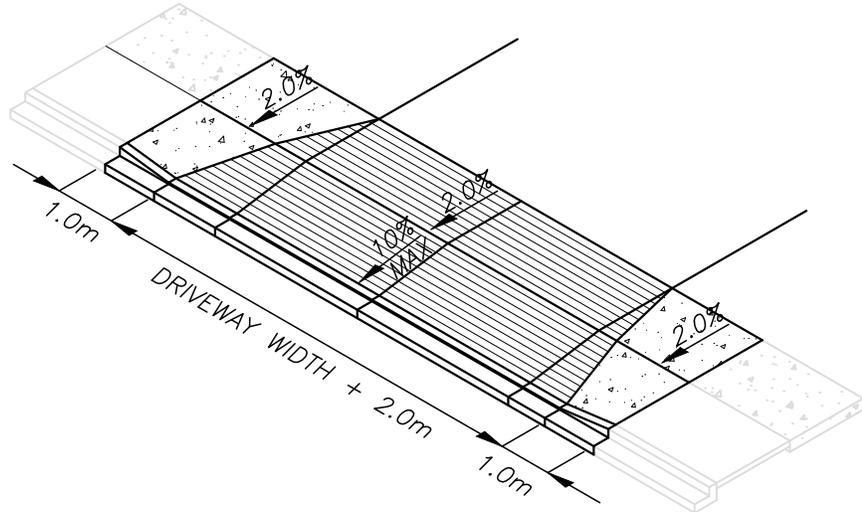
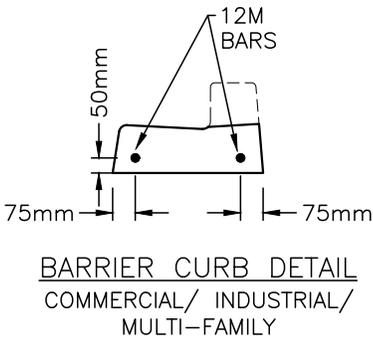
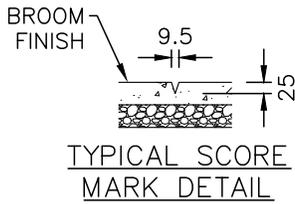
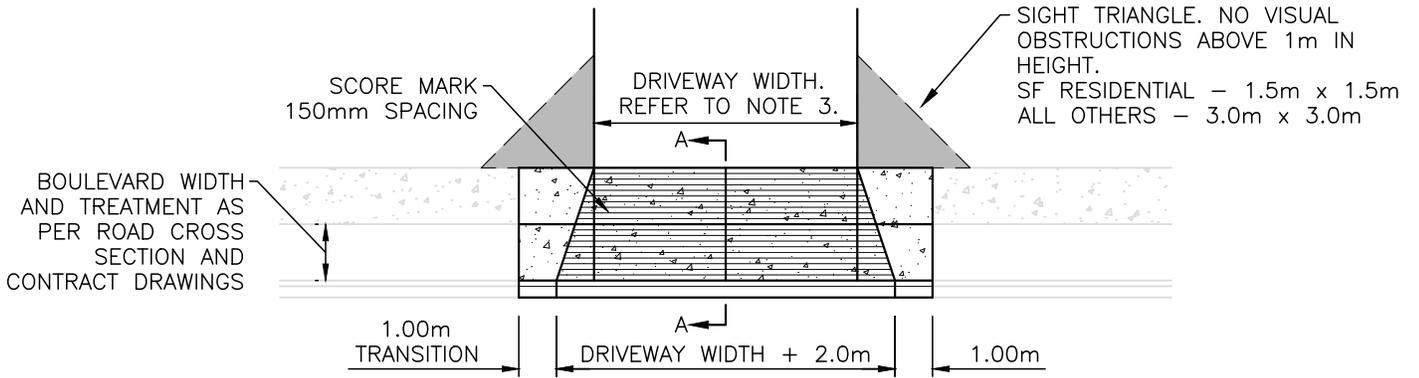
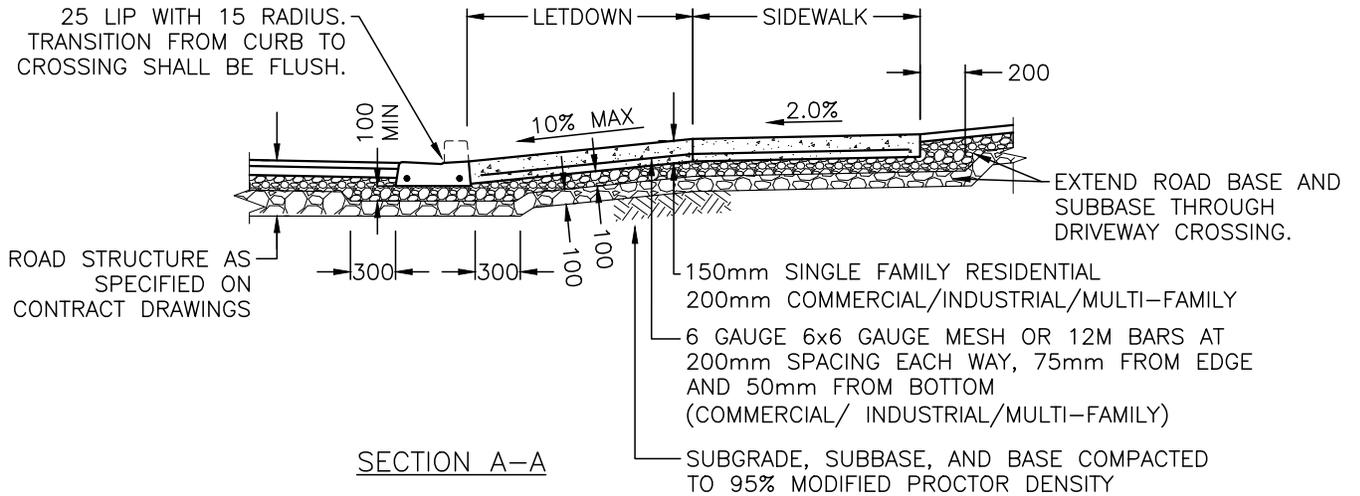


BYLAW NOTE



25 LIP WITH 15 RADIUS.
TRANSITION FROM CURB TO
CROSSING SHALL BE FLUSH.



NOTES:

1. DRIVEWAYS TO BE ORIENTATED AT 90° TO CURB, UNLESS OTHERWISE APPROVED.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. REFER TO BYLAW 7900 FOR DRIVEWAY WIDTHS. UPON DEMONSTRATED NEED (TURN PATH ANALYSIS OR CAPACITY ANALYSIS), A VARIANCE TO THESE STANDARDS MAY BE CONSIDERED BY CITY ENGINEER.

STANDARD
DETAIL
DRAWING

DATE:
OCT 31/22

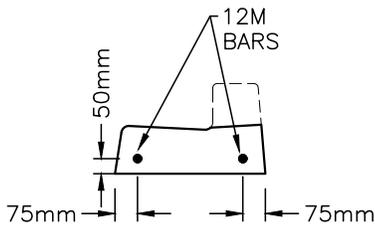
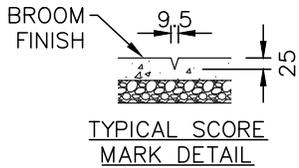
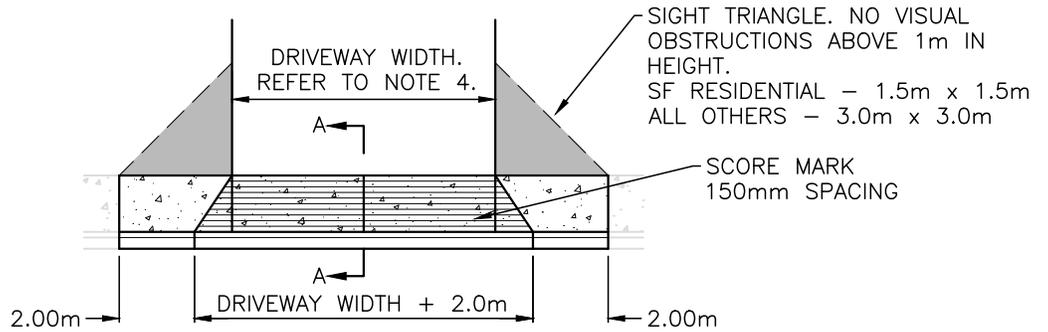
SCALE:
NTS

DRIVEWAY CROSSING FOR
BARRIER CURBS
SEPARATE SIDEWALK AND LETDOWN

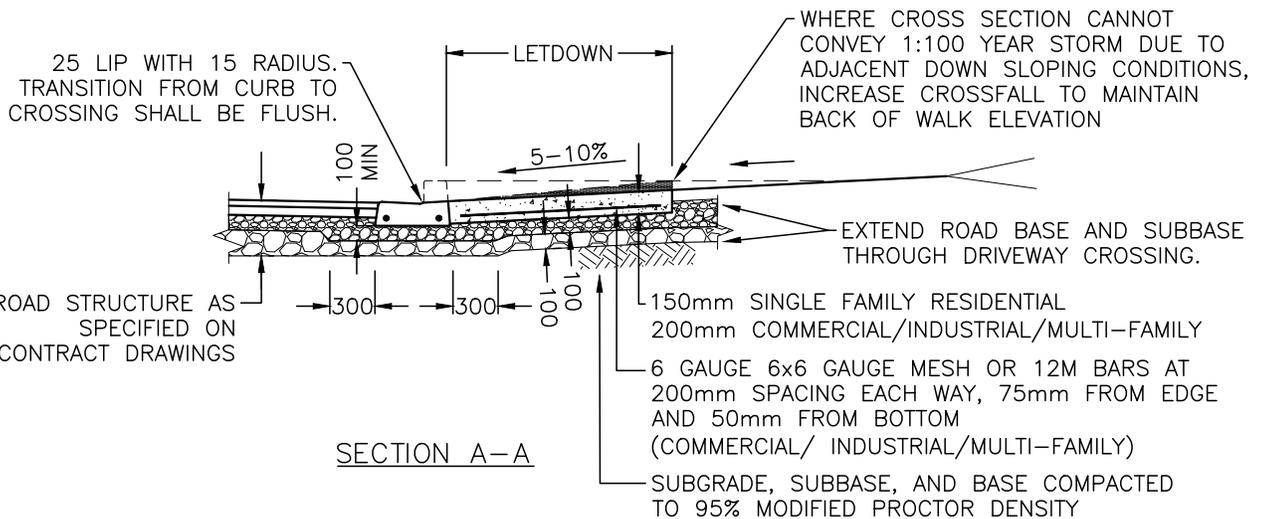
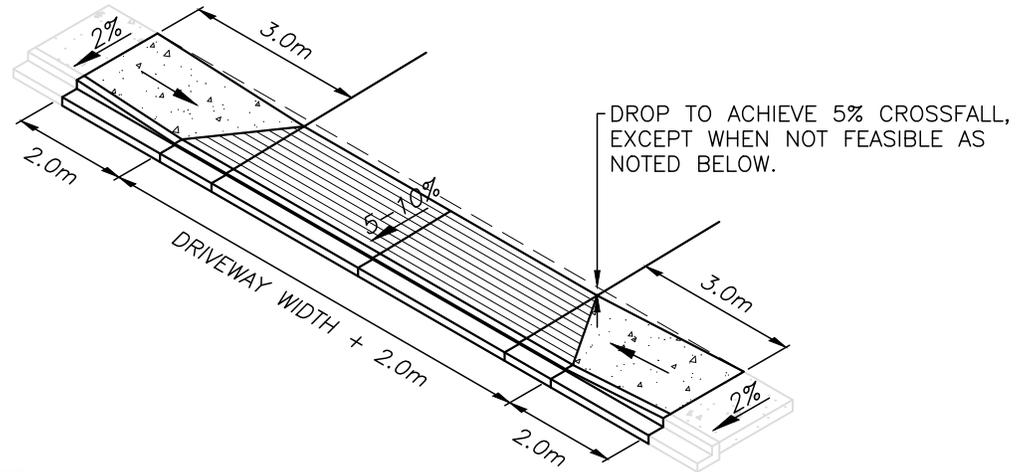
DWG. NO.

SS-C7a





BARRIER CURB DETAIL
COMMERCIAL/ INDUSTRIAL/
MULTI-FAMILY



NOTES:

1. THIS STANDARD IS TO BE USED WHERE SIDEWALK SEPARATION FROM CURB & GUTTER IS NOT POSSIBLE. SEE DRAWING SS-C7a FOR PREFERRED OPTION.
2. DRIVEWAYS TO BE ORIENTATED AT 90° TO CURB, UNLESS OTHERWISE APPROVED.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
4. REFER TO BYLAW 7900 FOR DRIVEWAY WIDTHS. UPON DEMONSTRATED NEED (TURN PATH ANALYSIS OR CAPACITY ANALYSIS), A VARIANCE TO THESE STANDARDS MAY BE CONSIDERED BY THE CITY ENGINEER.

**STANDARD
DETAIL
DRAWING**

DATE:
OCT 31/22

SCALE:
NTS

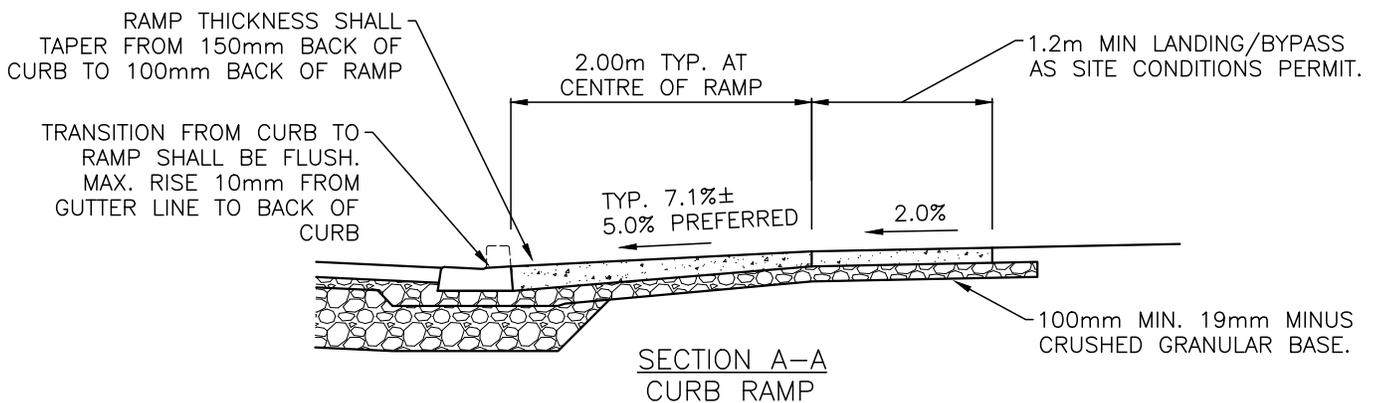
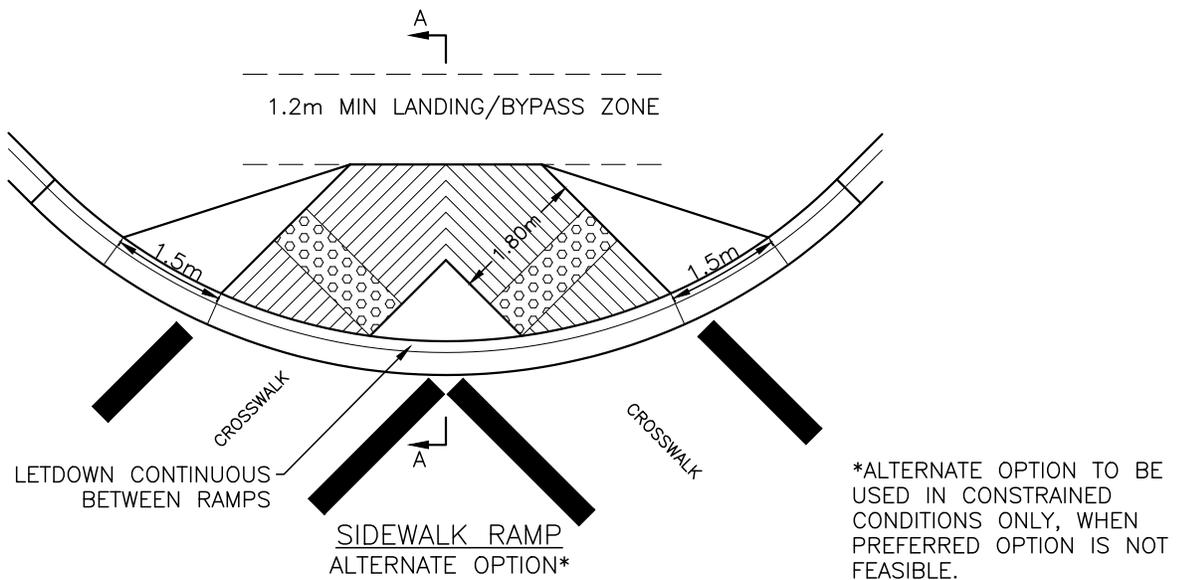
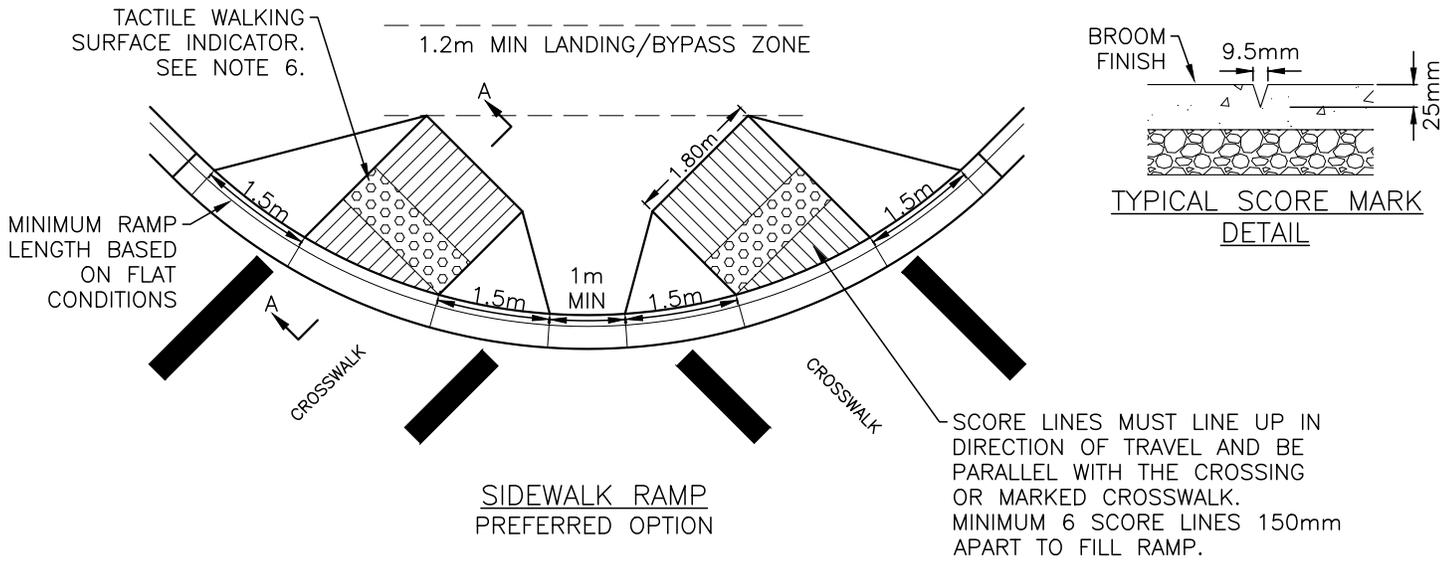
**DRIVEWAY CROSSING FOR
BARRIER CURBS**
COMBINED SIDEWALK AND LETDOWN

DWG. NO.

SS-C7b



BYLAW NOTE



NOTES:

1. STANDARD RAMP LENGTH : 2.0m TYP.(±) AT CENTRE OF RAMP.
2. STANDARD RAMP SLOPE: 7.1%(±) AT CENTRE OF RAMP.
3. PREFERRED RAMP SLOPE: 5% AT CENTRE OF RAMP WHERE VIABLE AND MAINTAINING THE LANDING/BYPASS ZONE.
4. MAX. SLOPE 8.3% (1:12) AT ANY POINT WHERE TOPOGRAPHY REQUIRES.
5. ADJUST LENGTH OF RAMP AS REQUIRED.
6. WHEN SITE CONDITIONS DO NOT PERMIT TYPICAL LAYOUT, CONTACT CITY ENGINEER FOR APPROVAL OF DESIGN.
7. REFER TO BYLAW 7900 FOR GUIDANCE AS TO WHEN TACTILE WALKING SURFACE INDICATORS ARE REQUIRED.

**STANDARD
DETAIL
DRAWING**

DATE:
JUNE 22/23

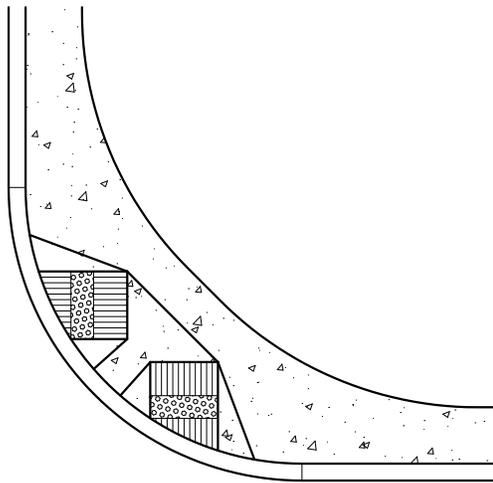
SCALE:
NTS

SIDEWALK RAMP DETAILS

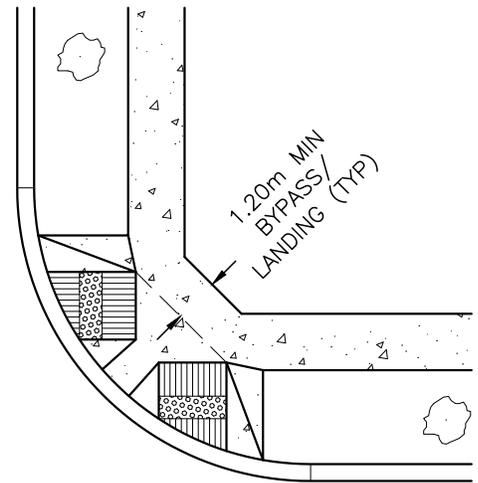
DWG. NO.

SS-C8

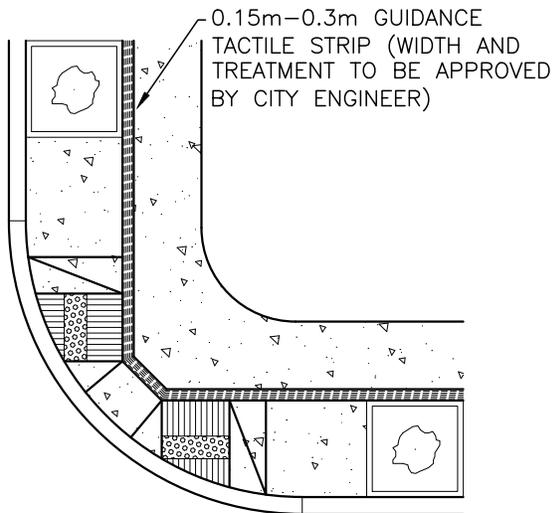




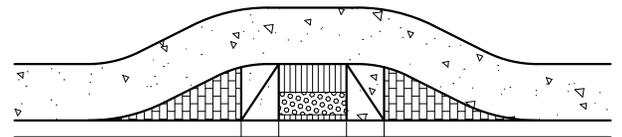
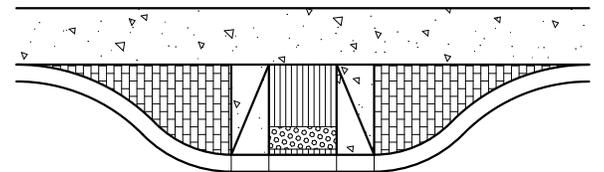
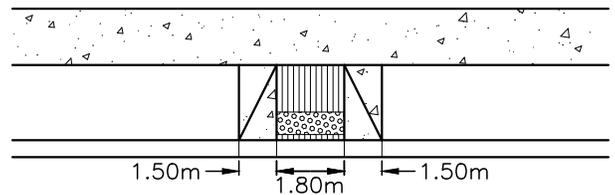
INTERSECTION
MONOLITHIC SIDEWALK



INTERSECTION
SEPARATED SIDEWALK



INTERSECTION
URBAN CENTRES WITH HARD
SURFACE BOULEVARD



MID-BLOCK / 'T' INTERSECTION
CROSSING OPTIONS

NOTES:

1. REFER TO DRAWING SS-C8 FOR SIDEWALK RAMP DETAILS
2. FOR THE DESIGN OF LOCAL AND COLLECTOR ROADS WITH ON-STREET PARKING, CURB EXTENSIONS SHALL BE INCLUDED BOTH AT INTERSECTIONS AND AT PEDESTRIAN CROSSINGS TO IMPROVE VISIBILITY. REFER TO DRAWINGS SS-R51, SS-R52, AND BYLAW 7900.
3. BOULEVARD TREATMENT AS PER LANDSCAPING SECTION 7.

**STANDARD
DETAIL
DRAWING**

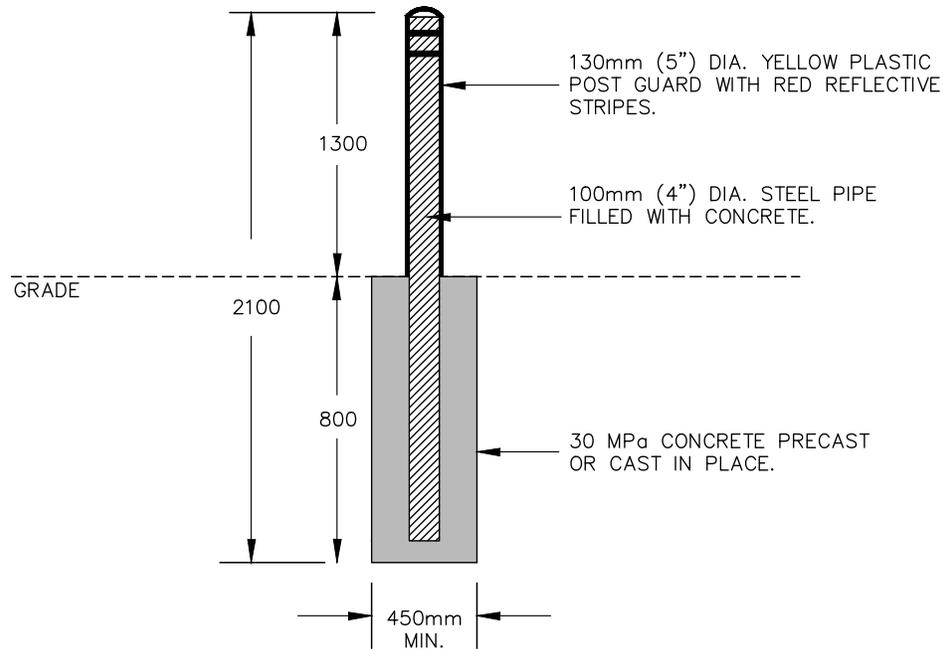
DATE:
SEPT 12/22
SCALE:
NTS

SIDEWALK RAMP LAYOUTS

DWG. NO.

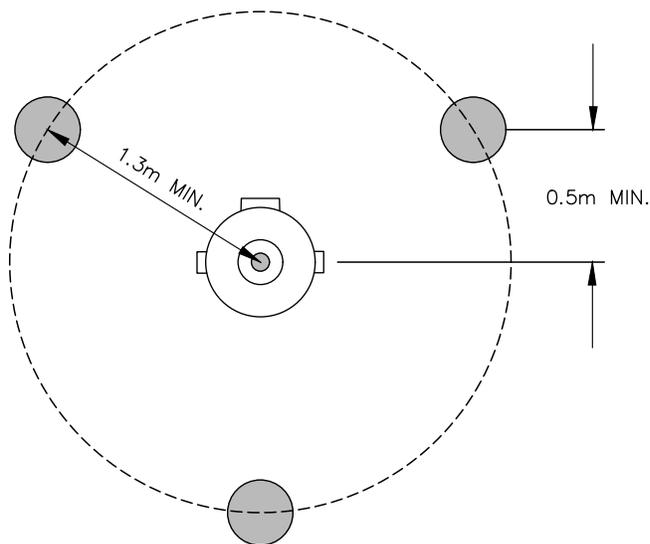
SS-C9





SLEEVE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS DIRECTIONS.

FOR HYDRANTS UNPROTECTED BY CURB:
 BOLLARDS SHALL BE A MINIMUM 1.3m MEASURED FROM THE CENTRE OF THE HYDRANT TO CENTRE OF BOLLARDS. OFFSET BOLLARDS FROM HYDRANT PORTS TO ALLOW FOR EASE OF HOSE CONNECTIONS.



OPTIONAL REAR BOLLARD
 WHERE VEHICLE ACCESS IS POSSIBLE

NOTE: REMOVABLE BOLLARDS TO BE INSTALLED WITH RECEIVER ASSEMBLY WITH HINGED LID AS PER APPROVED PRODUCTS LIST

**STANDARD
 DETAIL
 DRAWING**

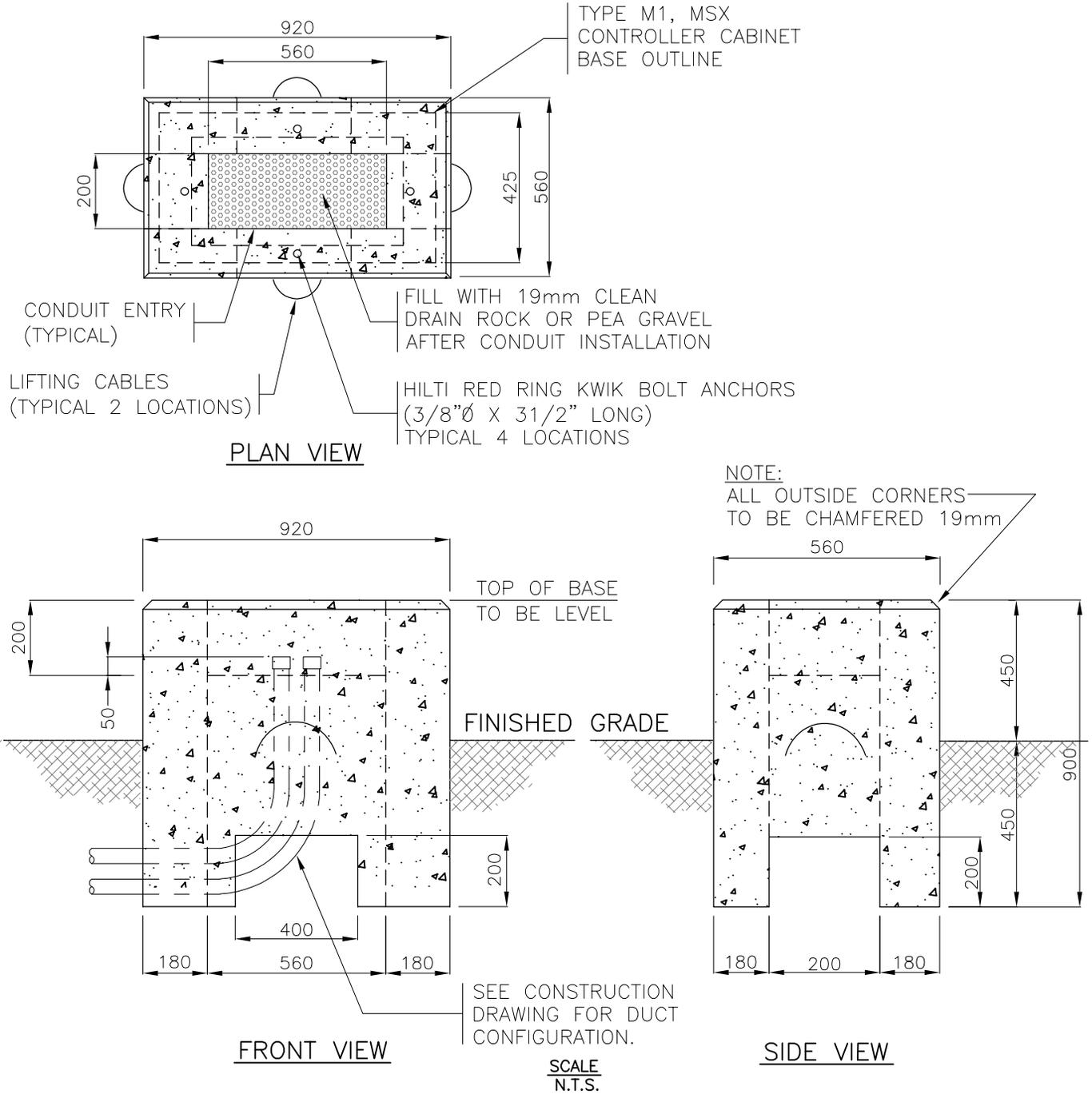
DATE:
 JUN 24/24
 SCALE:
 NTS

**PERMANENT BOLLARD
 (BARRIER POST)**

DWG. NO.

SS-C12b





NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. BASES TO BE PRE-CAST OR CAST-IN-PLACE.
4. BASE TO BE LOCATED A MINIMUM 1.5m AWAY FROM ANY OTHER ELECTRICAL EQUIPMENT OR STRUCTURE.

**STANDARD
DETAIL
DRAWING**

DATE:
7/20/20

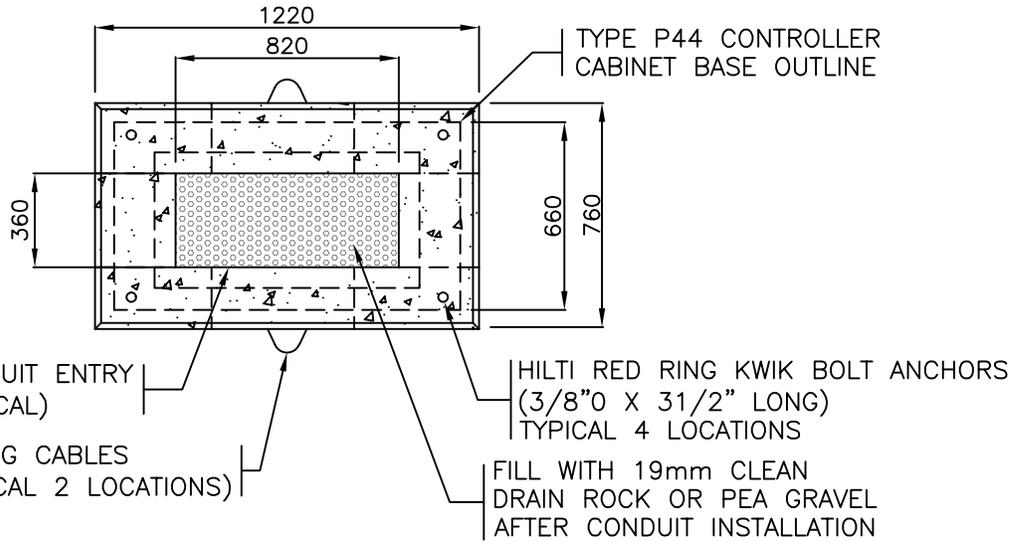
SCALE:
NTS

**TYPE M (NEMA CABINET)
CONCRETE CONTROLLER BASE**

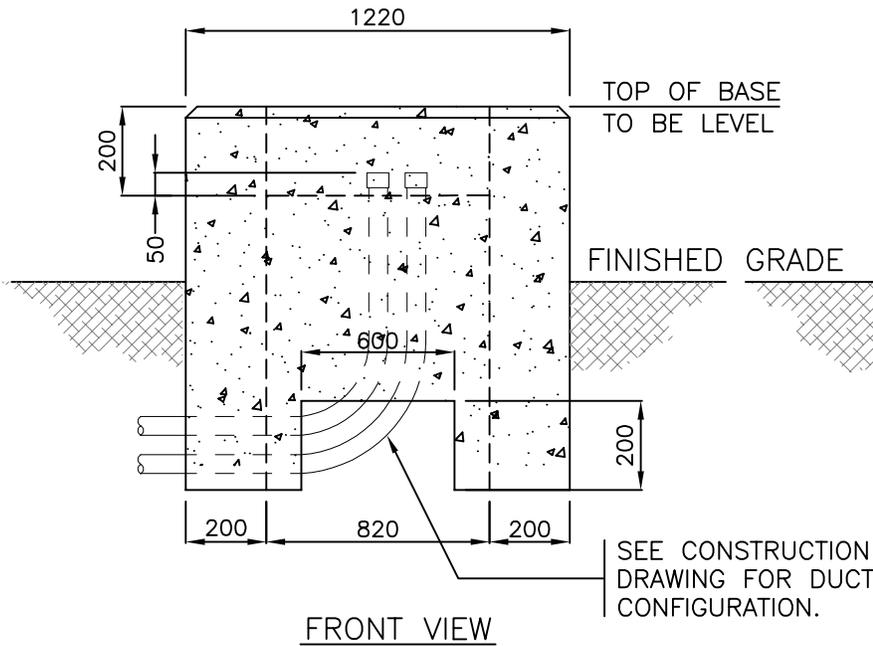
DWG. NO.

SS-E1.1

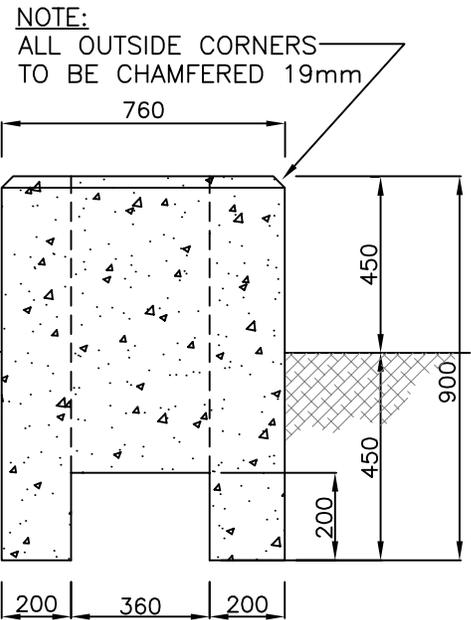




PLAN VIEW



FRONT VIEW



SIDE VIEW

NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. BASES TO BE PRE-CAST OR CAST-IN-PLACE.
4. BASE TO BE LOCATED A MINIMUM 1.5m AWAY FROM ANY OTHER ELECTRICAL EQUIPMENT OR STRUCTURE.

**STANDARD
DETAIL
DRAWING**

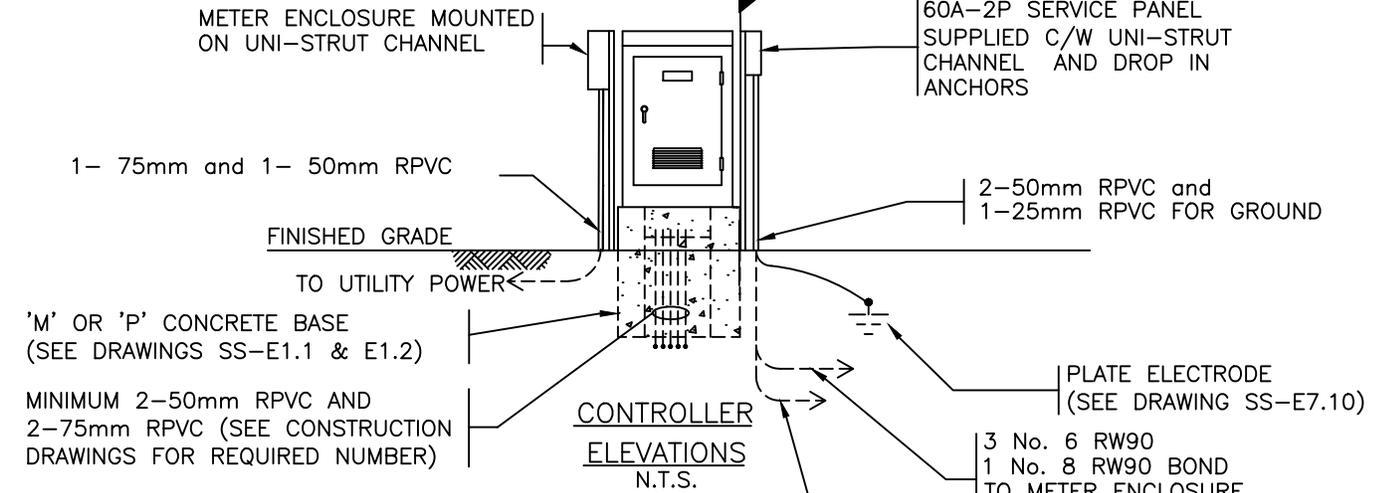
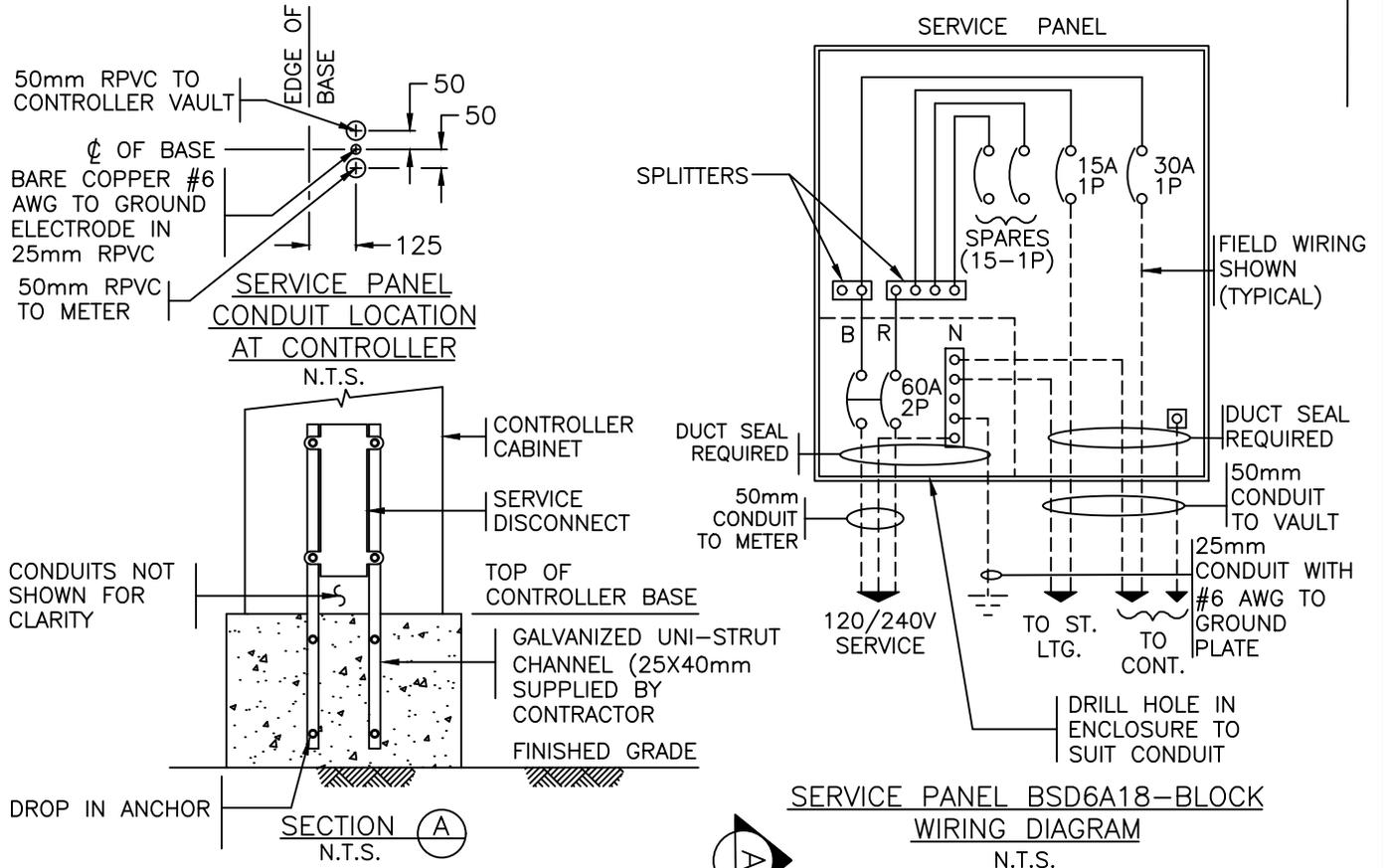
DATE:
07/20/20
SCALE:
NTS

**TYPE P (NEMA CABINET)
CONCRETE CONTROLLER BASE**

DWG. NO.

SS-E1.2





NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. DISCONNECT AND METER CABINETS TO BE LOCATED MINIMUM 1.0m AWAY FROM ANY OTHER ELECTRICAL EQUIPMENT OR STRUCTURE.
4. INSTALL SERVICE PANEL AND METER ENCLOSURE AS PER CANADIAN ELECTRIC CODE

**STANDARD
DETAIL
DRAWING**

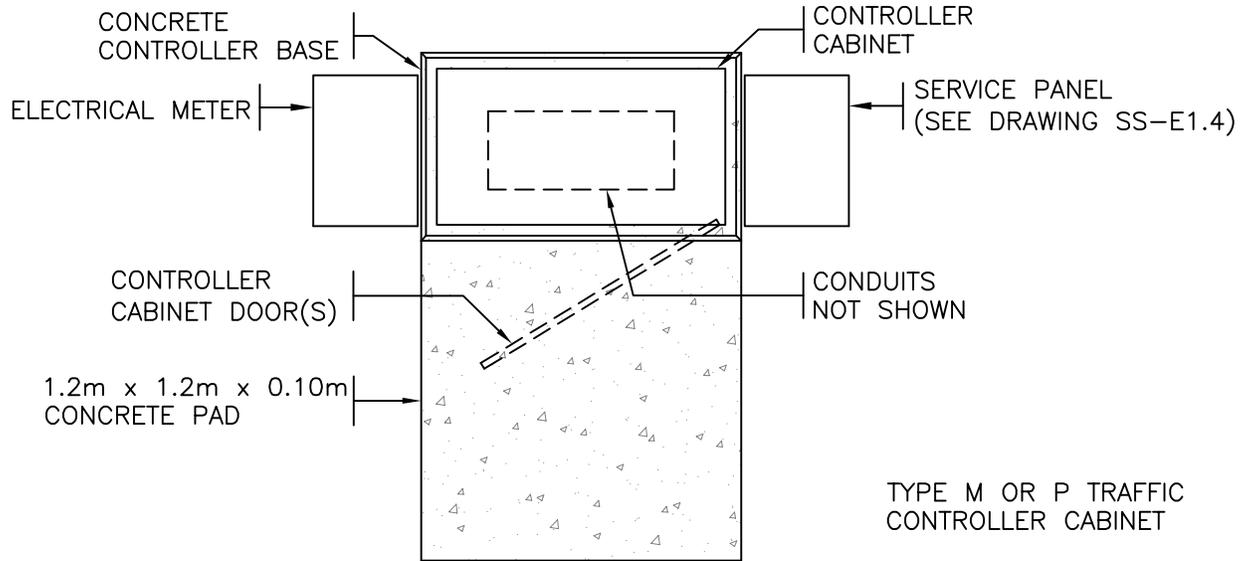
DATE:
04/19/21
SCALE:
NTS

**CONTROLLER SERVICE PANEL
INSTALLATION**

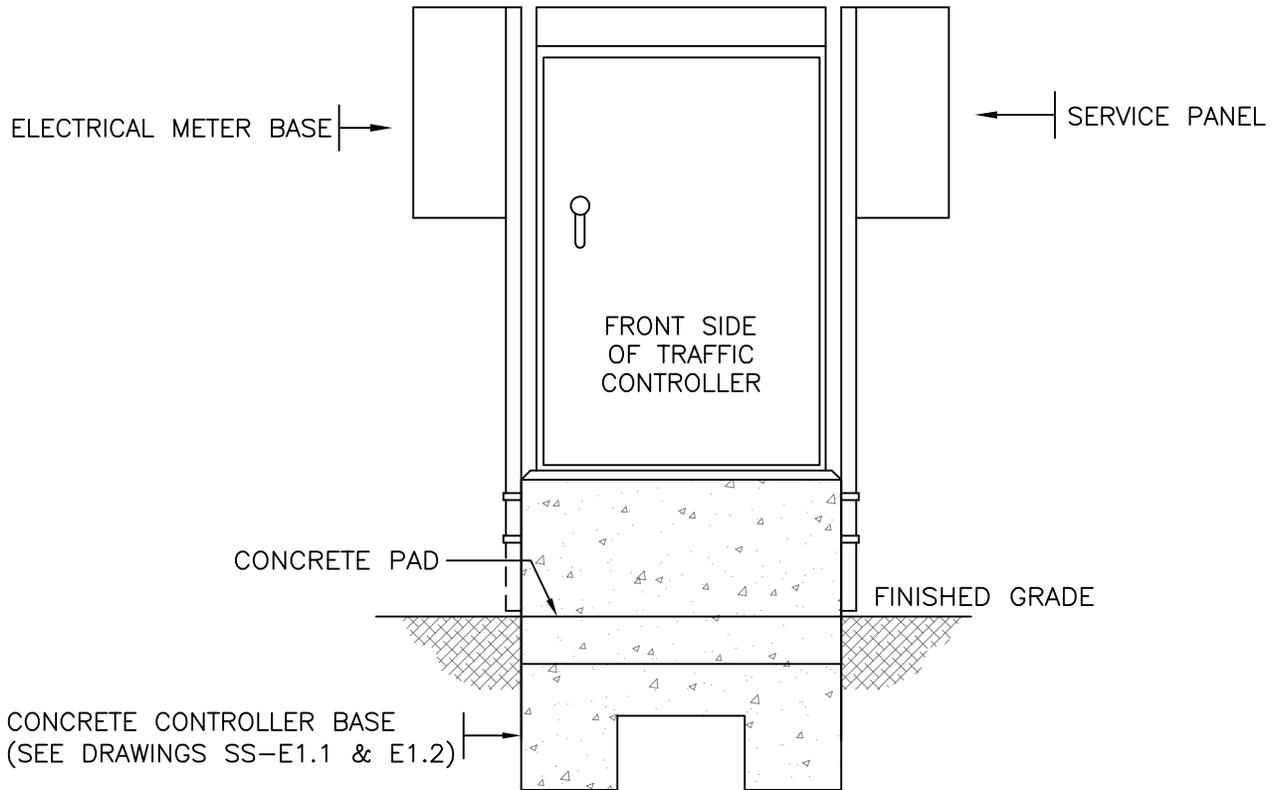
DWG. NO.

SS-E1.4





PLAN VIEW
N.T.S.



FRONT VIEW
N.T.S.

NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

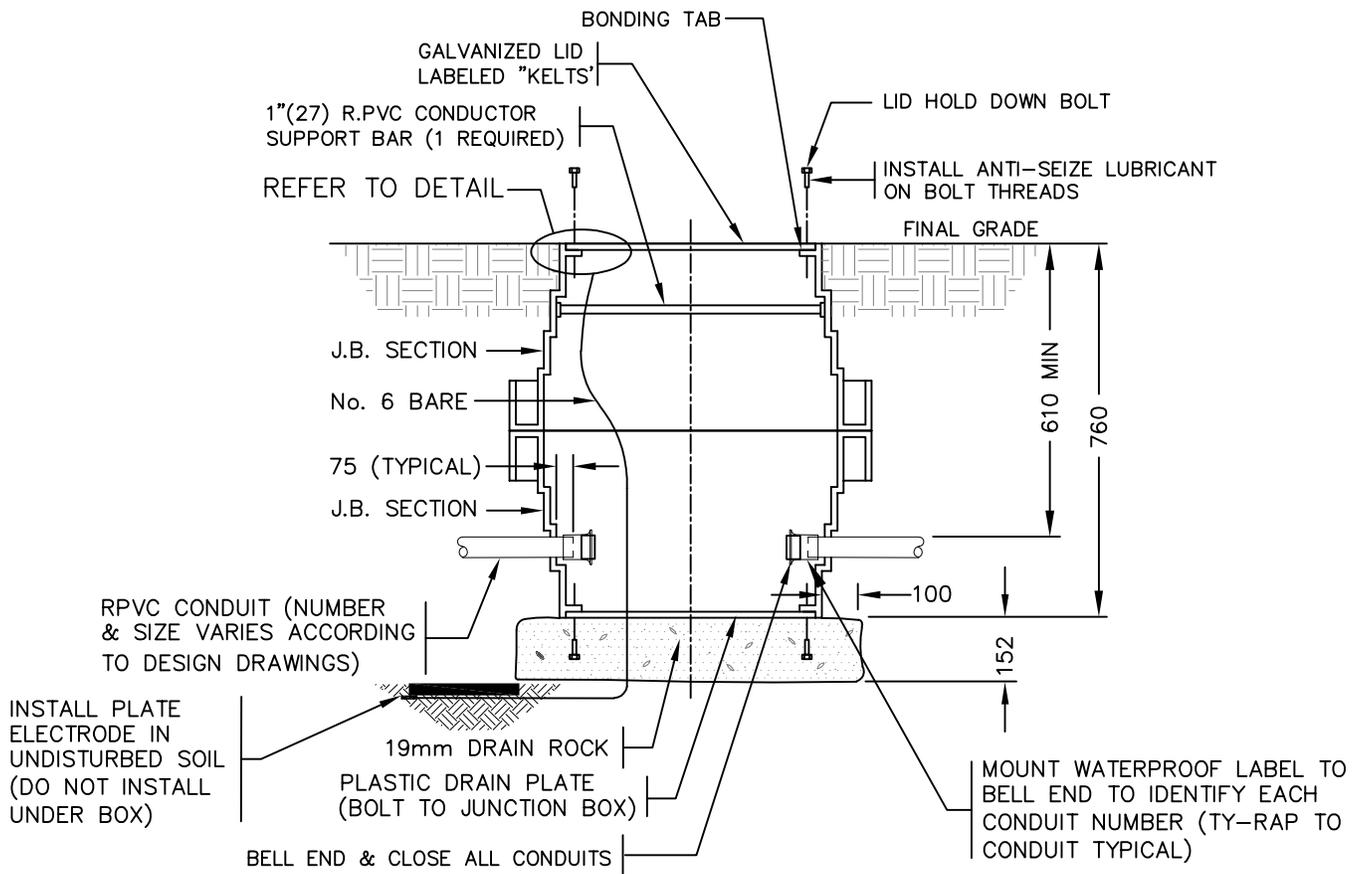
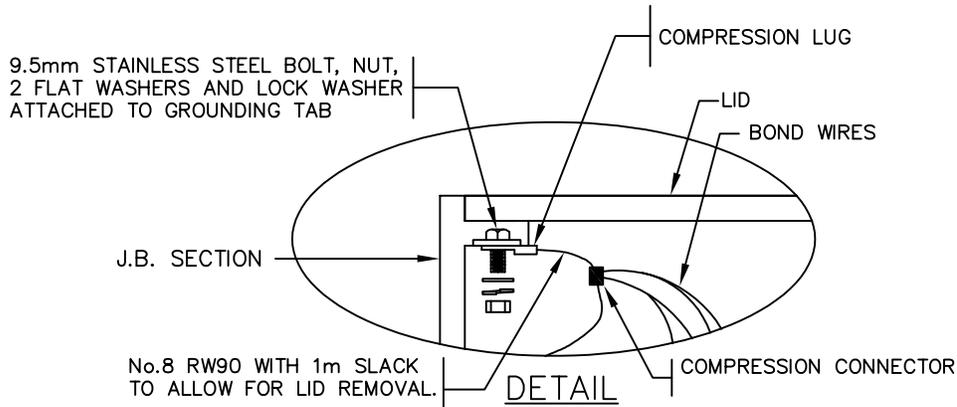
**STANDARD
DETAIL
DRAWING**

DATE:
07/20/20
SCALE:
NTS

**TYPICAL INSTALLATION FOR
TRAFFIC CONTROLLER**
ORIENTATION, SERVICE PANEL AND CONCRETE PAD

DWG. NO.
SS-E1.8





LARGE ROUND PLASTIC JUNCTION BOX

NOTES

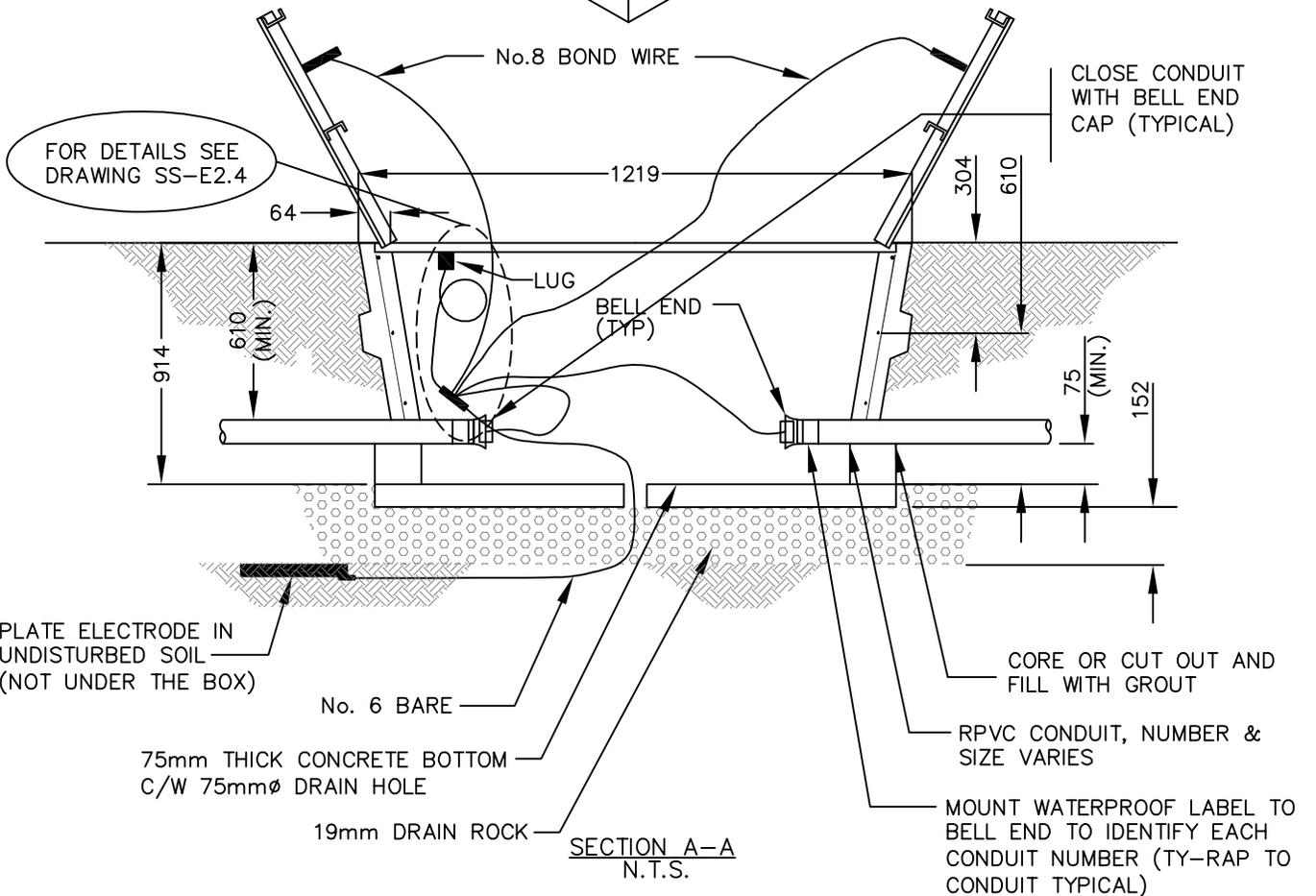
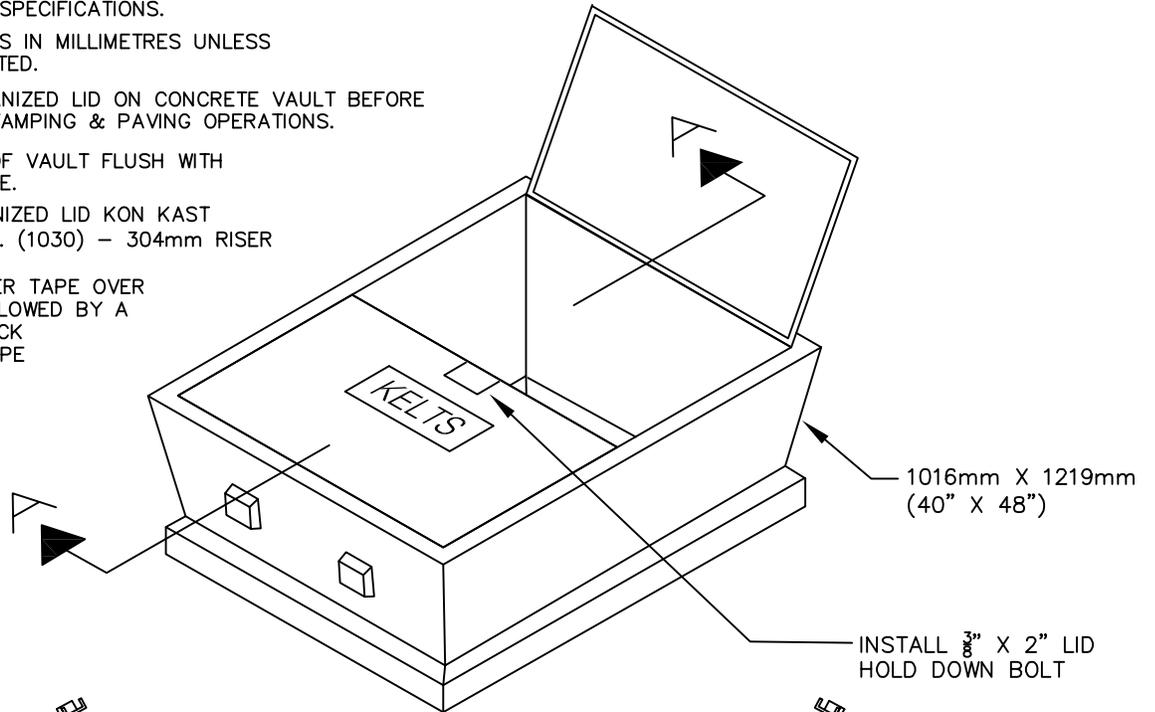
1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATION
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED
3. INSTALL LID ON PLASTIC JUNCTION BOX BEFORE BACKFILLIE, TAMPING & PAVING OPERATIONS
4. INSTALL TOP OF PLASTIC JUNCTION BOX FLUSH WITH FINISH GRADE
5. INSTAL ELECTRODE PLATE ON UNDISTURBED GROUND

NUMBER OF CONDUITS ENTERING JUNCTION BOX NOT TO EXCEED 10 (UNLESS OTHERWISE NOTED)

STANDARD DETAIL DRAWING	DATE: 07/20/20	LARGE ROUND PLASTIC JUNCTION BOX DETAILS	DWG. NO.	City of Kelowna
	SCALE: NTS		SS-E2.1	

NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTIONS 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. INSTALL GALVANIZED LID ON CONCRETE VAULT BEFORE BACKFILLING, TAMPING & PAVING OPERATIONS.
4. INSTALL TOP OF VAULT FLUSH WITH FINISHED GRADE.
5. BOX & GALVANIZED LID KON KAST PRODUCTS LTD. (1030) – 304mm RISER
6. INSTALL RUBBER TAPE OVER MARRETTE FOLLOWED BY A LAYER OF BLACK ELECTRICAL TAPE



**STANDARD
DETAIL
DRAWING**

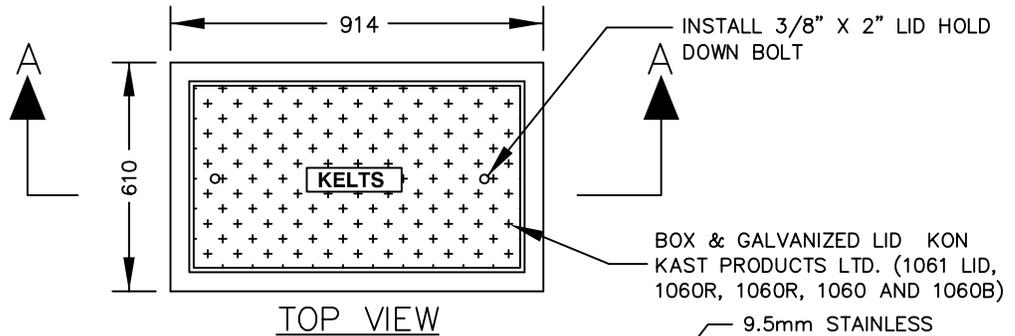
DATE:
07/20/20
SCALE:
NTS

**TRAFFIC SIGNAL MAIN VAULT
DETAILS**

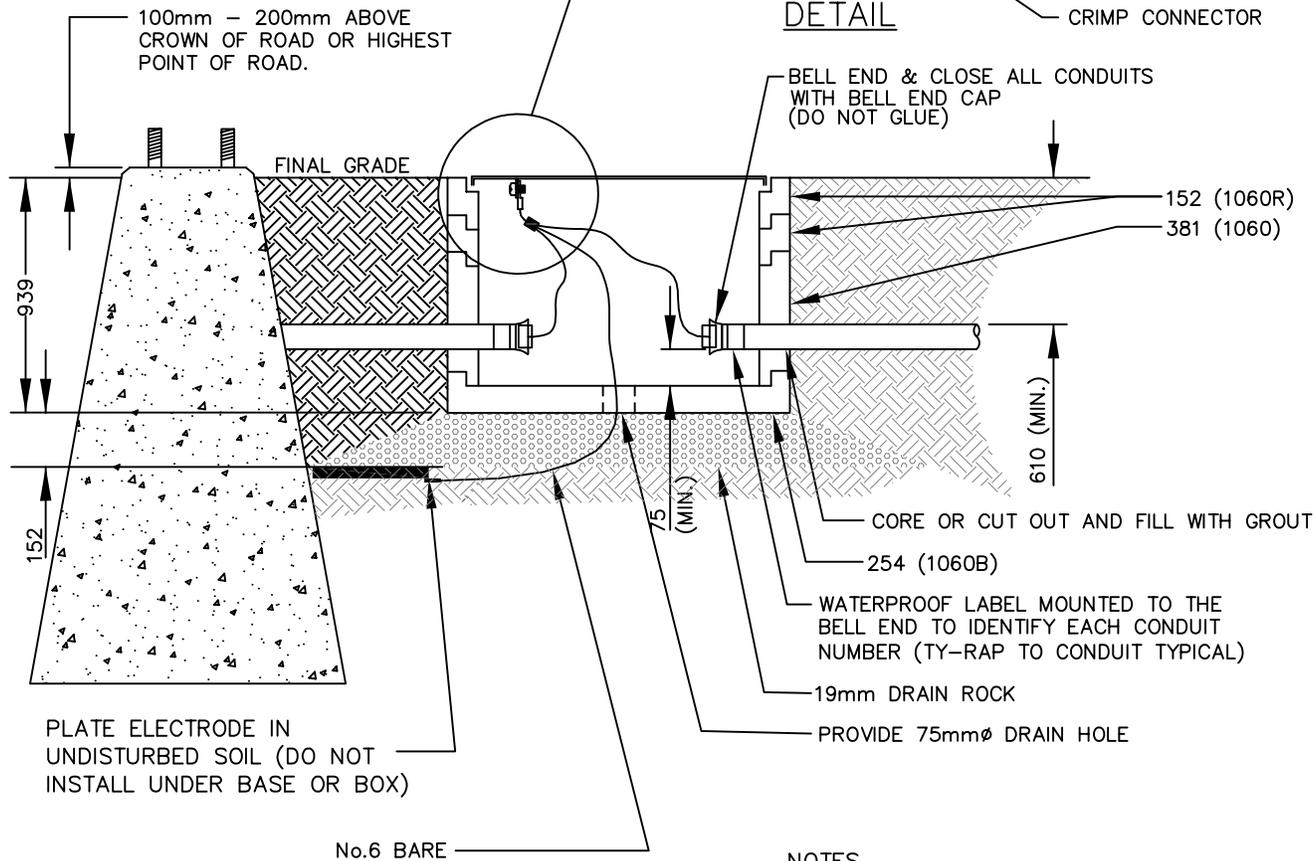
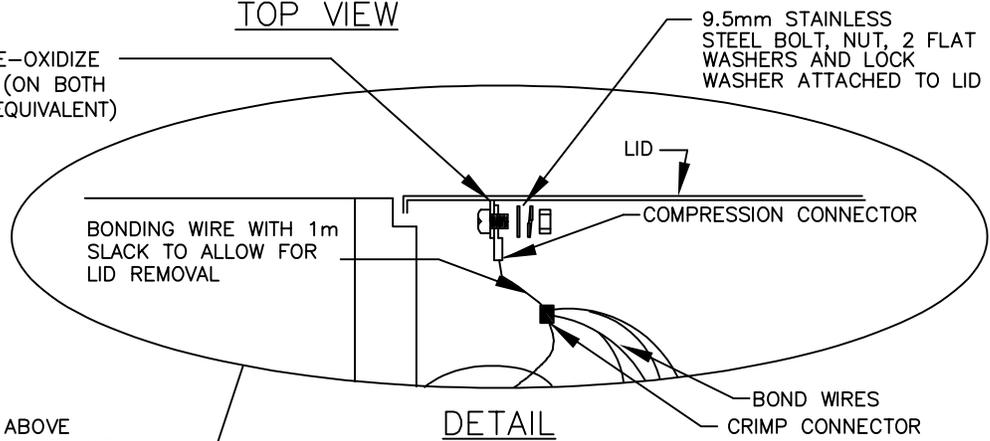
DWG. NO.

SS-E2.3





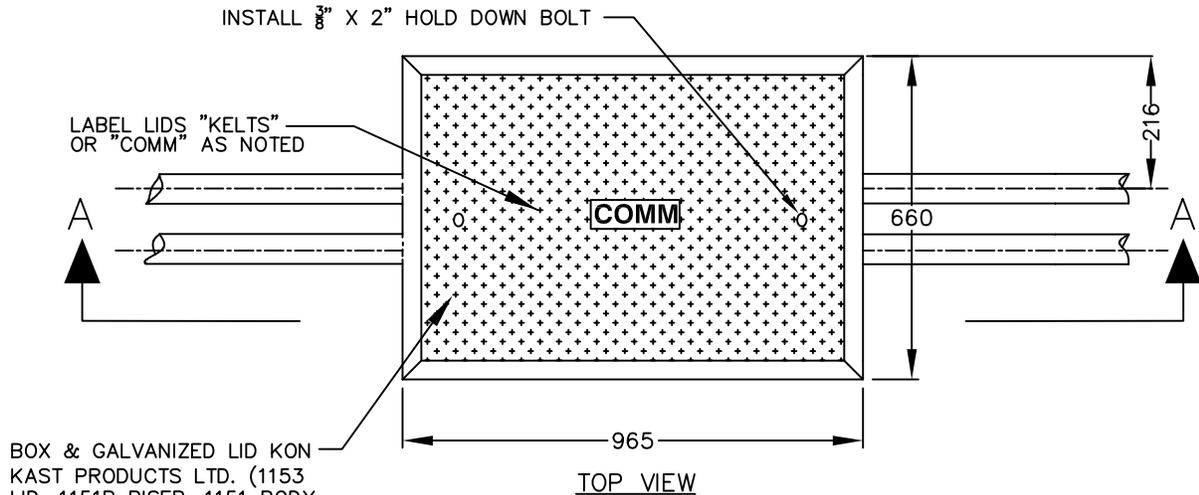
REMOVE PAINT AND APPLY DE-OXIDIZE COMPOUND TO GROUND TAB (ON BOTH SIDES) (USE PENETROX OR EQUIVALENT)



SECTION A-A
N.T.S

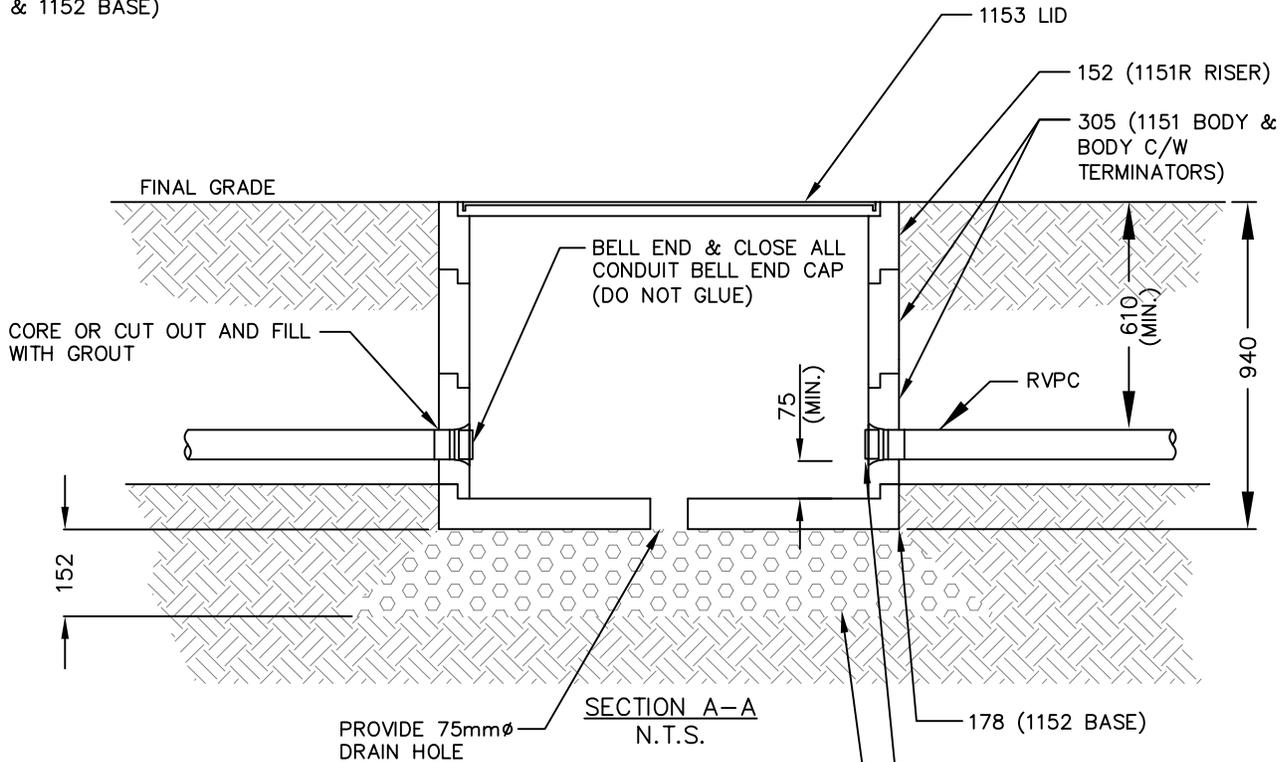
- NOTES**
1. REFER TO CONTRACT DRAWINGS AND SECTIONS 34 41 13 FOR DETAILED SPECIFICATIONS.
 2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
 3. INSTALL RUBBER TAPE OVER MARRETTE FOLLOWED BY A LAYER OF BLACK ELECTRICAL TAPE

STANDARD DETAIL DRAWING	DATE: 07/20/20	TRAFFIC SIGNAL JUNCTION BOX DETAILS	DWG. NO.	 City of Kelowna
	SCALE: NTS		SS-E2.4	



BOX & GALVANIZED LID KON
KAST PRODUCTS LTD. (1153
LID, 1151R RISER, 1151 BODY,
1151 BODY C/W TERMINATORS
& 1152 BASE)

TOP VIEW



SECTION A-A
N.T.S.

NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED
3. INSTALL LID ON CONCRETE PULL BOX BEFORE BACKFILLING, TAMPING & PAVING OPERATIONS.
4. INSTALL TOP OF PULL BOX FLUSH WITH FINISHED GRADE
5. INSTALL RUBBER TAPE OVER MARRETTE FOLLOWED BY BLACK ELECTRICAL TAPE

STANDARD
DETAIL
DRAWING

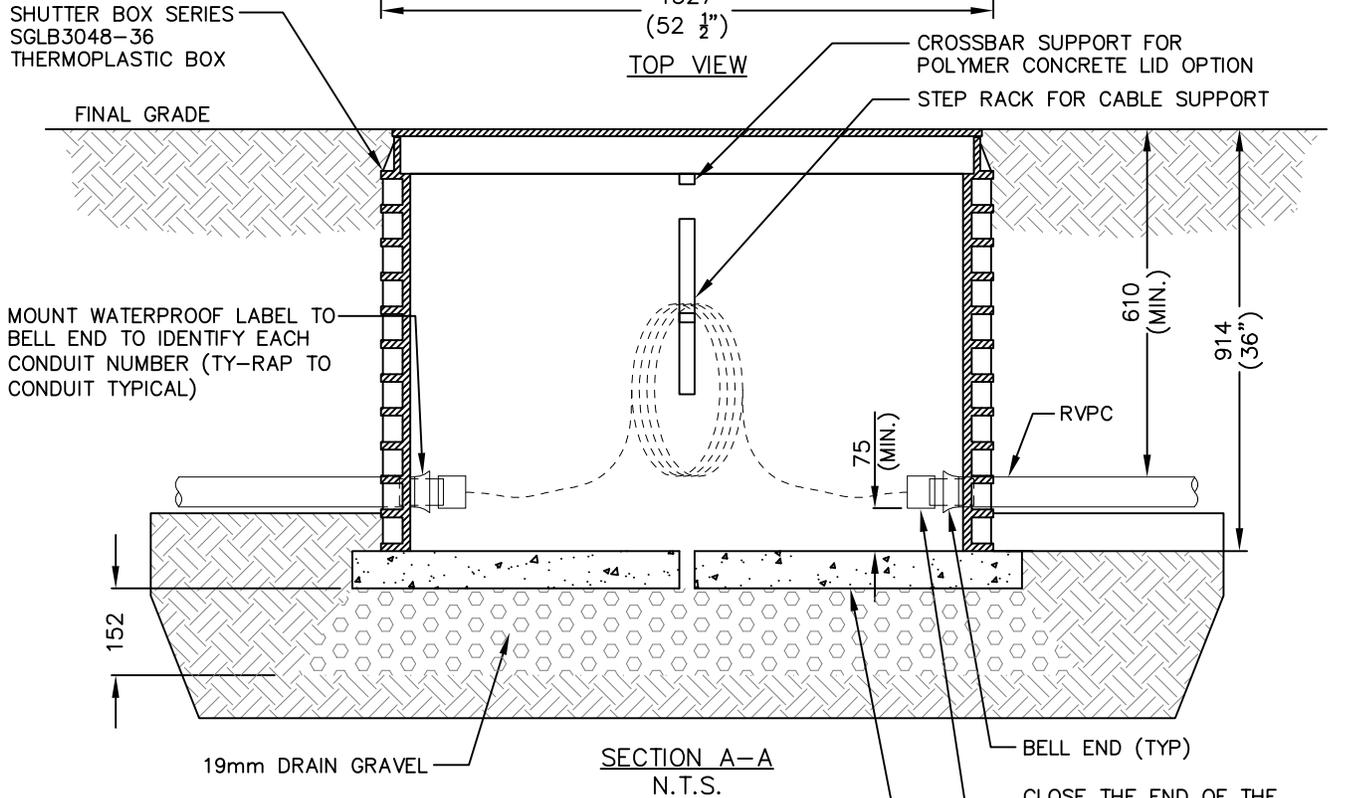
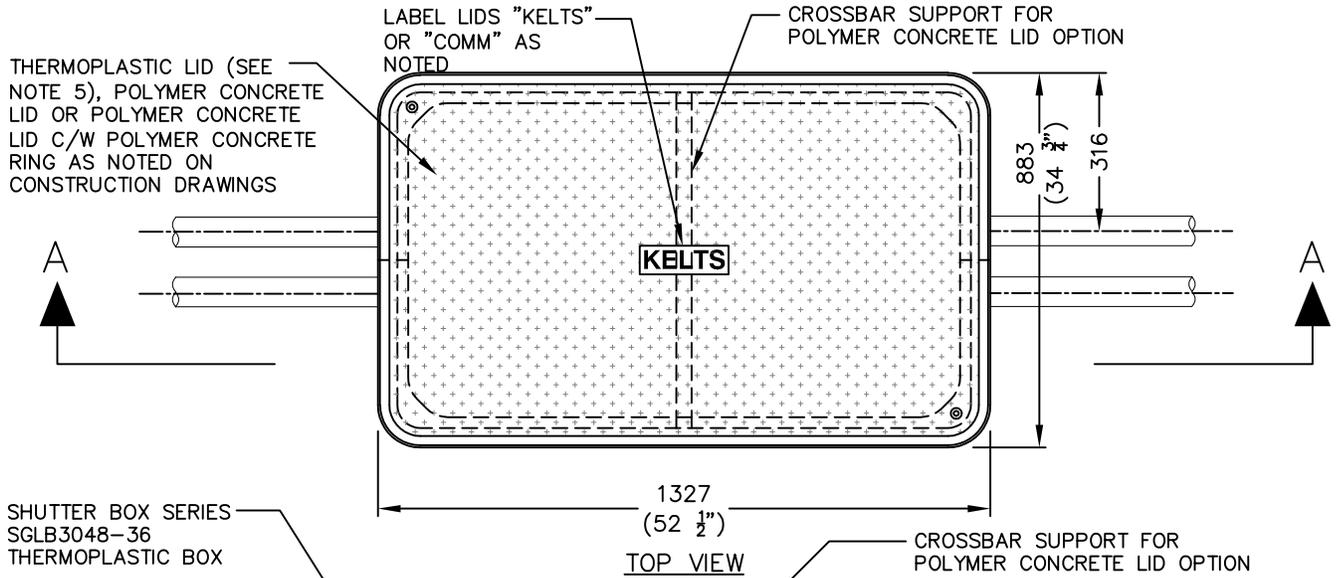
DATE:
7/20/20
SCALE:
NTS

CONCRETE TRAFFIC
COMMUNICATION PULL BOX
DETAILS

DWG. NO.

SS-E2.5





NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. INSTALL LID ON PULL BOX BEFORE BACKFILLING, TAMPING & PAVING OPERATIONS.
4. INSTALL TOP OF PULL BOX FLUSH WITH FINISHED GRADE.
5. THERMOPLASTIC LID TO BE USED IN SOFT LANDSCAPED AREAS ONLY.

**STANDARD
DETAIL
DRAWING**

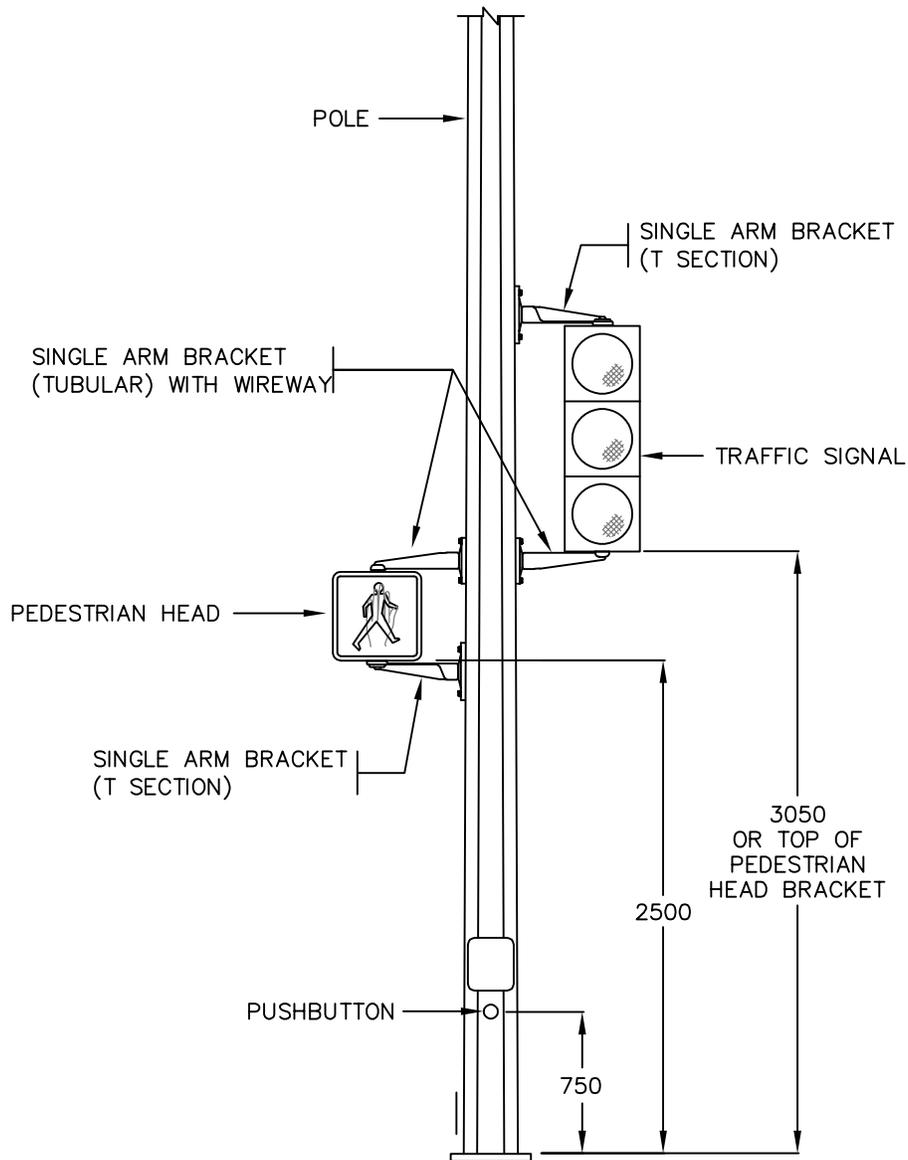
DATE:
07/20/20
SCALE:
NTS

**PLASTIC COMMUNICATION PULL
BOX DETAILS**

DWG. NO.

SS-E2.6





ELEVATION
N.T.S.

NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

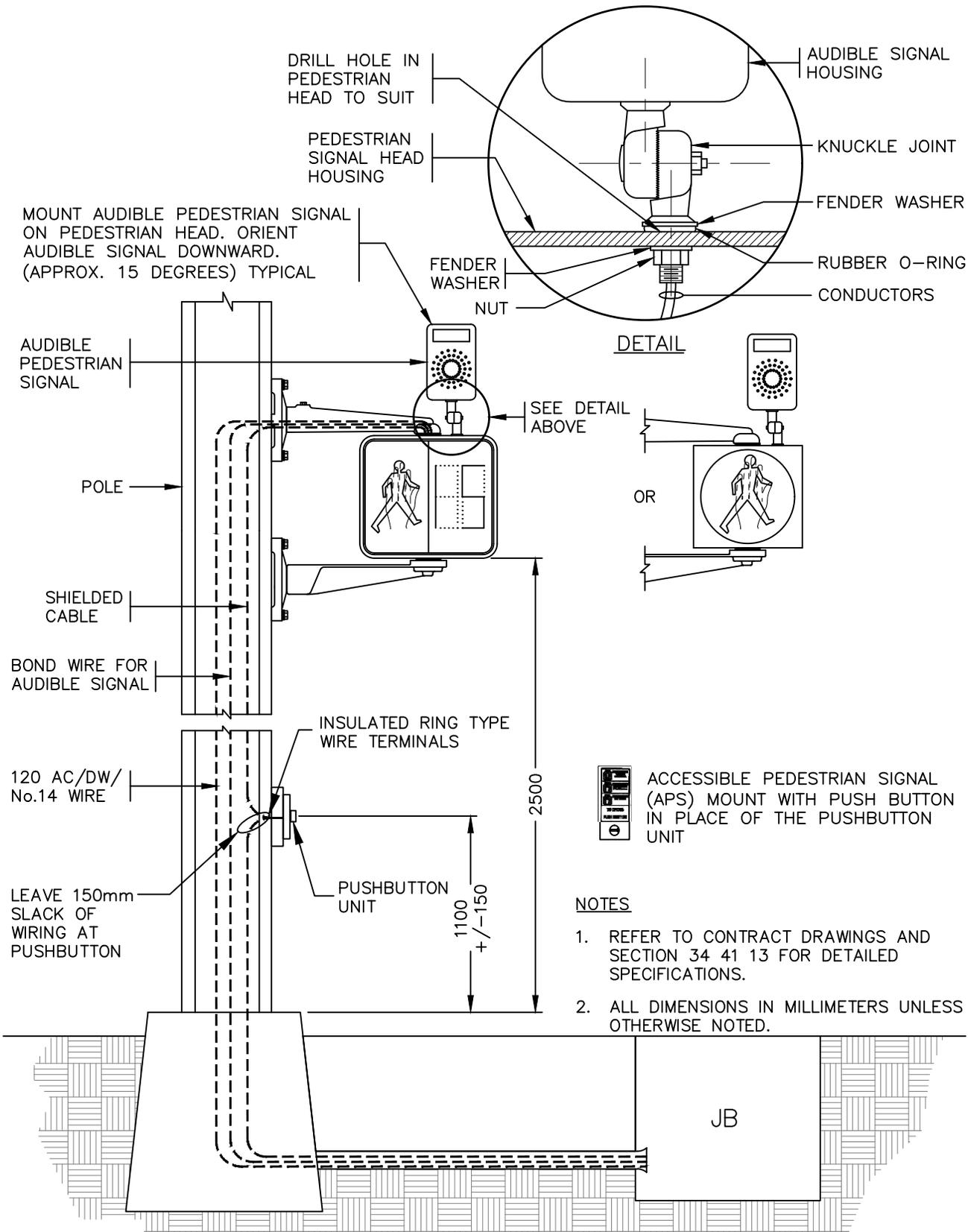
**STANDARD
DETAIL
DRAWING**

DATE:
07/20/20
SCALE:
NTS

**SIGNAL/PEDESTRIAN HEAD
MOUNTING ON TRAFFIC SIGNAL
POLES**

DWG. NO.
SS-E5.3





NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

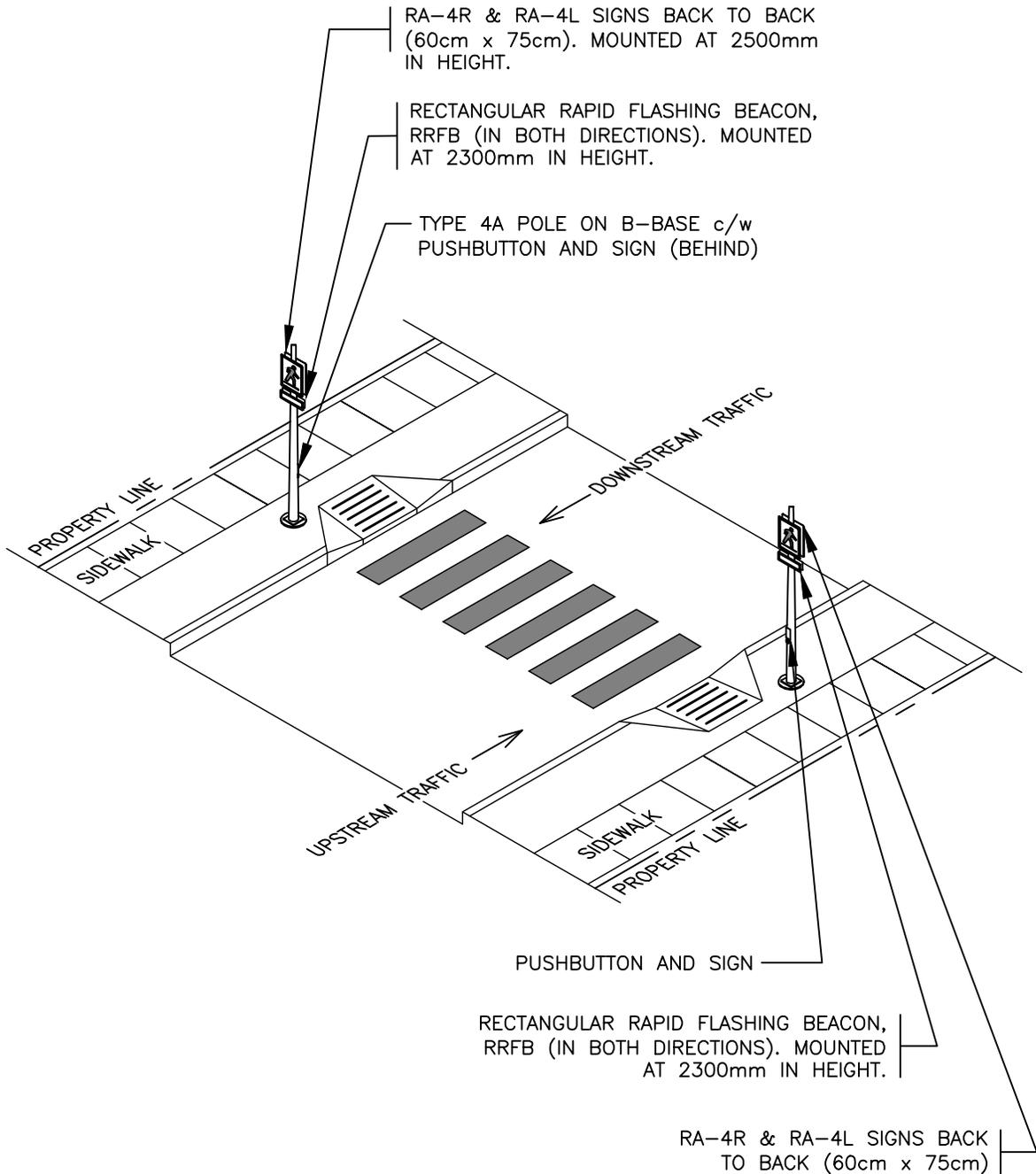
**STANDARD
DETAIL
DRAWING**

DATE:
07/20/20
SCALE:
NTS

**PEDESTRIAN AND AUDIBLE
SIGNAL INSTALLATION DETAILS**

DWG. NO.
SS-E5.12





NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. PUSH BUTTONS MOUNTED AT 750mm.
4. RRFB MOUNTED AT 2300mm.

