	<b>Council Policy</b>		
	Classification <b>Public Works</b>		Policy No. <b>PW 2.10</b>
	Policy Title <b>Road Specifications</b>		
	Approved By: Council	Effective Date: May 14, 2014	Revisions:

## Purpose

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To allow the County of Stettler No. 6 to set the design guidelines and construction specifications for new construction or upgrades of municipal roads. (Municipal roads are roads which are owned and/or maintained by the County of Stettler No. 6.)

## Statement

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All new construction of municipal roads or upgrades of existing municipal roads within the County of Stettler No. 6 must be designed according to the County of Stettler No. 6 standards set out in this Policy.

## Procedure

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Refer to the attached road cross-sections in this policy for the design guidelines and construction specifications for different municipal road types. The Developer must propose and obtain approval from the County for the exact road cross-section that will best suit local site conditions. Notwithstanding this, where lot sizes in a proposed multi-lot subdivision outside of an urban area (i.e. hamlet) are 0.33 acres or smaller and/or the lots have frontages of 25 metres width or less, the Developer is required to apply urban type road cross-sections, except where approved otherwise by the County.

The following list of design guidelines and construction specifications apply to all municipal road types:

1. All gravel roads to have a minimum of 450 tonne (276 m<sup>3</sup> or 360 yd<sup>3</sup>) of crushed gravel per kilometre of road (i.e. 576 yd<sup>3</sup> of crushed gravel per mile of road) for road types with a 7 metre top, unless otherwise specified in the road cross-sections mentioned

above. More gravel may be required depending on the width of the road and subject to the discretion of the Director of Public Works.

2. All culverts to be sized to accommodate storm flows. The minimum culvert diameter is 500 mm, subject to the discretion of the Director of Public Works in order to achieve a minimum of 300 mm depth of cover. Refer to Public Works Policy 2.6 – Installation of Approaches and/or Culverts for more information.
3. All access approaches require approval from the County of Stettler No. 6 prior to construction. Refer to Public Works Policy 2.6 – Installation of Approaches and/or Culverts for more information.
4. Place all required signage and fencing.
5. All rocks and debris must be removed from the road right of way and construction limits.
6. All sideslopes, backslopes and ditches are to be topsoiled (100 mm depth) and seeded to the County of Stettler No. 6 specifications (refer to 'Section 14 Landscaping Standards' in the Red Deer County 'Design Guidelines and General Construction Specifications'. The grass seed mix shall be to the satisfaction of the Director of Agricultural Services.
7. Cul de sac turn-arounds must have a minimum radius of 20 metres.
8. Within any rural road type right of way, utility services shall be placed as shown on the attached drawings 01-A, 02-A, 04-A and 05-A. Within any urban road type right of way, utility services shall be placed as shown on each urban road type cross-section (refer to Attachments).
9. The party initiating the road construction is required to enter into a Development Agreement with the County of Stettler No. 6 for all municipal work, prior to commencing the work.
10. The Director of Public Works may approve any variances to the above design guidelines and construction specifications.

11. The County will endeavour to conserve topsoil during road construction wherever possible.
12. Typically, newly constructed roads will be constructed to the standards set out in this policy and appropriate for the posted speed limit. For new roads where the County determines it is not cost effective to construct to the standard for the posted speed of the road, a lower standard may be permitted by the Director of Public Works for a specific element or the entire length of the road subject to installation of any required added safety devices including but not limited to warning signs or barrier installation.

**Attachments:**

The Rural and Urban Road Cross-sections are attached to this policy.

**Related Documents**

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Public Works Policy 2.6 – Installation of Approaches and/or Culverts  
 Public Works Policy 2.17 - Engineering Design Guidelines and General Construction Specifications

**Policy Authorization**

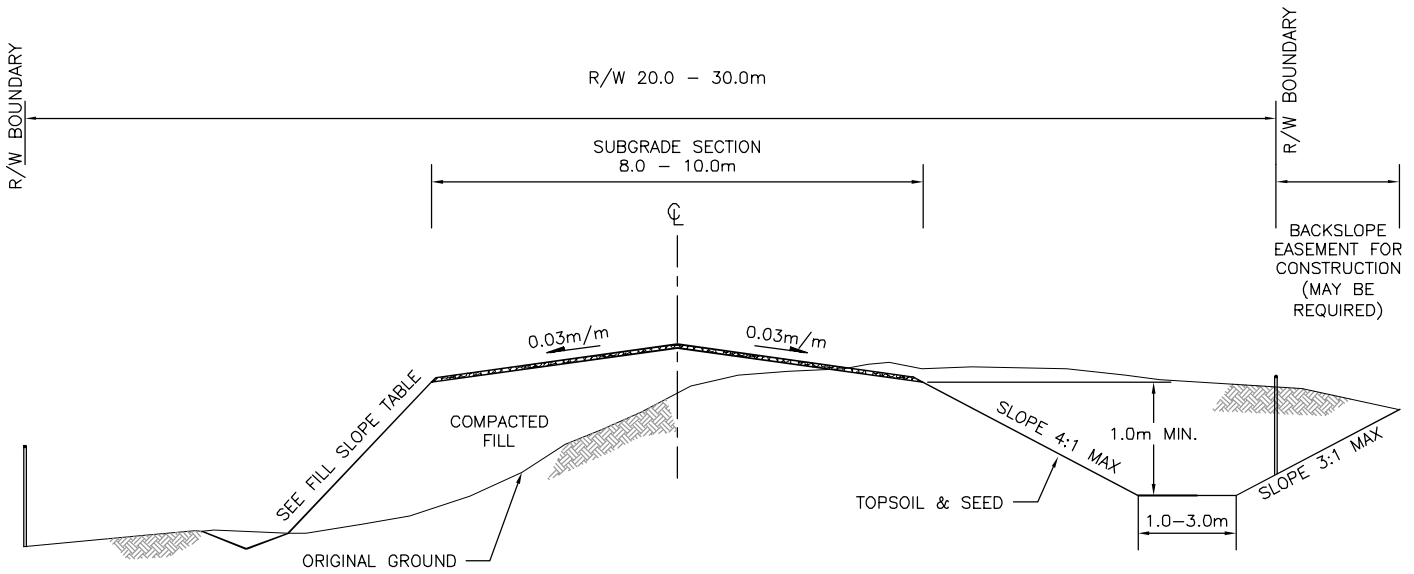
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<b>Reeve Signature</b>	<b>Effective Date</b>	<b>Resolution Number</b>
<i>transcription</i>	May 14, 2014	146.05.14.14

FUNCTION: TOWNSHIP OR RANGE ROAD WHICH MAY LINK TO A PRIMARY OR SECONDARY HIGHWAY.

Drawing No: 01

Date: 02/02/2010 Rev: 0



**FILL SLOPE TABLE:**

DEPTH OF FILL	SIDE SLOPE	BARRIER REQUIRED
0 - 1.5 m	4:1	NO
1.5 - 3.5 m	3:1	NO
3.5 - 4.5 m	2.5:1	YES
>4.5 m	2:1	YES

**GEOMETRIC PROPERTIES:**

1. USE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS.

**ROAD STRUCTURE REQUIREMENTS:**

1. A GEOTECHNICAL INVESTIGATION AND INDEPENDENT ROAD STRUCTURE DESIGN IS REQUIRED FOR ALL DEVELOPMENTS AND SHALL BE BASED ON A 20 YEAR DESIGN LIFE CONDITION AND PROJECTED TRAFFIC VOLUMES.
2. MINIMUM PRIMARY ROAD STRUCTURE:
  - DESIGNATION 4 CLASS 20 MATERIAL, SURFACE GRAVEL - APPLY 450 TONNES PER KM. ADDITIONAL APPLICATIONS MAY BE REQUIRED.
  - 0.90 NON-ORGANIC MATERIAL, 0.60m CLAY CAP.
3. THE ABOVE ROAD STRUCTURE INFORMATION DOES NOT NEGATE THE REQUIREMENT TO PROVIDE AN APPROVED ROAD STRUCTURE DESIGN. THE APPROVED ROAD STRUCTURE MUST MEET OR EXCEED THE MINIMUM PRIMARY ROAD STRUCTURE NOTED ABOVE.
4. COMPACT UPPER 300mm TO 100% OF STANDARD PROCTOR DENSITY. COMPACT ALL MATERIAL BELOW 300mm TO 95% OF STANDARD PROCTOR DENSITY. COMPACT AT OPTIMUM MOISTURE CONTENT.

**CULVERT INFORMATION:**

1. REFER TO DWG. NO. 06.

**NOTES:**

1. ROAD WIDTHS DEPENDANT ON TRAFFIC VOLUMES.
2. SIDE SLOPES STEEPER THAN 3:1 REQUIRE BARRIER INSTALLATION.
3. USE FLATTER SIDE SLOPES AND BACKSLOPES WHERE POSSIBLE TO INCREASE DEGREE OF SAFETY.
4. WIDTH OF DITCH - "V" DITCH MINIMUM. CHANNEL GEOMETRICS SHALL BE DETERMINED THROUGH A STORMWATER DRAINAGE ANALYSIS.
5. BACKSLOPE EASEMENT OUTSIDE OF THE ROAD R/W MAY BE REQUIRED FOR CONSTRUCTION.
6. POSTED SPEED LIMIT = 80km/hr.
7. CROSS-SECTIONAL PROPERTIES MUST BE APPROVED BY THE COUNTY OF STETTLER NO.6.
8. AN APPROPRIATE TRANSITION BETWEEN RURAL AND URBAN CROSS-SECTIONAL ELEMENTS IS REQUIRED WHERE APPLICABLE. DETAILS REGARDING THE TRANSITION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF STETTLER No.6 FOR APPROVAL.



Drawn By: M.R.

Checked By: H.H.

Scale: N.T.S.



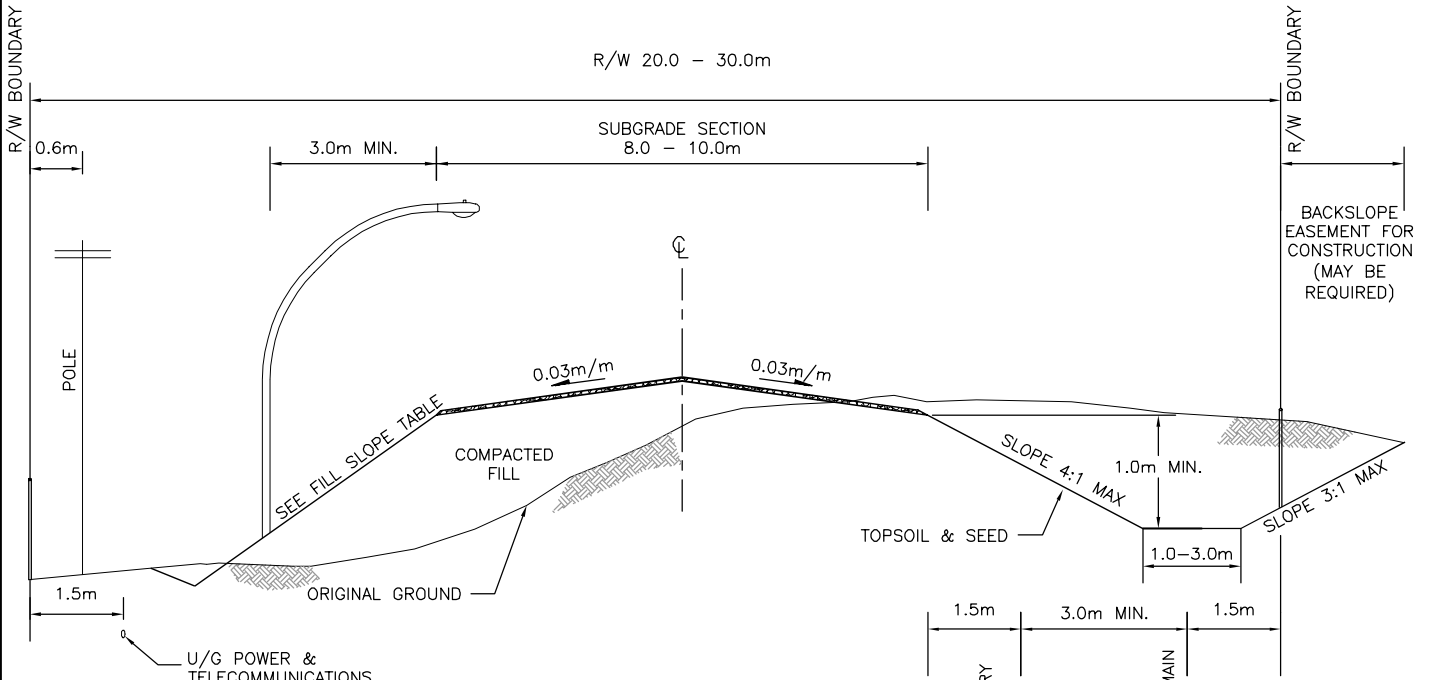
**COUNTY OF STETTLER**

TYPICAL CROSS SECTION  
PRIMARY ROAD

FUNCTION: TOWNSHIP OR RANGE ROAD WHICH MAY LINK TO A PRIMARY OR SECONDARY HIGHWAY.

Drawing No: 01 - A

Date: JUL/08/2010 Rev: 0



**FILL SLOPE TABLE:**

DEPTH OF FILL	SIDE SLOPE	BARRIER REQUIRED
0 - 1.5 m	4:1	NO
1.5 - 3.5 m	3:1	NO
3.5 - 4.5 m	2.5:1	YES
>4.5 m	2:1	YES

**GEOMETRIC PROPERTIES:**

- USE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS.

**ROAD STRUCTURE REQUIREMENTS:**

- A GEOTECHNICAL INVESTIGATION AND INDEPENDENT ROAD STRUCTURE DESIGN IS REQUIRED FOR ALL DEVELOPMENTS AND SHALL BE BASED ON A 20 YEAR DESIGN LIFE CONDITION AND PROJECTED TRAFFIC VOLUMES.
- MINIMUM PRIMARY ROAD STRUCTURE:  
-DESIGNATION 4 CLASS 20 MATERIAL, SURFACE GRAVEL - APPLY 450 TONNES PER KM. ADDITIONAL APPLICATIONS MAY BE REQUIRED.  
-0.90 NON-ORGANIC MATERIAL, 0.60m CLAY CAP.
- THE ABOVE ROAD STRUCTURE INFORMATION DOES NOT NEGATE THE REQUIREMENT TO PROVIDE AN APPROVED ROAD STRUCTURE DESIGN. THE APPROVED ROAD STRUCTURE MUST MEET OR EXCEED THE MINIMUM PRIMARY ROAD STRUCTURE NOTED ABOVE.
- COMPACT UPPER 300mm TO 100% OF STANDARD PROCTOR DENSITY. COMPACT ALL MATERIAL BELOW 300mm TO 95% OF STANDARD PROCTOR DENSITY. COMPACT AT OPTIMUM MOISTURE CONTENT.

**CULVERT INFORMATION:**

- REFER TO DWG. NO. 06.

