

## PW – 12

**Policy Name: Road Servicing Agreements**

Date Adopted: June 13, 2011

Policy Objective: To provide a uniform approach for specifications and requirements for roads constructed as a condition of subdivision or issuance of a development permit.

### Policy:

1. The road design guidelines herein generally follow the most recent Transportation Association of Canada (TAC) and Saskatchewan Ministry of Highways and Infrastructure design standards. The Municipality may consider alternate design variations from these standards to accommodate unique site circumstances, provided that public safety and the Municipality are not at risk. It is the Developer's responsibility to ensure that the design, construction, and performance of all infrastructure constructed under the Development or Servicing Agreement meets or exceeds these standards/guidelines.
2. Good engineering practice and design is required for all road construction situations.
3. All road design and construction must be certified by and performed under the supervision of a qualified professional engineer registered to practice in the Province of Saskatchewan. The design guidelines in this section are minimum requirements and the Developer's Engineer must certify that an adequate roadway structure is provided to the Municipality, both in design and as constructed. Where required, a complete traffic analysis may dictate the need for additional engineering.
4. Design and construction practices shall take into consideration site specific conditions which might cause deviation from standard practice. Such deviations must be approved by the Municipality prior to entering into a Development or Servicing Agreement.
5. All roadways constructed within the Municipality shall be constructed according to the design requirements appended to this policy based upon the rural road classifications provided below:
  - Main Farm Access Road
  - Grid Road
  - Primary Grid Road
  - Heavy Haul – High Volume Road
  - Internal Commercial Industrial Road
  - Internal Residential Road

6. Prior to initiating road construction the Developer shall be required to submit a formal written request to Council indicating the location and length of roadway construction being requested; and subject to receiving written approval from Council the Developer shall be required to enter into a Development or Servicing Agreement defining the financial security required by the Municipality as well as the staged release of this security. Generally security shall be calculated based upon 125% of the construction cost estimate prepared by a certified engineer prepared in support of the development.
7. Where security is required, it shall be provided in the form of Cash or Unconditional Letter of Credit from a local branch of a chartered bank or Credit Union.
8. Upon completion of construction and submission of as-built drawings, an inspection shall be undertaken by the Municipal Engineer and if no deficiencies have been identified, a Construction Completion Certificate (CCC) shall be issued and the maintenance period shall commence.
9. Upon issuance of a CCC, the maintenance period for a paved road development is two years.
10. Upon issuance of a CCC, the maintenance period for a gravel road development is one year.
11. The Municipality will retain financial security of sufficient amount to ensure repair to any deficiencies which might arise during the maintenance period. At the end of the maintenance period and repair of deficiencies, the Municipality shall release securities and issue a Final Acceptance Certificate (FAC).
12. Financial security shall not be required for condominium road developments but building permits shall not be issued until a FAC has been issued confirming that the roadway has been properly constructed.
13. CCC's and FAC's applied for after October 1<sup>st</sup> may not be considered for an inspection and issuance until the following spring after snow thaw.

<b>Main Farm Access Road Program</b>	Required Construction Standards
	Subject: Main Farm Access Road - Gravel

SUMMARY OF BASIC STANDARDS

Right-of-way width = 30 meters (purchased).

Full width of right-of-way to be cleared.

The standard basic finished top width for main farm access roads is 7.0 meters.

Top width for curves = 7.6 meters.

Sideslopes = 3:1

- fills 2 – 3 meters = 7.6 m top width

- fills over 3 meters = 8.0 m top width

Backslopes

- 5:1, with maximum of 3:1

- 5:1 backslope is to be maintained until top of backslope reaches the edge of right-of-way. The backslope will remain at the edge of the right-of-way to a maximum of 3:1.

Snowclearance – When shoulder grade elevation is 0.3 meters or less above natural surface at 15.0 meters to 20.0 meters from center line then the backslope must be flattened using a variable slope of 5:1 to a maximum of 3:1.

Maximum gradient – 9%. In unusual circumstances – 11%.

Stopping sight distance – 85 meters minimum.

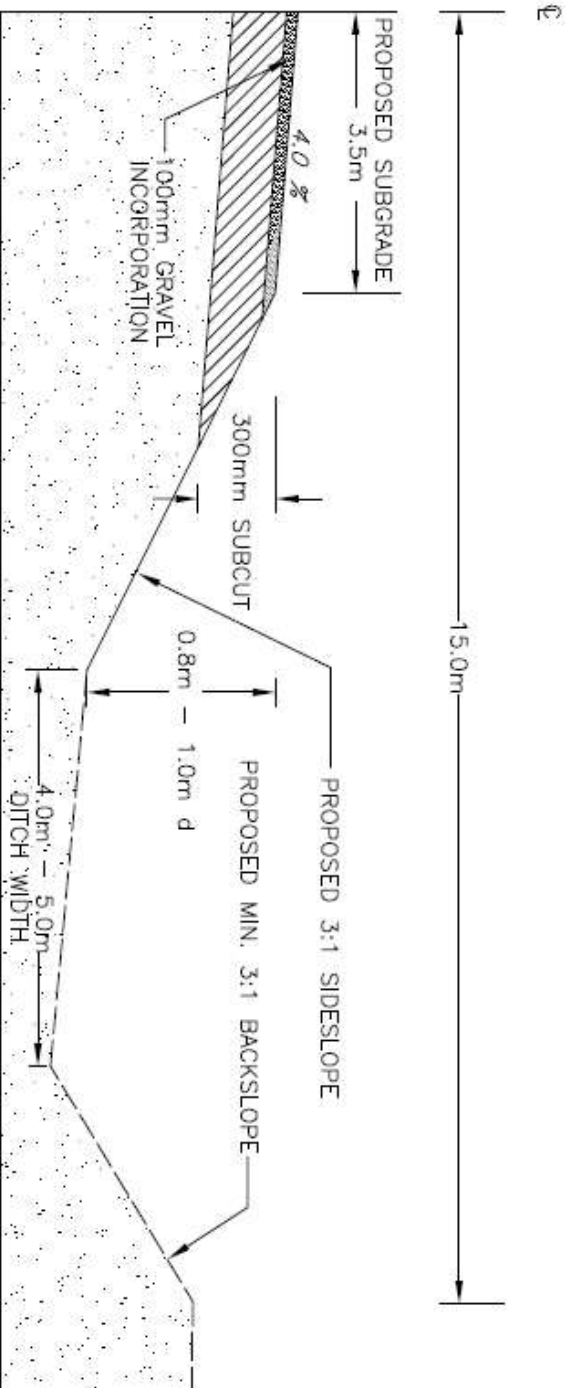
Clear vision at road intersection – minimum of 85 meters from the point of intersection on municipal roads and grid intersections and to a maximum of 140 meters on main farm access roads using 60 km/h design speed.

