LLOYDMINSTER

MUNICIPAL DEVELOPMENT STANDARDS

STANDARD DRAWINGS

October 2020

Planning & Engineering

Roadways

DRAWING NUMBER	DESCRIPTION	REVISION NUMBER	DATE
1-100	Urban Residential Local Roadways	5	2020-06-22
1-101	Urban Residential Collector Roadways	6	2020-06-22
1-102	Urban Industrial / Commercial Roadways	6	2020-06-22
1-103	Urban Arterial Roadways	6	2020-06-22
1-104	Typical Lane Cross Section	4	2020-06-22
1-106	Typical Residential Cul-de-sac	5	2020-06-22
1-107	Typical Industrial/Commercial Cul-de-sac	4	2020-06-22
1-200	Typical Cross Section Rural Roads	4	2020-06-22
1-201	Industrial / Commercial Approaches (Rural)	2	2018-11-19
1-202	Typical Rural Utility Layout	5	2020-05-04
1-203	Typical Rural Hydrant Shoulder Widening Layout	4	2020-05-04
1-204	150mm Steel Roadway Bollard	2	2020-02-27
1-300	Pavement Markings	2	2020-05-04
1-301	Traffic Signage	5	2020-06-29
1-302	Traffic Signage	2	2020-02-27
1-303	Hand Applied Markings	2	2020-05-04
1-400	Gutter and Butt Joint Milling	3	2020-05-04
1-500	Roundabout Cross-Section	1	2020-03-03
1-501	Roundabout Plan View and Landscaping Zones	2	2020-06-23

Concrete Work

DRAWING NUMBER	DESCRIPTION	REVISION NUMBER	DATE
2-100	Standard 150 mm Curb with 250 mm Gutter	6	2020-05-04
2-101	Standard 200 mm Curb with 250 mm Gutter	6	2020-05-04
2-102	Rolled Face Curb and Gutter	6	2020-05-04
2-103	Standard Barrier Curb	5	2020-05-04
2-104	Pinned Curb Median Detail	5	2020-06-22
2-105	Rolled Face Curb, Gutter, and Monolithic Sidewalk	6	2020-06-22
2-106	Straight Face Curb, Gutter and Monolithic Sidewalk	5	2020-06-22
2-107	1.5m Separate Sidewalk	6	2020-05-04
2-108	Mono Service Strip and Concrete Edger	5	2020-05-04
2-109	Commercial / Lane Crossing – Monolithic Sidewalk	9	2020-09-29
2-110	Commercial / Lane Crossing – Separate Sidewalk	9	2020-09-21
2-111	Residential Apron Crossing Mono Sidewalk	0	2020-09-21
2-112	Residential Apron Crossing Separate Sidewalk	0	2020-09-21
2-113	Trench Drain	4	2020-09-21
2-200	Curb Ramp	6	2020-09-30
2-201	Typical Dropped Gutter Lip for Two Stage Paving	4	2020-03-05
2-202	Type F-51 Catch Basin Curb Finishing Detail	3	2020-03-05
2-203	Typical Median	4	2020-05-04
2-204	“CC” Stamp	2	2020-03-05
2-205	Concrete Drainage Swale (Roadway)	4	2020-05-04

Manhole Details

DRAWING NUMBER	DESCRIPTION	REVISION NUMBER	DATE
3-100	Precast Manhole for Pipes up to 525 mm Diameter	7	2020-03-06
3-101	Precast Manhole for Pipes 600 mm to 900 mm Diameter	8	2020-03-06
3-102	Typical T-Riser Manhole for Pipes 1050 mm Diameter and Larger	9	2020-05-04
3-103	Internal Drop Manhole	7	2020-03-06
3-104	Perched Manhole	0	2019-07-02
3-105	Manhole Penetrations and Design	2	2020-03-06

DRAWING NUMBER	DESCRIPTION	REVISION NUMBER	DATE
3-200	Non-Floating Manhole Frame Adjustment Detail	4	2020-05-04
3-201	Safety Platform	4	2020-05-04
3-202	F-80 Manhole Frame	1	2016-04-14
3-203	F-80 Manhole Adjustment Detail	2	2020-03-06
3-204	TF-80LSAN Sanitary Sewer Cover (City Logo)	6	2020-03-06
3-205	TF-80LSTM Storm Sewer Cover (City Logo)	4	2020-03-06
3-206	Watertight Manhole Cover	3	2020-03-06
3-208	F-39 Frame and Locking Cover	1	2018-08-20
3-300	Typical Pipe Section Exfiltration Test	1	2020-03-06

Trenching and Backfill

DRAWING NUMBER	DESCRIPTION	REVISION NUMBER	DATE
4-100	Trench Backfill	4	2020-03-06
4-101	Insulation Requirements	1	2020-03-06
4-102	Insulation Requirements Crossing Pipe Open to Atmosphere	0	2020-03-09
4-200	Pipe Zone Bedding Detail (Class A, B)	6	2020-05-04
4-300	Pipe Support	1	2018-03-23

Storm Drainage

DRAWING NUMBER	DESCRIPTION	REVISION NUMBER	DATE
5-100	900 mm Dia. Catch Basin c/w Frame and Cover	7	2018-03-23
5-101	1200 mm Dia. Catch Basin c/w F-51 Frame and Cover with Two Piece Side Inlet	4	2018-11-23
5-200	Wick Drain Connection to Catch Basin	4	2020-05-04
5-300	Poured Concrete Outfall Structure	5	2020-03-09
5-301	Metal Culvert	1	2018-11-23
5-302	Bar Screen for Outlet Structure Detail	1	2018-11-26
5-303	Bar Screen for Inlet Structure Detail	1	2018-11-26
5-304	Rock Rip-Rap Detail for Metal Culverts or Open Channels	1	2018-11-26
5-400	Inlet/Outlet Indicator Post Detail	5	2020-05-04
5-401	Stormwater Storage Wetland Sign	4	2020-03-10
5-402	Stormwater Storage Pond Sign	4	2020-03-10
5-403	Stormwater Storage Site Sign	4	2020-03-10
5-404	Stormwater Storage Channel Sign	4	2020-03-10
5-405	Stormwater Storage Site Sign Details	5	2020-05-04
5-406	Typical Notice Sign	3	2020-05-04
5-500	Typical Stormwater Storage Pond	0	2019-01-10
5-501	Typical Stormwater Storage Pond Forebay	0	2019-01-09

Water Distribution

DRAWING NUMBER	DESCRIPTION	REVISION NUMBER	DATE
6-100	Water Valve Installation	5	2020-03-10
6-101	Hot Tapping Connection	6	2020-06-22
6-102	Hydrant Installation	7	2020-05-05
6-200	Permanent Blow Off Valve Detail	7	2020-05-05
6-201	Valve Adjustment Detail	3	2020-03-10
6-300	Poured Concrete Thrust Blocks for Horizontal Tees and Bends	4	2020-03-10
6-301	Poured Concrete Thrust Blocks for Vertical Bends (Downward Thrust)	4	2020-03-10
6-302	Poured Concrete Thrust Blocks for Vertical Bends (Upward Thrust)	4	2020-03-10
6-303	Poured Concrete Thrust Blocks for Dead-ends	4	2020-03-10
6-304	Poured Concrete Thrust Blocks for Dead-ends in Disturbed Soil	1	2020-03-10

DRAWING NUMBER	DESCRIPTION	REVISION NUMBER	DATE
6-400	Anode Installation at Hydrant	3	2018-03-22
6-401	Typical Anode Installation for Metallic Fittings used with PVC Water Mains	3	2018-03-22

Sanitary, Storm, and Water Service Connections

DRAWING NUMBER	DESCRIPTION	REVISION NUMBER	DATE
7-100	Typical Lateral Service Location Detail	8	2020-06-22
7-101	Residential Lateral Service Detail	7	2020-06-22
7-102	Multi-family Service Detail with Storm Service	5	2020-06-22
7-103	Multi-family Service Detail	5	2020-06-22
7-104	Commercial Service Detail with Storm Service	4	2020-06-22
7-105	Commercial Service Detail	4	2020-06-22
7-106	Service Connection Details for Sewer Manhole in Cul-de-Sac	2	2020-06-22
7-200	Residential Non-Riser Type Sanitary Service Connection	5	2020-06-22
7-201	Residential Riser Type Sanitary Service Connection	4	2020-06-22
7-202	Multi-family Sanitary Inspection Chamber	7	2020-06-22
7-203	Commercial / Industrial Sanitary Inspection Manhole	6	2020-06-22
7-204	Metal Driveway Box	2	2020-05-05
7-300	Residential Non-Riser Type Storm Service Connection	5	2020-06-22
7-301	Residential Riser Type Storm Service Connection	4	2020-06-22
7-302	Weeping Tile Discharge to Storm Service	4	2020-06-22
7-303	Granular Drainage Discharge to Storm Service	4	2020-06-22
7-304	Granular Drainage Overland Discharge If Storm Service Not Available	4	2020-05-05
7-305	Weeping Tile Overland Discharge If Storm Service Not Available	4	2020-05-05
7-400	Residential Water Service Connection	4	2020-03-11
7-401	Service Valve Rod for 20 mm, 25 mm, 38mm, 50 mm Curb Stops	0	2011-02-22
7-402	Service Box	5	2020-06-22

Lot Grading

DRAWING NUMBER	DESCRIPTION	REVISION NUMBER	DATE
8-100	Lot Grading Back to Front Drainage	6	2020-05-05
8-101	Lot Grading Split Drainage	6	2020-05-05
8-102	Shared Drainage Between Lots	3	2020-06-22
8-103	Concrete Between Driveways	3	2020-05-05
8-200	Concrete Drainage Swale (Landscaping)	6	2020-03-11

Landscaping

DRAWING NUMBER	DESCRIPTION	REVISION NUMBER	DATE
9-100	Standard Trail	4	2020-06-22
9-101	Root Barrier Section and Elevation	1	2020-03-11
9-102	Trail Seating Node	1	2020-03-17
9-103	Nature Trail	1	2020-03-17
9-104	Play Safe 18 mo to 5 yrs	2	2020-05-05
9-105	Play Safe Sign 5 Years to 12 Years	0	2020-03-15
9-200	Wooden Fence	3	2018-12-04
9-201	Chain-link Fence & Gate	5	2020-03-12
9-202	6” x 6” Wood Bollard	4	2020-03-12
9-203	150 mm Steel Landscaping Bollard	5	2020-05-05
9-204	Single Traffic Control Gate	4	2020-03-12
9-205	Paired Traffic Control Gates	2	2019-06-26
9-206	Steel Pipe Gate	2	2020-03-12

DRAWING NUMBER	DESCRIPTION	REVISION NUMBER	DATE
9-207	Chain Link Maintenance Gate	2	2020-03-12
9-208	Wooden Post and 3 Rail Fence	2	2020-03-12
9-209	Noise Attenuation Fence	4	2020-05-05
9-300	Tree Grate 1500 mm	1	2020-05-05
9-301	Typical Berm	5	2020-05-05
9-302	Wire Basket Tree Spade Planting Tree Staking & Mulching	1	2020-03-12
9-303	Typical Container Planting	1	2020-03-12
9-304	Typical Vault Planting	1	2020-03-12
9-305	Planting Bed Cross-Section	2	2020-05-05
9-400	Typical Park Bench	2	2018-12-04
9-401	Typical Picnic Table	4	2020-06-22
9-402	Garbage Receptacle	1	2017-03-02
9-403	Dog Waste Bag Dispenser	3	2020-03-12

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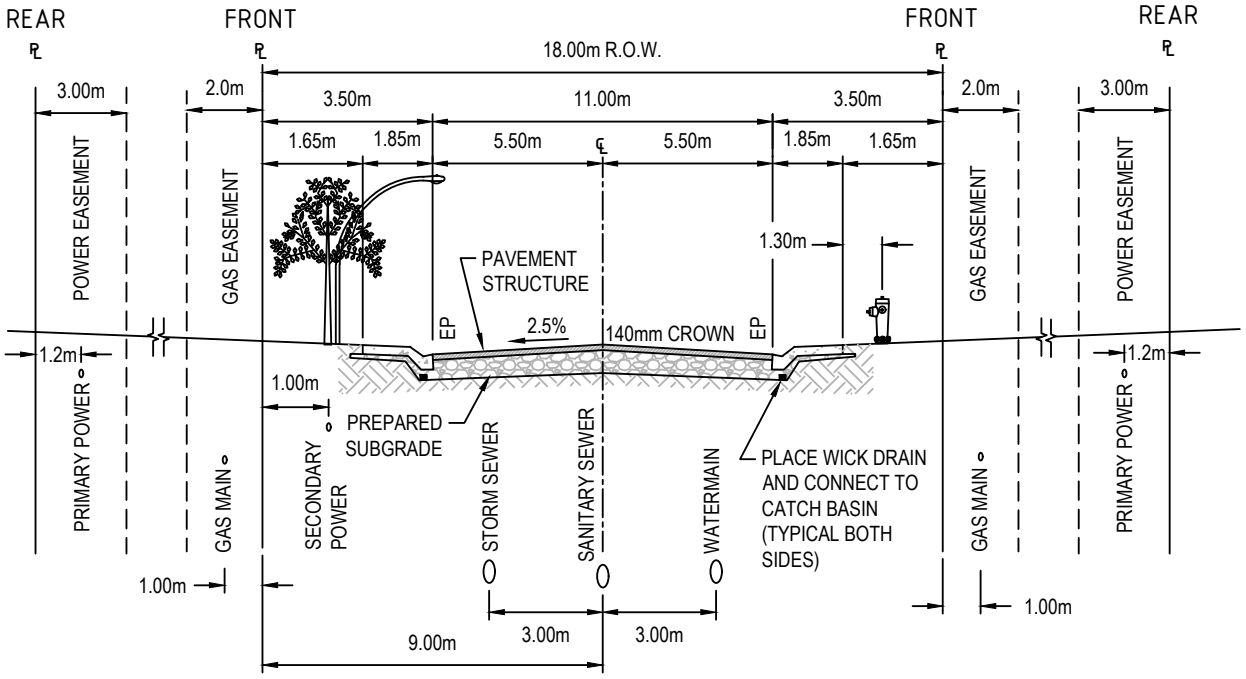


NOTES:

1. PAVEMENT STRUCTURES AS PER DESIGN STANDARDS SECTION 3.5.
2. MINIMUM CROSSFALL 2.5%, MAXIMUM CROSSFALL 4.0%.
3. CURB AND GUTTER TO BE ROLLED FACE WITH MONOLITHIC SIDEWALK. SEE DRAWING 1-205.

NO.	DATE	REVISION
8		
7		
6		
5	22/06/20	Revised Notes
4	27/02/20	Revised Notes
3	21/03/18	Revised Notes
2	22/11/16	Additional Notes
1	12/04/16	Additional Notes & Dimensions

The City of Lloydminster

Checked by:

Approved by

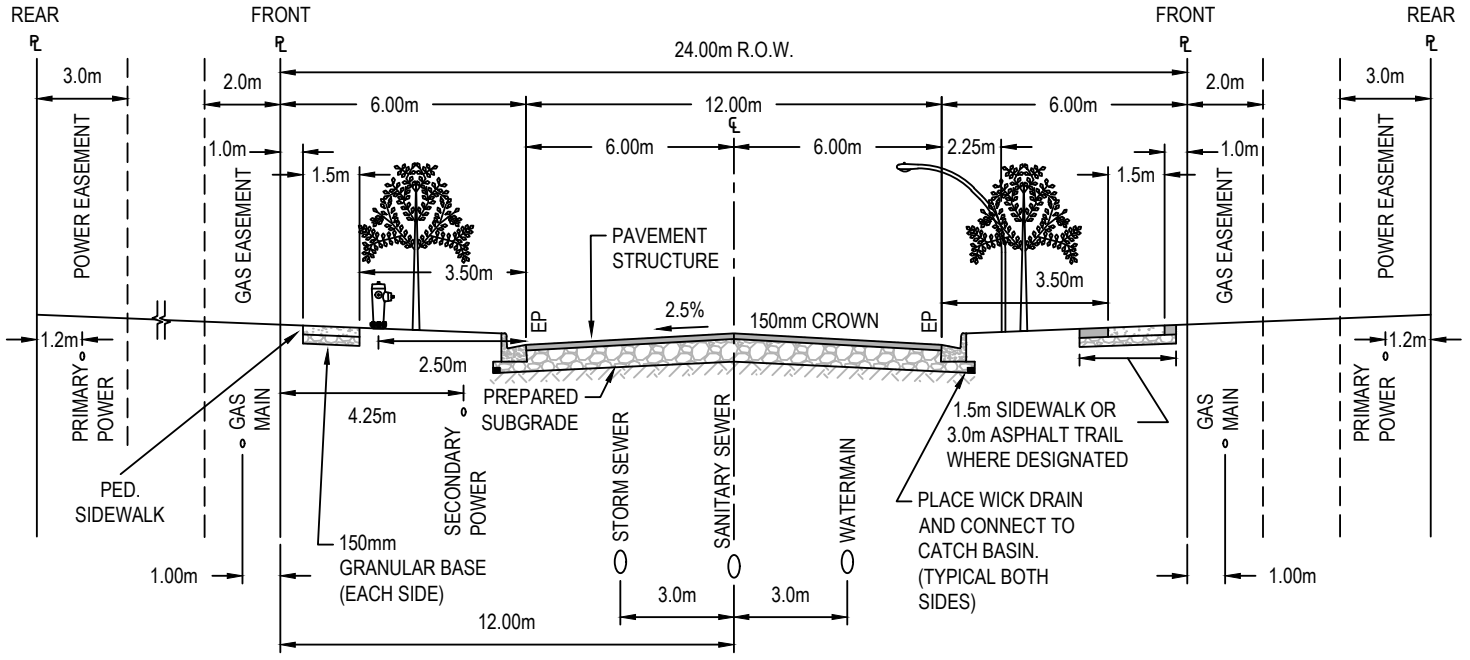
Drawn by: N/A

Scale: N.T.S.

URBAN RESIDENTIAL LOCAL ROADWAYS

Date: Feb. 22, 2011

Drawing #: 1-100



NOTES:

1. PAVEMENT STRUCTURES AS PER DESIGN STANDARDS SECTION 3.5.
2. MINIMUM CROSSFALL 2.5%, MAXIMUM CROSSFALL 4.0%
3. CURB AND GUTTER TO BE 150mm CURB WITH 250mm GUTTER. SEE DRAWING 1-100

NO.	DATE	REVISION
8		
7		
6	22/06/20	Revised Notes
5	21/04/20	Added Dim. / Label
4	27/02/20	Dimensions & Notes
3	19/11/18	Changed Streetlight Position
2	22/11/16	Additional Notes
1	12/04/16	Changed Dimensions

The City of Lloydminster

Checked by:

Approved by:

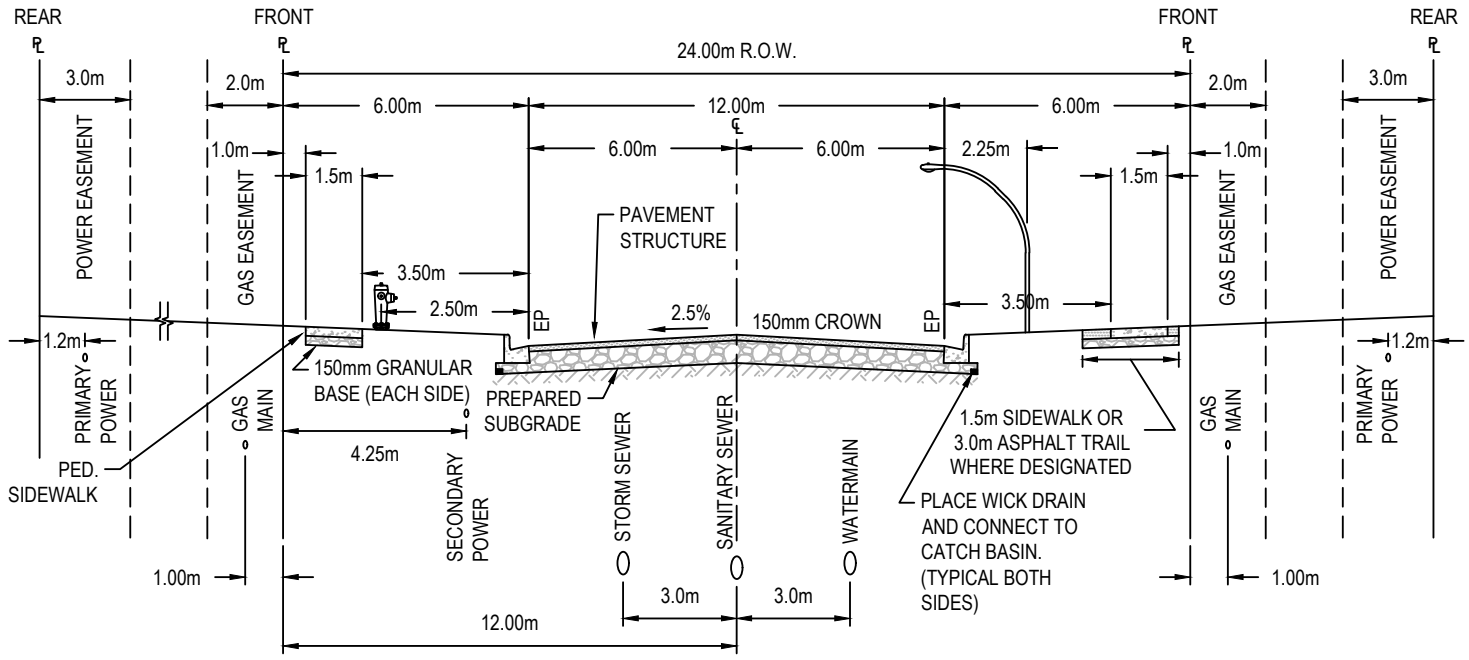
Drawn by: N/A

Scale: N.T.S.

URBAN RESIDENTIAL COLLECTOR ROADWAYS

Date: Feb. 22, 2011

Drawing #: 1-101



NOTES:

1. PAVEMENT STRUCTURES AS PER DESIGN STANDARDS SECTION 3.5.
2. MINIMUM CROSSFALL 2.5%, MAXIMUM CROSSFALL 4.0%.
3. COLLECTOR DETAILS TO BE REVIEWED AND APPROVED BY THE CITY.
4. CURB AND GUTTER TO BE 150mm CURB WITH 250mm GUTTER. SEE DRAWING 1-100.

NO.	DATE	REVISION
8		
7		
6	22/06/20	Revised Note 2
5	21/04/20	Added Dim. / Label
4	27/02/20	Dimensions & Text
3	19/11/18	Changed Streetlight Position
2	22/11/16	Additional Notes
1	12/04/16	Revised Dimensions

The City of Lloydminster

Checked by:

Approved by:

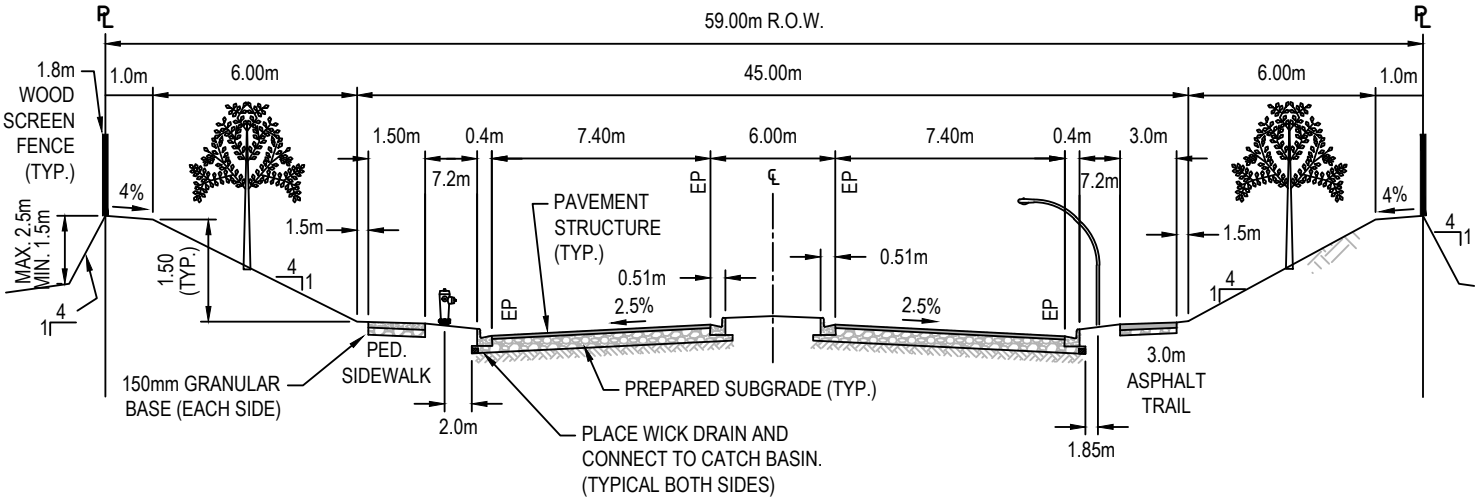
Drawn by: N / A

Scale: N.T.S.

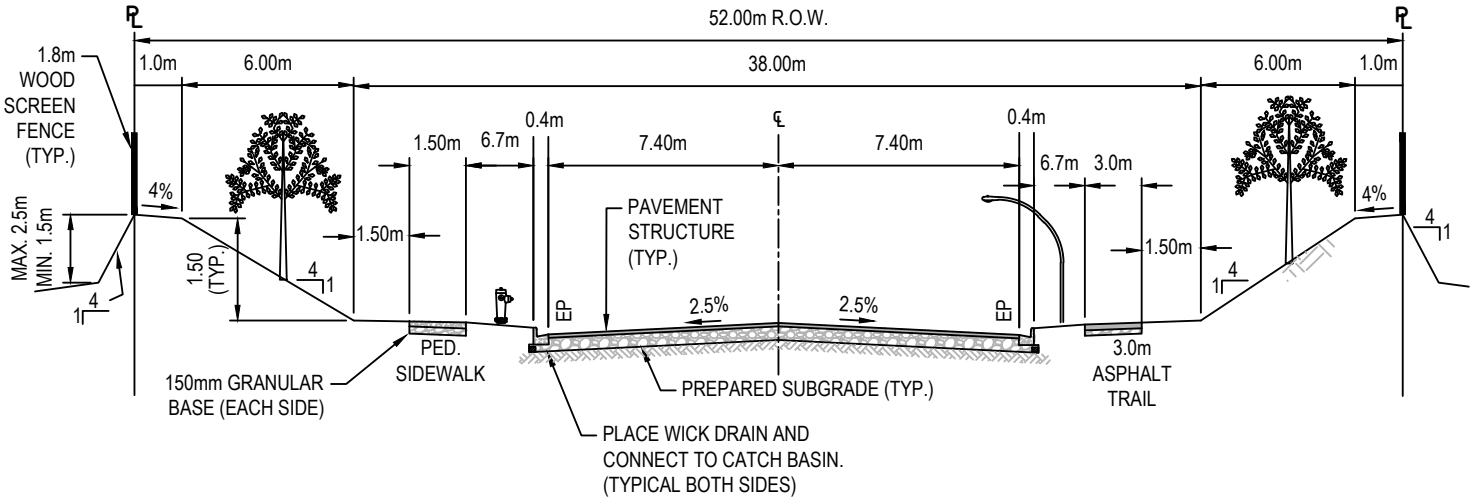
URBAN INDUSTRIAL / COMMERCIAL ROADWAYS

Date: Feb. 22, 2011

Drawing #: 1-102



4 LANE URBAN DIVIDED ARTERIAL ROADWAY



4 LANE URBAN UNDIVIDED ARTERIAL ROADWAY

NOTES:

1. PAVEMENT STRUCTURES AS PER DESIGN STANDARDS SECTION 3.5.
2. MINIMUM CROSSFALL 2.5%, MAXIMUM CROSSFALL 4.0%.
3. BERMS ARE REQUIRED ONLY WHERE ARTERIAL ROADWAY BACKS ON TO RESIDENTIAL LOTS. SEE DWG. 9-301 FOR BERM DETAILS.
4. CURB AND GUTTER TO BE 200mm CURB WITH 250mm GUTTER, SEE DWG. 2-101.

NO.	DATE	REVISION
8		
7		
6	22/06/20	Revised Drawing
5	27/02/20	Revised Drawing
4	02/07/19	Revised Drawing
3	11/19/18	Updated Notes & Resived Drawings
2	11/22/16	Additional Notes
1	18/04/16	Revised Dimensions

The City of Lloydminster

Checked by:

Approved by

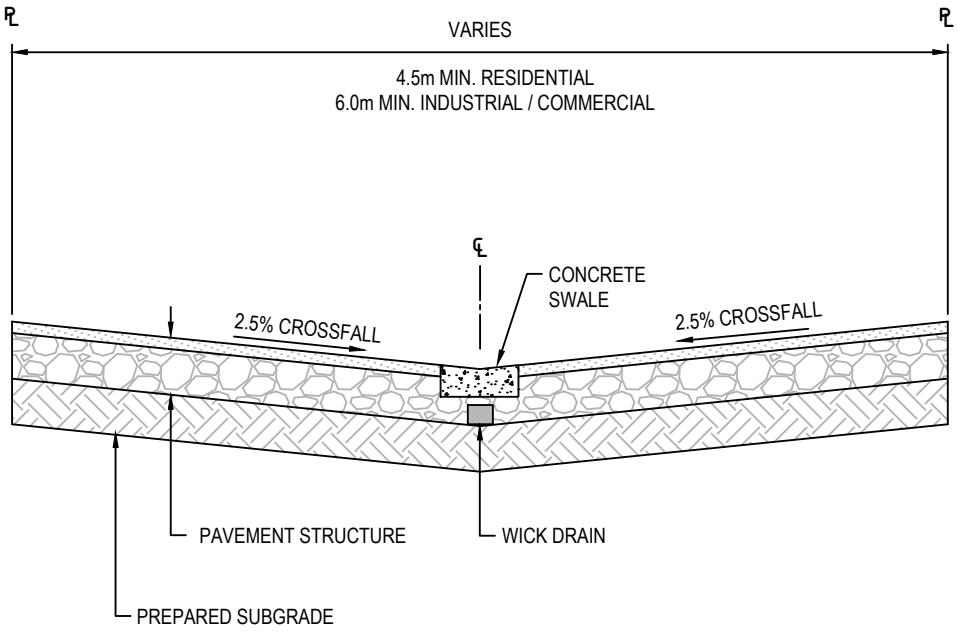
Drawn by: N / A

Scale: N.T.S.

URBAN ARTERIAL ROADWAYS

Date: Feb. 22, 2011

Drawing #: 1-103



NOTES:

1. PROVIDE FULL DEPTH ASPHALT PAVEMENT STRUCTURE TO ADJACENT HARD SURFACED PARKING AREAS.
2. PAVEMENT STRUCTURES AS PER DESIGN STANDARDS SECTION 3.5.
3. MINIMUM CROSSFALL 2.5%, MAXIMUM CROSSFALL 4.0%.
4. CENTRELINE CONCRETE SWALE TO BE CONSTRUCTED AS SHOWN IN DRAWING 2-205.

NO.	DATE	REVISION
8		
7		
6		
5		
4	22/06/20	Revised Note 3
3	27/02/20	Revised Notes and Drawing
2	11/19/18	Revised Notes and Drawing
1	12/04/16	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

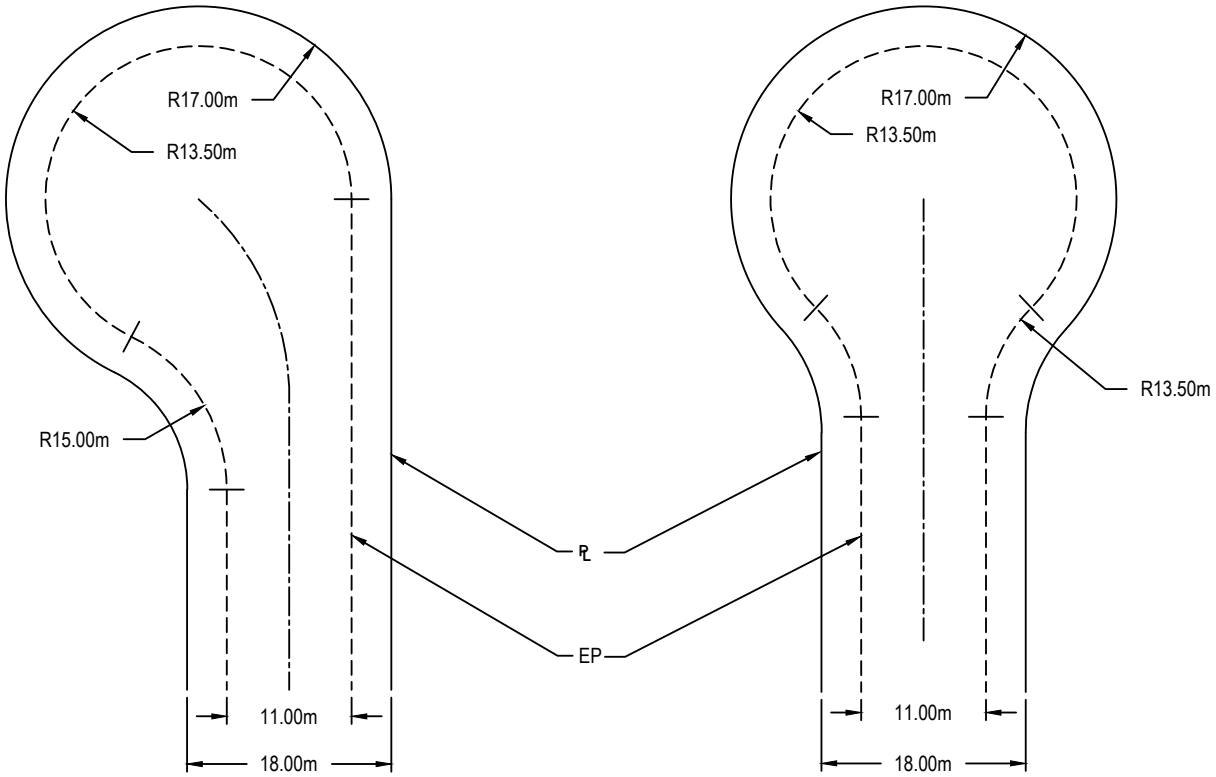
Drawn by: N / A

Scale: N.T.S.

TYPICAL LANE CROSS SECTION

Date: Feb. 22, 2011

Drawing #: 1-104



OFFSET CUL-DE-SAC

STRAIGHT CUL-DE-SAC

NOTES:

1. THE MINIMUM SLOPE FROM THE CENTRE OF THE CUL-DE-SAC SHALL BE 1.0%.
2. THE MAXIMUM SLOPE FROM THE CENTRE OF THE CUL-DE-SAC SHALL BE 3.0%.
3. THE MINIMUM GUTTER GRADE SHALL BE 0.8%.

NO.	DATE	REVISION
8		
7		
6		
5	22/06/20	Added "m" to dimensions
4	04/05/20	Adjusted Font Size
3	27/02/20	Changed Text & Dim.
2	19/11/18	Additional Notes
1	18/04/16	Changed dimensions

The City of Lloydminster

Checked by:

Approved by:

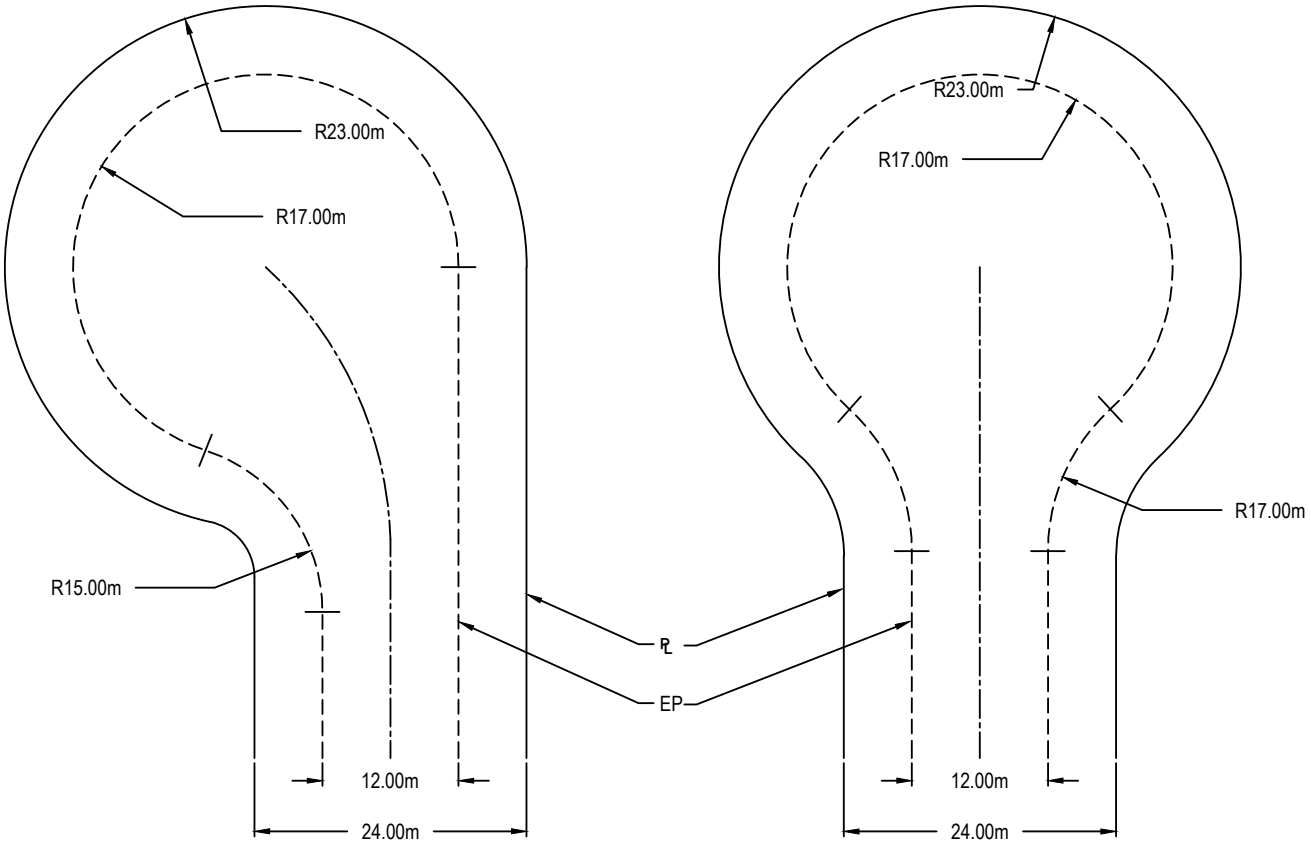
Drawn by: N / A

Scale: N.T.S.

TYPICAL RESIDENTIAL CUL-DE-SAC

Date: Dec. 15, 2015

Drawing #: 1-106



OFFSET CUL-DE-SAC

STRAIGHT CUL-DE-SAC

NOTES:

1. THE MINIMUM SLOPE FROM THE CENTRE OF THE CUL-DE-SAC SHALL BE 1.0%.
2. THE MAXIMUM SLOPE FROM THE CENTRE OF THE CUL-DE-SAC SHALL BE 3.0%.
3. THE MINIMUM GUTTER GRADE SHALL BE 0.8%.

NO.	DATE	REVISION
8		
7		
6		
5		
4	22/06/20	Added "m" to all dimensions
3	04/05/20	Changed Font Size
2	27/02/20	Changed Text & Dim.
1	11/19/18	ADDITIONAL NOTES

The City of Lloydminster

Checked by:

Approved by:

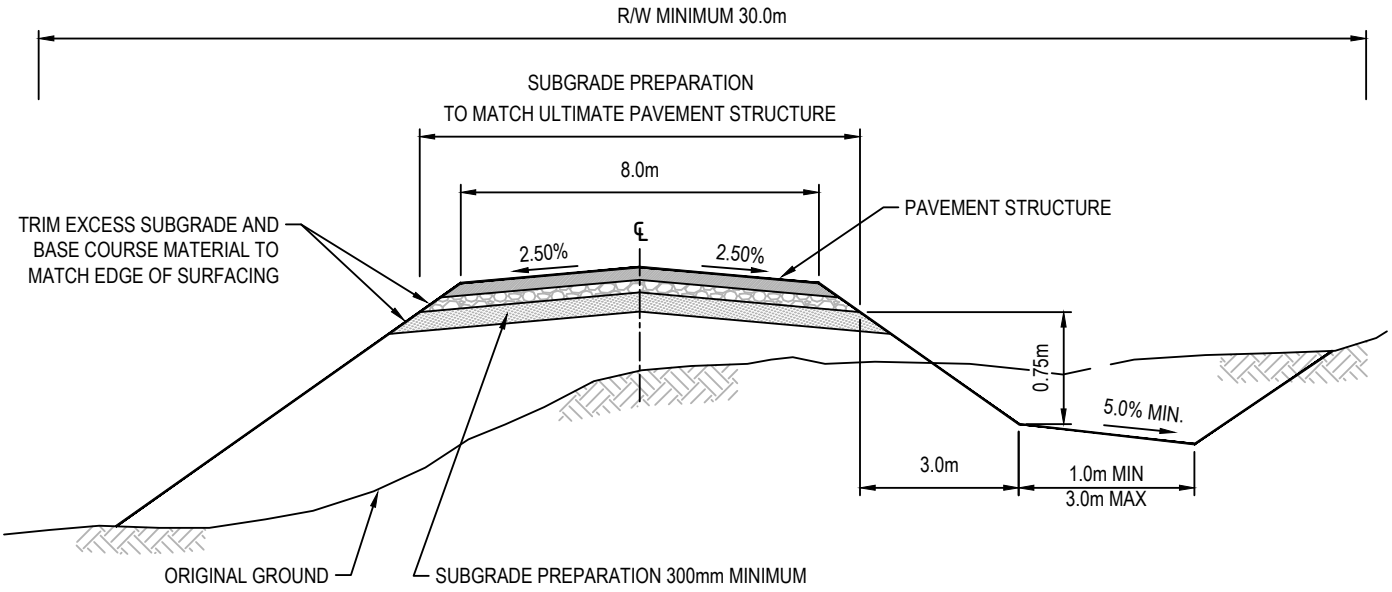
Drawn by: A. EDWARDS

Scale: N.T.S.

TYPICAL INDUSTRIAL / COMMERCIAL CUL-DE-SAC

Date: April 14, 2016

Drawing #: 1-107



NOTES:

1. ALL BACK SLOPES 4:1 UNLESS NOTED OTHERWISE.
2. SLOPES STEEPER THAN 4:1 REQUIRE 1m SHOULDER WIDENING & GUARD RAIL INSTALLATION.
3. PAVEMENT STRUCTURES AS PER DESIGN STANDARDS SECTION 3.5.
4. EROSION CONTROL MEASURES TO BE INSTALLED WITHIN SIDE SLOPES AND BOTTOM OF DITCH AS REQUIRED
5. MINIMUM CROSSFALL 2.5%, MAXIMUM CROSSFALL 4.0%

NO.	DATE	REVISION
8		
7		
6		
5		
4	22/06/20	Revised Note 5
3	27/02/20	Revised Text
2	11/19/18	Revised Notes
1	4/14/16	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

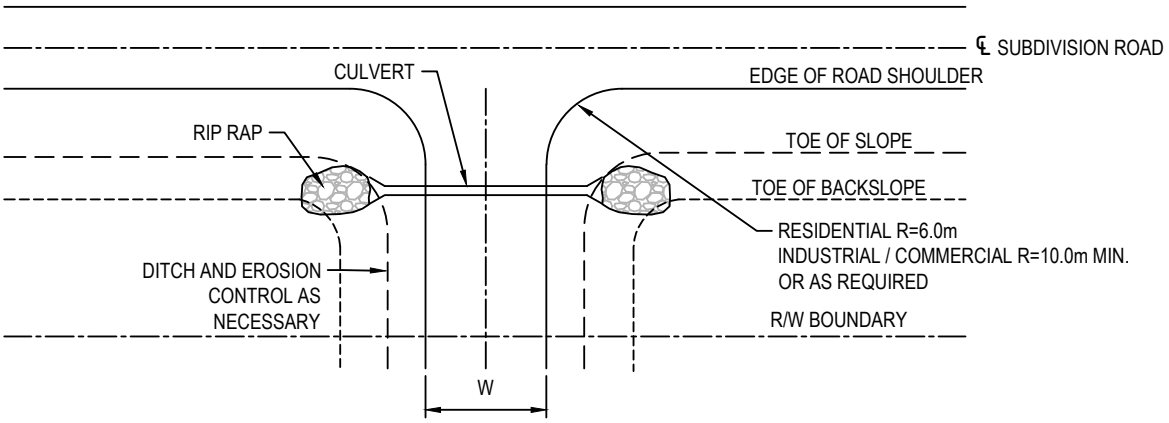
Drawn by: N / A

Scale: N.T.S.

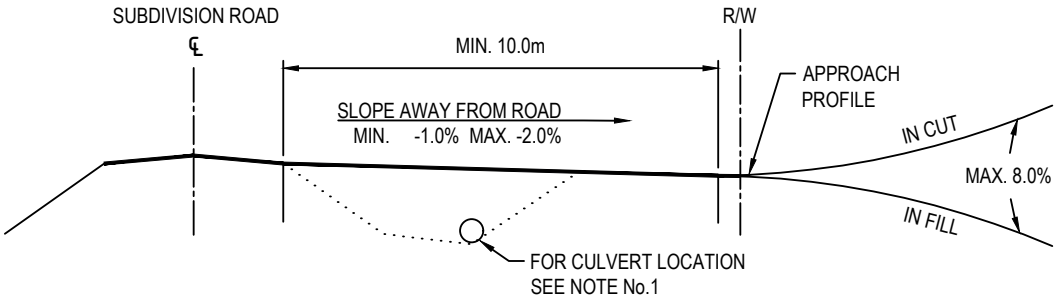
TYPICAL CROSS SECTION RURAL ROADS

Date: Feb. 22, 2011

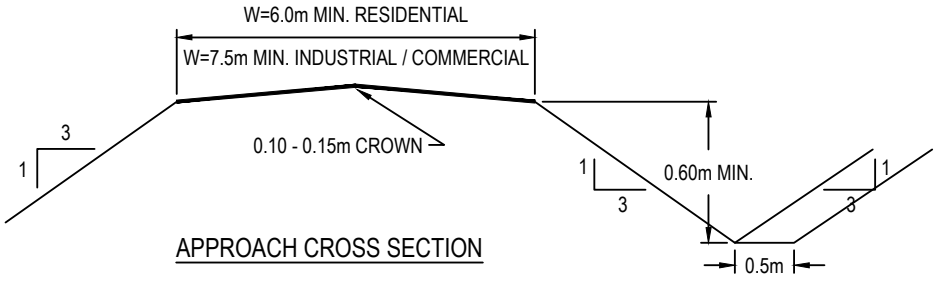
Drawing #: 1-200



APPROACH PLAN



DITCH AND CULVERT LOCATION



APPROACH CROSS SECTION

NOTES:

1. WHEN CULVERTS ARE REQUIRED, THEY MUST BE CORRUGATED STEEL PIPE CULVERTS AND BE THE FOLLOWING MIN. DIAMETERS:
   - RESIDENTIAL - 0.40m
   - INDUSTRIAL - 0.50m
   - LENGTH WILL VARY WITH DEPTH OF FILL (MIN. 10.0m)
   - CULVERT TO BE PLACED AT TOE OF BACKSLOPE
   - MINIMUM DEPTH OF COVER 0.5m
2. MIN. APPROACH LENGTH MEASURED FROM EDGE OF ROAD SHOULDER TO R/W BOUNDARY.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2	11/19/18	Revised Drawings
1	4/14/16	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

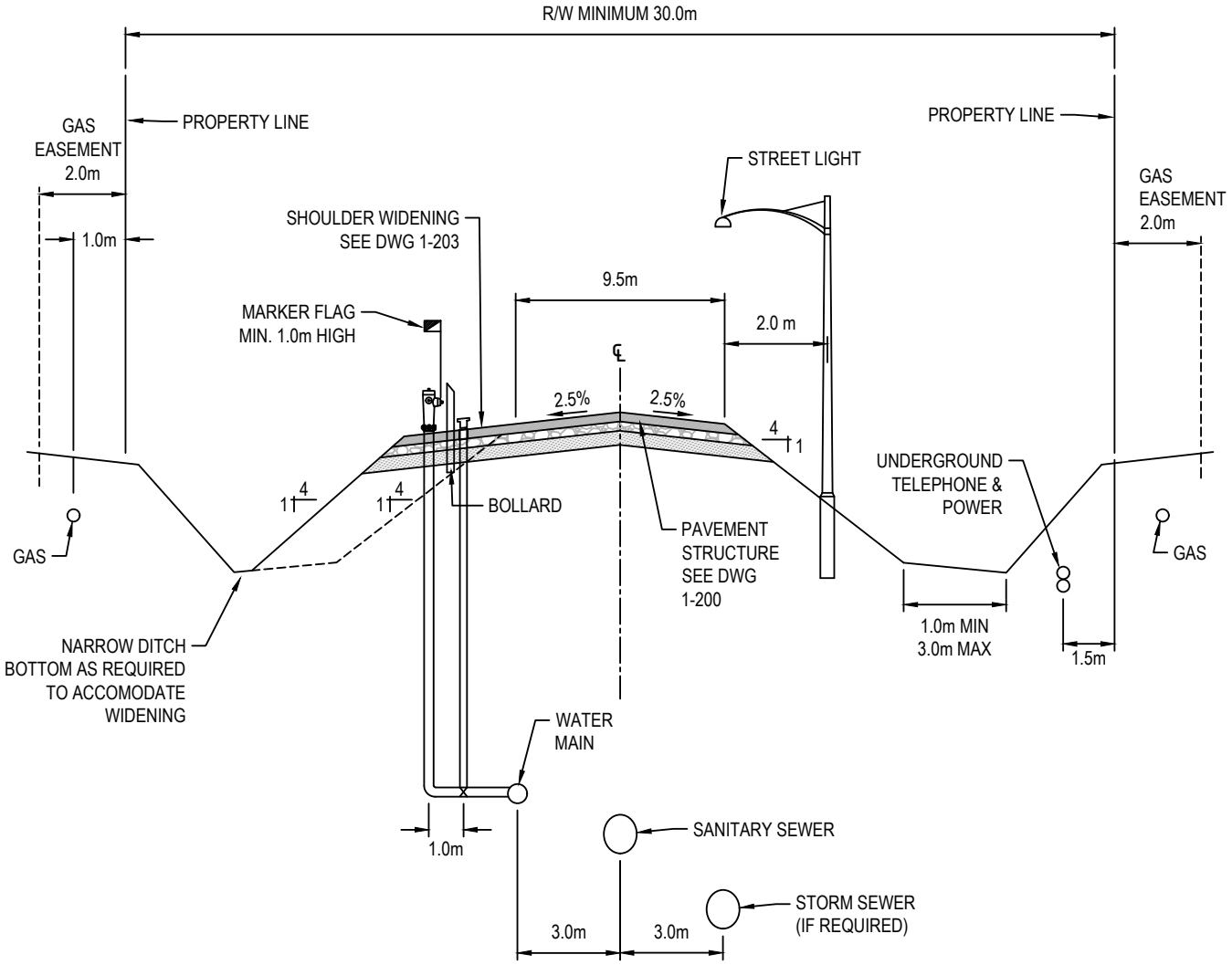
Drawn by: L. LEEPER

Scale: N.T.S.

INDUSTRIAL / COMMERCIAL APPROACHES (RURAL)

Date: Feb. 22, 2011

Drawing #: 1-201



NOTES:

1. WATERMAIN AND HYDRANT AND/OR STORM SEWER MAY BE LOCATED ON EITHER SIDE OF ROAD.
2. UNDERGROUND POWER AND STREET LIGHTS TO BE ON THE OPPOSITE SIDE TO WATERMAIN.
3. LUMINARE SUPPORTS TO BE OF THE FRANGIBLE BASE, SLIP BASE, OR FRANGIBLE COUPLING TYPE.
4. ALL BACK SLOPES 4:1 UNLESS NOTED OTHERWISE.
5. PAVEMENT STRUCTURES AS PER DESIGN STANDARDS SECTION 3.5.
6. HYDRANTS TO BE LOCATED IN WIDENING AS PER DWG. 1-203
7. EROSION CONTROL MEASURES TO BE INSTALLED WITHIN SIDE SLOPES AND BOTTOM OF DITCH AS REQUIRED
8. MINIMUM CROSSFALL 2.5%, MAXIMUM 4.0%

NO.	DATE	REVISION
8		
7		
6		
5	04/05/20	Revised Min/Max Case
4	27/02/20	Revised Text
3	11/20/18	Revised Notes
2	4/14/16	Revised Notes
1	15/05/12	Water and Sanitary Relocation

The City of Lloydminster

Checked by:

Approved by:

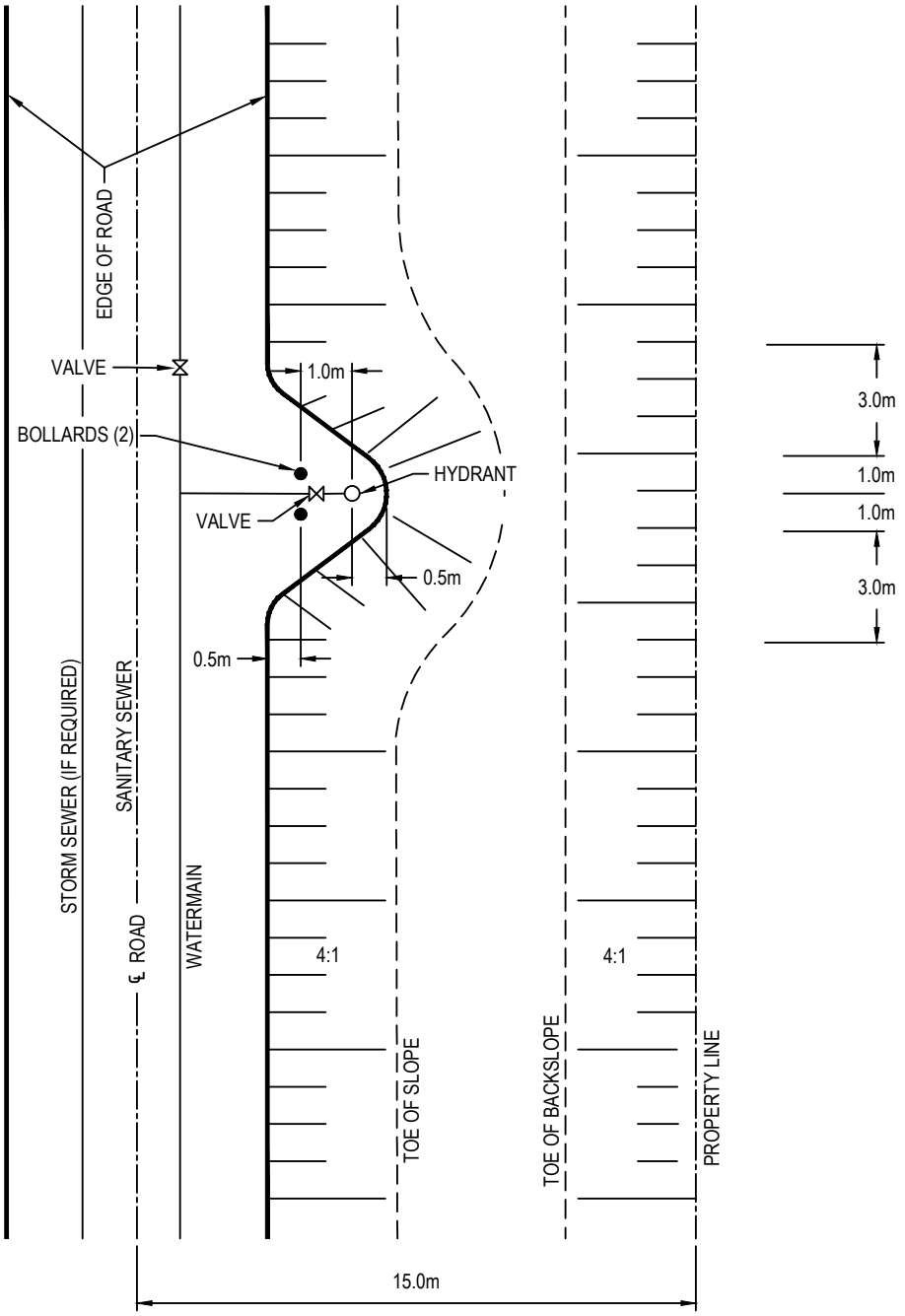
Drawn by: N / A

Scale: N.T.S.

TYPICAL RURAL UTILITY LAYOUT

Date: Feb. 22, 2011

Drawing #: 1-202



NOTES:

1. BOLLARDS TO BE CONSTRUCTED AS PER DWG 1-204.

NO.	DATE	REVISION
8		
7		
6		
5		
4	04/05/20	Moved Valve Location
3	27/02/20	Changed Notes
2	20/11/18	Changed Notes
1	15/05/12	Water and Sanitary Relocation

The City of Lloydminster

Checked by:

Approved by:

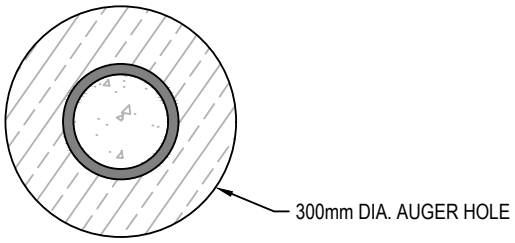
Drawn by: L. LEEPER

Scale: N.T.S.

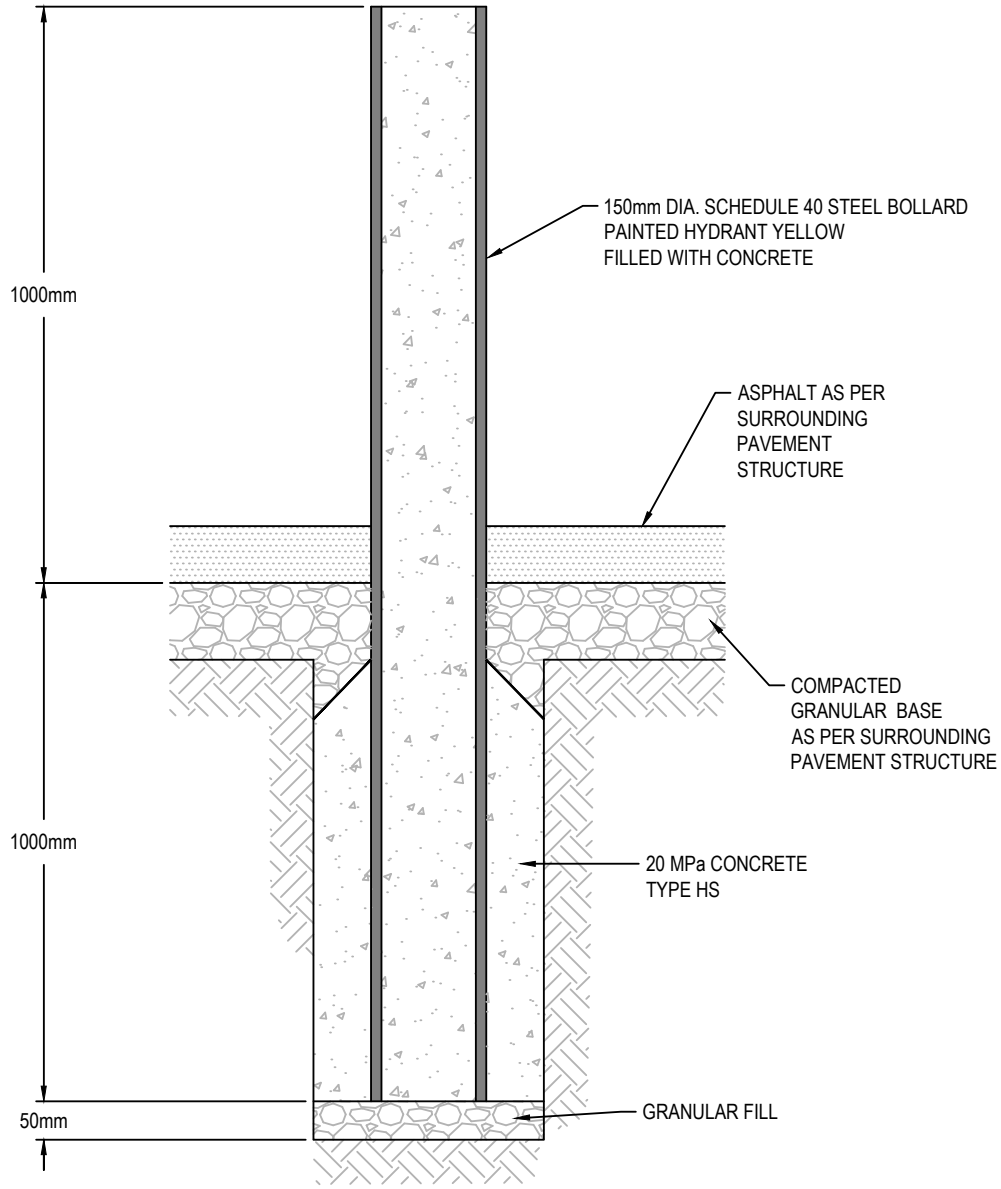
TYPICAL RURAL HYDRANT SHOULDER WIDENING LAYOUT

Date: Feb. 22, 2011

Drawing #: 1-203



TOP



ELEVATION

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2	27/02/20	Changed Drawing Text
1	01/02/19	Changed Drawing Text

The City of Lloydminster

Checked by:

Approved by:

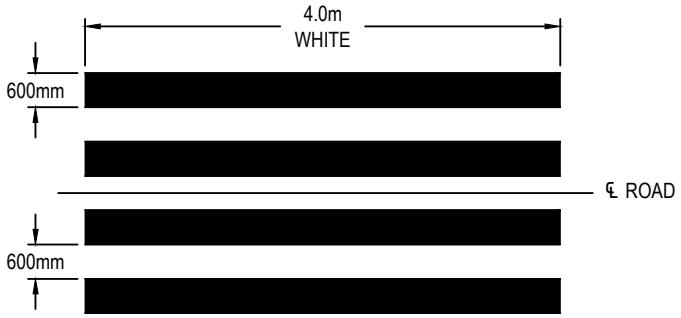
Drawn by: A. Edwards

Scale: N.T.S.

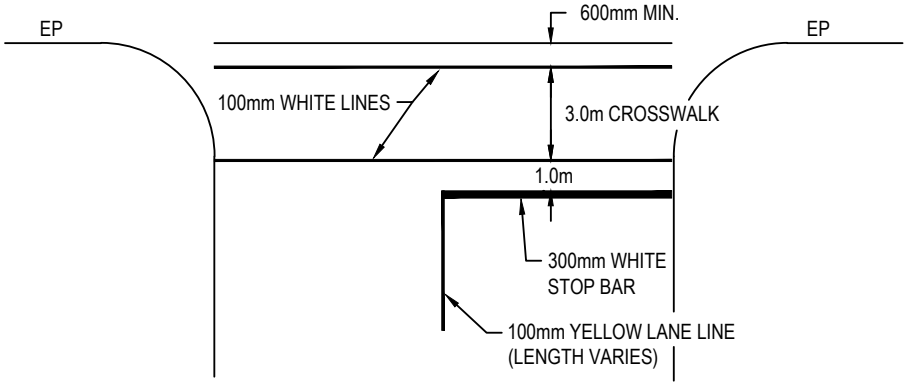
150mm STEEL ROADWAY BOLLARD

Date: Nov 23, 2016

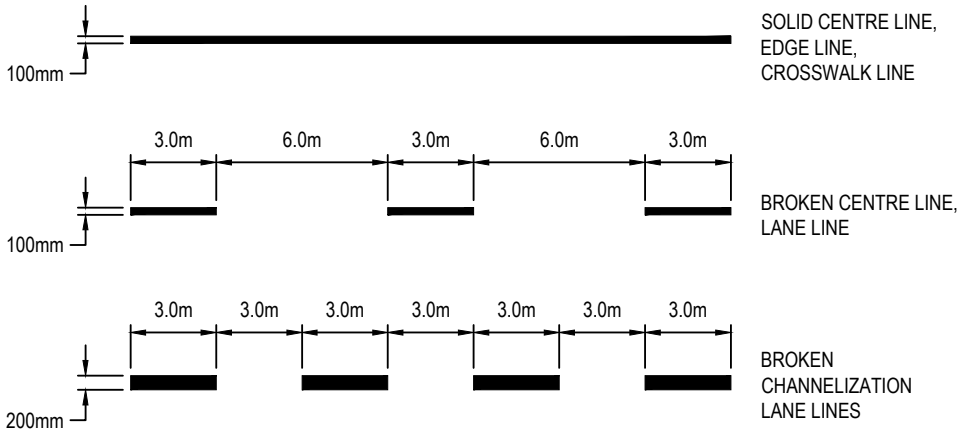
Drawing #: 1-204



TYPICAL "ZEBRA" CROSSWALK MARKINGS AT MIDBLOCK LOCATIONS AND RIGHT TURN CUT-OFFS



INTERSECTION LOCATIONS



LANE LINES

NOTES:

1. TO BE PLACED IN ACCORDANCE WITH THE "UNIFORM TRAFFIC CONTROL DEVICES" MANUAL.
2. LANE DIMENSIONS ARE FROM FACE OF CURB TO CENTRE OF LINE OR CENTRE OF LINE TO CENTRE OF LINE.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2	04/05/20	Revised Font Size
1	27/02/20	Revised Text

The City of Lloydminster

Checked by:

Approved by:

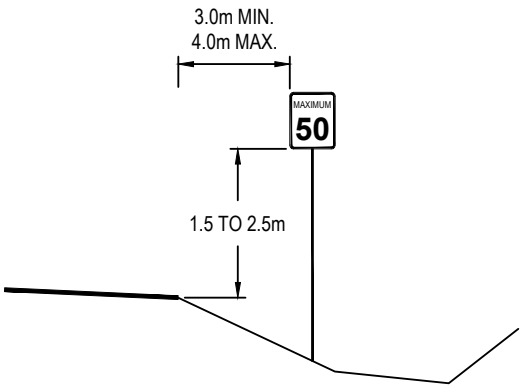
Drawn by: N / A

Scale: N.T.S.

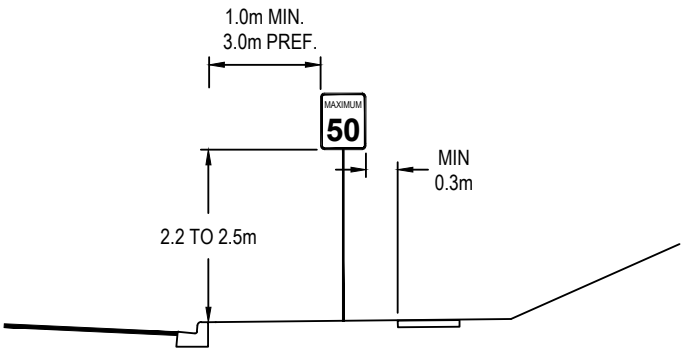
Date: Feb. 22, 2011

PAVEMENT MARKINGS

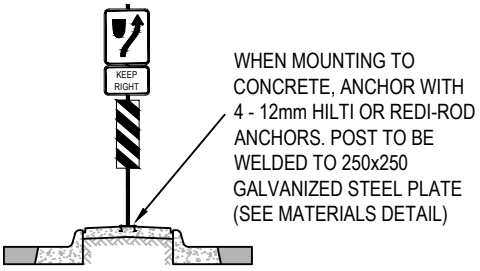
Drawing #: 1-300



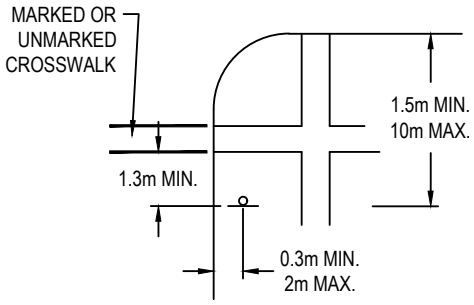
RURAL / INDUSTRIAL



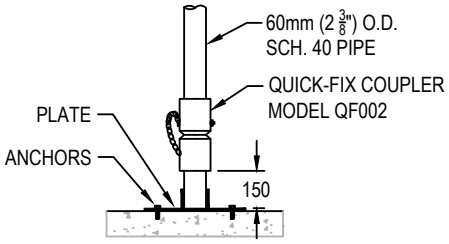
ARTERIAL ROADWAY



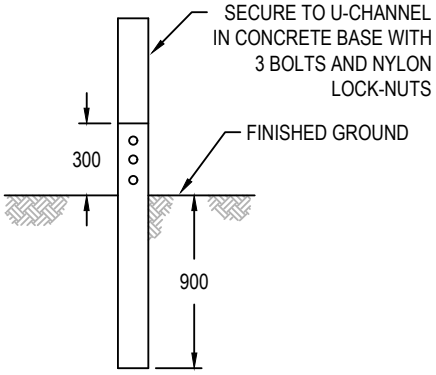
MEDIAN / CONCRETE DETAIL



INTERSECTION DETAIL



MATERIALS DETAIL
ROUND POLE



MATERIALS DETAIL
U-CHANNEL

NOTE:
1. SIGNS MOUNTED ON U-CHANNEL POLES EXCEPT WHEN INSTALLED IN CONCRETE.

NO.	DATE	REVISION
8		
7		
6		
5	29/06/20	Changed Materials Details
4	23/06/20	Changed Pipe Dia.
3	27/02/20	Changed Notes
2	03/21/18	Revised U-channel note.
1	08/04/14	Added U-channel note.

The City of Lloydminster

Checked by:

Approved by:

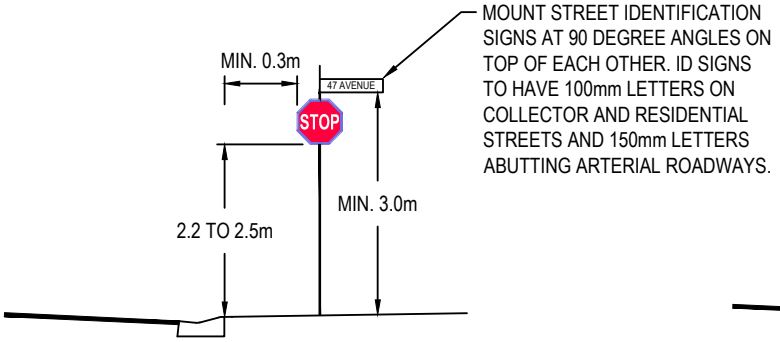
Drawn by: L. LEEPER

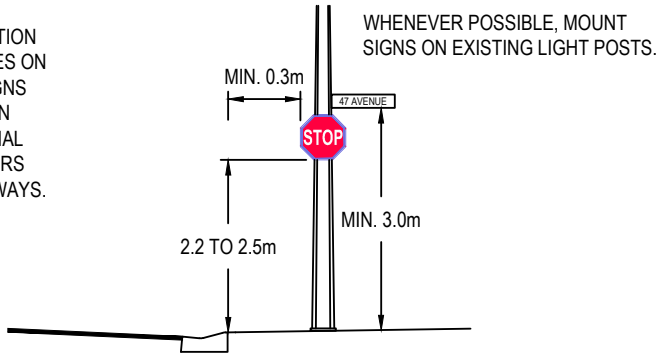
Scale: N.T.S.

Date: Feb. 22, 2011

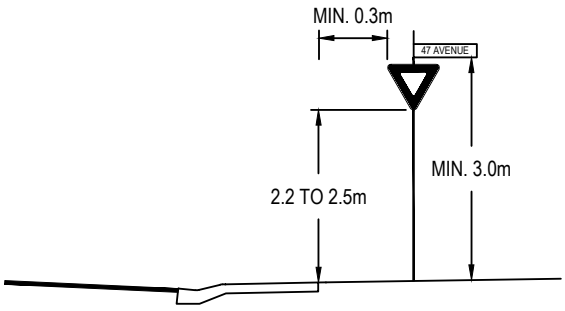
TRAFFIC SIGNAGE

Drawing #: 1-301

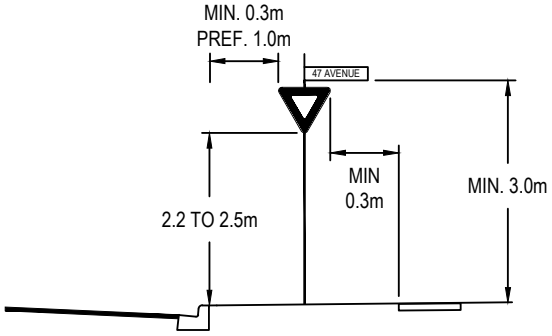




LOCAL RESIDENTIAL STREET



LOCAL RESIDENTIAL STREET



COLLECTOR STREET

NOTES:

1. WHERE PRACTICAL, MOUNT STREET NAME SIGNS:
   - ON A STREET LIGHT STANDARD AT THE INTERSECTION
   - ON THE TOP OF A YIELD OR STOP SIGN POST AT THE INTERSECTION
   - ON A SEPARATE POST ONLY IF THE ABOVE 2 LOCATIONS ARE NOT SUITABLE.
2. SIGNS MOUNTED ON U-CHANNEL POLES EXCEPT WHEN COUPLER IS REQUIRED.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2	27/02/20	Revised Notes
1	08/04/14	Added U-channel note.

The City of Lloydminster

Checked by:

Approved by:

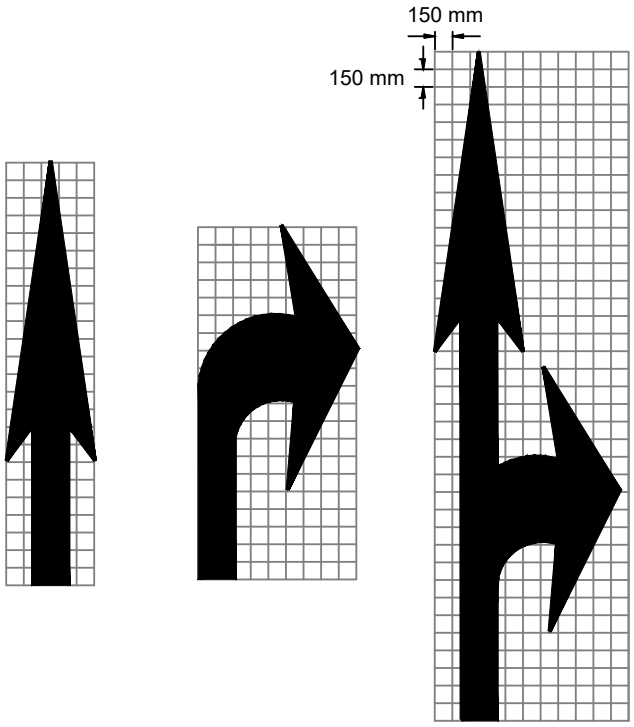
Drawn by: L. LEEPER

Scale: N.T.S.

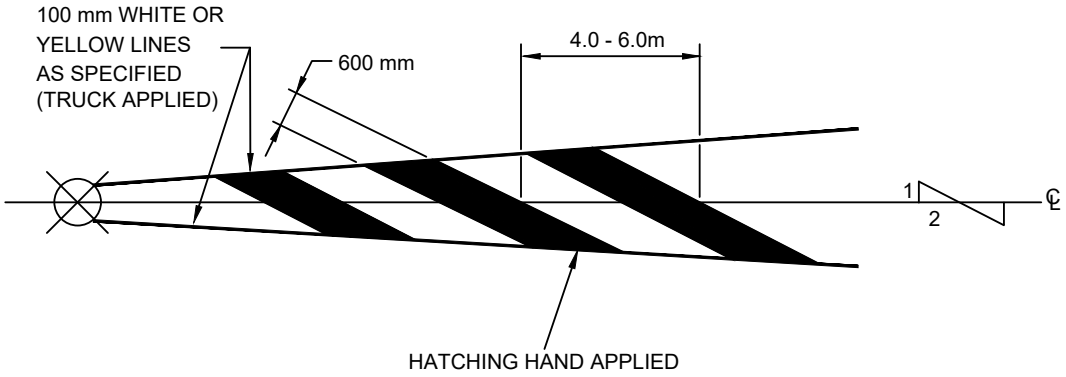
TRAFFIC SIGNAGE

Date: Feb. 22, 2011

Drawing #: 1-302



TYPICAL PAVEMENT ARROWS



DETAIL OF APPROACH PAVEMENT MARKINGS

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2	04/05/20	Revised Font Size
1	27/02/20	Revised Text

The City of Lloydminster

Checked by:

Approved by:

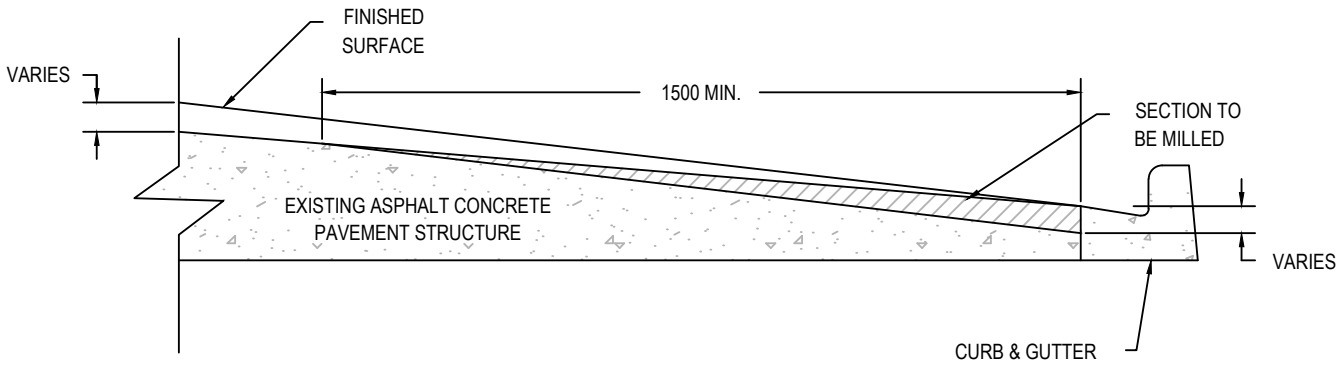
Drawn by: A. EDWARDS

Scale: N.T.S.

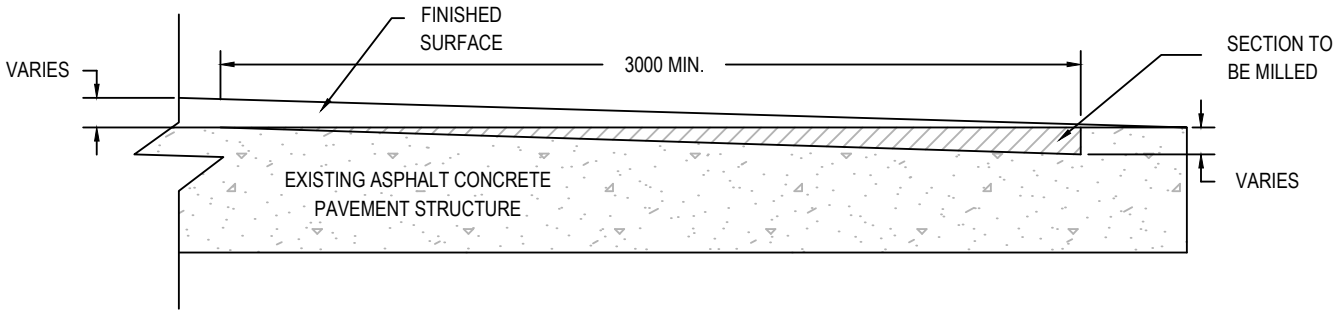
HAND APPLIED MARKINGS

Date: Jan 13, 2017

Drawing #: 1-303



GUTTER MILLING



BUTT JOINT MILLING

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. LIMITS OF MILLING TO BE CONFIRMED BY ENGINEER.
3. TO BE USED FOR MILL AND OVERLAY OPERATIONS, AND WHEN FILLETS ARE USED IN DEFERRED SECOND LIFT PAVING.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3	04/05/20	Revised Font Height
2	27/02/20	Revised Dimensions
1	21/03/18	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

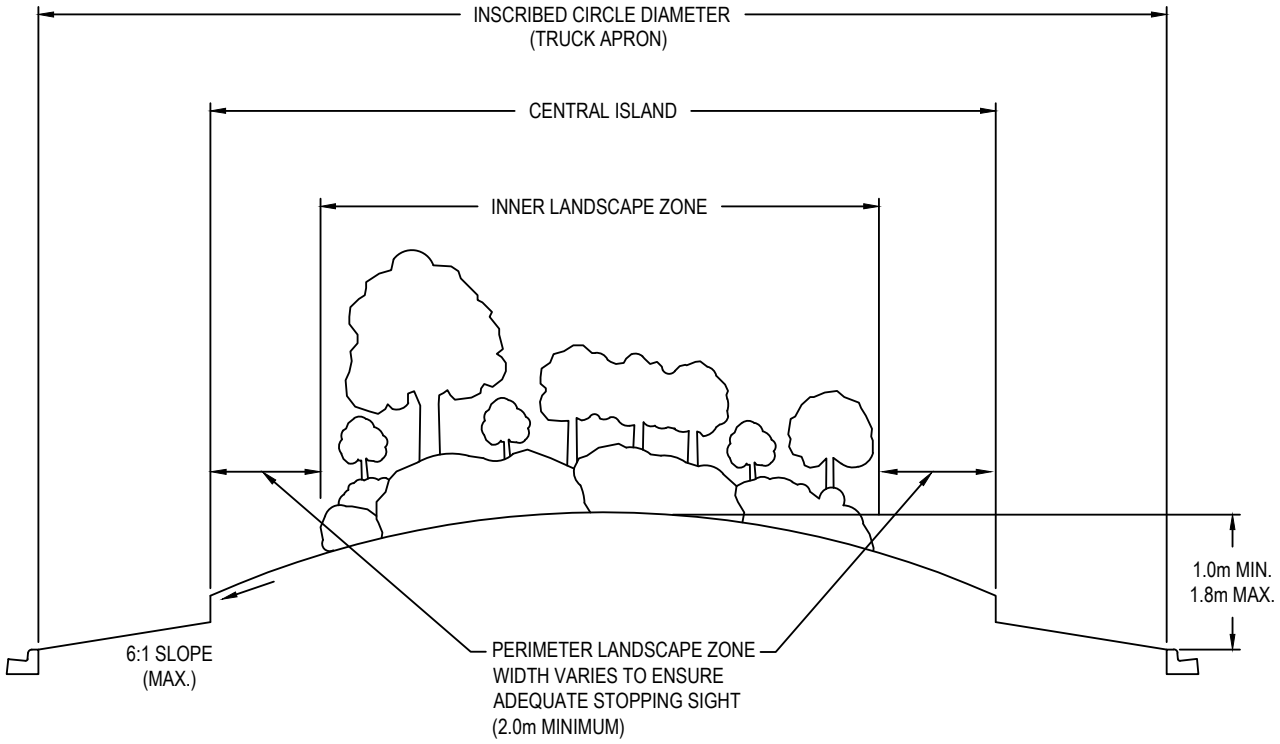
Drawn by: A. EDWARDS

Scale: N.T.S.