**NOTES:**

- ROAD WIDTHS DEPENDANT ON TRAFFIC VOLUMES.
- SIDE SLOPES STEEPER THAN 3:1 REQUIRE BARRIER INSTALLATION.
- USE FLATTER SIDE SLOPES AND BACKSLOPES WHERE POSSIBLE TO INCREASE DEGREE OF SAFETY.
- WIDTH OF DITCH - "V" DITCH MINIMUM. CHANNEL GEOMETRICS SHALL BE DETERMINED THROUGH A STORMWATER DRAINAGE ANALYSIS.
- BACKSLOPE EASEMENT OUTSIDE OF THE ROAD R/W MAY BE REQUIRED FOR CONSTRUCTION.
- THIS CROSS-SECTION IS A DESIGN GUIDELINE. PROPOSED ROAD CROSS-SECTION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF SETTLER NO.6. FOR APPROVAL.
- AN APPROPRIATE TRANSITION BETWEEN RURAL AND URBAN CROSS-SECTIONAL ELEMENTS IS REQUIRED WHERE APPLICABLE. DETAILS REGARDING THE TRANSITION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF SETTLER No.6 FOR APPROVAL.
- GAS MAIN TO EITHER BE LOCATED WITHIN ROAD RIGHT-OF-WAY OR WITHIN AN EASEMENT ON PRIVATE PROPERTY. GAS ALIGNMENT TO BE COORDINATED WITH OTHER UTILITIES.
- FRANCHISE UTILITY REQUIREMENTS AND ALIGNMENTS TO BE CONFIRMED WITH THE FRANCHISE UTILITY OWNER.
- SHOULDER WIDENING TO BE PROVIDED ADJACENT TO HYDRANTS.
- POSTED SPEED LIMIT = 80km/hr.

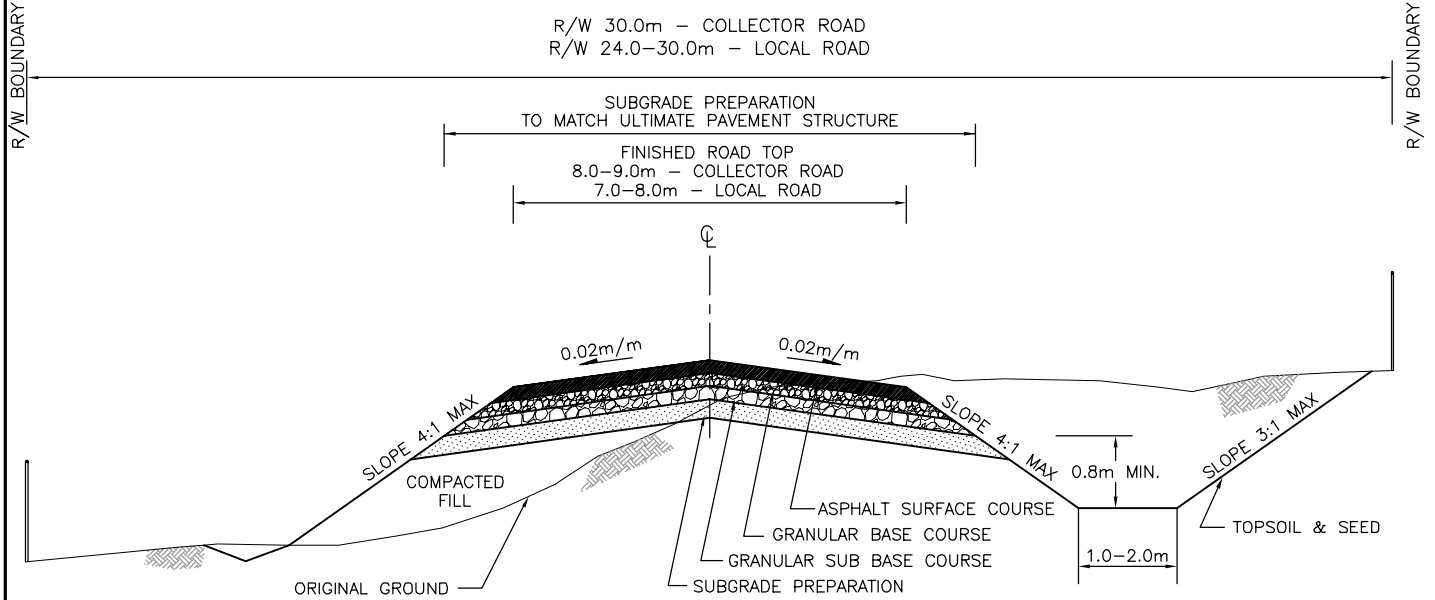


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**COUNTY OF SETTLER**

TYPICAL CROSS SECTION  
PRIMARY ROAD



**GEOMETRIC PROPERTIES:**

1. USE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS.

**ROAD STRUCTURE REQUIREMENTS:**

1. A GEOTECHNICAL INVESTIGATION AND INDEPENDENT ROAD STRUCTURE DESIGN IS REQUIRED FOR ALL DEVELOPMENTS AND SHALL BE BASED ON A 20 YEAR DESIGN LIFE CONDITION AND PROJECTED TRAFFIC VOLUMES.
2. MINIMUM RESIDENTIAL COLLECTOR ROAD STRUCTURE:
  - ASPHALT CONCRETE PAVEMENT – 100mm DEPTH (2 LIFTS)
  - GRANULAR BASE COURSE – 150mm DEPTH (20mm MINUS)
  - GRANULAR SUB BASE COURSE – 300mm DEPTH (75mm OR 150mm MINUS)
  - SUBGRADE PREPARATION – 150mm DEPTH (REPLACE UNSUITABLE SUBGRADE MATERIAL)
- MINIMUM RESIDENTIAL LOCAL ROAD STRUCTURE:
  - ASPHALT CONCRETE PAVEMENT – 75mm DEPTH
  - GRANULAR BASE COURSE – 100mm DEPTH (20mm MINUS)
  - GRANULAR SUB BASE COURSE – 250mm DEPTH (75mm OR 150mm MINUS)
  - SUBGRADE PREPARATION – 150mm DEPTH (REPLACE UNSUITABLE SUBGRADE MATERIAL)
- ALTERNATE FOR RESIDENTIAL COLLECTOR AND RESIDENTIAL LOCAL ROAD:
  - GRAVEL OR SOIL STABILIZATION WITH CHIP SEAL OR ASPHALT CONCRETE PAVEMENT MAY BE USED AT THE DISCRETION OF THE COUNTY OF STETTLER NO.6.
3. THE ABOVE MINIMUM RESIDENTIAL ROAD STRUCTURES DO NOT NEGATE THE REQUIREMENT TO PROVIDE AN APPROVED ROAD STRUCTURE DESIGN. THE APPROVED ROAD STRUCTURE MUST MEET OR EXCEED THE MINIMUM RESIDENTIAL ROAD STRUCTURE NOTED ABOVE.
4. AN ADDITIONAL LIFT OF ASPHALT MAY BE REQUIRED BEFORE EXPIRATION OF THE MAINTENANCE PERIOD.
5. FOR FILL BELOW ROAD STRUCTURE, COMPACT UPPER 300mm TO 100% OF STANDARD PROCTOR DENSITY, COMPACT BELOW 300mm TO 95% OF STANDARD PROCTOR DENSITY. COMPACT AT OPTIMUM MOISTURE CONTENT.

**CULVERT INFORMATION:**

1. REFER TO DWG. NO. 06.

**NOTES:**

1. ROAD WIDTHS DEPENDANT ON TRAFFIC VOLUMES.
2. SIDE SLOPES STEEPER THAN 3:1 REQUIRE BARRIER INSTALLATION.
3. USE FLATTER SIDE SLOPES AND BACKSLOPES WHERE POSSIBLE TO INCREASE DEGREE OF SAFETY.
4. WIDTH OF DITCH – "V" DITCH MINIMUM. CHANNEL GEOMETRICS SHALL BE DETERMINED THROUGH A STORMWATER DRAINAGE ANALYSIS.
5. BACKSLOPE EASEMENT OUTSIDE OF THE ROAD R/W MAY BE REQUIRED FOR CONSTRUCTION.
6. POSTED SPEED LIMIT = 30km/hr.
7. CROSS-SECTIONAL PROPERTIES MUST BE APPROVED BY THE COUNTY OF STETTLER NO.6.
8. AN APPROPRIATE TRANSITION BETWEEN RURAL AND URBAN CROSS-SECTIONAL ELEMENTS IS REQUIRED WHERE APPLICABLE. DETAILS REGARDING THE TRANSITION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF STETTLER NO.6 FOR APPROVAL.

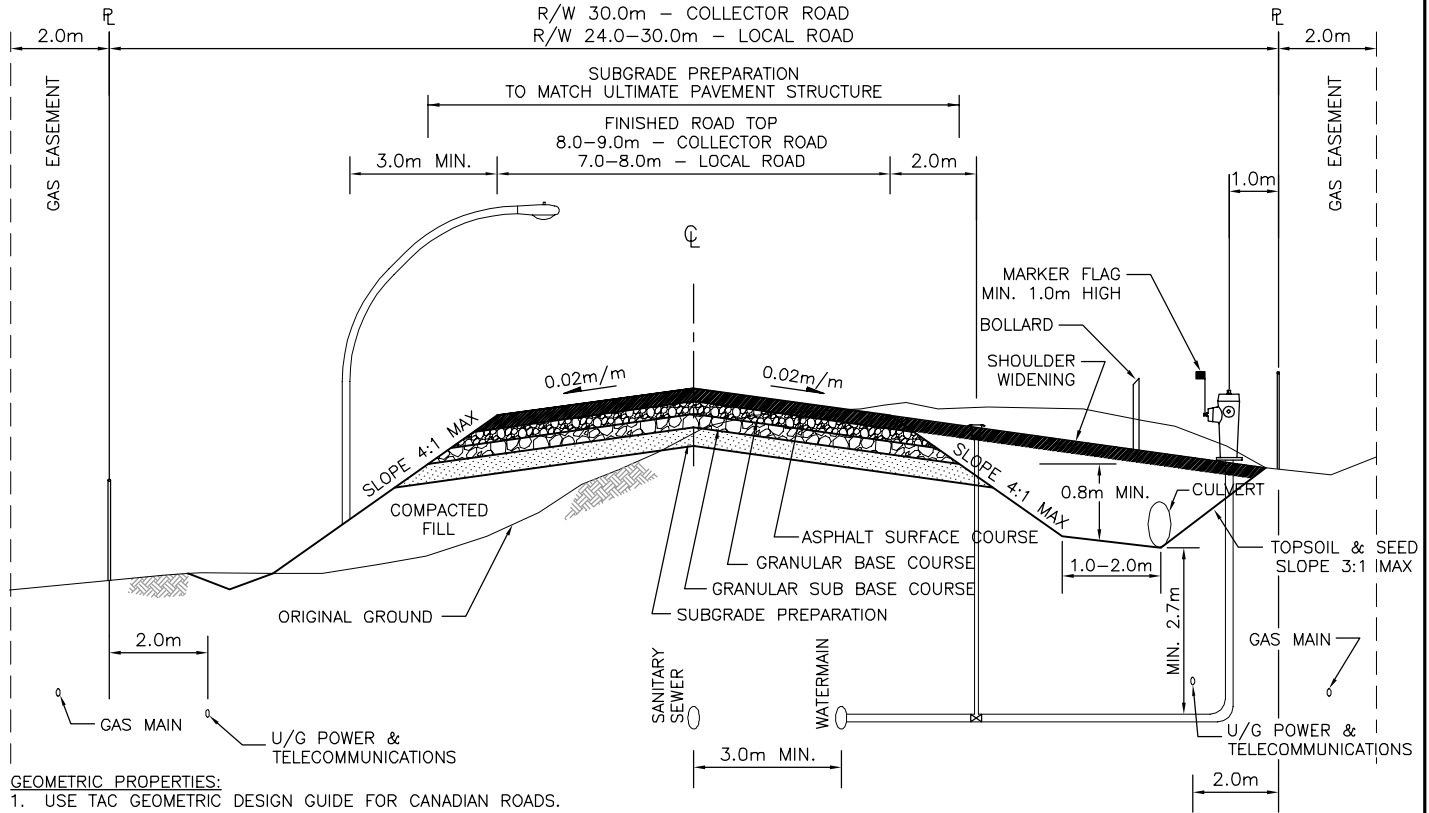


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**COUNTY OF STETTLER**

TYPICAL CROSS SECTION  
 RURAL RESIDENTIAL SUBDIVISION  
 COLLECTOR AND LOCAL ROADS



**GEOMETRIC PROPERTIES:**  
 1. USE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS.

- ROAD STRUCTURE REQUIREMENTS:**
- A GEOTECHNICAL INVESTIGATION AND INDEPENDENT ROAD STRUCTURE DESIGN IS REQUIRED FOR ALL DEVELOPMENTS AND SHALL BE BASED ON A 20 YEAR DESIGN LIFE CONDITION AND PROJECTED TRAFFIC VOLUMES.
  - MINIMUM RESIDENTIAL COLLECTOR ROAD STRUCTURE:  
 ASPHALT CONCRETE PAVEMENT - 100mm DEPTH (2 LIFTS)  
 GRANULAR BASE COURSE - 150mm DEPTH (20mm MINUS)  
 GRANULAR SUB BASE COURSE - 300mm DEPTH (75mm OR 150mm MINUS)  
 SUBGRADE PREPARATION - 150mm DEPTH (REPLACE UNSUITABLE SUBGRADE MATERIAL)
  - MINIMUM RESIDENTIAL LOCAL ROAD STRUCTURE:  
 ASPHALT CONCRETE PAVEMENT - 75mm DEPTH  
 GRANULAR BASE COURSE - 100mm DEPTH (20mm MINUS)  
 GRANULAR SUB BASE COURSE - 250mm DEPTH (75mm OR 150mm MINUS)  
 SUBGRADE PREPARATION - 150mm DEPTH (REPLACE UNSUITABLE SUBGRADE MATERIAL)
  - ALTERNATE FOR RESIDENTIAL COLLECTOR AND RESIDENTIAL LOCAL ROAD:  
 GRAVEL OR SOIL STABILIZATION WITH CHIP SEAL OR ASPHALT CONCRETE PAVEMENT MAY BE USED AT THE DISCRETION OF THE COUNTY OF STETTTLER NO.6.
  - THE ABOVE MINIMUM RESIDENTIAL ROAD STRUCTURES DO NOT NEGATE THE REQUIREMENT TO PROVIDE AN APPROVED ROAD STRUCTURE DESIGN. THE APPROVED ROAD STRUCTURE MUST MEET OR EXCEED THE MINIMUM RESIDENTIAL ROAD STRUCTURE NOTED ABOVE.
  - AN ADDITIONAL LIFT OF ASPHALT MAY BE REQUIRED BEFORE EXPIRATION OF THE MAINTENANCE PERIOD.
  - FOR FILL BELOW ROAD STRUCTURE, COMPACT UPPER 300mm TO 100% OF STANDARD PROCTOR DENSITY, COMPACT BELOW 300mm TO 95% OF STANDARD PROCTOR DENSITY. COMPACT AT OPTIMUM MOISTURE CONTENT.

