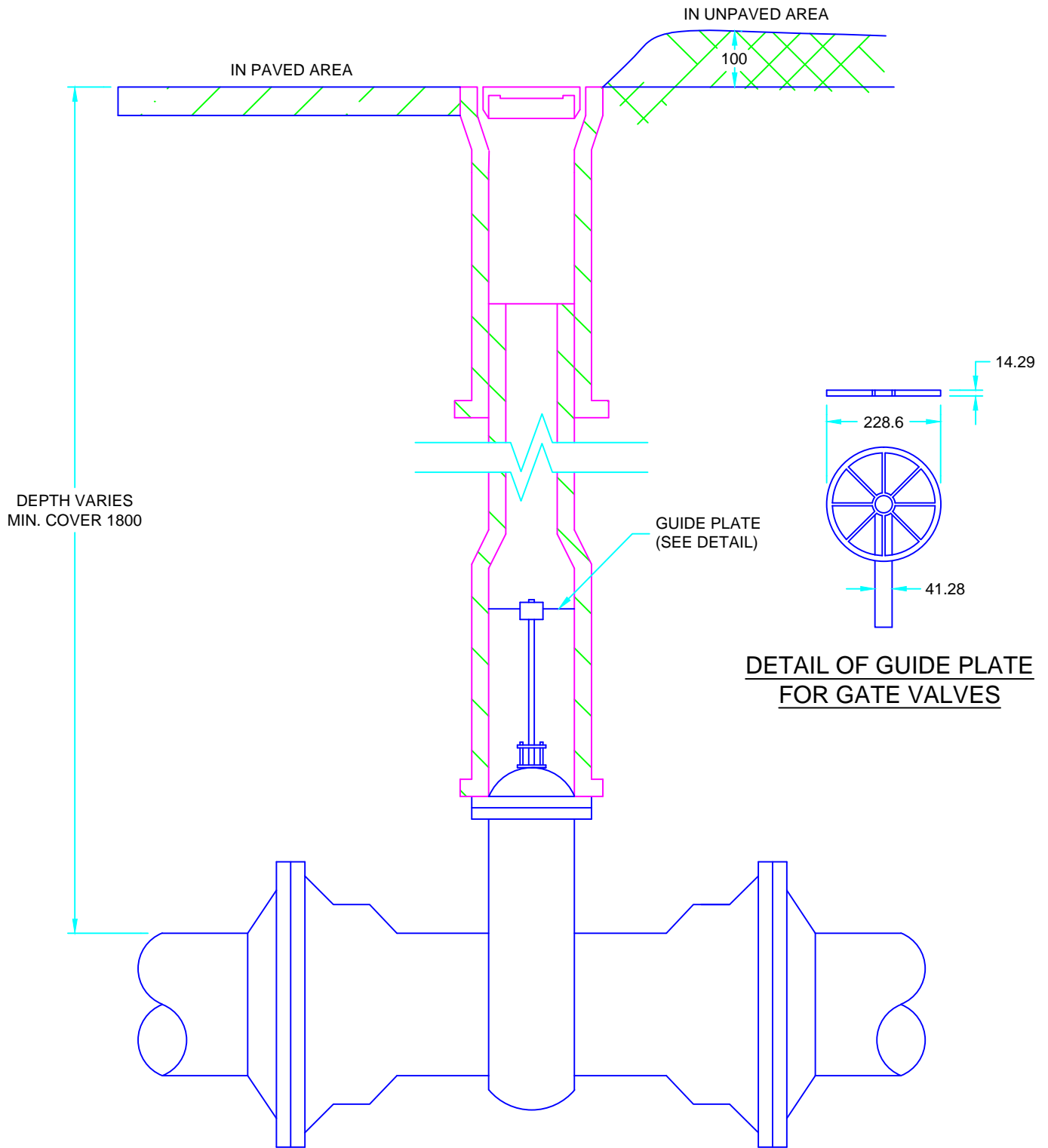
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

**MASTER  
SPECIFICATIONS**

**TYPICAL WATERMAIN STUB DETAIL**

DRAWING NUMBER 04530

DATE: MARCH 2016  
SCALE: N.T.S.