GUTTER AND BUTT JOINT MILLING

Date: Jan 13, 2017

Drawing #: 1-400



NOTES:

1. INSCRIBED CIRCLE TO BE CONCRETE, RED IN COLOUR
2. ONLY PLANTING SPECIES APPROVED BY THE CITY TO BE USED IN INNER LANDSCAPE ZONE
3. LANDSCAPING FEATURES MUST NOT INTERFERE WITH ACCESS TO, OR IMPEDE MAINTENANCE ON UTILITIES PASSING THROUGH ROUNDABOUT.
4. THE USE OF GRAVEL AND PUBLIC FURNITURE AS LANDSCAPING FEATURES TO BE AVOIDED.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1	03/03/20	Edited Text

The City of Lloydminster

Checked by:

Approved by:

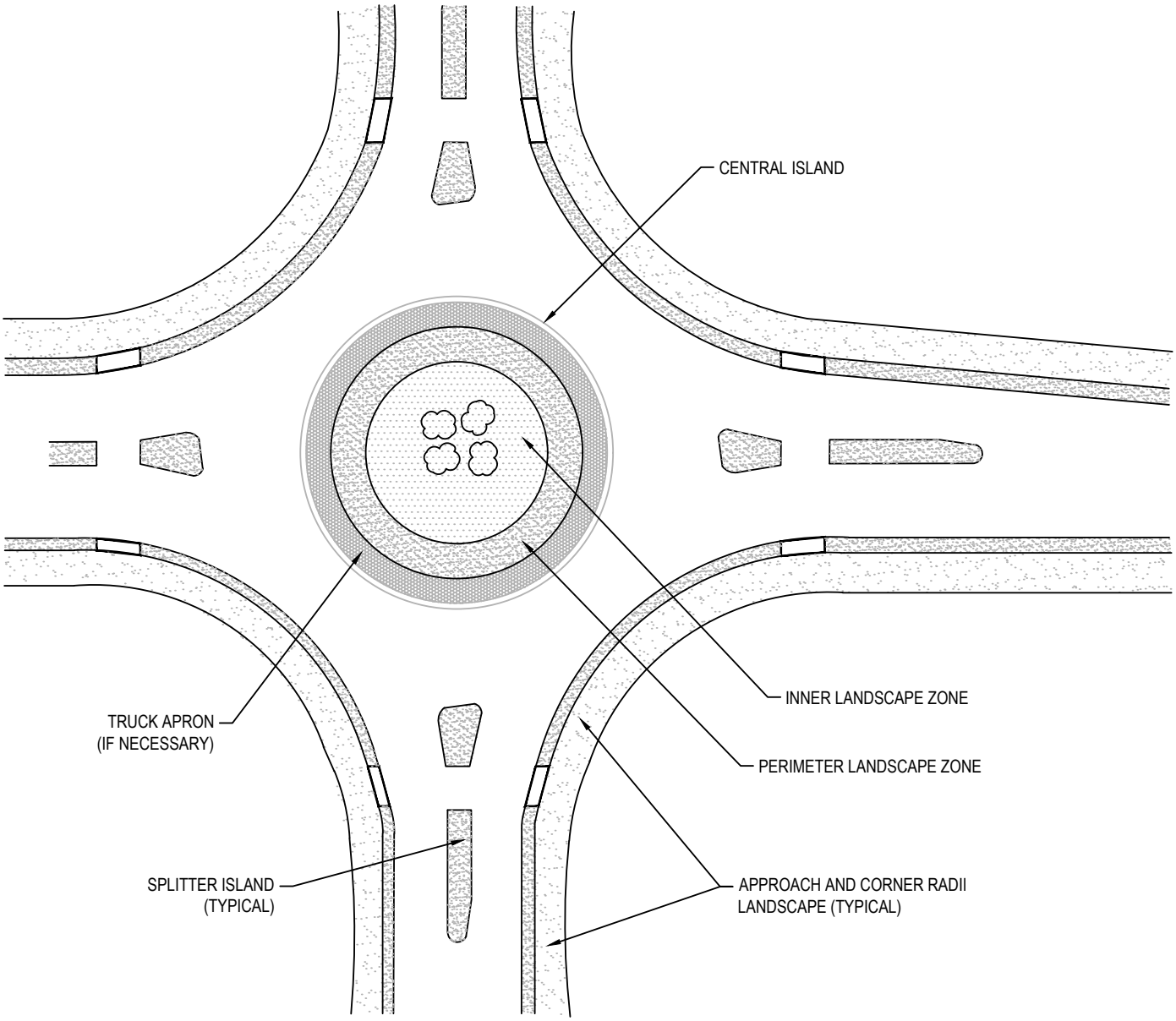
Drawn by: J. IDIOH

Scale: N.T.S.

ROUNDABOUT CROSS-SECTION

Date: Jan. 11, 2019

Drawing #: 1-500



NOTES:

1. TRUCK APRON TO BE CONCRETE, RED IN COLOUR.
2. ONLY PLANTING SPECIES APPROVED BY THE CITY TO BE USED IN INNER LANDSCAPE ZONE.
3. PERIMETER LANDSCAPE ZONE TO CONTAIN NO PLANTINGS.
4. LANDSCAPING FEATURES MUST NOT INTERFERE WITH ACCESS TO, OR IMPEDE MAINTENANCE ON UTILITIES PASSING THROUGH ROUNDABOUT.
5. THE USE OF GRAVEL AND PUBLIC FURNITURE AS LANDSCAPING FEATURES TO BE AVOIDED.
6. SPLITTER ISLAND TO BE FILLED WITH CONCRETE, WHICH MAY BE STAMPED OR COLOURED FOR AESTHETICS.
7. PAVEMENT MARKINGS TO BE REVIEWED BY THE CITY OF LLOYDMINSTER.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2	23/06/20	Revised Note 7
1	03/03/20	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

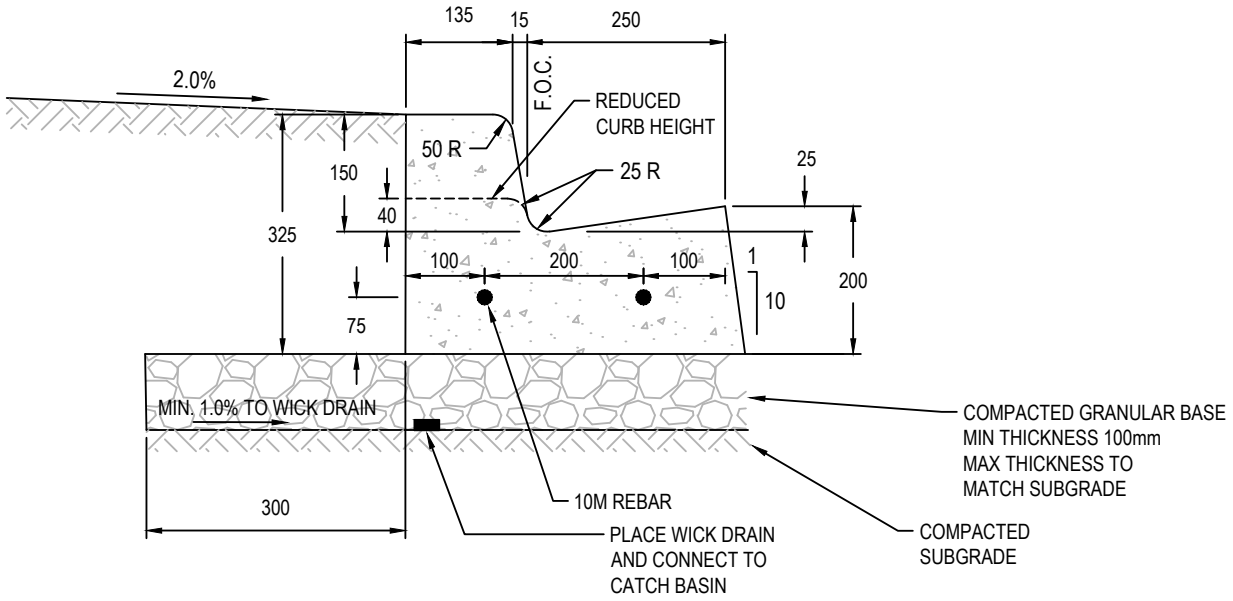
Drawn by: J. IDIOH

Scale: N.T.S.

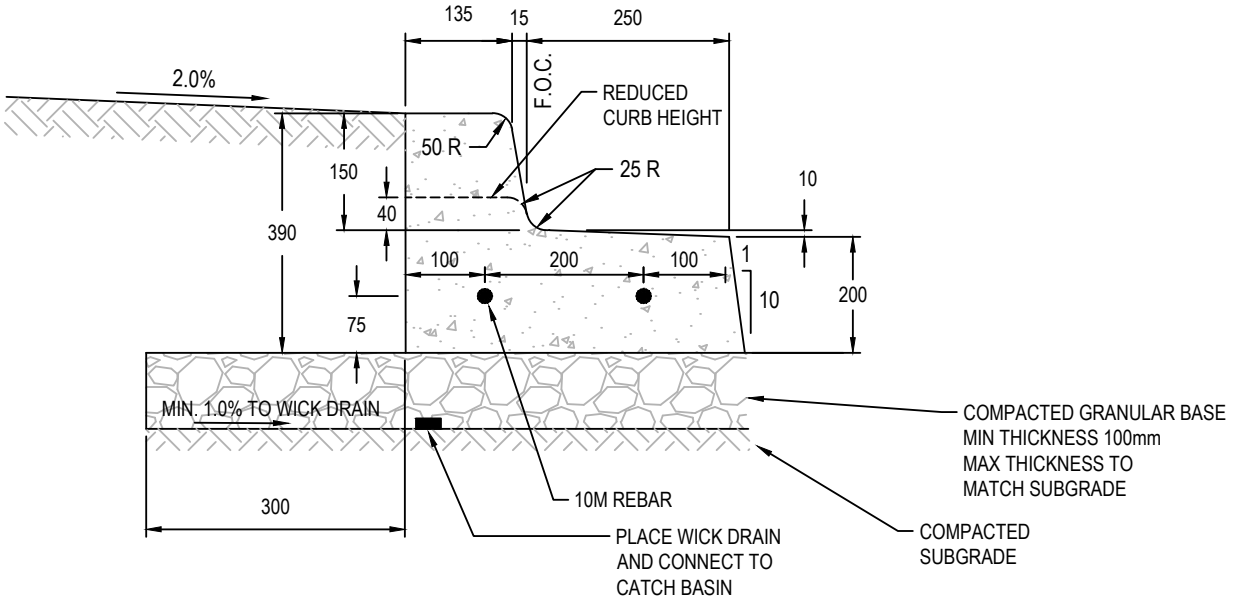
ROUNDABOUT PLAN VIEW AND LANDSCAPING ZONES

Date: Jan. 14, 2019

Drawing #: 1-501



STANDARD



REVERSE

NOTES:

1. CONCRETE TO BE TYPE HS, 32 MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5% TO 8% AIR ENTRAINMENT.
2. CURB RETURNS REQUIRED AT ALL CROSSINGS
3. COMPACT BACKFILL TO 95% FOR 500mm FROM BACK OF CURB AND PROVIDE POSITIVE DRAINAGE OVER THE TOP OF CURB.
4. 10M REBAR 6.0m LONG TO BE INSTALLED WHEN REPLACING CURB & GUTTER OVER SERVICE CONNECTION AND HYDRANT LEAD TRENCHES.
5. 10M REBAR TO BE INSTALLED AT ALL LANE AND COMMERCIAL CROSSINGS.
6. REDUCE CURB HEIGHT AT ALL CROSSINGS.
7. CONTRACTION JOINTS 50mm DEEP AND 5mm WIDE TO BE CONSTRUCTED AT 3.0m INTERVALS.

NO.	DATE	REVISION
8		
7		
6	04/05/20	Revised Details
5	03/03/20	Revised Notes
4	21/03/18	Revised Details
3	04/14/16	Revised Notes
2	10/12/13	Updated concrete notes
1	21/03/13	Updated concrete type

The City of Lloydminster

Checked by:

Approved by:

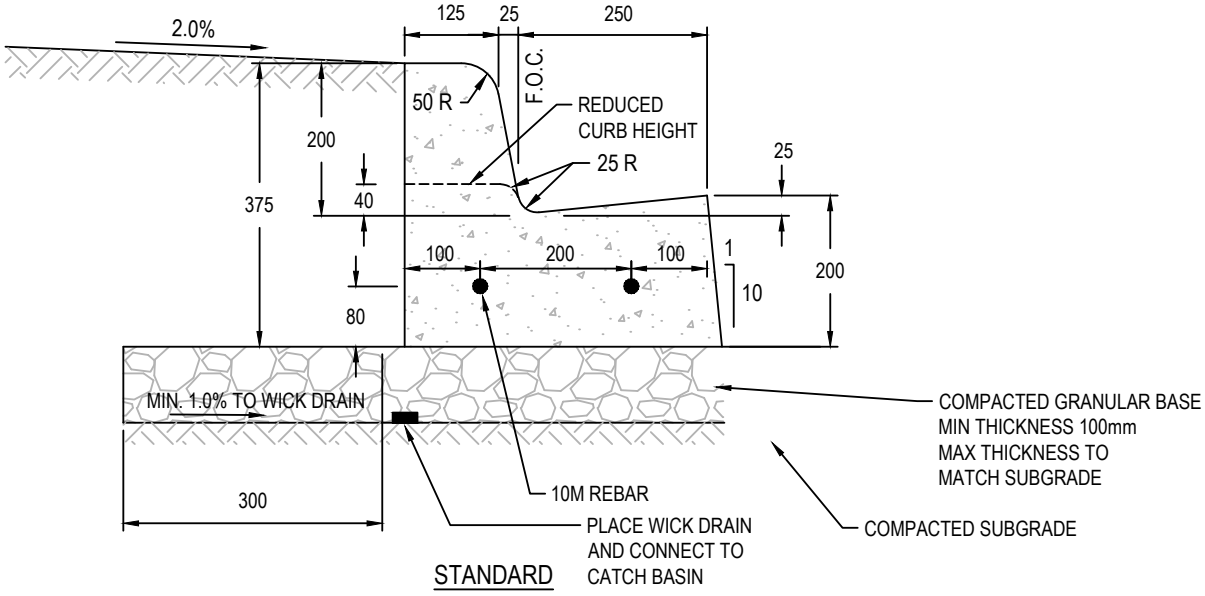
Drawn by: N / A

Scale: N.T.S.

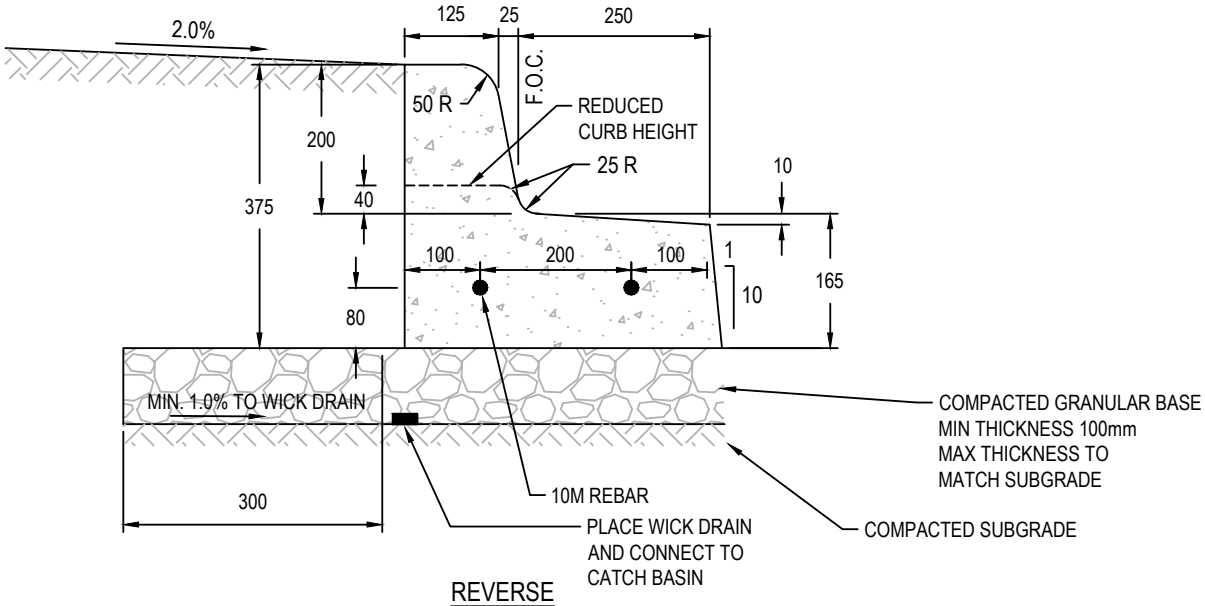
STANDARD 150mm CURB WITH 250mm GUTTER

Date: Feb. 22, 2011

Drawing #: 2-100



STANDARD



REVERSE

NOTES:

1. CONCRETE TO BE TYPE HS, 32 MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5% TO 8% AIR ENTRAINMENT.
2. CURB RETURNS REQUIRED AT ALL CROSSINGS
3. COMPACT BACKFILL TO 95% FOR 500mm FROM BACK OF CURB AND PROVIDE POSITIVE DRAINAGE OVER THE TOP OF CURB.
4. 10M REBAR 6.0m LONG TO BE INSTALLED WHEN REPLACING CURB & GUTTER OVER SERVICE CONNECTION AND HYDRANT LEAD TRENCHES.
5. 10M REBAR TO BE INSTALLED AT ALL LANE AND COMMERCIAL CROSSINGS.
6. REDUCE CURB HEIGHT AT ALL CROSSINGS.
7. CONTRACTION JOINTS 50mm DEEP AND 5mm WIDE TO BE CONSTRUCTED AT 3.0m INTERVALS.

NO.	DATE	REVISION
8		
7		
6	04/05/20	Revised Details
5	03/03/20	Revised Notes
4	22/03/18	Changed Curb Dimensions
3	14/04/16	Revised Notes
2	10/12/13	Updated concrete notes
1	21/03/13	Updated concrete type

The City of Lloydminster

Checked by:

Approved by:

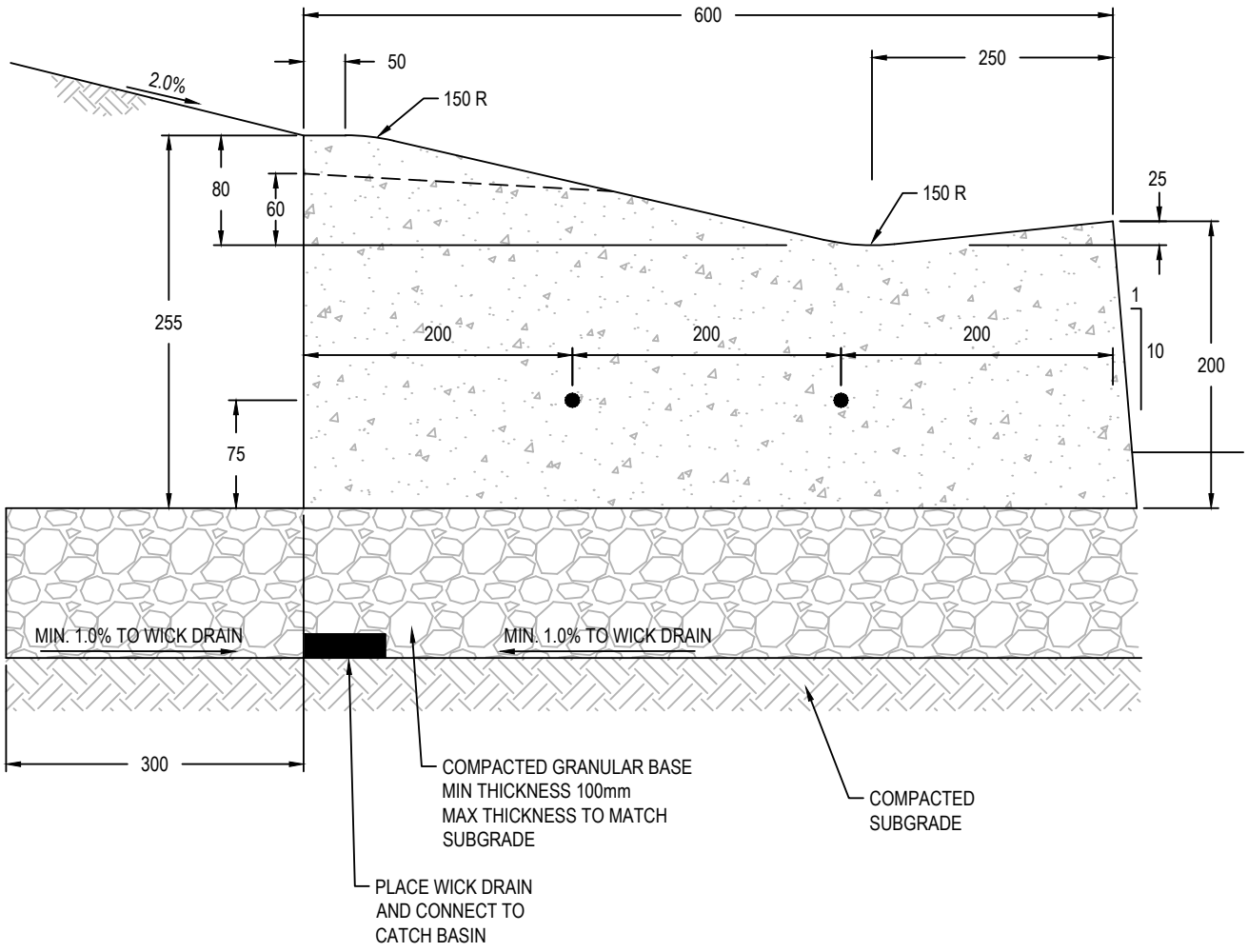
Drawn by: N / A

Scale: N.T.S.

STANDARD 200mm CURB WITH 250mm GUTTER

Date: April 14, 2011

Drawing #: 2-101



NOTES:

1. CONCRETE TO BE TYPE HS, 32 MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5% TO 8% AIR ENTRAINMENT.
2. CURB RETURNS REQUIRED AT ALL CROSSINGS
3. COMPACT BACKFILL TO 95% FOR 500mm FROM BACK OF CURB AND PROVIDE POSITIVE DRAINAGE OVER THE TOP OF CURB.
4. 10M REBAR 6.0m LONG TO BE INSTALLED WHEN REPLACING CURB & GUTTER OVER SERVICE CONNECTION AND HYDRANT LEAD TRENCHES.
5. 10M REBAR TO BE INSTALLED AT ALL LANE AND COMMERCIAL CROSSINGS.
6. REDUCE CURB HEIGHT AT ALL CROSSINGS.
7. CONTRACTION JOINTS 50mm DEEP AND 5mm WIDE TO BE CONSTRUCTED AT 3.0m INTERVALS.

NO.	DATE	REVISION
8		
7		
6	04/05/20	Removed "mm" From Dims.
5	03/03/20	Revised Notes & Detail
4	22/03/18	Revised Notes
3	14/04/16	Revised Notes
2	10/12/13	Updated concrete notes
1	21/03/13	Updated concrete type

The City of Lloydminster

Checked by:

Approved by:

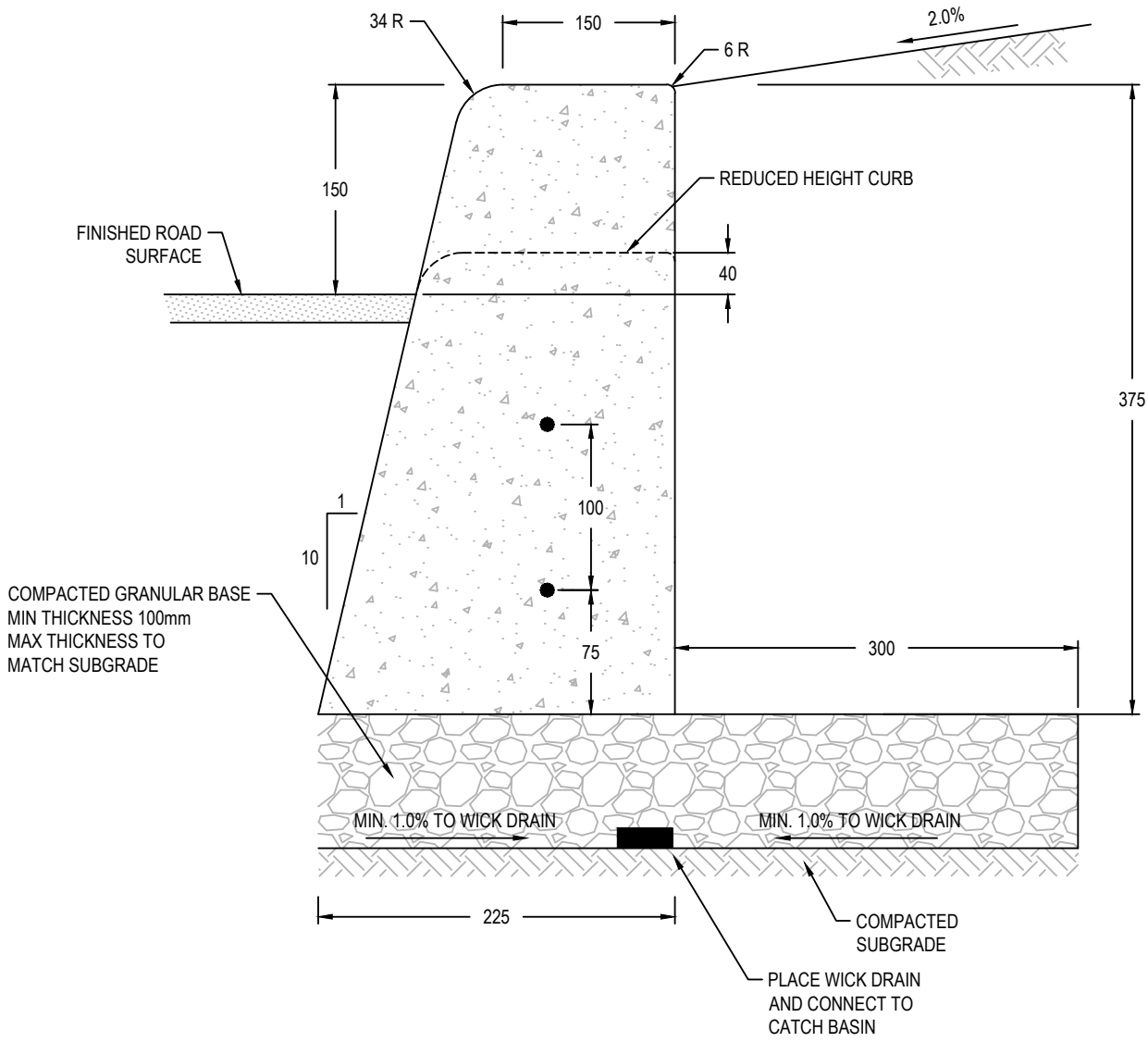
Drawn by: N / A

Scale: N.T.S.

ROLLED FACE CURB AND GUTTER

Date: Feb. 22, 2011

Drawing #: 2-102



NOTES:

1. CONCRETE TO BE TYPE HS, 32 MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5% TO 8% AIR ENTRAINMENT.
2. CURB RETURNS REQUIRED AT ALL CROSSINGS.
3. COMPACT BACKFILL TO 95% FOR 500mm FROM BACK OF CURB AND PROVIDE POSITIVE DRAINAGE OVER THE TOP OF CURB.
4. 10M REBAR 6.0m LONG TO BE INSTALLED WHEN REPLACING CURB & GUTTER OVER SERVICE CONNECTION AND HYDRANT LEAD TRENCHES.
5. 10M REBAR TO BE INSTALLED AT ALL LANE AND COMMERCIAL CROSSINGS.
6. REDUCE CURB HEIGHT AT ALL CROSSINGS.
7. CONTRACTION JOINTS 50mm DEEP AND 5mm WIDE TO BE CONSTRUCTED AT 3.0m INTERVALS.

NO.	DATE	REVISION
8		
7		
6		
5	04/05/20	Removed "mm" from Dims.
4	13/08/18	Revised Notes
3	14/04/16	Revised Notes
2	10/12/13	Updated concrete notes
1	20/03/13	Updated concrete type

The City of Lloydminster

Checked by:

Approved by:

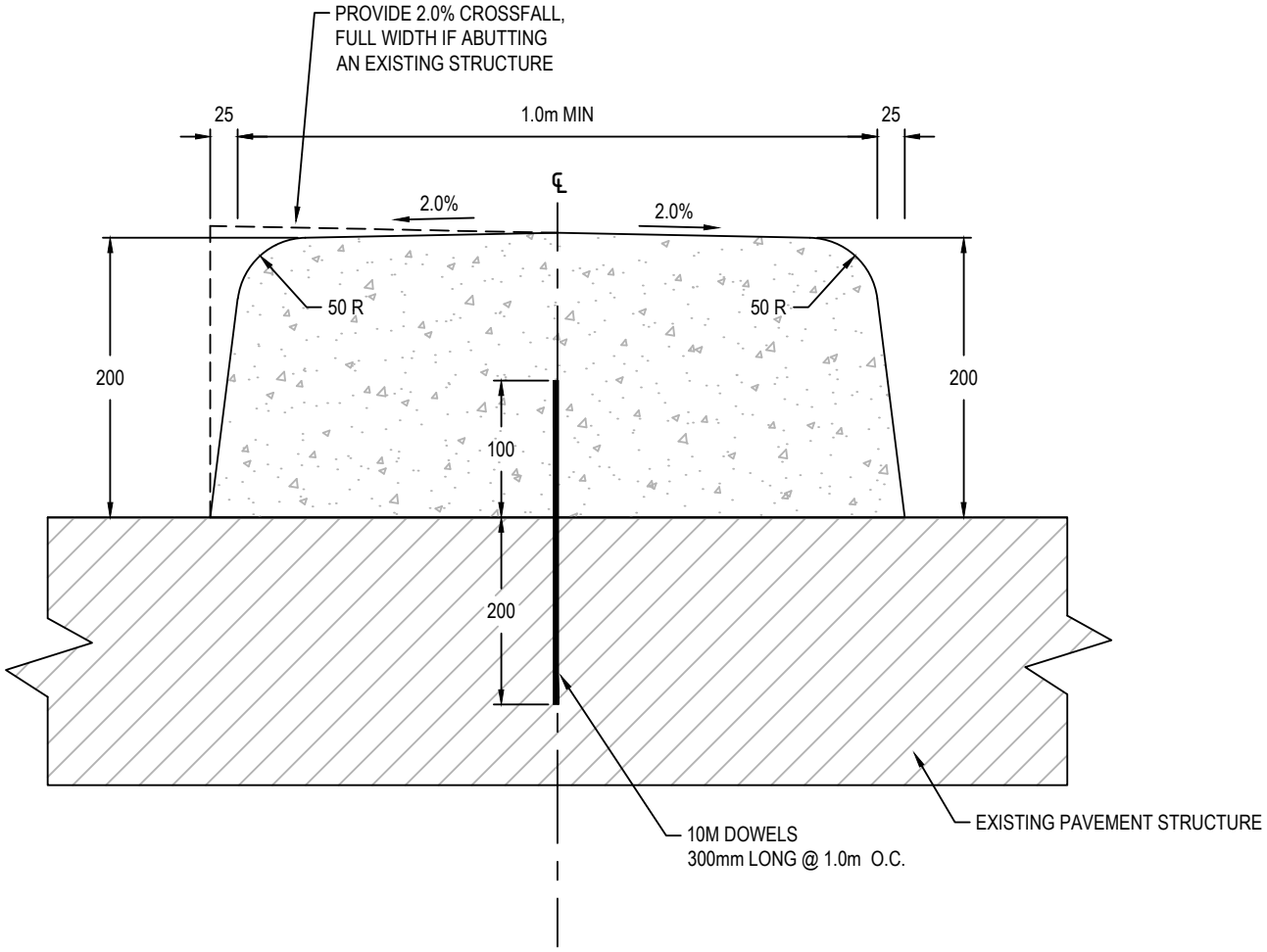
Drawn by: N / A

Scale: N.T.S.

Date: Feb. 22, 2011

STANDARD BARRIER CURB

Drawing #: 2-103



NOTES:

1. CONTRACTION JOINTS 50mm.DEEP AND 5mm WIDE TO BE CONSTRUCTED AT 3.0m INTERVALS.
2. CONCRETE TO BE TYPE HS, 32 MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5% TO 8% AIR ENTRAINMENT.

NO.	DATE	REVISION
8		
7		
6		
5	22/06/20	Revised Note 1
4	03/04/20	Revised Notes
3	13/08/18	Revised Notes
2	14/04/16	Revised Notes
1	10/12/13	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

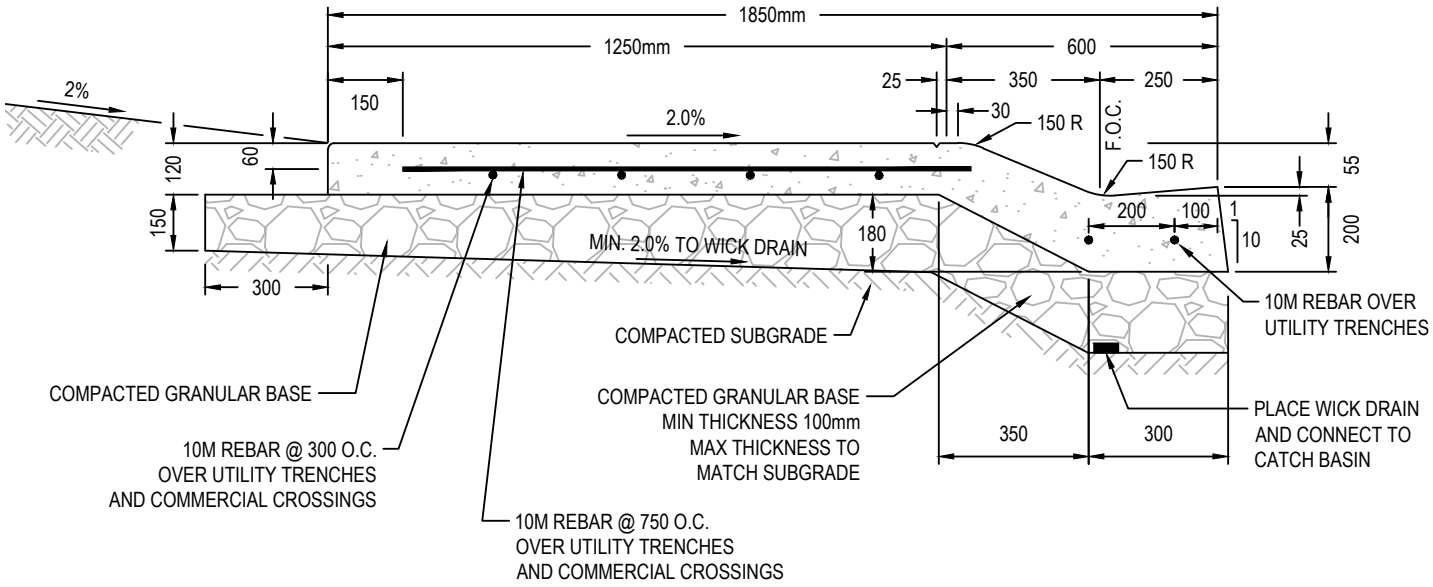
Drawn by: L. LEEPER

Scale: N.T.S.

PINNED CURB MEDIAN DETAIL

Date: Feb. 22, 2011

Drawing #: 2-104



NOTES:

1. CONCRETE TO BE TYPE HS, 32 MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5% TO 8% AIR ENTRAINMENT.
2. CURB RETURNS REQUIRED AT ALL CROSSINGS
3. COMPACT BACKFILL TO 95% FOR 500mm FROM BACK OF WALK AND PROVIDE POSITIVE DRAINAGE OVER THE TOP OF WALK.
4. 10M REBAR 6.0m LONG TO BE INSTALLED WHEN REPLACING MONOLITHIC WALK OVER SERVICE CONNECTION AND HYDRANT LEAD TRENCHES.
5. 10M REBAR TO BE INSTALLED AT ALL LANE AND COMMERCIAL CROSSINGS AS PER DWG. 2-109.
6. REDUCE CURB HEIGHT AT ALL CROSSINGS AS PER DWG. 2-109.
7. CONTRACTION JOINTS 50mm DEEP AND 5mm WIDE TO BE CONSTRUCTED AT 3.0m INTERVALS.

NO.	DATE	REVISION
8		
7		
6	22/06/20	Revised Detail
5	22/03/18	Revised Detail
4	22/03/18	Revised Notes
3	14/04/16	Revised Notes
2	10/12/13	Updated concrete notes
1	21/03/13	Updated concrete type

The City of Lloydminster

Checked by:

Approved by:

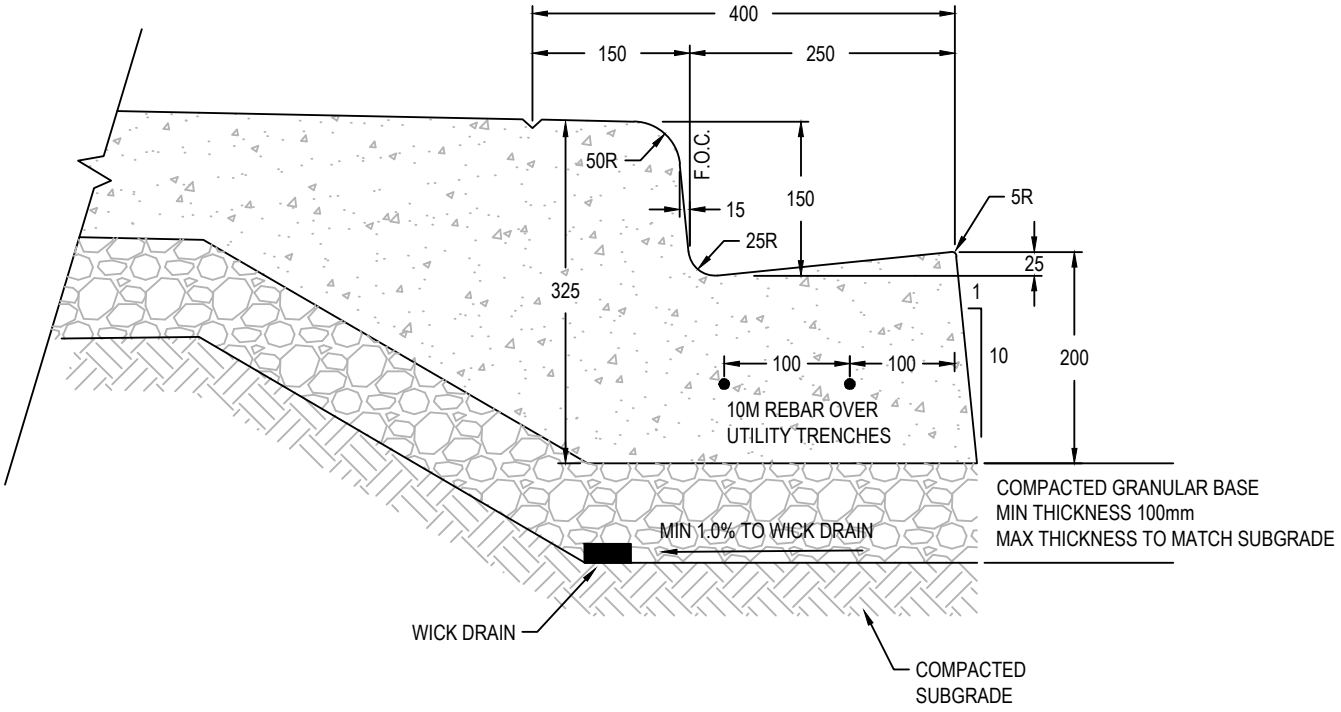
Drawn by: L. LEEPER

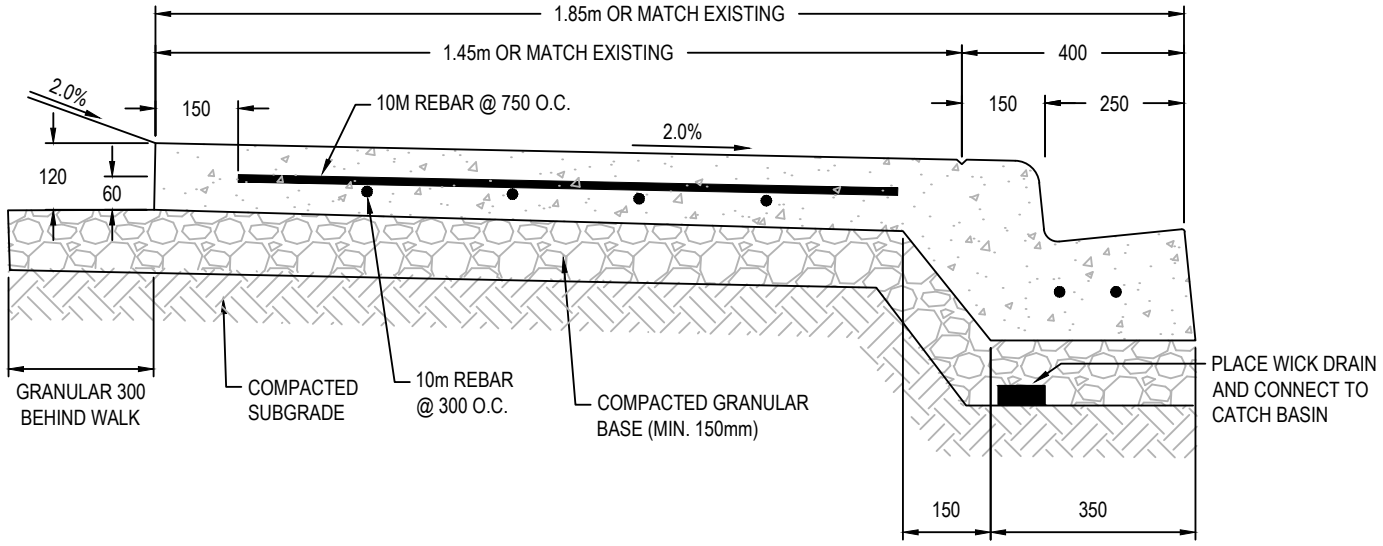
Scale: N.T.S.

ROLLED FACE CURB, GUTTER, AND MONOLITHIC SIDEWALK

Date: Feb. 22, 2011

Drawing #: 2-105





NOTES:

1. 10M REBAR 6.0m LONG TO BE INSTALLED WHEN REPLACING CURB & GUTTER OVER SERVICE CONNECTION AND HYDRANT LEAD TRENCHES.
2. ALL LANE OR COMMERCIAL CROSSINGS SHALL BE AS PER DWG. 2-109.
3. REDUCE CURB HEIGHT AT ALL CROSSINGS AS PER DWG. 2-109.
4. CONTRACTION JOINTS 50mm DEEP AND 5mm WIDE TO BE CONSTRUCTED AT 3.0m INTERVALS.
5. 150mm MINIMUM COMPACTED GRANULAR SUBBASE.
6. CONCRETE TO BE TYPE HS, 32 MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5% TO 8% AIR ENTRAINMENT.
7. COMPACT BACKFILL TO 95% FOR 500mm FROM BACK OF WALK AND PROVIDE POSITIVE DRAINAGE OVER TOP OF WALK.

NO.	DATE	REVISION
8		
7		
6		
5	22/06/20	Revised Details
4	03/04/20	Revised Details & Notes
3	22/03/18	Revised Notes
2	14/04/16	Revised Notes
1	10/12/13	Revised Concrete Notes

The City of Lloydminster

Checked by:

Approved by:

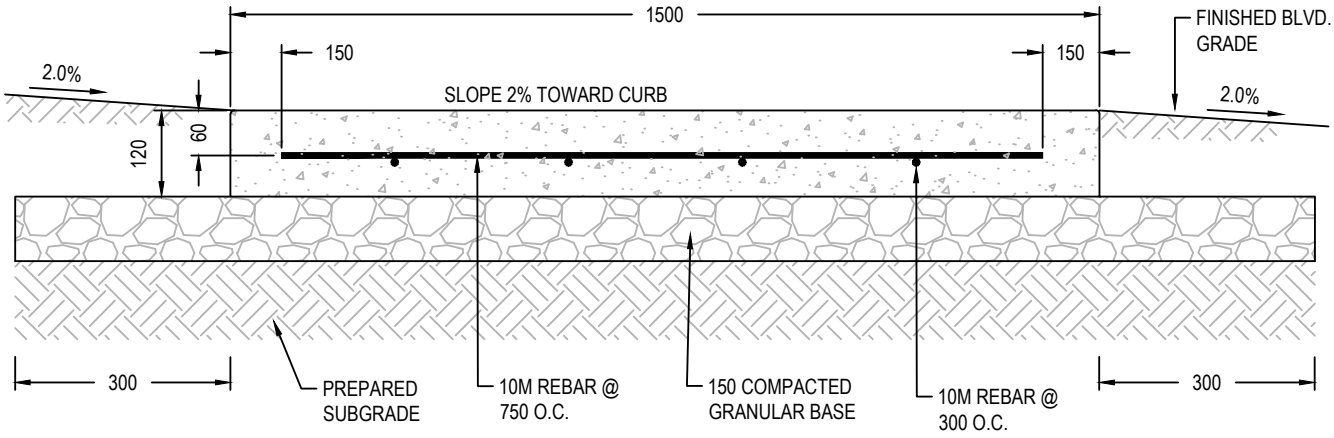
Drawn by: N / A

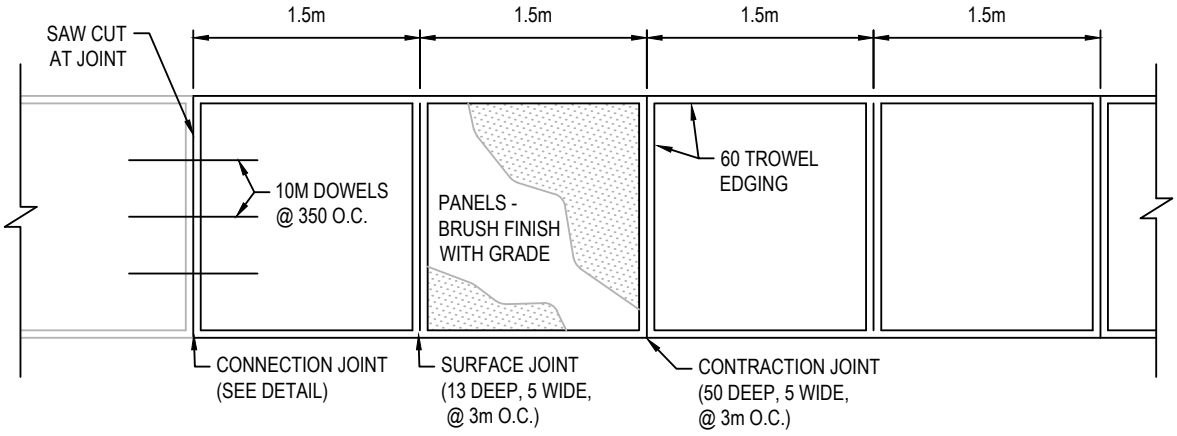
Scale: N.T.S.

STRAIGHT FACE CURB, GUTTER AND MONOLITHIC SIDEWALK

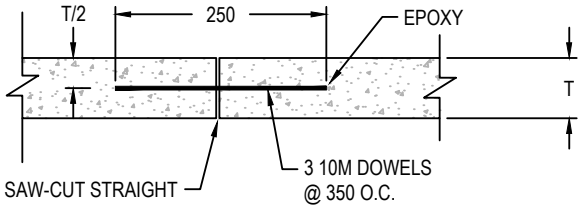
Date: Feb. 22, 2011

Drawing #: 2-106





PLAN



CONNECTION JOINT DETAIL

NOTES:

1. SIDEWALK IS 180mm THICK IN COMMERCIAL / INDUSTRIAL AREAS.
2. CONCRETE TO BE TYPE HS, 32 MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5% TO 8% AIR ENTRAINMENT.
3. COMPACT BACKFILL TO 95% FOR 500mm FROM BACK OF WALK AND PROVIDE POSITIVE DRAINAGE OVER THE TOP OF WALK.
4. 10M REBAR 6.0m LONG TO BE INSTALLED WHEN REPLACING WALK OVER SERVICE CONNECTION AND HYDRANT LEAD TRENCHES.
5. 10M REBAR TO BE INSTALLED AT ALL LANE AND COMMERCIAL CROSSINGS.
6. WHEN CONNECTING TO EXISTING WALK, SAW CUT EDGE AND INSTALL THREE 10M DOWELS @ 350 O.C.

NO.	DATE	REVISION
8		
7		
6	04/05/20	Removed "mm" from Dims.
5	14/08/18	Revised Notes
4	22/03/18	Revised Notes
3	14/04/18	Revised Notes
2	10/12/13	Changed concrete notes
1	21/03/13	Changed concrete type

The City of Lloydminster

Checked by:

Approved by:

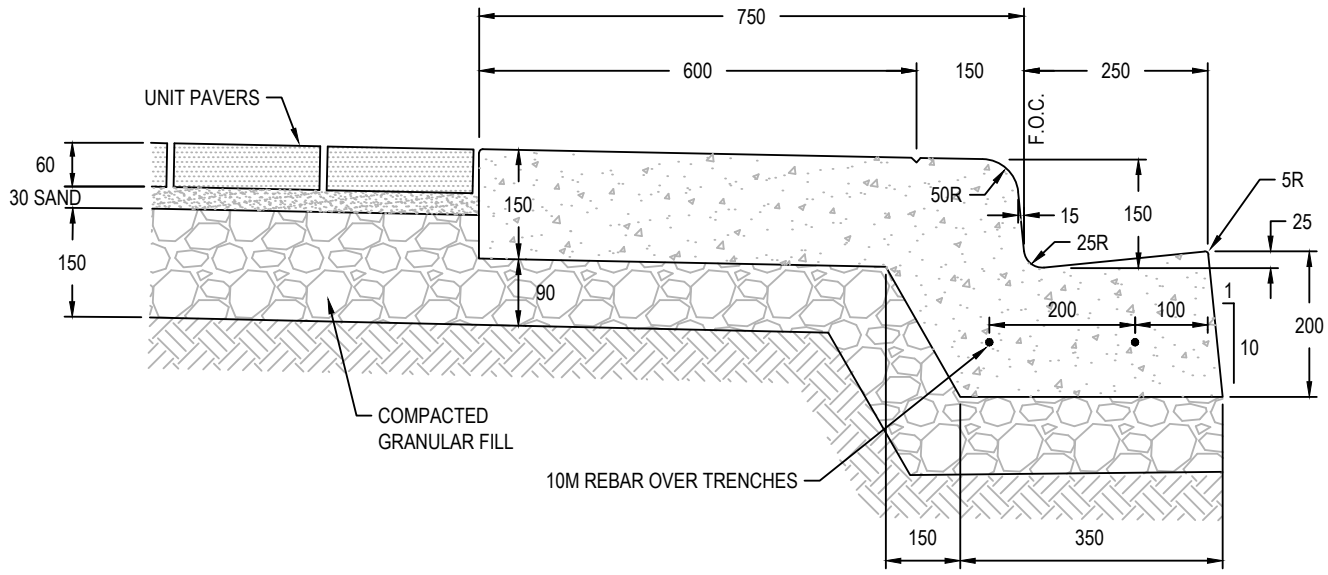
Drawn by: N / A

Scale: N.T.S.

Date: Feb. 22, 2011

1.5m SEPARATE SIDEWALK

Drawing #: 2-107



NOTES:

1. NORMAL CROSS-FALL ON SERVICE STRIP IS 2.0% TOWARDS ROAD. ACTUAL CROSS-FALL WILL VARY AND IN SOME CASES SLOPE WILL BE AWAY FROM ROAD. CONFIRM CROSS-FALL REQUIREMENTS ON-SITE WITH ENGINEER.
2. CONTRACTION JOINTS 50mm DEEP AND 5mm WIDE TO BE CONSTRUCTED AT 3.0m INTERVALS OR AS DIRECTED BY ENGINEER.
3. CONCRETE TO BE TYPE HS, 32 MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5% TO 8% AIR ENTRAINMENT.

NO.	DATE	REVISION
8		
7		
6		
5	04/05/20	Darkened a Line
4	03/04/20	Revised Detail
3	22/11/16	Additional Sand Detail
2	15/04/16	Removed Edger Detail
1	10/12/13	Changed Concrete Notes

The City of Lloydminster

Checked by:

Approved by:

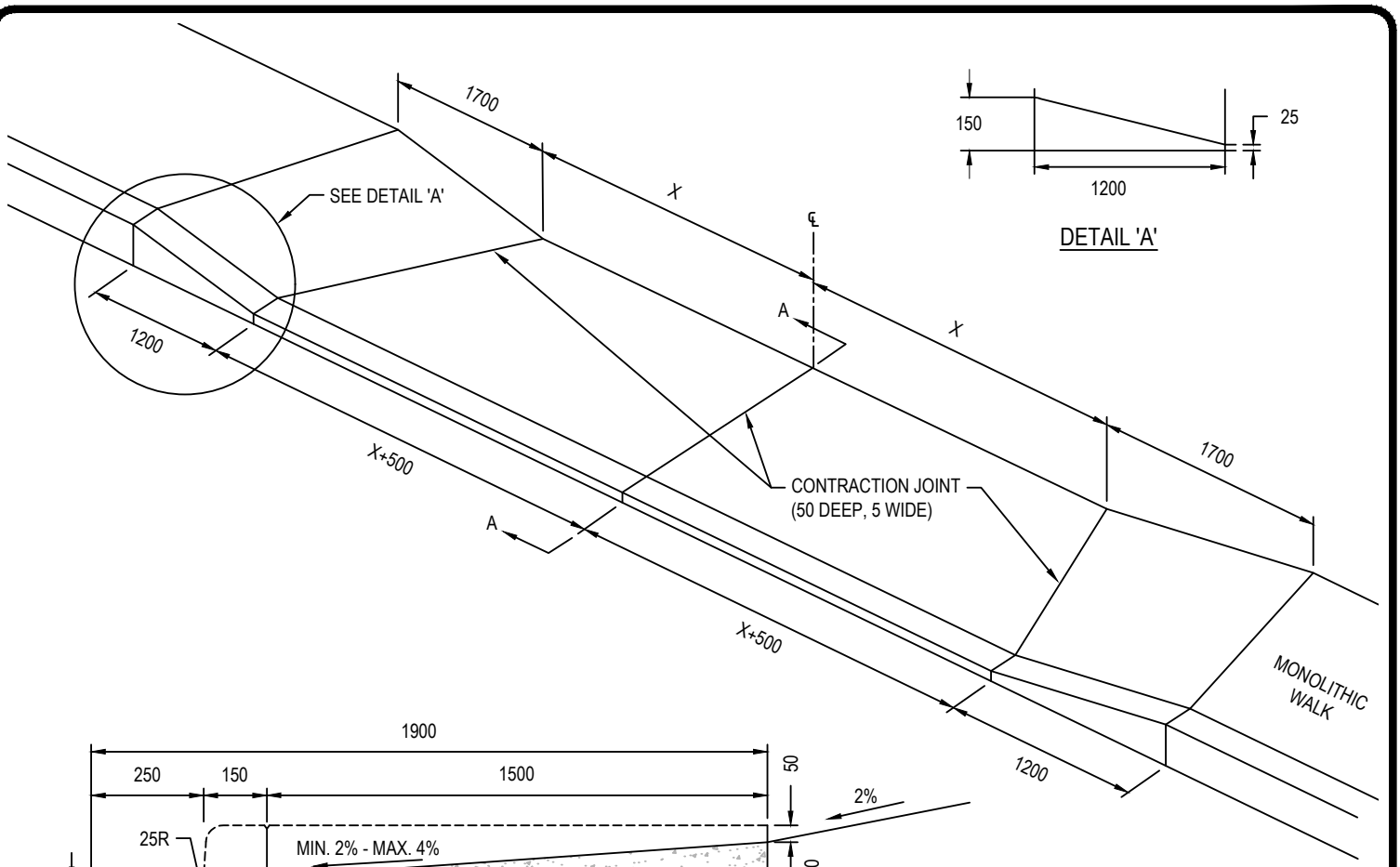
Drawn by: N / A

Scale: N.T.S.

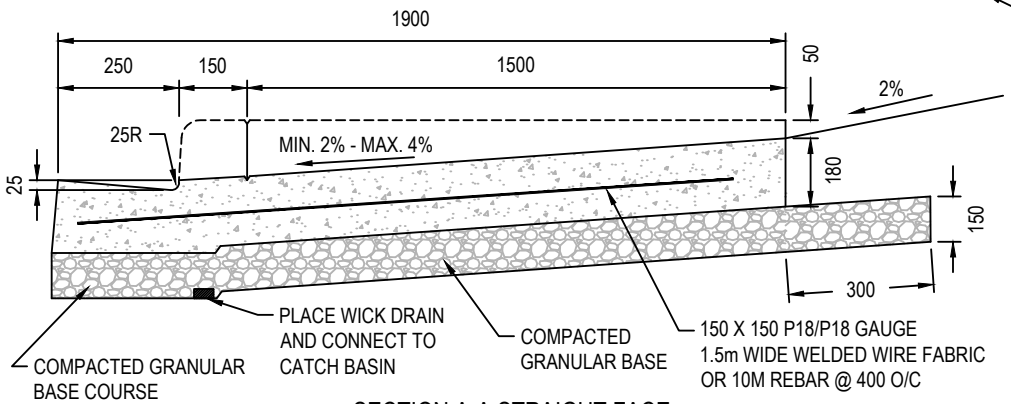
MONO SERVICE STRIP AND CONCRETE EDGER

Date: Feb. 22, 2011

Drawing #: 2-108



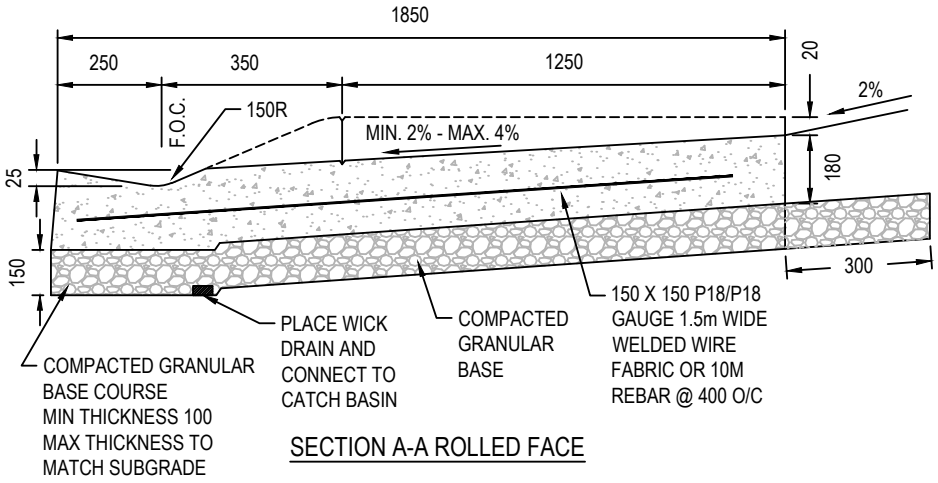
DETAIL 'A'



SECTION A-A STRAIGHT FACE

NOTES:

1. MAXIMUM ALLOWABLE 'X' AS PER ENGINEER.
2. CONCRETE STRENGTH TO BE TYPE HS, 32MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5-8% AIR ENTRAINMENT.
3. SIDEWALK THICKNESS = 120mm AT RESIDENTIAL CROSSINGS, 180mm AT ALL OTHER CROSSINGS.
4. CURB AND GUTTER SECTION REQUIRES REBAR. REFER TO DWGS 2-105 & 2-106.



SECTION A-A ROLLED FACE

NO.	DATE	REVISION
9	09/09/20	Labelled contraction joints
8	04/05/20	Removed "mm" From Dims.
7	04/03/20	Revised Details
6	14/08/18	Additional Notes
5	22/03/18	Additional Notes
4	22/11/16	Additional Notes
3	14/04/16	Revised Notes
2	10/12/13	Revised concrete notes

The City of Lloydminster

Checked by:

Approved by:

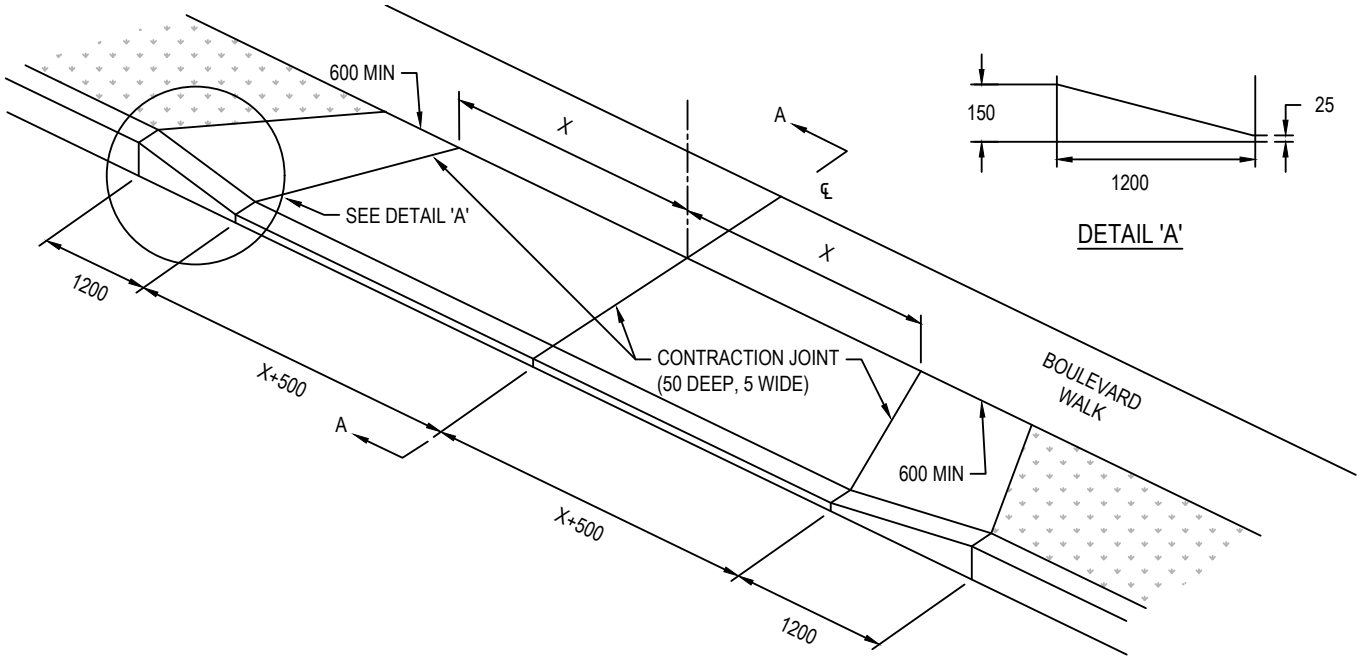
Drawn by: N / A

Scale: N.T.S.

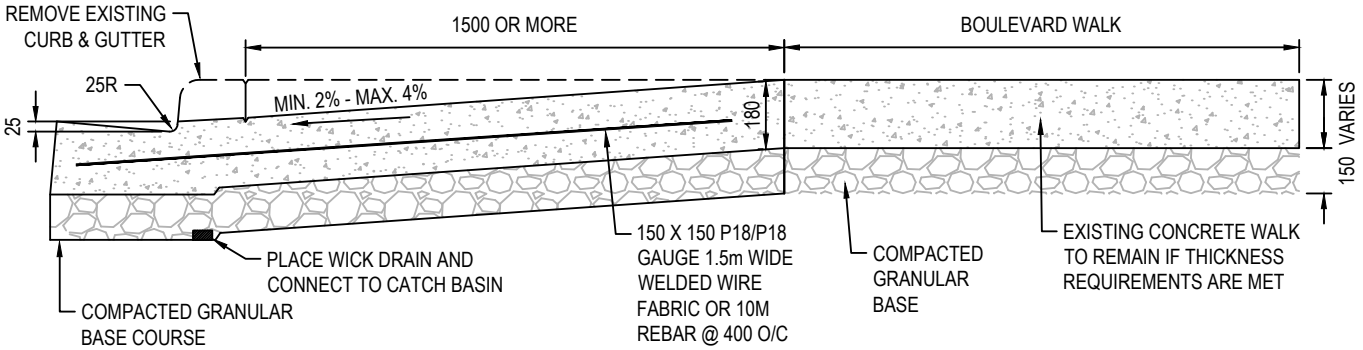
COMMERCIAL / LANE CROSSING MONOLITHIC SIDEWALK

Date: Feb. 22, 2011

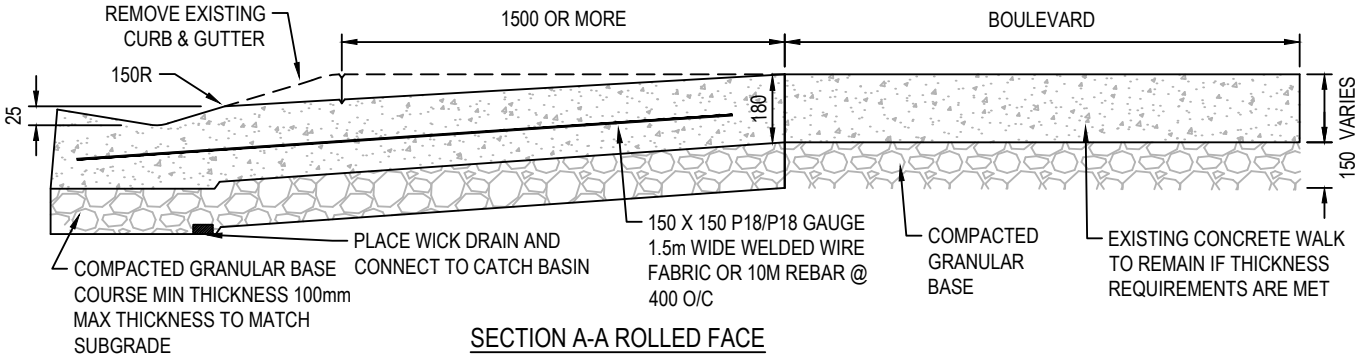
Drawing #: 2-109



DETAIL 'A'



SECTION A-A STRAIGHT FACE



SECTION A-A ROLLED FACE

NOTES:

1. MAXIMUM ALLOWABLE 'X' AS PER ENGINEER.
2. CONCRETE STRENGTH TO BE TYPE HS, 32MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5-8% AIR ENTRAINMENT.
3. SIDEWALK THICKNESS = 120mm AT RESIDENTIAL CROSSINGS, 180mm AT ALL OTHER CROSSINGS.
4. CURB AND GUTTER SECTION REQUIRES REBAR. REFER TO DWGS 2-100 & 2-101.

NO.	DATE	REVISION
9	21/09/20	Labelled contraction joints
8	05/03/20	Revised Details
7	14/08/18	Revised Details
6	22/03/18	Revised Details
5	03/06/17	Revised Taper
4	22/11/16	Additional Notes
3	14/04/16	Revised Notes
2	10/12/13	Updated concrete notes

The City of Lloydminster

Checked by:

Approved by:

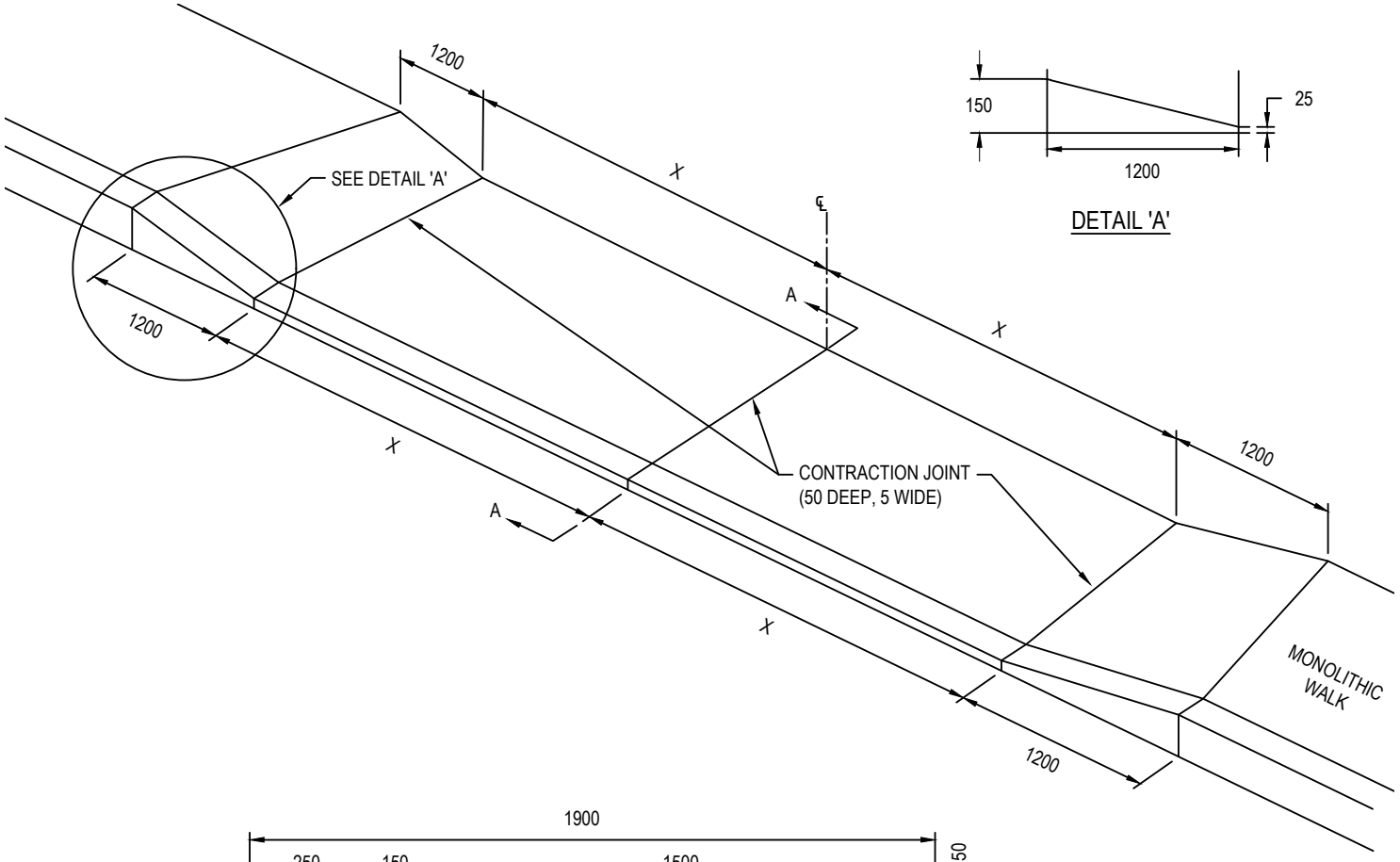
Drawn by: L. LEEPER

Scale: N.T.S.

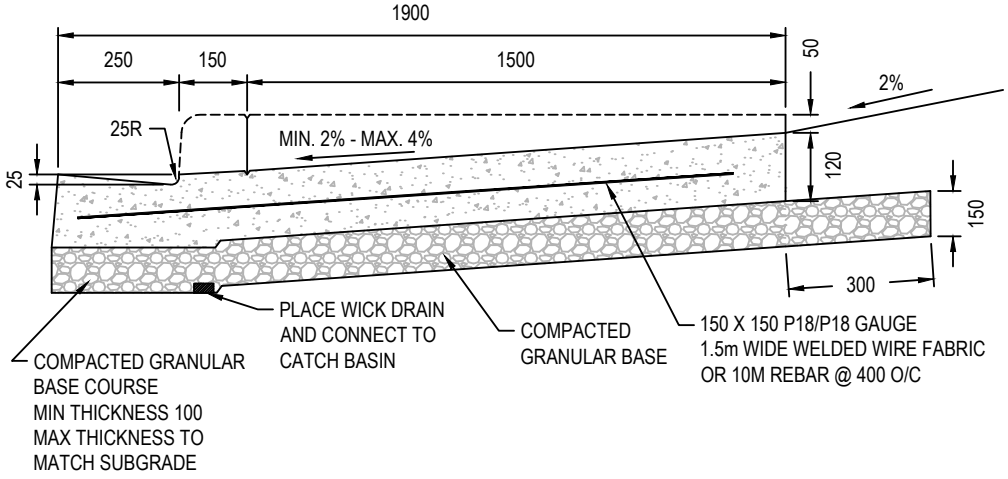
COMMERCIAL / LANE CROSSING SEPARATE SIDEWALK

Date: Feb. 22, 2011

Drawing #: 2-110



DETAIL 'A'



SECTION A-A STRAIGHT FACE

NOTES:

1. MAXIMUM ALLOWABLE 'X' AS PER ENGINEER.
2. CONCRETE STRENGTH TO BE TYPE HS, 32MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5-8% AIR ENTRAINMENT.
3. SIDEWALK THICKNESS = 120mm AT RESIDENTIAL CROSSINGS, 180mm AT ALL OTHER CROSSINGS.
4. CURB AND GUTTER SECTION REQUIRES REBAR. REFER TO DWGS 2-105 & 2-106.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1		

The City of Lloydminster

Checked by:

Approved by:

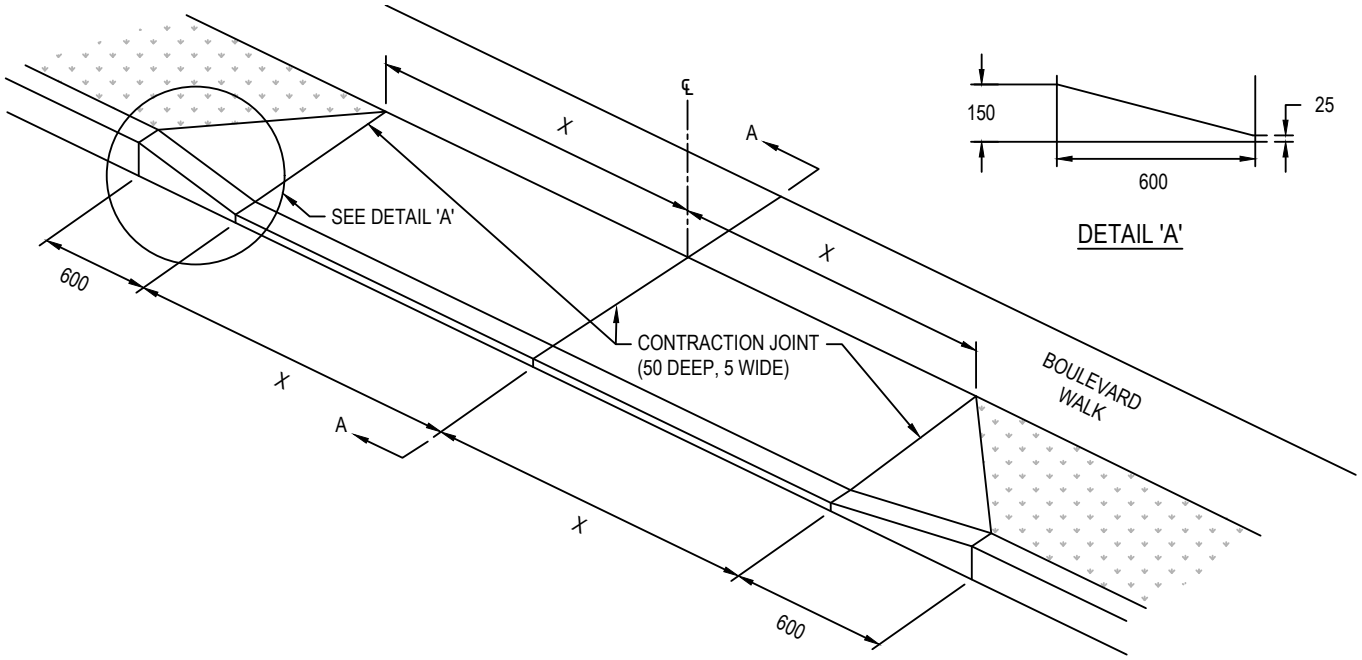
Drawn by: N / A

Scale: N.T.S.

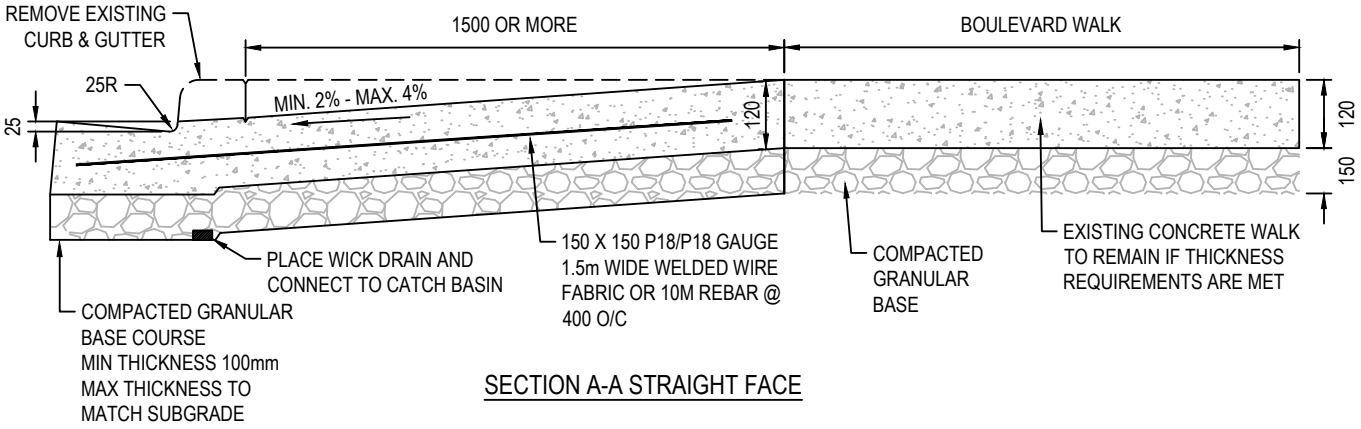
RESIDENTIAL APRON CROSSING MONOLITHIC SIDEWALK

Date: Sept. 21, 2020

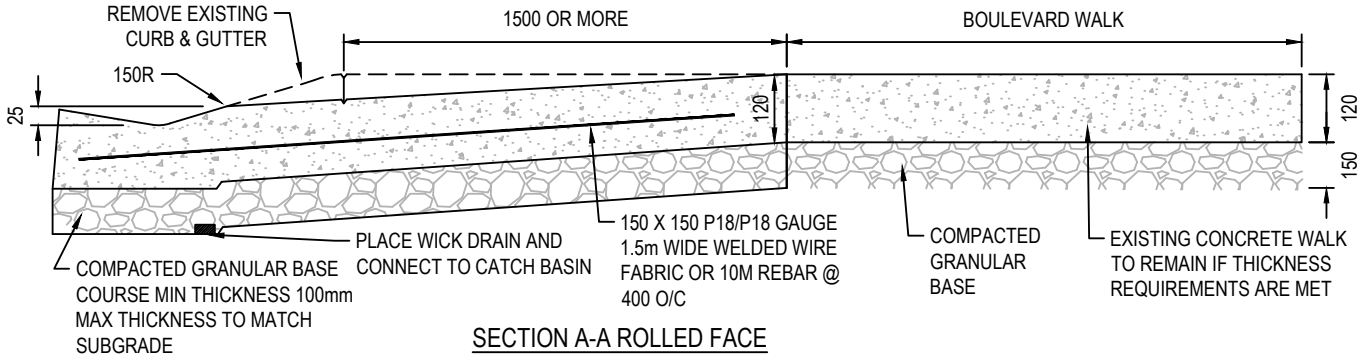
Drawing #: 2-111



DETAIL 'A'



SECTION A-A STRAIGHT FACE



SECTION A-A ROLLED FACE

NOTES:

1. MAXIMUM ALLOWABLE 'X' AS PER ENGINEER.
2. CONCRETE STRENGTH TO BE TYPE HS, 32MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5-8% AIR ENTRAINMENT.
3. SIDEWALK THICKNESS = 120mm AT RESIDENTIAL CROSSINGS.
4. CURB AND GUTTER SECTION REQUIRES REBAR. REFER TO DWGS 2-100 & 2-101.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1		

The City of Lloydminster

Checked by:

Approved by:

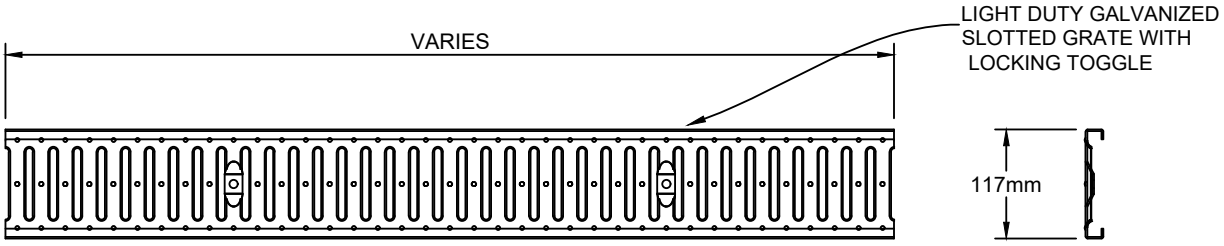
Drawn by: L. LEEPER

Scale: N.T.S.

RESIDENTIAL APRON CROSSING SEPARATE SIDEWALK

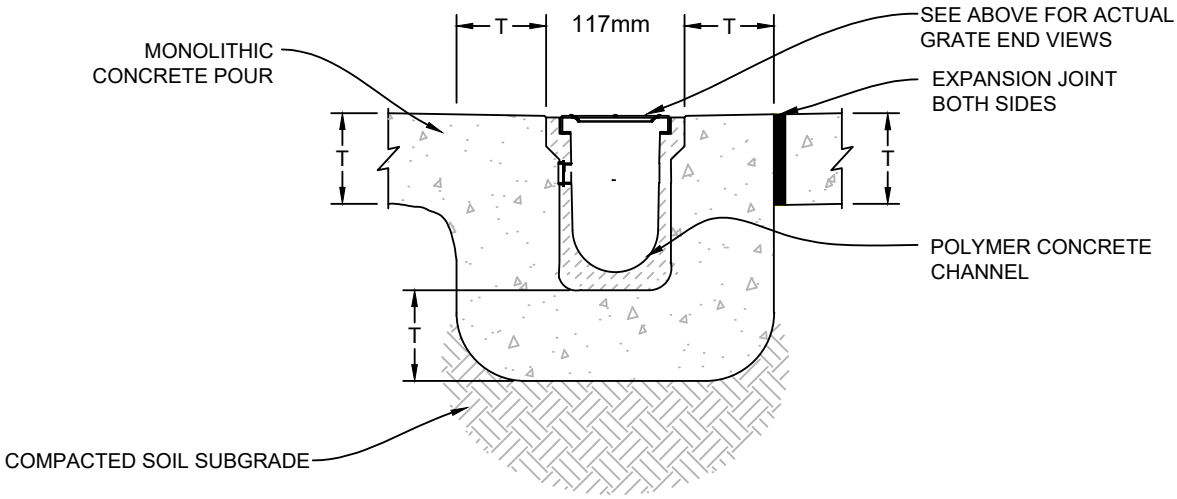
Date: Feb. 22, 2011

Drawing #: 2-112



GRATE TOP VIEW

GRATE END VIEW



CROSS SECTIONAL VIEW

NOTES:

1. ACO DRAIN LINE 100 OR APPROVED EQUIVALENT
2. FINISHED CONCRETE SURFACE SURROUND TO BE 3mm ABOVE GRATE
3. T = Min. 100mm
4. EXPANSION JOINT PLACED ON BOTH SIDES IS PREFERRED, MONOLITHIC POUR IS ACCEPTABLE

NO.	DATE	REVISION
8		
7		
6		
5		
4	21/09/20	Changed Dwg No. from 2-111
3	22/06/20	Underlined Detail Name
2	04/05/20	Revised Font Size
1	20/11/18	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

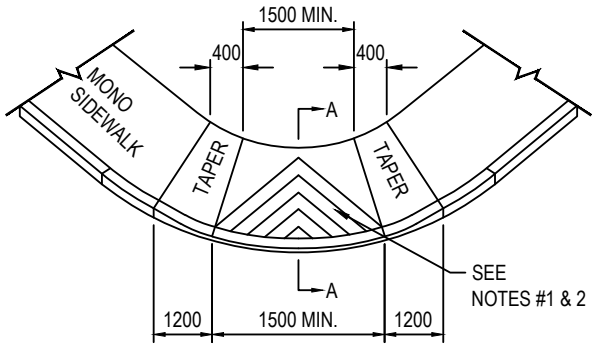
Drawn by: A. EDWARDS

Scale: N.T.S.

