



THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

PRIVATE ACCESS



2011
**Guide to Constructing
Private Approaches & Walks**



PRIVATE ACCESS KEY POINTS

- Only **LICENSED CONTRACTORS** may construct, remove, modify or relocate a private access
- **Crushed Concrete** is **approved** for use as a **base course material** for Private Accesses
- **Reinforcing steel** required for a private approach
- Single application for Residential Approval/Permit
- An Approval and Permit for Commercial Accesses
- Permit expires after **24 months**
- Private residential approach maximum width is 6.5 metres at property line
- Property owner and licensed contractor are responsible for compliance during construction
- Approval from City Forester if private access is within 2 metres of the outside of a tree trunk
- When constructing Private Accesses that are less than 1.5 metres from obstructions including but not limited to; fire hydrants, hydro poles, and communication pedestals, applicants must discuss options with an inspector (See Fig. 26)

DISCLAIMER

INFORMATION IN THIS BOOK IS INTENDED AS A GUIDELINE ONLY AND DOES NOT TAKE PRECEDENCE OVER ANY CURRENT INFORMATION IN ALL OF THE BY-LAWS AND STANDARD CONSTRUCTION SPECIFICATIONS.



TABLE OF CONTENTS

DEFINITIONS.....	1
GENERAL INFORMATION	2
GENERAL/SPECIFIC RULES.....	4
OTHER RULES	5
APPROVALS	6
NON-CONFORMING PRIVATE APPROACHES	6
CONSTRUCTION MATERIALS	7
MATERIAL LAYERS.....	7
SURFACE MATERIAL RESTRICTIONS	8
ROADWAY TYPE	8
CONCRETE ROADWAY:	8
ASPHALT ROADWAY:	8
**GRAVEL ROADWAY	8
CONSTRUCTION MATERIAL.....	8
LAYER MATERIALS.....	9
SUBGRADE.....	9
SUB-BASE.....	9
BASE COURSE	10
DRIVING SURFACES	11
MISCELLANEOUS.....	12
TABLES.....	14
CRUSHED SUB-BASE MATERIAL GRADING REQUIREMENTS (REF. TABLE CW 3110.1).....	14
BASE COURSE MATERIAL GRADING REQUIREMENTS (REF. TABLE CW 3110.2)	15
BEDDING SAND GRADING REQUIREMENTS (REF. TABLE CW 3330-R3.1).....	16
ASPHALTIC CONCRETE	17
Combined Aggregate Gradation Limits (Ref. TABLE 1 CW3410-R5.1).....	17
Physical Requirements (Ref. TABLE 2 CW3410-R5.2).....	17
NOTES.....	18
APPROACH DETAILS	20



DEFINITIONS

FIGURE 1	23
FIGURE 2	24
FIGURE 3	25
FIGURE 4	26
FIGURE 5	27
FIGURE 6	28
FIGURE 7	29
FIGURE 8	30
FIGURE 9	31
FIGURE 10	32
FIGURE 11	33
FIGURE 12	34
FIGURE 13	35
FIGURE 14	36
FIGURE 15	37
FIGURE 16	38
FIGURE 17	39
FIGURE 18	40
FIGURE 19	41
FIGURE 20	42
FIGURE 21	43
FIGURE 22	44
FIGURE 23	45
FIGURE 24	46
FIGURE 25	47
FIGURE 26	48
APPROVALS/ PERMITS, INSPECTIONS, RE-INSPECTIONS & MANHOLE ADJUSTMENTS.....	49
APPROVALS/PERMITS	49
INSPECTIONS	50
RE-INSPECTION FEE.....	50
MANHOLE & CATCH BASIN ADJUSTMENT (CW 3210 & CW 2130).....	50
APPROACH INSPECTION BOUNDARIES.....	51
CONTACTS	52
CUSTOMER NOTES.....	53

“Boulevard”	means the portion of a street on either side of a roadway but does not include a sidewalk.
“Lane”	means a street not more than nine metres in width.
“Licensed Contractor”	means a contractor who holds a valid licence issued pursuant to By-law 49/2008.
“Non-residential Property”	means real property that is not residential property as defined in By-law 49/2008.
“Private Access”	means a private approach, private walk, loading bay, turning lane or median opening.
“Private Access Permit”	means a permit for the construction, modification, relocation or removal of a private access issued pursuant to By-law 49/2008.
“Private Approach”	means any modification to a street in order to facilitate vehicular access to private real property and includes a vehicular drive, road, path, culvert, lane widening or other structure constructed or maintained within a street between private real property and the roadway line for the use or benefit of the owner or occupant of the real property.
“Private Walk”	means a pedestrian crossing between the sidewalk in front of the property of an owner, or the property itself, and the nearest curb or roadway in a street in like manner and for like purpose, constructed, installed or maintained.
“Property Line”	means the line between the street and adjacent private real property
“Regional Street”	means a street listed in Schedule “E” of the Streets By-law No. 1481/77 or a street identified as a regional street in a successor by-law to the Streets By-law.
“Street”	means any place or way, including any structure forming part thereof, which or any part of which has been dedicated as a roadway, lane, avenue, footpath, walkway, road or highway pursuant to the Real Property Act or which the public is ordinarily entitled to use for passage, with or without fee or charge therefore, and includes all the space between the boundary lines thereof.



GENERAL INFORMATION

Is a Permit required to construct a private approach or private walk, or to modify an existing approach or walk?

Yes. In most cases an approval/permit is required.

Every owner desiring an approach or private walk or any relocation or widening thereof must make a written application.

Applications for Residential private approaches on Non-Regional Streets must be made at the Customer Service Branch of the **Public Work's Customer Services counter, 107-1155 Pacific Ave.**

Applications for all Commercial private approaches and Residential private approaches on Regional Streets must be made at the **Traffic Assessment Section** of the **Transportation Branch, 101-1155 Pacific Ave.**

The application will be reviewed to determine if it conforms with the Private Access By-law No. 49/2008.

What information do I require to make an application?

You should provide a copy of a **Surveyor's Building Location Certificate** showing the location and dimensions of the proposed approach. As an alternative, a well drawn site plan showing all property dimensions, locations of buildings and the location and dimensions of the proposed approach may be acceptable.

For more information on Approvals/Permits see page 45.

Approach Approval/Permit lapses 24 months after issue date.

How can I obtain a Buildings Location Certificate?

Most home-owners already have this document - it usually comes with the purchase of a house. A qualified Land Surveyor (see Yellow Pages) can provide the certificate.

What if my application does not conform to the Private Access By-law?

If the approach does not conform to the By-law you will be advised as to why the application is non-conforming and informed of the process to follow should you wish to make an appeal to the applicable Community Committee for a residential approach or to the Standing Policy Committee for a commercial approach.

Who may construct a private access?

No person other than a licensed contractor, the employees of a licensed contractor or a City employee acting in the course of his or her employment may construct, remove, modify or relocate a private access.

I have an existing approach that is no longer required am I responsible for the cost of removing it?

Yes, the owner is responsible for the cost of removal of an existing private approach or part thereof. Only where it is considered by the City to be in the public interest to remove an approach that is no longer required will the cost of removing the approach be paid by the City.

A list of licensed Private Approach Contractors is available from:

**Customer Services Branch
107-1155 Pacific Ave
Phone: 986-3184**

Are there City Standards that must be followed when constructing a private approach/walk?

Yes. One of the primary purposes of this book is to provide you with the **minimum** standards that must be met. These minimum standards in no way prevent you from constructing an approach that exceeds these standards. In fact in certain circumstances it is recommended that the approach design be increased.

There is a manhole in the boulevard in the location where I wish to construct my private approach. How will this affect my approach?

The City will make any necessary grade adjustments to the manhole/catch basin. If the approach is to be concrete it will be necessary for you to construct an isolation (See Fig. 22). The City will also adjust/correct curb/gutter inlets that are in conflict with a private approach.

Any valve box or curb stop adjustments can only be done by a **City Licensed Sewer/Water Contractor**. (See Contacts; Pg. 48)

Be sure to read the special note: **Boulevard Settlement** on page 15.

Who is responsible for repairing a Private Approach?