**SLIDING TYPE VALVE BOX**

**NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

**MASTER  
SPECIFICATIONS**

**SLIDING TYPE VALVE BOX**

DRAWING NUMBER

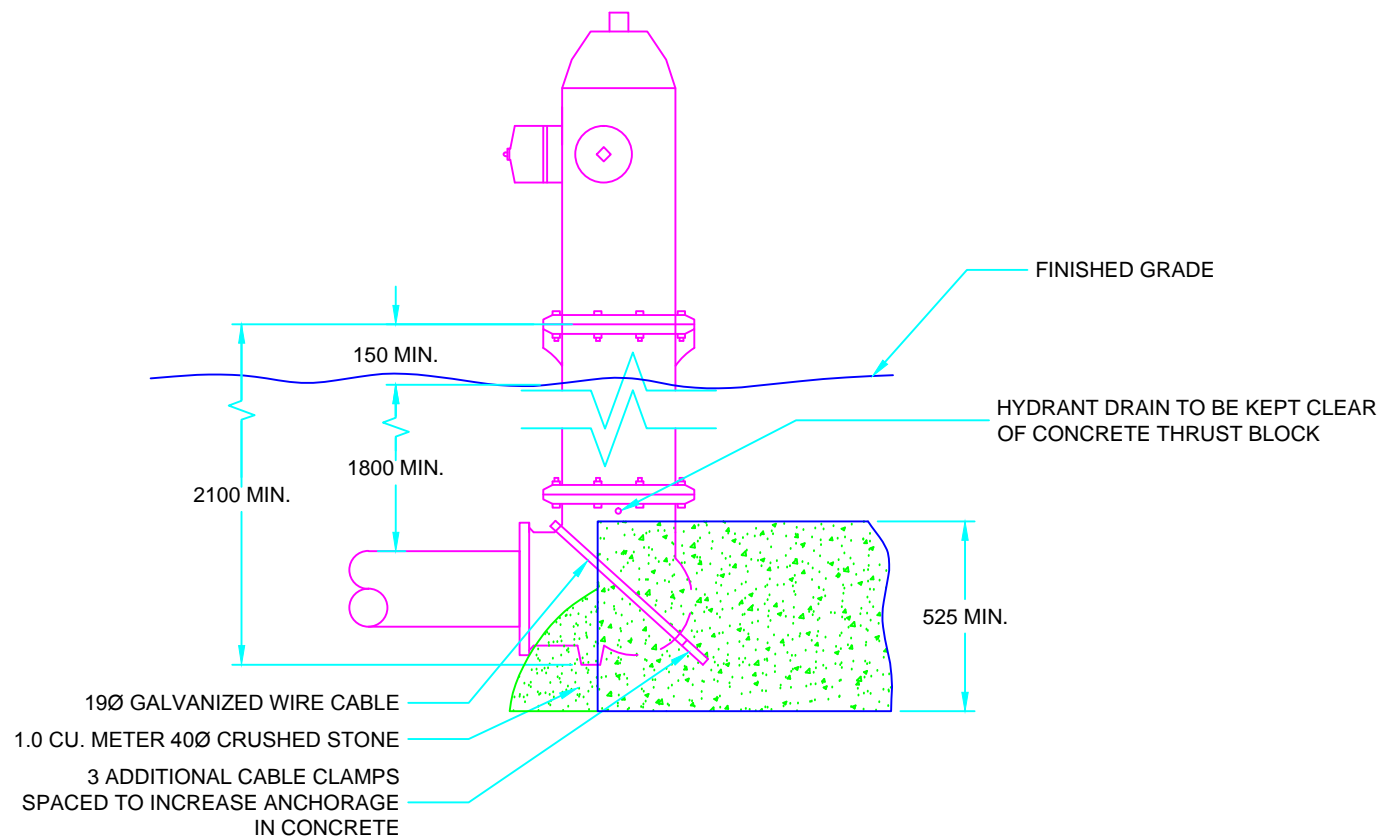
04540

DATE:

MARCH 2016

SCALE:

N.T.S.



**NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
2. MECHANICAL JOINT RESTRAINTS CAN BE USED IN LIEU OF THRUST BLOCKS AT THE DISCRETION OF THE DESIGNER.

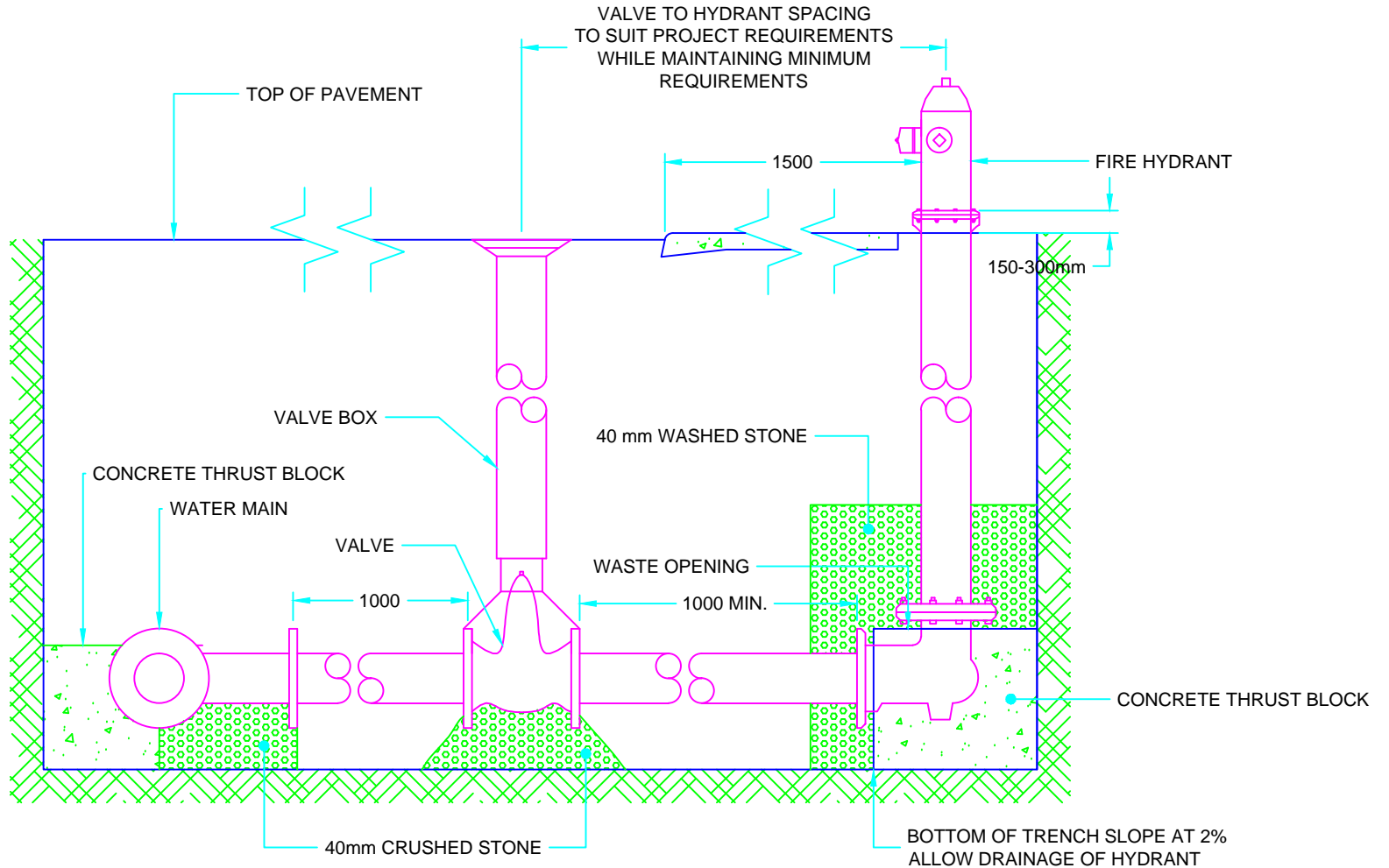
MASTER  
SPECIFICATIONS

TYPICAL HYDRANT DETAIL

DRAWING NUMBER 04550

DATE:  
MARCH 2016

SCALE:  
N.T.S.



**NOTES:**

1. HYDRANT LEADS TO BE 150 mm DIAMETER PIPE.
2. CONCRETE FOR THRUST BLOCKS TO BE 25 MPa.
3. HYDRANT DRAIN TO BE KEPT CLEAR OF CONCRETE THRUST BLOCK.
4. TEES FOR FIRE HYDRANT LATERALS TO BE 150 mm OFF ALL DIAMETER LINES. ALL LATERALS TO BE 150 mm DIAMETER PIPE.
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