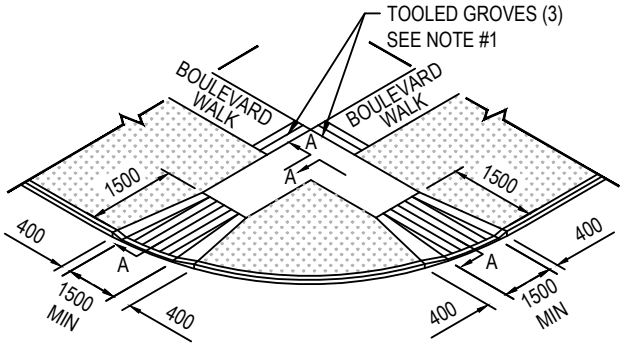
TRENCH DRAIN

Date: Jan 13, 2017

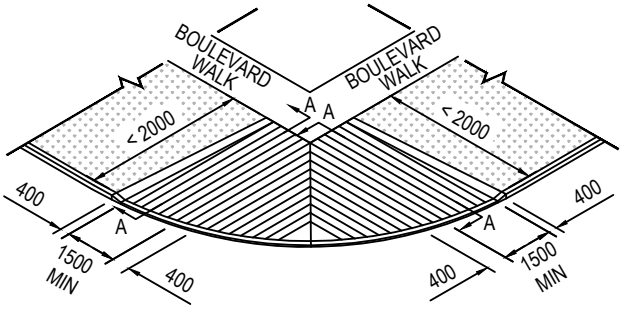
Drawing #: 2-113



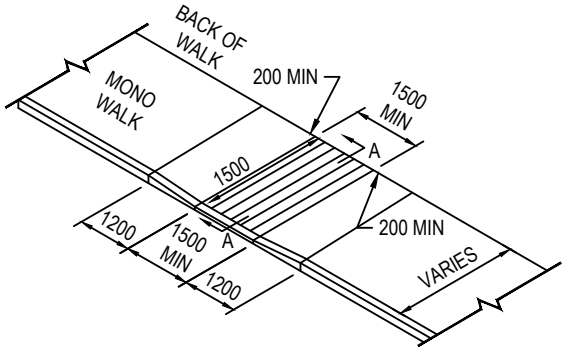
TYPE A



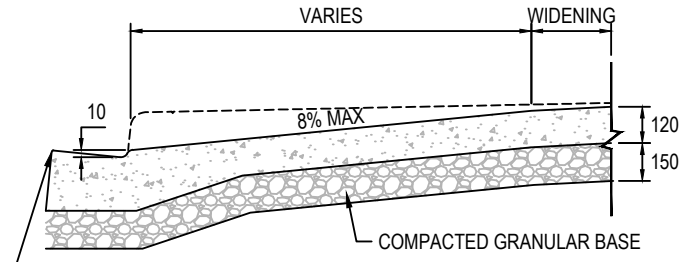
TYPE B-1 (BOULEVARD > 2.0m)



TYPE B-2 (BOULEVARD < 2.0m)

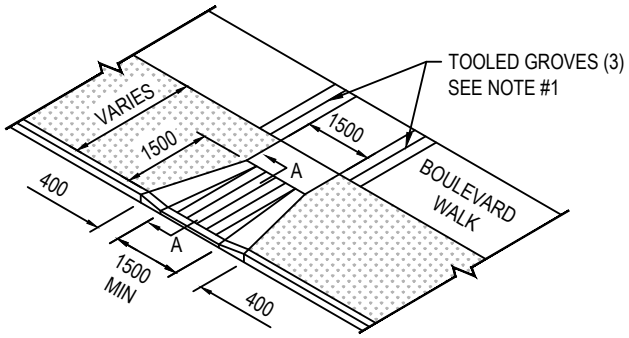


TYPE C



A) MATCH ASPHALT SURFACE TO GUTTER LIP WITHIN 3mm.
B) IF ASPHALT TOPLIFT IS DEFERRED, PLACE ASPHALT RAMP FOR THE WIDTH OF CURB RAMP, AND EXTENDING MINIMUM 1.0m INTO ROAD

TYPICAL CROSS SECTION A-A



TYPE D

NOTES:

1. TOOLED GROOVES 5mm WIDE X 10mm DEEP, BROOM FINISH. GROOVE SPACING 150mm O.C. ADJACENT TO CURB.
2. GROOVES TO BE IN DIRECTION OF TRAVEL.
3. WHEN REQUIRED, TRANSITION FROM STRAIGHT FACE CURB TO ROLLED FACE CURB AT CURB RAMP.
4. CURBS AND RAMP TO BE POURED MONOLITHICALLY.
5. WIDTH OF RAMP MUST EQUAL WIDTH OF WALK (MIN. 1.5m, MAX. 3.0m) EXCEPT "TYPE A".
6. MAXIMUM SLOPE ON CURB RAMP TO BE 8%.
7. COMPACT BACKFILL TO 95% FOR 500mm FROM BACK OF WALK AND PROVIDE POSITIVE DRAINAGE OVER THE TOP OF WALK.

NO.	DATE	REVISION
8		
7		
6	20/10/20	Removed Type A2, Added B2
5	01/02/19	Added Grass Hatch
4	22/03/18	Added Note
3	06/03/17	Revised Taper
2	22/11/16	Additional Dimensions
1	04/07/16	Removed widening in Type C

The City of Lloydminster

Checked by:

Approved by:

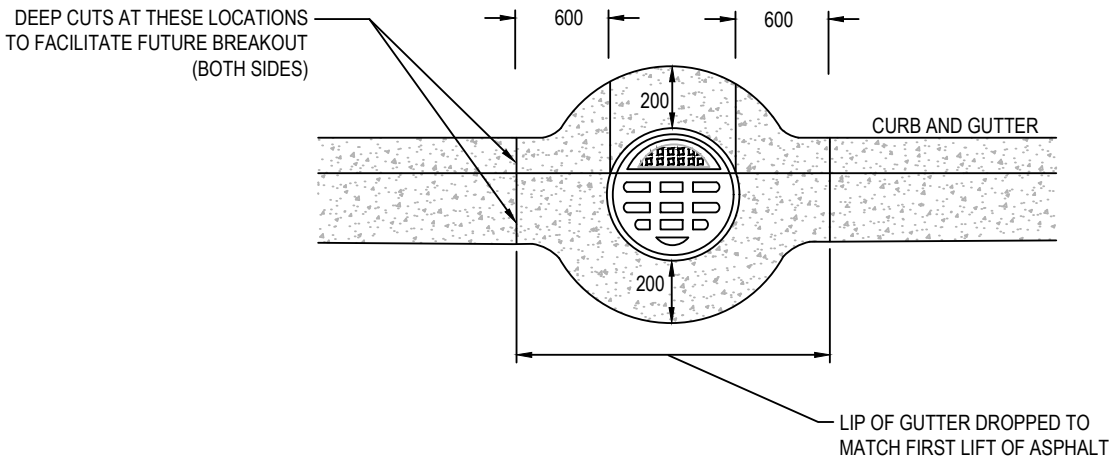
Drawn by: N / A

Scale: N.T.S.

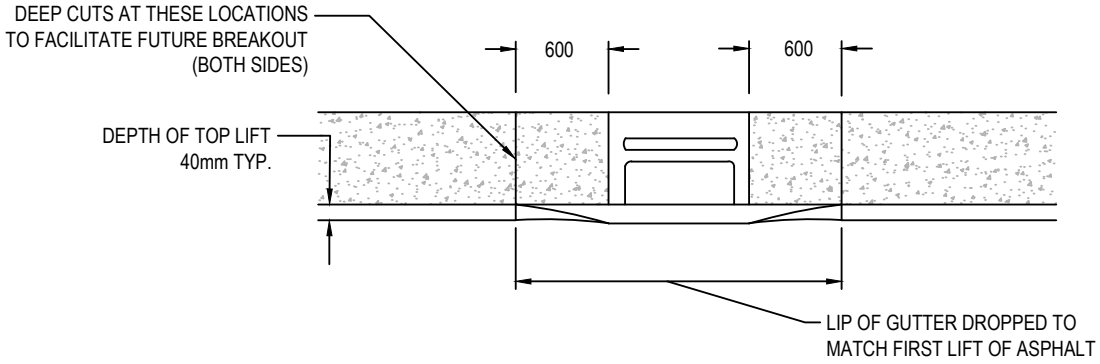
Date: Feb. 22, 2011

CURB RAMP

Drawing #: 2-200



TOP VIEW



SIDE VIEW

NOTES:

1. TYPICAL CURB AND GUTTER TREATMENT AT CATCH BASINS WHEN ASPHALT TOP LIFT IS DEFERRED.
2. DROPPED GUTTER SECTION TO BE REMOVED AND REPLACED PRIOR TO TOP LIFT BEING PLACED. REMOVAL NOT REQUIRED WHERE FILLET CONSTRUCTION OF BOTTOM LIFT IS USED.

NO.	DATE	REVISION
8		
7		
6		
5		
4	05/03/20	Revised Notes & Details
3	01/21/19	Changed Drawing Views
2	11/20/18	Revised Notes
1	4/14/16	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

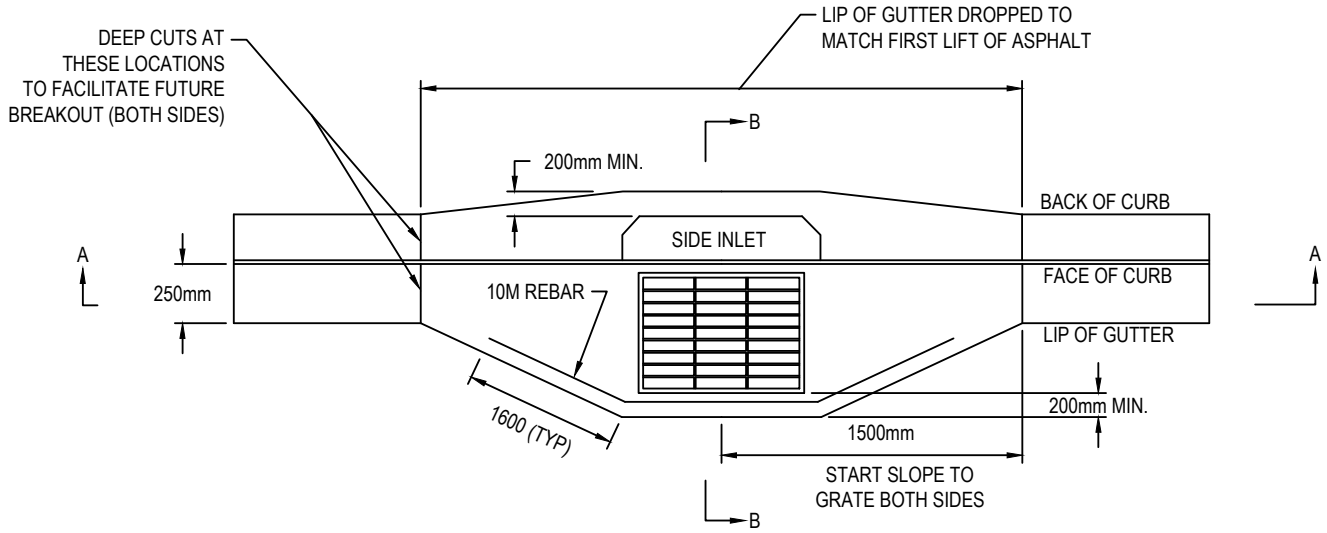
Drawn by: L. LEEPER

Scale: N.T.S.

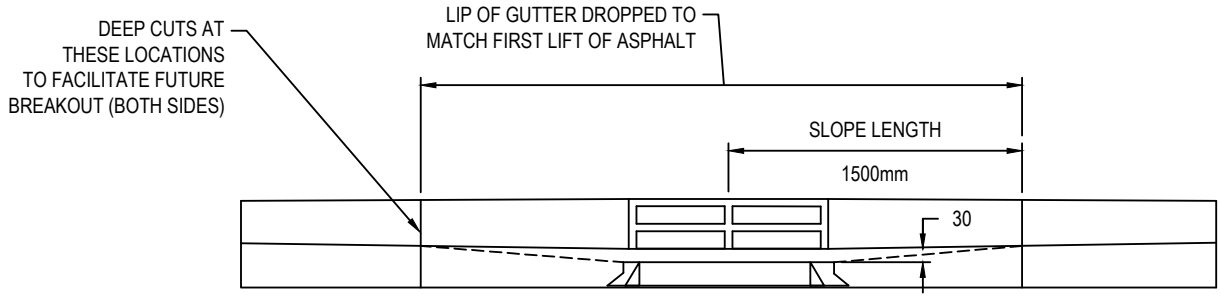
TYPICAL DROPPED GUTTER LIP FOR TWO STAGE PAVING

Date: Feb. 22, 2011

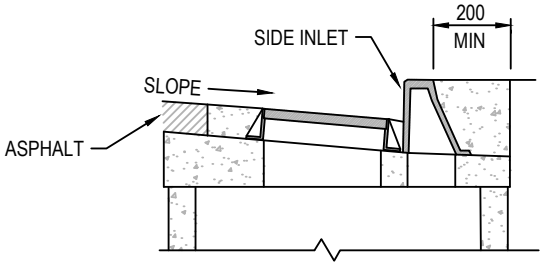
Drawing #: 2-201



PLAN - F-51 SIDE INLET, FRAME AND COVER SET IN
150mm CURB WITH 250mm GUTTER



SECTION A-A



SECTION B-B

NOTES:

1. TYPICAL CURB AND GUTTER TREATMENT AT CATCH BASINS WHEN ASPHALT TOP LIFT IS DEFERRED.
2. DROPPED GUTTER SECTION TO BE REMOVED AND REPLACED PRIOR TO TOP LIFT BEING PLACED. REMOVAL NOT REQUIRED WHERE FILLET CONSTRUCTION OF BOTTOM LIFT IS USED.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3	05/03/20	Changed Dwg, Added Notes
2	02/01/19	Modified Drawing
1	23/03/18	Removed 500mm Gutter

The City of Lloydminster

Checked by:

Approved by:

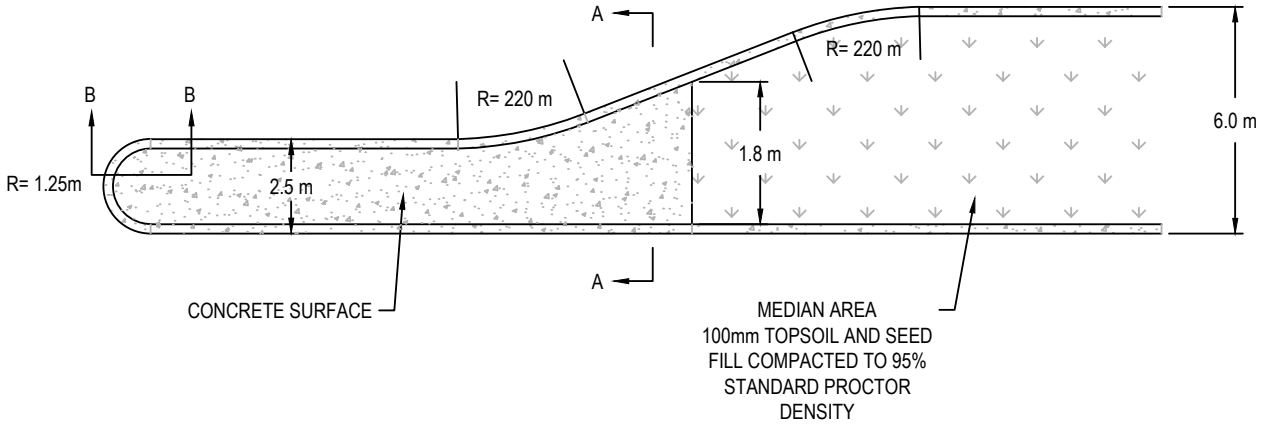
Drawn by: L. LEEPER

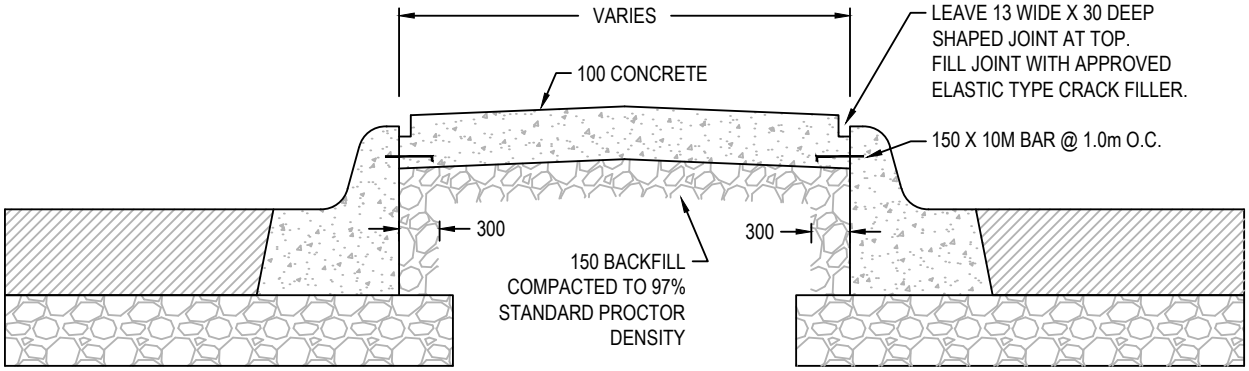
Scale: N.T.S.

TYPE F-51 CATCH BASIN CURB FINISHING DETAIL

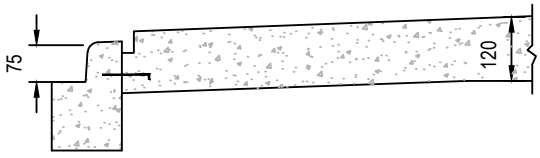
Date: Feb. 22, 2011

Drawing #: 2-202

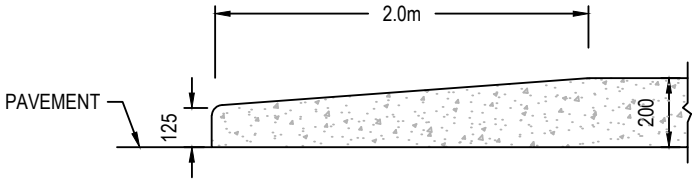




SECTION A-A



SECTION B-B
Full Curb



SECTION B-B
Pinned Median

NOTES:

1. CONTRACTION JOINTS AT 3m INTERVALS.
2. CONCRETE TO BE TYPE HS, 32 MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5% TO 8% AIR ENTRAINMENT.

NO.	DATE	REVISION
8		
7		
6		
5		
4	04/05/20	Rev. Font Size, Removed "mm"
3	05/03/20	Revised Notes & Updated Drawings
2	11/23/18	Revised Notes & Updated Drawings
1	4/14/16	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

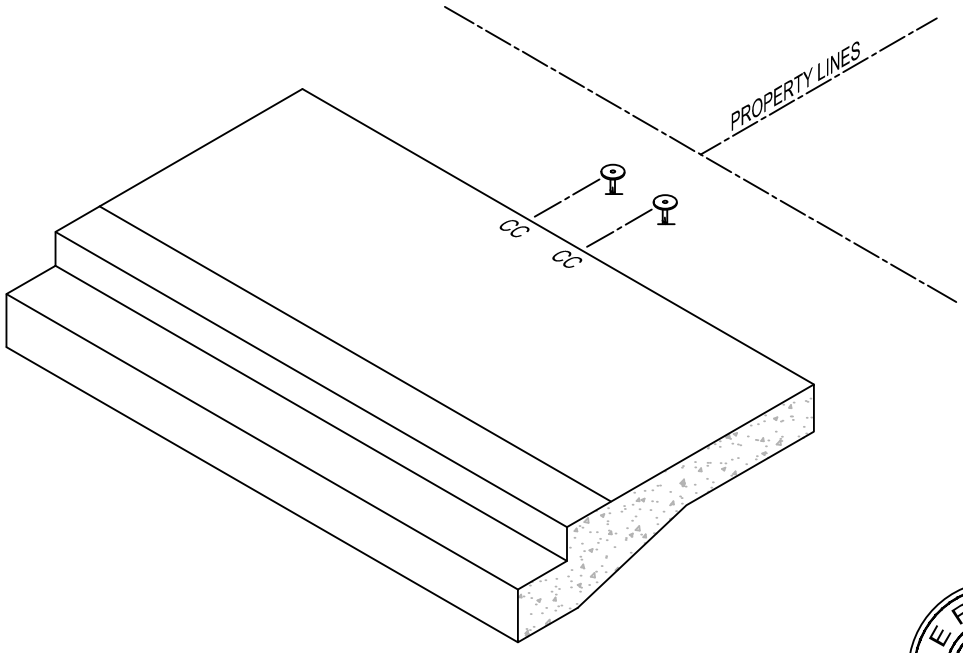
Drawn by: N / A

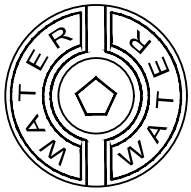
Scale: N.T.S.

TYPICAL MEDIAN

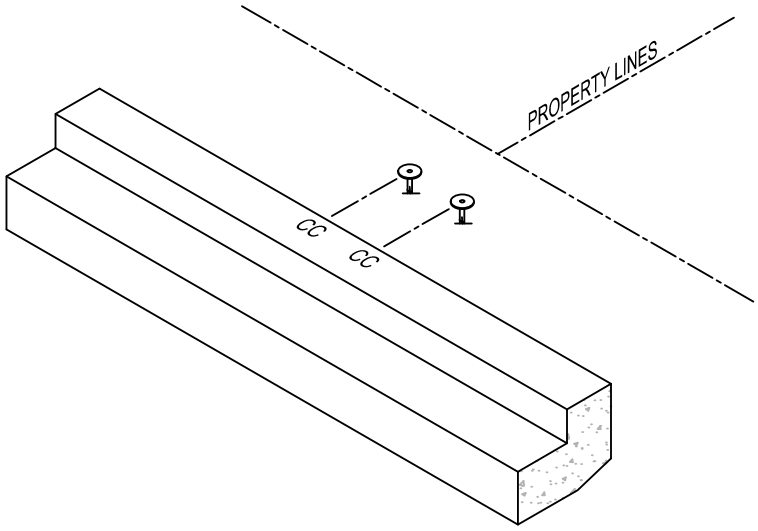
Date: Feb. 22, 2011

Drawing #: 2-203





SERVICE BOX CAP



NOTES:

1. AT THE TIME OF SIDEWALK / CURB CONSTRUCTION AN IMPRESSION OF A SERVICE BOX CAP OR THE LETTERS "CC" SHALL BE NEATLY MARKED INTO THE MOIST CONCRETE DIRECTLY OPPOSITE EACH SERVICE BOX.
2. IF MISSED, OR IF A NEW CC IS INSTALLED IN AN EXISTING AREA WITHOUT DISTURBING THE SIDEWALK, GRIND THE LETTERS "CC" INTO THE SURFACE.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2	05/03/20	Additional Notes
1	22/11/16	Additional Notes

The City of Lloydminster

Checked by:

Approved by:

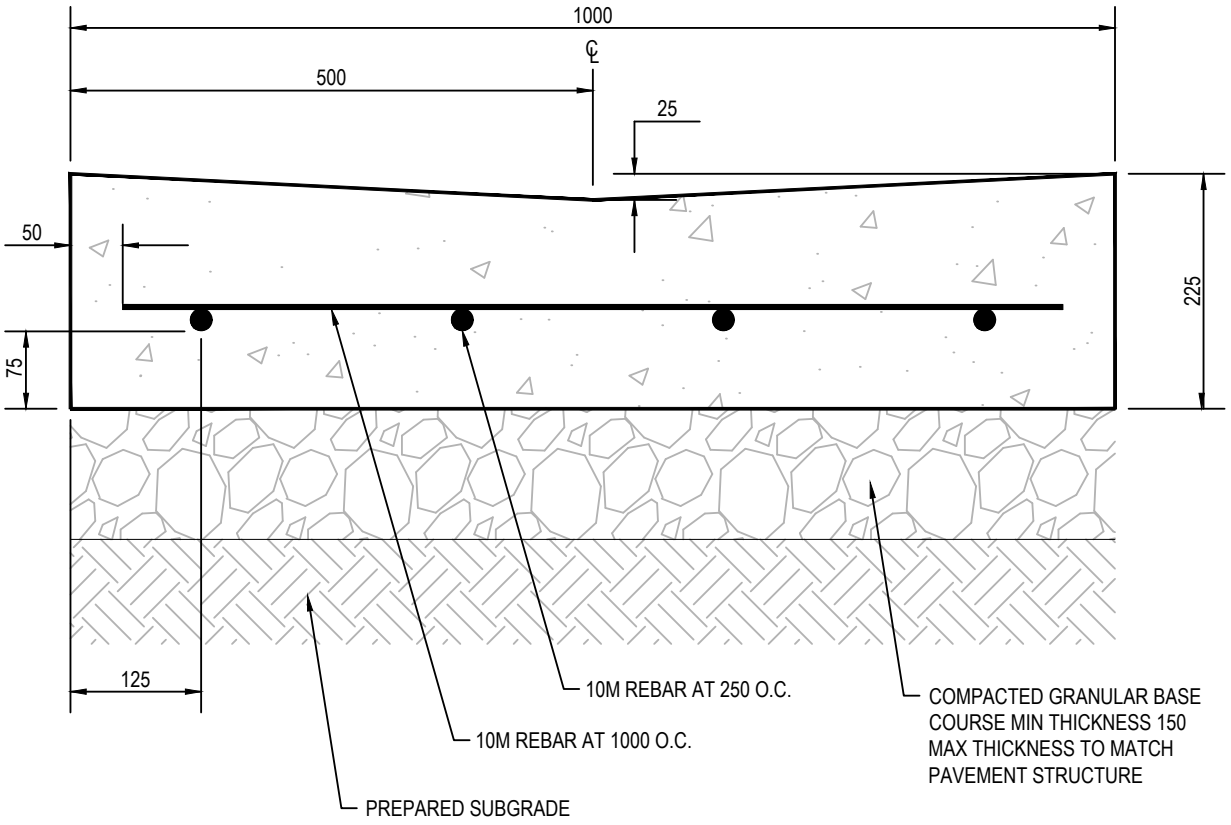
Drawn by: L. LEEPER

Scale: N.T.S.

"CC" STAMP

Date: Feb. 22, 2011

Drawing #: 2-204



NOTES:

1. CENTERLINE OF SWALE TO MATCH GUTTER ELEVATION AT UPSTREAM END. LOWER GUTTER LIP TO MEET CENTERLINE OF SWALE.
2. SWALE EDGE TO MATCH GUTTER ELEVATION ON DOWNSTREAM END. LOWER GUTTER LIP TO MATCH CENTERLINE OF SWALE.
3. EXPANSION JOINTS TO BE CONSTRUCTED AT ENDS OF SWALE WHERE SWALE ABUTS GUTTERS.
4. CONTRACTION JOINTS 50mm DEEP AND 5mm WIDE TO BE CONSTRUCTED AT 3.0m INTERVALS.
5. CONCRETE TO BE TYPE HS, 32 MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5% TO 8% AIR ENTRAINMENT

NO.	DATE	REVISION
8		
7		
6		
5		
4	04/05/20	Darkened Line, Rem. "mm"
3	06/03/20	Revised Notes
2	23/03/18	Revised Dimensions
1	22/11/16	Revised Line Width

The City of Lloydminster

Checked by:

Approved by:

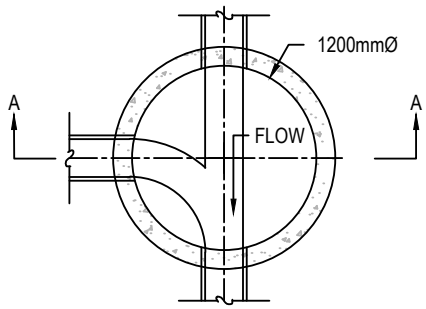
Drawn by: A. EDWARDS

Scale: N.T.S.

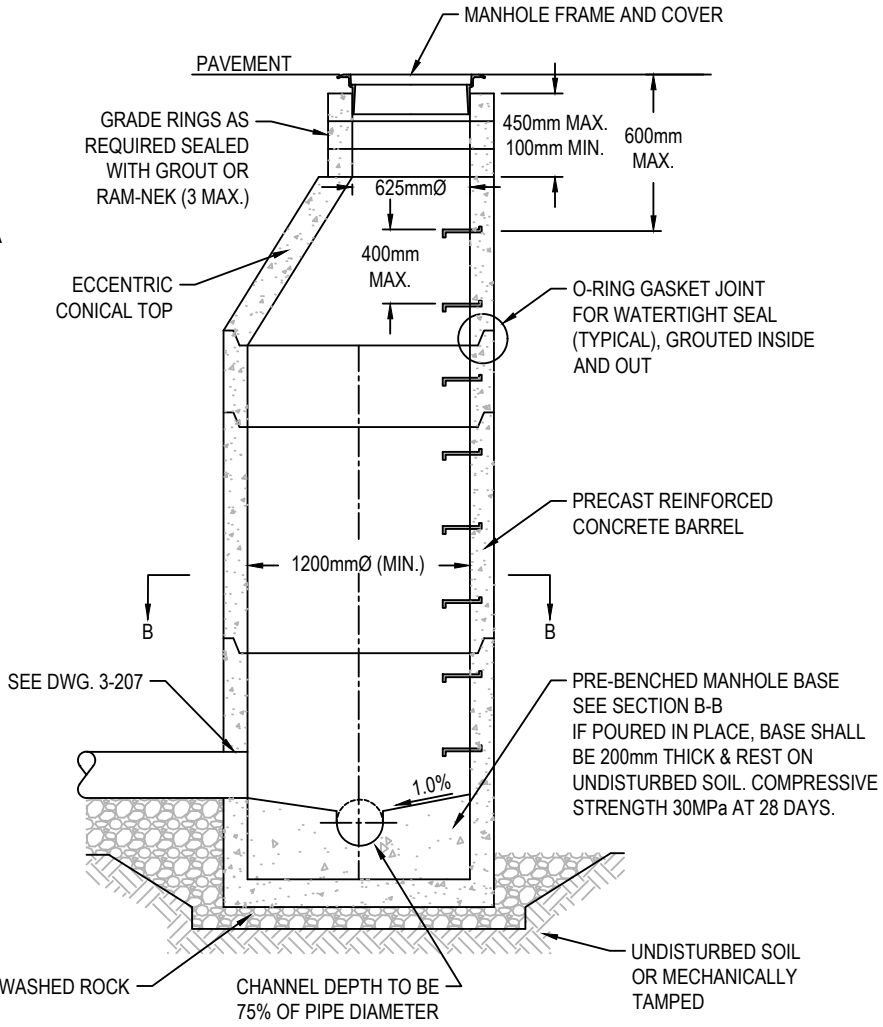
CONCRETE DRAINAGE SWALE (ROADWAY)

Date: July 25, 2017

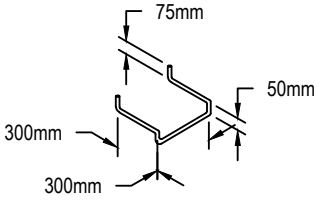
Drawing #: 2-205



SECTION B-B



SECTION A-A



20mm ALUMINUM FORGED MANHOLE STEPS OR AS PER MANUFACTURER SPECIFICATION

NOTES:

1. PRECAST RINGS, CONES AND BARRELS TO MEET CURRENT ASTM C478 STANDARDS.
2. SPECIAL BASE DESIGN REQUIRED FOR DEPTHS OVER 9.0m.
3. CHANNELLING AND BENCHING TO BE FINISHED TO TROWEL SMOOTHNESS. CONTINUE MAIN PIPE WHERE POSSIBLE.
4. CONICAL TOP TO BE USED WHERE DISTANCE FROM BENCH TO MANHOLE COVER EXCEEDS 2.0m.
5. INSTALL SAFETY PLATFORMS FOR ALL MANHOLES OVER 5.0m DEEP. LOCATE 2m ABOVE PIPE AS PER STANDARD DRAWING 3-201.
6. MANHOLE FRAME AND COVER TO BE AS PER STANDARD DRAWING 3-202.
7. BENCHING CONCRETE SHALL BE A MINIMUM OF 32MPa COMPRESSIVE STRENGTH, TYPE HS.
8. BUOYANCY CALCULATIONS TO BE PROVIDED TO THE CITY FOR ALL MANHOLES THAT HAVE HALF OR MORE OF VERTICAL DEPTH BELOW THE SURROUNDING WATER TABLE ELEVATION.

NO.	DATE	REVISION
8		
7	06/03/20	Added Note 8
6	23/03/18	Revised Details
5	14/04/16	Revised Notes
4	08/04/14	Changed grade ring thickness
3	10/12/13	Updated concrete notes
2	21/03/13	Updated concrete type
1	22/06/11	Detail reference, Note 6.

The City of Lloydminster

Checked by:

Approved by:

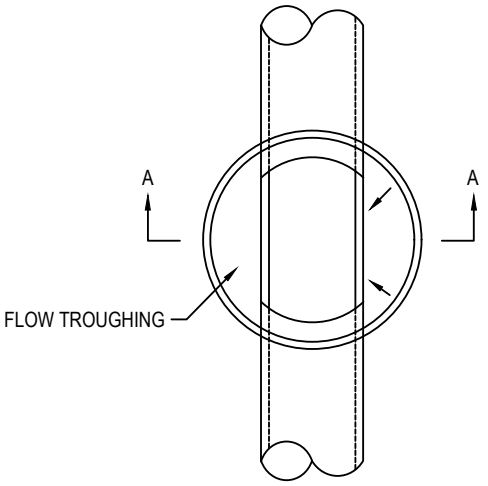
Drawn by: L. LEEPER

Scale: N.T.S.

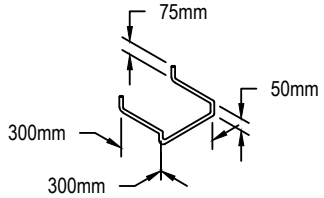
PRECAST MANHOLE FOR PIPES UP TO 525mm DIAMETER

Date: Feb. 22, 2011

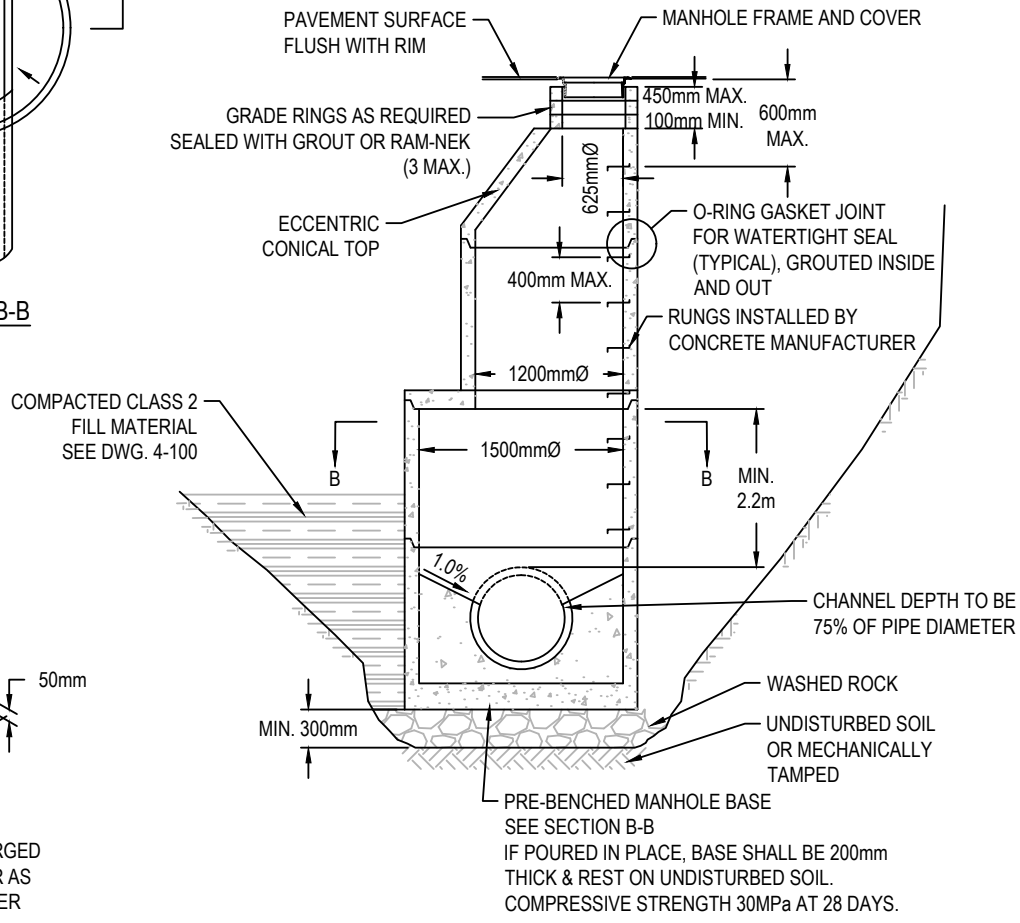
Drawing #: 3-100



SECTION B-B



20mm ALUMINUM FORGED MANHOLE STEPS OR AS PER MANUFACTURER SPECIFICATION



SECTION A-A

NOTES:

1. PRECAST RINGS, CONES AND BARRELS TO MEET CURRENT ASTM C478 STANDARDS.
2. SPECIAL BASE DESIGN REQUIRED FOR DEPTHS OVER 9.0m.
3. CHANNELLING AND BENCHING TO BE FINISHED TO TROWEL SMOOTHNESS. CONTINUE MAIN PIPE WHERE POSSIBLE.
4. CONICAL TOP TO BE USED WHERE DISTANCE FROM BENCH TO MANHOLE COVER EXCEEDS 2.0m.
5. INSTALL SAFETY PLATFORMS FOR ALL MANHOLES OVER 5.0m DEEP. LOCATE 2m ABOVE PIPE AS PER STANDARD DRAWING 3-201.
6. MANHOLE FRAME AND COVER TO BE AS PER STANDARD DRAWING 3-202.
7. BENCHING CONCRETE SHALL BE A MINIMUM OF 32MPa COMPRESSIVE STRENGTH, TYPE HS.
8. BUOYANCY CALCULATIONS TO BE PROVIDED TO THE CITY FOR ALL MANHOLES THAT HAVE HALF OR MORE OF VERTICAL DEPTH BELOW THE SURROUNDING WATER TABLE ELEVATION.

NO.	DATE	REVISION
9		
8	06/03/20	Added Note 8
7	16/08/18	Added surface flush with rim
5	14/04/16	Revised Notes
4	08/04/14	Changed grade ring thickness
3	10/12/13	Updated concrete notes
2	21/03/13	Updated concrete type
1	22/06/11	Detail reference, Note 6.

The City of Lloydminster

Checked by:

Approved by:

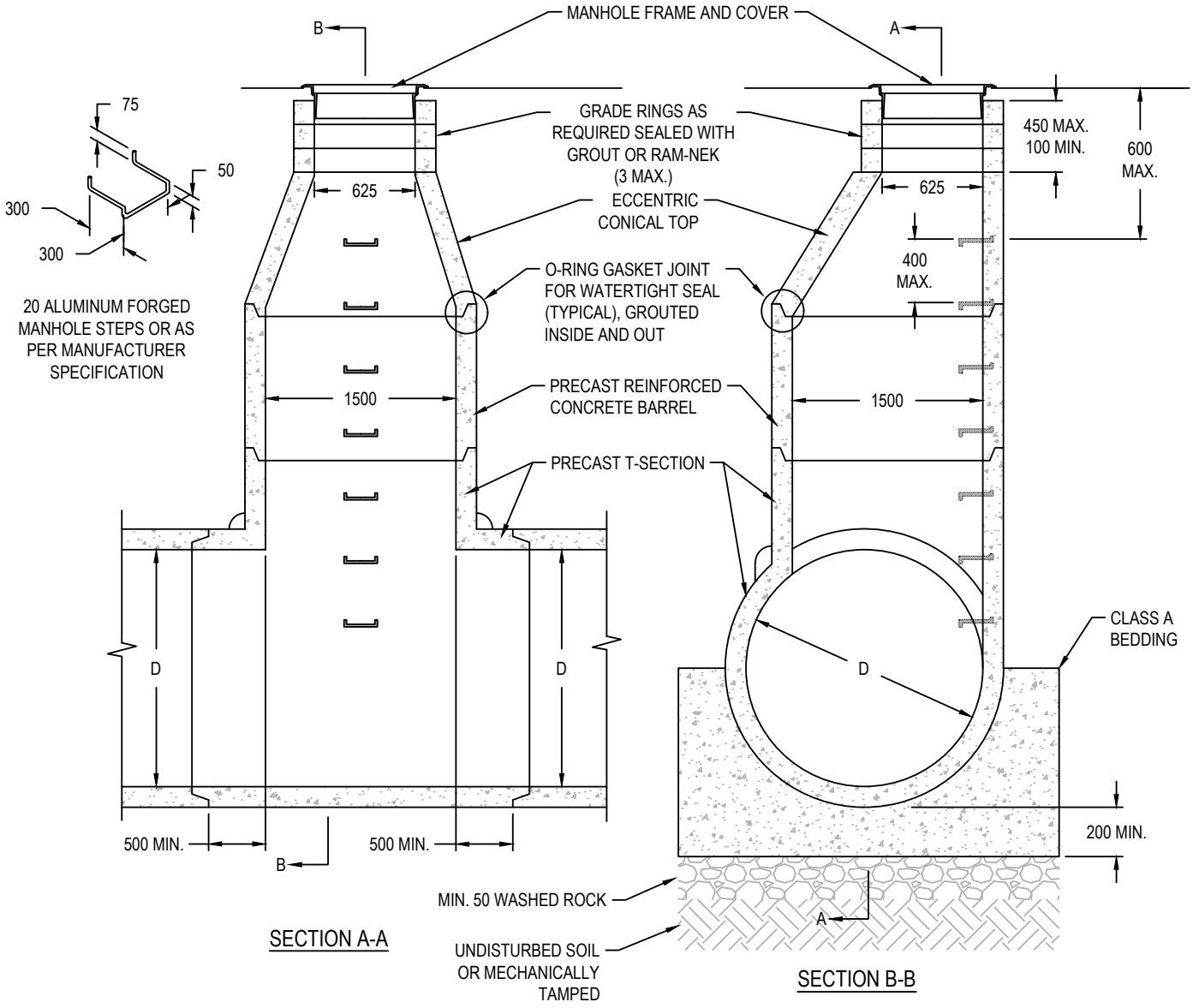
Drawn by: L. LEEPER

Scale: N.T.S.

Date: Feb. 22, 2011

PRECAST MANHOLE FOR PIPES 600mm TO 900mm DIAMETER

Drawing #: 3-101



NOTES:

1. PRECAST RINGS, CONES AND BARRELS TO MEET CURRENT A.S.T.M. C478 STANDARDS.
2. CHANNELLING AND BENCHING TO BE FINISHED TO TROWEL SMOOTHNESS. CONTINUE MAIN PIPE WHERE POSSIBLE.
3. CONICAL TOP TO BE USED WHERE DISTANCE FROM BENCH TO MANHOLE COVER EXCEEDS 2.0m.
4. INSTALL SAFETY PLATFORMS FOR ALL MANHOLES OVER 5.0m DEEP. LOCATE 2m ABOVE PIPE AS PER STANDARD DRAWING 3-201.
5. MANHOLE FRAME AND COVER TO BE AS PER STANDARD DRAWING 3-202.
6. BENCHING CONCRETE SHALL BE A MINIMUM OF 32MPa COMPRESSIVE STRENGTH, TYPE HS.
7. D => 1050mm .
8. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
9. BUOYANCY CALCULATIONS TO BE PROVIDED TO THE CITY FOR ALL MANHOLES THAT HAVE HALF OR MORE OF VERTICAL DEPTH BELOW THE SURROUNDING WATER TABLE ELEVATION.

NO.	DATE	REVISION
9	04/05/20	Changed Font Ht., Rem. "mm"
8	06/03/20	Added Note 9
7	02/07/19	Revised Notes
6	16/08/18	Revised Notes & Specs.
5	14/04/16	Revised Notes
4	08/04/14	Changed grade ring thickness
3	10/12/13	Updated concrete notes
2	21/03/13	Updated concrete type

The City of Lloydminster

Checked by:

Approved by:

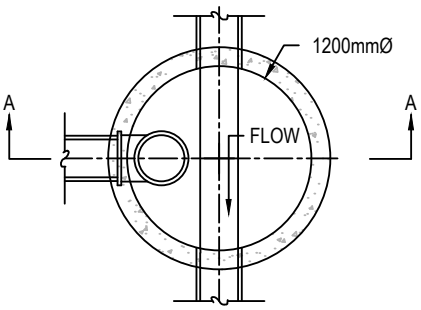
Drawn by: N / A

Scale: N.T.S.

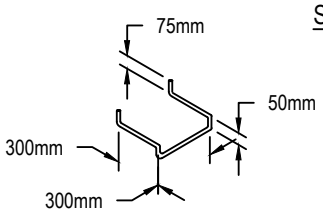
TYPICAL T-RISER MANHOLE FOR PIPES 1050mm DIAMETER AND LARGER

Date: Feb. 22, 2011

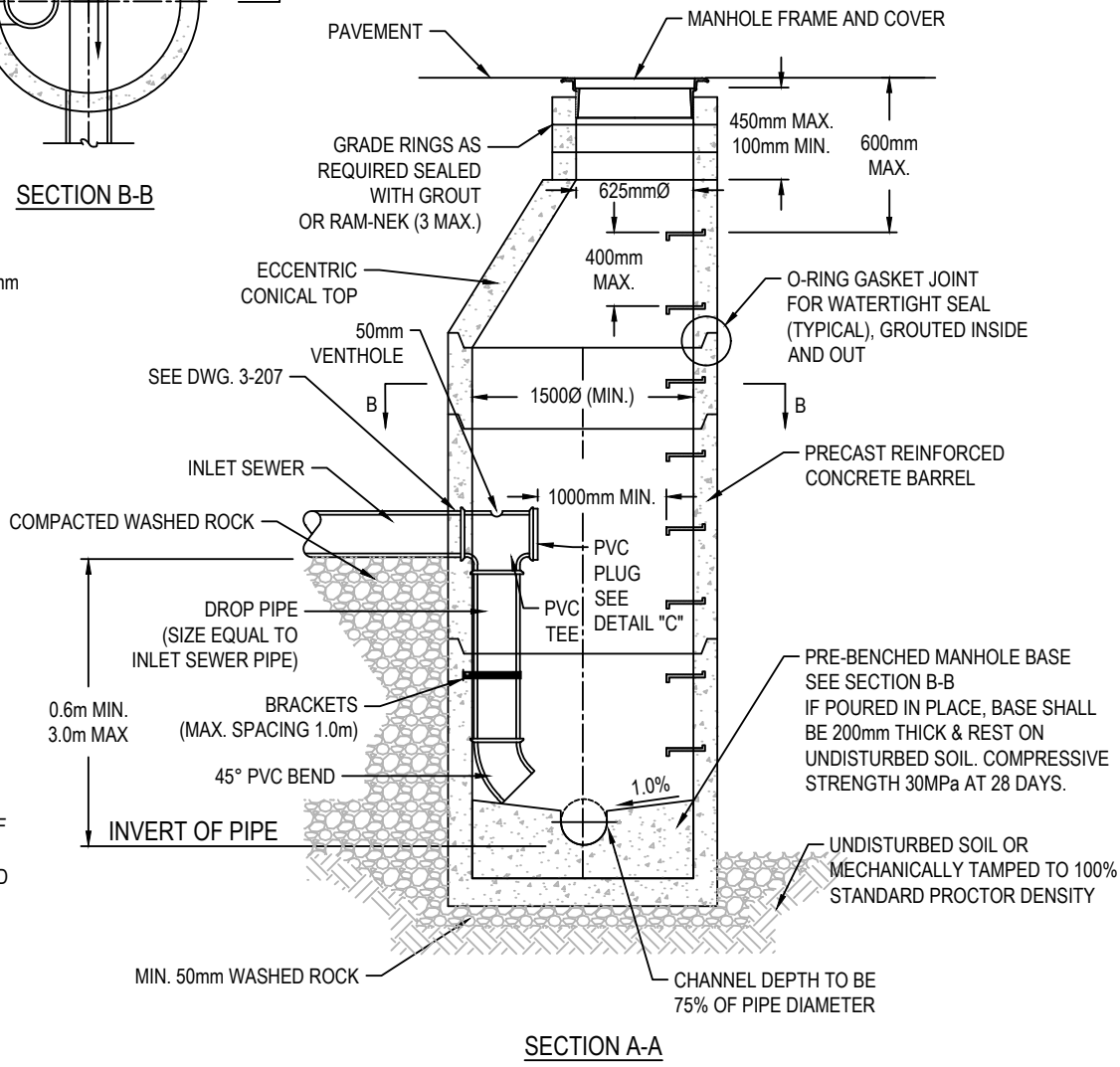
Drawing #: 3-102



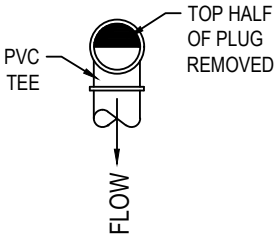
SECTION B-B



20mm ALUMINUM FORGED MANHOLE STEPS OR AS PER MANUFACTURER SPECIFICATION



SECTION A-A



DETAIL "C"

NOTES:

1. PRECAST RINGS, CONES AND BARRELS TO MEET CURRENT ASTM C478 STANDARDS.
2. SPECIAL BASE DESIGN REQUIRED FOR DEPTHS OVER 9.0m.
3. CHANNELLING AND BENCHING TO BE FINISHED TO TROWEL SMOOTHNESS. CONTINUE MAIN PIPE WHERE POSSIBLE.
4. CONICAL TOP TO BE USED WHERE DISTANCE FROM BENCH TO MANHOLE COVER EXCEEDS 2.0m.
5. INSTALL SAFETY PLATFORMS FOR ALL MANHOLES OVER 5.0m DEEP. LOCATE 2m ABOVE PIPE AS PER STANDARD DRAWING 3-201.
6. MANHOLE FRAME AND COVER TO BE AS PER STANDARD DRAWING 3-202.
7. BENCHING CONCRETE SHALL BE A MINIMUM OF 32MPa COMPRESSIVE STRENGTH, TYPE HS.
8. BUOYANCY CALCULATIONS TO BE PROVIDED TO THE CITY FOR ALL MANHOLES THAT HAVE HALF OR MORE OF VERTICAL DEPTH BELOW THE SURROUNDING WATER TABLE ELEVATION.

NO.	DATE	REVISION
8		
7	06/03/20	Added Note 8
6	16/08/18	Revised Notes & Specs.
5	23/03/18	Revised Notes & Specs.
4	14/04/16	Revised Notes
3	08/04/14	Changed grade ring thickness
2	10/12/13	Updated concrete notes
1	21/03/13	Updated concrete type

The City of Lloydminster

Checked by:

Approved by:

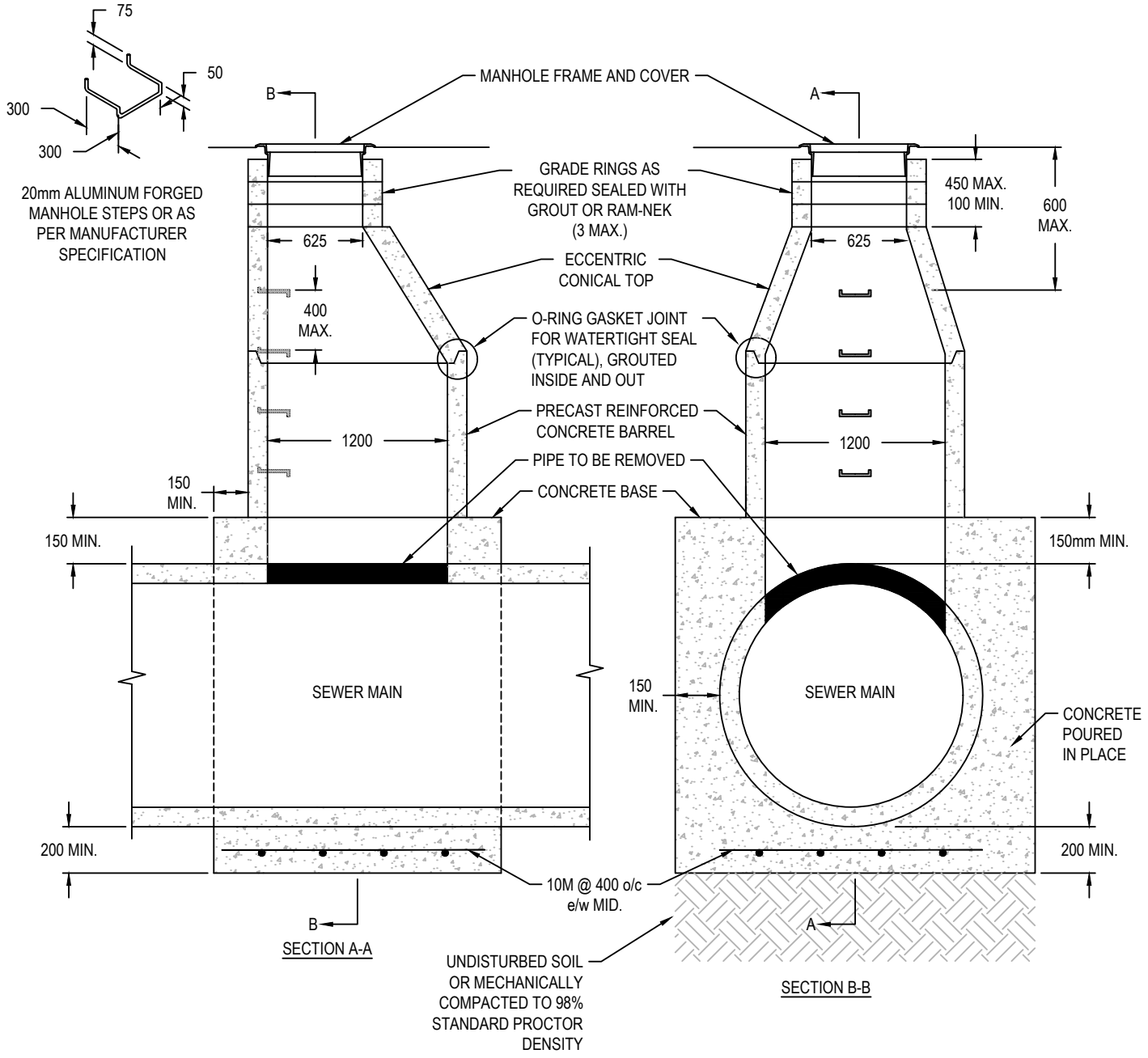
Drawn by: L. LEEPER

Scale: N.T.S.

INTERNAL DROP MANHOLE

Date: Feb. 22, 2011

Drawing #: 3-103



NOTES:

1. PRECAST RINGS, CONES AND BARRELS TO MEET CURRENT A.S.T.M. C478 STANDARDS.
2. CAST IN PLACE CONCRETE TO BE TYPE HS, 32MPa AT 28 DAYS.
3. COMPACT FILL AROUND MANHOLES TO A MINIMUM OF 98% STANDARD PROCTOR DENSITY.
4. CONICAL TOP TO BE USED WHERE DISTANCE FROM TOP OF PIPE TO MANHOLE COVER EXCEEDS 2.0m.
5. VERTICAL SIDE OF CONICAL MANHOLE ON UPSTREAM SIDE.
6. INSTALL SAFETY PLATFORMS FOR ALL MANHOLES OVER 5.0m DEEP. LOCATE 2.0m ABOVE PIPE AS PER STANDARD DRAWING 3-201.
7. MANHOLE FRAME AND COVER TO BE AS PER STANDARD DRAWING 3-202.
8. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

NO.	DATE	REVISION
8		
7		
6		
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4		
3		
2		
1		

The City of Lloydminster

Checked by:

Approved by:

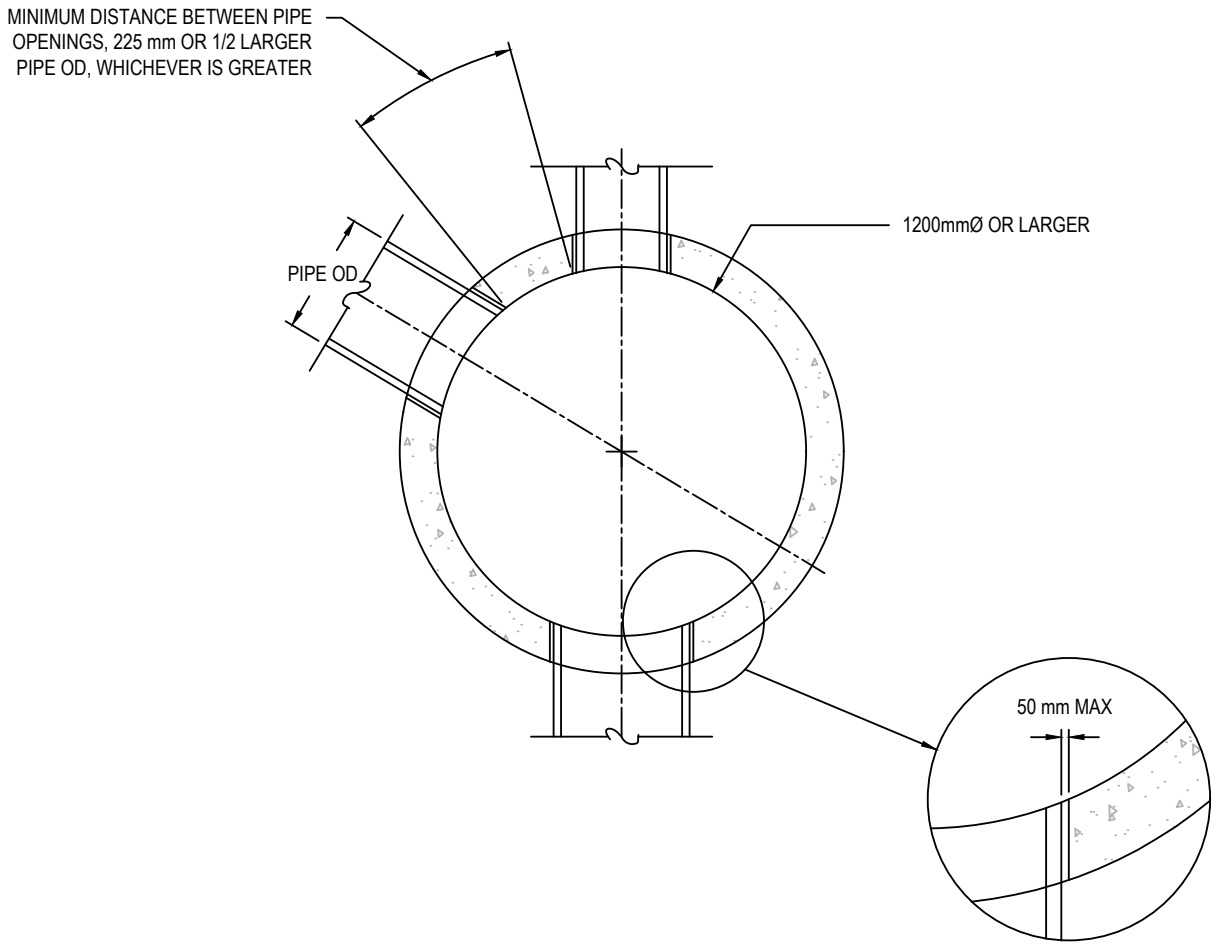
Drawn by: L. LEEPER

Scale: N.T.S.

Date: July 2, 2019

PERCHED MANHOLE

Drawing #: 3-104



NOTES:

1. MANHOLES MUST BE LARGE ENOUGH TO ACCOMMODATE THE MAXIMUM INTERSECTING PIPE SIZE.
2. THE MINIMUM DISTANCE BETWEEN OPENINGS FOR PIPES SHALL BE 225 mm OR 1/2 OF THE LARGER PIPE'S OUTER DIAMETER (OD), WHICHEVER IS GREATER.
3. MANHOLES SHALL BE DESIGNED WITH SUFFICIENT INSIDE DIMENSIONS TO PERFORM INSPECTION AND CLEANING OPERATIONS, ALLOW FOR PROPER CHANNEL CONSTRUCTION WITHOUT DIFFICULTY AND MINIMIZE HYDRAULIC LOSSES THROUGH THE MANHOLE.
4. PRE-BENCHED MANHOLE BASES SHALL BE USED WHEREVER POSSIBLE WITH PRE-CORED CONNECTION HOLES AND WATER-TIGHT DURASEAL OR G-LOC JOINTS OR APPROVED EQUAL.
5. OPENINGS FOR CONNECTIONS MADE IN THE FIELD SHALL NOT BE GREATER THAN THE OUTER DIAMETER OF THE PIPE BY MORE THAN 50 MM IN ANY DIRECTION AND SHALL BE CORED OR CUT, AND THE OPENING AROUND THE PIPE SEALED WITH NON-SHRINK GROUT.
6. 1500 mm OR LARGER DIAMETER MANHOLES ARE REQUIRED WHEN CONNECTING SEWERS THAT ARE BETWEEN 600 mm AND 900 mm.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2	06/03/20	Renumbered DWG from 3-207
1	23/03/18	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

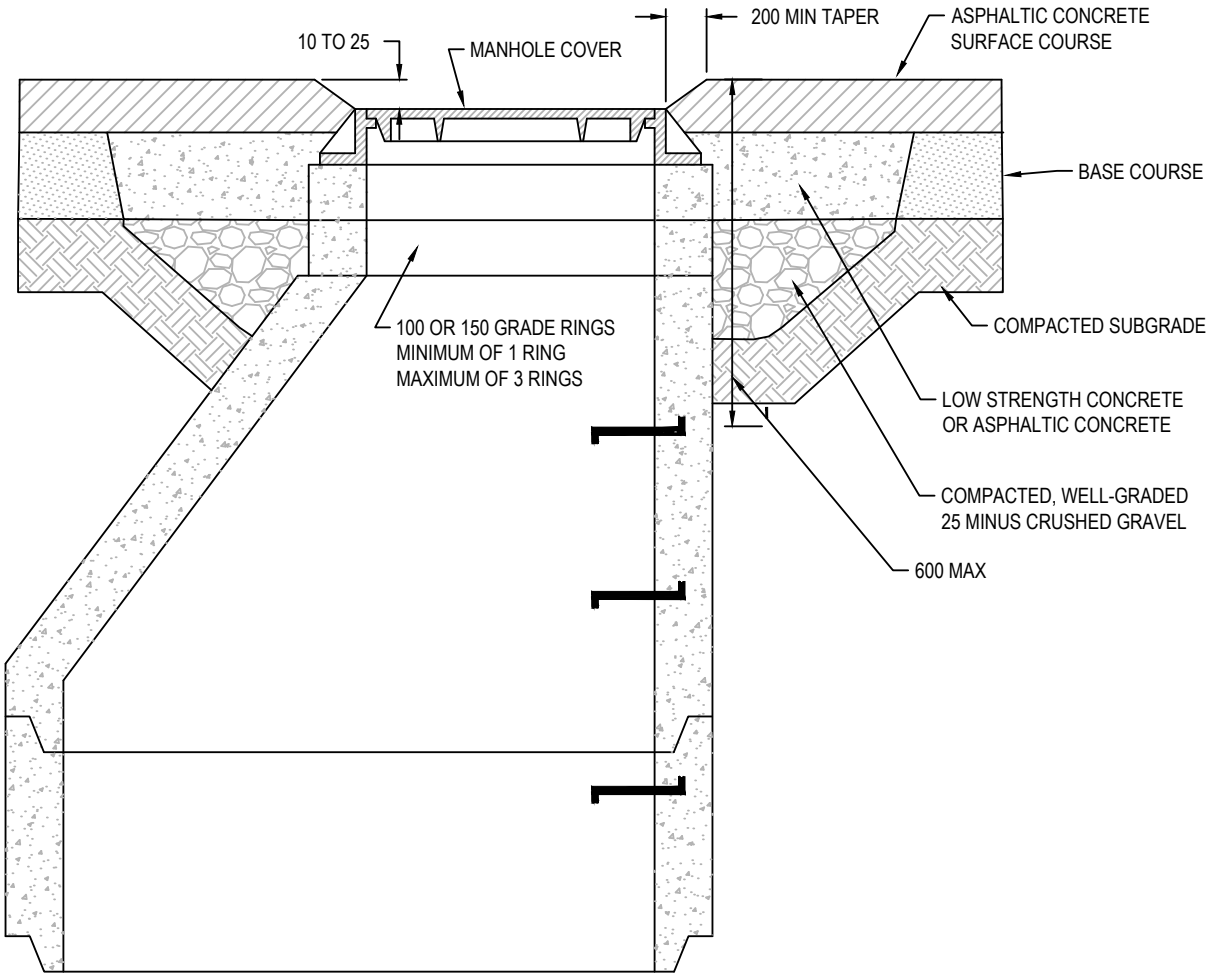
Drawn by: A. ADEBAYO

Scale: N.T.S.

MANHOLE PENETRATIONS AND DESIGN

Date: Apr. 05, 2016

Drawing #: 3-105



NOTES:

1. MANHOLES TO BE ADJUSTED TO FINISHED GRADE PRIOR TO PLACING ASPHALTIC CONCRETE SURFACE COURSE.
2. MANHOLE COLLARS TO BE SET IN MORTAR CONSISTING OF 3 PARTS SAND & 1 PART CEMENT. PARGING ON OUTSIDE OF MANHOLE COLLARS ONLY. INSIDE FACES SHALL BE POINTED SUCH THAT A NEAT, EVEN FINISH RESULTS.

NO.	DATE	REVISION
8		
7		
6		
5		
4	04/05/20	Removed "mm", "Max" to "MAX"
3	16/08/18	Changed Dwg Title
2	23/03/18	Changed Details
1	08/04/14	Changed min grade rings

The City of Lloydminster

Checked by:

Approved by:

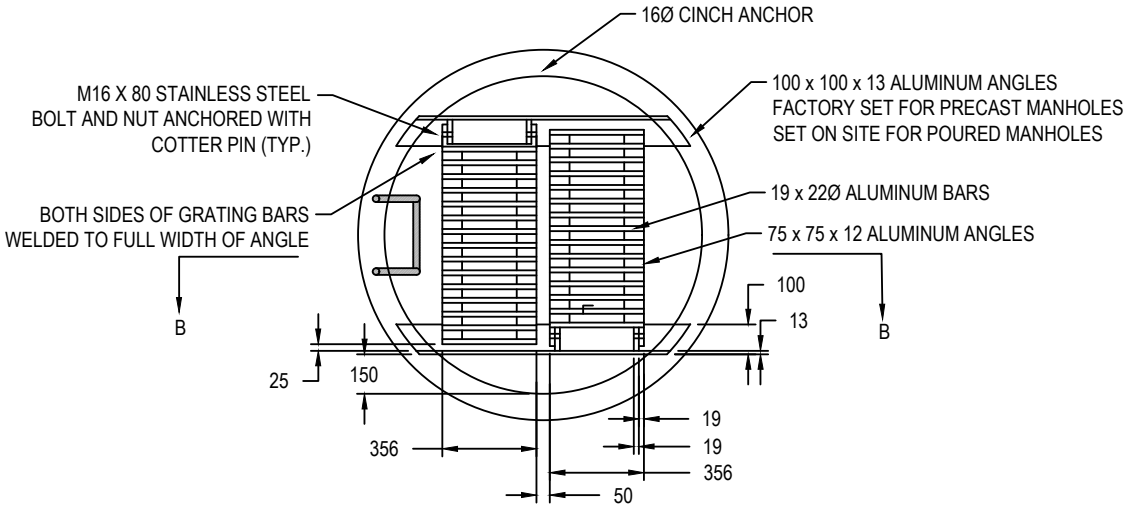
Drawn by: N / A

Scale: N.T.S.

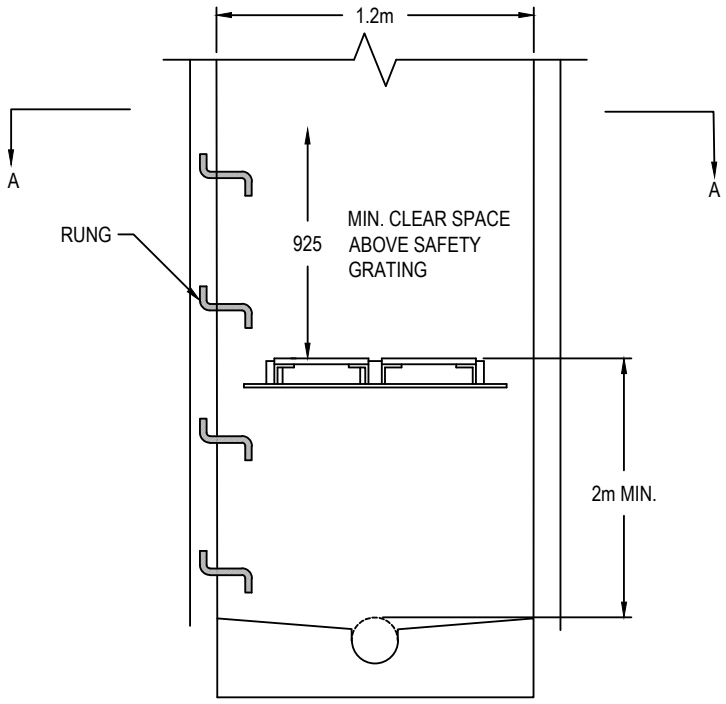
NON-FLOATING MANHOLE FRAME ADJUSTMENT DETAIL

Date: Feb. 22, 2011

Drawing #: 3-200



SECTION A-A



SECTION B-B

NOTES:

1. PLATFORMS TO BE INSTALLED IN ALL MANHOLES OVER 5.0m IN DEPTH (RIM TO INVERT)

NO.	DATE	REVISION
8		
7		
6		
5		
4	04/05/20	Rem. "mm", Adj. Font Ht.
3	01/03/19	Removed Features
2	8/16/18	Added Features
1	4/14/16	Revised Notes

The City of Lloydminster *Planning & Engineering*

Checked by:

Approved by:

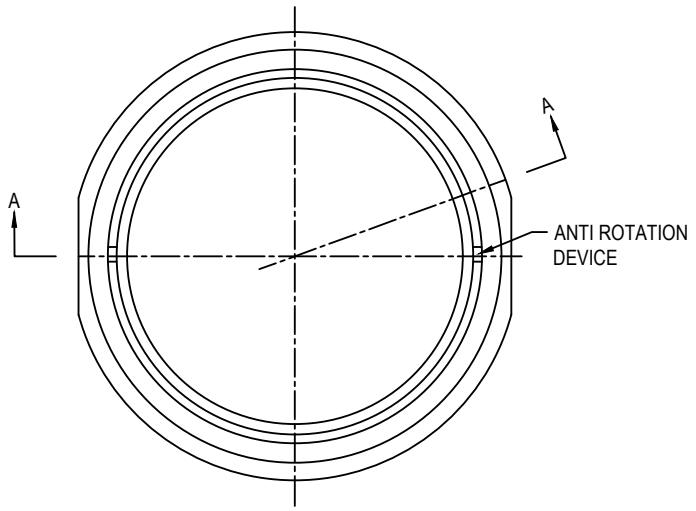
Drawn by: N / A

Scale: N.T.S.

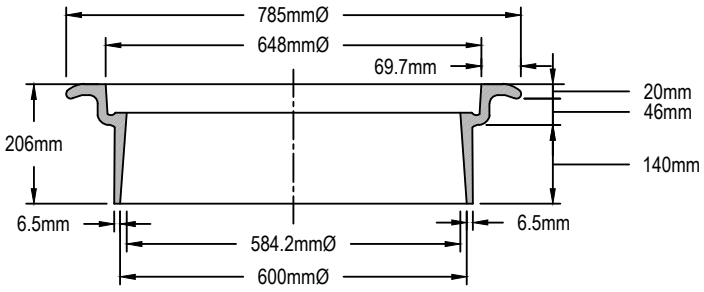
SAFETY PLATFORM

Date: Feb. 22, 2011

Drawing #: 3-201



FRAME



SECTION A - A

NOTES:

1. CASTINGS SHALL BE TRUE TO PATTERN AND FREE FROM CRACKS, GAS HOLES, FLAWS, OR SHRINKAGE. BEARING SURFACE SHALL BE MACHINED TO PREVENT ROCKING.
2. USE FOR ALL ROADWAY, GRAVEL APPLICATIONS.
3. COVER TO BE AS PER STANDARD DRAWING 3-204 FOR SANITARY SEWER SYSTEM OR 3-205 FOR STORM SEWER SYSTEM.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1	4/14/16	Rev. Notes, Dwg. Title, Rem. Cover

The City of Lloydminster

Checked by:

Approved by:

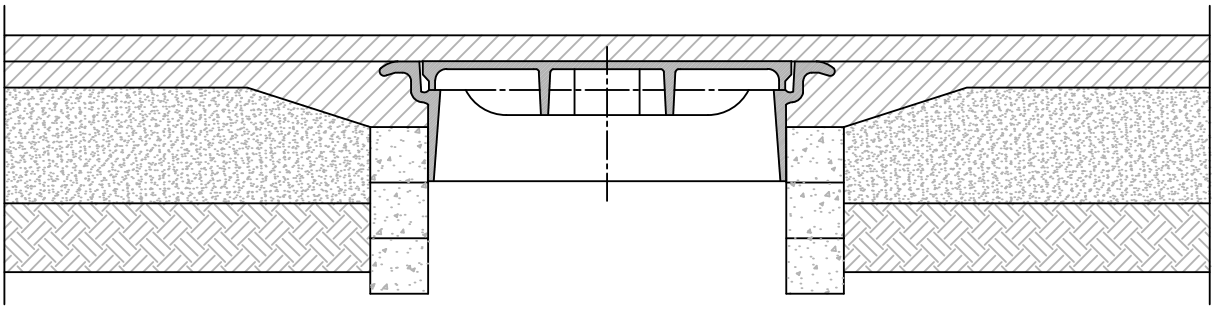
Drawn by: L. LEEPER

Scale: N.T.S.

F-80 MANHOLE FRAME

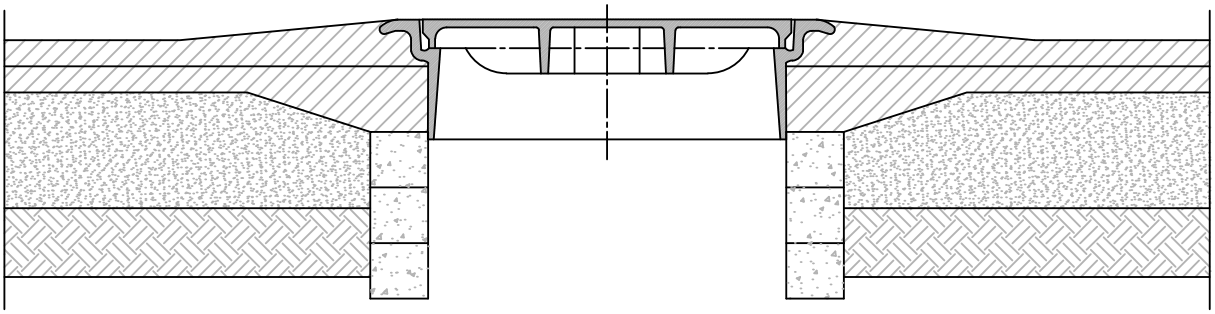
Date: Feb. 22, 2011

Drawing #: 3-202



WHEN RESURFACING EXISTING ROADS, LOOSEN FRAME FROM ASPHALT. SPRAY FRAME AND COVER WITH OIL TO EASE REMOVAL OF NEW ASPHALT. AFTER PAVER HAS LAID OUT ASPHALT, REMOVE ALL ASPHALT FROM THE FRAME AND COVER.

DURING PAVING OPERATION



LIFT THE FRAME AND COVER AND USE ASPHALT THAT WAS REMOVED TO PACK UNDER FLANGE AND FEATHER OUT TO APPROX. 50 cm FROM EDGE OF FRAME. THE ROLLER CAN PRESS FRAME AND COVER TO A SMOOTH INSTALLATION. LIFT HOLES MUST BE CLEANED OUT BEFORE THE MANHOLE IS LEFT.

FINAL PLACEMENT AND COMPACTION

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2	06/03/20	Added Detail Titles
1	14/04/16	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

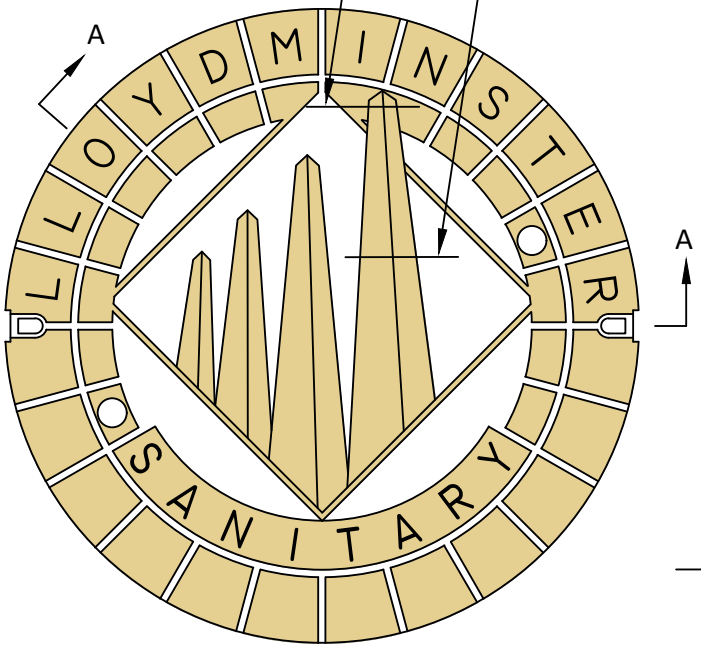
Drawn by: L. LEEPER

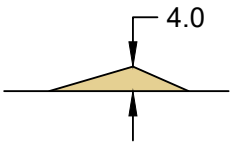
Scale: N.T.S.

F-80 MANHOLE ADJUSTMENT DETAIL

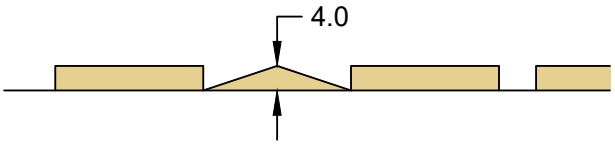
Date: March 9, 2015

Drawing #: 3-203





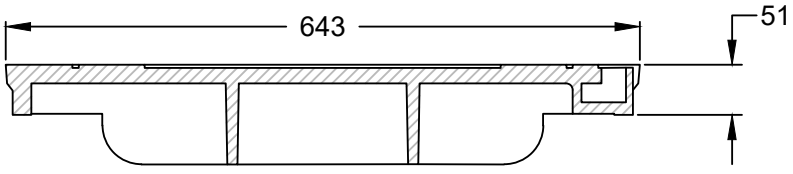
SECTION B



SECTION C

BOTTOM OF GROOVES - BASE LEVEL

4mm HIGHER



SECTION A-A

NO.	DATE	REVISION
8		
7		
6	06/03/20	Underlined Section Titles
5	03/12/18	Added Vent Holes
4	16/08/18	Revised Text's Font Height
3	23/03/18	Revised Text Height
2	22/11/16	Revised Dimensions
1	11/02/16	Revised Cover Text

The City of Lloydminster

Checked by:

Approved by:

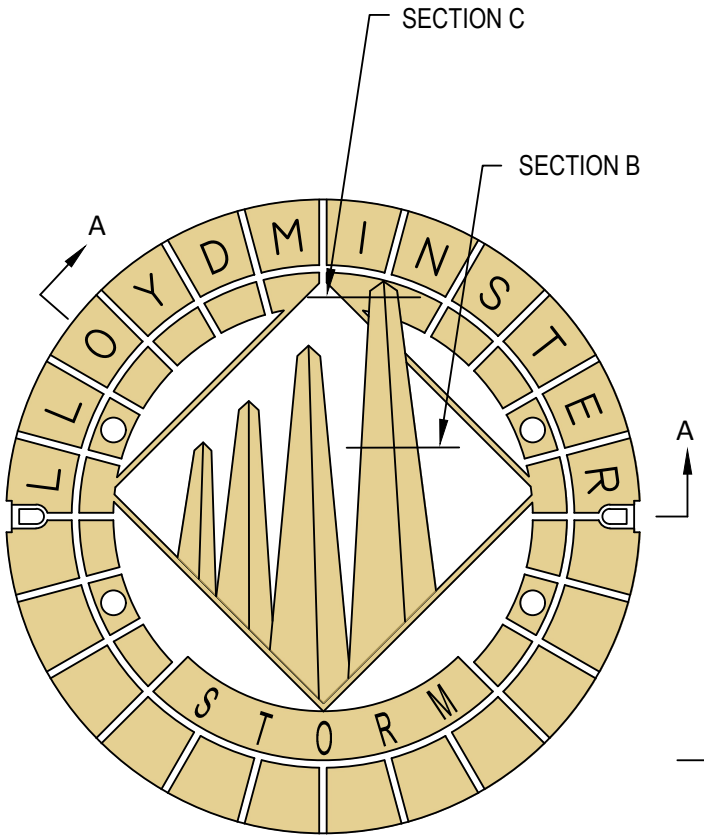
Drawn by: L. LEEPER

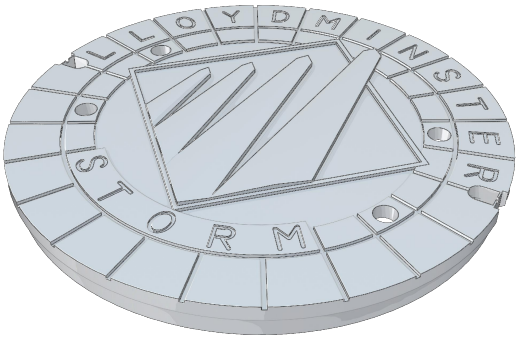
Scale: N.T.S.