<b>Main Farm Access Road Program</b>	
Required Construction Standards	Subject: Main Farm Access Road - Gravel

1. Shall include the installation of all necessary drainage structures and construction of drainage ditches. Culverts should be designed for at least a Q<sup>15</sup> flow, with a minimum culvert size of 500 mm diameter. Riprap only where

necessary to avoid undue erosion. All culverts will be constructed of metal unless approved by the Municipality prior to construction.

2. Construction shall include all road connections and approaches. See attached plan – Standard Approach.
3. The average shoulder elevation of the road surface to be approximately 0.5 meters above the adjacent ground surface, except in cuts.
4. Objectionable organic material shall be subcut where the fill is less than 0.3 meters in depth.
5. The subgrade surface shall not be less than 1.0 meters above high water level on the ground water table. (ie: level to which free water would rise in a hole sunk in the ground).
6. Road surface, sideslopes, ditches and backslopes shall be bladed smooth to conform to the typical cross-section.
7. Where necessary to provide a smooth, stable driving surface, the road shall be capped with a layer of clay material. The depth of clay cap shall be a minimum of 0.3 meters. Gravel shall be incorporated in the top 100 mm of the subgrade prior to traffic gravel being applied. Gravel incorporation shall be done according to the Municipal Specification attached. The gravel specification for incorporation is Type 103 or 104.
8. Gravel surfacing for the subgrade required at the rate of 180 m<sup>3</sup>/km for the first application, 150 m<sup>3</sup>/km for the year following construction and additional applications as required. The required gravel specification for traffic gravel is Type 106 or 108.
9. Alignment – curves must be constructed with the proper super-elevation using 80 km/hr design speed and  $e_{max} = 0.08$ .
  - minimum radius of curvature = 250 m, preferred radius = 300 m.



**PUBLIC WORKS**  
**MAIN FARM ACCESS - TYPICAL CROSS SECTION**  
**SUBGRADE**

DATE: 2011      SCALE: NTS      DRAWN BY: AMEC & E

<b>Grid Road Program</b>	Required Construction Standards
	Subject: Grid Road - Gravel

**SUMMARY OF BASIC STANDARDS**

Right-of-way width = 42 meters (purchased). With municipal approval = 30 meters (purchased).

Full width of right-of-way to be cleared.

The standard basic finished top width for grid roads is 8.0 meters.

- Sideslopes = 4:1
- fills 0 – 3 meters = 4:1
  - fills 3 meters to 4 meters - toe of slope to be 12.0 meters from shoulder
  - fills over 4 meters = 3:1

- Backslopes - 5:1, with maximum of 3:1
- 5:1 backslope is to be maintained until top of backslope reaches the edge of right-of-way. The backslope will remain at the edge of the right-of-way to a maximum of 3:1.

Snowclearance – When shoulder grade elevation is 0.3 meters or less above natural surface at 15.0 meters to 21.0 meters from center line then the backslope must be flattened using a variable slope of 5:1 to a maximum of 3:1.

Maximum gradient – 9%. In unusual circumstances – 11%.

Stopping sight distance – 140 meters minimum (for 80 km/h design).

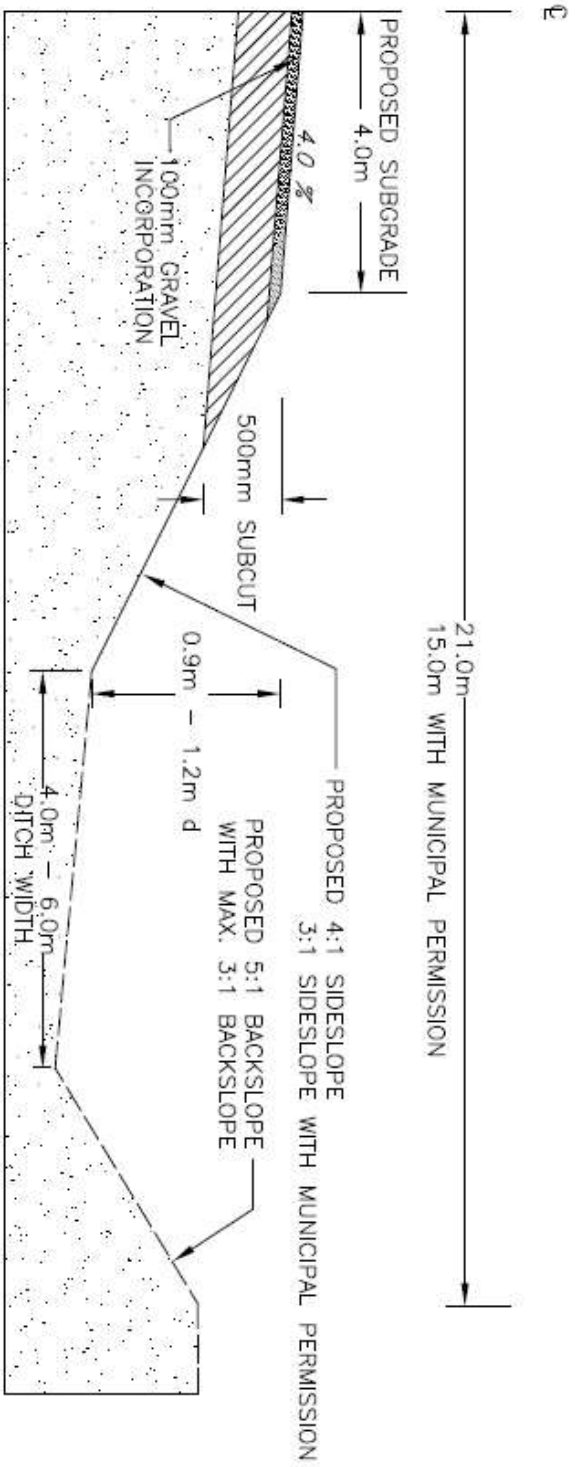
Clear vision at road intersection – minimum of 85 meters from the point of intersection on municipal roads and grid intersections and to a maximum of 140 meters on main farm access roads using 80 km/h design speed.