**CULVERT INFORMATION:**  
 1. REFER TO DWG. NO. 06.

- NOTES:**
- ROAD WIDTHS DEPENDANT ON TRAFFIC VOLUMES.
  - SIDE SLOPES STEEPER THAN 3:1 REQUIRE BARRIER INSTALLATION.
  - USE FLATTER SIDE SLOPES AND BACKSLOPES WHERE POSSIBLE TO INCREASE DEGREE OF SAFETY.
  - WIDTH OF DITCH - "V" DITCH MINIMUM. CHANNEL GEOMETRICS SHALL BE DETERMINED THROUGH A STORMWATER DRAINAGE ANALYSIS.
  - BACKSLOPE EASEMENT OUTSIDE OF THE ROAD R/W MAY BE REQUIRED FOR CONSTRUCTION.
  - THIS CROSS-SECTION IS A DESIGN GUIDELINE. PROPOSED ROAD CROSS-SECTION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF STETTTLER NO.6. FOR APPROVAL.
  - AN APPROPRIATE TRANSITION BETWEEN RURAL AND URBAN CROSS-SECTIONAL ELEMENTS IS REQUIRED WHERE APPLICABLE. DETAILS REGARDING THE TRANSITION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF STETTTLER NO.6 FOR APPROVAL.
  - FRANCHISE UTILITY REQUIREMENTS AND ALIGNMENTS TO BE CONFIRMED WITH THE FRANCHISE UTILITY OWNER.
  - POSTED SPEED LIMIT = 30km/hr.
  - ALL SERVICES SHALL EXTEND 3.0m PAST THE EASEMENT LINE INTO THE LOT.

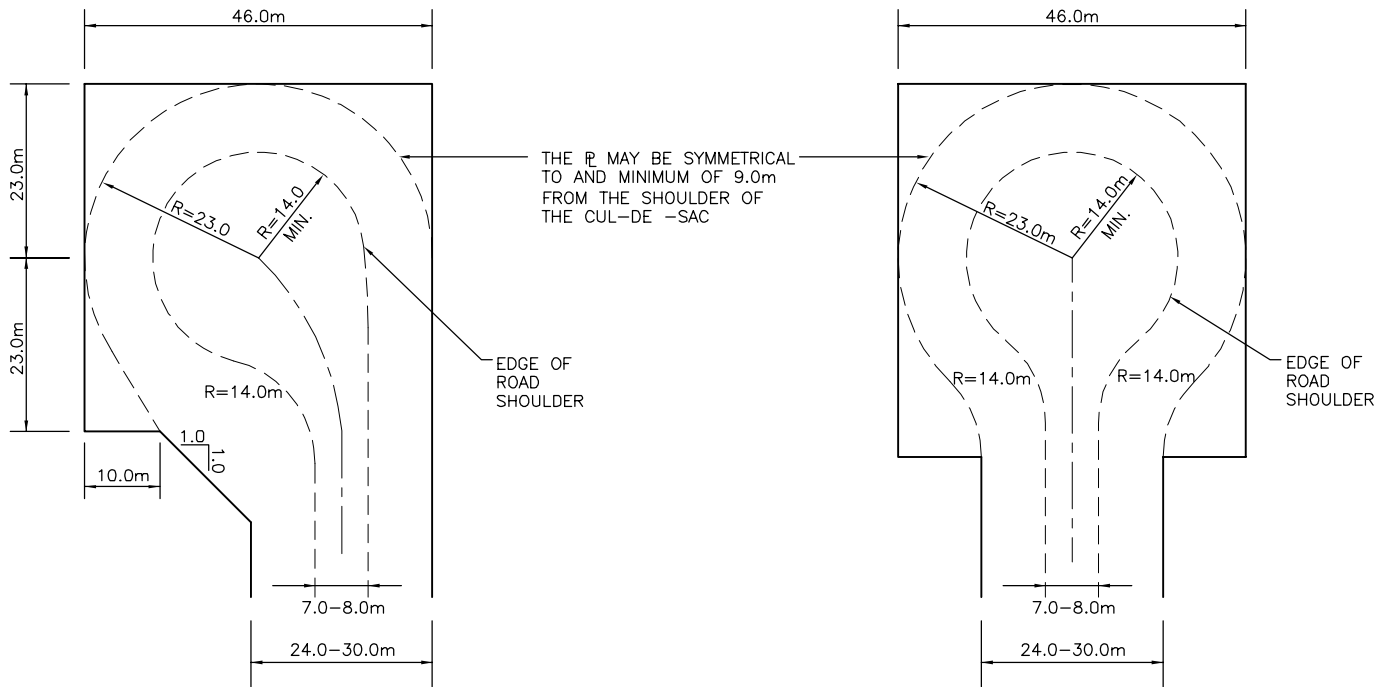


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**COUNTY OF STETTTLER**

TYPICAL CROSS SECTION  
 RURAL RESIDENTIAL SUBDIVISION  
 COLLECTOR AND LOCAL ROADS



**NOTES:**

1. THE MAXIMUM LENGTH OF DEAD-END ROADS THAT SERVICE RESIDENTIAL LOTS SHALL BE 300m.
2. OTHER THAN FOR AN INTERIM SOLUTION, DEAD-END ROADS SHALL NOT BE ALLOWED IN INDUSTRIAL/COMMERCIAL SUBDIVISIONS OR ON RESIDENTIAL COLLECTOR ROADS UNLESS APPROVED OTHERWISE BY THE COUNTY OF STETTLER NO.6.
3. A RESERVE SHALL BE SET ASIDE FOR SNOW STORAGE. RESERVE SHALL DRAIN AWAY FROM DEVELOPABLE LOTS OR OTHER STRUCTURES. RESERVE SHALL HAVE A MINIMUM AREA OF 0.30ha AND BE ADJACENT TO ROAD SURFACE. DESIGN OF STORAGE SITE TO BE APPROVED BY THE COUNTY OF STETTLER NO.6.

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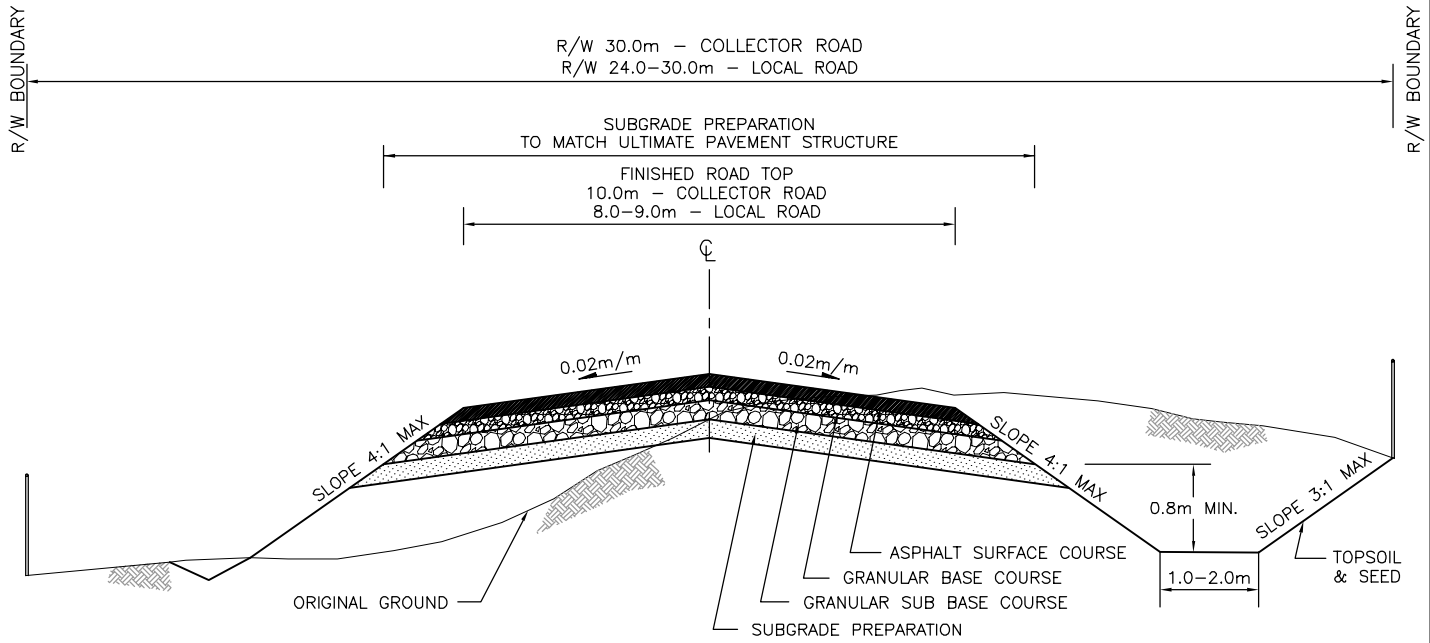
**COUNTY OF STETTLER**

TYPICAL RURAL RESIDENTIAL  
CUL-DE-SAC FOR  
LOCAL ROADS

FUNCTION: COLLECTOR AND LOCAL ROADS WITHIN A RURAL INDUSTRIAL OR COMMERCIAL MULTI-LOT SUBDIVISION

Drawing No: 04

Date: 02/02/2010 Rev: 0



**GEOMETRIC PROPERTIES:**

1. USE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS.

**ROAD STRUCTURE REQUIREMENTS:**

- A GEOTECHNICAL INVESTIGATION AND INDEPENDENT ROAD STRUCTURE DESIGN IS REQUIRED FOR ALL DEVELOPMENTS AND SHALL BE BASED ON A 20 YEAR DESIGN LIFE CONDITION AND PROJECTED TRAFFIC VOLUMES.
- MINIMUM INDUSTRIAL/COMMERCIAL COLLECTOR ROAD STRUCTURE:  
 ASPHALT CONCRETE PAVEMENT - 100mm DEPTH (2 LIFTS)  
 GRANULAR BASE COURSE - 200mm DEPTH (20mm MINUS)  
 GRANULAR SUB BASE COURSE - 300mm DEPTH (75mm OR 150mm MINUS)  
 SUBGRADE PREPARATION - 150mm DEPTH (REPLACE UNSUITABLE SUBGRADE MATERIAL)  
 MINIMUM INDUSTRIAL/COMMERCIAL LOCAL ROAD STRUCTURE:  
 ASPHALT CONCRETE PAVEMENT - 90mm DEPTH (2 LIFTS)  
 GRANULAR BASE COURSE - 150mm DEPTH (20mm MINUS)  
 GRANULAR SUB BASE COURSE - 300mm DEPTH (75mm OR 150mm MINUS)  
 SUBGRADE PREPARATION - 150mm DEPTH (REPLACE UNSUITABLE SUBGRADE MATERIAL)  
 ALTERNATE FOR COLLECTOR AND LOCAL ROAD:  
 SOIL STABILIZATION WITH ASPHALT CONCRETE PAVEMENT MAY BE USED AT THE DISCRETION OF THE COUNTY OF STETTLER NO.6.
- THE ABOVE MINIMUM INDUSTRIAL/COMMERCIAL ROAD STRUCTURES DO NOT NEGATE THE REQUIREMENT TO PROVIDE AN APPROVED ROAD STRUCTURE DESIGN. THE APPROVED ROAD STRUCTURE MUST MEET OR EXCEED THE MINIMUM INDUSTRIAL/COMMERCIAL ROAD STRUCTURE NOTED ABOVE.
- AN ADDITIONAL LIFT OF ASPHALT MAY BE REQUIRED BEFORE EXPIRATION OF THE MAINTENANCE PERIOD.
- FOR FILL BELOW ROAD STRUCTURE, COMPACT UPPER 300mm TO 100% OF STANDARD PROCTOR DENSITY, COMPACT BELOW 300mm TO 95% OF STANDARD PROCTOR DENSITY. COMPACT AT OPTIMUM MOISTURE CONTENT.

**CULVERT INFORMATION:**

1. REFER TO DWG. NO. 06.

**NOTES:**

- ROAD WIDTHS DEPENDANT ON TRAFFIC VOLUMES AND VEHICLE TYPE.
- SIDE SLOPES STEEPER THAN 3:1 REQUIRE BARRIER INSTALLATION.
- USE FLATTER SIDE SLOPES AND BACKSLOPES WHERE POSSIBLE TO INCREASE DEGREE OF SAFETY.
- WIDTH OF DITCH - "V" DITCH MINIMUM. CHANNEL GEOMETRICS SHALL BE DETERMINED THROUGH A STORMWATER DRAINAGE ANALYSIS.
- BACKSLOPE EASEMENT OUTSIDE OF THE ROAD R/W MAY BE REQUIRED FOR CONSTRUCTION.
- POSTED SPEED LIMIT = 50km/hr.
- APPLIES TO LIGHT INDUSTRIAL. FOR HEAVY INDUSTRIAL APPLICATIONS, PROVIDE SUITABLE DESIGN.
- CROSS-SECTIONAL PROPERTIES MUST BE APPROVED BY THE COUNTY OF STETTLER NO.6.
- AN APPROPRIATE TRANSITION BETWEEN RURAL AND URBAN CROSS-SECTIONAL ELEMENTS IS REQUIRED WHERE APPLICABLE. DETAILS REGARDING THE TRANSITION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF STETTLER NO.6 FOR APPROVAL.



Drawn By: M.R.

Checked By: H.H.

Scale: N.T.S.



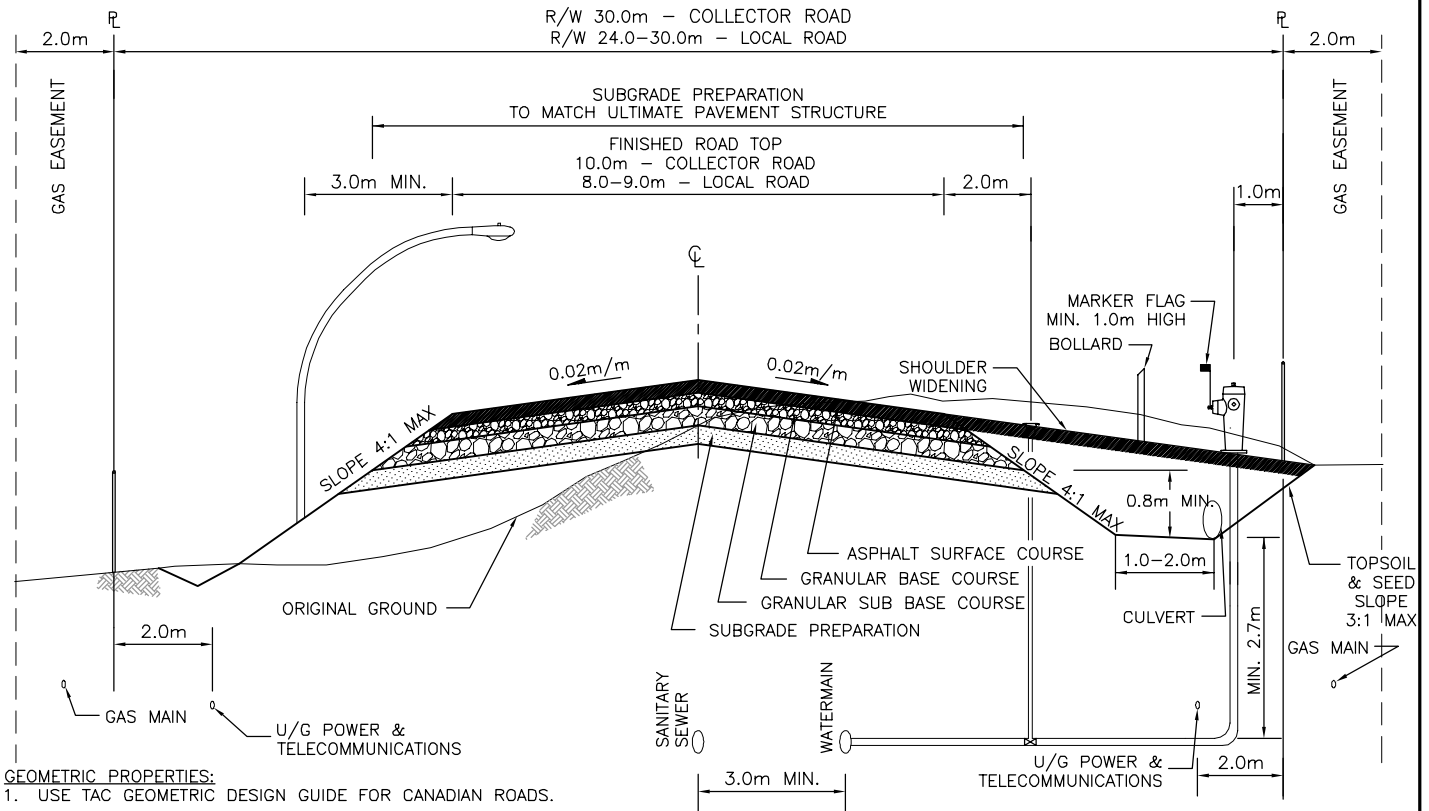
**COUNTY OF STETTLER**

TYPICAL CROSS SECTION  
RURAL INDUSTRIAL/COMMERCIAL SUBDIVISION  
COLLECTOR AND LOCAL ROADS

FUNCTION: COLLECTOR AND LOCAL ROADS WITHIN A RURAL INDUSTRIAL OR COMMERCIAL MULTI-LOT SUBDIVISION

Drawing No: 04 - A

Date: JUL/08/2010 Rev: 0



**GEOMETRIC PROPERTIES:**

1. USE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS.

**ROAD STRUCTURE REQUIREMENTS:**

1. A GEOTECHNICAL INVESTIGATION AND INDEPENDENT ROAD STRUCTURE DESIGN IS REQUIRED FOR ALL DEVELOPMENTS AND SHALL BE BASED ON A 20 YEAR DESIGN LIFE CONDITION AND PROJECTED TRAFFIC VOLUMES.