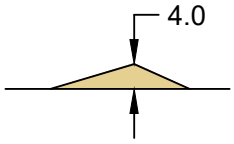
TF-80LSAN Sanitary Sewer Cover (City Logo)

Date: Dec. 14, 2015

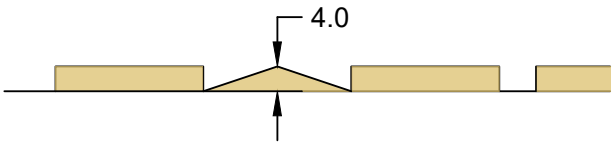
Drawing #: 3-204







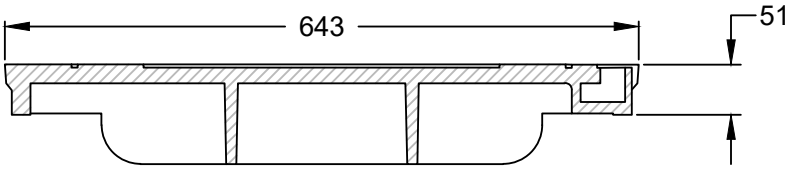
SECTION B



SECTION C

BOTTOM OF GROOVES - BASE LEVEL

4 mm HIGHER



SECTION A-A

NO.	DATE	REVISION
8		
7		
6		
5		
4	06/03/20	Underlined Section Text
3	23/03/18	Revised Text Height
2	22/11/16	Revised Dimensions
1	08/02/16	Revised Cover Text

The City of Lloydminster

Checked by:

Approved by:

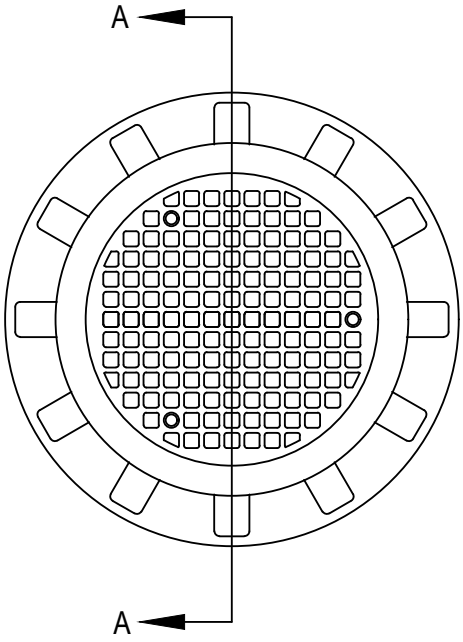
Drawn by: L. LEEPER

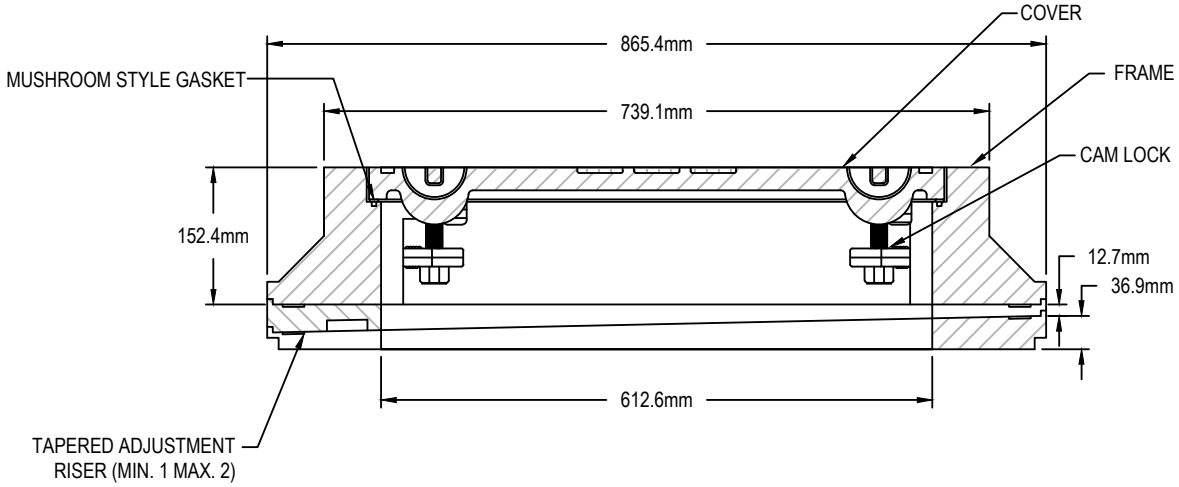
Scale: N.T.S.

TF-80LSTM Storm Sewer Cover (City Logo)

Date: Dec. 14, 2015

Drawing #: 3-205





SECTION A-A

NOTES:

1. USE ON SANITARY MANHOLES, LOCATED IN ROADWAY SAGS OR GRASSED AREAS WHERE THERE IS A RISK OF INFLOW.
2. INSTALLERS MUST HOLD A LIFESPAN INSTALLATION AND MAINTENANCE CERTIFICATE
3. ADJUST TAPERED ADJUSTMENT RISER(S) SO THAT FRAME IS ANGLED TO BE FLUSHED WITH THE PAVED SURFACE.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3	06/03/20	Underlined "Section A-A"
2	16/08/18	Additional Notes
1	22/11/16	Additional Notes

The City of Lloydminster

Checked by:

Approved by:

Drawn by: A. EDWARDS

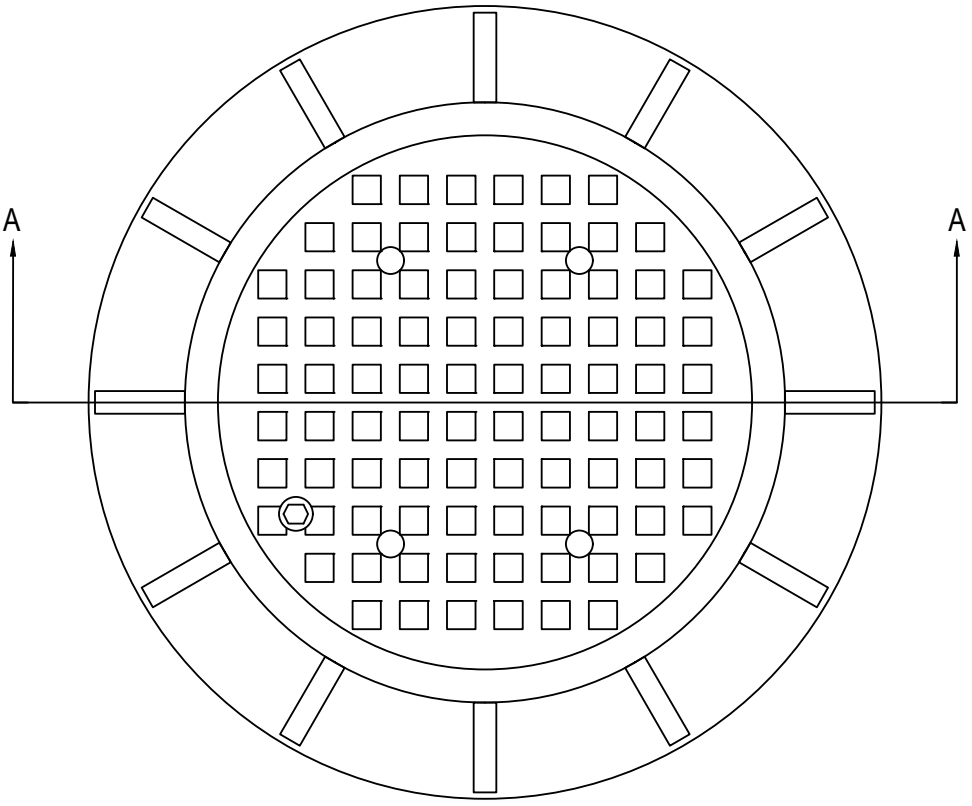
Scale: N.T.S.

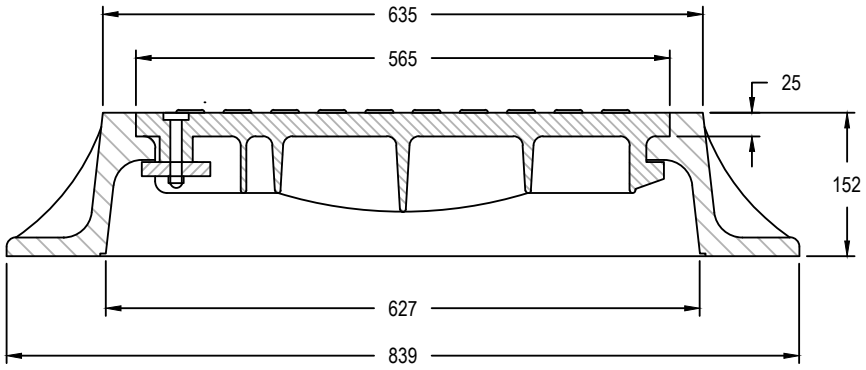
WATERTIGHT MANHOLE COVER

Date: April 19, 2016

Drawing #: 3-206

PLAN





SECTION A-A

NOTES:

1. CASTINGS SHALL BE TRUE TO PATTERN AND FREE FROM CRACKS, GAS HOLES, FLAWS, OR SHRINKAGE. BEARING SURFACE SHALL BE MACHINED TO PREVENT ROCKING.
2. USE FOR STORM SEWER MANHOLES IN GRASSED AREAS.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1	20/08/2018	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

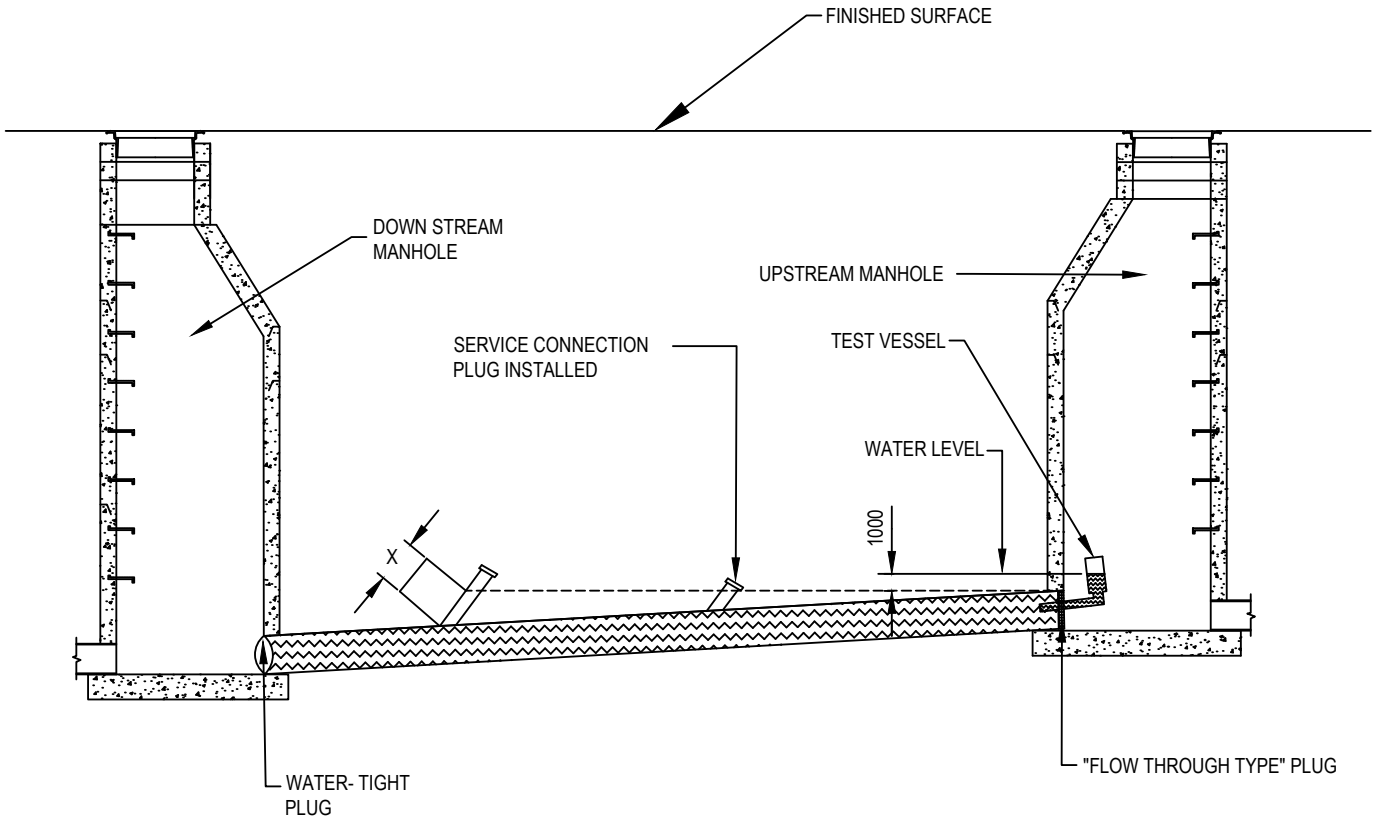
Drawn by: A. Edwards

Scale: N.T.S.

F-39 FRAME AND LOCKING COVER

Date: June 30, 2016

Drawing #: 3-208



X = LENGTH AND DIAMETER OF SERVICE CONNECTIONS TO BE INCLUDED IN EXFILTRATION TEST CALCULATION.

NOTES:

1. THE ENTIRE LENGTH OF SERVICE IS NOT INCLUDED. ONLY THE PORTION BELOW THE 1 METRE HEAD IS INCLUDED IN THE EXFILTRATION TEST
2. ALL DIMENSIONS ARE IN MILLIMETRES.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1	06/03/20	REVISED TEXT

The City of Lloydminster

Checked by:

Approved by:

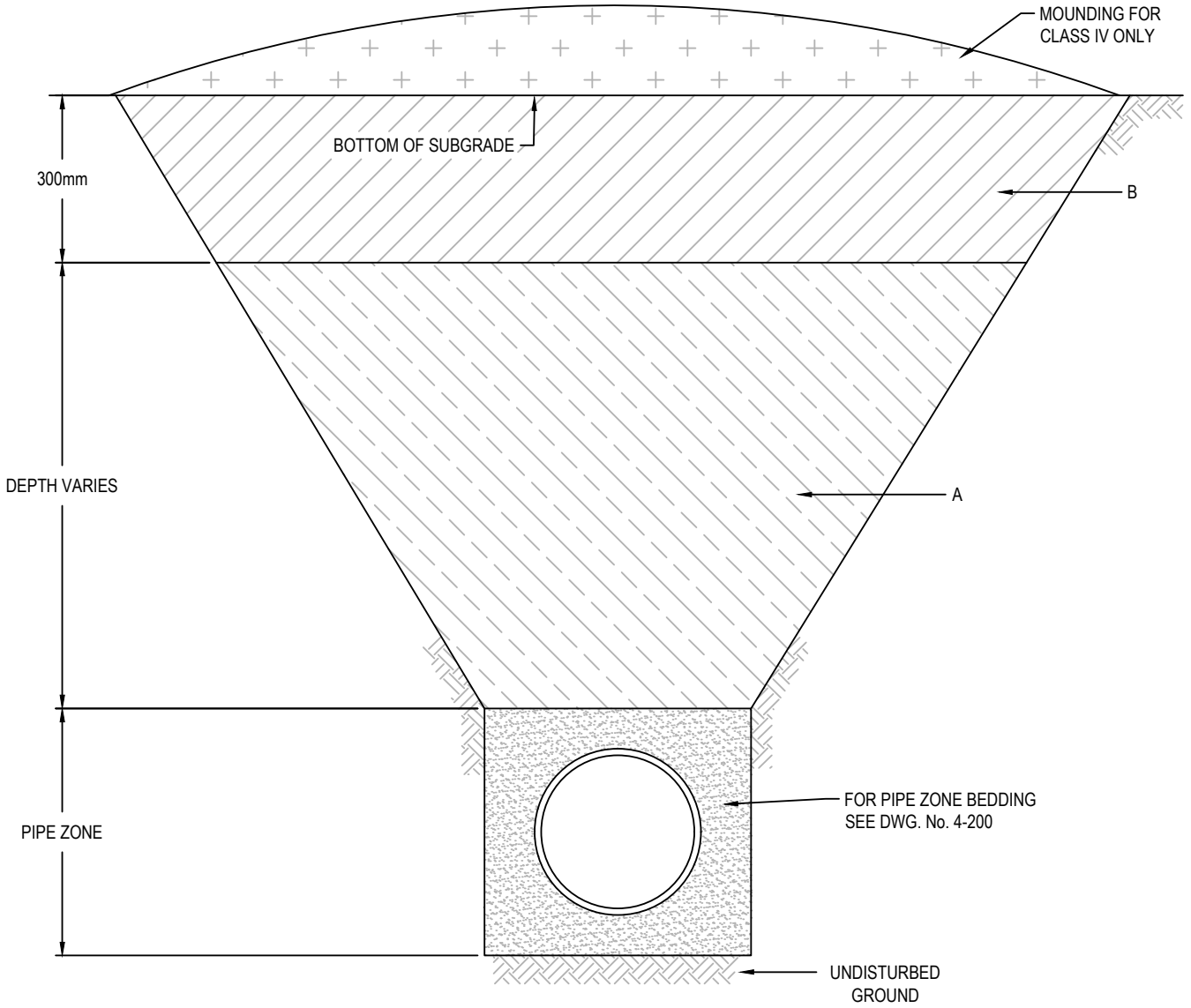
Drawn by: J. IDIOH

Scale: N.T.S.

TYPICAL PIPE SECTION EXFILTRATION TEST

Date: AUG. 20, 2018

Drawing #: 3-300



CLASS	USE	A			B		
		MATERIAL	MAX LIFT	% SPD	MATERIAL	MAX LIFT	% SPD
I	UNDER ROADS	IMPORTED GRANULAR	300	98	IMPORTED GRANULAR	150	100
II	UNDER ROADS	NATIVE	300	98	NATIVE	150	100
III	LANDSCAPED AREAS	NATIVE	300	95	NATIVE	200	95
IV	OPEN FIELD	NATIVE	300	95	NATIVE	300	95

NOTES:

1. ALL TRENCHED WALLS SHALL BE SLOPED OR SHORED IN CONFORMANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY REGULATIONS CURRENTLY IN EFFECT.
2. SURFACE DRAINAGE TO BE RECTIFIED FOR IMMEDIATE AREA IF CLASS IV BACKFILL IS USED.

NO.	DATE	REVISION
8		
7		
6		
5		
4	06/03/20	Notes Formatting
3	21/12/16	Updated Notes
2	30/06/16	Updated Notes
1	08/04/14	Changed bedding ref dwg no.

The City of Lloydminster

Checked by:

Approved by:

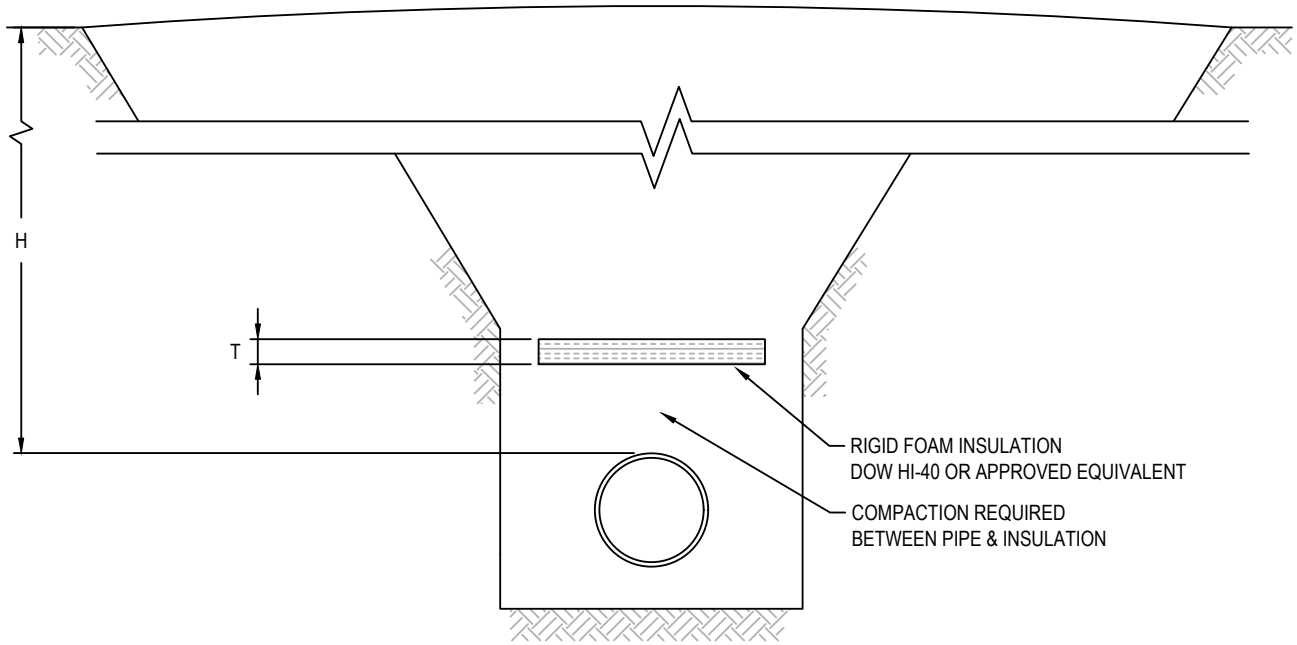
Drawn by: L. LEEPER

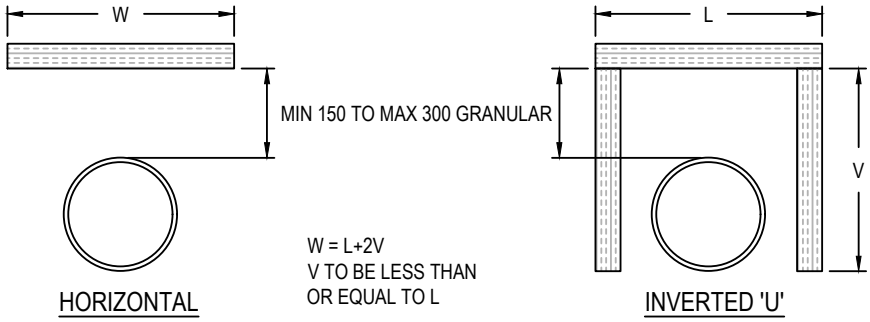
Scale: N.T.S.

TRENCH BACKFILL

Date: Feb. 22, 2011

Drawing #: 4-100





'H' DEPTH FROM FINISHED GRADE TO TOP OF MAIN IN METRES	TABLES FOR VALUES OF "T" (INSULATION THICKNESS) IN MILLIMETERS								'W' WIDTH OF INSULATION IN METRES
	MAINS IN LANES OR EASEMENTS		MAINS IN STREETS		DEAD END MAINS IN STREETS		DEAD END MAINS IN LANES		
	GRAVEL	CLAY	GRAVEL	CLAY	GRAVEL	CLAY	GRAVEL	CLAY	
0 - 1	*	*	*	*	*	*	*	*	*
1 - 1.25	125	100	150	125	175	150	150	125	3.7
1.25 - 1.5	100	75	125	100	150	125	125	100	3.2
1.5 - 1.8	75	50	100	75	125	100	100	75	2.6
1.8 - 2.1	50	25	75	50	100	75	75	75	2.0
2.1 - 2.4	25	0	50	25	75	50	50	25	1.4
2.4 - 2.7	0	0	25	0	50	25	25	0	1.0
2.7 - 3.0	0	0	0	0	25	0	0	0	1.0
3.0 OR MORE	0	0	0	0	0	0	0	0	-

* INDICATES DEPTH NOT PRACTICAL

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1	06/03/20	Revised Dwg, Details & Table

The City of Lloydminster

Checked by:

Approved by:

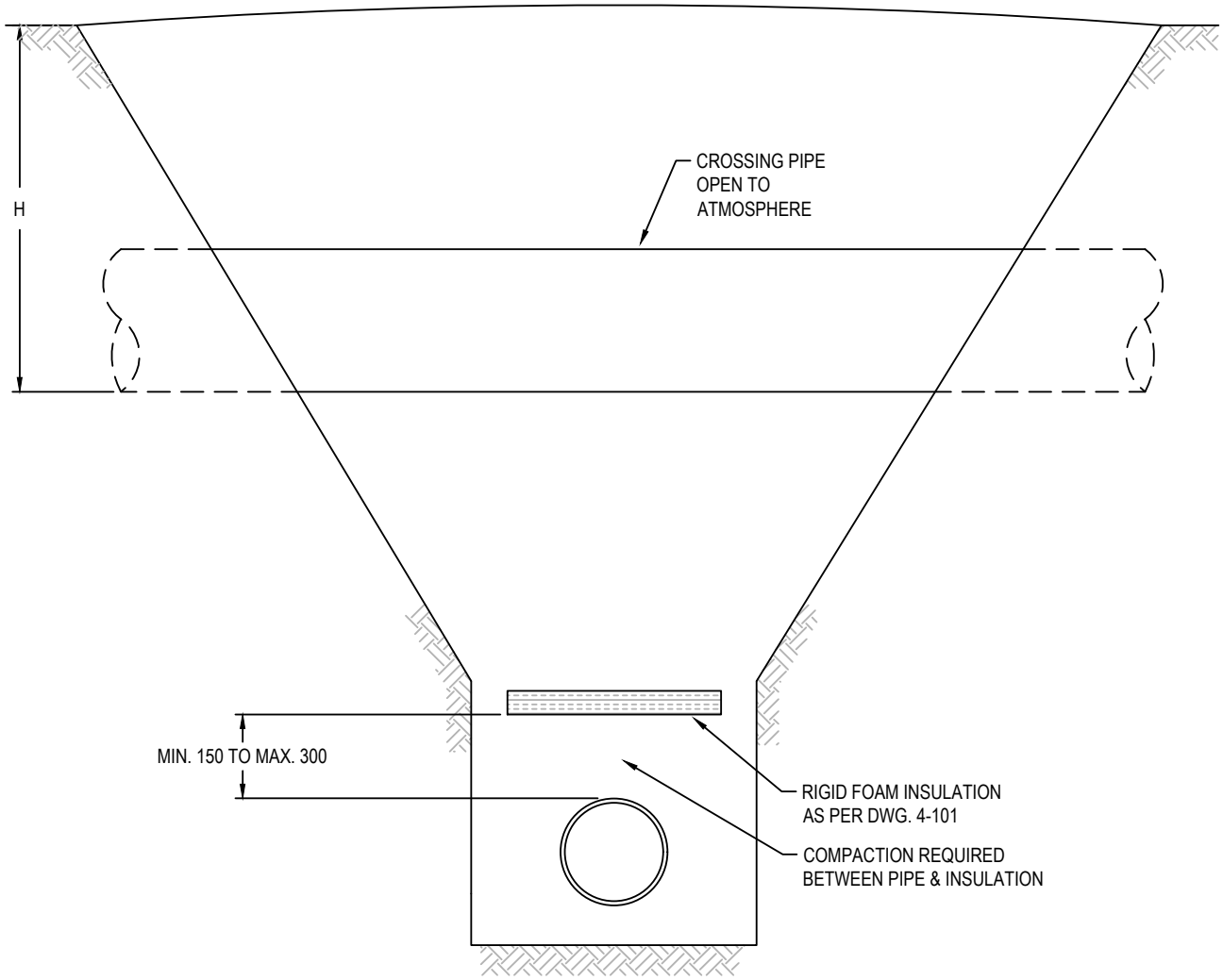
Drawn by: L. LEEPER

Scale: N.T.S.

INSULATION REQUIREMENTS

Date: Feb. 22, 2011

Drawing #: 4-101



NOTES:

1. TO BE USED WHERE CROSSING PIPE IS OPEN TO THE ATMOSPHERE (e.g. STORM SEWER, CULVERT CROSSING, etc.).
2. USE DEPTH "H" FOR INSULATION THICKNESS AND WIDTH AS PER DWG. 4-101.

NO.	DATE	REVISION
8		
7		
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1		

The City of Lloydminster

Checked by:

Approved by:

Drawn by: L. LEEPER

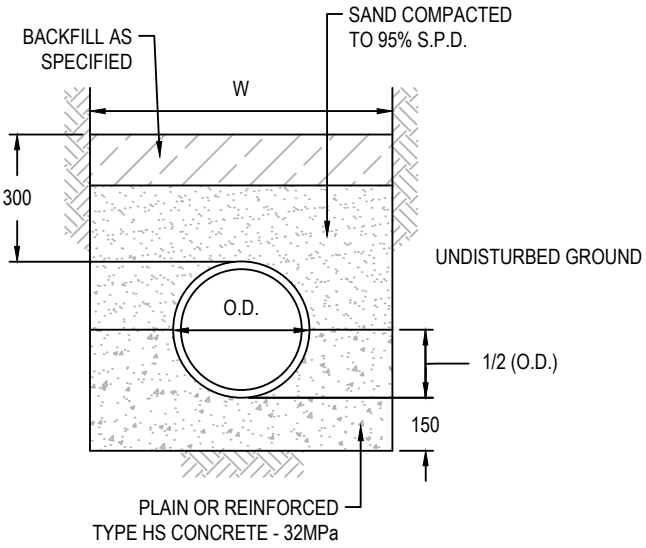
Scale: N.T.S.

Date: Mar. 9, 2020

INSULATION REQUIREMENTS

CROSSING PIPE OPEN TO ATMOSPHERE

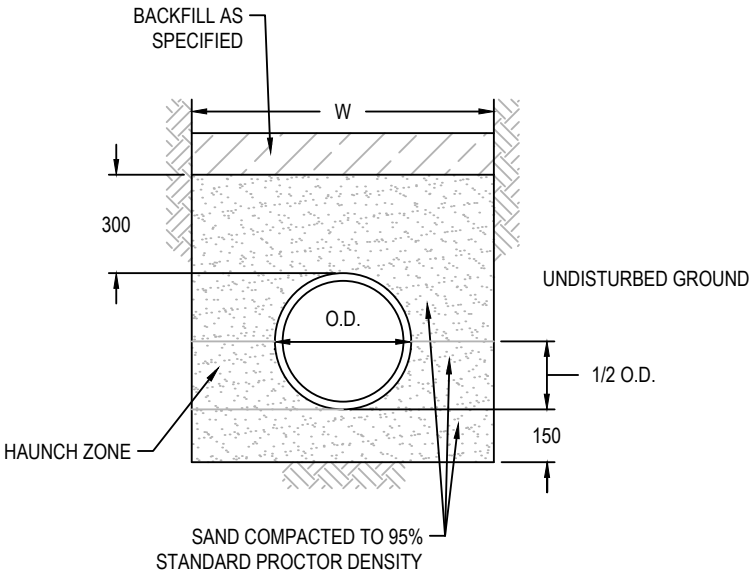
Drawing #: 4-102



CLASS A

LEGEND

W = TRENCH WIDTH.
O.D. = OUTSIDE DIAMETER OF PIPE.



CLASS B

NOTES:

1. ADD 100mm TO BEDDING IN ROCK EXCAVATION.
2. TRENCH WIDTH TO BE A MINIMUM OF TWICE THE OUTSIDE DIAMETER OF THE PIPE OR TO MANUFACTURERS SPECIFICATIONS.
3. COMPACT SAND IN THE HAUNCH ZONE IN BOTH DIRECTIONS AWAY FROM THE PIPE TO THE UNDISTURBED TRENCH WALLS.
4. FOR PIPES UP TO 600mm IN DIAMETER. FOR PIPES LARGER THAN 600mm IN DIAMETER PROVIDE BEDDING DESIGN IN CONFORMANCE WITH CITY STANDARDS.

NO.	DATE	REVISION
8		
7		
6	04/05/20	Removed "1/2 O.D." Text
5	09/03/20	Removed B-1 and Added Notes
4	23/03/18	Revised Notes
3	21/12/16	Updated Notes
2	17/04/14	Changed concrete strength
1	21/03/13	Updated concrete type

The City of Lloydminster

Checked by:

Approved by:

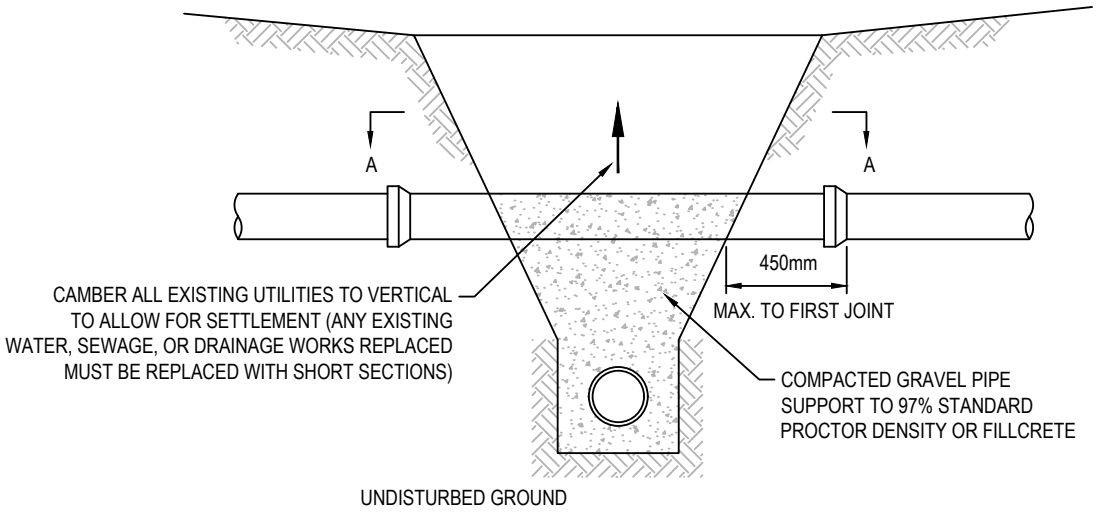
Drawn by: N / A

Scale: N.T.S.

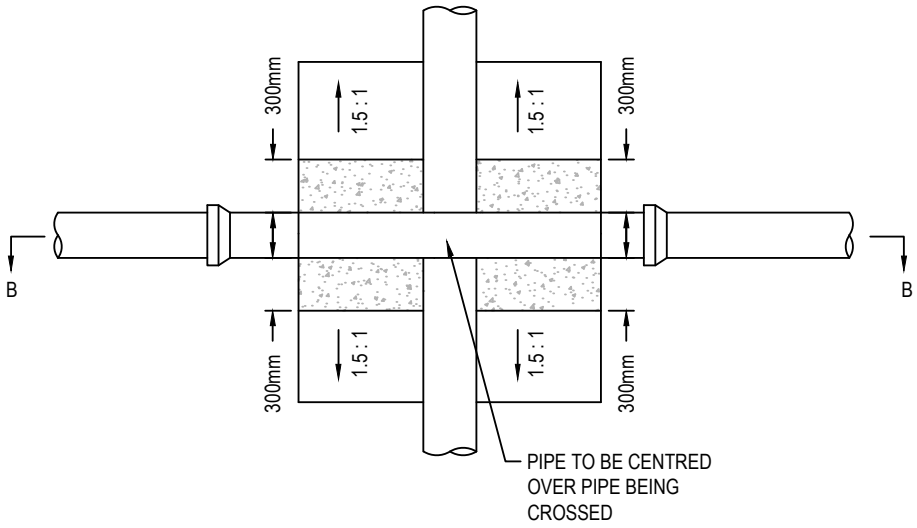
PIPE ZONE BEDDING DETAILS (CLASS A, B)

Date: Feb. 22, 2011

Drawing #: 4-200



SECTION B-B



SECTION A-A

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1	23/03/18	Revised Details

The City of Lloydminster

Checked by:

Approved by:

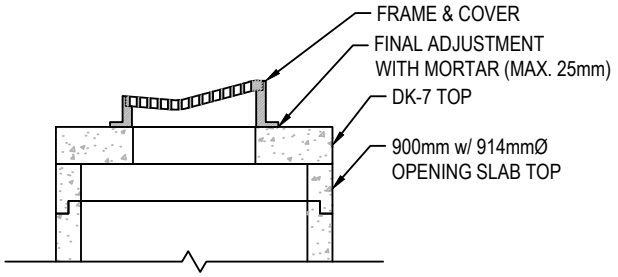
Drawn by: L. LEEPER

Scale: N.T.S.

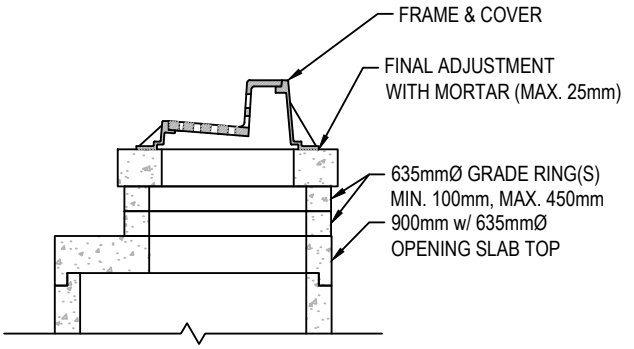
PIPE SUPPORT

Date: Feb. 22, 2011

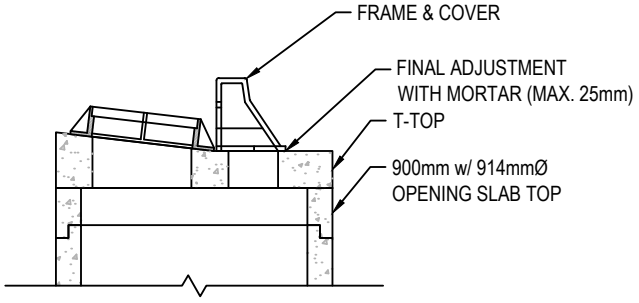
Drawing #: 4-300



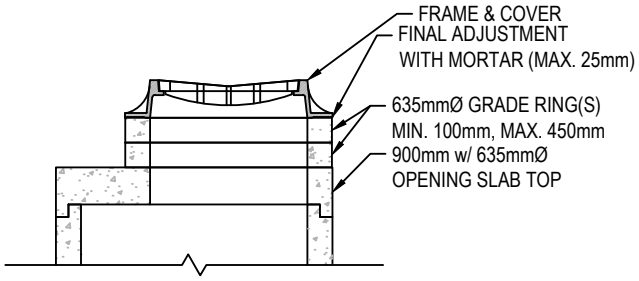
DK-7



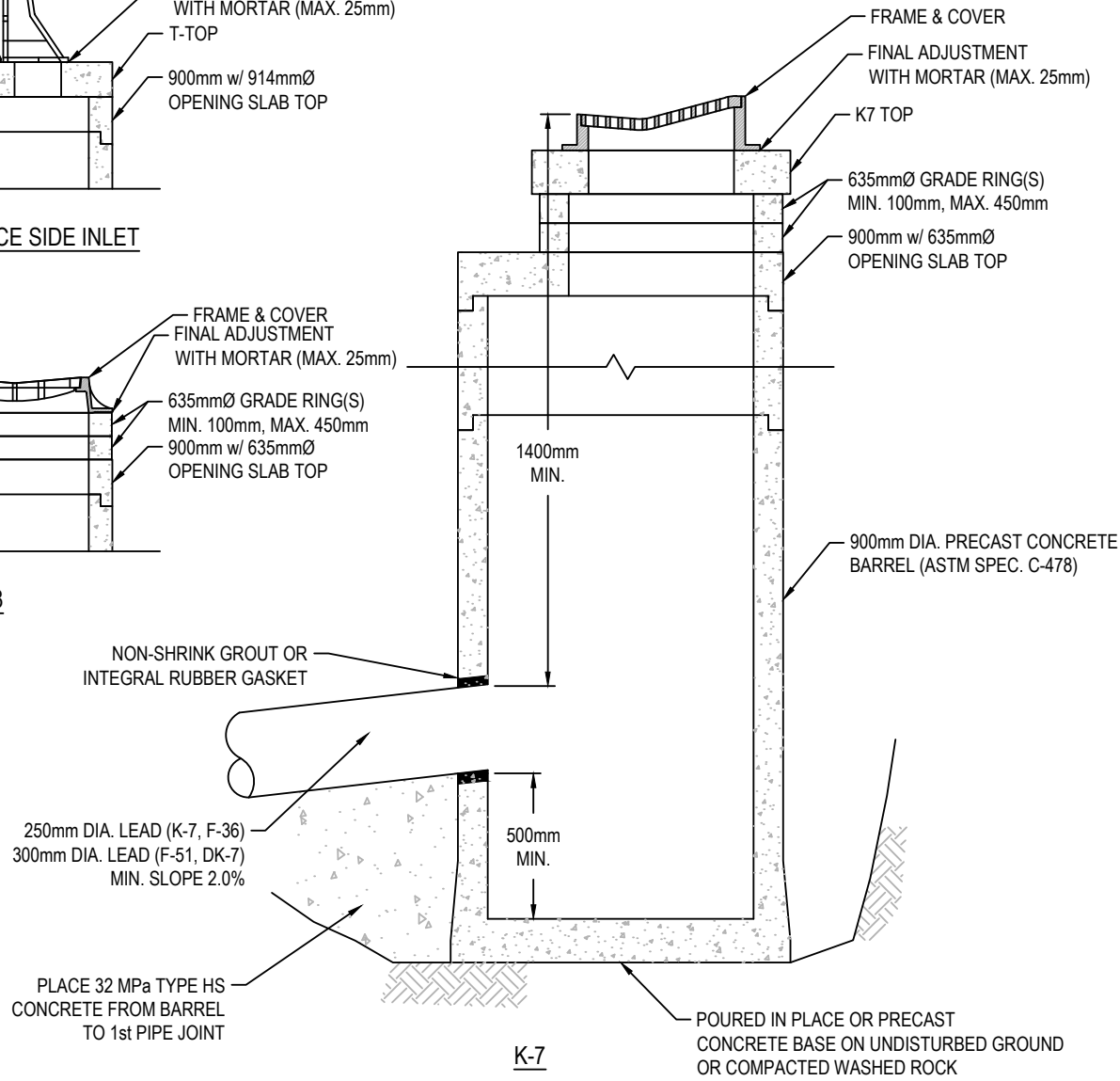
F-36



F-51 c/w TWO PIECE SIDE INLET



F-38



K-7

NO.	DATE	REVISION
8		
7	23/03/18	Revised Note
6	22/11/16	Updated Dimensions
5	28/06/16	Updated Notes
4	14/04/16	Updated Dimensions
3	08/04/14	Changed grade ring thickness
2	10/12/13	Updated concrete strength
1	21/03/13	Updated concrete type

The City of Lloydminster

Checked by:

Approved by:

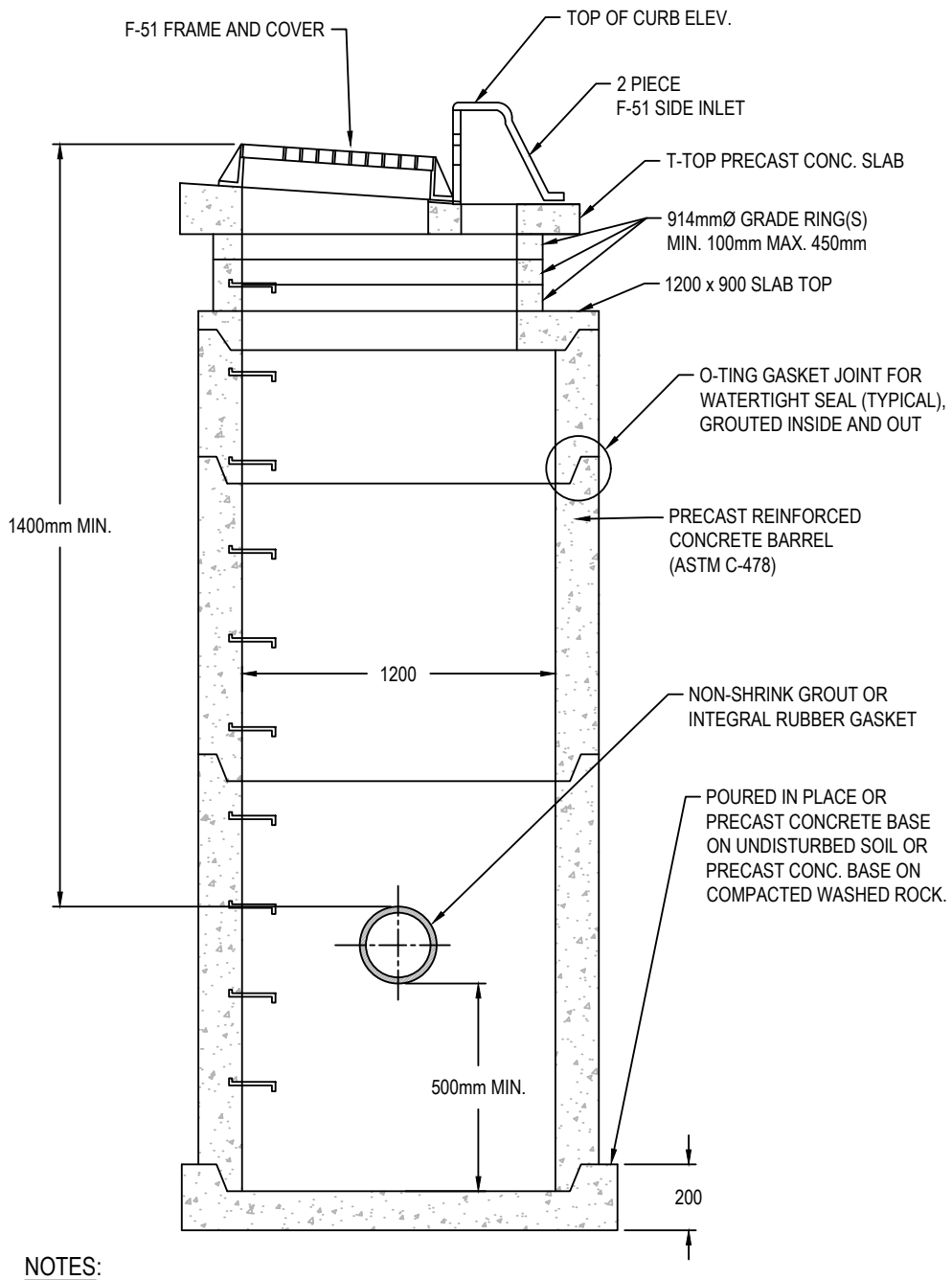
Drawn by: L. LEEPER

Scale: N.T.S.

900mm DIA. CATCH BASIN c/w FRAME AND COVER

Date: Feb. 22, 2011

Drawing #: 5-100



NOTES:

1. UNIT COULD BE MADE UP FROM TWO ITEMS (BASE AND BARREL).
2. OPPOSITE ORIENTATION OF JOINTS IS ACCEPTABLE.
3. SEE DWG. 2-202 FOR CURB INSTALLATION DETAIL

NO.	DATE	REVISION
8		
7		
6		
5		
4	23/11/18	Updated Notes
3	22/11/16	Updated Dimensions
2	28/06/16	Updated Notes
1	14/04/16	Updated Dimensions

The City of Lloydminster

Checked by:

Approved by:

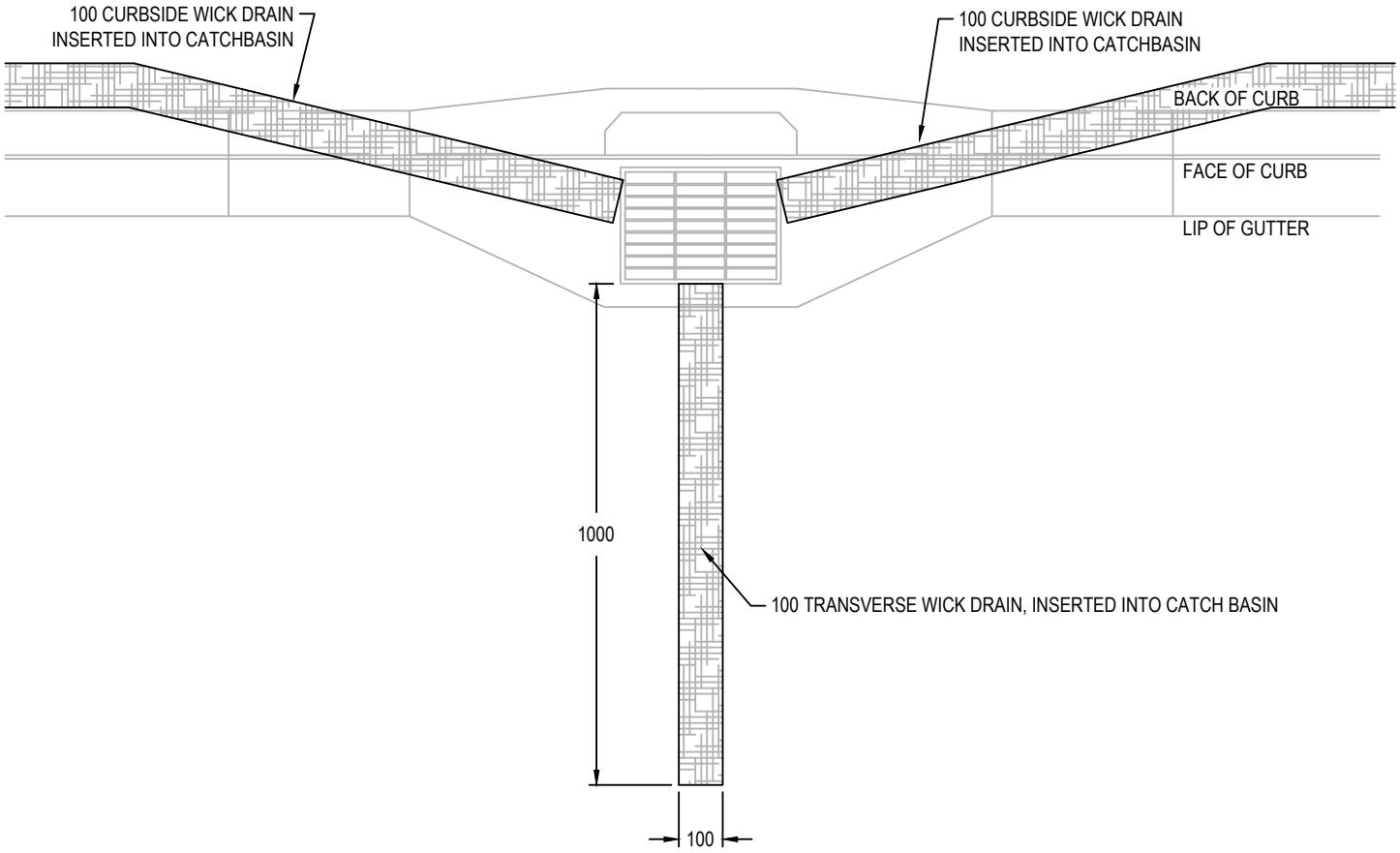
Drawn by: L. LEEPER

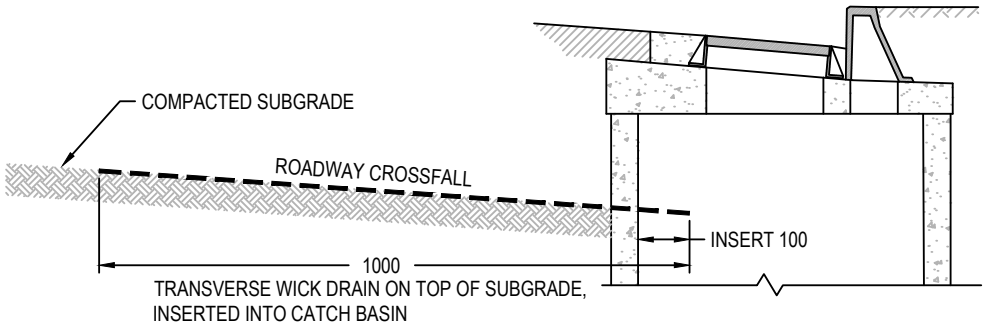
Scale: N.T.S.

1200mm DIA C.B. MANHOLE c/w F-51 FRAME AND COVER WITH TWO PIECE SIDE INLET

Date: Feb. 22, 2011

Drawing #: 5-101





NO.	DATE	REVISION
8		
7		
6		
5		
4	04/05/20	Rem. "mm", Changed Hatch
3	09/03/20	Added Hatching to Wick Drain
2	23/03/18	Rev. C/S W/D Placement
1	14/04/16	Updated Dimensions

The City of Lloydminster

Scale: N.T.S.

Checked by:

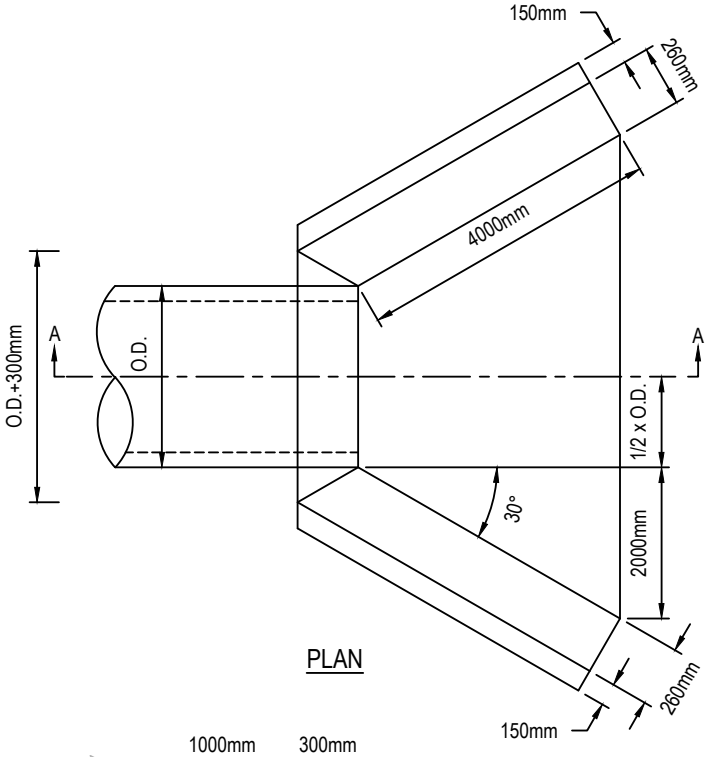
Approved by:

Drawn by: N / A

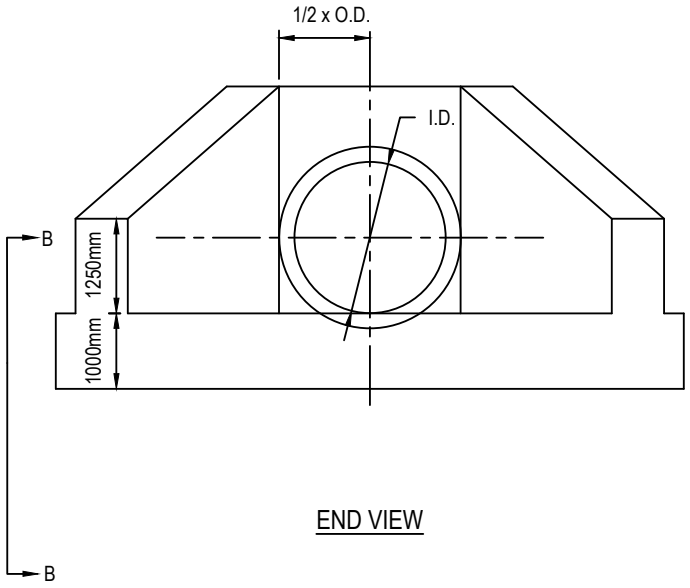
WICK DRAIN CONNECTION TO CATCH BASIN

Date: Feb. 22, 2011

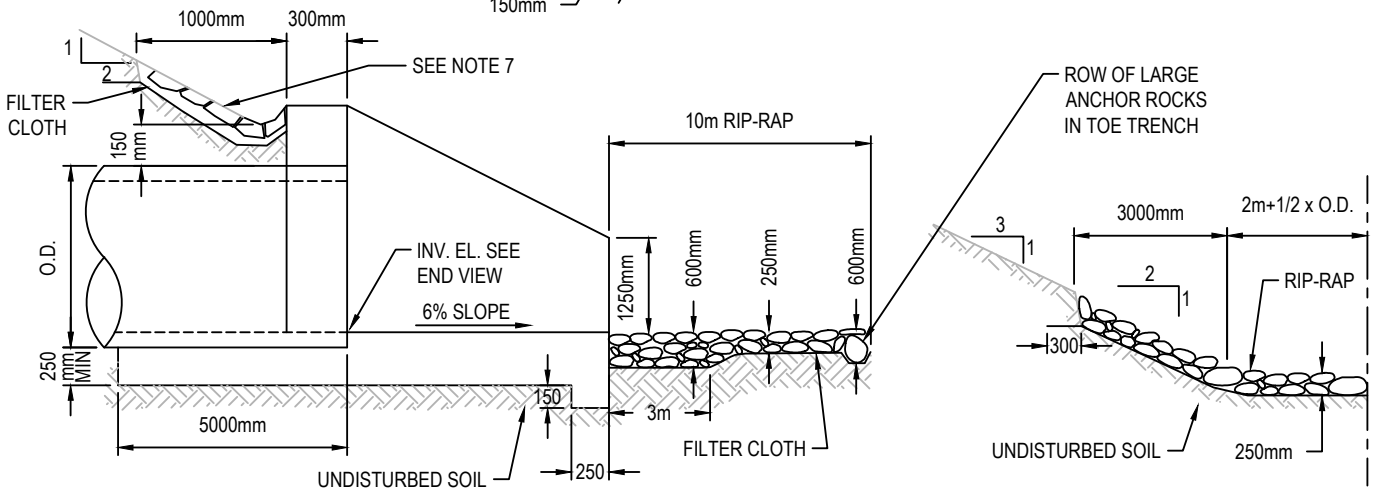
Drawing #: 5-200



PLAN



END VIEW



SECTION A-A

SECTION B-B

NOTES:

1. COMPRESSIVE STRENGTH OF STRUCTURE CONCRETE AT 28 DAYS SHALL BE 32 MPa.
2. CLEAR COVER FOR REBAR ON EARTH FACE SHALL BE 75mm AND 50mm ELSEWHERE.
3. STILLING BASIN SHALL BE REQ'D FOR HIGH VELOCITY FLOWS.
4. ALL FILTER CLOTH PANEL JOINTS TO OVERLAP 100mm
5. FILTER CLOTH TYPE TO BE NON-WOVEN.
6. SEE STD. DWG. NO. 5-302 FOR BAR SCREEN.
7. RIP-RAP TO BE GABION MAT OR SACKED CONCRETE, AND EXTEND TO CHANNEL SIDES.
8. APPROPRIATE ENGINEERED REINFORCEMENT REQUIRED.
9. RIP-RAP CLASS FOR OUTLET AND CHANNEL MUST BE SELECTED BASED ON DISCHARGE VELOCITY

NO.	DATE	REVISION
8		
7		
6		
5	09/03/20	Revised Drawing
4	03/01/19	Revised Drawings & Text
3	23/11/18	Revised Drawings & Text
2	08/04/14	Changed concrete strength
1	22/06/11	Drawing reference, Note 6

The City of Lloydminster

Checked by:

Approved by:

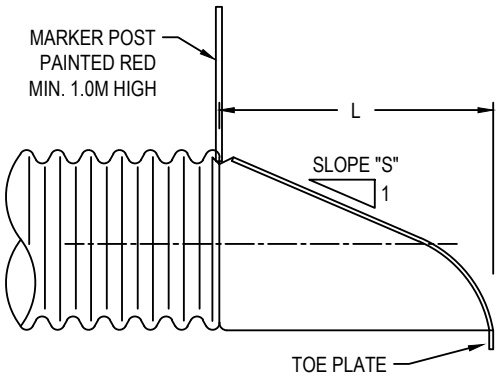
Drawn by: L. LEEPER

Scale: N.T.S.

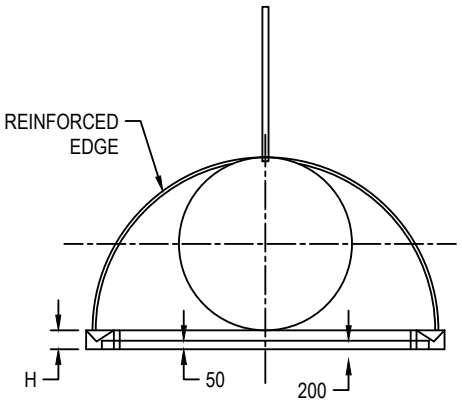
POURED CONCRETE OUTFALL STRUCTURE

Date: Feb. 22, 2011

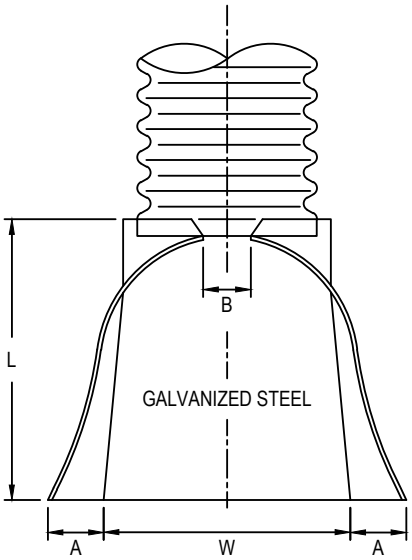
Drawing #: 5-300



CROSS SECTION



ELEVATION



PLAN

PIPE DIAMETER "D" mm	GALVANIZED METAL THICKNESS mm	DIMENSIONS, mm					SLOPE "S"	BODY
		A 25 mm ±	B MAX mm	H 25 mm ±	L 38 mm ±	W 50 mm ±		
300	1.6	150	140	150	535	610	2.5	1 PC
600	1.6	250	300	150	1040	1220	2.5	1 PC
1200	2.0	350	475	225	1500	1800	2.5	1 PC
1200	2.0	460	625	305	1980	2285	2.25	2 PC

NOTES:

1. RIP-RAP TO BE PLACED AROUND OUTLET AS PER DWG. 5-304

NO.	DATE	REVISION
8		
7		
6		
5		
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3		
2		
1	11/23/18	REVISED TEXT

The City of Lloydminster

Checked by:

Approved by:

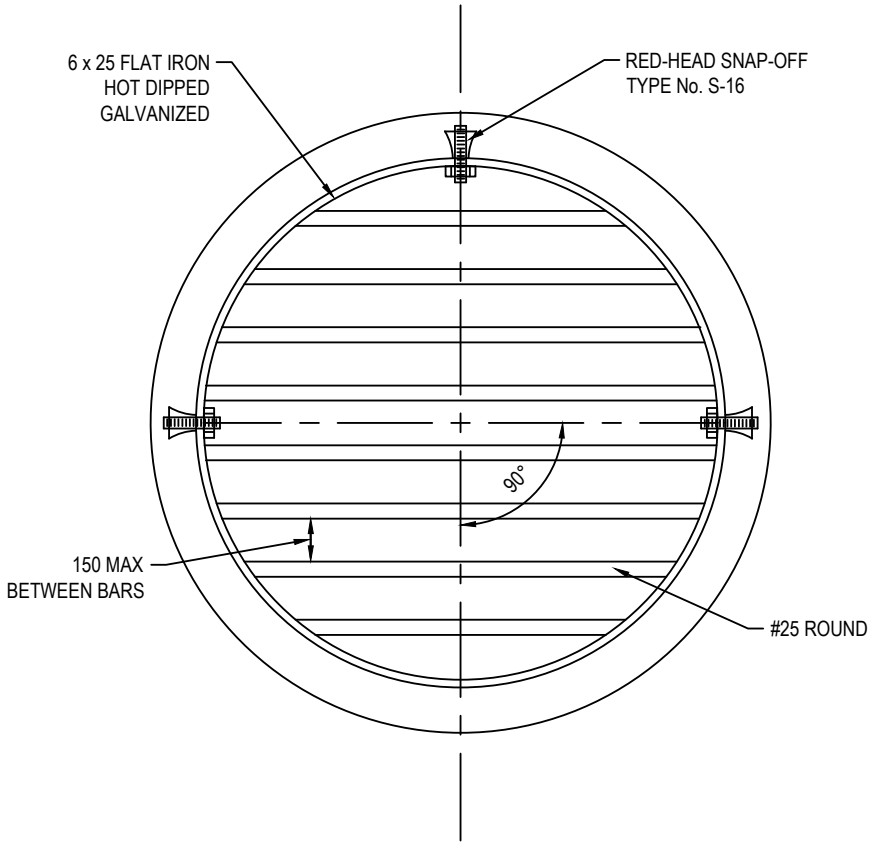
Drawn by: L. LEEPER

Scale: N.T.S.

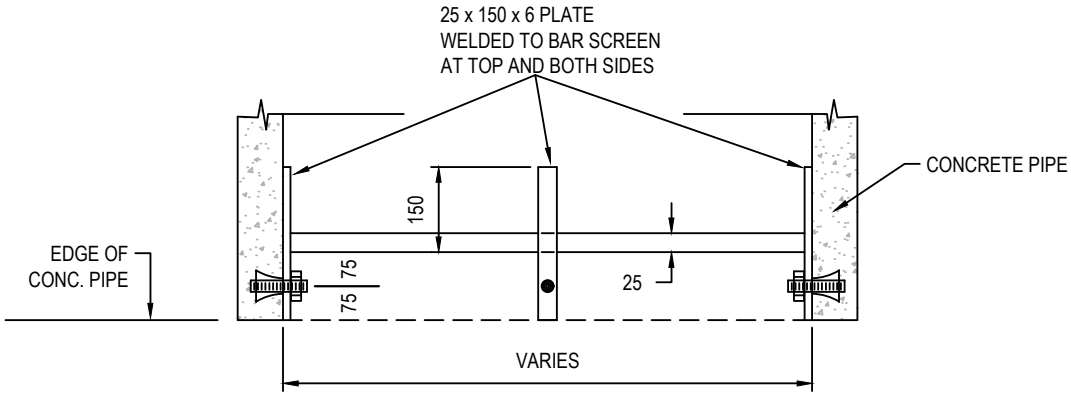
METAL CULVERT

Date: Feb. 22, 2011

Drawing #: 5-301



FRONT VIEW



TOP VIEW

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1	11/26/18	Removed Outlet Structure Linework

The City of Lloydminster

Checked by:

Approved by:

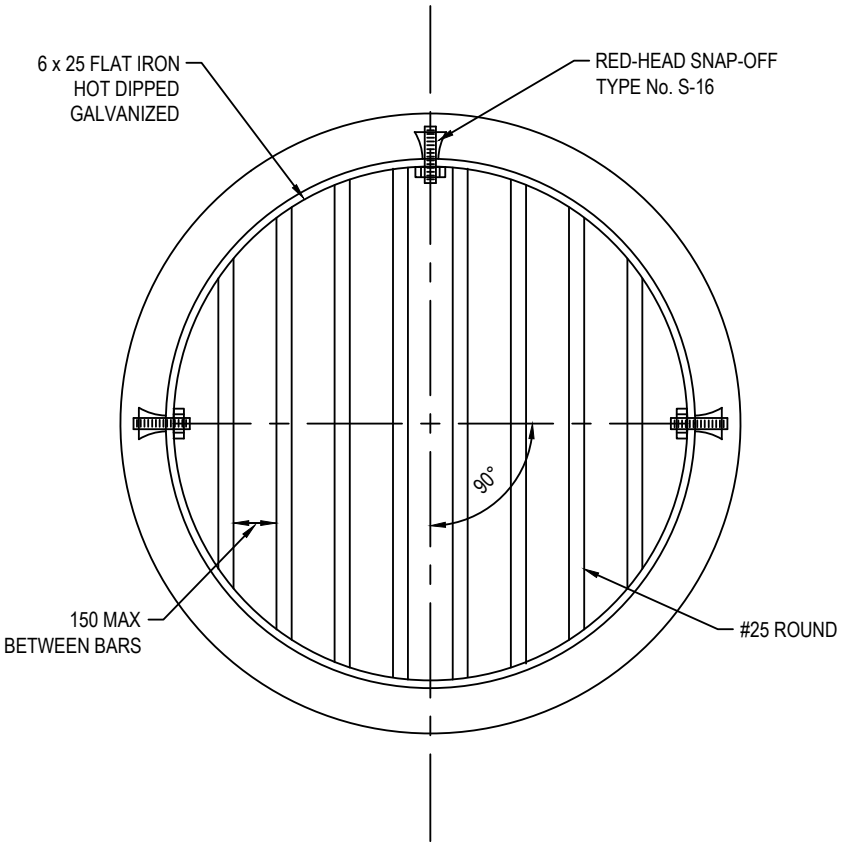
Drawn by: L. LEEPER

Scale: N.T.S.

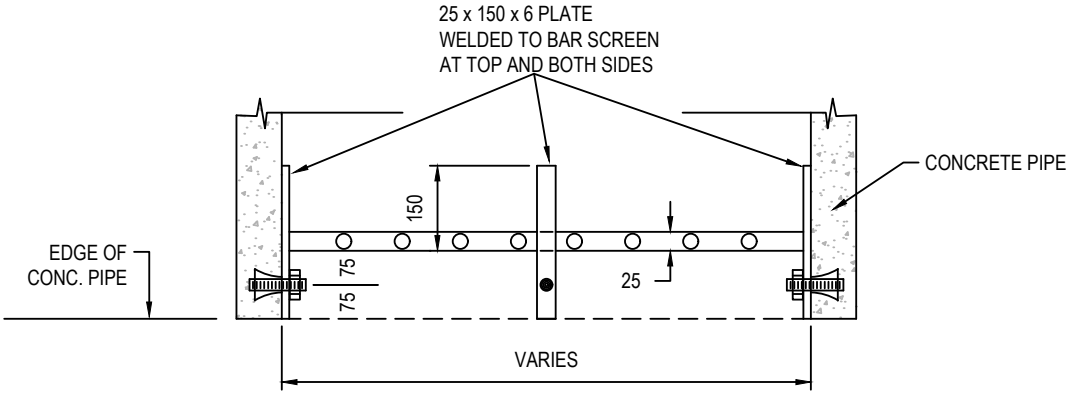
BAR SCREEN FOR OUTLET STRUCTURE DETAIL

Date: Feb. 22, 2011

Drawing #: 5-302



FRONT VIEW



TOP VIEW

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1	11/26/18	Removed Inlet Structure Linework

The City of Lloydminster

Checked by:

Approved by:

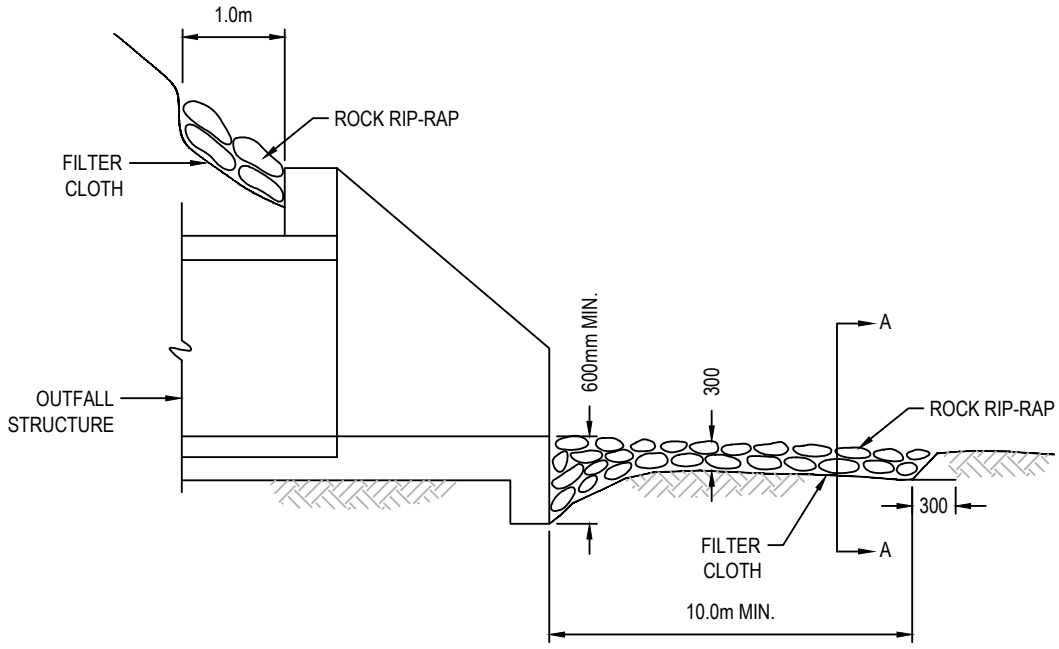
Drawn by: L. LEEPER

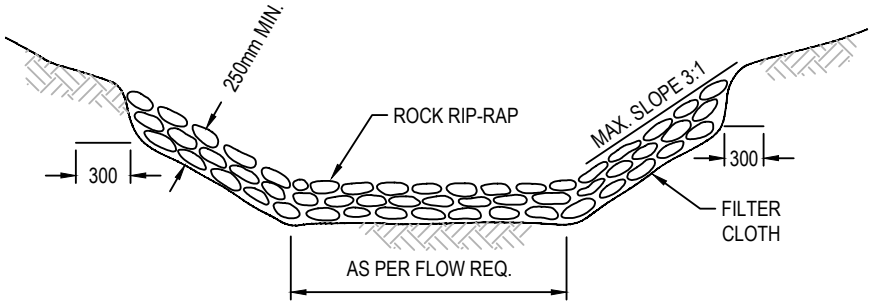
Scale: N.T.S.

BAR SCREEN FOR INLET STRUCTURE DETAIL

Date: Feb. 22, 2011

Drawing #: 5-303





SECTION A-A

NOTES:

1. STILLING BASIN SHALL BE REQ'D FOR HIGH-VELOCITY FLOWS.
2. ALL FILTER CLOTH PANEL JOINTS TO OVERLAP 1.0m IN THE DIRECTION OF FLOW.
3. FILTER CLOTH TYPE TO BE NON-WOVEN
4. RIP-RAP TO BE 150-350mm IN NORMAL DIAMETER WITH 50% BEING LARGER THAN 200mm
5. RIP-RAP ABOVE PIPE TO EXTEND TO CHANNEL SIDES

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1	11/26/18	UPDATED NOTES AND TITLE

The City of Lloydminster

Checked by:

Approved by:

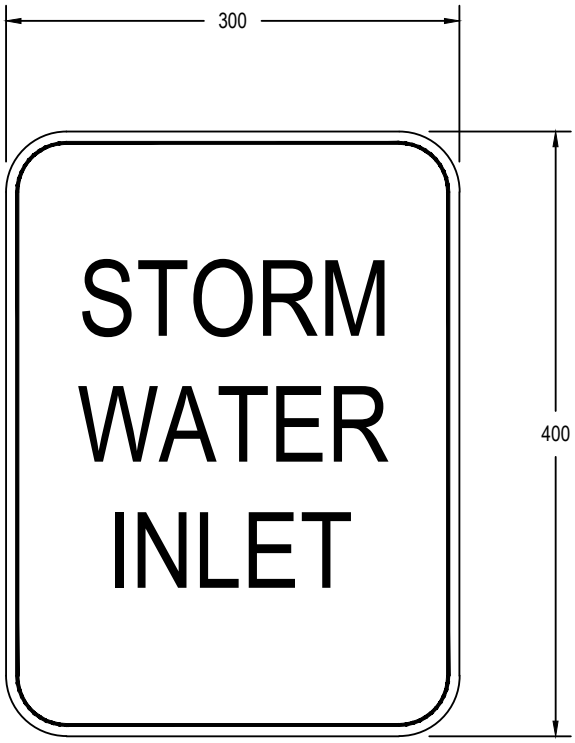
Drawn by: L. LEEPER

Scale: N.T.S.

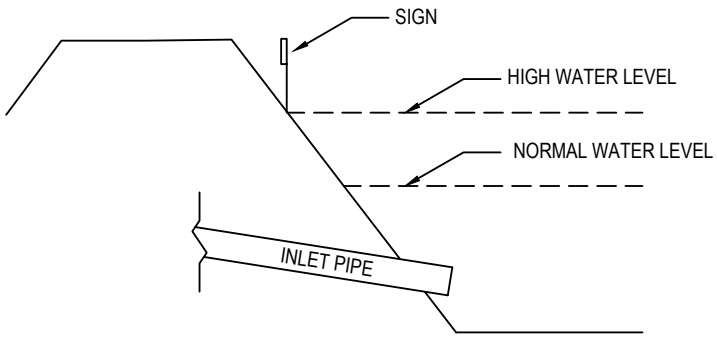
ROCK RIP-RAP DETAIL FOR METAL CULVERTS OR OPEN CHANNELS

Date: Feb. 22, 2011

Drawing #: 5-304



SIGN



LOCATION

NOTES:

1. SIGNS WILL BE PLACED AT THE HIGH WATER LEVEL AT ALL INLET AND OUTLET LOCATIONS.
2. ALL SIGNS TO BE SECURELY FASTENED WITH NYLON LOCKING NUTS.
3. SIGN AND LETTING TO BE SCREENED REFLECTIVE SHEETING ON SIGN GRADE ALUMINIUM.
4. SUBMIT ONE COMPLETE SIGN FOR APPROVAL BY ENGINEER PRIOR TO INSTALLATION.
5. POST TO BE 3100mm GALVANIZED STEEL U-CHANNEL SIGN POST, EMBEDDED IN CONCRETE AS PER DWG. 5-406

NO.	DATE	REVISION
8		
7		
6		
5	04/05/20	Revised Text Height
4	09/03/20	Revised Details
3	03/12/19	Revised Notes
2	26/11/18	Revised Notes
1	2/3/17	Revised Lineweight

The City of Lloydminster

Checked by:

Approved by:

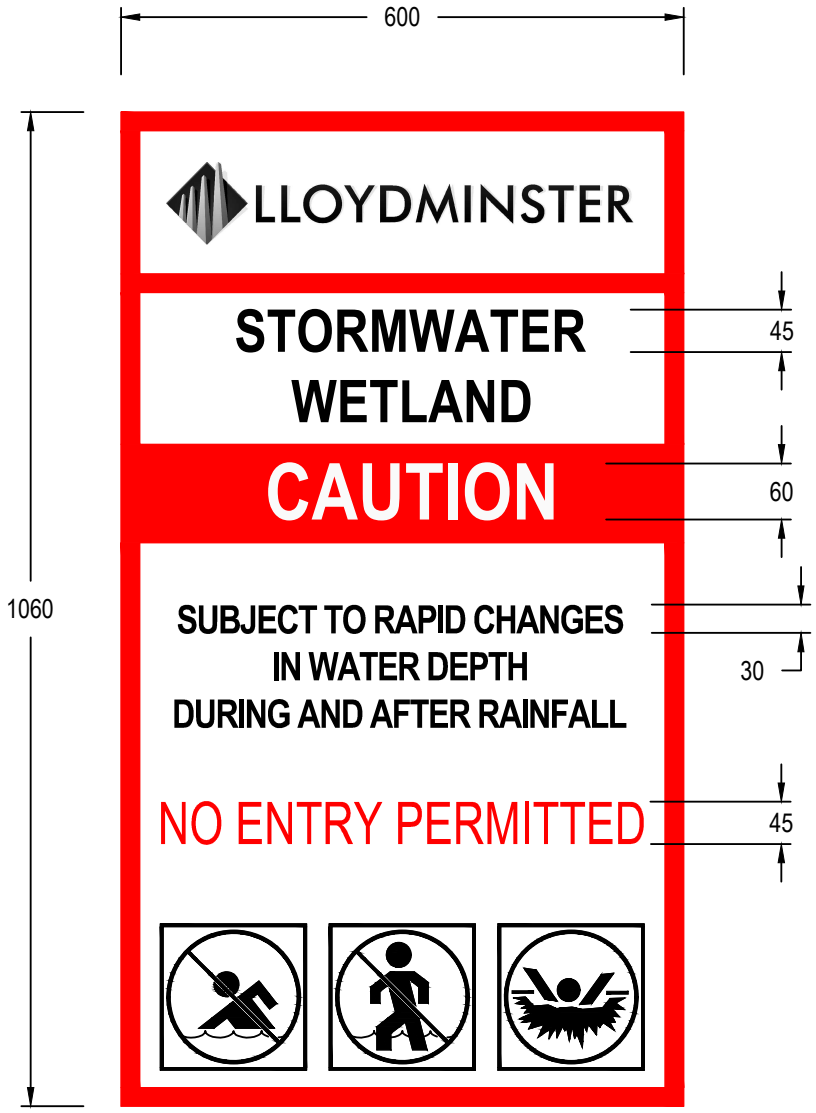
Drawn by: A. EDWARDS

Scale: N.T.S.

INLET INDICATOR POST DETAIL

Date: Dec 23, 2016

Drawing #: 5-400



NOTES:

1. SIGNS WILL BE PLACED AT ACCESS ENTRANCE TO THE STORM WATER MANAGEMENT FEATURE AS APPROVED BY WASTE SERVICES.
2. ALL SIGNS TO BE SECURELY FASTENED WITH NYLON LOCKING NUTS.
3. SIGN AND LETTERING TO BE SCREENED REFLECTIVE SHEETING ON SIGN GRADE ALUMINIUM.
4. SUBMIT ONE COMPLETE SIGN FOR APPROVAL BY CITY PRIOR TO INSTALLATION.
5. POST TO BE 3100mm GALVANIZED STEEL U-CHANNEL SIGN POST, EMBEDDED IN CONCRETE AS PER DWG. 5-406

NO.	DATE	REVISION
8		
7		
6		
5		
4	10/03/20	Changed Water to Waste
3	11/26/19	Revised Signage, Colour, Notes
2	11/26/18	Revised Notes
1	2/3/17	Revised Lineweight

The City of Lloydminster

Checked by:

Approved by:

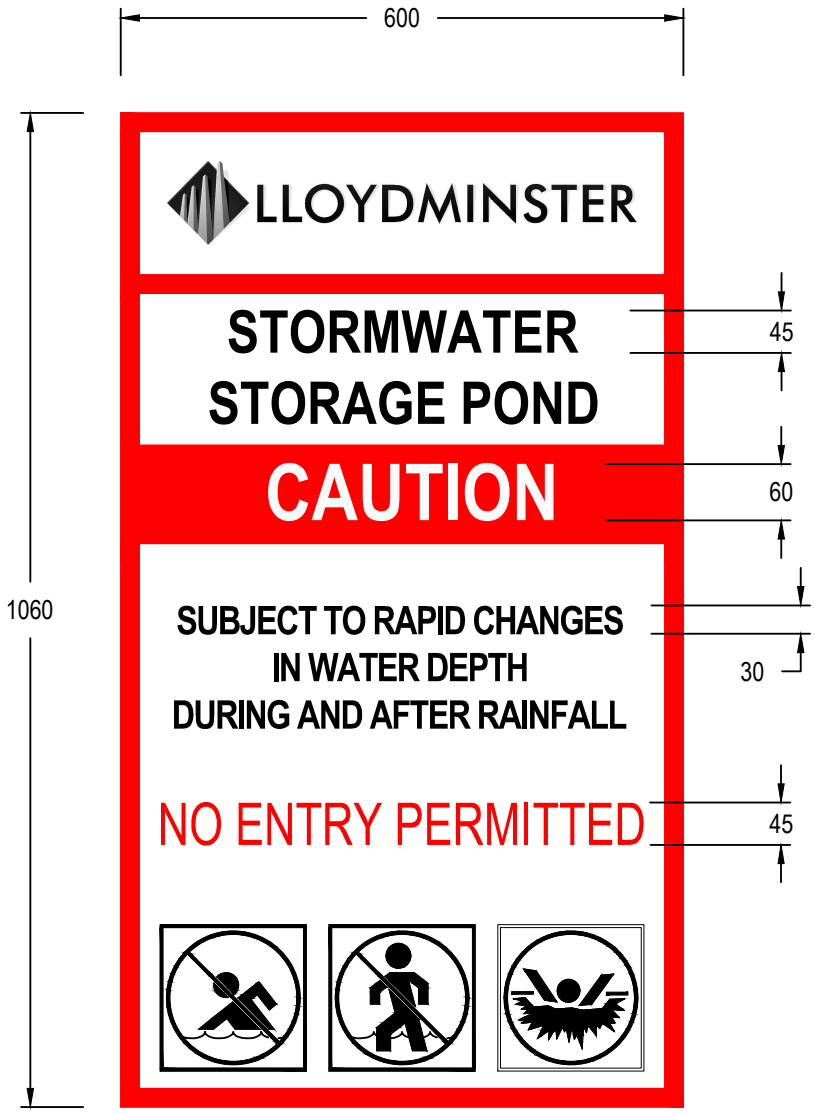
Drawn by: A. EDWARDS

Scale: N.T.S.