**STANDARD
DETAIL
DRAWING**

DATE:
03/27/23

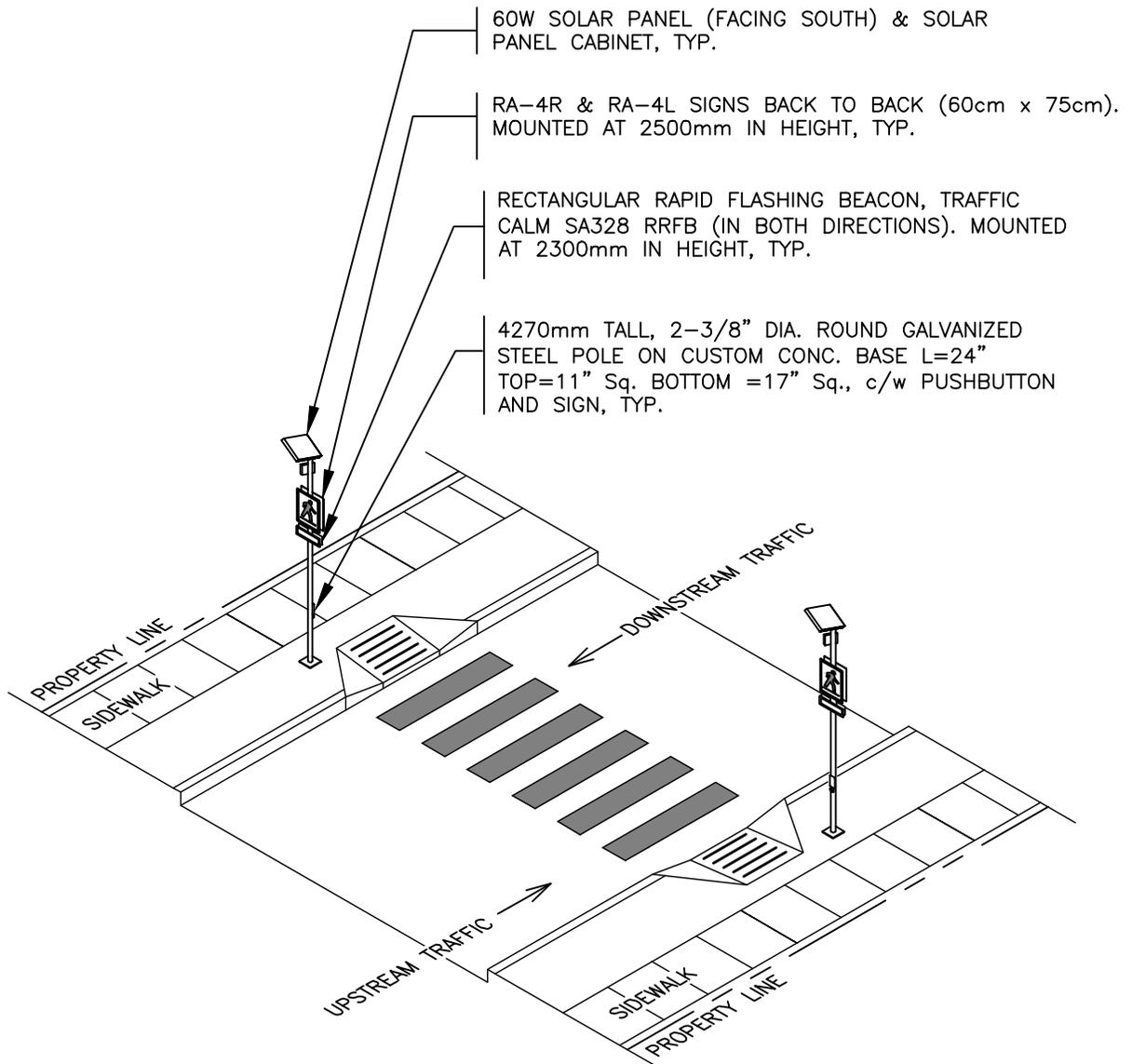
SCALE:
NTS

**ROADSIDE PEDESTRIAN
ACTIVATED FLASHERS
(NO MEDIAN OPTION)**

DWG. NO.

SS-E5.16





NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. PUSH BUTTONS MOUNTED AT 750mm.
4. RRFB MOUNTED AT 2300mm.

**STANDARD
DETAIL
DRAWING**

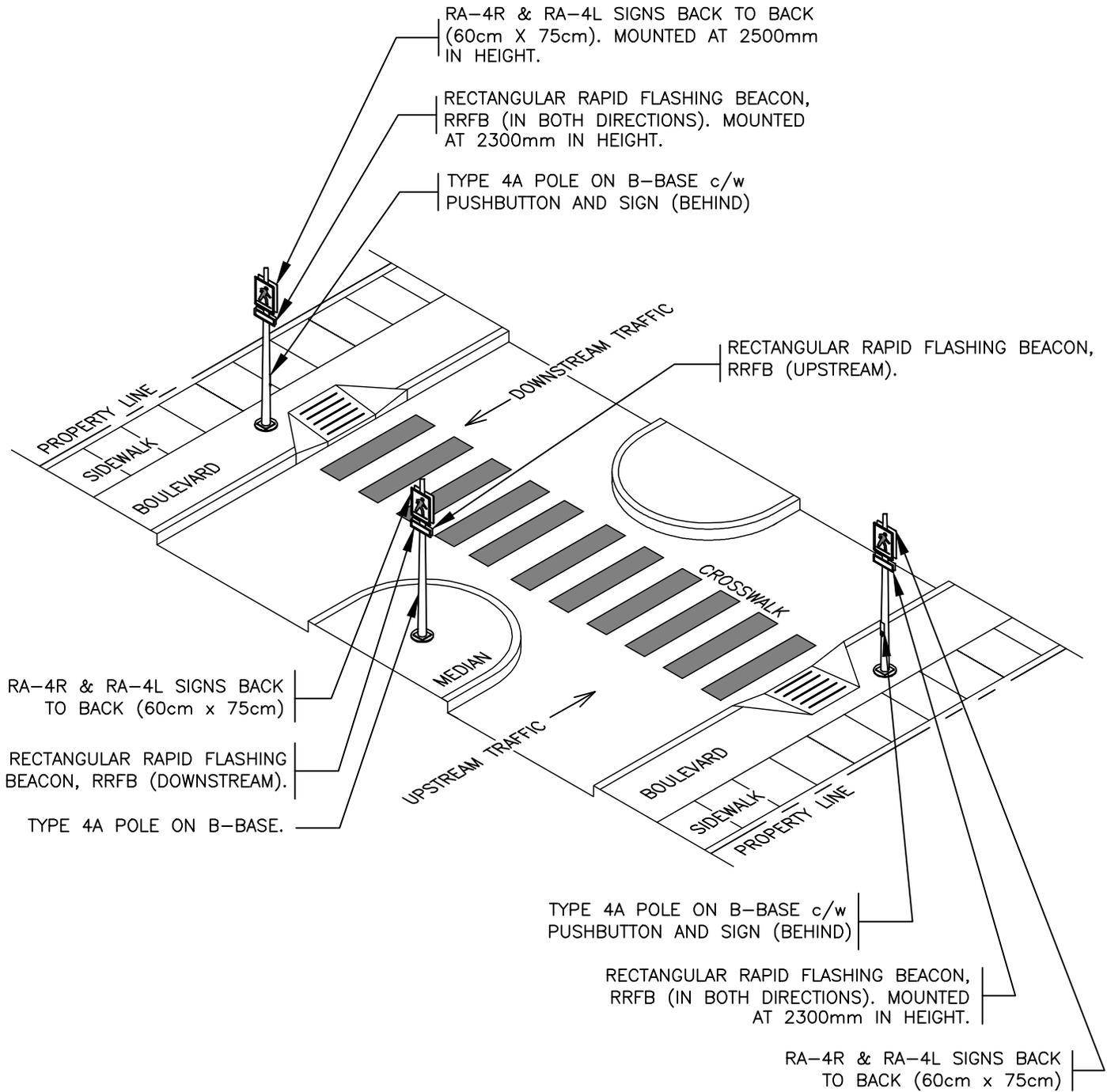
DATE:
03/27/23
SCALE:
NTS

**SOLAR ROADSIDE PEDESTRIAN
ACTIVATED FLASHERS
(NO MEDIAN OPTION)**

DWG. NO.

SS-E5.16a





NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. PUSH BUTTONS MOUNTED AT 750mm.
4. RRFB MOUNTED AT 2300mm.

**STANDARD
DETAIL
DRAWING**

DATE:
03/27/23

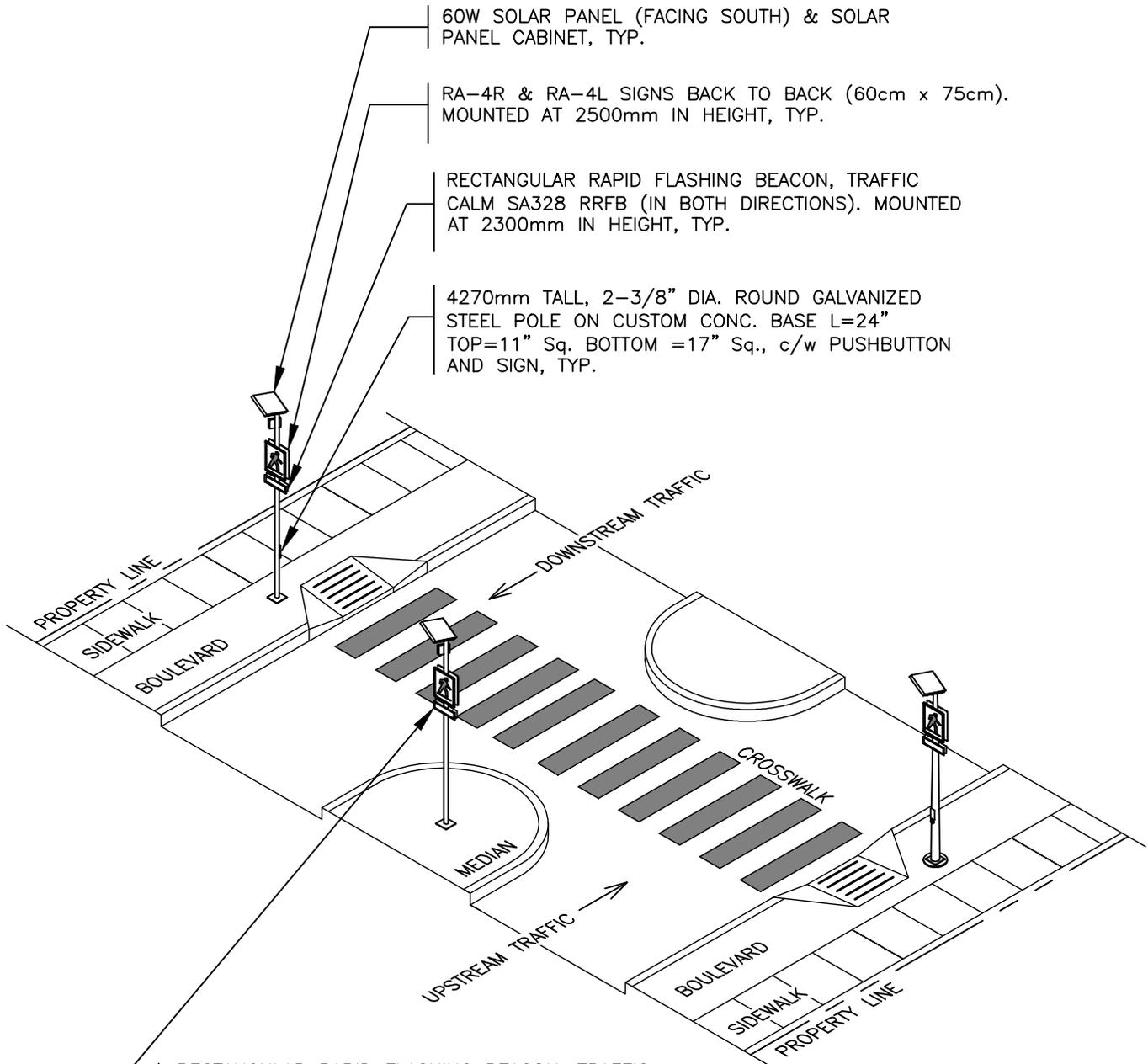
SCALE:
NTS

**ROADSIDE PEDESTRIAN
ACTIVATED FLASHERS
(MEDIAN OPTION)**

DWG. NO.

SS-E5.17





- 60W SOLAR PANEL (FACING SOUTH) & SOLAR PANEL CABINET, TYP.
- RA-4R & RA-4L SIGNS BACK TO BACK (60cm x 75cm). MOUNTED AT 2500mm IN HEIGHT, TYP.
- RECTANGULAR RAPID FLASHING BEACON, TRAFFIC CALM SA328 RRFB (IN BOTH DIRECTIONS). MOUNTED AT 2300mm IN HEIGHT, TYP.
- 4270mm TALL, 2-3/8" DIA. ROUND GALVANIZED STEEL POLE ON CUSTOM CONC. BASE L=24" TOP=11" Sq. BOTTOM =17" Sq., c/w PUSHBUTTON AND SIGN, TYP.

RECTANGULAR RAPID FLASHING BEACON, TRAFFIC CALM SA328 RRFB (IN BOTH DIRECTIONS). MOUNTED AT 2300mm IN HEIGHT, TYP. NO PUSH BUTTON ON CENTER POLE.

NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. PUSH BUTTONS MOUNTED AT 750mm.
4. RRFB MOUNTED AT 2300mm.

**STANDARD
DETAIL
DRAWING**

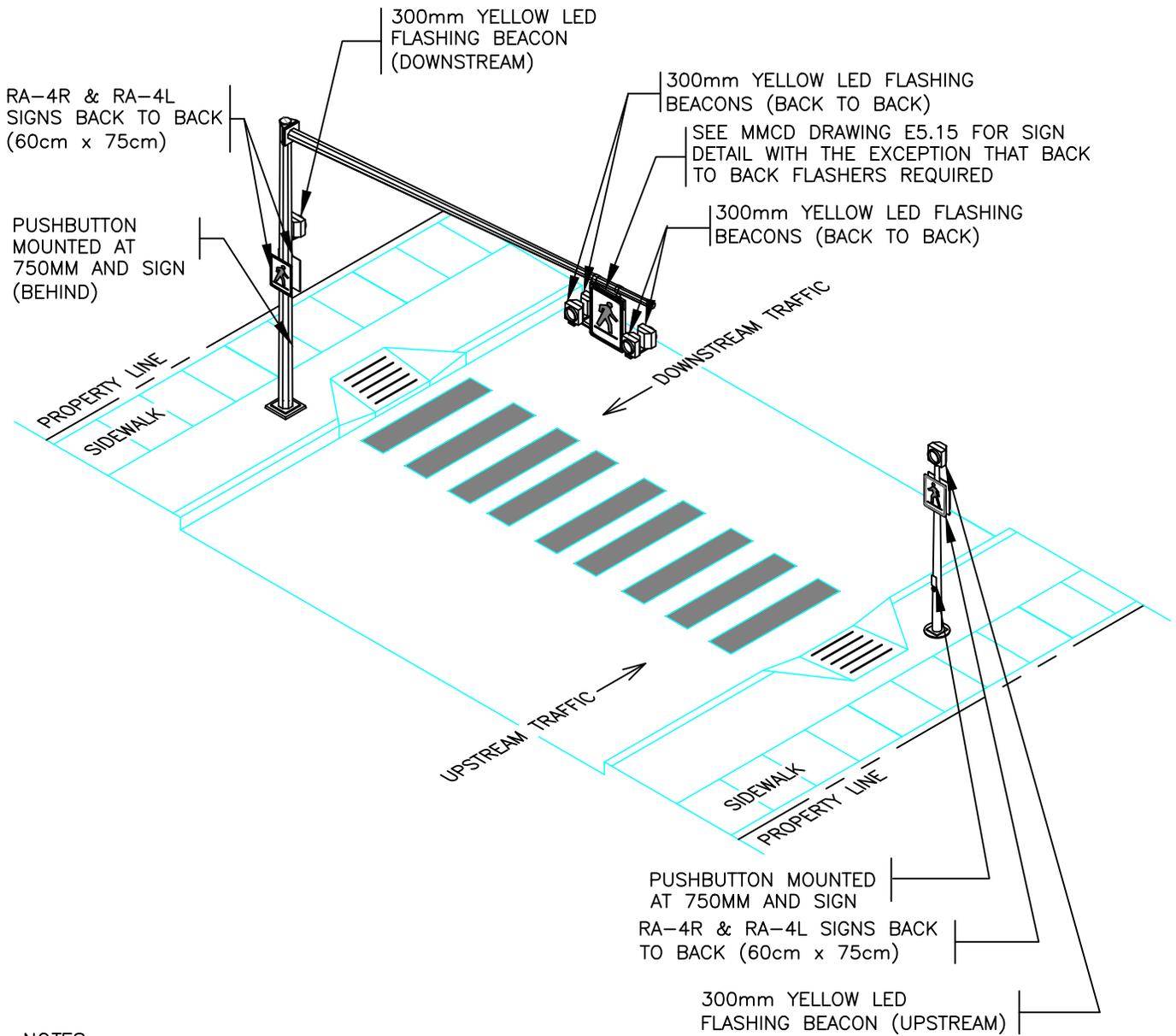
DATE:
03/27/23
SCALE:
NTS

**SOALR ROADSIDE PEDESTRIAN
ACTIVATED FLASHERS
(MEDIAN OPTION)**

DWG. NO.

SS-E5.17a





NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. FLASHER CONTROLLER TO BE INSTALLED AT 1200MM TO THE BOTTO OF THE CABINET ON THE POLE RECEIVING THE SERVICE

**STANDARD
DETAIL
DRAWING**

DATE:
07/20/20

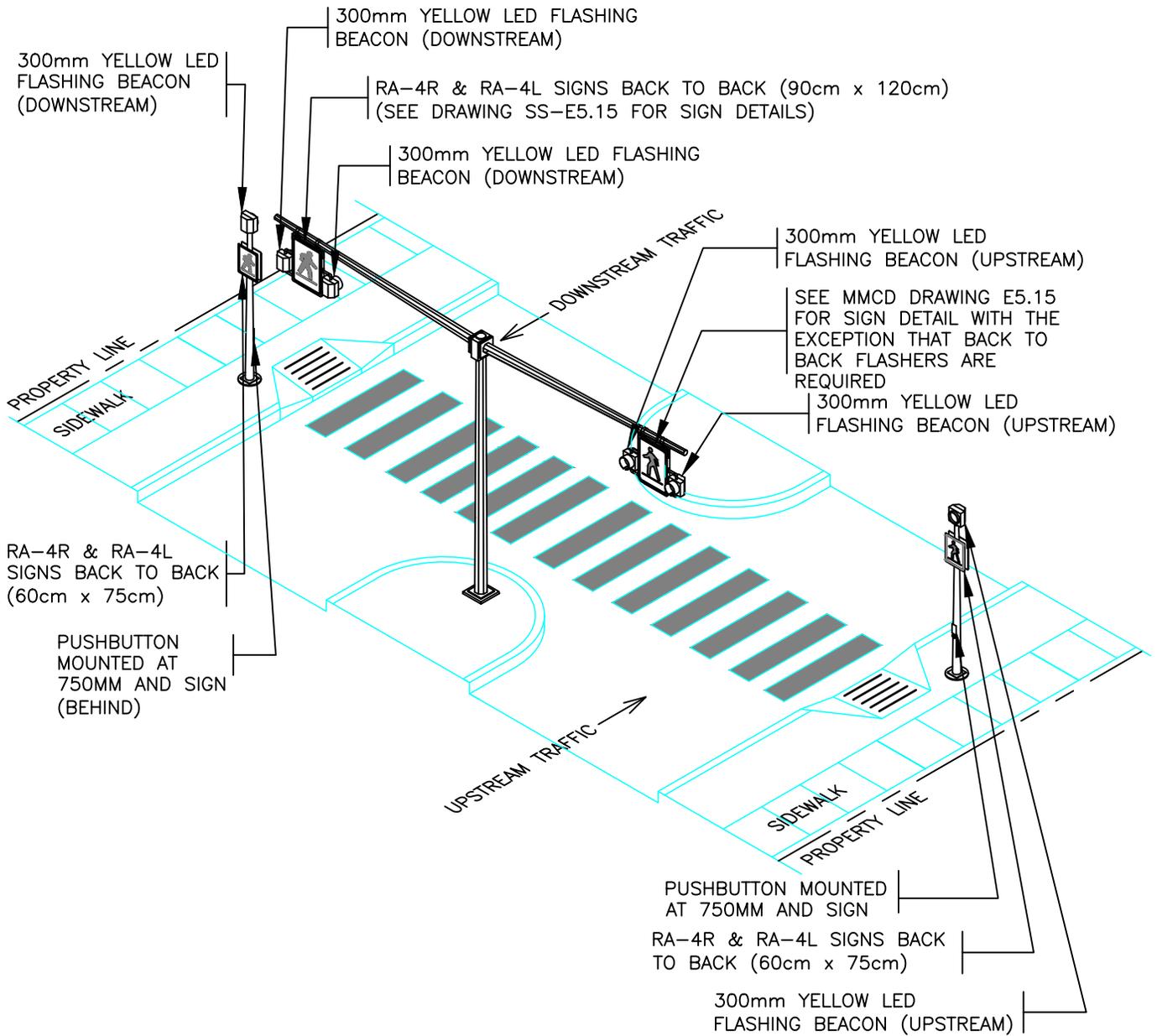
SCALE:
NTS

**ROADSIDE PEDESTRIAN
ACTIVATED FLASHERS
(OVERHEAD SIGN OPTION)**

DWG. NO.

SS-E5.18





NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. FLASHER CONTROLLER TO BE INSTALLED AT 1200MM TO THE BOTTOM OF THE CABINET ON THE POLE RECEIVING THE SERVICE

**STANDARD
DETAIL
DRAWING**

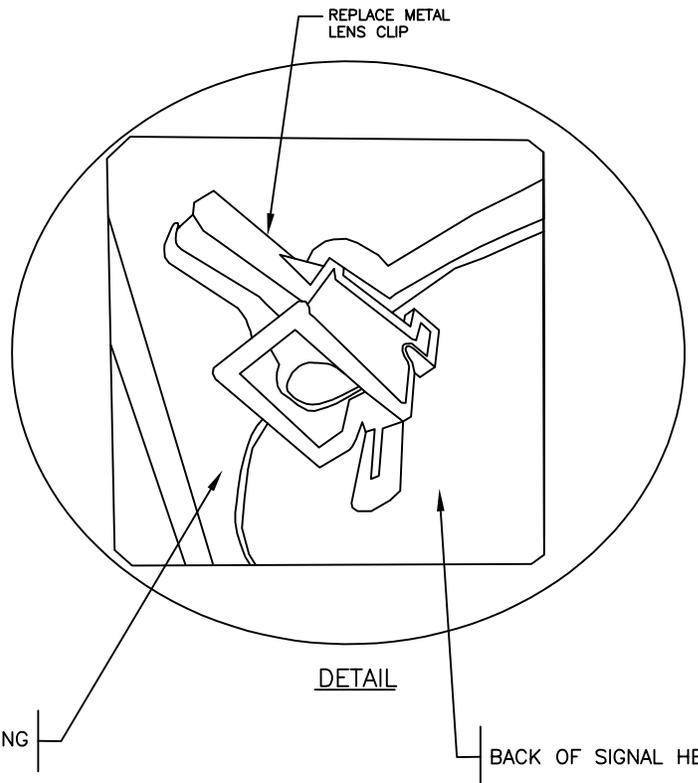
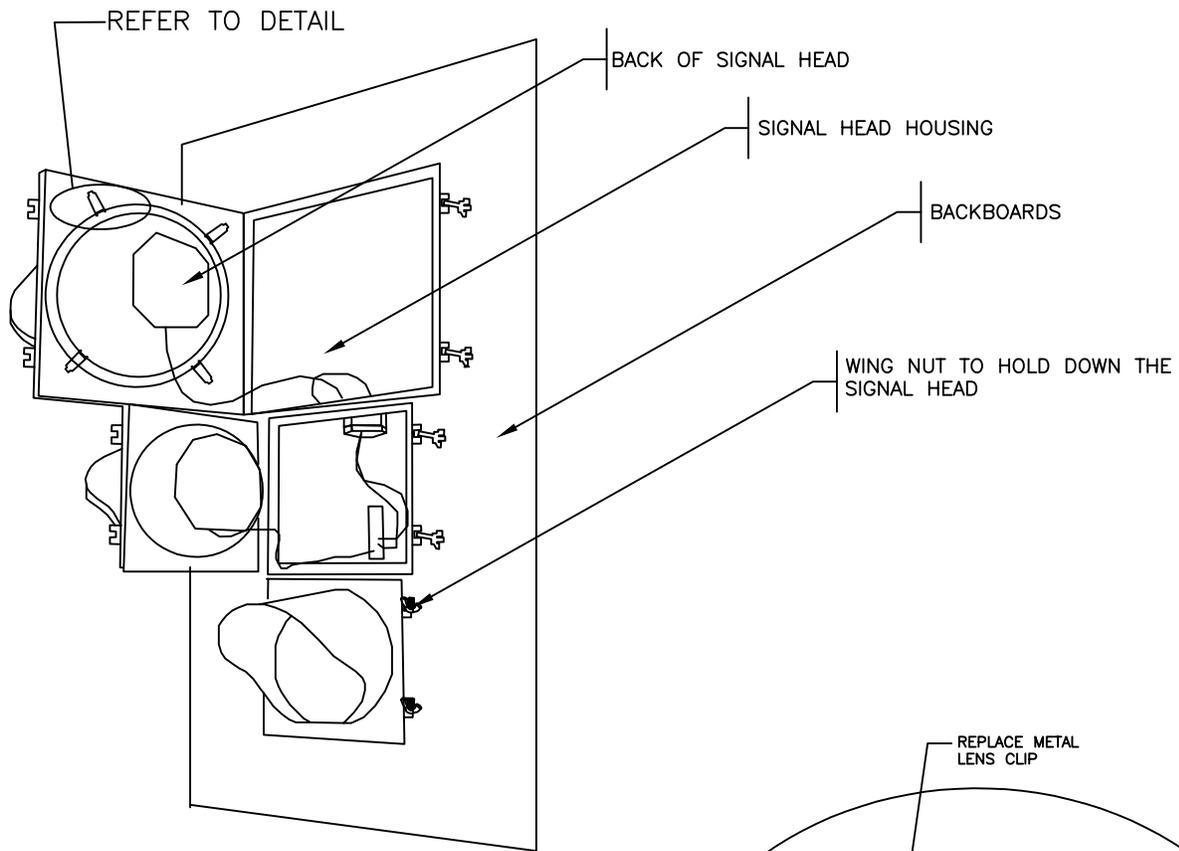
DATE:
07/20/20

SCALE:
NTS

**ROADSIDE PEDESTRIAN
ACTIVATED FLASHER
(OVERHEAD SIGN MEDIAN OPTION)**

DWG. NO.
SS-E5.19





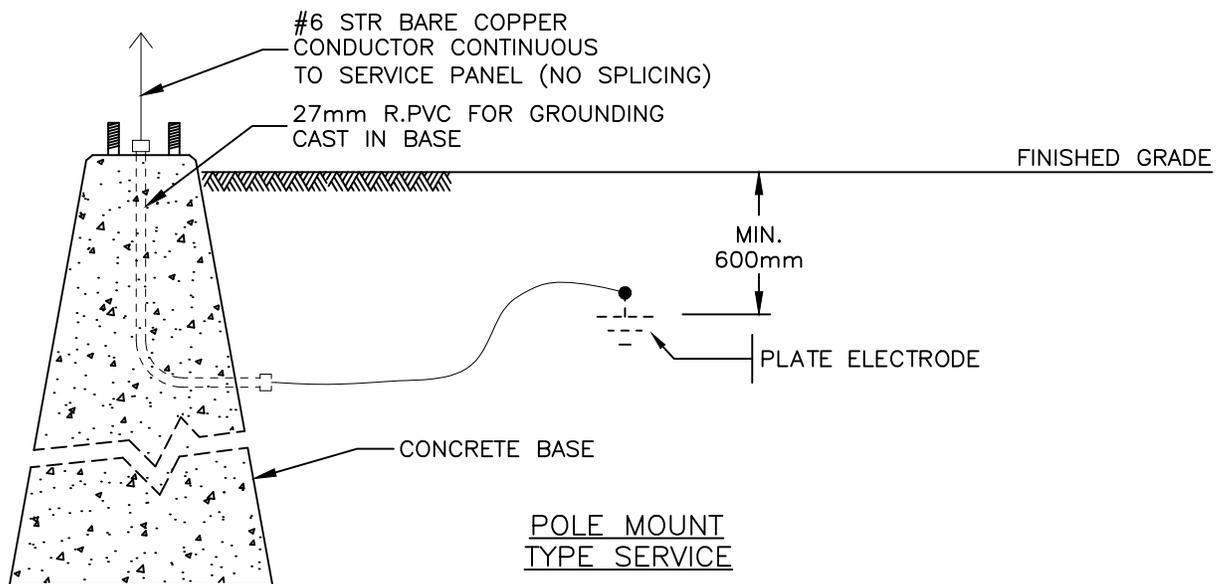
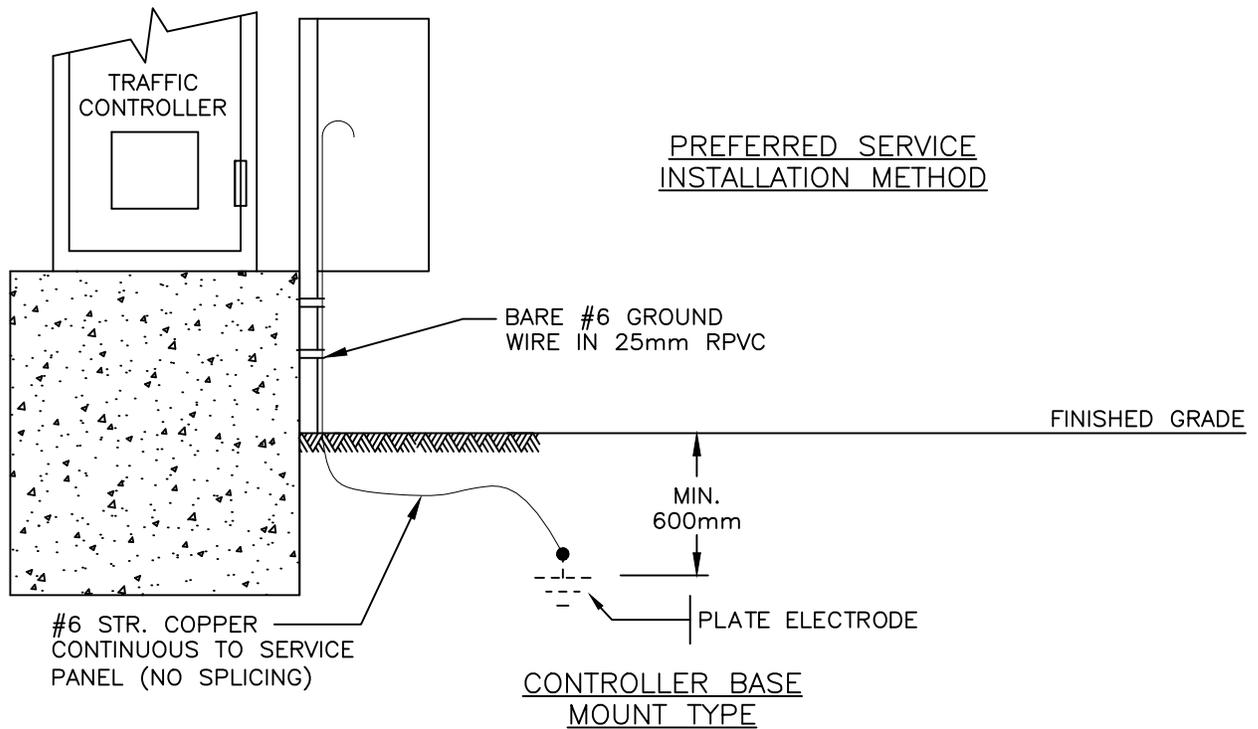
**STANDARD
DETAIL
DRAWING**

DATE:
07/20/20
SCALE:
NTS

**SIGNAL HEAD QUICK CHANGE
KIT**

DWG. NO.
SS-E5.20

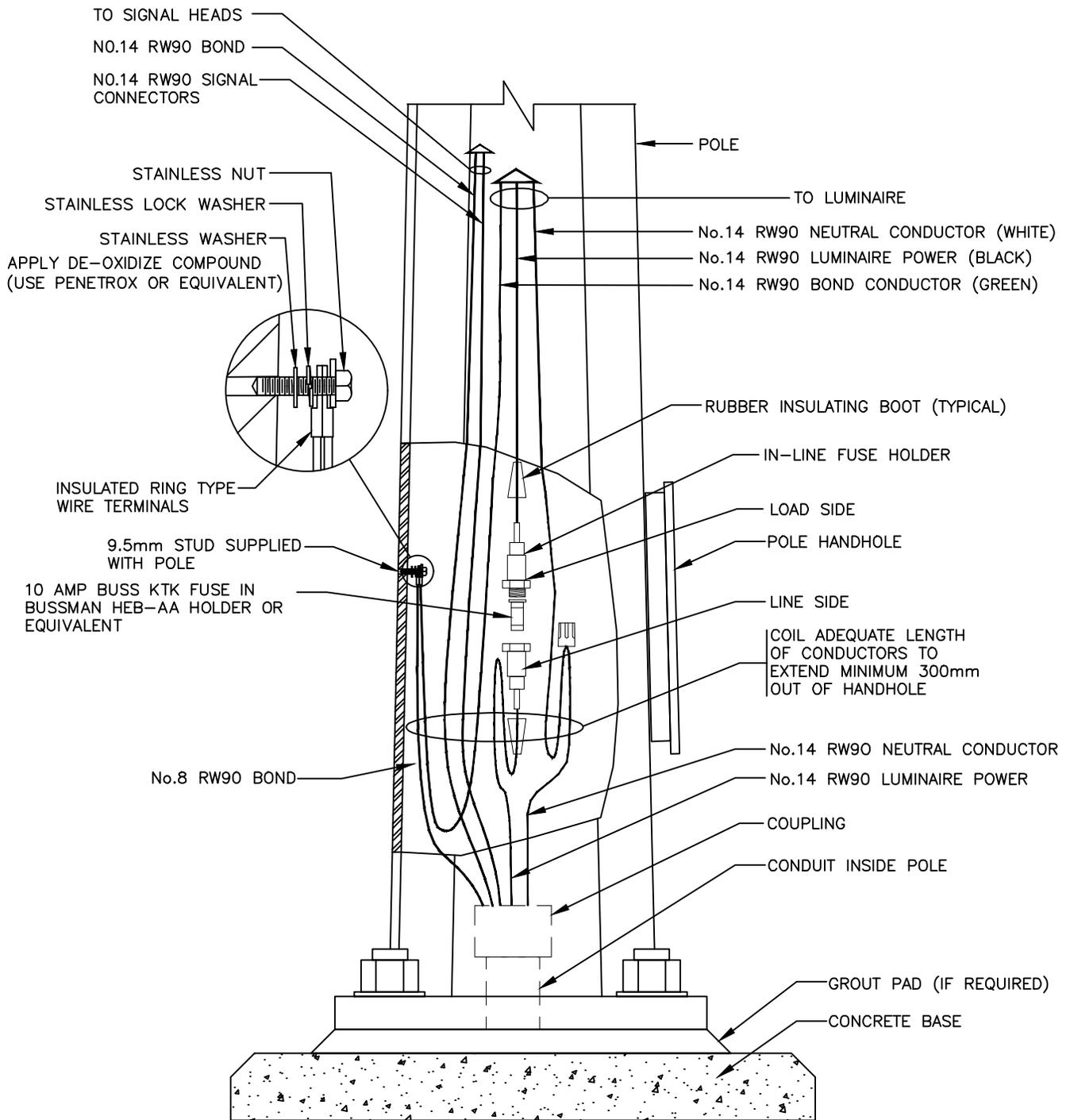




NOTES

1. REFER REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. REFER TO CONTRACT DRAWINGS FOR ADDITIONAL INSTALLATION DETAILS AND LOCATION
4. GROUND RODS NOT TO BE PLACED WITHIN 5m OF OTHER UTILITY GROUNDING.

STANDARD DETAIL DRAWING	DATE: 04/19/21	GROUNDING OF ELECTRICAL SERVICE INSTALLATION DETAILS	DWG. NO.	 City of Kelowna
	SCALE: NTS		SS-E7.10	



ELEVATION
N.T.S.

NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

**STANDARD
DETAIL
DRAWING**

DATE:
08/04/24

SCALE:
NTS

**LUMINAIRE WIRING ON POLE
HANDHOLE DETAIL**

DWG. NO.

SS-E7.11



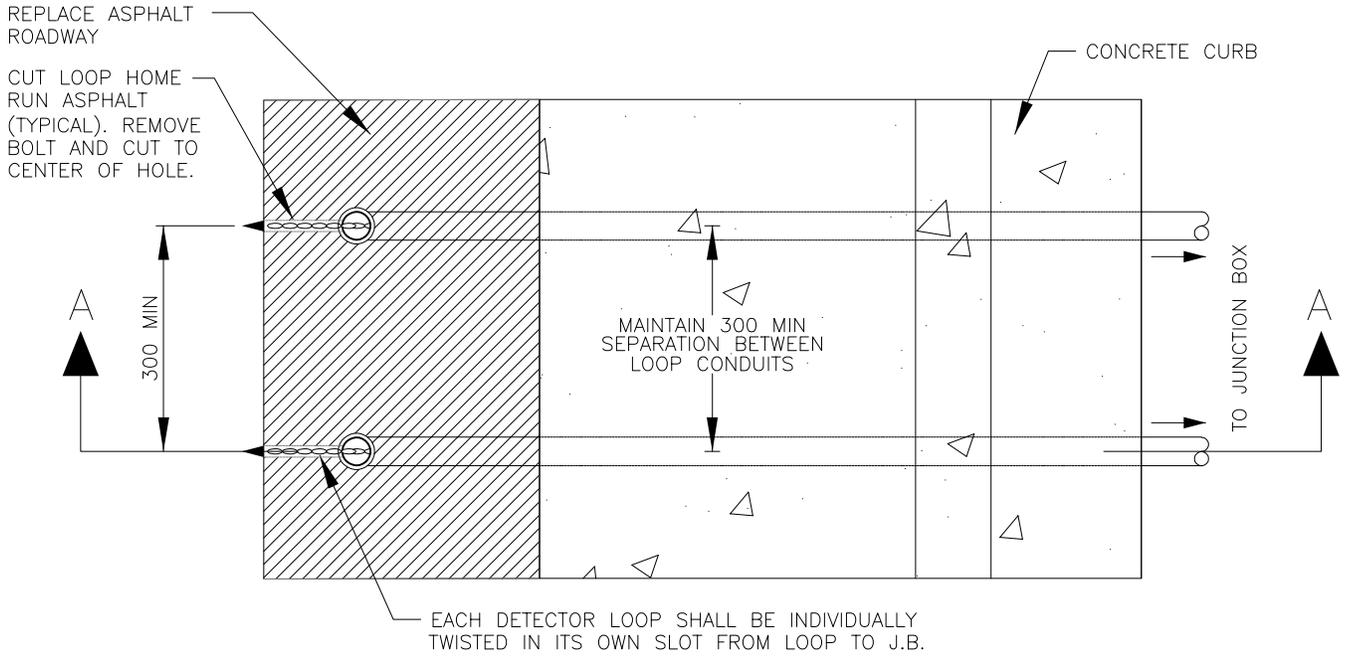
COLOUR CODE CHART			
ITEM	DISPLAY	CONDUCTOR COLOUR	ID TAPE
Phase 2 (NB)	RED YELLOW GREEN WALK DON'T WALK P. BUTTON	RED ORANGE BLUE BLUE BROWN YELLOW	RED RED RED RED/BLACK RED/BLACK RED/BK & RED/BK/BK
Phase 5 (NB-LT)	Green Ar Yellow Ar	BROWN YELLOW	RED RED
Phase 4 (EB)	RED YELLOW GREEN WALK DON'T WALK P. BUTTON	RED ORANGE BLUE BLUE YELLOW BROWN	YELLOW YELLOW YELLOW YELLOW/BLACK YELLOW/BLACK Y/BK & Y/BK/BK
Phase 7 (EB-LT)	Green Ar Yellow Ar	BROWN YELLOW	YELLOW YELLOW
Phase 6 (SB)	RED YELLOW GREEN WALK DON'T WALK P. BUTTON	RED ORANGE BLUE BLUE BROWN YELLOW	BLUE BLUE BLUE BLUE/BLACK BLUE/BLACK BL/BK & BL/BK/BK
Phase 1 (SB-LT)	Green Ar Yellow Ar	BROWN YELLOW	BLUE BLUE
Phase 8 (WB)	RED YELLOW GREEN WALK DON'T WALK P. BUTTON	RED ORANGE BLUE BLUE YELLOW BROWN	GREEN GREEN GREEN GREEN/BLACK GREEN/BLACK G/BK & G/BK/BK
Phase 3 (WB-LT)	Green Ar Yellow Ar	BROWN YELLOW	GREEN GREEN
Street Lighting	—	BLACK	WHITE
Controller Power	—	BLACK	—
Neutral	—	WHITE	—
Bond	—	GREEN	—

NOTES

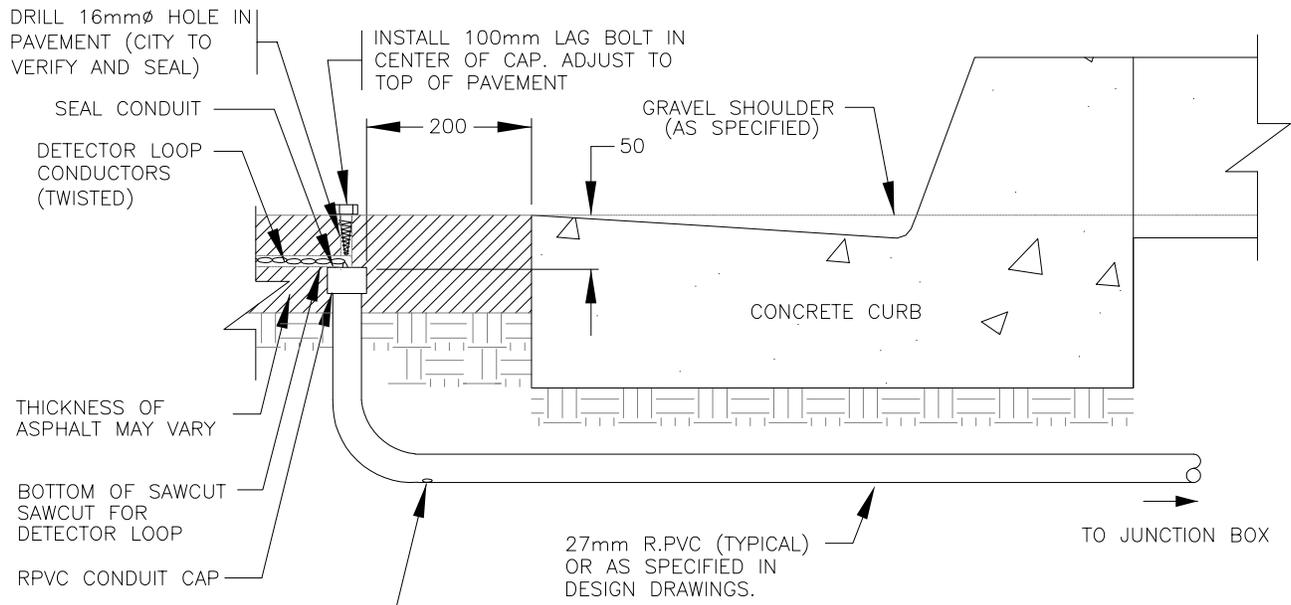
1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.

STANDARD DETAIL DRAWING	DATE: 07/20/20	SIGNAL WIRING COLOUR CODE CHART (FROM JB TO POLE)	DWG. NO.	 City of Kelowna
	SCALE: NTS		SS-E7.19	

BYLAW NOTE



TOP VIEW



SECTION A-A
N.T.S.

NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. LAG BOLT IS FOR LOCATING CONDUIT STUB AND IS TO BE REMOVED UPON INSTALLATION OF LOOP WIRES.

**STANDARD
DETAIL
DRAWING**

DATE:
07/20/20

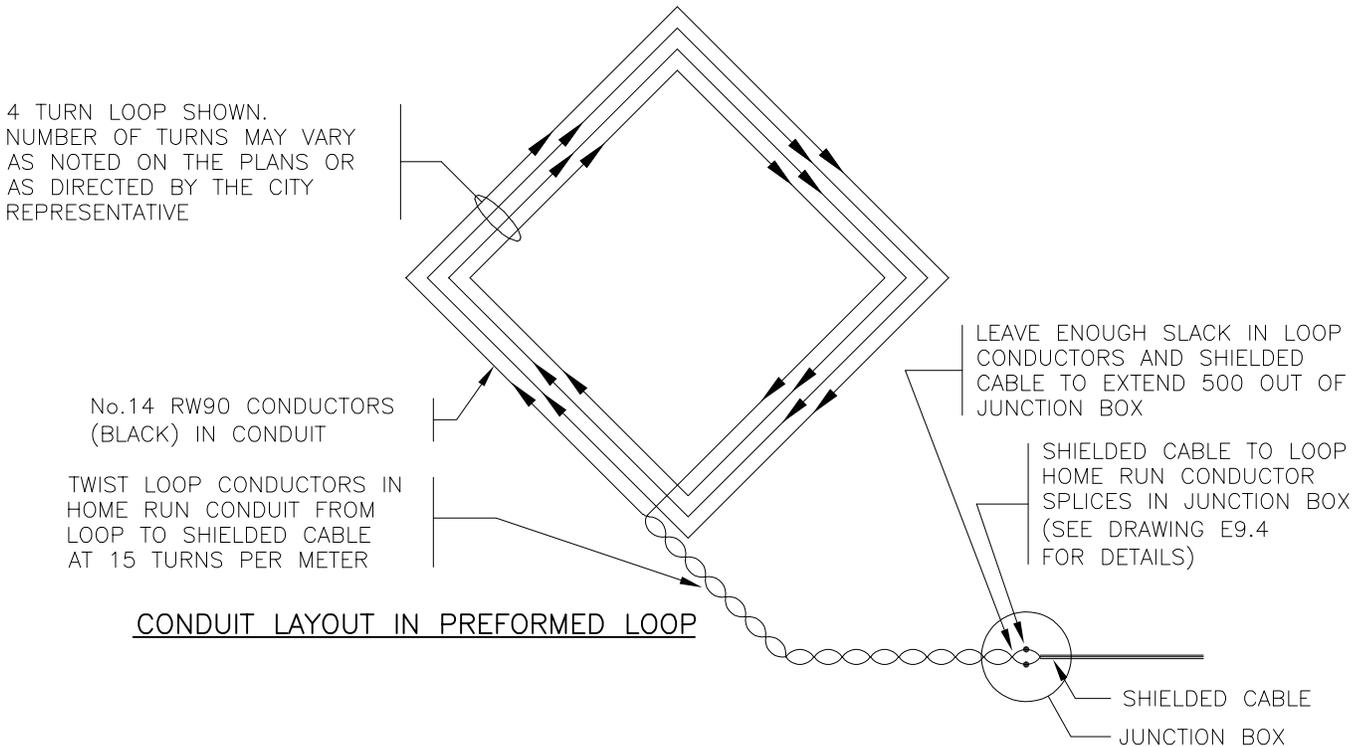
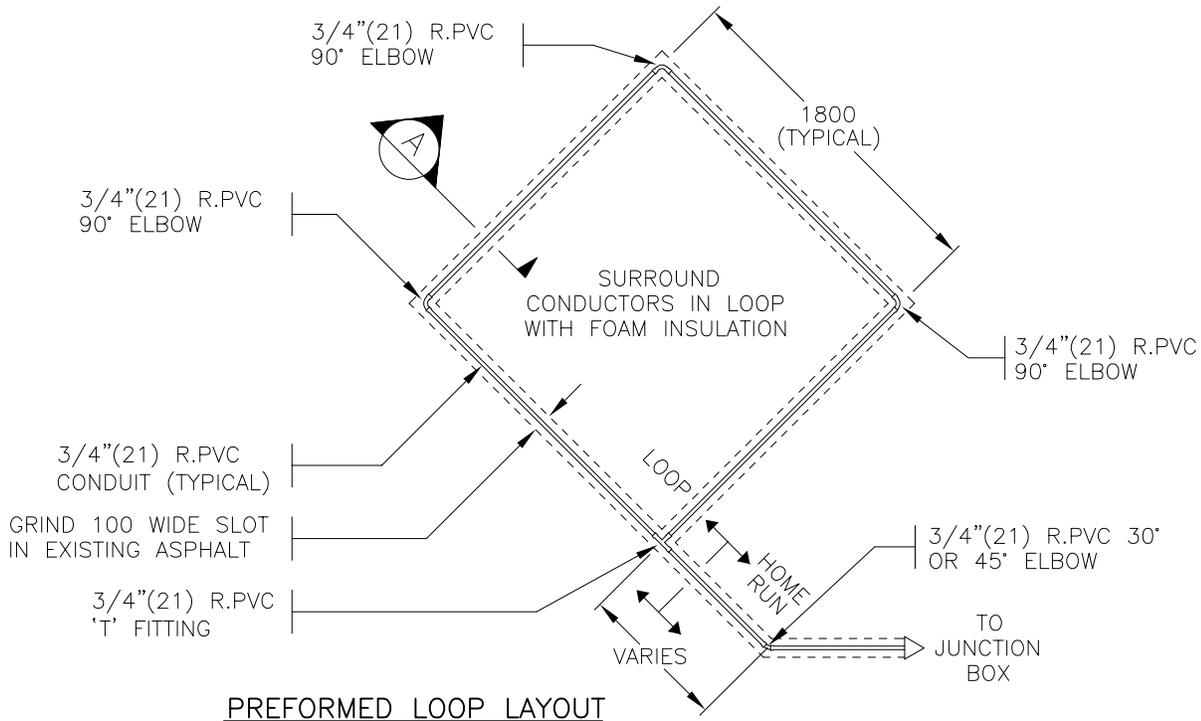
SCALE:
NTS

DETECTOR LOOPS

DWG. NO.

SS-E8.2





NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTIONS 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. LOOP INDUCTANCE TO BE EQUAL TO OR GREATER THAN SHIELDED CABLE INDUCTANCE. (A 2:1 RATIO IS PREFERABLE) No. 14 SHIELDED CABLE INDUCTANCE IS 0.72 μ H PER METRE

**STANDARD
DETAIL
DRAWING**

DATE:
07/20/20

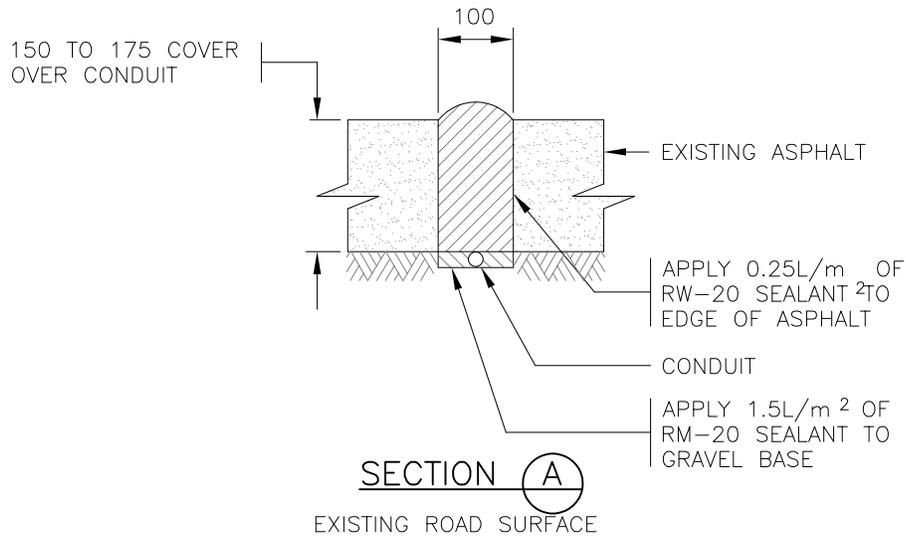
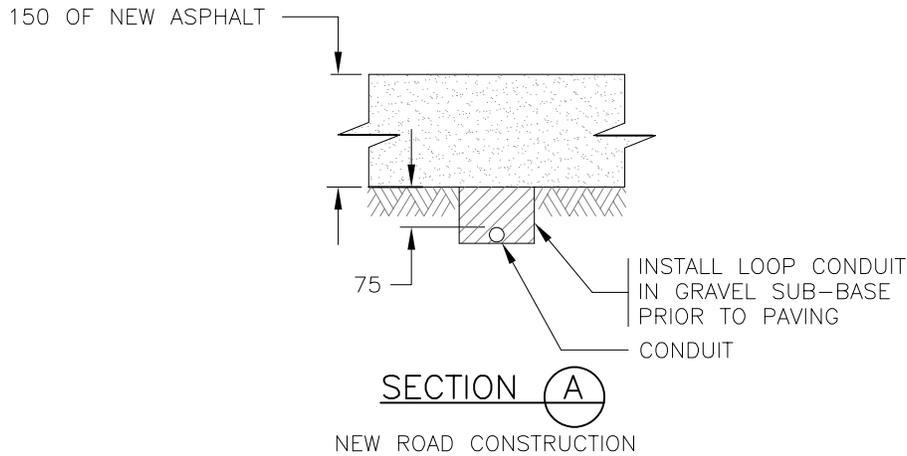
SCALE:
NTS

**PRE-FORMED DIAMOND
DETECTOR LOOPS**

DWG. NO.

SS-E8.8

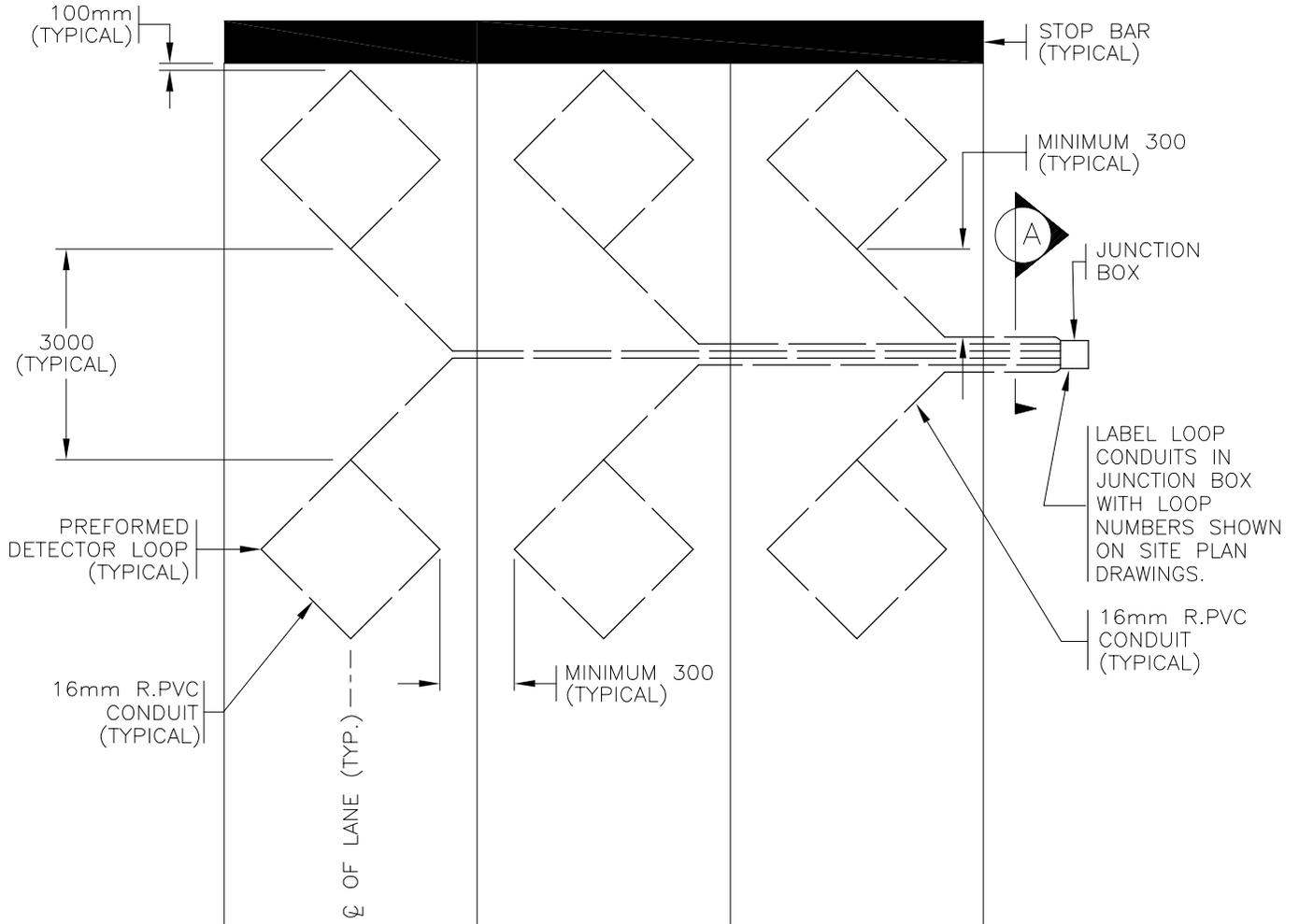




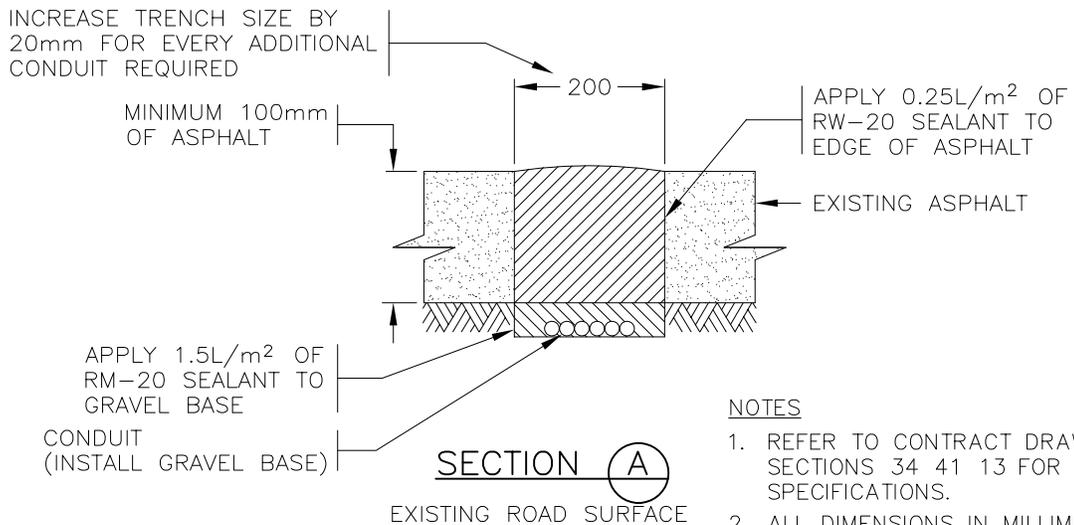
NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTION 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. WHERE INSTALLING PREFORMED LOOPS IN EXISTING ASPHALT GRIND OUT SLOT AND INSTALL PREFORMED LOOP. BACKFILL SLOT WITH HOT MIXED ASPHALT PAVEMENT. COMPACT ASPHALT WITH VIBRATING MECHANICAL COMPACTOR WITH 75mm SQUARE PLATE. WHERE INSTALLING PREFORMED LOOPS IN NEW ROAD CONSTRUCTION, PLACE CONDUIT IN GRAVEL SUB-BASE JUST BELOW ASPHALT. LAYOUT STOP BARS, CURB RETURNS, ISLANDS, MEDIANS, LANE LINES AND LOOPS AND VERIFY WITH CITY REPRESENTATIVE PRIOR TO CONSTRUCTION. FAILURE TO CORRECTLY LOCATE THE LOOPS IN THEIR REQUIRED LOCATIONS WILL RESULT IN REINSTALLATION OF THE LOOPS AT THE CONTRACTORS EXPENSE.
4. PREFORMED LOOPS SHALL MEET THE APPROVAL OF THE CITY REPRESENTATIVE PRIOR TO INSTALLATION.
5. CONTRACTOR SHALL VERIFY LOOPS LOCATIONS (CUT INTO OVERLAYED OR NEW PAVED ROADWAYS) WITH THE CITY REPRESENTATIVE AFTER INSTALLATION.

STANDARD DETAIL DRAWING	DATE: 07/20/20	PRE-FORMED DIAMOND DETECTOR LOOPS	DWG. NO.	 City of Kelowna
	SCALE: NTS		SS-E8.9	



TYPICAL PREFORMED LOOP LAYOUT



NOTES

1. REFER TO CONTRACT DRAWINGS AND SECTIONS 34 41 13 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

**STANDARD
DETAIL
DRAWING**

DATE:
07/20/20
SCALE:
NTS

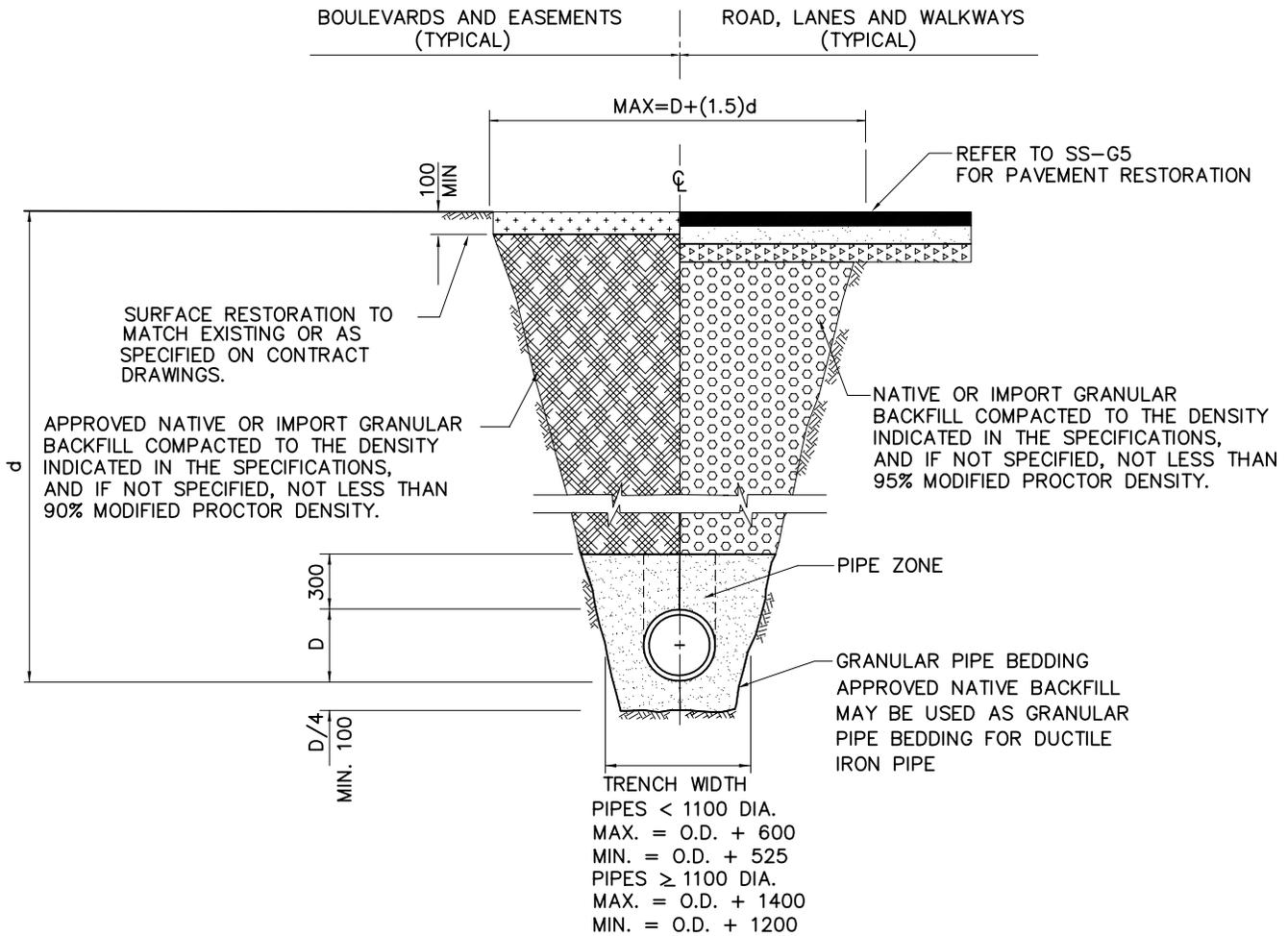
**PRE-FORMED DIAMOND
DETECTOR LOOPS**

DWG. NO.

SS-E8.10



STANDARD DETAIL DRAWINGS



NOTE:

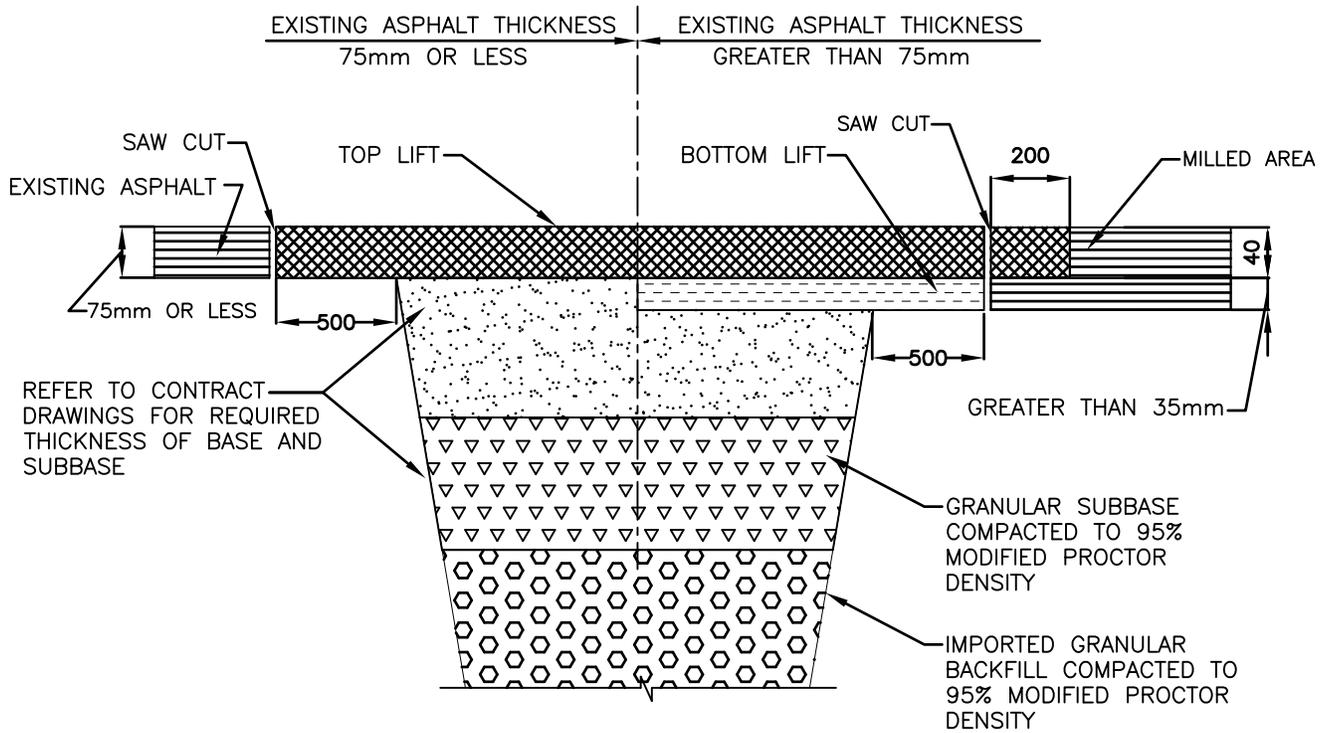
1. TRENCHING TO COMPLY WITH ALL REQUIREMENTS OF THE WORKERS COMPENSATION BOARD.
2. REFER TO CONTRACT DRAWINGS AND SECTION 02223 FOR DETAILED SPECIFICATIONS.

MAY 09/02

UTILITY TRENCH

SS-G4

STANDARD DETAIL DRAWINGS



CROSS SECTION

H:\WU\DRAWING\STD-DWGS\MMCD\SS-G5

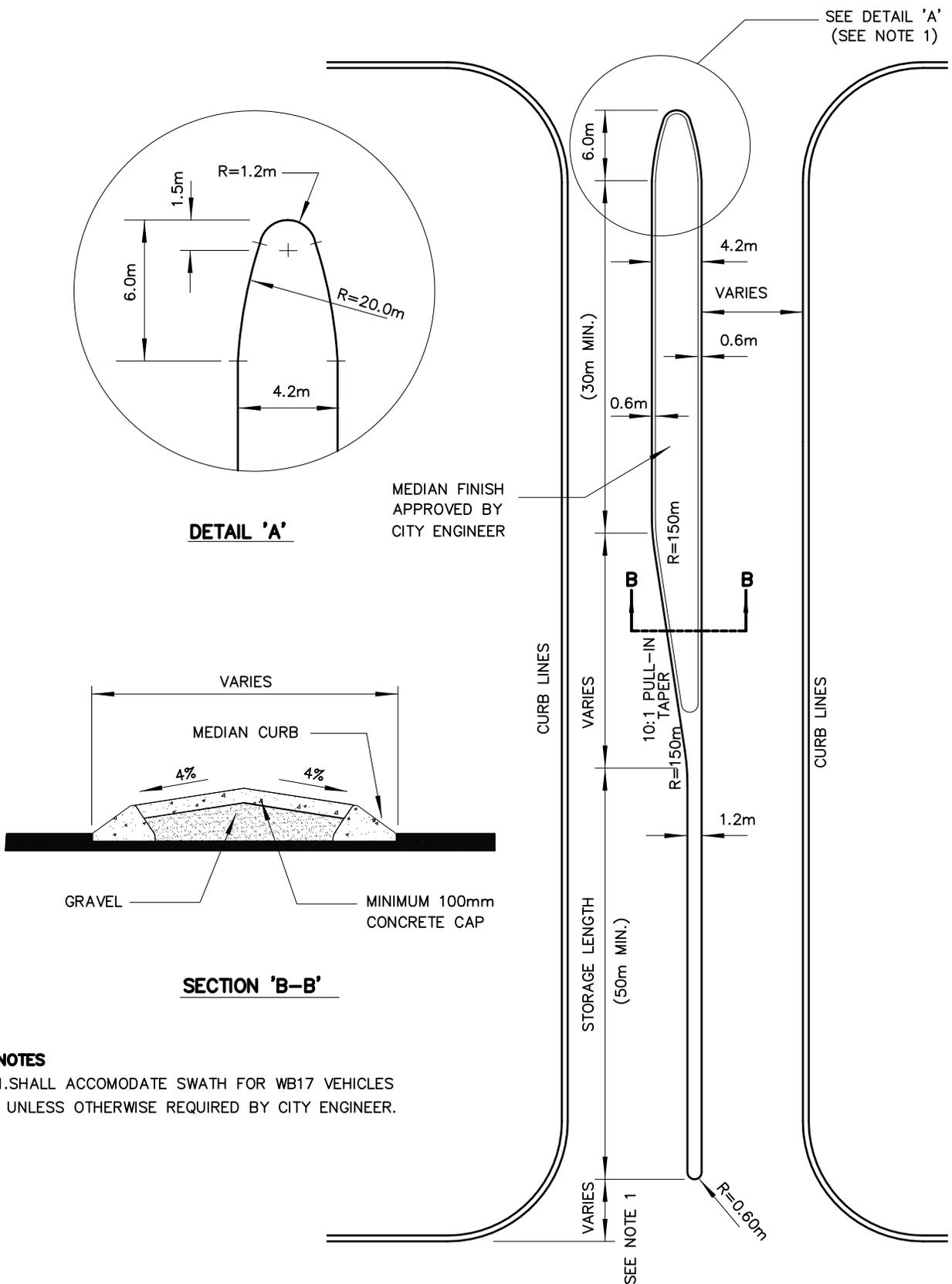
PAVEMENT RESTORATION

SS-G5

REV: JAN.29/01

DATE: OCT.12/01

STANDARD DETAIL DRAWINGS

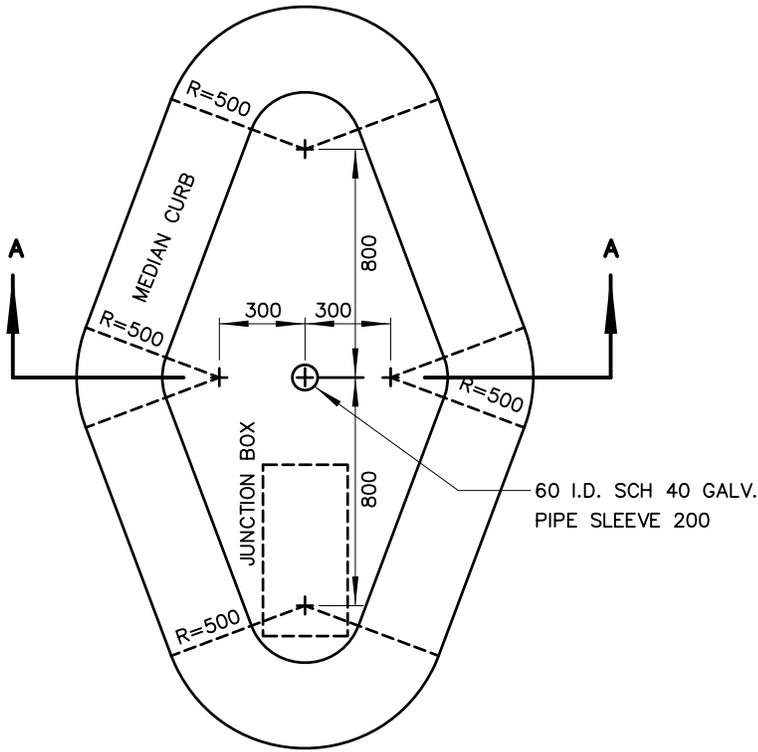


NOV. 2/98

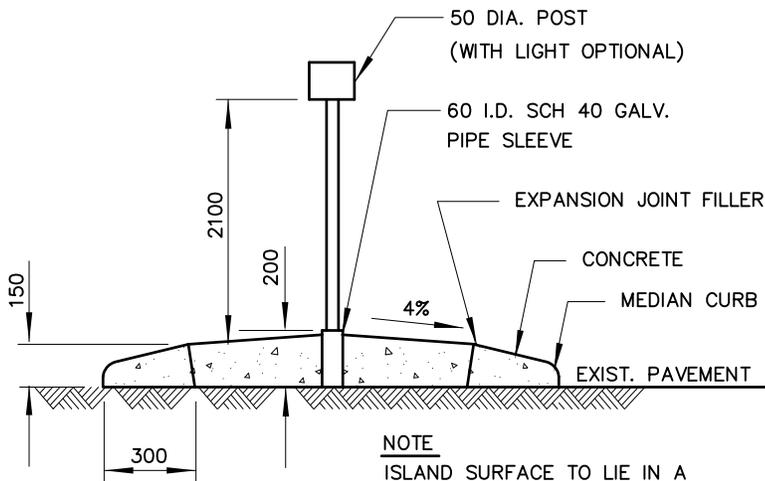
LEFT TURN LANE (RAISED MEDIAN)

SS-R20

STANDARD DETAIL DRAWINGS



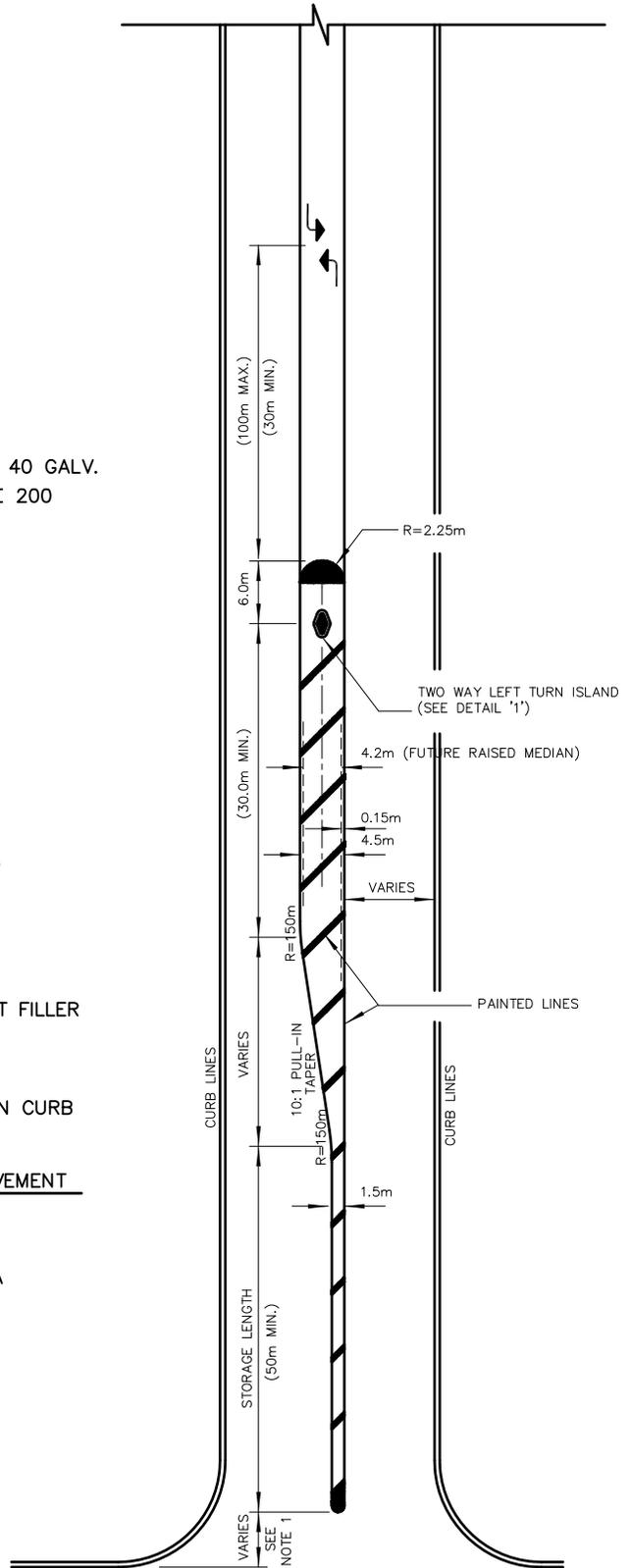
**PLAN OF RAISED ISLAND
(DETAIL '1')**



NOTE
ISLAND SURFACE TO LIE IN A
PLANE PARALLEL TO ROAD

NOTES

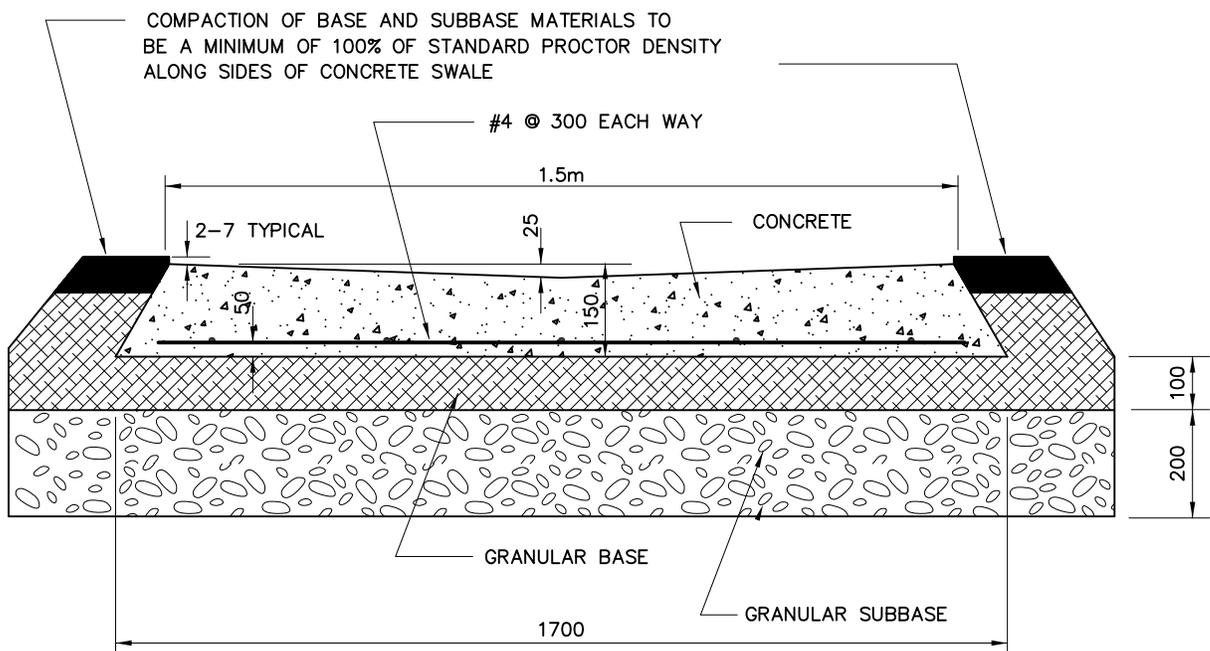
1. SHALL ACCOMMODATE SWATH FOR WB17 DESIGN VEHICLES
UNLESS OTHERWISE REQUIRED BY CITY ENGINEER.



**LEFT TURN LANE (PAINTED) AND
TWO-WAY LEFT TURN LANE**

SS-R21

STANDARD DETAIL DRAWINGS



SECTION

NOTES:

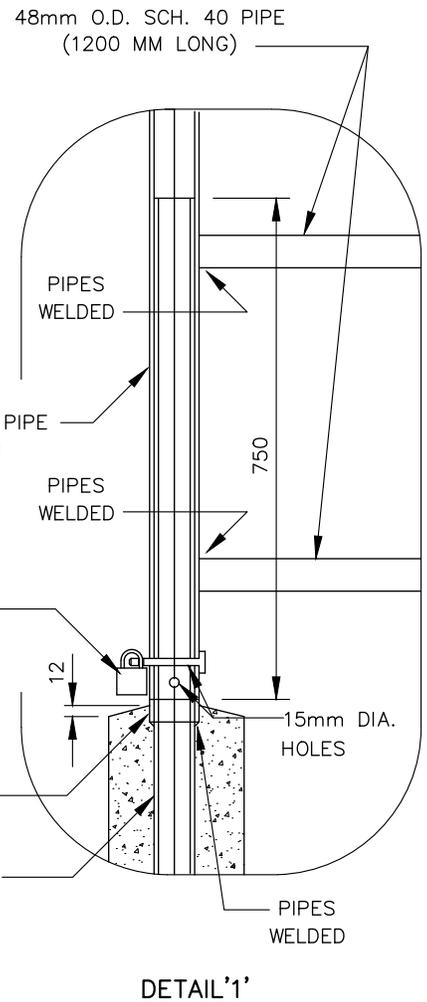
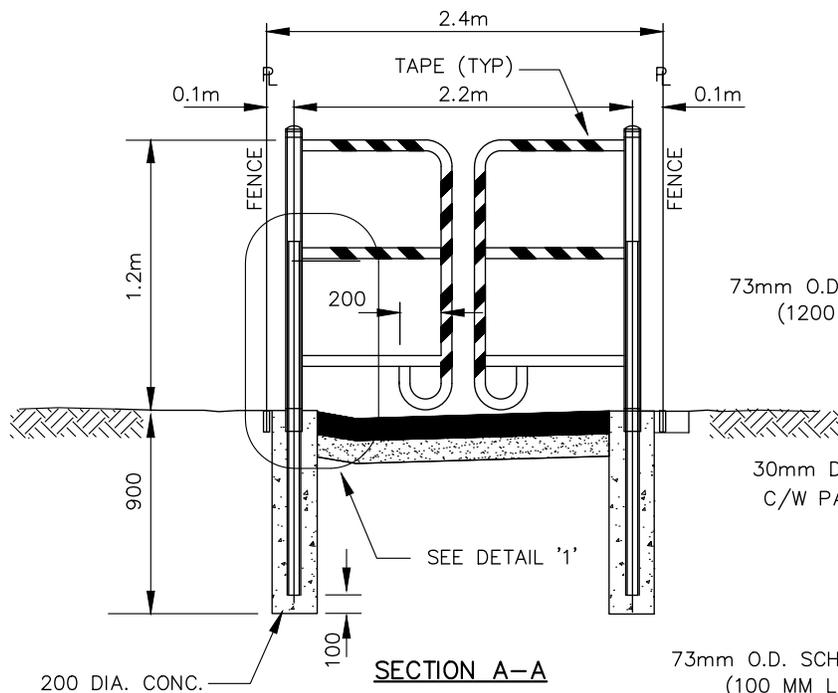
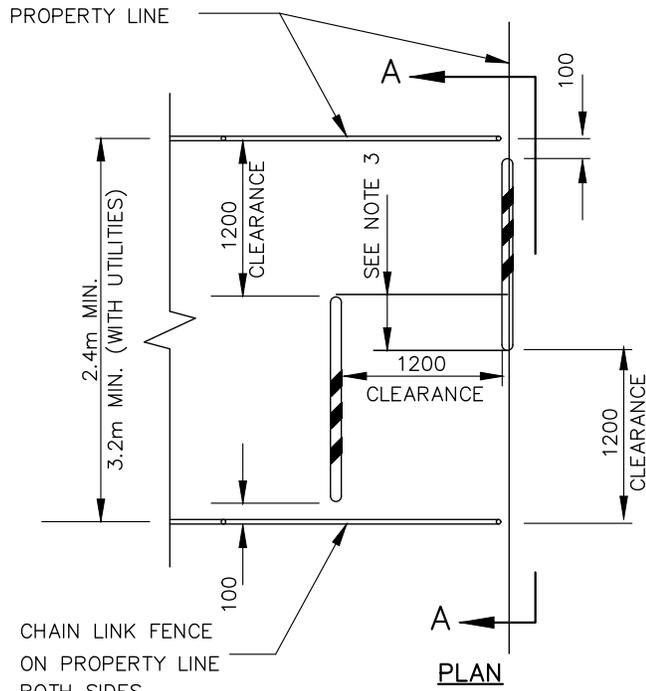
1. CONCRETE TO HAVE A 28 DAY COMPRESSIVE STRENGTH OF 30 MPa.
2. BRUSH FINISH.
3. MINOR VARIATION IN CROSS SECTION WILL BE CONSIDERED TO ACCOMMODATE EXTRUDING OR SLIPFORM MACHINES.
4. MINIMUM GRADE 1.0%.
5. EXPANSION JOINTS AT EACH END ONLY.
6. THIS STANDARD IS ONLY TO BE USED IF SPECIAL APPROVAL IS OBTAINED FROM THE CITY ENGINEER.

\\WU\DRAWING\STD-DWGS\D44\D44-370

NOV. 2/98

**CONCRETE DRAINAGE SWALE
ACROSS ASPHALT**

SS-R23



NOTES:

1. ALL METAL IS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION, EXCEPT WHERE FIELD JOINTS ARE NECESSARY IN WHICH CASE 2 COATS OF GALVICAN CAN BE USED.
2. WRAP GATE VERTICALS/LATERALS WITH RETROREFLECTIVE TAPE (DIAMOND GRADE)
3. WHERE WALKWAY IS GREATER THAN 2.4m WIDE, GATES NOT TO OVERLAP MORE THAN 0.9m
4. CATCH BASIN REQUIRED WHERE DRAINAGE WOULD CROSS SIDEWALK

**STANDARD
DETAIL
DRAWING**

DATE:
MAY 09/24

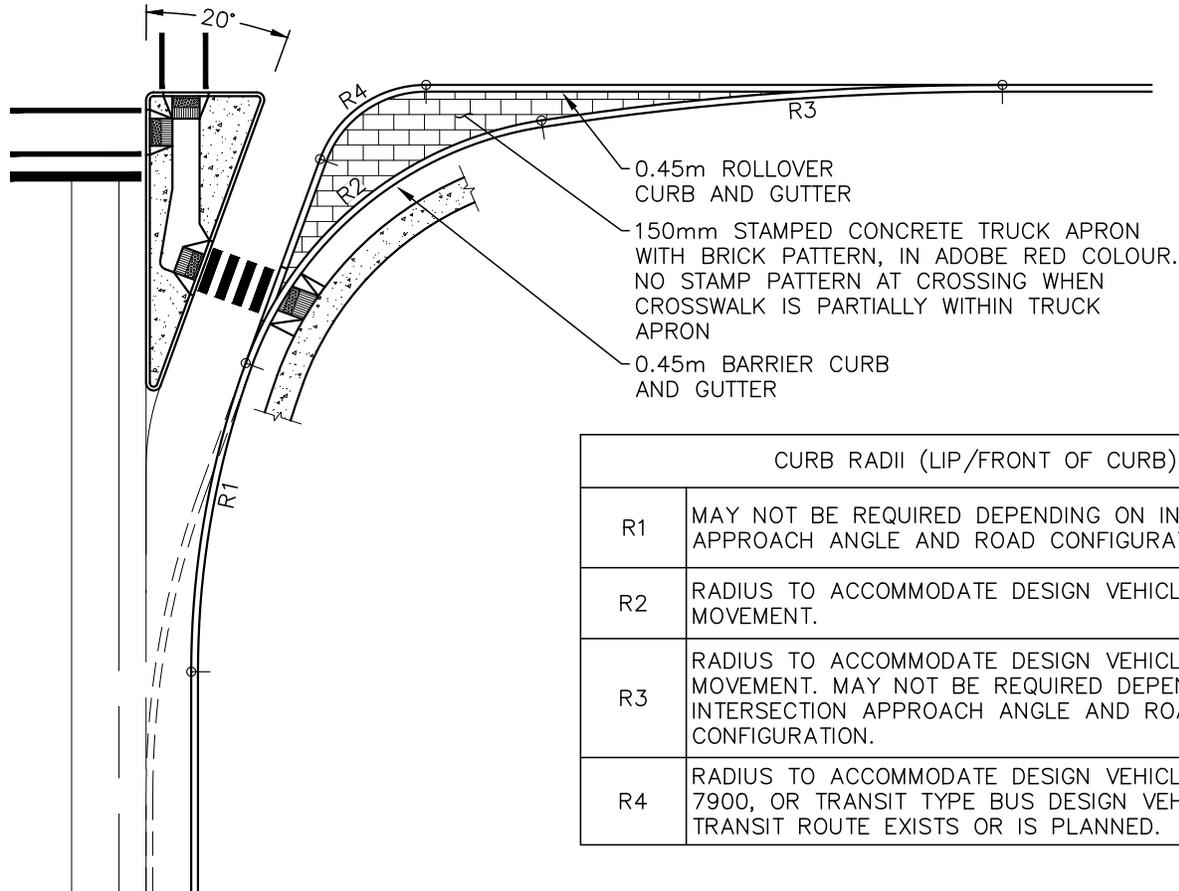
SCALE:
NTS

WALKWAY GATE

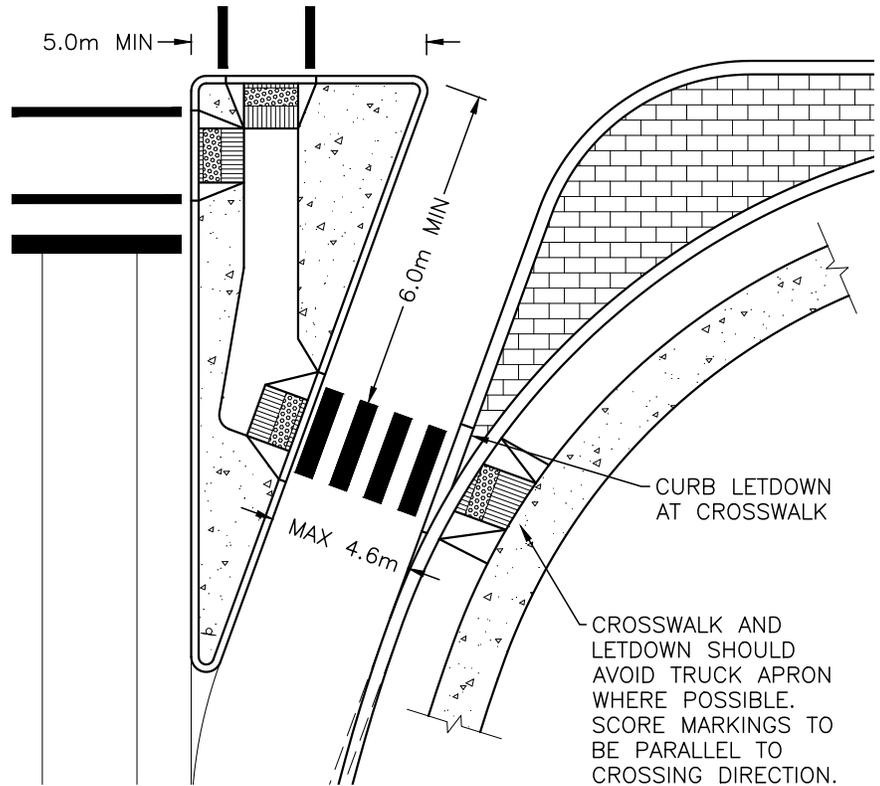
DWG. NO.

SS-R28





CURB RADII (LIP/FRONT OF CURB)	
R1	MAY NOT BE REQUIRED DEPENDING ON INTERSECTION APPROACH ANGLE AND ROAD CONFIGURATION.
R2	RADIUS TO ACCOMMODATE DESIGN VEHICLE TURNING MOVEMENT.
R3	RADIUS TO ACCOMMODATE DESIGN VEHICLE TURNING MOVEMENT. MAY NOT BE REQUIRED DEPENDING ON INTERSECTION APPROACH ANGLE AND ROAD CONFIGURATION.
R4	RADIUS TO ACCOMMODATE DESIGN VEHICLE PER BYLAW 7900, OR TRANSIT TYPE BUS DESIGN VEHICLE IF TRANSIT ROUTE EXISTS OR IS PLANNED.



NOTES:

1. THIS DRAWING IS INTENDED TO BE USED AS A GENERAL DESIGN GUIDANCE. TURN PATH ANALYSIS AND SITE SPECIFIC DESIGN IS REQUIRED. DESIGNS TO BE APPROVED BY CITY ENGINEER.
2. ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE.
3. REFER TO DRAWINGS SS-C8 AND SS-C9 FOR SIDEWALK RAMP DETAILS.
4. CURB TRANSITIONS AT SIDEWALK RAMP TO BE FLUSH, TYPICAL FOR ALL CURB TYPES.

ISLAND DETAIL

**STANDARD
DETAIL
DRAWING**

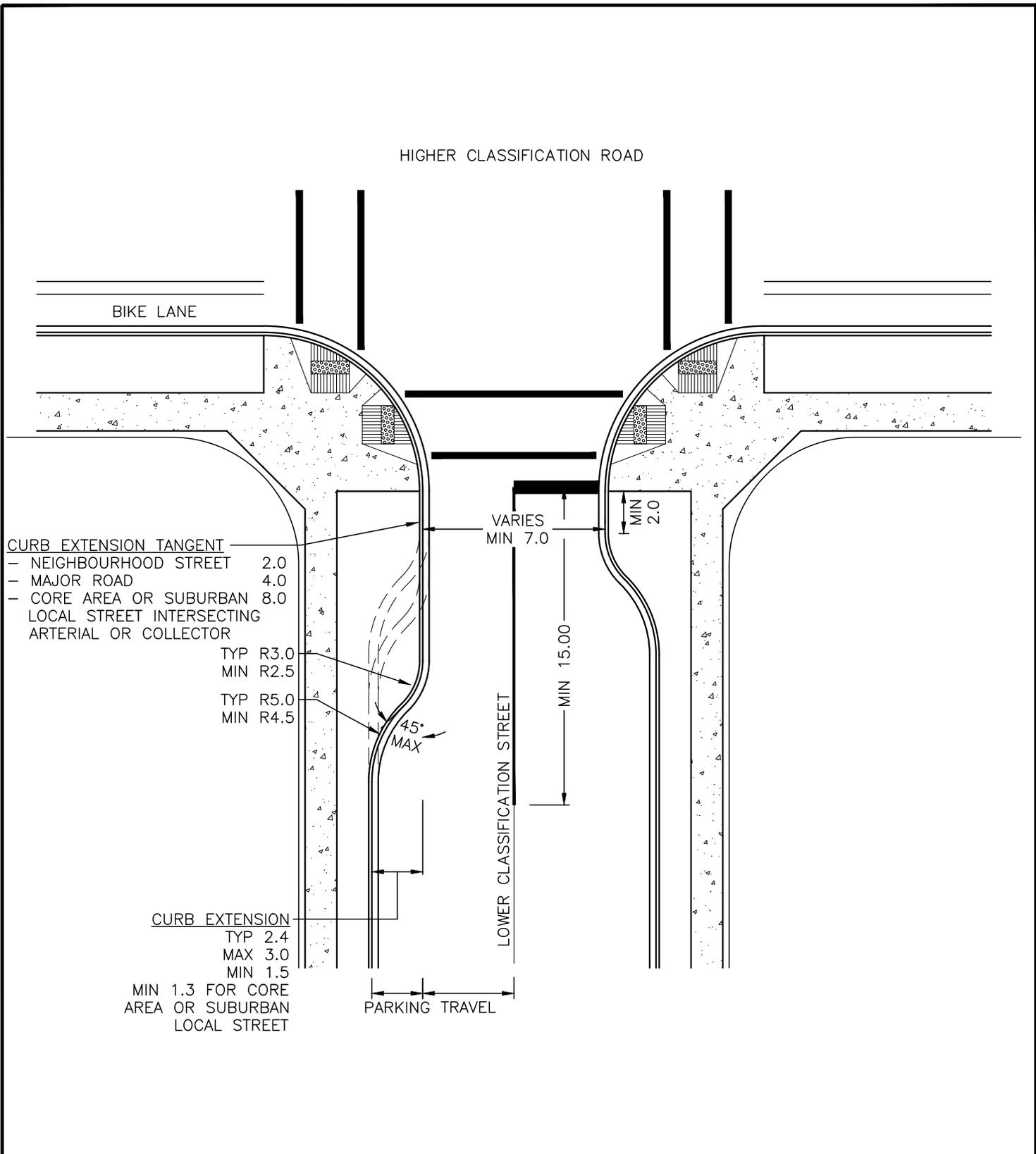
DATE:
OCT 31/22
SCALE:
NTS

**SMART CHANNEL
RIGHT TURN**

DWG. NO.