The **owner of the approach** is responsible for the cost of reconstruction, reinstallation, repair, alteration or maintenance. Should a private approach deteriorate to an unsafe condition the City can give written notice to the owner ordering the repairs to be done at the owner's cost.

The street pavement is being renewed will I be required to pay for any necessary alterations to my private approach?

No. The City shall assume the costs, whenever the City widens, reconstructs or resurfaces a pavement and thereby necessitates alteration or reconstruction of a lawful private approach or walk. If the approach is not constructed to the same standard as the abutting street, the City may assess the cost of improving the approach against the benefiting property.

The City's Waterworks crews removed a part of my approach while carrying out a repair to the Watermain will they be repairing the approach?

Yes. When the City, a utility company or others do work in a street that damages a lawful private approach or walk the person responsible for the damage shall assume the entire cost of restoring the approach or walk to its original condition. In most cases the utility will obtain a permit to make the excavation and will pay to the City the fees required to do the restoration.

My approach that was inspected by the City of Winnipeg has cracked. Is the City liable?

The City inspects the approach for design, layout and dimensions. The City was not a part of any agreements made between the owner and contractor or owner and supplier. **It is the owner's responsibility** to ensure that minimum standards for both materials and construction practices are met. These standards are discussed later in this booklet.



GENERAL/SPECIFIC RULES

Non-Conforming Private Accesses

“General Rules re. Private Access

17(1) Private access are non-conforming if they fail to conform to the following general rules:

- (a) the private access must not be detrimental to the safe and efficient movement of vehicular and pedestrian traffic upon the adjacent street;
- (b) subject to subsection (2), the projected nearest edge of an approach or nearest point of a loading bay must not be within 6 metres of an intersection or an intersecting street, measured along the property line;
- (c) subject to subsection 25(5)¹, an approach must not be within 30 metres of the centre line of a railway track;
- (d) two or more approaches benefiting the same assessment holding that are on the same street must be at least 15 metres apart, measured along the property line;
- (e) the nearest point of intersection between a private approach and the property line must not be within 1.5 metres of a building or structure on the private real property.

17(2) Clause (1) (b) does not apply

- (a) in the case of a private approach benefiting a residential property, where the proposed private approach is within the projected roadway line of a roadway that has come to a dead-end in a T-shaped intersection; and
- (b) in the case of a private approach benefiting a non-residential property, when a proposed private approach is centred within the projected roadway line of a roadway that has come to a dead-end in a T-shaped intersection.

Specific Rules re. Residential Approaches

18. Private approaches benefiting residential properties are non-conforming if they fail to conform to the following rules:

- (a) an approach must not be less than 3 metres or greater than 6.5 metres wide measured along the property line;

(b) subject to subsection 25(3)², a private approach must not extend beyond the lot line of the adjacent property projected into the street if

- (i) the approach could negatively impact an existing or future conforming private approach benefiting an adjacent property; and
- (ii) an alternate location of the approach is possible, taking into account the proposed or actual location of buildings on the lot;

(c) an approach must not be constructed or allowed to exist where a lane at least 4.5 metres wide is adjacent to the property, whether or not the lane is improved.”

Notes: ¹ “25(5) Notwithstanding that a private access has been approved by the City and is otherwise in compliance with this By-law, where Transport Canada or a railway company requires the removal, modification or relocation of the private access as a condition of maintaining a railway crossing, it must be removed, modified or relocated at the expense of the owner of the benefitting property.”

² “25(3) Notwithstanding clause 18(b) and subject to subsection (4)³, in order to accommodate an approach benefitting adjacent property, the Director may authorize the removal or modification of that portion of a private approach that has been permitted to extend beyond the lot line of the adjacent property projected onto the street.”

³ “25(4) The cost of the removal or modification referred to in subsection (3) must be borne by the owner of the property being benefitted by the approach being constructed.”

An application that does not meet one or more of the General/Specific Rules must be rejected by the officer for the City.



OTHER RULES

Where manholes exist, manhole isolation must be included in the construction of the approach. (See Fig. 22)

An approach shall be constructed such that the minimum of one and a half (1.50) metres of clearance is maintained from all obstructions. Obstructions include but not limited to; lamp standards, hydro poles, fire hydrants and communication pedestals. (See Fig. 26) The cost of removal or relocation or replacement of these obstructions shall be borne by the property owner. All approaches must maintain at least two (2.0) metres clearance from the outer edge of the trunk of a tree unless approval is granted by the City Forester.

The Private Access By-law contains a number of Schedules that restrict the construction of approaches on:

- Most main Arterial Streets that do not have service roads; and
- streets where there is other means of access to the property.



APPROVALS

An application for a private approach or private walk which meets all of the Rules shall be approved and an Approval/Permit issued for construction and installation, unless the City is of the opinion that the approval of such approach or walk would be detrimental to the public interest. Example: Property owner of a corner lot wishes to construct a private approach on the side of the lot which is adjacent to a collector/bus route.

NON-CONFORMING PRIVATE APPROACHES

The Private Access By-law provides the property owner with a method of appealing an application that is refused;

a) because it does not conform with one or more of the Rules,

or;

b) on the basis that it is detrimental to the public interest.

Upon application for a private approach or private walk that does not comply with the Rules, or is determined to be detrimental to the public interest, the City will notify the applicant why the application has been denied and outline the procedure that the applicant can follow should the applicant wish to appeal to the designated Committee.

Where an application has been denied on the basis that it does not conform with one or more of the Rules of the By-law, the onus shall be on the owner to satisfy the Committee that:

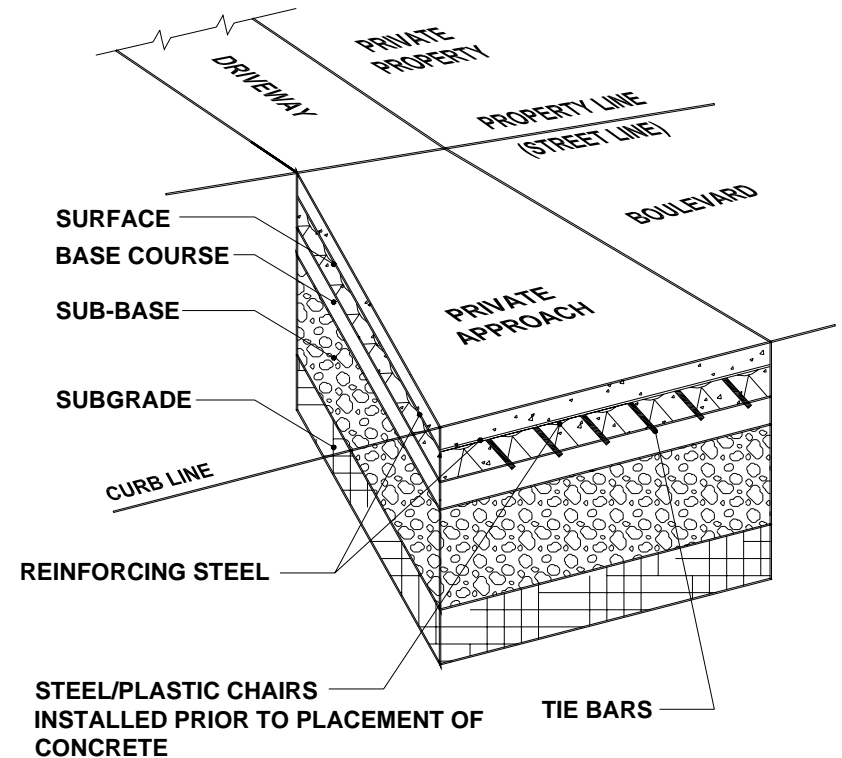
- i. no feasible method of providing access is possible within the terms of Rules;
- ii. the approach is necessary for the intended use of the property, and;
- iii. the granting of a variation of the terms of Rules will not be detrimental to the public interest.

Where an application has been denied on the basis that it is detrimental to the public interest the onus shall be on the City to satisfy the Committee of such detriment.

Applicants are welcome to attend Community Committee meetings, for information regarding the process, call the Plan Approval/Permit Technologist; 986-4113.