2. MINIMUM INDUSTRIAL/COMMERCIAL COLLECTOR ROAD STRUCTURE:

- ASPHALT CONCRETE PAVEMENT - 100mm DEPTH (2 LIFTS)
- GRANULAR BASE COURSE - 200mm DEPTH (20mm MINUS)
- GRANULAR SUB BASE COURSE - 300mm DEPTH (75mm OR 150mm MINUS)
- SUBGRADE PREPARATION - 150mm DEPTH (REPLACE UNSUITABLE SUBGRADE MATERIAL)

MINIMUM INDUSTRIAL/COMMERCIAL LOCAL ROAD STRUCTURE:

- ASPHALT CONCRETE PAVEMENT - 90mm DEPTH (2 LIFTS)
- GRANULAR BASE COURSE - 150mm DEPTH (20mm MINUS)
- GRANULAR SUB BASE COURSE - 300mm DEPTH (75mm OR 150mm MINUS)
- SUBGRADE PREPARATION - 150mm DEPTH (REPLACE UNSUITABLE SUBGRADE MATERIAL)

ALTERNATE FOR COLLECTOR AND LOCAL ROAD:

SOIL STABILIZATION WITH ASPHALT CONCRETE PAVEMENT MAY BE USED AT THE DISCRETION OF THE COUNTY OF STETTLER NO.6.

3. THE ABOVE MINIMUM INDUSTRIAL/COMMERCIAL ROAD STRUCTURES DO NOT NEGATE THE REQUIREMENT TO PROVIDE AN APPROVED ROAD STRUCTURE DESIGN. THE APPROVED ROAD STRUCTURE MUST MEET OR EXCEED THE MINIMUM INDUSTRIAL/COMMERCIAL ROAD STRUCTURE NOTED ABOVE.

4. AN ADDITIONAL LIFT OF ASPHALT MAY BE REQUIRED BEFORE EXPIRATION OF THE MAINTENANCE PERIOD.

5. FOR FILL BELOW ROAD STRUCTURE, COMPACT UPPER 300mm TO 100% OF STANDARD PROCTOR DENSITY, COMPACT BELOW 300mm TO 95% OF STANDARD PROCTOR DENSITY. COMPACT AT OPTIMUM MOISTURE CONTENT.

**CULVERT INFORMATION:**

1. REFER TO DWG. NO. 06.

**NOTES:**

1. ROAD WIDTHS DEPENDANT ON TRAFFIC VOLUMES AND VEHICLE TYPE.
2. SIDE SLOPES STEEPER THAN 3:1 REQUIRE BARRIER INSTALLATION.
3. USE FLATTER SIDE SLOPES AND BACKSLOPES WHERE POSSIBLE TO INCREASE DEGREE OF SAFETY.
4. WIDTH OF DITCH - "V" DITCH MINIMUM. CHANNEL GEOMETRICS SHALL BE DETERMINED THROUGH A STORMWATER DRAINAGE ANALYSIS.
5. BACKSLOPE EASEMENT OUTSIDE OF THE ROAD R/W MAY BE REQUIRED FOR CONSTRUCTION.
6. APPLIES TO LIGHT INDUSTRIAL. FOR HEAVY INDUSTRIAL APPLICATIONS, PROVIDE SUITABLE DESIGN.
7. THIS CROSS-SECTION IS A DESIGN GUIDELINE. PROPOSED ROAD CROSS-SECTION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF STETTLER NO.6. FOR APPROVAL.
8. AN APPROPRIATE TRANSITION BETWEEN RURAL AND URBAN CROSS-SECTIONAL ELEMENTS IS REQUIRED WHERE APPLICABLE. DETAILS REGARDING THE TRANSITION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF STETTLER NO.6 FOR APPROVAL.
9. FRANCHISE UTILITY REQUIREMENTS AND ALIGNMENTS TO BE CONFIRMED WITH THE FRANCHISE UTILITY OWNER.
10. POSTED SPEED LIMIT = 50km/hr.
11. ALL SERVICES SHALL EXTEND 3.0m PAST THE EASEMENT LINE INTO THE LOT.



Drawn By: M.R.  
 Checked By: H.H.  
 Scale: N.T.S.



**COUNTY OF STETTLER**

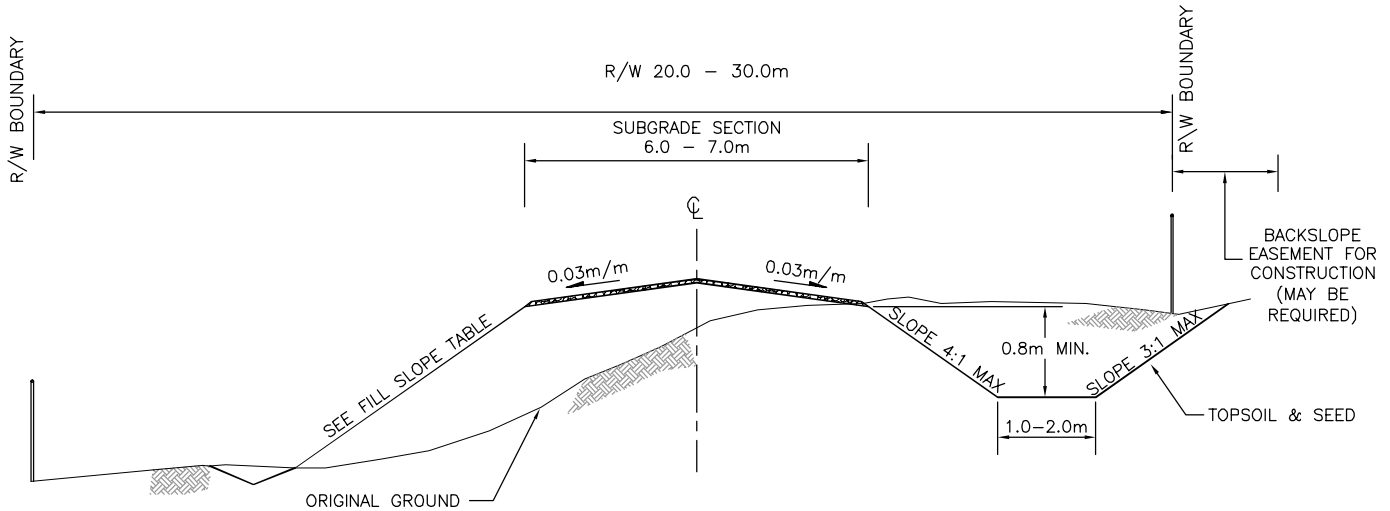
TYPICAL CROSS SECTION  
 RURAL INDUSTRIAL/COMMERCIAL SUBDIVISION  
 COLLECTOR AND LOCAL ROADS

FUNCTION: A RESIDENTIAL AND/OR FARM MACHINERY ROAD THAT SERVICES THREE OR LESS RESIDENCES EACH ON A SEPARATE TITLE.

Drawing No: 05

Date: 02/02/2010

Rev: 0



**FILL SLOPE TABLE:**

DEPTH OF FILL	SIDE SLOPE	BARRIER REQUIRED
0 - 1.5m	4:1	NO
1.5 - 3.5m	3:1	NO
3.5 - 4.5m	2.5:1	YES
>4.5m	2:1	YES

**GEOMETRIC PROPERTIES:**

1. USE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS.

**ROAD STRUCTURE REQUIREMENTS:**

1. A GEOTECHNICAL INVESTIGATION AND INDEPENDENT ROAD STRUCTURE DESIGN IS REQUIRED FOR ALL DEVELOPMENTS AND SHALL BE BASED ON A 20 YEAR DESIGN LIFE AND PROJECTED TRAFFIC VOLUMES.
2. MINIMUM LIMITED ACCESS ROAD STRUCTURE:
  - DESIGNATION 4 CLASS 25 MATERIAL, 250 TONNES PER KM.
  - 0.90 NON-ORGANIC MATERIAL, 0.20m CLAY CAP.
3. THE ABOVE ROAD STRUCTURE DOES NOT NEGATE THE REQUIREMENT TO PROVIDE AN APPROVED ROAD STRUCTURE DESIGN. THE APPROVED ROAD STRUCTURE MUST MEET OR EXCEED THE MINIMUM LIMITED ACCESS ROAD STRUCTURE NOTED ABOVE.
4. COMPACT 200mm CLAY CAP AND 100mm OF FILL BELOW CLAY CAP TO 100% OF STANDARD PROCTOR DENSITY. COMPACT ALL MATERIAL BELOW UPPER 300mm TO 95% OF STANDARD PROCTOR DENSITY. COMPACT AT OPTIMUM MOISTURE CONTENT.

**CULVERT INFORMATION:**

1. REFER TO DWG. NO. 06

**NOTES:**

1. SIDE SLOPES STEEPER THAN 3:1 REQUIRE BARRIER INSTALLATION.
2. USE FLATTER SIDE SLOPES AND BACKSLOPES WHERE POSSIBLE TO INCREASE DEGREE OF SAFETY.
3. WIDTH OF DITCH - "V" DITCH MINIMUM. CHANNEL GEOMETRICS SHALL BE DETERMINED THROUGH A STORMWATER DRAINAGE ANALYSIS.
4. BACKSLOPE EASEMENT OUTSIDE OF THE R/W MAY BE REQUIRED FOR CONSTRUCTION.
5. THIS STANDARD IS INTENDED FOR LOW-SPEED, LOW VOLUME ROADS WHICH WILL BE GRAVEL SURFACE ONLY AND WILL SERVICE A MAXIMUM OF THREE RESIDENCES.
6. TYPICALLY 6.0m ROAD TOP WIDTH IS ONLY FOR RESIDENTIAL USE AND A LENGTH OF ROAD LESS THAN 300m. A 7.0m ROAD TOP IS REQUIRED FOR AGRICULTURAL (FARM MACHINERY) USE AND FOR RESIDENTIAL USE IF THE ROAD HAS A LENGTH GREATER THAN 300m.
7. THIS STANDARD EXCLUDES ROADS WITHIN MULTI-LOT SUBDIVISIONS.
8. IF THE LIMITED ACCESS ROAD IS ANTICIPATED TO SERVICE MORE THAN THREE RESIDENCES IN THE FUTURE REFER TO "PRIMARY ROAD" STANDARD (DRAWING NO. 01).
9. POSTED SPEED LIMIT FOR A 6.0m ROAD TOP WIDTH = 30km/hr AND POSTED SPEED LIMIT FOR A 7.0m ROAD TOP WIDTH = 40km/hr.
10. CROSS-SECTIONAL PROPERTIES MUST BE APPROVED BY THE COUNTY OF STETTLER No. 6.
11. AN APPROPRIATE TRANSITION BETWEEN RURAL AND URBAN CROSS-SECTIONAL ELEMENTS IS REQUIRED WHERE APPLICABLE. DETAILS REGARDING THE TRANSITION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF STETTLER No.6 FOR APPROVAL.
12. LIMITED ACCESS ROAD STANDARDS MAY BE VARIED AT THE DISCRETION OF THE COUNTY OF STETTLER NO. 6



Drawn By: M.R.  
 Checked By: H.H.  
 Scale: N.T.S.



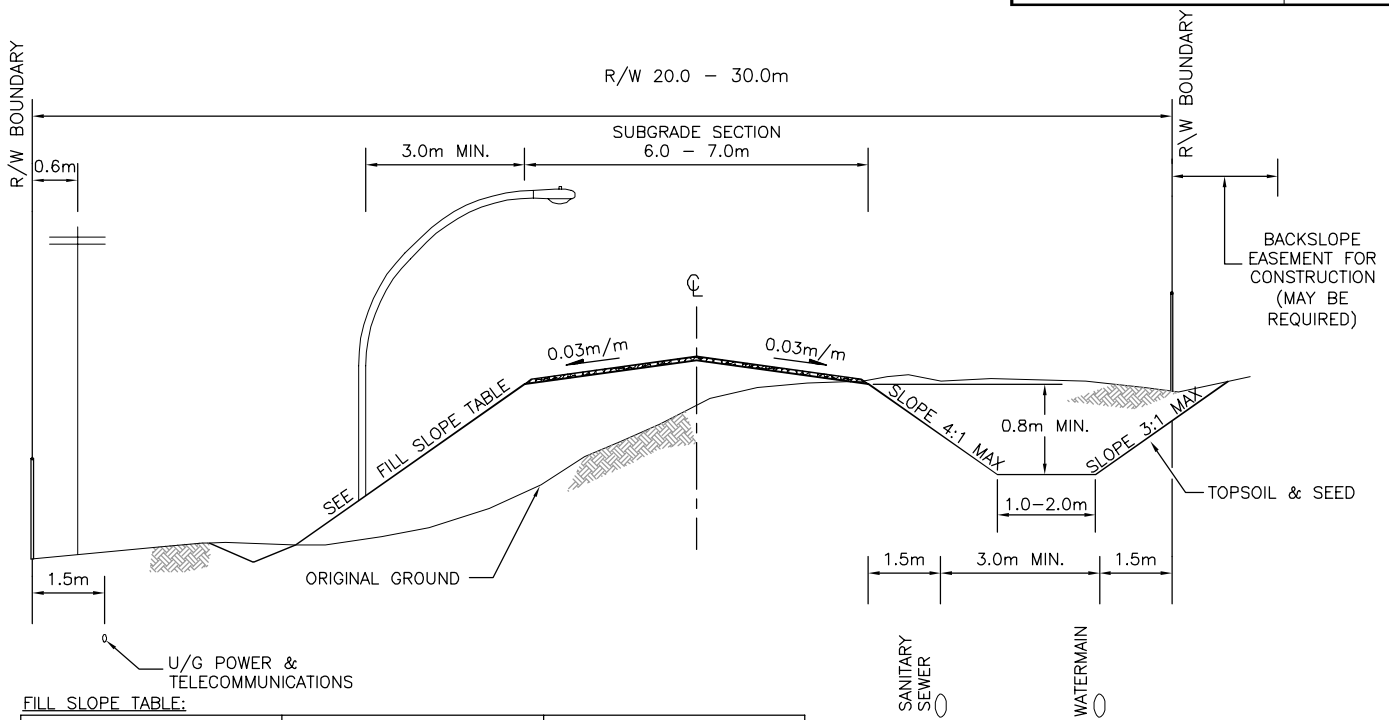
**COUNTY OF STETTLER**

TYPICAL CROSS SECTION  
 LIMITED ACCESS ROAD

FUNCTION: A RESIDENTIAL AND/OR FARM MACHINERY ROAD THAT SERVICES THREE OR LESS RESIDENCES EACH ON A SEPARATE TITLE.