STORMWATER STORAGE WETLAND SIGN

Date: Dec 23, 2016

Drawing #: 5-401



NOTES:

1. SIGNS WILL BE PLACED AT ACCESS ENTRANCE TO THE STORM WATER MANAGEMENT FEATURE AS APPROVED BY WASTE SERVICES.
2. ALL SIGNS TO BE SECURELY FASTENED WITH NYLON LOCKING NUTS.
3. SIGN AND LETTERING TO BE SCREENED REFLECTIVE SHEETING ON SIGN GRADE ALUMINIUM.
4. SUBMIT ONE COMPLETE SIGN FOR APPROVAL BY ENGINEER PRIOR TO INSTALLATION.
5. POST TO BE 3100mm GALVANIZED STEEL U-CHANNEL SIGN POST, EMBEDDED IN CONCRETE AS PER DWG. 5-406.

NO.	DATE	REVISION
8		
7		
6		
5		
4	10/03/20	Changed Water to Waste
3	11/26/19	Revised Signage, Colour, Notes
2	11/26/18	Revised Notes
1	2/3/17	Revised Lineweight

The City of Lloydminster

Checked by:

Approved by:

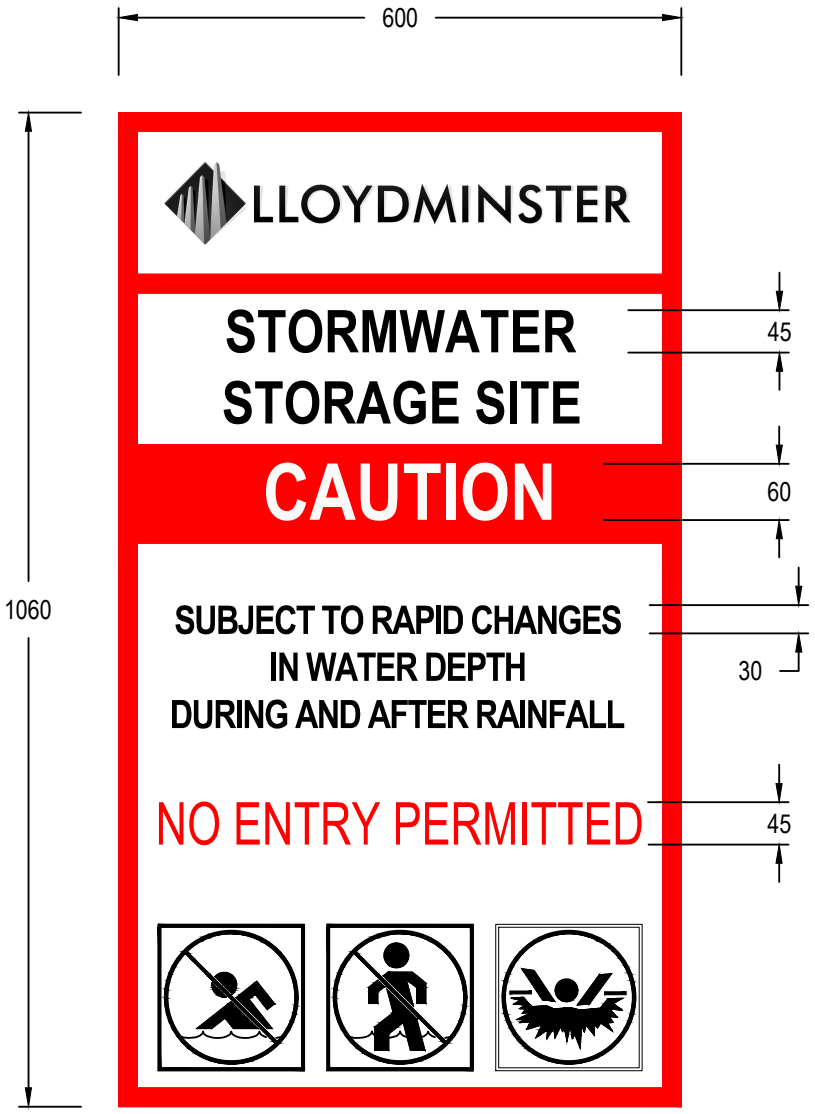
Drawn by: A. EDWARDS

Scale: N.T.S.

STORMWATER STORAGE POND SIGN

Date: Dec 23, 2016

Drawing #: 5-402



NOTES:

1. SIGNS WILL BE PLACED AT ACCESS ENTRANCE TO THE STORM WATER MANAGEMENT FEATURE AS APPROVED BY WASTE SERVICES.
2. ALL SIGNS TO BE SECURELY FASTENED WITH NYLON LOCKING NUTS.
3. SIGN AND LETTERING TO BE SCREENED REFLECTIVE SHEETING ON SIGN GRADE ALUMINIUM.
4. SUBMIT ONE COMPLETE SIGN FOR APPROVAL BY CITY PRIOR TO INSTALLATION.
5. POST TO BE 3100mm GALVANIZED STEEL U-CHANNEL SIGN POST, EMBEDDED IN CONCRETE AS PER DWG. 5-406

NO.	DATE	REVISION
8		
7		
6		
5		
4	10/03/20	Changed Water to Waste
3	11/26/19	Revised Signage, Colour, Notes
2	11/26/18	Revised Notes
1	2/3/17	Revised Lineweight

The City of Lloydminster

Checked by:

Approved by:

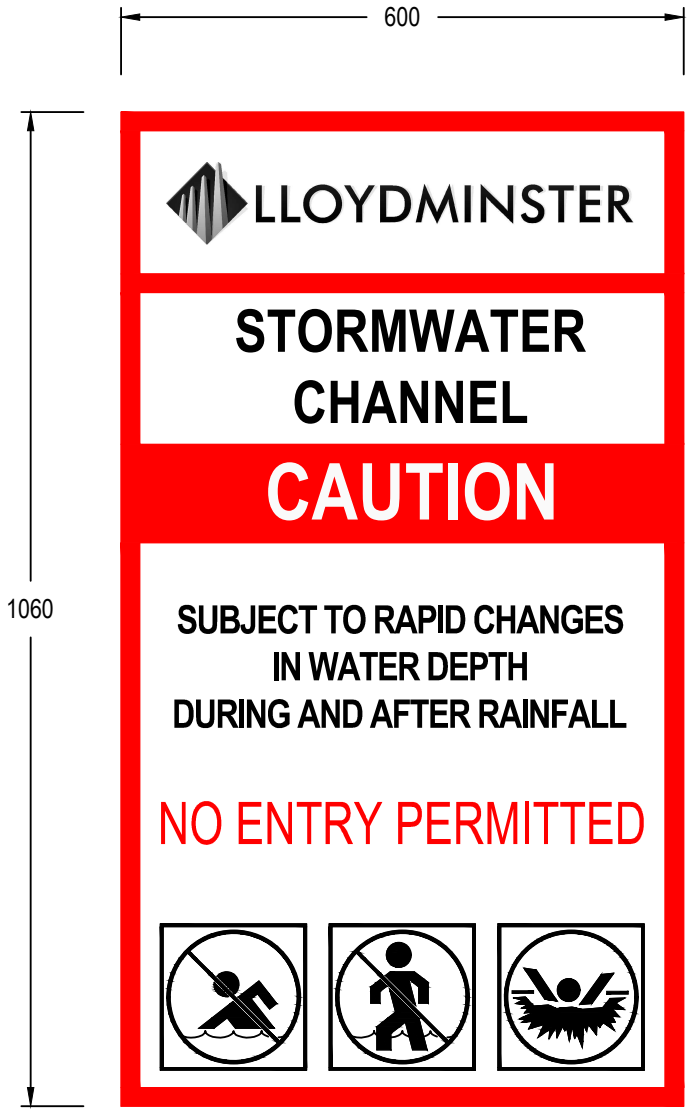
Drawn by: A. EDWARDS

Scale: N.T.S.

STORMWATER STORAGE SITE SIGN

Date: Dec 23, 2016

Drawing #: 5-403



NOTES:

1. SIGNS WILL BE PLACED AT ACCESS ENTRANCE TO THE STORM WATER MANAGEMENT FEATURE AS APPROVED BY WASTE SERVICES.
2. ALL SIGNS TO BE SECURELY FASTENED WITH NYLON LOCKING NUTS.
3. SIGN AND LETTERING TO BE SCREENED REFLECTIVE SHEETING ON SIGN GRADE ALUMINIUM.
4. SUBMIT ONE COMPLETE SIGN FOR APPROVAL BY CITY PRIOR TO INSTALLATION.
5. POST TO BE 3100mm GALVANIZED STEEL U-CHANNEL SIGN POST, EMBEDDED IN CONCRETE AS PER DWG. 5-406

NO.	DATE	REVISION
8		
7		
6		
5		
4	10/03/20	Changed Water to Waste
3	11/26/19	Replaces 5-404 (now 5-405)
2	11/26/18	Revised Notes
1	2/3/17	Revised Lineweight

The City of Lloydminster

Checked by:

Approved by:

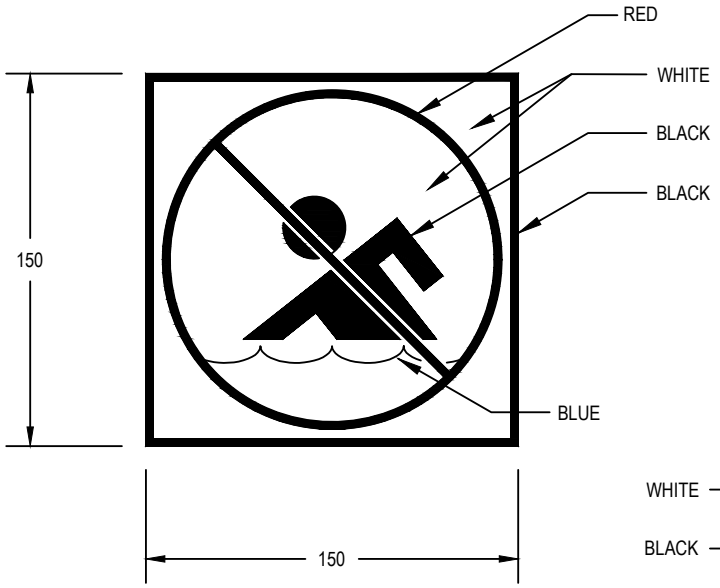
Drawn by: A. EDWARDS

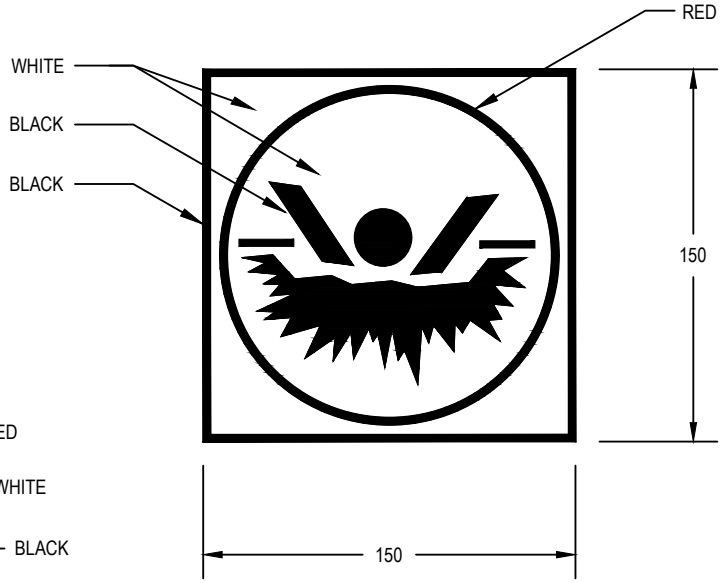
Scale: N.T.S.

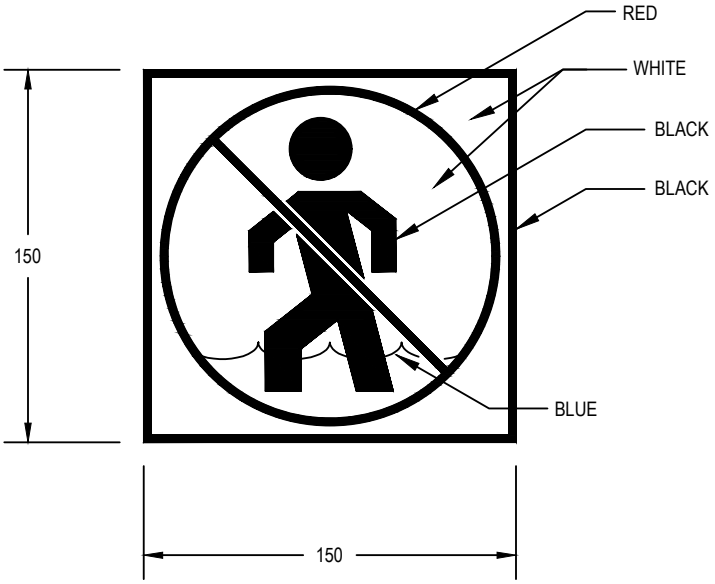
STORMWATER CHANNEL SIGN

Date: Dec 23, 2016

Drawing #: 5-404







NOTES:

1. TO ACCOMPANY DWGS. 5-401, 5-402, 5-403.
2. ON SIGNS 5-403 & 5-404, SYMBOLS TO BE 200mm x 200mm.

NO.	DATE	REVISION
8		
7		
6		
5	04/05/20	Changed Text Height
4	10/03/20	Changed Text Height
3	27/11/19	Changed DWG No. from 5-404
2	2/3/17	Revised Notes and Arrows
1	2/3/17	Revised Lineweight

The City of Lloydminster

Checked by:

Approved by:

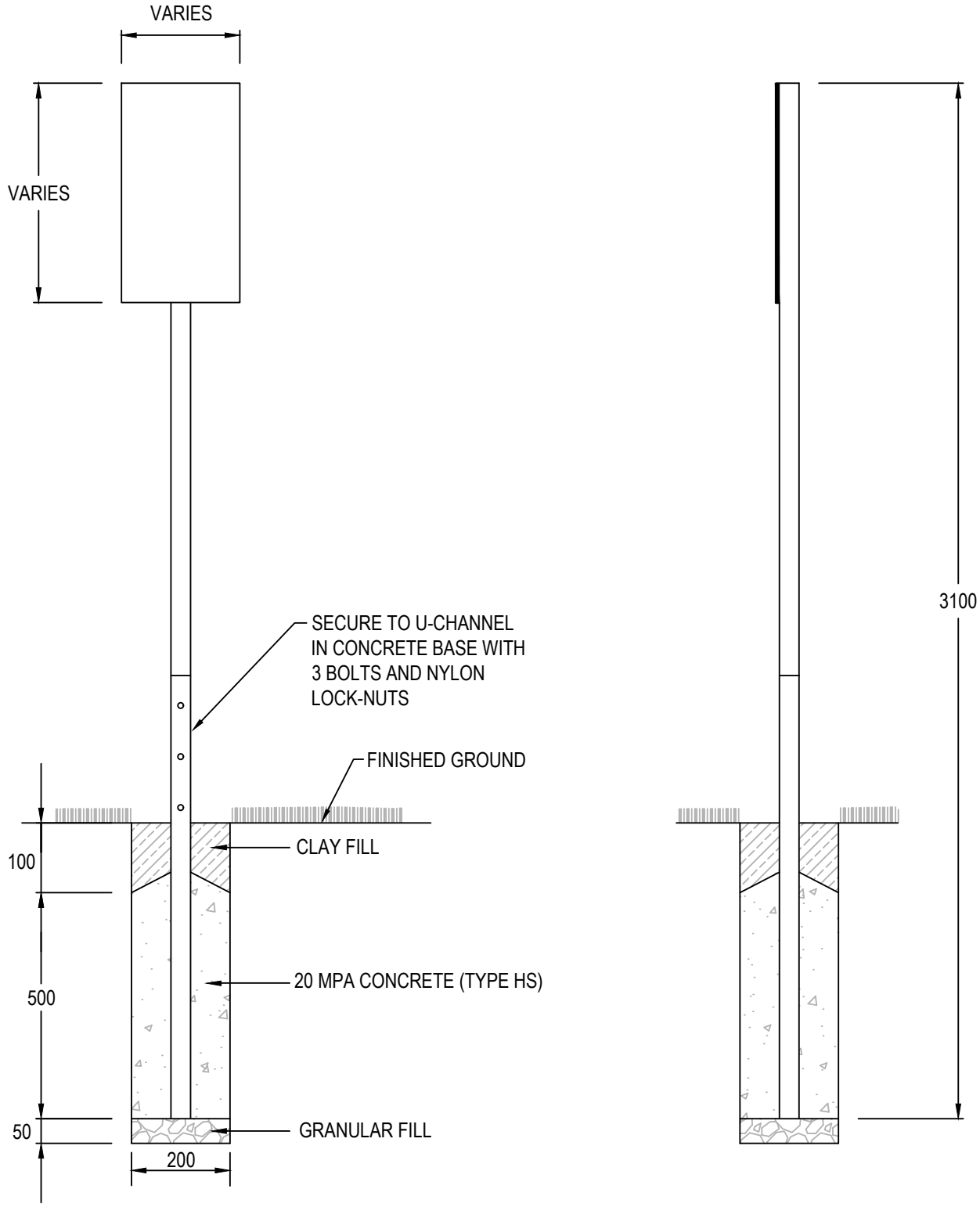
Drawn by: A. EDWARDS

Scale: N.T.S.

STORMWATER STORAGE SITE SIGN DETAILS

Date: Jan 11, 2017

Drawing #: 5-405



NOTES:

1. U-CHANNEL TO BE EMBEDDED WITHIN CONCRETE BASE, EXTENDING 200 mm ABOVE FINISHED GROUND
2. MOUNT SIGN ON U-CHANNEL POST. SECURE POST TO U-CHANNEL IN CONCRETE BASE

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3	04/05/20	Revised "MM" to "mm"
2	10/03/20	Added Text
1	27/11/19	Changed DWG No. from 5-405

The City of Lloydminster

Checked by:

Approved by:

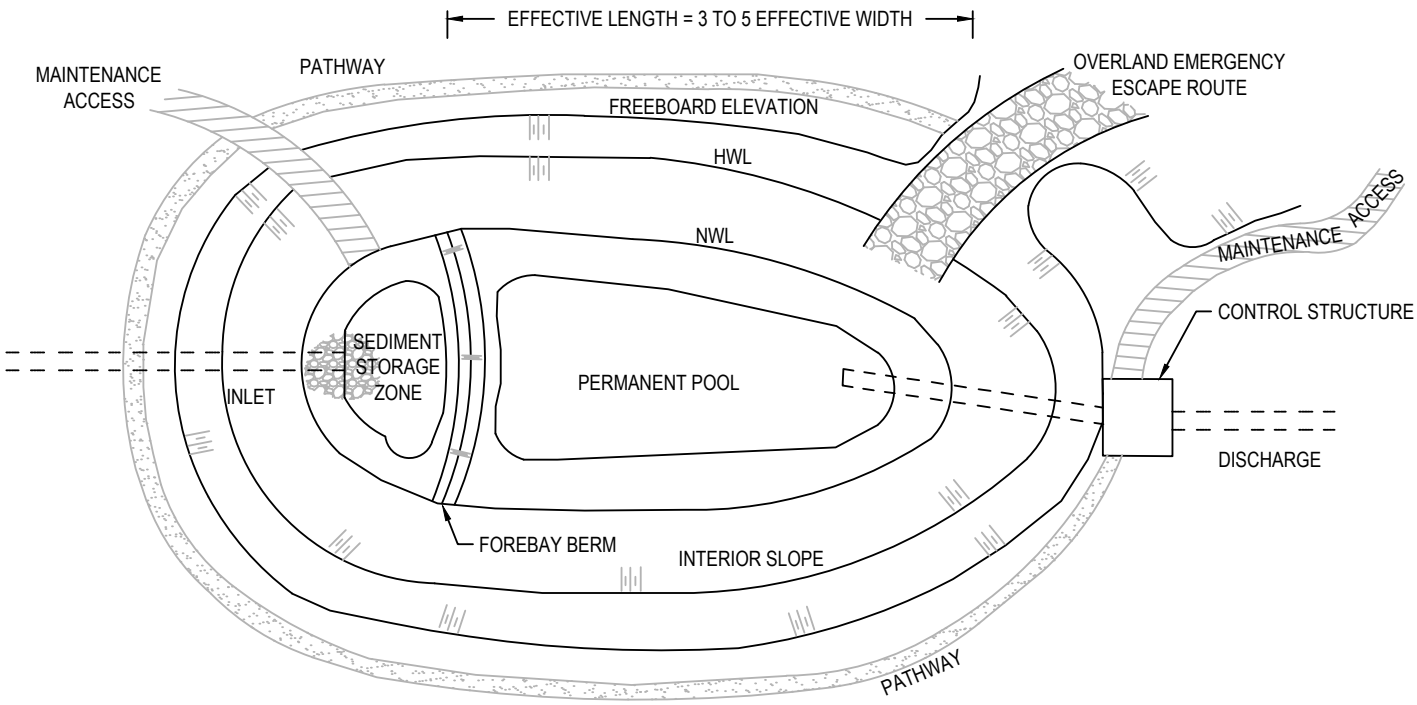
Drawn by: J.IDIOH

Scale: N.T.S.

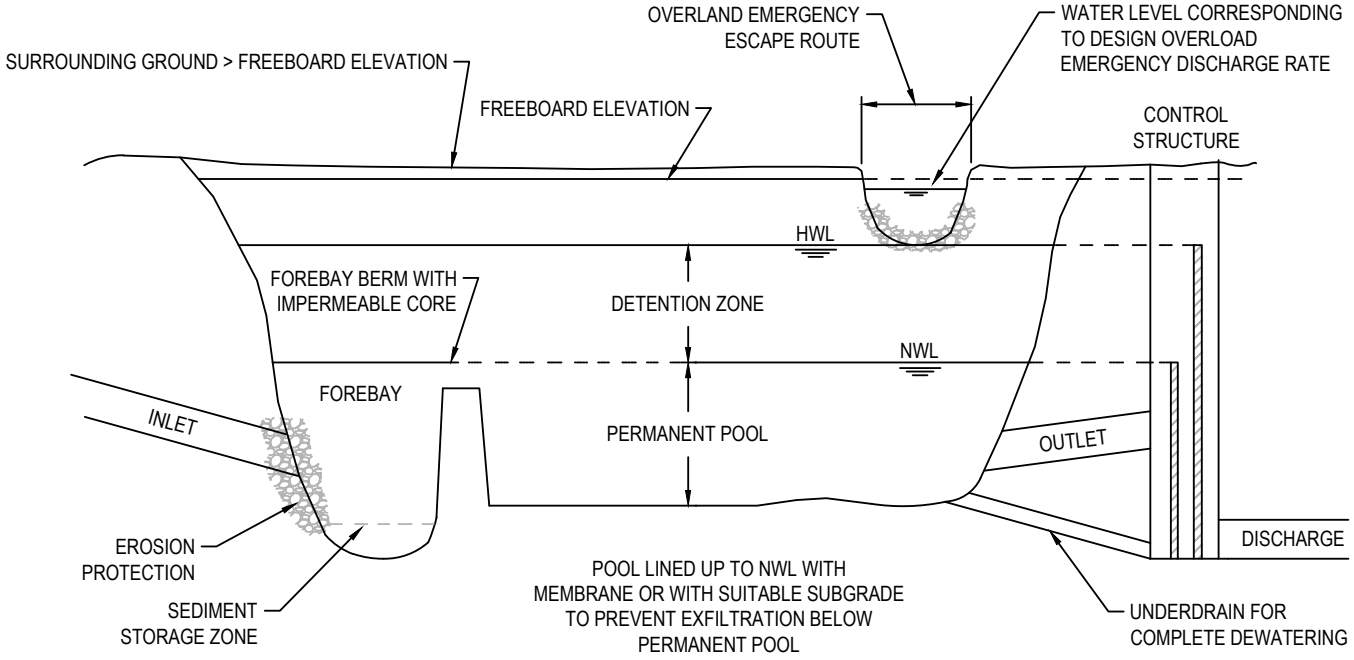
TYPICAL NOTICE SIGN

Date: Jan 17, 2019

Drawing #: 5-406



PLAN VIEW



SECTION VIEW

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1		

The City of Lloydminster

Checked by:

Approved by:

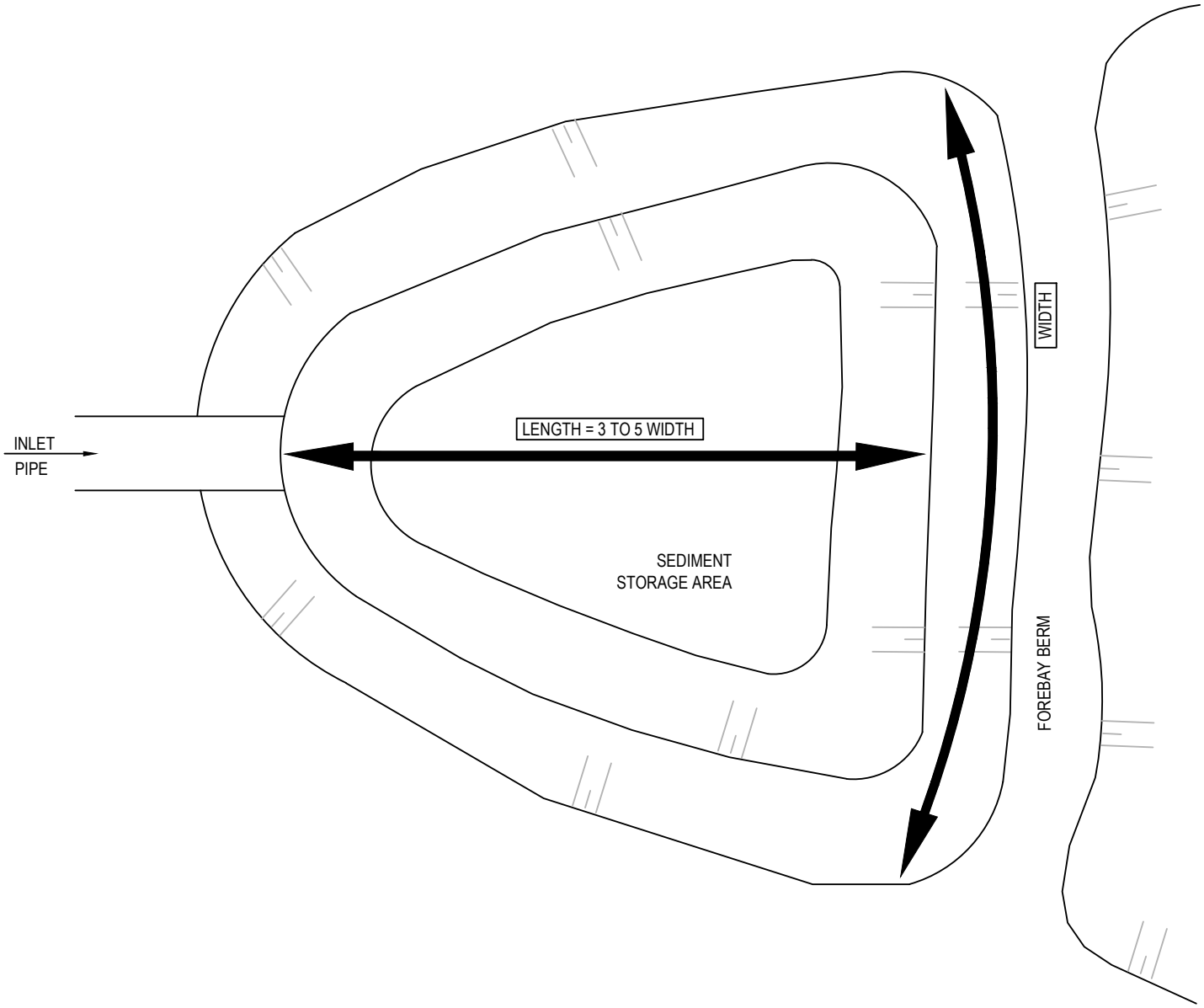
Drawn by: J.IDIOH

Scale: N.T.S.

TYPICAL STORMWATER STORAGE POND

Date: Jan. 10, 2019

Drawing #: 5-500



NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1		

The City of Lloydminster

Checked by:

Approved by:

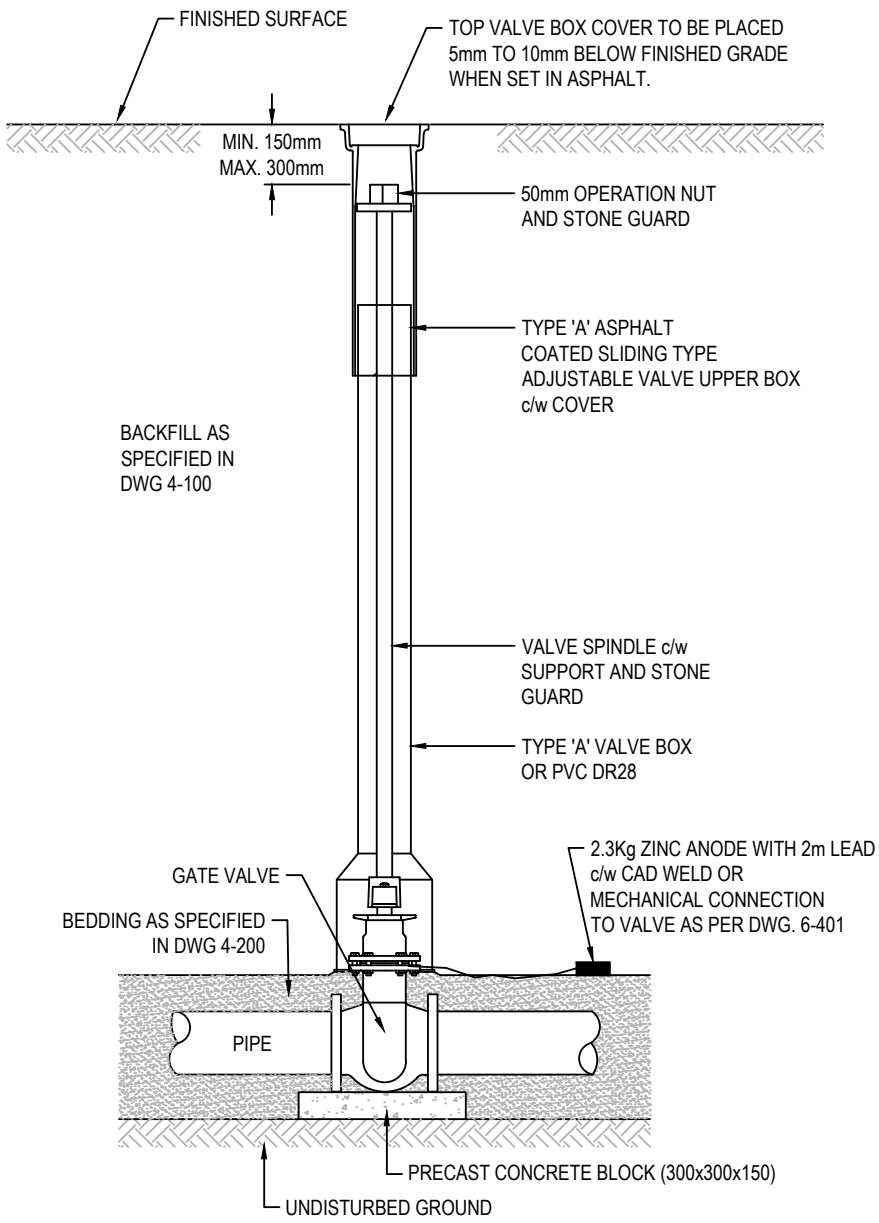
Drawn by: J.IDIOH

Scale: N.T.S.

TYPICAL STORMWATER STORAGE POND FOREBAY

Date: Jan. 09, 2019

Drawing #: 5-501



NOTES:

1. VALVE BOX TOPS TO BE SET FLUSH WITH SURFACE IN BOULEVARDS, GREEN SPACES AND CONCRETE SIDEWALKS.
2. ALL BOLTS TO BE WRAPPED IN DENSO OR PETROGUARD PETROLATUM TAPE.
3. CAD WELD TO BE COVERED BY DENSO OR PETROGUARD PETROLATUM TAPE.

NO.	DATE	REVISION
8		
7		
6		
5	10/03/20	Revised Drawing
4	3/22/18	Revised Notes
3	22/11/16	Revised Notes
2	6/14/16	Revised Notes
1	4/14/16	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

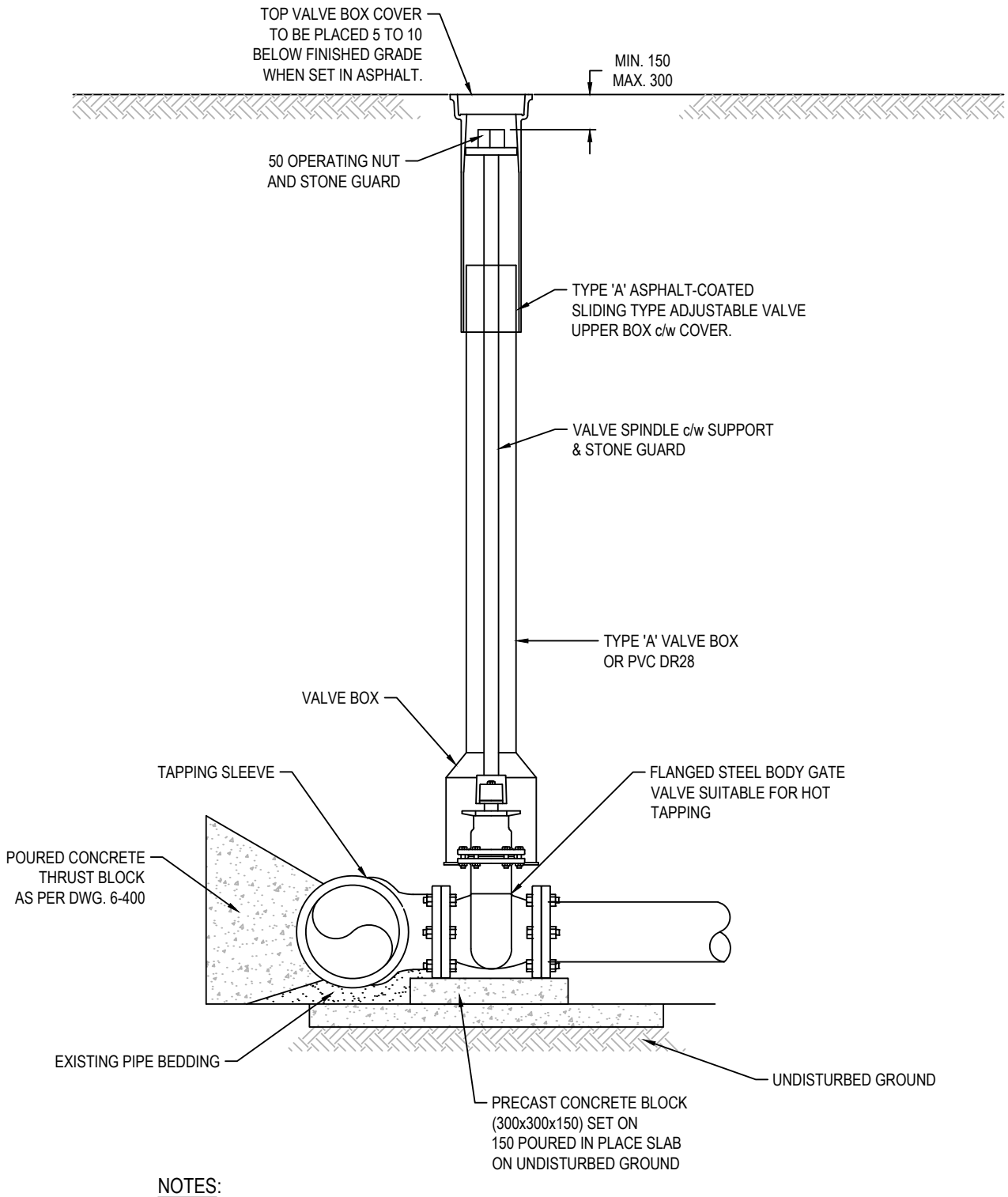
Drawn by: L. LEEPER

Scale: N.T.S.

WATER VALVE INSTALLATION

Date: Feb. 22, 2011

Drawing #: 6-100



NOTES:

1. VALVE BOX COVER TO BE SET FLUSH WITH SURFACE IN BOULEVARDS, GREEN SPACES AND CONCRETE SIDEWALKS.
2. ALL BOLTS TO BE WRAPPED IN DENSO OR PETROGUARD PETROLATUM TAPE.
3. SACRIFICIAL ANODE TO BE INSTALLED AS PER STANDARD DRAWING 6-401.

NO.	DATE	REVISION
8		
7		
6	22/06/20	Rev. Dim to Nut
5	05/05/20	Rev. Nut, Removed "mm"
4	27/11/18	Revised Notes & Drawing
3	22/11/16	Revised Notes
2	6/14/16	Revised Notes
1	4/14/16	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

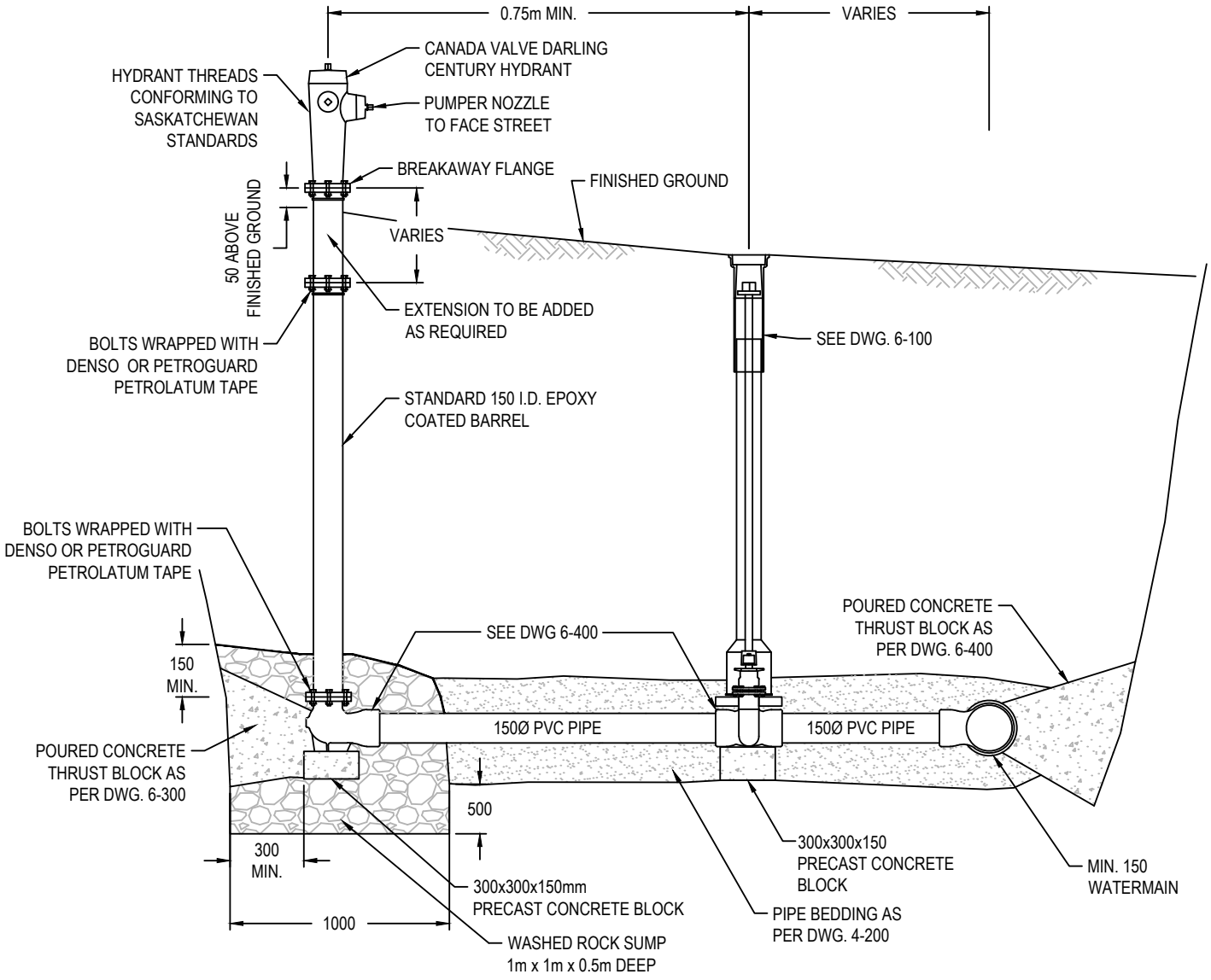
Drawn by: N / A

Scale: N.T.S.

HOT TAPPING CONNECTION

Date: Feb. 22, 2011

Drawing #: 6-101



NOTES:

1. HYDRANT TO BE SET PLUMB WITH BARREL EXTENSIONS TO SUIT DEPTH OF HYDRANT LEAD. HYDRANT LEAD TO BE SET LEVEL WITH A MIN. OF 3.0m OF COVER ABOVE TOP OF PIPE. EXTENSION TO BE INSTALLED BETWEEN HYDRANT AND TOP OF BARREL AS REQUIRED.
2. ALL THRUST BLOCKING TO BE AGAINST UNDISTURBED TRENCH WALL WITH DRAIN HOLES CLEAR OF CONCRETE.
3. VALVE BOX TO BE INSTALLED IN VERTICAL POSITION WITH TOP FLUSH WITH FINISHED GRADE.
4. HYDRANT SHALL BE COMPRESSION TYPE AS SPECIFIED.
5. ALL CAST IRON VALVES AND FITTINGS SHALL BE CATHODICALLY PROTECTED BY SACRIFICIAL ANODES AS PER DWG. 6-401. CAD WELDS TO BE COVERED WITH DENSO OR PETROGUARD PETROLATUM TAPE.
6. HYDRANT TO BE SUPPLIED WITH BREAKAWAY FLANGE INSTALLED ABOVE GROUND DIRECTLY BELOW THE BODY FLANGE..
7. CONCRETE TO BE 25MPa TYPE HS.
8. **ALL HYDRANTS TO HAVE THREADS CONFORMING TO SASKATCHEWAN SPECIFICATIONS:**
   - **HOSE CONNECTION: 6 THREADS PER INCH, OUTSIDE DIAMETER 82.55mm**
   - **PUMPER CONNECTION: 6 THREADS PER INCH, MAJOR DIAMETER 123.11mm, PITCH DIAMETER 119.76mm, MINOR DIAMETER 116.41mm.**
9. ALL BOLTS BELOW GROUND TO BE WRAPPED WITH DENSO OR PETROGUARD PETROLATUM TAPE.
10. INSIDE ROD COUPLING (TRAFFIC TYPE) TO BE LOCATED WITHIN 50mm OF BREAKAWAY FLANGE.

NO.	DATE	REVISION
8		
7	05/05/20	Removed "mm" From Dims
6	3/22/18	Revised Notes
5	22/11/16	Revised Notes
4	05/07/16	Revised Notes
3	4/14/16	Revised Notes
2	28/05/14	Removed drain plug ref.
1	21/03/13	Updated concrete type

The City of Lloydminster

Checked by:

Approved by:

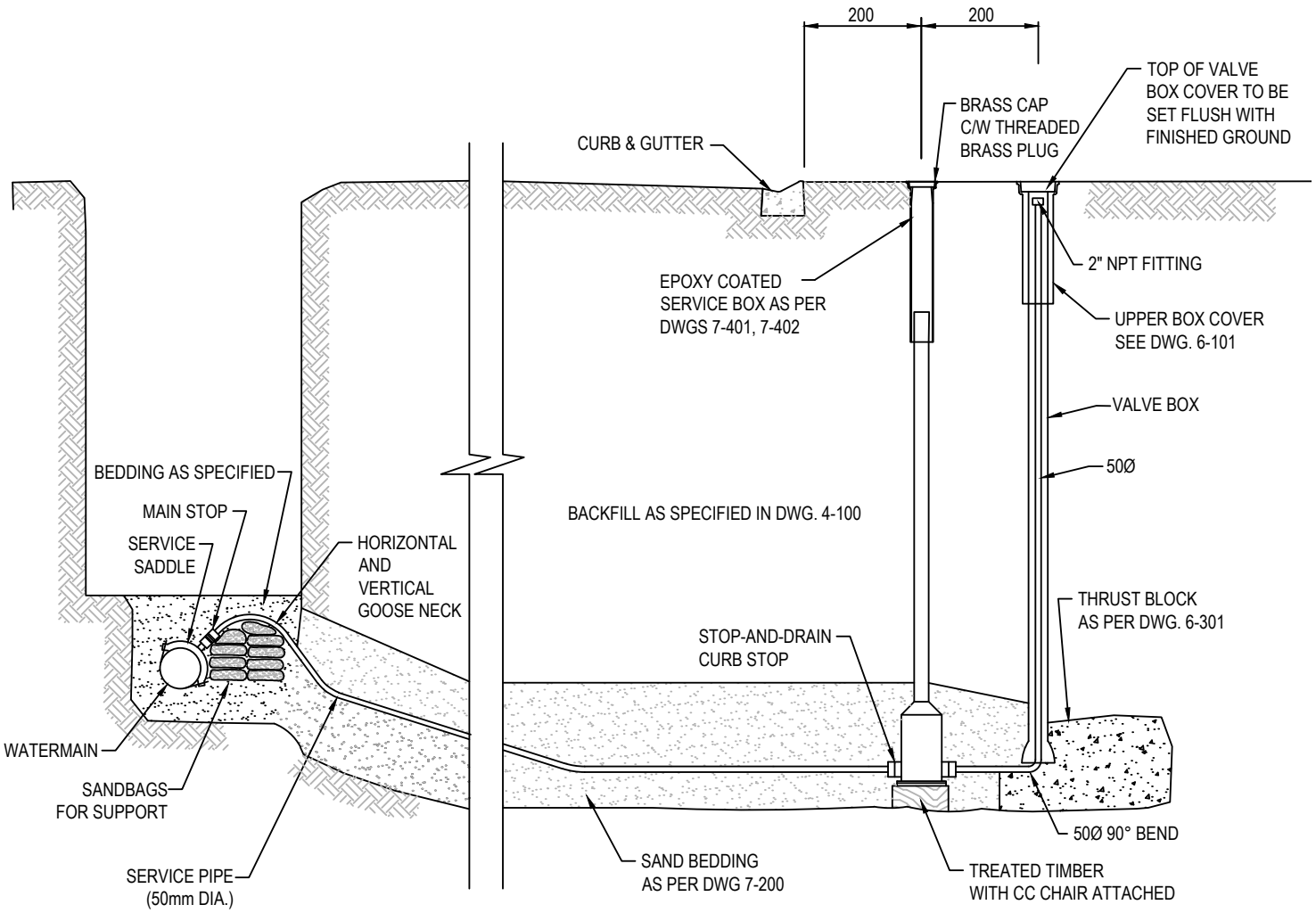
Drawn by: L. LEEPER

Scale: N.T.S.

Date: Feb. 22, 2011

HYDRANT INSTALLATION

Drawing #: 6-102



NOTES:

1. SERVICE BOX AND VALVE CASING TO BE INSTALLED PLUMB.
2. DIAMETER OF SERVICE PIPE TO BE UNIFORM FROM CORPORATION STOP.
3. MINIMUM COVER OVER SERVICE PIPE TO BE 2.8m.
4. CAPS TO BE INSTALLED FLUSH WITH FINISHED GROUND.
5. NPT FITTING TO BE COMPRESSION-TYPE, FEMALE THREADS.

NO.	DATE	REVISION
8		
7	05/05/20	Revised Notes Text Height
6	10/03/20	Revised Text Styles
5	01/05/19	Revised Notes
4	27/11/18	Revised Drawings
3	28/06/16	Revised Notes
2	14/04/16	Revised Notes
1	08/04/14	Changed drawing title

The City of Lloydminster

Checked by:

Approved by:

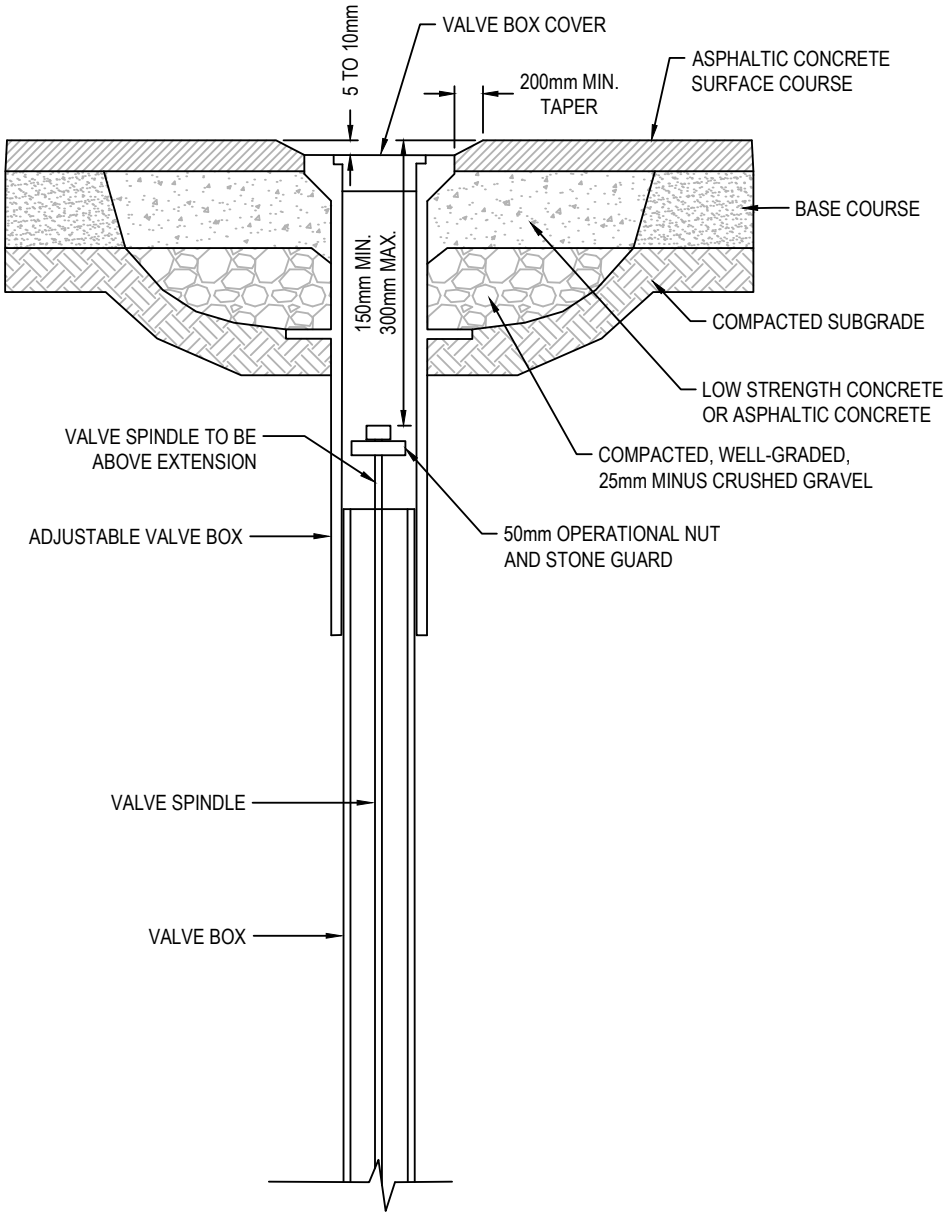
Drawn by: N / A

Scale: N.T.S.

PERMANENT BLOW OFF VALVE DETAIL

Date: Feb. 22, 2011

Drawing #: 6-200



NOTES:

1. VALVES TO BE ADJUSTED TO FINISHED GRADE PRIOR TO PLACING ASPHALTIC CONCRETE SURFACE COURSE.
2. TOP OF VALVES IN SIDEWALKS SHALL BE SET FLUSH WITH THE CONCRETE SURFACE.
3. TOP OF VALVES IN BOULEVARDS SHALL BE SET FLUSH WITH THE BOULEVARD FINISHED SURFACE ELEVATION.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3	10/03/20	Revised Dimension
2	3/22/18	Revised Notes
1	4/14/16	Added Nut and Stone Guard

The City of Lloydminster

Checked by:

Approved by:

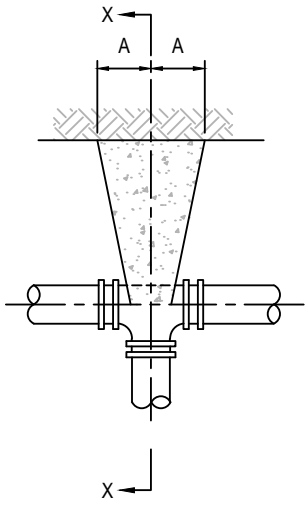
Drawn by: L. LEEPER

Scale: N.T.S.

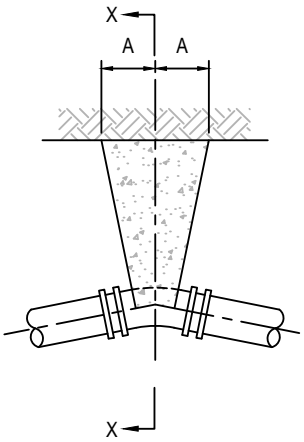
VALVE ADJUSTMENT DETAIL

Date: Feb. 22, 2011

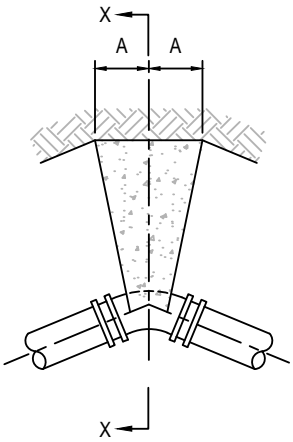
Drawing #: 6-201



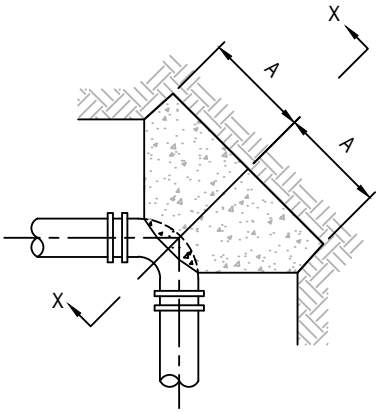
TEE



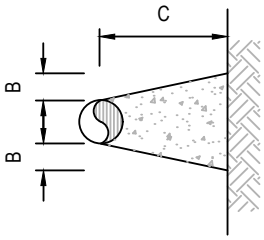
11 1/4° &
22 1/2° BENDS



45° BENDS



90° BENDS



SECTION X-X

PIPE SIZE	FITTINGS															
	TEE & DEAD END				11 1/4° & 22 1/2° BENDS				45° BEND				90° BEND			
	A	B	C	BEARING AREA	A	B	C	BEARING AREA	A	B	C	BEARING AREA	A	B	C	BEARING AREA
	(mm)	(mm)	(mm)	(m^2)	(mm)	(mm)	(mm)	(m^2)	(mm)	(mm)	(mm)	(m^2)	(mm)	(mm)	(mm)	(m^2)
150	348	100	275	0.244	159	75	225	0.095	311	75	225	0.187	575	75	225	0.345
200	433	150	400	0.433	211	100	300	0.169	415	100	300	0.332	766	100	300	0.613
250	521	200	525	0.677	264	125	375	0.264	518	125	375	0.518	958	125	375	0.958
300	609	250	650	0.975	317	150	450	0.380	622	150	450	0.746	1149	150	450	1.379
400	867	300	800	1.733	423	200	600	0.676	829	200	600	1.327	1532	200	600	2.451
450	954	350	925	2.194	476	225	675	0.856	933	225	675	1.679	1724	225	675	3.102
600	1393	400	1100	3.900	634	300	900	1.522	1244	300	900	2.985	2298	300	900	5.515
750	1741	500	1375	6.094	793	375	1125	2.378	1555	375	1125	4.664	2873	375	1125	8.618

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. DESIGN BASIS:
   a. HYDRAULIC DESIGN PRESSURE 690 kPA (100 psi).
   b. SOIL BEARING CAPACITY 50 kPA (1044 lb/sq.ft) (SOFT CLAY)
3. CONCRETE THRUST BLOCK BEARING SURFACE AREA AND PARAMETER 'A', 'B', & 'C' MUST BE ADJUSTED IF HYDRAULIC DESIGN PRESSURE AND SOIL BEARING CAPACITY ARE DIFFERENT THAN SHOWN IN ITEM 2, DESIGN BASIS.
4. HYDRAULIC DESIGN PRESSURE MUST INCLUDE HIGHEST OPERATING PRESSURE SCENARIO WITH SURGE PRESSURE INCLUDED.
5. TEMPORARY BLOCKING MUST BE APPROVED BY THE ENGINEER.
6. CONCRETE STRENGTH SHALL BE 25 MPa AT 28 DAYS, TYPE HS
7. CONCRETE TO BE CLEAR OF BELLS AND TO BEAR AGAINST UNDISTURBED TRENCH WALLS.
8. CONCRETE TO BE PLACED UNDER ALL FITTINGS.
9. CONCRETE TO BE CURED FOR 24 HOURS PRIOR TO BACKFILLING.
10. BOND BREAKER TO BE USED BETWEEN CONCRETE AND FITTINGS.
11. IF THE DESIGN IS BASED ON INFORMATION NOT VERIFIED IN THE FIELD AND NOT SUPPORTED BY HYDRAULIC MODELING / CALCULATIONS, A MIN. FACTOR OF SAFETY OF 1.50 SHOULD BE APPLIED TO ALL TABULATED BEARING AREAS.

NO.	DATE	REVISION
8		
7		
6		
5		
4	10/03/20	Reviewed Notes
3	27/11/18	Reviewed Notes
2	17/04/14	Changed concrete strength
1	24/03/14	Changed concrete strength

The City of Lloydminster

Checked by:

Approved by:

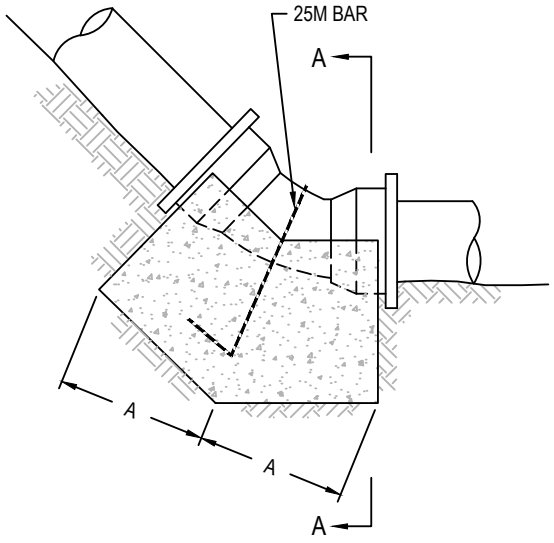
Drawn by: L. LEEPER

Scale: N.T.S.

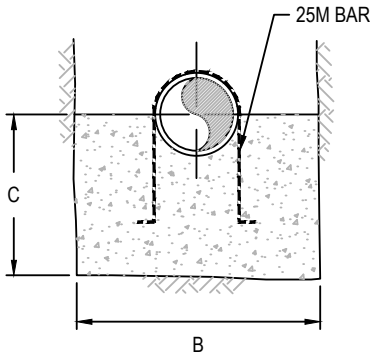
POURED CONCRETE THRUST BLOCKS FOR HORIZONTAL TEES AND BENDS

Date: Feb. 22, 2011

Drawing #: 6-300



ELEVATION



SECTION A-A

PIPE SIZE	FITTINGS							
	11 1/4° & 22 1/2° BENDS				45° BEND			
	A	B	C	BEARING AREA	A	B	C	BEARING AREA
	(mm)	(mm)	(mm)	(m^2)	(mm)	(mm)	(mm)	(m^2)
150	106	450	375	0.095	207	450	375	0.187
200	169	500	400	0.169	332	500	400	0.332
250	240	550	425	0.264	471	550	425	0.518
300	317	600	450	0.380	662	600	450	0.746
400	483	700	500	0.676	948	700	500	1.327
450	571	750	525	0.856	1119	750	525	1.679
600	845	900	600	1.522	1658	900	600	2.985
750	1132	1050	675	2.378	2221	1050	675	4.664

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. DESIGN BASIS:
   a. HYDRAULIC DESIGN PRESSURE 690 kPA (100 psi).
   b. SOIL BEARING CAPACITY 50 kPA (1044 lb/sq.ft) (SOFT CLAY)
3. CONCRETE THRUST BLOCK BEARING SURFACE AREA AND PARAMETER 'A', 'B', & 'C' MUST BE ADJUSTED IF HYDRAULIC DESIGN PRESSURE AND SOIL BEARING CAPACITY ARE DIFFERENT THAN SHOWN IN ITEM 2, DESIGN BASIS.
4. HYDRAULIC DESIGN PRESSURE MUST INCLUDE HIGHEST OPERATING PRESSURE SCENARIO WITH SURGE PRESSURE INCLUDED.
5. TEMPORARY BLOCKING MUST BE APPROVED BY THE ENGINEER.
6. CONCRETE STRENGTH SHALL BE 25 MPa AT 28 DAYS, TYPE HS.
7. CONCRETE TO BE CLEAR OF BELLS AND TO BEAR AGAINST UNDISTURBED TRENCH WALLS.
8. CONCRETE TO BE PLACED UNDER ALL FITTINGS.
9. CONCRETE TO BE CURED FOR 24 HOURS PRIOR TO BACKFILLING.
10. BOND BREAKER TO BE USED BETWEEN CONCRETE AND FITTINGS.
11. IF THE DESIGN IS BASED ON INFORMATION NOT VERIFIED IN THE FIELD AND NOT SUPPORTED BY HYDRAULIC MODELING / CALCULATIONS, A MIN. FACTOR OF SAFETY OF 1.50 SHOULD BE APPLIED TO ALL TABULATED BEARING AREAS.

NO.	DATE	REVISION
8		
7		
6		
5		
4	10/03/20	Revised Notes
3	23/03/18	Changed line weights
2	17/04/14	Changed concrete strength
1	24/03/14	Changed concrete strength

The City of Lloydminster

Checked by:

Approved by:

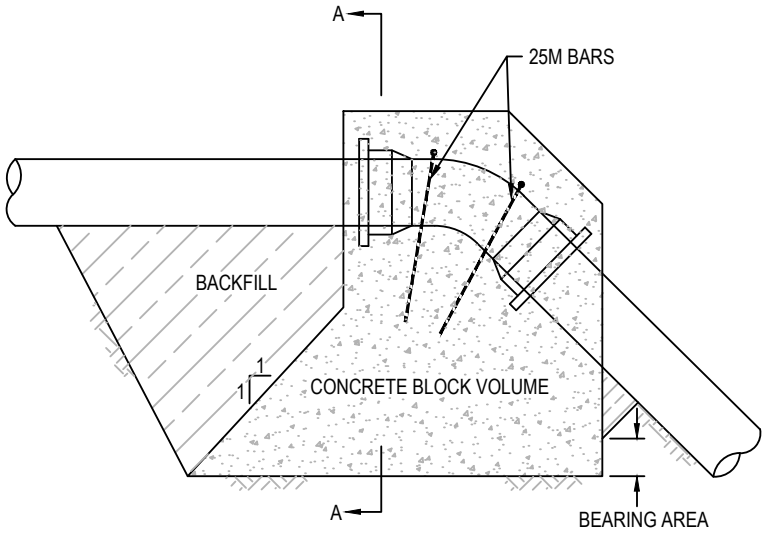
Drawn by: L. LEEPER

Scale: N.T.S.

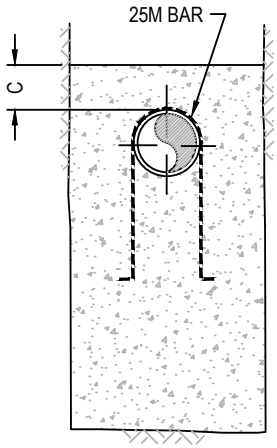
POURED CONCRETE THRUST BLOCKS FOR VERTICAL BENDS (DOWNWARD THRUST)

Date: Jan. 22, 2011

Drawing #: 6-301



ELEVATION



SECTION A-A

PIPE SIZE	FITTINGS					
	11 1/4° & 22 1/2° BENDS			45° BEND		
	BLOCK VOL.	C	BEARING AREA	BLOCK VOL.	C	BEARING AREA
	(m^3)	(mm)	(m^2)	(m^3)	(mm)	(m^2)
150	0.4	375	0.019	0.7	375	0.071
200	0.7	400	0.033	1.3	400	0.127
250	1.1	425	0.052	2.0	425	0.198
300	1.6	450	0.074	2.9	450	0.286
400	2.8	500	0.132	5.2	500	0.508
450	3.6	525	0.167	6.6	525	0.643
600	6.3	600	0.297	11.7	600	1.142
750	9.9	675	0.464	18.3	675	1.785

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. DESIGN BASIS:
   a. HYDRAULIC DESIGN PRESSURE 690 kPA (100 psi).
   b. SOIL BEARING CAPACITY 50 kPA (1044 lb/sq.ft) (SOFT CLAY)
3. CONCRETE THRUST BLOCK BEARING SURFACE AREA AND PARAMETER 'A', 'B', & 'C' MUST BE ADJUSTED IF HYDRAULIC DESIGN PRESSURE AND SOIL BEARING CAPACITY ARE DIFFERENT THAN SHOWN IN ITEM 2, DESIGN BASIS.
4. HYDRAULIC DESIGN PRESSURE MUST INCLUDE HIGHEST OPERATING PRESSURE SCENARIO WITH SURGE PRESSURE INCLUDED.
5. TEMPORARY BLOCKING MUST BE APPROVED BY THE ENGINEER.
6. CONCRETE STRENGTH SHALL BE 25 MPa AT 28 DAYS, TYPE HS.
7. CONCRETE TO BE CLEAR OF BELLS AND TO BEAR AGAINST UNDISTURBED TRENCH WALLS.
8. CONCRETE TO BE PLACED UNDER ALL FITTINGS.
9. CONCRETE TO BE CURED FOR 24 HOURS PRIOR TO BACKFILLING.
10. BOND BREAKER TO BE USED BETWEEN CONCRETE AND FITTINGS.
11. IF THE DESIGN IS BASED ON INFORMATION NOT VERIFIED IN THE FIELD AND NOT SUPPORTED BY HYDRAULIC MODELING / CALCULATIONS, A MIN. FACTOR OF SAFETY OF 1.50 SHOULD BE APPLIED TO ALL TABULATED BEARING AREAS.

NO.	DATE	REVISION
8		
7		
6		
5		
4	10/03/20	Revised Notes
3	23/03/18	Changed line weights
2	17/04/14	Changed concrete strength
1	24/03/14	Changed concrete strength

The City of Lloydminster

Checked by:

Approved by:

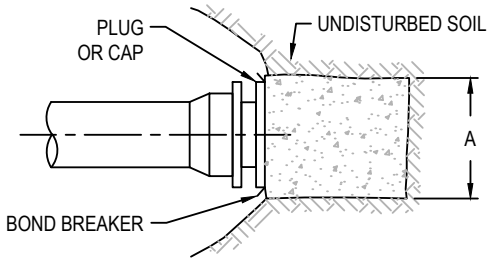
Drawn by: L. LEEPER

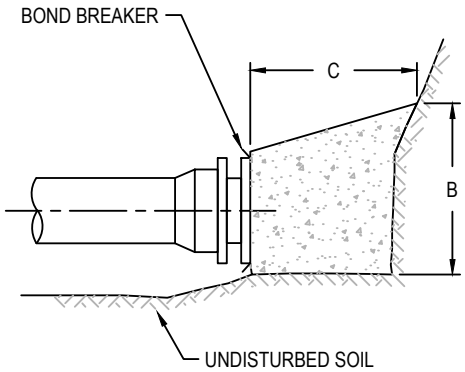
Scale: N.T.S.

POURED CONCRETE THRUST BLOCKS FOR VERTICAL BENDS (UPWARD THRUST)

Date: Jan. 22, 2011

Drawing #: 6-302





MINIMUM DIMENSIONS IN mm's				
SIZE OF PIPE	A	B	C	BEARING AREA
100	430	250	200	0.11
150	700	350	200	0.24
200	870	500	200	0.43
250	1040	650	275	0.68
300	1220	800	350	0.98
400	1730	1000	400	1.73
450	1910	1150	475	2.19
600	2790	1400	500	3.90
750	3480	1750	625	6.09

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. DESIGN BASIS:
   a. HYDRAULIC DESIGN PRESSURE 690 kPA (100 psi).
   b. SOIL BEARING CAPACITY 50 kPA (1044 lb/sq.ft) (SOFT CLAY)
3. CONCRETE THRUST BLOCK BEARING SURFACE AREA AND PARAMETER 'A', 'B', & 'C' MUST BE ADJUSTED IF HYDRAULIC DESIGN PRESSURE AND SOIL BEARING CAPACITY ARE DIFFERENT THAN SHOWN IN ITEM 2, DESIGN BASIS.
4. HYDRAULIC DESIGN PRESSURE MUST INCLUDE HIGHEST OPERATING PRESSURE SCENARIO WITH SURGE PRESSURE INCLUDED.
5. TEMPORARY BLOCKING MUST BE APPROVED BY THE ENGINEER.
6. CONCRETE STRENGTH SHALL BE 25 MPa AT 28 DAYS, TYPE HS.
7. CONCRETE TO BE CLEAR OF BELLS AND TO BEAR AGAINST UNDISTURBED TRENCH WALLS.
8. CONCRETE TO BE PLACED UNDER ALL FITTINGS.
9. CONCRETE TO BE CURED FOR 24 HOURS PRIOR TO BACKFILLING.
10. BOND BREAKER TO BE USED BETWEEN CONCRETE AND FITTINGS.
11. IF THE DESIGN IS BASED ON INFORMATION NOT VERIFIED IN THE FIELD AND NOT SUPPORTED BY HYDRAULIC MODELING / CALCULATIONS, A MIN. FACTOR OF SAFETY OF 1.50 SHOULD BE APPLIED TO ALL TABULATED BEARING AREAS.

NO.	DATE	REVISION
8		
7		
6		
5		
4	10/03/20	Revised Notes
3	23/03/18	Changed concrete type note 6
2	17/04/14	Changed concrete strength
1	24/03/14	Changed concrete strength

The City of Lloydminster

Checked by:

Approved by:

Drawn by: L. LEEPER

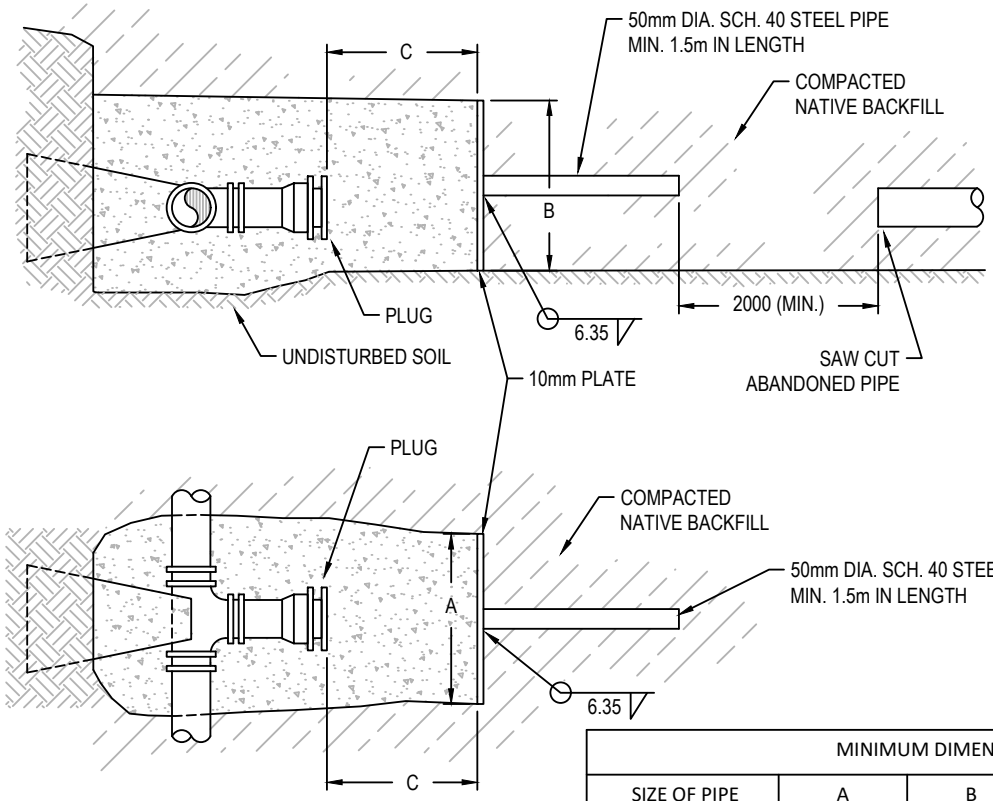
Scale: N.T.S.

POURED CONCRETE THRUST BLOCKS FOR DEAD-ENDS

Date: Feb. 22, 2011

Drawing #: 6-303

SIDE VIEW



TOP VIEW

MINIMUM DIMENSIONS IN mm				
SIZE OF PIPE	A	B	C	BEARING AREA
100	430	250	200	0.11
150	700	350	200	0.24
200	870	500	200	0.43
250	1040	650	275	0.68
300	1220	800	350	0.98
400	1730	1000	400	1.73
450	1910	1150	475	2.19
600	2790	1400	500	3.90
750	3480	1750	625	6.09

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. SAW CUT PIPE TO BE ABANDONED.
3. REMOVE PIPE FROM TEE ON MAIN. INSTALL PLUG ON TEE.
4. PLACE BACKFILL (COMPACTED TO 100% S.P.D.) TO A DEPTH OF TWO TIMES DIMENSION "B".
5. CUT 10mm THICK STEEL PLATE TO RECTANGULAR DIMENSIONS "A" x "B", WELD STEEL PIPE TO CENTRE OF PLATE.
6. DRIVE PIPE INTO BACKFILLED MATERIAL, CREATING A SPACE A MINIMUM OF DIMENSION "C" IN LENGTH BETWEEN THE PLUG AND THE FACE OF THE STEEL PLATE.
7. POUR CONCRETE THRUST BLOCK, COVERING THE ENTIRE TEE.
8. CONCRETE STRENGTH MUST BE 25 MPa AT 28 DAYS, TYPE HS.
9. CONCRETE TO BE CLEAR OF BELLS AND TO BEAR AGAINST EXCAVATED TRENCH WALLS AND PLATE.
10. CONCRETE TO BE PLACED UNDER ALL FITTINGS.
11. CONCRETE TO BE CURED FOR 24 HOURS PRIOR TO BACKFILLING.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1		

The City of Lloydminster

Checked by:

Approved by:

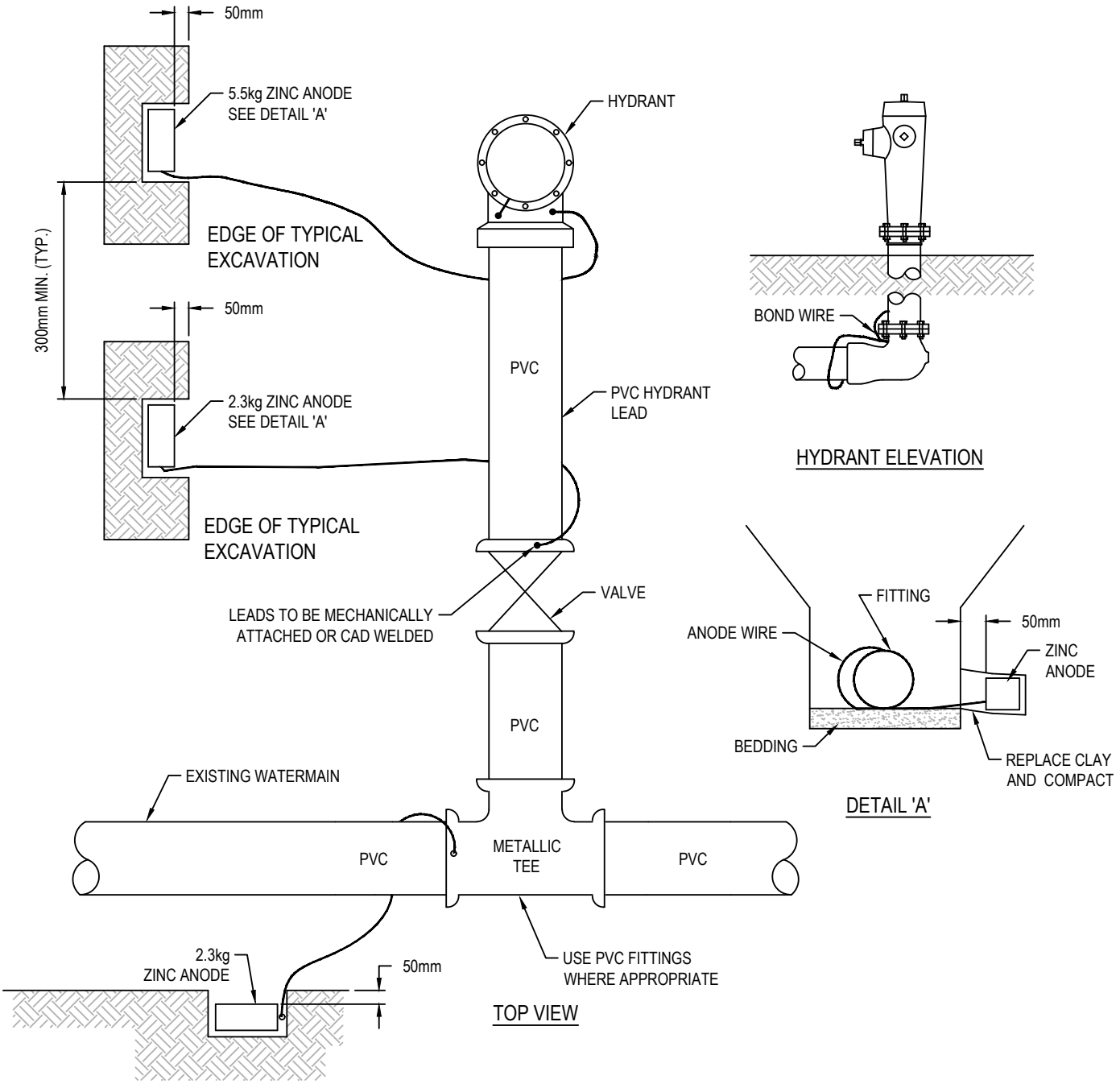
Drawn by: L. LEEPER

Scale: N.T.S.

POURED CONCRETE THRUST BLOCKS FOR DEAD-ENDS IN DISTURBED SOIL

Date: Oct. 29, 2018

Drawing #: 6-304



NOTES:

1. MINIMUM DISTANCE FROM ANODE TO PIPE, FITTING, VALVE, OR HYDRANT IS 150mm.
2. INSTALL ANODE AT APPROXIMATE PIPE DEPTH IN NATIVE SOIL.
3. ZINC ANODES TO BE EMBEDDED INTO TRENCH WALL TO PROVIDE FOR A MINIMUM OF 50mm OF NATIVE CLAY COMPLETELY SURROUNDING THE ANODE.
4. ANODES TO BE AT LEAST 300mm CLEAR OF THRUST BLOCK
5. CAD WELDS TO BE COVERED IN DENSO OR PETROGUARD PETROLATUM TAPE.
6. 3 LITRES OF WATER TO BE POURED ON ANODE FOLLOWING PLACEMENT TO ACTIVATE.
7. ANODE LEADS TO BE 2m IN LENGTH.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3	3/22/18	Revised Notes
2	22/11/16	Revised Notes
1	4/14/16	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

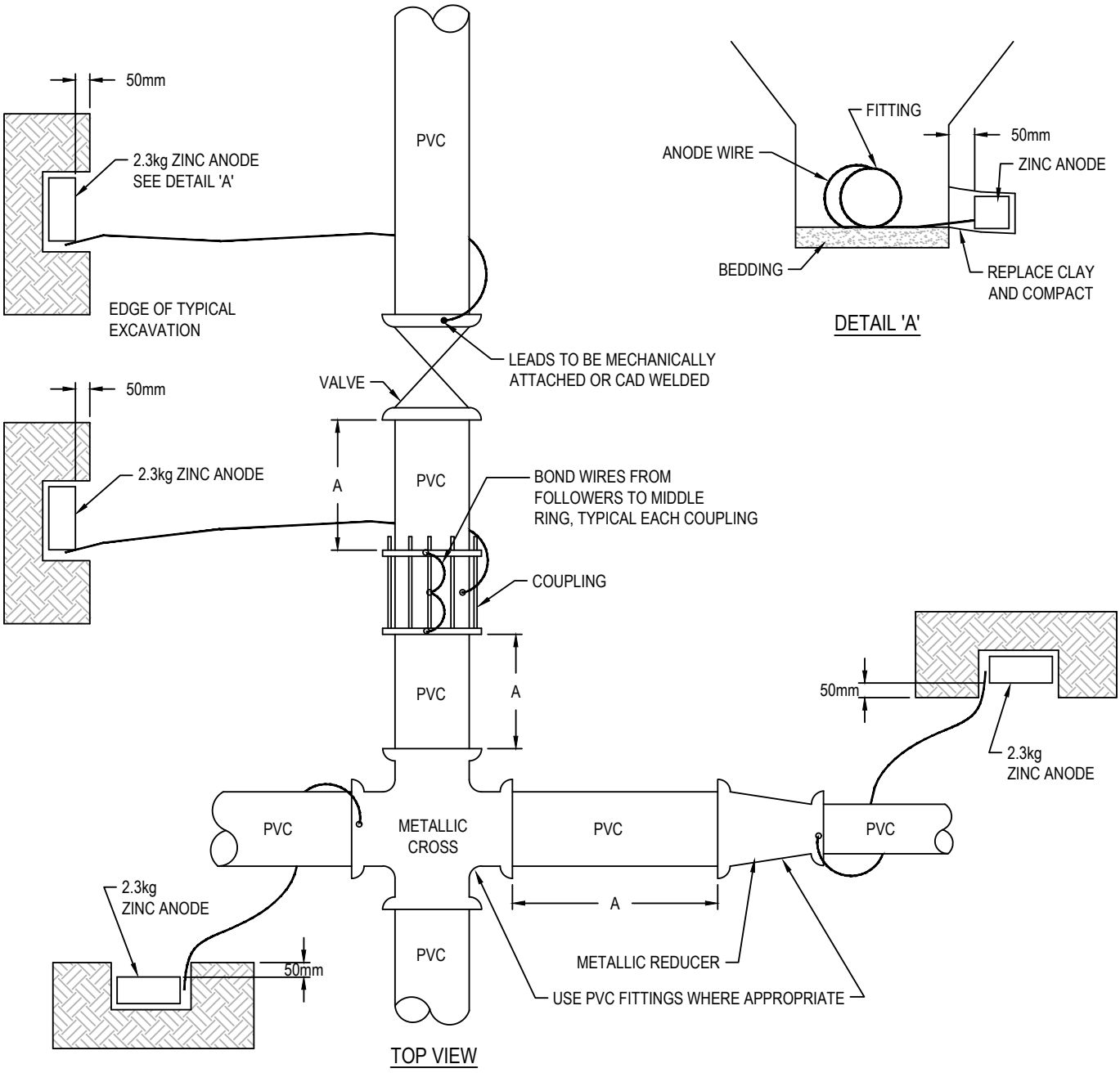
Drawn by: L. LEEPER

Scale: N.T.S.