MASTER  
SPECIFICATIONS

HYDRANT CONNECTION

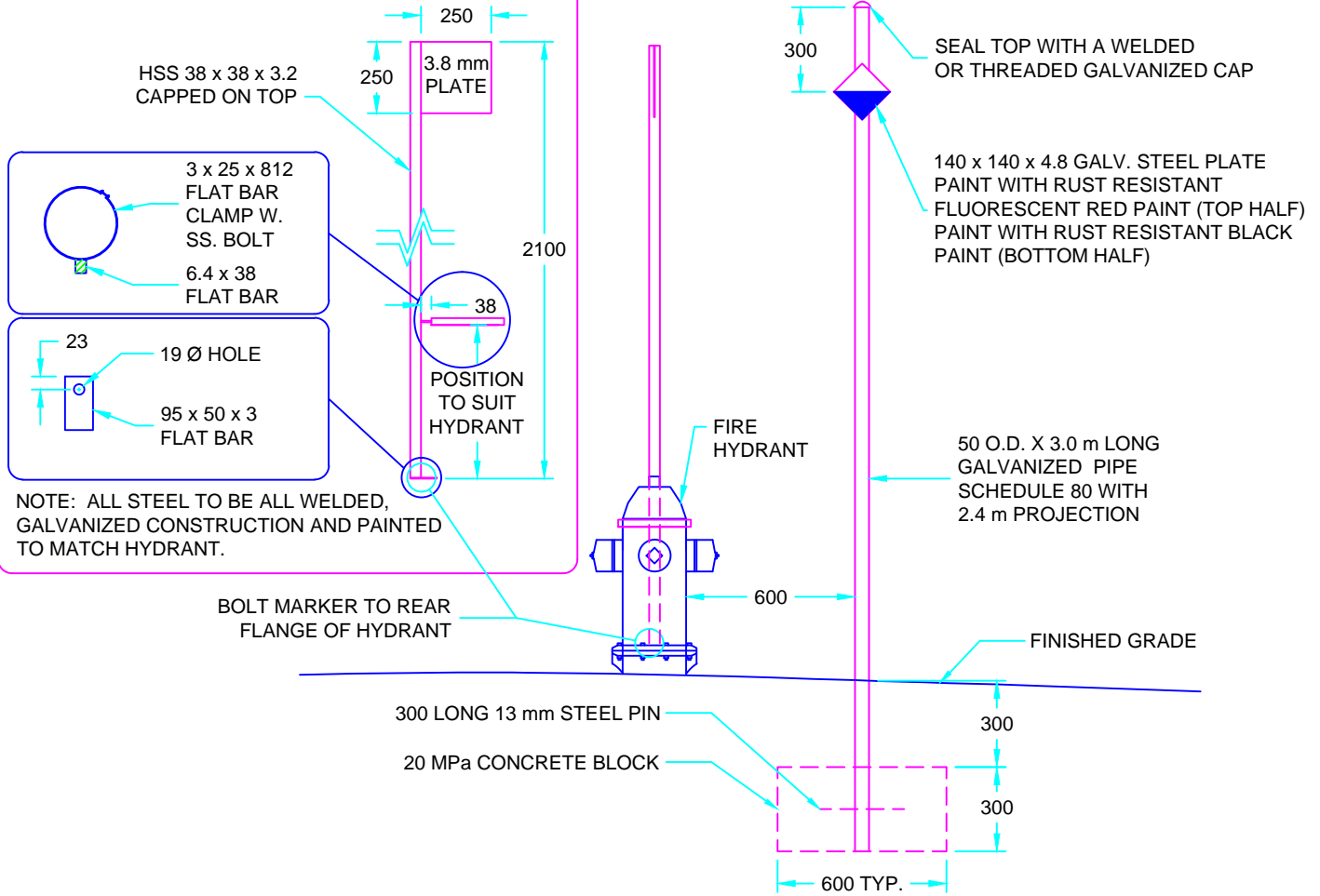
DRAWING NUMBER 04560

DATE:  
MARCH 2022

SCALE:  
N.T.S.

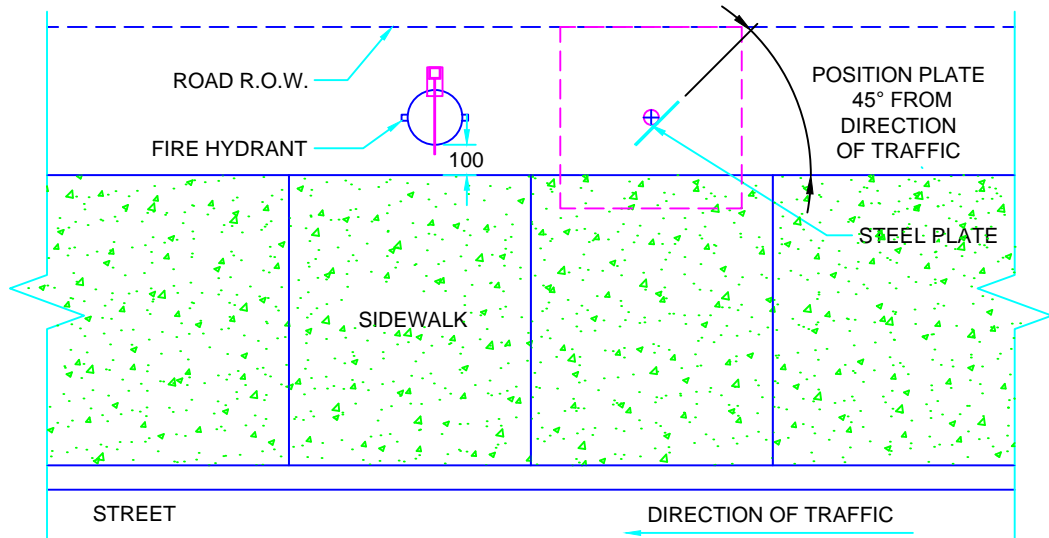
### HYDRANT CONNECTED MARKER

### ISOLATED HYDRANT MARKER



BOLT MARKER TO REAR FLANGE OF HYDRANT

### SECTION



### PLAN

#### NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. INSTALL HYDRANT CONNECTED MARKER OR ISOLATED HYDRANT MARKER TO SUIT PROJECT REQUIREMENTS