<b>Grid Road Program</b>	
Required Construction Standards	Subject: Grid Road - Gravel

1. Shall include the installation of all necessary drainage structures and construction of drainage ditches. Culverts should be designed for at least a Q<sup>15</sup> flow, with a minimum culvert size of 500 mm diameter. Riprap only where

necessary to avoid undue erosion. All culverts will be constructed of metal unless approved by the Municipality prior to construction.

2. Construction shall include all road connections and approaches. See attached plan – Standard Approach.
3. The average shoulder elevation of the road surface to be approximately 0.5 meters above the adjacent ground surface, except in cuts.
4. Objectionable organic material shall be subcut where the fill is less than 0.5 meters in depth.
5. The subgrade surface shall not be less than 1.0 meters above high water level on the ground water table. (ie: level to which free water would rise in a hole sunk in the ground).
6. Road surface, sideslopes, ditches and backslopes shall be bladed smooth to conform to the typical cross-section.
7. Where necessary to provide a smooth, stable driving surface, the road shall be capped with a layer of clay material. The depth of clay cap shall be a minimum of 0.3 meters. Gravel shall be incorporated in the top 100 mm of the subgrade prior to traffic gravel being applied. Gravel incorporation shall be done according to the Municipal Specification attached. The gravel specification for incorporation is Type 103 or 104.
8. Gravel surfacing for the subgrade required at the rate of 180 m<sup>3</sup>/km for the first application, 180 m<sup>3</sup>/km for the year following construction and additional applications as required. The required gravel specification for traffic gravel is Type 106 or 108.
9. Alignment – curves must be constructed with the proper super-elevation using 80 km/hr design speed and  $e_{max} = 0.08$ .
  - minimum radius of curvature = 300 m.



**PUBLIC WORKS**  
**GRID ROAD - TYPICAL CROSS SECTION**  
**SUBGRADE**

DATE: 2011

SCALE: NTS

DRAWN BY: AMECE & E

<b>Primary Grid Road Program</b>	Required Construction Standards
	Subject: Primary Grid Road

**SUMMARY OF BASIC STANDARDS**

Right-of-way width = 46 meters (purchased).

Full width of right-of-way to be cleared.

The standard basic finished top width for primary grid roads is 8.6 meters for gravel surface and 8.0 meters for asphalt surfaces.

- Sideslopes = 4:1
- fills 0 – 3 meters = 4:1
  - fills 3 meters to 4 meters - toe of slope to be 12.0 meters from shoulder
  - fills over 4 meters = 3:1

- Backslopes
- 5:1, with maximum of 3:1
  - 5:1 backslope is to be maintained until top of backslope reaches the edge of right-of-way. The backslope will remain at the edge of the right-of-way to a maximum of 3:1.

Snowclearance – When shoulder grade elevation is 0.3 meters or less above natural surface at 21.0 meters from center line then the backslope must be flattened using a variable slope of 5:1 to a maximum of 3:1.

Maximum gradient – 6%. In unusual circumstances – 7%.

Stopping sight distance – 140 meters minimum (for 80 km/h design).

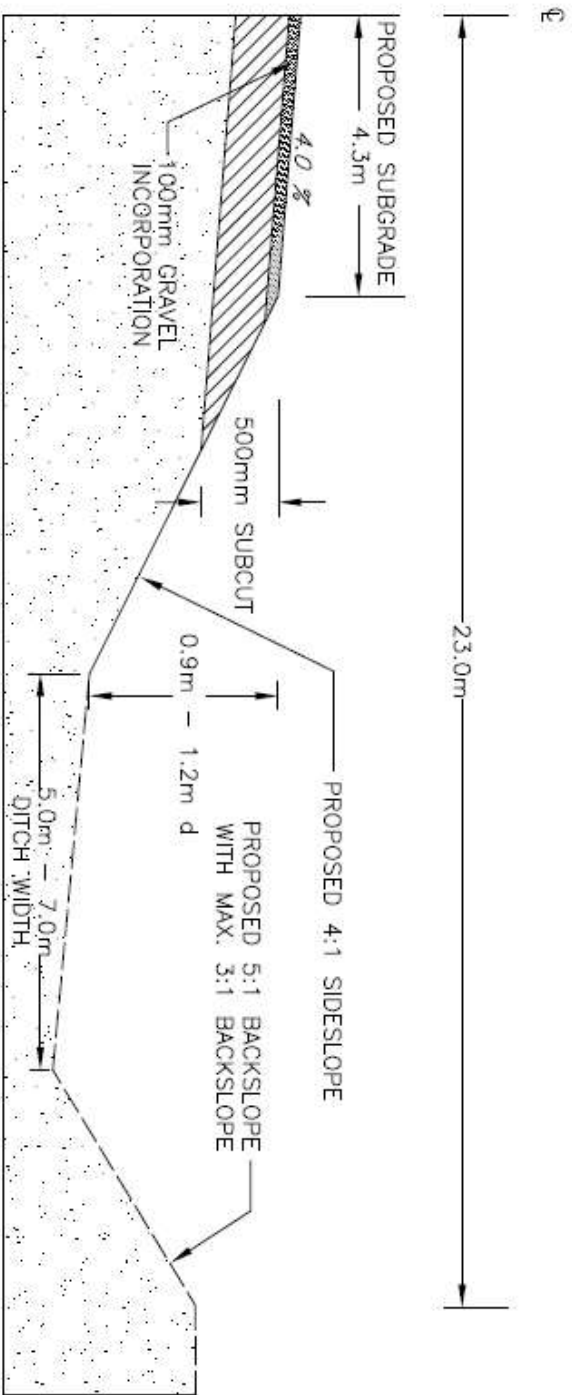
Clear vision at road intersection – minimum of 85 meters from the point of intersection on municipal roads and grid intersections and to a maximum of 140 meters on main farm access roads using 80 km/h design speed.