Drawing No: 05 - A

Date: JUL/08/2010 Rev: 0



**FILL SLOPE TABLE:**

DEPTH OF FILL	SIDE SLOPE	BARRIER REQUIRED
0 - 1.5m	4:1	NO
1.5 - 3.5m	3:1	NO
3.5 - 4.5m	2.5:1	YES
>4.5m	2:1	YES

**GEOMETRIC PROPERTIES:**

1. USE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS.

**ROAD STRUCTURE REQUIREMENTS:**

1. A GEOTECHNICAL INVESTIGATION AND INDEPENDENT ROAD STRUCTURE DESIGN IS REQUIRED FOR ALL DEVELOPMENTS AND SHALL BE BASED ON A 20 YEAR DESIGN LIFE AND PROJECTED TRAFFIC VOLUMES.
2. MINIMUM LIMITED ACCESS ROAD STRUCTURE:
  - DESIGNATION 4 CLASS 25 MATERIAL, 250 TONNES PER KM.
  - 0.90 NON-ORGANIC MATERIAL, 0.20m CLAY CAP.
3. THE ABOVE ROAD STRUCTURE DOES NOT NEGATE THE REQUIREMENT TO PROVIDE AN APPROVED ROAD STRUCTURE DESIGN. THE APPROVED ROAD STRUCTURE MUST MEET OR EXCEED THE MINIMUM LIMITED ACCESS ROAD STRUCTURE NOTED ABOVE.
4. COMPACT 200mm CLAY CAP AND 100mm OF FILL BELOW CLAY CAP TO 100% OF STANDARD PROCTOR DENSITY. COMPACT ALL MATERIAL BELOW UPPER 300mm TO 95% OF STANDARD PROCTOR DENSITY. COMPACT AT OPTIMUM MOISTURE CONTENT.

**CULVERT INFORMATION:**

1. REFER TO DWG. NO. 06

**NOTES:**

1. SIDE SLOPES STEEPER THAN 3:1 REQUIRE BARRIER INSTALLATION.
2. USE FLATTER SIDE SLOPES AND BACKSLOPES WHERE POSSIBLE TO INCREASE DEGREE OF SAFETY.
3. WIDTH OF DITCH - "V" DITCH MINIMUM. CHANNEL GEOMETRICS SHALL BE DETERMINED THROUGH A STORMWATER DRAINAGE ANALYSIS.
4. BACKSLOPE EASEMENT OUTSIDE OF THE R/W MAY BE REQUIRED FOR CONSTRUCTION.
5. THIS STANDARD IS INTENDED FOR LOW-SPEED, LOW VOLUME ROADS WHICH WILL BE GRAVEL SURFACE ONLY AND WILL SERVICE A MAXIMUM OF THREE RESIDENCES.
6. TYPICALLY 6.0m ROAD TOP WIDTH IS ONLY FOR RESIDENTIAL USE AND A LENGTH OF ROAD LESS THAN 300m. A 7.0m ROAD TOP IS REQUIRED FOR AGRICULTURAL (FARM MACHINERY) USE AND FOR RESIDENTIAL USE IF THE ROAD HAS A LENGTH GREATER THAN 300m.
7. THIS STANDARD EXCLUDES ROADS WITHIN MULTI-LOT SUBDIVISIONS.
8. IF THE LIMITED ACCESS ROAD IS ANTICIPATED TO SERVICE MORE THAN THREE RESIDENCES IN THE FUTURE REFER TO "PRIMARY ROAD" STANDARD (DRAWING NO. 01).
9. THIS CROSS-SECTION IS A DESIGN GUIDELINE. PROPOSED ROAD CROSS-SECTION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF STETTLER NO.6. FOR APPROVAL.
10. AN APPROPRIATE TRANSITION BETWEEN RURAL AND URBAN CROSS-SECTIONAL ELEMENTS IS REQUIRED WHERE APPLICABLE. DETAILS REGARDING THE TRANSITION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF STETTLER No.6 FOR APPROVAL.
11. GAS MAIN TO EITHER BE LOCATED WITHIN ROAD RIGHT-OF-WAY OR WITHIN AN EASEMENT ON PRIVATE PROPERTY. GAS ALIGNMENT TO BE COORDINATED WITH OTHER UTILITIES.
12. FRANCHISE UTILITY REQUIREMENTS AND ALIGNMENTS TO BE CONFIRMED WITH THE FRANCHISE UTILITY OWNER.
13. SHOULDER WIDENING TO BE PROVIDED ADJACENT TO HYDRANTS.
14. POSTED SPEED LIMIT FOR A 6.0m ROAD TOP WIDTH = 30km/hr AND POSTED SPEED LIMIT FOR A 7.0m ROAD TOP WIDTH = 40km/hr.
15. LIMITED ACCESS ROAD STANDARDS MAY BE VARIED AT THE DISCRETION OF THE COUNTY OF STETTLER NO. 6



Drawn By: M.R.  
 Checked By: H.H.  
 Scale: N.T.S.



**COUNTY OF STETTLER**

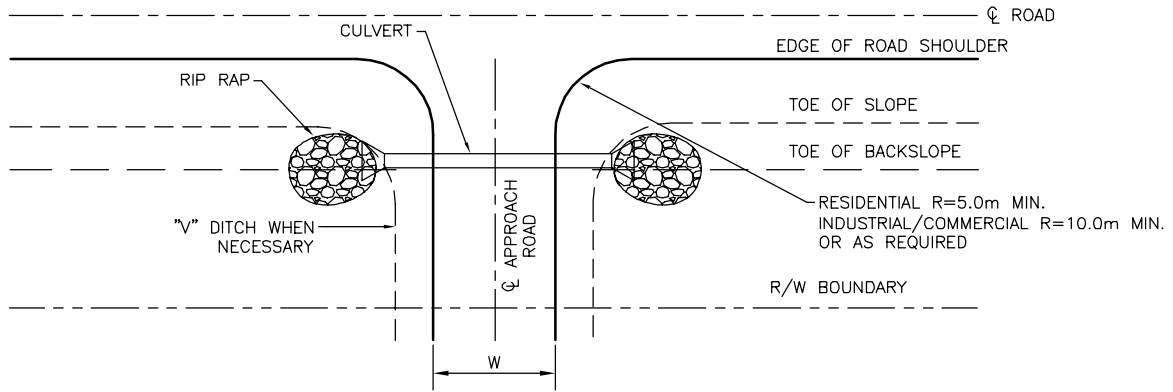
TYPICAL CROSS SECTION  
 LIMITED ACCESS ROAD

FUNCTION: APPROACHES FROM A SINGLE PARCEL ONTO A ROAD WITH A DESIGN SPEED OF 80km/hr OR LESS (DOES NOT INCLUDE APPROACHES ONTO PROVINCIAL HIGHWAYS).

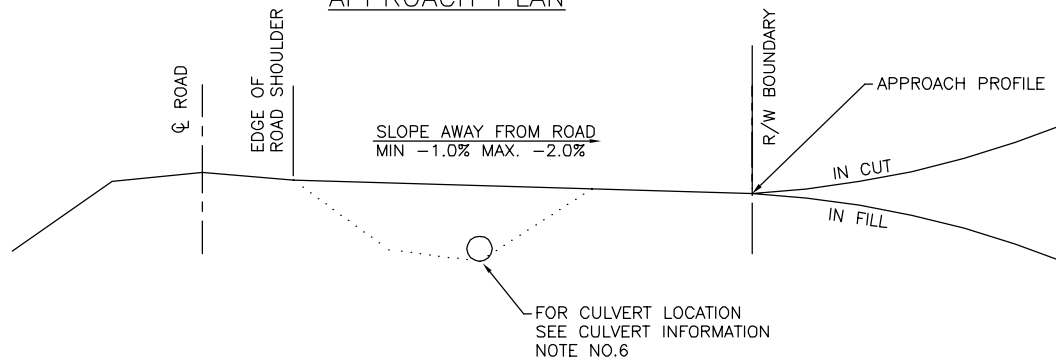
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Date: 02/02/2010

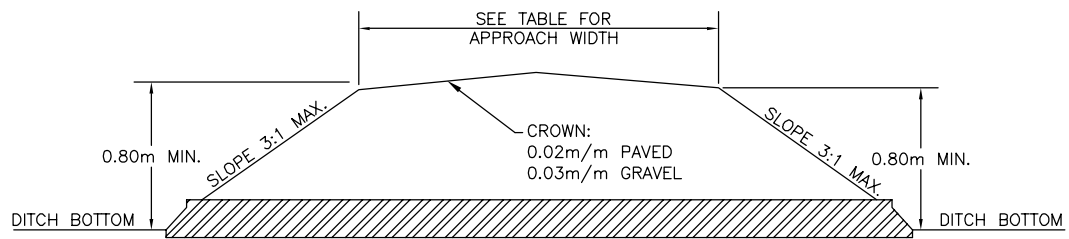
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APPROACH PLAN



DITCH AND CULVERT LOCATION



APPROACH CROSS SECTION

TABLE FOR APPROACH WIDTH

USE	ROADWAY WIDTH (m)	
	SINGLE	JOINT
RESIDENTIAL	6.0	8.0
AGRICULTURAL	8.0	10.0

\*JOINT APPROACH SERVICES TWO RESIDENCES.  
 \*\*FOR MULTI-LOT SUBDIVISIONS, DEVELOPER TO DESIGN APPROACHES FOR COUNTY OF SETTLER NO.6 APPROVAL. DESIGN SHALL CONSIDER VEHICLE TYPE, TRAFFIC VOLUMES AND STORMWATER MANAGEMENT.

**CULVERT INFORMATION:**

1. USE GALVANIZED CORRUGATED STEEL PIPE WITH A MINIMUM WALL THICKNESS OF 1.6mm OR AS REQUIRED BY THE LOADING CRITERIA.
2. CULVERT TO HAVE 2:1 SLOPED ENDS.
3. CULVERT SIZE REQUIREMENTS SHALL BE DETERMINED THROUGH A STORMWATER DRAINAGE ANALYSIS (MINIMUM DIAMETER = 500mm). MINIMUM DIAMETER MAY VARY AT THE DISCRETION OF THE COUNTY OF SETTLER NO.6 IN ORDER TO MEET THE MINIMUM COVER OVER THE CULVERT OF 300mm.
4. RIP-RAP AND GEOTEXTILE MAY BE REQUIRED AROUND CULVERT ENDS.
5. LENGTH WILL VARY WITH DEPTH OF FILL (MIN. 10.0m).
6. CULVERT TO BE PLACED AT TOE OF BACKSLOPE OF ADJACENT ROAD.

**NOTES:**

1. APPROACHES SHALL BE CONSTRUCTED TO THE SAME STRUCTURE AS THE ADJOINING ROADWAY WITH THE SAME SURFACING EXTENDING TO PROPERTY LINE.
2. WHERE TRUCKED WATER AND SANITARY SERVICE IS PROVIDED, INTERNAL DRIVEWAYS/ACCESS LANES SHALL BE DESIGNED TO ACCOMMODATE THE EXPECTED WHEEL LOADS.
3. USE 4:1 SIDESLOPES IF POSSIBLE.
4. APPROACH STANDARDS MAY BE VARIED AT THE DISCRETION OF THE COUNTY OF SETTLER NO.6



Drawn By: M.R.

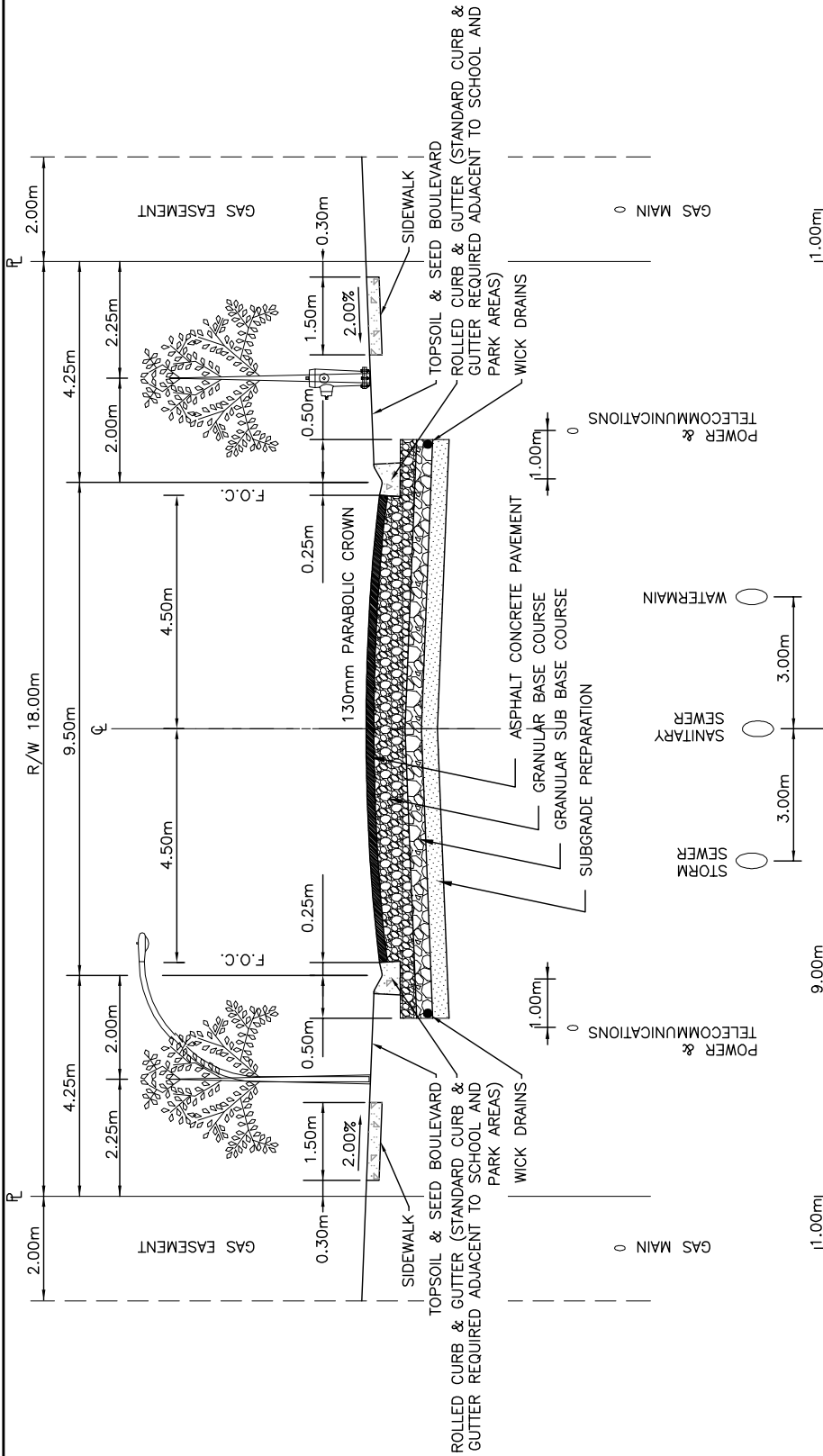
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**COUNTY OF SETTLER**

TYPICAL RURAL RESIDENTIAL & INDUSTRIAL APPROACHES



**GEOMETRIC PROPERTIES:**

1. USE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS.

**ROAD STRUCTURE REQUIREMENTS:**

1. A GEOTECHNICAL INVESTIGATION AND INDEPENDENT ROAD STRUCTURE DESIGN IS REQUIRED FOR ALL DEVELOPMENTS AND SHALL BE BASED ON A 20 YEAR DESIGN LIFE CONDITION AND PROJECTED TRAFFIC VOLUMES.
2. MINIMUM RESIDENTIAL LOCAL ROAD STRUCTURE:  
 ASPHALT CONCRETE PAVEMENT – 75mm DEPTH  
 GRANULAR BASE COURSE – 100mm DEPTH (20mm MINUS)  
 GRANULAR SUB BASE COURSE – 250mm DEPTH (75mm OR 150mm MINUS)  
 SUBGRADE PREPARATION – 150mm DEPTH (REPLACE UNSUITABLE SUBGRADE MATERIAL)
3. THE ABOVE MINIMUM RESIDENTIAL LOCAL ROAD STRUCTURE INFORMATION DOES NOT NEGATE THE REQUIREMENT TO PROVIDE AN APPROVED ROAD STRUCTURE DESIGN. THE APPROVED ROAD STRUCTURE MUST MEET OR EXCEED THE MINIMUM LOCAL ROAD STRUCTURE NOTED ABOVE.
4. AN ADDITIONAL LIFT OF ASPHALT MAY BE REQUIRED BEFORE EXPIRATION OF THE MAINTENANCE PERIOD.
5. FOR FILL BELOW ROAD STRUCTURE, COMPACT UPPER 300mm TO 100% OF STANDARD PROCTOR DENSITY, COMPACT BELOW 300mm TO 95% STANDARD PROCTOR DENSITY. COMPACT AT OPTIMUM MOISTURE CONTENT.