MASTER SPECIFICATIONS

### HYDRANT MARKER

DRAWING NUMBER

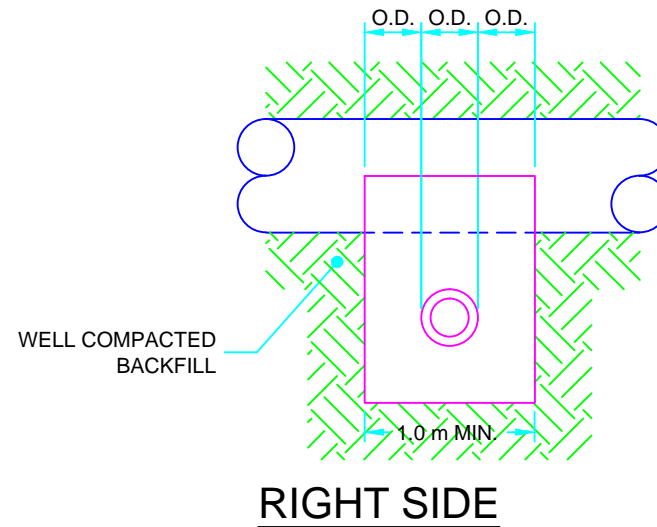
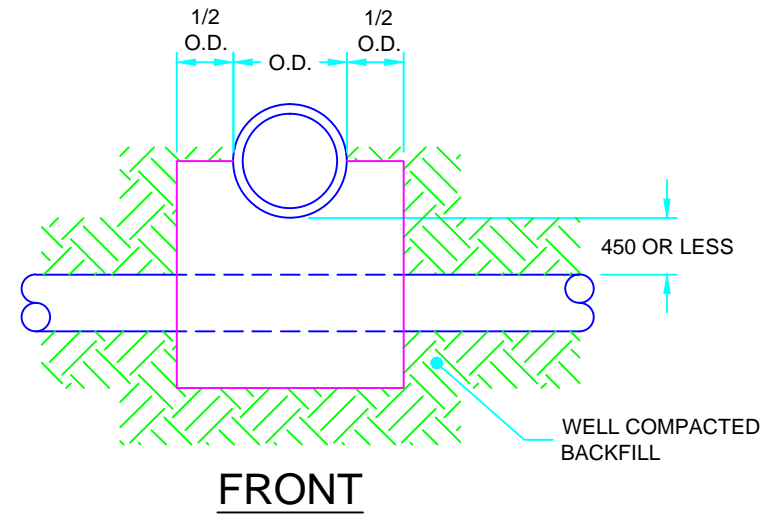
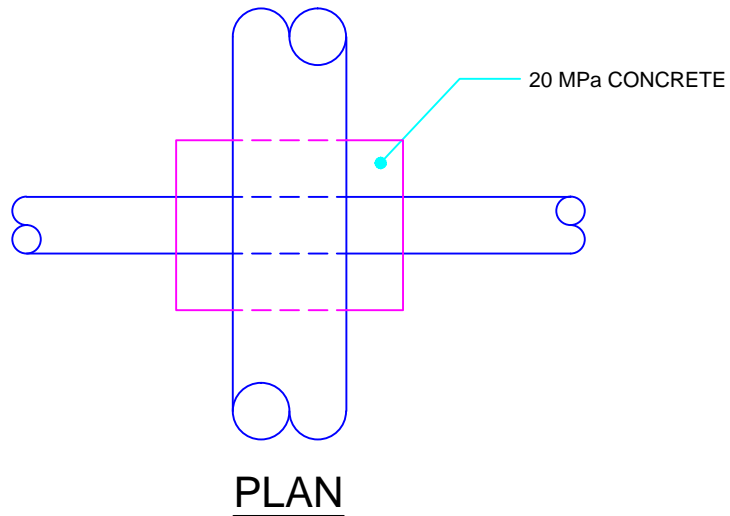
04570

DATE:

MARCH 2016

SCALE:

N.T.S.



**NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
2. SEWER PIPE SHALL BE INSTALLED SUCH THAT ITS JOINTS ARE AS FAR AS POSSIBLE FROM THE PIPE CROSSING. TO ACHIEVE THIS, JOINTS SHALL BE STAGGERED UPON APPROACH TO ENSURE THE MIDDLE OF THE SEWER PIPE IS AT THE POINT OF CROSSING.

MASTER  
SPECIFICATIONS

CONCRETE SUPPORT CRADLE

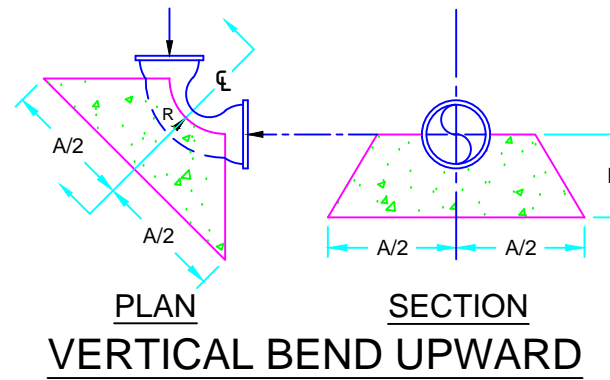
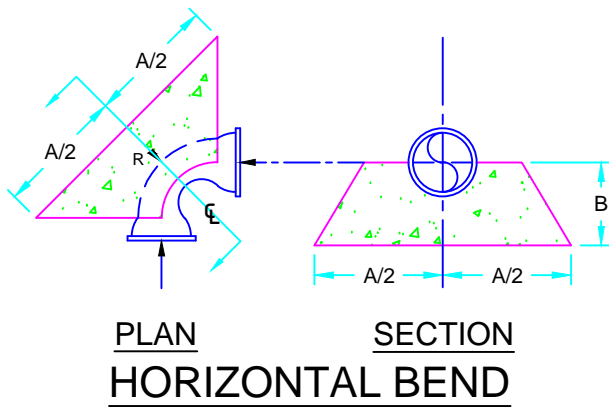
DRAWING NUMBER 04580

DATE:  
MARCH 2016

SCALE:  
N.T.S.

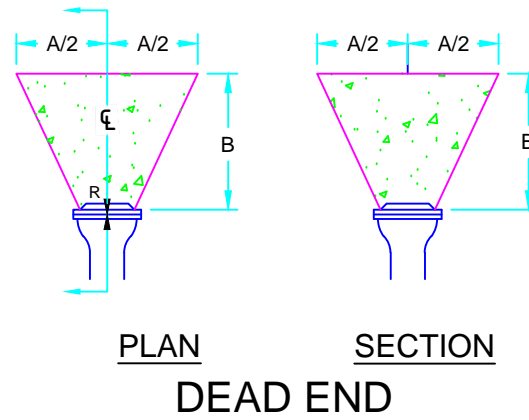
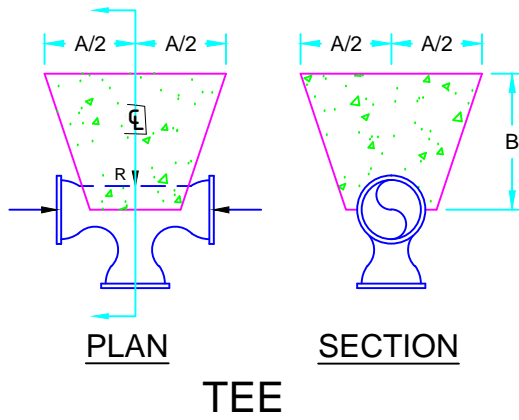


NOMINAL DIAMETER (mm)	EFFECTIVE AREA (m <sup>2</sup> )	BENDS --- HORIZONTAL & VERTICAL --- UP																				TEE & DEAD END				
		90°					45°					22 1/2°					11 1/4°									
		R	b AREA	A	B	CONC	R	b AREA	A	B	CONC	R	b AREA	A	B	CONC	R	b AREA	A	B	CONC	R	b AREA	A	B	CONC
100	0.012	1.74	0.14	375	300	0.04	0.94	0.08	300	300	0.04	0.37	0.03	300	300	0.04	0.24	0.02	300	300	0.04	1.23	0.10	375	450	0.04
150	0.024	3.61	0.30	525	300	0.04	1.95	0.16	450	300	0.04	1.00	0.08	300	300	0.04	0.50	0.04	300	300	0.04	2.55	0.21	450	450	0.04
200	0.042	6.21	0.51	750	450	0.19	3.36	0.27	525	450	0.04	1.71	0.14	375	450	0.04	0.86	0.07	300	450	0.04	4.39	0.36	600	450	0.08
250	0.063	9.21	0.75	900	450	0.19	5.03	0.41	675	450	0.08	2.61	0.21	450	450	0.04	1.29	0.11	375	450	0.04	6.58	0.54	750	450	0.19
300	0.088	13.24	1.09	1100	450	0.38	7.12	0.58	750	450	0.19	3.65	0.30	525	450	0.04	1.84	0.15	375	450	0.04	9.34	0.76	900	525	0.19