SS-R50



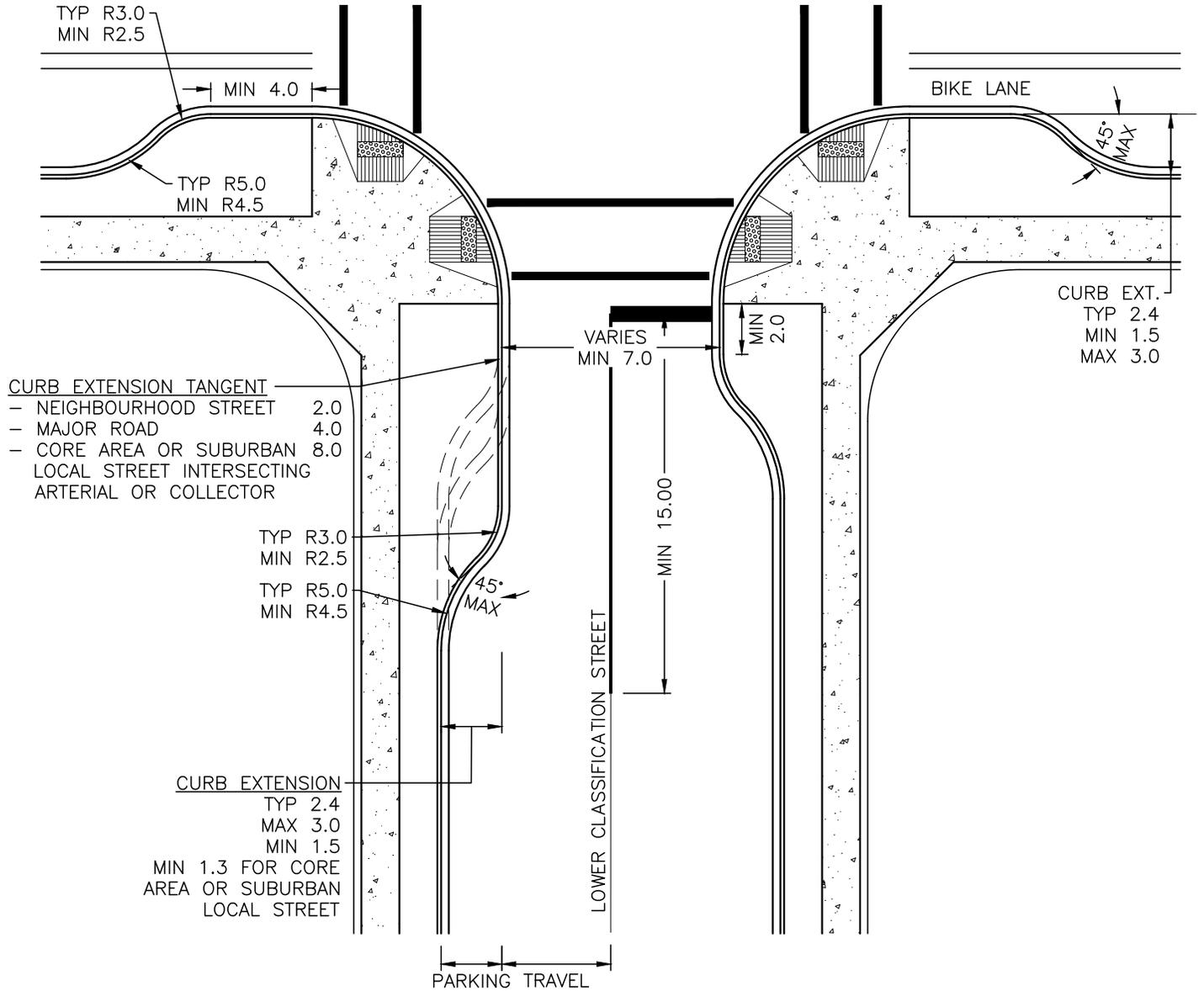


NOTES:

1. THIS DRAWING IS INTENDED TO BE USED AS A GENERAL DESIGN GUIDANCE. TURN PATH ANALYSIS AND SITE SPECIFIC DESIGN IS REQUIRED.
2. ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE.
3. CURB DIMENSIONS ARE TO THE FACE OF CURB (150mm FROM BACK OF CURB).
4. SEE DRAWING SS-C8 AND SS-C9 FOR SIDEWALK RAMP DETAILS.

STANDARD DETAIL DRAWING	DATE: SEPT 22/22	INTERSECTION CURB EXTENSIONS HIGHER CLASS ROAD NO PARKING	DWG. NO.	 City of Kelowna
	SCALE: NTS		SS-R51	

HIGHER CLASSIFICATION ROAD



NOTES:

1. THIS DRAWING IS INTENDED TO BE USED AS A GENERAL DESIGN GUIDANCE. TURN PATH ANALYSIS AND SITE SPECIFIC DESIGN IS REQUIRED.
2. ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE.
3. CURB DIMENSIONS ARE TO THE FACE OF CURB (150mm FROM BACK OF CURB).
4. SEE DRAWING SS-C8 AND SS-C9 FOR SIDEWALK RAMP DETAILS.

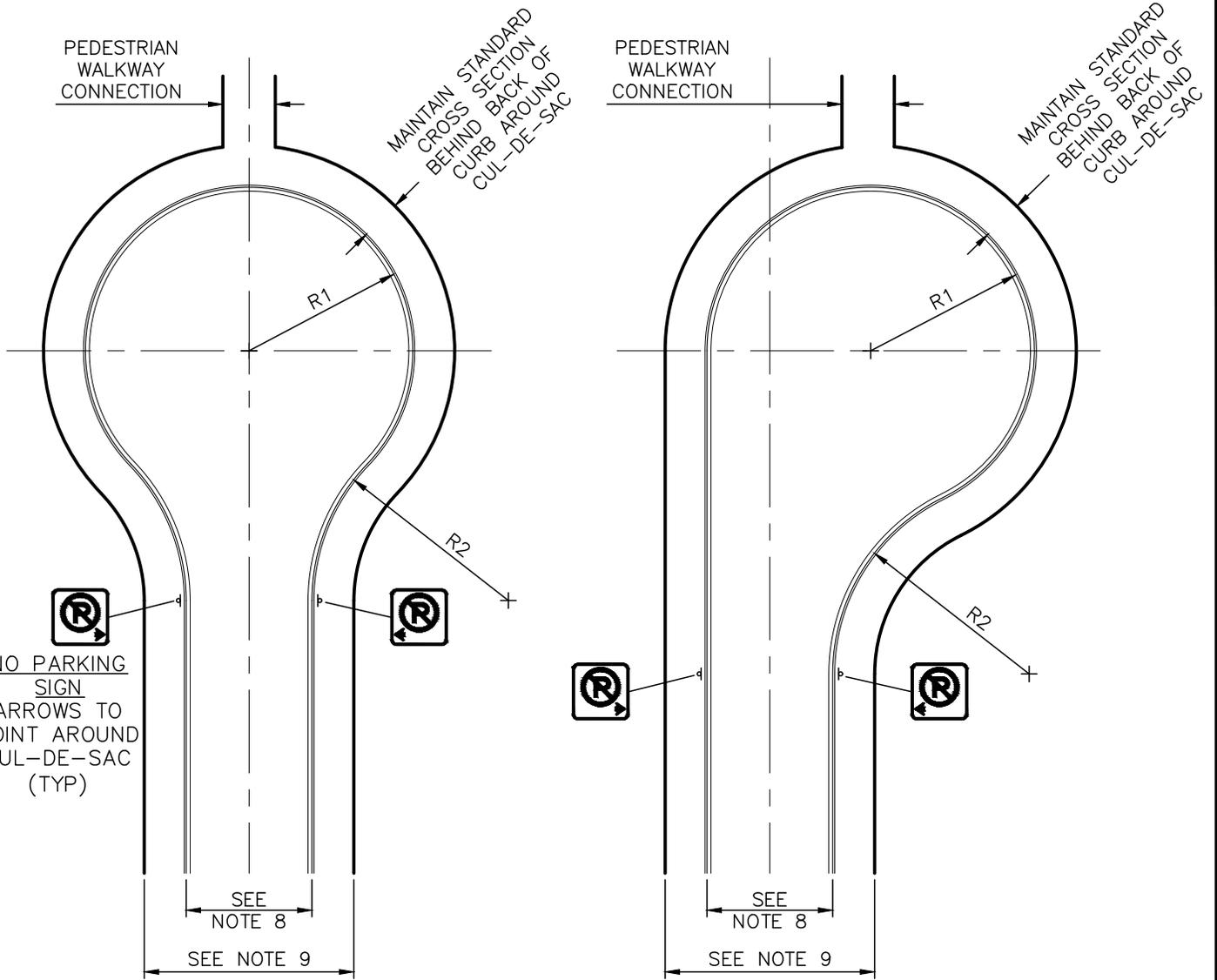
**STANDARD
DETAIL
DRAWING**

DATE:
SEPT 22/22
SCALE:
NTS

**INTERSECTION CURB
EXTENSIONS**
HIGHER CLASS ROAD WITH PARKING

DWG. NO.
SS-R52



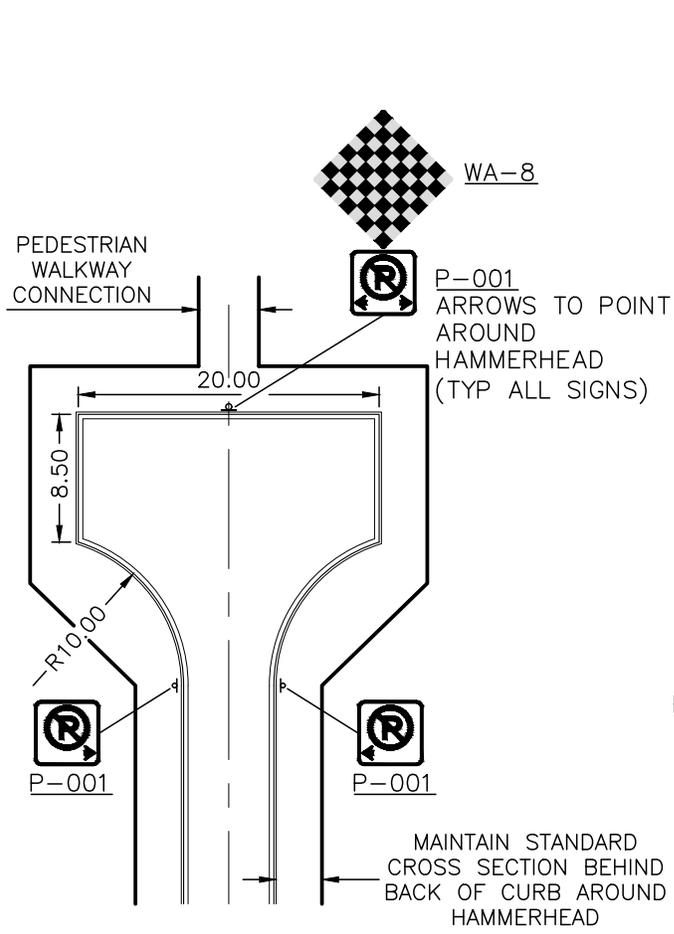


CLASS	R1 (MIN)	R2 (MIN)
LOCAL RURAL	12.5m	15.0m
LOCAL SUBURBAN	12.5m	15.0m
LOCAL CORE AREA	12.5m	15.0m
LOCAL HILLSIDE	12.5m	15.0m
LOCAL INDUSTRIAL	15.0m	15.0m

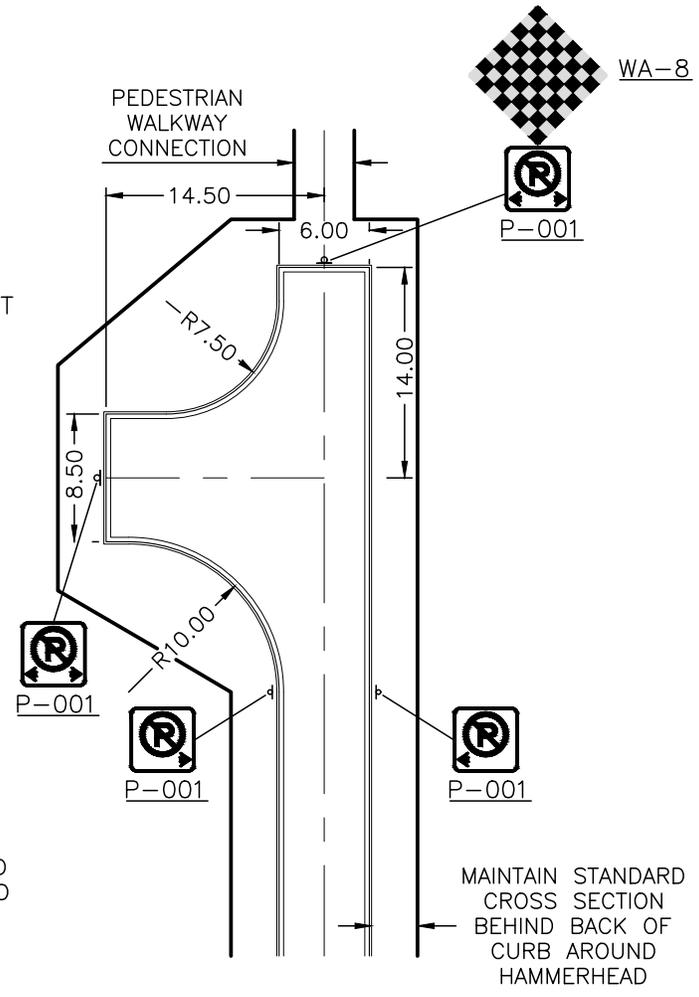
NOTES:

1. CUL-DE-SAC TURNAROUNDS ARE ONLY IMPLEMENTED ON LOCAL STREETS.
2. CUL-DE-SAC IMPLEMENTATION TO MEET BYLAW LENGTH AND NETWORK CONNECTION REQUIREMENT.
3. NEW CUL-DE-SACS ARE NOT SUPPORTED IN URBAN CENTRES
4. NO PARKING WITHIN CUL-DE-SAC.
5. SPECIAL PROVISIONS FOR CUT AND FILL SLOPES MAY BE REQUIRED BY CITY ENGINEER.
6. CUL-DE-SAC TO HAVE MINIMUM LONGITUDINAL DRAINAGE OF 0.5%.
7. RADIUS DIMENSIONS SHOWN ARE TO FACE OF CURB (150mm FROM BACK OF CURB)
8. PAVEMENT WIDTH, SIDEWALK, AND BOULEVARD AS PER ROAD CROSS SECTION.
9. ROAD DEDICATION AS PER ROAD CROSS SECTION.

STANDARD DETAIL DRAWING	DATE: JUN 22/23	CUL-DE-SAC TURNAROUND	DWG. NO.	City of Kelowna
	SCALE: NTS		SS-R53	



HAMMERHEAD



MODIFIED HAMMERHEAD

NOTES:

1. CITY PREFERENCE IS FOR CUL-DE-SAC. HAMMERHEAD TURNAROUND IS ONLY TO BE USED IN HILLSIDE ZONES UPON DEMONSTRATED NEED WHERE TOPOGRAPHICAL CONSTRAINTS ARE PRESENT AND AS APPROVED BY THE CITY ENGINEER.
2. PAVEMENT WIDTH AS PER ROAD CROSS SECTION.
3. ROAD DEDICATION AND FRONTAGE IMPROVEMENTS AS PER ROAD CROSS SECTION.
4. DIMENSIONS ARE ALL IN METRES UNLESS OTHERWISE NOTED.
5. DIMENSIONS ARE TO FACE OF CURB (150mm FROM BACK OF CURB).

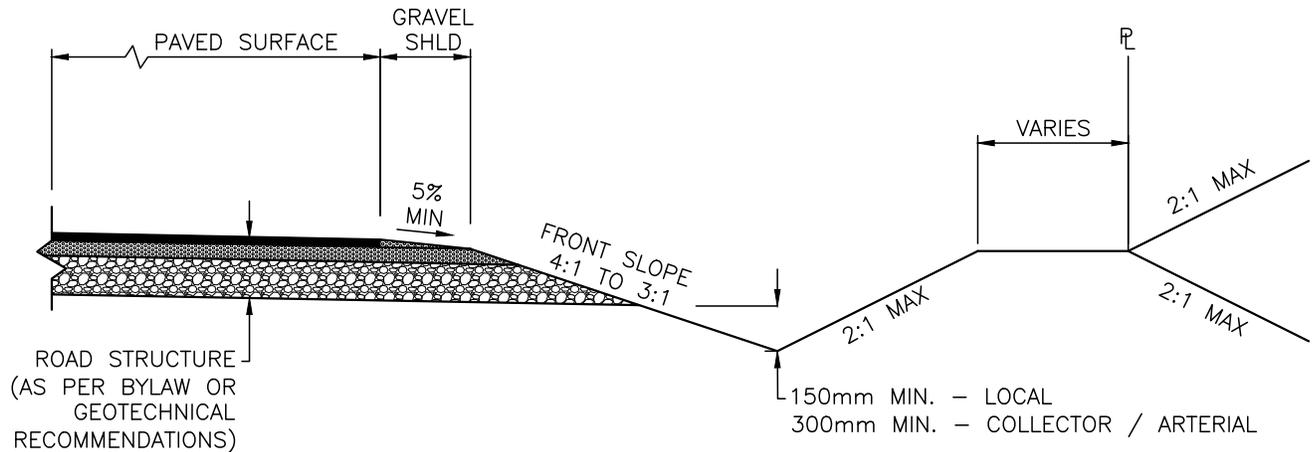
**STANDARD
DETAIL
DRAWING**

DATE:
JUN 22/23
SCALE:
NTS

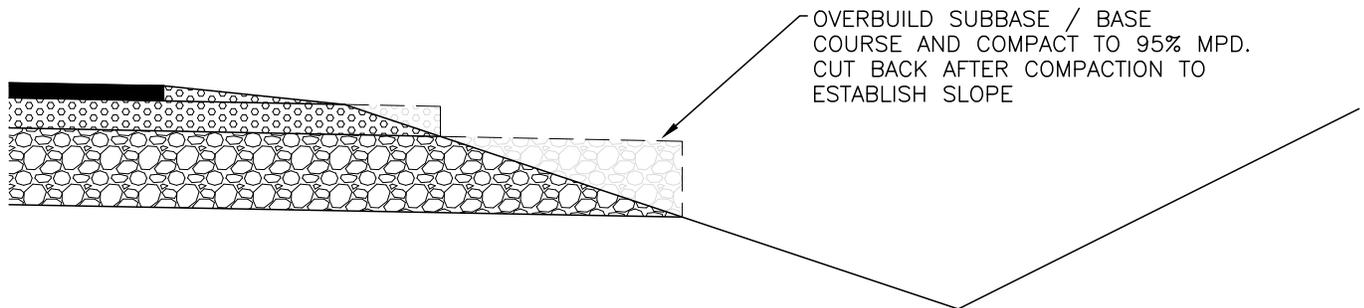
HAMMERHEAD TURNAROUND

DWG. NO.
SS-R54





TYPICAL DITCH SECTION



OVERBUILD DETAIL

NOTES:

1. WHERE THE CROSS SLOPE IS STEEPER THAN 4:1, ENGINEERING ANALYSIS IS REQUIRED WITH CONSIDERATION OF TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROAD CHAPTER 7 AND MOTI BC SUPPLEMENT.
2. 2:1 SLOPES CAN BE CONSIDERED ON LOW VOLUME ROAD UPON DEMONSTRATED NEED AS PER TAC CHAPTER 7, IF APPROVED BY THE CITY ENGINEER

**STANDARD
DETAIL
DRAWING**

DATE:
SEPT 23/22
SCALE:
NTS

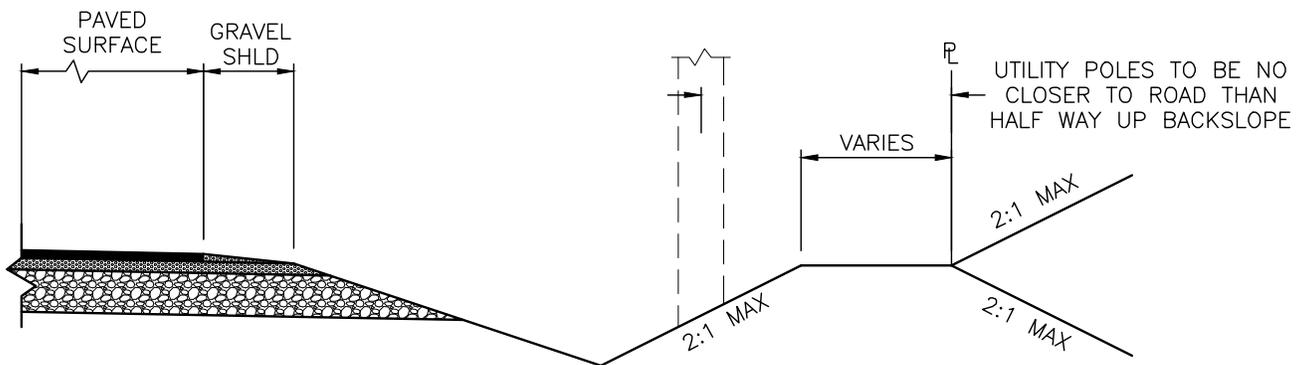
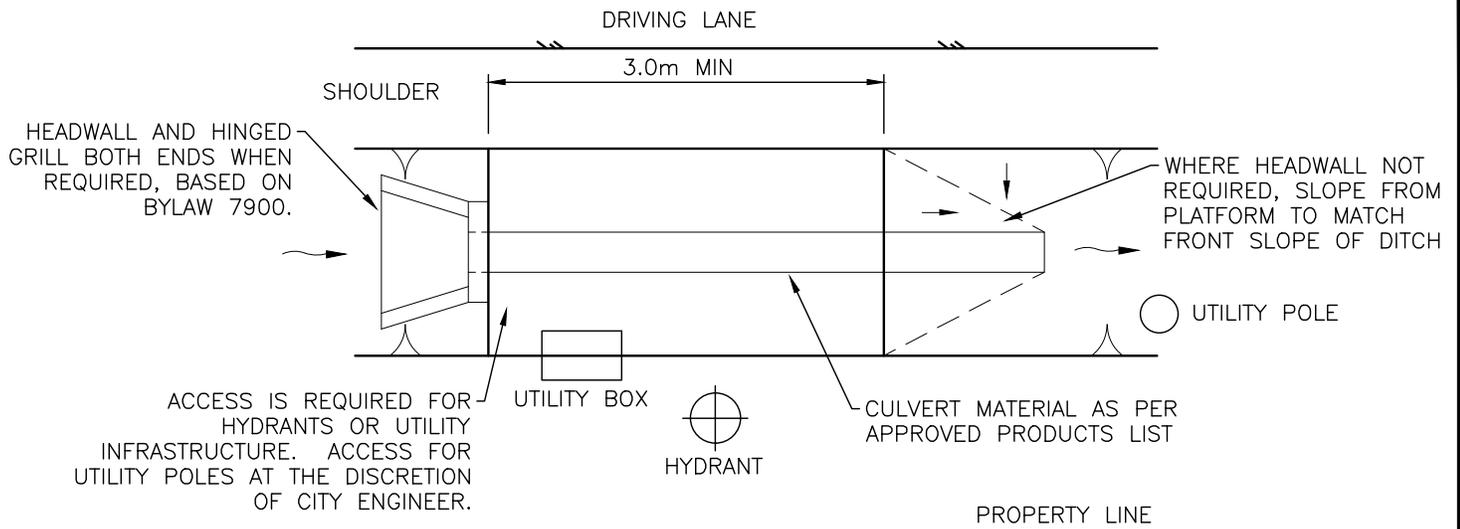
STANDARD DITCH SECTION

DWG. NO.

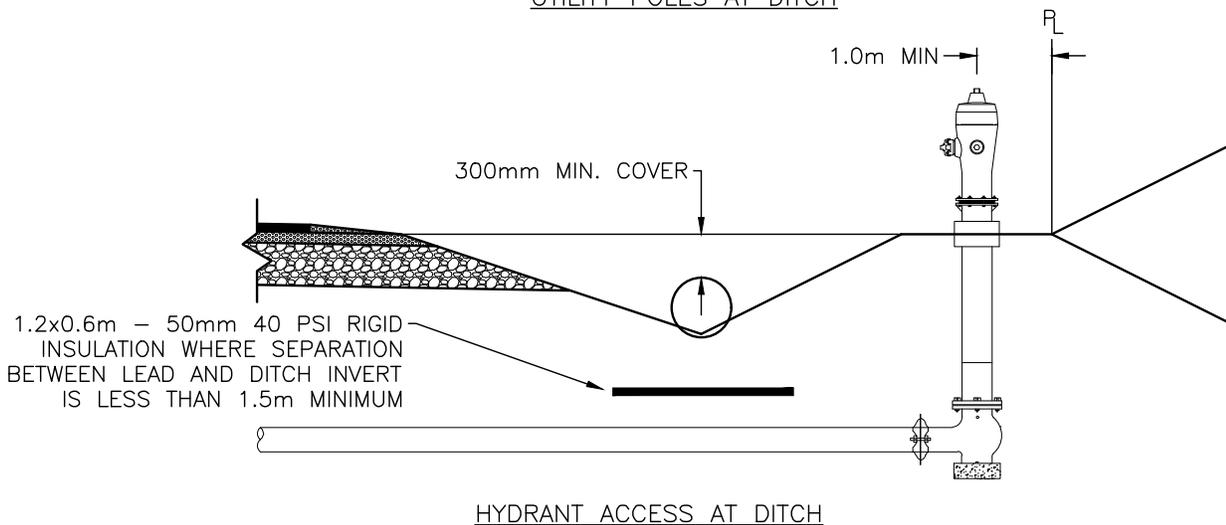
SS-R55



BYLAW NOTE



UTILITY POLES AT DITCH



NOTES:

1. REFER TO DRAWING SS-R55 FOR TYPICAL DITCH SECTION DETAILS.

**STANDARD
DETAIL
DRAWING**

DATE:
SEPT 23 /22

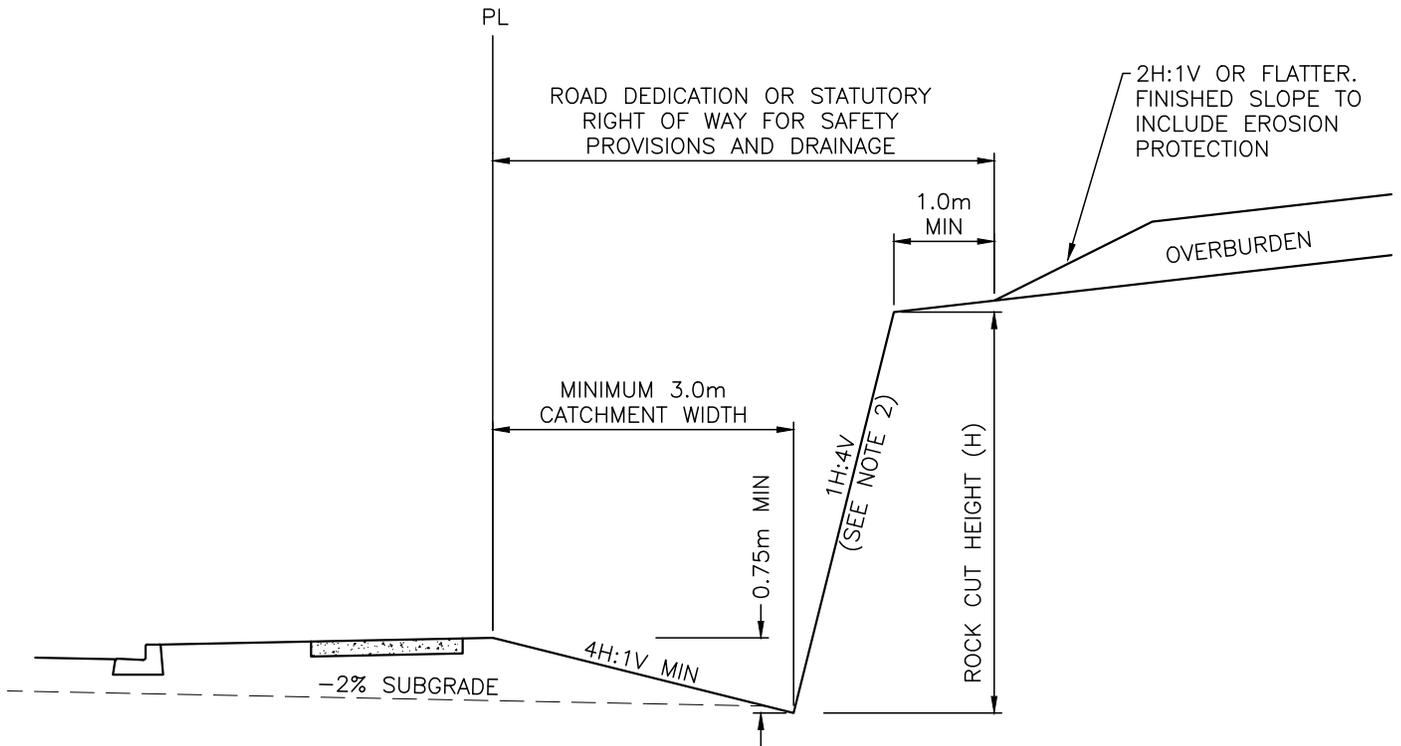
SCALE:
NTS

**UTILITY ACCESS AND
LOCATION AT DITCH**

DWG. NO.

SS-R56

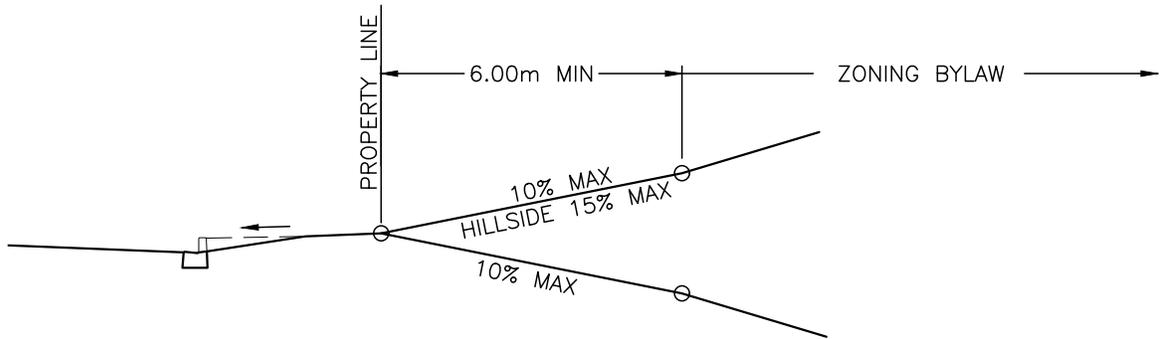




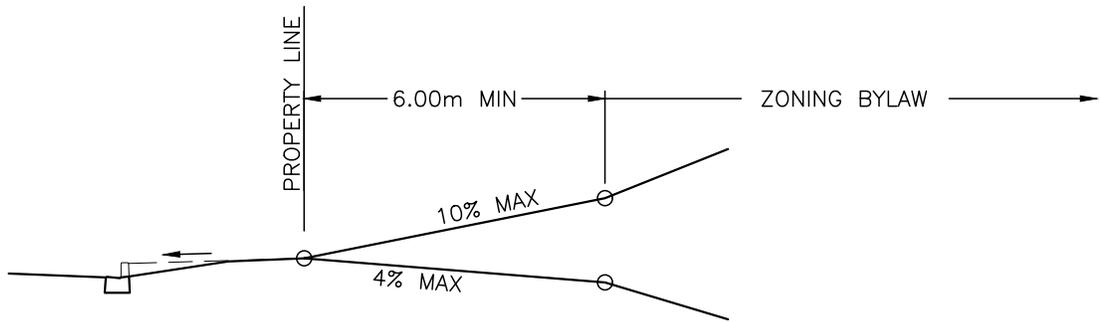
NOTES:

1. SITE SPECIFIC GEOTECHNICAL DESIGN REQUIRED FOR ALL ROCK CUT HEIGHTS GREATER THAN 4m AND WHERE GEOHAZARDS EXIST.
2. A VERTICAL BACKSLOPE MAY BE USED IF APPROVED BY THE GEOTECHNICAL DESIGN. MINIMUM CATCHMENT WIDTH WOULD THEN BE INCREASED BASED ON THE ROCK CUT HEIGHT (I.E. 3.0m + 25% OF ROCK CUT HEIGHT (H)), OR AS DIRECTED BY GEOTECHNICAL DESIGN.
3. DRAINAGE COLLECTION PROVISIONS TO BE ADDRESSED FOR CATCHMENT AREA.
4. GROUNDWATER SEEPAGE WITHIN OVERBURDEN, IF ANY, MUST BE ADDRESSED BY GEOTECHNICAL ENGINEERING DESIGN

STANDARD DETAIL DRAWING	DATE: JUN 22/23	ROCK CUT CROSS SECTION	DWG. NO.	 City of Kelowna
	SCALE: NTS		SS-R57	



GROUND-ORIENTED
INFILL HOUSING / SINGLE & TWO DWELLING



COMMERCIAL / MULTI-DWELLING

NOTES:

1. MAXIMUM GRADE CHANGE AT ANY TRANSITION POINT 12% OR AS PER K-VALUE IN TABLE 4.4.1 SCHEDULE 4 SECTION 4.

**STANDARD
DETAIL
DRAWING**

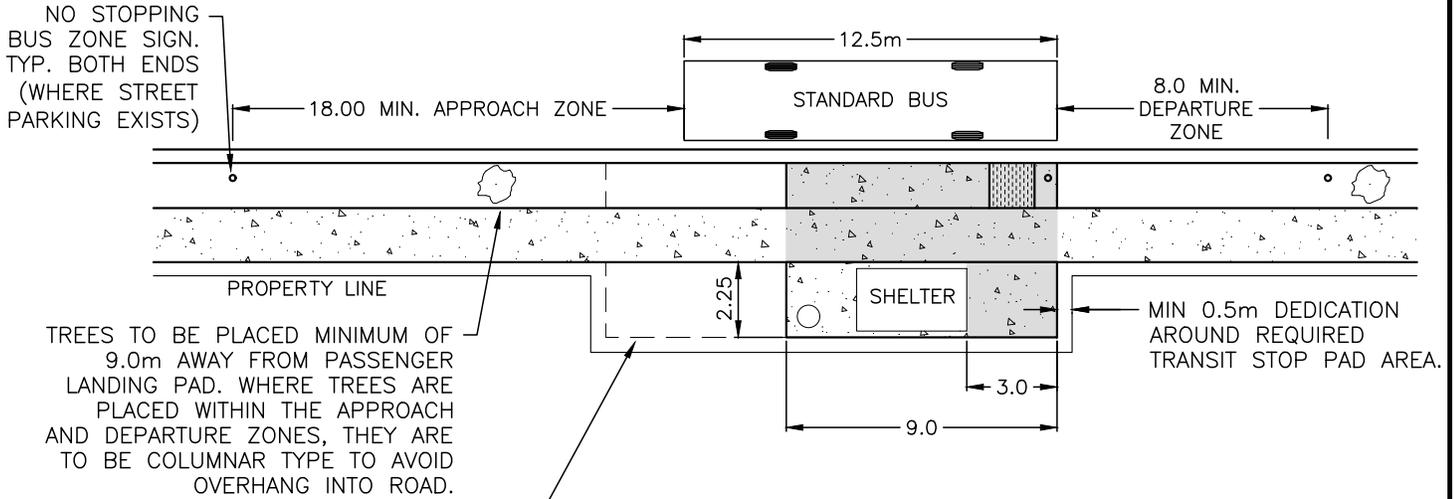
DATE:
OCT 31 /22
SCALE:
NTS

DRIVEWAY GRADES

DWG. NO.

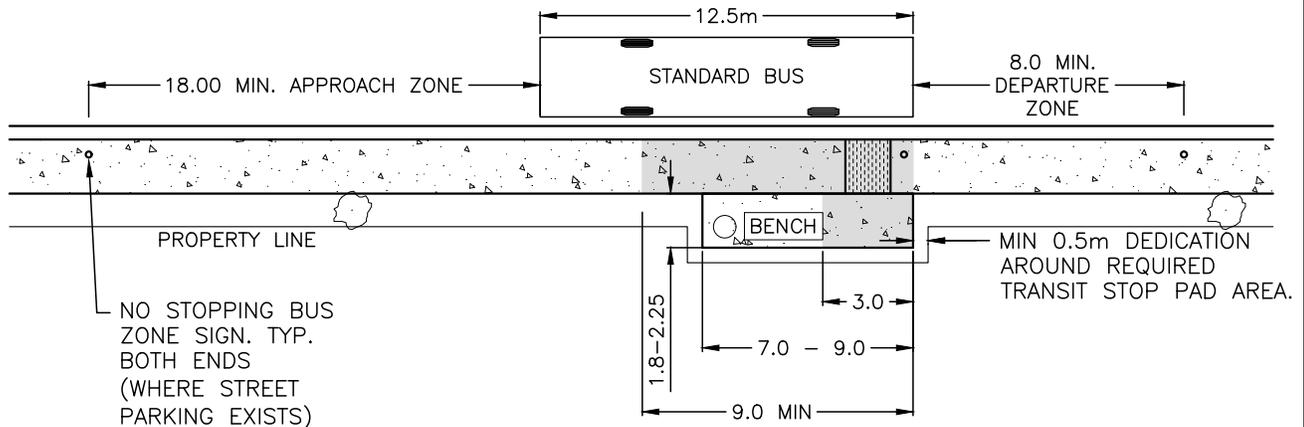
SS-R58





SHELTER GENERAL LAYOUT

WHERE ARTICULATED BUSES ARE USED OR PLANNED FOR USE ON TRANSIT ROUTE, PASSENGER LANDING PAD TO BE INCREASED TO 15m AND SHELTER PAD TO BE INCREASED TO MIN. 10m MAX. 15m



BENCH GENERAL LAYOUT

NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS SPECIFIED OTHERWISE.
2. THIS DRAWING IS INTENDED TO BE USED AS A GENERAL DESIGN GUIDANCE, SITE SPECIFIC DESIGN IS REQUIRED.
3. REFER TO ADDITIONAL DETAILS AND INFORMATION IN THE BC TRANSIT INFRASTRUCTURE DESIGN SUMMARY AND CONSULT CITY ENGINEER.
4. BOULEVARD AND SIDEWALK AS PER STANDARD CROSS SECTIONS.
5. IN RURAL AREAS, AS REQUIRED BY CITY ENGINEER, STOP REQUIREMENTS AS PER BC TRANSIT GUIDANCE FOR RURAL BUS STOP PADS.
6. ON ARTERIAL AND COLLECTOR ROADS WHERE BOULEVARD IS >3.5m, SHELTER PAD COULD BE ACCOMMODATED IN BOULEVARD IF IT DOES NOT BLOCK PEDESTRIAN FACILITY
7. IF NO SHELTER AND BENCH WARRANTED AS PER TABLE 4.13.2 SCHEDULE 4 SECTION 4, CONSTRUCT STOP AS PER GENERAL BENCH LAYOUT WITHOUT BENCH.

CLEAR ZONE FREE OF OBSTRUCTIONS

**STANDARD
DETAIL
DRAWING**

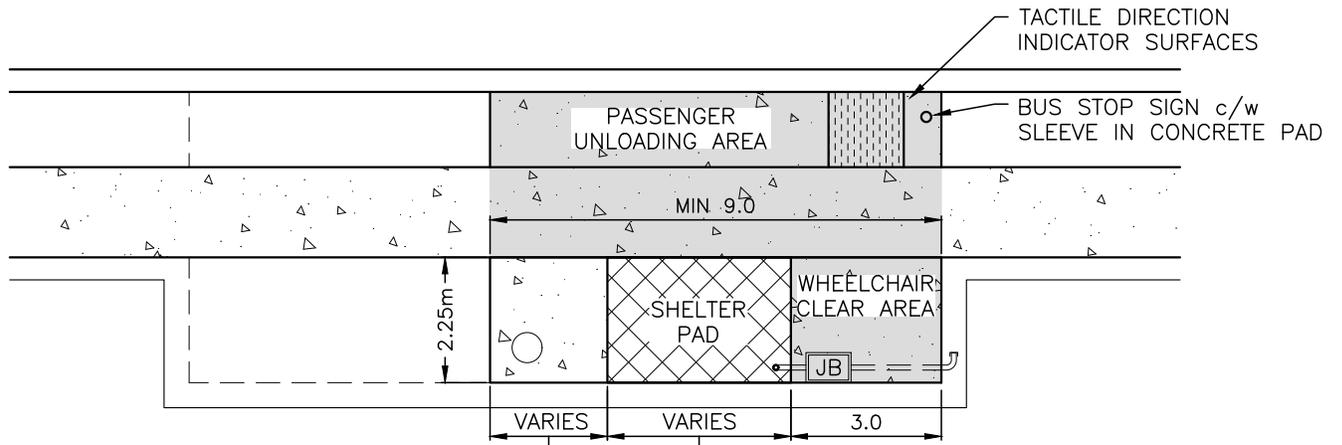
DATE:
OCT 31/22
SCALE:
NTS

**URBAN TRANSIT
STOP LAYOUT**

DWG. NO.

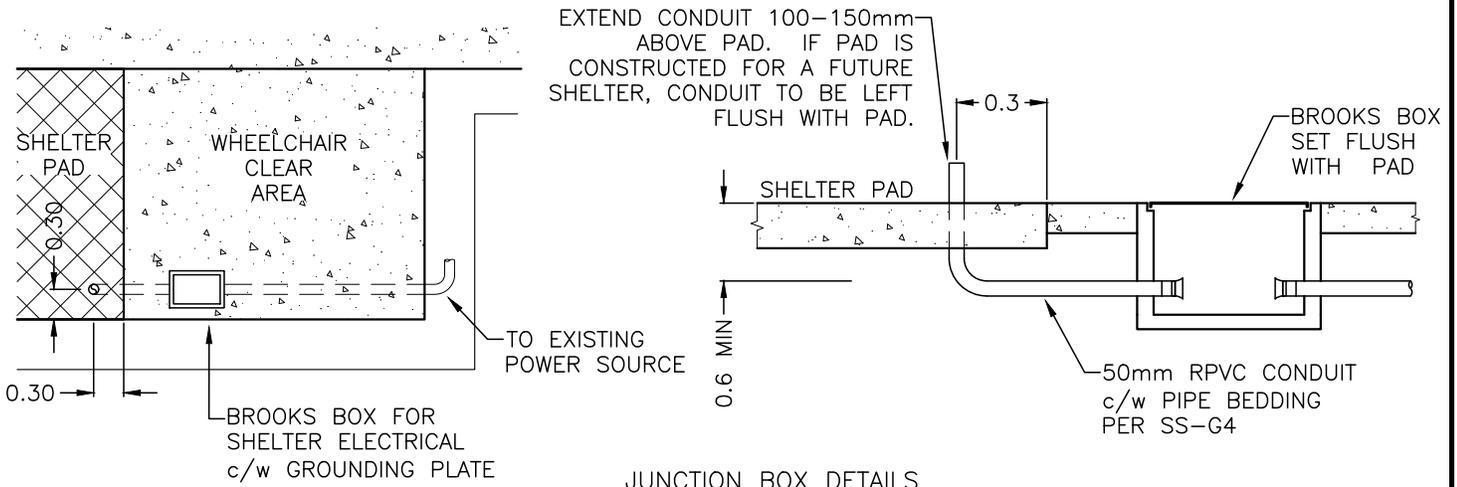
SS-R59



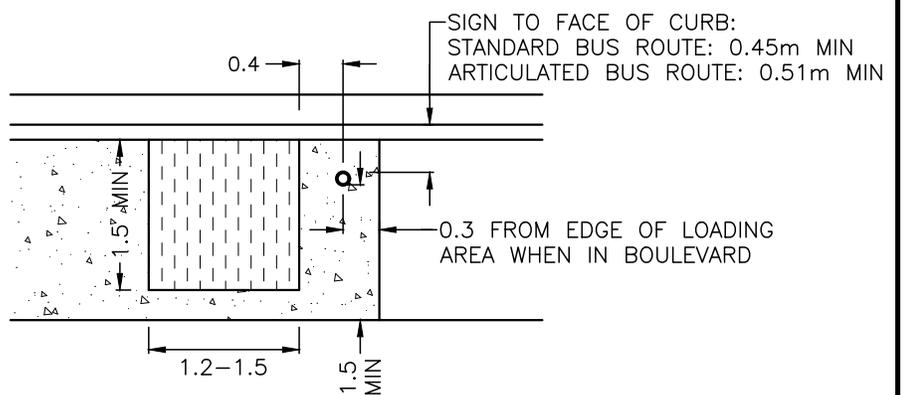


AREA FOR STREET FURNITURE (GARBAGE BIN, ETC.)

REINFORCED CONCRETE PAD FOR SHELTER. MODEL SPECIFIC FOUNDATION DESIGN IS REQUIRED. CONSULT WITH CITY ENGINEER.



JUNCTION BOX DETAILS



TACTILE SURFACE INDICATOR/TRANSIT SIGN LOCATION

NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS SPECIFIED OTHERWISE.
2. THIS DRAWING IS INTENDED TO BE USED AS A GENERAL DESIGN GUIDANCE, SITE SPECIFIC DESIGN IS REQUIRED.

**STANDARD
DETAIL
DRAWING**

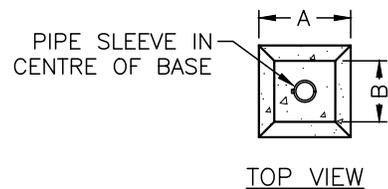
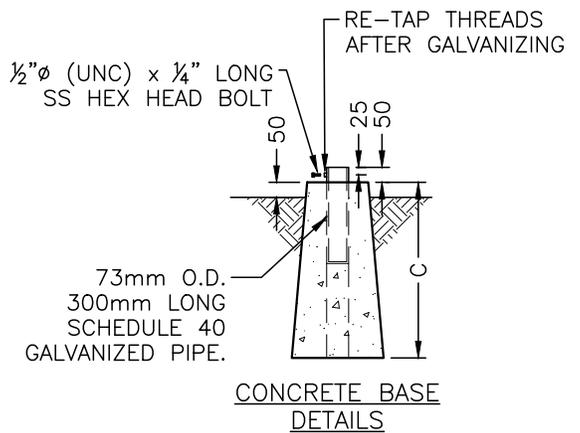
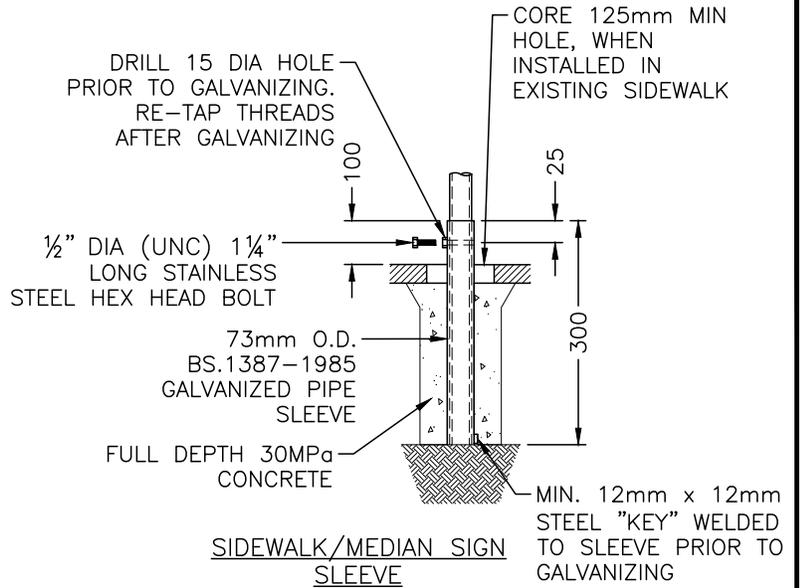
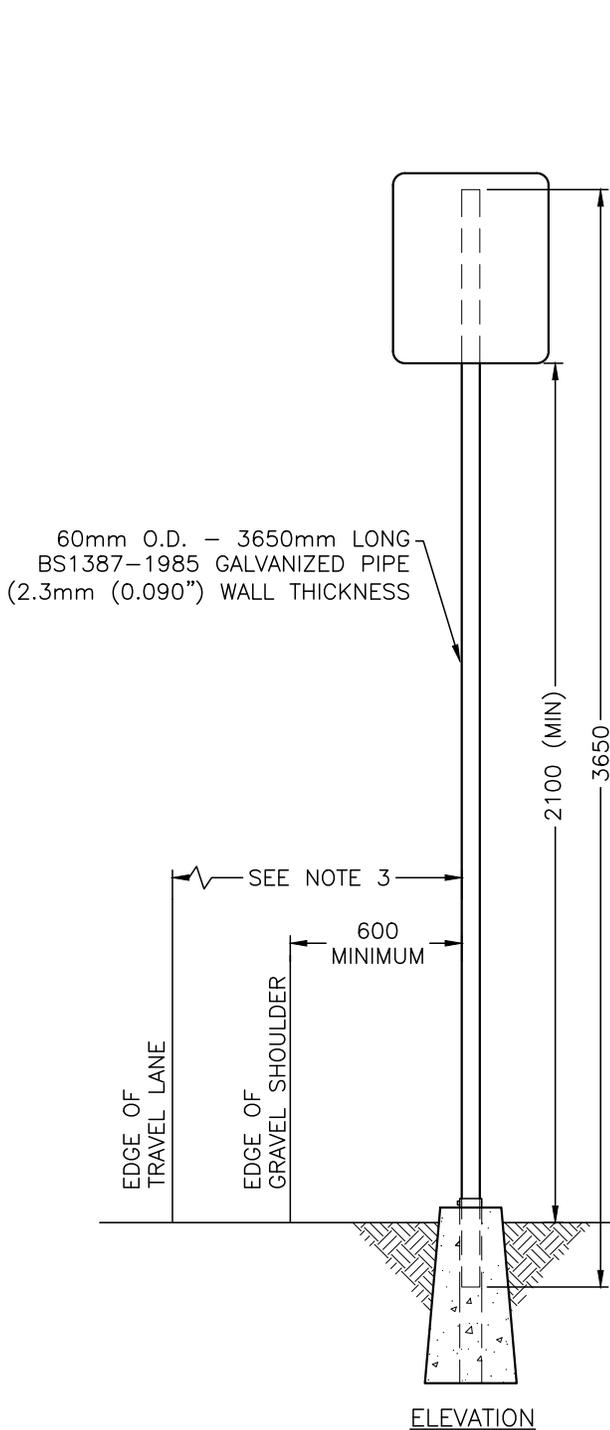
DATE:
SEPT 23/22
SCALE:
NTS

**URBAN TRANSIT STOP
SHELTER PAD DETAILS**

DWG. NO.

SS-R60





NOTES:

1. DETAIL IS FOR SINGLE POST SIGNS.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. HORIZONTAL CLEARANCES BASED ON DESIGN SPEEDS UP TO 60 km/h AS PER SECTION 4.15 IN BYLAW 7900. FOR HIGHER SPEED ROADS REFER TO TAC TRANSPORTATION ASSOCIATION OF CANADA ROADSIDE DESIGN.
4. SIGN SLEEVE TO BE PLACED PRIOR TO SIDEWALK POUR, OR TO BE CORED IN AFTER. FOR EXISTING SIDEWALK CORE MINIMUM 125mm HOLE IN SIDEWALK, SUB-EXCAVATE AND FILL WITH CONCRETE AROUND SLEEVE.

CONCRETE BASE					
APPLICATION	A mm	B mm	C mm	APPROX. MASS	VOLUME OF CONCRETE
GRAVEL SHOULDER OR HIGHWAY	305	203	584	85 kg	0.05m ³
PAVED SHOULDER OR LANDSCAPE	229	152	457	37 kg	0.02m ³

**STANDARD
DETAIL
DRAWING**

DATE:
OCT 31/22

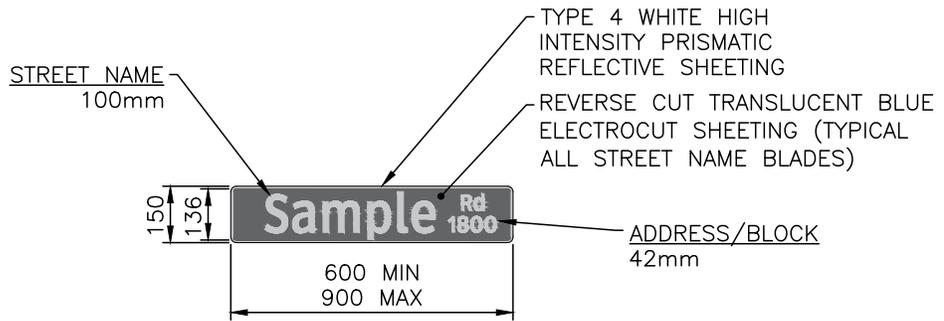
SCALE:
NTS

POST MOUNTED SIGN

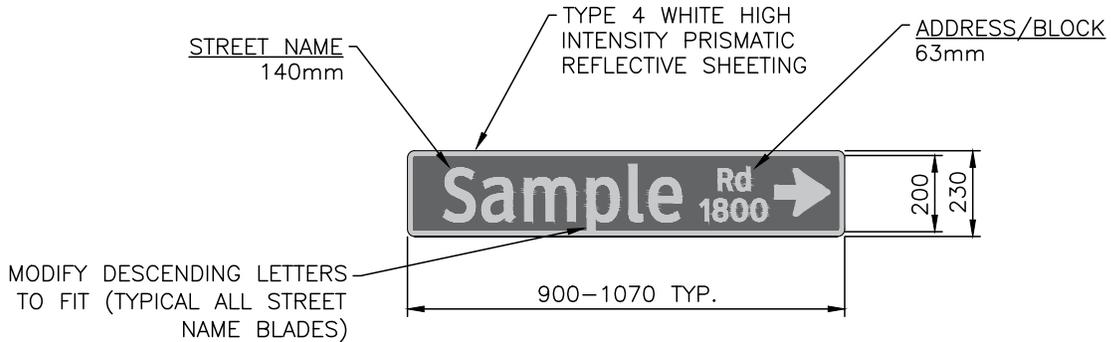
DWG. NO.

SS-R61

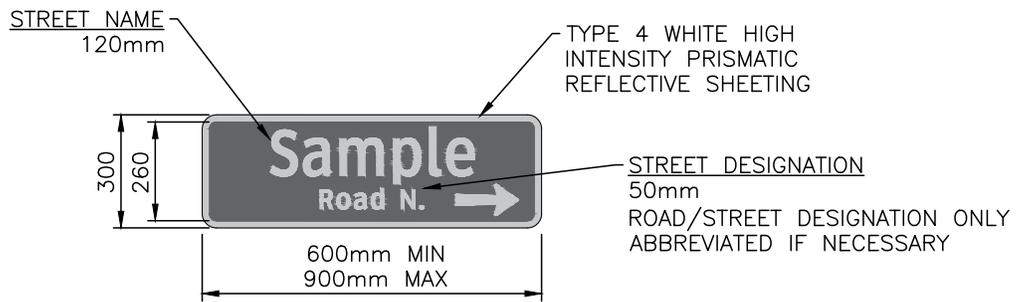




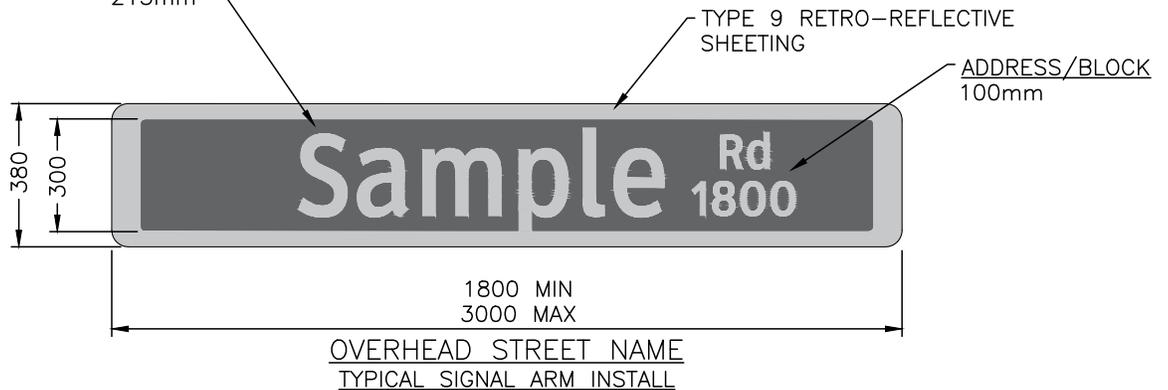
STANDARD STREET NAME BLADE



OVERSIZE STREET NAME BLADE
HIGH SPEED/VOLUME MULTI LANE ROUTES



ADVANCE STREET NAME BLADE



OVERHEAD STREET NAME
TYPICAL SIGNAL ARM INSTALL

**STANDARD
DETAIL
DRAWING**

DATE:
JULY 11/22
SCALE:
NTS

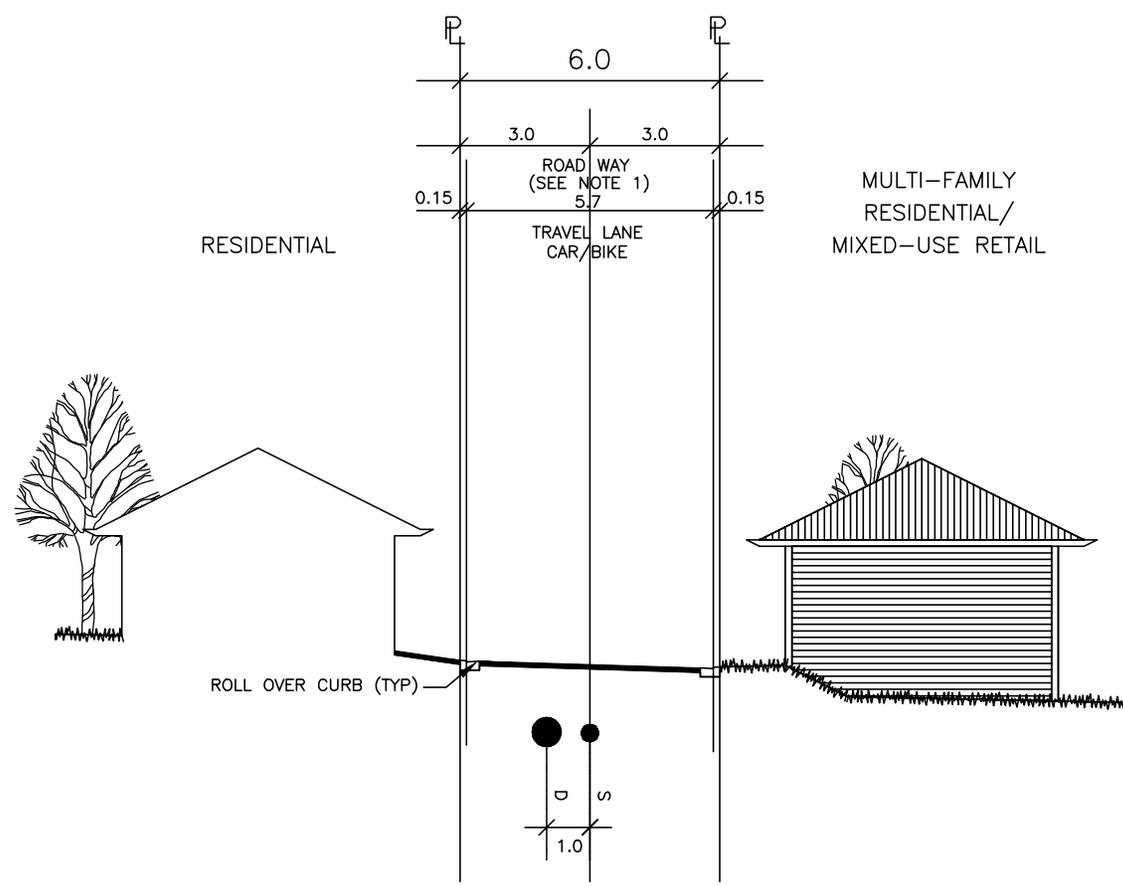
STREET NAME BLADE DETAILS

DWG. NO.

SS-R62



HILLSIDE ZONE STANDARDS



NOTE:

1. WHERE SINGLE FAMILY ABUTS BOTH SIDES, TRAVEL LANE MAY BE REDUCED TO 4.5M. IN THIS CASE, BOULEVARDS MUST BE TREATED WITH A LOW PROFILE, WEED FREE, AUTO ACCESSIBLE SURFACE. GRAVEL BASES TO EXTEND TO FULL WIDTH OF ROW (6.0M).

2. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

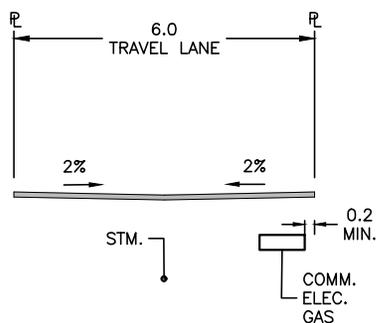
**STANDARD
DETAIL
DRAWING**

DATE:
JULY 4/23
SCALE:
NTS

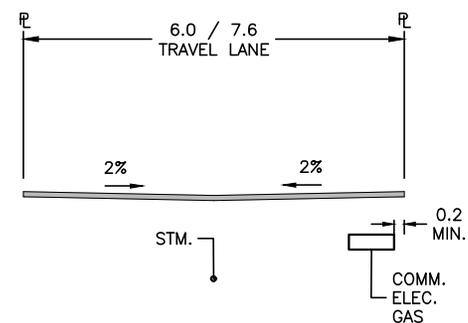
HILLSIDE LANEWAY

DWG. NO.
XS-R01





SUBURBAN



CORE AREA / URBAN CENTRE

NOTES:

1. NO NEW INFRASTRUCTURE SHALL BE INSTALLED SUCH THAT IN ENCROACHES INTO THE LANEWAY, THEREBY REDUCING THE EFFECTIVE WIDTH OR FUNCTION OF THE LANEWAY
2. IF AN INDUSTRIAL LANEWAY IS REQUIRED IT MUST BE DESIGNED TO ACCOMMODATE THE ANTICIPATED DESIGN VEHICLE.
3. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
4. REFER TO SCHEDULE 4, TABLE 4.3.1, NOTE 12 TO DETERMINE THE APPROPRIATE CORE AREA LANE WIDTH.

**STANDARD
DETAIL
DRAWING**

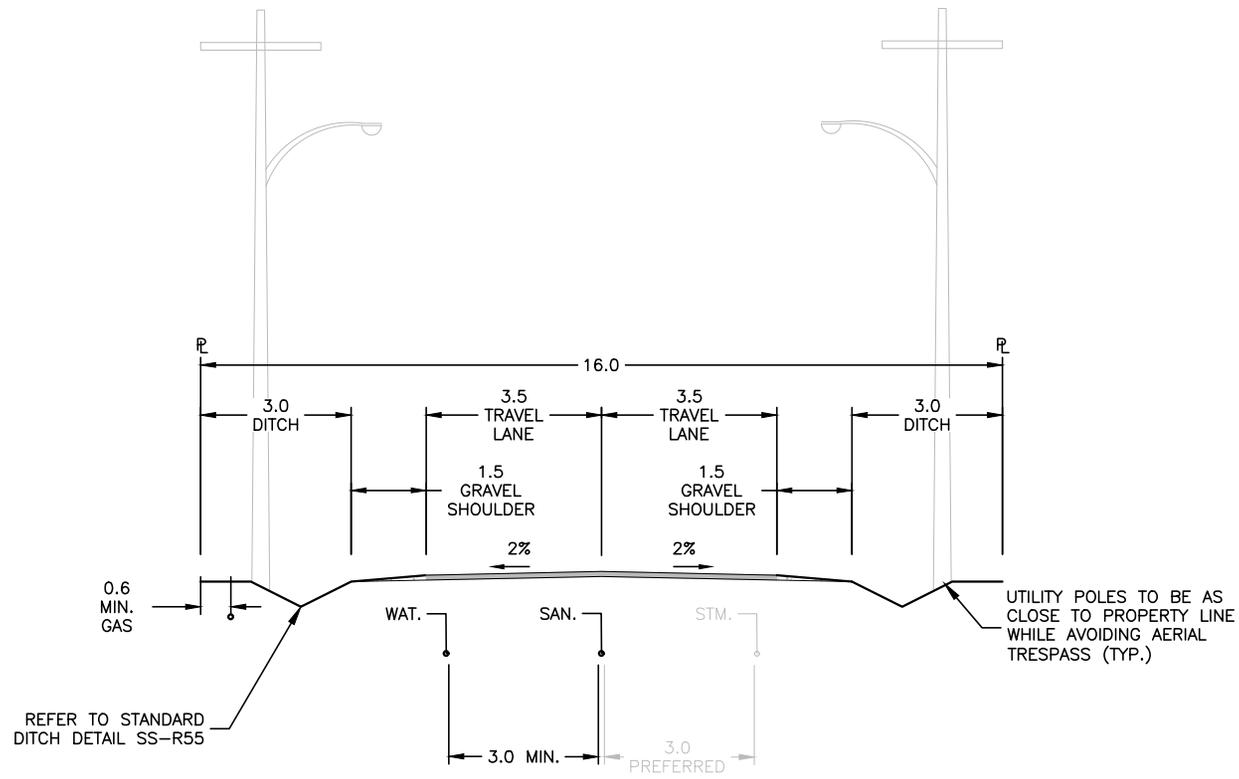
DATE:
JULY 4/23
SCALE:
NTS

**SUBURBAN / CORE AREA / URBAN CENTRE
LANEWAYS**

DWG. NO.

XS-R02





NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

**STANDARD
DETAIL
DRAWING**

DATE:
JULY 4/23
SCALE:
NTS

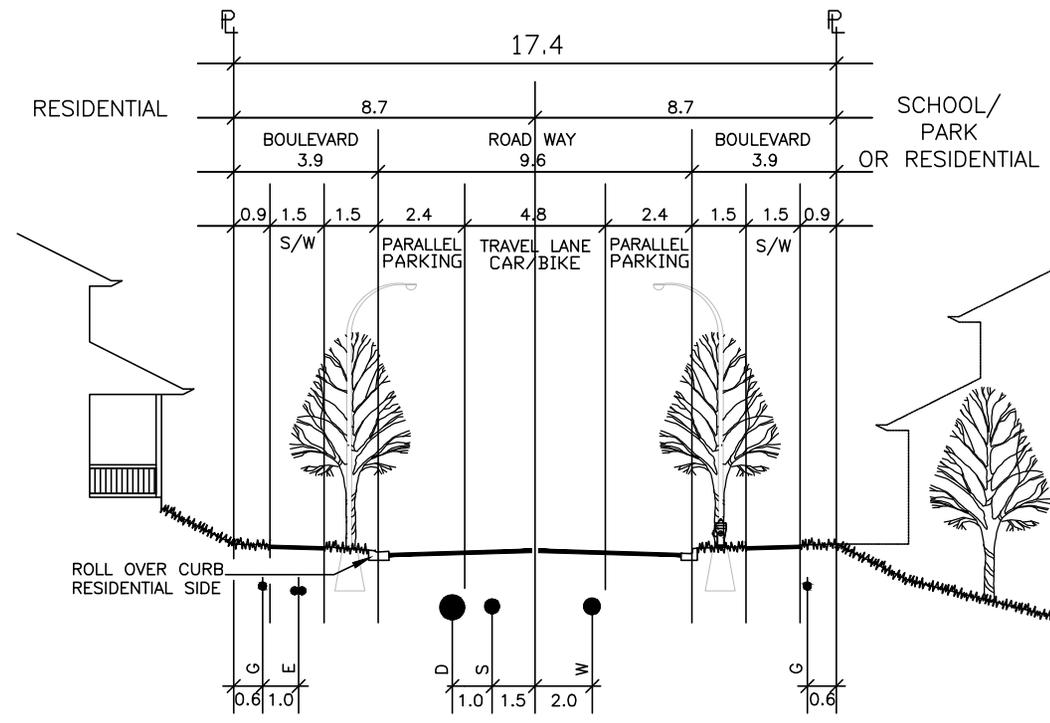
**RURAL
LOCAL**

DWG. NO.

XS-R20



HILLSIDE ZONE STANDARDS



NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

**STANDARD
DETAIL
DRAWING**

DATE:
JULY 4/23
SCALE:
NTS

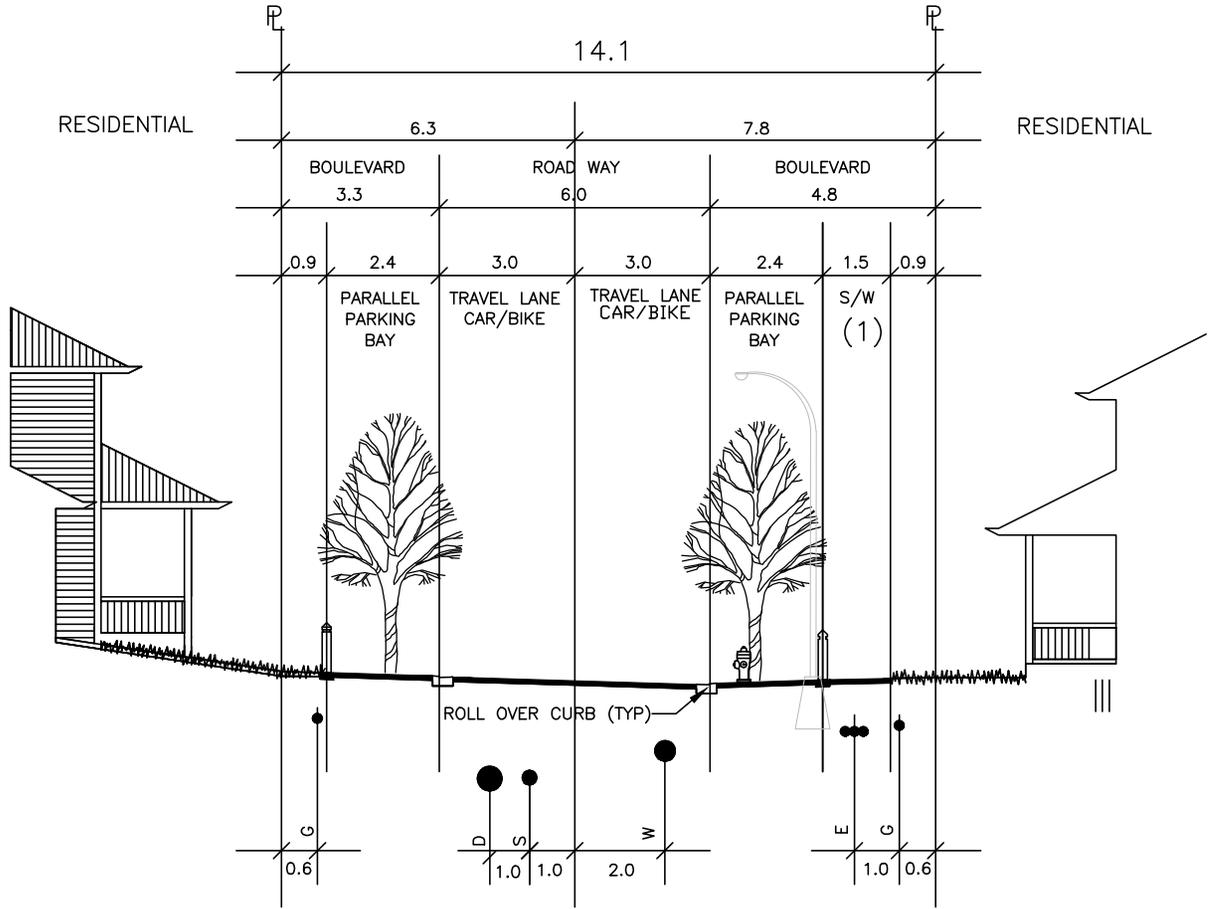
HILLSIDE VILLAGE LOCAL-RESIDENTIAL

DWG. NO.

XS-R21



HILLSIDE ZONE STANDARDS

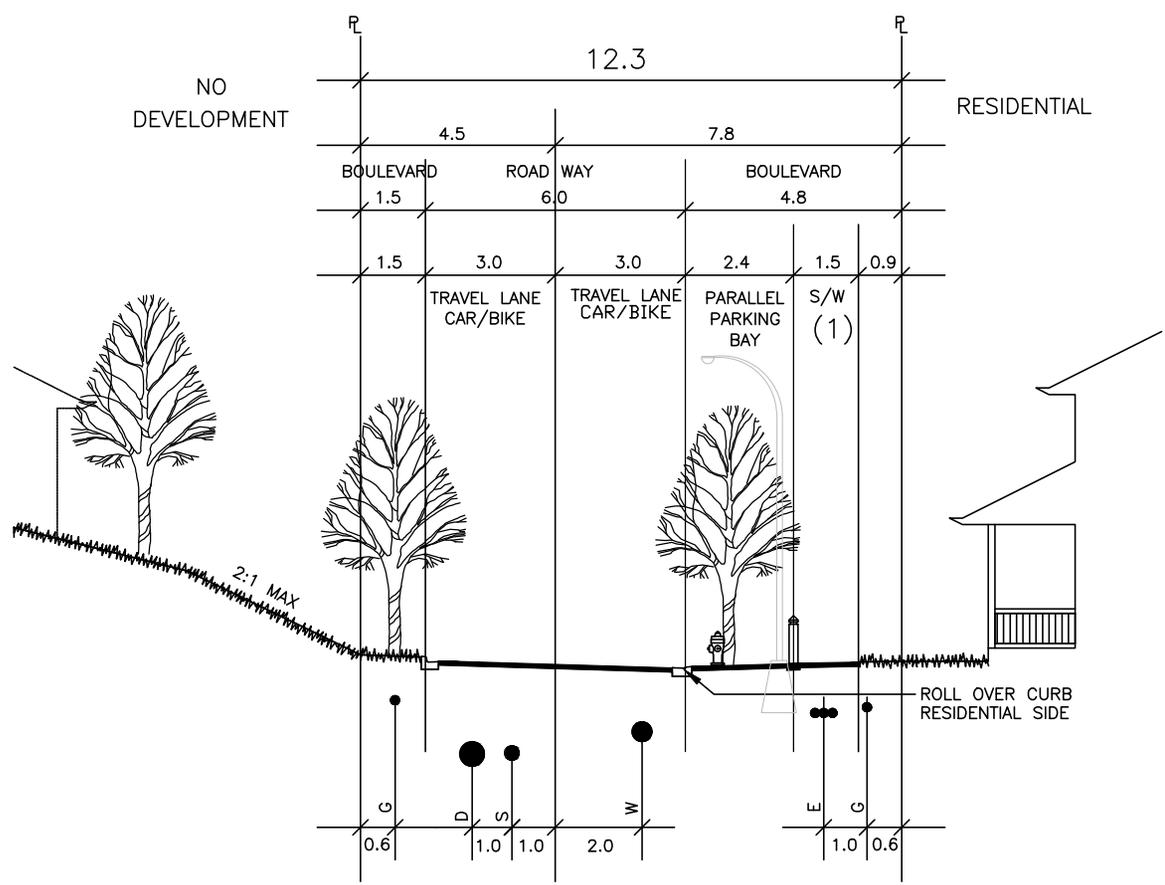


NOTES:

1. UNLESS NECESSARY FOR PEDESTRIAN CONNECTIVITY TO SCHOOLS, PARKS, COMMERCIAL AREAS OR LANDS BEYOND, A SIDEWALK IS NOT REQUIRED FOR LOCAL STREETS ACCESSING 30 LOTS OR LESS. THE STREET ROW WIDTH MAY BE REDUCED ACCORDINGLY IF SIDEWALK IS NOT REQUIRED.
2. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

STANDARD DETAIL DRAWING	DATE: JULY 4/23	HILLSIDE LOCAL-CONDITION A (DEVELOPMENT BOTH SIDES)	DWG. NO.	 City of Kelowna
	SCALE: NTS		XS-R22	

HILLSIDE ZONE STANDARDS

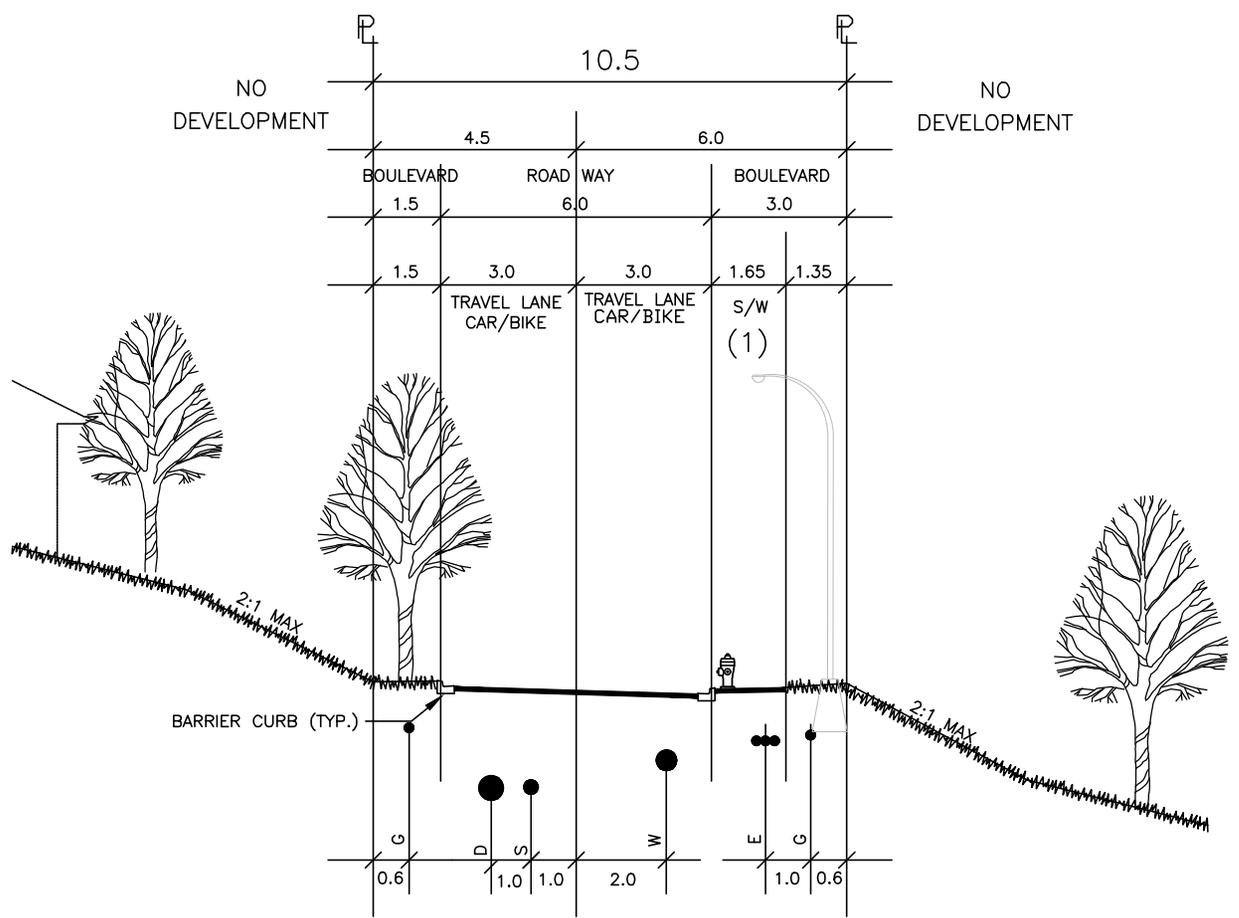


NOTES:

1. UNLESS NECESSARY FOR PEDESTRIAN CONNECTIVITY TO SCHOOLS, PARKS, COMMERCIAL AREAS OR LANDS BEYOND, A SIDEWALK IS NOT REQUIRED FOR LOCAL STREETS ACCESSING 30 LOTS OR LESS. THE STREET ROW WIDTH MAY BE REDUCED ACCORDINGLY IF SIDEWALK IS NOT REQUIRED.
2. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

STANDARD DETAIL DRAWING	DATE: JULY 4/23	HILLSIDE LOCAL CONDITION B (DEVELOPMENT ONE SIDE)	DWG. NO.	
	SCALE: NTS		XS-R23	

HILLSIDE ZONE STANDARDS



NOTES:

1. UNLESS NECESSARY FOR PEDESTRIAN CONNECTIVITY TO SCHOOLS, PARKS, COMMERCIAL AREAS OR LANDS BEYOND, A SIDEWALK IS NOT REQUIRED FOR LOCAL STREETS ACCESSING 30 LOTS OR LESS.
2. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

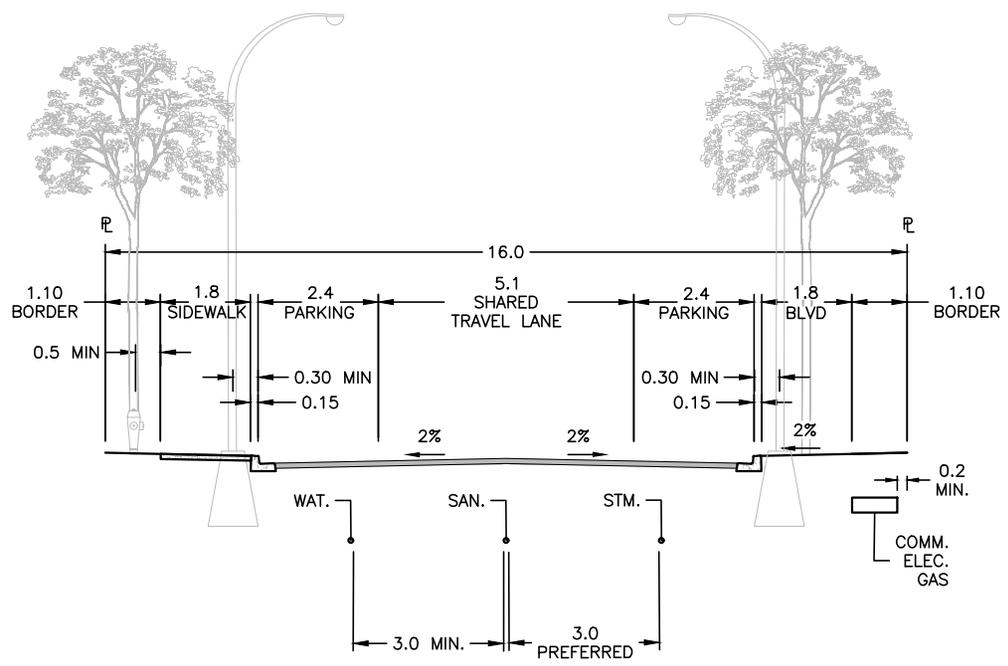
**STANDARD
DETAIL
DRAWING**

DATE:
JULY 4/23
SCALE:
NTS

HILLSIDE LOCAL CONDITION C (NO DEVELOPMENT EITHER SIDE)

DWG. NO.
XS-R24





NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

**STANDARD
DETAIL
DRAWING**

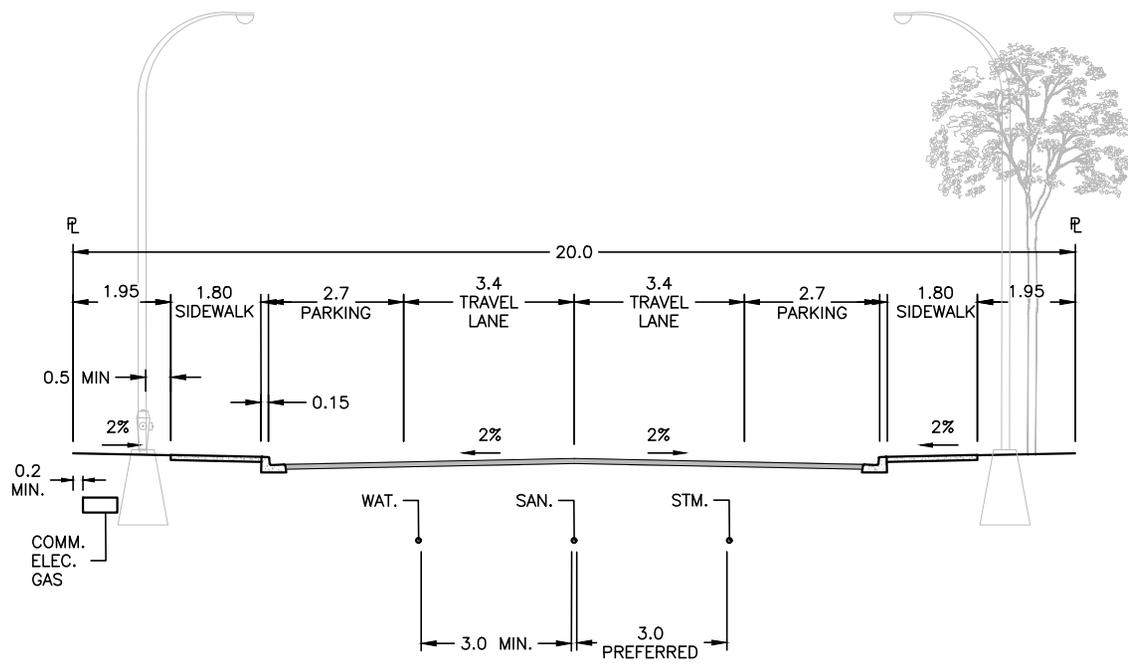
DATE:
JULY 4/23
SCALE:
NTS

**SUBURBAN
LOCAL**

DWG. NO.

XS-R25





NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. SEPARATED SIDEWALK PLACED 0.3M OFF PL IS REQUIRED DEPENDING ON SURROUNDING LAND USE AND PEDESTRIAN CONNECTIONS AT THE CITY ENGINEER'S DISCRETION.

**STANDARD
DETAIL
DRAWING**

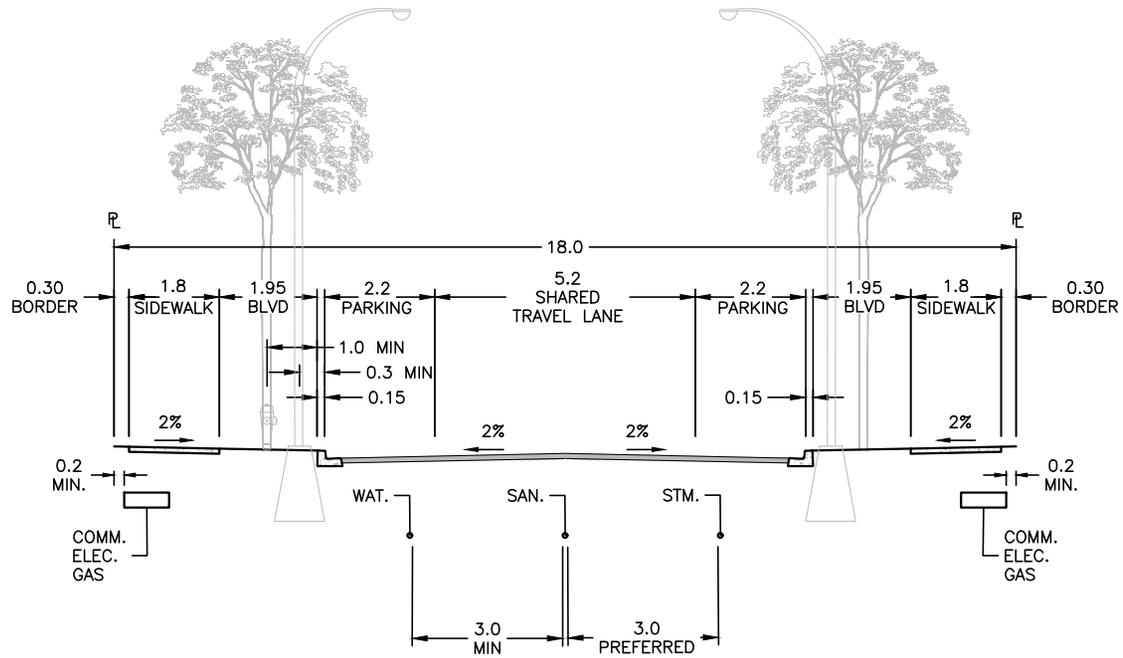
DATE:
JULY 4/23
SCALE:
NTS

**INDUSTRIAL
LOCAL**

DWG. NO.

XS-R26





NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

**STANDARD
DETAIL
DRAWING**

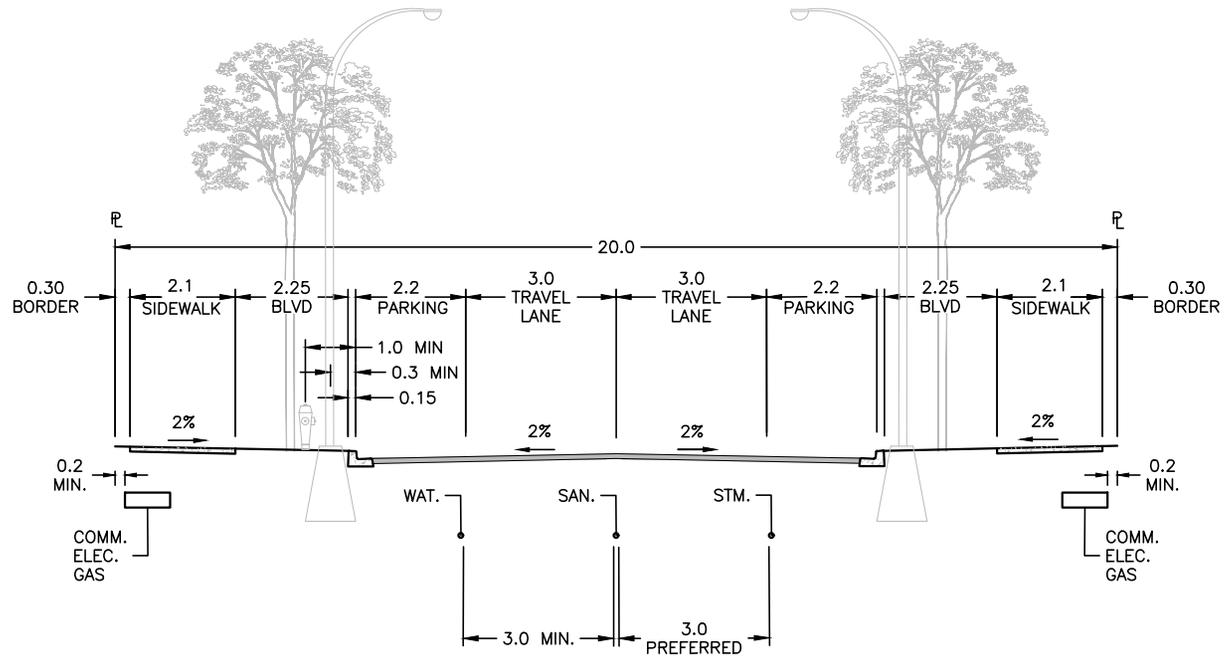
DATE:
JULY 4/23
SCALE:
NTS

**CORE AREA
LOCAL**

DWG. NO.

XS-R27





NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

**STANDARD
DETAIL
DRAWING**

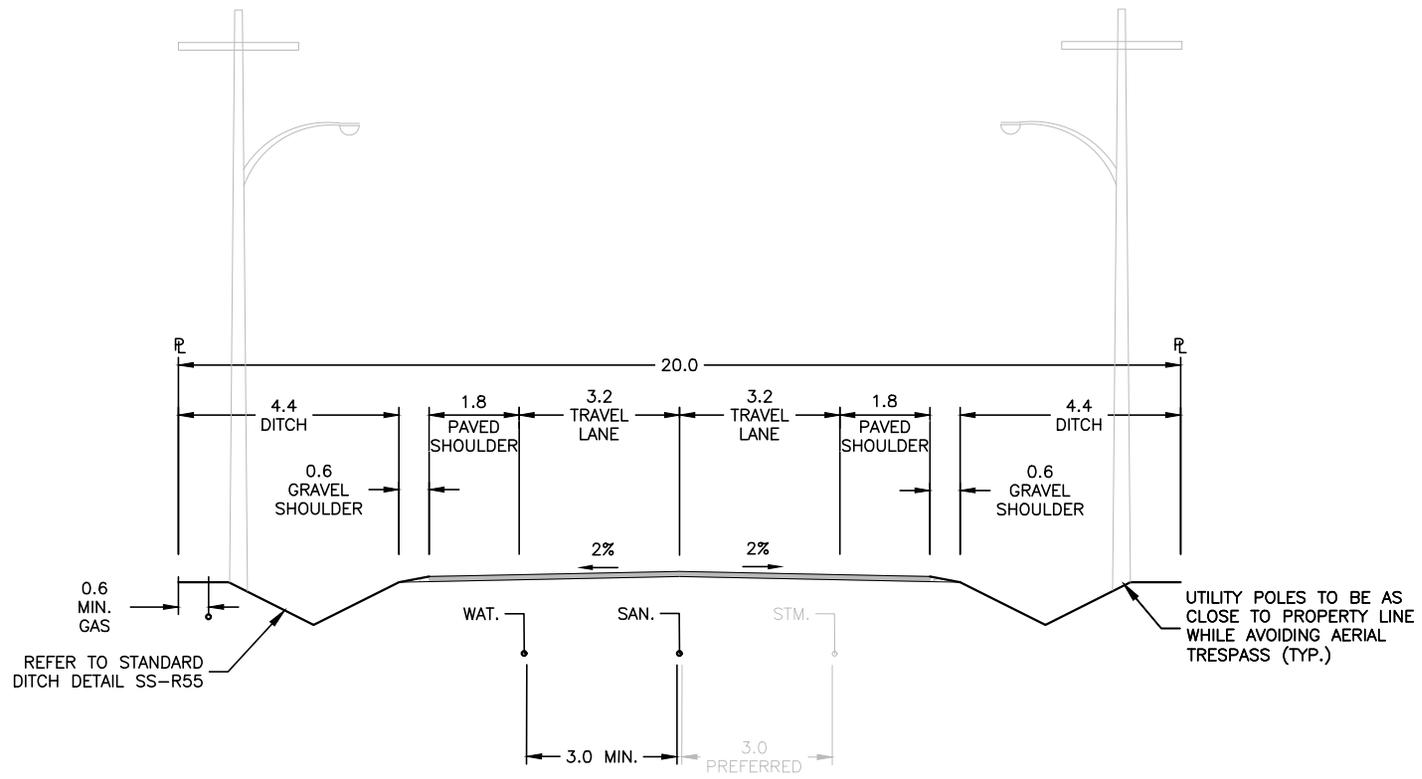
DATE:
JULY 4/23
SCALE:
NTS

**URBAN CENTRE
LOCAL**

DWG. NO.