**NOTES:**

1. THIS CROSS-SECTION IS A DESIGN GUIDELINE. THE SERVICES AND CROSS-SECTIONAL ELEMENTS (SIDEWALKS, CURBS, DITCHES, STREETLIGHTS, TREES, ETC.) IN EACH OF THE HAMLETS WITHIN THE COUNTY OF STETTLER NO.6 VARY. THEREFORE, PROPOSED ROAD CROSS-SECTIONS MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY FOR APPROVAL.
2. AN APPROPRIATE TRANSITION BETWEEN RURAL AND URBAN CROSS-SECTIONAL ELEMENTS IS REQUIRED WHERE APPLICABLE. DETAILS REGARDING THE TRANSITION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF STETTLER NO.6 FOR APPROVAL.
3. FRANCHISE UTILITY REQUIREMENTS AND ALIGNMENTS TO BE CONFIRMED WITH THE FRANCHISE UTILITY OWNER.
4. POSTED SPEED LIMIT = 30km/hr.
5. ALL SERVICES SHALL EXTEND 3.00m PAST THE EASEMENT LINE INTO THE LOT.



Drawn By: L.S.M  
 Checked By: H.H.  
 Scale: N.T.S.



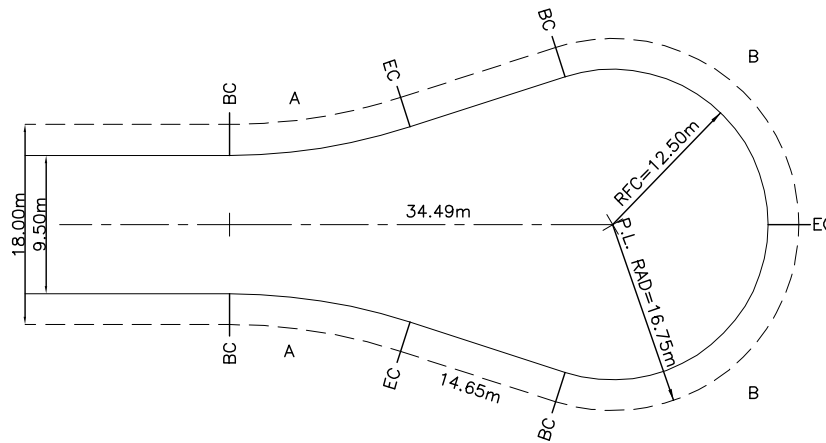
**COUNTY OF STETTLER**

URBAN RESIDENTIAL LOCAL ROADWAYS  
 SEPARATE SIDEWALK BOTH SIDES  
 18.00 METRE R/W

Drawing No: 08

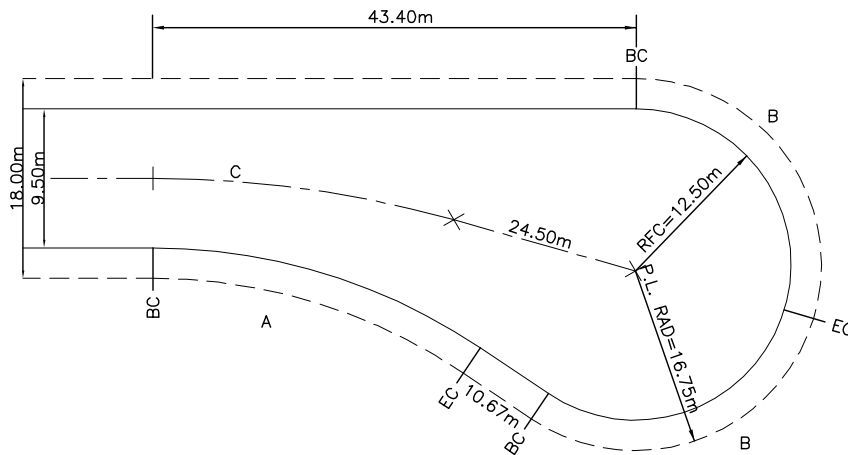
Date: 02/02/2010

Rev: 0



CURVE "A"  
 $\Delta = 17^{\circ}55'19''$   
 RAD = 50.00m  
 TAN = 5.38m  
 ARC = 7.88m  
 (AT PROPERTY LINE)

CURVE "B"  
 $\Delta = 107^{\circ}55'17''$   
 RAD = 16.75m  
 TAN = 21.33m  
 ARC = 23.02m  
 (AT PROPERTY LINE)



CURVE "A"  
 $\Delta = 24^{\circ}32'44''$   
 RAD = 50.00m  
 TAN = 10.88m  
 ARC = 21.42m  
 (AT PROPERTY LINE)

CURVE "B"  
 $\Delta = 106^{\circ}57'49''$   
 RAD 16.75m  
 TAN = 22.62m  
 ARC = 31.27m  
 (AT PROPERTY LINE)

CURVE "C"  
 $\Delta = 22^{\circ}41'24''$   
 RAD 100.00m  
 TAN = 6.61m  
 ARC = 39.60m  
 (AT CENTERLINE OF ROAD)



Drawn By: M.R.

Checked By: H.H.

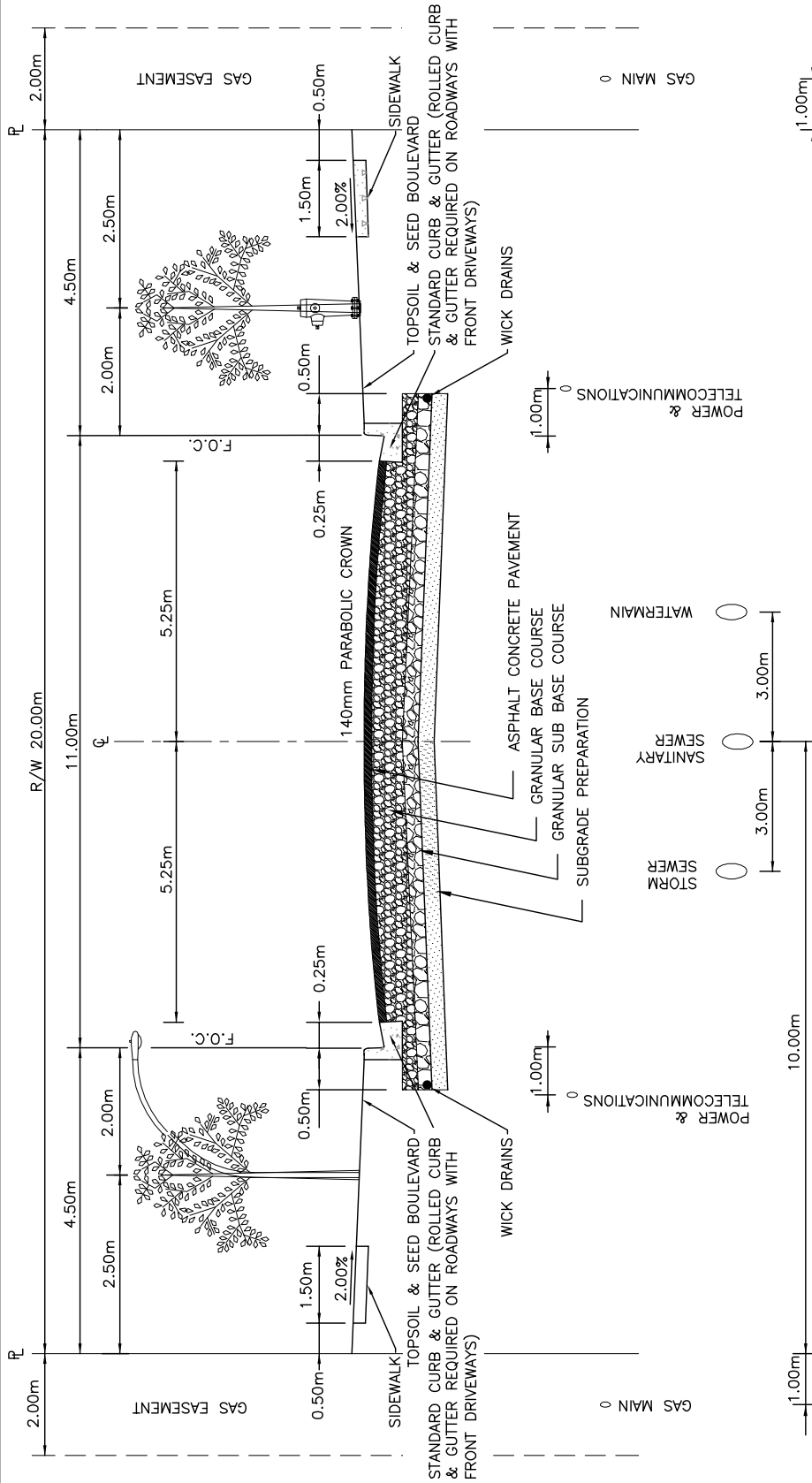
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## COUNTY OF STETTLER

TYPICAL URBAN RESIDENTIAL  
 CUL-DE-SAC FOR  
 LOCAL ROADS

Time: 9:47am  
 Date: Feb 03, 2010  
 File: P:\20093802\02\_Urban\_Crosssection\Working\_Dwgs\100\_Civil\DWGs\08\_Typ Urban Res Cul-De-Sac For Local Roads.dwg by



GEOMETRIC PROPERTIES:  
 1. USE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS.

- ROAD STRUCTURE REQUIREMENTS:  
 1. A GEOTECHNICAL INVESTIGATION AND INDEPENDENT ROAD STRUCTURE DESIGN IS REQUIRED FOR ALL DEVELOPMENTS AND SHALL BE BASED ON A 20 YEAR DESIGN LIFE CONDITION AND PROJECTED TRAFFIC VOLUMES.  
 2. MINIMUM RESIDENTIAL COLLECTOR ROAD STRUCTURE:  
 ASPHALT CONCRETE PAVEMENT - 100mm DEPTH (2 LIFTS)  
 GRANULAR BASE COURSE - 100mm DEPTH (20 MINUS)  
 GRANULAR SUB BASE COURSE - 300mm DEPTH (75mm OR 150mm MINUS)  
 SUBGRADE PREPARATION - 150mm DEPTH (REPLACE UNSUITABLE SUBGRADE MATERIAL)  
 3. THE ABOVE MINIMUM RESIDENTIAL COLLECTOR ROAD STRUCTURE INFORMATION DOES NOT NEGATE THE REQUIREMENT TO PROVIDE AN APPROVED ROAD STRUCTURE DESIGN.  
 4. THE APPROVED ROAD STRUCTURE MUST MEET OR EXCEED THE MINIMUM COLLECTOR ROAD STRUCTURE NOTED ABOVE.  
 5. AN ADDITIONAL LIFT OF ASPHALT MAY BE REQUIRED BEFORE EXPIRATION OF THE MAINTENANCE PERIOD.  
 6. FOR FILL BELOW ROAD STRUCTURE, COMPACT UPPER 300mm TO 100% OF STANDARD PROCTOR DENSITY, COMPACT BELOW 300mm TO 95% STANDARD PROCTOR DENSITY. COMPACT AT OPTIMUM MOISTURE CONTENT.

- NOTES:  
 1. THIS CROSS-SECTION IS A DESIGN GUIDELINE. THE SERVICES AND CROSS-SECTIONAL ELEMENTS (SIDEWALKS, CURBS, DITCHES, STREETLIGHTS, TREES, ETC.) IN EACH OF THE HAMLETS WITHIN THE COUNTY OF STETTLER NO.6 VARY. THEREFORE, PROPOSED ROAD CROSS-SECTIONS MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY FOR APPROVAL.  
 2. AN APPROPRIATE TRANSITION BETWEEN RURAL AND URBAN CROSS-SECTIONAL ELEMENTS IS REQUIRED WHERE APPLICABLE. DETAILS REGARDING THE TRANSITION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF STETTLER NO.6 FOR APPROVAL.  
 3. FRANCHISE UTILITY REQUIREMENTS AND ALIGNMENTS TO BE CONFIRMED WITH THE FRANCHISE UTILITY OWNER.  
 4. POSTED SPEED LIMIT = 30km/hr.  
 5. ALL SERVICES SHALL EXTEND 3.00m PAST THE EASEMENT LINE INTO THE LOT.