### ABBREVIATIONS:

- R - REACTION IN 1000kg
- b - MINIMUM BEARING AREA AT SOIL TO CONCRETE FACE IN m<sup>2</sup>
- CONC - VOLUME OF CONCRETE IN m<sup>3</sup>
- A & B - DIMENSION OF CONCRETE IN mm UNLESS OTHERWISE SHOWN



### NOTES:

1. CONCRETE SHALL BE 25MPa 28 DAY STRENGTH.
2. BLOCKS SHALL BE POURED DIRECTLY AGAINST UNDISTURBED SOIL AS INDICATED.
3. DESIGN DATA - STATIC PRESSURE 1000KPa.  
- MINIMUM BEARING CAPACITY OF SOIL 120 KPa.
4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

MASTER SPECIFICATIONS

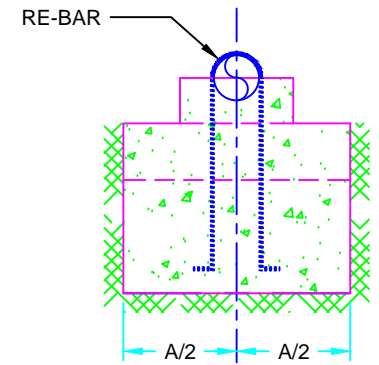
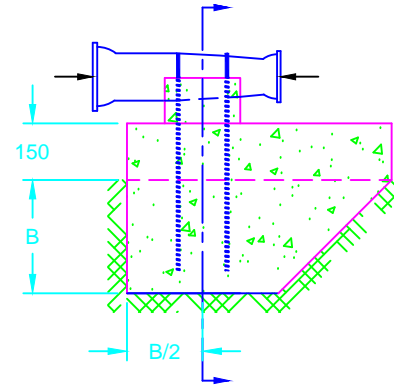
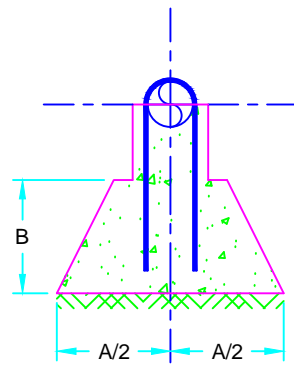
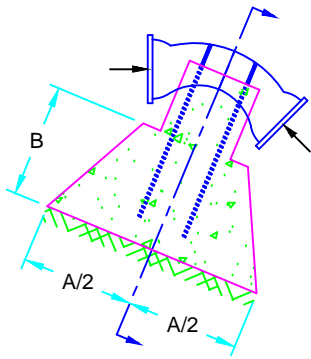
WATERMAIN THRUST BLOCKS A

DRAWING NUMBER 04590

DATE:  
MARCH 2016

SCALE:  
N.T.S.

NOMINAL DIAMETER (mm)	EFFECTIVE AREA (m <sup>2</sup> )	VERTICAL BENDS DOWN																				NOMINAL DIAMETER (mm)	EFFECTIVE AREA (m <sup>2</sup> )	REDUCERS				
		90°					45°					22 1/2°					11 1/4°							R	RE-BAR	A	B	CONC
		R	RE-BAR	A	B	CONC	R	RE-BAR	A	B	CONC	R	RE-BAR	A	B	CONC	R	RE-BAR	A	B	CONC							
100	0.012	1.74	15M	1150	525	0.75	0.94	15M	900	450	0.38	0.37	15M	750	450	0.19	0.24	15M	750	450	0.19	100 X 150	0.012	1.32	15M	900	450	0.57
150	0.025	3.61	20M	1525	750	1.72	1.95	20M	1225	600	0.98	1.00	15M	900	450	0.38	0.50	15M	900	450	0.38	150 X 200	0.017	1.84	15M	900	600	0.57
200	0.042	6.21	25M	1825	900	2.87	3.36	20M	1450	675	1.53	1.71	15M	1075	525	0.76	0.86	15M	900	450	0.38	150 X 250	0.038	4.03	15M	1200	750	1.15
250	0.063	9.21	25M	2050	975	4.20	5.03	25M	1675	750	2.29	2.61	20M	1375	675	1.15	1.29	15M	1075	525	0.57	150 X 300	0.064	6.80	20M	1200	900	1.34
300	0.088	13.24	25M	2275	1150	5.92	7.12	25M	1900	900	3.25	3.65	20M	1525	750	1.72	1.84	20M	1150	525	0.76	200 X 300	0.047	4.97	15M	1200	750	1.15



ELEVATION

SECTION

ELEVATION

SECTION

VERTICAL BEND DOWN

REDUCER

NOTES:

1. CONCRETE SHALL BE 25 MPa 28 DAY STRENGTH.
2. RE-BARS, REINFORCING STEEL STRUCTURAL GRADE 125 MPa MINIMUM WORKING STRESS WHEN EXPOSED TO SOIL BARS SHALL BE COATED WITH ASPHALT PAINT TO PREVENT CORROSION.
3. BLOCKS SHALL BE POURED DIRECTLY AGAINST UNDISTURBED SOIL AS INDICATED.
4. DESIGN DATA - STATIC PRESSURE 1000KPa.  
- MINIMUM BEARING CAPACITY OF SOIL 120 KPa.
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

ABBREVIATIONS:

- |       |   |
|-------|---|
| R     | REACTION IN 1000 Kg.                                |
| CONC. | VOLUME OF CONCRETE IN m <sup>3</sup> .              |
| A & B | DIMENSION OF CONCRETE IN mm UNLESS OTHERWISE NOTED. |