XS-R28





NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

**STANDARD
DETAIL
DRAWING**

DATE:
JULY 4/23
SCALE:
NTS

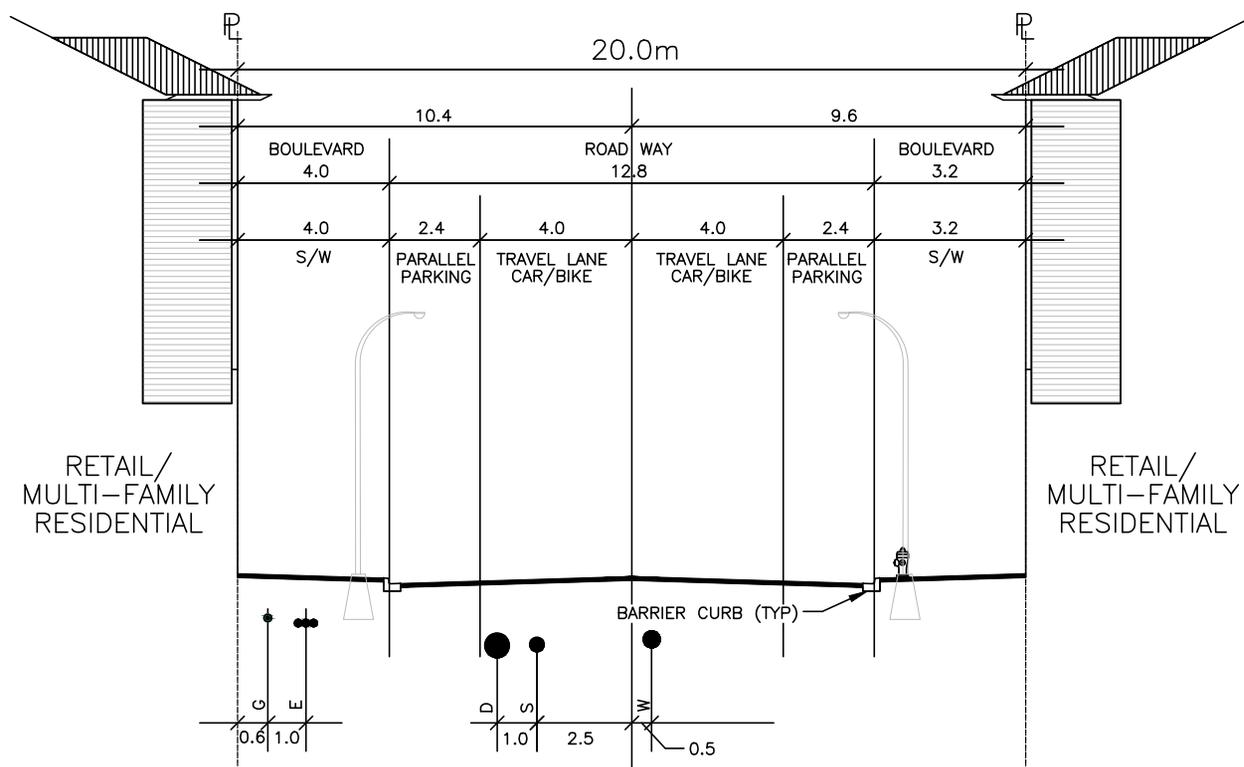
**RURAL
COLLECTOR**

DWG. NO.

XS-R40



HILLSIDE ZONE STANDARDS



NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

**STANDARD
DETAIL
DRAWING**

DATE:
JULY 4/23
SCALE:
NTS

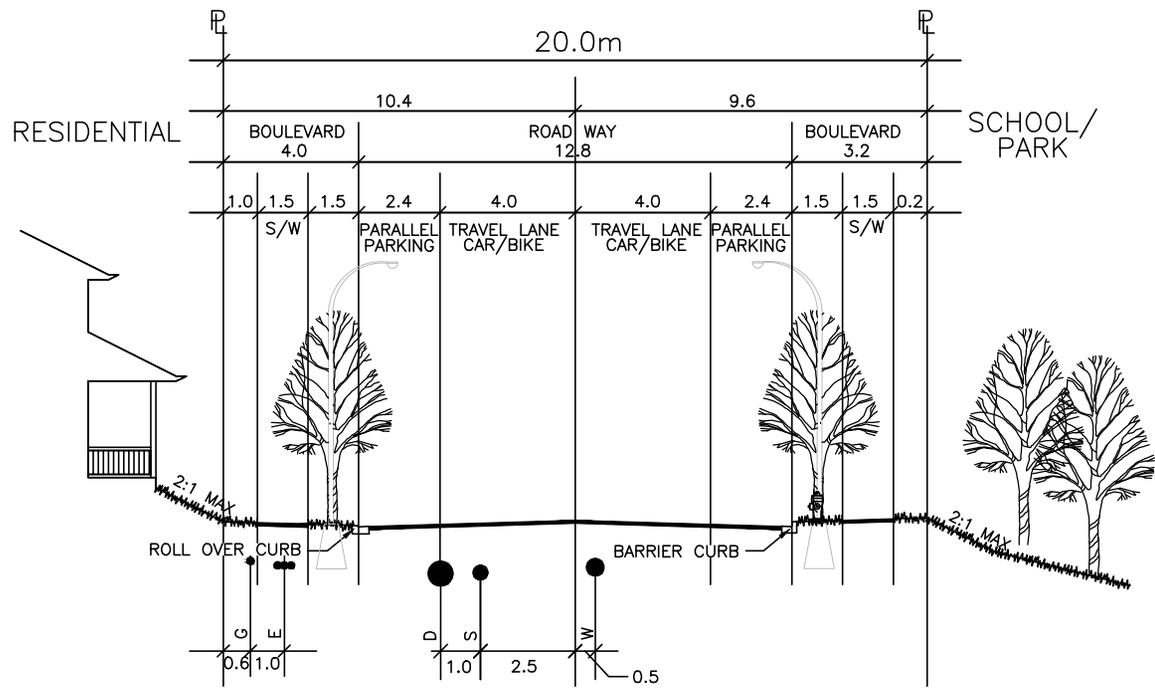
**HILLSIDE - VILLAGE COLLECTOR CONDITION A
(RETAIL/M.F. FRONTING)**

DWG. NO.

XS-R41



HILLSIDE ZONE STANDARDS

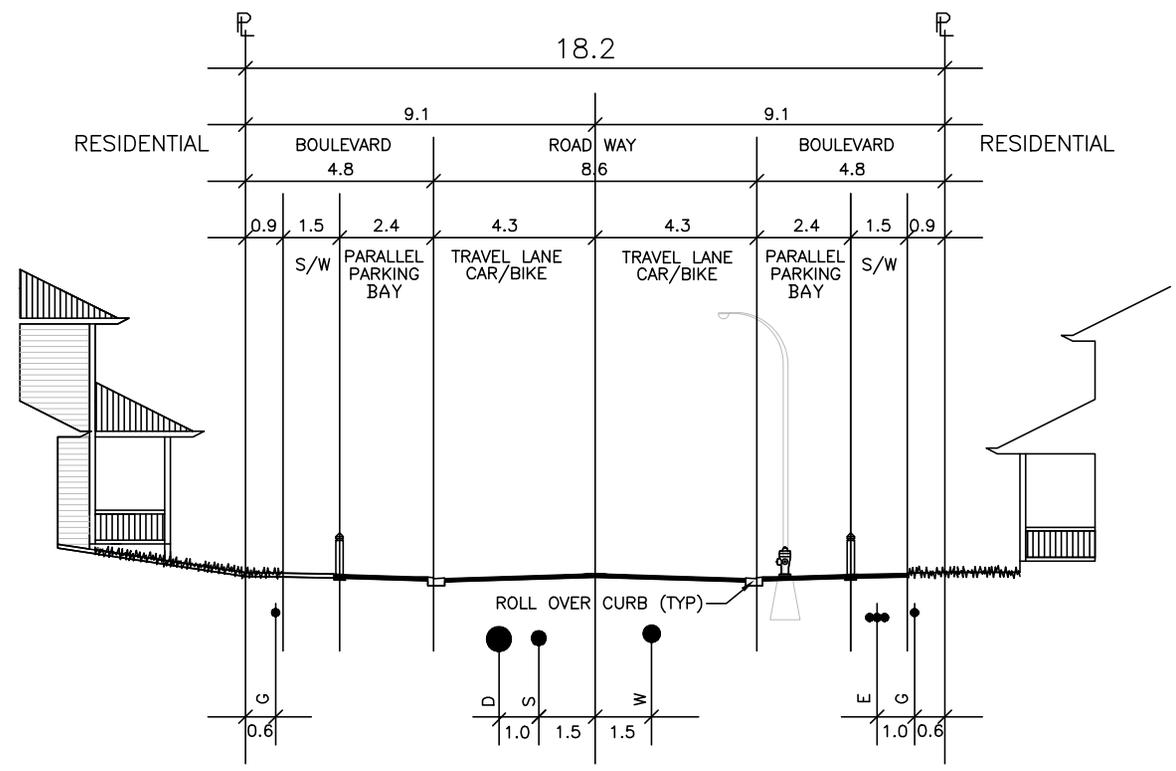


NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

STANDARD DETAIL DRAWING	DATE: JULY 4/23	HILLSIDE - VILLAGE COLLECTOR CONDITION B (NO RETAIL FRONTING)	DWG. NO.	 City of Kelowna
	SCALE: NTS		XS-R42	

HILLSIDE ZONE STANDARDS

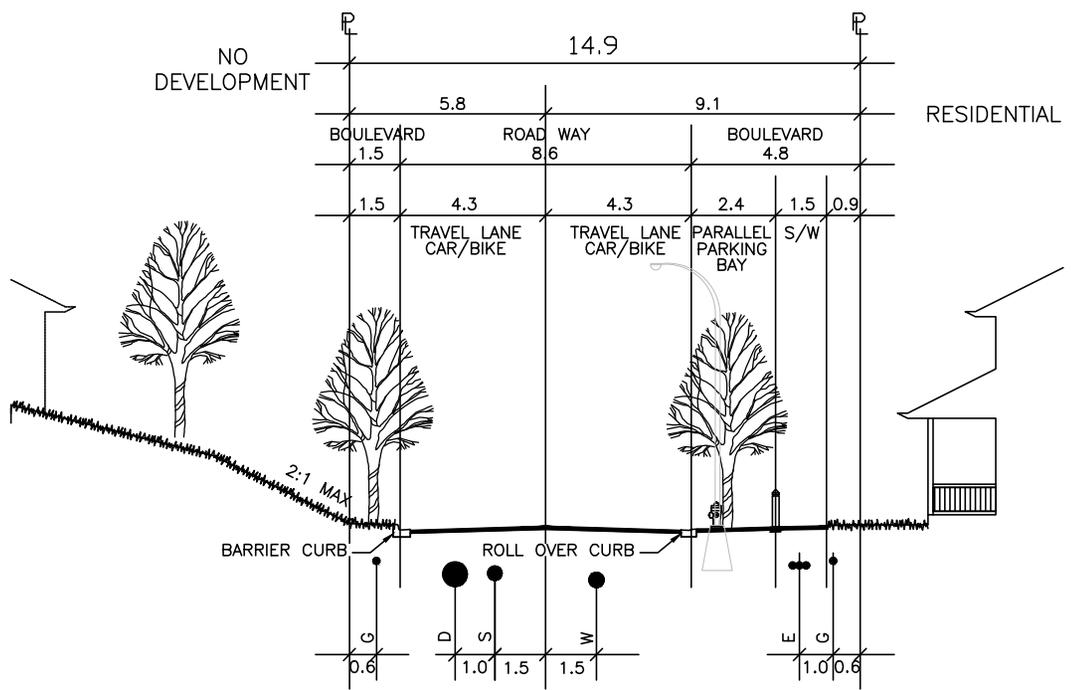


NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

STANDARD DETAIL DRAWING	DATE: JULY 4/23	HILLSIDE - COLLECTOR CONDITION-A (DEVELOPMENT BOTH SIDES)	DWG. NO.	 City of Kelowna
	SCALE: NTS		XS-R43	

HILLSIDE ZONE STANDARDS



NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

**STANDARD
DETAIL
DRAWING**

DATE:
JULY 4/23
SCALE:
NTS

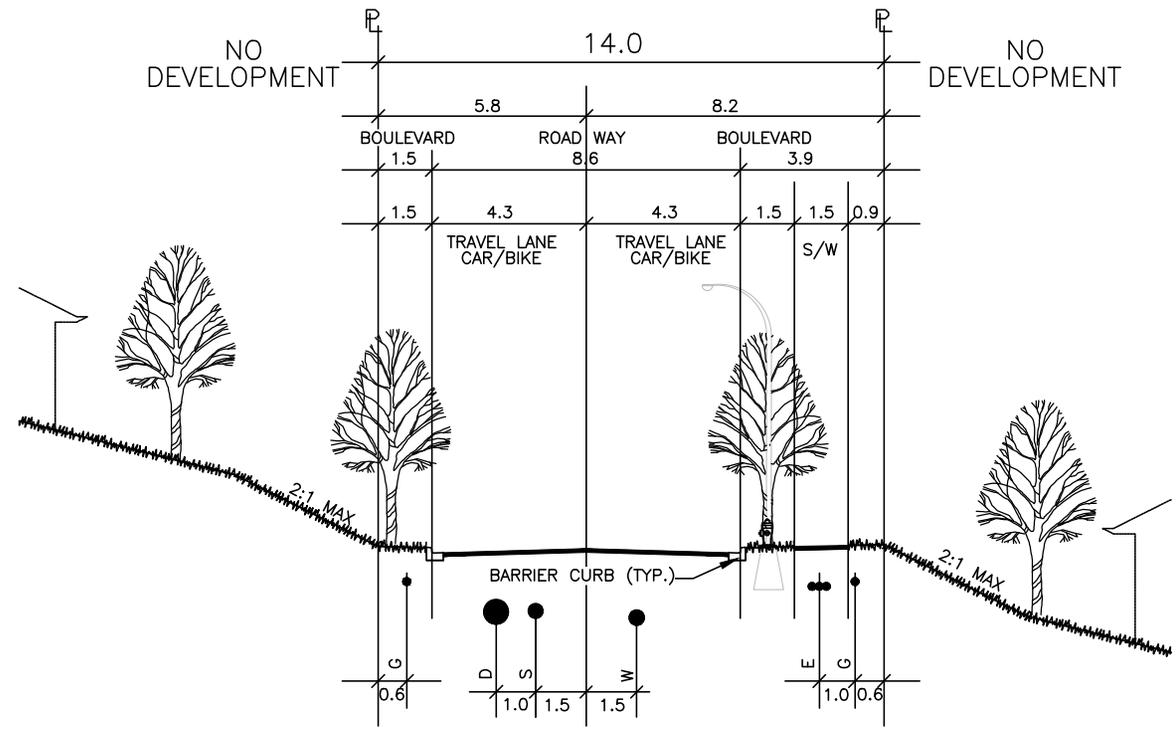
**HILLSIDE - COLLECTOR CONDITION-B
(DEVELOPMENT ONE SIDE)**

DWG. NO.

XS-R44



HILLSIDE ZONE STANDARDS

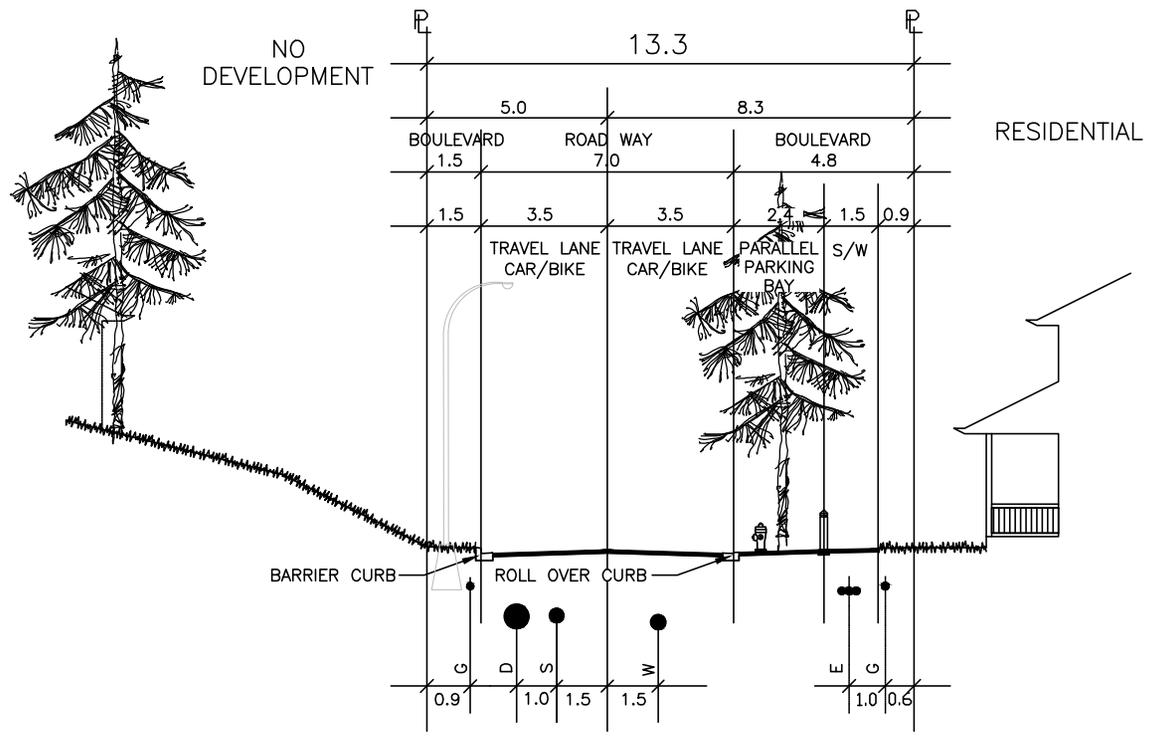


NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

STANDARD DETAIL DRAWING	DATE: JULY 4/23	HILLSIDE - COLLECTOR CONDITION-C (NO DEVELOPMENT EITHER SIDE)	DWG. NO.	 City of Kelowna
	SCALE: NTS		XS-R45	

HILLSIDE ZONE STANDARDS

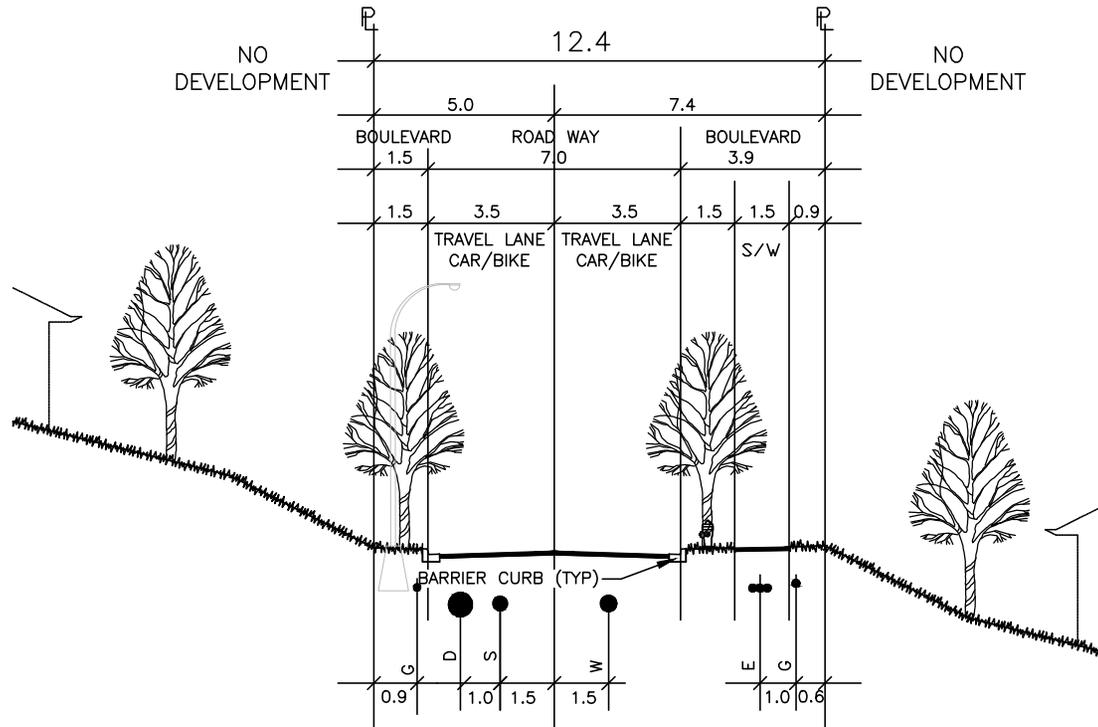


NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

STANDARD DETAIL DRAWING	DATE: JULY 4/23	HILLSIDE - MINOR COLLECTOR CONDITION-A	DWG. NO.	
	SCALE: NTS		XS-R46	

HILLSIDE ZONE STANDARDS



NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.

**STANDARD
DETAIL
DRAWING**

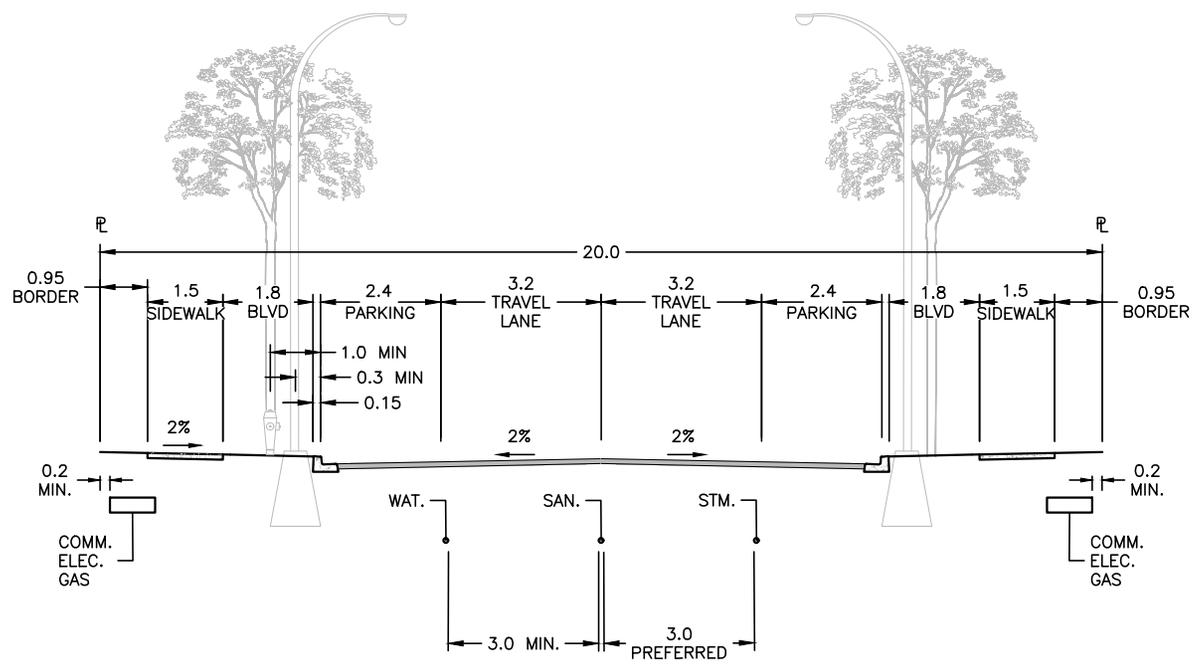
DATE:
JULY 4/23
SCALE:
NTS

HILLSIDE - MINOR COLLECTOR CONDITION-B

DWG. NO.

XS-R47

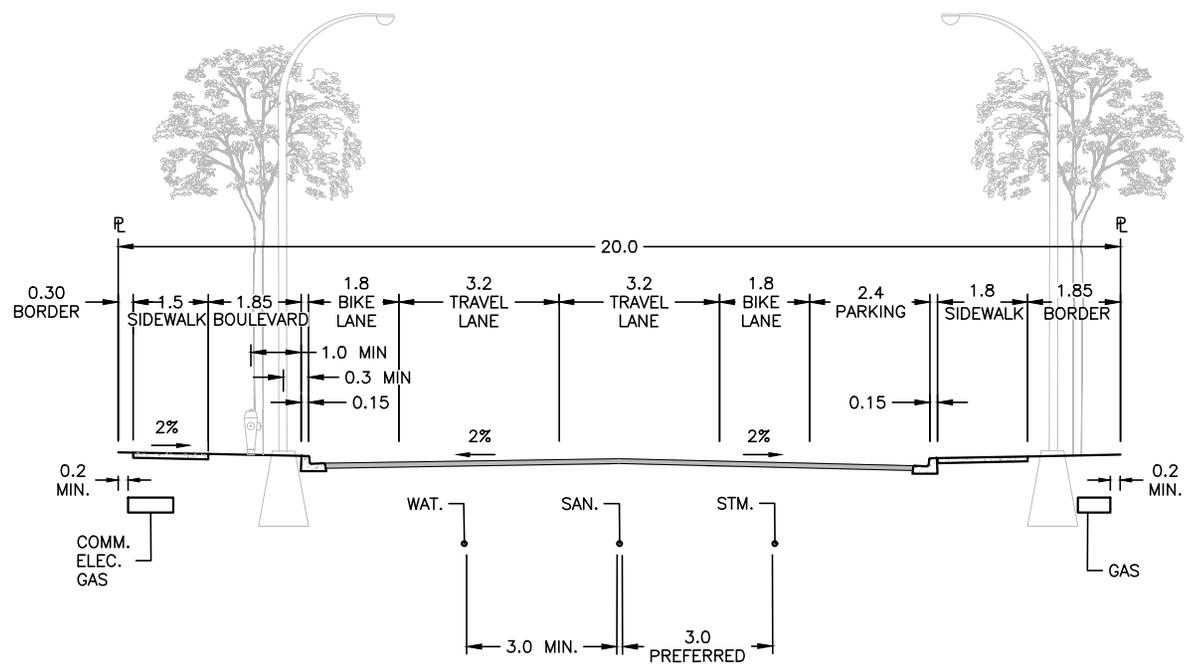




NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. HYDRANT TO BE CLEAR OF SIDEWALK, AND 1.0m ZONE SURROUNDING IT.

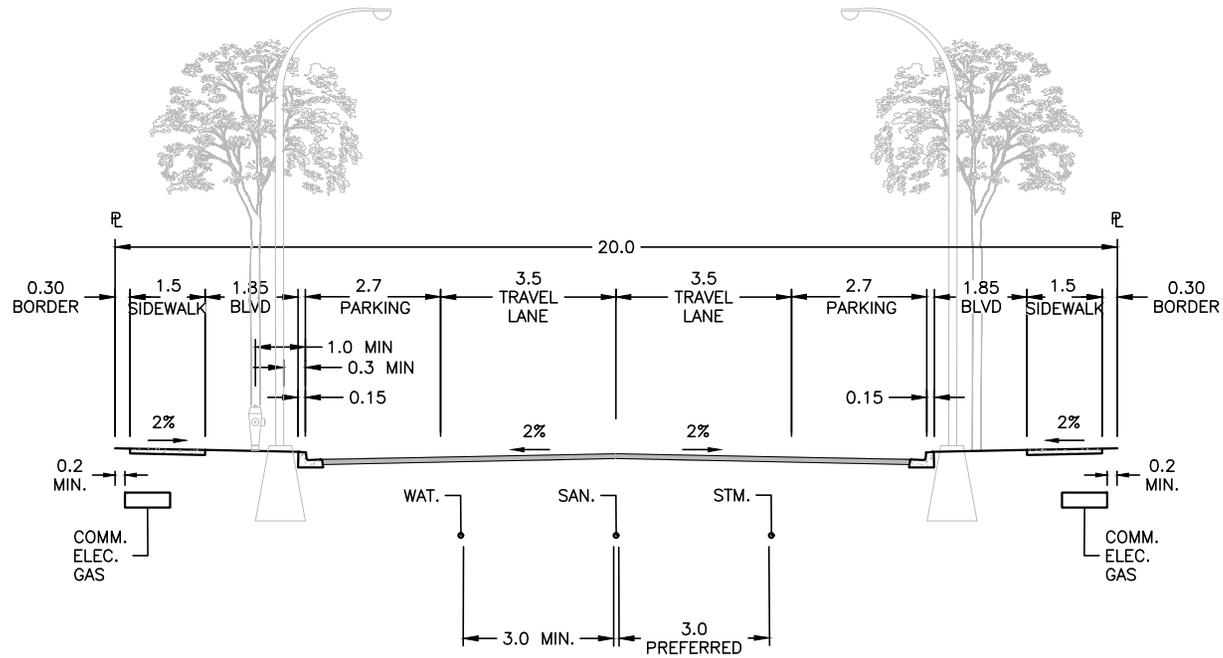
STANDARD DETAIL DRAWING	DATE: JULY 4/23	SUBURBAN COLLECTOR	DWG. NO.	
	SCALE: NTS		XS-R48	



NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. SIDEWALK MAY BE MONOLITHIC OR SEPARATED TO ACCOMMODATE SIDEWALK, SHALLOW UTILITIES, AND STREET TREES.

STANDARD DETAIL DRAWING	DATE: JULY 4/23	SUBURBAN COLLECTOR (WITH BIKE LANES)	DWG. NO.	 City of Kelowna
	SCALE: NTS		XS-R49	



NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

**STANDARD
DETAIL
DRAWING**

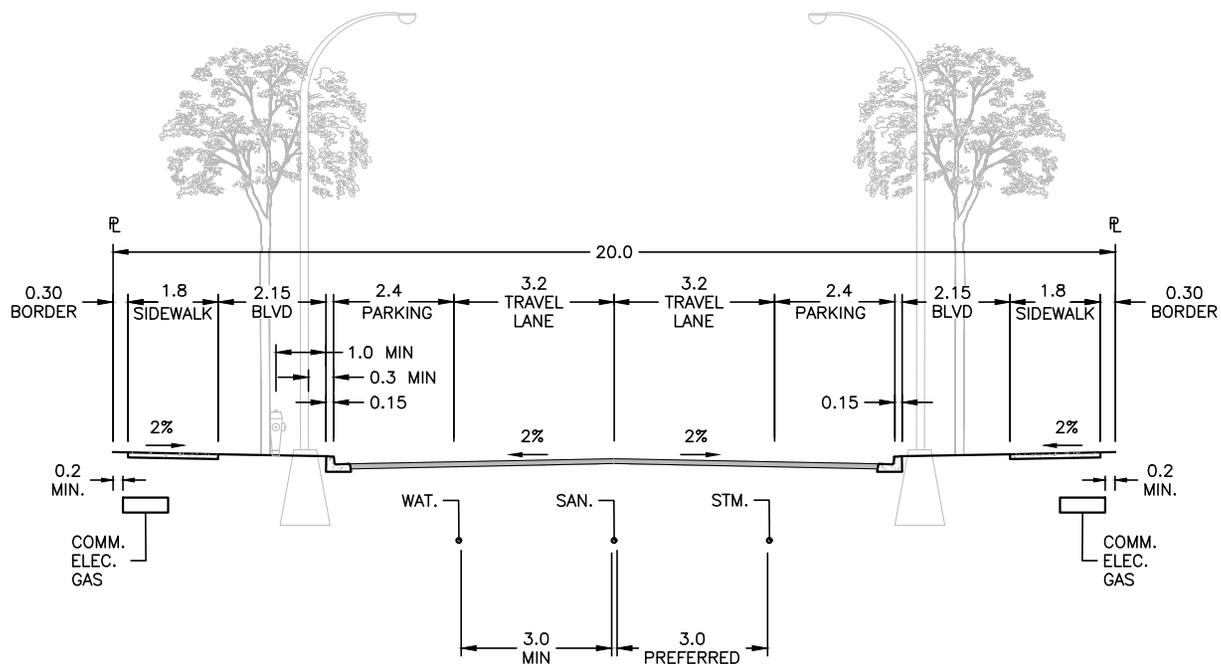
DATE:
JULY 4/23
SCALE:
NTS

**INDUSTRIAL
COLLECTOR**

DWG. NO.

XS-R50





NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

**STANDARD
DETAIL
DRAWING**

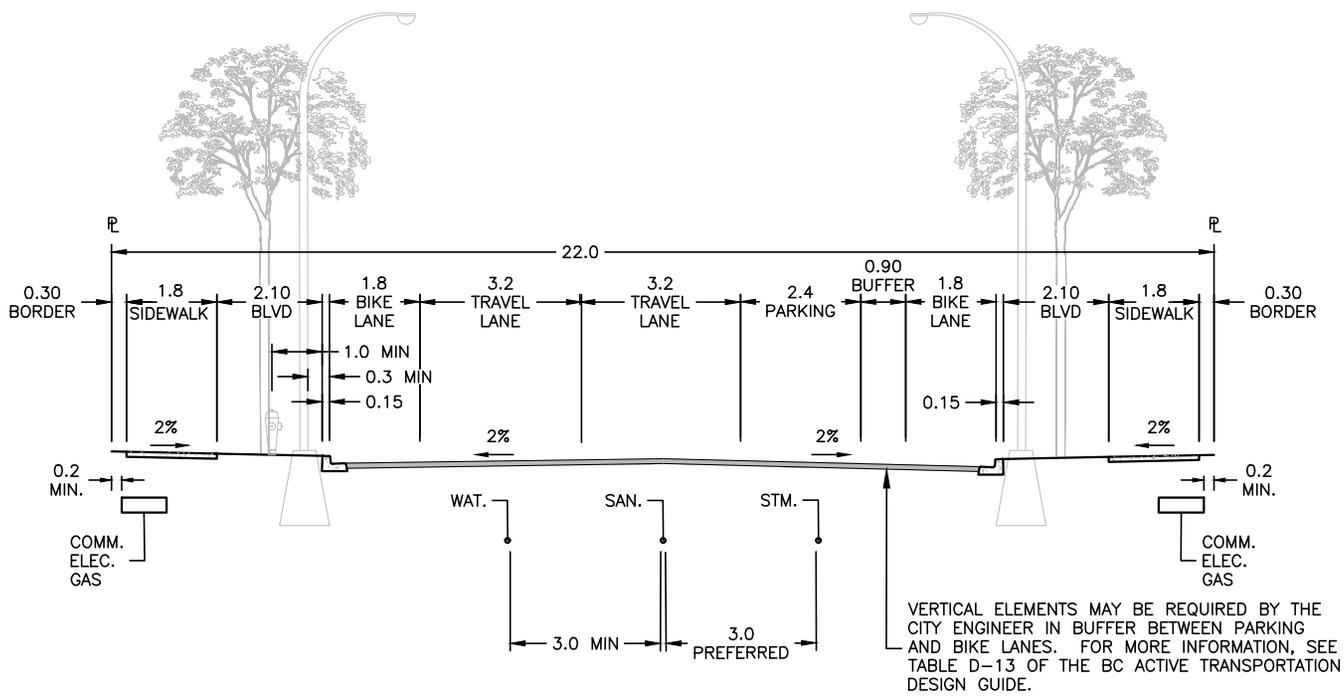
DATE:
JULY 4/23
SCALE:
NTS

**CORE AREA
COLLECTOR**

DWG. NO.

XS-R51

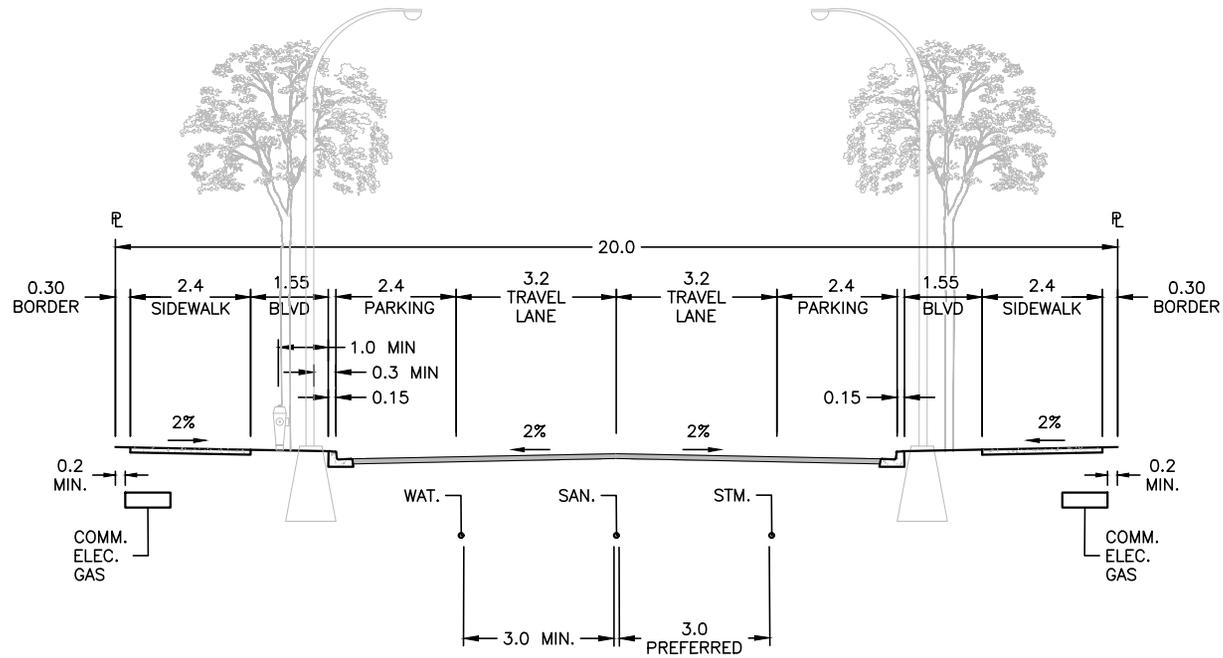




NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

STANDARD DETAIL DRAWING	DATE: JULY 4/23	CORE AREA COLLECTOR (WITH BIKE LANES)	DWG. NO.	
	SCALE: NTS		XS-R52	



NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

**STANDARD
DETAIL
DRAWING**

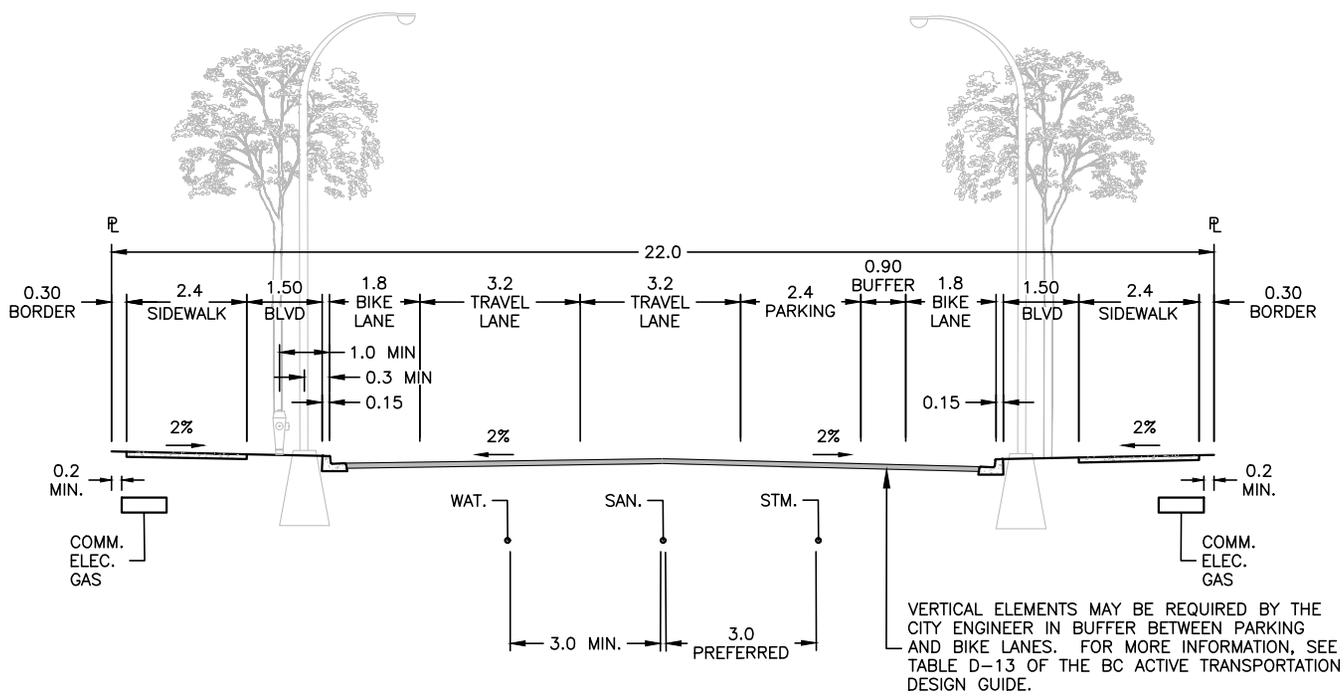
DATE:
JULY 4/23
SCALE:
NTS

**URBAN CENTRE
COLLECTOR**

DWG. NO.

XS-R53

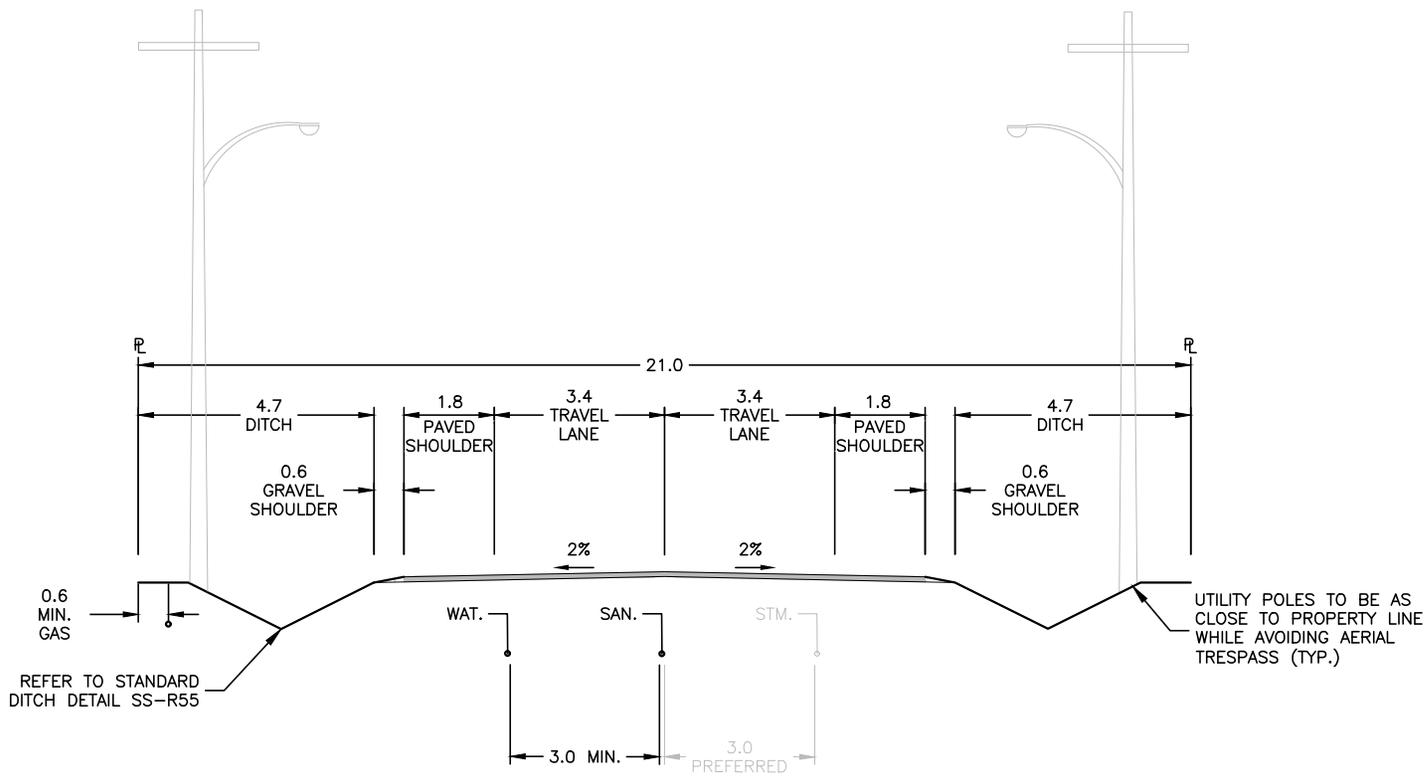




NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

STANDARD DETAIL DRAWING	DATE: JULY 4/23	URBAN CENTRE COLLECTOR (WITH BIKE LANES)	DWG. NO. XS-R54	
	SCALE: NTS			



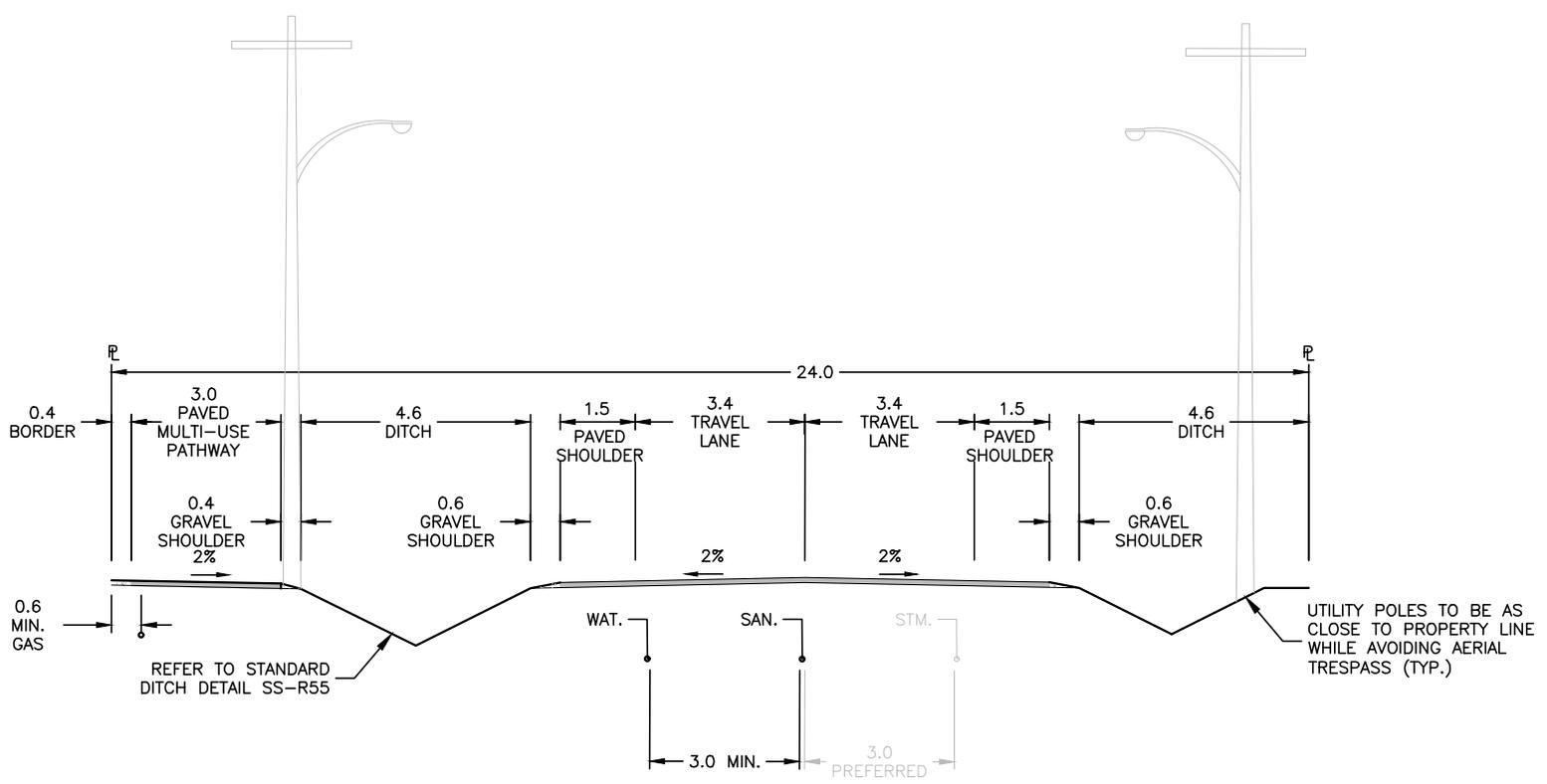
0.6 MIN. GAS
REFER TO STANDARD DITCH DETAIL SS-R55

UTILITY POLES TO BE AS CLOSE TO PROPERTY LINE WHILE AVOIDING AERIAL TRESPASS (TYP.)

NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

STANDARD DETAIL DRAWING	DATE: JULY 4/23	RURAL MINOR ARTERIAL	DWG. NO.	 City of Kelowna
	SCALE: NTS		XS-R60	

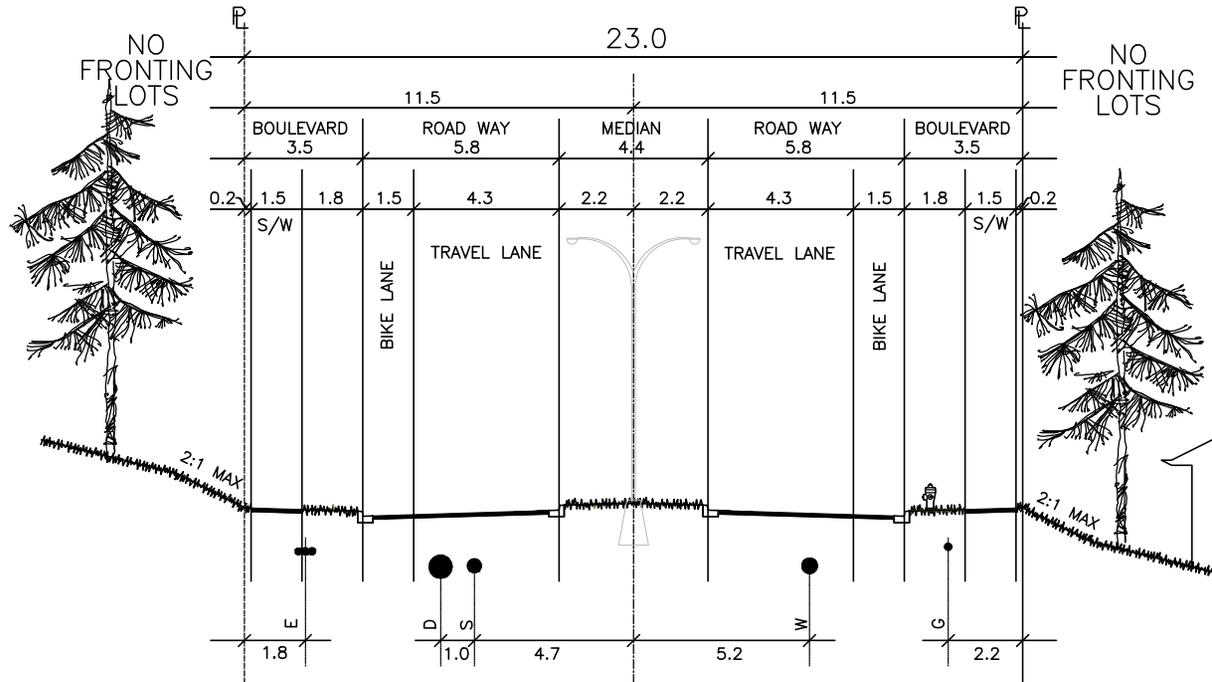


NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

STANDARD DETAIL DRAWING	DATE: JULY 4/23	RURAL MINOR ARTERIAL (WITH MULTI-USE PATH)	DWG. NO. XS-R61	
	SCALE: NTS			

HILLSIDE ZONE STANDARDS



NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

**STANDARD
DETAIL
DRAWING**

DATE:
JULY 4/23
SCALE:
NTS

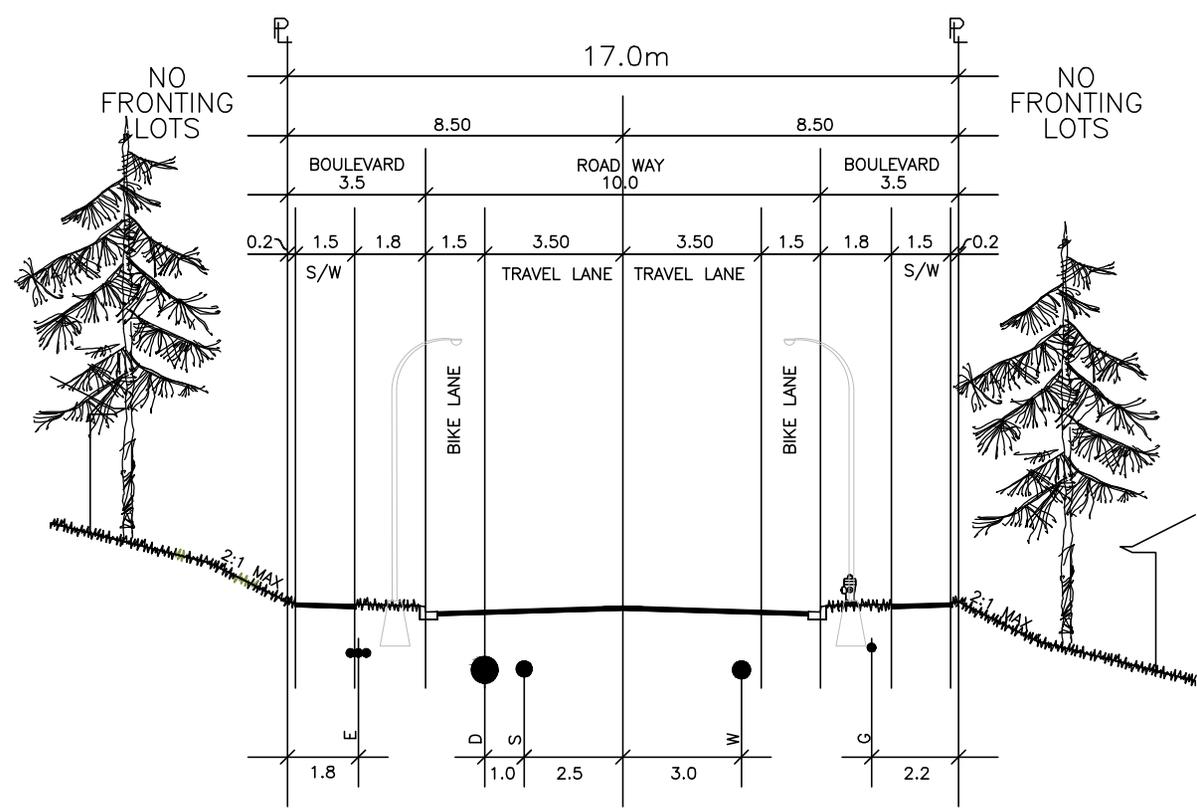
**HILLSIDE - ARTERIAL CONDITION A
(VILLAGE PARKWAY)**

DWG. NO.

XS-R62



HILLSIDE ZONE STANDARDS



NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

**STANDARD
DETAIL
DRAWING**

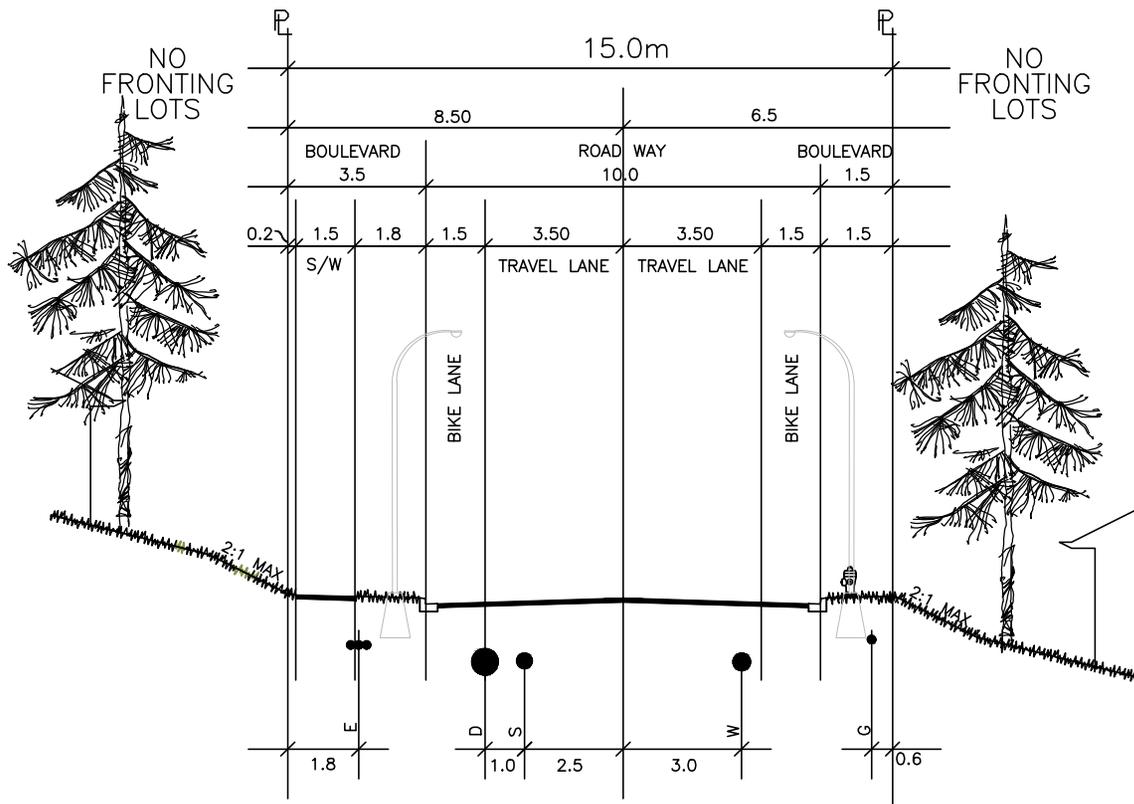
DATE:
JULY 4/23
SCALE:
NTS

**HILLSIDE - ARTERIAL CONDITION B
(WITHIN 0.8 KM WALKING DISTANCE OF VILLAGE)**

DWG. NO.
XS-R63



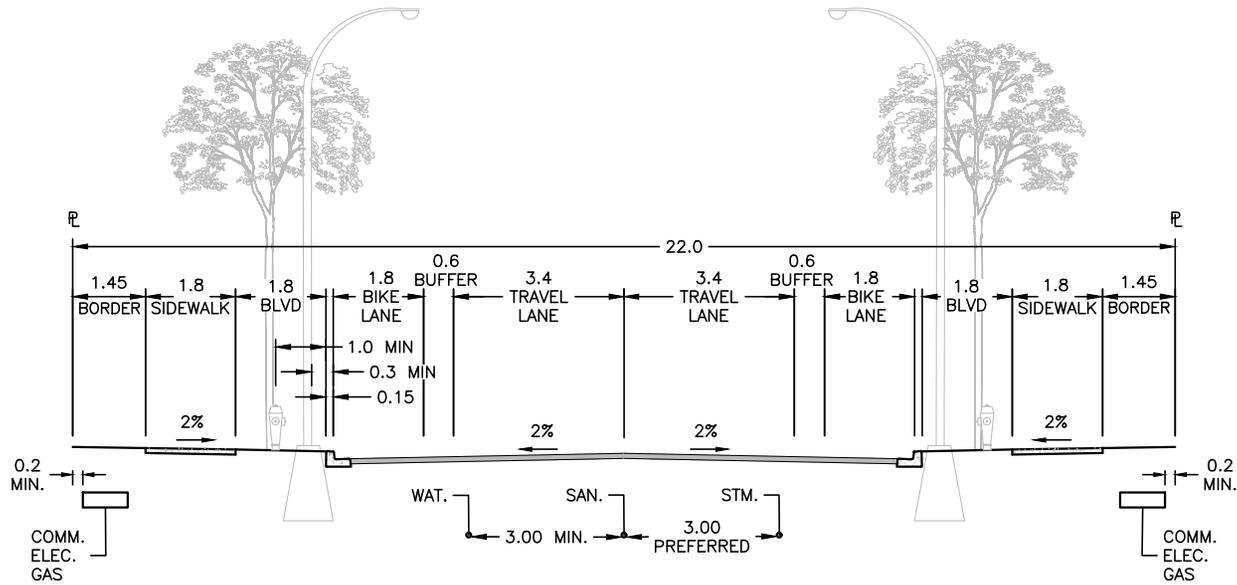
HILLSIDE ZONE STANDARDS



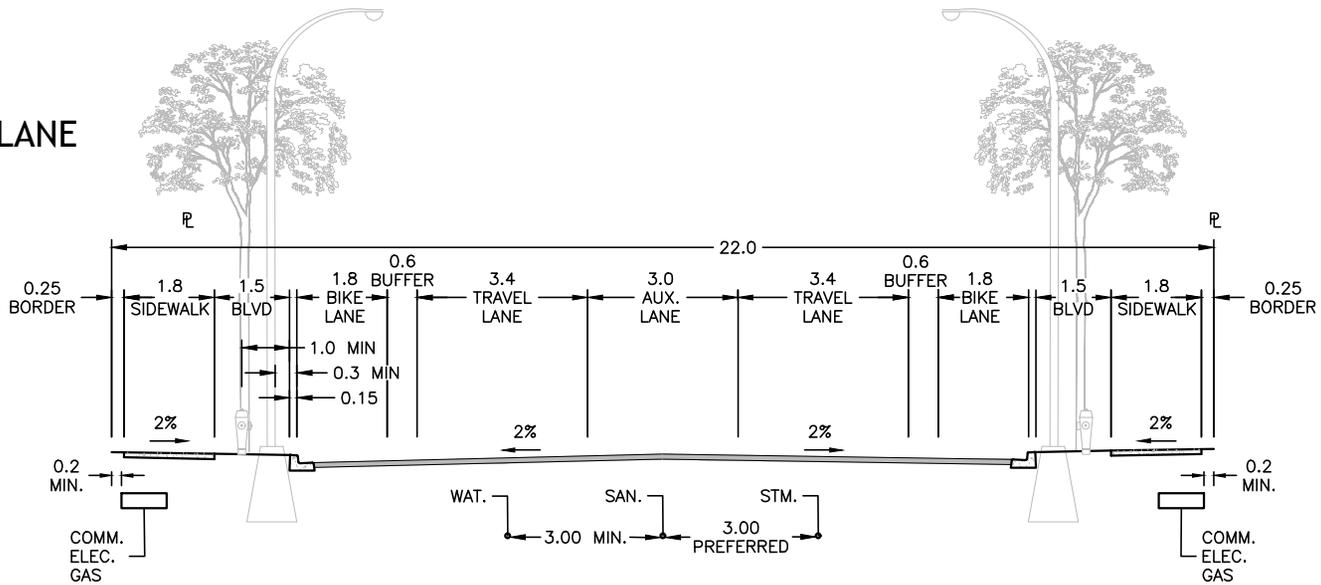
NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

<p>STANDARD DETAIL DRAWING</p>	DATE: JULY 4/23	<p>HILLSIDE - ARTERIAL CONDITION-C (GREATER THAN 0.8 KM WALKING DISTANCE OF VILLAGE)</p>	DWG. NO.	
	SCALE: NTS		<p>XS-R64</p>	



WITH AUXILIARY LANE



NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

**STANDARD
DETAIL
DRAWING**

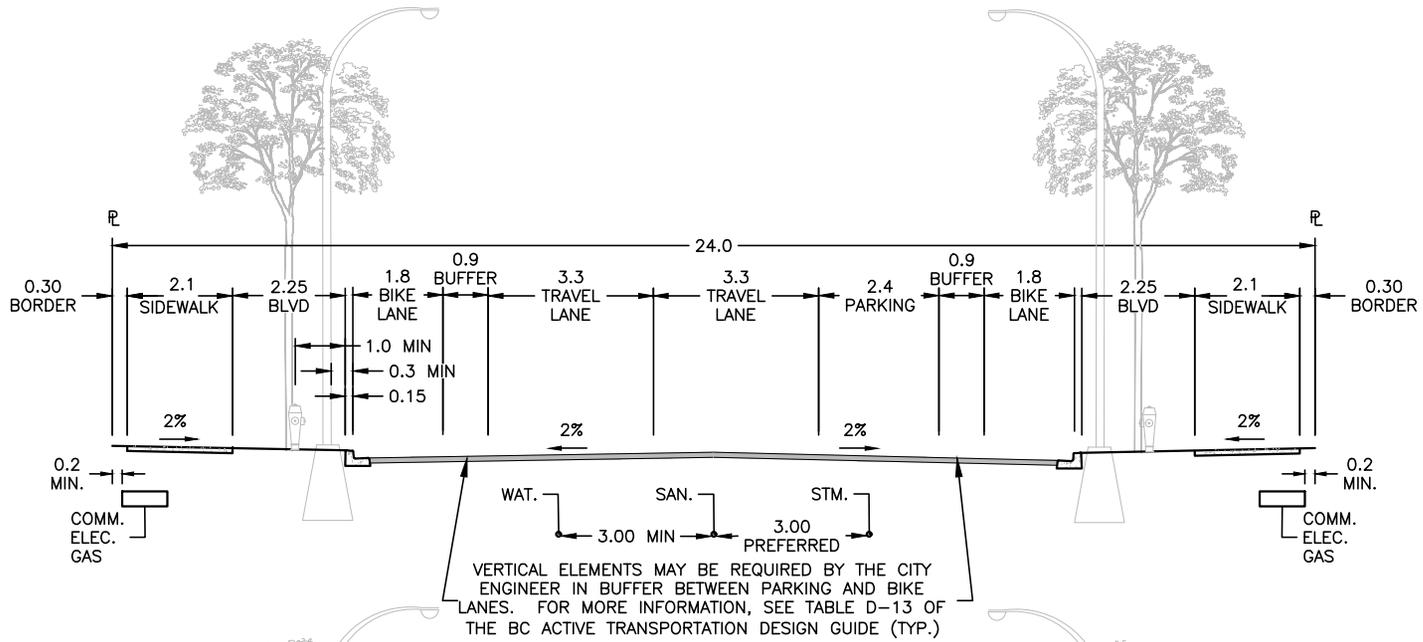
DATE:
JULY 4/23
SCALE:
NTS

**SUBURBAN
MINOR ARTERIAL**

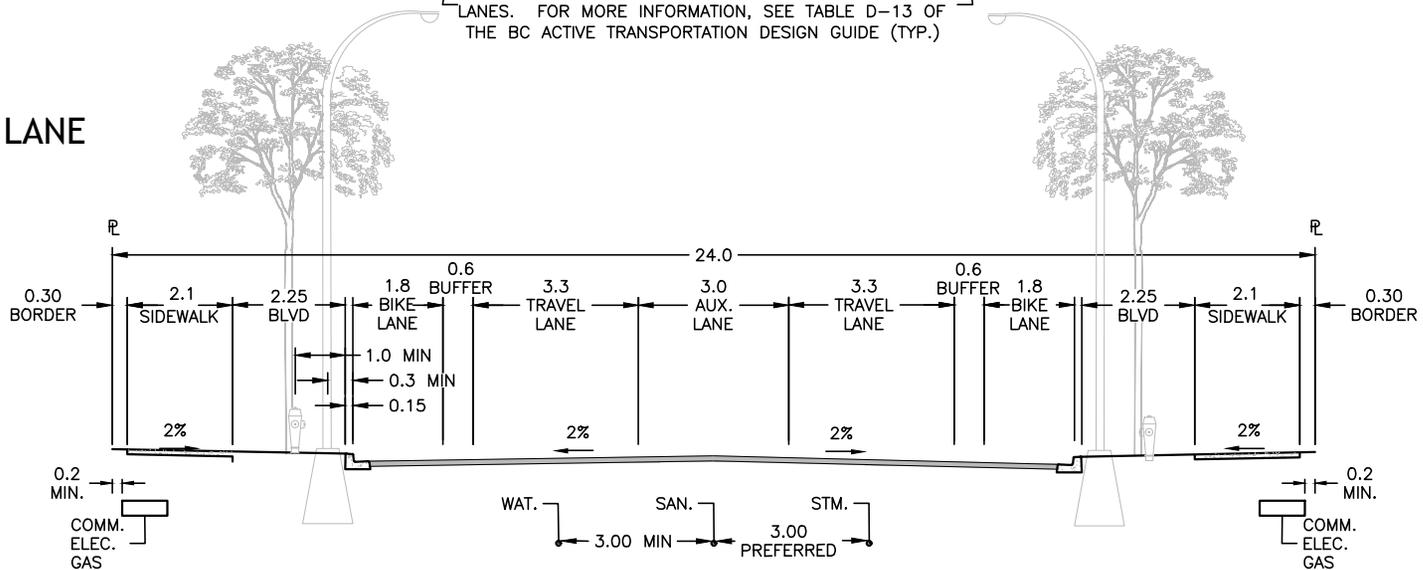
DWG. NO.

XS-R65





WITH AUXILIARY LANE



NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

**STANDARD
DETAIL
DRAWING**

DATE:
JULY 4/23
SCALE:
NTS

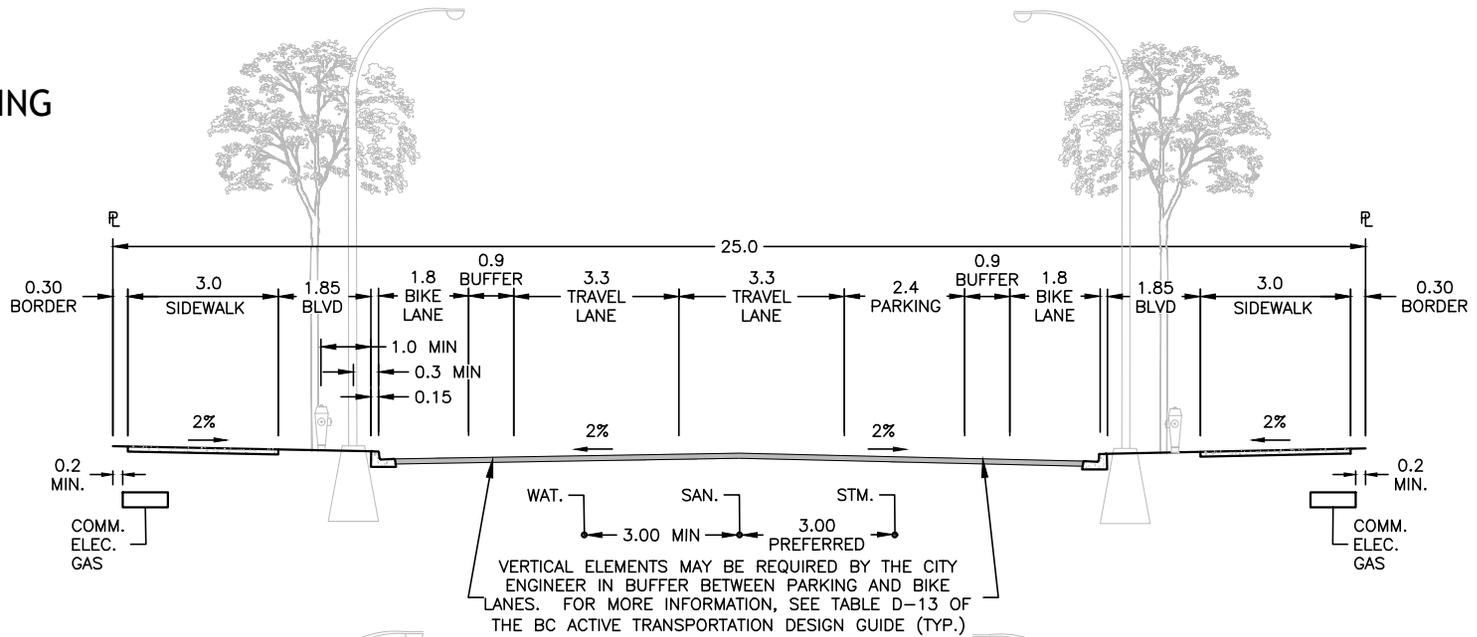
**CORE AREA
MINOR ARTERIAL**

DWG. NO.

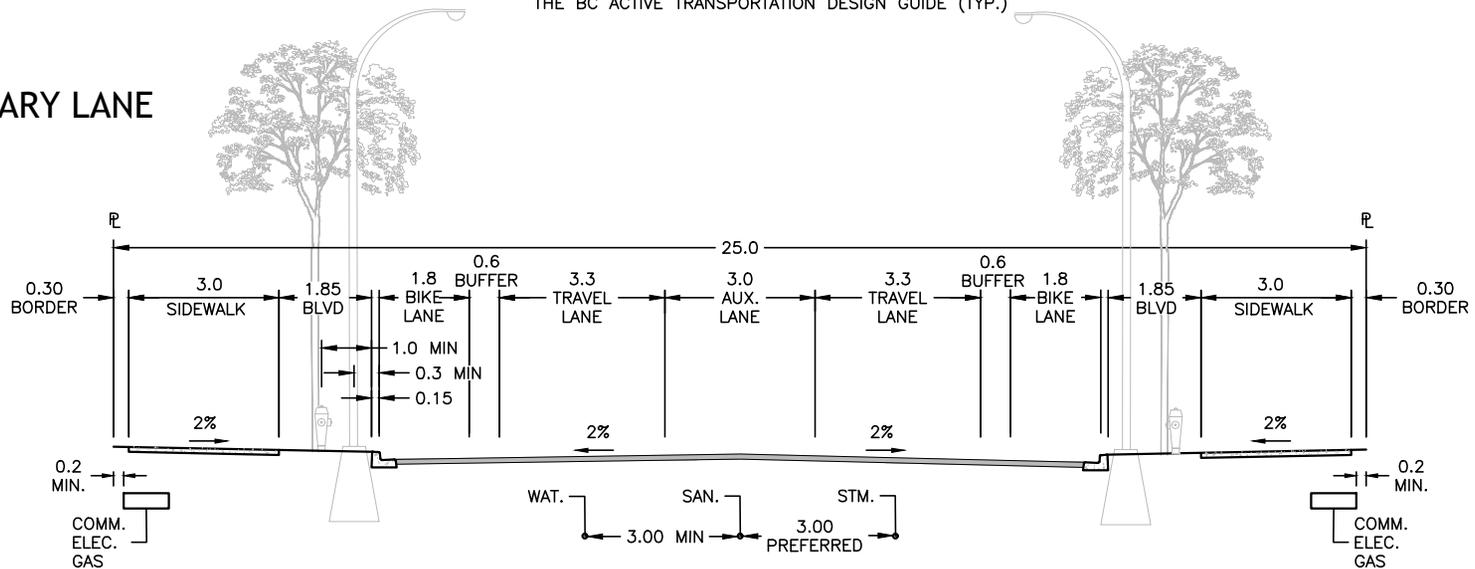
XS-R66



WITH PARKING



WITH AUXILIARY LANE



NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

STANDARD
DETAIL
DRAWING

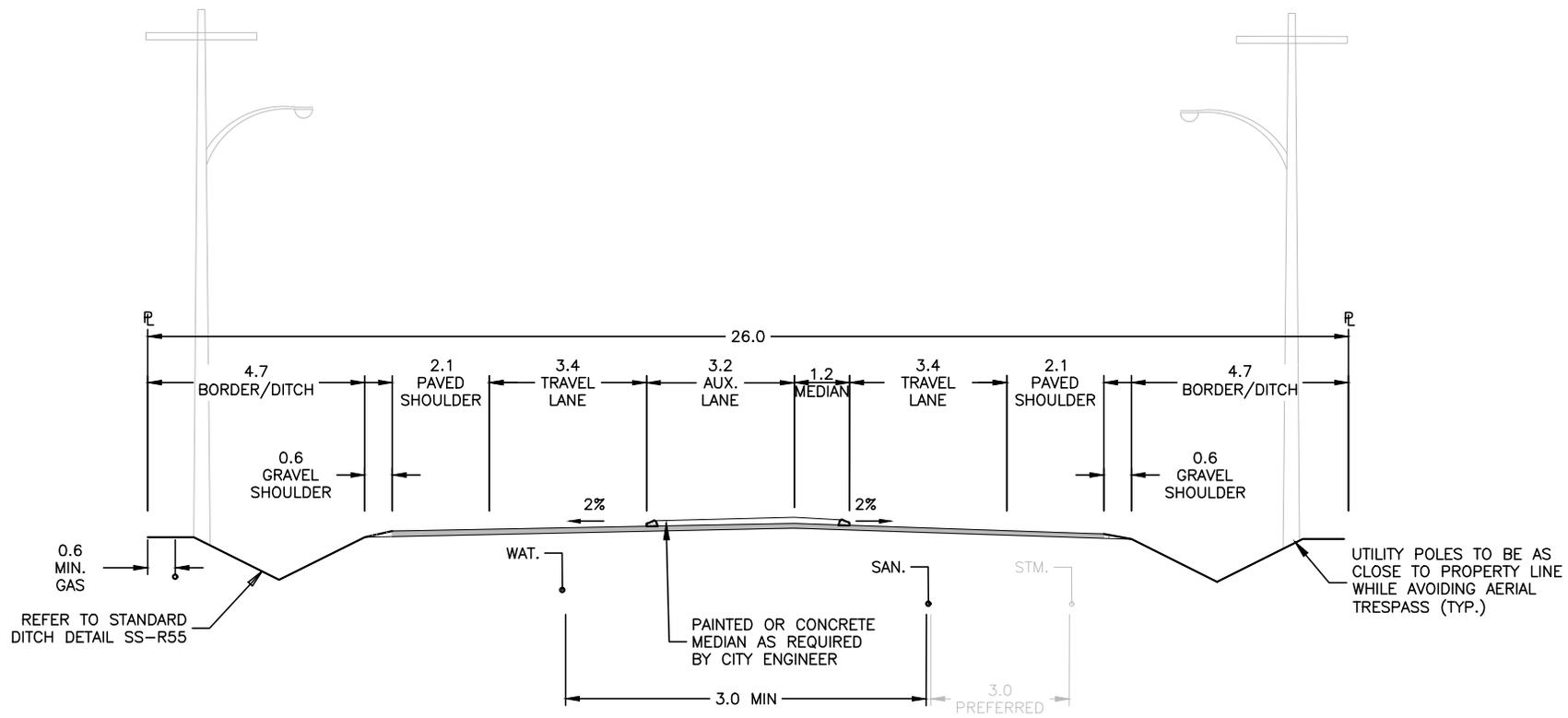
DATE:
JULY 4/23
SCALE:
NTS

URBAN CENTRE MINOR ARTERIAL

DWG. NO.

XS-R67





NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

**STANDARD
DETAIL
DRAWING**

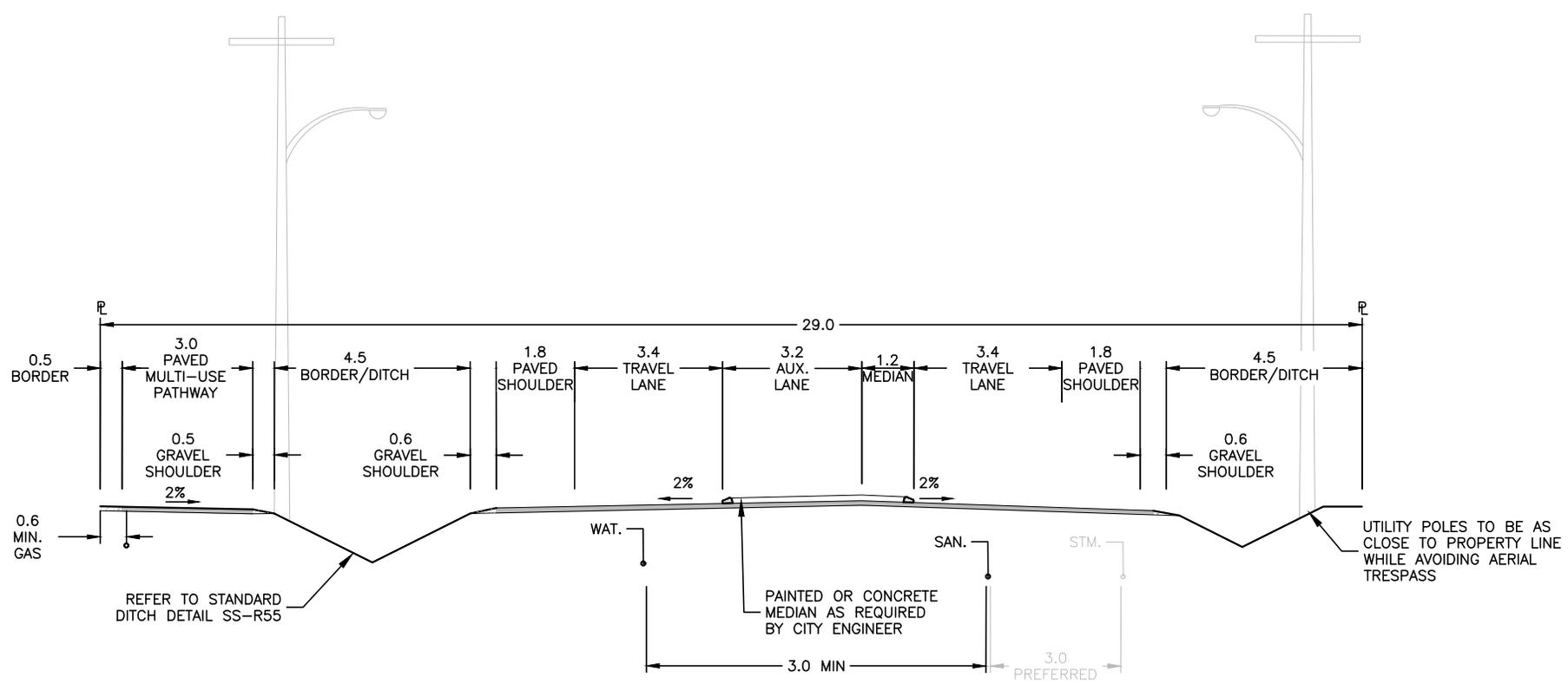
DATE:
JULY 4/23
SCALE:
NTS

**RURAL MAJOR ARTERIAL
(3 LANE)**

DWG. NO.

XS-R80

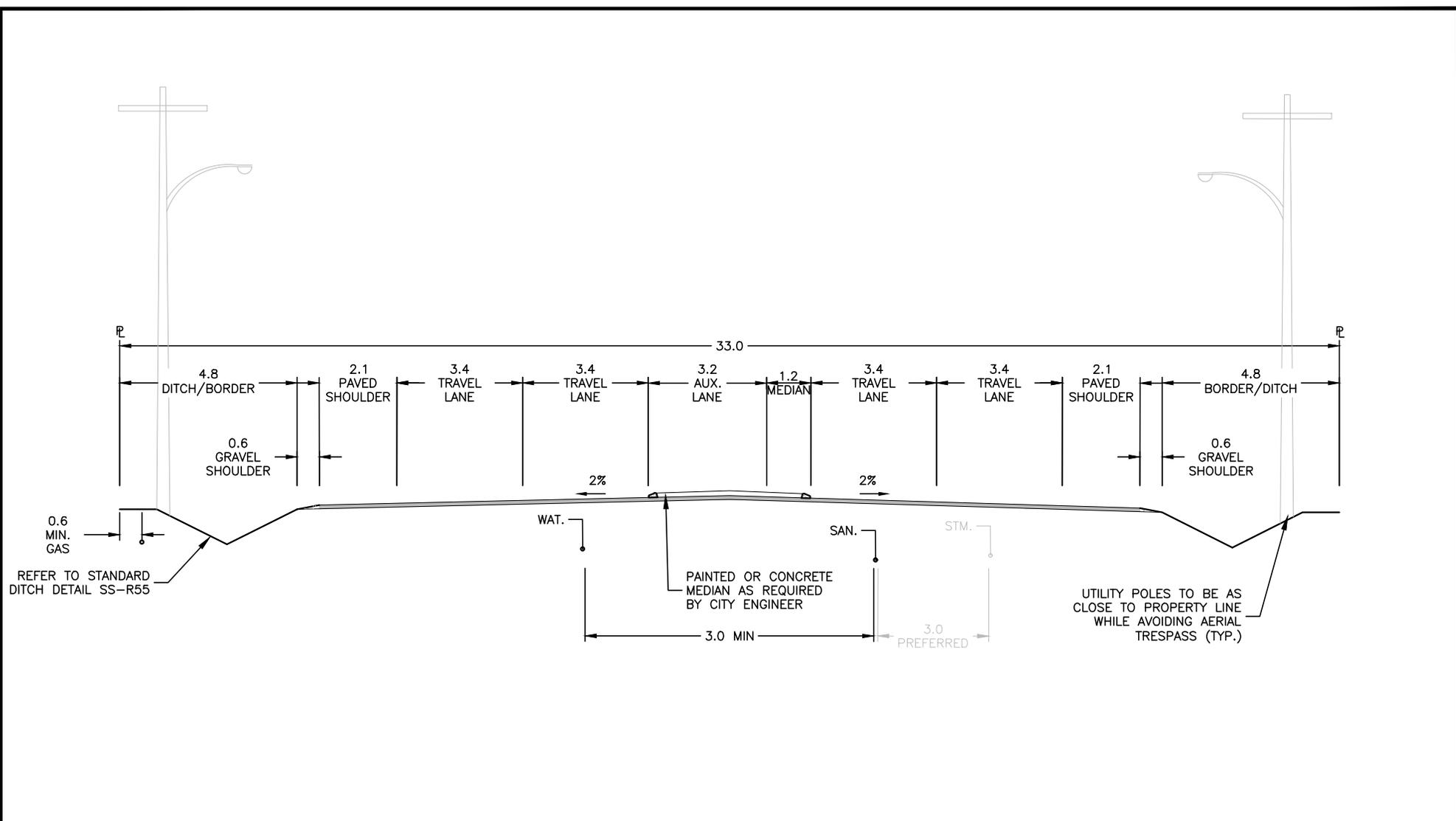




NOTES:

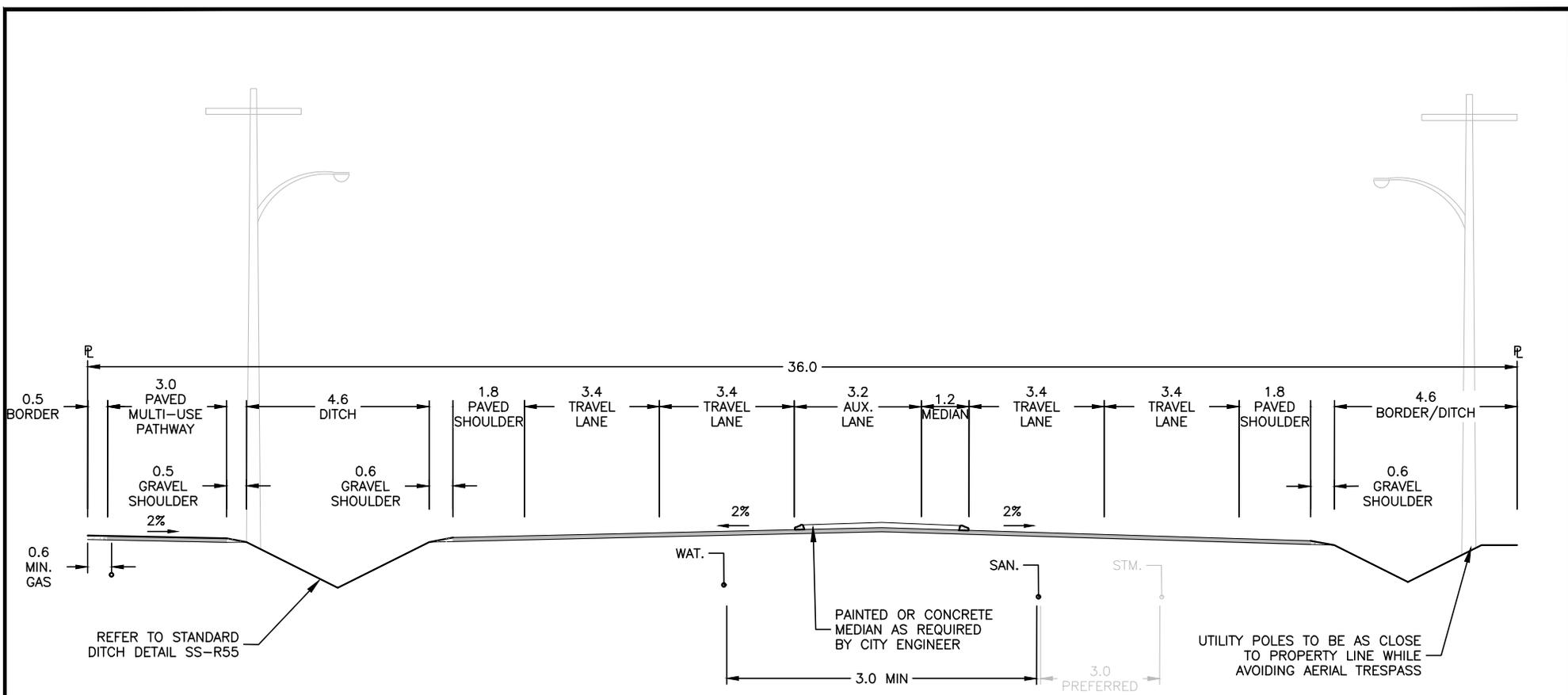
1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

STANDARD DETAIL DRAWING	DATE: JULY 4/23	RURAL MAJOR ARTERIAL (3 LANE WITH MULTI-USE PATH)	DWG. NO.	 City of Kelowna
	SCALE: NTS		XS-R81	



- NOTES:
1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
 2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

STANDARD DETAIL DRAWING	DATE: JULY 4/23	RURAL MAJOR ARTERIAL (5 LANE)	DWG. NO.	 City of Kelowna
	SCALE: NTS		XS-R82	



NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

**STANDARD
DETAIL
DRAWING**

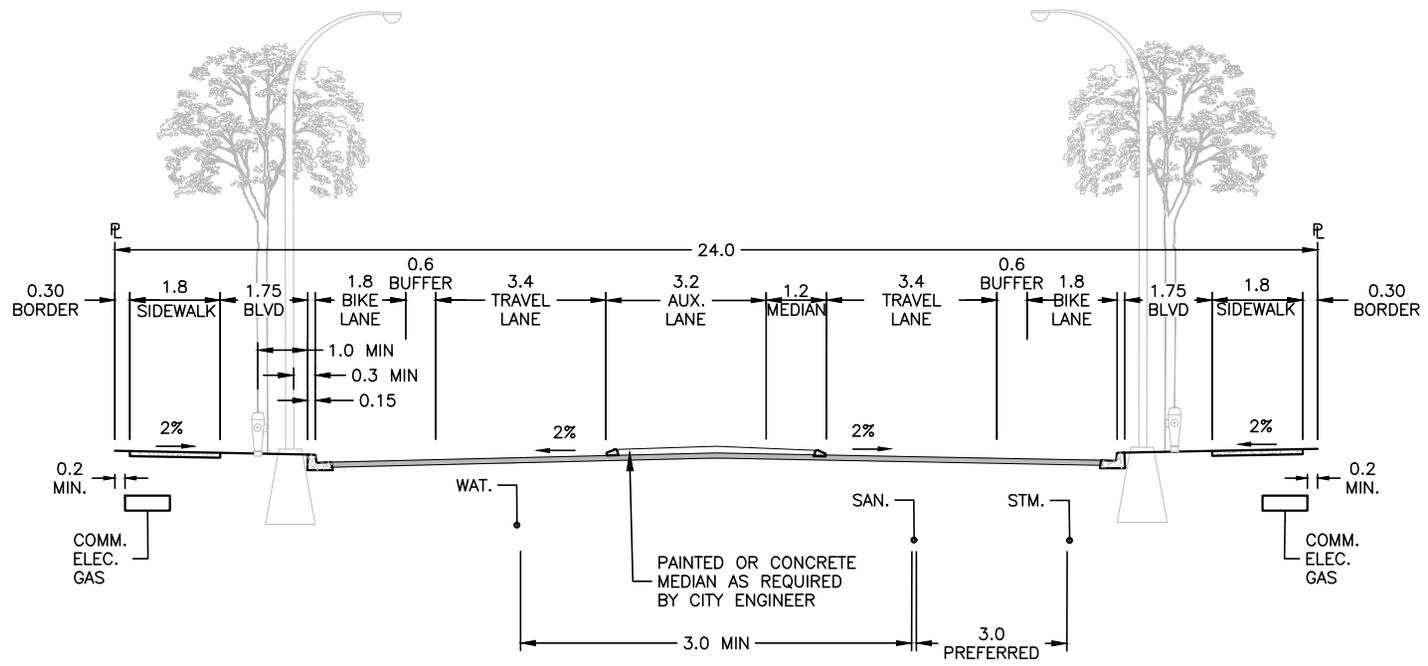
DATE:
JULY 4/23

SCALE:
NTS

**RURAL MAJOR ARTERIAL
(5 LANE WITH MULTI-USE PATHWAY)**

DWG. NO.
XS-R83





NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

**STANDARD
DETAIL
DRAWING**

DATE:
JULY 4/23

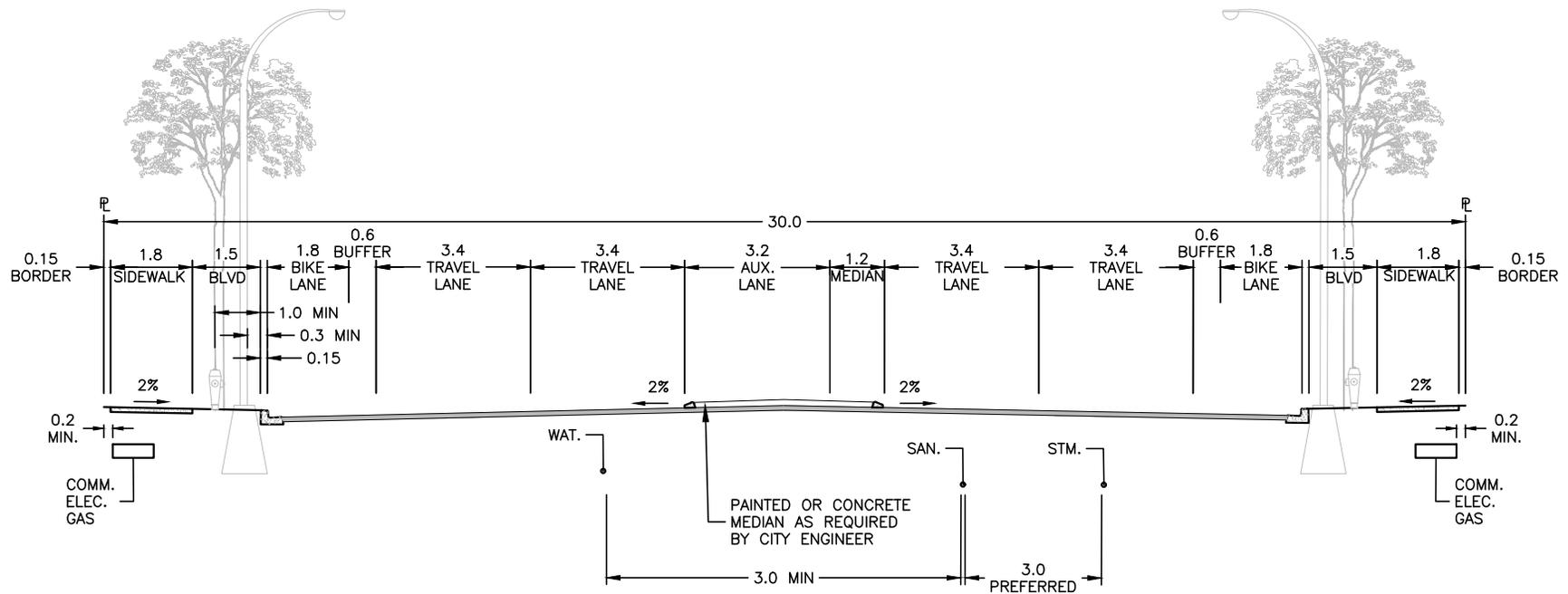
SCALE:
NTS

**SUBURBAN MAJOR ARTERIAL
(3 LANE)**

DWG. NO.