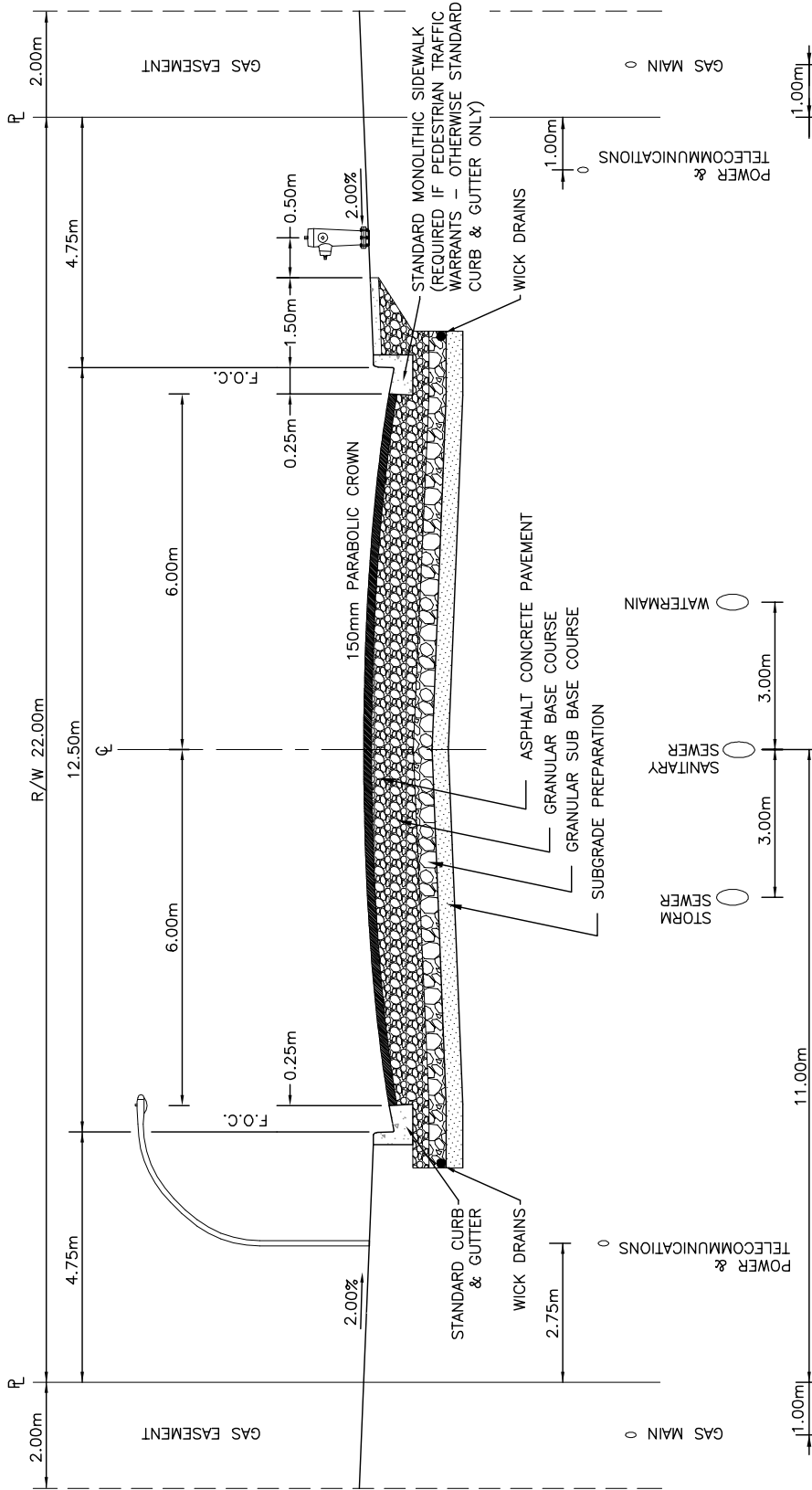


Drawn By: L.S.M  
 Checked By: H.H.  
 Scale: N.T.S.



# COUNTY OF STETTLER

URBAN RESIDENTIAL  
 COLLECTOR ROADWAYS  
 20.00 METRE R/W



**GEOMETRIC PROPERTIES:**

1. USE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS.

**ROAD STRUCTURE REQUIREMENTS:**

1. A GEOTECHNICAL INVESTIGATION AND INDEPENDENT ROAD STRUCTURE DESIGN IS REQUIRED FOR ALL DEVELOPMENTS AND SHALL BE BASED ON A 20 YEAR DESIGN LIFE CONDITION AND PROJECTED TRAFFIC VOLUMES.
2. MINIMUM INDUSTRIAL/COMMERCIAL LOCAL ROAD STRUCTURE:  
 ASPHALT CONCRETE PAVEMENT - 90mm DEPTH (2 LIFTS)  
 GRANULAR BASE COURSE - 150mm DEPTH (20mm MINUS)  
 GRANULAR SUB BASE COURSE - 300mm DEPTH (75mm OR 150mm MINUS)  
 SUBGRADE PREPARATION - 150mm DEPTH (REPLACE UNSUITABLE SUBGRADE MATERIAL)
3. THE ABOVE MINIMUM INDUSTRIAL/COMMERCIAL LOCAL ROAD STRUCTURE INFORMATION DOES NOT NEGATE THE REQUIREMENT TO PROVIDE AN APPROVED ROAD STRUCTURE DESIGN. THE APPROVED ROAD STRUCTURE MUST MEET OR EXCEED THE MINIMUM LOCAL ROAD STRUCTURE NOTED ABOVE.
4. AN ADDITIONAL LIFT OF ASPHALT MAY BE REQUIRED BEFORE EXPIRATION OF THE MAINTENANCE PERIOD.
5. FOR FILL BELOW ROAD STRUCTURE, COMPACT UPPER 300mm TO 100% OF STANDARD PROCTOR DENSITY, COMPACT BELOW 300mm TO 95% OF STANDARD PROCTOR DENSITY. COMPACT AT OPTIMUM MOISTURE CONTENT.

**NOTES:**

1. THIS CROSS-SECTION IS A DESIGN GUIDELINE. THE SERVICES AND CROSS-SECTIONAL ELEMENTS (SIDEWALKS, CURBS, DITCHES, STREETLIGHTS, TREES, ETC.) IN EACH OF THE HAMLETS WITHIN THE COUNTY OF STETTLER NO.6 VARY. THEREFORE, PROPOSED ROAD CROSS-SECTIONS MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY FOR APPROVAL.
2. AN APPROPRIATE TRANSITION BETWEEN RURAL AND URBAN CROSS-SECTIONAL ELEMENTS IS REQUIRED WHERE APPLICABLE. DETAILS REGARDING THE TRANSITION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF STETTLER NO.6 FOR APPROVAL.
3. FRANCHISE UTILITY REQUIREMENTS AND ALIGNMENTS TO BE CONFIRMED WITH THE FRANCHISE UTILITY OWNER.
4. POSTED SPEED LIMIT = 30km/hr.
5. ALL SERVICES SHALL EXTEND 3.00m PAST THE EASEMENT LINE INTO THE LOT.

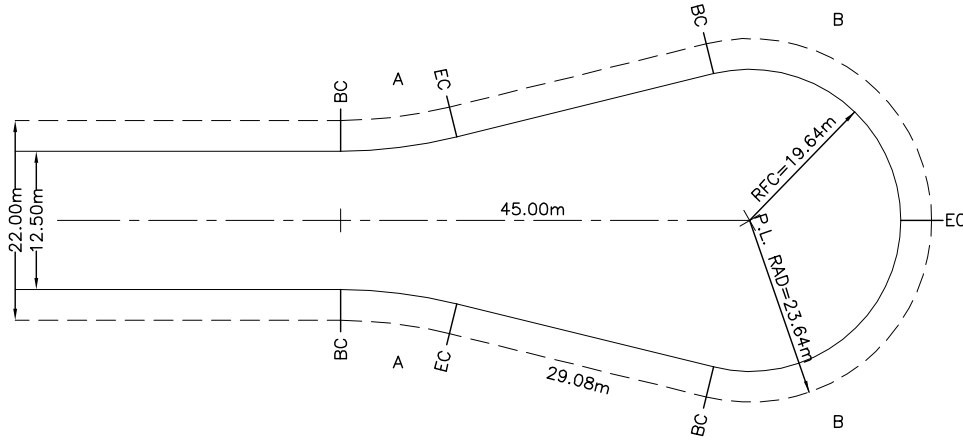


Drawn By: L.S.M  
 Checked By: H.H.  
 Scale: N.T.S.

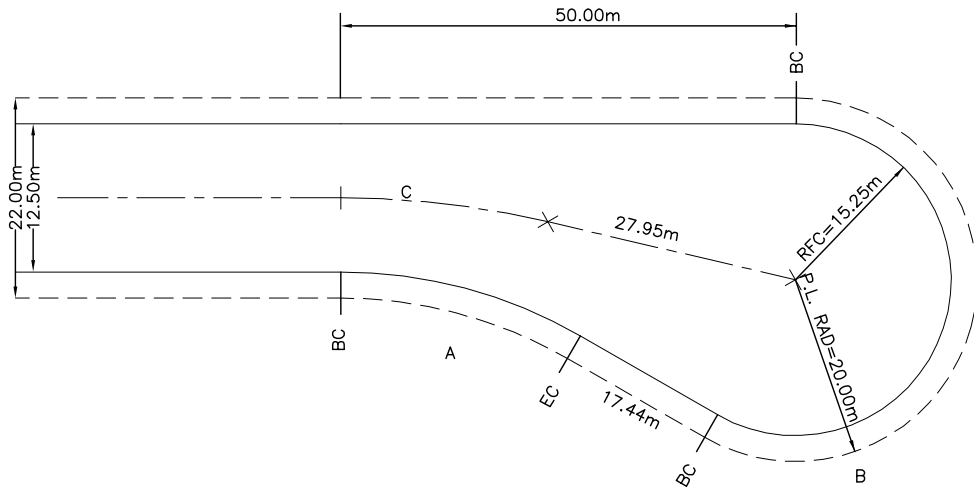


**COUNTY OF STETTLER**

URBAN INDUSTRIAL/COMMERCIAL  
 LOCAL ROADWAYS  
 22.00 METRE R/W



<p><b>CURVE "A"</b>  <math>\Delta = 13^{\circ}51'15''</math>                  RAD = 50.00m                  TAN = 6.07m                  ARC = 12.09m                  (AT PROPERTY LINE)</p>	<p><b>CURVE "B"</b>  <math>\Delta = 87^{\circ}51'30''</math>                  RAD = 23.64m                  TAN = 22.77m                  ARC = 36.25m                  (AT PROPERTY LINE)</p>
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<p><b>CURVE "A"</b>  <math>\Delta = 29^{\circ}53'08''</math>                  P.L. RAD = 50.00m                  P.L. TAN = 13.34m                  P.L. ARC = 26.08m                  (AT PROPERTY LINE)</p>	<p><b>CURVE "B"</b>  <math>\Delta = 104^{\circ}56'14''</math>                  P.L. RAD 20.00m                  P.L. TAN = 26.03m                  P.L. ARC = 36.63m                  (AT PROPERTY LINE)</p>	<p><b>CURVE "C"</b>                  R = 100.00m                  ARC = 27.95m                  (AT CENTERLINE OF ROAD)</p>
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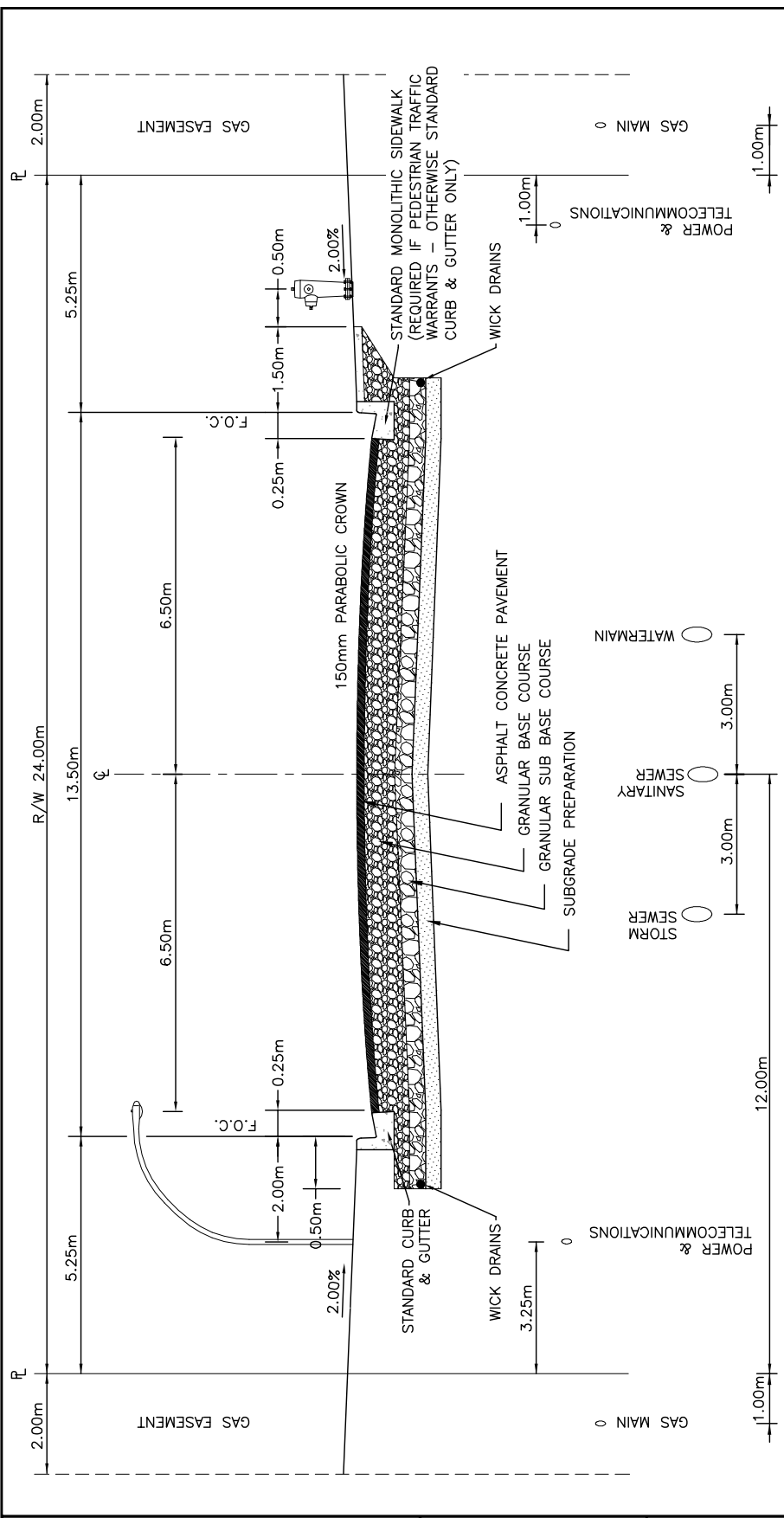


Drawn By: M.R.  
 Checked By: H.H.  
 Scale: N.T.S.



## COUNTY OF STETTLER

TYPICAL URBAN  
 INDUSTRIAL/COMMERCIAL  
 CUL-DE-SAC FOR  
 LOCAL ROADS



**GEOMETRIC PROPERTIES:**  
 1. USE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS.

**ROAD STRUCTURE REQUIREMENTS:**

1. A GEOTECHNICAL INVESTIGATION AND INDEPENDENT ROAD STRUCTURE DESIGN IS REQUIRED FOR ALL DEVELOPMENTS AND SHALL BE BASED ON A 20 YEAR DESIGN LIFE CONDITION AND PROJECTED TRAFFIC VOLUMES.
2. MINIMUM INDUSTRIAL/COMMERCIAL COLLECTOR ROAD STRUCTURE:  
 ASPHALT CONCRETE PAVEMENT - 100mm DEPTH (2 LIFTS)  
 GRANULAR BASE COURSE - 200mm DEPTH (20mm MINUS)  
 GRANULAR SUB BASE COURSE - 300mm DEPTH (75mm OR 150mm MINUS)  
 SUBGRADE PREPARATION - 150mm DEPTH (REPLACE UNSUITABLE SUBGRADE MATERIAL)
3. THE ABOVE MINIMUM INDUSTRIAL/COMMERCIAL COLLECTOR ROAD STRUCTURE INFORMATION DOES NOT NEGATE THE REQUIREMENT TO PROVIDE AN APPROVED ROAD STRUCTURE DESIGN. THE APPROVED ROAD STRUCTURE MUST MEET OR EXCEED THE MINIMUM COLLECTOR ROAD STRUCTURE NOTED ABOVE.
4. AN ADDITIONAL LIFT OF ASPHALT MAY BE REQUIRED BEFORE EXPIRATION OF THE MAINTENANCE PERIOD.
5. FOR FILL BELOW ROAD STRUCTURE, COMPACT UPPER 300mm TO 100% OF STANDARD PROCTOR DENSITY, COMPACT BELOW 300mm TO 95% OF STANDARD PROCTOR DENSITY, COMPACT AT OPTIMUM MOISTURE CONTENT.