ANODE INSTALLATION AT HYDRANT

Date: Feb. 22, 2011

Drawing #: 6-400



NOTES:

1. MINIMUM DISTANCE FROM ANODE TO PIPE, FITTING, VALVE, OR HYDRANT IS 150mm.
2. INSTALL ANODE AT APPROXIMATE PIPE DEPTH IN NATIVE SOIL.
3. BOND WIRES MAY BE USED TO PROTECT UP TO TWO FITTINGS WITH ONE ANODE WHEN DIMENSION 'A' DOES NOT EXCEED ONE (1) METER.
4. ALL ZINC ANODES ON FITTINGS AND VALVES ARE 2.3kg.
5. ZINC ANODES TO BE EMBEDDED INTO TRENCH WALL TO PROVIDE FOR A MINIMUM OF 50mm OF NATIVE CLAY COMPLETELY SURROUNDING THE ANODE.
6. CAD WELDS TO BE COVERED IN DENSO OR PETROGUARD PETROLATUM TAPE.
7. 3 LITRES OF WATER TO BE POURED ON ANODE FOLLOWING PLACEMENT TO ACTIVATE.
8. ANODE LEADS TO BE 2m IN LENGTH.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3	3/22/18	Revised Notes
2	22/11/16	Revised Notes
1	4/14/16	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

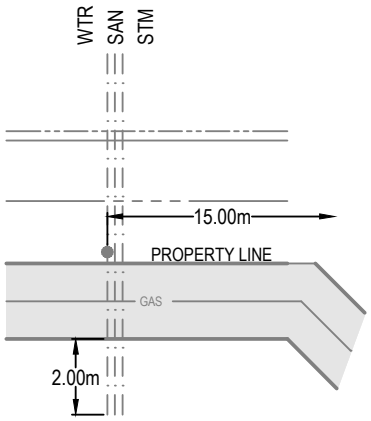
Drawn by: L. LEEPER

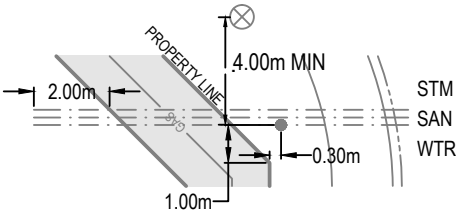
Scale: N.T.S.

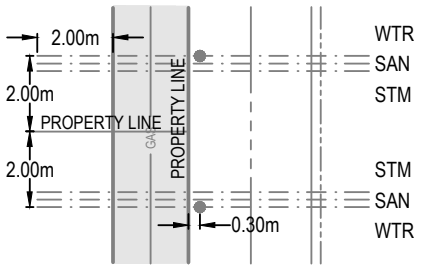
TYPICAL ANODE INSTALLATION FOR METALLIC FITTINGS USED WITH PVC WATER MAINS

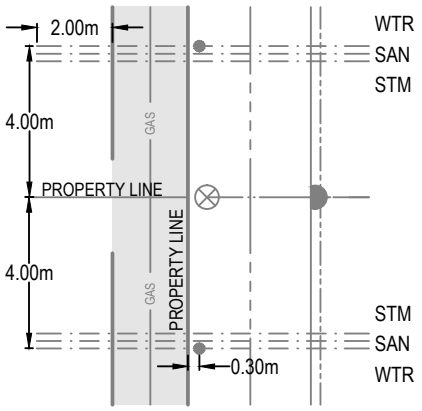
Date: Feb. 22, 2011

Drawing #: 6-401









NO.	DATE	REVISION
8	22/06/20	Added "m" to Dim
7	05/05/20	Added "m" to Dims, Chg Txt Ht.
6	10/03/20	Added Dimension
5	04/14/16	Removed Gas Line & Drawing dimensions
4	04/14/16	Added Hydrant Dimension
3	06/03/13	Revised Side Lot Dimension
2	22/10/12	Revised Side Lot Dimension
1	14/02/12	Revised Dimensioning

The City of Lloydminster

Scale: N.T.S.

Checked by:

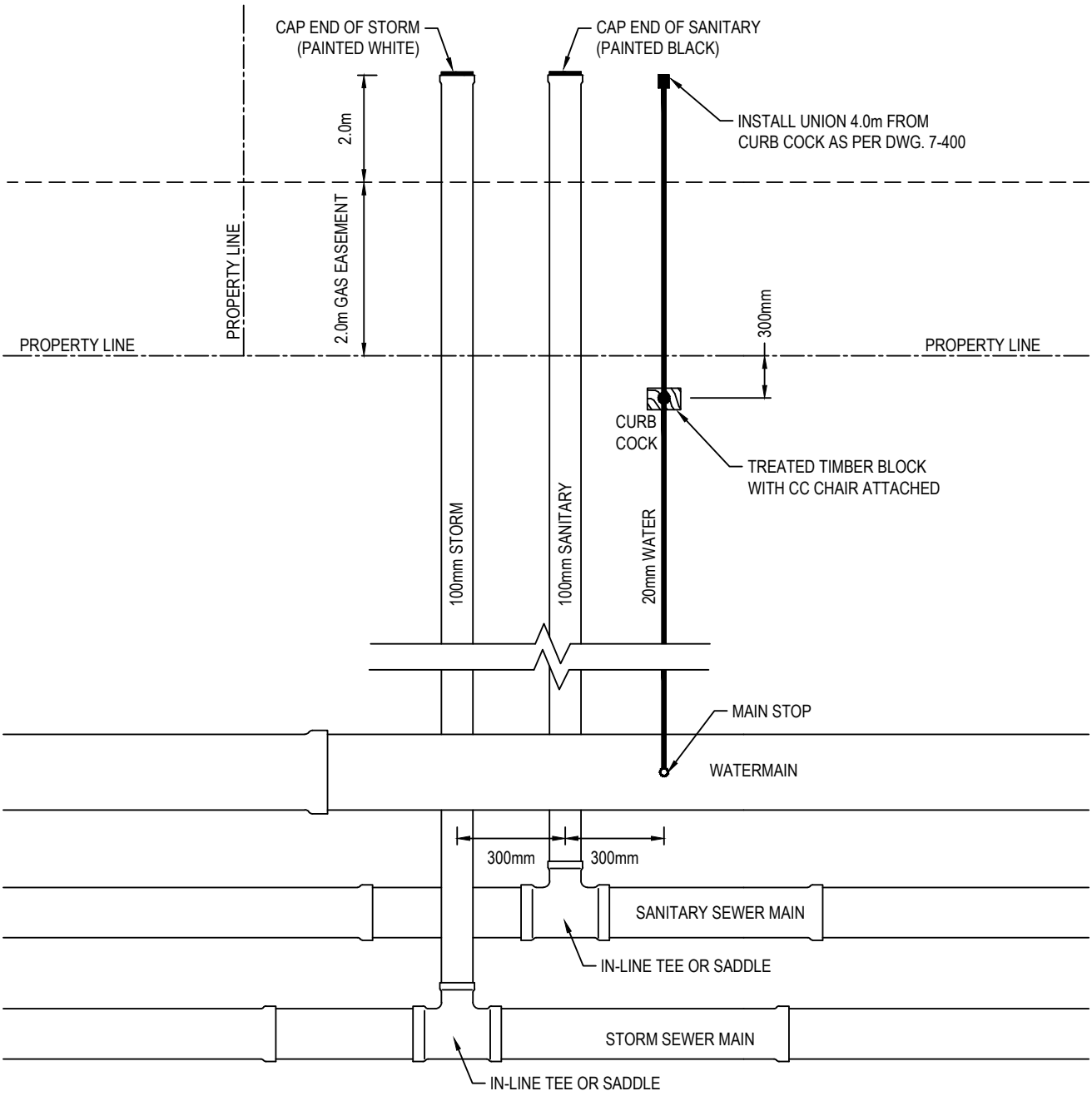
Approved by:

Drawn by: N / A

TYPICAL LATERAL SERVICE LOCATION DETAIL

Date: Feb. 22, 2011

Drawing #: 7-100



NOTES:

1. THE CITY OF LLOYDMINSTER ACCEPTS NO RESPONSIBILITY FOR THE CONSTRUCTION OR MAINTENANCE OF THE SERVICES BEYOND THE PROPERTY LINE.
2. THE END OF THE WATER SERVICE SHALL NOT BE CRIMPED CLOSED, PERMEABLE FILTER CLOTH WILL BE USED TO PREVENT INTRUSION OF DEBRIS AND TO ALLOW TESTING FLOW OF CURBSTOP.
3. STORM SERVICE SHALL ALWAYS BE LOCATED CLOSEST TO PROPERTY LINE.
4. INSERTABLE TEES MAY BE USED ON CONCRETE MAINS AND OPEN PROFILE PVC MAINS.

NO.	DATE	REVISION
8		
7	22/06/20	Revised Note 1
6	10/03/20	Added Union Block to Water
5	3/22/18	Revised Notes
4	22/11/16	Revised Notes
3	04/14/16	Updated Dimensions & Notes
2	09/04/14	Added property line for clarity
1	14/02/12	Revised drawing name & notes.

The City of Lloydminster

Checked by:

Approved by:

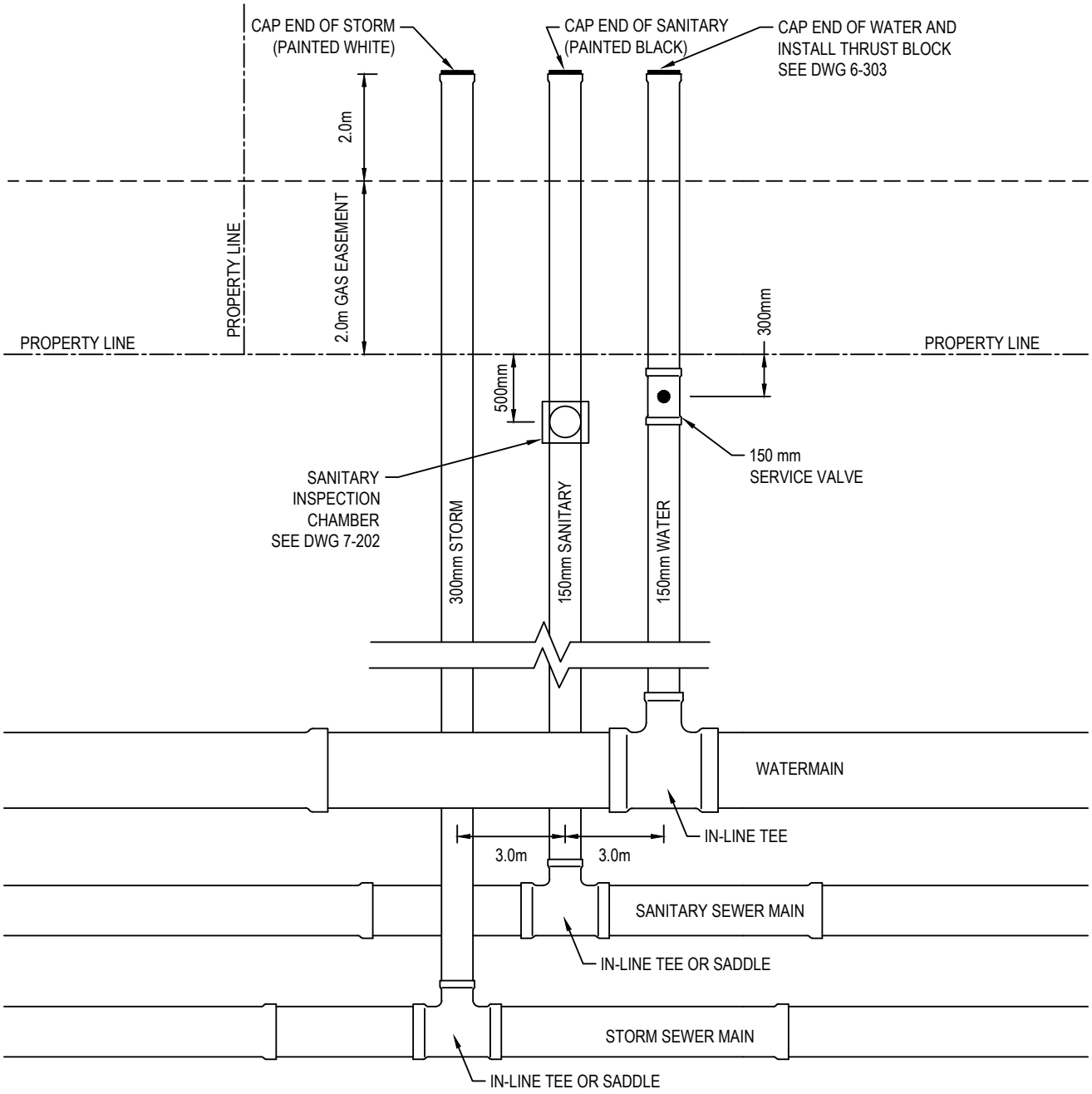
Drawn by: L. LEEPER

Scale: N.T.S.

RESIDENTIAL LATERAL SERVICE DETAIL

Date: Feb. 22, 2011

Drawing #: 7-101



NOTES:

1. THE CITY OF LLOYDMINSTER ACCEPTS NO RESPONSIBILITY FOR THE CONSTRUCTION OR MAINTENANCE OF THE SERVICES BEYOND THE PROPERTY LINE.
2. STORM SERVICE SHALL ALWAYS BE LOCATED CLOSEST TO PROPERTY LINE.
3. SIZE OF THE SERVICES BEYOND THE PROPERTY LINE MAY BE REDUCED BY THE DEVELOPER AS REQUIRED.
4. INSERTABLE TEES MAY BE USED ON CONCRETE MAINS AND OPEN PROFILE PVC MAINS

NO.	DATE	REVISION
8		
7		
6		
5	22/06/20	Revised Note 1
4	28/11/18	Revised Notes
3	22/11/16	Revised Notes
2	4/14/16	Revised Notes
1	24/02/15	Rem. Saddle from WM, Chg. Title

The City of Lloydminster

Checked by:

Approved by:

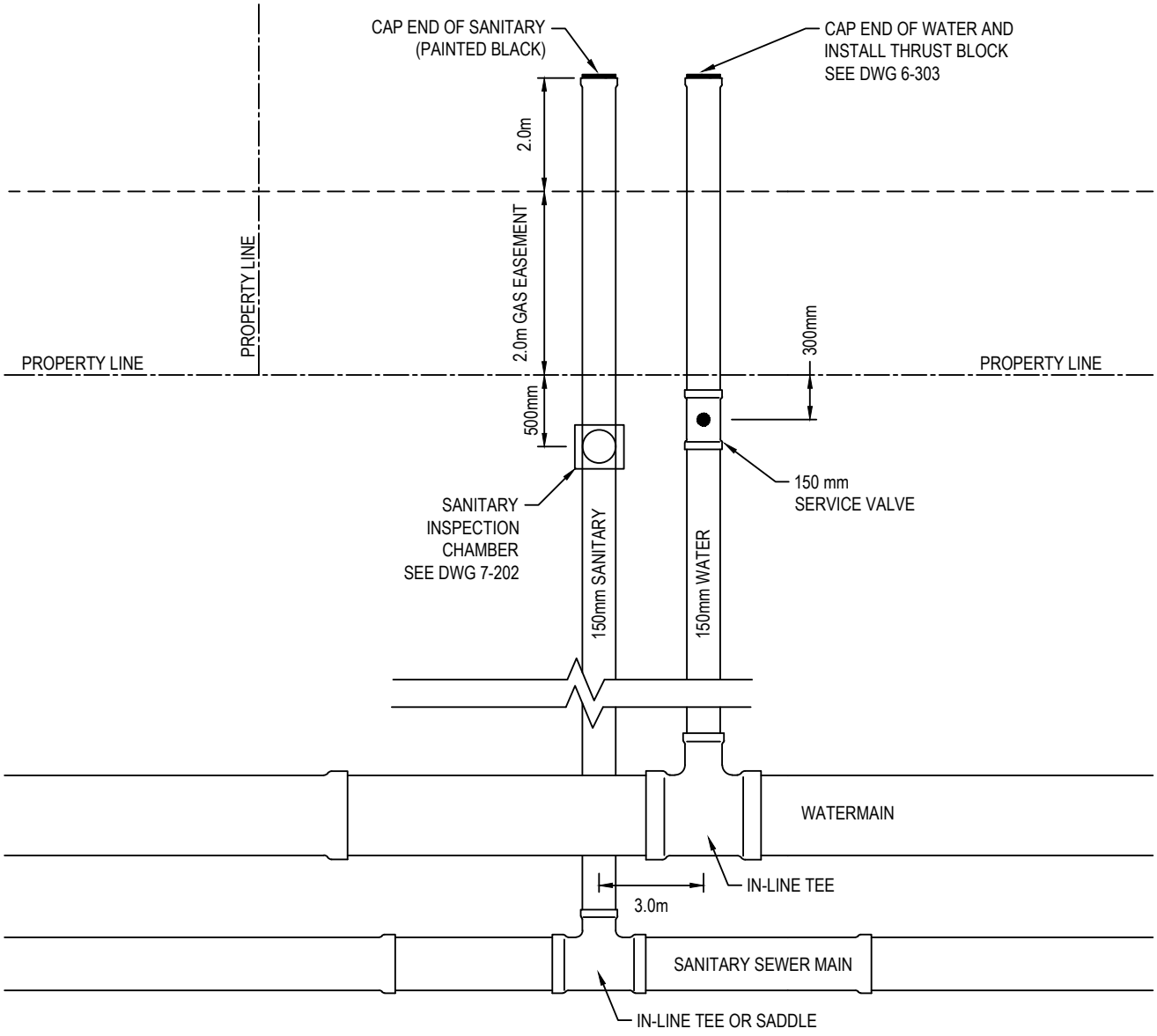
Drawn by: N / A

Scale: N.T.S.

MULTI-FAMILY SERVICE DETAIL WITH STORM SERVICE

Date: Apr. 30, 2014

Drawing #: 7-102



NOTES:

1. THE CITY OF LLOYDMINSTER ACCEPTS NO RESPONSIBILITY FOR THE CONSTRUCTION OR MAINTENANCE OF THE SERVICES BEYOND THE PROPERTY LINE.
2. SIZE OF THE SERVICES BEYOND THE PROPERTY LINE MAY BE REDUCED BY THE DEVELOPER AS REQUIRED.
3. INSERTABLE TEES MAY BE USED ON CONCRETE MAINS AND OPEN PROFILE PVC MAINS.

NO.	DATE	REVISION
8		
7		
6		
5	22/06/20	Revised Note 1
4	3/22/18	Revised Notes
3	22/11/16	Revised Notes
2	4/14/16	Revised Notes
1	24/02/15	Changed dwg title & detail text

The City of Lloydminster

Checked by:

Approved by:

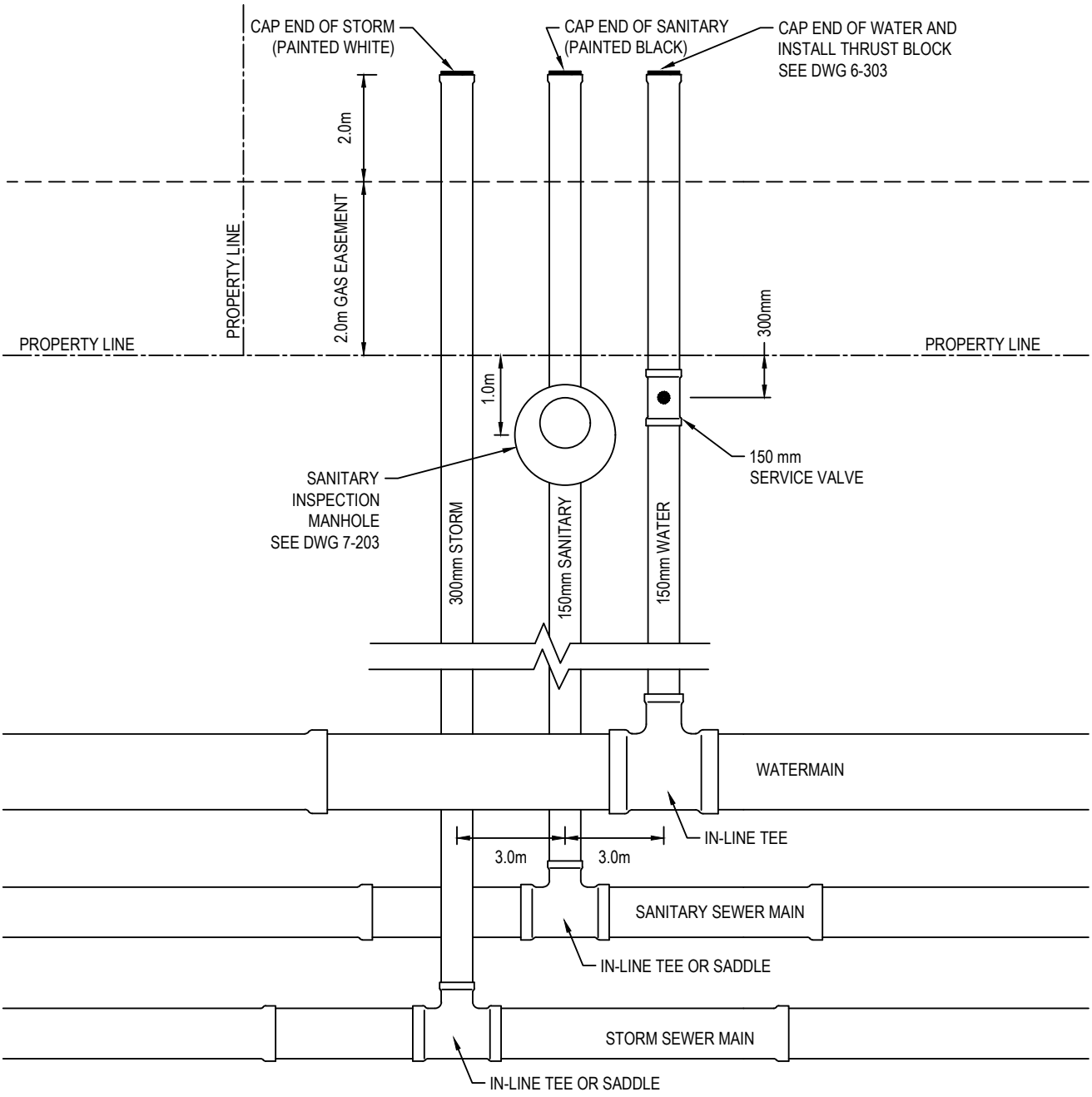
Drawn by: N / A

Scale: N.T.S.

MULTI-FAMILY SERVICE DETAIL

Date: Apr. 30, 2014

Drawing #: 7-103



NOTES:

1. THE CITY OF LLOYDMINSTER ACCEPTS NO RESPONSIBILITY FOR THE CONSTRUCTION OR MAINTENANCE OF THE SERVICES BEYOND THE PROPERTY LINE.
2. STORM SERVICE SHALL ALWAYS BE LOCATED CLOSEST TO PROPERTY LINE.
3. SIZE OF THE SERVICES BEYOND THE PROPERTY LINE MAY BE REDUCED BY THE DEVELOPER AS REQUIRED.
4. IINSERTABLE TEES MAY BE USED ON CONCRETE MAINS AND OPEN PROFILE PVC MAINS

NO.	DATE	REVISION
8		
7		
6		
5		
4	22/06/20	Revised Note 1
3	28/11/18	Revised Notes
2	22/11/16	Revised Notes
1	24/02/15	Rem. Saddle from WM, Chg. dwg no.

The City of Lloydminster

Checked by:

Approved by:

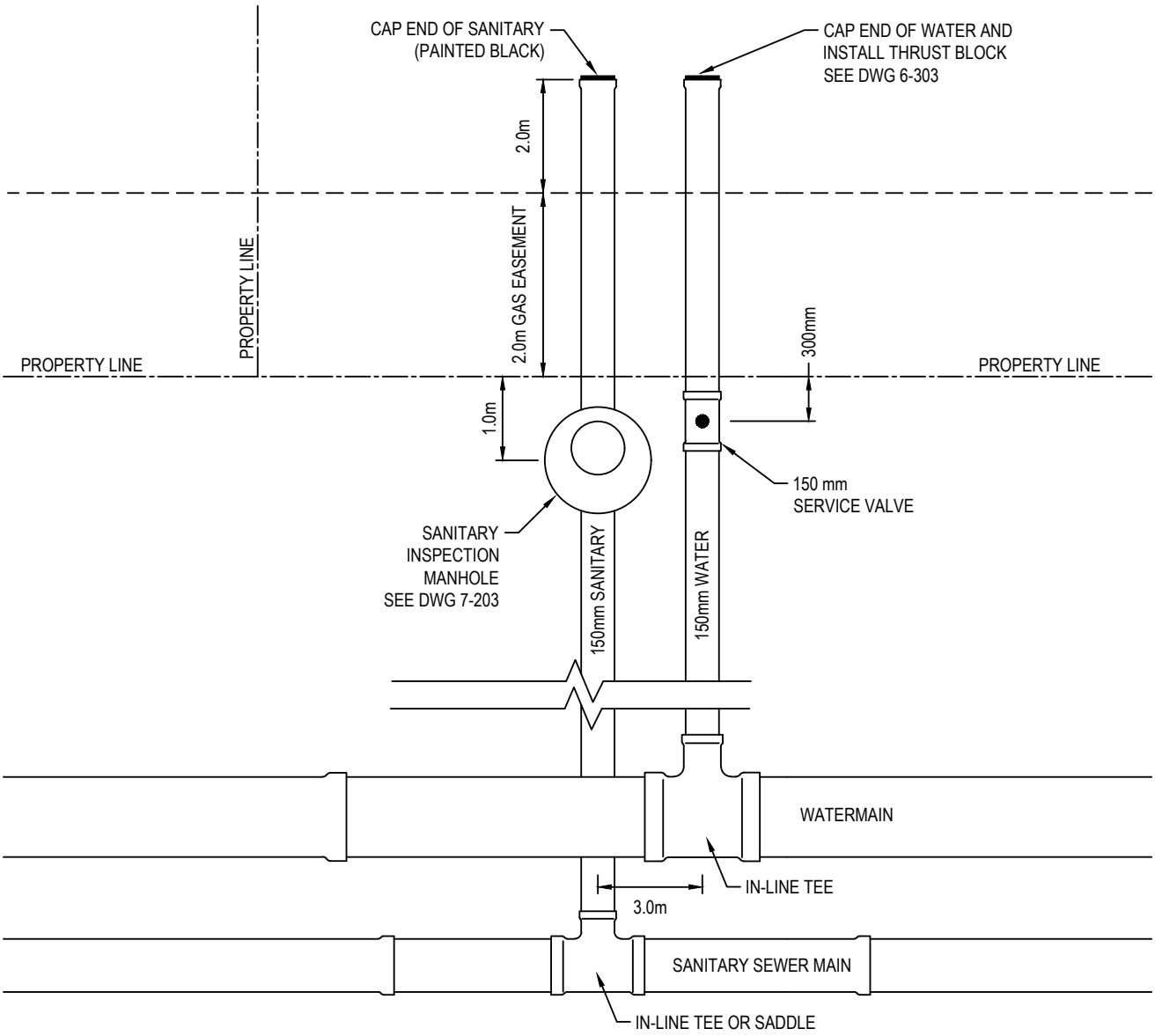
Drawn by: N / A

Scale: N.T.S.

COMMERCIAL SERVICE DETAIL WITH STORM SERVICE

Date: Apr. 30, 2014

Drawing #: 7-104



NOTES:

1. THE CITY OF LLOYDMINSTER ACCEPTS NO RESPONSIBILITY FOR THE CONSTRUCTION OR MAINTENANCE OF THE SERVICES BEYOND THE PROPERTY LINE.
2. SIZE OF THE SERVICES BEYOND THE PROPERTY LINE MAY BE REDUCED BY THE DEVELOPER AS REQUIRED.
3. INSERTABLE TEES MAY BE USED ON CONCRETE MAINS AND OPEN PROFILE PVC MAINS.

NO.	DATE	REVISION
8		
7		
6		
5		
4	22/06/20	Revised Note 1
3	28/11/18	Revised Notes
2	22/11/16	Revised Notes
1	24/02/15	Changed dwg no., added MH

The City of Lloydminster

Checked by:

Approved by:

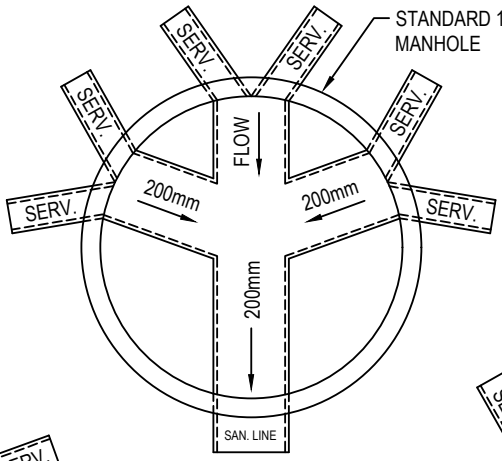
Drawn by: N / A

Scale: N.T.S.

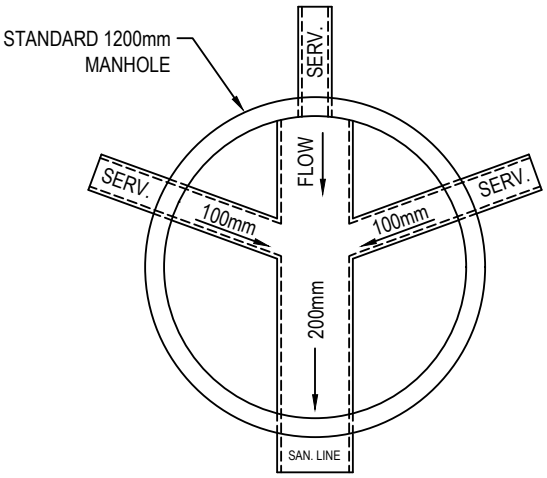
COMMERCIAL SERVICE DETAIL

Date: Feb.24, 2015

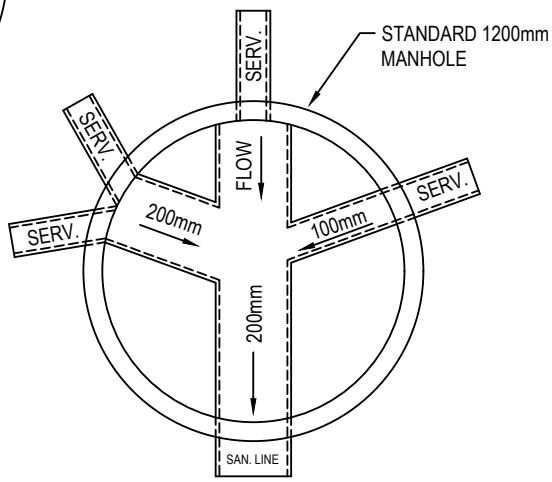
Drawing #: 7-105



TYPICAL



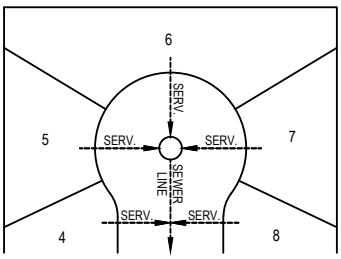
ALTERNATE #1



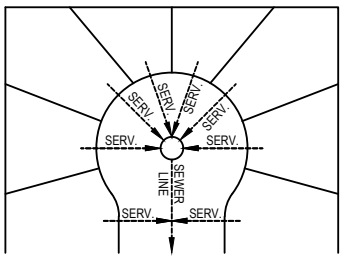
ALTERNATE #2

NOTES:

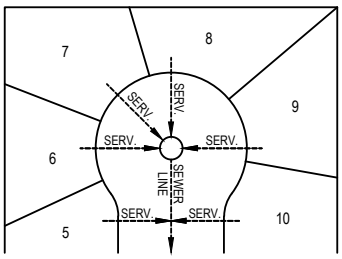
1. IN THE CASE OF MORE THAN 6 CONNECTIONS INTO A MANHOLE, A DETAIL DRAWING SHALL BE SUBMITTED TO THE CITY OF LLOYDMINSTER FOR APPROVAL.
2. MAXIMUM HEIGHT - INVERT OF INCOMING SERVICE PIPES SHALL NOT EXCEED 300mm ABOVE THE INVERT OF THE OUTLET MAIN LINE PIPE.
3. MINIMUM HEIGHT - MATCH CROWN OF SERVICE PIPES WITH CROWN OF OUTLET MAIN LINE PIPE.
4. PIPE BENCHING TO ACCOMMODATE BRANCH CONNECTIONS.
5. SERVICE CONNECTIONS INTO BARREL TO BE MACHINE CORED OR CUT, AND SEALED WITH NON-SHRINK GROUT AS PER DWG. 3-207
6. MIN. 100 FOR 1 SERVICE, MIN. 200 FOR 2 SERVICES.



ALTERNATE #1



TYPICAL



ALTERNATE #2

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2	22/06/20	Revised Note 1
1	11/28/18	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

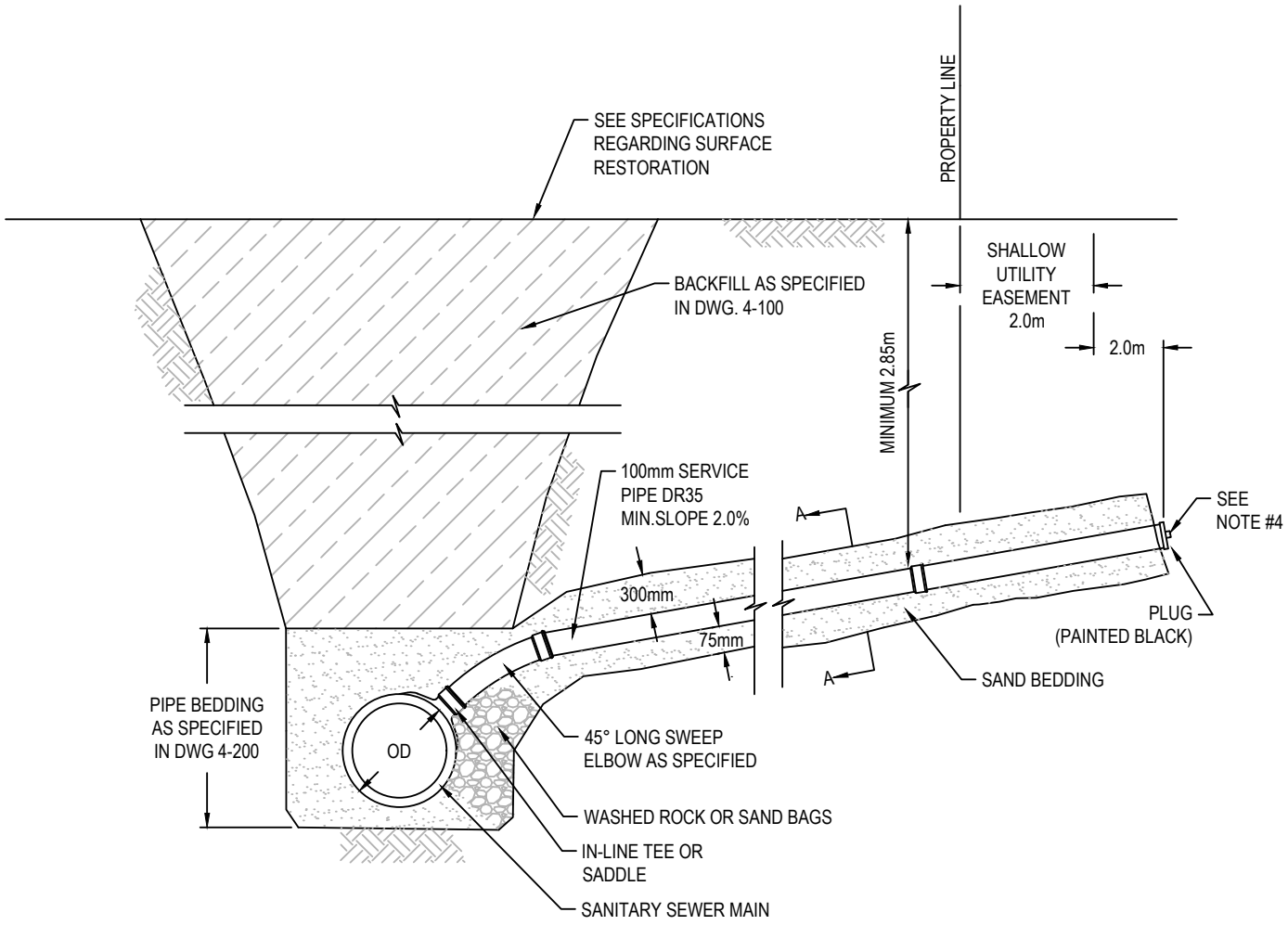
Drawn by: A. EDWARDS

Scale: N.T.S.

SERVICE CONNECTION DETAILS FOR SEWER MANHOLE IN CUL DE SAC

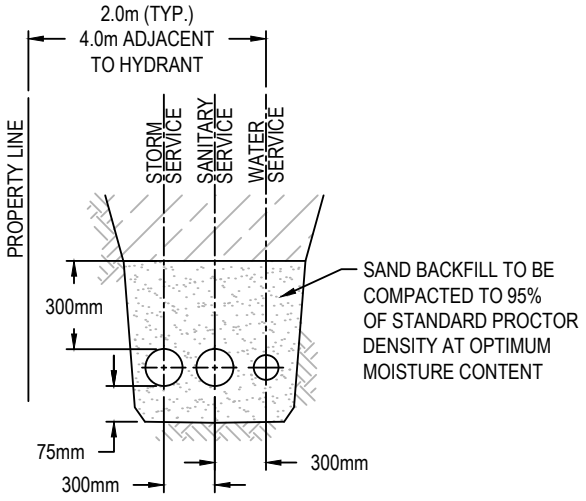
Date: April 14, 2016

Drawing #: 7-106



NOTES:

1. ALL TRENCH WALLS SHALL BE SLOPED OR SHORED IN CONFORMANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY REGULATIONS CURRENTLY IN EFFECT
2. OD = OUTSIDE DIAMETER
3. SERVICE CONNECTIONS TO BE MADE AT THE 10:00 OR 2:00 POSITION.
4. INSTALL 100mm SERVICE PIPE FROM PLUG TO THE HOUSE CONNECTION.
   - MIN SLOPE = 2.0%
   - MAX BEND = 45° TOTAL
   - MAX NUMBER OF BENDS = 2
5. THE CITY OF LLOYDMINSTER ACCEPTS NO RESPONSIBILITY FOR THE CONSTRUCTION OR MAINTENANCE OF THE SERVICES BEYOND THE PROPERTY LINE.



SECTION A-A

NO.	DATE	REVISION
8		
7		
6		
5	22/06/20	Revised Note 5
4	10/03/20	Revised Notes & Dwg
3	3/22/18	Revised Notes
2	4/14/16	Revised Notes
1	08/04/14	Added property line to Sec. A-A

The City of Lloydminster

Checked by:

Approved by:

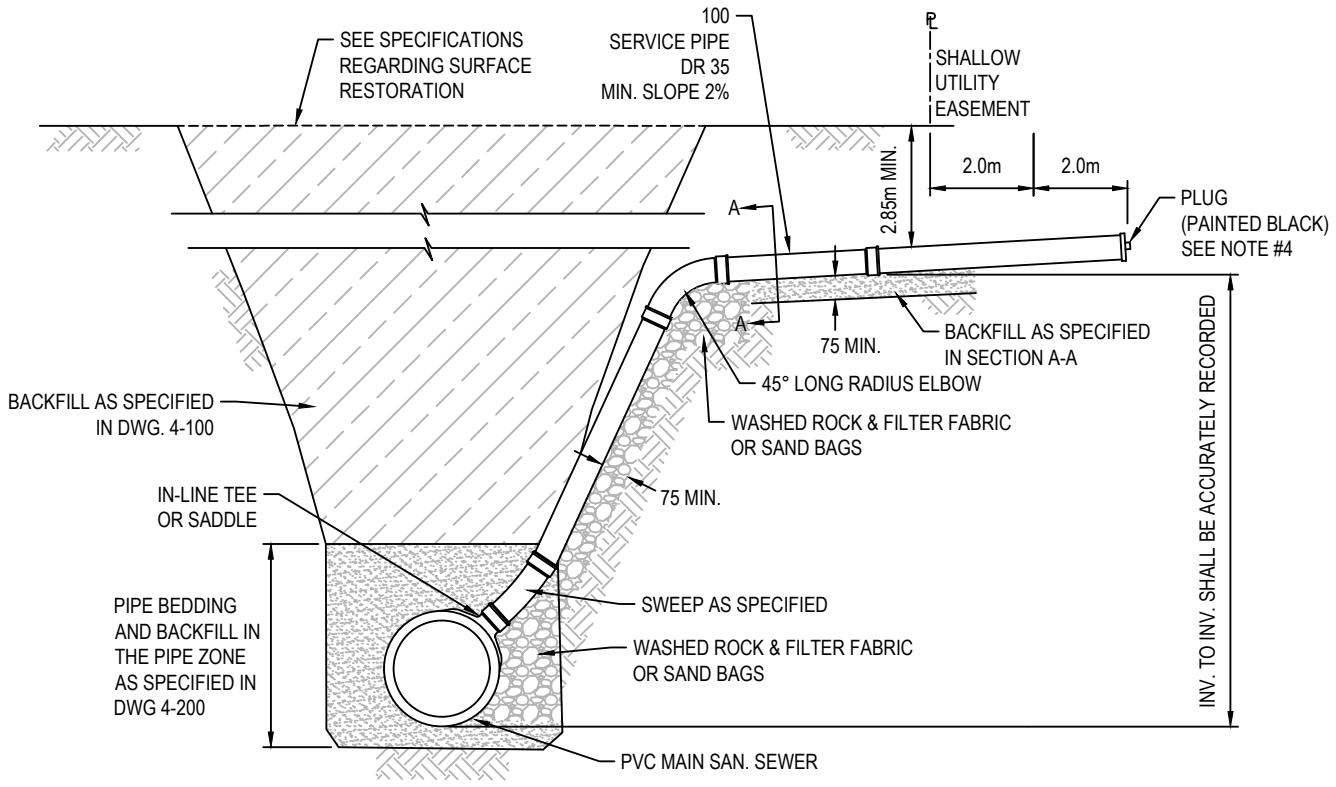
Drawn by: N / A

Scale: N.T.S.

RESIDENTIAL NON - RISER TYPE SANITARY SERVICE CONNECTION

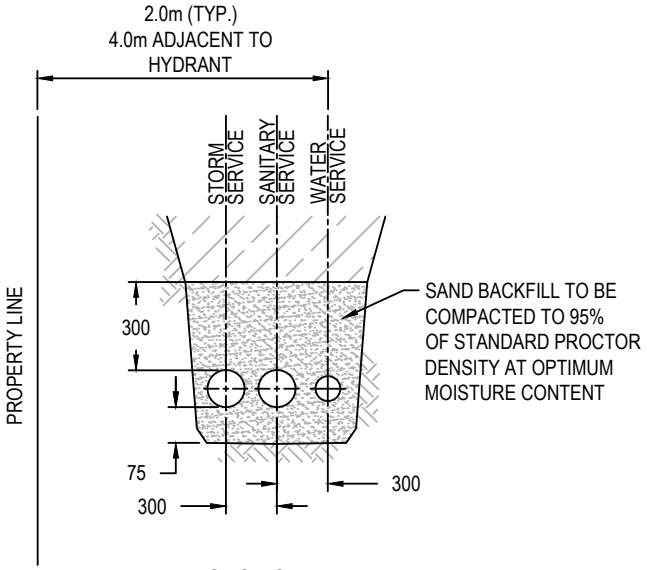
Date: Feb. 22, 2011

Drawing #: 7-200



NOTES:

1. ALL TRENCH WALLS SHALL BE SLOPED OR SHORED IN CONFORMANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY REGULATIONS CURRENTLY IN EFFECT
2. OD = OUTSIDE DIAMETER
3. SERVICE CONNECTIONS TO BE MADE AT THE 10:00 OR 2:00 POSITION.
4. INSTALL 100mm SERVICE PIPE FROM PLUG TO THE HOUSE CONNECTION.
   MIN SLOPE = 2.0%
   MAX BEND = 45° TOTAL
   MAX NUMBER OF BENDS = 2
5. THE CITY OF LLOYDMINSTER ACCEPTS NO RESPONSIBILITY FOR THE CONSTRUCTION OR MAINTENANCE OF THE SERVICES BEYOND THE PROPERTY LINE.



SECTION A-A

NO.	DATE	REVISION
8		
7		
6		
5		
4	22/06/20	Revised Note 5
3	10/03/20	Changed Dwg, Added Note
2	01/03/18	Added Drawing Text
1	4/14/16	Revised Notes

The City of Lloydminster

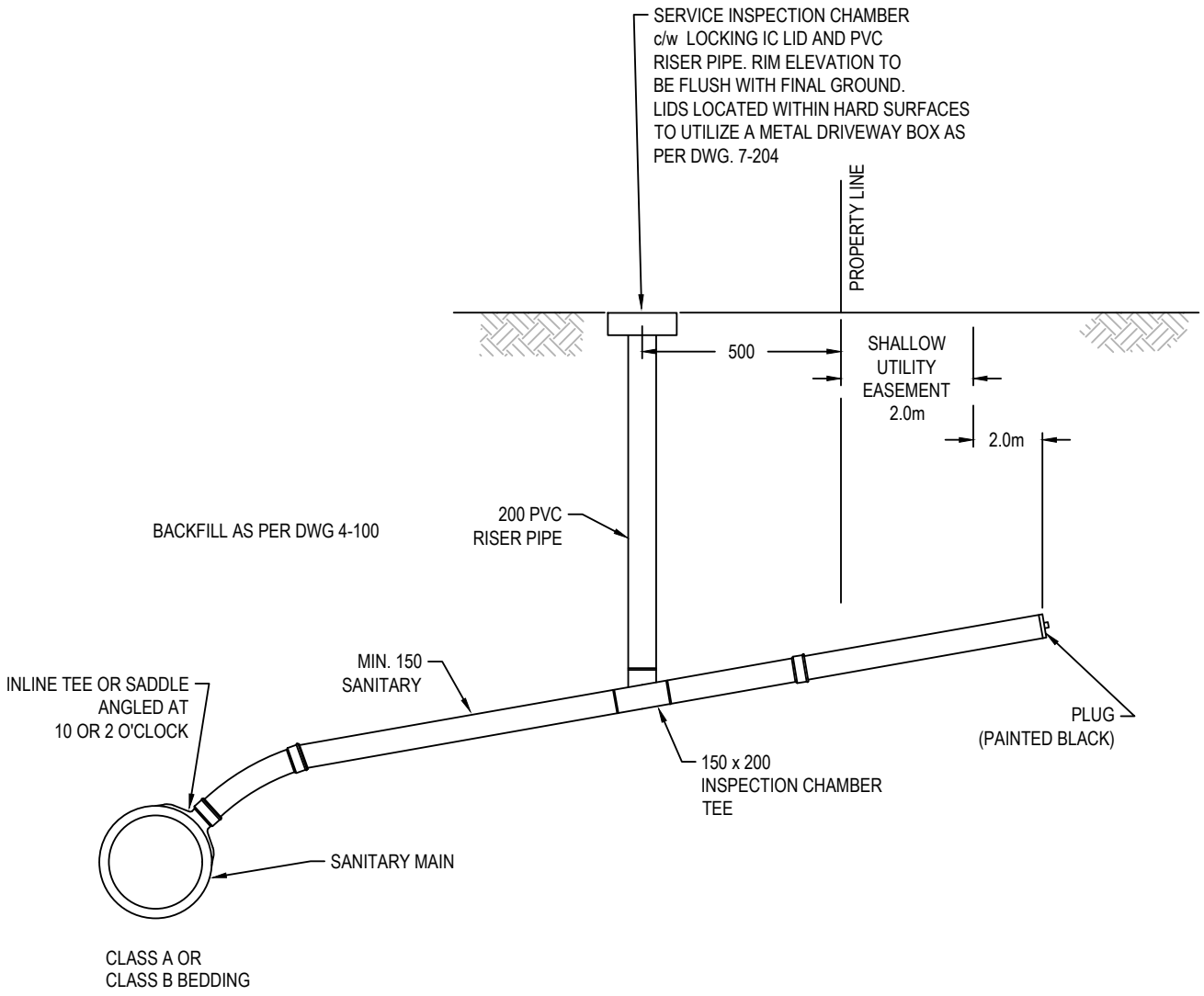
Checked by: | Approved by: | Drawn by: N / A

Scale: N.T.S.

RESIDENTIAL RISER TYPE SANITARY SERVICE CONNECTION

Date: Feb. 22, 2011

Drawing #: 7-201



NOTES:

1. THE CITY OF LLOYDMINSTER ACCEPTS NO RESPONSIBILITY FOR THE CONSTRUCTION OR MAINTENANCE OF THE SERVICES BEYOND THE PROPERTY LINE.
2. SEWER SERVICE MUST BE PROPERLY CAPPED.
3. INSTALL SERVICE PIPE FROM PLUG TO THE BUILDING CONNECTION MIN SLOPE = 1.0%

NO.	DATE	REVISION
8		
7	22/06/20	Revised Note 1
6	05/05/20	Added Text
5	11/03/20	Added Text, Rev. Notes
4	3/22/18	Revised Notes
3	22/11/16	Revised Notes
2	14/04/16	Revised Notes
1	24/02/15	Min slope, dwg title

The City of Lloydminster

Checked by:

Approved by:

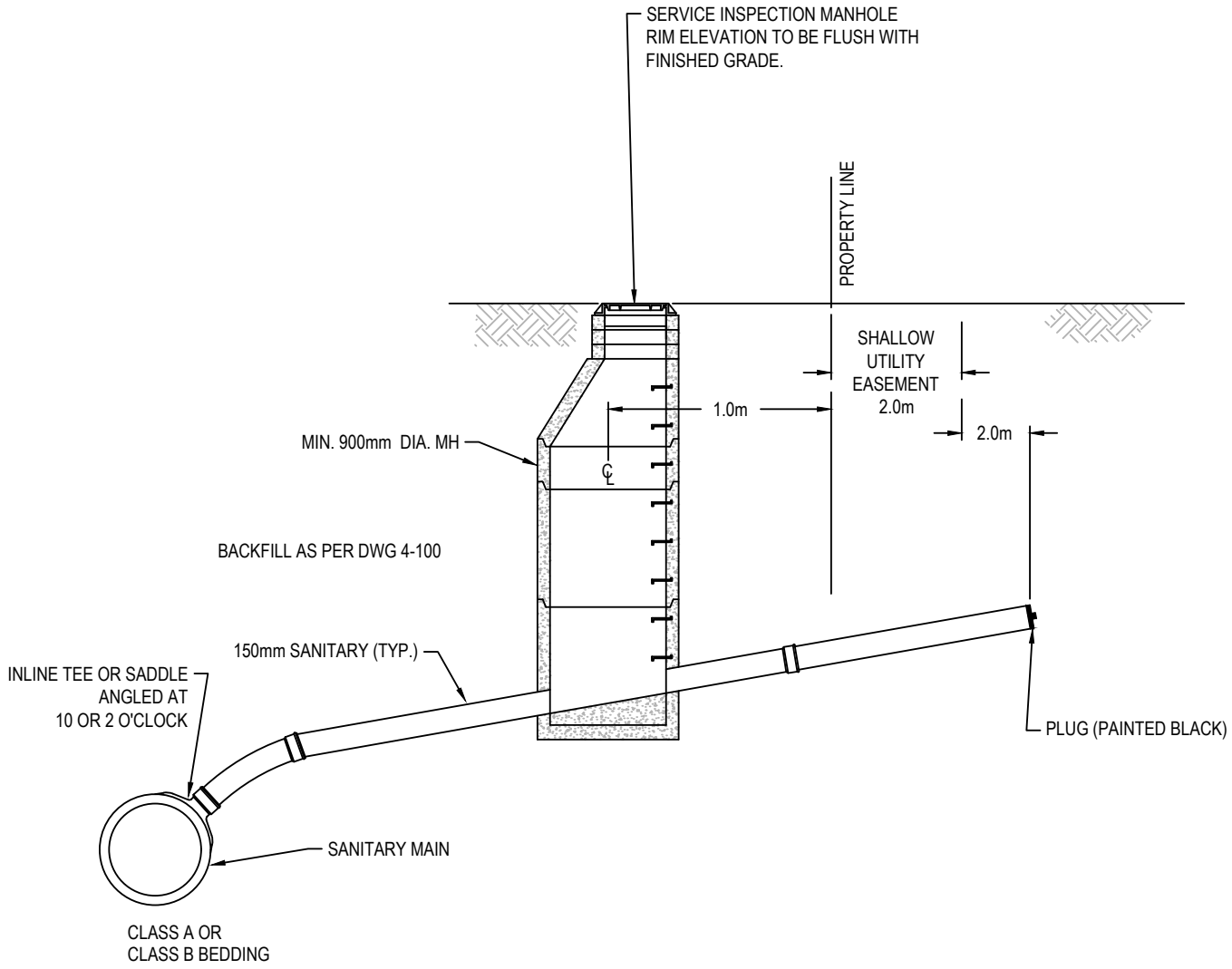
Drawn by: N / A

Scale: N.T.S.

MULTI-FAMILY SANITARY SERVICE INSPECTION CHAMBER

Date: Feb. 22, 2011

Drawing #: 7-202



NOTES:

1. THE CITY OF LLOYDMINSTER ACCEPTS NO RESPONSIBILITY FOR THE CONSTRUCTION OR MAINTENANCE OF THE SERVICES BEYOND THE PROPERTY LINE.
2. INSTALL SERVICE PIPE FROM PLUG TO THE BUILDING CONNECTION.
   MIN SLOPE = 1.0%

NO.	DATE	REVISION
8		
7		
6	22/06/20	Revised Note 1
5	11/03/20	Revised Notes & Dwg.
4	28/11/18	Revised Notes & Painted Plug
3	28/06/16	Revised Notes
2	14/04/16	Revised Notes
1	24/02/15	Min slope, dwg no.

The City of Lloydminster

Checked by:

Approved by:

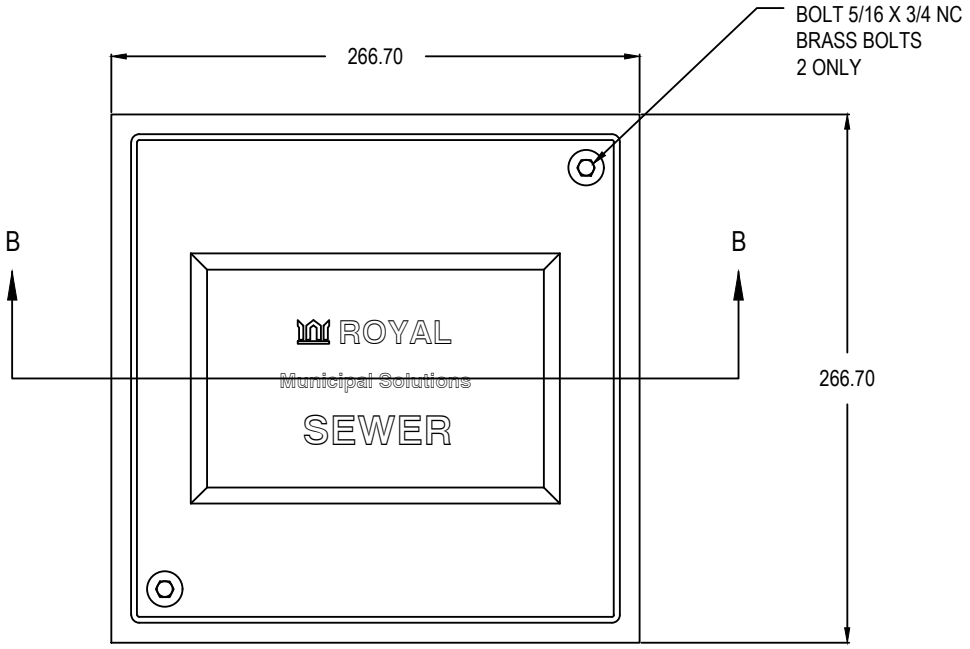
Drawn by: N / A

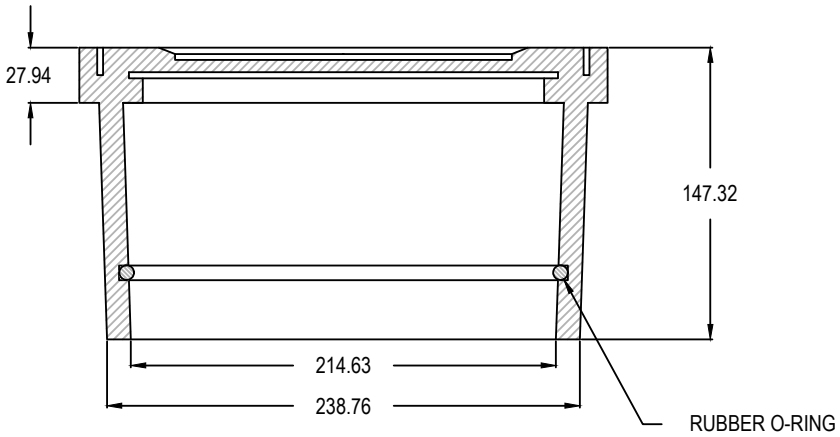
Scale: N.T.S.

COMMERCIAL / INDUSTRIAL SANITARY SERVICE INSPECTION MANHOLE

Date: Feb. 22, 2011

Drawing #: 7-203





SECTION B-B

NOTES:

1. TO BE UTILIZED FOR INSPECTION CHAMBERS PLACED IN A HARD SURFACE.
2. USE ROYAL PIPE SYSTEMS 71A08 OR APPROVED EQUIVALENT.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2	05/05/20	Rev. Text Size & Style
1	11/03/20	REV. TEXT SIZE & STYLE

The City of Lloydminster

Checked by:

Approved by:

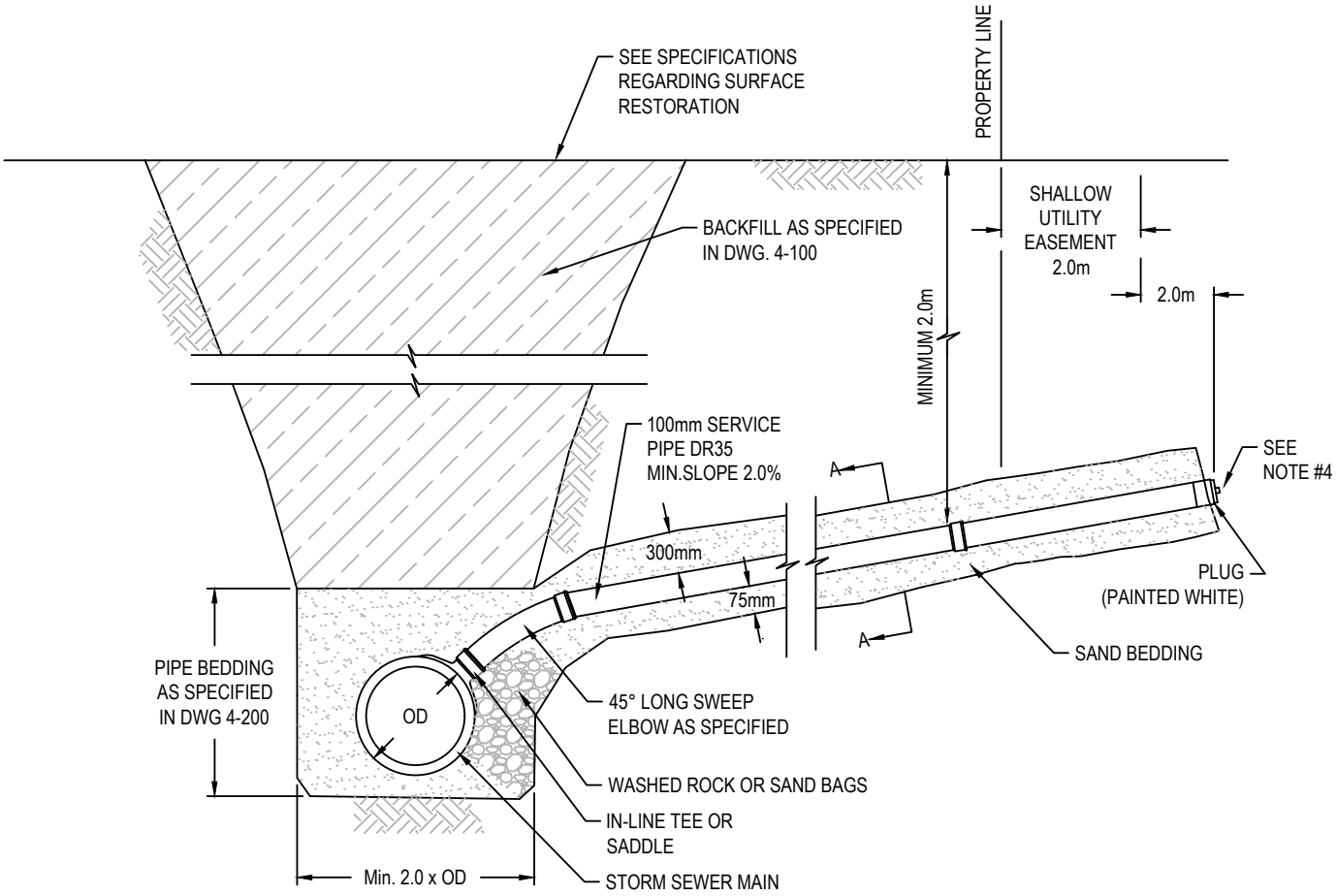
Drawn by: A. EDWARDS

Scale: N.T.S.

METAL DRIVEWAY BOX

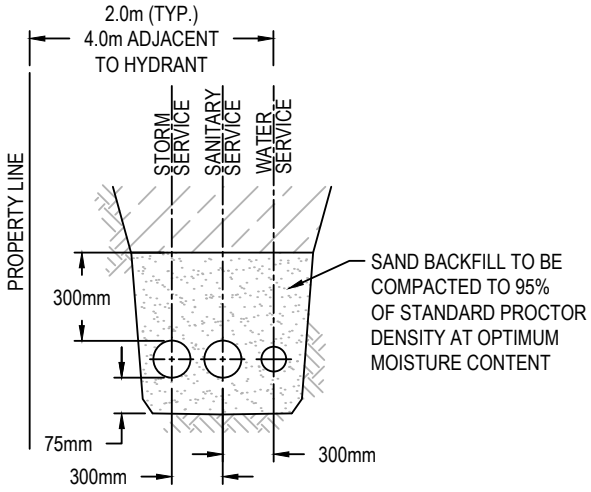
Date: Nov 22, 2016

Drawing #: 7-204



NOTES:

1. ALL TRENCH WALLS SHALL BE SLOPED OR SHORED IN CONFORMANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY REGULATIONS CURRENTLY IN EFFECT
2. OD = OUTSIDE DIAMETER
3. SERVICE CONNECTIONS TO BE MADE BETWEEN THE 10:00 AND 2:00 POSITION.
4. INSTALL 100mm SERVICE PIPE FROM PLUG TO THE HOUSE CONNECTION.
   - MIN SLOPE = 2.0%
   - MAX BEND = 45° TOTAL
   - MAX NUMBER OF BENDS = 2
5. THE CITY OF LLOYDMINSTER ACCEPTS NO RESPONSIBILITY FOR THE CONSTRUCTION OR MAINTENANCE OF THE SERVICES BEYOND THE PROPERTY LINE.



SECTION A-A

NO.	DATE	REVISION
8		
7		
6		
5	22/06/20	Revised Note 5
4	11/03/20	Added Note 5
3	11/28/18	Added Property Line
2	4/14/16	Revised Notes
1	08/04/14	Reduced min cover @ P/L

The City of Lloydminster

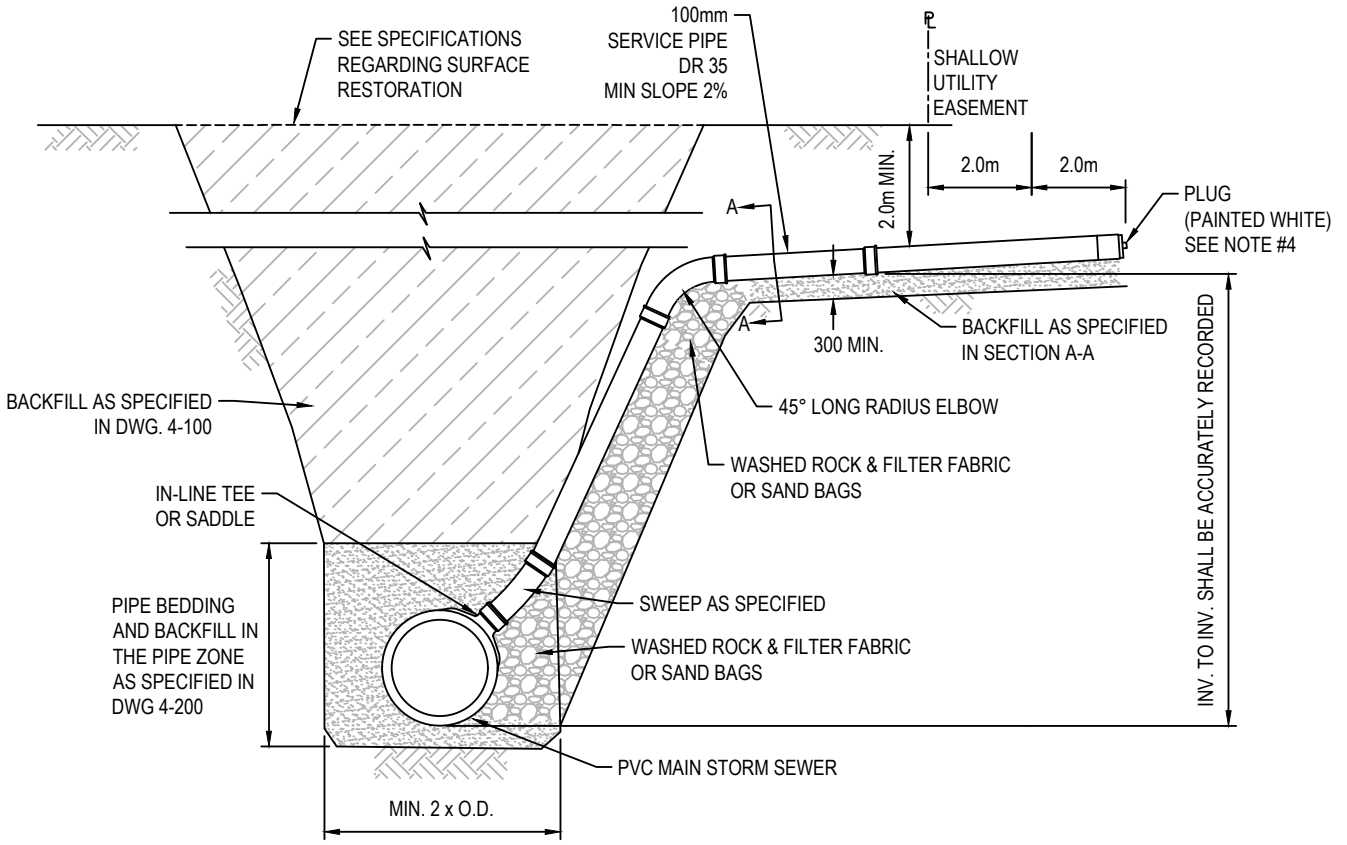
Checked by: | Approved by: | Drawn by: N / A

Scale: N.T.S.

RESIDENTIAL NON - RISER TYPE STORM SERVICE CONNECTION

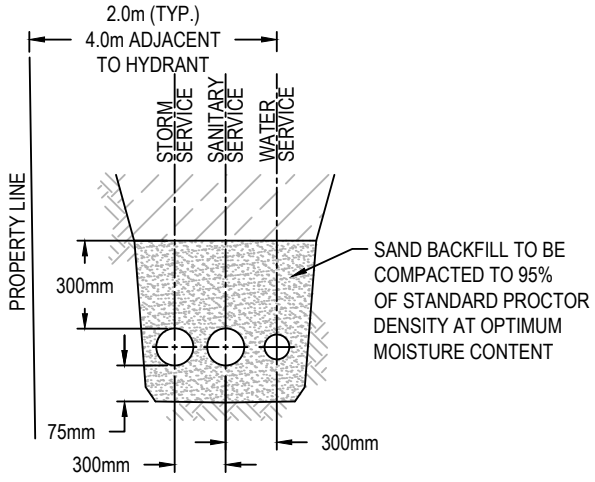
Date: Feb. 22, 2011

Drawing #: 7-300



NOTES:

1. ALL TRENCH WALLS SHALL BE SLOPED OR SHORED IN CONFORMANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY REGULATIONS CURRENTLY IN EFFECT
2. OD = OUTSIDE DIAMETER
3. SERVICE CONNECTIONS TO BE MADE BETWEEN THE 10:00 AND 2:00 POSITION.
4. INSTALL 100mm SERVICE PIPE FROM PLUG TO THE HOUSE CONNECTION.
   - MIN SLOPE = 2.0%
   - MAX BEND = 45° TOTAL
   - MAX NUMBER OF BENDS = 2
5. THE CITY OF LLOYDMINSTER ACCEPTS NO RESPONSIBILITY FOR THE CONSTRUCTION OR MAINTENANCE OF THE SERVICES BEYOND THE PROPERTY LINE.



SECTION A-A

NO.	DATE	REVISION
8		
7		
6		
5		
4	22/06/20	Revised Note 5
3	11/03/20	Revised Drawing & Notes
2	11/28/18	Revised Drawings & Title
1	4/14/16	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

Drawn by: N / A

Scale: N.T.S.

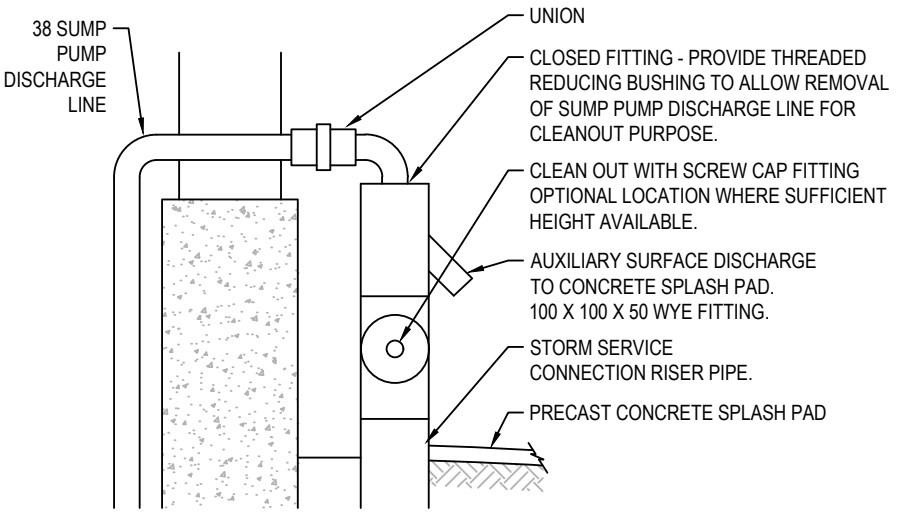
RESIDENTIAL RISER TYPE STORM SERVICE CONNECTION

Date: Feb. 22, 2011

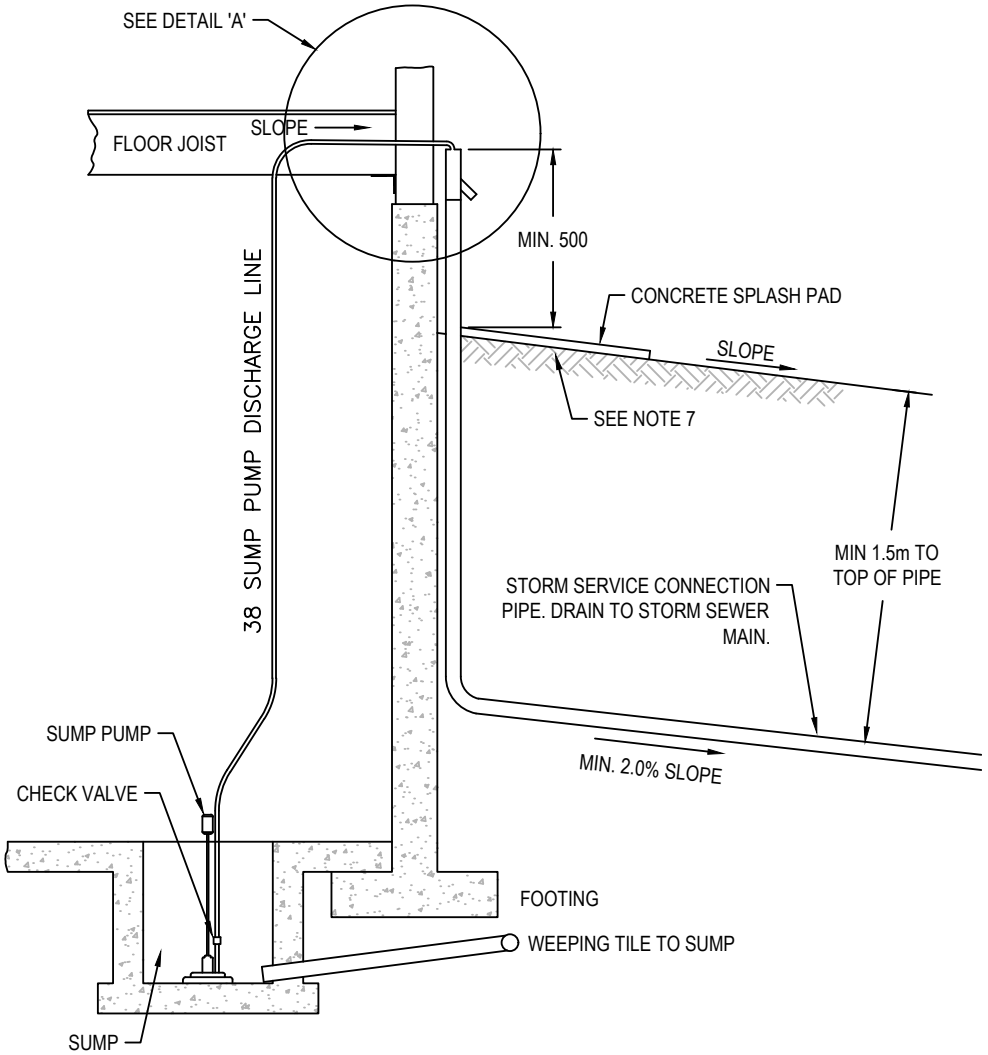
Drawing #: 7-301

NOTES:

1. ROOF LEADERS (DOWNSPOUTS) OR ANY OTHER STORM WATER SOURCE MUST NOT BE CONNECTED TO THE FOUNDATION DRAIN DISCHARGE COLLECTION SYSTEM.
2. THE AUXILIARY SURFACE DISCHARGE MUST BE INSTALLED TO PROVIDE AN OVERFLOW IN THE EVENT THAT THE STORM DRAINAGE SYSTEM CANNOT ACCOMMODATE FLOWS DUE TO BLOCKAGE OR OTHER PROBLEMS.
3. EVERY PART OF THE PLUMBING SYSTEM SHALL BE PROTECTED FROM FREEZING THROUGH THE USE OF AN APPROVED METHOD.
4. WEEPING TILES SHALL NOT BE CONNECTED TO THE SANITARY SYSTEM.
5. THE LOCATION OF THE POINT OF DISCHARGE SHALL BE DIRECTED AWAY FROM ADJACENT PROPERTIES.
6. THE DISCHARGE MAY NOT BE DIRECTED INTO THE SIDE YARD UNLESS THE SIDE YARD IS ADJACENT TO A STREET.
7. DISCHARGE MAY NOT BE DIRECTED ONTO A PERVIOUS GROUND SURFACE WITHIN ONE METRE (1m) OF ANY BUILDING.



DETAIL A



NO.	DATE	REVISION
8		
7		
6		
5		
4	05/05/20	Revised Text Height
3	11/03/20	Revised Text Height
2	21/10/16	Revised Notes
1	08/04/14	Removed San. service

The City of Lloydminster

Checked by:

Approved by:

Drawn by: N / A

Scale: N.T.S.

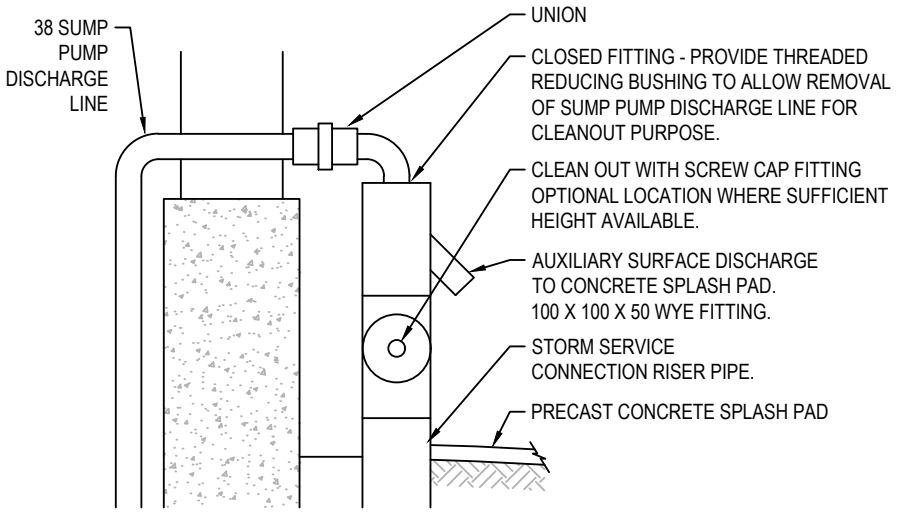
WEEPING TILE DISCHARGE TO STORM SERVICE

Date: Feb. 22, 2011

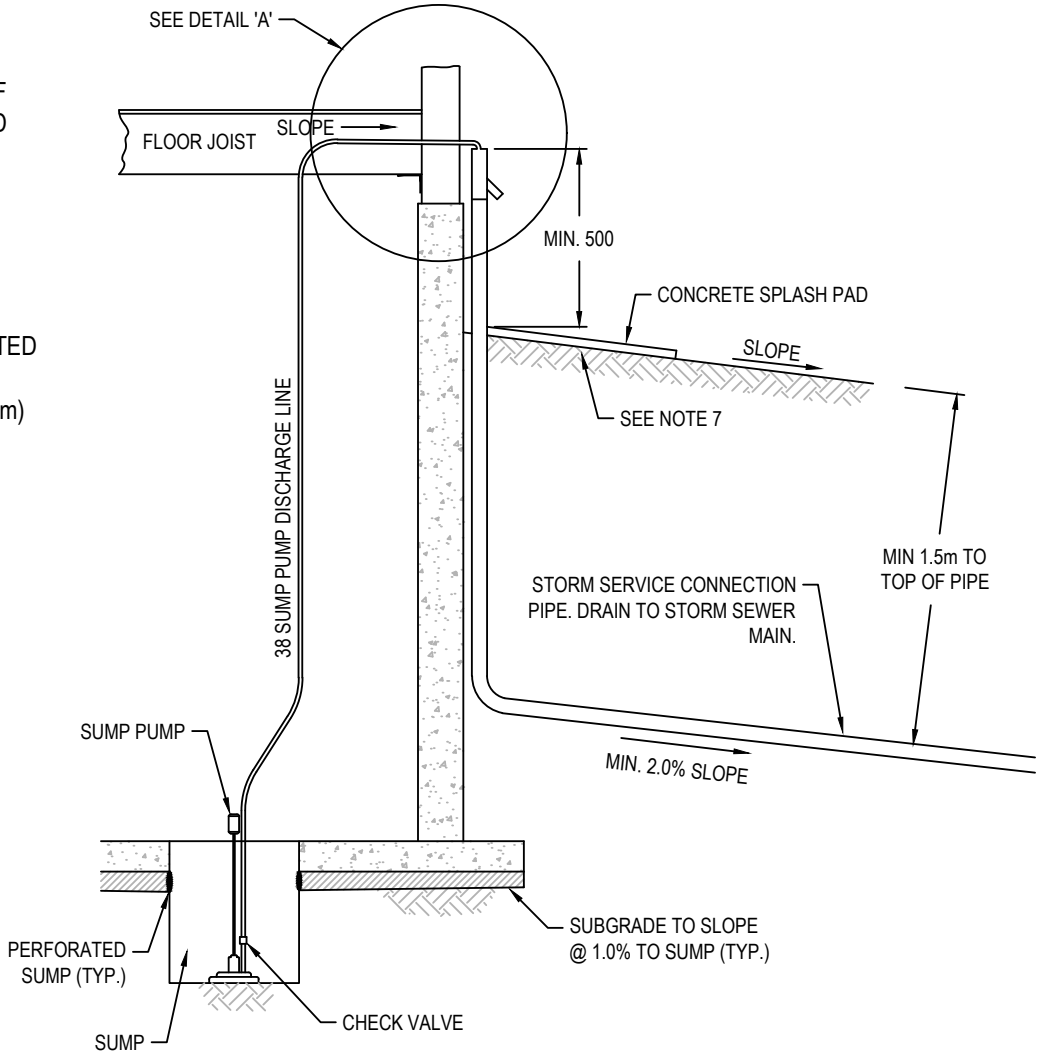
Drawing #: 7-302

NOTES:

1. ROOF LEADERS (DOWNSPOUTS) OR ANY OTHER STORM WATER SOURCE MUST NOT BE CONNECTED TO THE FOUNDATION DRAIN DISCHARGE COLLECTION SYSTEM.
2. THE AUXILIARY SURFACE DISCHARGE MUST BE INSTALLED TO PROVIDE AN OVERFLOW IN THE EVENT THAT THE STORM DRAINAGE SYSTEM CANNOT ACCOMMODATE FLOWS DUE TO BLOCKAGE OR OTHER PROBLEMS.
3. EVERY PART OF THE PLUMBING SYSTEM SHALL BE PROTECTED FROM FREEZING THROUGH THE USE OF AN APPROVED METHOD.
4. WEEPING TILES SHALL NOT BE CONNECTED TO THE SANITARY SYSTEM.
5. THE LOCATION OF THE POINT OF DISCHARGE SHALL BE DIRECTED AWAY FROM ADJACENT PROPERTIES.
6. THE DISCHARGE MAY NOT BE DIRECTED INTO THE SIDE YARD UNLESS THE SIDE YARD IS ADJACENT TO A STREET.
7. DISCHARGE MAY NOT BE DIRECTED ONTO A PERVIOUS GROUND SURFACE WITHIN ONE METRE (1m) OF ANY BUILDING.



DETAIL A



NO.	DATE	REVISION
8		
7		
6		
5		
4	05/05/20	Revised Text Height
3	11/03/20	Revised Text Height
2	21/10/16	Revised Notes
1	08/04/14	Removed San. service

The City of Lloydminster

Checked by:

Approved by:

Drawn by: N / A

Scale: N.T.S.