CONSTRUCTION MATERIALS



Material Layers

SURFACE MATERIAL RESTRICTIONS

ROADWAY TYPE	CONSTRUCTION MATERIAL
<i>Concrete Roadway:</i> (with or without asphalt overlay)	
• with curb	Concrete*
• with asphalt or concrete shoulders:	Concrete*
• with gravel shoulders -farm or single family/ duplex residential	Gravel, asphalt or concrete*
-all other land uses	Concrete*
<i>Asphalt Roadway:</i>	
• with curb	Asphalt or concrete*
• with asphalt or concrete shoulders	Asphalt or concrete*
• with gravel shoulder: -farm or single family/ duplex residential	Gravel, asphalt or concrete
-all other land uses	Asphalt or concrete*
**Gravel Roadway	Gravel
*- includes a surface constructed of paving stones or concrete underlay with an asphalt overlay.	
**- includes a surface constructed of oil treated gravel or chip sealant roadways	

LAYER MATERIALS

THE FOLLOWING ARE **MINIMUM STANDARDS** DERIVED FROM THE CITY OF WINNIPEG STANDARD CONSTRUCTION SPECIFICATIONS¹. IT IS THE RESPONSIBILITY OF THE OWNER/APPLICANT/LICENSED CONTRACTOR TO ENSURE THAT THESE STANDARDS ARE MET OR EXCEEDED.

SEE NOTES:

- 1) **PAGE 18 FOR INFORMATION ON STANDARD PROCTOR DENSITIES, and**
- 2) **PAGE 19 FOR IMPORTANT INFORMATION CONCERNING BOULEVARD SETTLEMENT.**

SUBGRADE

ALL SURFACES (CW 3110)

Suitable site material	Compact to a min. 95% standard proctor density
Unsuitable material	Replace a min. depth of 300mm with sub-base material. See CW 3110 for acceptable sub-base materials (see also Crushed Sub-Base Material Grading Requirements [pg. 14]) and compact to specified density.

SUB-BASE

ALL SURFACE TYPES (EXCEPT GRAVEL – Where Clay material is used) (WHERE THERE IS UNSUITABLE SUBGRADE MATERIAL) (CW 3110)

Type	See CW 3110 for acceptable materials See also Crushed Sub-Base Material Grading Requirements (pg. 14)
Min. thickness	300mm (Placed in compacted layers not exceeding 150mm)
Max. aggregate size	150mm
Gradation	As specified in CW 3110 see also Crushed Sub-Base Material Grading Requirements (pg. 14)
Compaction	100% Standard Proctor Density

¹ The City of Winnipeg Standard Construction Specifications are available in Adobe Acrobat (PDF) format at The City of Winnipeg, Corporate Finance, Materials Management internet site www.winnipeg.ca/matmgt/Spec/Default.stm

FOR INTERLOCKING PAVING STONE

FOR COMMERCIAL APPROACHES (CW 3335)

Type	Lean Concrete Mix over Sub-base
<u>Lean Mix Concrete</u>	
Min. thickness	150mm
Aggregate size	20mm nominal
Slump	25-75mm
Compressive strength	5-10 MPa @ 28 days
Air content	5-8%
Cement content	150 kg/cu.m.
Fly ash (10% of cement)	15 kg/cu.m.

FOR COMMERCIAL & RESIDENTIAL APPROACHES (CW 3110)

Type	Crushed Aggregate, Crushed Limestone or Crushed Concrete Pavement
Min. thickness	300mm (placed in two 150mm layers)
Max. aggregate size	20mm
Gradation	well graded
Compaction	100% Standard Proctor Density

BASE COURSE

FOR CONCRETE (CW 3110)

Types	See CW 3110 for acceptable base course materials (see also Base Course Material Grading Requirements [pg. 15]) (Granular - 25 mm nominal, Crushed Limestone - 20mm nominal or Crushed Concrete ² - 20mm nominal)
Compaction	100% Standard Proctor Density
Min. thickness	75mm

FOR PAVING STONES (CW 3330)

Types	Torpedo Sand, Conforms to CAN3-123 Section 5, see CW 3330.
Min. thickness	See also Bedding Sand Grading Requirements (pg. 16) 30mm without lean mix 15mm with lean mix

FOR ASPHALT (CW 3410)

Types	See CW 3110 & CW 3410 for acceptable base course materials (See also Base Course Material Grading Requirements [pg. 15]) (Granular – 25mm nominal, Crushed Limestone - 20mm nominal or Crushed Concrete ² - 20mm nominal)
Compaction	100% Standard Proctor Density
Min. thickness	150mm Residential 300mm Commercial

² Refer to Base Course Material Grading Requirements (pg. 15) for more information

DRIVING SURFACES

CONCRETE (CW 3310)

Note: All concrete placed must be supplied by an Approved Concrete Supplier. A list of these suppliers is made available on the City of Winnipeg Web Site @ www.winnipeg.ca/matmgt/Spec/Default.stm. Select → Approved Concrete Mix Designs → Contents

CEMENT

Type 10 Normal Portland, Conforms to CSA A5

FOR RESIDENTIAL APPROACHES (CW 3310)

Min. thickness	150mm
Min. compressive strength	30 MPa @ 28 DAYS
Min. cement content	300 kg/cu.m.
Max water/cement ratio	0.49
Slump	80 +/- 20mm
Aggregate size	20mm nominal
Air content	5.0 - 8.0%

FOR COMMERCIAL APPROACHES (CW 3310)

Min. thickness	200mm
Min. compressive strength	32 MPa @ 28 DAYS
Min. cement content	340 kg/cu.m.
Max. water/cement ratio	0.45
Slump	70 +/- 20mm
Aggregate size	20mm nominal
Air content	5.0 - 8.0%

REINFORCING STEEL (Fig. 24 & 25) (CW 3310)

Type I	12.7mm plain bars, grade 300, conforms to CSA G30.12.
Type II	10M (Deformed), grade 300, conforms to CSA G30.12.

Placement Maintain a 75mm clearance from edges. **Elevate to mid depth of the concrete using steel/plastic chairs** sufficiently placed to ensure positioning is maintained during concrete placement.

RESIDENTIAL APPROACH REINFORCING STEEL (SD-237 & FIG. 24)

Alternative I	Place in a grid to form a mat. Spaced not greater than 470mm O.C. in both directions, and welded or securely fastened at intersections. (Ref. FIG. 25)
Alternative II	Cut and place to form a grid spaced not greater than 400mm O.C. in both directions and welded or securely fastened at intersections.

COMMERCIAL APPROACH REINFORCING STEEL (SD-217 & FIG. 25)

Bar Mats are to be used in accordance with SD-217, FIG. 25 and ALTERNATIVE 1, SECTION A-A of SD-237, FIG. 24

PAVING STONES (CW 3330)

Type	Conforms with CAN3-A231.2 Pre-cast Concrete Pavers
Placement	Paving stones to be compacted into the sand bedding with a vibratory compactor & filler sand shall be swept into the joints until full.

ASPHALTIC CONCRETE (CW 3410)

See:

Combined Aggregate Gradation Limits (pg. 17)
Physical Requirements (pg. 17)

FOR RESIDENTIAL APPROACHES	Type IA, or Type I Minimum thickness 75mm
FOR COMMERCIAL APPROACHES	Type IA Minimum thickness 75mm
OVERLAY FOR CONCRETE	Type II Minimum thickness 20mm

GRAVEL (CW 3150)

Base Course Material	see Base Course Material Grading Requirements (pg. 15)
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MISCELLANEOUS

CONCRETE INCIDENTAL ITEMS (CW 3310)

Expansion/Isolation Joint	Fibre joint filler conforms to ASTM D1751, 15mm thick, pre-formed, rot-proof, bituminous fibre. Plastic expansion joint filler, fluted polypropylene type 6mm in thickness.
Contraction Joint	Saw cut 40mm deep X 10mm wide, located as shown on drawing.
Tie Bars	Grade 300 (Approach to pavement) – 15M deformed epoxy coated bars, 600mm long, placed 600mm O.C., drilled into existing pavement 230mm and bonded. (Curb Ramps) – 15M deformed epoxy coated bars, 600mm long, placed 600mm O.C..
Bonding Agent	Conforms to ASTM C881, Type 1 grade 3 epoxy, see “Approved Products Surface Works” in Standard Construction Specifications.
Curing Compound	Conforms to ASTM C309 Type 2 white pigmented, water based liquid membrane-forming.