XS-R84





NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

**STANDARD
DETAIL
DRAWING**

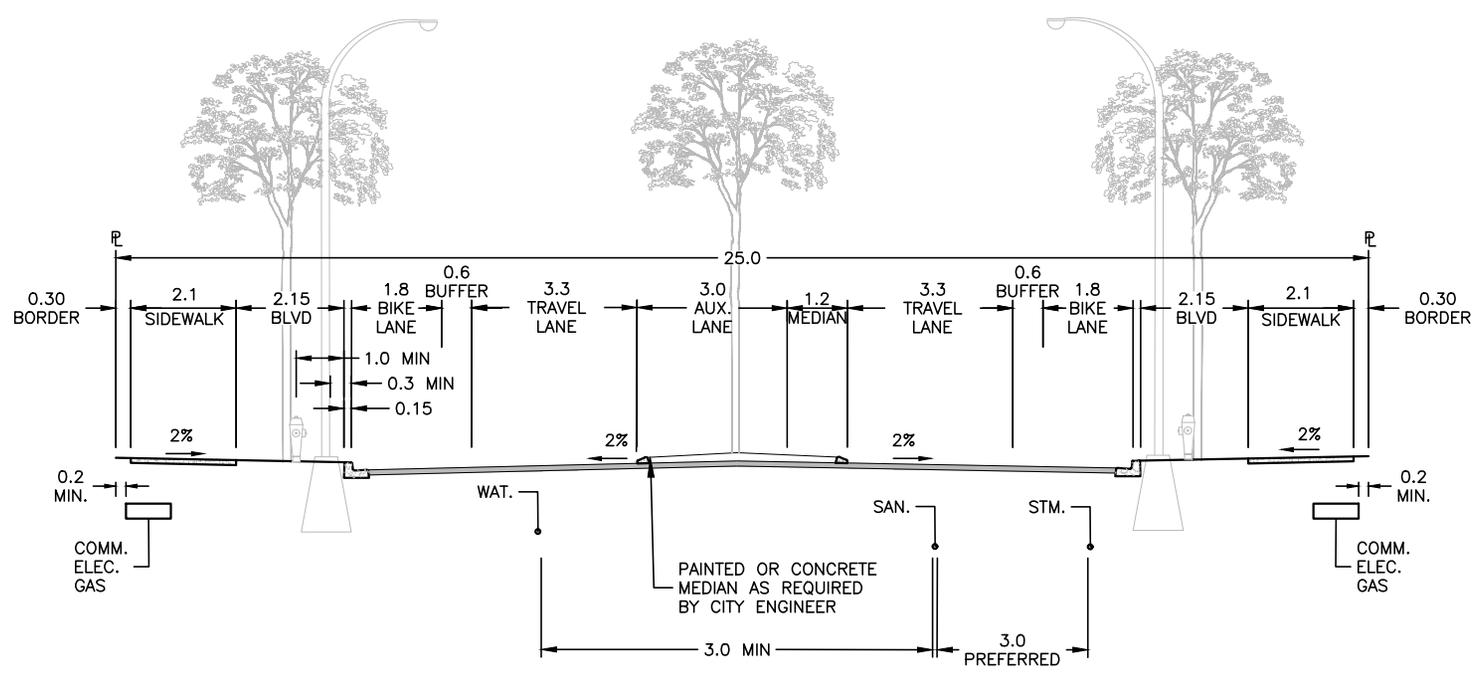
DATE:
JULY 4/23
SCALE:
NTS

**SUBURBAN MAJOR ARTERIAL
(5 LANE)**

DWG. NO.

XS-R85

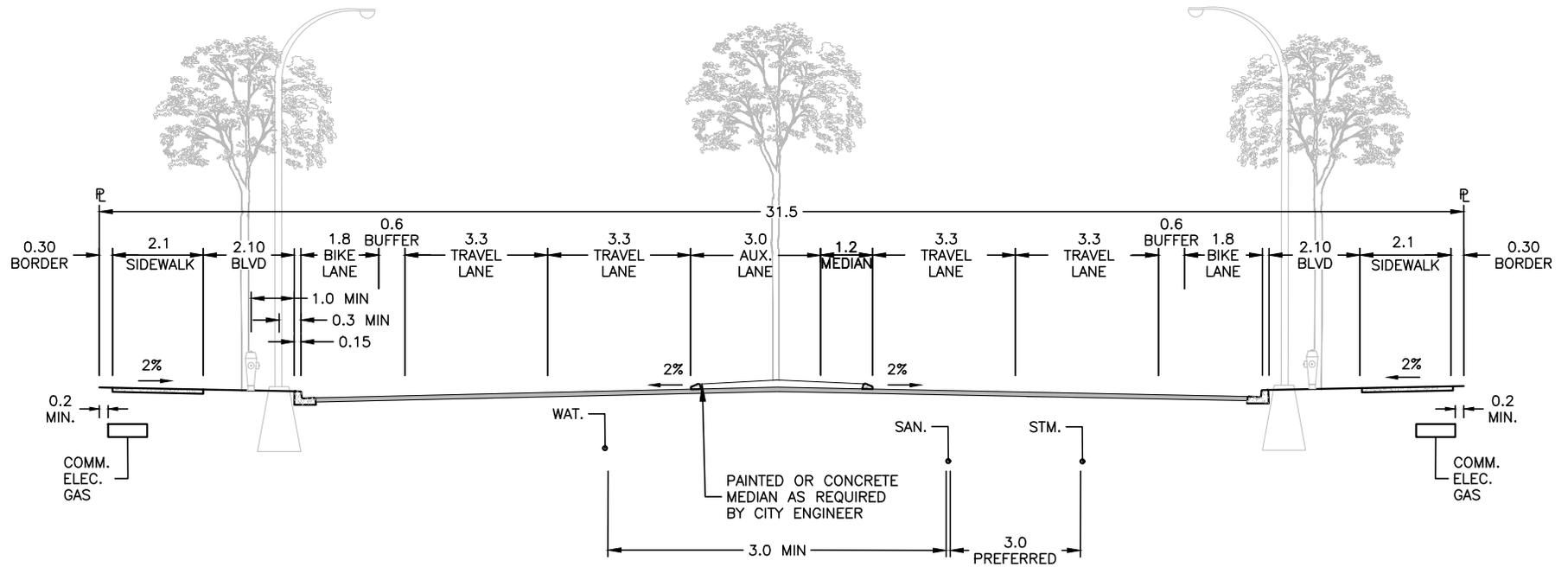




NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

STANDARD DETAIL DRAWING	DATE: JULY 4/23	CORE AREA MAJOR ARTERIAL (3 LANE)	DWG. NO.	 City of Kelowna
	SCALE: NTS		XS-R86	



NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

**STANDARD
DETAIL
DRAWING**

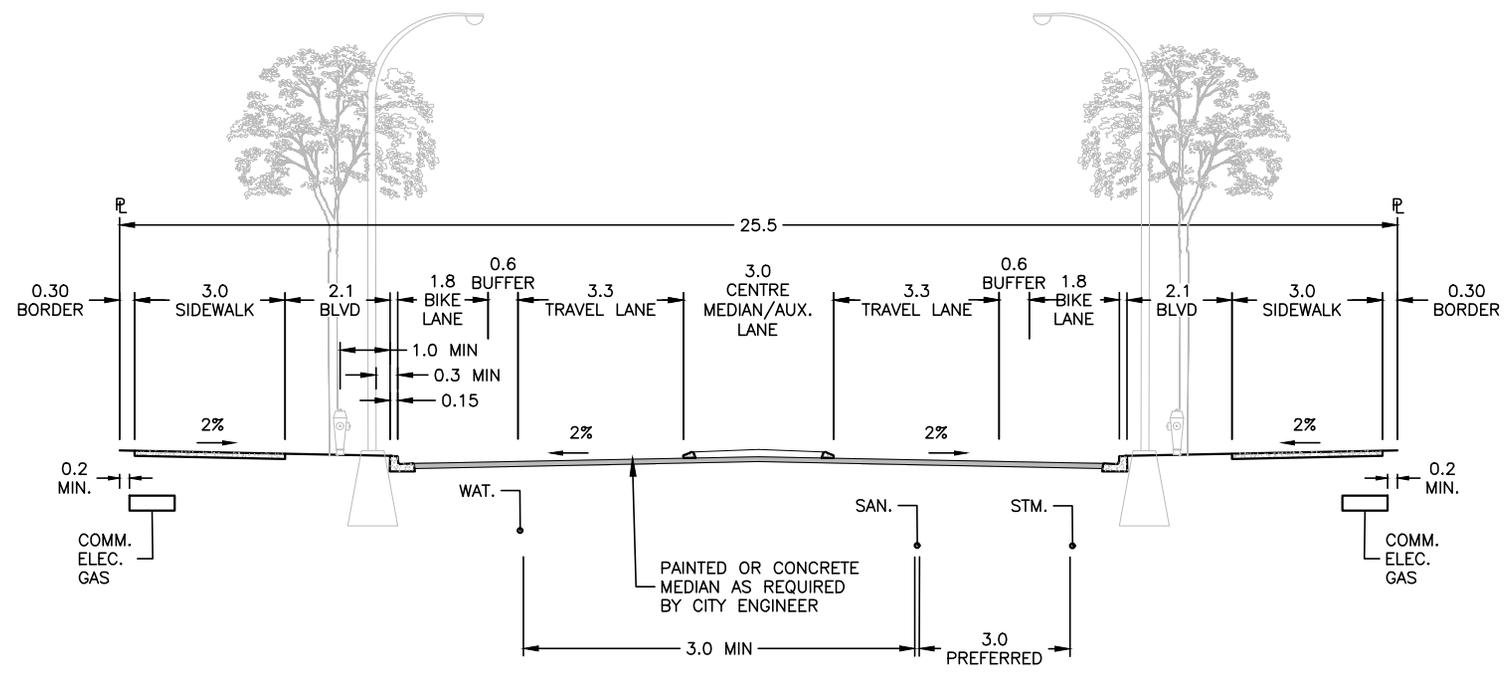
DATE:
JULY 4/23
SCALE:
NTS

**CORE AREA MAJOR ARTERIAL
(5 LANE)**

DWG. NO.

XS-R87

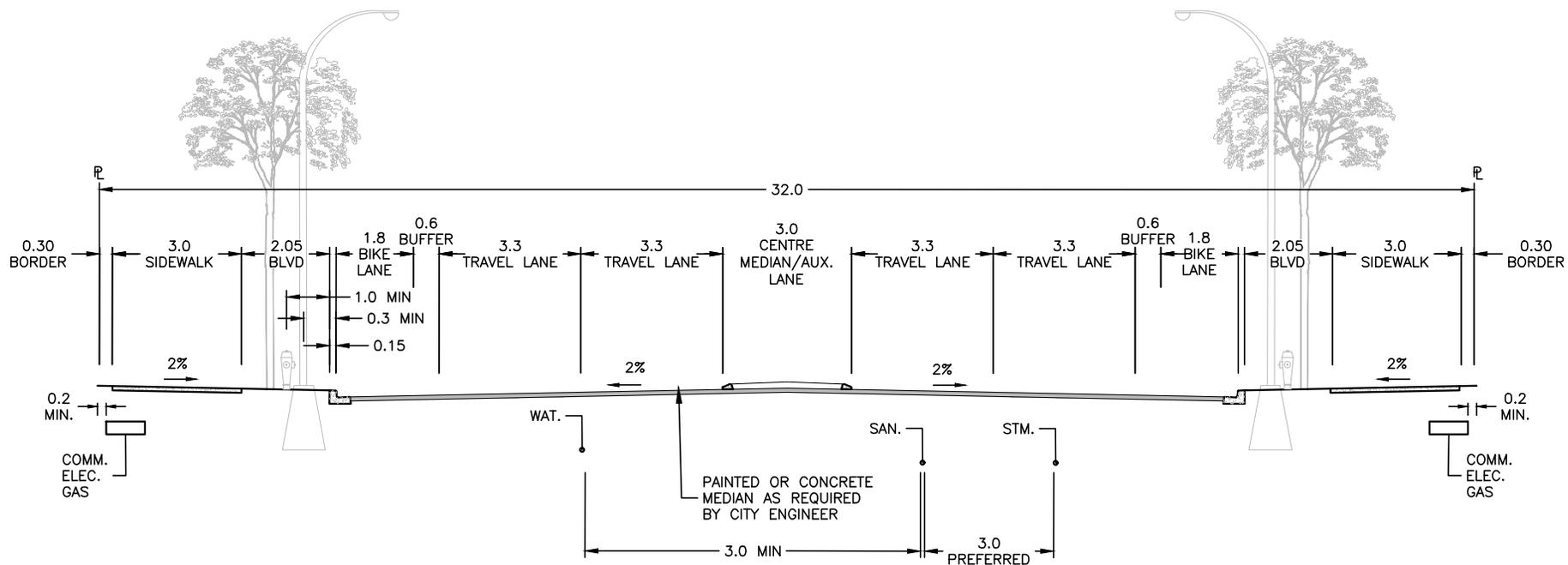




NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

STANDARD DETAIL DRAWING	DATE: JULY 4/23	URBAN CENTRE MAJOR ARTERIAL (3 LANE)	DWG. NO.	 City of Kelowna
	SCALE: NTS		XS-R88	



NOTES:

1. AT THE RECOMMENDATION OF THE CITY ENGINEER, THE APPROVING OFFICER MAY REQUIRE SPECIAL PROVISIONS OR ADDITIONAL ROW FOR THE ROAD TO BE ADEQUATELY SUPPORTED, PROTECTED, OR DRAINED.
2. AUXILIARY LANES REQUIRED AS NECESSARY, AS PER BYLAW 7900.

**STANDARD
DETAIL
DRAWING**

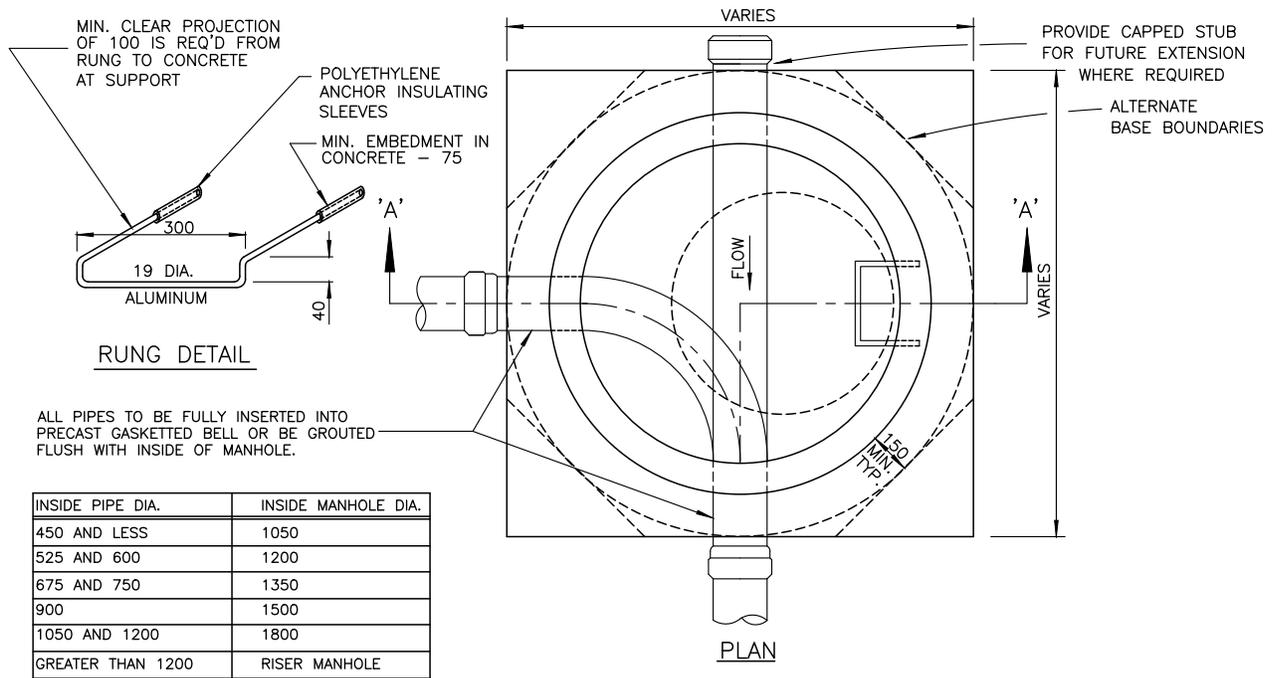
DATE:
JULY 4/23
SCALE:
NTS

**URBAN CENTRE MAJOR ARTERIAL
(5 LANE)**

DWG. NO.

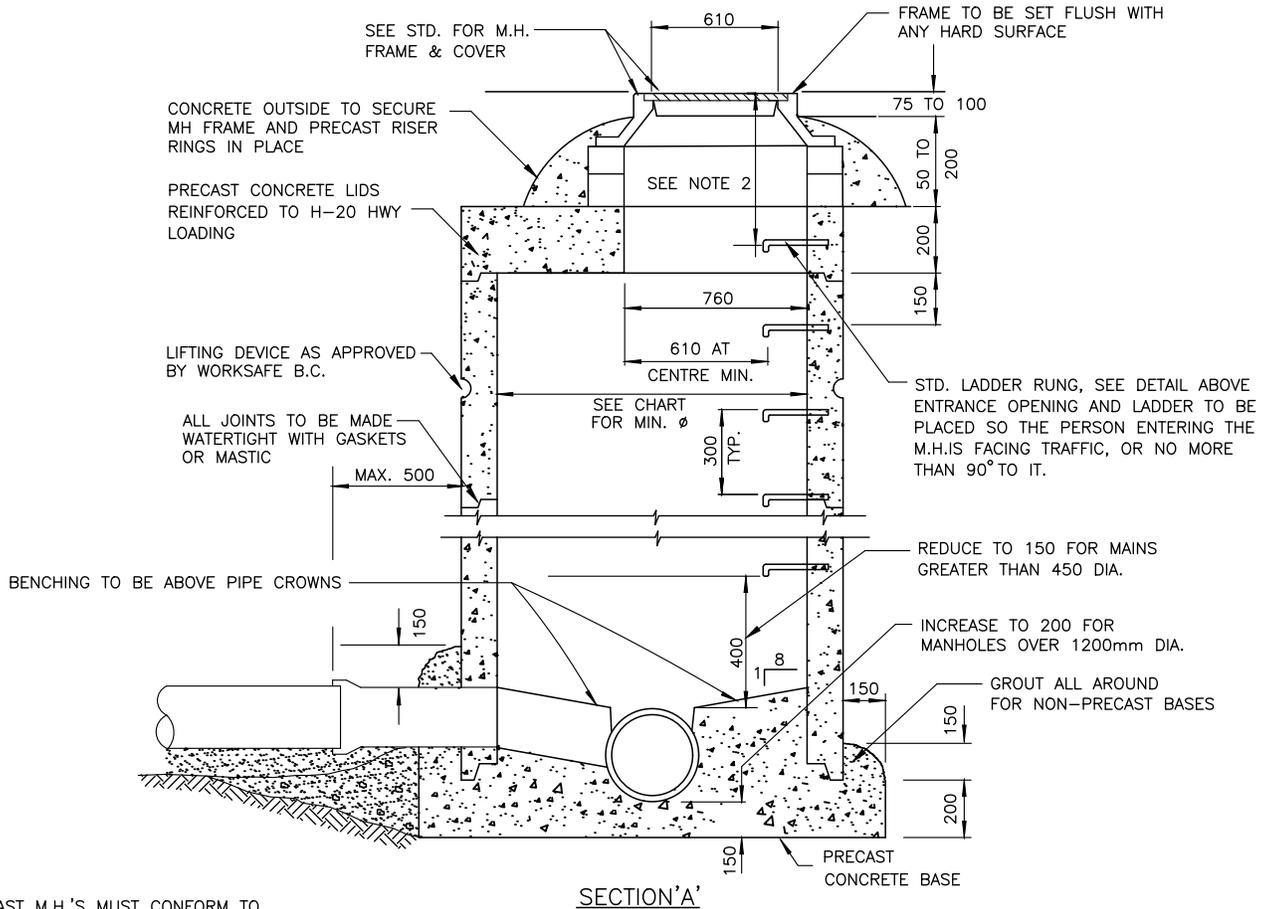
XS-R89





ALL PIPES TO BE FULLY INSERTED INTO PRECAST GASKETTED BELL OR BE GROUTED FLUSH WITH INSIDE OF MANHOLE.

INSIDE PIPE DIA.	INSIDE MANHOLE DIA.
450 AND LESS	1050
525 AND 600	1200
675 AND 750	1350
900	1500
1050 AND 1200	1800
GREATER THAN 1200	RISE MANHOLE



NOTES:

1. ALL PRECAST M.H.'S MUST CONFORM TO A.S.T.M. & CSA SPECIFICATIONS AND HAVE A MIN. 114 WALL THICKNESS.
2. MAXIMUM DEPTH TO FIRST RUNG IS 500MM. WHEN HANDHOLD IS INSTALLED BETWEEN TOP AND FIRST RUNG, MAXIMUM DEPTH MAY BE INCREASED TO 660MM
3. CAST-IN-PLACE BASE SHOWN. PRECAST BASE REQUIRED, UNLESS OTHERWISE APPROVED.
4. FOR OVER-BUILD MH'S, PIPE ENTERING MH MUST NOT PROTRUDE FURTHER THAN 25MM AND BE NO LESS THAN FLUSH WITH INSIDE OF BARREL.

**STANDARD
DETAIL
DRAWING**

DATE:
JUNE 6/24
SCALE:
NTS

MANHOLES

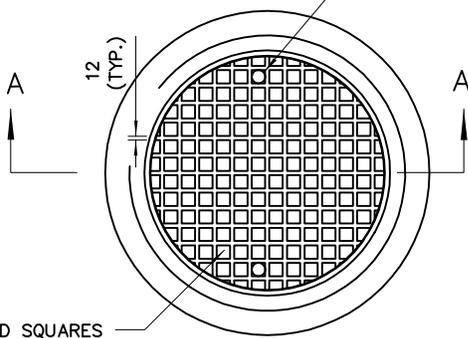
DWG. NO.

SS-S1a



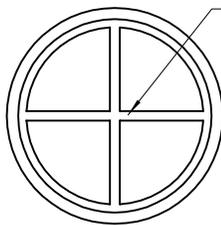
STANDARD DETAIL DRAWINGS

2 - 22mm DIA. PICK-OUT HOLES REQ'D

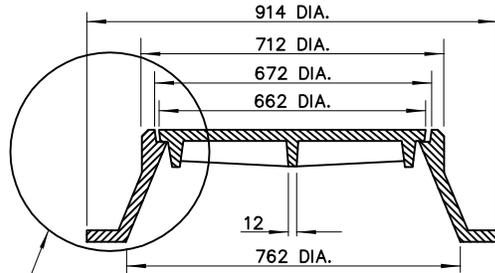


RAISED SQUARES
(5mm HIGH)

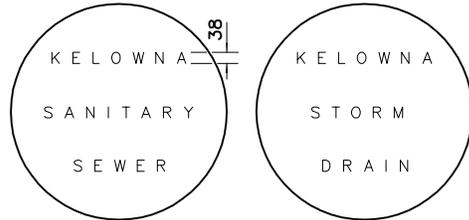
PLAN



WEBBING TO ACCOMMODATE
SPECIFIED LOAD

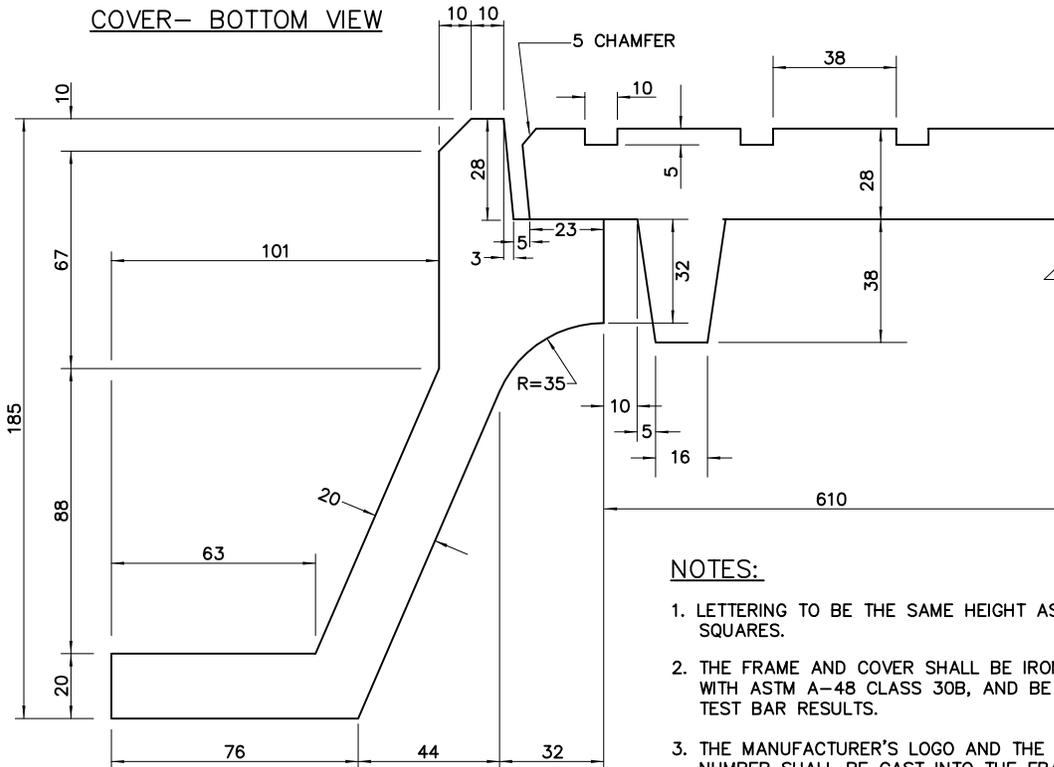


SEE DETAIL 'A'
SECTION 'A-A'



STANDARD LETTERING ON COVER

COVER- BOTTOM VIEW



DETAIL 'A'

NOTES:

1. LETTERING TO BE THE SAME HEIGHT AS THE RAISED SQUARES.
2. THE FRAME AND COVER SHALL BE IRON IN ACCORDANCE WITH ASTM A-48 CLASS 30B, AND BE ACCOMPANIED BY TEST BAR RESULTS.
3. THE MANUFACTURER'S LOGO AND THE HEAT SERIES NUMBER SHALL BE CAST INTO THE FRAME AND COVER.
4. COVER AND FRAME TO BE ABLE TO WITHSTAND 175 kN (40 000LBS) LOAD APPLIED AT THE CENTER OF THE COVER ON A 50mm THICK 250 x 250 RUBBER PAD.
5. THE CONTACT SURFACES BETWEEN THE FRAME AND THE COVER ARE TO BE MACHINED SMOOTH.

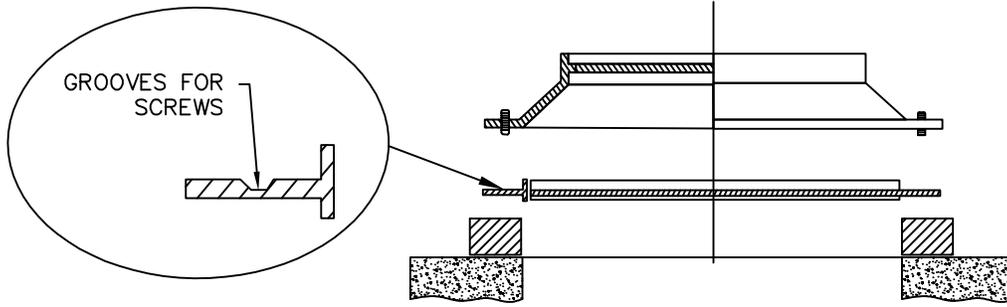
P:\DRAFTING\Standard Drawings\City_of_Kelowna\Utilities\Drainage and Sanitary\Proposed for Council

MANHOLE FRAME AND COVER

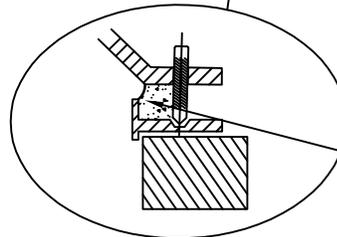
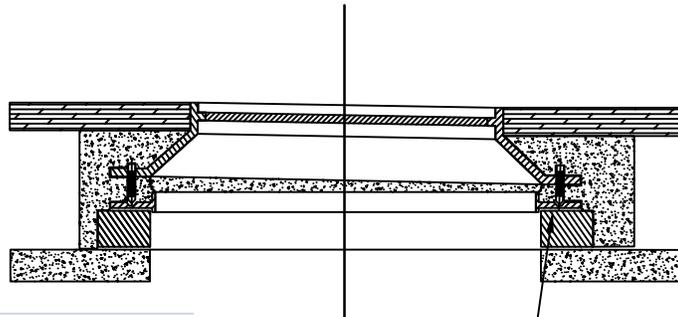
SS-S1b

JUNE 28/18

STANDARD DETAIL DRAWINGS



NOTES:
 FOR GRADES >4% USE
 LONGER SET SCREWS OR
 USE SLOPE GRADE RINGS
 AS RECOMMENDED BELOW.



15mm MINIMUM GAP BETWEEN
 TOP OF SUPPORT RING FORM
 TO BOTTOM OF CASTING

ROAD GRADE	GRADE RING	ADJUSTBABLE FRAME
8-12%	8%	AFSR
4-8%	4%	AFSR
0-4%		AFSR ONLY

RAKE FINISH SURFACE OF CONCRETE
 MAINTAIN MINIMUM 50mm ASPHALT
 THICKNESS OVER CONCRETE

MIN. ASPHALT THICKNESS TO BE
 50mm AROUND FRAME

FILL VOID
 WITH CONCRETE

MATCH CONTOUR OF ROAD
 SURFACE.

SET SCREW TO HAVE BONDED
 THREAD PROTECTION AND
 GRAPHITE. THREADED HOLES
 IN FRAME

DO NOT EXCAVATE
 BEYOND GRADE RINGS
 100mm, RECOMMEND
 HYDRO EXCAVATION

PLACE CONCRETE BETWEEN FRAME
 AND SUPPORTING RING, IN A SINGLE
 HOMOGENEOUS MANNER.
 EXPOSED CONCRETE INSIDE CHIMNEY
 TO BE HAND FINISHED SMOOTH

NOTE: PROTECT SET SCREW
 THREADS FROM CONCRETE
 USING PLASTIC THREAD CAPS
 OR OTHER APPROVED EQUAL.
 (SEE MANUFACTURERS
 RECOMMENDATIONS.)
 THICKNESS OF CONCRETE TO
 BE 100mm
 -CONCRETE 30 MPA
 -10mm AGREGATE REDUCE
 SHRINKAGE BY USE OF
 PLASTISIZER

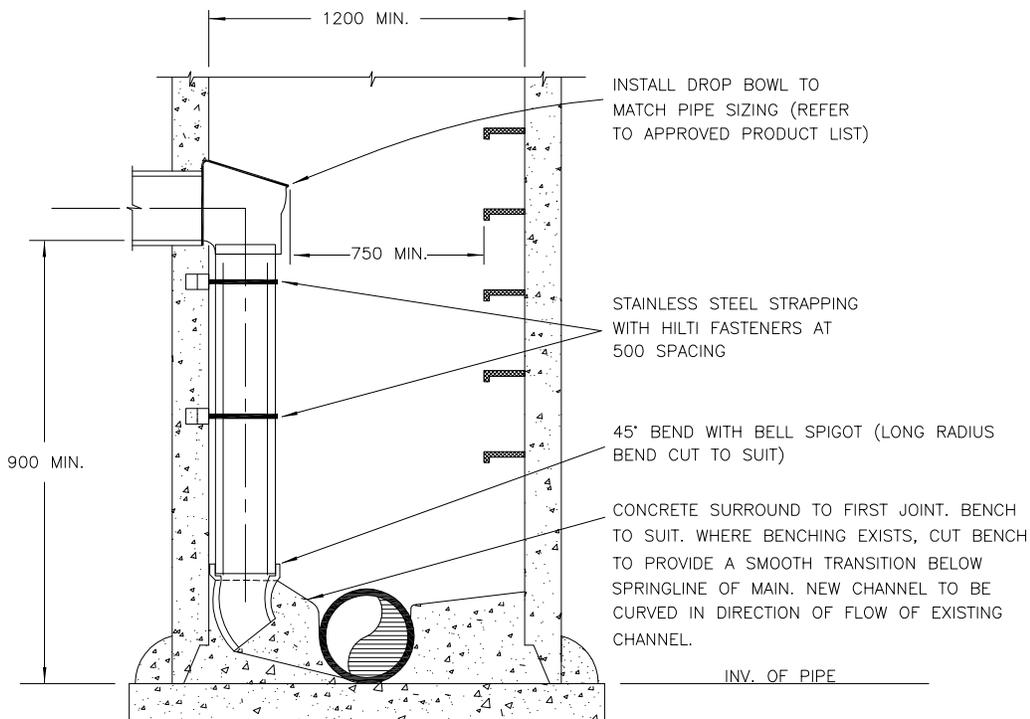
P:\DRAFTING\Standard Drawings\City_of_Kelowna\Utilities\Drainage and Sanitary\Proposed for Council

ADJUSTABLE MANHOLE FRAME AND COVER

SS-S1c

JUNE 28/2014

STANDARD DETAIL DRAWINGS



INSIDE DROP TYPE

- NOTE:**
1. INSIDE DROP TO BE USED WHERE SPECIFIED BY ENGINEER.
 2. ALL INSIDE PIPE AND FITTINGS PVC DR 28/35.
 3. THIS DRAWING SHOWS INSIDE DROP ONLY. SEE DRAWING SS-S1A FOR ALL OTHER DETAILS PERTAINING TO MANHOLE REQUIREMENTS.
 4. REFER TO CONTRACT DRAWINGS. SECTION 33 44 01 FOR DETAILED SPECIFICATIONS.

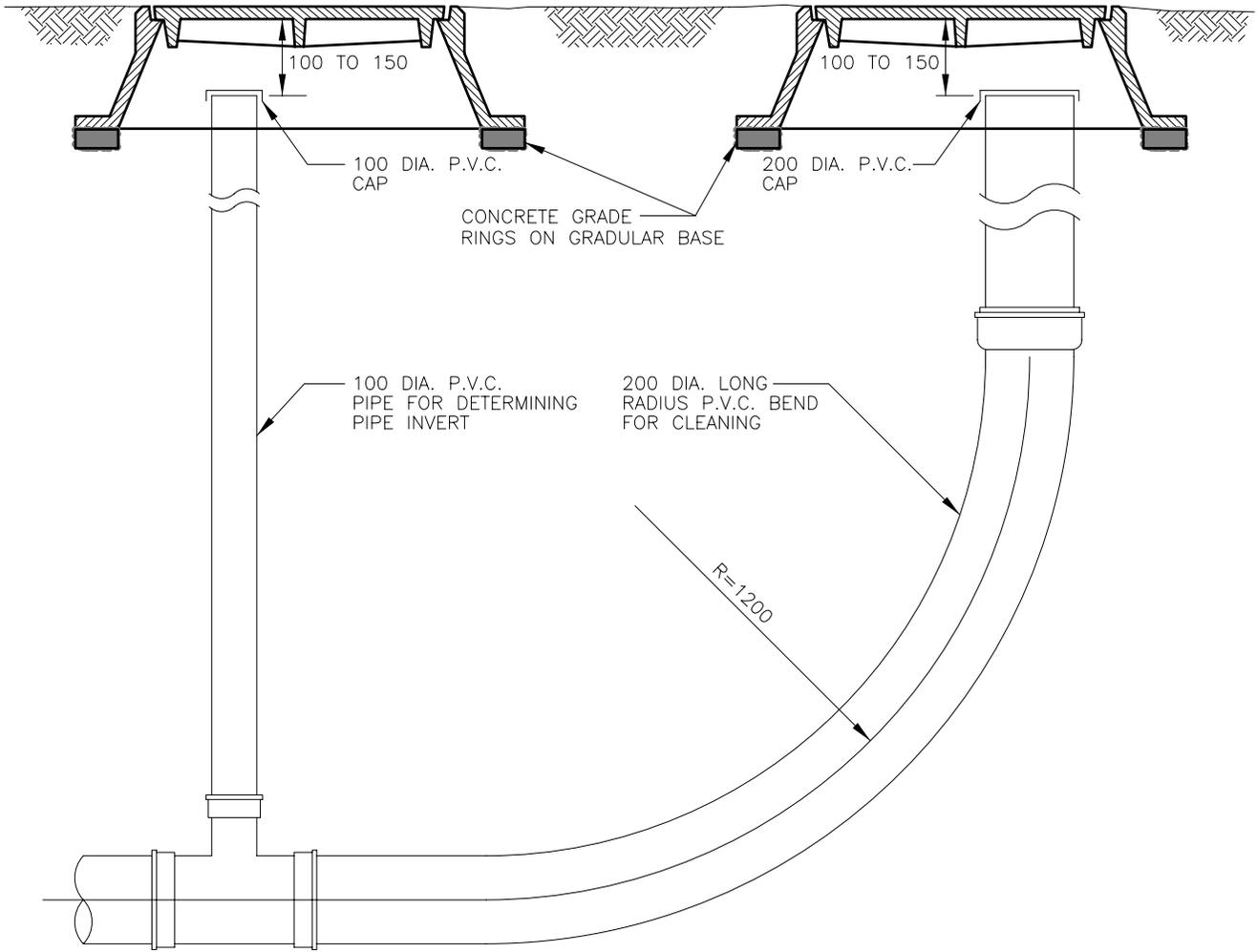
NOT TO SCALE

INSIDE DROP MANHOLE

SS-S4

JULY 4/18

STANDARD DETAIL DRAWINGS

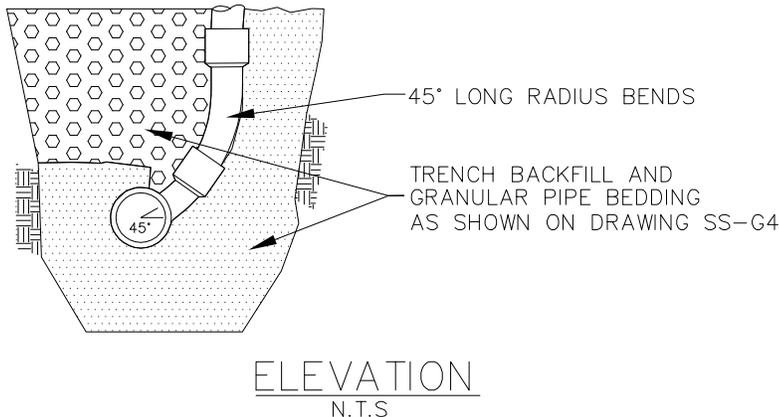
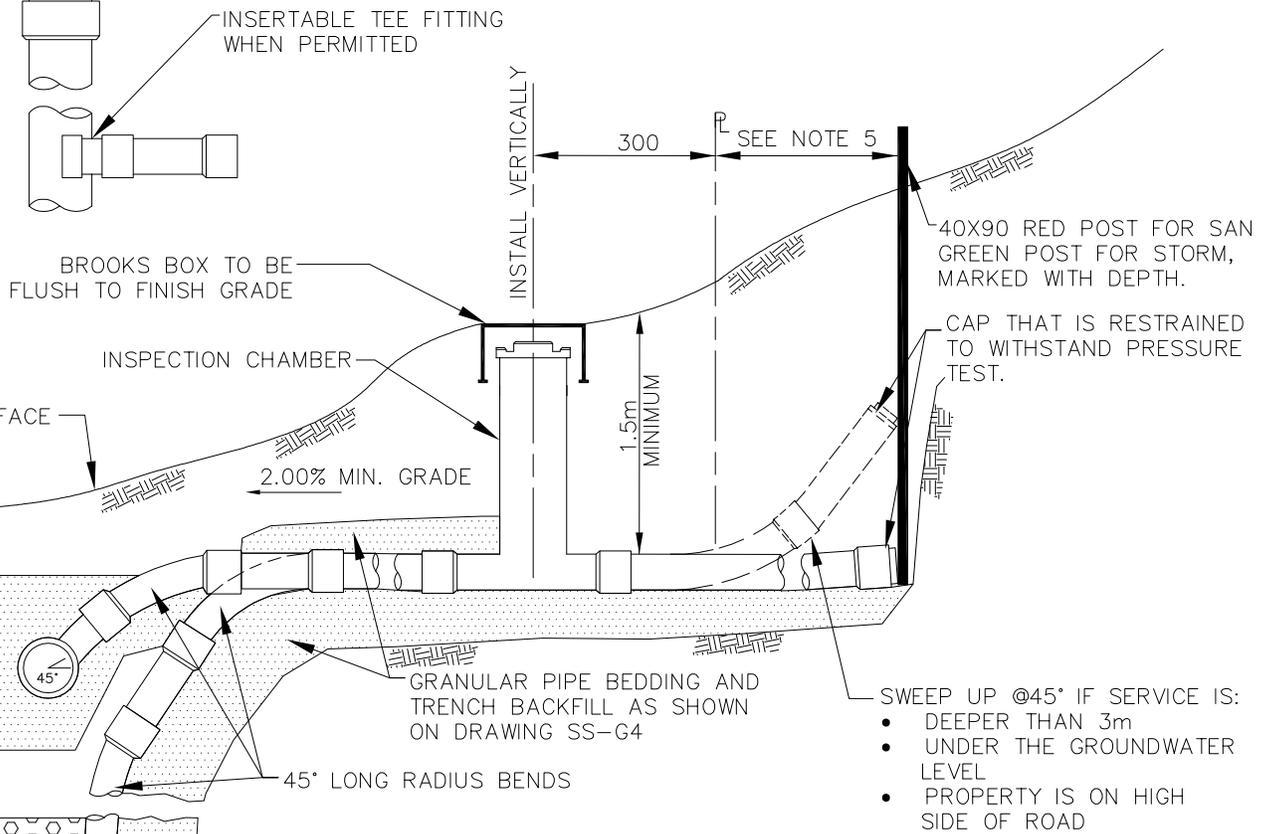
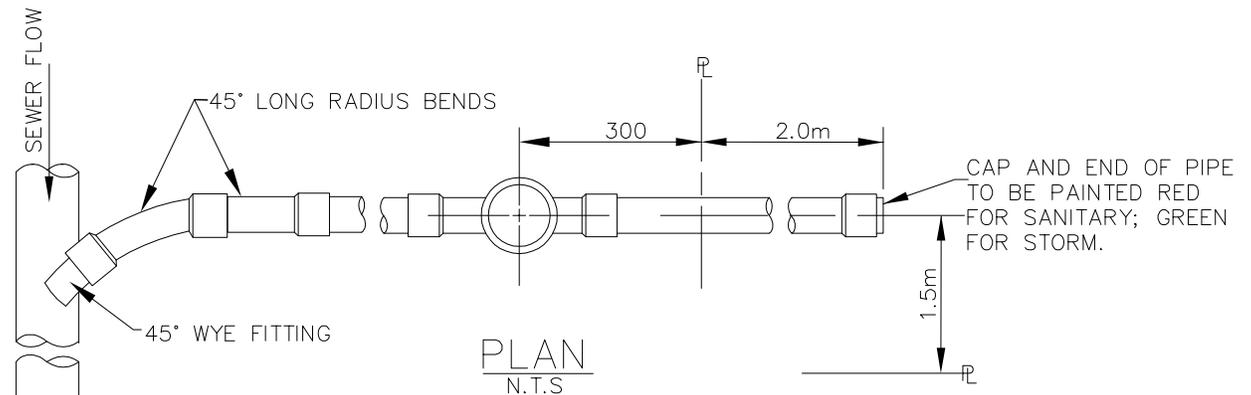


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CLEANOUT DETAIL (TEMPORARY)

SS-S6

APRIL 15/08



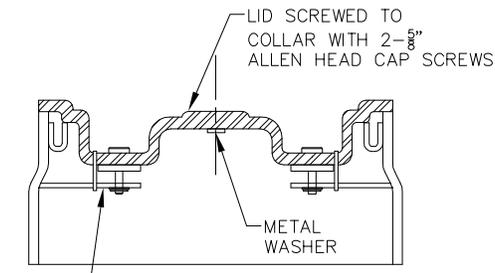
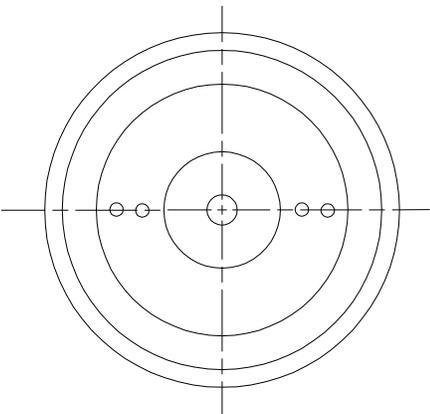
NOTE:

1. CONNECTIONS TO BE 100mm DIAMETER FOR SANITARY AND 150mm FOR STORM.
2. RISER TYPE SERVICE (FROM MAIN) TO BE USED ONLY WHEN SERVICE IS MORE THAN 2.4m ABOVE WYE INVERT.
3. LOCATION OF SERVICE AND MARKER AS SHOWN ON CONTRACT DRAWINGS.
4. SEE DRAWING SS-S9 FOR DETAILS OF INSPECTION CHAMBER, BROOKS BOX AND INSTALLATION REQUIREMENTS.
5. 2.0m TYPICAL. WHEN ON LOW SIDE OF ROAD AND PIPE DEPTHS > 2.0m, USE 4.0m
6. HORIZONTAL SEPARATION BETWEEN SANITARY SEWER SERVICE AND ADJUST WATER AND STORM SERVICES TO BE MINIMUM OF 0.5m

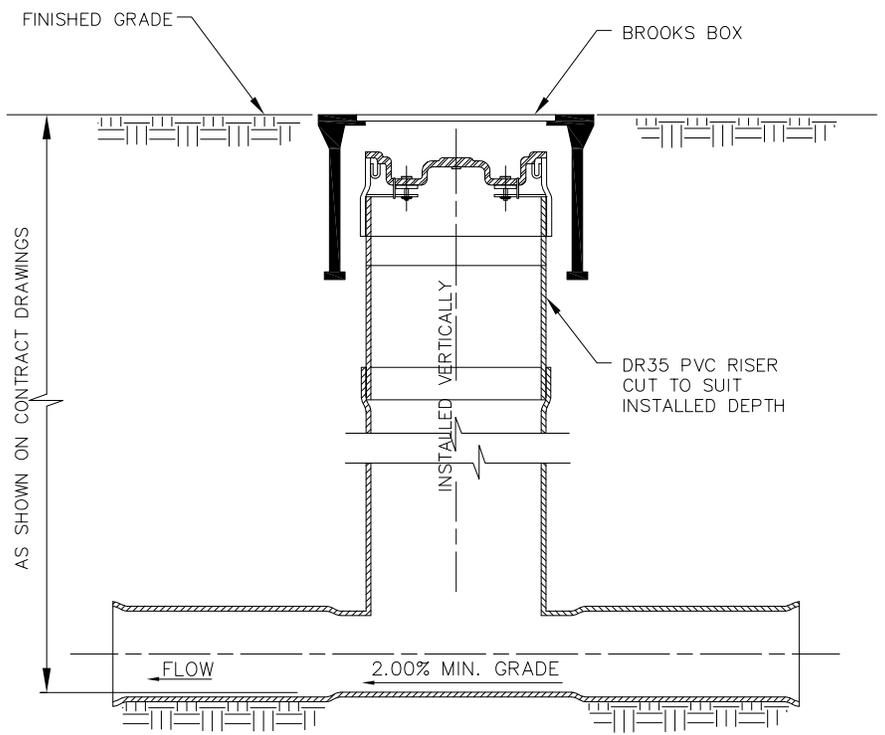
SANITARY AND STORM SEWER SERVICE CONNECTION

DRAWING NUMBER
SS-S7

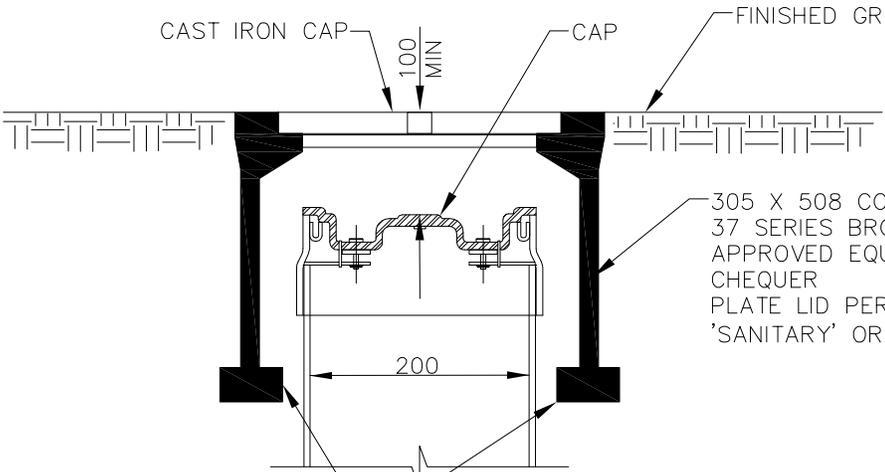
P:\DRAFTING\STANDARD_DRAWINGS\CITY_OF_KELOWNA UTILITIES\DRAINAGE_AND_SANITARY\PROPOSED_FOR_COUNCIL\SS-S9



CAP DETAIL
N.T.S



PROFILE VIEW
N.T.S



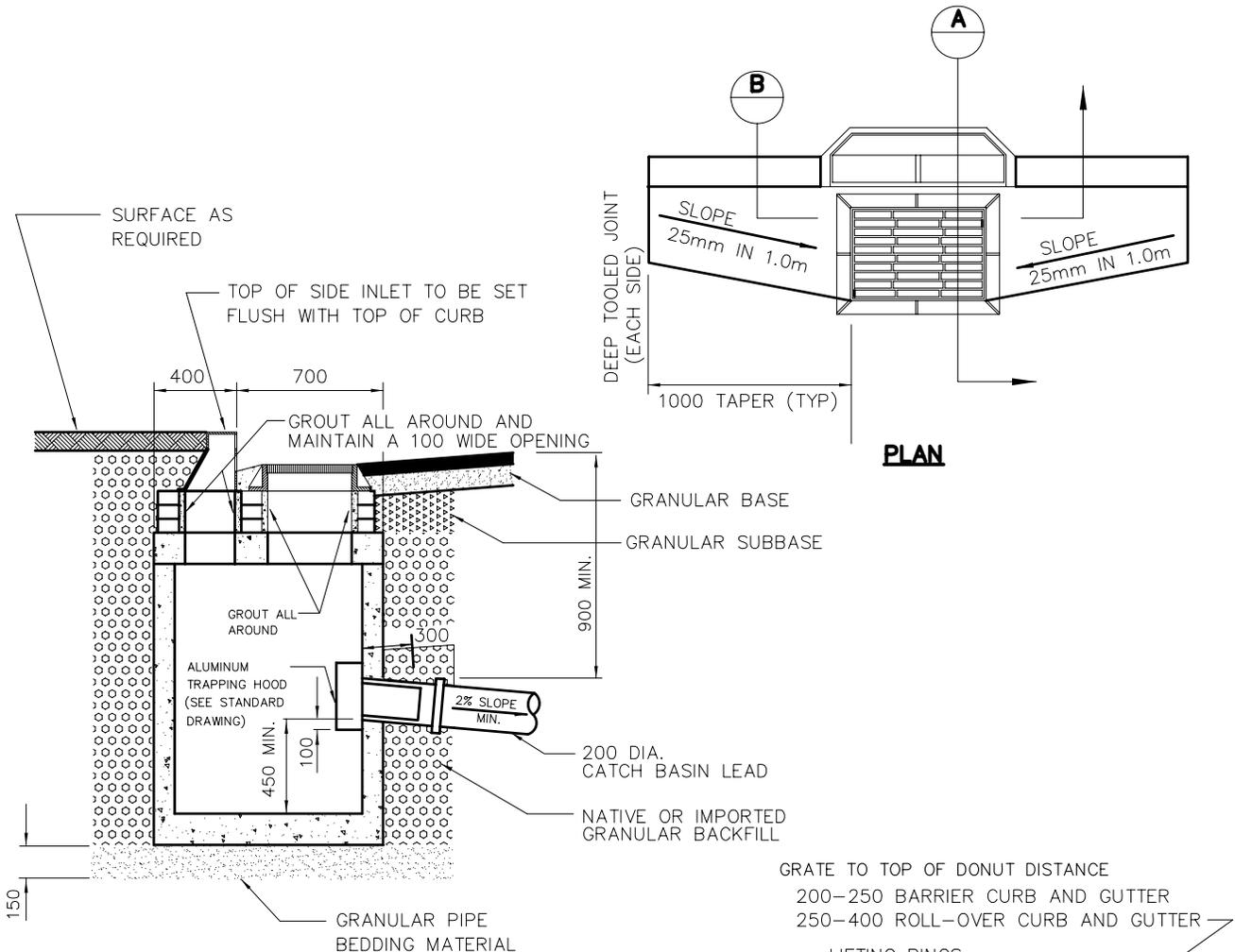
BROOKS BOX DETAIL
N.T.S

- NOTE:**
1. REFER TO DRAWING SS-S7 FOR INSTALLATION REQUIREMENTS.
 2. INSPECTION TO BE APPROVED MANUFACTURED FITTING.
 3. REFER TO CONTRACT DRAWINGS FOR SITE SPECIFIC DIMENSIONS AND SECTION 02731 FOR DETAILED SPECIFICATIONS.
 4. RED CAP FOR SANITARY AND GREEN CAP FOR STORM CONNECTIONS.

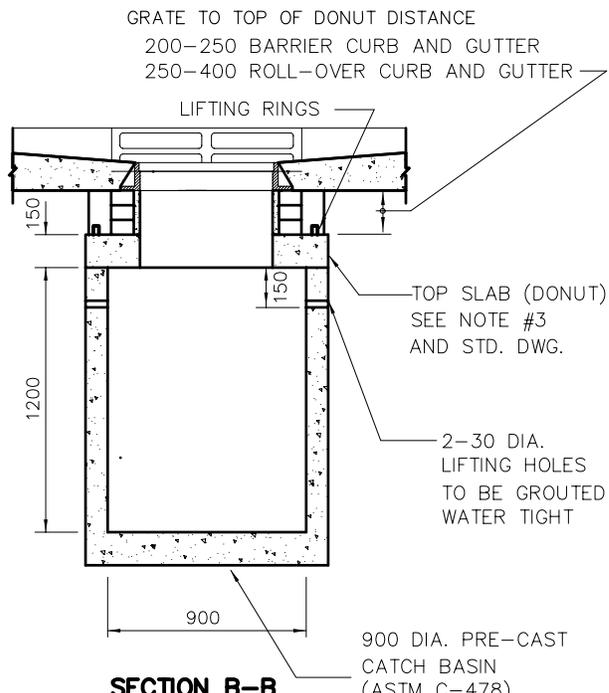
**INSPECTION CHAMBER FOR 100 TO 200
SANITARY SEWER OR STORM DRAIN CONNECTION**

**DRAWING NUMBER
SS-S9**

STANDARD DETAIL DRAWINGS



SECTION A-A



SECTION B-B

NOTES:

1. FOR DETAILS OF METAL CASTINGS; SEE STANDARD.
2. REFER TO CATCH BASIN TOP SLAB FOR DETAILS.
3. a) METAL CASTINGS ADJUSTED TO GRADE WITH CONCRETE GRADE RINGS. INSIDE SURFACES TO BE GROUTED SMOOTH.
 b) FOR INSTALLATION OF CATCH BASIN IN ROLLOVER CURB AND GUTTER, USE ROLLOVER FRAME AND GRATE. (WESTVIEW SALES LTD RB7 OR EQUAL)
 c) FOR INSTALLATION OF CATCH BASIN WITHOUT CURB AND GUTTER, BLOCK CURB INLET OPENING IN TOP SLAB WITH SOLID NON-DECOMPOSABLE MATERIAL.
4. GRATE TO BE SET BELOW FIRST LIFT OF ASPHALT WHERE FINAL LIFT IS NOT BEING INSTALLED WITHIN ONE MONTH.

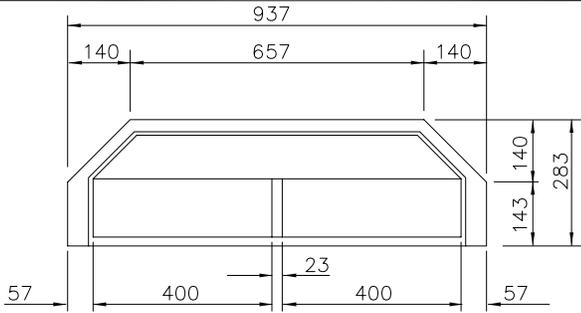
CATCH BASIN (900mm DIA.)

SS-S11a

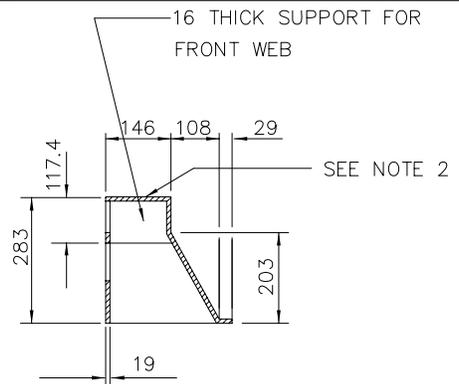
APRIL 15/08

I:\P:\DRAFTING\STD-DWGS\MACD-STD\SS-S11A.dwg

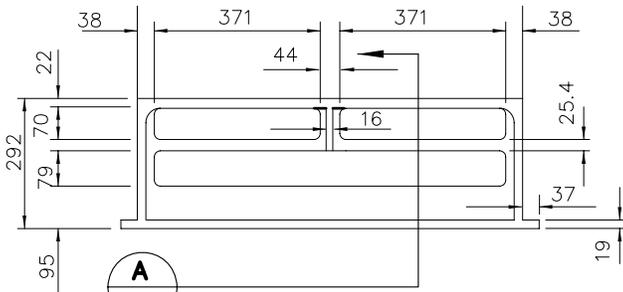
STANDARD DETAIL DRAWINGS



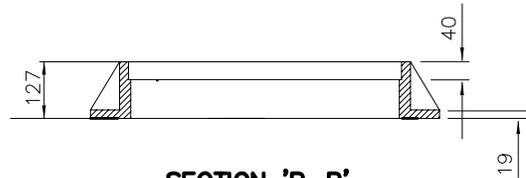
BOTTOM VIEW
(BARRIER CURB ONLY)



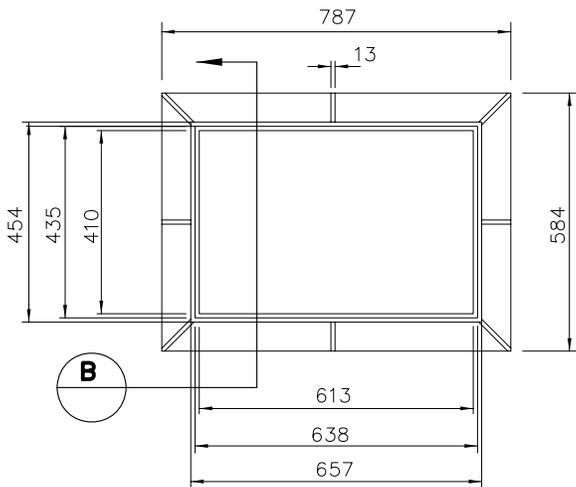
SECTION 'A-A'



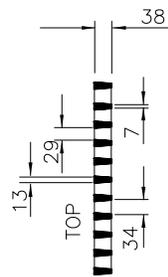
FRONT ELEVATION
(BARRIER CURB ONLY)



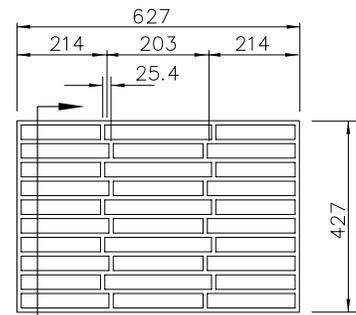
SECTION 'B-B'



PLAN VIEW
(CATCH BASIN FRAME CASTING)



SECTION C-C



PLAN VIEW
(CATCH BASIN GRATE)

NOTE:

1. CURB INLET CASTING GRATE AND FRAME CASTING TO BE DUCTILE IRON (DESIGNED FOR H-20 LOADING)
2. FISH DESIGN CAN BE ADDED TO TOP OF SIDE INLET BUT MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO CONSTRUCTION.
3. FOR ROLL CURB USE ROLLOVER FRAME & GRATE (WESTVIEW SALES LTD RB7 OR EQUAL)

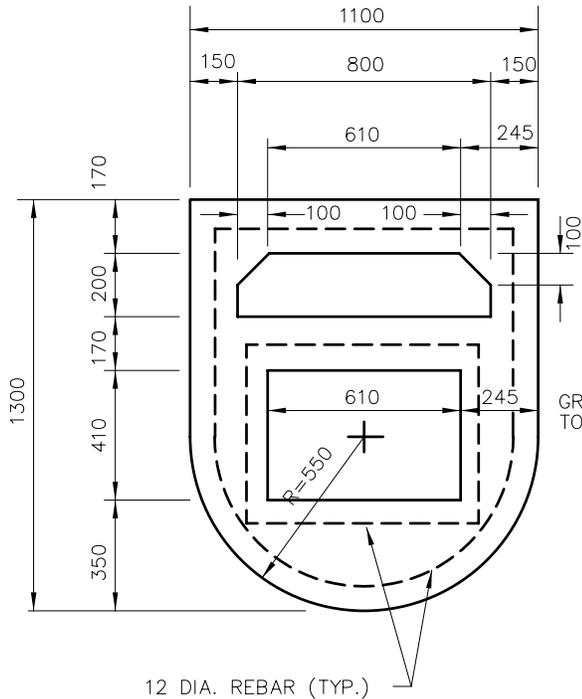
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CATCH BASIN CASTINGS
COMBINED SIDE & GUTTER INLET

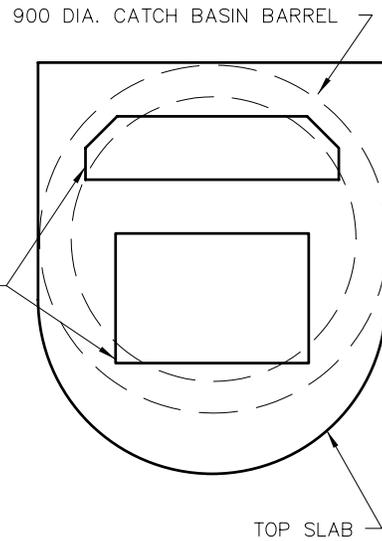
APRIL 15/08

SS-S11b

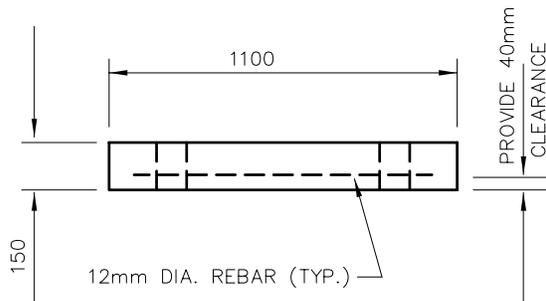
STANDARD DETAIL DRAWINGS



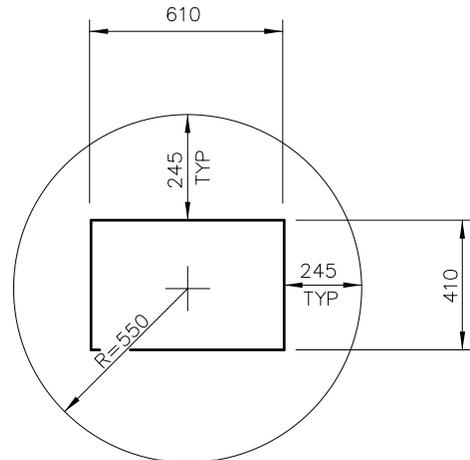
PLAN TOP SLAB



**POSITION OF TOP SLAB
ON 900mm DIA. CATCH BASIN**



FRONT ELEVATION



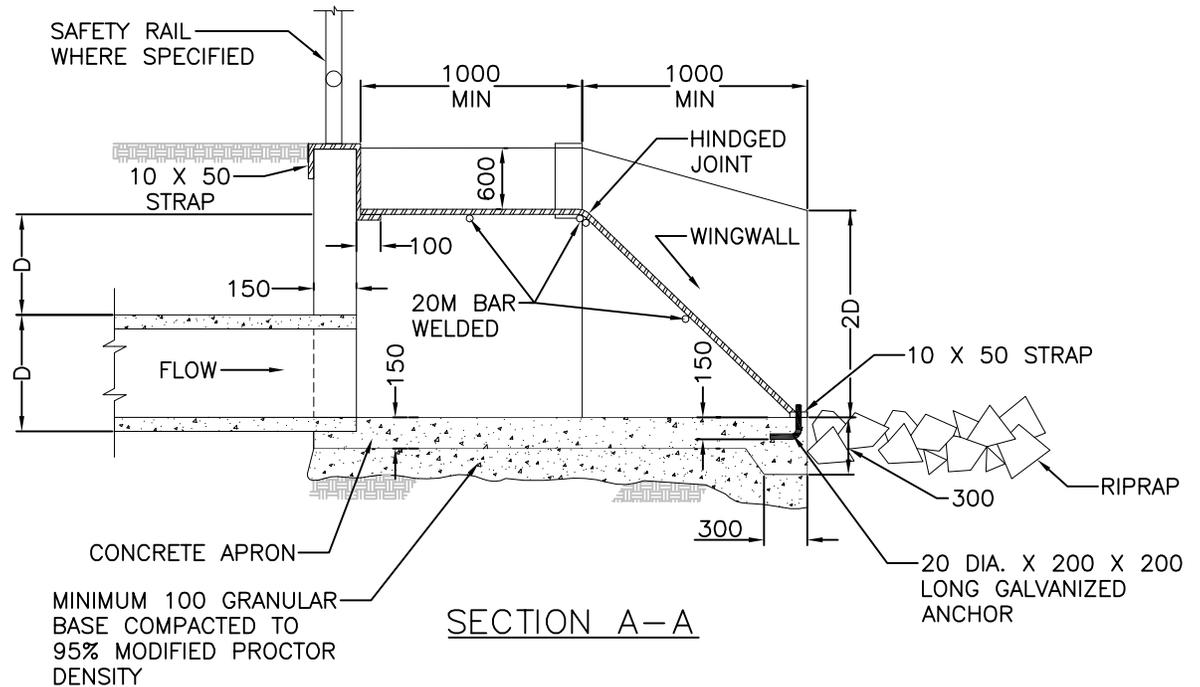
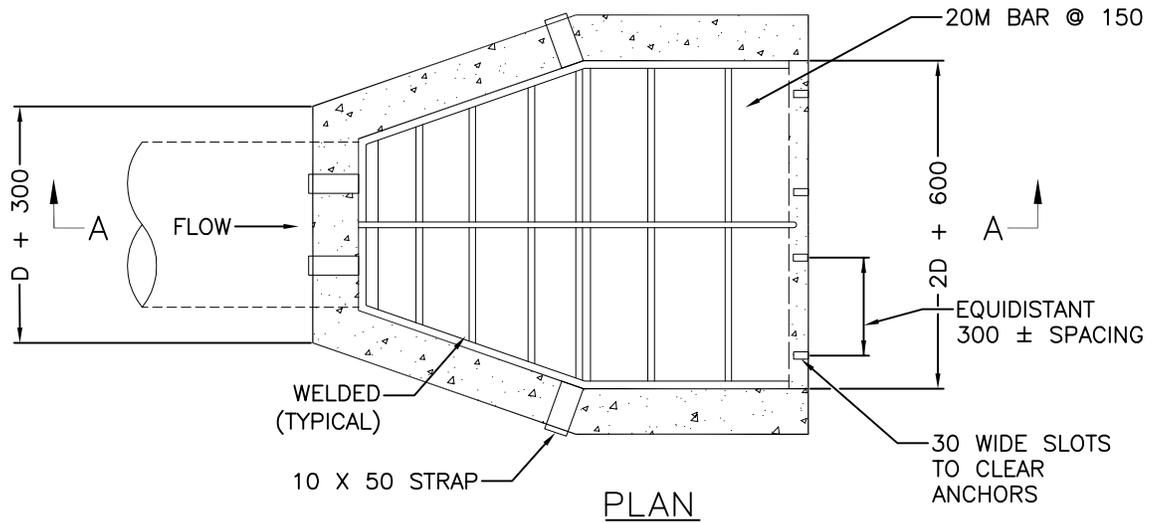
**TOP SLAB
(WITHOUT CURB INLET OPENING)**

NOTES:

1. ALL CONCRETE WORK TO BE A MINIMUM OF 30MP_a STRENGTH AND DESIGNED FOR H-20 LOADING.
2. MODIFY OPENINGS FOR ROLLOVER FRAME AND GRATE.

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STANDARD DETAIL DRAWINGS



NOTES

1. INSTALL SAFETY HANDRAIL IF SPECIFIED ON CONTRACT DRAWINGS
2. PRECAST UNIT MAY BE PROVIDED AS ALTERNATIVE WITH CONTRACT ADMINISTRATOR'S APPROVAL.
3. ALL STEEL COMPONENTS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION.
4. SAFETY GRILLAGE TO BE WELDED AT ALL JOINTS AND CONNECTIONS EXCEPT AT ANCHOR BOLTS
5. REFER TO CONTRACT DRAWINGS FOR LOCATIONS AND SITE SPECIFIC DIMENSIONS. REFER TO SECTIONS 03200 AND FOR DETAILED SPECIFICATIONS.

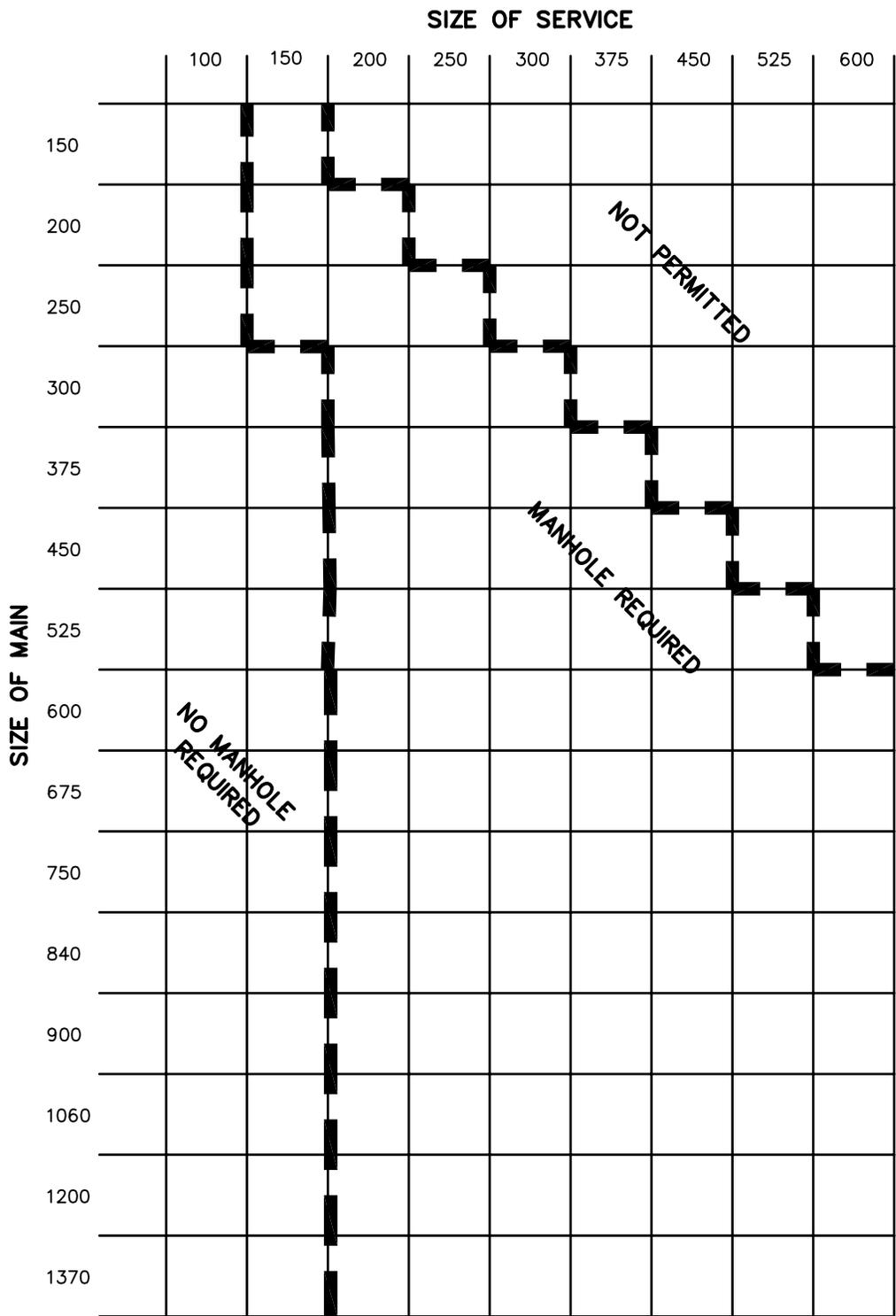
STORM DRAIN OUTLET WITH SAFETY GRILLAGE

JUNE 28/18

DRAWING NUMBER:

SS-S13B

STANDARD DETAIL DRAWINGS



NOTES:

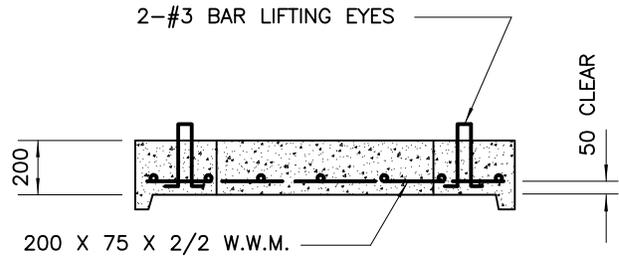
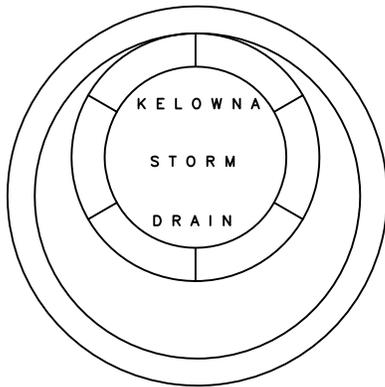
1. ALL CATCH BASIN LEADS MUST BE CONNECTED TO A MANHOLE.

NOV. 2/98

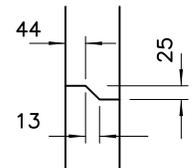
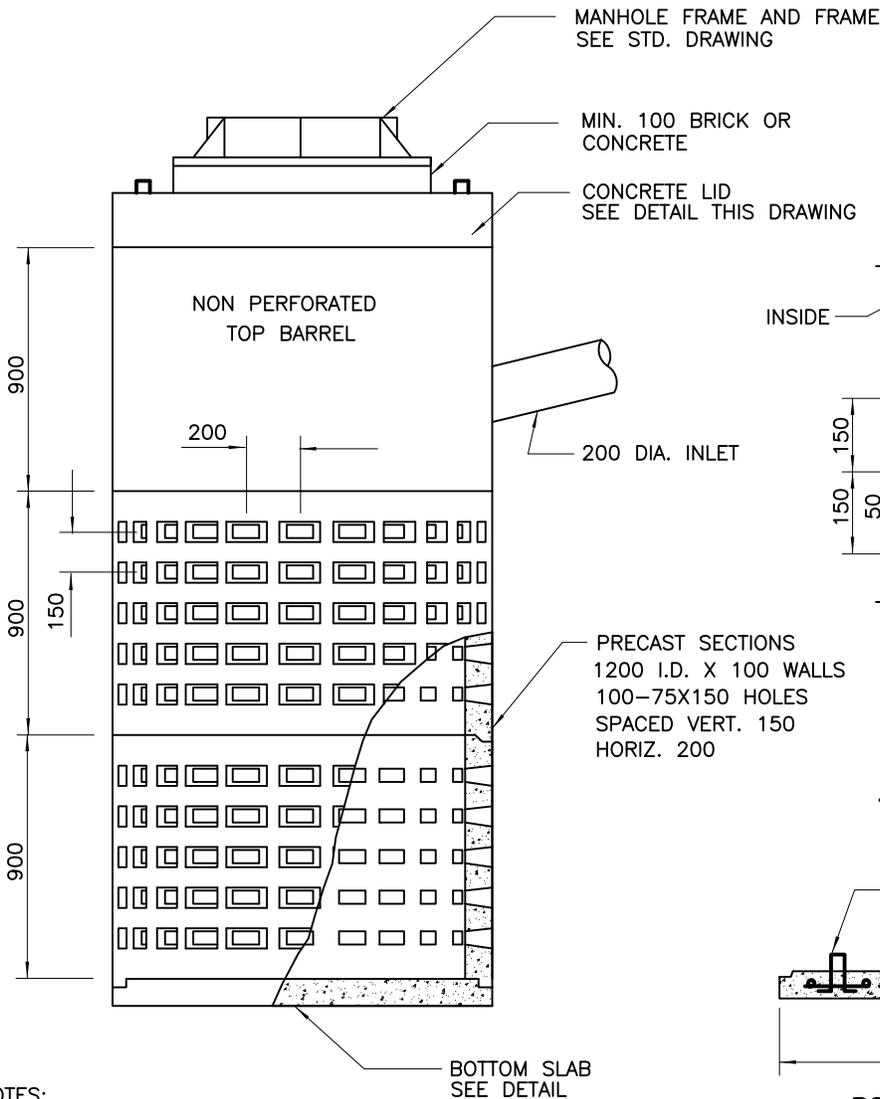
MANHOLE REQUIREMENT FOR SERVICES

SS-S50

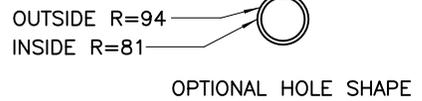
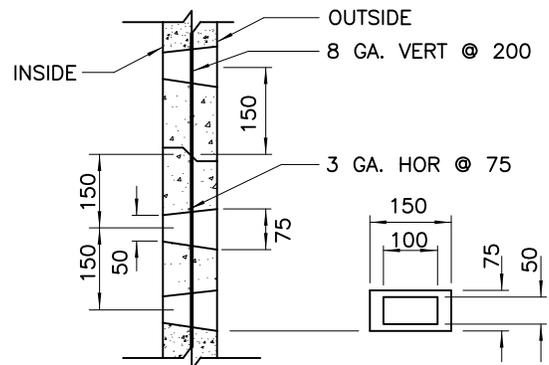
STANDARD DETAIL DRAWINGS



CONCRETE LID DETAIL



JOINT DETAIL



SECTION-BARREL



BOTTOM SLAB DETAIL

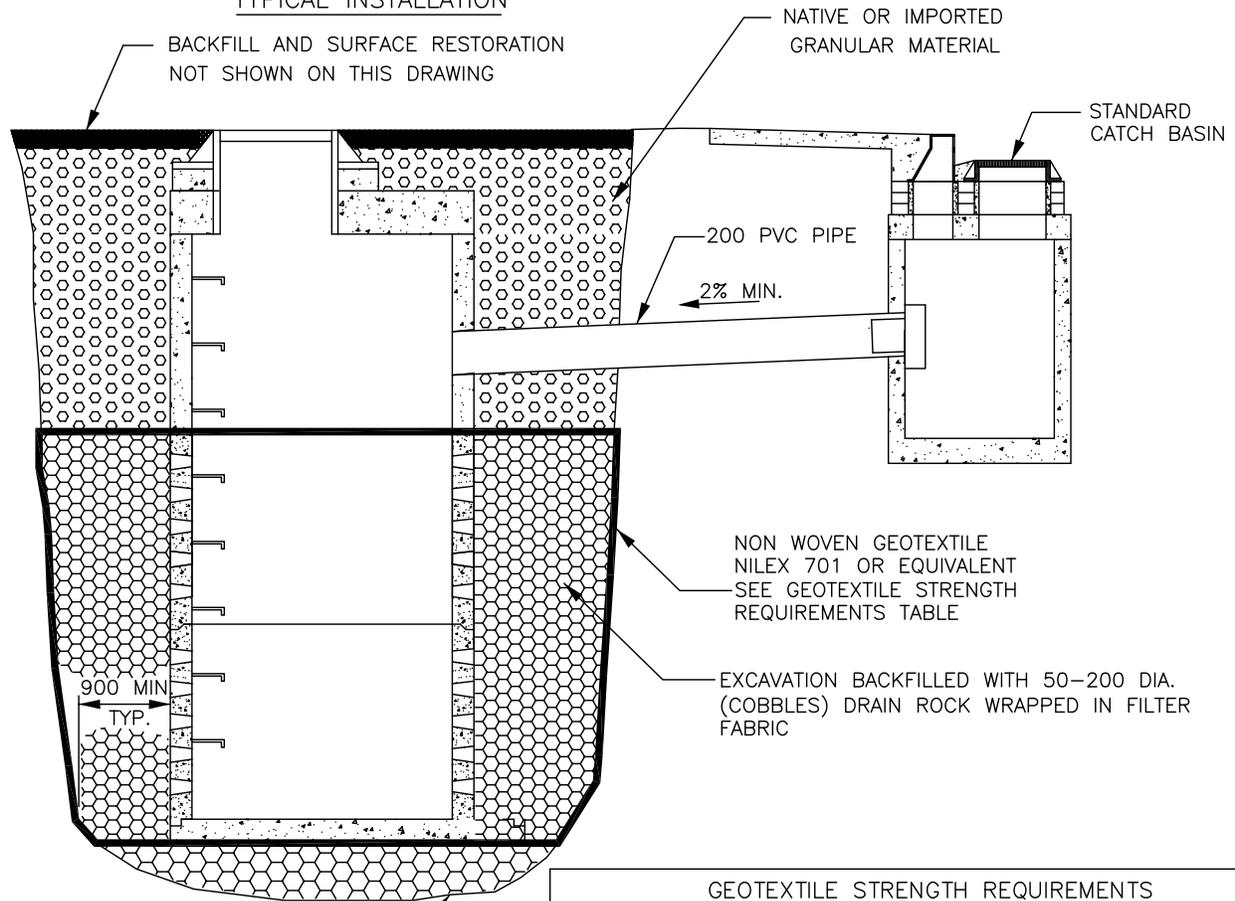
NOTES:

1. LADDER RUNGS ARE REQUIRED.
2. SEE MANHOLE STD. DWG. FOR DETAILS.
3. SEE DRAINAGE DRYWELL INSTALLATION STANDARD FOR DETAILS.
4. THIS STANDARD IS ALLOWED ONLY IN ACCORDANCE WITH THE STORM WATER POLICY AND DESIGN MANUAL.

H:\WU\DRAWING\STD-DWGS\MMCD\SS-S51

STANDARD DETAIL DRAWINGS

TYPICAL INSTALLATION



GEOTEXTILE STRENGTH REQUIREMENTS

STRENGTH TYPE	TEST METHOD	UNITS	CLASS 1	CLASS 2
Grab Tensile	ASTM D4632	N	800	360
Puncture	ASTM D4833	N	370	200
Burst	ASTM D3786	kPa	1950	1030
Trapezoidal	ASTM D4533	N	260	130

- 1 Class 1: Geotextile installation where very coarse shape angular aggregate is used
 Compaction >95% Standard Proctor Maximum Dry Density (SPMDD)
 Depth of trench > 3.0
- 2 Class 2: Geotextile installation on smooth graded surfaces having no sharp angular aggregate.
 Compaction < 95% SPMDD
 =

NOTES:

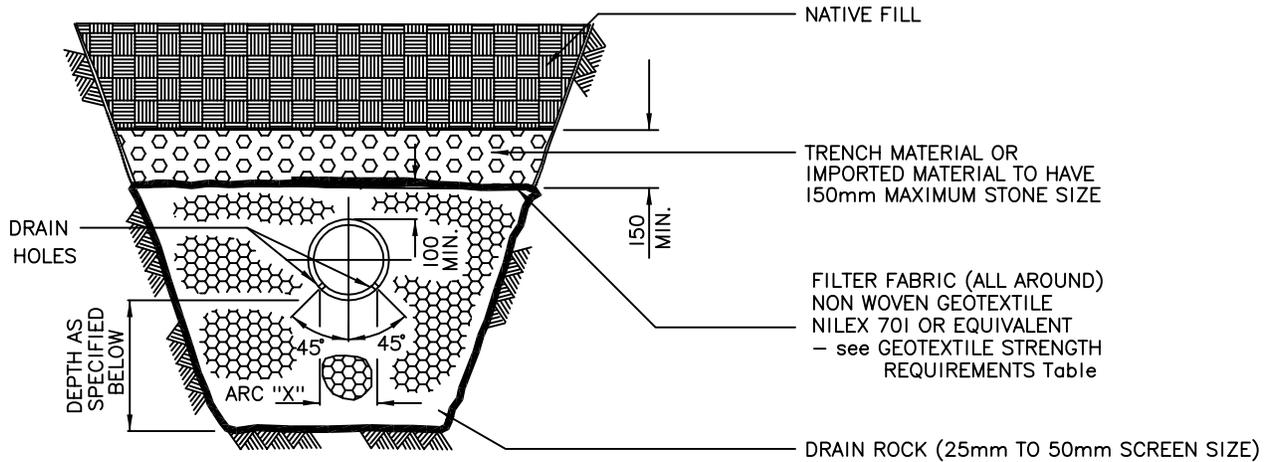
1. THE NUMBER AND SPACING OF DRAINAGE DRYWELLS MUST BE CALCULATED IN ACCORDANCE WITH CITY DESIGN CRITERIA AND WILL DEPEND UPON THE AREA DRAINED AND GROUND CONDITIONS. (SEE ALSO PIPE PERFORATION AND BEDDING DETAIL STANDARD DRAWING SS-S53).
2. FILTER FABRIC TO BE STRETCHED BELOW TOP BARREL SECTION AND REMOVED BY THE CONTRACTOR DURING THE FINAL INSPECTION.
3. DEPTH TO BE SPECIFIED WILL VARY DEPENDING UPON DRAINAGE REQUIREMENTS AND GROUND CONDITIONS. DEPTH TO WATER TABLE MUST BE SHOWN IF LESS THAN 3.6m. THERE IS NO NEED TO PLACE DRYWELLS BELOW LOW WATER TABLE.

P:\DRAFTING\STD-DWGS\DRAWING\SS-S52

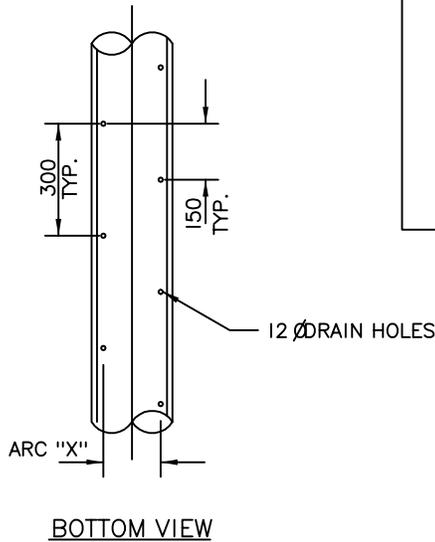
DRAINAGE DRYWELL INSTALLATION

SS-S52

STANDARD DETAIL DRAWINGS



END VIEW



BOTTOM VIEW

GEOTEXTILE STRENGTH REQUIREMENTS

STRENGTH TYPE	TEST METHOD	UNITS	CLASS 1	CLASS 2
Grab Tensile	ASTM D4632	N	800	360
Puncture	ASTM D4833	N	370	200
Burst	ASTM D3786	kPa	1950	1030
Trapezoidal	ASTM D4533	N	260	130

- 1 Class 1: Geotextile installation where very coarse shape angular aggregate is used
 Compaction >95% Standard Proctor Maximum Dry Density (SPMDD)
 Depth of trench > 3.0
- 2 Class 2: Geotextile installation on smooth graded surfaces having no sharp angular aggregate.
 Compaction < 95% SPMDD

NOMINAL PIPE DIAMETER	ARC "X" (BASED UPON AVERAGE O.D.)
200	160
250	200
300	240
375	290
450	350

NOTES:

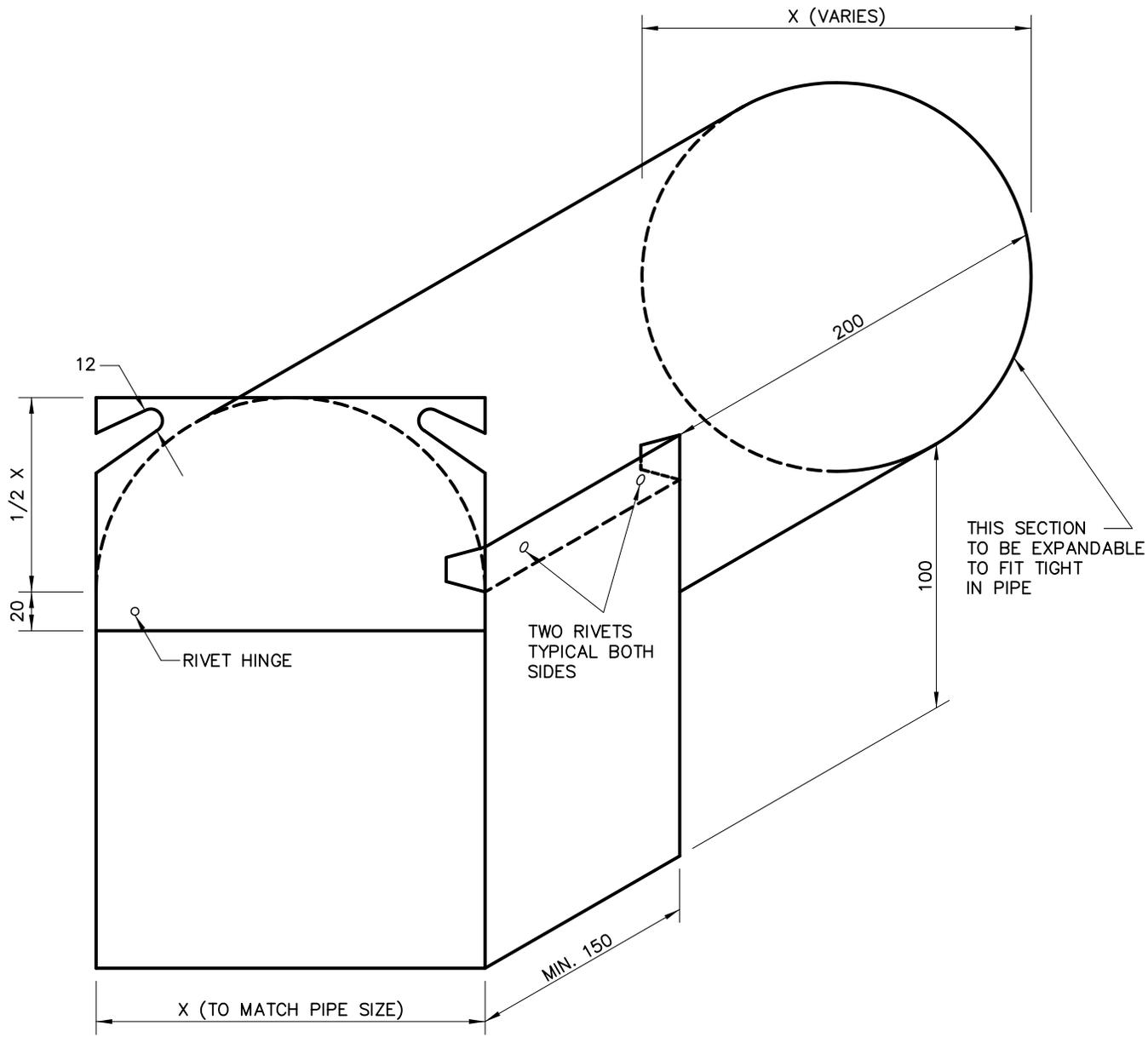
- PERFORATION SECTION APPLIES TO USE OF PVC PIPE.
- FIELD PERFORATION OF PIPE SHALL BE TO THIS STANDARD. FACTORY PERFORATED PIPE MUST BE APPROVED BY THE CITY ENGINEER.
- PROVIDE 0.5m MIN. FABRIC OVERLAP FOR LONGITUDINAL OR TRANSVERSE JOINTS IN FABRIC.
- NUMBER OF DRYWELLS AND DEPTH OF DRAIN ROCK TO BE AS FOLLOWS:
 - FOR PERCOLATION RATE OF 0-15 MIN. PER 25mm
 - USE 5 PER HA.
 - USE 200mm DEPTH OF DRAIN ROCK UNDER PERF. PIPE
 - FOR PERCOLATION RATE OF 15-30 MIN. PER 25mm
 - USE 10 DRYWELLS PER HA.
 - USE 300mm DEPTH OF DRAIN ROCK UNDER PERF. PIPE
 - FOR PERCOLATION RATE OVER 30 MIN. PER 25mm, PERF. PIPE & DRYWELLS ARE NOT RECOMMENDED.

FEB. 12/2010

PIPE PERFORATION AND BEDDING DETAIL
FOR GROUND WATER RECHARGE

SS-S53

STANDARD DETAIL DRAWINGS



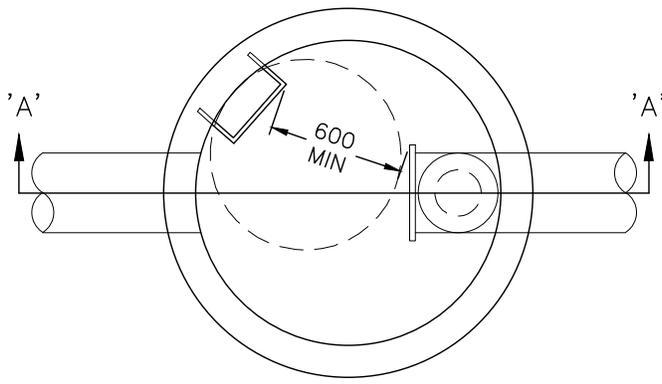
NOTES:

1. SEWER TRAPS SHALL BE MANUFACTURED FROM 16 GAUGE ALUMINUM.
2. BLIND RIVETS ONLY SHALL BE USED. RIVETS SHALL BE ALUMINUM EQUAL TO POP #AD64ABS.