<b>Primary Grid Road Program</b>	
Required Construction Standards	Subject: Primary Grid Road

1. Shall include the installation of all necessary drainage structures and construction of drainage ditches. Culverts should be designed for at least a Q<sup>15</sup> flow, with a minimum culvert size of 500 mm diameter. Riprap only where

necessary to avoid undue erosion. All culverts will be constructed of metal unless approved by the Municipality prior to construction.

2. Construction shall include all road connections and approaches. See attached plan – Standard Approach.
3. The average shoulder elevation of the road surface to be approximately 0.5 meters above the adjacent ground surface, except in cuts.
4. Objectionable organic material shall be subcut where the fill of subgrade is less than 0.5 meters in depth for gravel surfaces and 0.6 meters in depth for asphalt surfaces.
5. The subgrade surface shall not be less than 1.5 meters above high water level on the ground water table. (ie: level to which free water would rise in a hole sunk in the ground).
6. Road surface, sideslopes, ditches, and backslopes shall be bladed smooth to conform to the typical cross-section.
7. Where necessary to provide a smooth, stable driving surface, the road shall be capped with a layer of clay material. The depth of clay cap shall be a minimum of 0.3 meters. If the subgrade is to be surfaced clay material should be avoided if possible and a granular subgrade constructed. Gravel shall be incorporated in the top 100 mm of the subgrade prior to traffic gravel being applied. Gravel incorporation shall be done according to the Municipal Specification attached. The gravel specification for incorporation is Type 103 or 104.
8. Gravel surfacing for the subgrade required at the rate of 200 m<sup>3</sup>/km for the first application, 200 m<sup>3</sup>/km for the year following construction and additional applications as required. The required gravel specification for traffic gravel is Type 106 or 108.
9. Alignment – curves must be constructed with the proper super-elevation as per the Ministry of Highways & Transportation Standards.
10. Asphalt surface for Primary Grid – Soil testing is required to determine surface design. Along with the soil testing, traffic volume and vehicle configurations must be considered when selecting the surface structure.



NOTE: SUBGRADE WIDTH FOR PRIMARY GRID-SURFACED ROADS TO BE DETERMINED AFTER COMPLETION OF SURFACING DESIGN.



**PUBLIC WORKS  
PRIMARY GRID - TYPICAL CROSS SECTION  
SUBGRADE**

DATE: 2011

SCALE: NTS

DRAWN BY: AMEC E & E

<b>Heavy Haul Access Road Program</b>	Required Construction Standards
	Subject: Heavy Haul Access Roads

**SUMMARY OF BASIC STANDARDS**

Right-of-way width = 46 meters (purchased).

Full width of right-of-way to be cleared.

The standard basic finished top width for heavy haul roads is 10.0 meters for gravel surface and 9.0 meters for surfaced.

Sideslopes = 4:1

- fills 0 – 3 meters = 4:1
- fills 3 meters to 4 meters - toe of slope to be 12.0 meters from shoulder.
- fills over 4 meters = 3:1

Backslopes - 5:1, with maximum of 3:1  
 - 5:1 backslope is to be maintained until top of backslope reaches the edge of right-of-way. The backslope will remain at the edge of the right-of-way to a maximum of 3:1.

Snowclearance – When shoulder grade elevation is 0.3 meters or less above natural surface at 23.0 meters from center line then the backslope must be flattened using a variable slope of 5:1 to a maximum of 3:1.

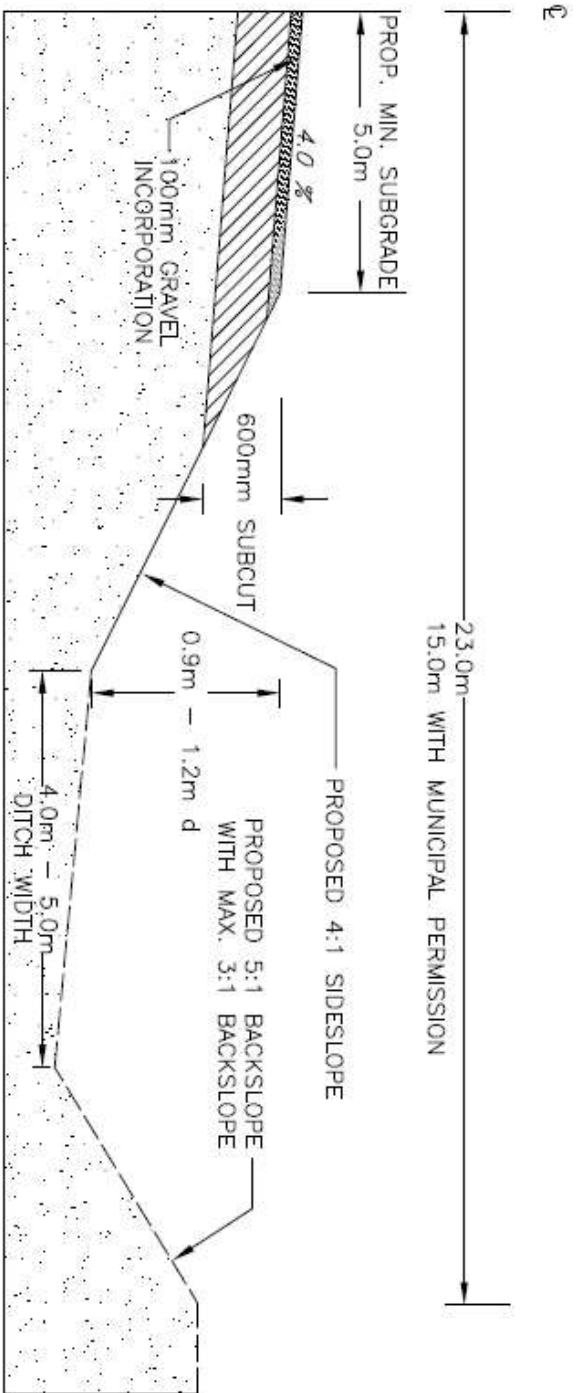
Maximum gradient – 5%. In unusual circumstances – 6%.