CAST IN PLACE CONCRETE CURBS

FOR ASPHALT/PAVING STONE APPROACHES (CW 3310)

Size	100mm Wide X 200mm Deep
Cement	Type GU, conforms to CSA A3001
Min. compressive strength	32 MPA @ 28 DAYS
Min. cement content	340 kg/cu.m.
Max. water/cement ratio	0.45
Max. slump	70 +/- 20mm
Aggregate size	20mm nominal
Air content	5-8%
Reinforcing steel	Conforms to CSA G30-12 Billet Steel for reinforcement, 2-15M deformed bars spaced as shown on applicable figures.

PLASTIC PAVER EDGE SUPPORT

FOR PAVING STONE APPROACHES (CW 3330)

Plastic paver edge support shall be made of High Density Polyethylene (HDPE) material.

Plastic paver edge support may be installed as a paving stone edging for residential approaches. All installation shall be in accordance with the manufacturer’s instructions.

For vehicular applications 10” or 12” x 3/8” diameter steel spikes shall be spaced every 12” (min. every 3rd hole) with the exception of radius applications, where the steel spikes should be spaced every 8” to 12”.

An acceptable plastic edge support is “Snap Edge” as manufactured by Snapedge Canada Ltd. or Snap Edge Corporation.
www.snapedge.ca

CULVERTS

FOR STREETS WITH DITCH TYPE DRAINAGE (CW 3610)

Size	To be determined by City of Winnipeg. Call Plan Approval/Permit Technologist 986-4113
Type	Corrugated Steel Pipe, conforms to CSA CAN3-G401, pre-cast concrete pipe, conforms to ASTM C-14, C-76, or C-655



TABLES

Crushed Sub-Base Material Grading Requirements (Ref. TABLE CW 3110.1)

SUB-BASE MATERIALS			
To be supplied in accordance with the following requirements: Crushed sub-base material, well graded, maximum aggregate size of either 50mm or 150mm.			
<u>CDN. METRIC SIEVE SIZE</u>	<u>PERCENT OF TOTAL DRY WEIGHT PASSING EACH SIEVE</u>		
	<u>50mm MAX.</u>	<u>100mm MAX.</u>	<u>150mm MAX.</u>
150 000			90% - 100%*
100 000		97% - 100%	75% - 90%
50 000	100%		
25 000		30% - 50%	50% max.
5 000	25% - 80%		
80	5% - 18%	5% max.	
* Max. allowable size is 300mm			
a) 150mm Crushed Limestone when subject to the abrasion test shall not have a loss of not more than 40% when tested in accordance with grading 1 of ASTM C535, Test for Resistance to Degradation of Large Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.			
b) 50mm crushed limestone material when subjected to the abrasion test will have a loss of not more than 40% when tested in accordance with grading A of ASTM C131, Test for Resistance to Degradation of Small Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.			
c) Crushed pavement sub-base material will be a mixture of reclaimed concrete and asphaltic concrete. The contents of the material will be limited to the following percentages based on weight: <ul style="list-style-type: none"> -minimum of 85% recycled concrete -maximum of 15% recycled asphaltic concrete -maximum of 3% clay -maximum of 1% foreign material 			

Base Course Material Grading Requirements (Ref. TABLE CW 3110.2)

BASE COURSE MATERIALS			
Base course material will consist of sound, hard, crushed rock, crushed gravel, or crushed concrete. Base course material will consist of sound durable particles produced by crushing, screening and grading of recovered materials, free from soft material that would decay or disintegrate from weathering.			
Crushed rock and crushed gravel will be free from organic or soft material that would disintegrate through decay or weathering.			
Crushed concrete base course material is limited to a maximum of two percent of the total dry weight of deleterious material. Deleterious material includes porcelain, vegetation, organic material, wood, glass, plastic, metal, reinforcing steel, building rubble, brick, salvaged asphalt materials, clay, shale, and friable particles.			
Materials are to be spread uniformly to avoid segregation, free of pockets of fine and coarse material.			
Base course material will be well-graded and conform to the following grading requirements:			
<u>CDN. METRIC SIEVE SIZE</u>	<u>PERCENT OF TOTAL DRY WEIGHT PASSING EACH SIEVE</u>		
	<u>GRANULAR</u>	<u>CRUSHED LIMESTONE</u>	<u>CRUSHED CONCRETE</u>
25 000	100%		
20 000	80% - 100%	100%	100%
5 000	40% - 70%	40% - 70%	40% - 70%
2 500	25% - 55%	25% - 60%	25% - 60%
315	13% - 30%	8% - 25%	8% - 25%
80	5% - 15%	6% - 17%	6% - 17%
Base course material when subjected to the abrasion test will have a loss of not more than 35% when tested in accordance with grading B of ASTM C131, Test for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.			
Where base course is being placed under an <u>asphaltic concrete pavement</u> , the aggregate retained on a No. 5 000 sieve shall contain not less than 35% crushed aggregate as determined by actual particle count. Crushed aggregate will be considered as that aggregate having at least one fractured face.			
Crushed rock or gravel material passing the 315 sieve shall have a liquid limit not greater than 25 and a plasticity index not greater than 6.			

Bedding Sand Grading Requirements (Ref. TABLE CW 3330-R3.1)

BEDDING SAND	
Bedding sand shall be fine aggregate as specified in Section 5.3.1 of Specification CW 3310, with the exception that the sand shall conform to the following grading requirements:	
CDN. METRIC SIEVE SIZE	PERCENT OF TOTAL DRY WEIGHT PASSING EACH SIEVE
10 000	100%
5 000	95% - 100%
2 500	80% - 100%
1 250	50% - 85%
630	25% - 60%
315	10% - 35%
160	5% - 15%
80	0% - 10%

Material	Parameter	Test Method	Specifications Limit	Frequency of Test
fine aggregate	petrographic examination	ASTM C295	see note* (CW 3310-R14 5.3.1)	1 year
	Micro-Deval	CSA A23.2-23A	20% max	1 year
	clay lumps	CSA A23.2-3A	1% max	2 years
	low density		0.5% max	2 years
	granular material	CSA A23.2-4A		
	alkali-silica reactivity	CSA A23.2-25A	0.15% max	2 years
	organic impurities	CSA A23.2-7A	free from injurious amounts	2 years
* - NOTE:				
The petrographic report for the fine aggregate shall include a comment on the suitability of the material for use in the production of concrete paving mix.				
For concrete mix designs that will utilize two coarse aggregates and both coarse aggregates are from the same source, only the larger nominal maximum size coarse aggregate shall be tested for the parameters shown in the table above. If the coarse aggregates are from different sources, both materials shall be tested for the parameters shown in the table above.				
The Coarseness Factor of the combined aggregate shall be between 45 and 65.				
Quarried limestone and dolomite shall not be acceptable as aggregate materials.				

ASPHALTIC CONCRETE

Combined Aggregate Gradation Limits (Ref. TABLE 1 CW3410-R5.1)

Physical Requirements (Ref. TABLE 2 CW3410-R5.2)

COMBINED AGGREGATE GRADATION LIMITS				
Percent of Total Dry Weight Passing Each Sieve				
Canadian Metric Sieve Size	Type 1A (Surface Course) %	Type I (Surface Course) %	Type II (Surface Course) %	Type III (Base Course) %
	40 000		100%	
25 000				90% to 100%
16 000	99% to 100%			60% to 90%
12 500	--	70% to 85%	100%	56% to 80%
10 000	70% to 88%	45% to 70%	90% to 95%	--
5 000	55% to 70%	25% to 55%	74% to 80%	29% to 59%
2 500	40% to 60%	20% to 40%	55% to 64%	20% to 50%
1 250	25% to 50%	15% to 30%	35% to 46%	--
630	15% to 40%	5% to 20%	22% to 30%	15% to 30%
315	5% to 28%	--	8% to 11%	5% to 17%
160	4% to 11%	3% to 6%		--
80	3% to 7%	50% min.		1% to 7%
Crush Count: (Clause 5.4.1 (b) (iii))	60% min. (2 fractured faces)	(1 fractured face)	--	60% min. (2 fractured faces)

PHYSICAL REQUIREMENTS			
	Type 1A (Surface Course) %	Type I (Surface Course) %	Type II (Surface Course) %
Asphalt Cement, % total sample weight	5.0% to 6.0%	5.0% to 6.0%	5.0% to 7.0%
Voids in Mineral Aggregate, VMA	14.0% min.	14.5% min.	16.0% min.
Air Voids	3.0% to 5.0%	2.5% to 5.0%	2.5% to 5.0%
Marshall Stability, kN at 60°C	7 min.	5 min.	4 min.
Flow Index, units of 250 µm	6.0 to 16.0	6.0 to 16.0	6.0 to 16.0
			4.0% to 5.5%
			12.0% min.
			2.5% to 5.0%
			5 min.
			6.0 to 16.0

STANDARD PROCTOR DENSITIES

Standard Proctor Densities are a measure of soils density obtained using industry standard tests. The Standard Proctor Density for a soil is unique to that soil type. A sandy soil compacted to 100% Standard Proctor Density would not be as dense a soil with a greater clay content compacted to the same 100% Standard Proctor Density. Soil agencies can determine soil compaction (percent of Standard Proctor Density) at a cost.