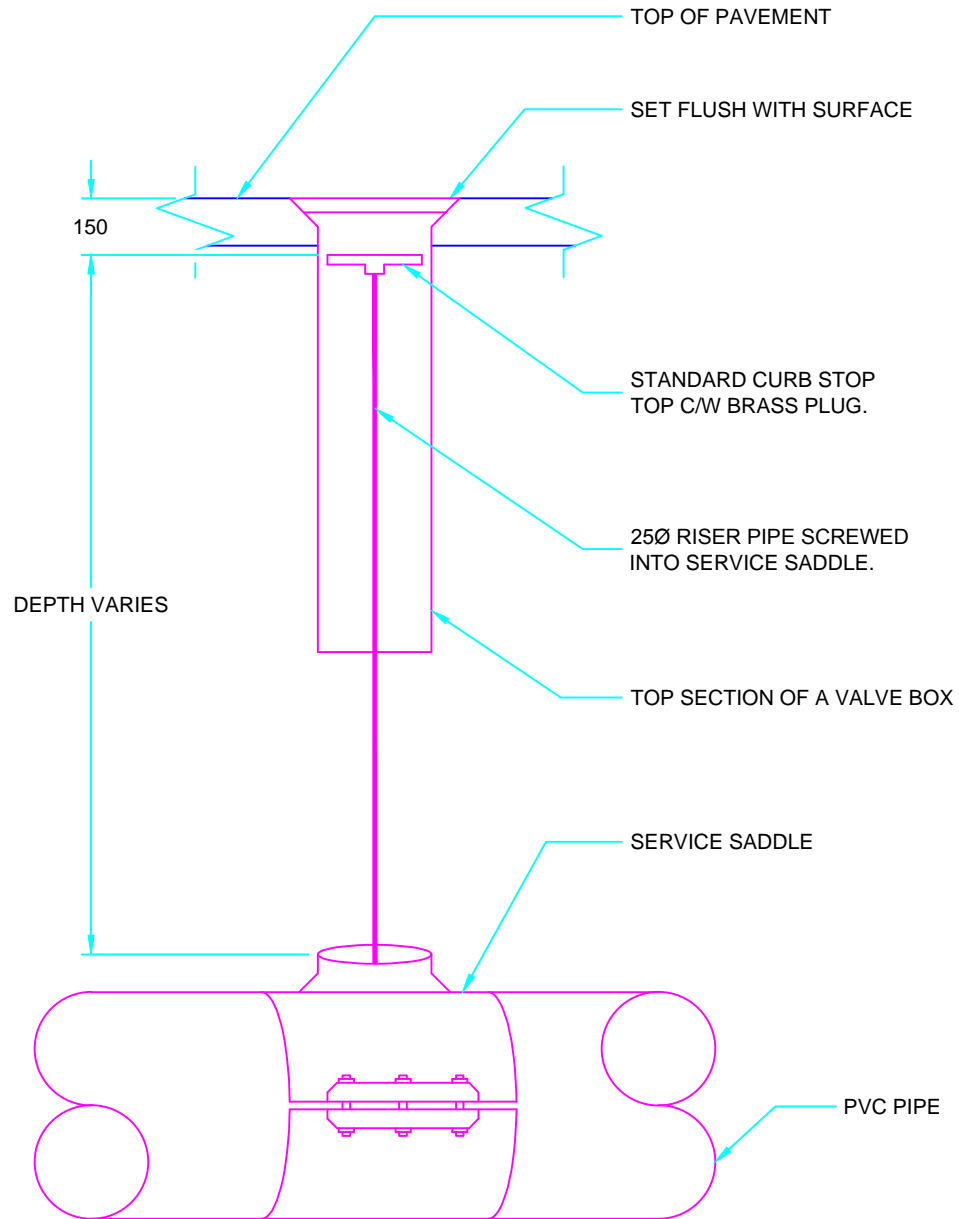
MASTER SPECIFICATIONS

WATERMAIN THRUST BLOCKS B

DRAWING NUMBER 04600

DATE: MARCH 2022

SCALE: N.T.S.



**NOTES:**

1. SOUNDING POINT TO BE LOCATED 250m FROM NEAREST VALVE AND SPACED 250m APART.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

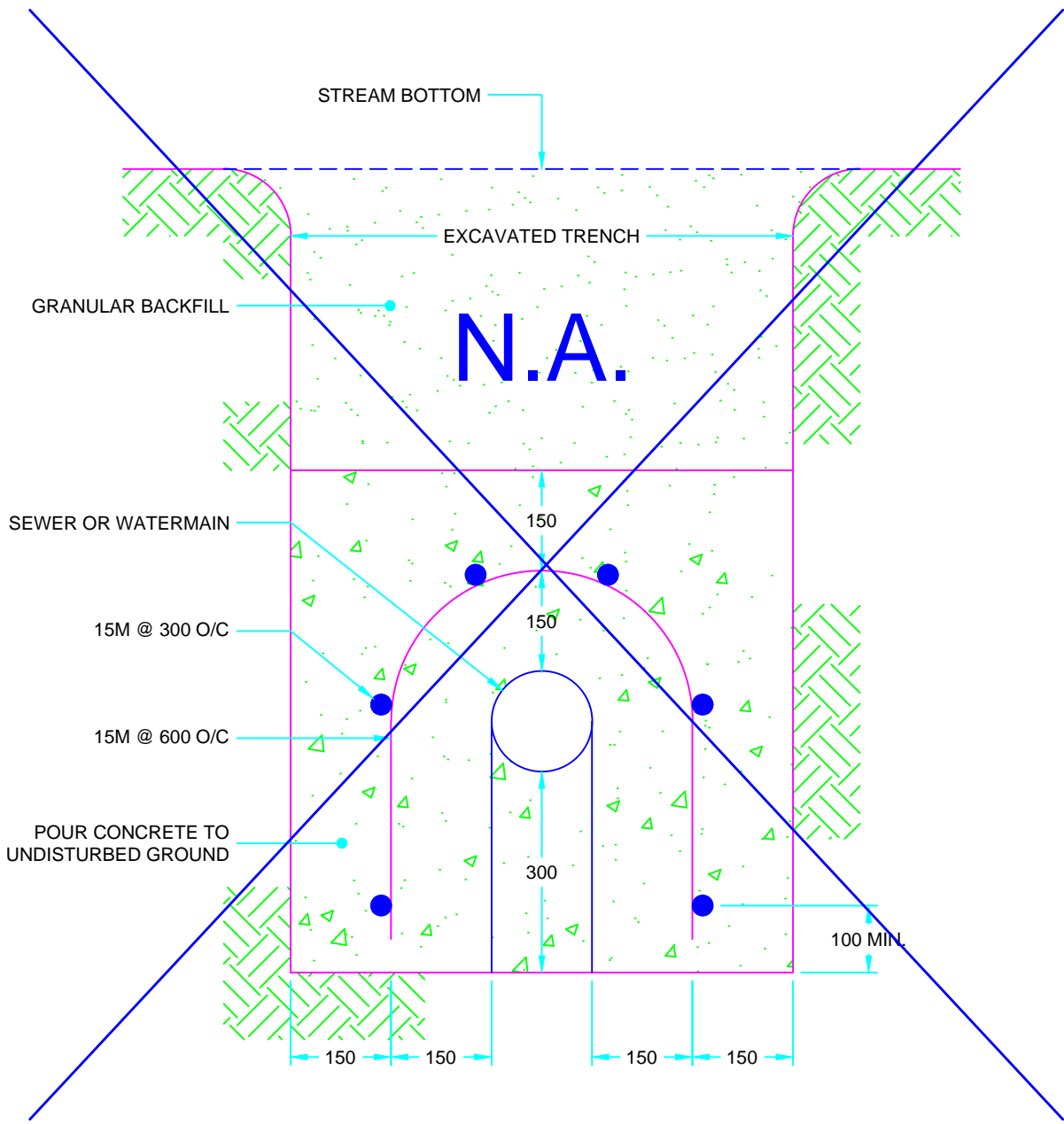
**MASTER  
SPECIFICATIONS**

**SOUNDING POINT / MARKER DETAIL FOR  
NON-METALLIC WATERMAIN**

DRAWING NUMBER      04610

DATE:                      MARCH 2016

SCALE:                    N.T.S.