Stopping sight distance – 200 meters minimum (for 100 km/h design).

Clear vision at road intersection – minimum of 85 meters from the point of intersection on municipal roads and grid intersections and to a maximum of 140 meters on primary grid roads using 80 km/h design speed and 200 meters for a highway on another heavy haul road using 100 km/hr design spread.

<b>Heavy Haul Access Road Program</b>	
Required Construction Standards	Subject: Heavy Haul Road - Gravel

1. Shall include the installation of all necessary drainage structures and construction of drainage ditches. Culverts should be designed for at least a  $Q^{15}$  flow, with a minimum culvert size of 500 mm diameter. Riprap only where necessary to avoid undue erosion. All culverts will be constructed of metal unless approved by the Municipality prior to construction.
2. Construction shall include all road connections and approaches. See attached plan – Standard Approach.
3. The average shoulder elevation of the road surface to be approximately 0.6 meters above the adjacent ground surface, except in cuts.
4. Objectionable organic material shall be subcut where the fill is less than 0.6 meters in depth.
5. The subgrade surface shall not be less than 1.5 meters above high water level on the ground water table. (ie: level to which free water would rise in a hole sunk in the ground).
6. Road surface, sideslopes, ditches and backslopes shall be bladed smooth to conform to the typical cross-section.
7. Where necessary provide a smooth, stable driving surface, the road top shall be capped with a minimum of 0.3 meters of clay material. If the subgrade is to be surfaced clay material should be avoided if possible and a granular subgrade constructed. Gravel shall be incorporated in the top 100 mm of the subgrade prior to traffic gravel being applied. Gravel incorporation shall be done according to the Municipal Specification attached. The gravel specification for incorporation is Type 103 or Type 104.
8. Gravel surfacing for the subgrade required at the rate of 250 m<sup>3</sup>/km for the first application, 250 m<sup>3</sup>/km for the year following construction and additional applications as required. The required gravel specification for traffic gravel is Type 106 or Type 108.
9. Alignment – curves must be constructed with the proper super-elevation as per the Ministry of Highways & Transportation Standards.
10. Asphalt surface for heavy haul roads – Soil testing is required to determine surface design. Along with the soil testing, traffic volume and vehicle configurations must be considered when selecting the surface structure.



NOTE: SUBGRADE WIDTH FOR HEAVY HAUL—SURFACED ROADS TO BE DETERMINED AFTER COMPLETION OF SURFACING DESIGN.



**PUBLIC WORKS**  
**HEAVY HAUL - TYPICAL CROSS SECTION**  
**SUBGRADE**

DATE: 2011

SCALE: NTS

DRAWN BY: AMEC & E

<b>Internal Commercial Industrial Road Program</b>	Required Construction Standards
	Subject: Internal Commercial Industrial Road

**SUMMARY OF BASIC STANDARDS**

Right-of-way width = 46 meters (purchased). With municipal approval = 30 meters (purchased).

Full width of right-of-way to be cleared.

The standard basic finished top width for heavy haul roads is 10.0 meters for gravel surface and 9.0 meters for asphalt.

Sideslopes = 4:1

- fills 0 – 3 meters = 4:1
- fills 3 meters to 4 meters - toe of slope to be 12.0 meters from shoulder.
- fills over 4 meters = 3:1

Backslopes - 5:1, with maximum of 3:1  
 - 5:1 backslope is to be maintained until top of backslope reaches the edge of right-of-way. The backslope will remain at the edge of the right-of-way to a maximum of 3:1.

Snowclearance – When shoulder grade elevation is 0.3 meters or less above natural surface at 15.0 meters from center line then the backslope must be flattened using a variable slope of 5:1 to a maximum of 3:1.

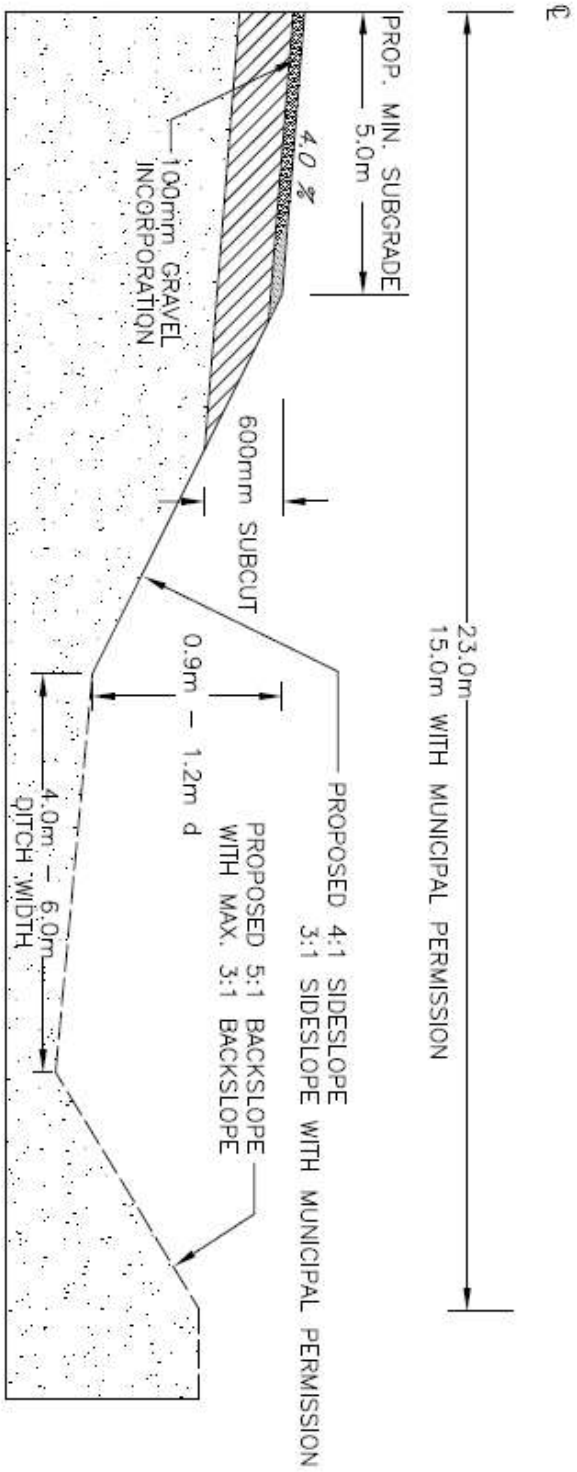
Maximum gradient – 5%. In unusual circumstances – 6%.