A general rule of thumb can be applied to most soils to determine the approximate degree of compaction. A simple procedure is to try to penetrate the compacted soil with a common screwdriver. The screwdriver blade should be placed in contact with the soil and then hand force applied to the screwdriver to penetrate the soil. For Suitable Site sub-grade materials compacted to 95% Standard Proctor Density it should take considerable force to make the screwdriver penetrate the soil 50-75mm. For a base course material compacted to 100% Standard Proctor Density the screwdriver should only penetrate the soil approximately 25mm.

BOULEVARD SETTLEMENT

Water, sewer and other utility trenches exist in most boulevards in the City of Winnipeg. Long term settlement of the trench backfill material can occur even though steps have been taken during the utility installation to ensure that compaction of the backfill material was in accordance with Standard Construction Specifications. Over time boulevard settlement can occur that might adversely affect a private approach. It is therefore recommended that the sub-grade material in the boulevard be examined and preventative measures such as sub-grade compaction by jetting and flooding be performed prior to constructing a private approach.

Special attention should be given to sewer manholes that will lie within the limits of an approach. Backfill around manholes may be more susceptible to settlement. Where a manhole exists, manhole isolations must be included in the construction of the approach. A manhole which is not isolated will act as a pile under the approach which can lead to serious undermining followed by high severity cracking of the approach when settlement ultimately does occur.

Property owners/licensed contractors should also consider design alternatives above the minimum standards to minimize the effect of long term trench settlement.



APPROACH DETAILS

TO USE THE DETAIL CHARTS (PGS 17 & 18) TO DETERMINE WHICH APPROACH DETAIL IS APPLICABLE. FOLLOW THESE STEPS:

- STEP 1** Determine your land usage:
- for Residential or Farm property use Chart 1.
 - for Commercial, Industrial or any other property use Chart II.
- STEP 2** Verify:
- a) The type of pavement of the Street to which the approach will access:
 - Concrete or Asphalt over Concrete,
 - Asphalt, or
 - Gravel
 - b) The type of curb if any:
 - Barrier (rectangular with a vertical face)
 - Lip (rolled with a diagonal face)
 - c) The shoulder type if applicable:
 - Asphalt, or
 - Gravel
- Use the information from a, b & c, starting from the left to select the proper row.
- STEP 3** Determine whether the Street to which the approach will access is considered Regional or Non-Regional. (see definitions for Regional Streets (pg. 1))
- Use this information to select the appropriate side of the table.
- STEP 4** In the row you selected in step 2, on the side you select in step 3, locate the cell containing the surface material type you intend to use.
- Note: The listed types are the option available to conform with the Private Access By-law.
- The figure number in this cell will reference the applicable detail.

CHART I – RESIDENTIAL / FARM

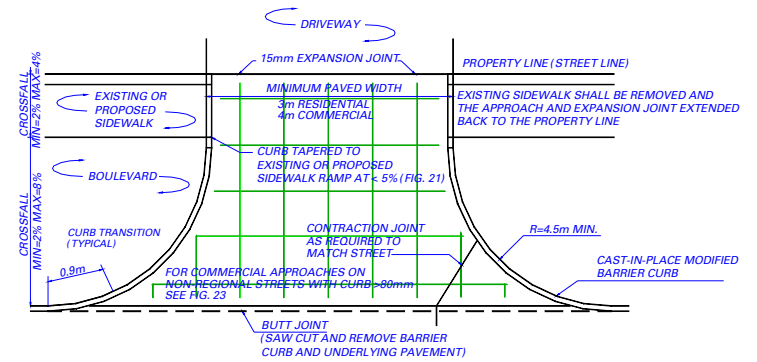
PAVEMENT TYPE	CURB TYPE	SHOULDER TYPE	LAND USE	
			REGIONAL STREETS	NON-REGIONAL STREETS
CONCRETE OR ASPHALT OVER CONCRETE	BARRIER CURB	NONE	CONCRETE FIG. 1	CONCRETE FIG. 11
			CONCRETE FIG. 2	CONCRETE FIG. 12
			CONCRETE FIG. 3	CONCRETE FIG. 13
	LIP CURB	NONE	CONCRETE FIG. 4	CONCRETE FIG. 14
			CONCRETE FIG. 5	CONCRETE FIG. 15
			CONCRETE FIG. 6	CONCRETE FIG. 16
	NONE	NONE	ASPHALT FIG. 9	ASPHALT FIG. 17
			ASPHALT FIG. 10	ASPHALT FIG. 18
			ASPHALT FIG. 7	ASPHALT FIG. 19
ASPHALT	BARRIER CURB	NONE	CONCRETE FIG. 1	CONCRETE FIG. 11
			CONCRETE FIG. 2	CONCRETE FIG. 12
			CONCRETE FIG. 3	CONCRETE FIG. 13
	LIP CURB	NONE	CONCRETE FIG. 4	CONCRETE FIG. 14
			CONCRETE FIG. 5	CONCRETE FIG. 15
			CONCRETE FIG. 6	CONCRETE FIG. 16
	NONE	ASPHALT	ASPHALT FIG. 9	ASPHALT FIG. 17
			ASPHALT FIG. 10	ASPHALT FIG. 18
			ASPHALT FIG. 7	ASPHALT FIG. 19
NONE	NONE	GRAVEL FIG. 10	GRAVEL FIG. 17	
		GRAVEL FIG. 11	GRAVEL FIG. 18	
		GRAVEL FIG. 8	GRAVEL FIG. 19	
GRAVEL	NONE	GRAVEL FIG. 10	GRAVEL FIG. 17	
		GRAVEL FIG. 11	GRAVEL FIG. 18	
		GRAVEL FIG. 8	GRAVEL FIG. 19	

CHART II – COMMERCIAL / INDUSTRIAL

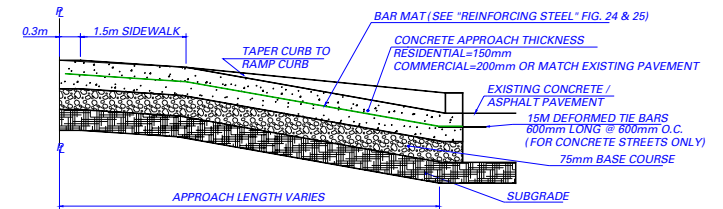
PAVEMENT TYPE	CURB TYPE	SHOULDER TYPE	LAND USE	
			REGIONAL STREETS	NON-REGIONAL STREETS
CONCRETE OR ASPHALT OVER CONCRETE	BARRIER CURB	NONE	CONCRETE FIG. 1	CONCRETE FIG. 1
	LIP CURB	NONE	PAVING STONES FIG. 2	PAVING STONES FIG. 2
	NONE	ASPHALT	CONCRETE FIG. 3	CONCRETE FIG. 3
	NONE	GRAVEL	PAVING STONES FIG. 6	PAVING STONES FIG. 6
ASPHALT	BARRIER CURB	NONE	CONCRETE FIG. 5	CONCRETE FIG. 5
	LIP CURB	NONE	ASPHALT FIG. 7	ASPHALT FIG. 7
	NONE	ASPHALT	PAVING STONES FIG. 2	PAVING STONES FIG. 2
	NONE	GRAVEL	PAVING STONES FIG. 6	PAVING STONES FIG. 6
GRAVEL	NONE	GRAVEL / NONE	GRAVEL FIG. 10	GRAVEL FIG. 10