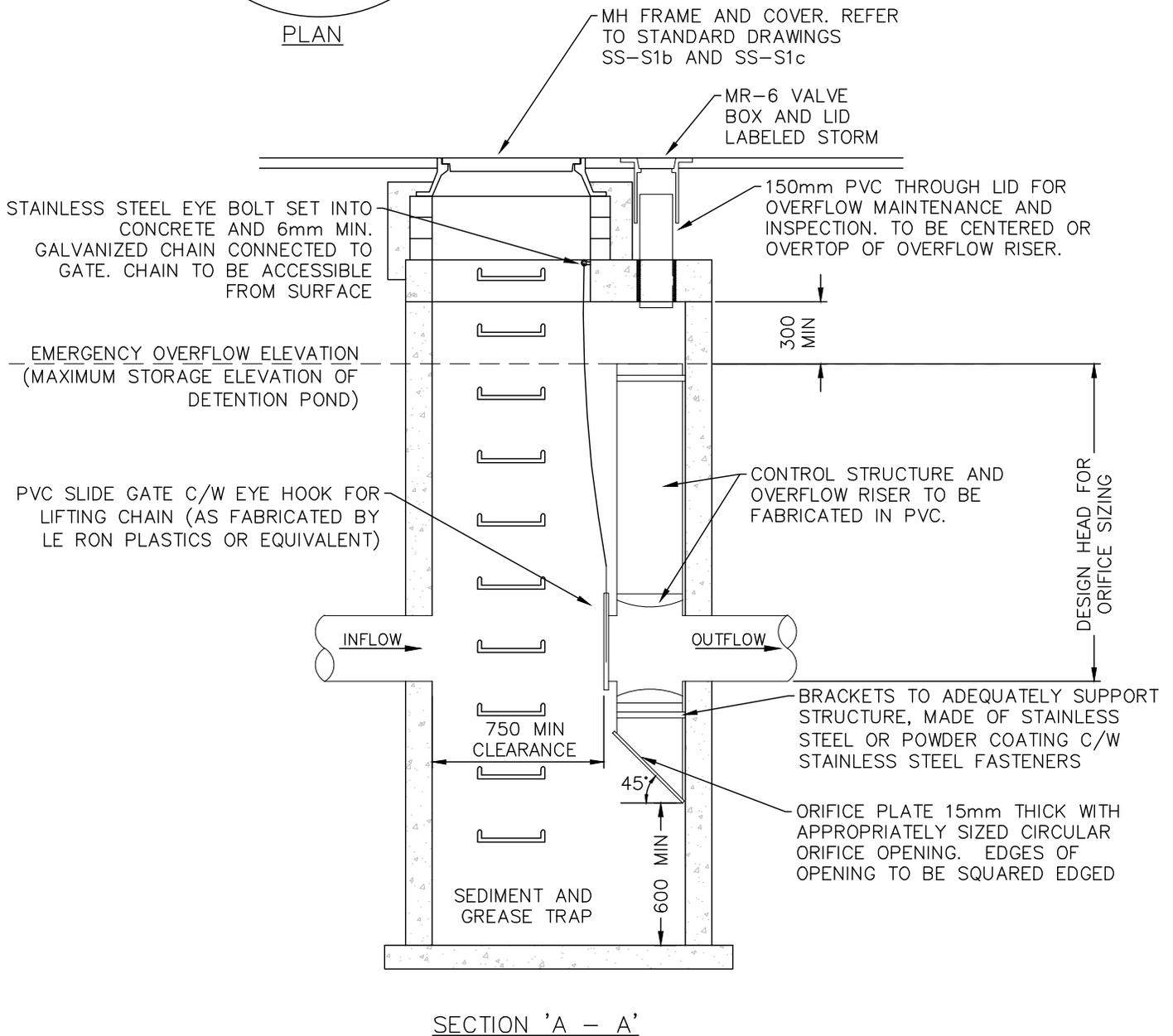
NOV. 2/98

CATCH BASIN TRAPPING HOOD

SS-S54



MANHOLE SIZE	MAX OVERFLOW STRUCTURE SIZE
1200	300
1350	375
1500	450
1800	600



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO STANDARD DRAWING SS-S1a FOR MANHOLE DETAILS

**STANDARD
DETAIL
DRAWING**

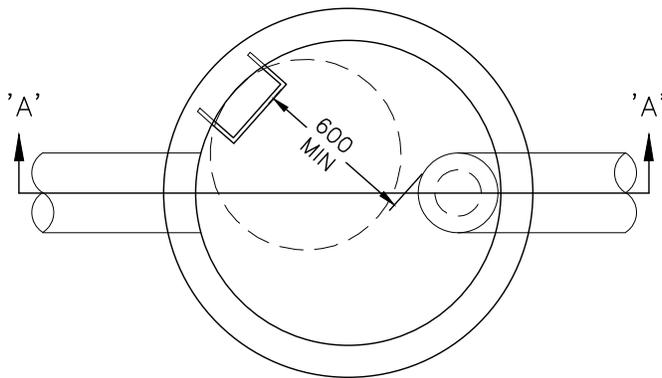
DATE:
AUG 11/22
SCALE:
NTS

**FLOW CONTROL CHAMBER
CITY FACILITY**

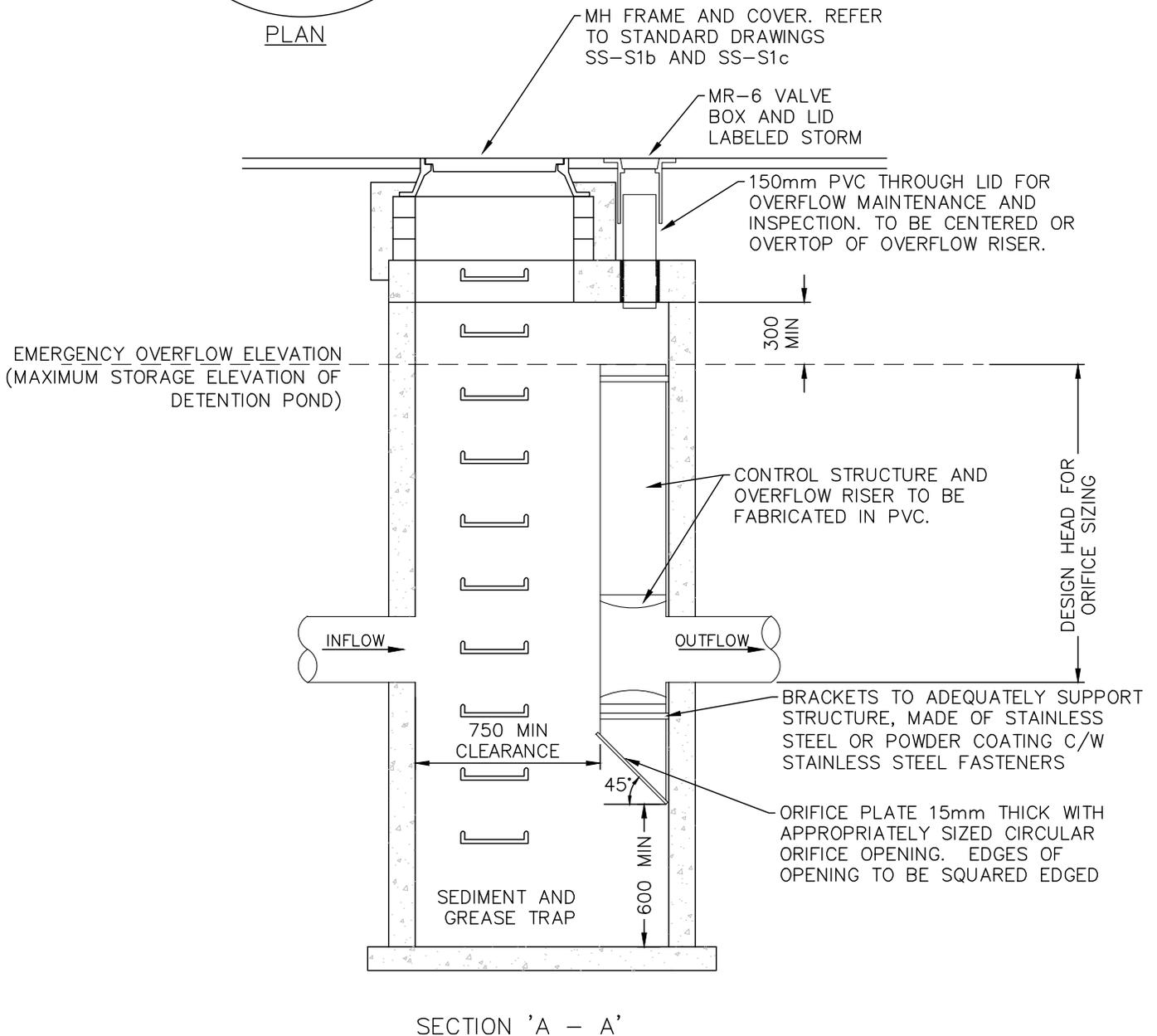
DWG. NO.

SS-S55a





MANHOLE SIZE	MAX OVERFLOW STRUCTURE SIZE
1200	300
1350	375
1500	450
1800	600



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO STANDARD DRAWING SS-S1a FOR MANHOLE DETAILS

**STANDARD
DETAIL
DRAWING**

DATE:
AUG 11/22
SCALE:
NTS

**FLOW CONTROL CHAMBER
PRIVATE FACILITY**

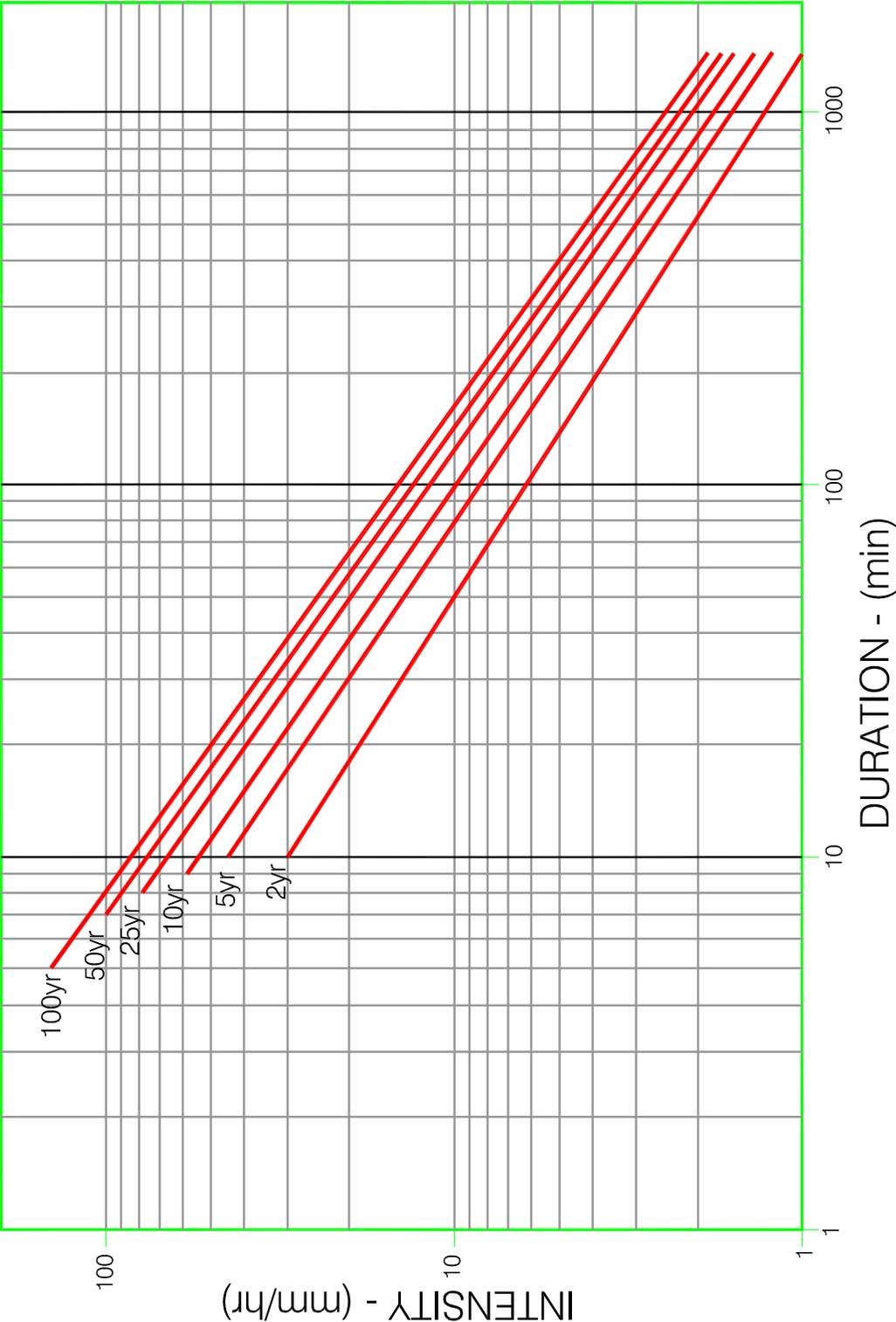
DWG. NO.

SS-S55b



STANDARD DETAIL DRAWINGS

RAINFALL IDF CURVE FOR KELOWNA (BASED ON RECORDING RAIN GAUGE DATA FOR THE PERIOD 1969-2004)



ATMOSPHERIC ENVIRONMENT SERVICE
ENVIRONMENT CANADA

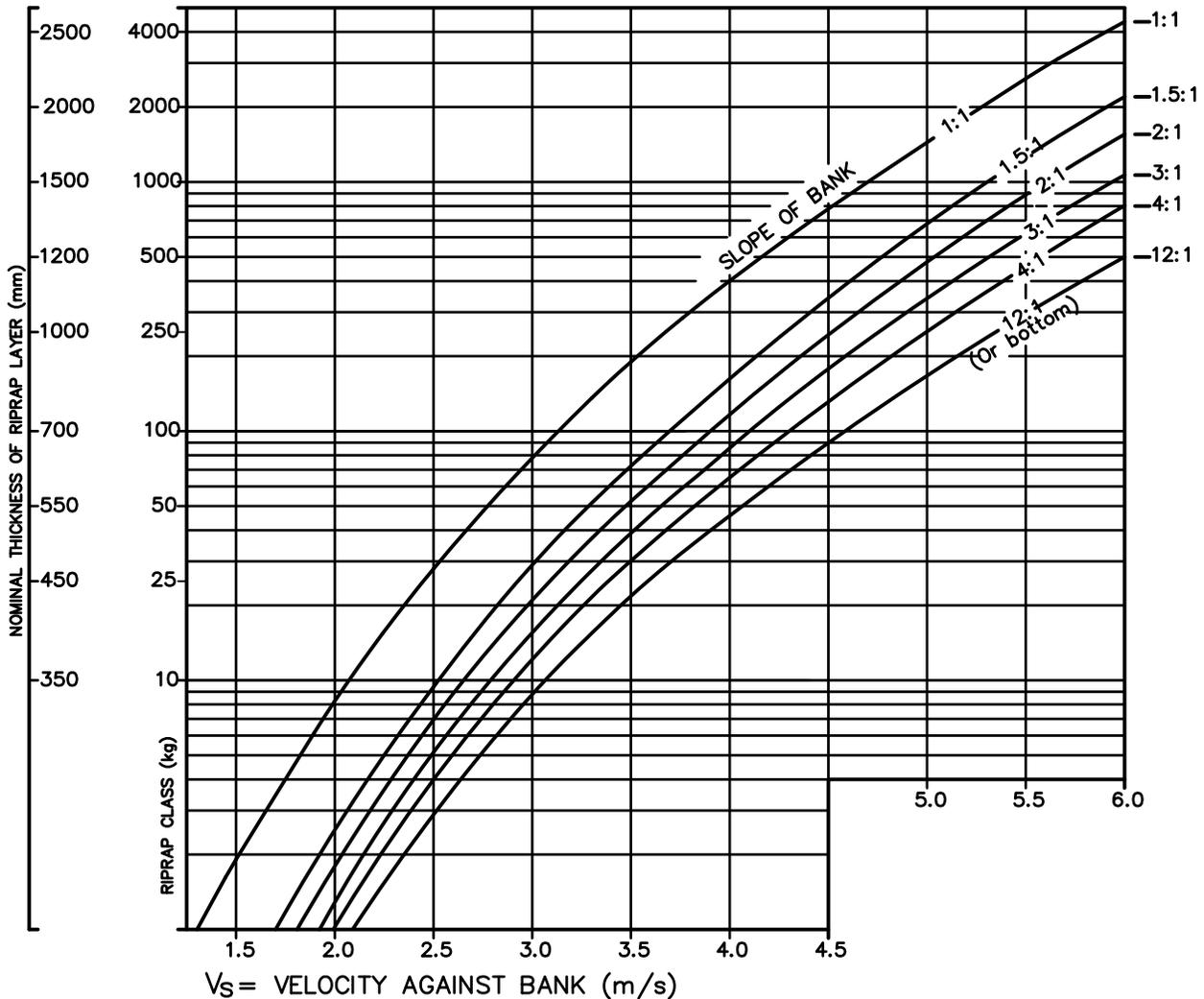
P:\DRAFTING\STD-DWG\SUBBYLAW\SS-S56

IDF CURVES

SS-S56

DATE: OCT.27/10

STANDARD DETAIL DRAWINGS



SIZE OF ROCK AND THICKNESS OF PROTECTION BLANKET THAT WILL RESIST DISPLACEMENT FOR VARIOUS VELOCITIES AND BANKSIDE SLOPES.

Notes:

- Adapted from report of Sub-committee on slope protection, Am. Soc. Civil Engineers Proc. June 1948.
- Density of stone assumed at 2,640 kg/m³.
- Enter graph at known velocity to intersection with desired slope curve. Move horizontally to required riprap class and thickness.
- V_M = mean stream velocity.
- For parallel flow along tangent bank; $V_S = 2/3 V_M$
- For impinging flow against curved bank; $V_S = 4/3 V_M$
- For direct impingement on the bank; $V_S = 2 V_M$
- The riprap class No. is the mass (kg) of the 50% rock size (i.e., at least half of the riprap must be heavier than its class mass).
- Do not interpolate between riprap classes. Use the next highest class.

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RIPRAP DESIGN CHART

SS-S57

DATE: MAY08/02

STANDARD DETAIL DRAWINGS

Legend

- Watercourse
- Waterbody
- Wetlands
- Parcel
- City Boundary
- HILLSIDE AREAS

For development in Hillside Areas, the City's focus will be on safe conveyance. Roof or site drainage must discharge directly to the storm system. The City will not permit infiltration to ground except for foundation drainage.

Where storm drains are not available, the City will require a hydrogeological review provided by a qualified Professional (P.Eng. or P.Geo.) to ensure that site infiltration does not exceed pre-development conditions, impact slope stability or off-site seepage, or impact downhill properties. The terms of reference of the review must be confirmed by the City Engineer and approved as a condition for obtaining a Development Permit.

Refer to City of Kelowna Bylaw # 7900, Schedule 4, Section 3.1.4 & 3.9.12b

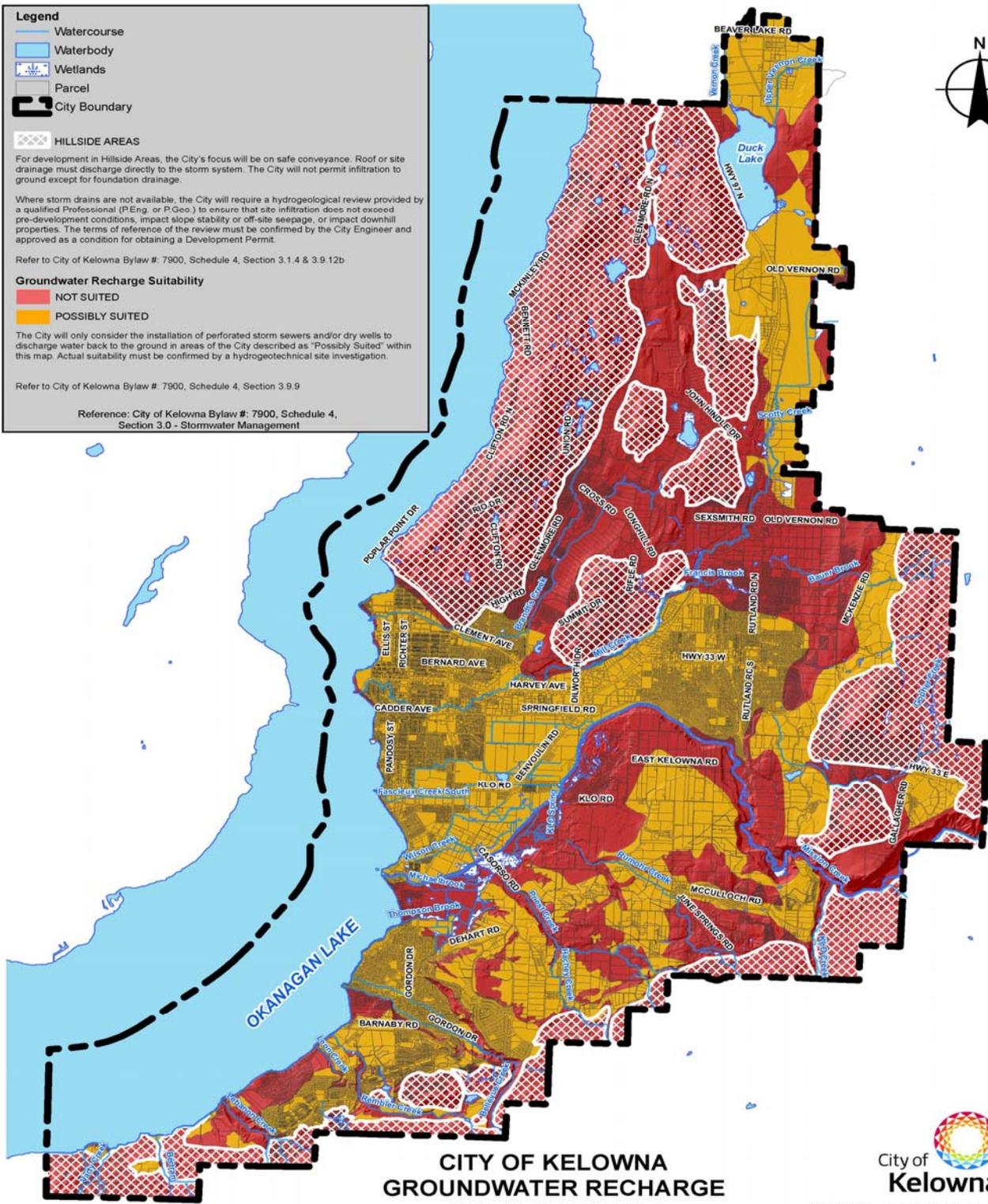
Groundwater Recharge Suitability

- NOT SUITED
- POSSIBLY SUITED

The City will only consider the installation of perforated storm sewers and/or dry wells to discharge water back to the ground in areas of the City described as "Possibly Suited" within this map. Actual suitability must be confirmed by a hydrogeotechnical site investigation.

Refer to City of Kelowna Bylaw # 7900, Schedule 4, Section 3.9.9

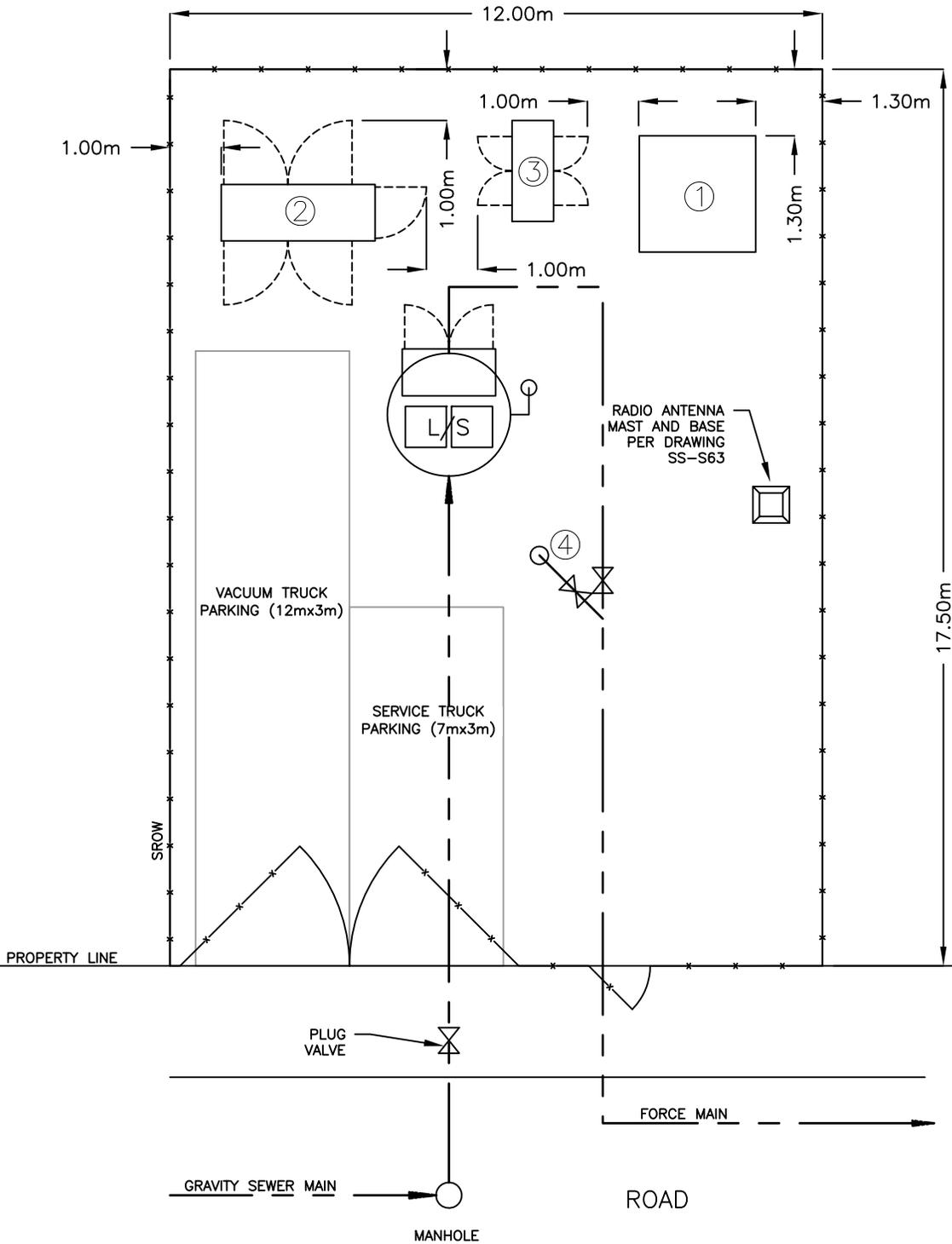
Reference: City of Kelowna Bylaw # 7900, Schedule 4, Section 3.0 - Stormwater Management



CITY OF KELOWNA GROUNDWATER RECHARGE SUITABILITY MAP



SCALE NTS. Last Updated: November 05/19



NOTES:

- 1.) THE SITE LAYOUT IS INTENDED TO PROVIDE GENERAL GUIDANCE FOR PLACEMENT OF EQUIPMENT, SETBACKS, AND ACCESS. EVERY SITE WILL HAVE UNIQUE SITE SPECIFIC CHALLENGES THAT MAY AFFECT THE OVERALL LAYOUT. THESE ISSUES ARE TO BE DEALT WITH DURING PLANNING AND DESIGN PHASES.
- 2.) IF PERMANENT GENSET IS NOT REQUIRED, PROVIDE A LOCATION FOR A PORTABLE GENSET.
- 3.) CONDUIT FROM KIOSK TO PROPERTY LINE REQUIRED FOR FUTURE FIBRE CONNECTION. TERMINATE IN JUNCTION BOX.
- 4.) CHEMICAL FEED CONDUIT TO BE STUBBED FOR FUTURE ODOUR CONTROL BUILDING.
- 5.) OFF STREET PARKING TO ACCOMMODATE A VACUUM TRUCK (HSU) AND FULL SIZE PICKUP TRUCK SIMULTANEOUSLY.
- 6.) ANTENNA MAST LOCATION TO BE DETERMINED BASED ON SITE CONDITIONS.
- 7.) ENTIRE SITE TO BE PAVED AND FENCED C/W VEHICLE ACCESS GATES AND MAN GATE.
- 8.) IF ODOUR CONTROL BUILDING IS REQUIRED, AN ADDITIONAL 13MX13M AREA MAY BE REQUIRED.
- 9.) CONCRETE BASES FOR TRANSFORMER, ELECTRICAL KIOSK AND GENSET TO BE 200MM ABOVE GRADE.

LEGEND

- ① TRANSFORMER
- ② ELECTRICAL KIOSK
- ③ GENSET
- ④ PIGGING PORT PER DRAWING SS-S62

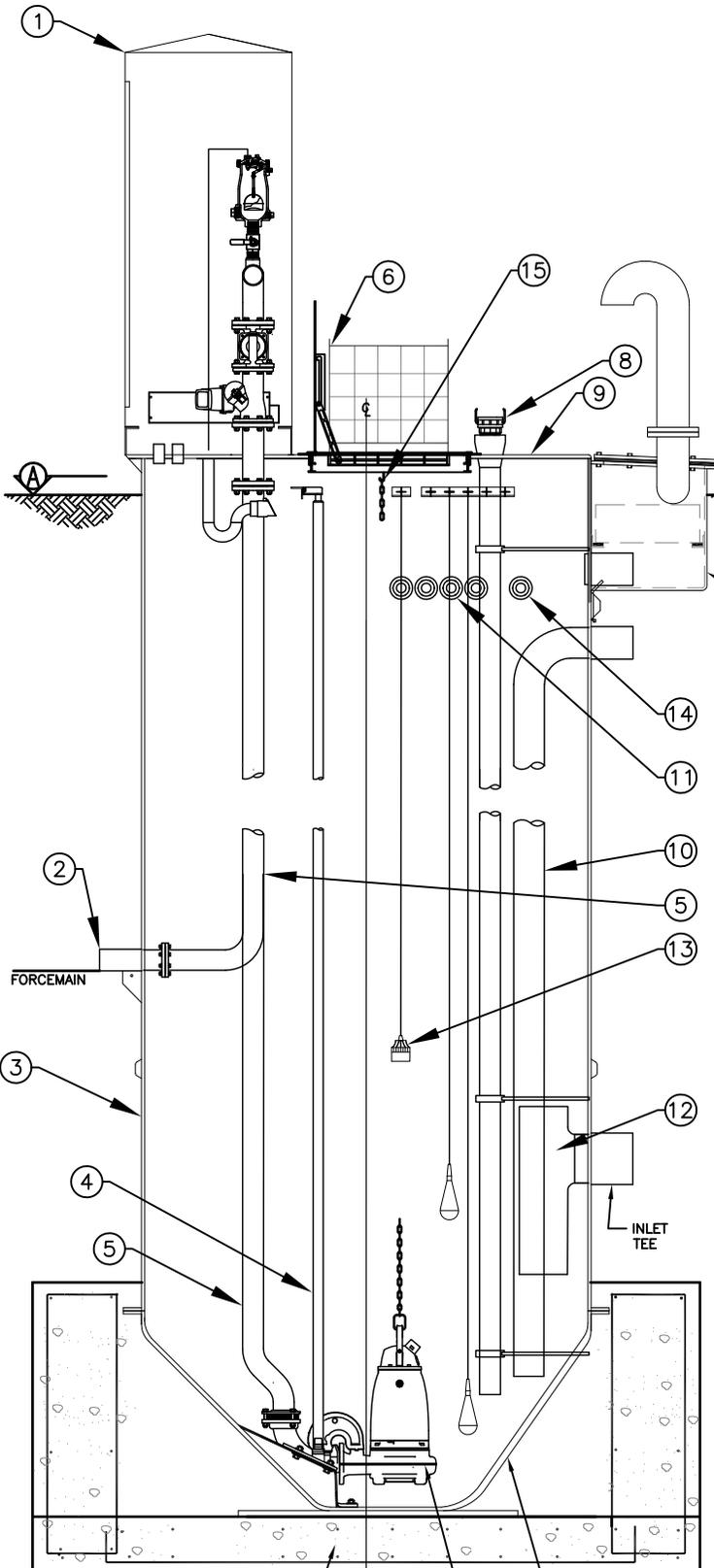
**STANDARD
DETAIL
DRAWING**

DATE:
06/22/20
SCALE:
NTS

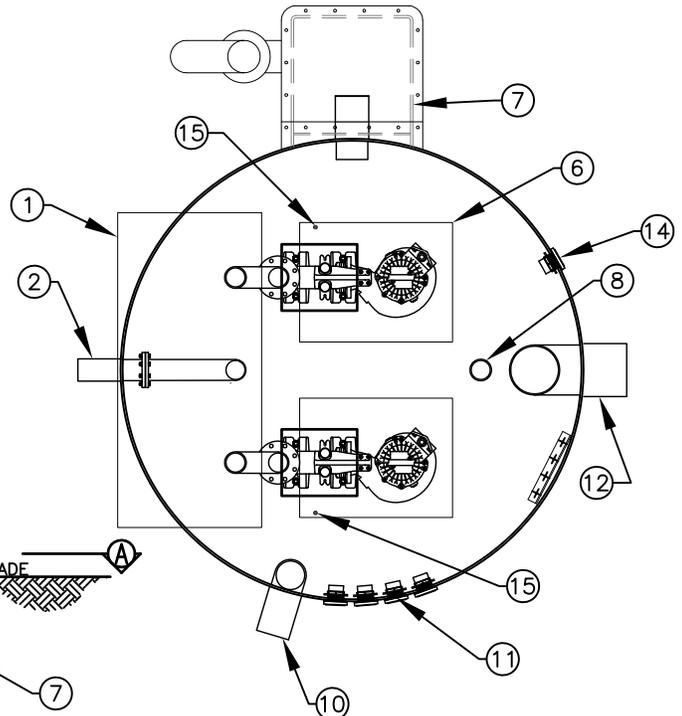
**TYPICAL LIFT STATION
SITE LAYOUT**

DWG. NO.
SS-S59





ELEVATION
N.T.S.



SECTION "A-A"
N.T.S. - PUMPS LAYOUT

ITEM	DESCRIPTION
1	INSULATED FIBREGLASS VALVE KIOSK, SEE COK STD. DWG. SS-S61
2	FORCEMAIN, MACHINED FRP STUB OR STAINLESS STEEL
3	FRP WET WELL
4	50mm GUIDE BAR Sch.40 316 STAINLESS STEEL
5	FRP RISER PIPE
6	ALUMINIUM OR STAINLESS STEEL HATCH c/w SAFETY GRATES
7	AIR OUTLET TO FIBREGLASS CARBON FILTER ENCLOSURE c/w ABOVE GROUND GOOSENECK OR ODOUR CONTROL BUILDING
8	100mm CAMLOCK c/w DUST CAP AND FRP DROP PIPE FOR EMERGENCY CONNECTION
9	FRP LID (ELEVATION 200mm ABOVE GRADE)
10	FRP AIR INLET FROM ELECTRICAL KIOSK
11	50mm ELECTRICAL CONNECTION
12	FRP INLET TEE (OPEN TOP)
13	ULTRASONIC LEVEL TRANSMITTER
14	50mm CONDUIT FOR CHEMICAL FEED LINE
15	LIFT CHAIN HOOK

NOTES:

- 1.) ALL FASTENERS AND METAL COMPONENTS TO BE 316 STAINLESS STEEL
- 2.) ALL PIPING TO BE FRP OR STAINLESS STEEL

**STANDARD
DETAIL
DRAWING**

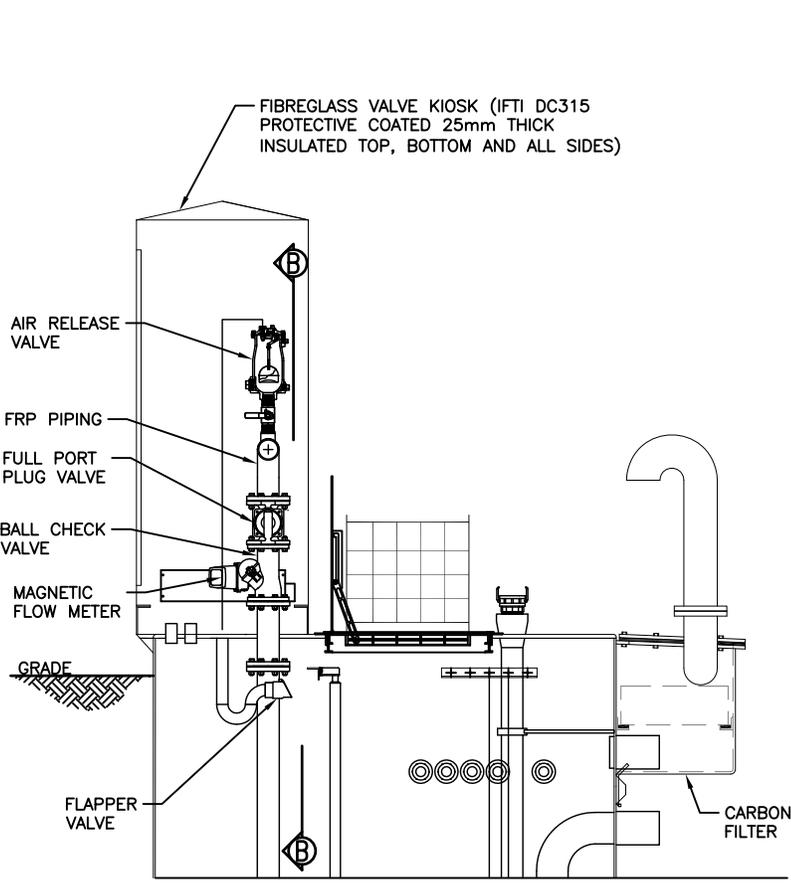
DATE:
05/22/20
SCALE:
NTS

SANITARY LIFT STATION

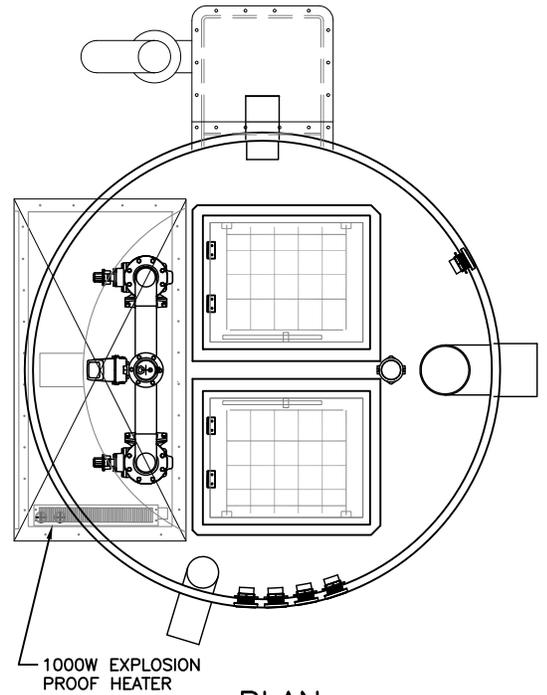
DWG. NO.

SS-S60

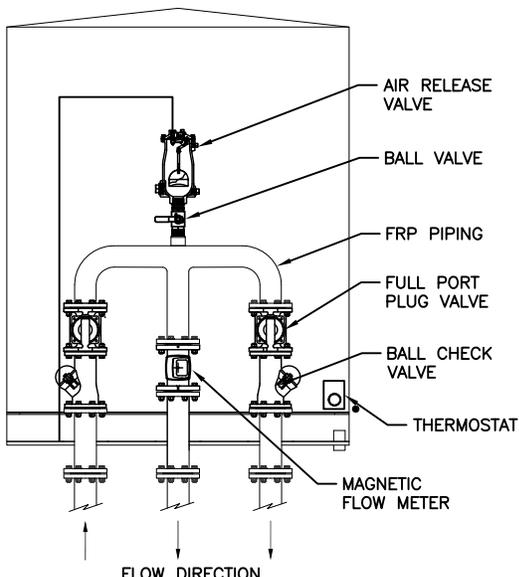




ELEVATION
N.T.S.

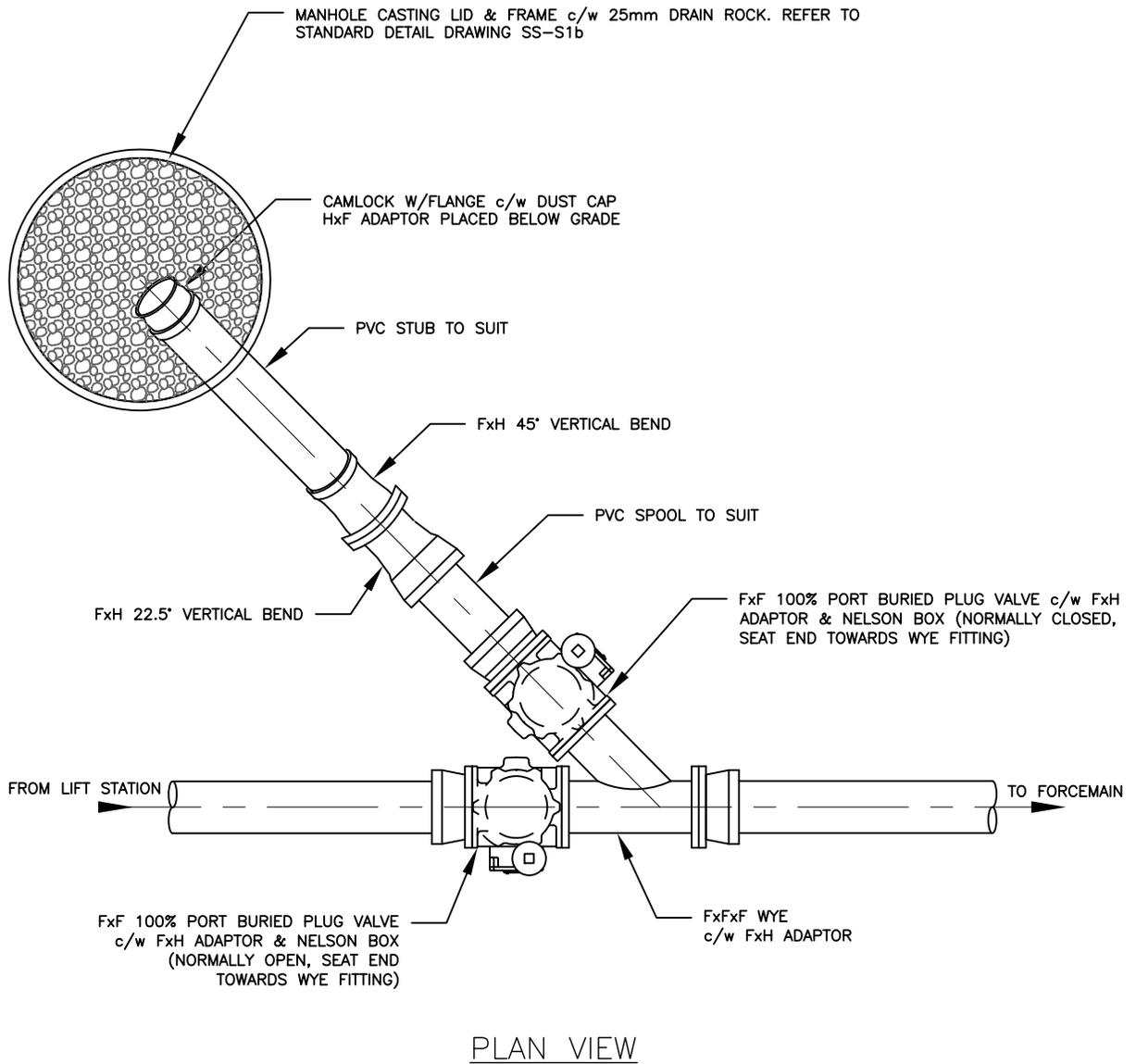


PLAN
N.T.S.



SECTION "B-B"
N.T.S. - VALVE KIOSK PIPING

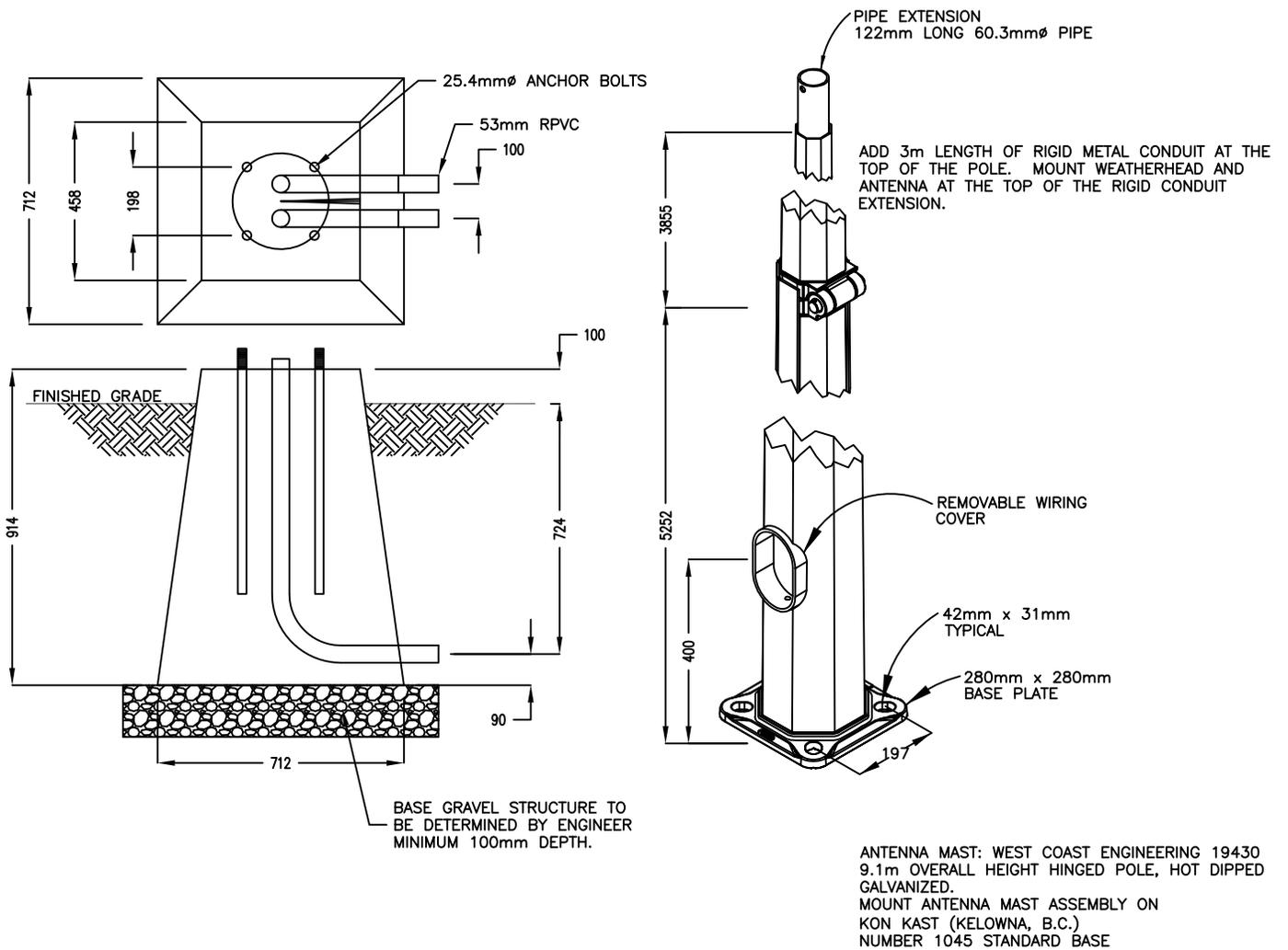
STANDARD DETAIL DRAWING	DATE: 05/22/20	ABOVE GROUND VALVE KIOSK	DWG. NO.	 City of Kelowna
	SCALE: NTS		SS-S61	



NOTES:

- 1.) ALL FITTINGS SHALL BE JOINT RESTRAINED.
- 2.) SIZE OF ALL FITTINGS AND PIPE TO MATCH SIZE OF FORCEMAIN.

STANDARD DETAIL DRAWING	DATE: 05/22/20	PIGGING PORT	DWG. NO.	 City of Kelowna
	SCALE: NTS		SS-S62	



NOTES:

- 1.) PROVIDE ADEQUATE CLEARANCE TO ACCOMMODATE MAST SWING ON SITE LAYOUT.
- 2.) ALL DIMENSIONS IN MILLIMETERS UNLESS NOTED OTHERWISE.

**STANDARD
DETAIL
DRAWING**

DATE:
05/22/20

SCALE:
NTS

**RADIO ANTENNA MAST
AND BASE**

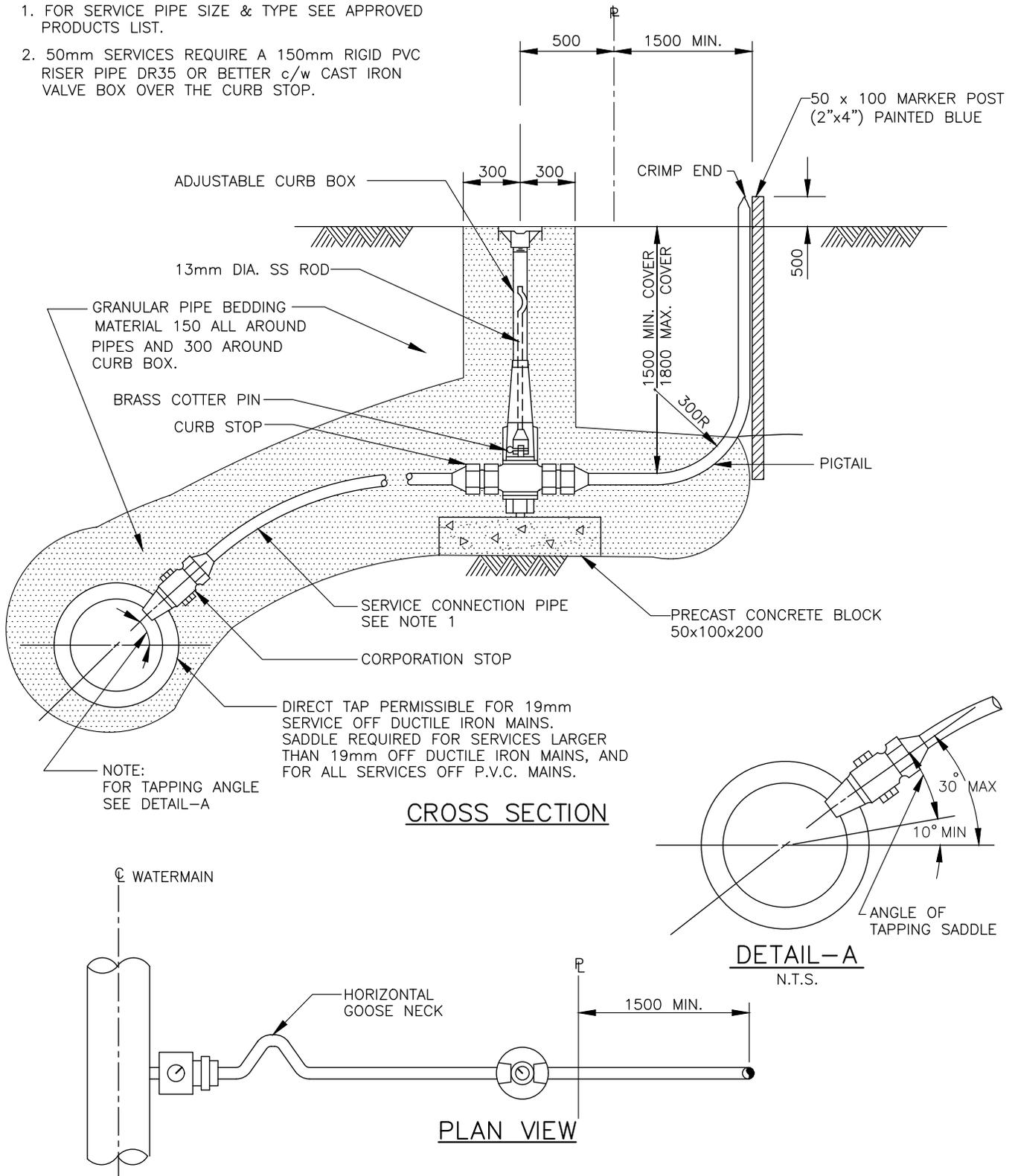
DWG. NO.

SS-S63



NOTES:

1. FOR SERVICE PIPE SIZE & TYPE SEE APPROVED PRODUCTS LIST.
2. 50mm SERVICES REQUIRE A 150mm RIGID PVC RISER PIPE DR35 OR BETTER c/w CAST IRON VALVE BOX OVER THE CURB STOP.



**STANDARD
DETAIL
DRAWING**

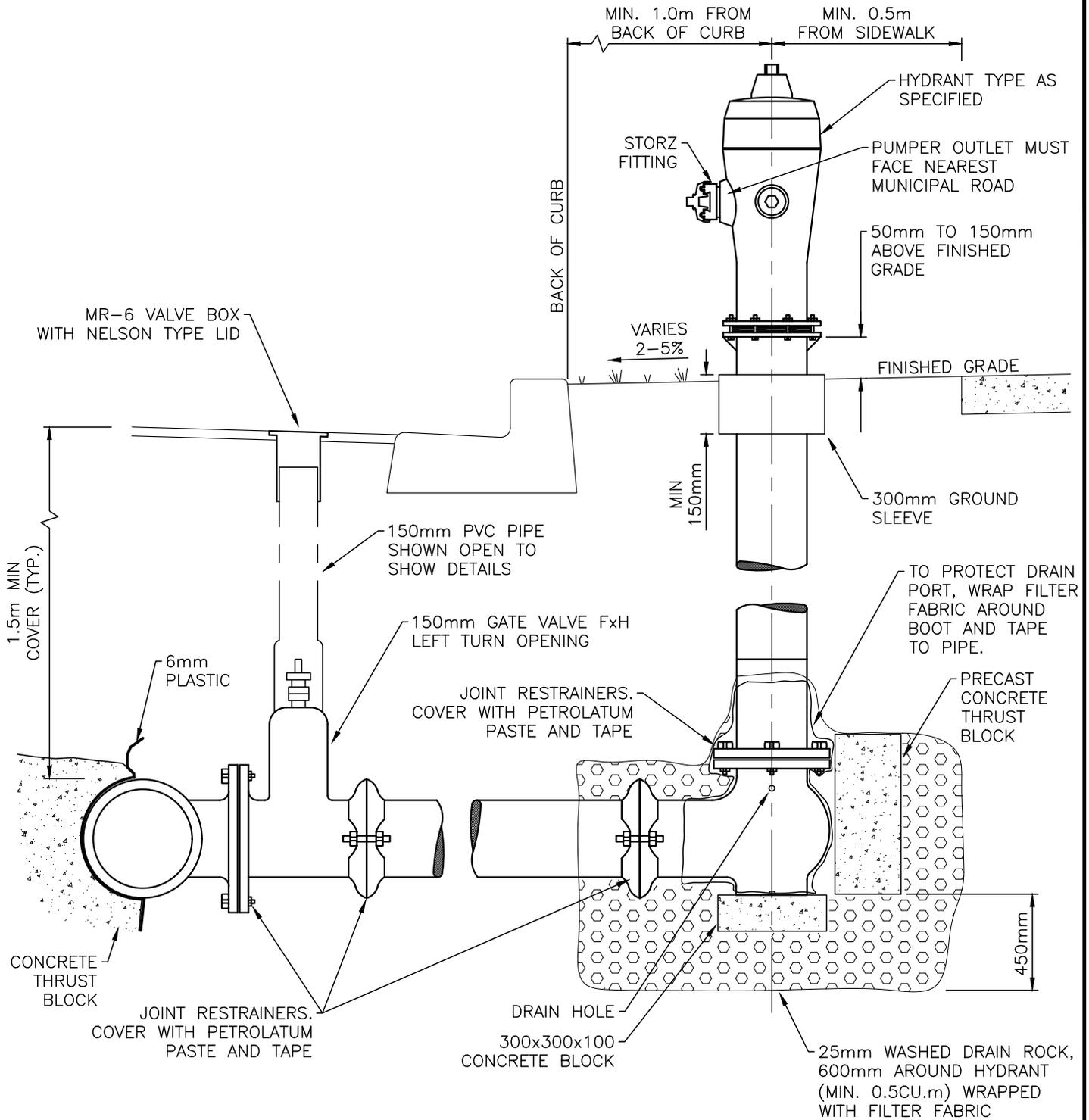
DATE:
MAY 09/24
SCALE:
NTS

WATER SERVICE CONNECTION

DWG. NO.

SS-W2





NOTES:

1. HYDRANTS – IN ACCORDANCE WITH APPROVED PRODUCTS LIST.
2. HYDRANTS SHALL HAVE 2 – 63.5mm OUTLETS B.C. STANDARD AND 1 – 100mm PUMPER OUTLET WITH STORZ FITTING
3. ALL HYDRANTS TO HAVE 300mm ϕ GROUND SLEEVE (SDR 35 PVC)
4. SEE APPROVED PRODUCTS LIST FOR HYDRANT PAINT TYPE AND COLOR CODE.
5. FOR ALL BOLTS AND JOINT RESTRAINERS, USE DENSO PASTE AND TAPE.
6. MAINTAIN 1.0m MINIMUM CLEARANCE FROM ANY HYDRANT PROJECTION AROUND HYDRANT.
7. FOR HYDRANTS NOT PROTECTED BY A BARRIER CURB, SEE DETAIL DRAWINGS SS-C12B – BOLLARDS.
8. HYDRANT NOT TO INTRUDE INTO SIDEWALK OR PUBLIC CORRIDORS.

**STANDARD
DETAIL
DRAWING**

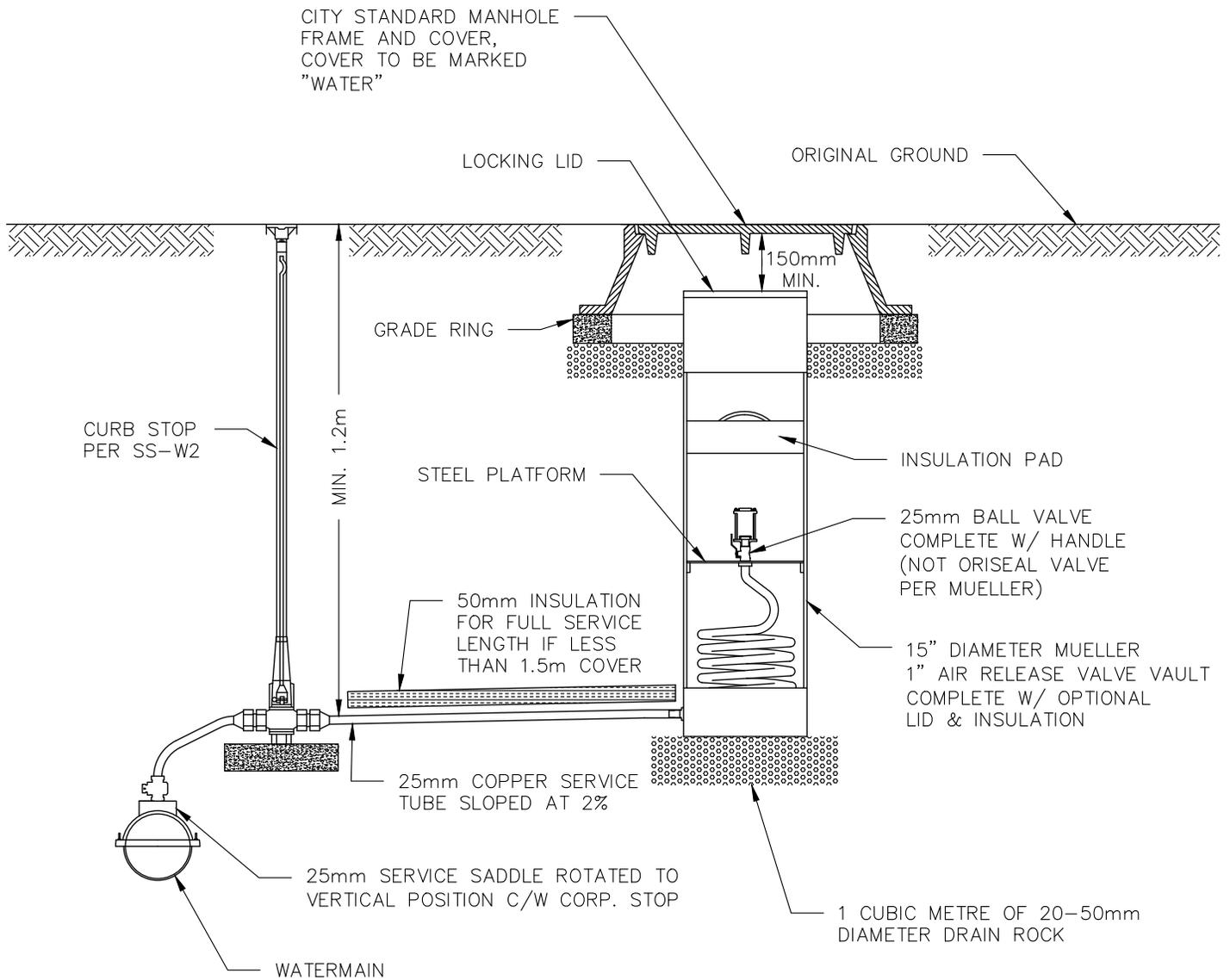
DATE:
JUN 22/23
SCALE:
NTS

HYDRANT

DWG. NO.

SS-W4





NOTES:

1. ALL PIPE & FITTINGS TO BE PER APPROVED PRODUCTS LIST.
2. THIS ASSEMBLY TO BE USED IN STATUTORY RIGHT OF WAYS WHERE POWER IS NOT READILY AVAILABLE.
3. CONTRACTOR TO ENSURE ALL PIPING FROM CORP. STOP TO AIR VALVE IS INSTALLED WITH POSITIVE GRADE, INCLUDING COIL TUBING INSIDE AIR RELEASE VAULT.
4. CONTRACTOR TO ENSURE STEEL PLATFORM FOR AIR VALVE CAN BE PULLED UP & OUT OF AIR RELEASE VAULT.

**STANDARD
DETAIL
DRAWING**

DATE:
JUN 28/24
SCALE:
NTS

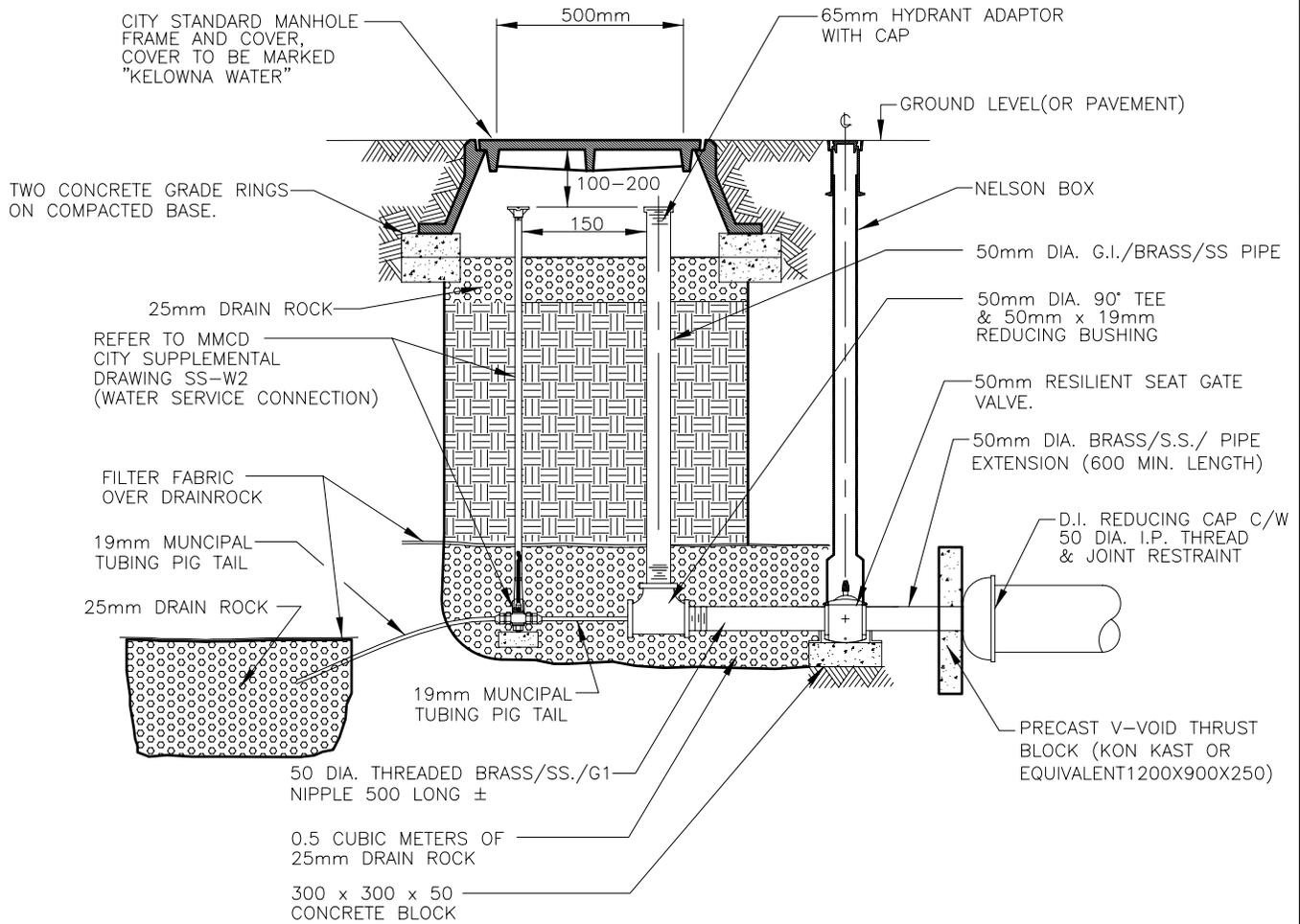
**25mm UNDERGROUND
AIR VALVE**

DWG. NO.

SS-W6a



STANDARD DETAIL DRAWINGS



NOTES:

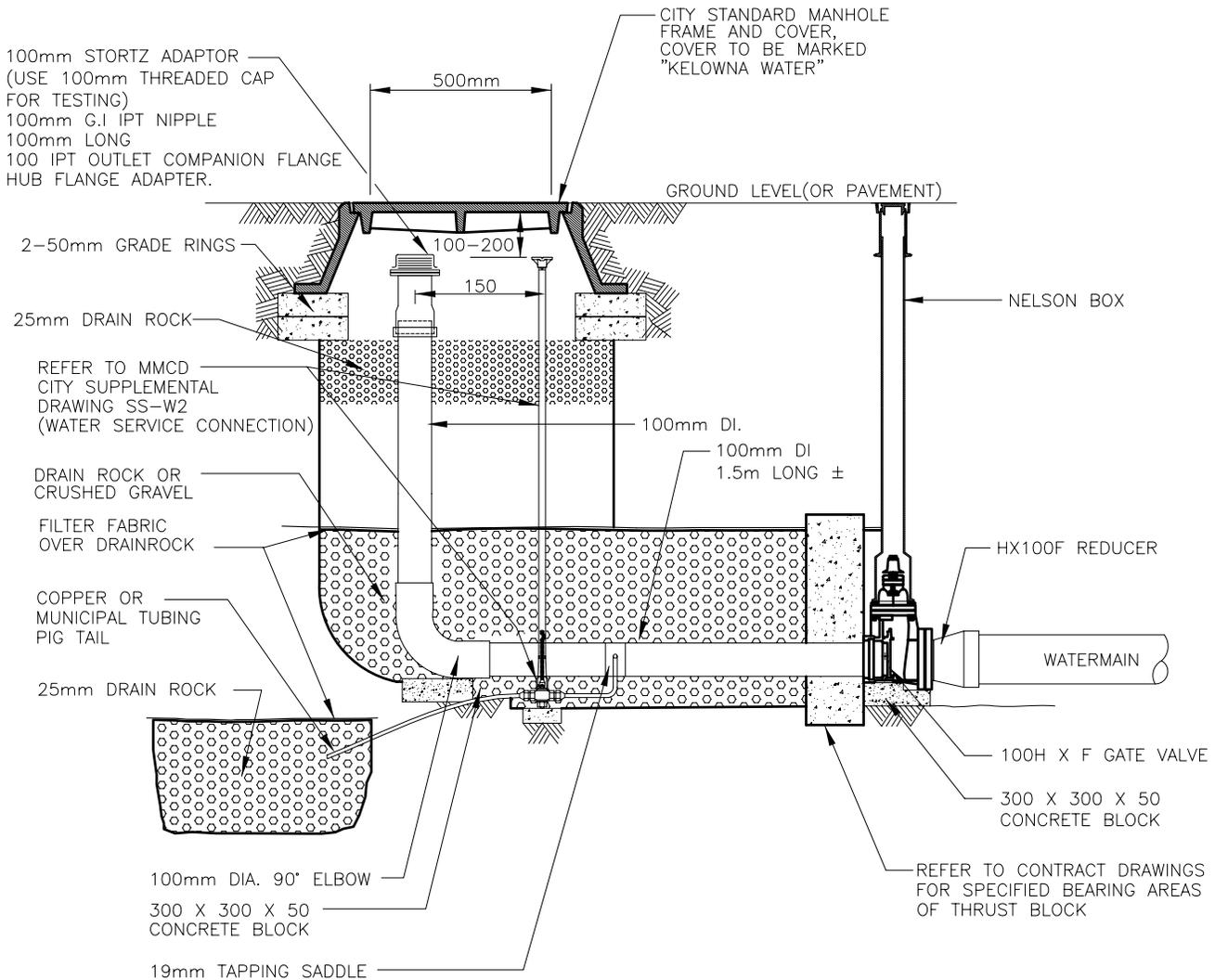
1. SIZE BLOW-OFF ASSEMBLY TO ACHIEVE SPECIFIED MAIN FLUSHING VELOCITY.
2. ENTIRE ASSEMBLY TO BE PRESSURE TESTED.
3. FOR ALL BOLTS AND JOINT RESTRAINTERS USE DENSO PASTE AND TAPE.

50mm BLOW-OFF
(FOR MAINS 100mm & SMALLER)

SS-W8a

APRIL 15/08

STANDARD DETAIL DRAWINGS



NOTES:

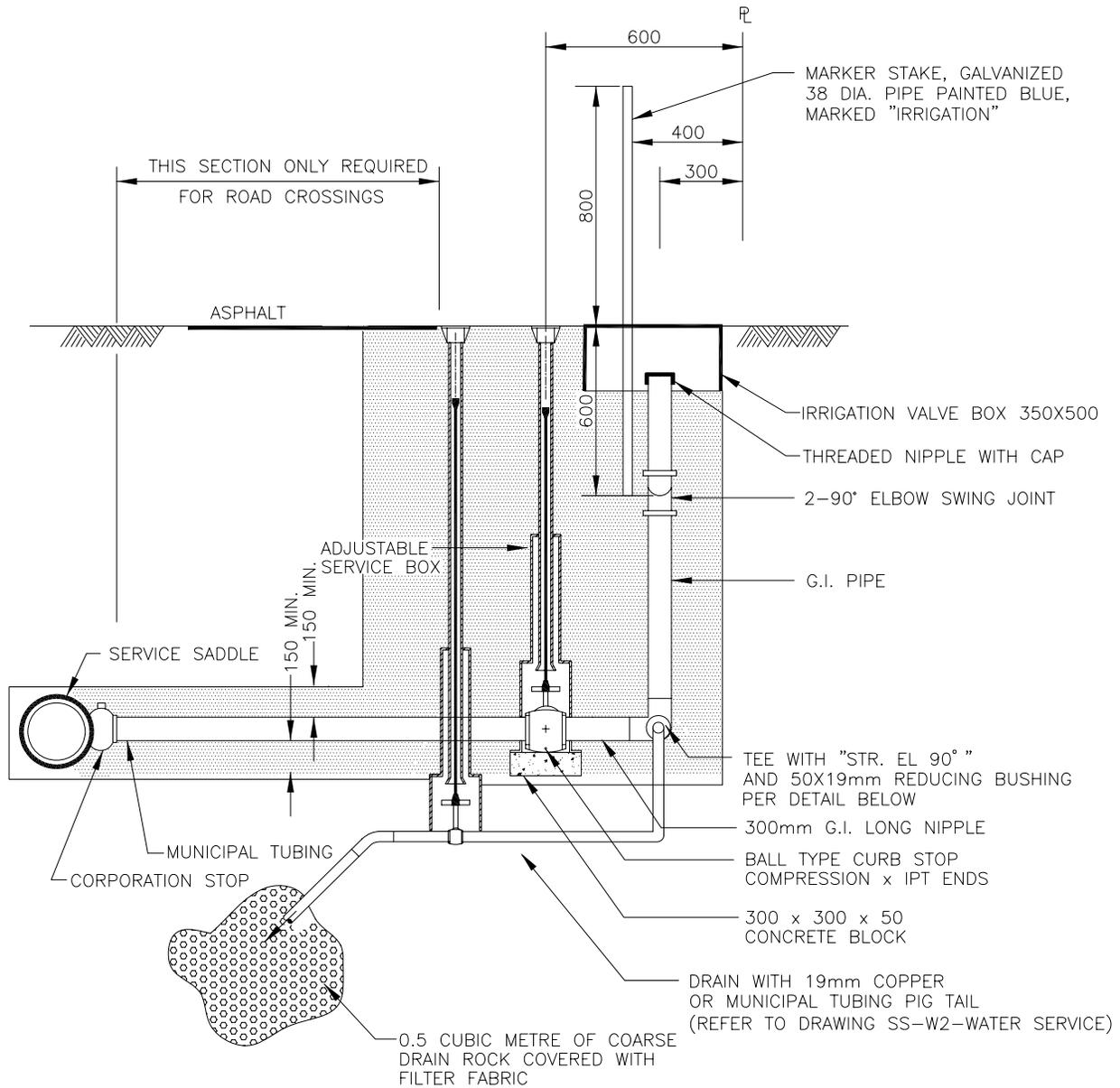
1. USE JOINT RESTRAINTS FOR ALL JOINTS.
2. ALL JOINT RESTRAINTERS TO BE APPROVED AS PER POLICY 266 IN THE CITY OF KELOWNA SUBDIVISION AND SERVICING BYLAW.
3. ALL JOINTS TO BE RESTRAINED AS PER MMCD 02666, 2.2.13 AND THE CITY OF KELOWNA SUBDIVISION AND SERVICING BYLAW SCHEDULE 4 WATER, SECTION 1.13, AND/OR AS SPECIFIED IN THE CONTRACT DOCUMENTS OR DRAWINGS.
4. ENTIRE ASSEMBLY TO BE PRESSURE TESTED.
5. FOR ALL BOLTS AND JOINT RESTRAINTERS, USE DENSO PASTE AND TAPE.
6. PVC C900 PIPE MAYBE APPROVED BY UTILITIES OTHER THAN THE CITY

100mm BLOW-OFF
(FOR MAINS 150mm & LARGER)

APRIL 15/08

SS-W8b

STANDARD DETAIL DRAWINGS



NOTES:

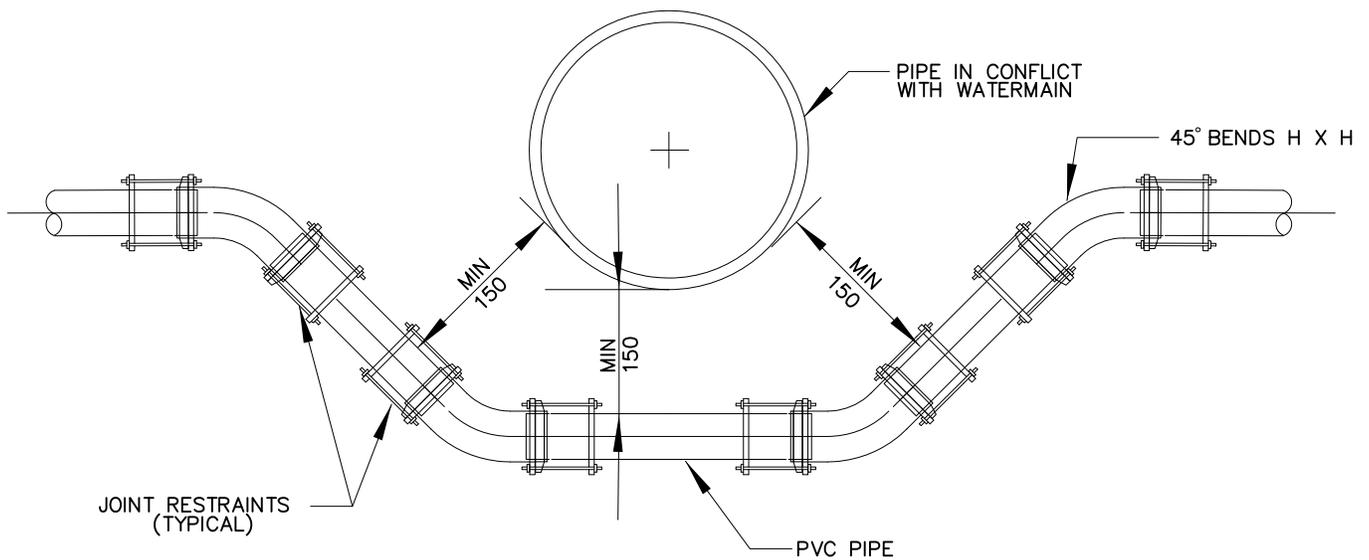
1. REFER TO BEDDING AND BACKFILL STANDARDS FOR DETAILS.

IRRIGATION SERVICE

SS-W50

APRIL 15/08

STANDARD DETAIL DRAWINGS



TYPICAL SECTION

NOTES:

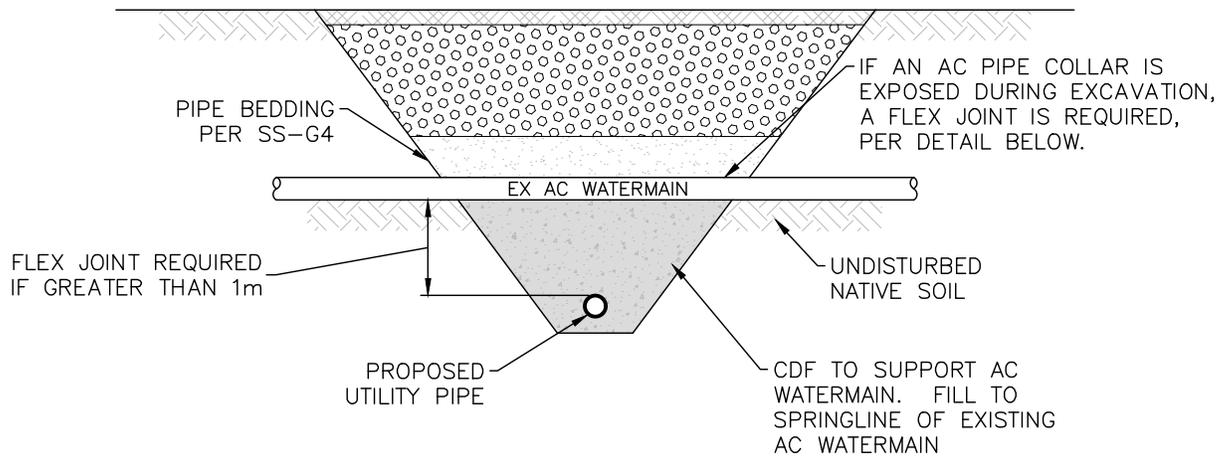
1. ALL JOINT RESTRAINERS TO BE APPROVED AS PER POLICY 266 IN THE CITY OF KELOWNA SUBDIVISION AND SERVICING BYLAW.
2. ALL JOINTS TO BE RESTRAINED AS PER MMCD 02666, 2.2.13 AND THE CITY OF KELOWNA SUBDIVISION AND SERVICING BYLAW SCHEDULE 4 WATER, SECTION 1.13, AND/OR AS SPECIFIED IN THE CONTRACT DOCUMENTS OR DRAWINGS.

\\WU\DRAWING\STD-DWGS\MMCD-STD\SS-W51.dwg

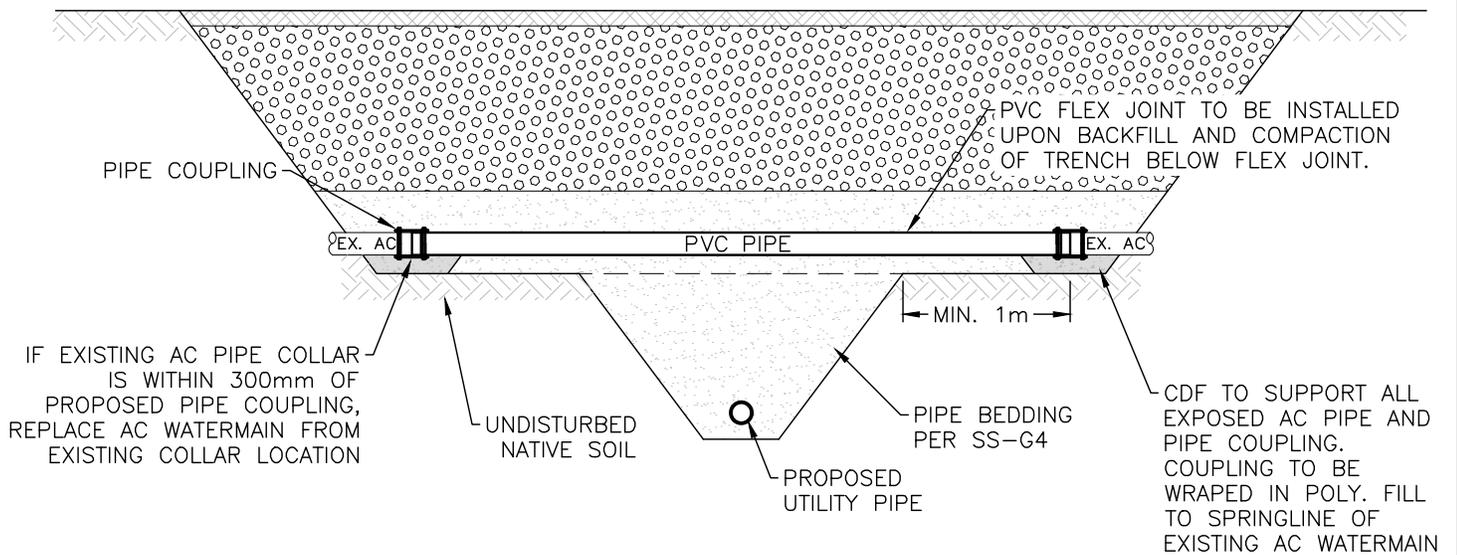
**U-BEND DETAIL
(PIPE CROSSING CONFLICT)**

REV. SEPT. 27/01

SS-W51



CONTROLLED DENSITY FILL (CDF) SUPPORTED CROSSING



FLEX JOINT CROSSING

NOTES:

1. TRENCHING TO COMPLY WITH WORKSAFE REGULATIONS.
2. PIPE BEDDING & TRENCH BACKFILL TO BE PER SS-G4.
3. SURFACE RESTORATION TO BE AS REQUIRED PER SS-G5.
4. FLEX JOINT REQUIRED IF EXISTING WATERMAIN IS CLASS 100 AC.
5. PROPOSED AND EXISTING MAINS WITHIN CDF TO BE WRAPPED WITH POLY.
6. BASE OF CDF AREA TO BE TWICE THE DIAMETER OF THE SUPPORTED MAIN.
7. PIPE & COUPLINGS TO BE PER APPROVED PRODUCTS LIST.

**STANDARD
DETAIL
DRAWING**

DATE:
FEB 11/22
SCALE:
NTS

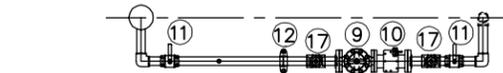
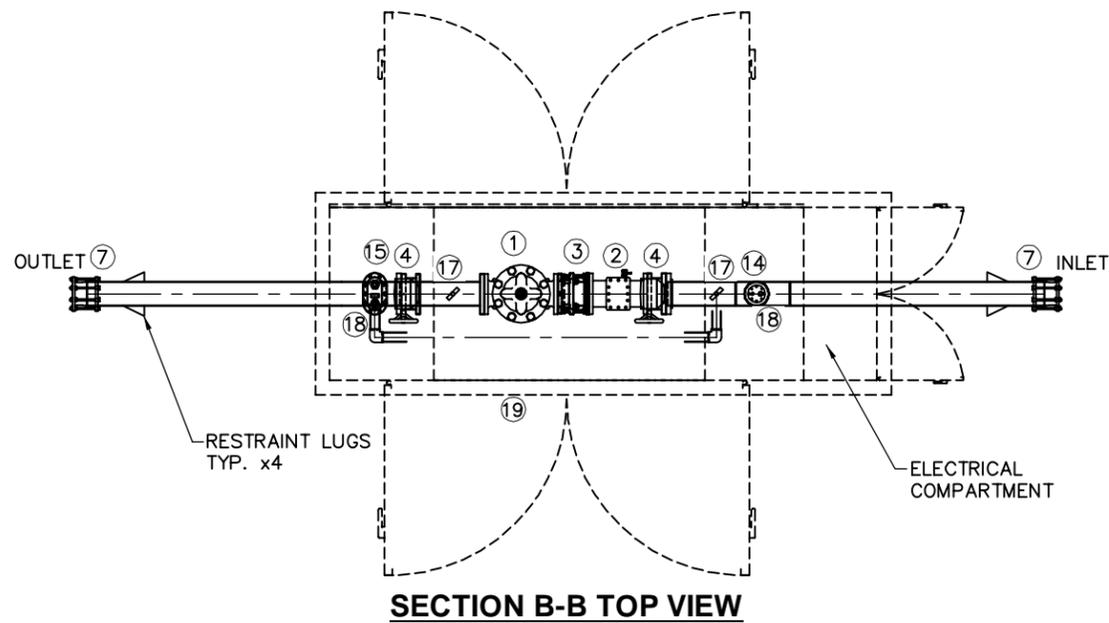
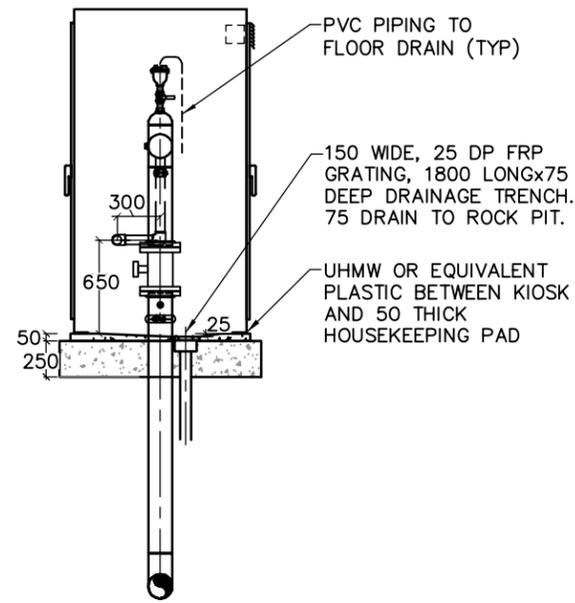
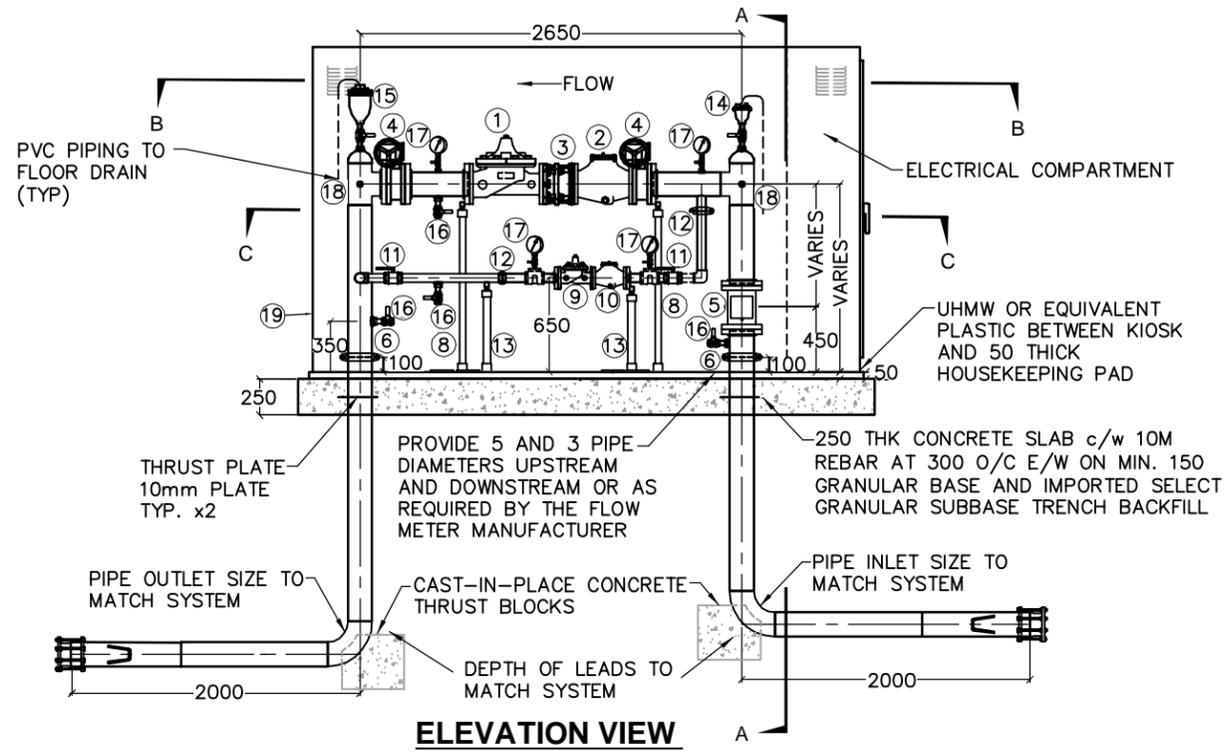
AC WATERMAIN CROSSINGS

DWG. NO.