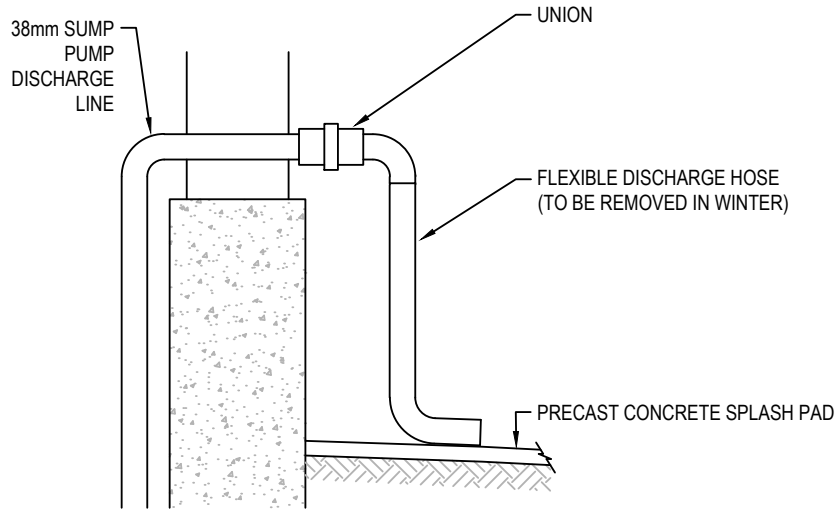
GRANULAR DRAINAGE DISCHARGE TO STORM SERVICE

Date: Feb. 22, 2011

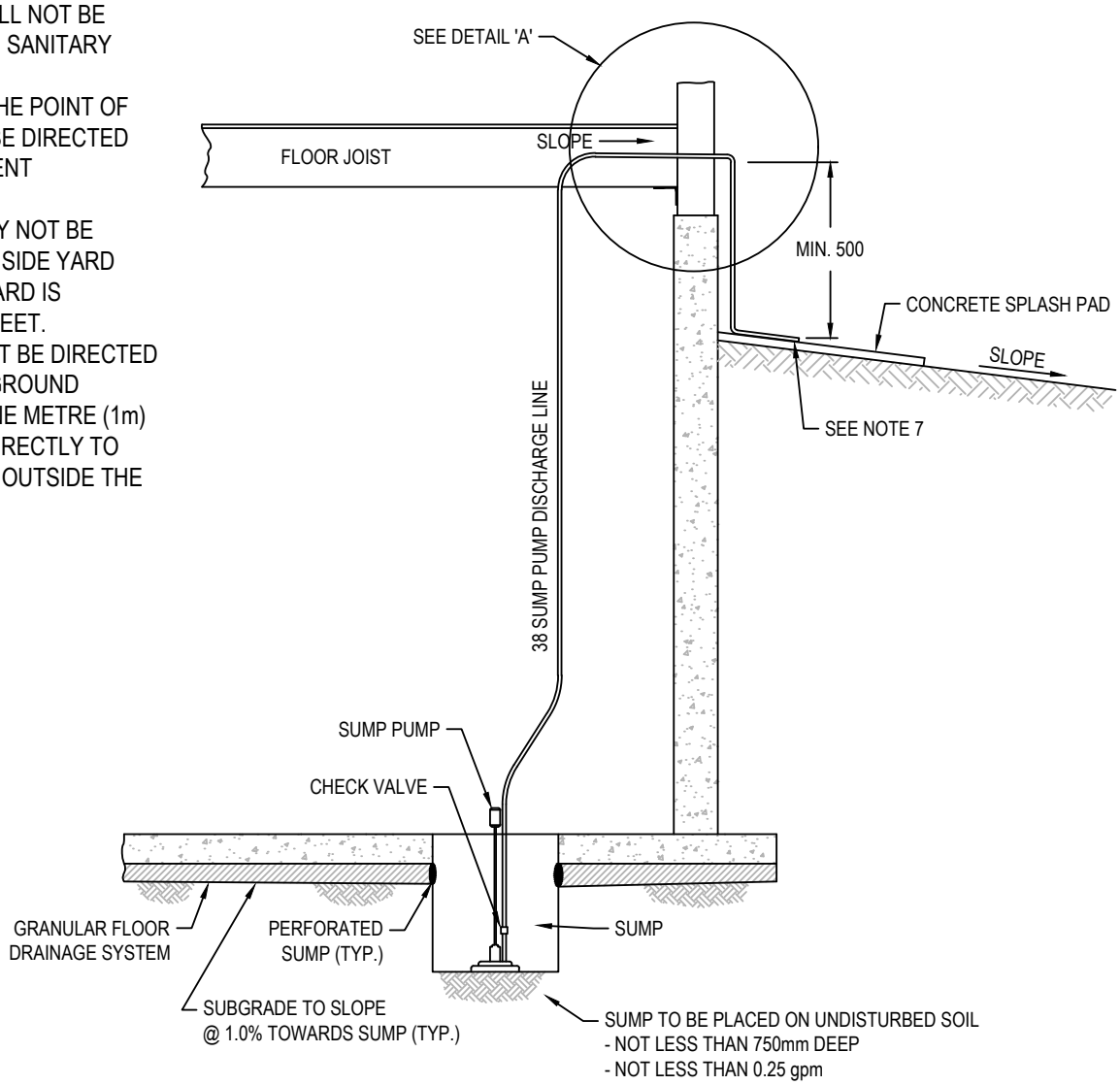
Drawing #: 7-303

NOTES:

1. ROOF LEADERS (DOWNSPOUTS) OR ANY OTHER STORM WATER SOURCE MUST NOT BE CONNECTED TO THE FOUNDATION DRAIN DISCHARGE COLLECTION SYSTEM.
2. THE AUXILIARY SURFACE DISCHARGE MUST BE INSTALLED TO PROVIDE AN OVERFLOW IN THE EVENT THAT THE STORM DRAINAGE SYSTEM CANNOT ACCOMMODATE FLOWS DUE TO BLOCKAGE OR OTHER PROBLEMS.
3. EVERY PART OF THE PLUMBING SYSTEM SHALL BE PROTECTED FROM FREEZING THROUGH THE USE OF AN APPROVED METHOD.
4. WEEPING TILES SHALL NOT BE CONNECTED TO THE SANITARY SYSTEM.
5. THE LOCATION OF THE POINT OF DISCHARGE SHALL BE DIRECTED AWAY FROM ADJACENT PROPERTIES.
6. THE DISCHARGE MAY NOT BE DIRECTED INTO THE SIDE YARD UNLESS THE SIDE YARD IS ADJACENT TO A STREET.
7. DISCHARGE MAY NOT BE DIRECTED ONTO A PERVIOUS GROUND SURFACE WITHIN ONE METRE (1m) OF ANY BUILDING, DIRECTLY TO PROPERTY LINE, OR OUTSIDE THE PROPERTY.



DETAIL A



NO.	DATE	REVISION
8		
7		
6		
5		
4	05/05/20	Revised Text Height
3	11/03/20	Revised Text Height
2	21/10/16	Revised Notes
1	16/11/15	Changed note number

The City of Lloydminster

Checked by: | Approved by: | Drawn by: N / A

Scale: N.T.S.

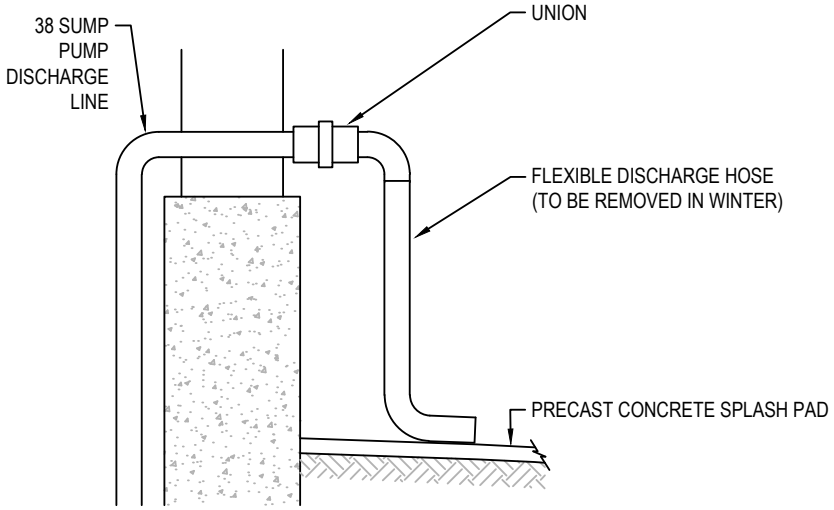
GRANULAR DRAINAGE OVERLAND DISCHARGE IF STORM SERVICE IS NOT AVAILABLE

Date: Feb. 22, 2011

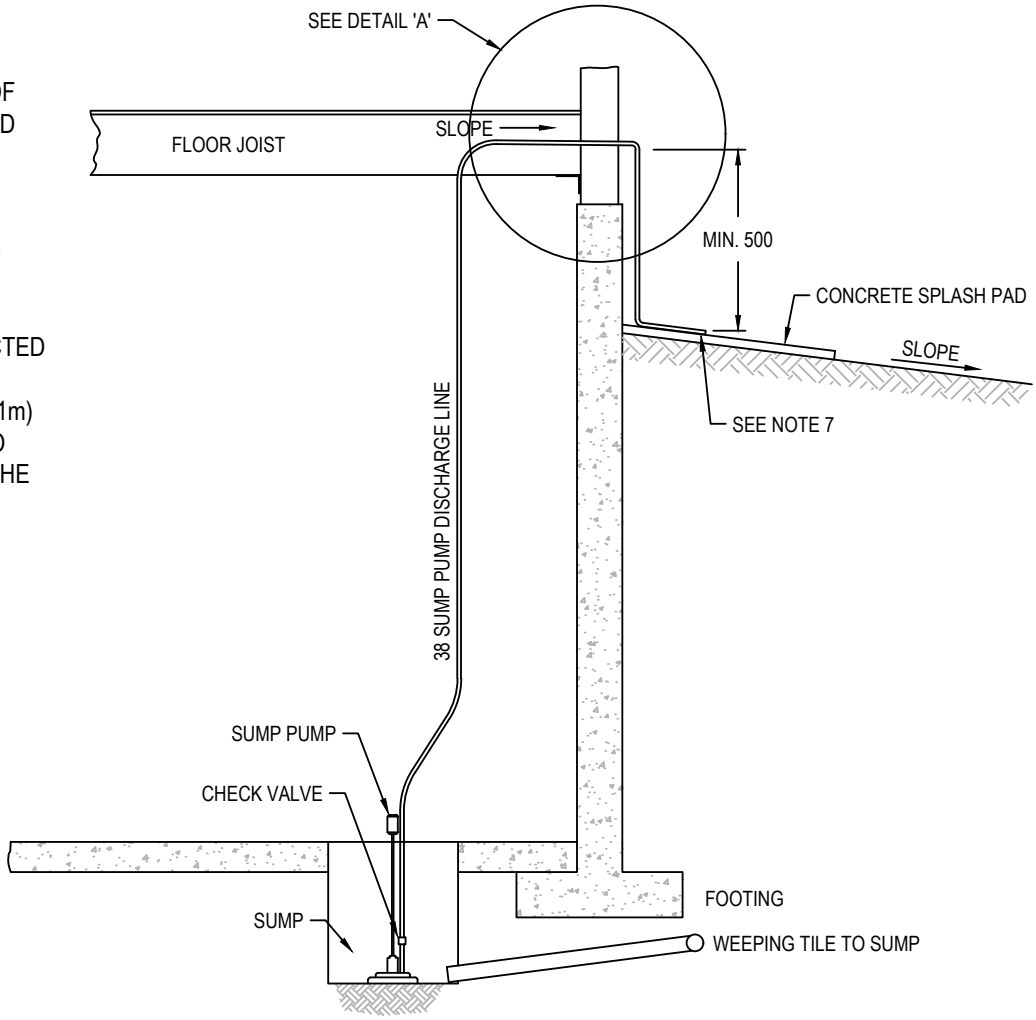
Drawing #: 7-304

NOTES:

1. ROOF LEADERS (DOWNSPOUTS) OR ANY OTHER STORM WATER SOURCE MUST NOT BE CONNECTED TO THE FOUNDATION DRAIN DISCHARGE COLLECTION SYSTEM.
2. THE AUXILIARY SURFACE DISCHARGE MUST BE INSTALLED TO PROVIDE AN OVERFLOW IN THE EVENT THAT THE STORM DRAINAGE SYSTEM CANNOT ACCOMMODATE FLOWS DUE TO BLOCKAGE OR OTHER PROBLEMS.
3. EVERY PART OF THE PLUMBING SYSTEM SHALL BE PROTECTED FROM FREEZING THROUGH THE USE OF AN APPROVED METHOD.
4. WEEPING TILES SHALL NOT BE CONNECTED TO THE SANITARY SYSTEM.
5. THE LOCATION OF THE POINT OF DISCHARGE SHALL BE DIRECTED AWAY FROM ADJACENT PROPERTIES.
6. THE DISCHARGE MAY NOT BE DIRECTED INTO THE SIDE YARD UNLESS THE SIDE YARD IS ADJACENT TO A STREET.
7. DISCHARGE MAY NOT BE DIRECTED ONTO A PERVIOUS GROUND SURFACE WITHIN ONE METRE (1m) OF ANY BUILDING, DIRECTLY TO PROPERTY LINE, OR OUTSIDE THE PROPERTY.



DETAIL A



NO.	DATE	REVISION
8		
7		
6		
5		
4	05/05/20	Revised Text Height
3	11/03/20	Revised Text Height
2	21/10/16	Revised Notes
1	16/11/15	Changed Note Number

The City of Lloydminster

Checked by:

Approved by:

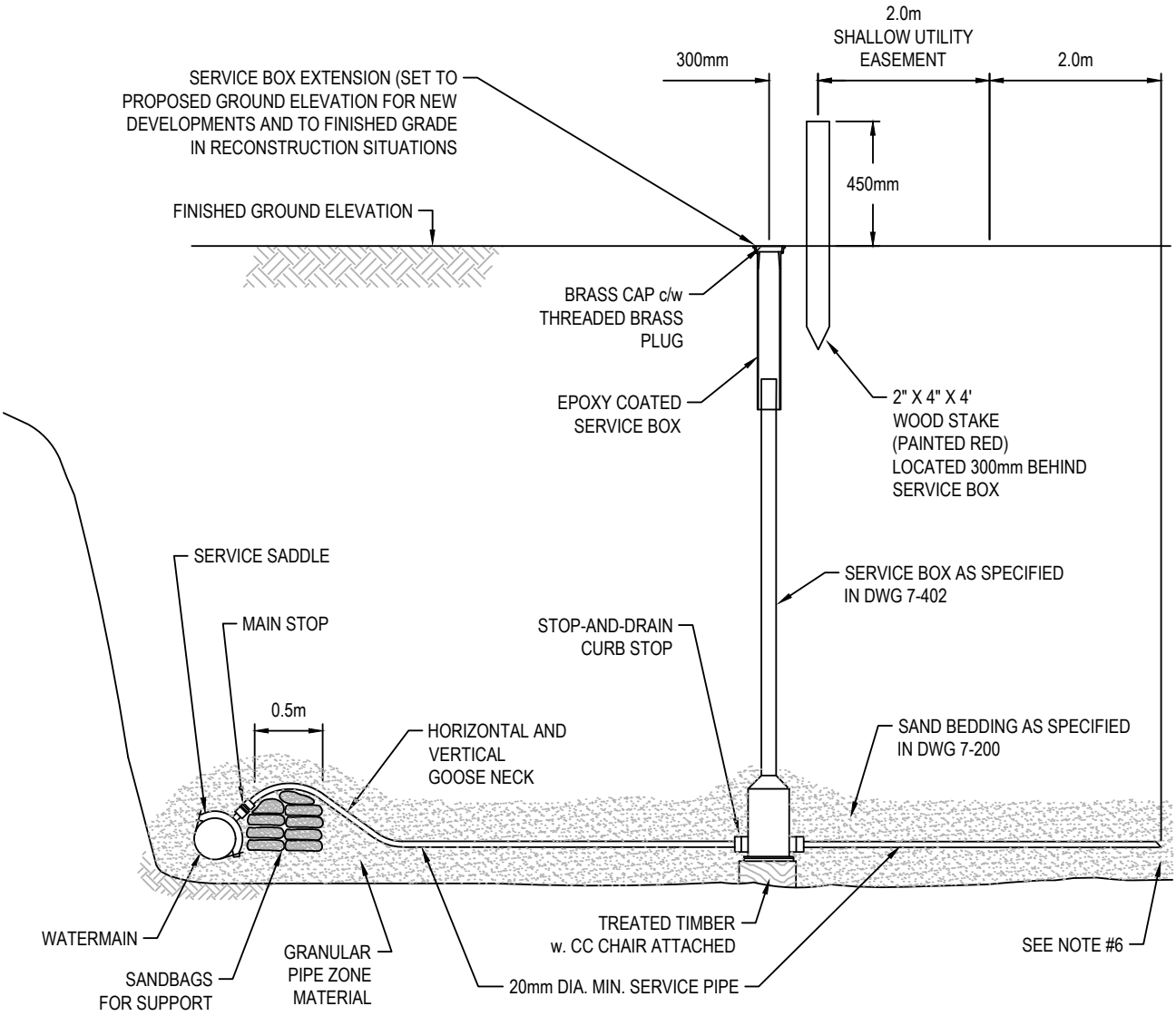
Drawn by: N / A

Scale: N.T.S.

WEEPING TILE OVERLAND DISCHARGE IF STORM SERVICE IS NOT AVAILABLE

Date: Feb. 22, 2011

Drawing #: 7-305



NOTES:

1. SERVICES TO BE INSTALLED AT RIGHT ANGLES TO WATERMAINS WHERE POSSIBLE.
2. SERVICE BOXES TO BE INSTALLED PLUMB. 150mm ABOVE THE SIDEWALK/CURB WHEN THE SERVICE BOX IS IN THE EXTENDED POSITION.
3. SERVICE PIPE TO BE UNIFORM DIAMETER AND CONTINUOUS FROM UNION AT CC STOP TO WATER METER.
4. MINIMUM COVER OVER SERVICE PIPES TO BE 2.85m AT THE PROPERTY LINE.
5. THE END OF THE WATER SERVICE SHALL NOT BE CRIMPED CLOSED. PERMEABLE FILTER CLOTH WILL BE USED TO PREVENT INTRUSION OF DEBRIS AND TO ALLOW TESTING FLOW OF CURBSTOP.
6. INSTALL UNION 4.0m FROM CC.
7. SERVICE BOX TO BE ADJUSTED TO BE SET FLUSH WITH FINISHED SURFACE IN BOULEVARDS. IN CONCRETE DRIVE WAYS, SERVICE BOX IS TO EITHER BE SET FLUSH WITH FINISHED SURFACE OR RECESSED BENEATH A REMOVABLE CAP.
8. SEE DWG. 7-402 FOR SERVICE BOX DETAILS.

NO.	DATE	REVISION
8		
7		
6		
5		
4	11/03/20	Revised Notes & Detail
3	23/03/18	Revised Notes & Detail
2	22/11/16	Revised Notes
1	4/14/16	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

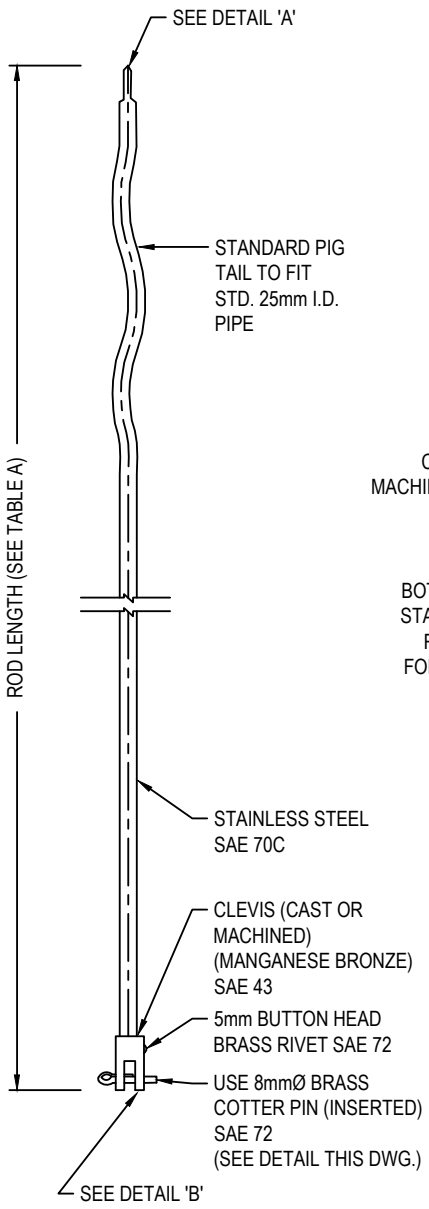
Drawn by: L. LEEPER

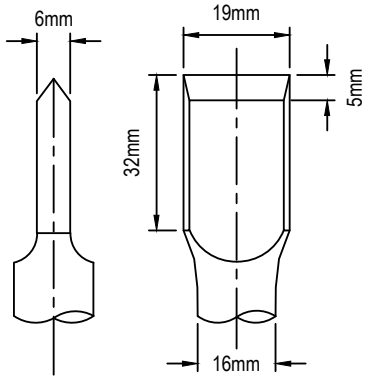
Scale: N.T.S.

RESIDENTIAL WATER SERVICE CONNECTION

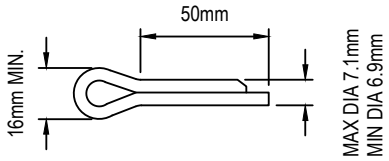
Date: Feb. 22, 2011

Drawing #: 7-400

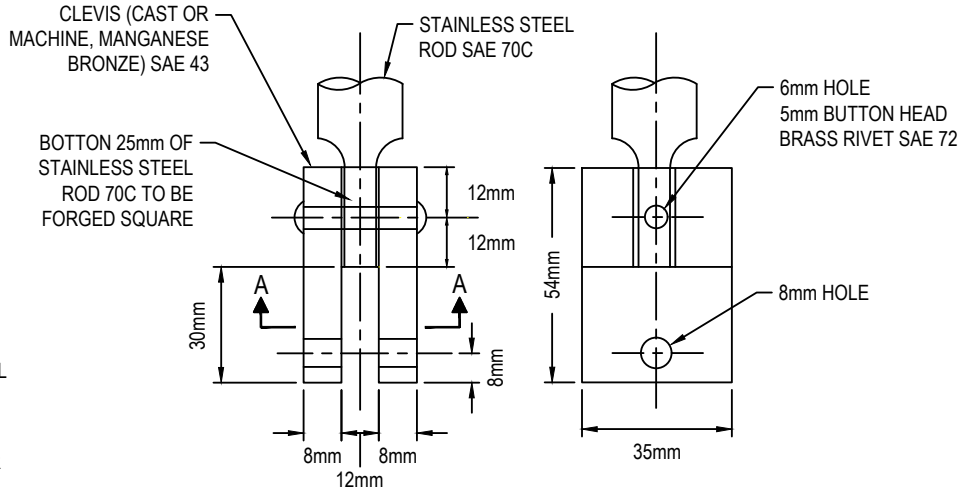




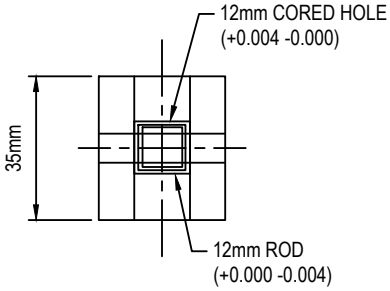
DETAIL 'A'



BRASS COTTER PIN DETAIL



DETAIL 'B'



SECTION A-A

TABLE A

DEPTH OF COVER	ROD LENGTH	CASING LENGTH
2.4m	2.15m	1.97m
2.85m	2.60m	2.42m
3.0m	2.75m	2.57m
3.3m	3.05m	2.87m

NO.	DATE	REVISION
8		
7		
6		
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3		
2		
1		

The City of Lloydminster

Checked by:

Approved by:

Drawn by: L. LEEPER

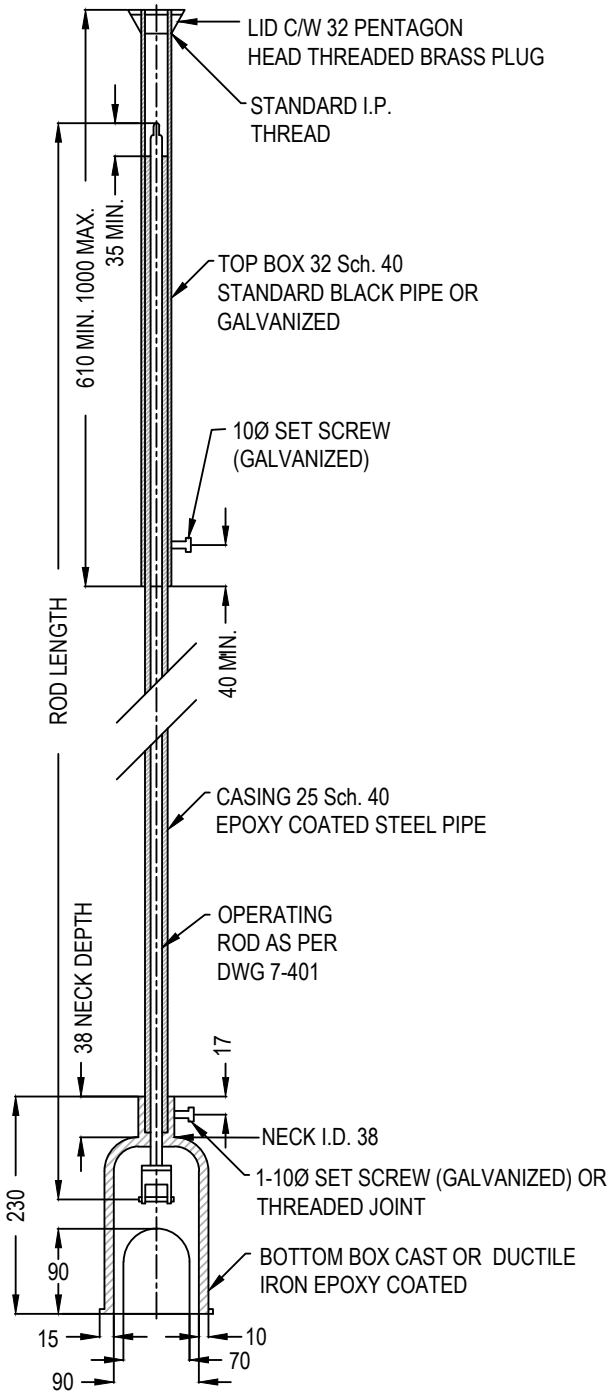
Scale: N.T.S.

SERVICE VALVE ROD FOR 20mm, 25mm, 38mm, 50mm CURB STOPS

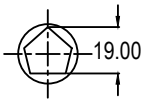
Date: Feb. 22, 2011

Drawing #: 7-401

FOR 20mm & 25mm VALVES

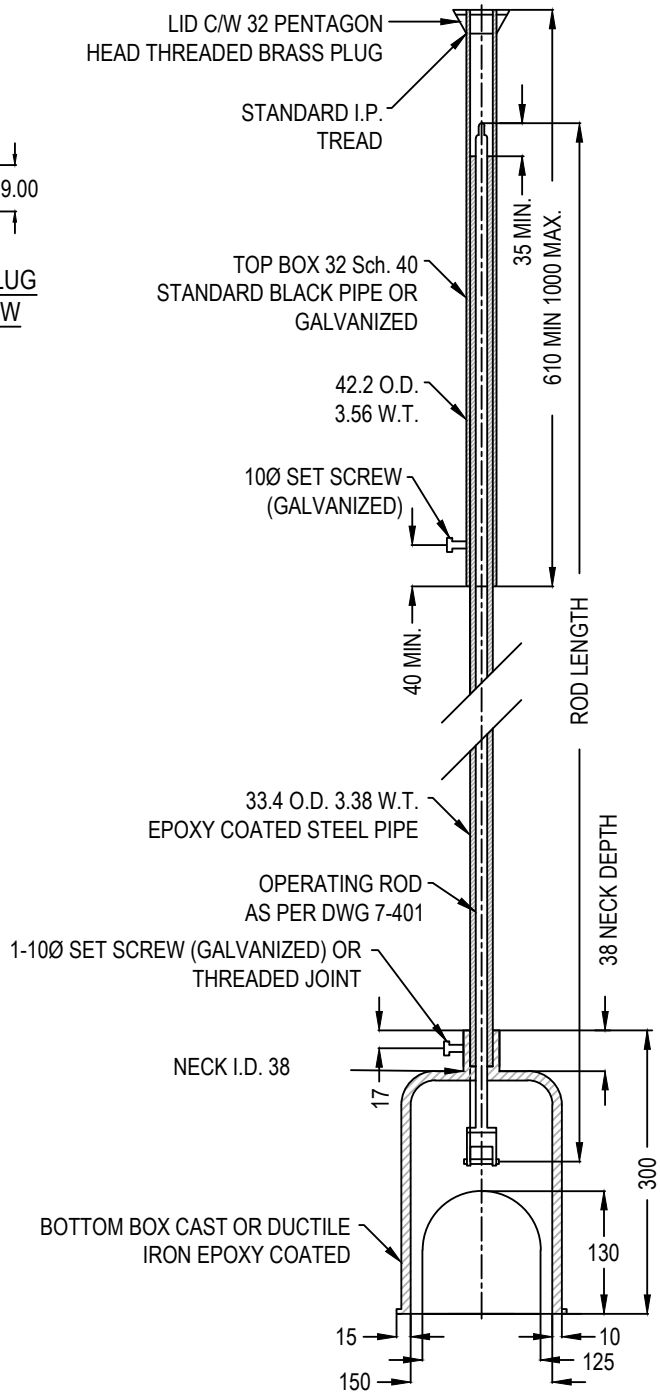


SMALL BOOT FOR
20mm & 25mm SERVICE



BRASS PLUG
TOP VIEW

FOR 40mm & 50mm VALVES



LARGE BOOT FOR
40mm & 50mm SERVICE

NOTES:

1. THE EXTERIOR & INTERIOR OF THE BOTTOM BOX SHALL BE FACTORY COATED.
2. GREY CAST IRON SHALL CONFORM TO ASTM A-48 CLASS 25 (LATEST EDITION).
3. OPERATING RODS TO BE AS PER DWG 7-401.

NO.	DATE	REVISION
8		
7		
6		
5	22/06/20	Underlined Detail Names
4	05/05/20	Changed Text Ht, Rem. "mm"
3	11/03/20	Changed Text Ht, Added Note 3
2	3/22/18	Revised Notes
1	2/3/17	Revised Lineweight

The City of Lloydminster

Checked by:

Approved by:

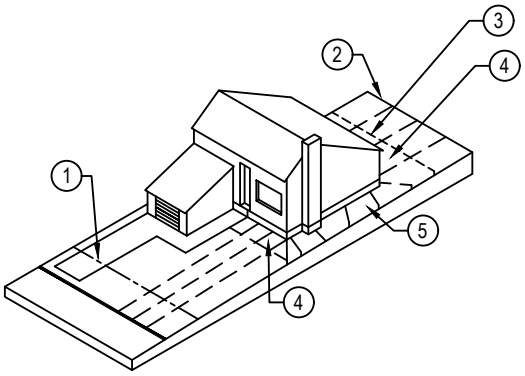
Drawn by: A. Edwards

Scale: N.T.S.

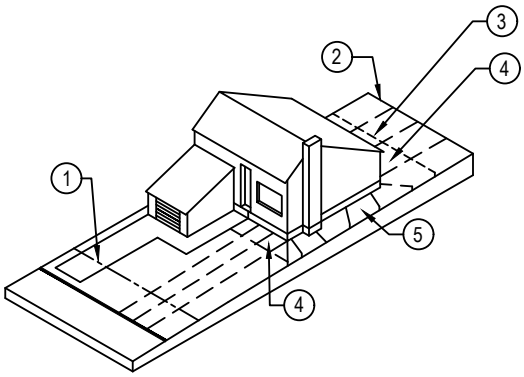
SERVICE BOX

Date: Nov 23, 2016

Drawing #: 7-402



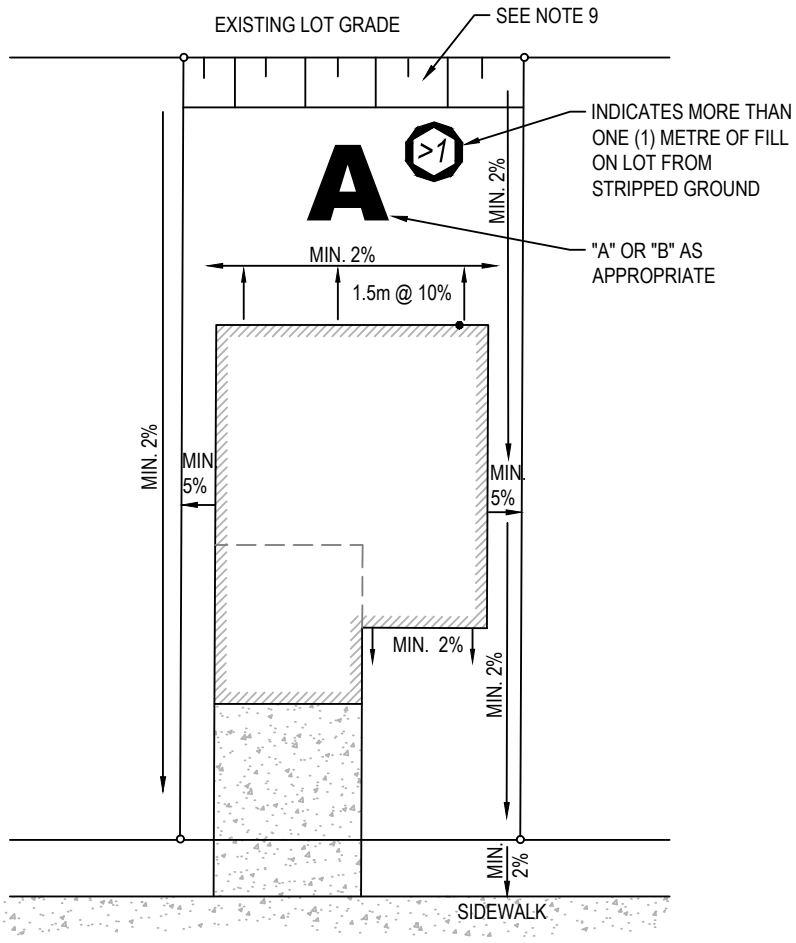
TYPE A
2-3% OVERALL LOT SLOPE
REAR TO FRONT DRAINAGE



TYPE B
3-6% OVERALL LOT SLOPE
REAR TO FRONT DRAINAGE

NOTES:

1. FRONT PROPERTY LINE.
2. REAR PROPERTY LINE.
3. TYPICAL RELATIVE HIGH POINT ACROSS YARD DRAINAGE MAY BE SPLIT FROM CENTER OR ALL SLOPED TO LOW SIDE.TYPICAL 2.0% MIN. CROSS YARD SLOPES.
4. 2% MIN. SLOPE AWAY FROM BLDG.
5. 3.0m @ 5% MIN. SLOPE FROM WALL TO PROPERTY LINE.
6. MINIMUM GARAGE SLAB ELEVATION TO BE SET 0.36m ABOVE HIGHEST FRONT CORNER LOT ELEVATION.
7. ALL INTERIOR SLOPES, INCLUDING CONCRETE DRIVEWAYS, SIDEWALKS AND PATIOS TO BE A MINIMUM OF 2%.
8. DRIVEWAY SLOPE SHOULD BE LESS THAN 8.3%. SLOPES GREATER THAN 10.0% REQUIRE APPROVAL FROM THE CITY.
9. WHERE DESIGN BACK OF LOT ELEVATIONS ARE MUCH MORE THAN 2% ABOVE FRONT, A 10m SECTION OF LOT CAN BE SLOPED AT 3% MIN.
10. WHERE LOT BEHIND HAS SPLIT DRAINAGE, THIS LOT MUST ACCOMMODATE THE DRAINAGE FROM THE REAR OF THE LOT BEHIND IT.
11. ESTABLISHING AND MAINTAINING LOT GRADING AND DRAINAGE IS THE RESPONSIBILITY OF THE PROPERTY OWNER.



NO.	DATE	REVISION
8		
7		
6	05/05/20	Rev. Text Height
5	11/03/20	Revised Notes & Drawing
4	11/28/18	Revised Notes
3	1/27/17	Revised Notes
2	4/14/16	Revised Notes
1	08/06/15	Added min. drop to Note 5

The City of Lloydminster

Checked by:

Approved by:

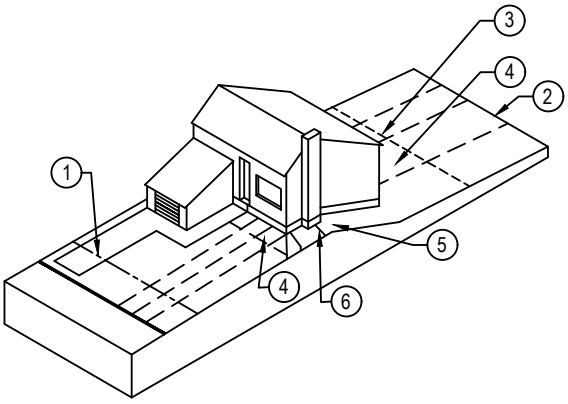
Drawn by: N / A

Scale: N.T.S.

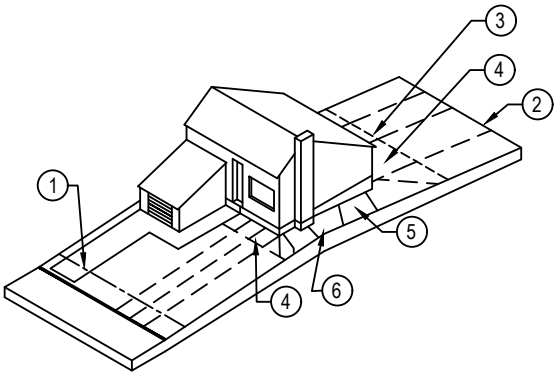
LOT GRADING
BACK TO FRONT DRAINAGE

Date: Feb. 22, 2011

Drawing #: 8-100



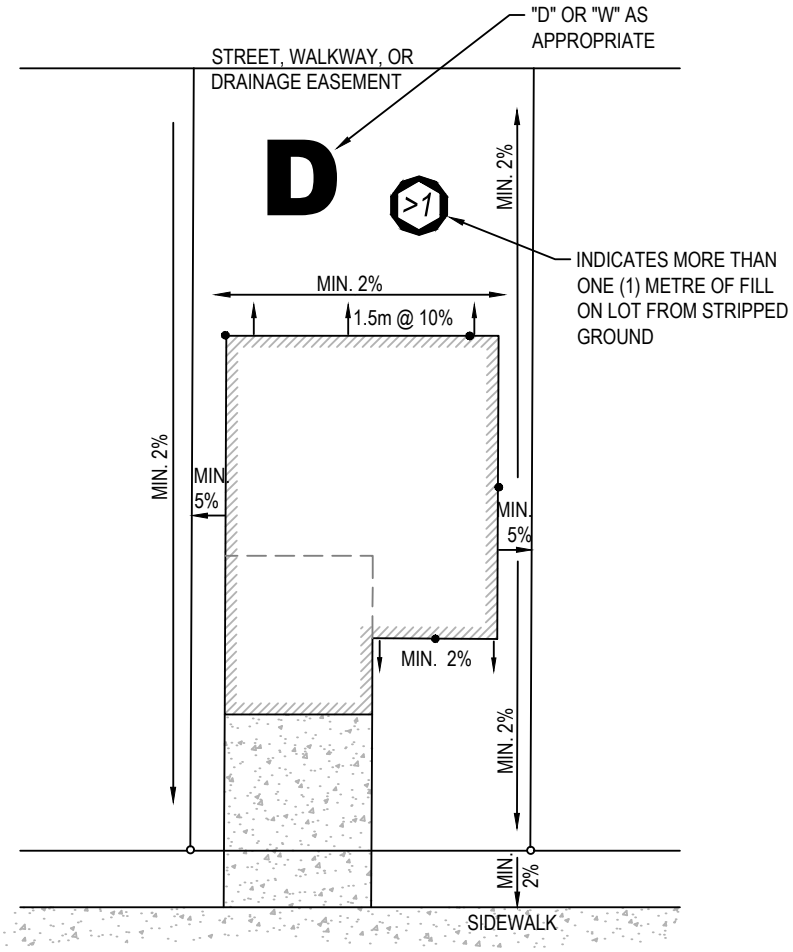
TYPE W
WALKOUT BASEMENT
SPLIT DRAINAGE



TYPE D
STANDARD SPLIT DRAINAGE

NOTES:

1. FRONT PROPERTY LINE.
2. REAR PROPERTY LINE.
3. TYPICAL RELATIVE HIGH POINT ACROSS YARD DRAINAGE MAY BE SPLIT FROM CENTRE OR ALL SLOPED TO LOW SIDE.TYPICAL 1.5% MIN. CROSS YARD SLOPES.
4. 2% MIN. SLOPE AWAY FROM BLDG.
5. 3.0m @ 5% MIN. SLOPE FROM WALL TO PROPERTY LINE.
6. HIGH POINT - VARIES.
7. MINIMUM GARAGE SLAB ELEVATION TO BE SET 0.36m ABOVE HIGHEST FRONT CORNER LOT ELEVATION.
8. ALL INTERIOR SLOPES, INCLUDING CONCRETE DRIVEWAYS, SIDEWALKS AND PATIOS TO BE A MINIMUM OF 2%.
9. DRIVEWAY SLOPE SHOULD BE LESS THAN 8.3%. SLOPES GREATER THAN 10.0% REQUIRE APPROVAL FROM THE CITY.
10. HIGH POINT MAY BE AT FRONT, REAR, OR MID-POINT, DEPENDANT ON HOUSE DESIGN AND RELATIVE ELEVATIONS OF LOT CORNERS.
11. ESTABLISHING AND MAINTAINING LOT GRADING AND DRAINAGE IS THE RESPONSIBILITY OF THE PROPERTY OWNER.



NO.	DATE	REVISION
8		
7		
6	05/05/20	Revised Text Height
5	11/03/20	Revised Notes and Drawing
4	11/29/18	Revised Notes
3	1/27/17	Revised Notes
2	4/14/16	Revised Notes
1	08/06/15	Added Min. drop to Note 5

The City of Lloydminster

Checked by:

Approved by:

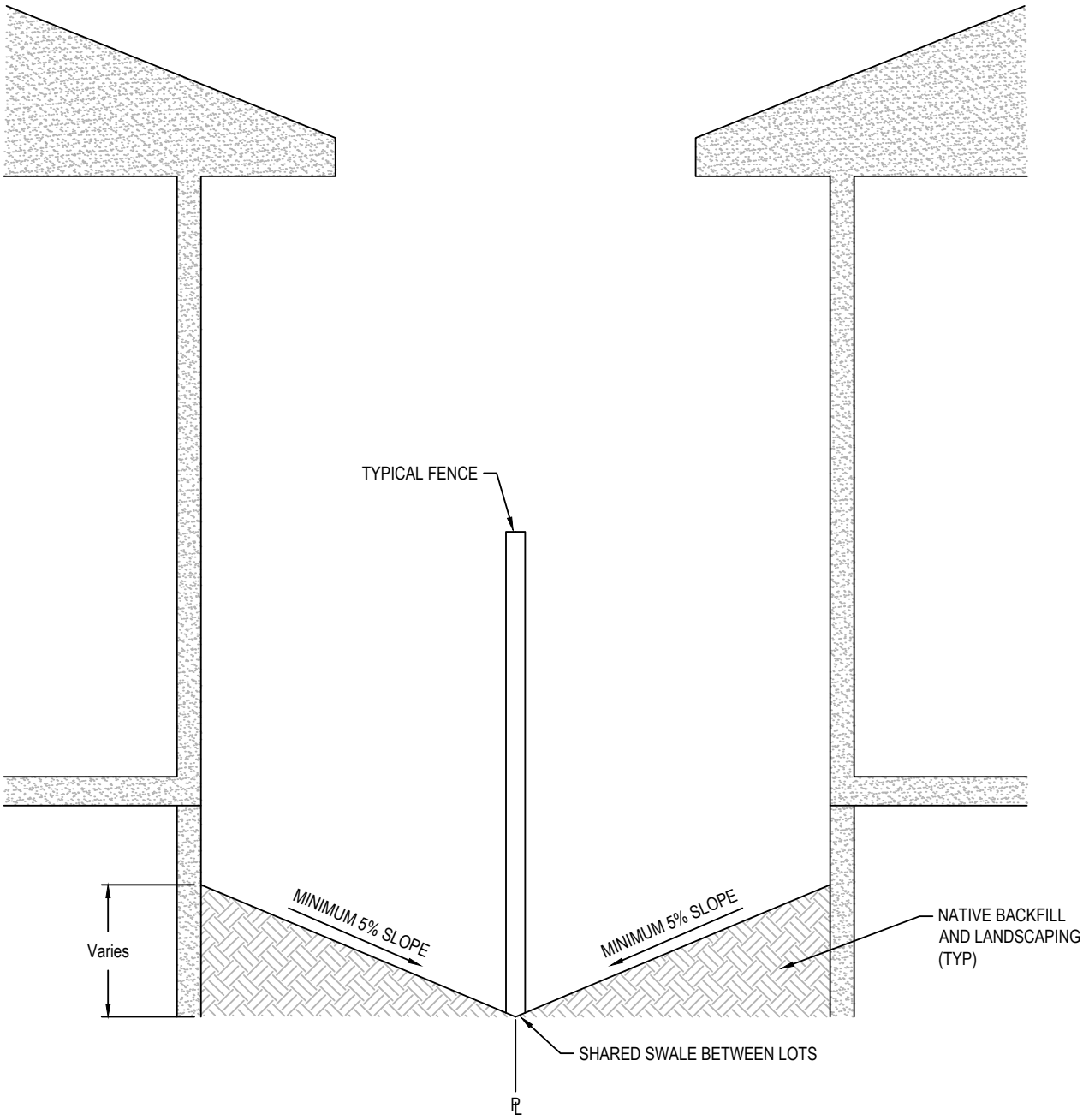
Drawn by: N / A

Scale: N.T.S.

LOT GRADING
SPLIT DRAINAGE

Date: Feb. 22, 2011

Drawing #: 8-101



NOTES:

1. SLOPE OF SHARED SWALE MUST BE CONSISTENT WITH THE DESIGN SIDE LOT SLOPE.
2. ROOF LEADERS MUST BE ANGLED IN THE DIRECTION OF FLOW.
3. ESTABLISHING AND MAINTAINING LOT GRADING AND DRAINAGE IS THE RESPONSIBILITY OF THE PROPERTY OWNER.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3	22/06/20	Revised Notes Height
2	11/29/18	Revised Notes
1	02/03/16	Revised height req'd

The City of Lloydminster

Checked by:

Approved by:

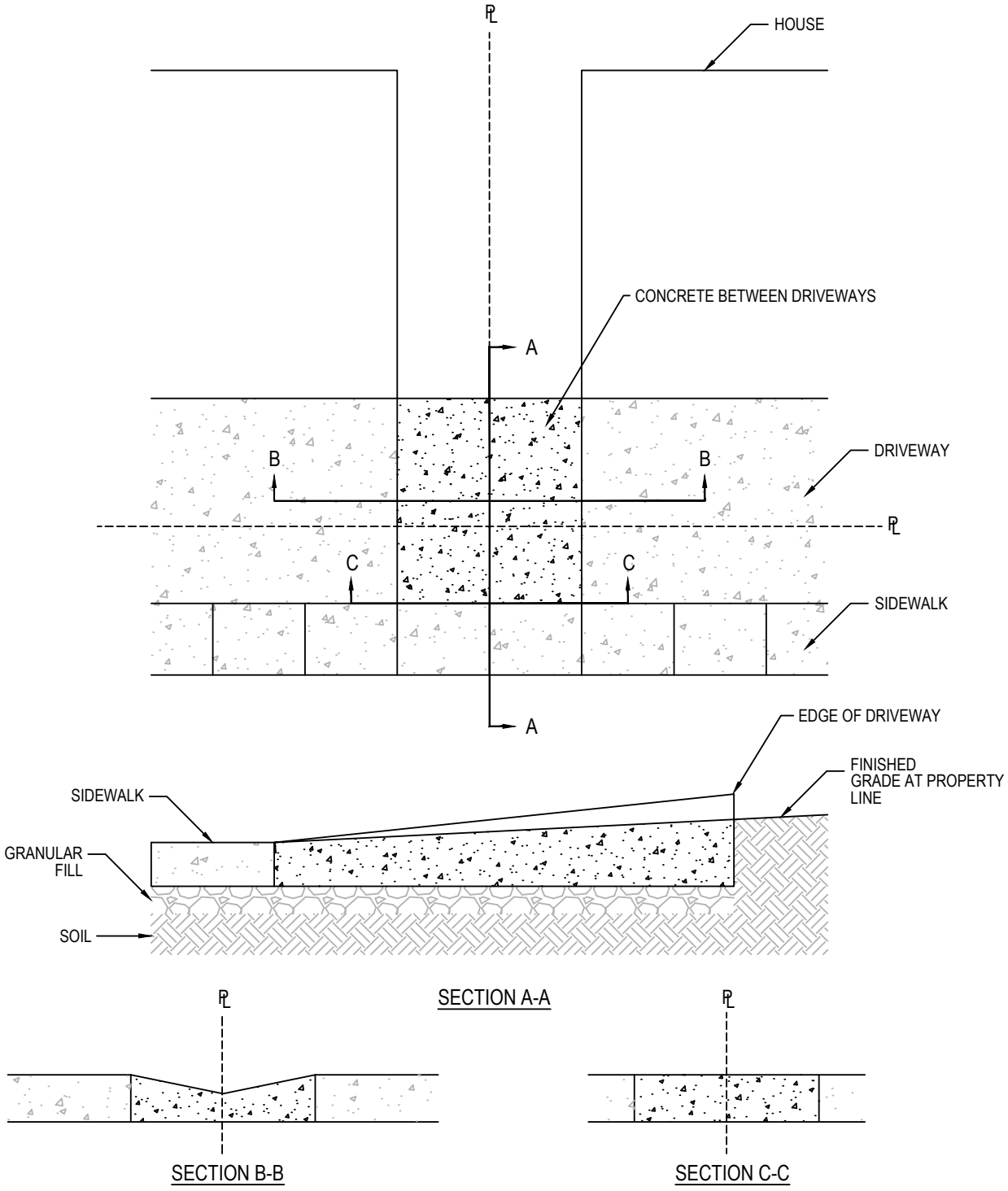
Drawn by: L. LEEPER

Scale: N.T.S.

SHARED DRAINAGE BETWEEN LOTS

Date: June 8, 2015

Drawing #: 8-102



NOTES:

1. SLOPE OF CONCRETE AT FINISHED DRIVEWAY TO MATCH DESIGN SLOPE OF FINISHED GRADE.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3	05/05/20	Revised Hatch Style
2	11/03/20	Revised Drawing
1	11/29/18	Revised Drawing

The City of Lloydminster

Checked by:

Approved by:

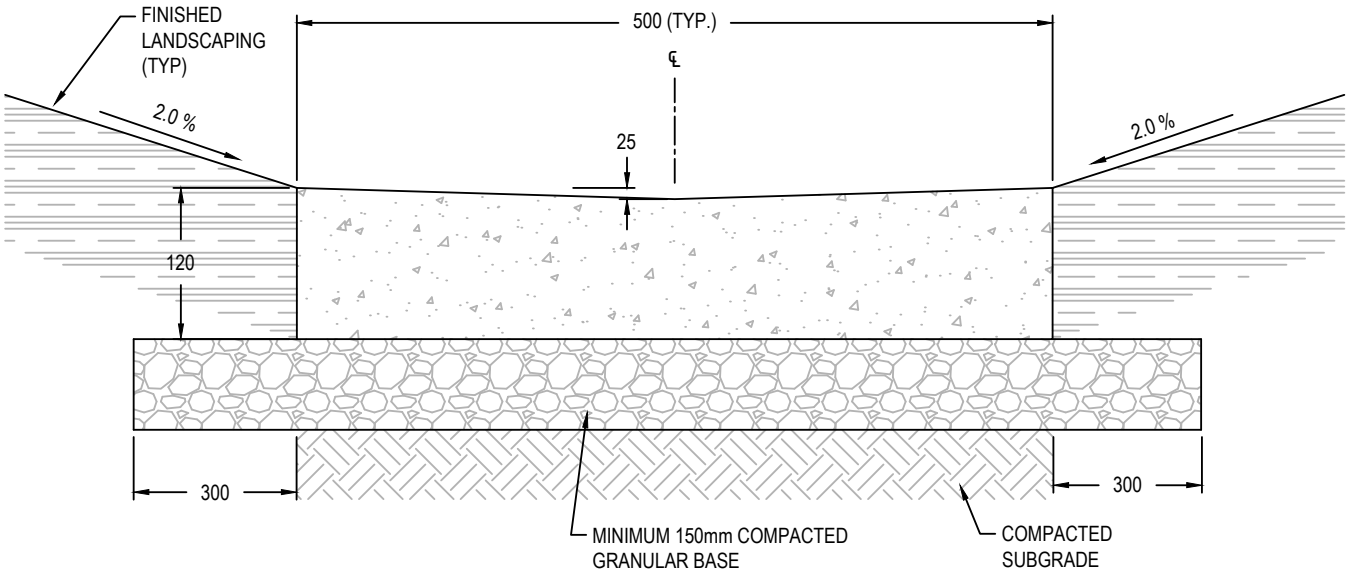
Drawn by: A. EDWARDS

Scale: N.T.S.

CONCRETE BETWEEN DRIVEWAYS

Date: Jan 26 2017

Drawing #: 8-103



NOTES:

1. CONCRETE TO BE TYPE HS, 32 MPa COMPRESSIVE STRENGTH AT 28 DAYS WITH 5% TO 8% AIR ENTRAINMENT.
2. COMPACT BACKFILL TO 95% FOR 500mm FROM BACK OF SWALE AND PROVIDE POSITIVE DRAINAGE OVER THE TOP OF SWALE.
3. CONTRACTION JOINTS 50mm DEEP AND 5mm WIDE TO BE CONSTRUCTED AT 3.0m INTERVALS.
4. EXPANSION JOINTS TO BE CONSTRUCTED AT ENDS OF SWALE WHERE SWALE ABUTS GUTTERS.

NO.	DATE	REVISION
8		
7		
6	11/03/20	Revised Slope Text & Hatch
5	01/04/19	Revised Drawings
4	11/29/18	Revised Notes & Drawings
3	4/14/16	Revised Notes
2	10/12/13	Updated concrete notes
1	21/03/13	Updated concrete type

The City of Lloydminster

Checked by:

Approved by:

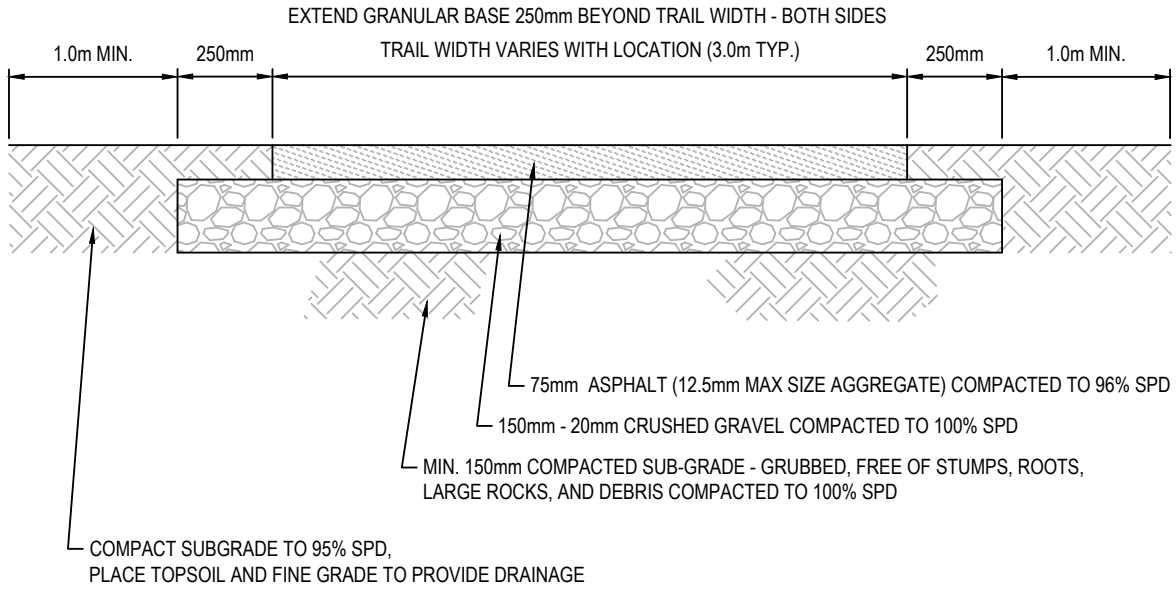
Drawn by: L. LEEPER

Scale: N.T.S.

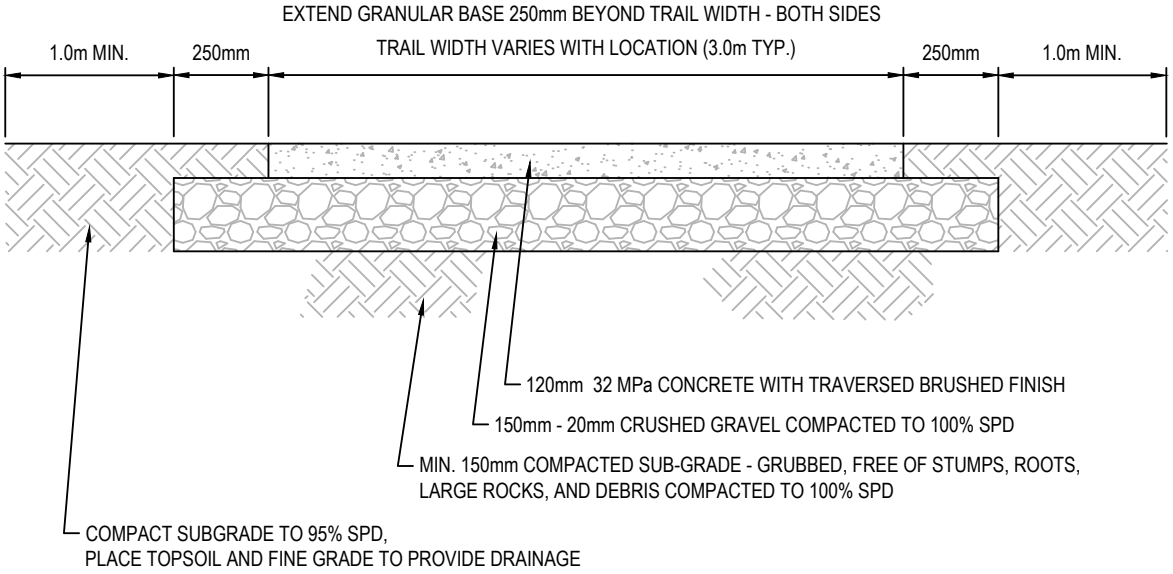
CONCRETE DRAINAGE SWALE (LANDSCAPING)

Date: Feb. 22, 2011

Drawing #: 8-200



ASPHALT CROSS SECTION



CONCRETE CROSS SECTION

NOTES:

1. WIDTH MAY VARY WITH LOCATION.
2. HORIZONTAL CLEARANCE MIN WIDTH OF 1000mm FROM EDGE OF TRAIL.
3. CONTRACTION JOINTS 50mm DEEP AND 5mm WIDE TO BE CONSTRUCTED AT 3.0m INTERVALS.
4. ADJACENT GRADES ARE TO SLOPE AWAY FROM THE TRAIL WHEREVER POSSIBLE
5. CROSS-SLOPE TO BE IN THE DIRECTION OF SURFACE DRAINAGE (MIN. 2.0%).

NO.	DATE	REVISION
8		
7		
6		
5		
4	22/06/20	Revised Note 3
3	3/22/18	Revised Notes
2	4/14/16	Revised Compaction %
1	24/03/14	Changed concrete strength

The City of Lloydminster

Checked by:

Approved by:

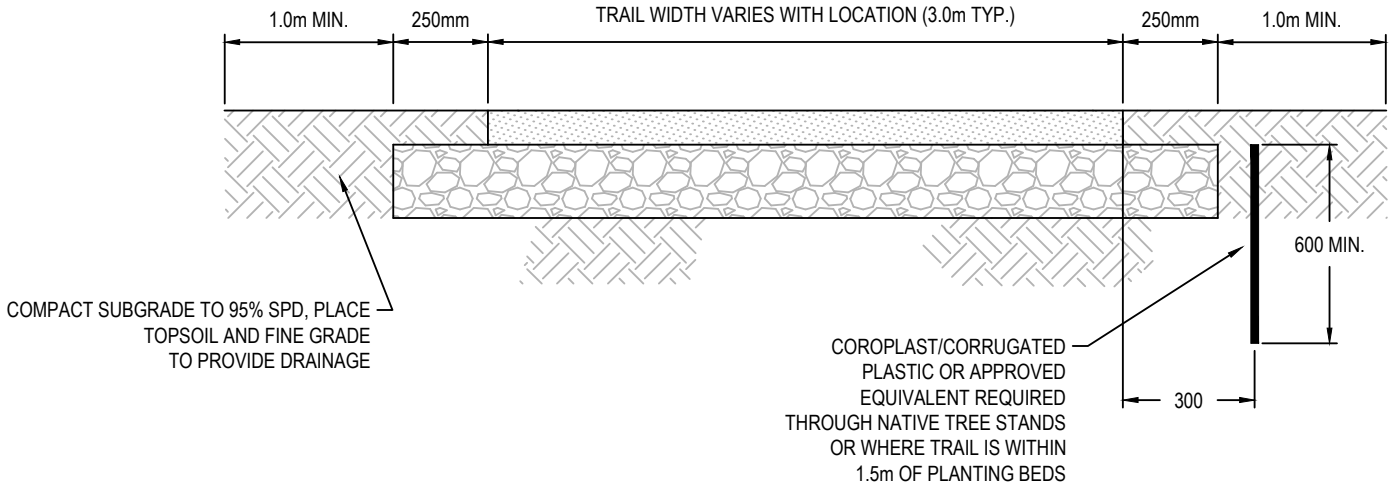
Drawn by: L. LEEPER

Scale: N.T.S.

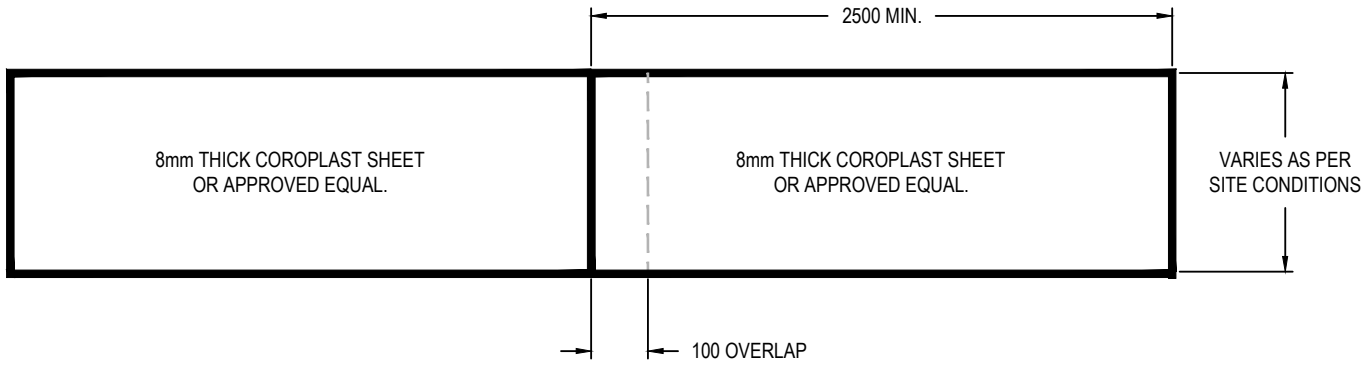
STANDARD TRAIL

Date: Feb. 22, 2011

Drawing #: 9-100



ASPHALT CROSS SECTION



ELEVATION

NOTES:

1. DEPTH OF ROOT BARRIER VARIES ACCORDING TO PLANT AND MANUFACTURER'S RECOMMENDATIONS.
2. A TRENCH SHOULD BE DUG FOR THE ROOT BARRIER PRIOR TO IT BEING INSTALLED IN THE GROUND.
3. ROOT BARRIER SHOULD BE BURIED FLUSH WITH ROUGH GRADE.
4. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
5. TRAIL STRUCTURE AS PER DWG 9-100.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1	11/29/18	Revised Notes

The City of Lloydminster

Checked by:

Approved by:

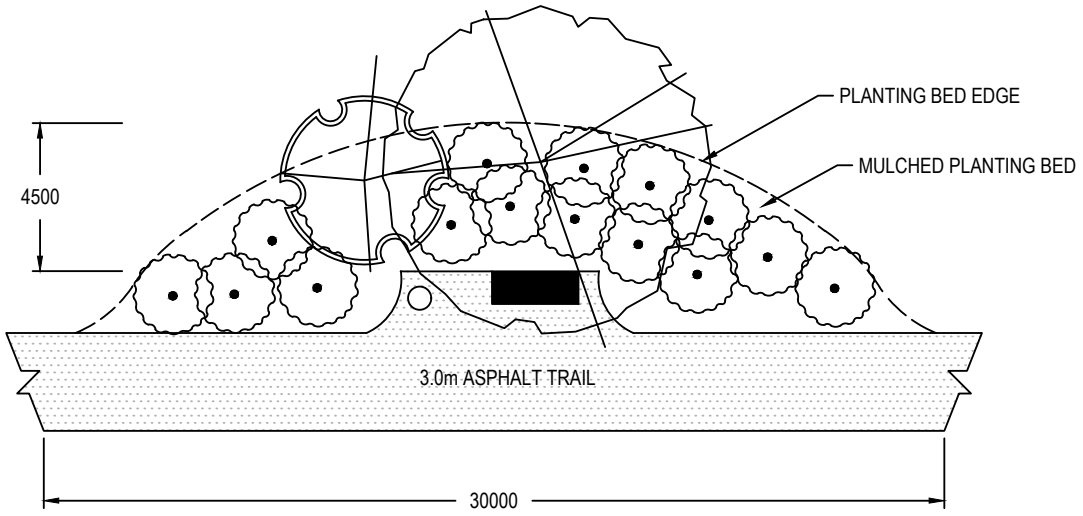
Drawn by: A. EDWARDS

Scale: N.T.S.

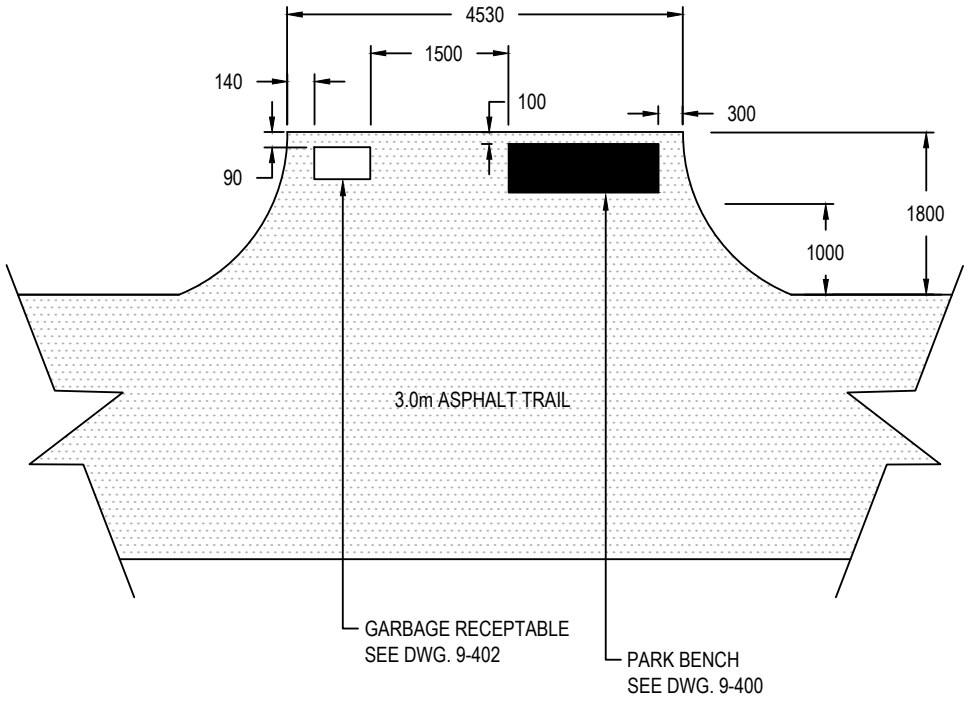
ROOT BARRIER SECTION AND ELEVATION

Date: Jan 5, 2017

Drawing #: 9-101



TYPICAL PLANTING BED



DETAIL

NOTES:

1. PLANTING BED EDGE WILL MAINTAIN A GRADUAL ARC TO ACCOMMODATE TRACTOR MOWER TURNING.
2. ALL ASPHALT EDGES ARE TO BE FINISHED, AND NODE FREE OF ANY SEAMS.
3. FINISHED TOPSOIL GRADE TO BE MAINTAINED TO A MAXIMUM OF 12mm BELOW TOP OF FINISHED LEVEL OF ASPHALT SURFACE
4. TYPICAL PLANTING: 2 TREES & 16 SHRUBS
5. DIMENSIONS ARE IN MILLIMETRES.
6. SEE STANDARD DRAWING 9-305 FOR PLANTING BED DETAILS.

NO.	DATE	REVISION
8		
7		
6		
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4		
3		
2		
1	17/03/20	Revised from Dwg. 9-103

The City of Lloydminster

Checked by:

Approved by:

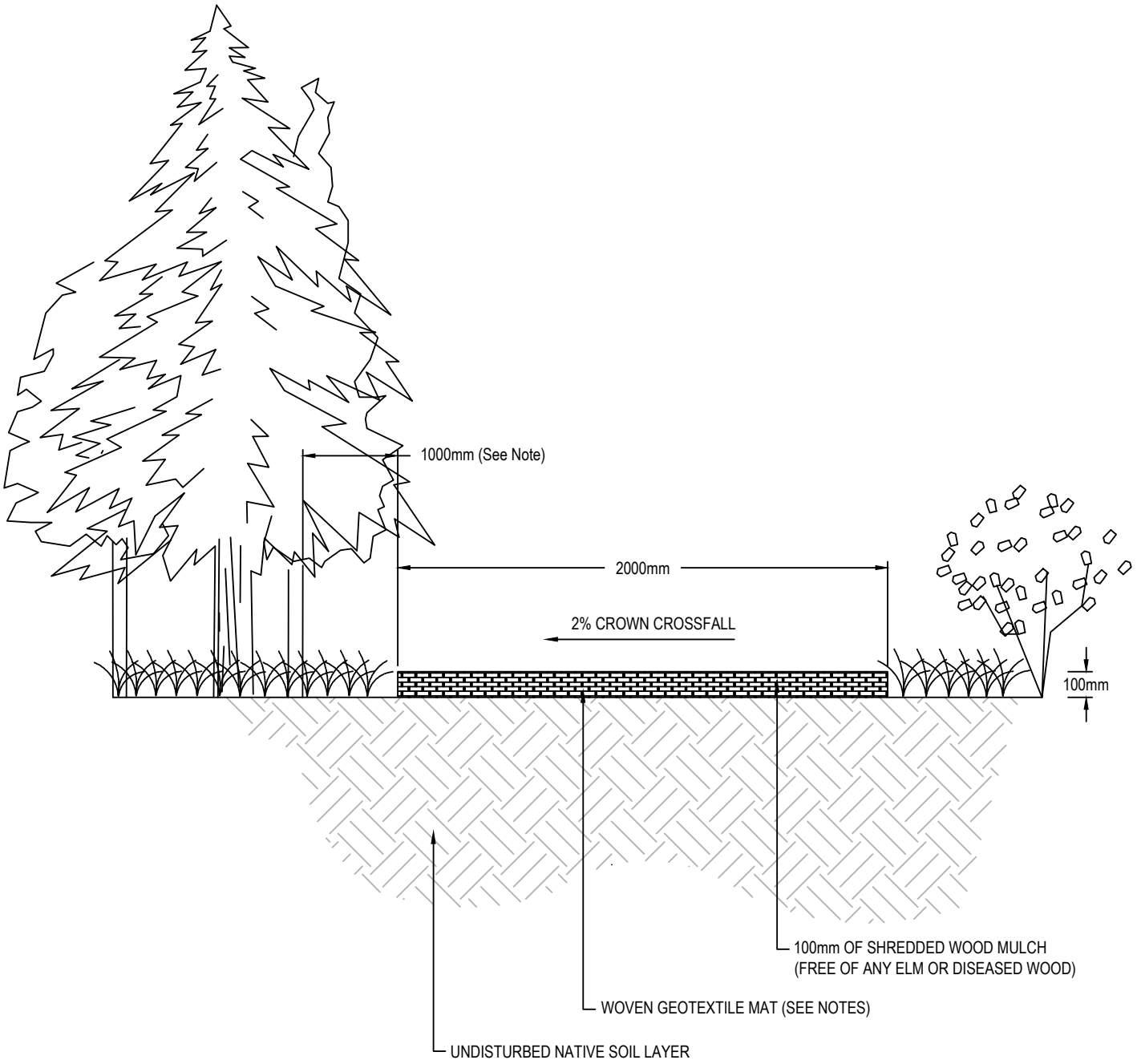
Drawn by: J.IDIOH

Scale: N.T.S.

TRAIL SEATING NODE

Date: Jan. 14, 2019

Drawing #: 9-102



NOTES:

1. PRUNE SHRUBS & REGULARLY MOW GRASS BACK (IF REQUIRED) FROM EDGE TO TRAIL TO 1000mm MINIMUM
2. PROVIDE A MINIMUM HEADROOM CLEARANCE OF 2500mm AT CENTRE LINE OF TRAIL
3. WOVEN GEOTEXTILE MAT WITH MINIMUM TENSILE STRENGTH OF 91 KILOGRAMS OR BETTER
4. MULCH MATERIAL MUST COMPLY WITH SECTION 8.1.2.1
5. DIMENSIONS ARE IN MILLIMETRES

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1	17/03/20	Changed from Dwg. 9-104

The City of Lloydminster

Checked by:

Approved by:

Drawn by: J.IDIOH

Scale: N.T.S.

Date: Jan. 07, 2019

NATURE TRAIL

Drawing #: 9-103

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2	05/05/20	Changed Title
1	17/03/20	New Drawing

The City of Lloydminster

Checked by:

Approved by:

Drawn by: L. LEEPER

Scale: N.T.S.

PLAY SAFE SIGN
18 MONTHS TO 5 YEARS

Date: Mar. 17, 2020

Drawing #: 9-104

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1		

The City of Lloydminster

Checked by:

Approved by:

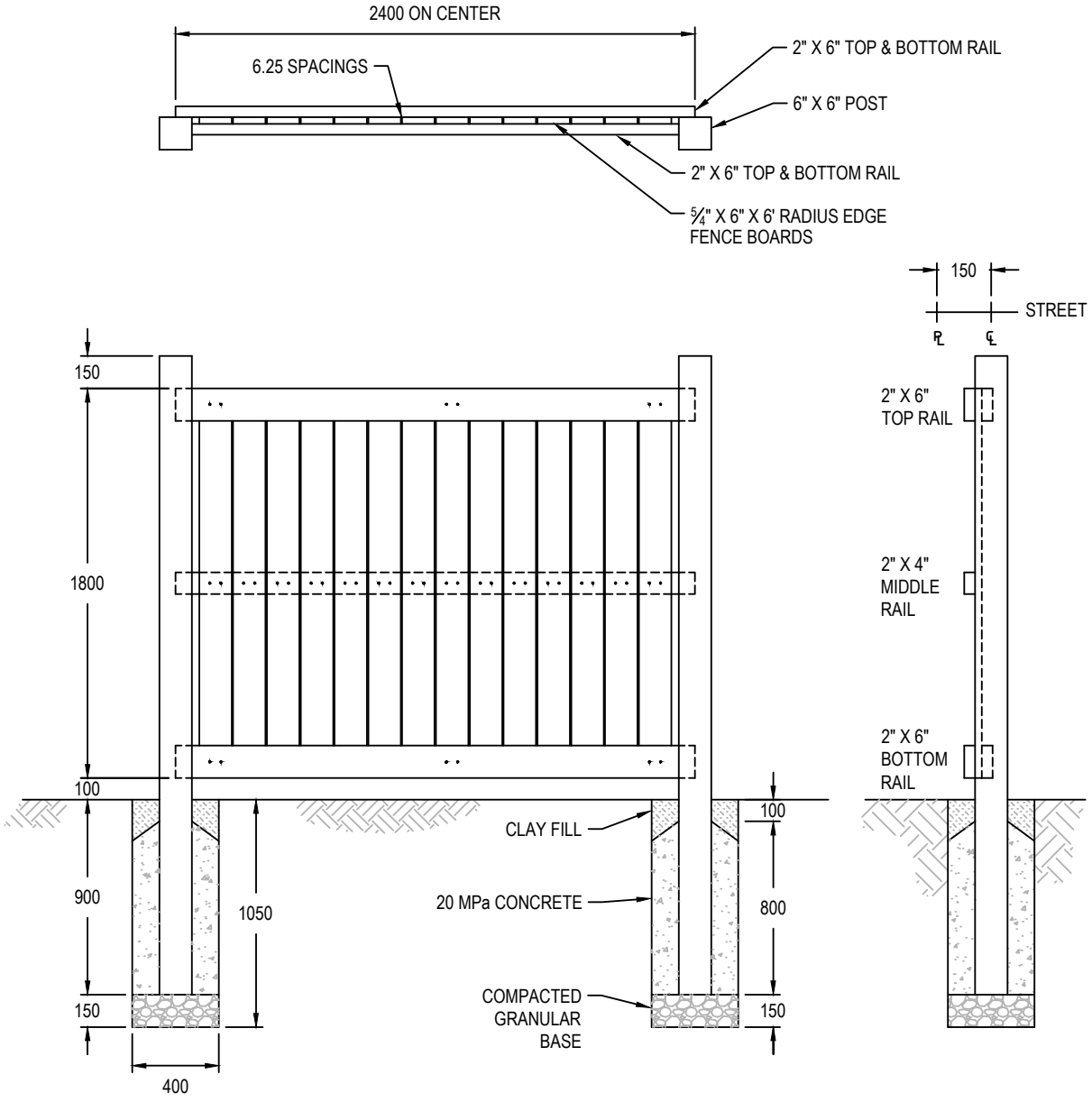
Drawn by: L. LEEPER

Scale: N.T.S.

PLAY SAFE SIGN
5 YEARS TO 12 YEARS

Date: Mar. 15, 2020

Drawing #: 9-105



NOTES:

1. FASTENERS - SCREWS

   RAIL TO POST: 3 #8 - 75mm D.S.
   3 #8 - 75mm D.S. (TOE NAIL)

   RAIL TO FENCE BOARD:
   - FASTEN ALL FENCE BOARDS TO MIDDLE RAIL WITH 2 #6 - 50mm GREEN DECK SCREWS.
   - FASTEN MIDDLE & END FENCE BOARD TO ALL RAILS WITH 2 #6 - 87.5mm DECK SCREWS.
   - REMAINDER OF FENCE BOARDS TO BE SANDWICHED BETWEEN TOP & BOTTOM RAIL. ADD SCREWS AS REQUIRED FOR ANY LOOSE BOARDS.

2. USE GALVANIZED NAILS ONLY WHERE REQUIRED FOR FURTHER REINFORCEMENT. GALVANIZED - CSA G164

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3	04/12/18	Changed reference information
2	08/04/14	Changed dimensions to metric
1	25/03/14	Moved fence 0.3m into city prop.

The City of Lloydminster

Checked by:

Approved by:

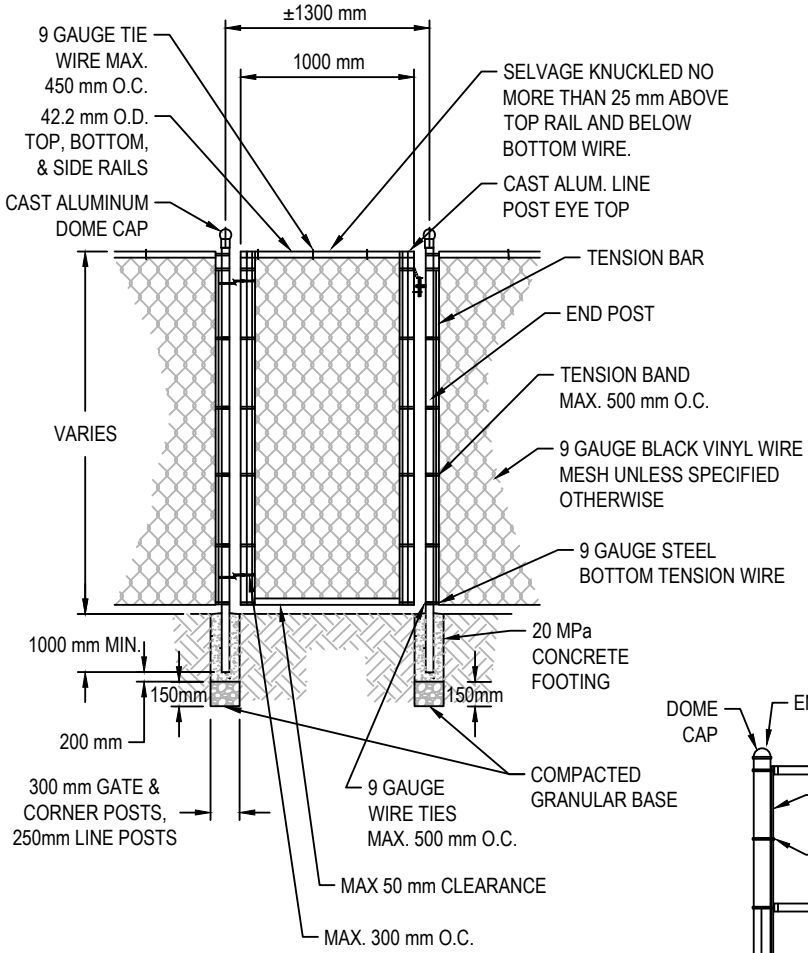
Drawn by: L. LEEPER

Scale: N.T.S.