FIGURE 1

COMMERCIAL CONCRETE APPROACH ON REGIONAL AND NON-REGIONAL STREETS WITH BARRIER CURB RESIDENTIAL CONCRETE APPROACH ON REGIONAL STREETS WITH BARRIER CURB



PLAN VIEW



LONGITUDINAL SECTION

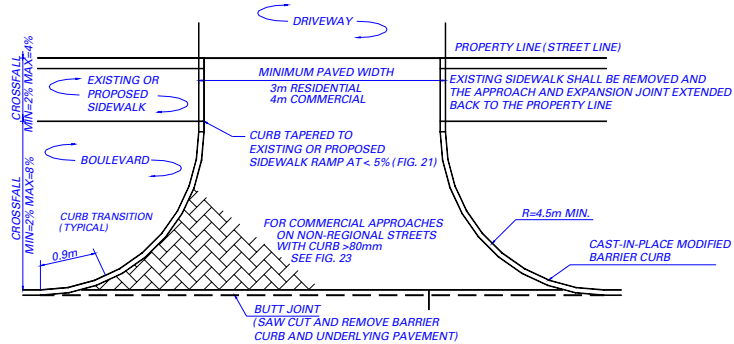
NOTE

- SEE FIG. 22 FOR MANHOLE ISOLATION DETAIL IF REQUIRED.
- WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED).

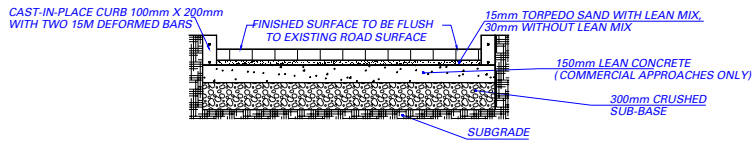
N.T.S.

FIGURE 2

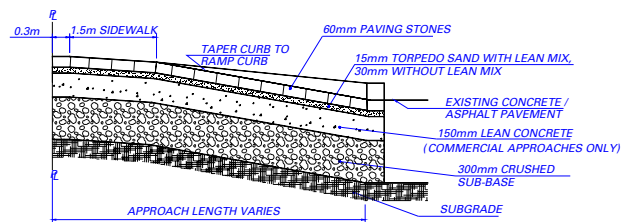
COMMERCIAL PAVING STONE APPROACH ON REGIONAL AND NON-REGIONAL STREETS WITH BARRIER CURB
RESIDENTIAL PAVING STONE APPROACH ON REGIONAL STREETS WITH BARRIER CURB



PLAN VIEW



CROSS SECTION



LONGITUDINAL SECTION

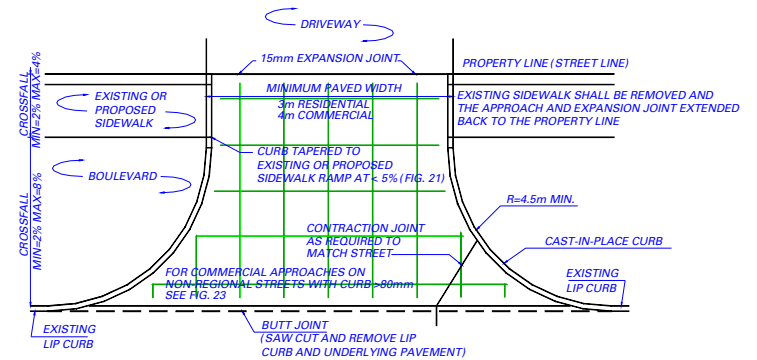
NOTE

1) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED)

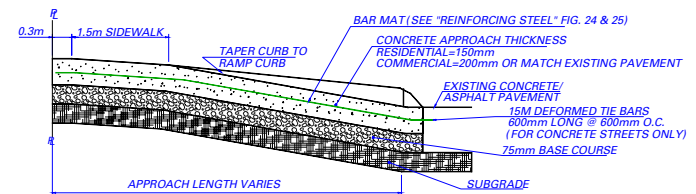
N.T.S.

FIGURE 3

COMMERCIAL CONCRETE APPROACH ON REGIONAL AND NON-REGIONAL STREETS WITH LIP CURB
RESIDENTIAL CONCRETE APPROACH ON REGIONAL STREETS WITH LIP CURB



PLAN VIEW



LONGITUDINAL SECTION

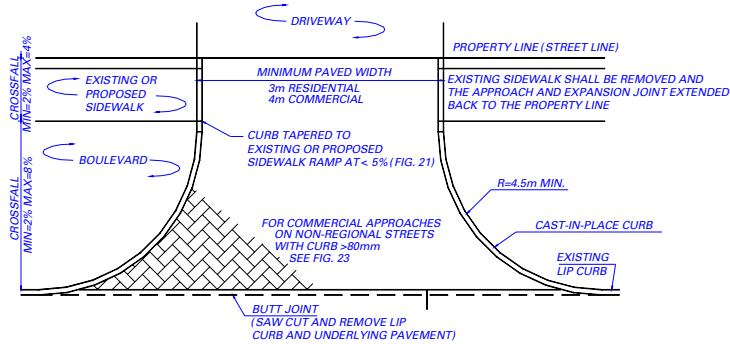
NOTE

1) SEE FIG. 22 FOR MANHOLE ISOLATION DETAIL IF REQUIRED.
 2) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED).

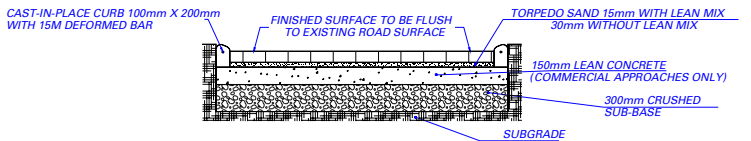
N.T.S.

FIGURE 4

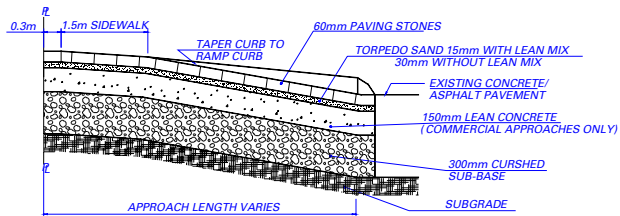
**COMMERCIAL PAVING STONE APPROACH ON REGIONAL AND NON-REGIONAL STREETS WITH LIP CURB
RESIDENTIAL PAVING APPROACH ON REGIONAL STREETS WITH LIP CURB**



PLAN VIEW



CROSS SECTION



LONGITUDINAL SECTION

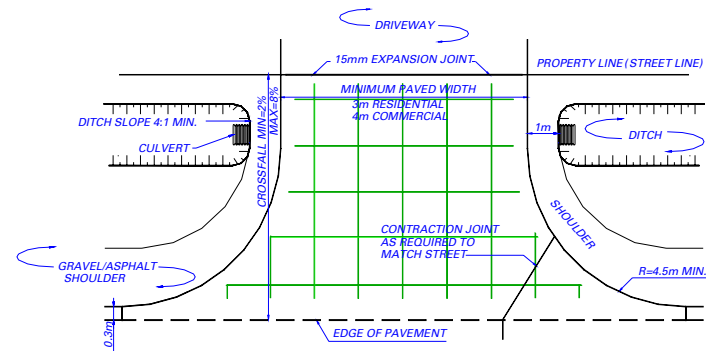
NOTE

1) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED)

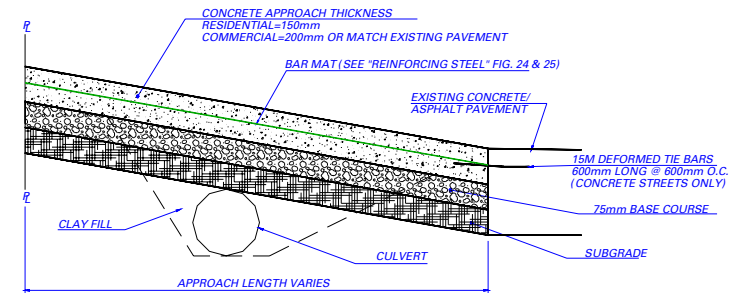
N.T.S.