SS-W52



STANDARD DETAIL DRAWINGS



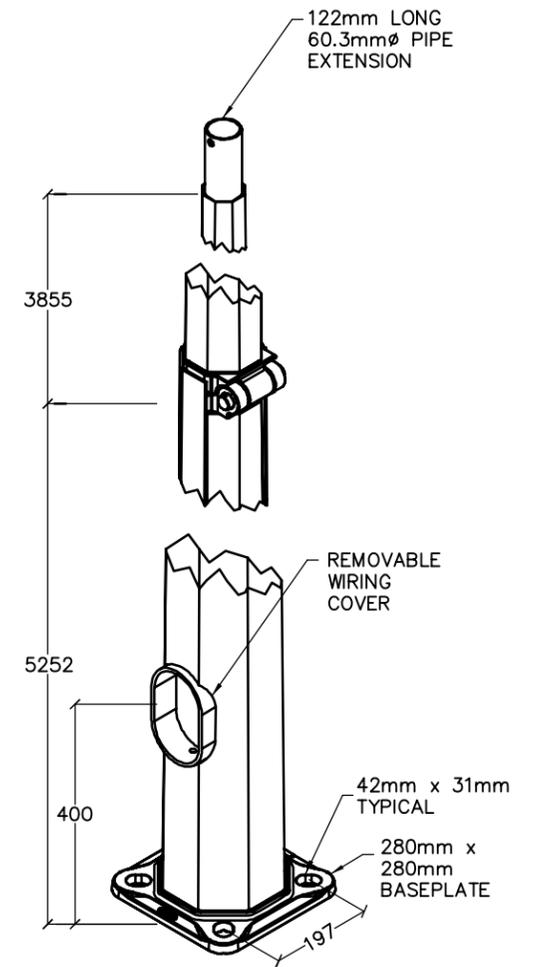
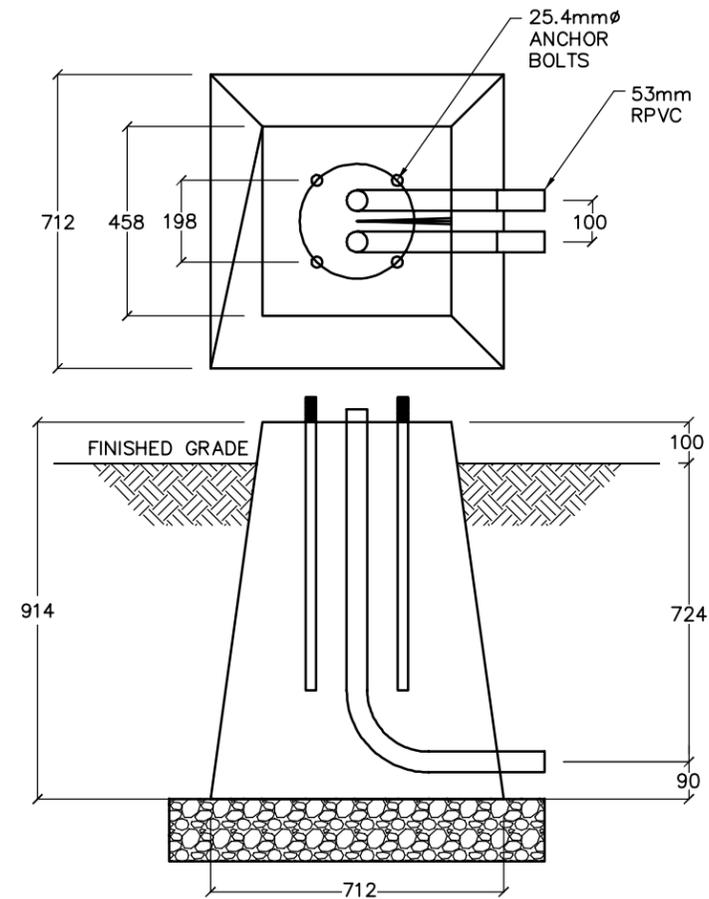
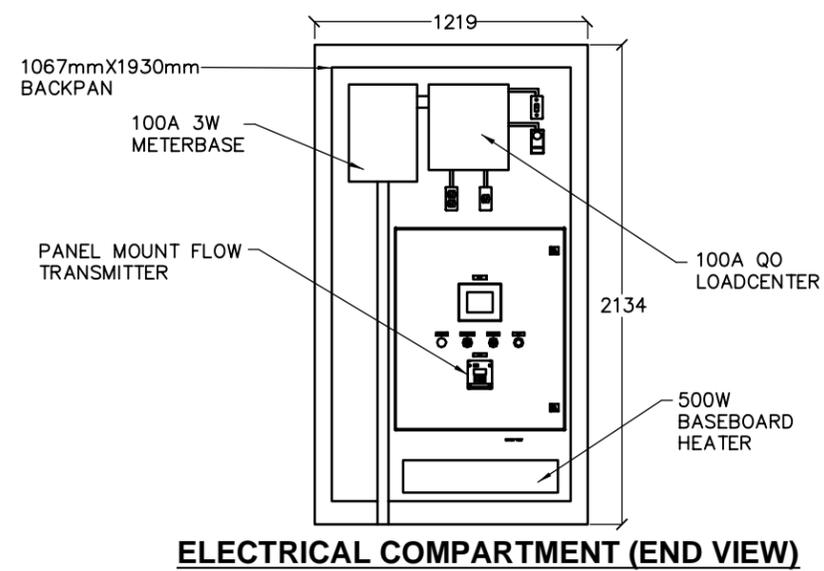
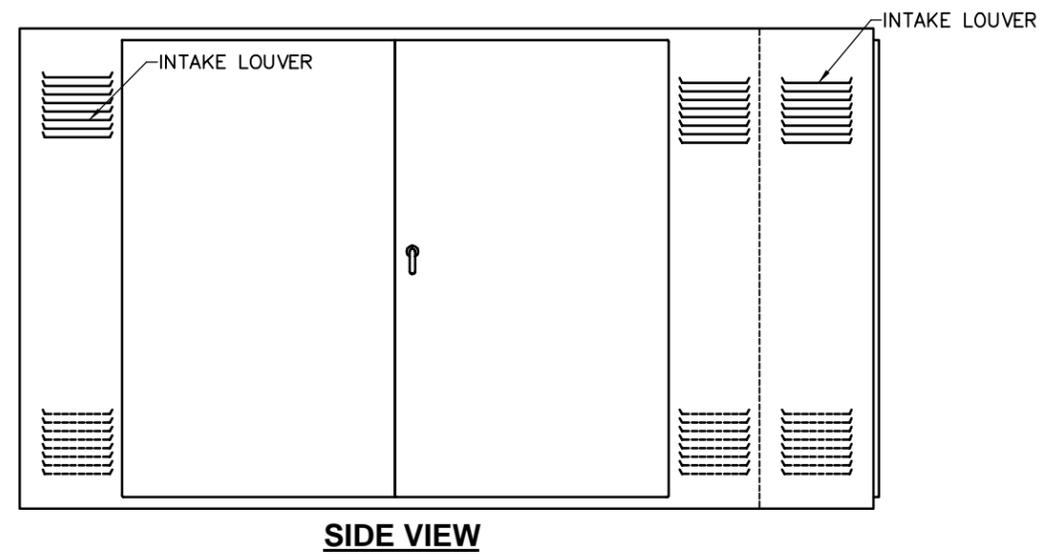
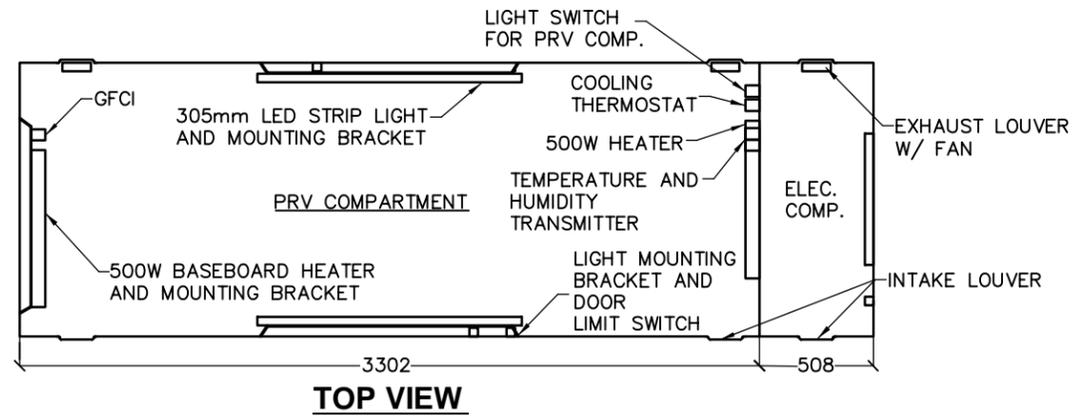
NOTES:

1. ALL PIPE & FITTINGS TO BE PER APPROVED PRODUCTS LIST.
2. ALL PIPING 316 STAINLESS STEEL.
3. COORDINATE WITH FORTIS TO PROVIDE A 120/240 VAC, 100A SERVICE C/W CABLE PULL BOX IN KIOSK.
4. KIOSK TO BE SUPPLIED WITH:
 - 500W BASEBOARD HEATER AND TWO VENTILATION FANS C/W HEATING AND COOLING THERMOSTATS
 - TEMPERATURE AND HUMIDITY TRANSMITTER
 - FLOW TRANSDUCER AND FLOW INDICATING TRANSMITTER
 - 2-15A GFCI RECEPTACLES
 - DATA RADIO AND YAGI ANTENNA
 - 1000VA UPS
 - O&M MANUALS

MATERIALS LIST		
ITEM	QTY	DESCRIPTION
1	1	PRESSURE REDUCING VALVE W/ POSITION INDICATOR, AWWA EPOXY COATING AND S.S. TRIM - APPROVED SUPPLIERS: CLA-VAL OR SINGER
2	1	"H" STRAINER W/ EPOXY COATING, S.S. HARDWARE AND S.S. BLOWDOWN VALVES - APPROVED SUPPLIERS: CLA-VAL OR SINGER
3	1	DISMANTLING JOINT W/ S.S. FASTENERS - APPROVED SUPPLIERS: ROBAR OR OTHER APPROVED SUPPLIER
4	2	BUTTERFLY VALVE W/ S.S. DISC AND HANDWHEEL - APPROVED SUPPLIERS: MUELLER, DEZURIK OR VICTAULIC
5	1	MAG METER W/ REMOTE DISPLAY IN ELECTRICAL CABINET-APPROVED SUPPLIERS: SIEMENS OR ROSEMOUNT
6	2	RIGID COUPLING FOR S.S. - APPROVED SUPPLIERS: VICTAULIC OR SHURJOINT
7	2	EXTERNAL TRANSITION COUPLING - APPROVED SUPPLIERS: ROBAR OR OTHER APPROVED SUPPLIER
8	2	CWS ADJ. GALV. STEEL PIPE SUPPORT
9	1	PRESSURE REDUCING VALVE W/ POSITION INDICATOR, AWWA EPOXY COATING AND S.S. TRIM - APPROVED SUPPLIERS: CLA-VAL OR SINGER (BYPASS)
10	1	"H" STRAINER W/ EPOXY COATING, S.S. HARDWARE AND S.S. BLOWDOWN VALVES - APPROVED SUPPLIERS: CLA-VAL OR SINGER (BYPASS)
11	2	S.S. BALL VALVE (BYPASS)
12	2	RIGID COUPLING FOR S.S. - APPROVED SUPPLIERS: VICTAULIC OR SHURJOINT (BYPASS)
13	2	CWS ADJ. GALV. STEEL PIPE SUPPORT (BYPASS)
14	1	AIR RELEASE VALVE W/ S.S. ISOLATION VALVE AND VENT PIPE - APPROVED SUPPLIERS: VALMATIC OR VENT-O-MAT
15	1	COMBINATION AIR RELEASE VALVE W/ S.S. ISOLATION VALVE AND VENT PIPE - APPROVED SUPPLIERS: VAL-MATIC OR VENT-O-MAT
16	4	THREADOLET W/ S.S. BALL VALVE AND PLUG
17	4	(100mm) LIQUID FILLED PRESSURE GAUGE (6MM NPT) W/ S.S. ISOLATION BALL VALVES AND TEE OR WELDOLET AS REQUIRED - APPROVED SUPPLIERS: SIEMENS OR ABB
18	2	(19mm) THREADOLET FOR WALL MOUNTED PRESSURE TRANSMITTER W/ S.S. BALL VALVE - APPROVED SUPPLIERS: SIEMENS OR ABB
19	1	ALUMINUM QUAD DOOR KIOSK WITH END CABINET PER APPROVED PRODUCTS LIST

PRESSURE REDUCING STATION

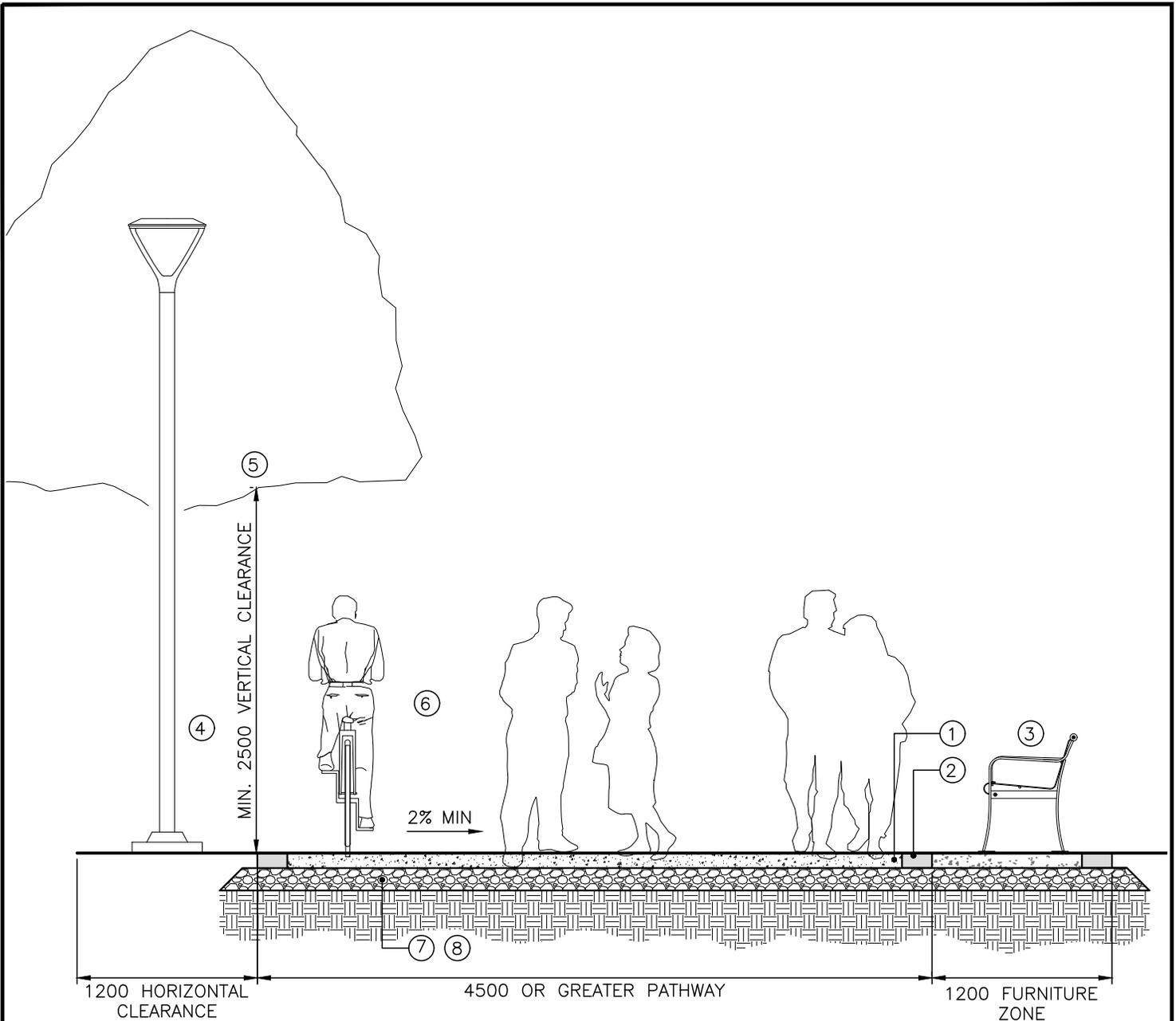
STANDARD DETAIL DRAWINGS



RADIO ANTENNA POLE AND BASE DETAILS

ANTENNA MAST: WEST COAST ENGINEERING 19430 9107mm OVERALL HEIGHT HINGED POLE, HOT DIPPED GALVANIZED. MOUNT ANTENNA MAST ASSEMBLY ON KON KAST (KELOWNA, B.C.) NUMBER 1045 STANDARD BASE

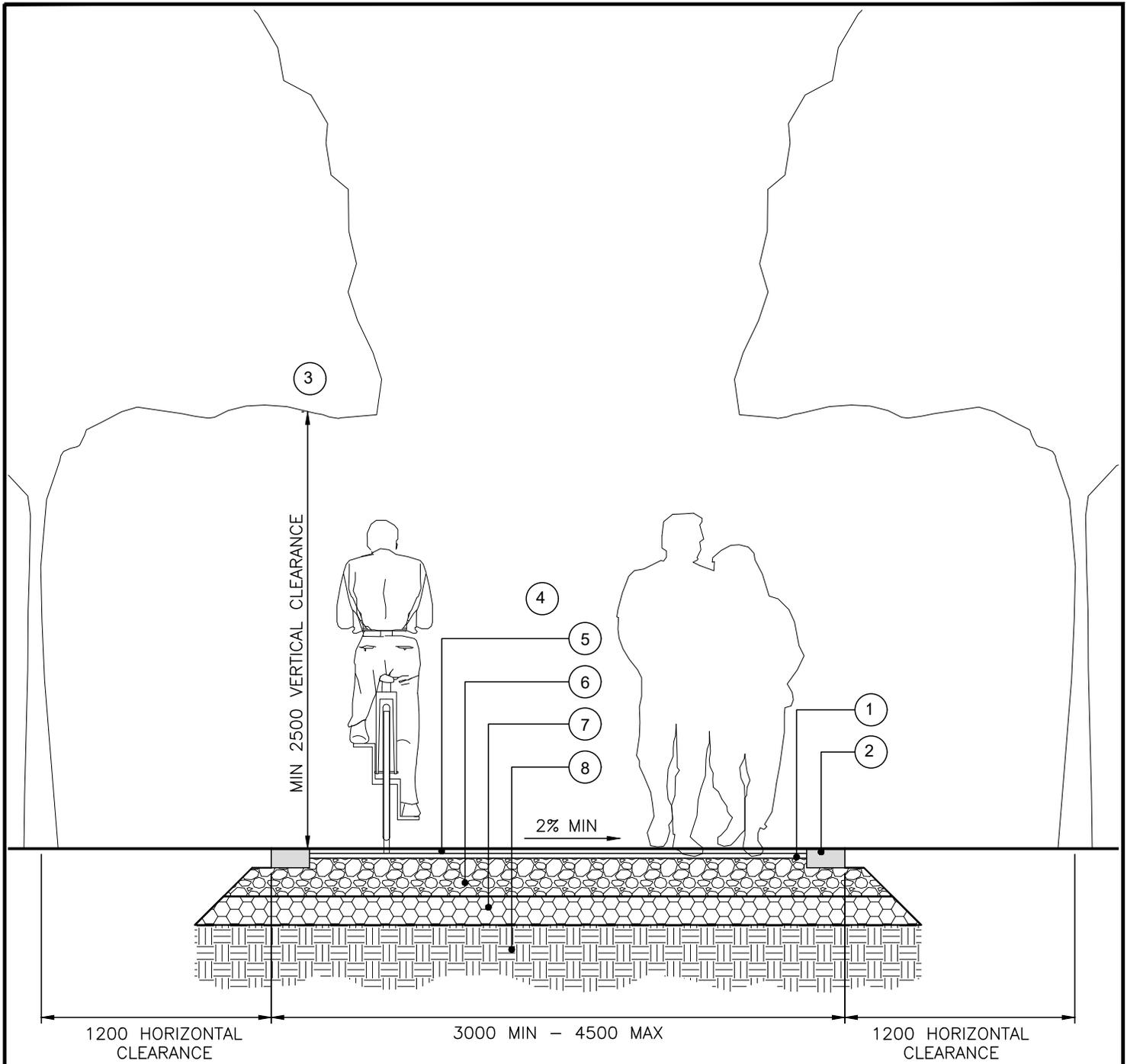
PRESSURE REDUCING STATION



NOTES:

1. HARD SURFACE (E.G. PAVERS, CONCRETE, SPECIAL PAVING, ETC.) c/w SAW-CUT OR BROOM-OVER FINISHED CONTROL JOINTS
2. ACCENT PAVING EDGE, URBAN BRAILLE OPPORTUNITY
3. COMFORT AMENITY ZONE (BENCH, BIKE RACK, WASTE RECEPTACLES, WAYFINDING SIGNAGE, KIOSKS, ETC.)
4. PEDESTRIAN LIGHTING c/w SHARP-ANGLE CUT-OFF FIXTURE & PAGEANTRY / BANNER OPPORTUNITY
5. TREE PLANTING SPACED EQUALLY BETWEEN LIGHTING c/w APPROVED GROWING MEDIUM AND VOLUME PER CITY STANDARDS
6. SHARED PATHWAY TO BE BARRIER FREE & UNIVERSAL ACCESSIBILITY STANDARDS.
7. 19mm MINUS COMPACTED GRANULAR BASE (95% MPD)
OPTIONAL: SAND LEVELING BED FOR UNIT PAVER SURFACING – REFER TO TRAIL GUIDELINES CHART FOR MAXIMUM SLOPES, MATERIAL DEPTHS AND SPECIFICATIONS
8. REMOVE ALL ORGANIC MATERIAL, LARGE STONES AND COMPACT NATIVE SUBGRADE (95% MPD)
9. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.

STANDARD DETAIL DRAWING	DATE: JUN 26/23	CLASS 1 TRAIL MAJOR URBAN PROMENADE	DWG. NO.	 City of Kelowna
	SCALE: NTS		SS-T01	

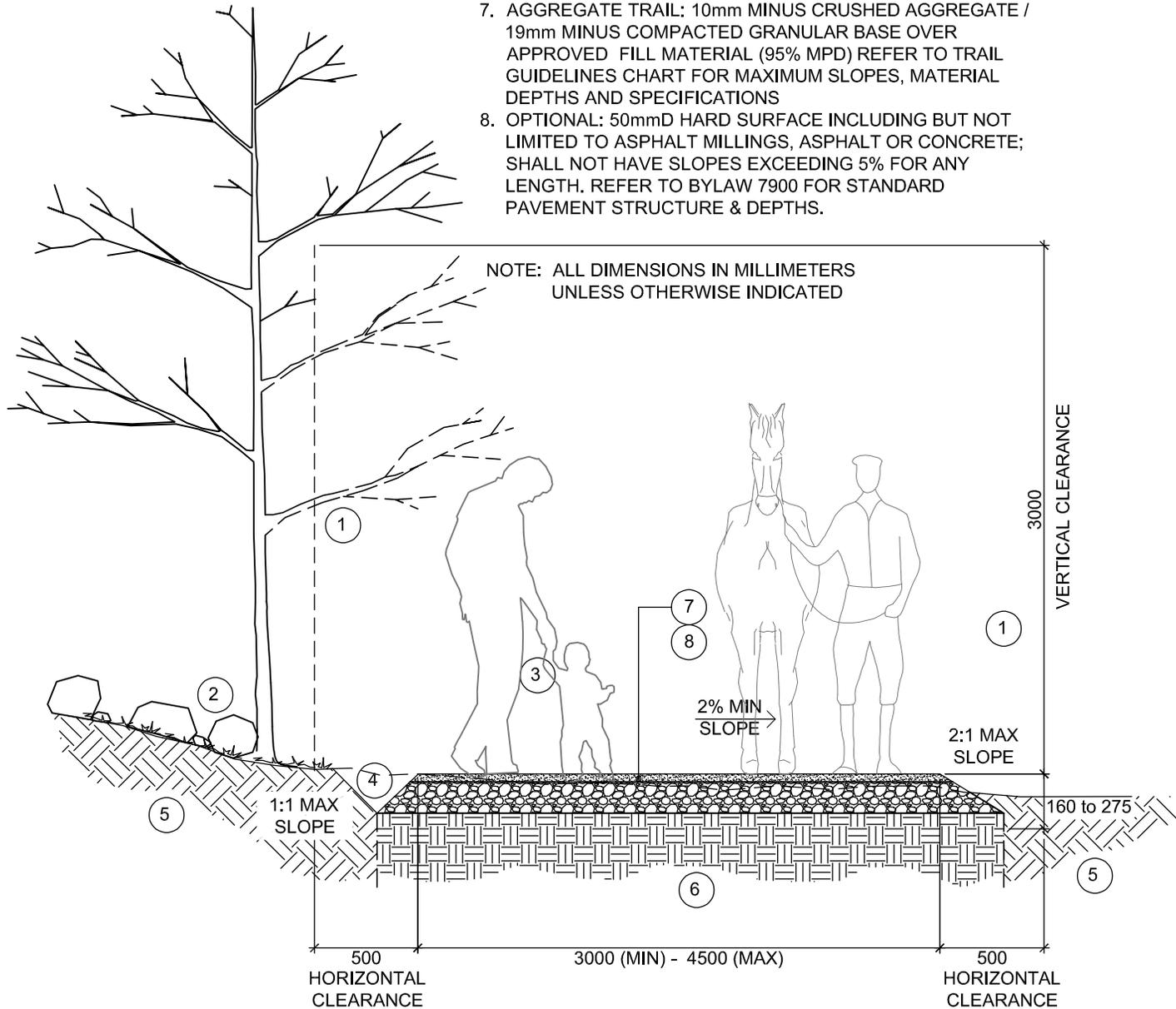


NOTES:

1. ASPHALT OR ASPHALT MILLINGS PAVING
2. ACCENT PAVING / EDGE RESTRAINT
3. TREE PLANTING SPACED EQUALLY BETWEEN LIGHTING c/w APPROVED GROWING MEDIUM AND VOLUME PER CITY STANDARDS
4. SHARED PATHWAY TO BE BARRIER FREE & UNIVERSAL ACCESSIBILITY STANDARDS
5. 50mm ASPHALT SURFACE. REFER TO BYLAW 7900 FOR STANDARD PAVEMENT STRUCTURE DEPTHS.
6. 19mm MINUS COMPACTED GRANULAR BASE (95% MPD) – REFER TO TRAIL GUIDELINES CHART FOR MAXIMUM SLOPES, MATERIAL DEPTHS AND SPECIFICATIONS
7. 75mm MINUS COMPACTED SUB-BASE (95% MPD) – REFER TO TRAIL GUIDELINES CHART FOR MAXIMUM SLOPES, MATERIAL DEPTHS AND SPECIFICATIONS
8. REMOVE ALL ORGANIC MATERIAL, LARGE STONES AND COMPACT NATIVE SUBGRADE (95% MPD)
9. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE

STANDARD DETAIL DRAWING	DATE: JUN 26/23	CLASS 2 TRAIL MAJOR MULTI-USE URBAN	DWG. NO.	 City of Kelowna
	SCALE: NTS		SS-T02	

STANDARD DETAIL DRAWING



1. PRUNE BRANCHES BACK TO TRUNK OR LIMB
2. REMOVE LOOSE ROCK & DEBRIS FROM ABOVE TRAIL
3. CLEAR & GRUB SHRUBS & TREES FOR TRAIL EXCEPT THOSE DESIGNATED TO STAY
4. PROVIDE DRAINAGE SWALE AS REQUIRED
5. UNDISTURBED NATIVE SOIL
6. REMOVE ALL ORGANIC MATERIAL, LARGE STONES AND COMPACTED NATIVE SUBGRADE (95% MPD)
7. AGGREGATE TRAIL: 10mm MINUS CRUSHED AGGREGATE / 19mm MINUS COMPACTED GRANULAR BASE OVER APPROVED FILL MATERIAL (95% MPD) REFER TO TRAIL GUIDELINES CHART FOR MAXIMUM SLOPES, MATERIAL DEPTHS AND SPECIFICATIONS
8. OPTIONAL: 50mmD HARD SURFACE INCLUDING BUT NOT LIMITED TO ASPHALT MILLINGS, ASPHALT OR CONCRETE; SHALL NOT HAVE SLOPES EXCEEDING 5% FOR ANY LENGTH. REFER TO BYLAW 7900 FOR STANDARD PAVEMENT STRUCTURE & DEPTHS.

DETAIL No. :

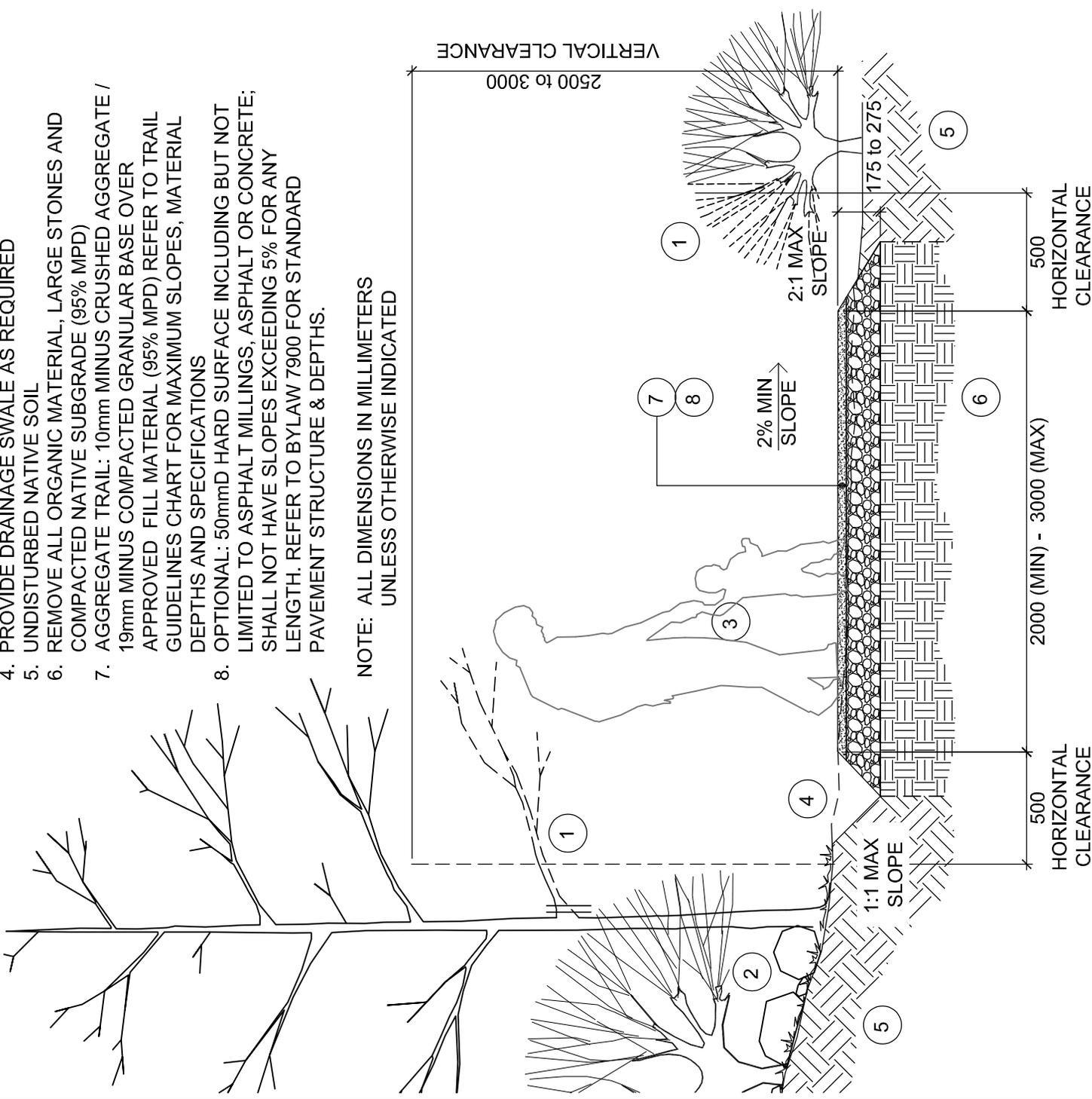
SS-T03

**CLASS 3 - MAJOR MULTI-USE
RURAL**

STANDARD DETAIL DRAWING

1. PRUNE BRANCHES BACK TO TRUNK OR LIMB
2. REMOVE LOOSE ROCK & DEBRIS FROM ABOVE TRAIL
3. CLEAR & GRUB SHRUBS & TREES FOR TRAIL EXCEPT THOSE DESIGNATED TO STAY
4. PROVIDE DRAINAGE SWALE AS REQUIRED
5. UNDISTURBED NATIVE SOIL
6. REMOVE ALL ORGANIC MATERIAL, LARGE STONES AND COMPACTED NATIVE SUBGRADE (95% MPD)
7. AGGREGATE TRAIL: 10mm MINUS CRUSHED AGGREGATE / 19mm MINUS COMPACTED GRANULAR BASE OVER APPROVED FILL MATERIAL (95% MPD) REFER TO TRAIL GUIDELINES CHART FOR MAXIMUM SLOPES, MATERIAL DEPTHS AND SPECIFICATIONS
8. OPTIONAL: 50mmD HARD SURFACE INCLUDING BUT NOT LIMITED TO ASPHALT MILLINGS, ASPHALT OR CONCRETE; SHALL NOT HAVE SLOPES EXCEEDING 5% FOR ANY LENGTH. REFER TO BYLAW 7900 FOR STANDARD PAVEMENT STRUCTURE & DEPTHS.

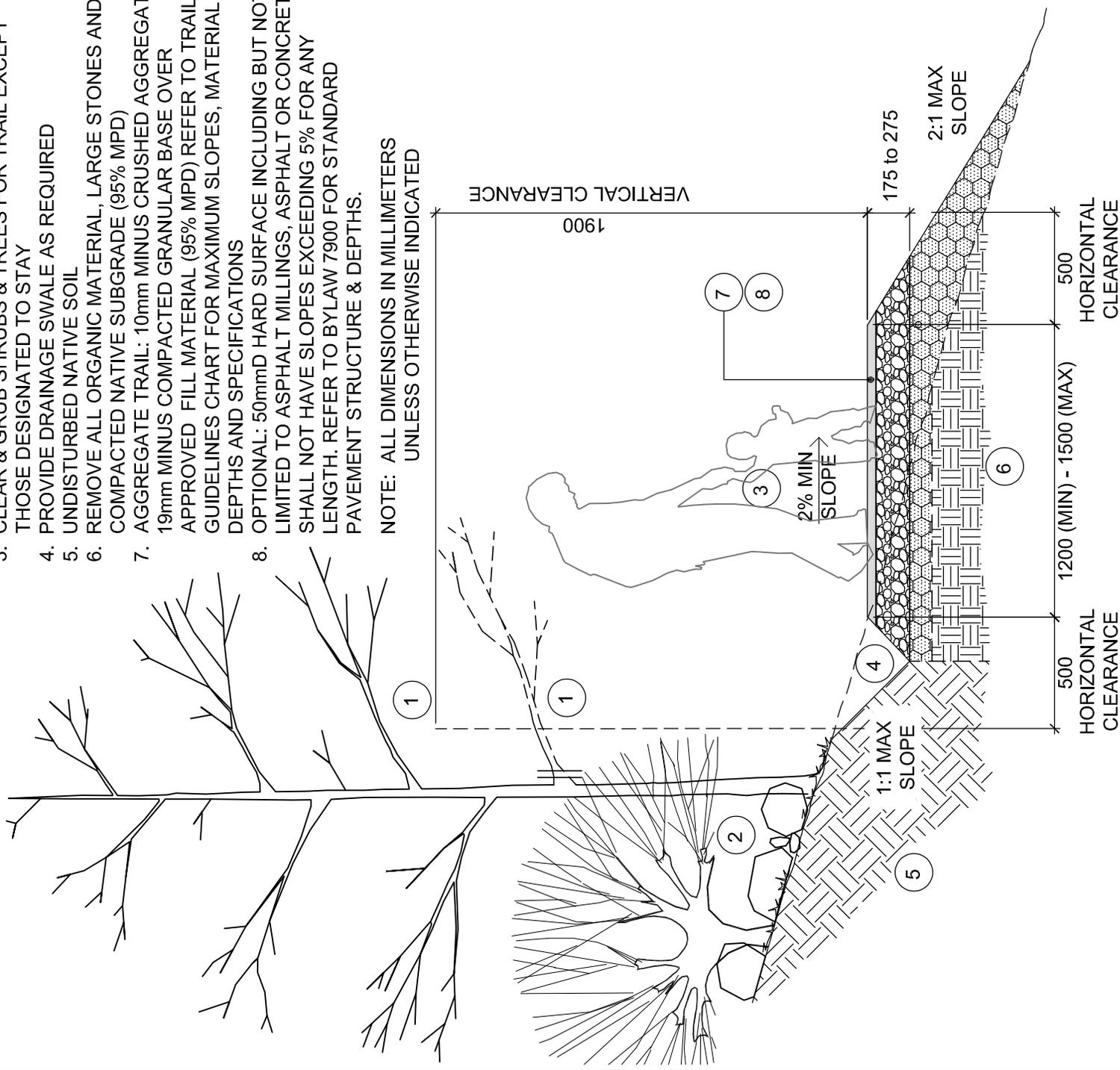
NOTE: ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE INDICATED

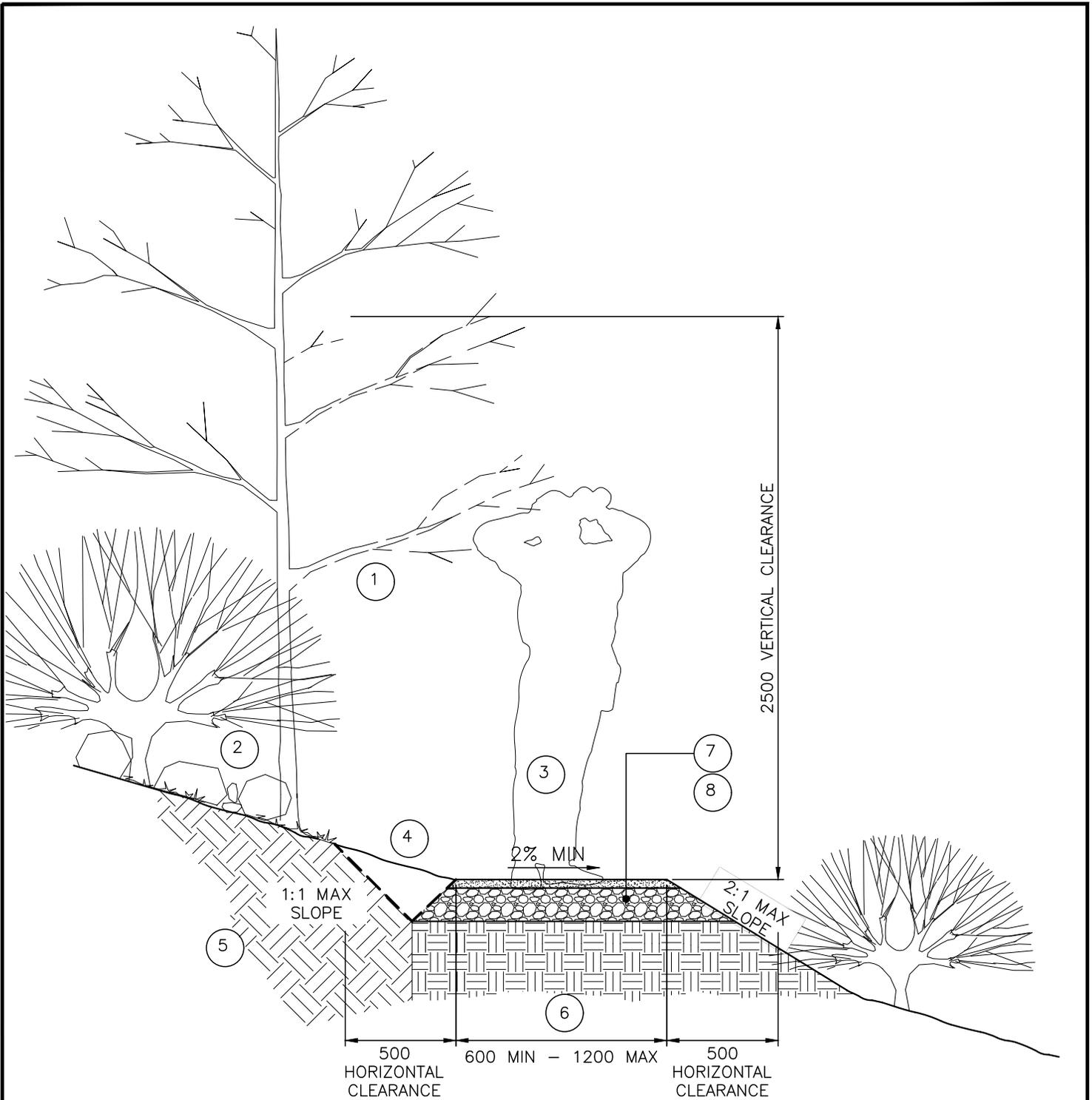


STANDARD DETAIL DRAWING

1. PRUNE BRANCHES BACK TO TRUNK OR LIMB
2. REMOVE LOOSE ROCK & DEBRIS FROM ABOVE TRAIL
3. CLEAR & GRUB SHRUBS & TREES FOR TRAIL EXCEPT THOSE DESIGNATED TO STAY
4. PROVIDE DRAINAGE SWALE AS REQUIRED
5. UNDISTURBED NATIVE SOIL
6. REMOVE ALL ORGANIC MATERIAL, LARGE STONES AND COMPACTED NATIVE SUBGRADE (95% MPD)
7. AGGREGATE TRAIL: 10mm MINUS CRUSHED AGGREGATE / 19mm MINUS COMPACTED GRANULAR BASE OVER APPROVED FILL MATERIAL (95% MPD) REFER TO TRAIL GUIDELINES CHART FOR MAXIMUM SLOPES, MATERIAL DEPTHS AND SPECIFICATIONS
8. OPTIONAL: 50mmD HARD SURFACE INCLUDING BUT NOT LIMITED TO ASPHALT MILLINGS, ASPHALT OR CONCRETE; SHALL NOT HAVE SLOPES EXCEEDING 5% FOR ANY LENGTH. REFER TO BYLAW 7900 FOR STANDARD PAVEMENT STRUCTURE & DEPTHS.

NOTE: ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE INDICATED





NOTES:

1. PRUNE BRANCHES BACK TO TRUNK OR LIMB
2. REMOVE LOOSE ROCK & DEBRIS FROM ABOVE TRAIL
3. CLEAR & GRUB SHRUBS & TREES FOR TRAIL EXCEPT THOSE DESIGNATED TO STAY
4. PROVIDE DRAINAGE SWALE AS REQUIRED WHERE ADEQUATE DISCHARGE LOCATIONS ARE PRESENT
5. UNDISTURBED NATIVE SOIL
6. REMOVE ALL ORGANIC MATERIAL, LARGE STONES AND COMPACT NATIVE SUBGRADE (95% MPD)
7. APPROVED FILL MATERIAL / NATURAL TRAIL
8. REFER TO TRAIL GUIDELINES CHART FOR MAXIMUM SLOPES AND SPECIFICATIONS
9. OPTIONAL SURFACE: 10mm MINUS CRUSHED AGGREGATE OVER 19mm MINUS COMPACTED GRANULAR BASE (95% MPD)
10. DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

**STANDARD
DETAIL
DRAWING**

DATE:
JUN 26/23

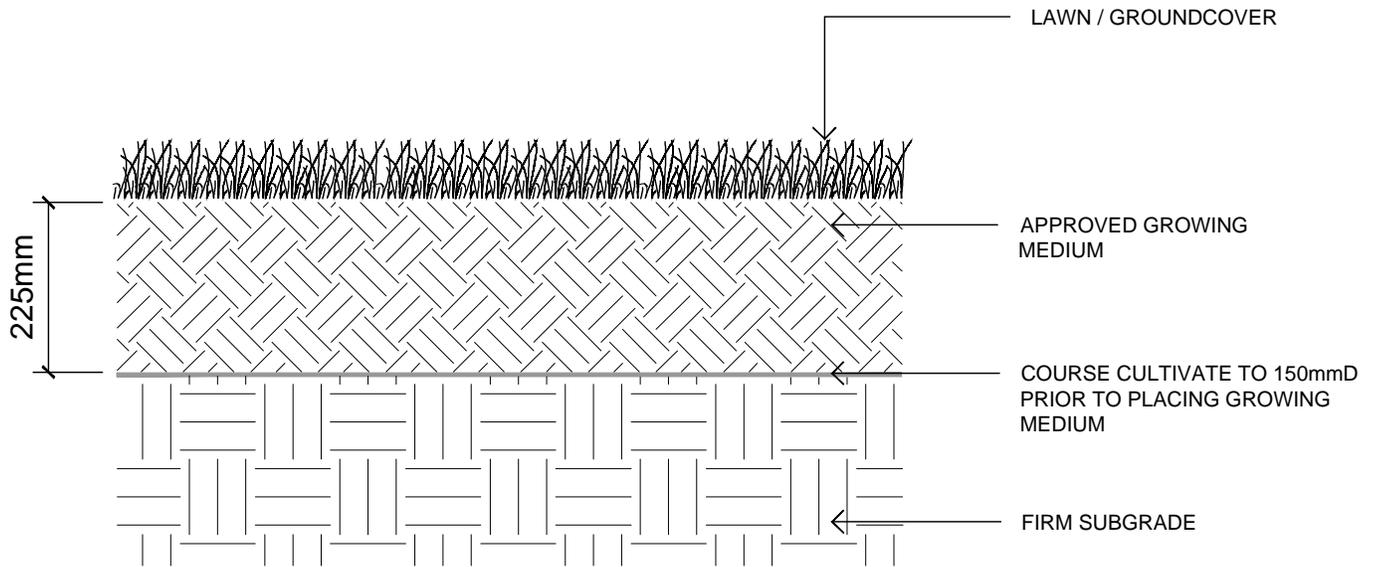
SCALE:
NTS

**CLASS 6 TRAIL
NATURE TRAIL RURAL**

DWG. NO.

SS-T06





JUNE 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

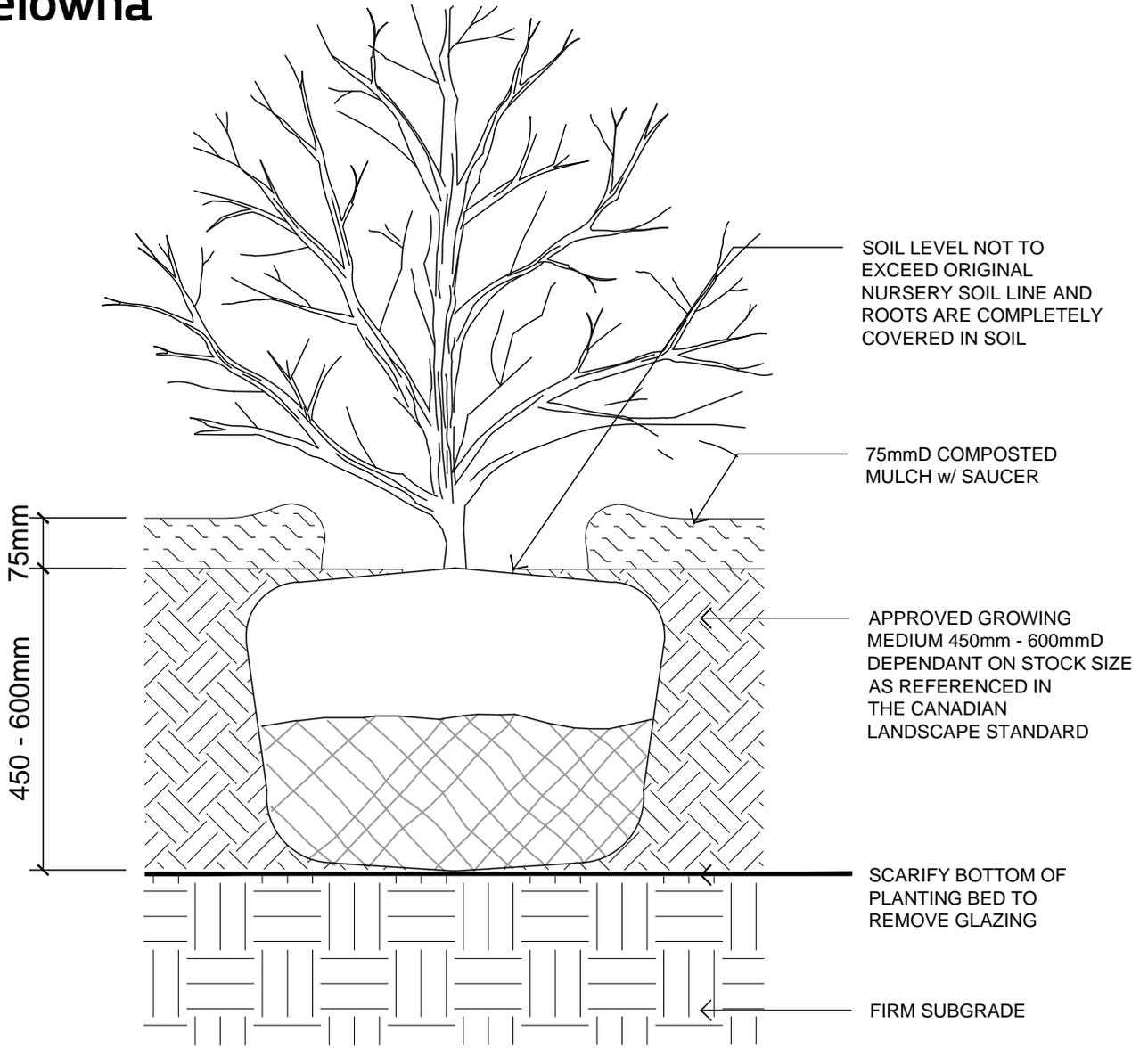
**GROWING MEDIUM
BOULEVARD GROUNDCOVER**

DETAIL No.:

SS L01

SCALE:

NTS



JUNE 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

**GROWING MEDIUM
BOULEVARD PLANTING BED**

DETAIL No.:

SS L02

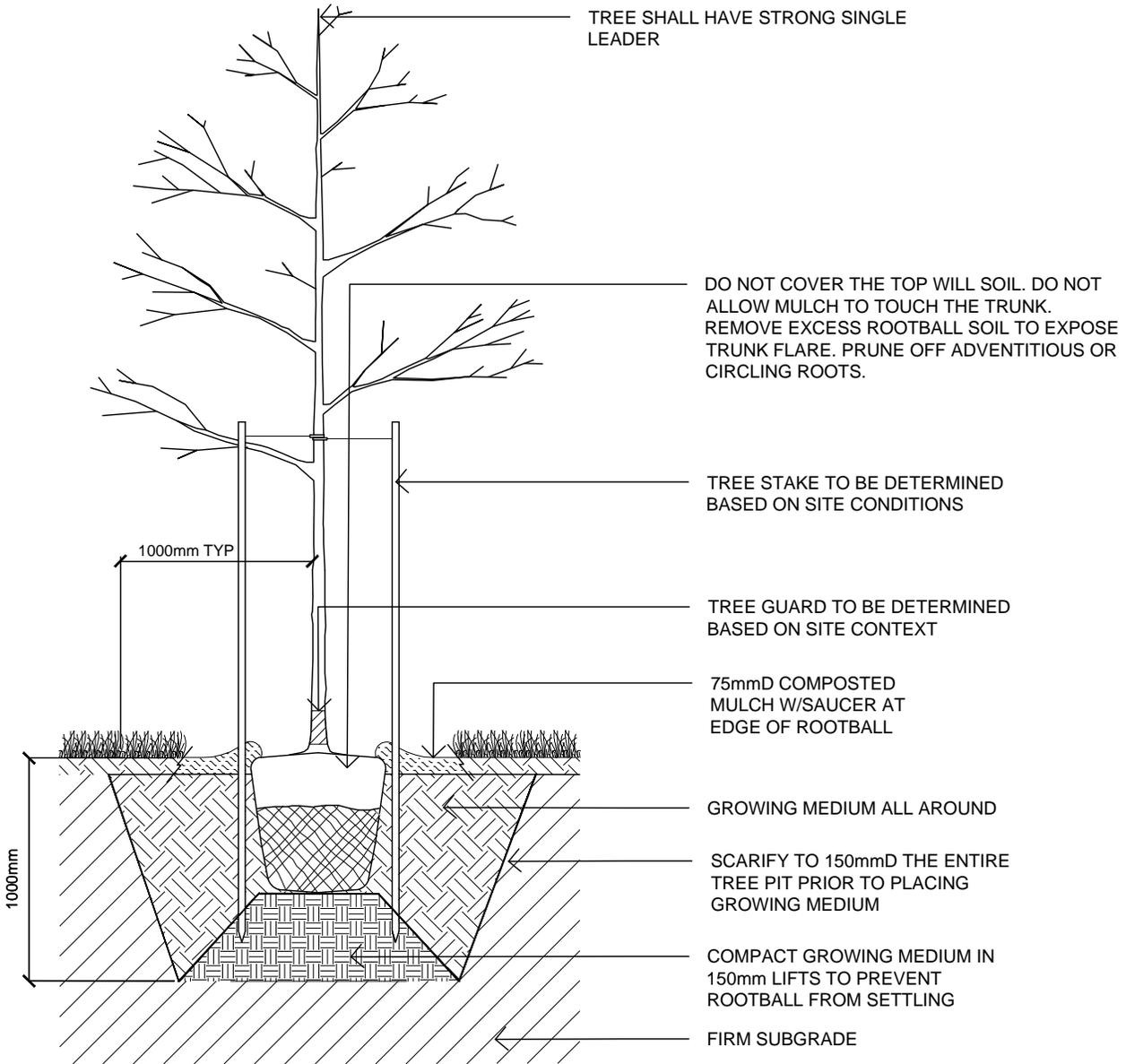
SCALE:

NTS



NOTES:

1. POLY MESH STRAP GUYING ASSEMBLY TO BE DEEP ROOT ARBORTIE INSTALLED PER MANUFACTURER'S INSTRUCTIONS OR APPROVED EQUAL.
2. TREE STAKES TO BE MIN. 75mm CEDAR STAKES, INSTALLED 600mm IN THE GROUND AND NO MORE THAN 2/3 OF THE WAY UP THE TRUNK.



JUNE 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

TREE - IN OPEN GREEN SPACE

DETAIL No.:

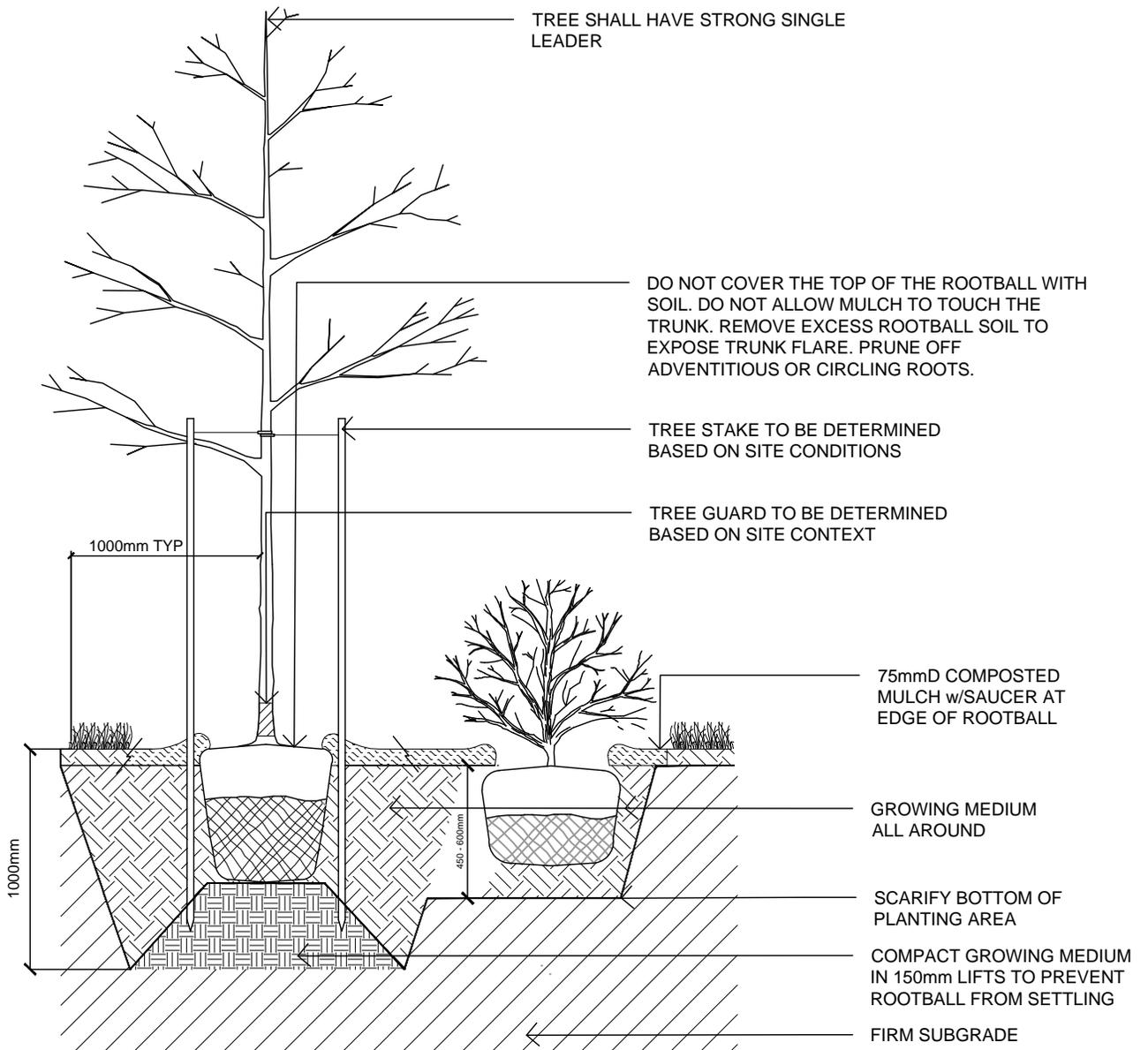
SS L03

SCALE:

NTS

NOTES:

1. POLY MESH STRAP GUYING ASSEMBLY TO BE DEEP ROOT ARBORTIE INSTALLED PER MANUFACTURER'S INSTRUCTIONS OR APPROVED EQUAL.
2. TREE STAKES TO BE MIN. 75mm CEDAR STAKES, INSTALLED 600mm IN THE GROUND AND NO MORE THAT 2/3 OF THE WAY UP THE TRUNK
3. REFERENCE DETAIL SS-L02 FOR SHRUB GROWING MEDIUM DEPTH



JUNE 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

TREE - IN PLANTING BED

DETAIL No.:

SS L04

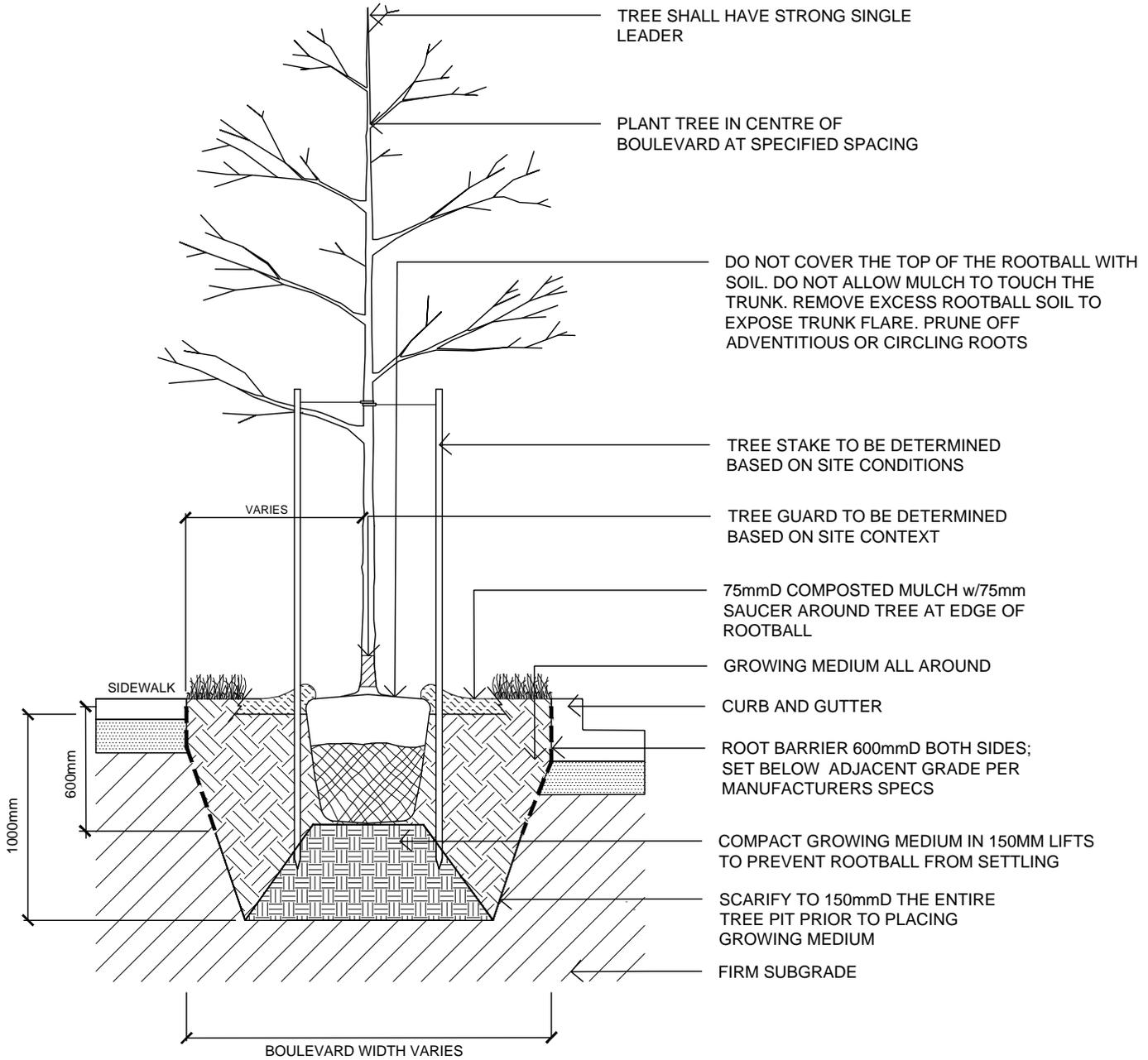
SCALE:

NTS



NOTES:

1. POLY MESH STRAP GUYING ASSEMBLY TO BE DEEP ROOT ARBORTIE INSTALLED PER MANUFACTURER'S INSTRUCTIONS OR APPROVED EQUAL.
2. TREE STAKES TO BE MIN. 75mm CEDAR STAKES, INSTALLED 600mm IN THE GROUND AND NO MORE THAT 2/3 OF THE WAY UP THE TRUNK
3. ROOT BARRIER TO BE INSTALLED WHERE TRUNK IS WITHIN 3m OF ADJACENT HARD SURFACE.



JUNE 2024

**STANDARD
DETAIL
DRAWING**

DETAIL TITLE:

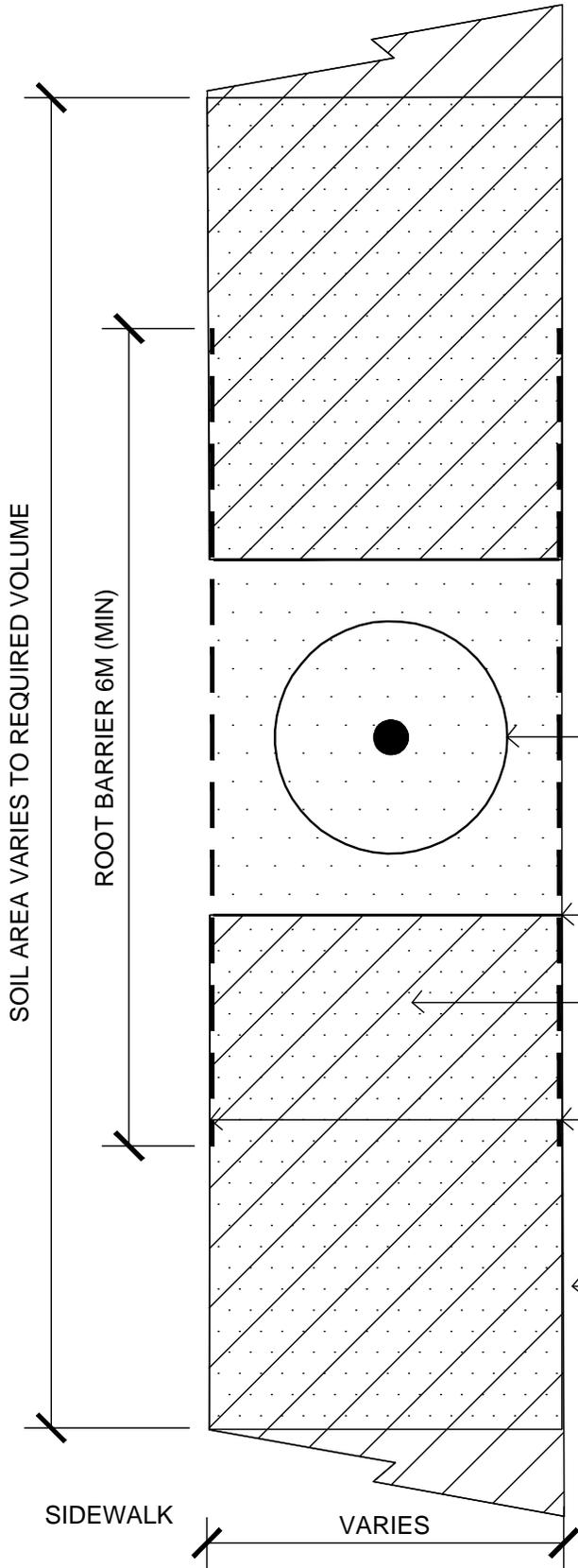
**TREE - IN BOULEVARD
SECTION**

DETAIL No.:

SS L05a

SCALE:

NTS



NOTES:

1. BOULEVARD WIDTH DETERMINES THE LENGTH OF SOIL AREA REQUIRED.

	TOTAL SOIL VOLUME	
	SINGLE TREE	MULTIPLE TREES
LARGE 15 - 25m mature height	20cu m	15cu m
MEDIUM 9 - 15m mature height	18cu m	12cu m
SMALLL <8m mature height	15cu m	10cu m

TREE

LIMIT OF ADJACENT TURF OR PLANTINGS (TYP)

SOIL VOLUME; SEE NOTES

CONTINUOUS ROOT BARRIER FOR MIN. OF 3m ON EITHER SIDE OF TRUNK

CURB

ROAD

SOIL AREA VARIES TO REQUIRED VOLUME

ROOT BARRIER 6M (MIN)

SIDEWALK

VARIES

JUNE 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

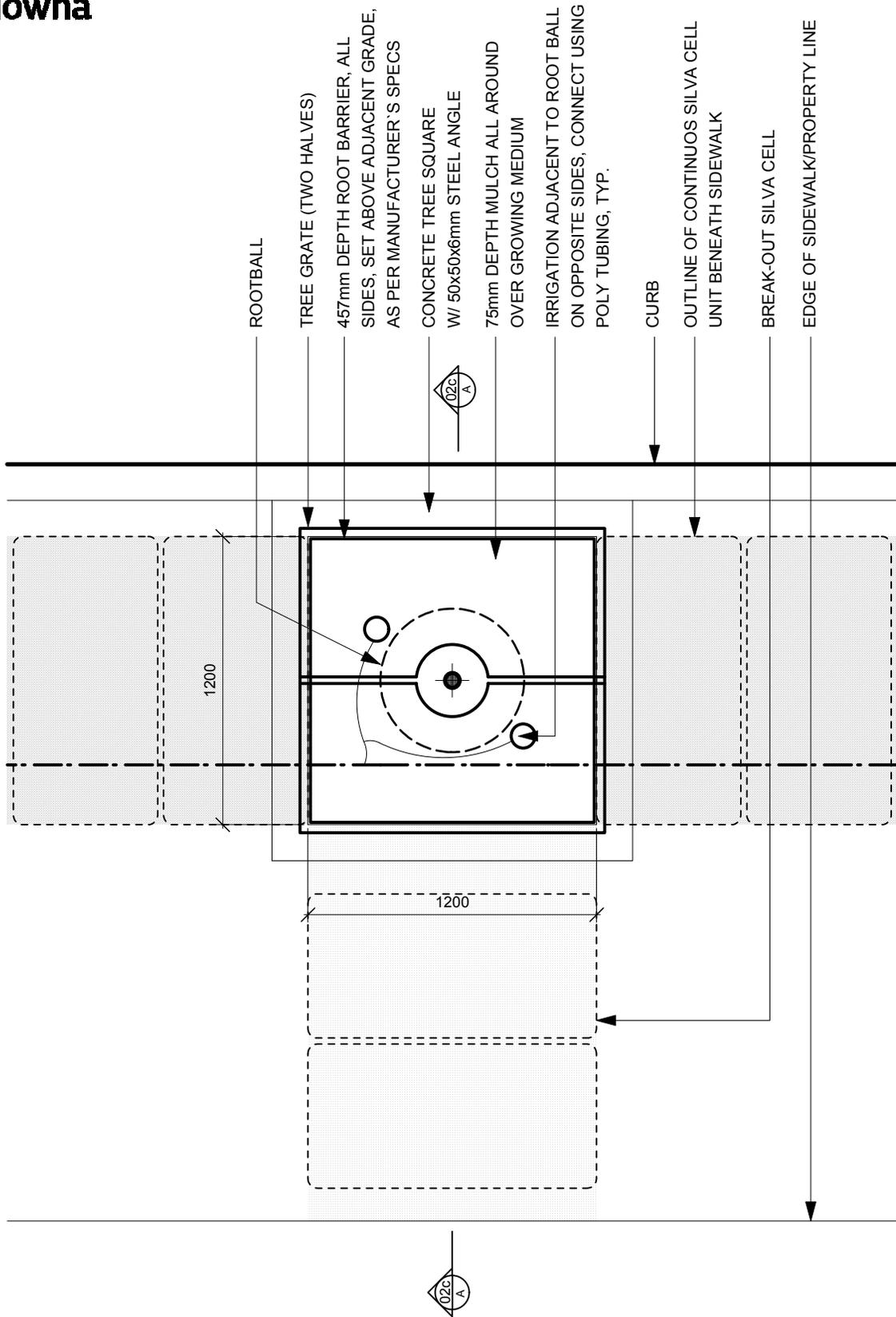
**TREE - IN BOULEVARD
PLAN**

DETAIL No.:

SS L05b

SCALE:

NTS



N.B. All dimensions in millimetres, unless noted otherwise

DECEMBER 2010

**STANDARD
DETAIL
DRAWING**

DETAIL
TITLE :

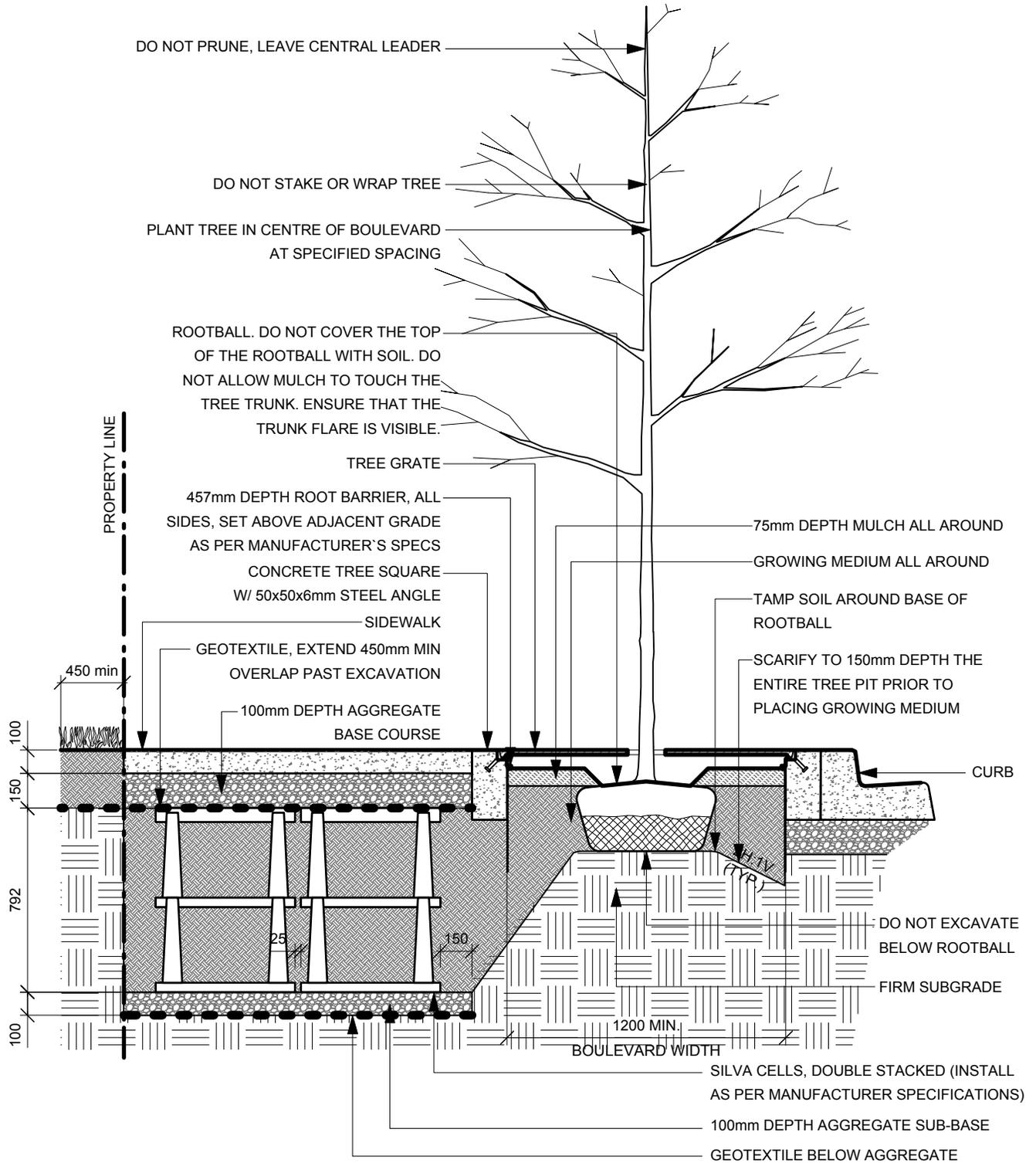
**Boulevard Tree - in Soil Cell
(Plan)**

DETAIL No. :

SS-L.06a

NOTES :

1. DO NOT STAKE OR WRAP TREE UNLESS REQUIRED BY CITY. WHEN REQUIRED, STAKE TREES USING ARBOURTIE OR EQUIVALENT TO ALLOW FOR LOCALIZED TREE SWING
2. ROOT BARRIER : INSTALLED PER MANUFACTURER'S INSTRUCTIONS
3. USE ROOT BARRIER ADJACENT TO HARD SURFACE WHERE TREE TRUNK IS WITHIN 3.0m OF HARD SURFACE.
4. DO NOT DISTURB THE ROOTBALL OR PLANTING PIT OF THE TREE WITH THOSE OF OTHER TREES AND SHRUBS PLANTED IN THE PLANTING BED.



N.B. All dimensions in millimetres, unless noted otherwise

DECEMBER 2010

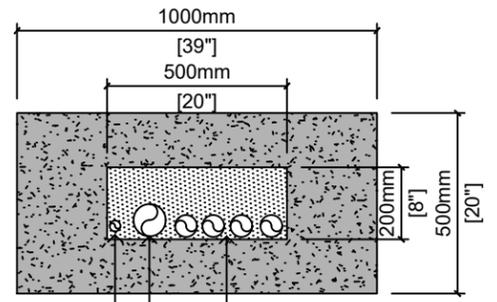
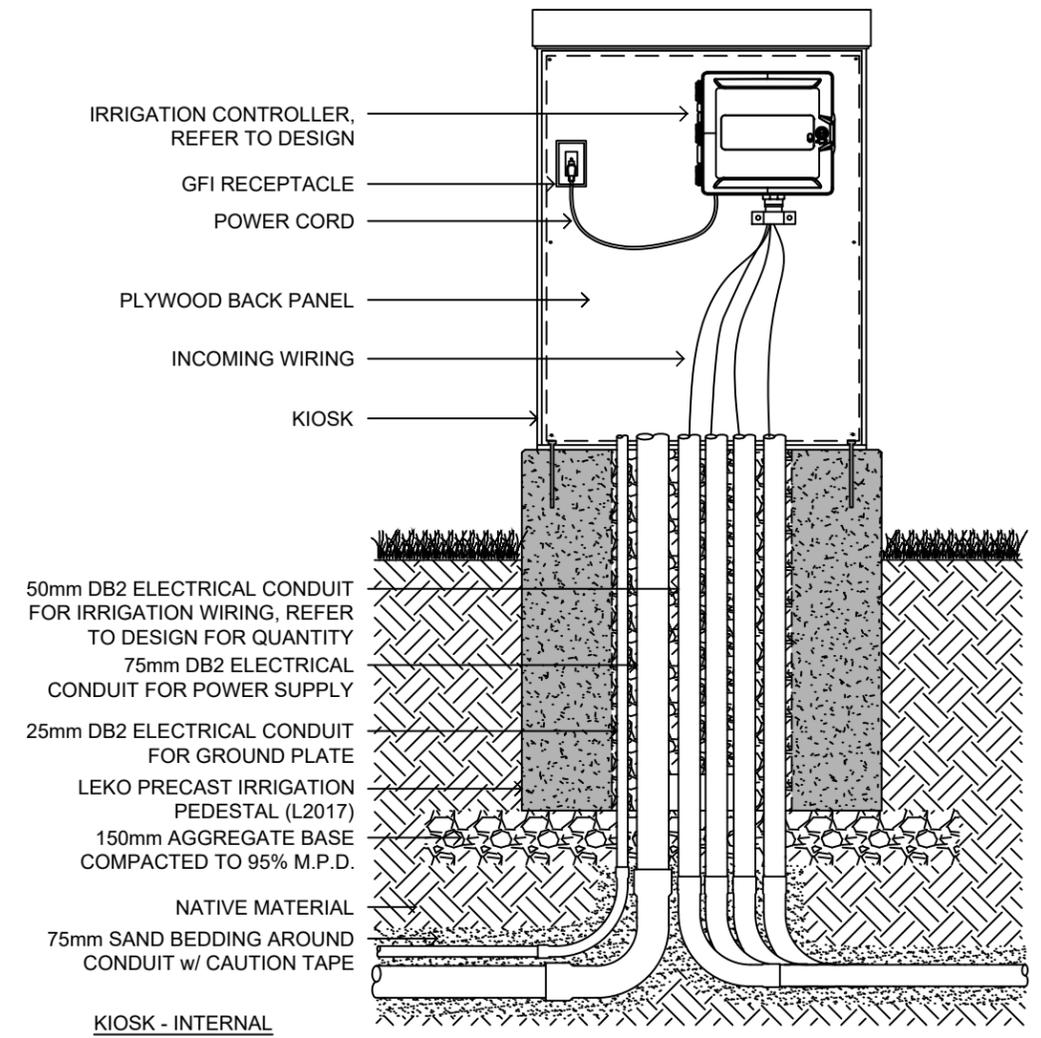
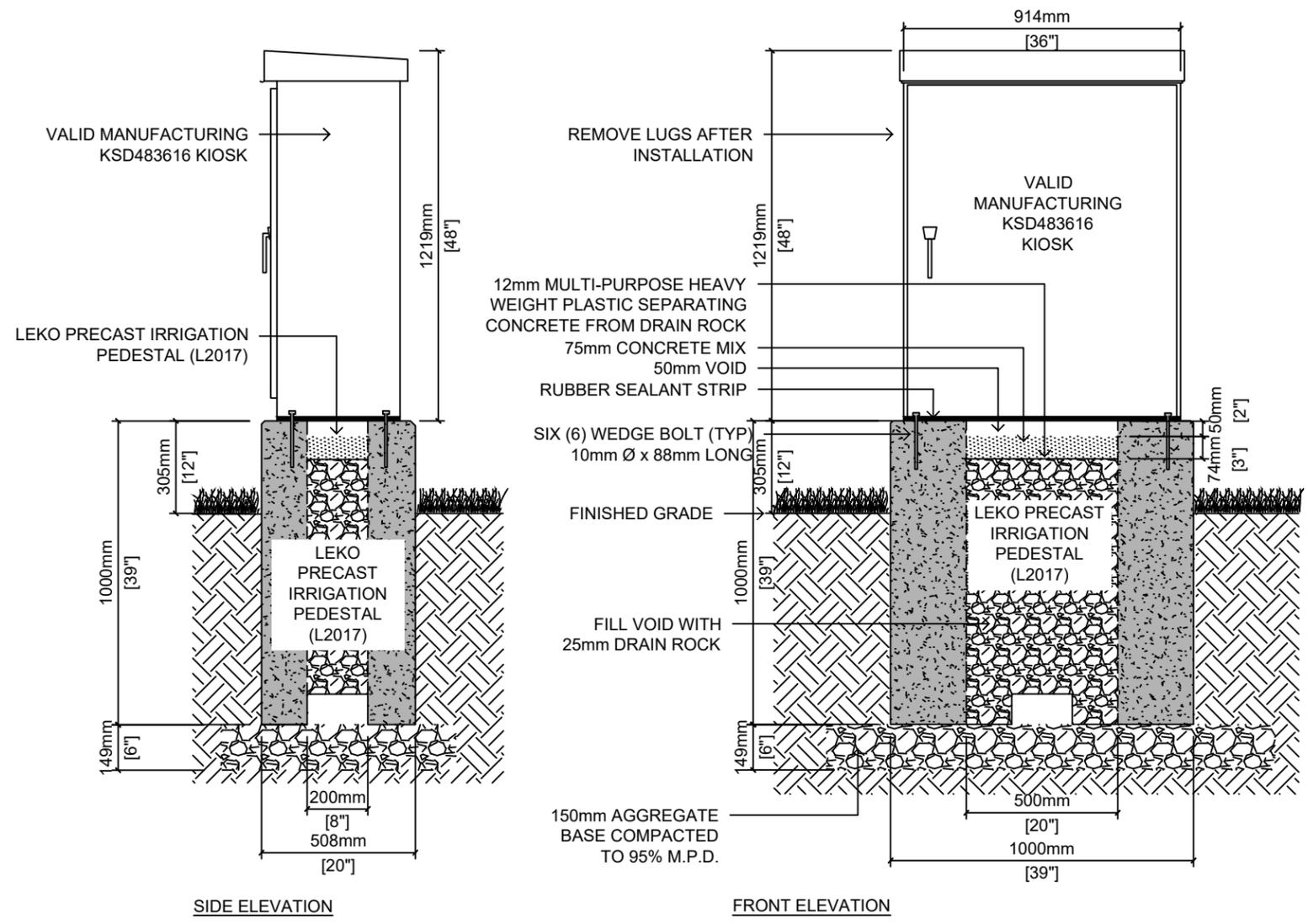
STANDARD
DETAIL
DRAWING

DETAIL
TITLE :

Boulevard Tree - in Soil Cell (Section A-A')

DETAIL No. :

SS-L.06b



- BASE GENERAL NOTES**
- PRECAST CONCRETE SHALL BE EXPOSURE CLASS HSe AND MEET MIN COMPRESSIVE STRENGTH OF 30MPa @28d
 - AIR CATEGORY: 4.0% - 7.0% (EXCEPT WHERE ZERO-SLUMP CONCRETE IS USED)
 - AGGREGATE: CSA/CAN A23.4 MAXIMUM SIZE: 20mm
 - ADMIXTURES: CSA/CAN A23.4
 - REINFORCING: GRADE 400W CSA G30.18, 3x12 W2.5/W2.5
 - INSERT/EMBEDS: AS NOTED IN DRAWING DETAILS
 - MANUFACTURE OF PRECAST CONCRETE UNITS SHALL BE IN ACCORDANCE WITH SPECIFICATION CSA A23.4
- ** LEKO PRECAST LTD. SHALL NOT BE RESPONSIBLE FOR INSTALLATION PRACTICES FOLLOWED ON-SITE UNLESS PERFORMED BY LEKO PRECAST LTD. **

935Kg (2,060 LBS)

- 25mm DB2 FOR GROUND PLATE
- 75mm DB2 FOR POWER SUPPLY
- 50mm DB2 FOR CONTROL WIRING, REFER TO DESIGN FOR QUANTITY

- NOTES:**
- REFER TO IRRIGATION DESIGN FOR REQUIRED COMMUNICATION HARDWARE
 - CONTRACTOR TO CONNECT HYDROMETER AND PROGRAM MASTER VALVE AND FLOW SENSING FUNCTIONS PRIOR TO SUBSTANTIAL COMPLETION
 - CONTRACTOR SHALL LABEL ALL WIRES

DETAIL TITLE:

DETAIL No.: **SS-IR.01a**

SCALE: **1:20**

APRIL 2024

DOUBLE-SIDED METERED KIOSK
EXTERNAL

KIOSK CONTENTS

- MICROELECTRIC BS2-INTCVBC - METER BASE, 200A 4 JAW, w/ ISOLATED NEUTRAL BLOCK SQ-D CQ0112M60PC - PANEL, 12CCT 100A, 1Ø 3W 120/240V, W/ 60A MAIN (SERVICE ENTRANCE RATED) (4) SQ-D Q0115 - BREAKERS, 15A 1P, PUSH-ON 10kAIC
- LEVITON GFNT1-W - RECEPTACLE, GFI 15A, 5-15R

KIOSK GENERAL NOTES

- ENCLOSURE CERTIFIED 3R, 240V 60A SUPPLY, 10kA
- KIOSK SHELL MADE OF 0.125" ALUMINUM
- KIOSK SHELL POWDER COATED PC101 (ANSI 61) GREY
- INTERIOR PANELS, WIREWAYS, AND COVERS ARE 14GA GALVANIZED STEEL (UNFINISHED)
- WIREWAYS WITH DEADFRONT COVERS
- HINGED DOORS WITH POUR IN PLACE GASKETS, W/ GAS SHOCK STAYS
- DOOR HANDLES ARE STAINLESS STEEL, PADLOCK-ABLE, AND HAVE THREE POINT LATCHING SYSTEM WIRED FROM METER BASE TO PANEL WITH #3AWG COPPER
- BACK PANEL LAYOUT MAY BE REVISED DURING ASSEMBLY TO ALLOW BETTER FIT OF COMPONENTS WIREWAY FOOTPRINT WILL BE MAINTAINED
- CABLE/CONDUIT CLAMPS SUPPLIED AND INSTALLED BY OTHERS
- SYSTEM DESIGNED FOR HOT-METERED APPLICATIONS
- DESIGNED TO BC HYDRO STANDARD ES54 S1-01 REV 9

CONTROLLER NOTES:

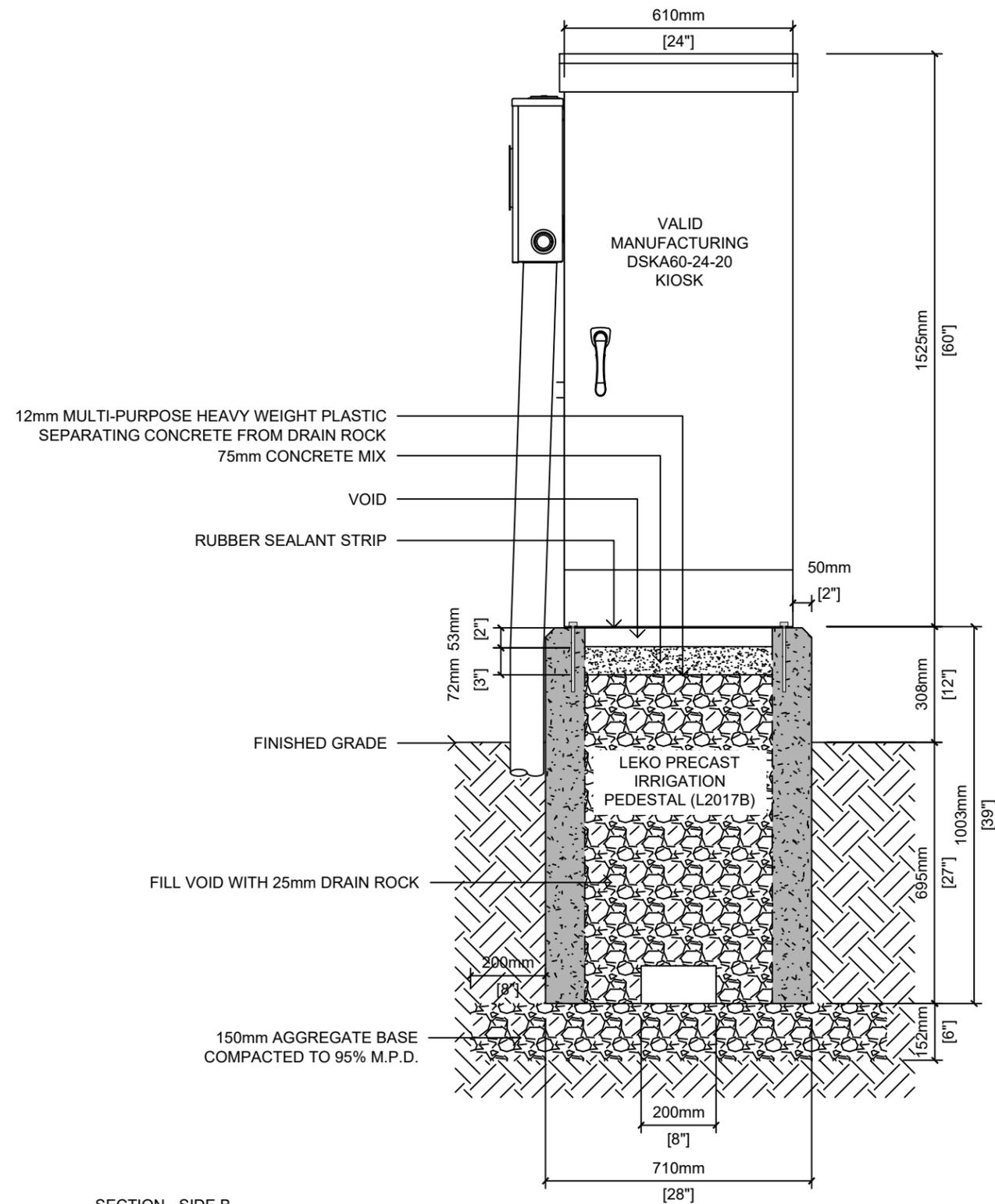
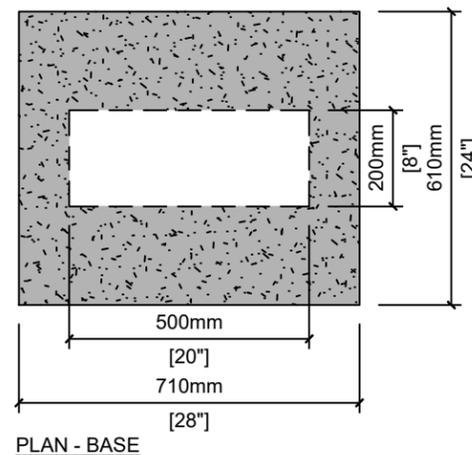
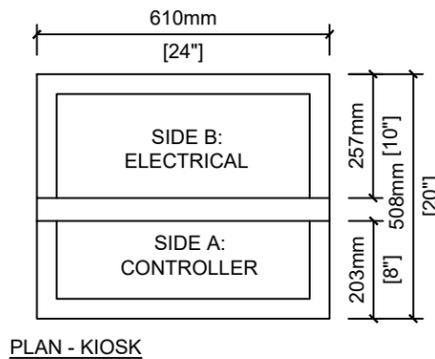
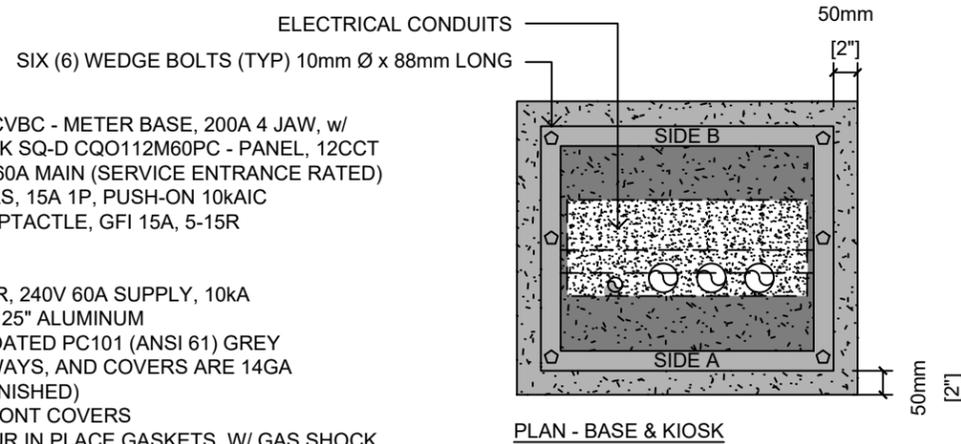
- CONTRACTOR TO INSTALL RAIN BIRD IQ NCC 4G CELLULAR CARTRIDGE
- CONTRACTOR TO CONNECT HYDROMETER AND PROGRAM MASTER VALVE AND FLOW SENSING FUNCTIONS PRIOR TO SUBSTANTIAL COMPLETION
- CONTRACTOR SHALL TO LABEL ALL WIRES

BASE GENERAL NOTES

- PRECAST CONCRETE SHALL BE EXPOSURE CLASS HSe AND MEET MIN COMPRESSIVE STRENGTH OF 30MPA @28d
- AIR CATEGORY: 4.0% - 7.0% (EXCEPT WHERE ZERO-SLUMP CONCRETE IS USED)
- AGGREGATE: CSA/CAN A23.4 MAXIMUM SIZE: 20mm
- ADMIXTURES: CSA/CAN A23.4
- REINFORCING: GRADE 400W CSA G30.18, 3x12 W2.5/W2.5
- INSERT/EMBEDS: AS NOTED IN DRAWING DETAILS
- MANUFACTURE OF PRECAST CONCRETE UNITS SHALL BE IN ACCORDANCE WITH SPECIFICATION CSA A23.4

** LEKO PRECAST LTD. SHALL NOT BE RESPONSIBLE FOR INSTALLATION PRACTICES FOLLOWED ON-SITE UNLESS PERFORMED BY LEKO PRECAST LTD. **

600Kg (1300 LBS)



DETAIL TITLE:

DETAIL No.: **SS-IR.01b**

SCALE: **1:15**

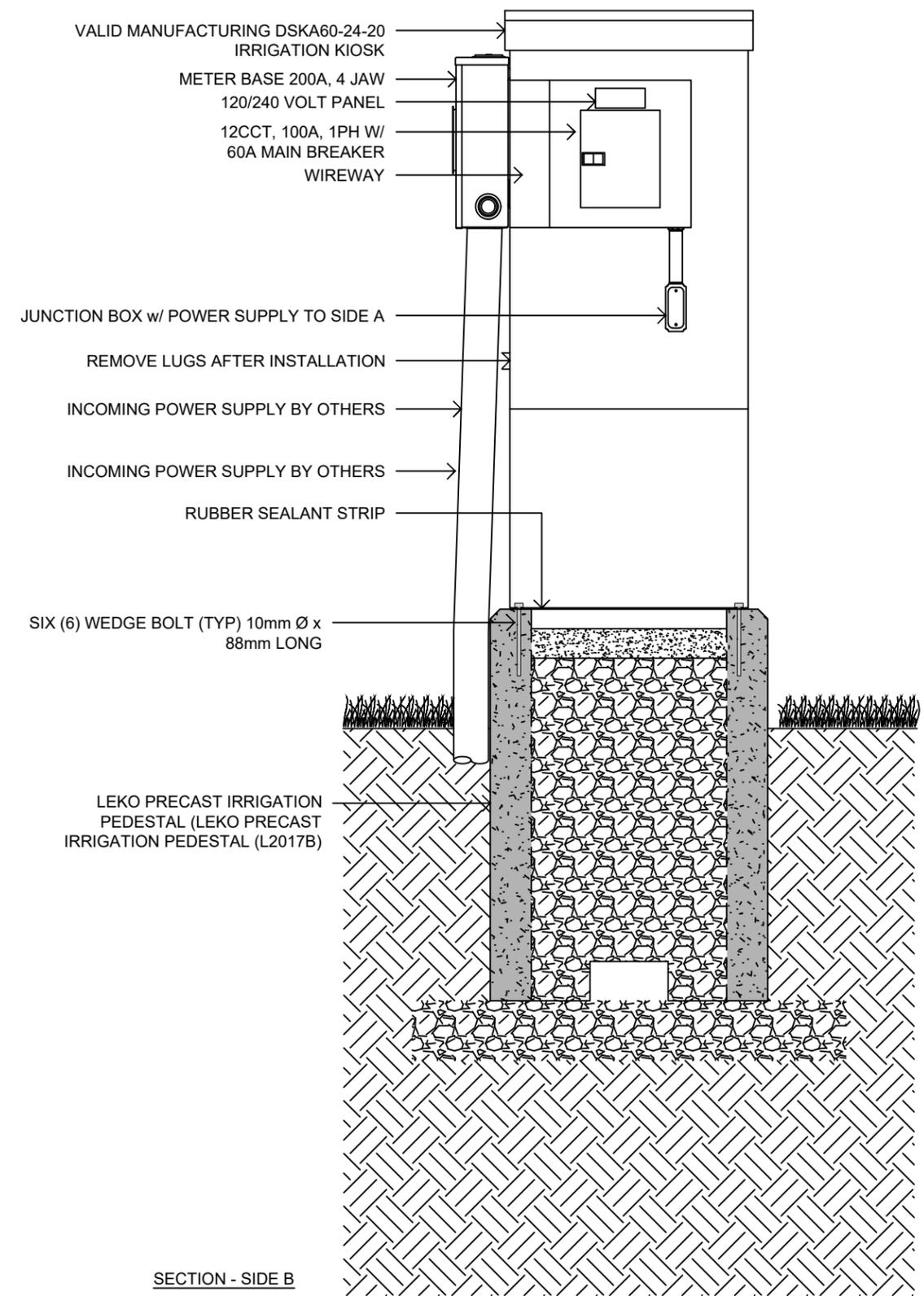
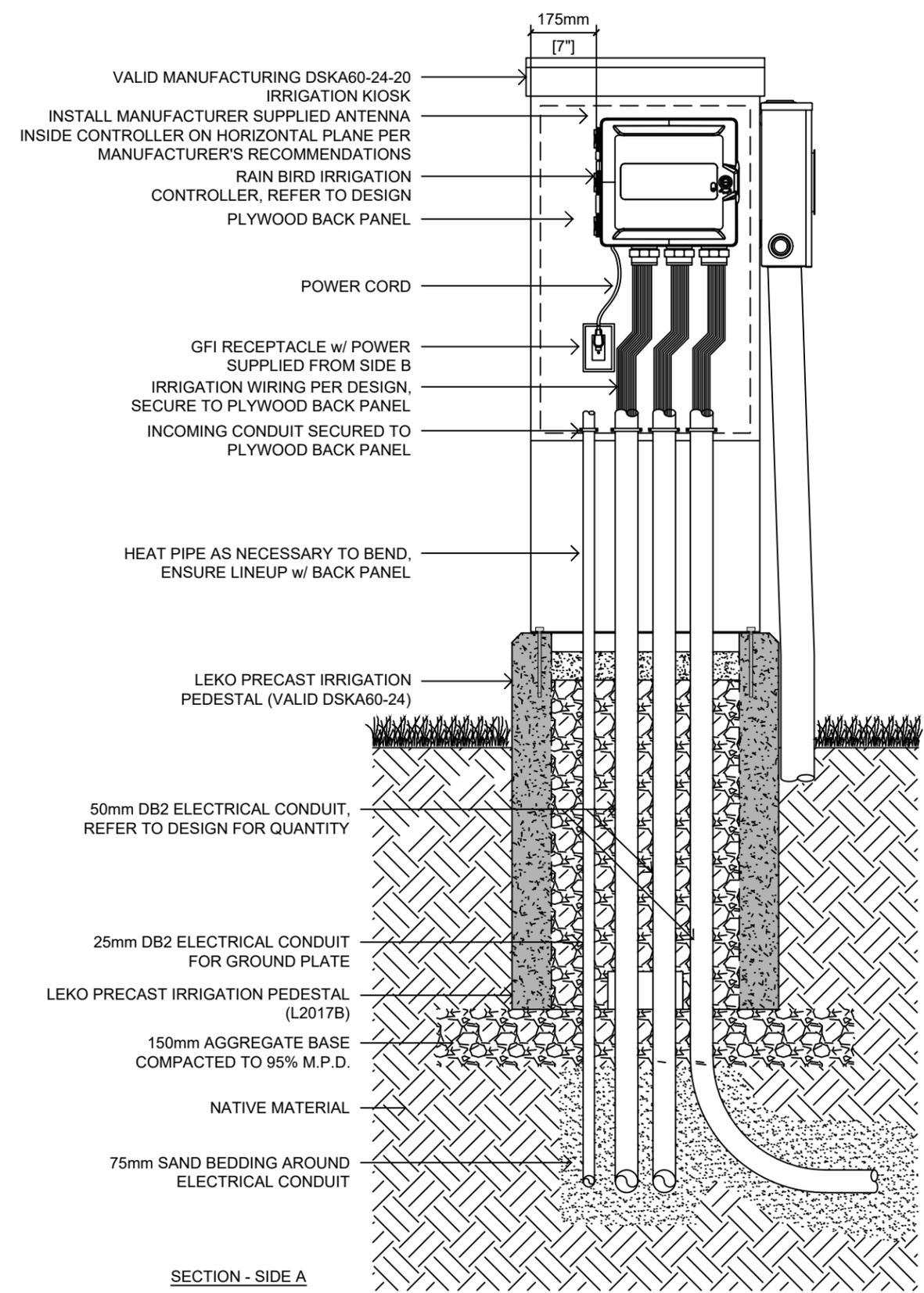
DOUBLE-SIDED METERED KIOSK
INTERNAL