Stopping sight distance – 140 meters minimum (for 80 km/h design).

Clear vision at road intersection – minimum of 85 meters from the point of intersection on municipal roads and grid intersections and to a maximum of 140 meters on primary grid roads using 80 km/h design speed and 200 meters for a highway on another heavy haul road using 100 km/hr design spread.

<b>Internal Commercial Industrial Road Program</b>	
Required Construction Standards	Subject: Internal Commercial Industrial Road

1. Shall include the installation of all necessary drainage structures and construction of drainage ditches. Culverts should be designed for at least a Q<sup>15</sup> flow, with a minimum culvert size of 500 mm diameter. Riprap only where necessary to avoid undue erosion. All culverts will be constructed of metal unless approved by the Municipality prior to construction.
2. Construction shall include all road connections and approaches. See attached plan – Standard Approach.
3. The average shoulder elevation of the road surface to be approximately 0.6 meters above the adjacent ground surface, except in cuts.
4. Objectionable organic material shall be subcut where the fill is less than 0.6 meters in depth.
5. The subgrade surface shall not be less than 1.5 meters above high water level on the ground water table. (ie: level to which free water would rise in a hole sunk in the ground).
6. Road surface, sideslopes, ditches and backslopes shall be bladed smooth to conform to the typical cross-section.
7. Where necessary to provide a smooth, stable driving surface, the road shall be capped with a layer of clay material. The depth of clay cap shall be a minimum of 0.3 meters. If the subgrade is to be surfaced clay material should be avoided if possible and a granular subgrade constructed. Gravel shall be incorporated in the top 100 mm of the subgrade prior to traffic gravel being applied. Gravel incorporation shall be done according to the Municipal Specification attached. The gravel specification for incorporation is Type 103 or 104.
8. Gravel surfacing for the subgrade required at the rate of 250 m<sup>3</sup>/km for the first application, 250 m<sup>3</sup>/km for the year following construction and additional applications as required. The required gravel specification for traffic gravel is Type 106 or Type 108.
9. Alignment – curves must be constructed with the proper super-elevation as per the Ministry of Highways & Transportation Standards.
10. Asphalt surface for Internal Commercial Industrial Roads – Soil testing is required to determine surface design. Along with the soil testing, traffic volume and vehicle configurations must be considered when selecting the surface structure.



NOTE: SUBGRADE WIDTH FOR INTERNAL COMMERCIAL-SURFACED ROADS TO BE DETERMINED AFTER COMPLETION OF SURFACING DESIGN.



**PUBLIC WORKS**  
**INTERNAL COMMERCIAL INDUSTRIAL ROADS**  
**TYPICAL CROSS SECTION**  
**SUBGRADE**

DATE: 2011

SCALE: NTS

DRAWN BY: AMECE & E

<b>Subdivision Road Program &amp; Internal Residential Roads</b>	Required Construction Standards
	Subject: Subdivision and Special Roads

SUMMARY OF BASIC STANDARDS  
Right-of-

Right-of-way width = 30 meters (purchased).

way width for cul-de-sac and turnabouts = 60 meters (purchased) with 15 meters radius on driving surface.

Full width of right-of-way to be cleared.

The standard basic finished top width for subdivision roads is 7.4 meters. On fills over 3 meters in height, the top width is to be a Minimum of 0.6 meters wider than the basic top width.

Top widths should be widened as follows:

- Fills 0 meters to 3 meters – 7.4 meter finished top width
- Fills over 3 meters – 8.0 meter finished top width

Sideslopes

- 3:1 only with permission from the municipality.
- 4:1 Preferred:
  - fills 0 – 3 meters = 4:1
  - fills 3 meters to 4 meters - toe of slope to be 12.0 meters from shoulder.
  - fills over 4 meters = 3:1

- Backslopes
- 5:1, with maximum of 3:1
  - 5:1 backslope is to be maintained until top of backslope reaches the edge of right-of-way. The backslope will remain at the edge of the right-of-way to a maximum of 3:1.

Snowclearance – When shoulder grade elevation is 0.3 meters or less above natural surface at 15.0 meters to 20.0 meters from center line then the backslope must be flattened using a variable slope of 5:1 to a maximum of 3:1.