FIGURE 5

**COMMERCIAL CONCRETE APPROACH ON REGIONAL AND NON-REGIONAL STREETS WITH SHOULDERS
RESIDENTIAL CONCRETE APPROACH ON REGIONAL STREETS WITH SHOULDERS**



PLAN VIEW



LONGITUDINAL SECTION

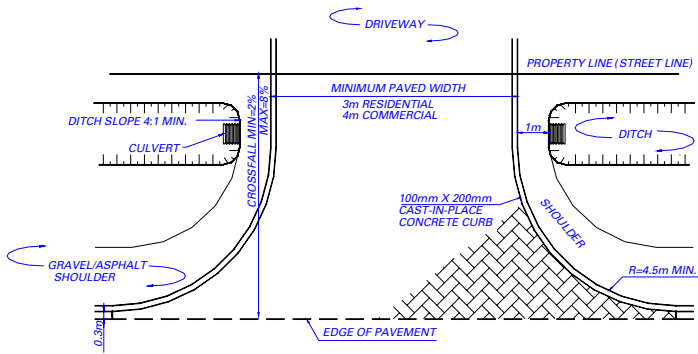
NOTE

1) SEE FIG. 22 FOR MANHOLE ISOLATION DETAIL IF REQUIRED.
2) CULVERT LENGTH AND DIAMETER AS DETERMINED BY THE PLAN APPROVAL/PERMIT TECHNOLOGIST.

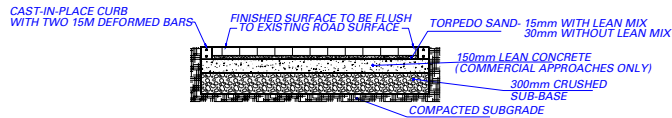
N.T.S.

FIGURE 6

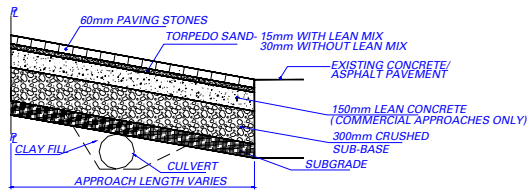
**COMMERCIAL PAVING STONE APPROACH ON REGIONAL AND NON-REGIONAL STREETS WITH SHOULDERS
RESIDENTIAL PAVING STONE APPROACH ON REGIONAL STREETS WITH SHOULDERS**



PLAN VIEW



CROSS SECTION



LONGITUDINAL SECTION

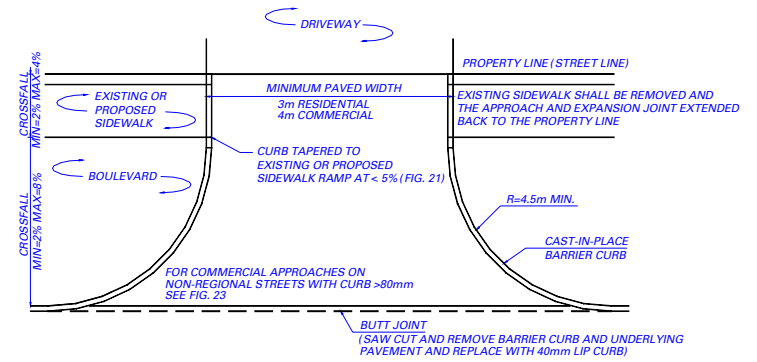
NOTE

1) CULVERT LENGTH AND DIAMETER AS DETERMINED BY THE PLAN APPROVAL/PERMIT TECHNOLOGIST.

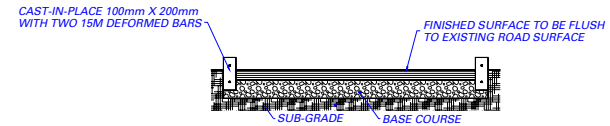
N.T.S.

FIGURE 7

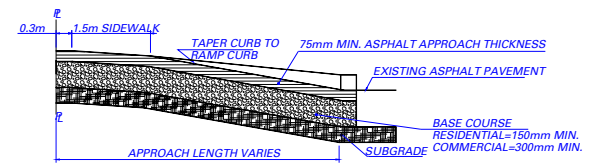
**COMMERCIAL ASPHALT APPROACH ON REGIONAL AND NON-REGIONAL STREETS WITH BARRIER CURB
RESIDENTIAL ASPHALT APPROACH ON REGIONAL STREETS WITH BARRIER CURB**



PLAN VIEW



CROSS SECTION



LONGITUDINAL SECTION

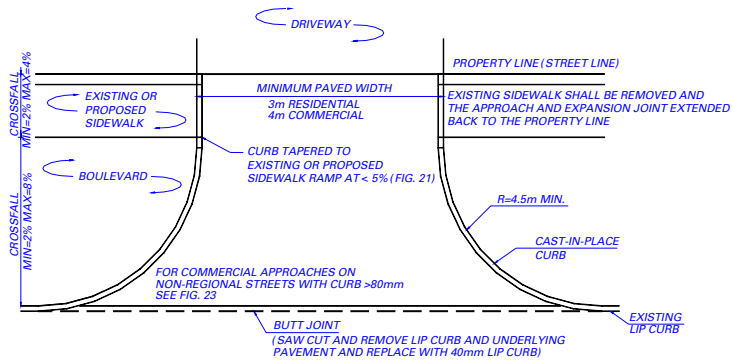
NOTE

1) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED)

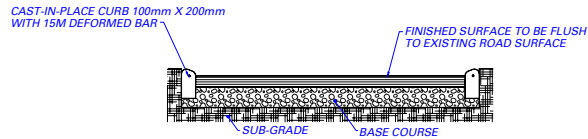
N.T.S.

FIGURE 8

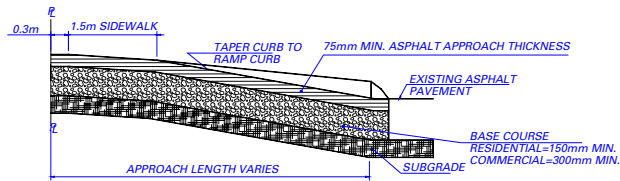
COMMERCIAL ASPHALT APPROACH ON REGIONAL AND NON-REGIONAL STREETS WITH LIP CURB
RESIDENTIAL ASPHALT APPROACH ON REGIONAL STREETS WITH LIP CURB



PLAN VIEW



CROSS SECTION



LONGITUDINAL SECTION

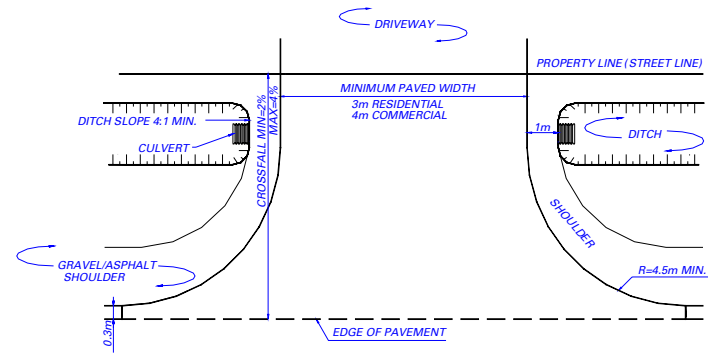
NOTE

1) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED)

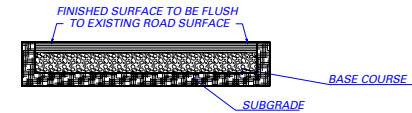
N.T.S.