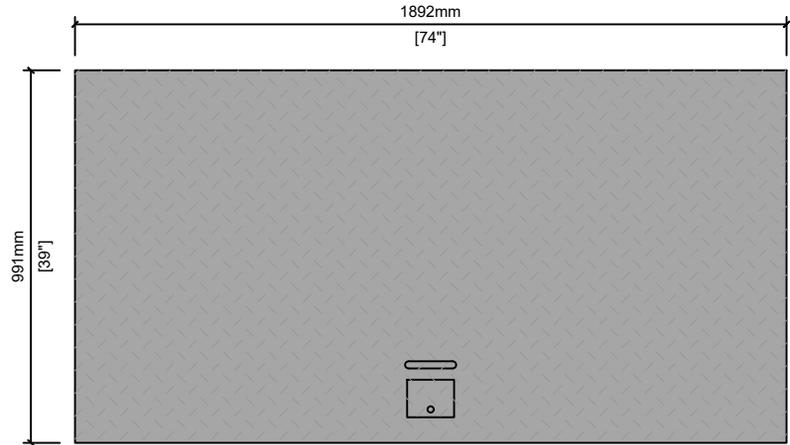
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DETAIL No.: **SS-IR.01c**

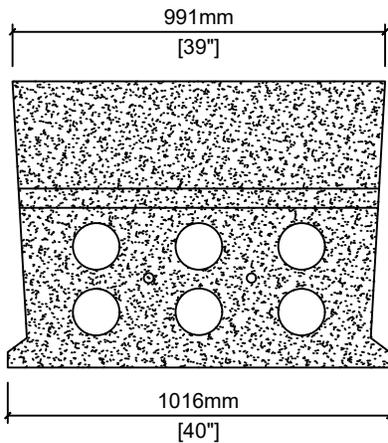
SCALE: **1:15**

APRIL 2024

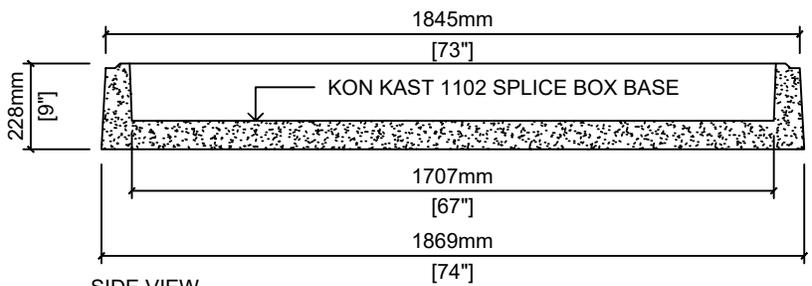
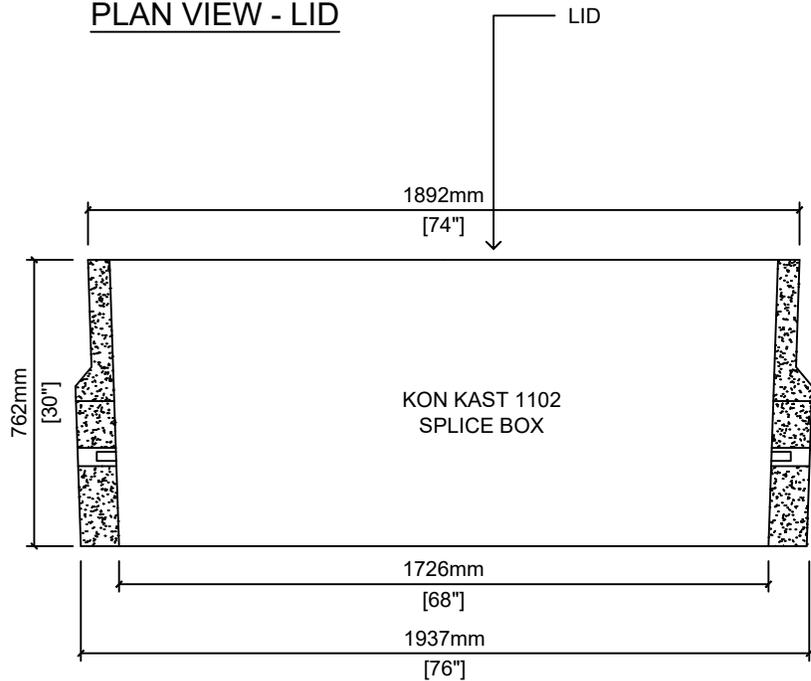




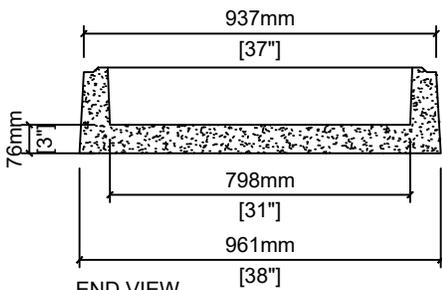
PLAN VIEW - LID



END VIEW



SIDE VIEW



APRIL 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

**IRRIGATION VAULT
KON KAST 1102**

DETAIL No.:

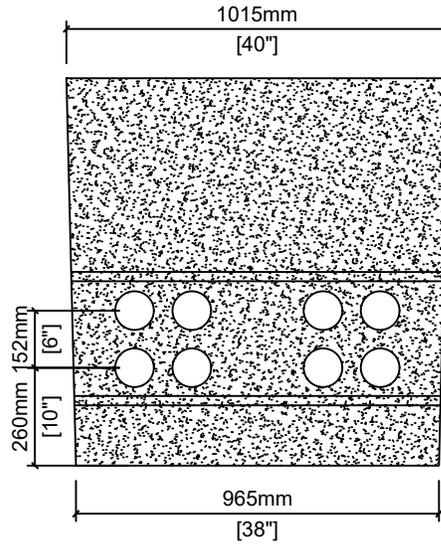
SS-IR.02a

SCALE:

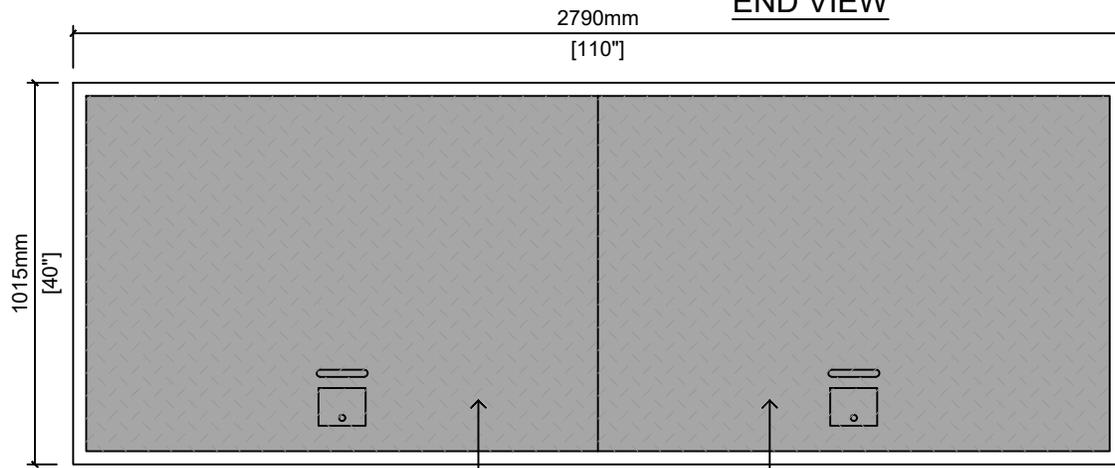
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NOTES:

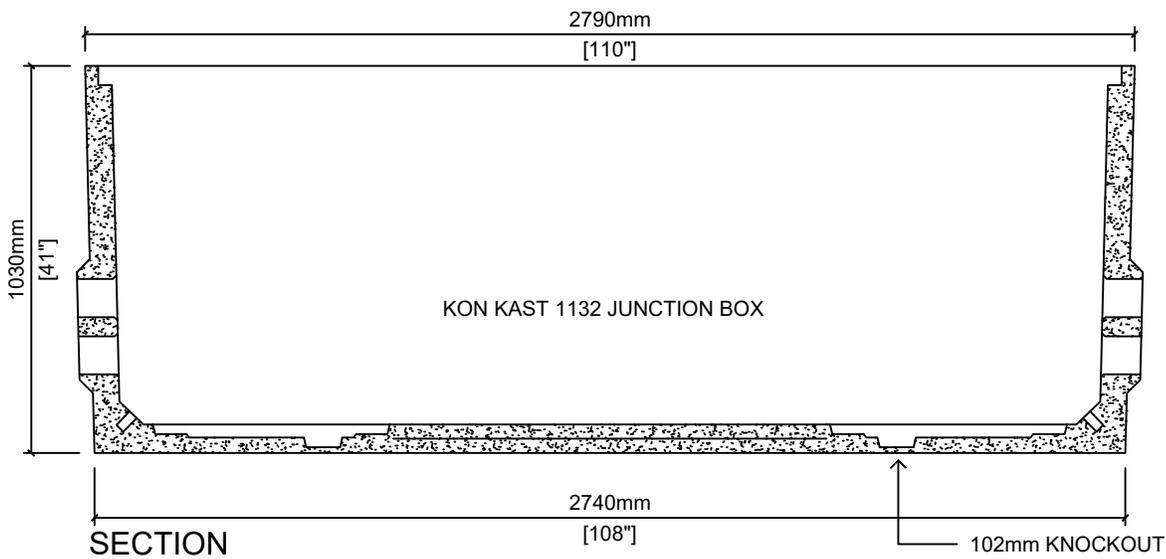
- 30 MPa @ 28 DAYS
- MEETS H-20 LOADING
- SULPHATE RESISTANT CONCRETE



END VIEW



PLAN VIEW - LID



SECTION

APRIL 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

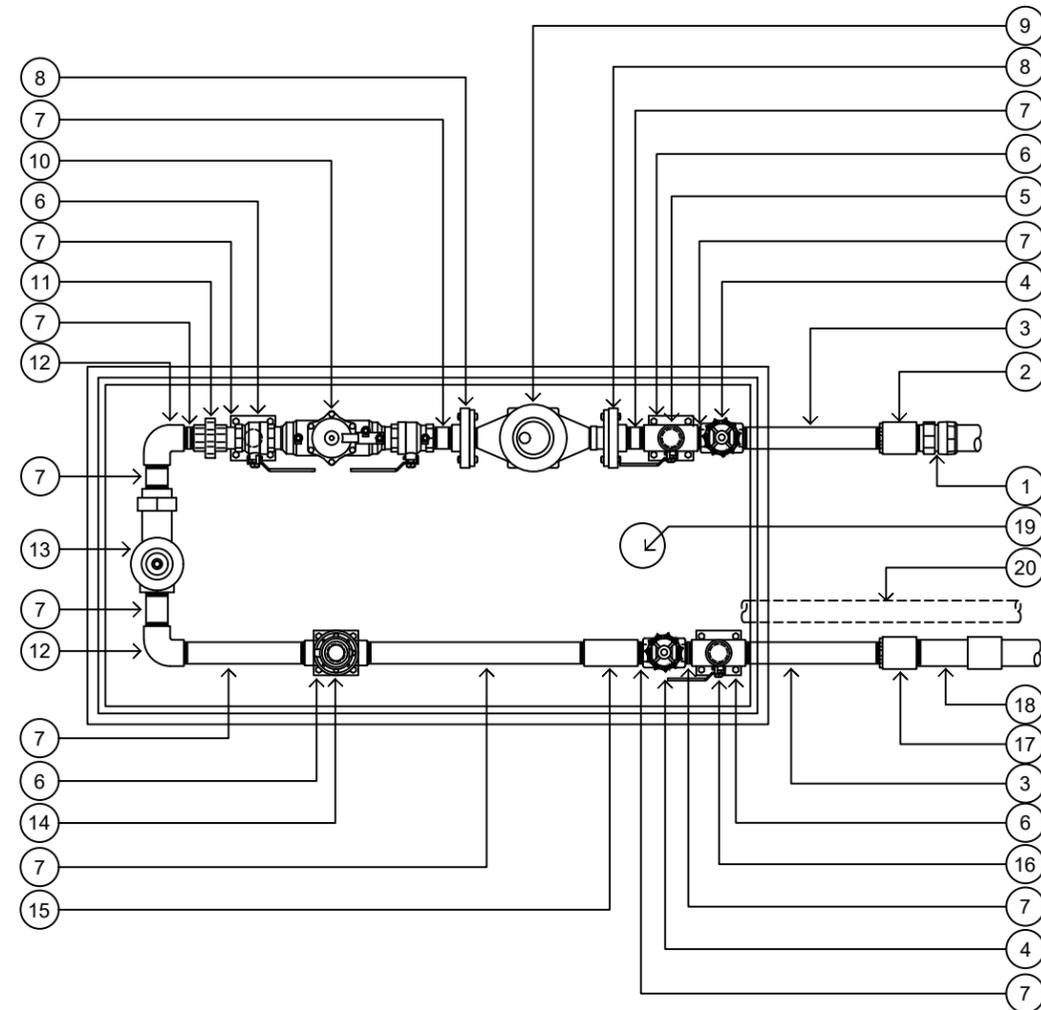
**IRRIGATION VAULT
KON KAST 1132**

DETAIL No.:

SS-IR.02b

SCALE:

1:20

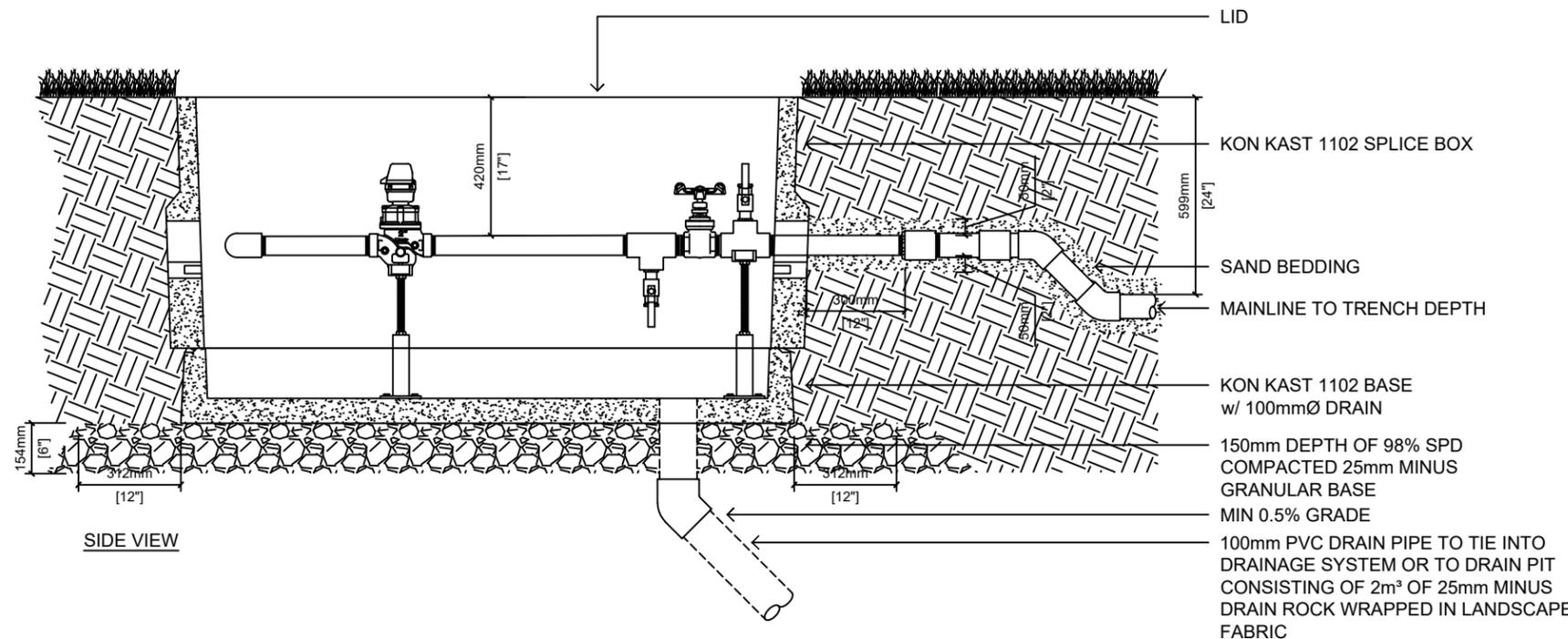


PLAN VIEW - CHAMBER

#	25mm POC	38mm POC	50mm POC
1	BRASS COMPRESSION x MPT w/ STAINLESS STEEL PIPE INSERT	BRASS COMPRESSION x MPT w/ STAINLESS STEEL PIPE INSERT	BRASS COMPRESSION x MPT w/ STAINLESS STEEL PIPE INSERT
2	BRASS COUPLER SIZED TO INCOMING PIPE w/ 25mm BRASS REDUCING BUSHING	BRASS COUPLER SIZED TO INCOMING PIPE w/ 38mm BRASS REDUCING BUSHING	BRASS COUPLER SIZED TO INCOMING PIPE w/ 50mm BRASS REDUCING BUSHING
3	25mm BRASS NIPPLE, EXTEND TO 300mm FROM VAULT	38mm BRASS NIPPLE, EXTEND TO 300mm FROM VAULT	50mm BRASS NIPPLE, EXTEND TO 300mm FROM VAULT
4	25mm GATE VALVE	38mm GATE VALVE	50mm GATE VALVE
5	BLOW-OUT ASSEMBLY w/ 25mm BRASS TEE, 25mm BRASS NIPPLE, 25mm BRASS BALL VALVE, w/ AIR RELIEF VALVE	BLOW-OUT ASSEMBLY w/ 38mm x 25mm BRASS TEE, 25mm BRASS NIPPLE, 25mm BRASS BALL VALVE, w/ AIR RELIEF VALVE	BLOW-OUT ASSEMBLY w/ 50mm x 25mm BRASS TEE, 25mm BRASS NIPPLE, 25mm BRASS BALL VALVE, w/ AIR RELIEF VALVE
6	PIPE STAND	PIPE STAND	PIPE STAND
7	25mm BRASS NIPPLE	38mm BRASS NIPPLE	50mm BRASS NIPPLE
8	25mm BRASS COUPLER	38mm BRASS FLANGED ADAPTER	50mm BRASS FLANGED ADAPTER
9	25mm PURVEYOR APPROVED WATER METER	38mm PURVEYOR APPROVED WATER METER	50mm PURVEYOR APPROVED WATER METER
10	25mm DOUBLE CHECK VALVE ASSEMBLY	38mm DOUBLE CHECK VALVE ASSEMBLY	50mm DOUBLE CHECK VALVE ASSEMBLY
11	25mm BRASS UNION	38mm BRASS UNION	50mm BRASS UNION
12	25mm BRASS ELBOW	38mm BRASS ELBOW	50mm BRASS ELBOW
13	25mm PRESSURE REDUCING VALVE (IF REQUIRED)	38mm PRESSURE REDUCING VALVE (IF REQUIRED)	50mm PRESSURE REDUCING VALVE (IF REQUIRED)
14	38mm HYDROMETER, 38mm BRASS COUPLER w/ 38mm x 25mm BRASS REDUCING BUSHING	38mm HYDROMETER w/ 38mm BRASS COUPLERS	50mm HYDROMETER
15	DOWNWARD FACING BLOW-OUT ASSEMBLY w/ 25mm BRASS TEE, 25mm BRASS NIPPLE, 25mm BRASS BALL VALVE, w/ PLUG	DOWNWARD FACING BLOW-OUT ASSEMBLY w/ 38mm x 25mm BRASS TEE, 25mm BRASS NIPPLE, 25mm BRASS BALL VALVE, w/ PLUG	DOWNWARD FACING BLOW-OUT ASSEMBLY w/ 50mm x 25mm BRASS TEE, 25mm BRASS NIPPLE, 25mm BRASS BALL VALVE, w/ PLUG
16	BLOW-OUT ASSEMBLY w/ 25mm BRASS TEE, 25mm BRASS NIPPLE, 25mm BRASS BALL VALVE	BLOW-OUT ASSEMBLY w/ 38mm x 25mm BRASS TEE, 25mm BRASS NIPPLE, 25mm BRASS BALL VALVE	BLOW-OUT ASSEMBLY w/ 50mm x 25mm BRASS TEE, 25mm BRASS NIPPLE, 25mm BRASS BALL VALVE
17	BRASS COUPLER SIZED TO MAINLINE w/ 25mm REDUCING BUSHING.	BRASS COUPLER SIZED TO MAINLINE w/ 38mm REDUCING BUSHING.	BRASS COUPLER SIZED TO MAINLINE w/ 50mm REDUCING BUSHING.
18	PVC MAINLINE: SCH 80 NIPPLE CUT IN HALF AND SOLVENT WELDED TO SCH 80 COUPLER SIZED TO MAINLINE, THREADED INTO BRASS COUPLER HDPE MAINLINE: MIPT-NPT TRANSITION FITTING SIZED TO MAINLINE	PVC MAINLINE: SCH 80 NIPPLE CUT IN HALF AND SOLVENT WELDED TO SCH 80 COUPLER SIZED TO MAINLINE, THREADED INTO BRASS COUPLER HDPE MAINLINE: MIPT-NPT TRANSITION FITTING SIZED TO MAINLINE	PVC MAINLINE: SCH 80 NIPPLE CUT IN HALF AND SOLVENT WELDED TO SCH 80 COUPLER SIZED TO MAINLINE, THREADED INTO BRASS COUPLER HDPE MAINLINE: MIPT-NPT TRANSITION FITTING SIZED TO MAINLINE
19	100mm DRAIN HOLE w/ GRATE	100mm DRAIN HOLE w/ GRATE	100mm DRAIN HOLE w/ GRATE
20	50mm DB2 ELECTRICAL CONDUIT TO KIOSK	50mm DB2 ELECTRICAL CONDUIT TO KIOSK	50mm DB2 ELECTRICAL CONDUIT TO KIOSK

NOTE:

- APPLY EXPANDING FOAM TO SEAL ALL PIPE PENETRATIONS MADE IN VAULT
- ALL FLANGES TO BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS w/ STAINLESS STEEL BOLTS
- INSTALL AIR RELIEF VALVE ON BLOW-OUT ASSEMBLY UPSTREAM OF THE BACKFLOW

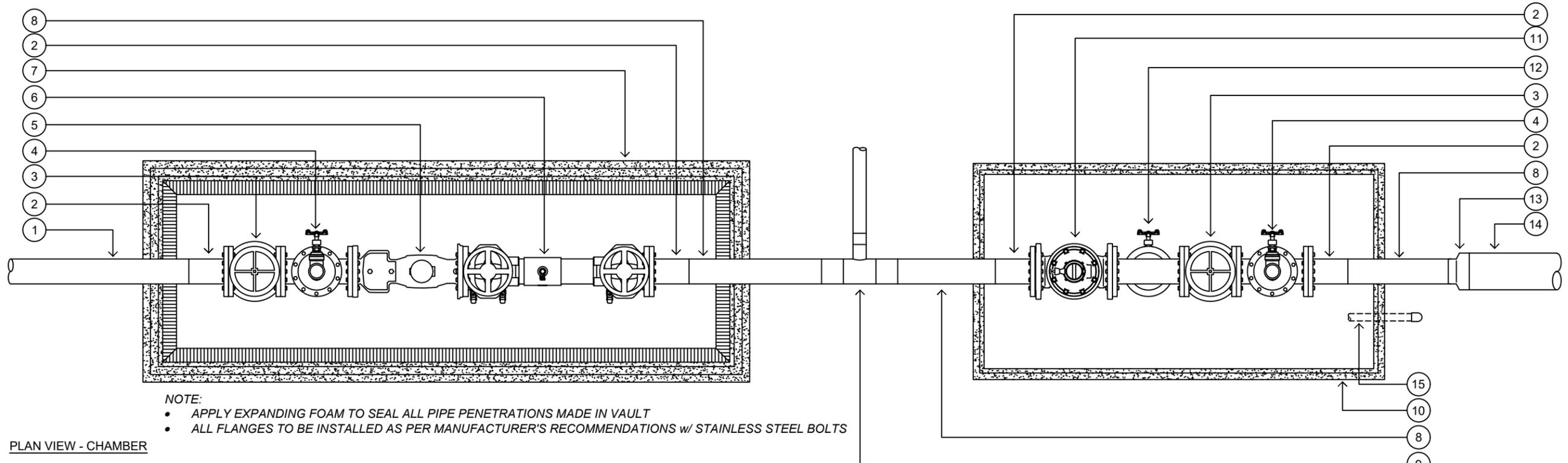


SIDE VIEW

DETAIL TITLE:

DETAIL No.:
SS-IR.03a

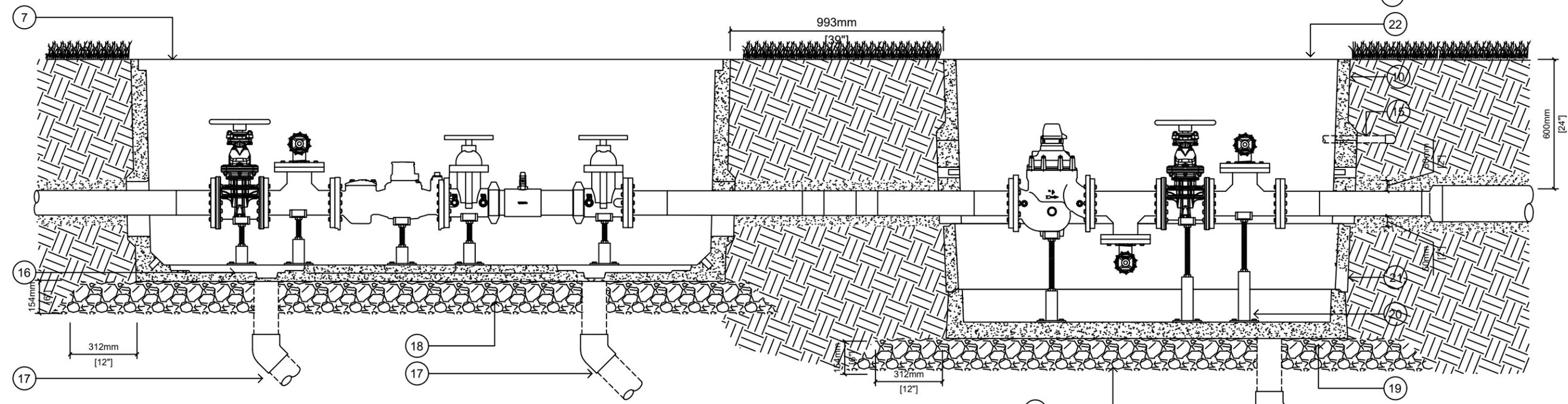
SCALE:
1:20



NOTE:

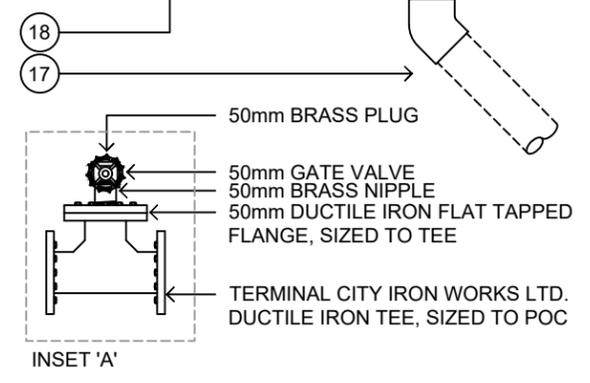
- APPLY EXPANDING FOAM TO SEAL ALL PIPE PENETRATIONS MADE IN VAULT
- ALL FLANGES TO BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS w/ STAINLESS STEEL BOLTS

PLAN VIEW - CHAMBER



SECTION

LEGEND			
1	CONNECT TO WATER SERVICE, TRANSITION TO 100mm HDPE	7	KON KAST 1132 VAULT w/ LID
2	100mm BUTT FUSION (BF) FLANGE ADAPTER	8	100mm HDPE PIPE
3	RESILIENT WEDGE GATE VALVE, FL x FL w/ HANDWHEEL	9	100mm BF TEE FOR SUBMAIN, SIZE PER PLAN
4	BLOW-OUT ASSEMBLY, SEE INSET 'A'	10	KON KAST 1102 SPLICE BOX, REFER TO SS-IR02a
5	100mm PURVEYOR APPROVED WATER METER	11	100mm HYDROMETER
6	100mm DOUBLE CHECK VALVE ASSEMBLY	12	DOWNWARD FACING BLOW-OUT ASSEMBLY, SEE INSET 'A'
		13	150mm BUTT FUSION REDUCER IF REQUIRED, SIZED PER MAINLINE
		14	MAINLINE, REFER TO PLANS FOR SIZING
		15	50mm ELECTRICAL CONDUIT TO CONTROLLER
		16	FIVE (5) PIPE STANDS
		17	100mm PVC DRAIN PIPE TO TIE INTO DRAINAGE SYSTEM OR TO DRAIN PIT CONSISTING OF 2m ² OF 25mm MINUS DRAIN ROCK WRAPPED IN LANDSCAPE FABRIC
		18	150mm DEPTH OF 98% SPD COMPACTED 25mm MINUS GRANULAR BASE
		19	KON KAST 1102 SPLICE BOX BASE
		20	THREE (3) PIPE STANDS
		21	KON KAST 1102 SPLICE BOX 300mm RISER
		22	LID



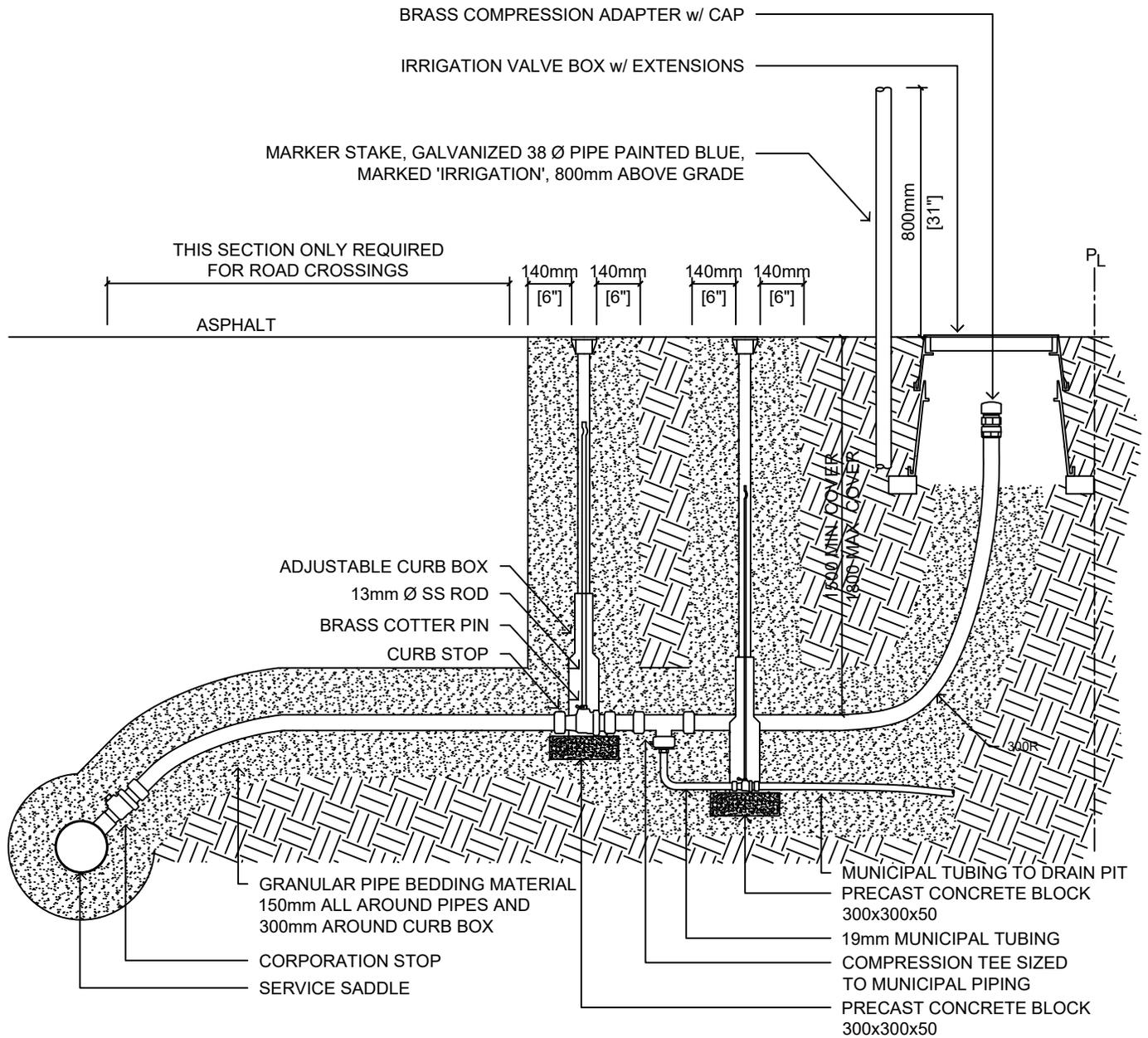
POINT OF CONNECTION
100mm

DETAIL TITLE:

DETAIL No.:
SS-IR.03b

SCALE:
1:20

APRIL 2024



NOTE:

- REFER TO BEDDING AND BACKFILL STANDARDS FOR DETAILS
- REFER TO WATERWORKS BYLAW FOR CONNECTIONS TO WATERMAINS

MAY 2024

**STANDARD
DETAIL
DRAWING**

DETAIL TITLE:

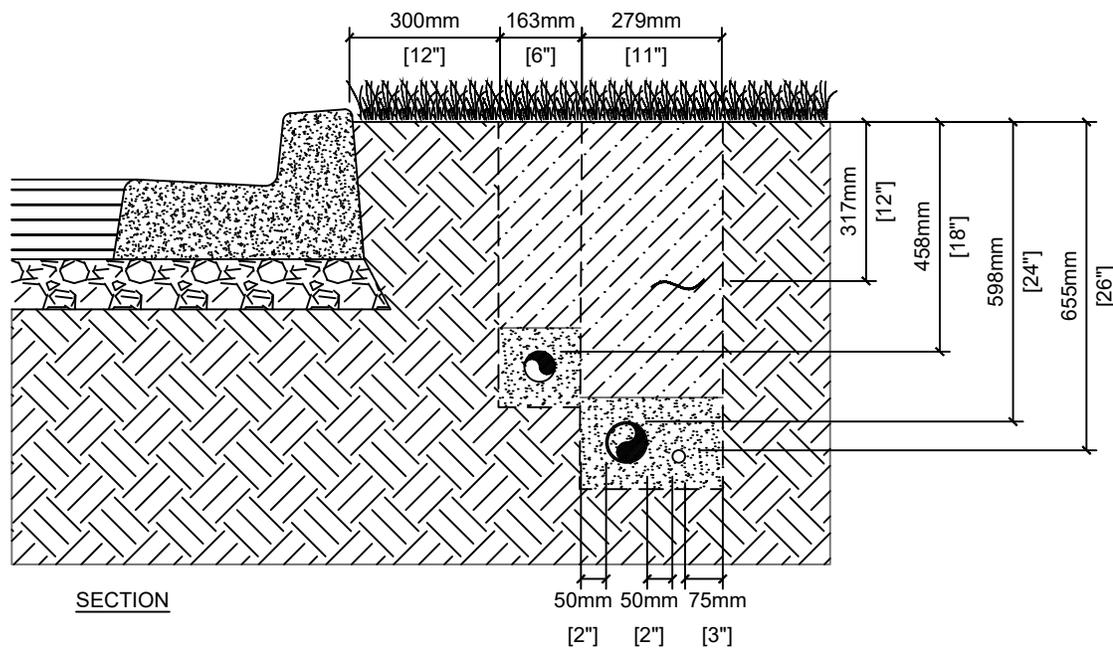
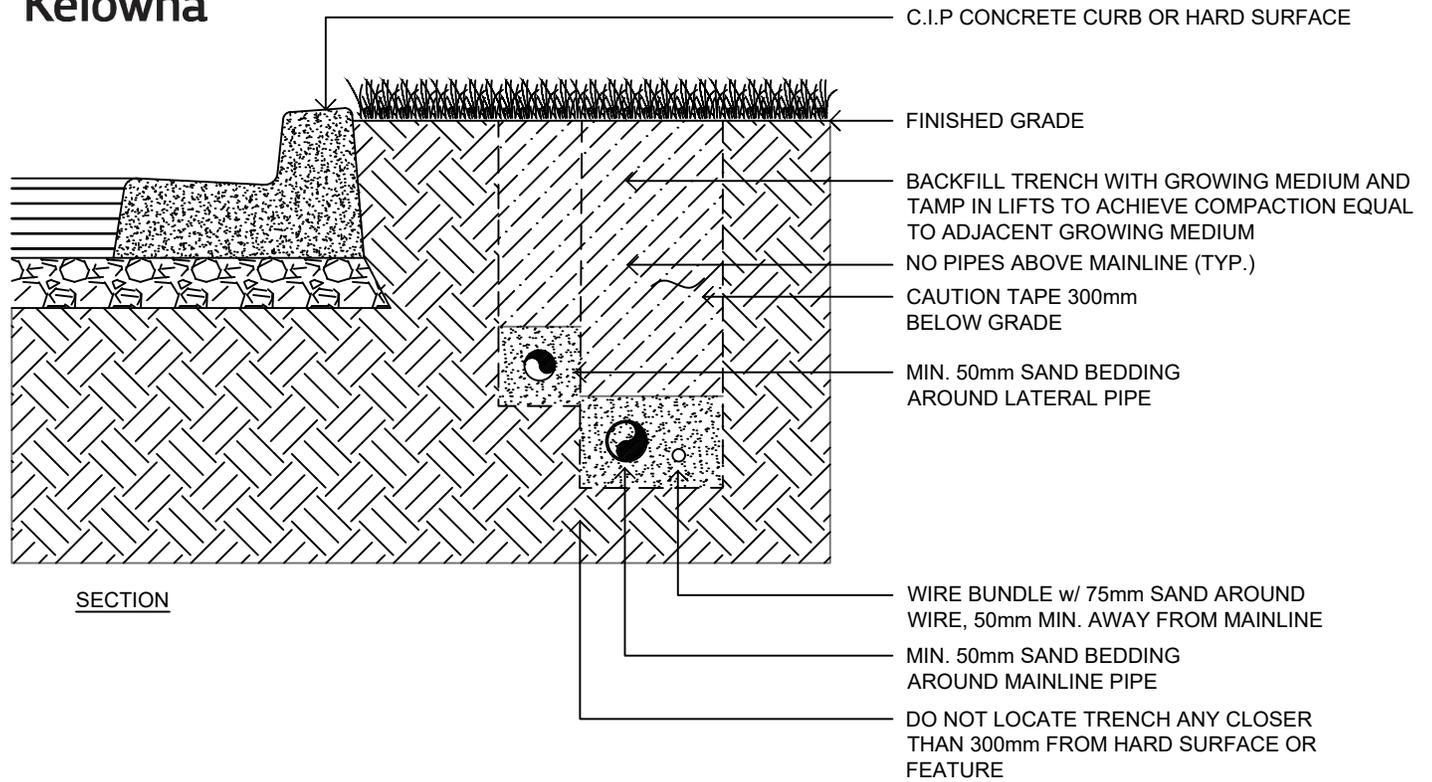
**IRRIGATION
SERVICE**

DETAIL No.:

SS-IR.03c

SCALE:

1:20



APRIL 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

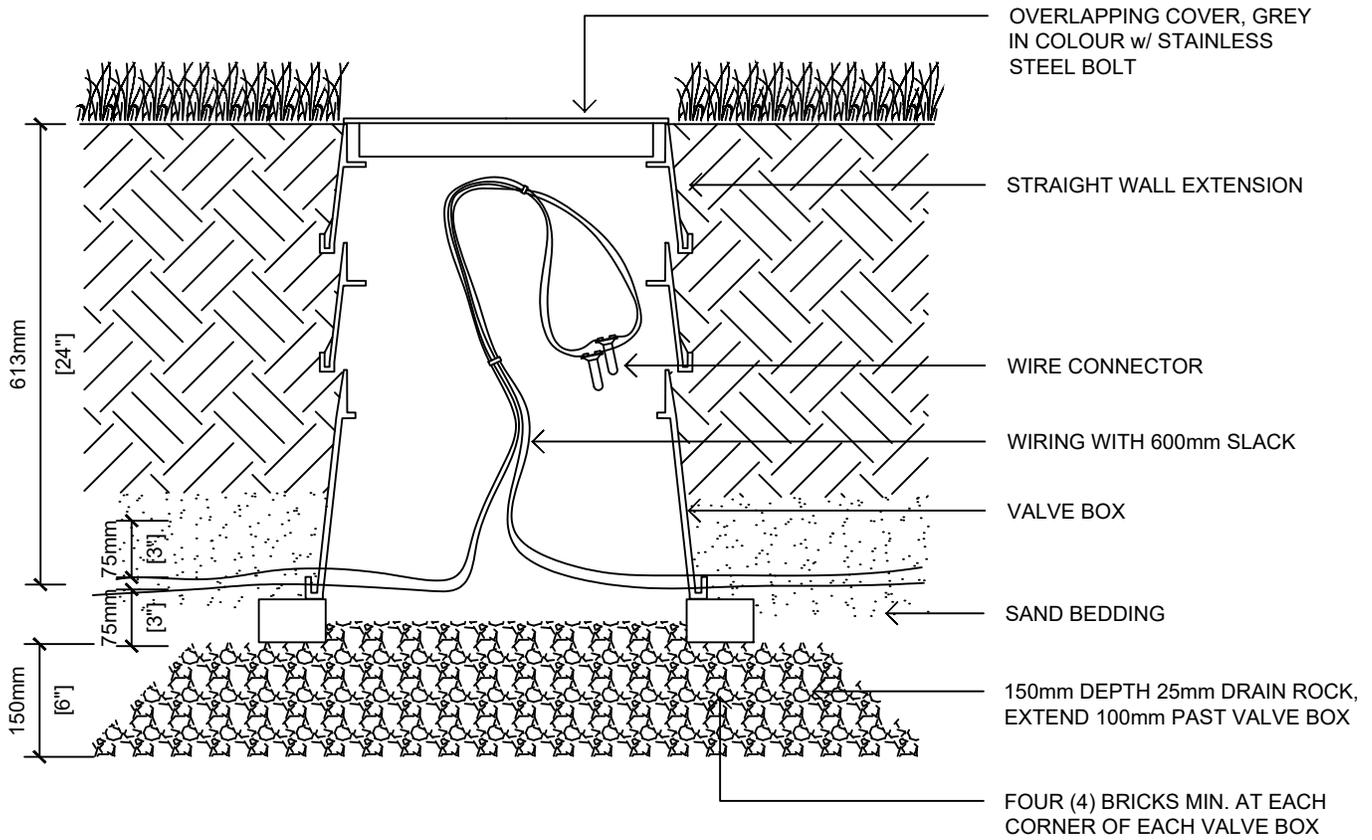
TRENCH SECTION

DETAIL No.:

SS-IR.04a

SCALE:

1:15



SECTION

NOTE:

- WIRE COLOURING TO STAY CONSISTENT
- LABEL ALL WIRING WITH WITH ASSIGNED STATION NUMBER
- WRAP VALVE BOX WITH LANDSCAPE FABRIC TO PREVENT INGRESS OF MATERIAL

APRIL 2024

**STANDARD
DETAIL
DRAWING**

DETAIL TITLE:

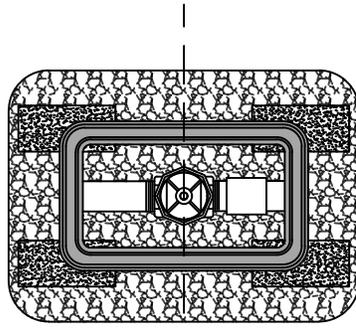
WIRE SPLICE BOX

DETAIL No.:

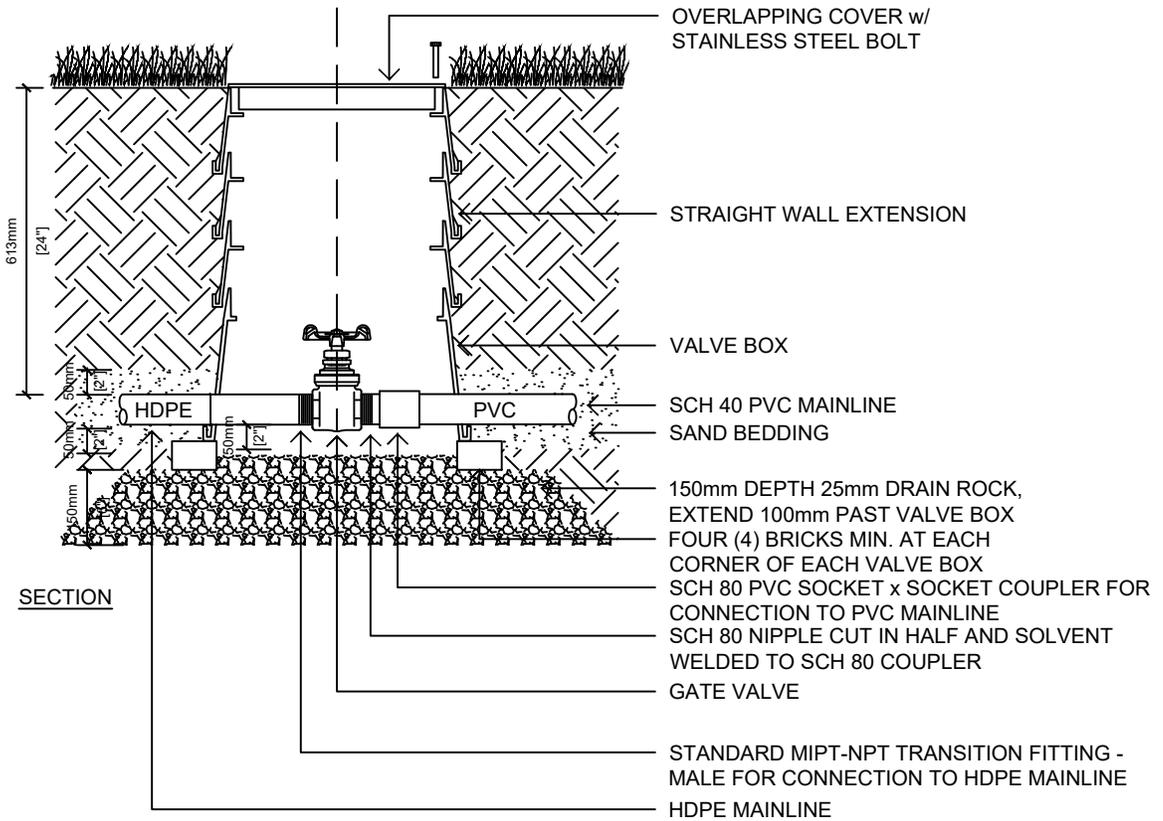
SS-IR.04b

SCALE:

1:10



PLAN



SECTION

NOTE:

- CENTER VALVE IN VALVE BOX
- MAINTAIN 50mm GAP BETWEEN BOTTOM OF VALVE & TOP OF DRAIN ROCK
- WRAP VALVE BOX WITH LANDSCAPE FABRIC TO PREVENT INGRESS OF MATERIAL
- DETAIL REPRESENTS TYPICAL CONNECTIONS TO HDPE OR PVC MAINLINE TO PROVIDE THE INSTALLER WITH METHOD REQUIRED TO CONNECT THE GATE VALVE TO THE MAINLINE.
- REFER TO DESIGN FOR MAINLINE PIPE MATERIAL

APRIL 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

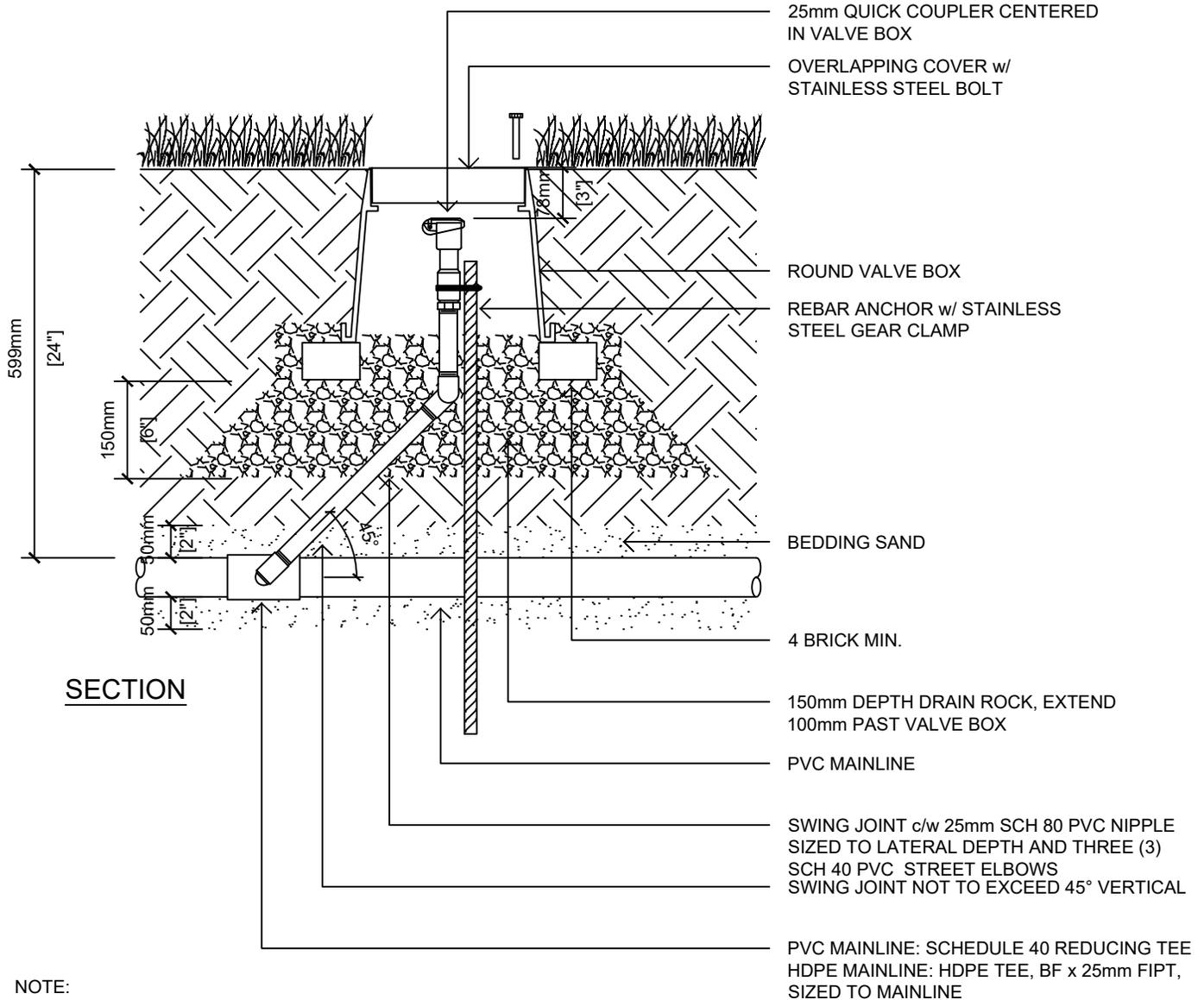
**GATE VALVE
25mm TO 75mm**

DETAIL No.:

SS-IR.05a

SCALE:

1:15



NOTE:

- CENTER VALVE IN VALVE BOX
- WRAP VALVE BOX WITH LANDSCAPE FABRIC TO PREVENT INGRESS OF MATERIAL

APRIL 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

QUICK COUPLER

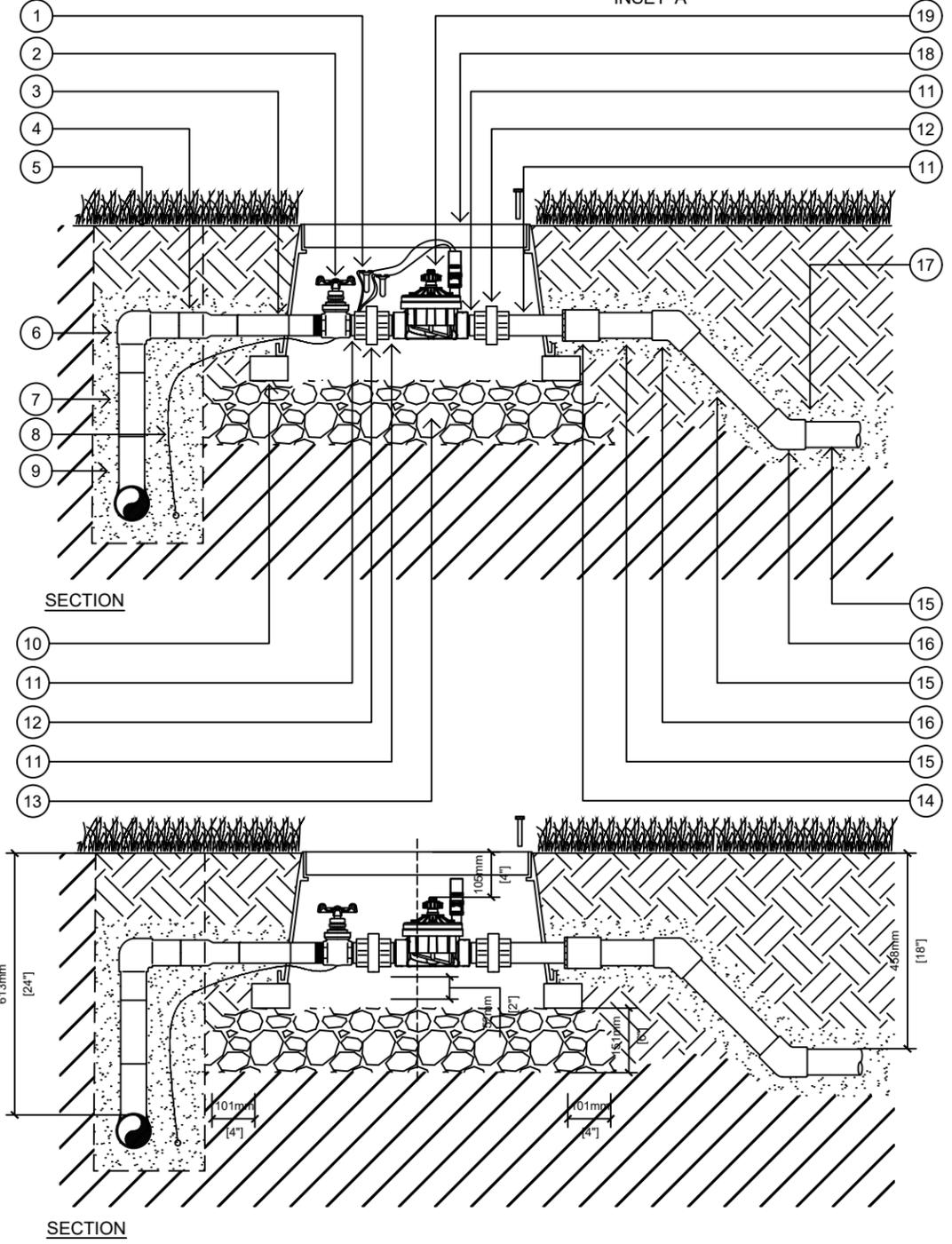
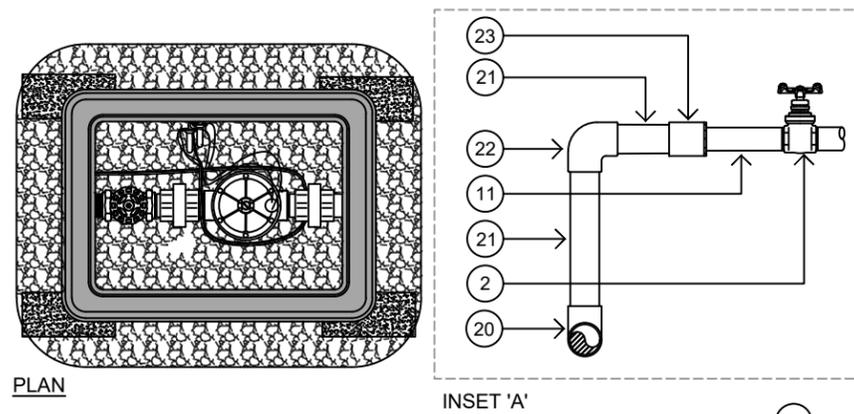
DETAIL No.:

SS-IR.05c

SCALE:

1:10

**ELECTRIC CONTROL VALVE
25mm TO 50mm**



LEGEND			
#	25mm ECV	38mm ECV	50mm ECV
1	600mm SLACK WIRE w/ WIRE CONNECTOR	600mm SLACK WIRE w/ WIRE CONNECTOR	600mm SLACK WIRE w/ WIRE CONNECTOR
2	25mm GATE VALVE	38mm GATE VALVE	50mm GATE VALVE
3	25mm STANDARD MIPT-NPT TRANSITION FITTING - MALE	38mm STANDARD MIPT-NPT TRANSITION FITTING - MALE	50mm STANDARD MIPT-NPT TRANSITION FITTING - MALE
4	50mm x 25mm MOLDED BUTT FUSION REDUCER	50mm x 38mm MOLDED BUTT FUSION REDUCER	50mm HDPE MAINLINE
5	FINISHED GRADE	FINISHED GRADE	FINISHED GRADE
6	50mm MOLDED BUTT FUSION 90° ELBOW	50mm MOLDED BUTT FUSION 90° ELBOW	50mm MOLDED BUTT FUSION 90° ELBOW
7	50mm HDPE PIPE, LENGTH TO VALVE HEIGHT	50mm HDPE PIPE, LENGTH TO VALVE HEIGHT	50mm HDPE PIPE, LENGTH TO VALVE HEIGHT
8	WIRING, REFER TO IRRIGATION DESIGN	WIRING, REFER TO IRRIGATION DESIGN	WIRING, REFER TO IRRIGATION DESIGN
9	MOLDED BUTT FUSION REDUCING TEE, REFER TO INSET 'A' IF USING A PVC MAINLINE	MOLDED BUTT FUSION REDUCING TEE, REFER TO INSET 'A' IF USING A PVC MAINLINE	MOLDED BUTT FUSION REDUCING TEE, REFER TO INSET 'A' IF USING A PVC MAINLINE
10	FOUR (4) BRICKS MIN., INSTALLED AT EACH CORNER	FOUR (4) BRICKS MIN., INSTALLED AT EACH CORNER	FOUR (4) BRICKS MIN., INSTALLED AT EACH CORNER
11	25mm SCH 80 NIPPLE CUT IN HALF, THREADED INTO GATE VALVE AND SOLVENT WELDED TO UNION	38mm SCH 80 NIPPLE CUT IN HALF, THREADED INTO GATE VALVE AND SOLVENT WELDED TO UNION	50mm SCH 80 NIPPLE CUT IN HALF, THREADED INTO GATE VALVE AND SOLVENT WELDED TO UNION
12	25mm SCH 80 SOCKET x SOCKET UNION	38mm SCH 80 SOCKET x SOCKET UNION	50mm SCH 80 SOCKET x SOCKET UNION
13	150mm DEPTH 25mm DRAIN ROCK, EXTEND 100mm PAST VALVE BOX	150mm DEPTH 25mm DRAIN ROCK, EXTEND 100mm PAST VALVE BOX	150mm DEPTH 25mm DRAIN ROCK, EXTEND 100mm PAST VALVE BOX
14	SCH 80 COUPLER w/ 25mm REDUCING BUSHING, REFER TO IRRIGATION DESIGN FOR LATERAL PIPE SIZING	SCH 80 COUPLER w/ 38mm REDUCING BUSHING, REFER TO IRRIGATION DESIGN FOR LATERAL PIPE SIZING	SCH 80 COUPLER w/ 50mm REDUCING BUSHING, REFER TO IRRIGATION DESIGN FOR LATERAL PIPE SIZING
15	CSA APPROVED CLASS 200 PVC LATERAL, REFER TO DESIGN FOR LATERAL PIPE SIZING	CSA APPROVED CLASS 200 PVC LATERAL, REFER TO DESIGN FOR LATERAL PIPE SIZING	CSA APPROVED CLASS 200 PVC LATERAL, REFER TO DESIGN FOR LATERAL PIPE SIZING
16	SCHEDULE 40 PVC 45° ELBOW TO TRENCH DEPTH	SCHEDULE 40 PVC 45° ELBOW TO TRENCH DEPTH	SCHEDULE 40 PVC 45° ELBOW TO TRENCH DEPTH
17	SAND BEDDING, REFER TO TRENCH SECTION	SAND BEDDING, REFER TO TRENCH SECTION	SAND BEDDING, REFER TO TRENCH SECTION
18	VALVE BOX	VALVE BOX	VALVE BOX
19	25mm ELECTRIC CONTROL VALVE	38mm ELECTRIC CONTROL VALVE	50mm ELECTRIC CONTROL VALVE
20	SCHEDULE 40 PVC TEE	SCHEDULE 40 PVC TEE	SCHEDULE 40 PVC TEE
21	SCHEDULE 40 PVC MAINLINE	SCHEDULE 40 PVC MAINLINE	SCHEDULE 40 PVC MAINLINE
22	SCHEDULE 40 90° ELBOW	SCHEDULE 40 90° ELBOW	SCHEDULE 40 90° ELBOW
23	SCHEDULE 80 COUPLING w/ REDUCING BUSHING, IF REQUIRED	SCHEDULE 80 COUPLING w/ REDUCING BUSHING, IF REQUIRED	SCHEDULE 80 COUPLING w/ REDUCING BUSHING, IF REQUIRED

- NOTE:
- CENTER VALVE IN VALVE BOX
 - INSTALL PLASTIC TAG ENGRAVED w/ ZONE NUMBER
 - MAINTAIN 50mm GAP BETWEEN BOTTOM OF VALVE & TOP OF DRAIN ROCK
 - WRAP VALVE BOX WITH LANDSCAPE FABRIC TO PREVENT INGRESS OF MATERIAL
 - DO NOT INSTALL VALVE OVER MAINLINE, INSTALL VALVE PERPENDICULAR TO MAINLINE
 - MAINTAIN 600mm OF SLACK TWO-WIRE CONDUCTOR IN VALVE BOX. TAPE WIRING TOGETHER

DETAIL TITLE:

DETAIL No.: **SS-IR.05d**

SCALE: **1:15**

APRIL 2024

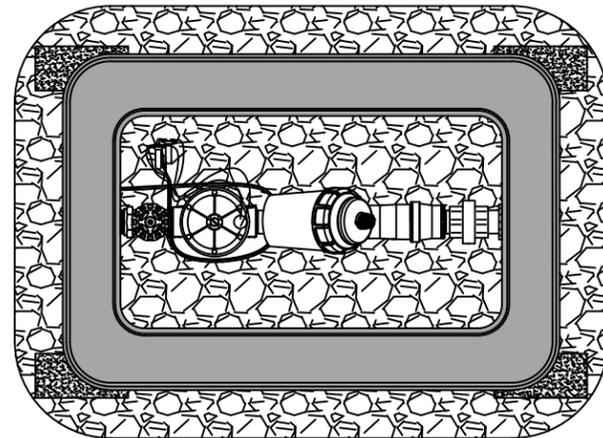
DRIP ZONE KIT
38mm

DETAIL TITLE:

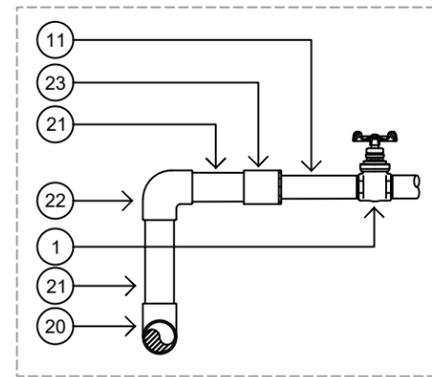
MAY 2024

DETAIL No.:
SS-IR.05f

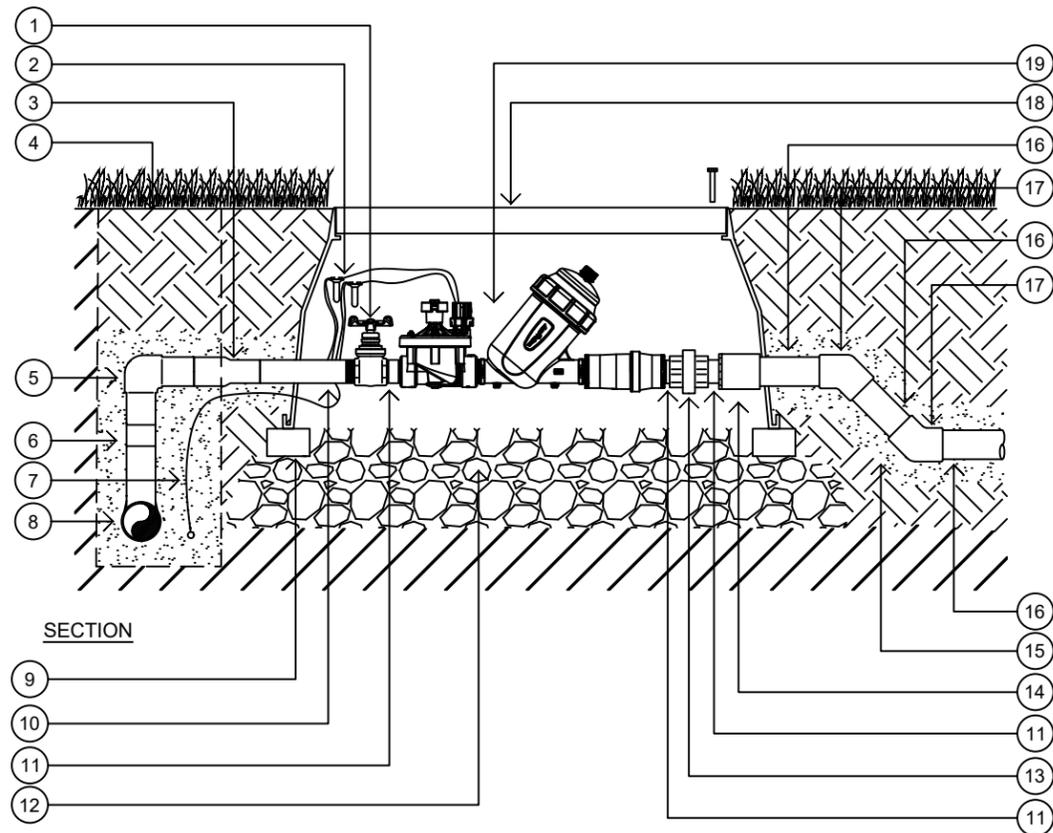
SCALE:
1:15



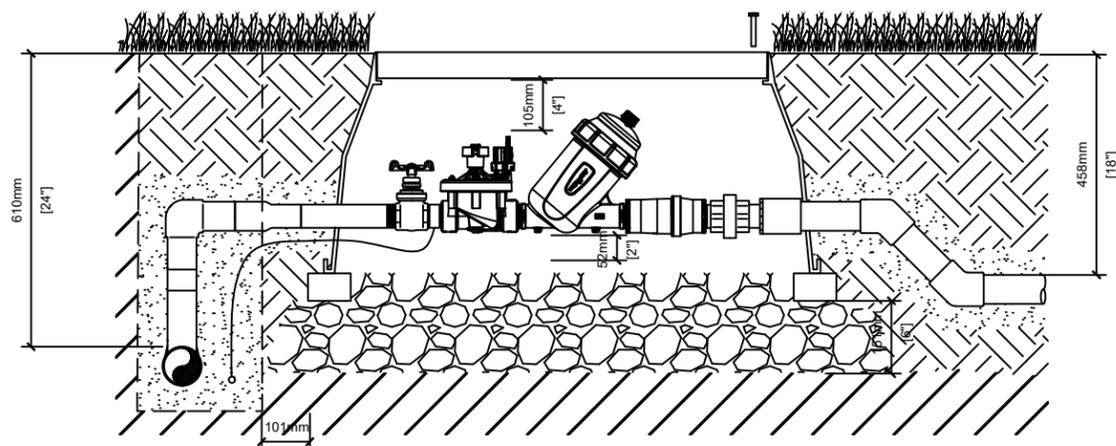
PLAN



INSET 'A'



SECTION

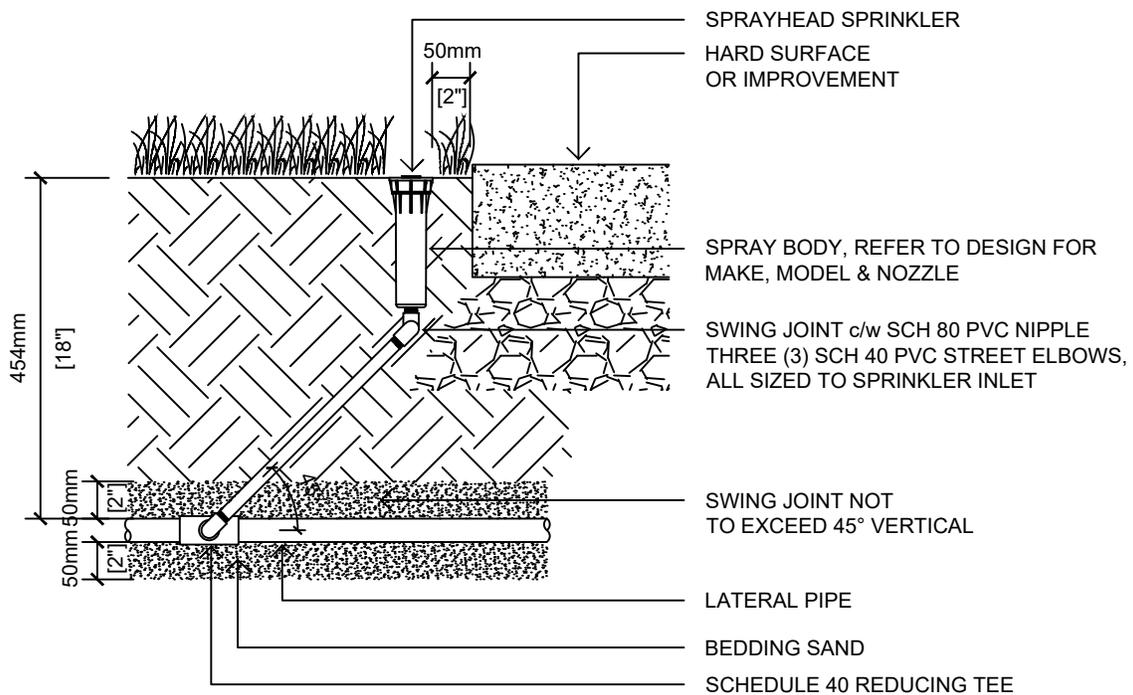


SECTION

LEGEND	
#	38mm ECV
1	38mm GATE VALVE
2	600mm SLACK WIRE w/ WIRE CONNECTOR
3	50mm x 38mm MOLDED BUTT FUSION REDUCER
4	FINISHED GRADE
5	50mm MOLDED BUTT FUSION 90° ELBOW
6	50mm HDPE PIPE, LENGTH TO VALVE HEIGHT
7	WIRING, REFER TO IRRIGATION DESIGN
8	MOLDED BUTT FUSION REDUCING TEE, REFER TO INSET 'A' IF USING A PVC MAINLINE
9	FOUR (4) BRICKS MIN., INSTALLED AT EACH CORNER
10	50mm x 38mm STANDARD MIPT-NPT TRANSITION FITTING - MALE
11	38mm SCHEDULE 80 NIPPLE
12	150mm DEPTH 25mm DRAIN ROCK, EXTEND 100mm PAST VALVE BOX
13	38mm SCHEDULE 80 THREADED UNION
14	SCH 80 COUPLER w/ REDUCING BUSHING IF REQUIRED, REFER TO IRRIGATION DESIGN FOR LATERAL PIPE SIZING
15	SAND BEDDING, REFER TO TRENCH SECTION
16	CSA APPROVED CLASS 200 PVC LATERAL, REFER TO DESIGN FOR LATERAL PIPE SIZING
17	SCHEDULE 40 PVC 45° ELBOW TO TRENCH DEPTH
18	VALVE BOX
19	38mm DRIP ZONE KIT
20	SCHEDULE 40 PVC TEE
21	SCHEDULE 40 PVC MAINLINE
22	SCHEDULE 40 90° ELBOW
23	SCHEDULE 80 COUPLING w/ 38mm REDUCING BUSHING IF REQUIRED

NOTE:

- CENTER VALVE IN VALVE BOX
- INSTALL PLASTIC TAG ENGRAVED w/ ZONE NUMBER
- MAINTAIN 50mm GAP BETWEEN BOTTOM OF VALVE & TOP OF DRAIN ROCK
- WRAP VALVE BOX WITH LANDSCAPE FABRIC TO PREVENT INGRESS OF MATERIAL
- DO NOT INSTALL VALVE OVER MAINLINE, INSTALL VALVE PERPENDICULAR TO MAINLINE
- MAINTAIN 600mm OF SLACK TWO-WIRE CONDUCTOR IN VALVE BOX. TAPE WIRING TOGETHER



APRIL 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

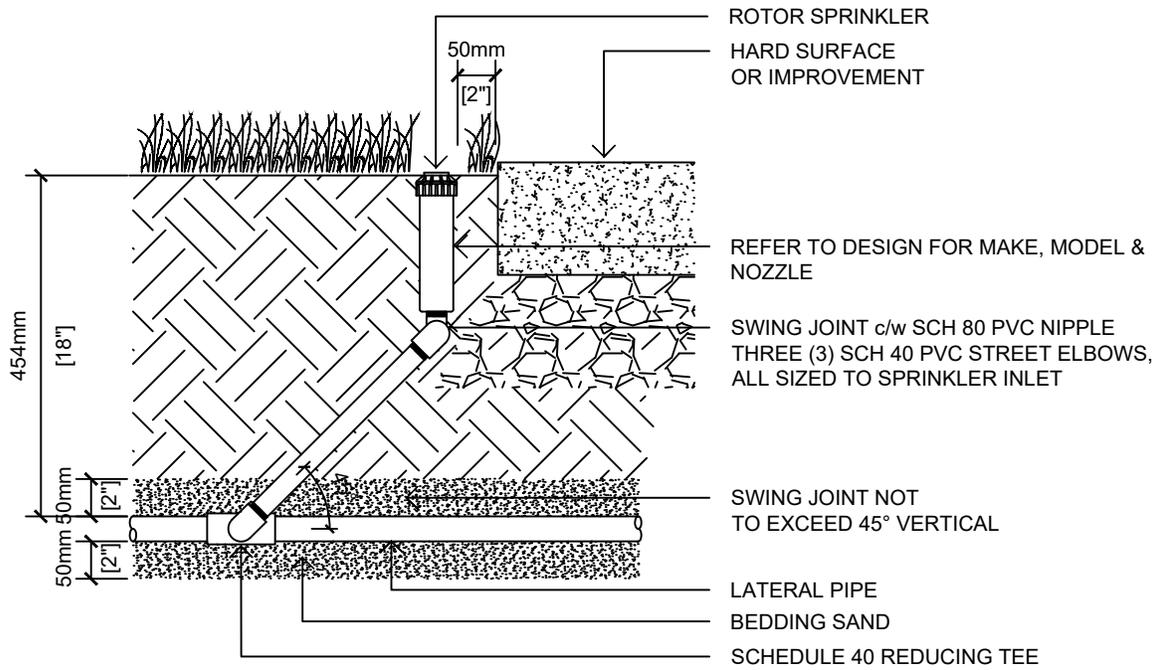
SPRAYHEAD SPRINKLER

DETAIL No.:

SS-IR.06a

SCALE:

1:10



APRIL 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

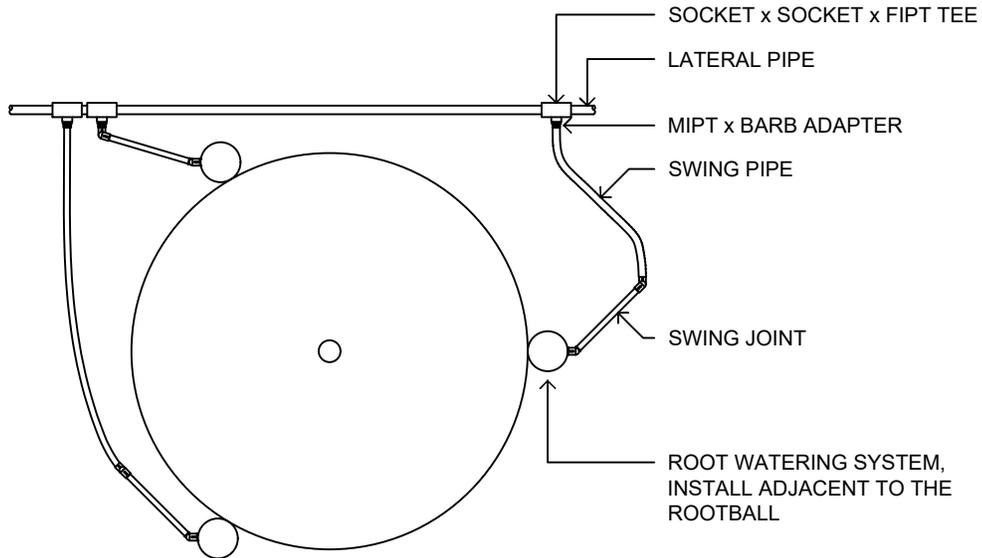
ROTOR SPRINKLER

DETAIL No.:

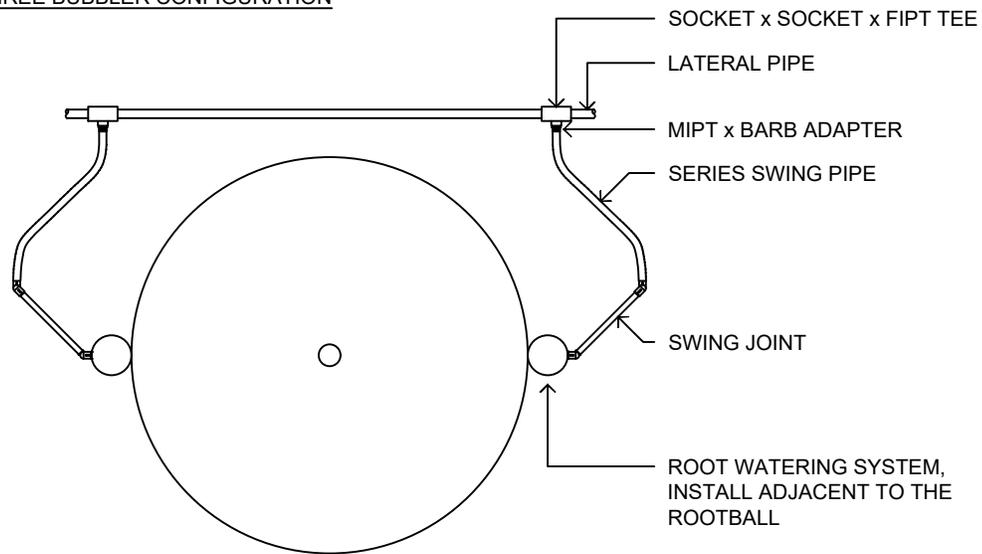
SS-IR.06b

SCALE:

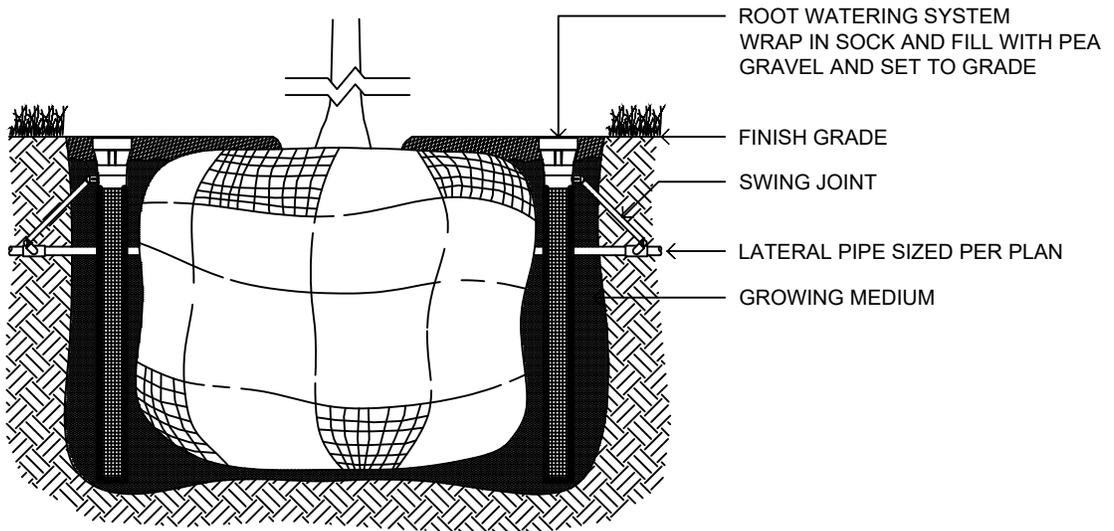
1:10



THREE BUBBLER CONFIGURATION



TWO BUBBLER CONFIGURATION



APRIL 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

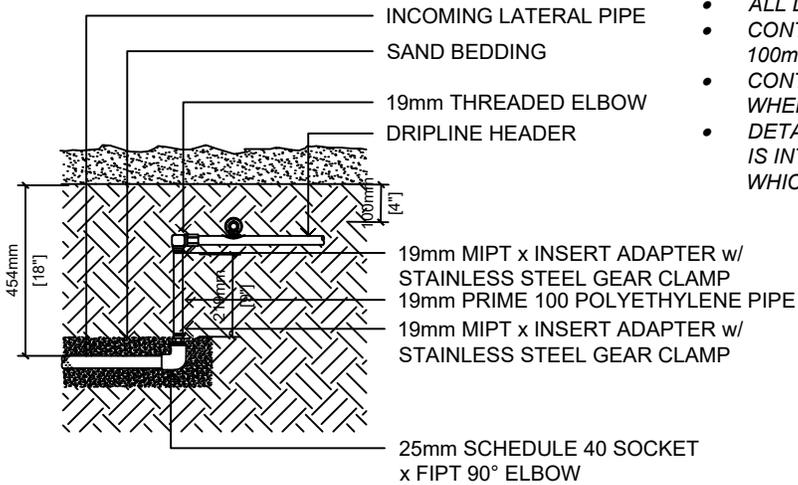
**ROOT WATERING
SYSTEM**

DETAIL No.:

SS-IR.06c

SCALE:

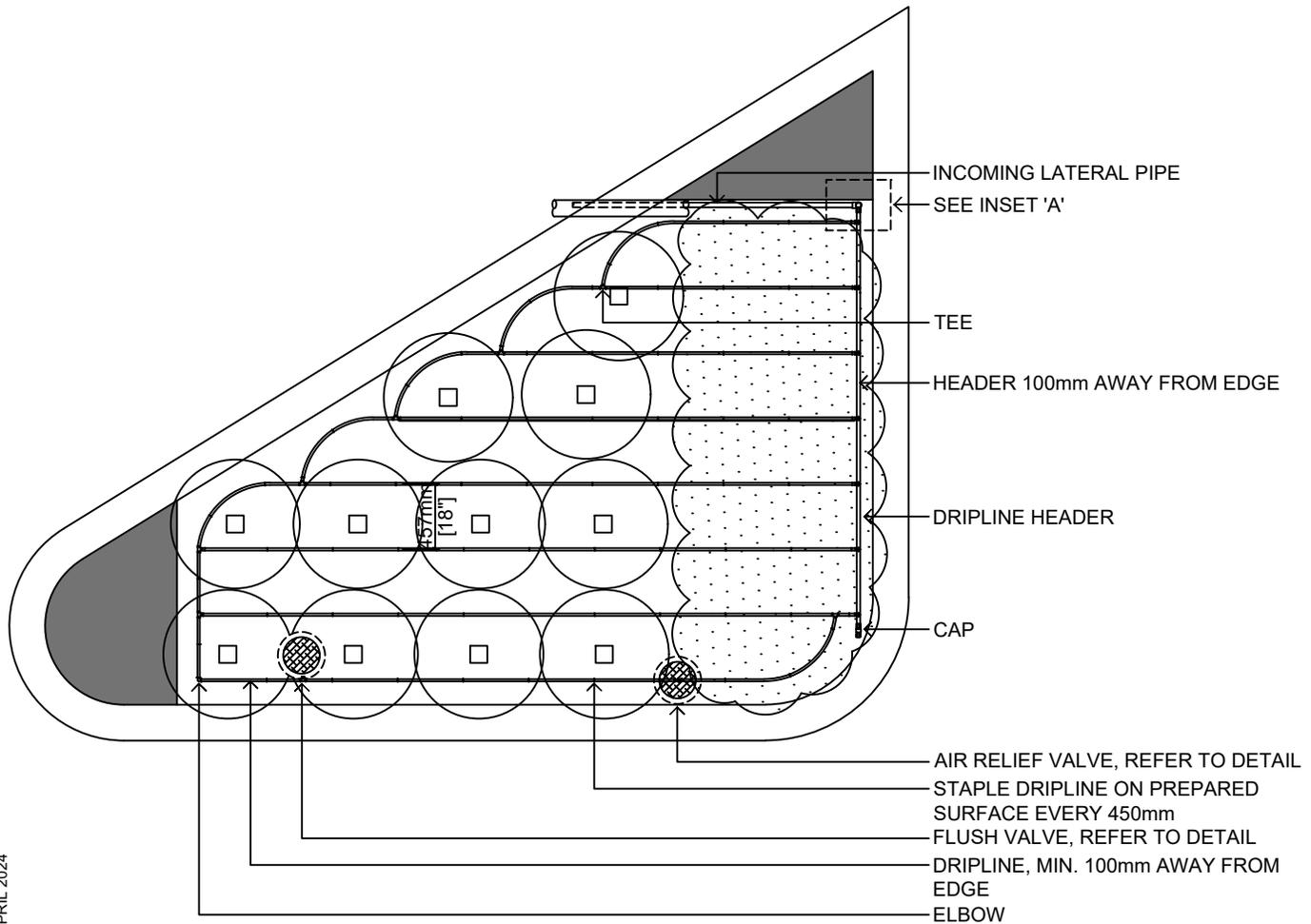
1:20



NOTES:

- STAPLE DRIPLINE EVERY 450mm
- ALL DRIPLINE TO BE INSTALLED ON HIGH SIDE OF PLANT
- CONTRACTOR SHALL ENSURE THAT DRIPLINE IS INSTALLED 100mm BELOW GRADE AND SPACED EVENLY AT 450mm
- CONTRACTOR SHALL INSTALL DRIPLINE IN STRAIGHT ROWS WHEREVER POSSIBLE TO MINIMIZE SHARP BENDS IN PIPE
- DETAIL REPRESENTS TYPICAL LAYOUT FOR DRIP ZONES. DETAIL IS INTENDED TO PROVIDE INSTALLER WITH THE CONCEPT IN WHICH THE DRIP ZONE IS TO BE CONSTRUCTED.

INSET 'A'
1:20



APRIL 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

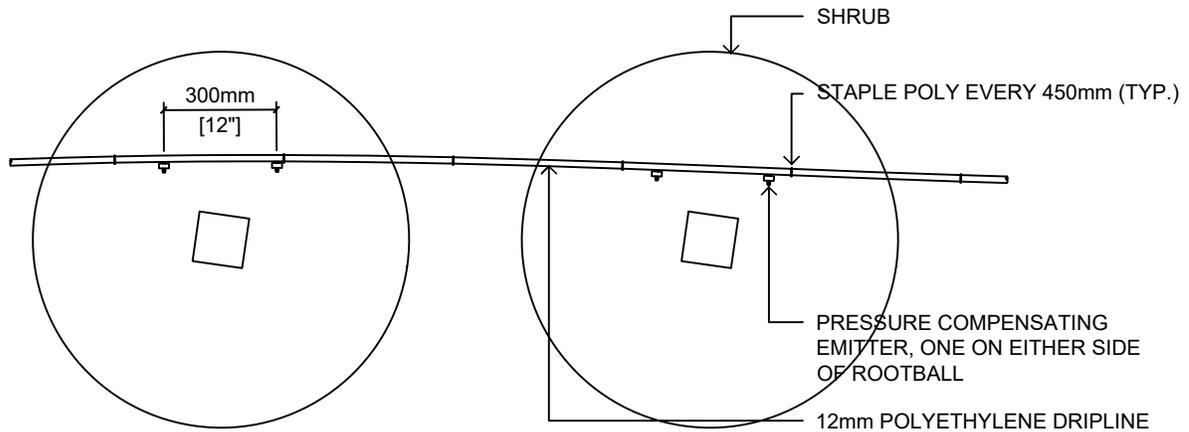
**DRIPLINE LAYOUT
INLINE DRIP**

DETAIL No.:

SS-IR.07a

SCALE:

1:15



NOTES:

- STAPLE DRIPLINE EVERY 450mm
- ALL DRIPLINE AND EMITTERS TO BE INSTALLED ON HIGH SIDE OF PLANT
- TWO (2) EMITTERS PER SHRUB ON EITHER SIDE OF ROOTBALL, TO PROMOTE FUTURE GROWTH
- CONTRACTOR SHALL ENSURE THAT DRIPLINE IS INSTALLED 50mm BELOW GRADE, AND NOT VISIBLE
- CONTRACTOR SHALL INSTALL DRIPLINE IN STRAIGHT ROWS WHEREVER POSSIBLE TO MINIMIZE SHARP BENDS IN PIPE
- DETAIL REPRESENTS TYPICAL LAYOUT FOR DRIP ZONES. DETAIL IS INTENDED TO PROVIDE INSTALLER WITH THE CONCEPT IN WHICH THE DRIP ZONE IS TO BE CONSTRUCTED.

APRIL 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

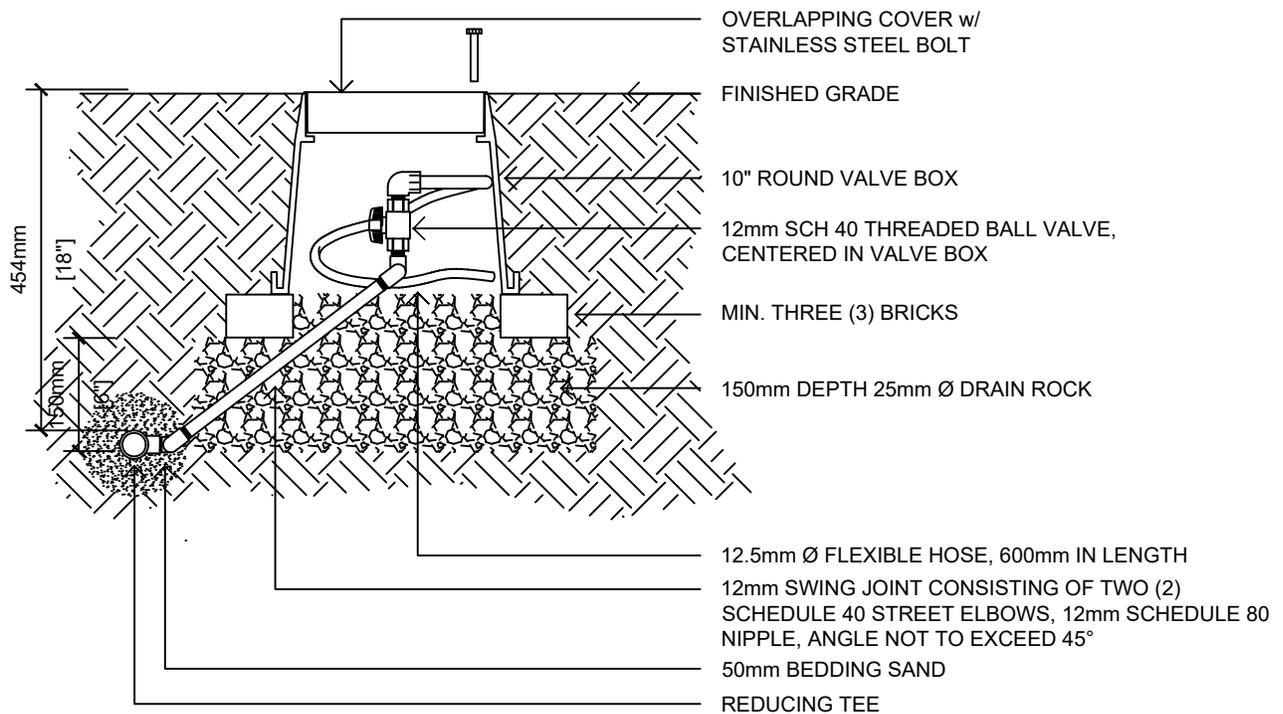
**DRIPLINE LAYOUT
POINT SOURCE DRIP**

DETAIL No.:

SS-IR.07b

SCALE:

1:20



APRIL 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

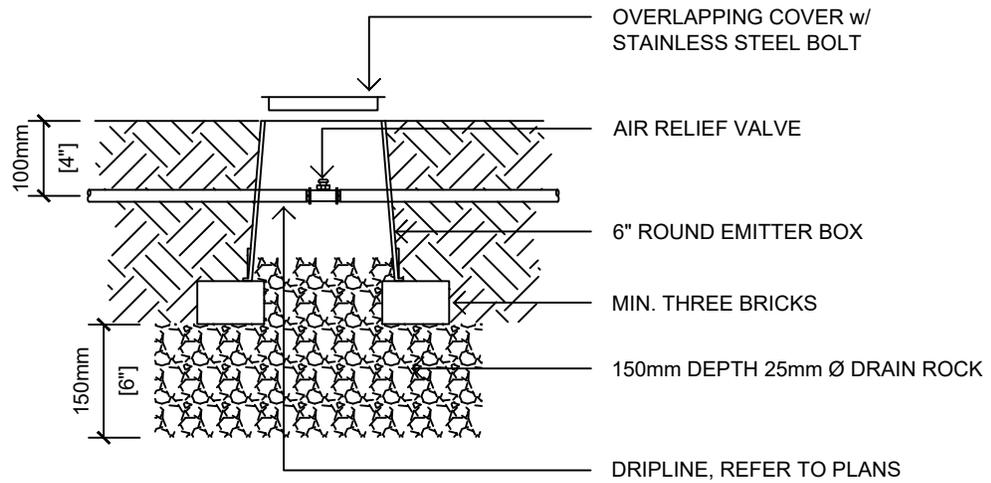
FLUSH VALVE ASSEMBLY

DETAIL No.:

SS-IR.07c

SCALE:

1:10



APRIL 2024

STANDARD
DETAIL
DRAWING

DETAIL TITLE:

AIR RELIEF VALVE

DETAIL No.:

SS-IR.07d

SCALE:

1:10