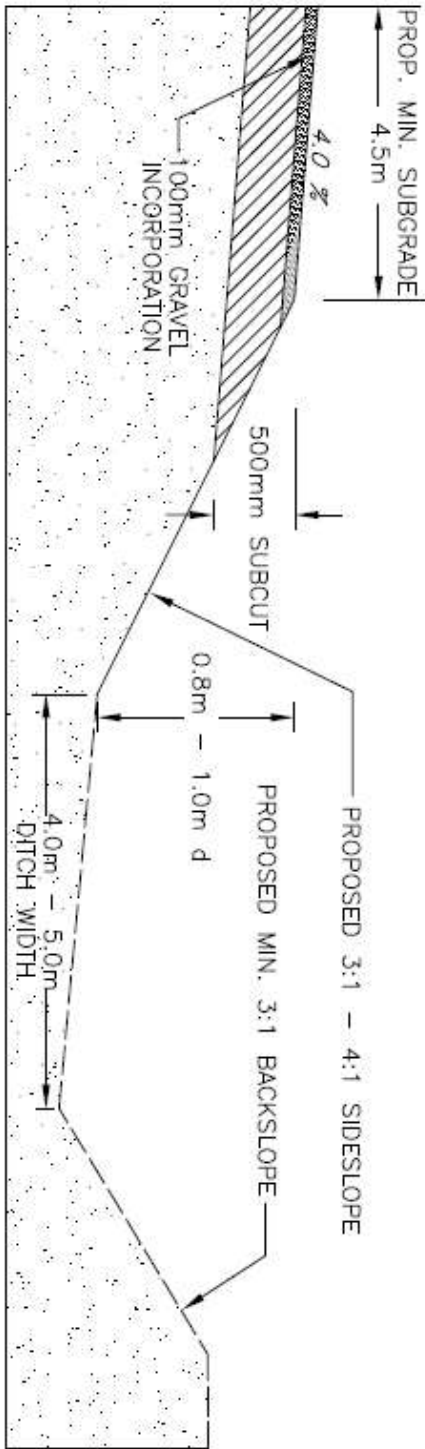
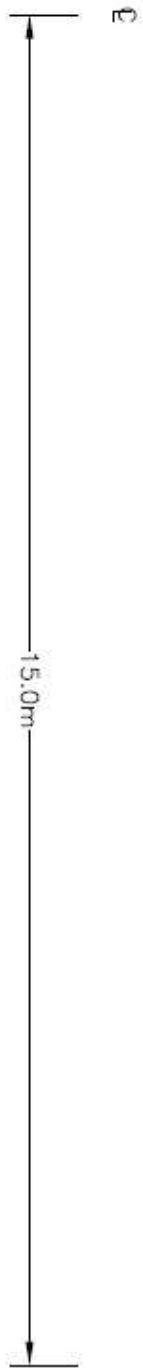
Maximum gradient – 5%. In unusual circumstances – 6%.

Stopping sight distance – 140 meters minimum (for 80 km/h design).

Clear vision at road intersection – minimum of 85 meters from the point of intersection on municipal roads and grid intersections and to a maximum of 140 meters on primary grid roads using 80 km/h design speed.

<b>Subdivision Road Program</b>	
Required Construction Standards	Subject: Subdivision And Special Roads Gravel

1. Shall include the installation of all necessary drainage structures and construction of drainage ditches. Culverts should be designed for at least a Q<sup>15</sup> flow, with a minimum culvert size of 400 mm diameter. Riprap only where necessary to avoid undue erosion. All culverts will be constructed of metal unless approved by the Municipality prior to construction.
2. Construction shall include all road connections and approaches. See attached plan – Standard Approach.
3. The average shoulder elevation of the road surface to be approximately 0.5 meters above the adjacent ground surface, except in cuts.
4. Objectionable organic material shall be subcut where the fill is less than 0.5 meters in depth.
5. The subgrade surface shall not be less than 1 meter above high water level on the ground water table. (ie: level to which free water would rise in a hole sunk in the ground).
6. Road surface, sideslopes, ditches and backslopes shall be bladed smooth to conform to the typical cross-section.
7. Gravel shall be incorporated in the top 100 mm of the subgrade prior to traffic gravel being applied. Gravel incorporation shall be done according to the Municipal Specification attached. The gravel specification for incorporation is Type 103 or Type 104.
8. Gravel surfacing for the subgrade required at the rate of 100 m<sup>3</sup>/km for the first application, 100 m<sup>3</sup>/km for the year following construction and additional applications as required. The required gravel specification for traffic gravel is Type 106 or Type 108.
9. Alignment – curves must be constructed with the proper super-elevation.



NOTE: SUBGRADE WIDTH MAY BE WIDER IF SOIL TESTING DETERMINES ADDITIONAL SUBBASE MATERIAL IS REQUIRED.



**PUBLIC WORKS**  
**SUBDIVISION - TYPICAL CROSS SECTION**  
**SUBGRADE**

DATE: 2011

SCALE: NTS

DRAWN BY: AMEC E & E

<b>Road Program</b>	
Municipal Specification	Subject: Gravel Incorporation Specification