## CONCRETE ENCASEMENT AT STREAM CROSSING

**NOTES:**

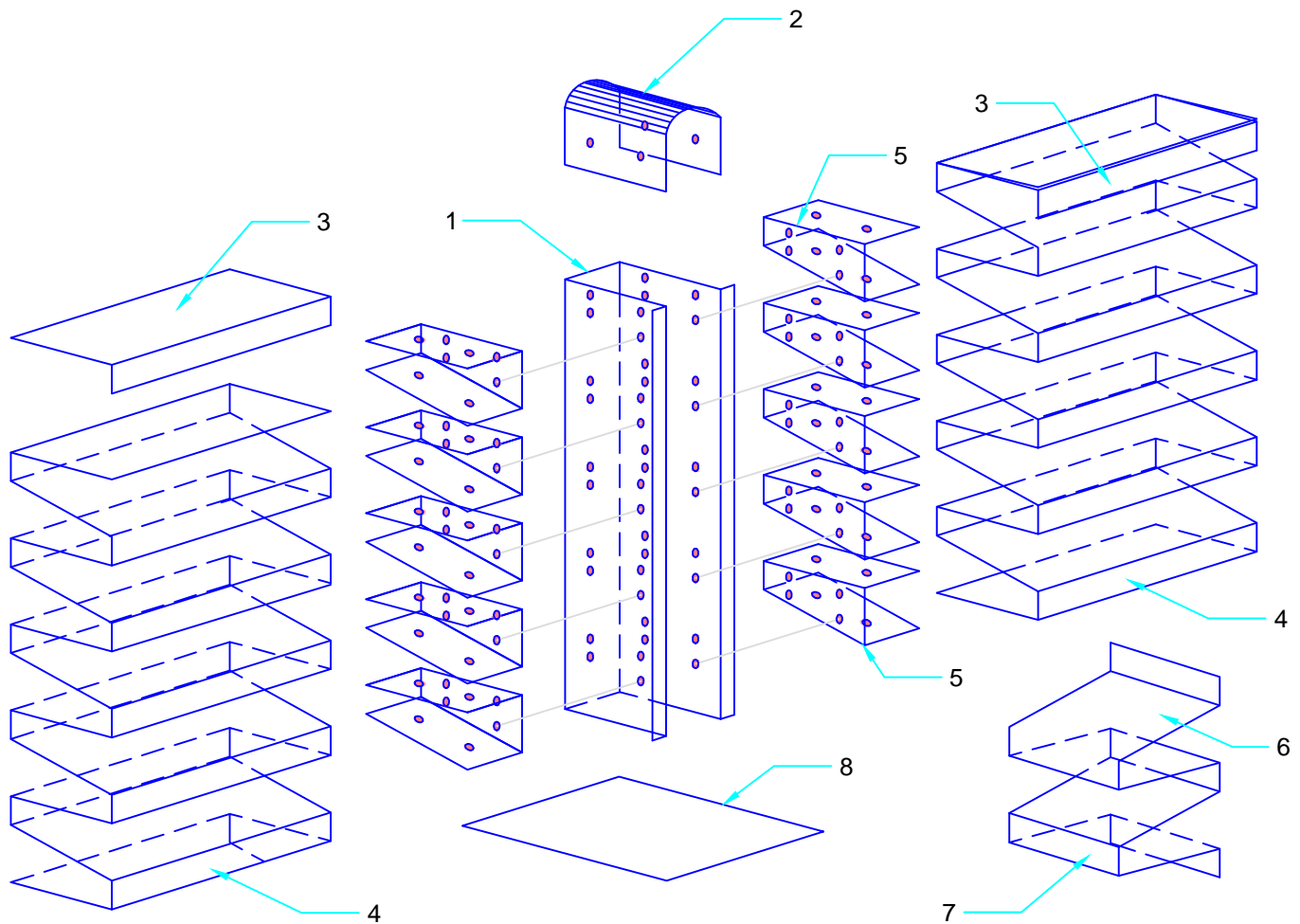
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
2. THIS PRACTICE IS NOT TO BE USED DUE TO PREMATURE BREAKS.

**MASTER SPECIFICATIONS**

### STREAM CROSSING ENCASEMENT

DRAWING NUMBER      04620

DATE:                      FEBRUARY 2019  
 SCALE:                    N.T.S.



## LIST AND DESCRIPTION OF UNITS

<u>NAME</u>		<u>DESCRIPTION</u>
1	VERTICAL CONNECTOR	VERTICAL MEMBER CONNECTING ALL OTHER MEMBERS
2	VERTICAL CONNECTOR CAP	COVER FOR FRONT VERTICAL CONNECTOR
3	STRINGER STIFFENER	HORIZONTAL LONGITUDINAL MEMBERS IN FRONT AND REAR WALLS
4	STRINGER	TOP FLANGE PROTECTOR
5	CONNECTING CHANNEL	CONNECTOR FOR ATTACHING STRINGERS TO VERTICAL CONNECTORS
6	SPACER	TRANSVERSE MEMBERS THAT SEPARATE THE FRONT AND REAR VERTICAL CONNECTORS
7	BOTTOM SPACER	SPECIAL BOTTOM TRANSVERSE MEMBER
8	GRADE PLATE	INSTALLATION PLATE ON WHICH THE VERTICAL CONNECTORS REST
9	32 x 16 BOLTS	
10	16 NUTS	
11	16 SPRING NUTS	