**NOTES:**

1. THIS CROSS-SECTION IS A DESIGN GUIDELINE. THE SERVICES AND CROSS-SECTIONAL ELEMENTS (SIDEWALKS, CURBS, DITCHES, STREETLIGHTS, TREES, ETC.) IN EACH OF THE HAMLETS WITHIN THE COUNTY OF STETTLER NO.6 VARY. THEREFORE, PROPOSED ROAD CROSS-SECTIONS MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY FOR APPROVAL.
2. AN APPROPRIATE TRANSITION BETWEEN RURAL AND URBAN CROSS-SECTIONAL ELEMENTS IS REQUIRED WHERE APPLICABLE. DETAILS REGARDING THE TRANSITION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF STETTLER NO.6 FOR APPROVAL.
3. FRANCHISE UTILITY REQUIREMENTS AND ALIGNMENTS TO BE CONFIRMED WITH THE FRANCHISE UTILITY OWNER.
4. POSTED SPEED LIMIT = 30km/hr.
5. ALL SERVICES SHALL EXTEND 3.00m PAST THE EASEMENT LINE INTO THE LOT.

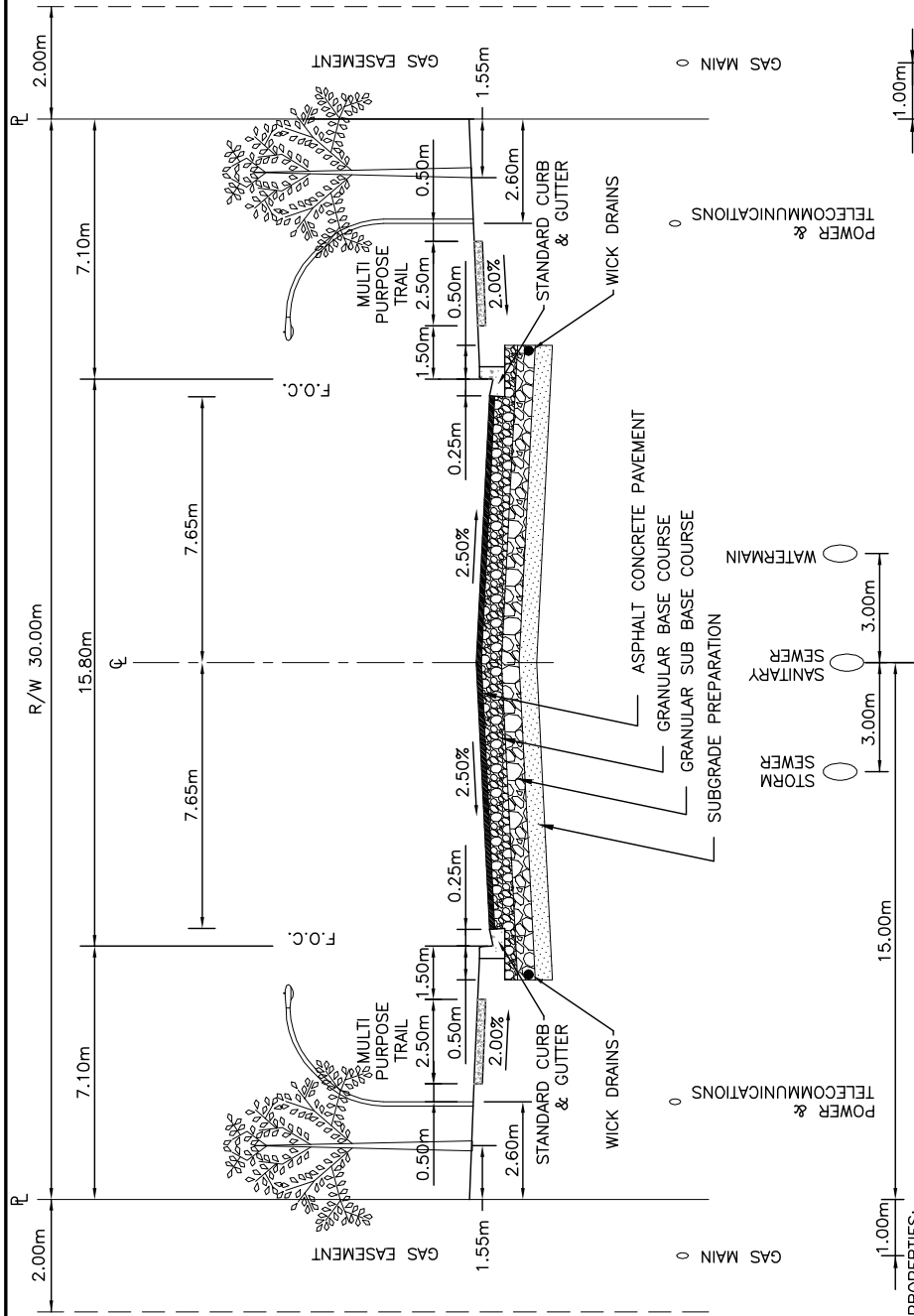


Drawn By: L.S.M  
 Checked By: H.H.  
 Scale: N.T.S.



## COUNTY OF STETTLER

URBAN INDUSTRIAL/COMMERCIAL  
 COLLECTOR ROADWAYS  
 24.00 METRE R/W




GEOMETRIC PROPERTIES:  
 1. USE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS.

ROAD STRUCTURE REQUIREMENTS:  
 1. A GEOTECHNICAL INVESTIGATION AND INDEPENDENT ROAD STRUCTURE DESIGN IS REQUIRED FOR ALL DEVELOPMENTS AND SHALL BE BASED ON A 20 YEAR DESIGN LIFE CONDITION AND PROJECTED TRAFFIC VOLUMES.

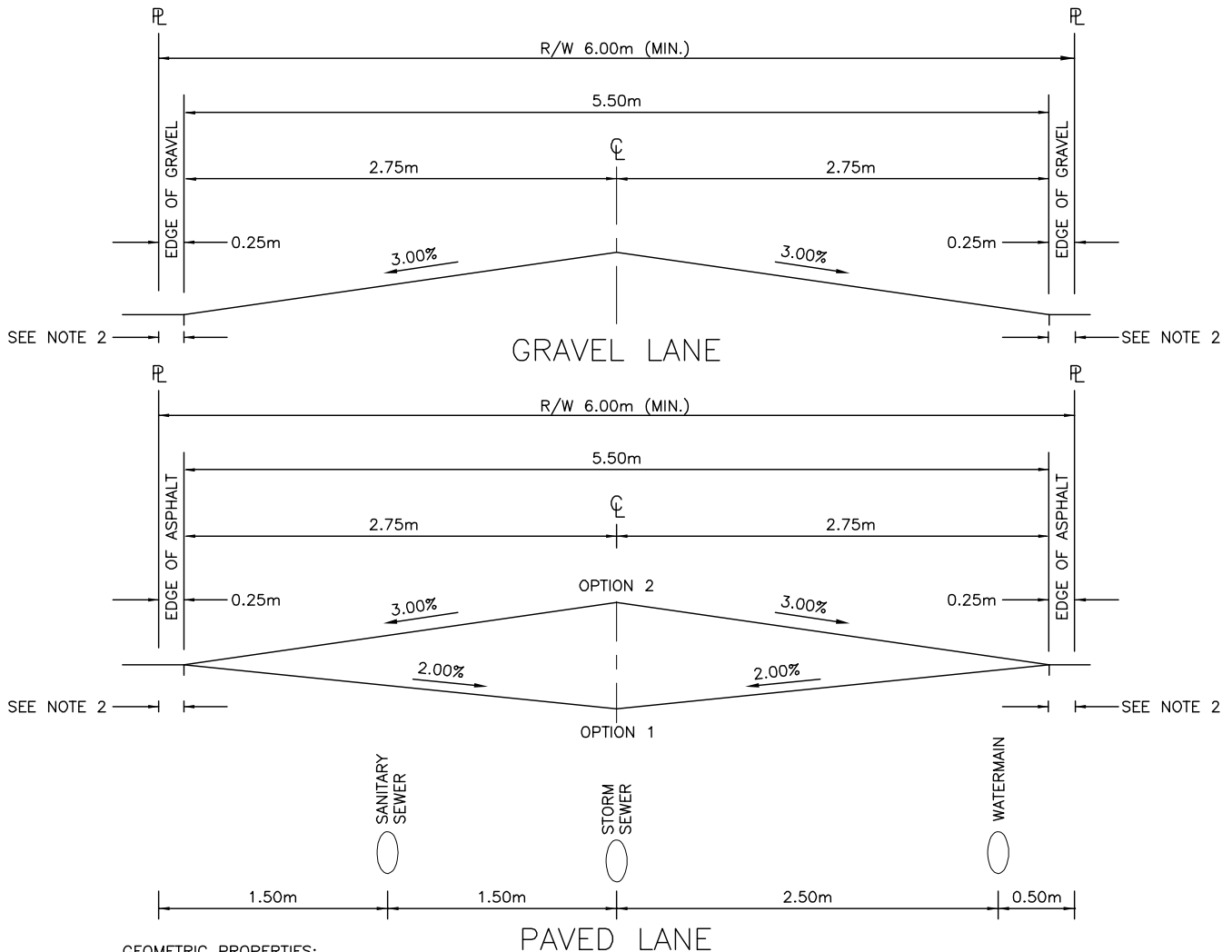
- MINIMUM ARTERIAL ROAD STRUCTURE:  
 ASPHALTIC CONCRETE PAVEMENT - 125mm DEPTH (2 LIFTS)  
 GRANULAR BASE COURSE - 200mm DEPTH (20mm MINUS)  
 GRANULAR SUB BASE COURSE - 350mm DEPTH (75mm OR 150mm MINUS)  
 SUBGRADE PREPARATION - 150mm DEPTH (REPLACE UNSUITABLE SUBGRADE MATERIAL)
  - THE ABOVE MINIMUM ARTERIAL ROAD STRUCTURE INFORMATION DOES NOT NEGATE THE REQUIREMENT TO PROVIDE AN APPROVED ROAD STRUCTURE DESIGN. THE APPROVED ROAD STRUCTURE MUST MEET OR EXCEED THE MINIMUM ARTERIAL ROAD STRUCTURE NOTED ABOVE.
  - AN ADDITIONAL LIFT OF ASPHALT MAY BE REQUIRED BEFORE EXPIRATION OF THE MAINTENANCE PERIOD.
  - FOR FILL BELOW ROAD STRUCTURE, COMPACT UPPER 300mm TO 100% OF STANDARD PROCTOR DENSITY, COMPACT BELOW 300mm TO 95% OF STANDARD PROCTOR DENSITY. COMPACT AT OPTIMUM MOISTURE CONTENT.
- NOTES:  
 1. THIS CROSS-SECTION IS A DESIGN GUIDELINE. THE SERVICES AND CROSS-SECTIONAL ELEMENTS (SIDEWALKS, CURBS, DITCHES, STREETLIGHTS, TREES, ETC.) IN THE HAMLETS WITHIN THE COUNTY OF STETTLER No.6 VARY. THEREFORE, PROPOSED ROAD CROSS-SECTIONS MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY FOR APPROVAL.  
 2. AN APPROPRIATE TRANSITION BETWEEN RURAL AND URBAN CROSS-SECTIONAL ELEMENTS IS REQUIRED WHERE APPLICABLE. DETAILS REGARDING THE TRANSITION MUST BE INCLUDED IN THE ENGINEERING DRAWINGS AND SUBMITTED TO THE COUNTY OF STETTLER No.6 FOR APPROVAL.  
 3. FRANCHISE UTILITY REQUIREMENTS AND ALIGNMENTS TO BE CONFIRMED WITH THE FRANCHISE UTILITY OWNER.  
 4. RIGHT OF WAY MAY REQUIRE WIDENING AT MAJOR INTERSECTIONS TO PROVIDE FOR LEFT TURN BAY CHANNELIZATION. MAJOR INTERSECTIONS TO BE DESIGNED BY A TRANSPORTATION ENGINEER AND APPROVED BY THE COUNTY OF STETTLER No.6.  
 5. POSTED SPEED LIMIT=60 km/hr.



Drawn By: L.S.M  
 Checked By: H.H.  
 Scale: N.T.S.  


## COUNTY OF STETTLER

URBAN ARTERIAL ROADWAYS  
 4 LANE UNDIVIDED  
 30.00 METRE R/W



**GEOMETRIC PROPERTIES:**

1. USE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS.

**ROAD STRUCTURE REQUIREMENTS:**

1. A GEOTECHNICAL INVESTIGATION AND INDEPENDENT ROAD STRUCTURE DESIGN IS REQUIRED FOR ALL DEVELOPMENTS AND SHALL BE BASED ON A 20 YEAR DESIGN LIFE CONDITION AND PROJECTED TRAFFIC VOLUMES.
2. MINIMUM GRAVEL LANE ROAD STRUCTURE:  
 GRANULAR BASE COURSE – 100mm DEPTH (20mm MINUS)  
 GRANULAR SUB BASE COURSE – 200mm DEPTH (75mm MINUS)  
 SUBGRADE PREPARATION – 150mm DEPTH  
 MINIMUM PAVED LANE ROAD STRUCTURE:  
 ASPHALTIC CONCRETE PAVEMENT – 75mm DEPTH  
 GRANULAR BASE COURSE – 100mm DEPTH (20mm MINUS)  
 GRANULAR SUB BASE COURSE – 200mm (75mm MINUS)  
 SUBGRADE PREPARATION – 150mm DEPTH
3. THE ABOVE ROAD STRUCTURE INFORMATION DOES NOT NEGATE THE REQUIREMENT TO PROVIDE AN APPROVED ROAD STRUCTURE DESIGN. THE APPROVED ROAD STRUCTURE MUST MEET OR EXCEED THE MINIMUM ROAD STRUCTURE NOTED ABOVE.
4. FOR FILL BELOW ROAD STRUCTURE, COMPACT UPPER 300mm TO 100% OF STANDARD PROCTOR DENSITY, COMPACT BELOW 300mm TO 95% OF STANDARD PROCTOR DENSITY. COMPACT AT OPTIMUM MOISTURE CONTENT.

**NOTES:**

1. LANE TO BE PAVED ADJACENT TO MULTI-FAMILY AND COMMERCIAL DEVELOPMENTS WHERE LANE ACCESS IS PROVIDED.
2. EXTEND FULL DEPTH ROAD STRUCTURE TO ADJACENT PARKING AREAS.
3. LANE R/W WIDTH MAY VARY IN ESTABLISHED SUBDIVISION, CROSS-SECTION DIMENSIONS TO BE ADJUSTED ACCORDINGLY.
4. SERVICING IN LANES ONLY UPON APPROVAL OF THE COUNTY OF STETTLER No.6.



Drawn By: L.S.M  
 Checked By: H.H.  
 Scale: N.T.S.



**COUNTY OF STETTLER**

GRAVEL AND PAVED LANES