## SPECIFICATION FOR GRAVEL INCORPORATION

### DESCRIPTION

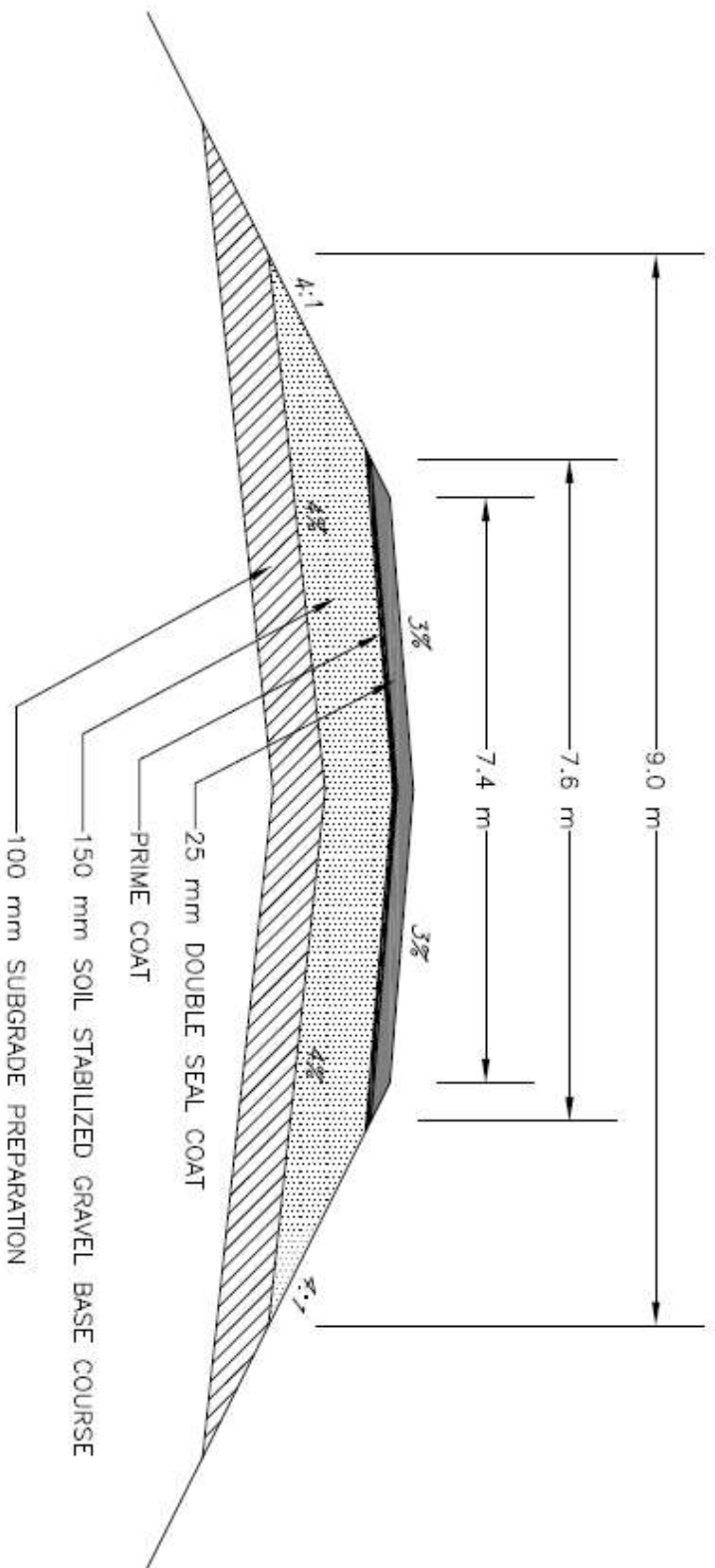
The work will consist of traffic gravel uniformly mixed with the insitu material in the top of the subgrade.

### MATERIALS

1. The gravel will be supplied, hauled and placed on the road by the developer.
2. The gravel will meet Type 103 or Type 104 specifications.
3. The gravel will be mixed with insitu material from the top of the subgrade.
4. A water source will be supplied by the developer.

### CONSTRUCTION

1. The contractor may use any machine, combination of machines or equipment that will result in the gravel being uniformly mixed with the subgrade material in the top **100 millimetres** of the finished road top. The mixture of gravel and subgrade material shall be packed enough to produce a smooth firm surface that will support normal road traffic without rutting or becoming unstable.
2. The amount of gravel to be blended into the subgrade may vary as directed by the Engineer but will normally be 190 cubic metres per kilometre (400 cubic yards per mile). The width and depth of subgrade material scarified or loosened up may also vary as designated by the Engineer, however, the width will normally be two metres less than the subgrade road top width and the depth will be between 75 to 100 millimetres.
3. Adding water to the mixture will be directed by the Engineer if there is insufficient moisture to produce a stable driving surface.
4. All surplus rock (80 millimetres and larger) shall be removed from the surface and disposed of as directed by the municipality. All small rocks from thirty millimetres (30 mm) to eighty millimetres (80 mm) shall be bladed off the road top into the ditch or onto the sideslope.



NOTE: SUBBASE MATERIAL MAY BE REQUIRED FOLLOWING SUBGRADE TEST RESULTS

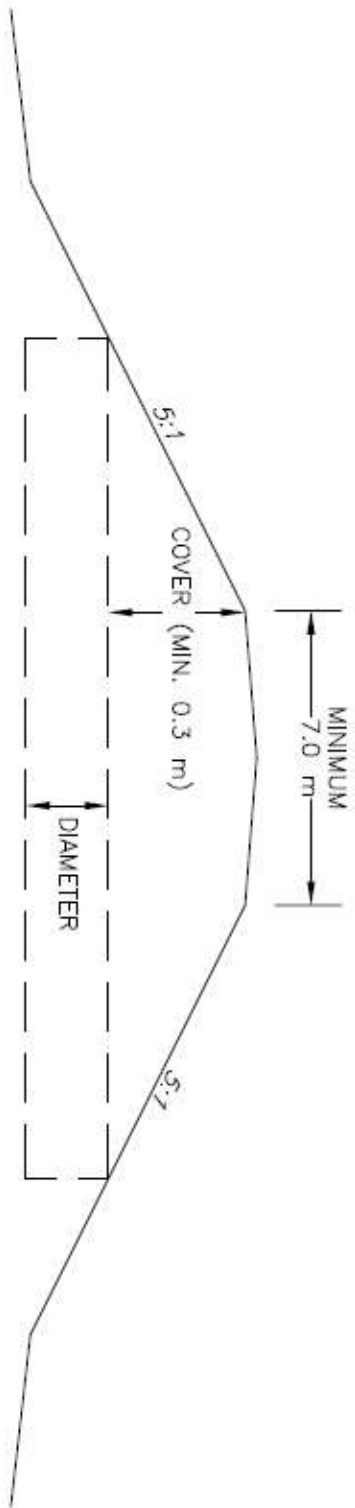


**PUBLIC WORKS**  
**SUBDIVISION - TYPICAL CROSS SECTION**  
**DOUBLE SEAL COAT**

DATE: 2011

SCALE: NTS

DRAWN BY: AMEC E & E



CULVERT DIAMETER	COVER	CULVERT LENGTH
400 mm	0.3 m	12 m
500 mm	0.4 m	12 m
500 mm	0.6 m	13 m
600 mm	0.3 m	12 m
600 mm	0.4 m	12 m
600 mm	0.6 m	13 m



**PUBLIC WORKS  
TYPICAL CROSS SECTION  
STANDARD APPROACH**

DATE: 2011

SCALE: NTS

DRAWN BY: AMEC E & E