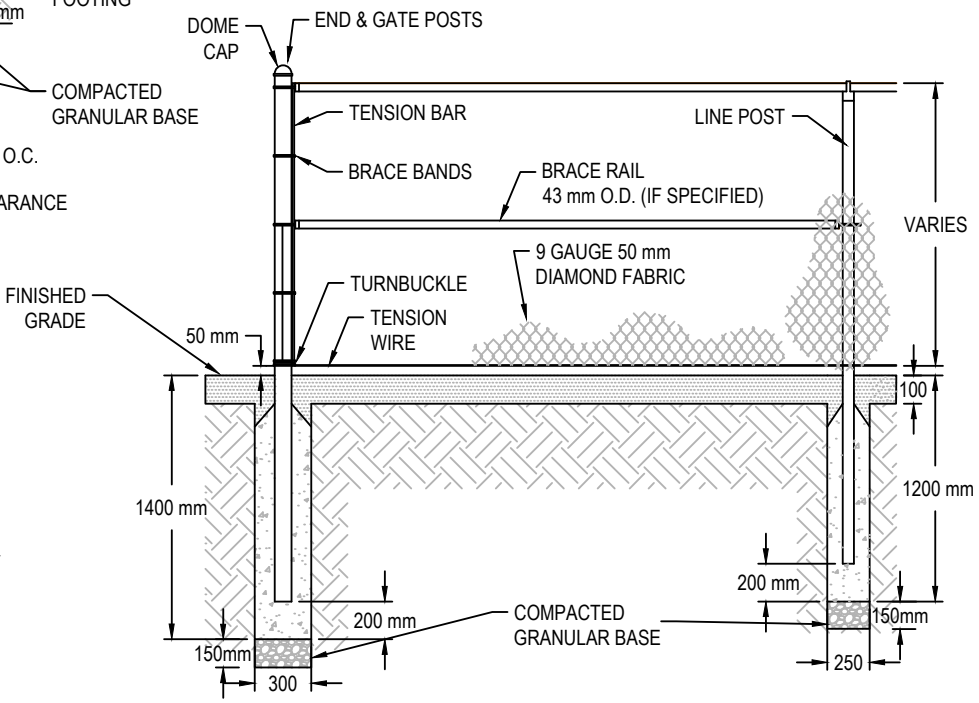
WOODEN FENCE

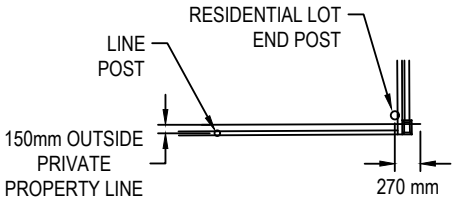
Date: Feb. 22, 2011

Drawing #: 9-200



POST SCHEDULE			
POST TYPE	FENCE HEIGHT	LINE POST	TERMINAL POST
FENCE POSTS	1.2m	48 mm	73 mm
	1.8 m	73 mm	89 mm
SWING GATE POSTS	1.2 m	73 mm	73 mm
	1.8 m	73 mm	73 mm





NOTES:

1. ALL PIPES ARE SCHEDULE 40 STEEL, BLACK EPOXY POWDER COATED UNLESS SPECIFIED OTHERWISE.
2. AUGURED HOLES, CONCRETE TYPE HS, 20 MPa, SMOOTH FINISH.
3. CONCRETE TO DRAIN FROM POST AT FINAL GRADE.
4. ALL FASTENINGS & HARDWARE BLACK EPOXY POWDER COATED STEEL UNLESS SPECIFIED OTHERWISE. WIRE TO BE BLACK VINYL COATED UNLESS SPECIFIED OTHERWISE.
5. MIDDLE BRACE RAIL AT ALL END AND GATE SECTIONS IF SPECIFIED.
6. TIE WIRES FOR FABRIC TO LINE POSTS, RAILS AND TENSION WIRE 450 mm O.C.
7. TENSION BAR BRACE BANDS AT MINIMUM 500 mm O.C.
8. MESH TO BE 50 mm 9 GAUGE.

NO.	DATE	REVISION
8		
7		
6		
5	12/03/20	Changed Concrete Type, Note 2
4	01/04/19	Updated Drawing
3	04/12/18	Changed Drawing reference
2	25/03/14	Moved fence 0.3m into city prop.
1	24/08/12	Changed var. spacing & sizing.

The City of Lloydminster

Checked by:

Approved by:

Drawn by: L. LEEPER

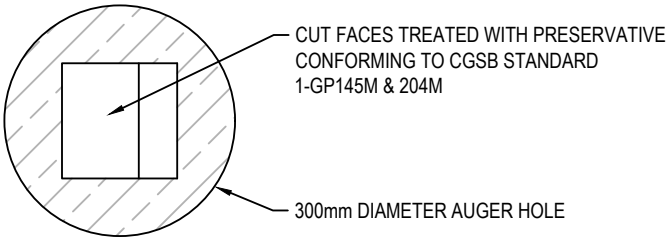
Scale: N.T.S.

CHAINLINK FENCE & GATE

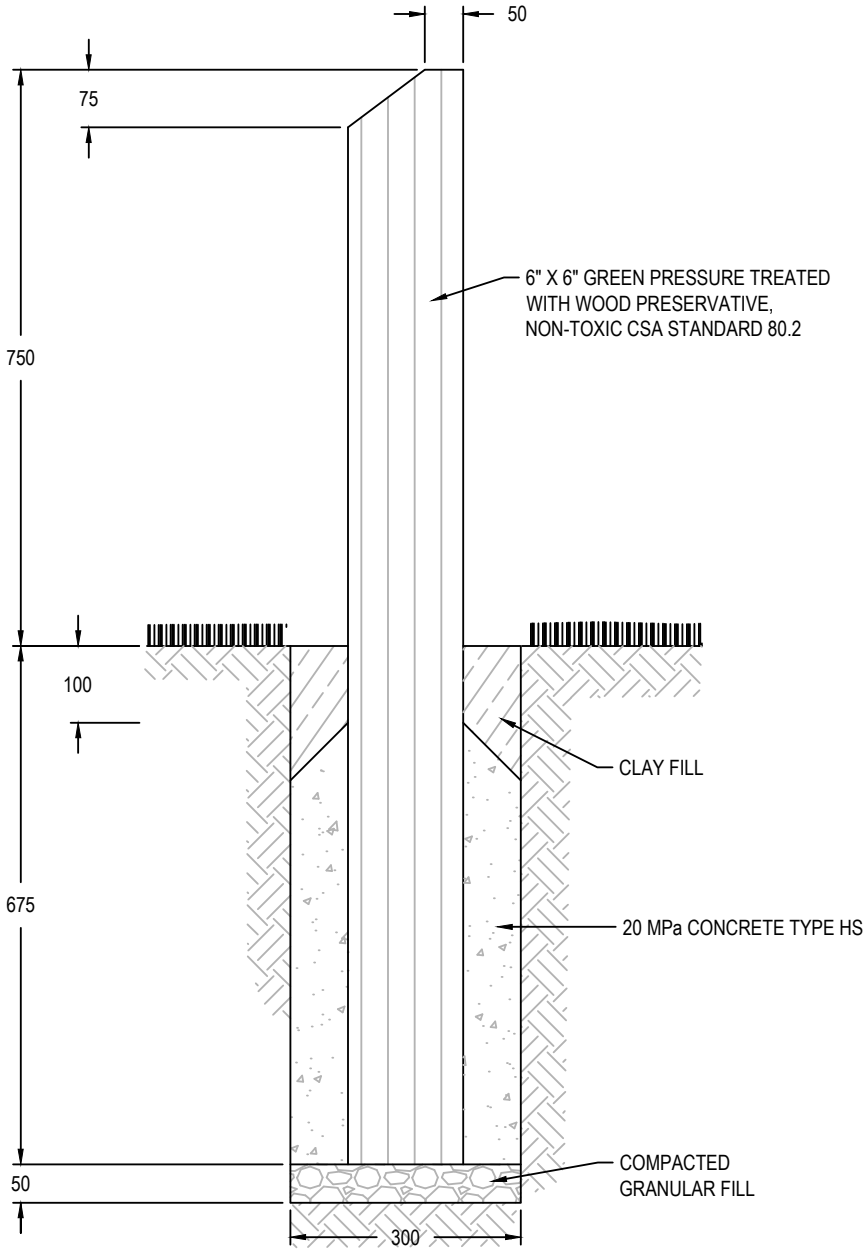
Date: Apr. 14, 2011

Drawing #: 9-201

NOTES:
1. BOLLARD SPACING IS 1.2m O.C



TOP



ELEVATION

NO.	DATE	REVISION
8		
7		
6		
5		
4	12/03/20	Specified Concrete Type
3	04/12/18	Revised Notes & Drawing Ref.
2	23/11/16	Revised Notes
1	08/04/14	Changed dimensions to metric

The City of Lloydminster

Checked by:

Approved by:

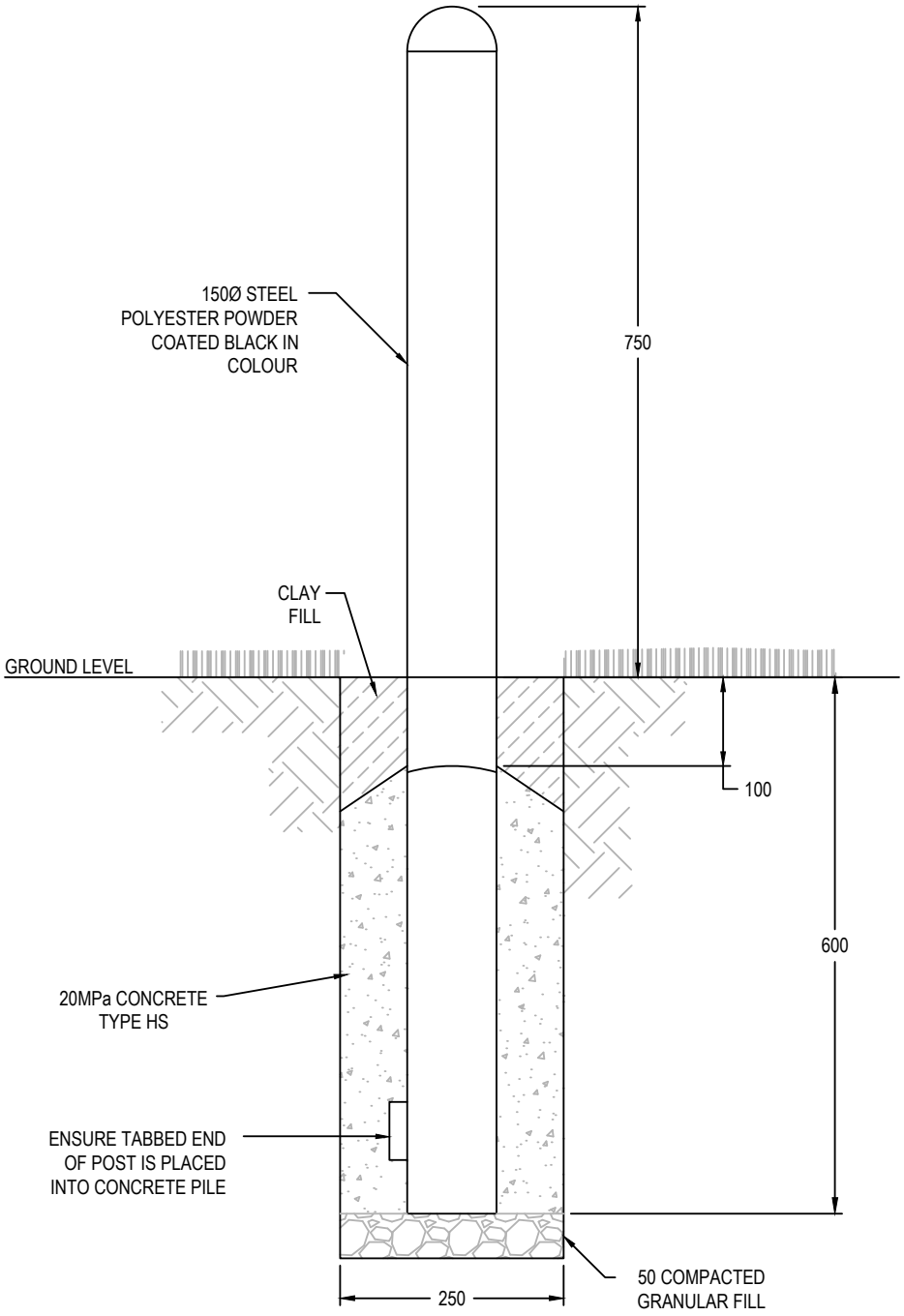
Drawn by: L. LEEPER

Scale: N.T.S.

6" X 6" WOOD BOLLARD

Date: Feb. 22, 2011

Drawing #: 9-202



NOTES:

1. BOLLARDS TO BE INSTALLED WITH 1.2m SPACING O.C

NO.	DATE	REVISION
8		
7		
6		
5	05/05/20	Removed "mm" Text
4	12/03/20	Revised Drawing
3	04/12/18	Revised Drawing and its ref.
2	2/3/17	Revised Lineweight
1	25/11/16	Changed bollard design

The City of Lloydminster

Checked by:

Approved by:

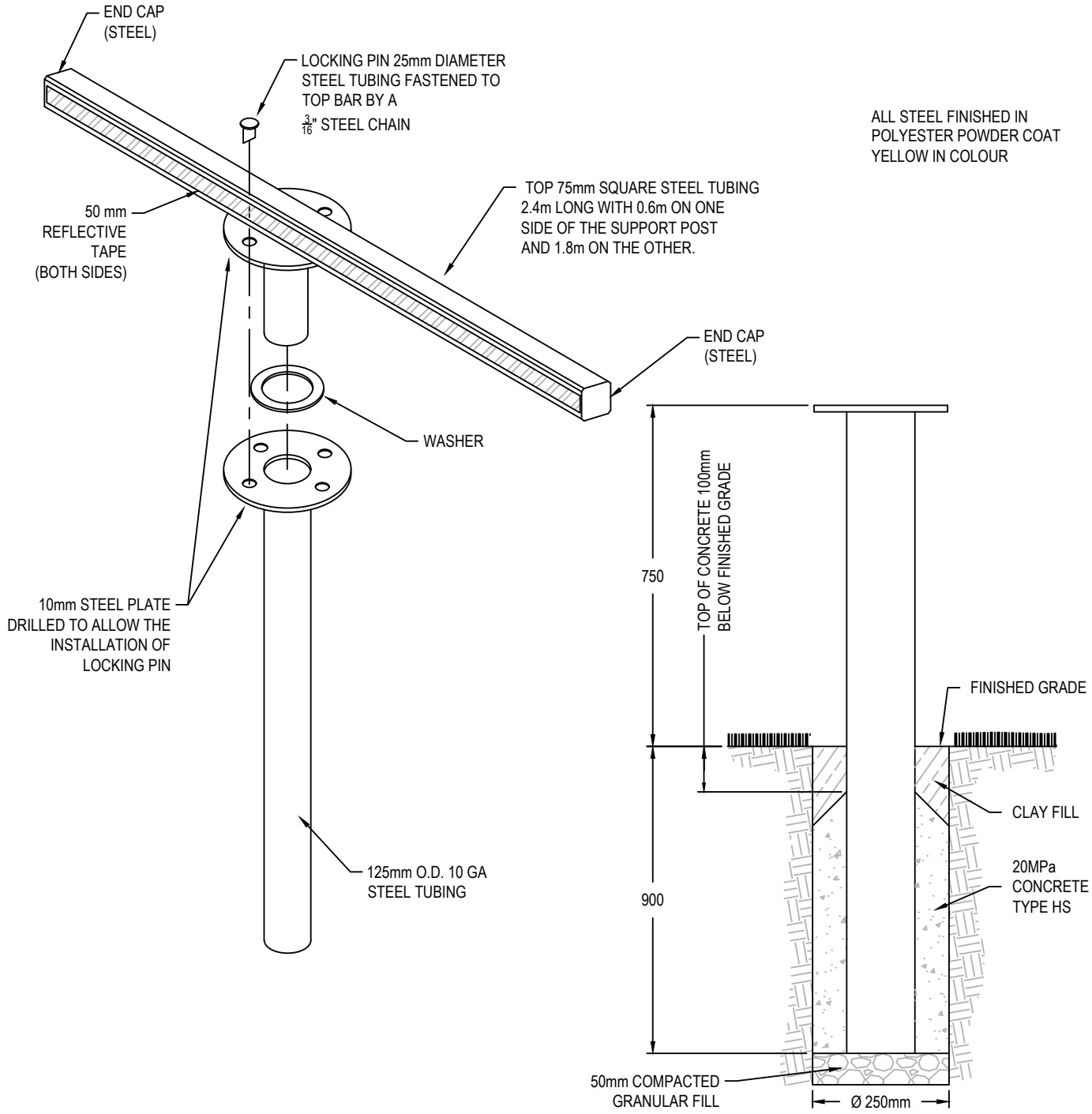
Drawn by: A. EDWARDS

Scale: N.T.S.

150mm STEEL LANDSCAPING BOLLARD

Date: Nov 23, 2016

Drawing #: 9-203



NOTES:

1. PLACE THE WASHER OVER THE PIPE OF THE TOP BAR AND INSERT INTO THE POST
2. INSERT THE PIN INTO THE FLANGES AND LOCK AT THE BOTTOM WITH KEY OR COMBINATION LOCK.
3. TOP BAR TO FEATURE 50mm REFLECTIVE TAPE ON BOTH SIDES.
4. ALL CUT EDGES TO BE GROUND TO A SMOOTH EDGE WITH NO SHARP ANGLES OR BURS.

NO.	DATE	REVISION
8		
7		
6		
5		
4	12/03/20	Added Conc. Type & Clay Fill
3	26/06/19	Revised Notes
2	04/12/18	Revised Notes & Drawing Ref.
1	23/11/16	Revised Drawing Name

The City of Lloydminster

Checked by:

Approved by:

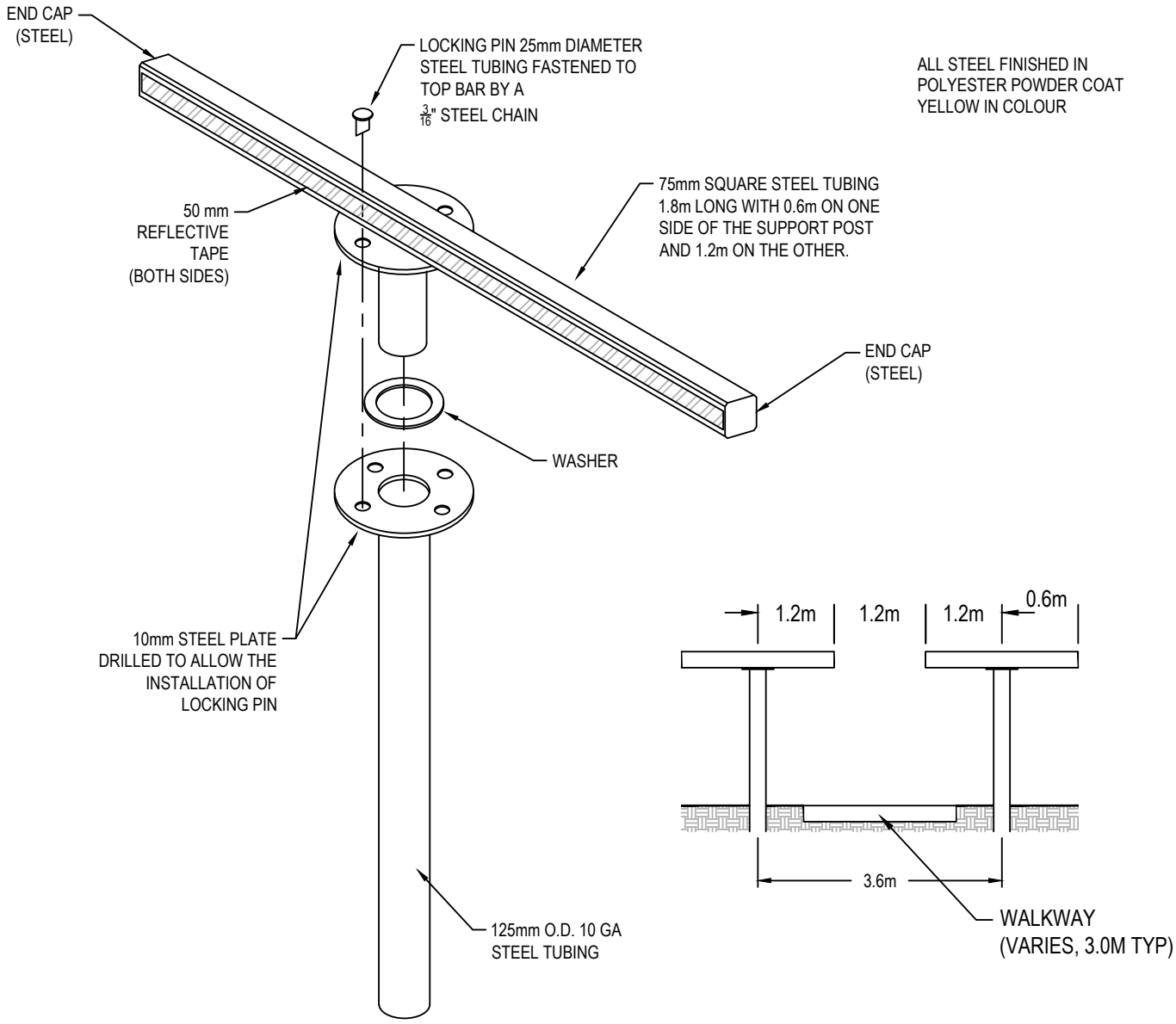
Drawn by: L. LEEPER

Scale: N.T.S.

SINGLE TRAFFIC CONTROL GATE

Date: June 8, 2015

Drawing #: 9-204



NOTES:

1. INSTALL THE GATES ACCORDING TO DRAWING 9-204.
2. GATES TO BE INSTALLED WITH A 1.2m OPENING BETWEEN BARS PRIOR TO INSTALLATION. CITY STAFF TO CONFIRM GATE OPENING DIMENSIONS.
3. TOP BAR TO FEATURE 50mm REFLECTIVE TAPE ON BOTH SIDES.
4. ALL CUT EDGES TO BE GROUND TO A SMOOTH EDGE WITH NO SHARP ANGLES OR BURS.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2	26/06/19	Revised Notes
1	12/04/18	Revised Notes & Drawing Ref.

The City of Lloydminster

Checked by:

Approved by:

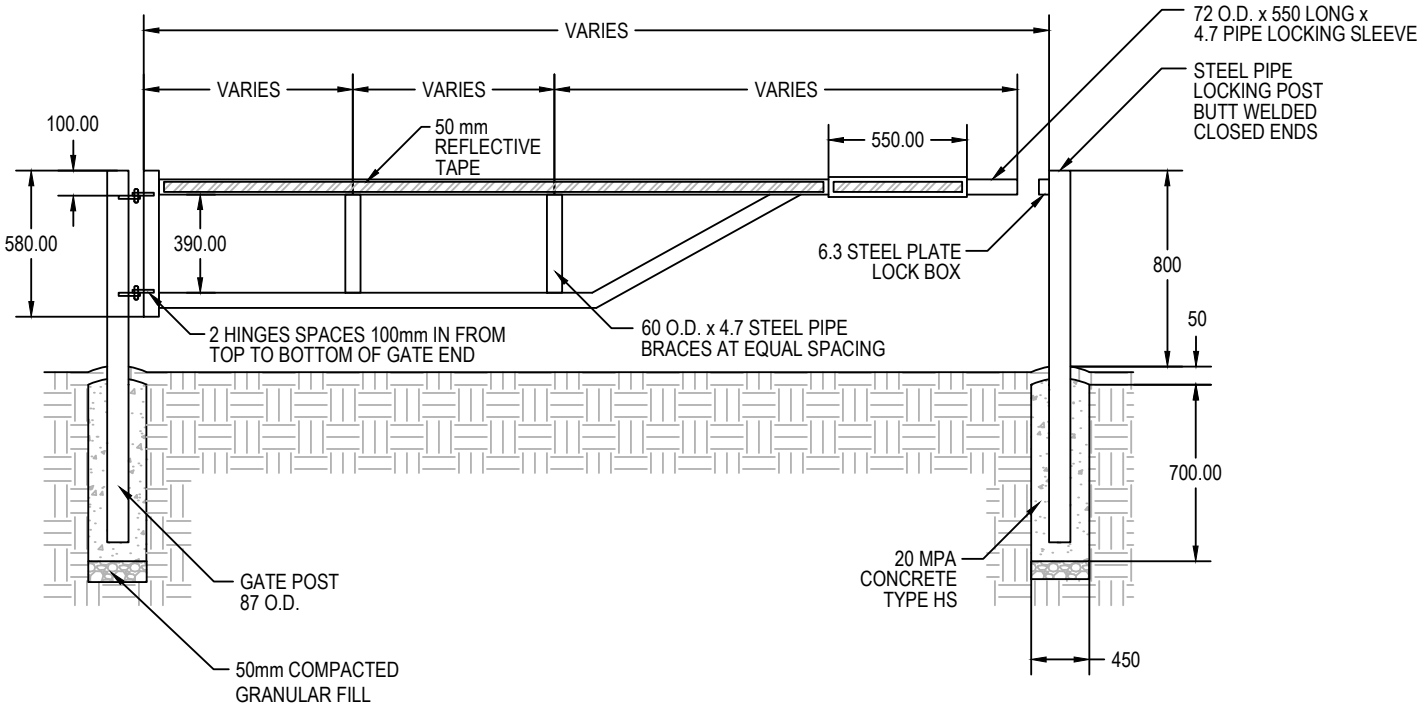
Drawn by: A. EDWARDS

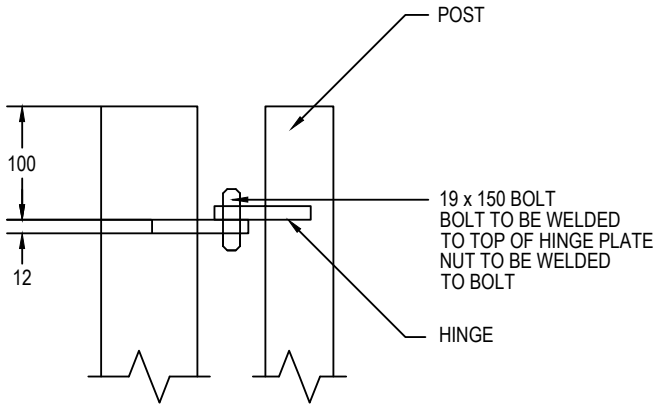
Scale: N.T.S.

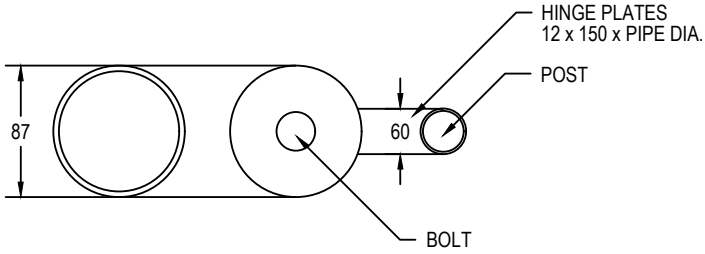
PAIRED TRAFFIC CONTROL GATES

Date: Nov 23, 2016

Drawing #: 9-205







NOTES:

1. GATE FINISH TO BE BROWN ALKYD SEMI-GLOSS PAINT.
2. ALL WELDS TO BE GROUND SMOOTH.
3. PAINTING SHALL BE IN ACCORDANCE WITH C.P.C.A. (CANADIAN PAINTING CONTRACTORS ASSOCIATION)
4. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
5. TOP BAR TO FEATURE 50mm REFLECTIVE TAPE ON BOTH SIDES.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2	12/03/20	Specified Conc. Type
1	12/04/18	Revised Drawing Reference

The City of Lloydminster

Checked by:

Approved by:

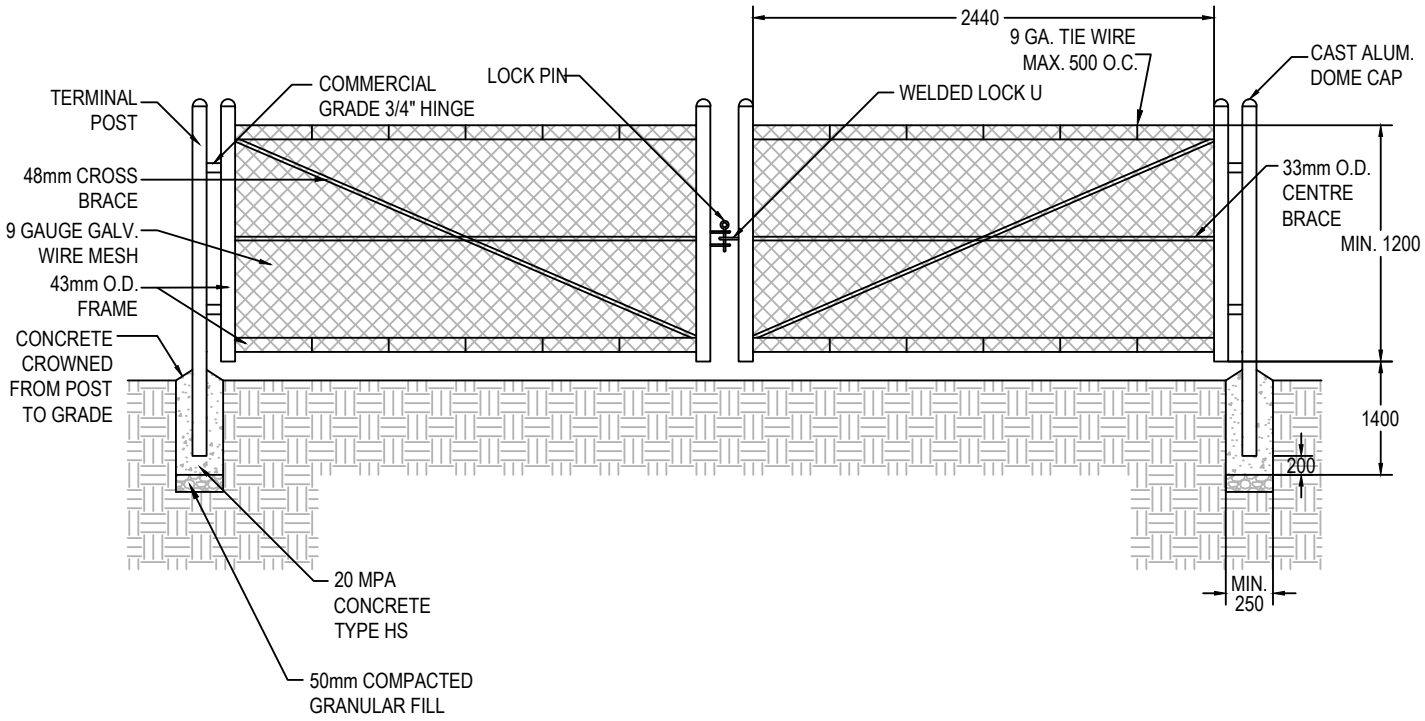
Drawn by: A. EDWARDS

Scale: N.T.S.

STEEL PIPE GATE

Date: Jan 3, 2017

Drawing #: 9-206



NOTES:

1. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2	12/03/20	Specified Conc. Type
1	12/04/18	Revised Drawing Reference

The City of Lloydminster

Checked by:

Approved by:

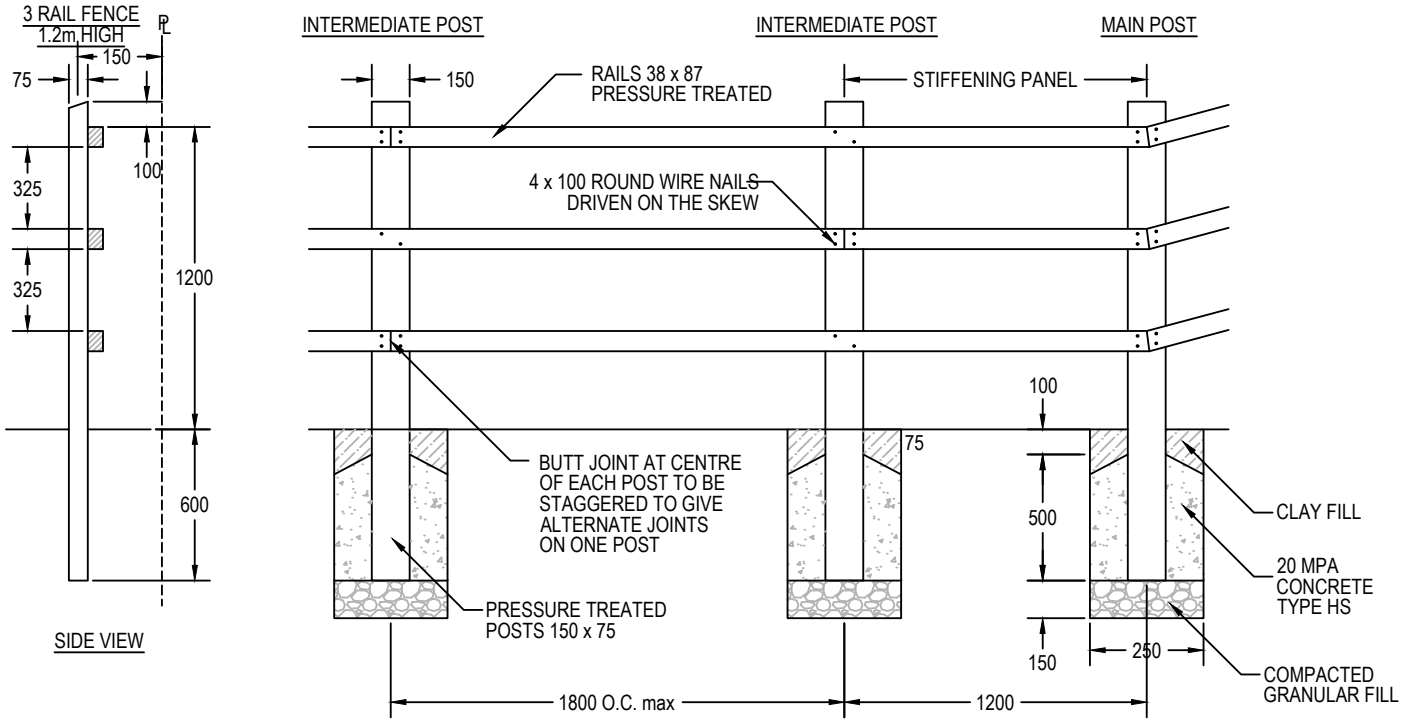
Drawn by: A. EDWARDS

Scale: N.T.S.

CHAIN LINK MAINTENANCE GATE

Date: Jan 3, 2017

Drawing #: 9-207



TYPICAL ELEVATION

NOTES:

1. HEIGHT OF FENCE ABOVE GROUND IS NOMINAL AND SHALL BE VARIED TO ACHIEVE A SATISFACTORY VERTICAL ALIGNMENT.
2. POSTS AND RAILS TO BE CHAMFERED AS NECESSARY AT CHANGES OF DIRECTION.
3. POSTS TO BE LOCATED INSIDE CITY PROPERTY BY 150mm.
4. TOPS OF POSTS TO BE CHAMFERED 25mm.
5. MAIN POSTS AND STIFFENING PANEL TO BE PROVIDED AT ENDS (ONE PANEL) AND AT ALL CHANGES OF DIRECTION EXCEEDING 380mm VERTICALLY AND/OR 760mm HORIZONTALLY (ONE PANEL AT EACH SIDE OF MAIN POSTS.)
6. DOUBLE POSTS TO BE PROVIDED AS REQUIRED TO FACILITATE FENCING AROUND RADII.
7. TYPE HS 20 MPa CONCRETE SHALL BE USED FOR ALL FOUNDATIONS.
8. THE GROUND SHALL BE TRIMMED WHERE NECESSARY FOR THE BOTTOM OF THE FENCE.
9. POST HOLES TO BE RAMMED/BACKFILLED WITH SELECTED EXCAVATED MATERIAL NO SOONER THAN 24 HOURS AFTER PLACING CONCRETE.
10. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED.

NO.	DATE	REVISION
8		
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3		
2	12/03/20	Specified Conc. Type
1	12/04/18	Revised Notes & Drawing Ref

The City of Lloydminster

Checked by:

Approved by:

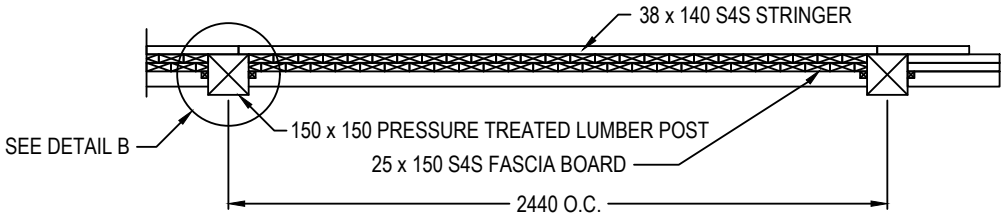
Drawn by: A. EDWARDS

Scale: N.T.S.

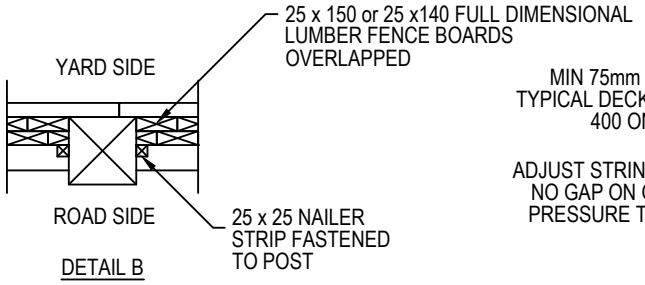
WOODEN POST AND 3 RAIL FENCE

Date: Jan 4, 2017

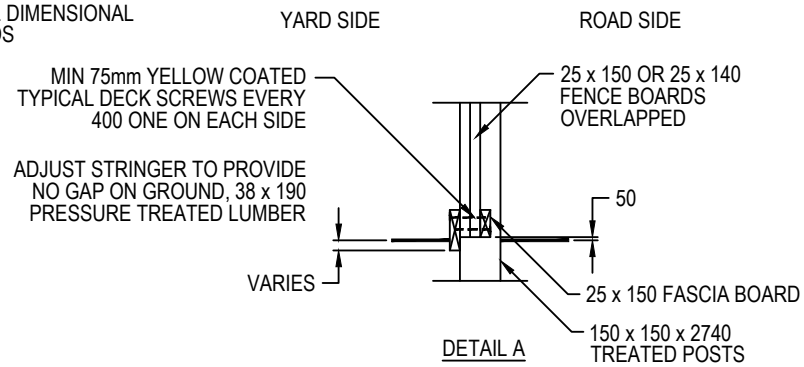
Drawing #: 9-208



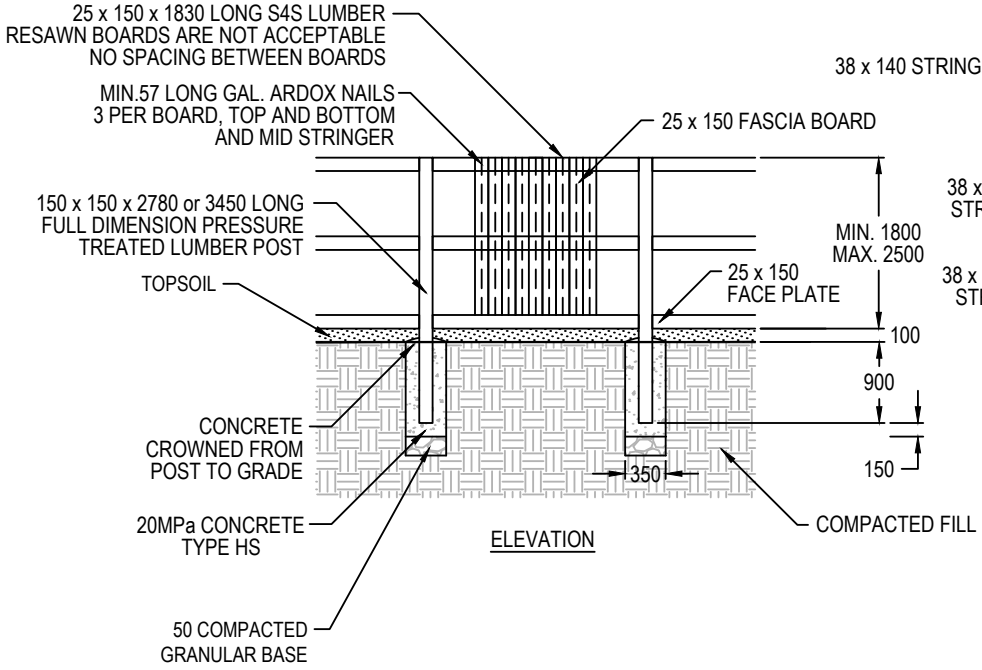
PLAN VIEW



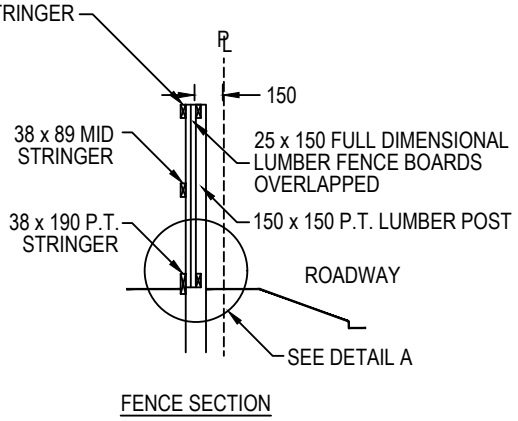
DETAIL B



DETAIL A



ELEVATION



FENCE SECTION

NOTES:.

1. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

NO.	DATE	REVISION
8		
7		
6		
5		
4	05/05/20	Rem. Dim. & "mm" From Dims.
3	12/03/20	Specified Conc. Type
2	04/01/19	Revised Drawings
1	12/04/18	Revised Drawings and Notes

The City of Lloydminster

Checked by:

Approved by:

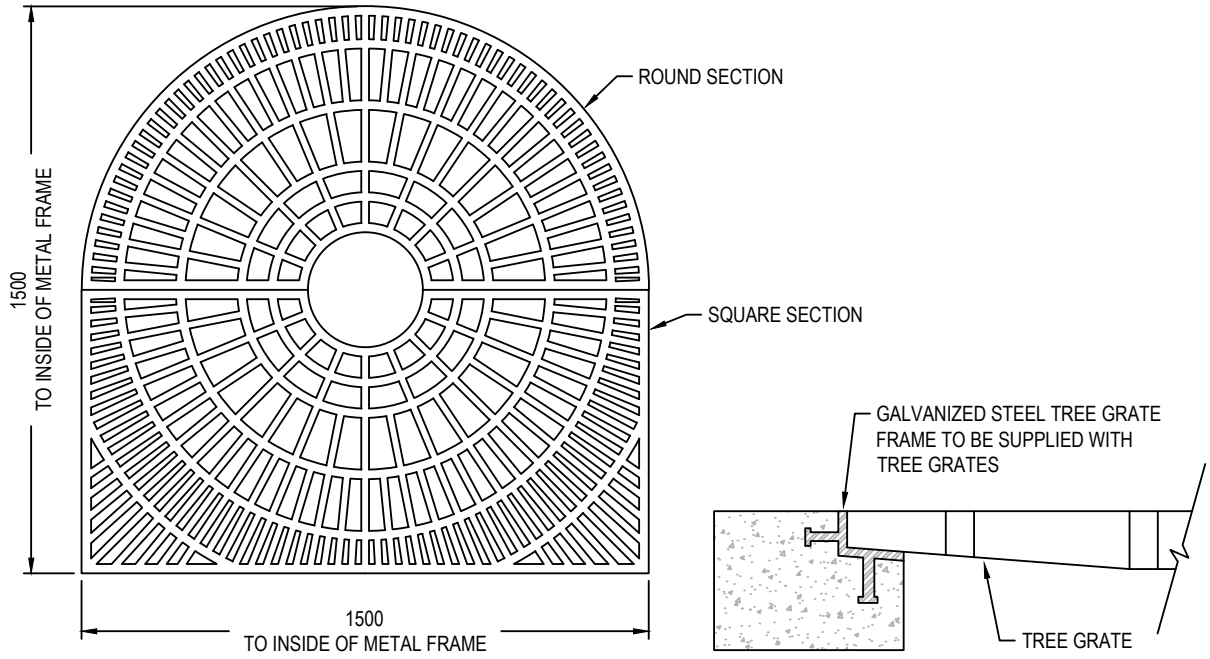
Drawn by: A. EDWARDS

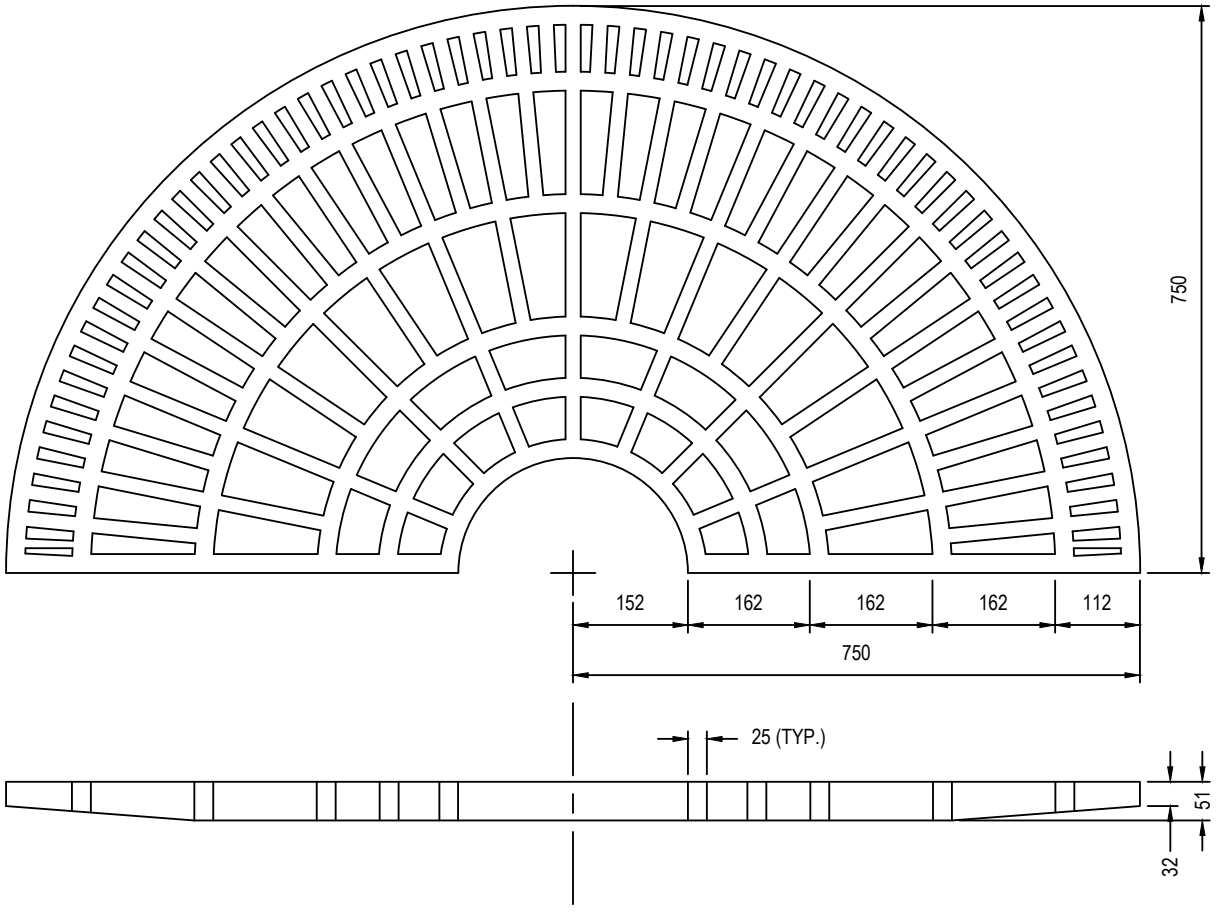
Scale: N.T.S.

NOISE ATTENUATION FENCE

Date: Jan 12, 2017

Drawing #: 9-209





NO.	DATE	REVISION
8		
7		
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4		
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2		
1	05/05/20	Rem Dwg Path & "mm" from Dim

The City of Lloydminster *Planning & Engineering*

Checked by:

Approved by:

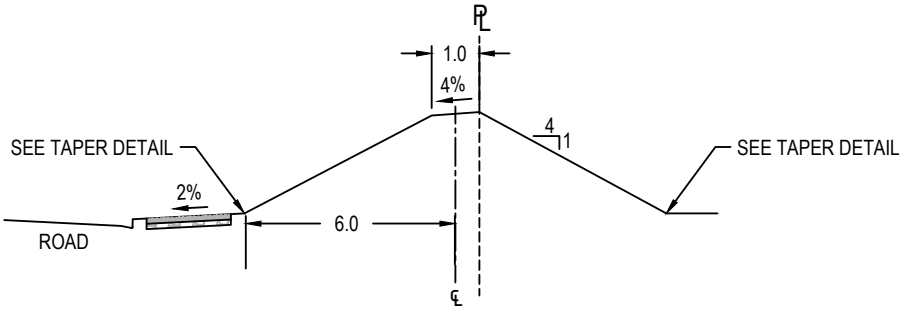
Drawn by: L. LEEPER

Scale: N.T.S.

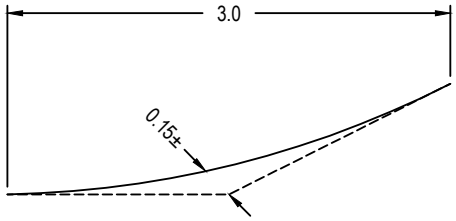
TREE GRATE 1500mm

Date: Feb. 22, 2011

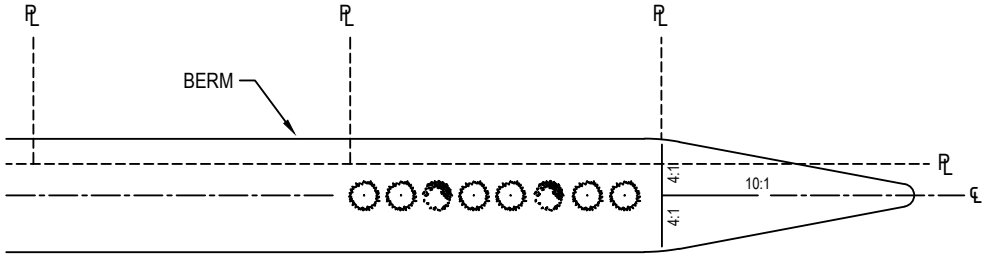
Drawing #: 9-300



CROSS SECTION



BERM TAPER DETAIL



ROAD

BERM PLAN VIEW

NOTES:

1. PROVIDE A TAPER TO THE BERM ADJACENT TO THE BOULEVARD & PUBLIC UTILITY LOT/M.R. FOR MOWER TRANSITION.
2. A TRANSITION IS NOT REQUIRED IF A LANE IS CONSTRUCTED ADJACENT TO THE BERM.
3. ALL DIMENSIONS IN METRES

NO.	DATE	REVISION
8		
7		
6		
5	05/05/20	Changed Plan View
4	12/03/20	Removed Elev. View
3	02/07/19	Revised Drawing
2	04/01/19	Revised Drawing
1	12/04/18	Revised Drawing & Removed Ref.

The City of Lloydminster

Checked by:

Approved by:

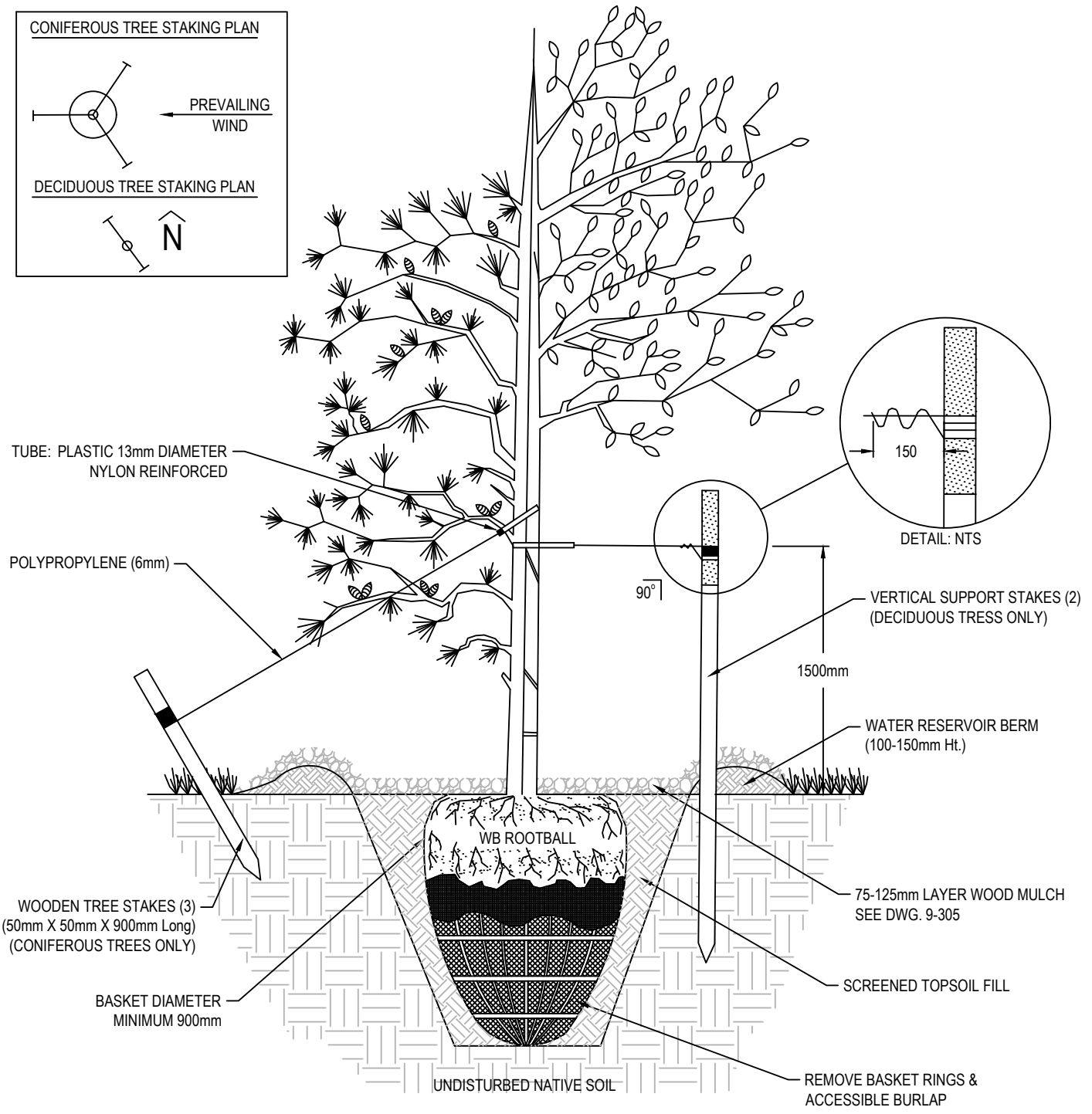
Drawn by: A. EDWARDS

Scale: N.T.S.

TYPICAL BERM

Date: Dec 29, 2016

Drawing #: 9-301



NOTES:

1. SEE SECTION 8.1.2.1 FOR DETAILED PLANTING REQUIREMENTS
2. HOLE WIDTH EXCAVATION TO EQUAL 1.5 TIMES THE ROOT BALL DIAMETER.
3. FOR DECIDUOUS MATERIAL OVER 60mm, A MINIMUM CANOPY CLEARANCE OF 1.2m IS REQUIRED
4. THE ROOT FLARE OF NEWLY PLANTED TREES MUST BE VISIBLE AT TIME OF INSTALLATION

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1	12/03/20	Added Hatching

The City of Lloydminster

Checked by:

Approved by:

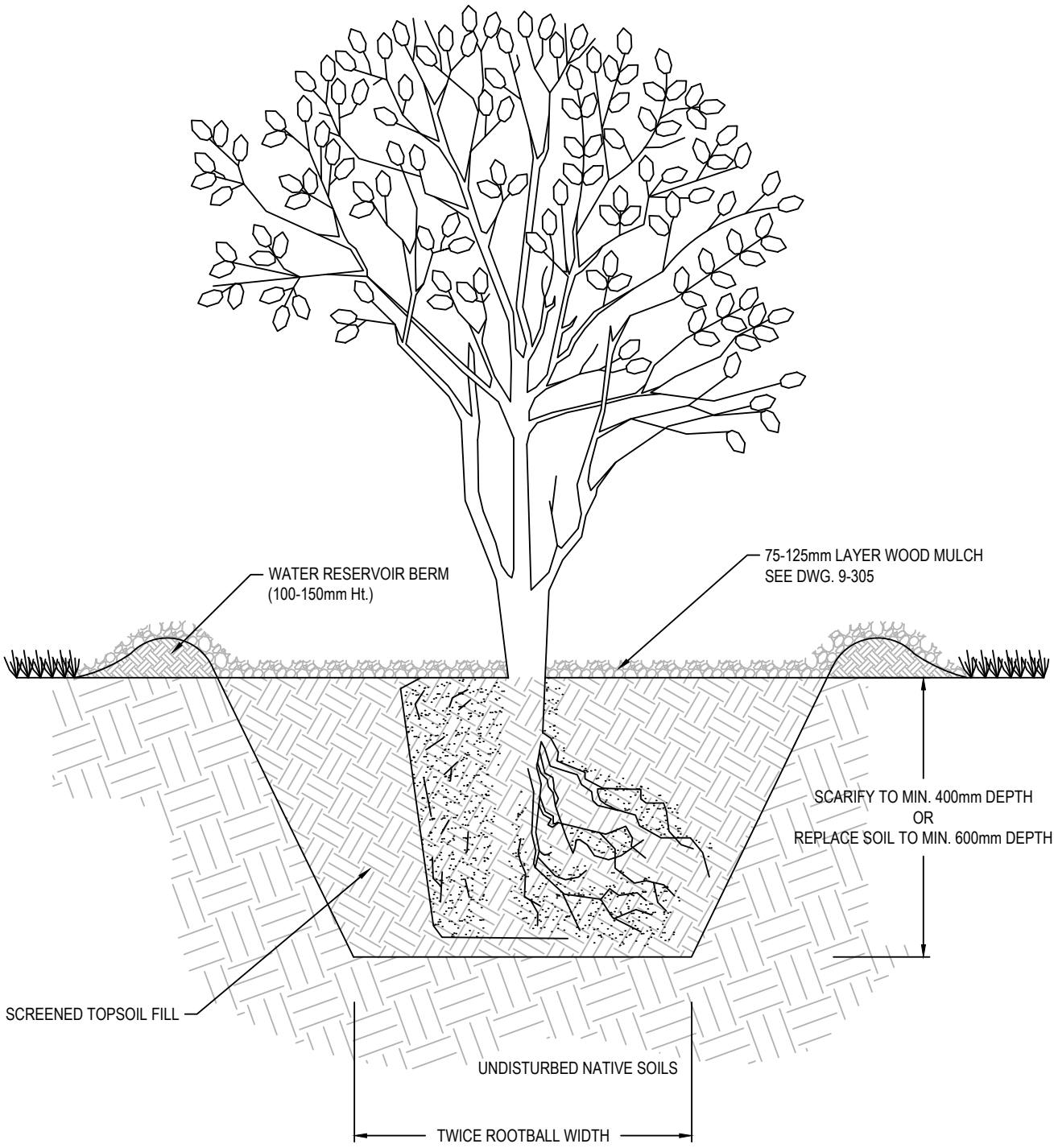
Drawn by: J.IDIOH

Scale: N.T.S.

WIRE BASKET TREE SPADE PLANTING TREE STAKING & MULCHING

Date: Jan. 08, 2019

Drawing #: 9-302



NOTES:

1. SEE SECTION 8.1.2.1 FOR DETAILED PLANTING REQUIREMENTS

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1	12/03/20	Added Hatching

The City of Lloydminster

Checked by:

Approved by:

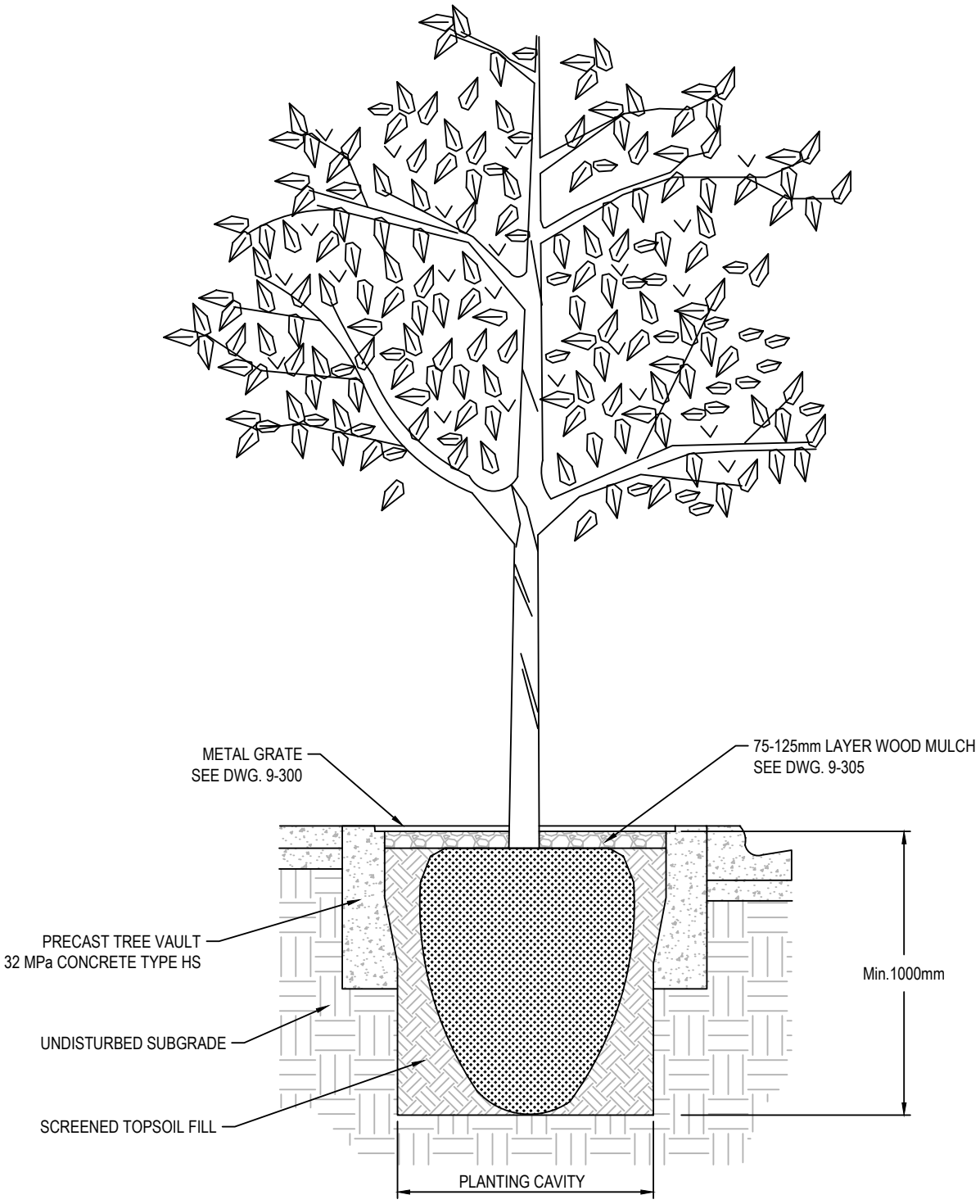
Drawn by: J.IDIOH

Scale: N.T.S.

Date: Jan. 08, 2019

TYPICAL CONTAINER PLANTING

Drawing #: 9-303



NOTES:

1. SEE SECTION 8.1.2.1 FOR DETAILED PLANTING REQUIREMENTS
2. DEPTH OF HOLE TO INCLUDE TOTAL DEPTH OF ROOT BALL & DEPTH OF MULCH.
3. PREPARE PLANTING SOIL AS SPECIFIED IN SECTION 8.1.2.1
4. FOR DECIDUOUS MATERIAL OVER 60mm, A MINIMUM CANOPY CLEARANCE OF 1.2m IS REQUIRED
5. THE ROOT FLARE OF NEWLY PLANTED TREES MUST BE VISIBLE AT TIME OF INSTALLATION

NO.	DATE	REVISION
8		
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5		
4		
3		
2		
1	12/03/20	Revised Fill Type

The City of Lloydminster

Checked by:

Approved by:

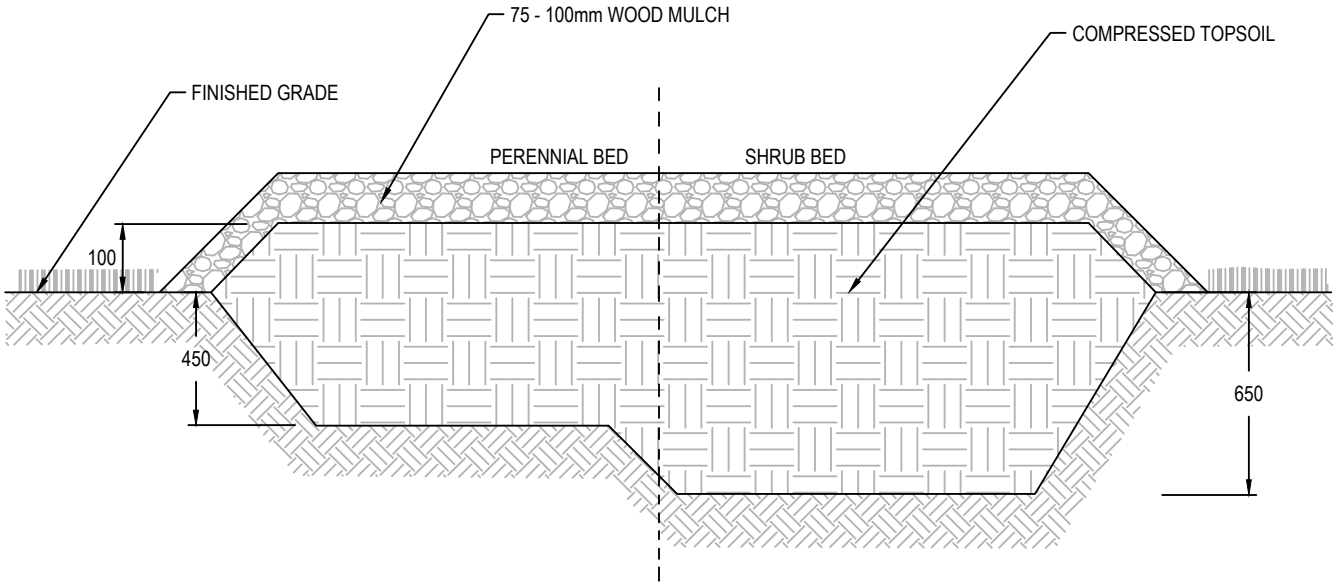
Drawn by: J.IDIOH

Scale: N.T.S.

Date: Jan. 04, 2019

TYPICAL VAULT PLANTING

Drawing #: 9-304



NOTES:

1. SEE SECTION 8.1.2.1 FOR DETAILED PLANTING REQUIREMENTS
2. USE OF FILTER FABRIC AND EDGING WITHIN PLANTING BEDS IS NOT PERMITTED.
3. TOPSOIL MUST BE FREE OF STONES LARGER THAN 25mm IN DIAMETER, DEBRIS, QUACK GRASS, NOXIOUS WEEDS, OTHER PLANTS AND INORGANIC MATTER .
4. NO ANNUAL PLANTINGS ARE ALLOWED IN PLANTING BEDS, ONLY PERENNIALS AND BULBS
5. SHRUBS ARE TO BE PLANTED AT A RATE OF 5 PER SQUARE METRE
6. MULCH MAY BE: - BARK CHIPS FROM 25 TO 100mm IN DIAMETER
   - WOOD CHIPS FROM 50 TO 100mm IN LENGTH AND 5 TO 20mm THICK
   - SHREDDED WOOD FROM 25 TO 100mm IN LENGTH.
7. USE OF FILTER FABRIC AND EDGING WITHIN PLANTING BEDS IS NOT PERMITTED.

NO.	DATE	REVISION
8		
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2	05/05/20	Added Note 7
1	12/03/20	Added Hatching

The City of Lloydminster

Checked by:

Approved by:

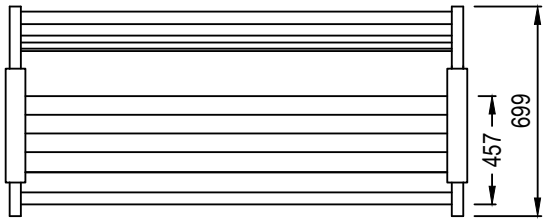
Drawn by: J.IDIOH

Scale: N.T.S.

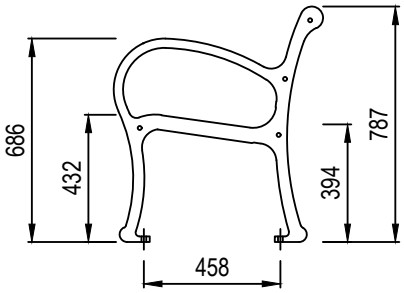
PLANTING BED CROSS-SECTION

Date: Jan. 04, 2019

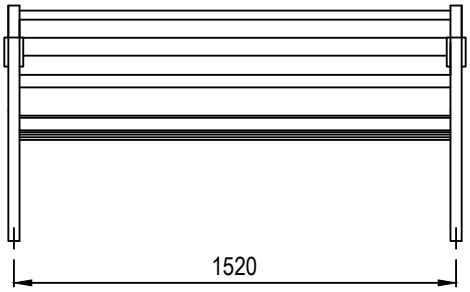
Drawing #: 9-305



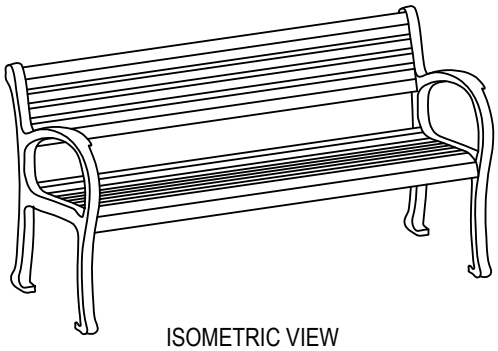
TOP VIEW



SIDE ELEVATION



FRONT ELEVATION



ISOMETRIC VIEW

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. BENCH TO BE MOUNTED ON A CONCRETE PAD

SPECIFICATIONS:
-RECYCLED PLASTIC SLATS, OR APPROVED EQUIVALENT
-POWDER COATED ALUMINIUM FRAME, BLACK IN COLOUR
-STAINLESS STEEL HARDWARE

NO.	DATE	REVISION
8		
7		
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5		
4		
3		
2	12/04/18	Revised Drawing Title
1	2/3/17	Revised Lineweight

The City of Lloydminster

Checked by:

Approved by:

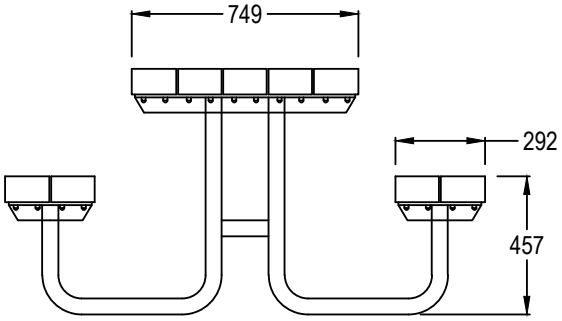
Drawn by: A. EDWARDS

Scale: N.T.S.

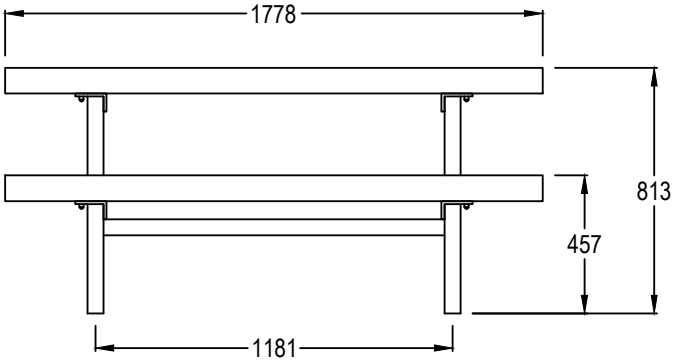
TYPICAL PARK BENCH

Date: Dec 5, 2016

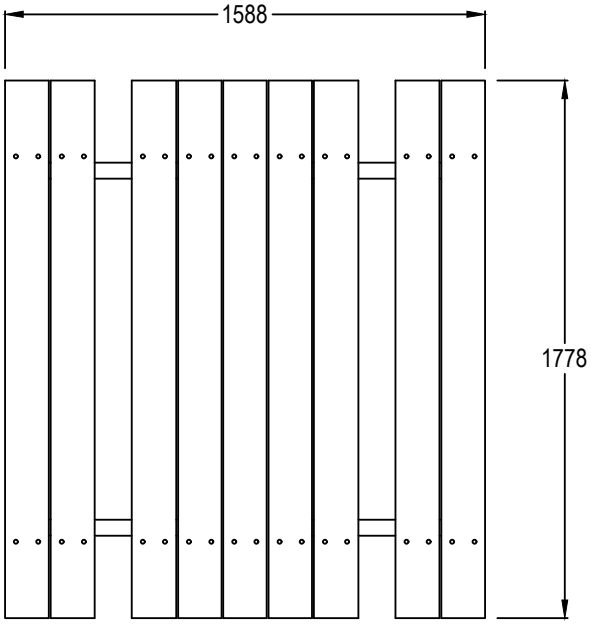
Drawing #: 9-400



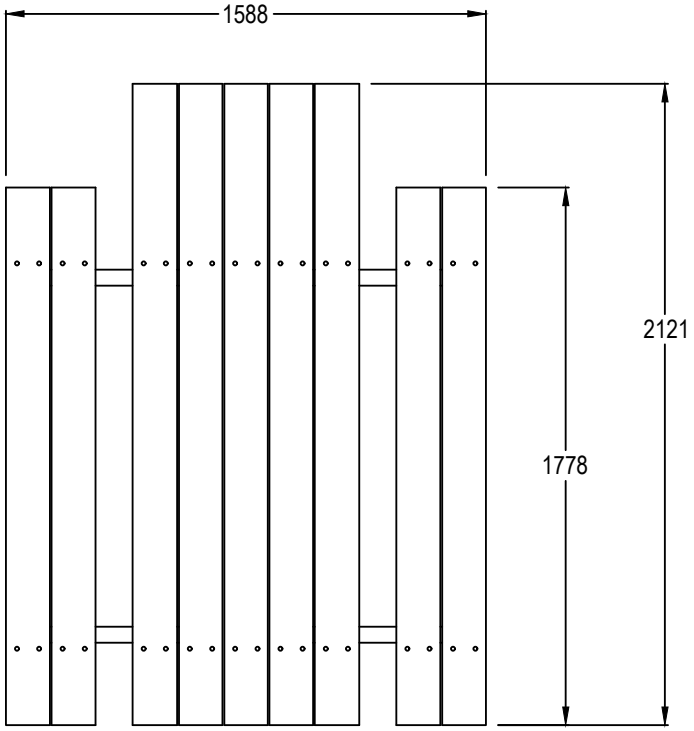
END VIEW



SIDE VIEW



PLAN VIEW



PLAN VIEW
WHEELCHAIR ACCESSIBLE

NOTES:

1. FRAME TO BE MOUNTED TO A CONCRETE SLAB.

SPECIFICATIONS:

WOOD: 3 $\frac{1}{2}$" x 5 $\frac{1}{2}$" x 70" #1 GRADE SELECT CEDAR.
STEEL TYPE: 4" x 3" ANGLE IRON WOOD SUPPORTS.
2" x 2" SQUARE TUBE FRAME.
FASTENERS: $\frac{3}{8}$" PLATED CARRIAGE BOLTS. COLOR MATCHED TO STEEL FRAME.
STEEL FINISH: POWDER COAT BLACK IN COLOR.

NO.	DATE	REVISION
8		
7		
6		
5		
4	23/06/20	Added Dimensions
3	05/05/20	Removed Dimensions
2	12/04/18	Revised Drawing Title
1	2/3/17	Revised Lineweight

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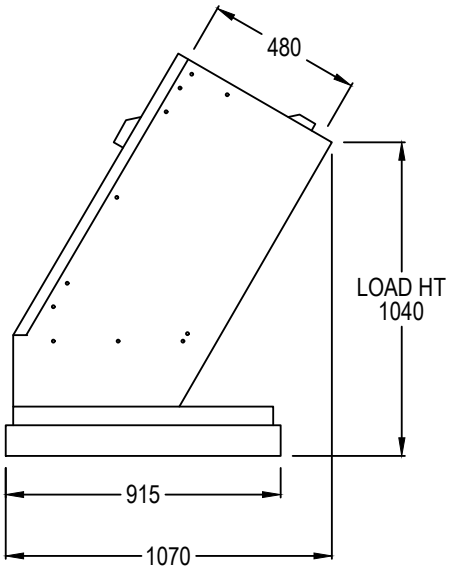
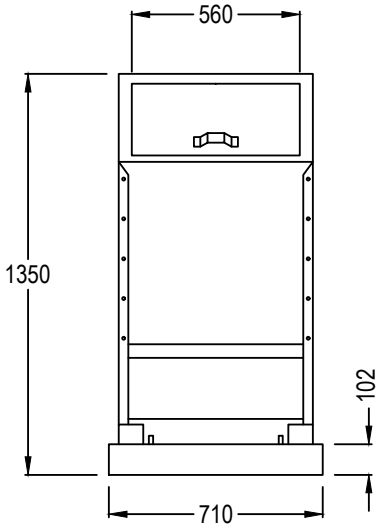
TYPICAL PICNIC TABLE

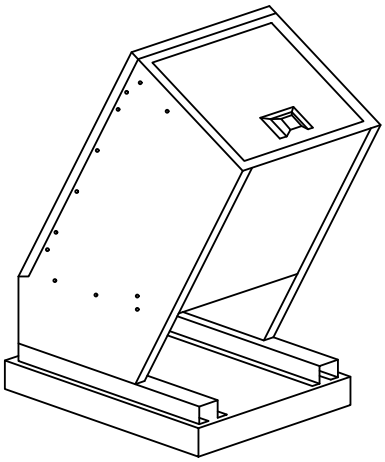
Date: Dec 5, 2016

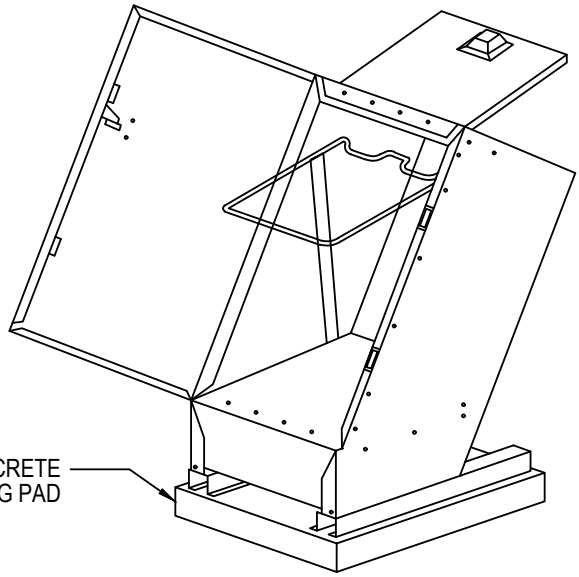
Drawing #: 9-401

FEATURE	DESCRIPTION	SPECIFICATION
Capacity	Tilt Out Bag Cage	9-1/2cu.ft. 70 Gallons (265L)
	Poly Bag	2.5mm 42"x50" (1070x1270)
Construction	Housing	12Ga. (2.6) Galvanneal Steel
	Lid	14Ga. (1.9) Galvanneal Steel
	User Door	14Ga. (1.9) Galvanneal Steel
	Side Hinged Unloading Door	14Ga. (1.9) Galvanneal Steel
	Hinges and Latches	Stainless Steel
	Paint	Powder Coat









NO.	DATE	REVISION
8		
7		
6		
5		
4		
3		
2		
1	2/3/17	Revised Lineweight

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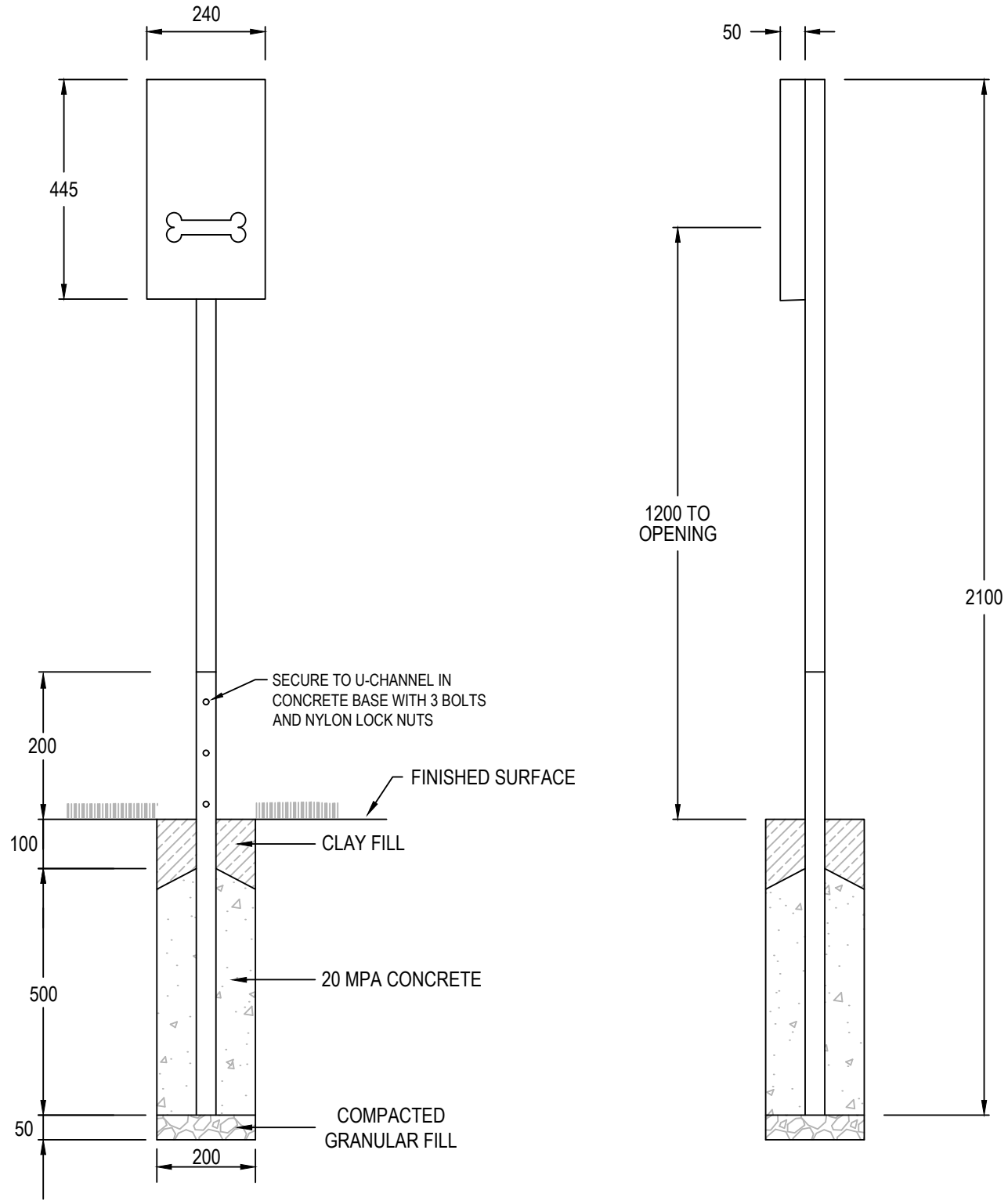
Scale: N.T.S.

GARBAGE RECEPTACLE

Date: Dec 21, 2016

Drawing #: 9-402



NOTES:

1. PRATICA DISPENSER (201/203)
2. U-CHANNEL TO BE EMBEDDED WITHIN CONCRETE BASE, EXTENDING 200 mm ABOVE FINISHED GROUND
3. MOUNT DISPENSER ON U-CHANNEL POST. SECURE POST TO U-CHANNEL IN CONCRETE BASE

NO.	DATE	REVISION
8		
7		
6		
5		
4		
3	12/03/20	Rev. Note 2, Added Hatch
2	12/05/18	Revised Notes and Drawing Ref
1	2/3/17	Revised Lineweight

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DOG WASTE BAG DISPENSER

Date: Dec 21, 2016

Drawing #: 9-403