**MASTER  
SPECIFICATIONS**

## BIN TYPE RETAINING WALL

DRAWING NUMBER

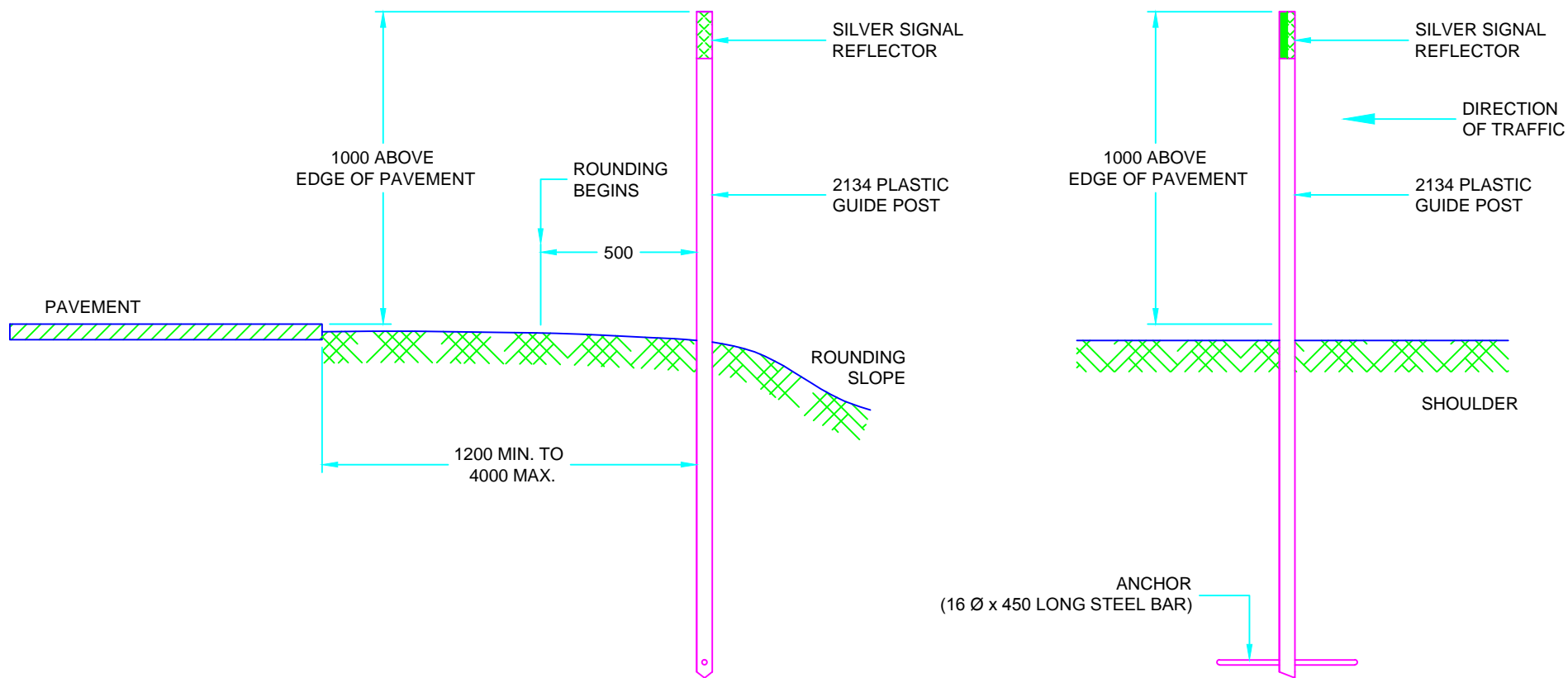
04630

DATE:

MARCH 2016

SCALE:

N.T.S.



FRONT VIEW

SIDE VIEW

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

MASTER  
SPECIFICATIONS

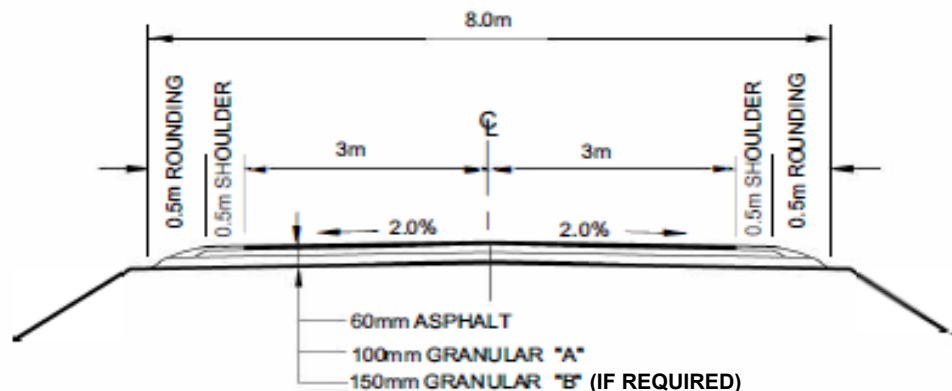
INSTALLATION OF PLASTIC  
GUIDE POSTS

DRAWING NUMBER 04640

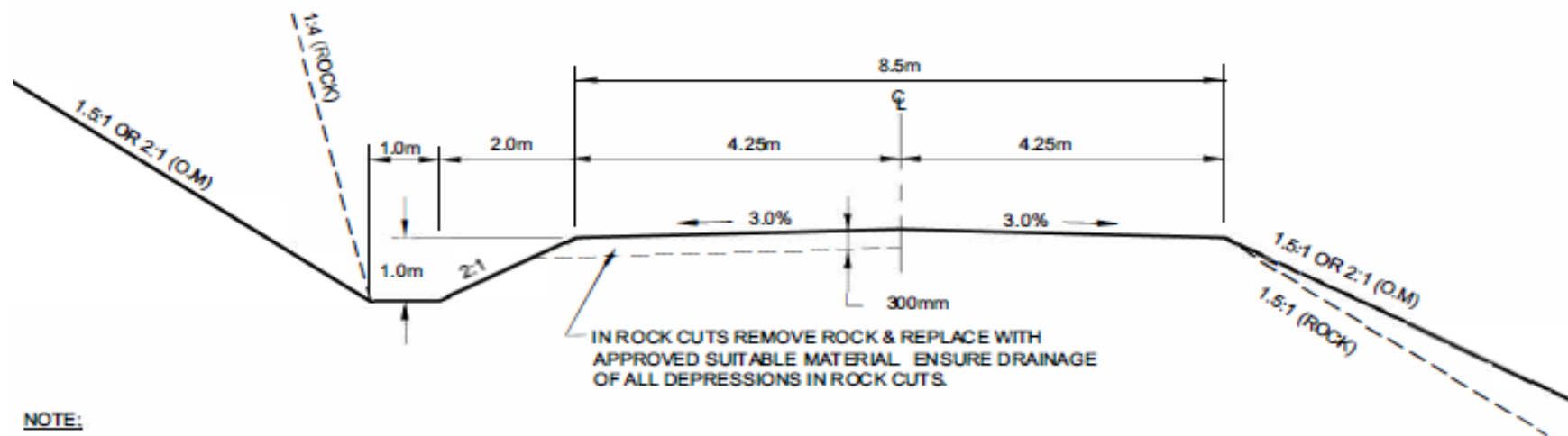
DATE:  
MARCH 2016

SCALE:  
N.T.S.

### MUNICIPAL ROAD



TYPICAL CROSS SECTION FOR MUNICIPAL ROAD FINAL CONSTRUCTION



**NOTE:**

IF SCARIFYING IS REQUIRED WIDTH OF SCARIFYING SHALL BE WIDTH OF PAVEMENT PLUS 300mm ON BOTH SIDES.

TYPICAL CROSS SECTION FOR MUNICIPAL ROAD SUB-GRADE CONSTRUCTION

MASTER SPECIFICATIONS

TYPICAL CROSS SECTION MUNICIPAL ROAD

DRAWING NUMBER 04650

DATE: MARCH 2022

SCALE: NTS