FIGURE 9

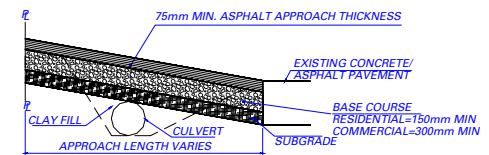
COMMERCIAL ASPHALT APPROACH ON REGIONAL AND NON-REGIONAL STREETS WITH SHOULDERS
RESIDENTIAL ASPHALT APPROACH ON REGIONAL STREETS WITH SHOULDERS



PLAN VIEW



CROSS SECTION



LONGITUDINAL SECTION

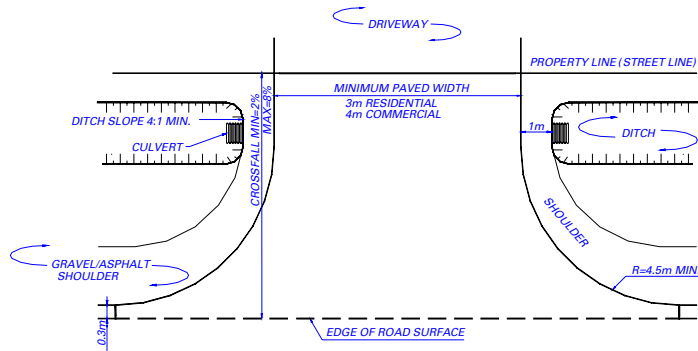
NOTE:

1) CULVERT LENGTH AND DIAMETER AS DETERMINED BY THE PLAN APPROVAL/PERMIT TECHNOLOGIST.

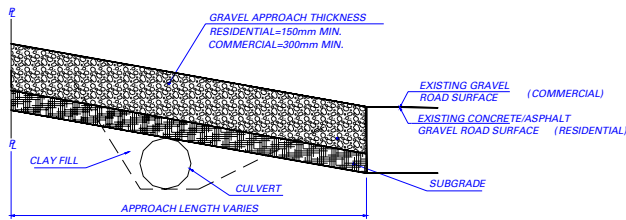
N.T.S.

FIGURE 10

COMMERCIAL GRAVEL APPROACH ON REGIONAL AND NON-REGIONAL STREETS WITH SHOULDERS
RESIDENTIAL GRAVEL APPROACH ON REGIONAL STREETS WITH SHOULDERS



PLAN VIEW



LONGITUDINAL SECTION

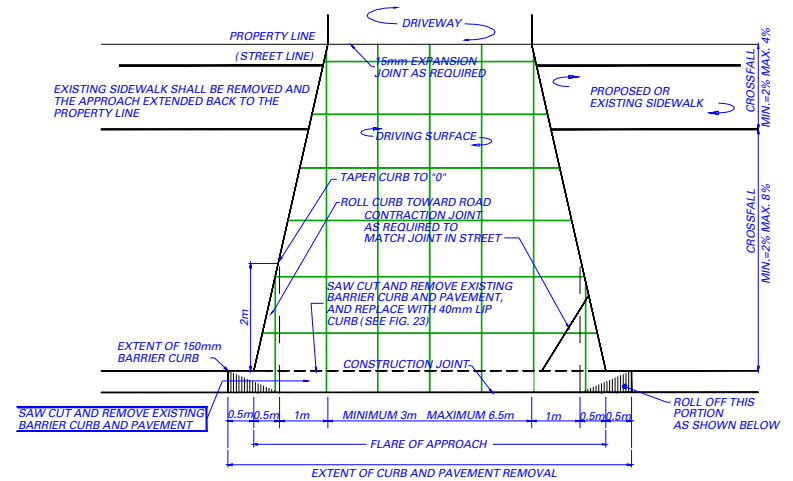
NOTE:

1) CULVERT LENGTH AND DIAMETER AS DETERMINED BY THE PLAN APPROVAL/PERMIT TECHNOLOGIST.

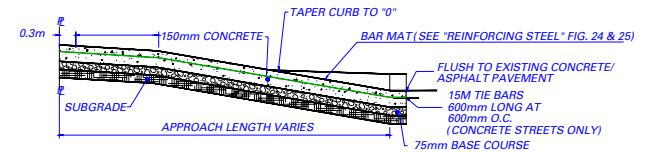
N.T.S.

FIGURE 11

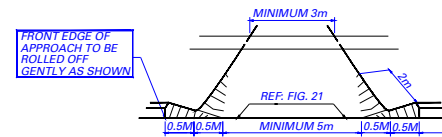
RESIDENTIAL CONCRETE APPROACH ON NON-REGIONAL STREETS WITH BARRIER CURB



PLAN VIEW



CROSS SECTION



FRONTAL PERSPECTIVE OF FINISHED PRIVATE APPROACH

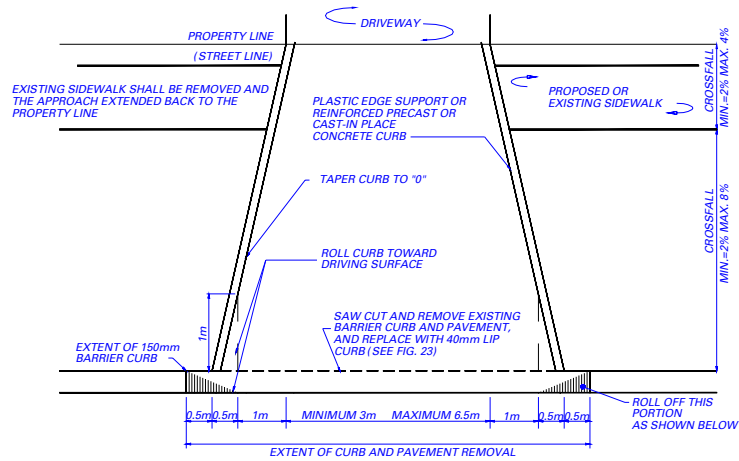
NOTE:

1) SEE FIG. 22 FOR MANHOLE ISOLATION DETAIL, IF REQUIRED.
 2) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED).

N.T.S.

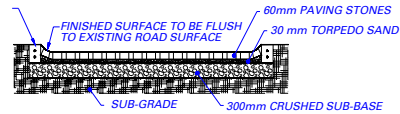
FIGURE 12

RESIDENTIAL PAVING STONE APPROACH ON NON-REGIONAL STREETS WITH BARRIER CURB

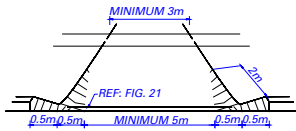


PLAN VIEW

PLASTIC EDGE SUPPORT
65mm X 140mm PRECAST CURB OR
100mm X 200mm CAST-IN-PLACE CURB
WITH TWO 15M DEFORMED BARS



CROSS SECTION



FRONTAL PERSPECTIVE OF FINISHED PRIVATE APPROACH

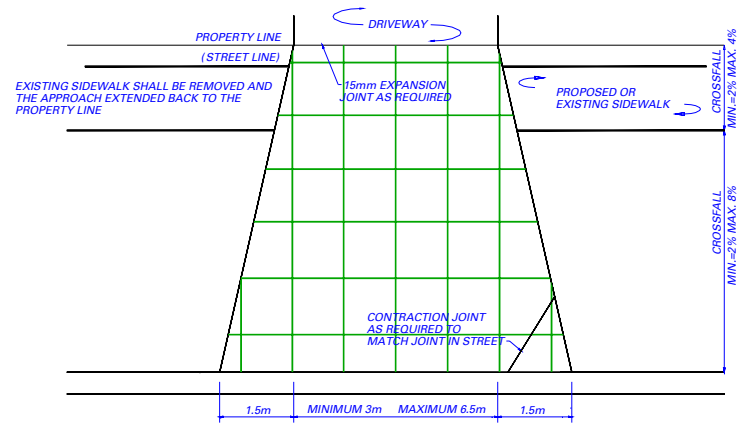
NOTE

1) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED)

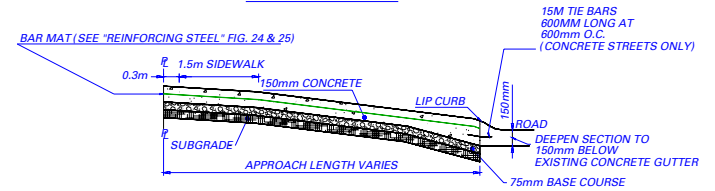
N.T.S.

FIGURE 13

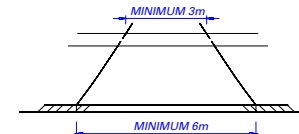
RESIDENTIAL CONCRETE APPROACH ON NON-REGIONAL STREETS WITH LIP CURB



PLAN VIEW



CROSS SECTION



FRONTAL PERSPECTIVE OF FINISHED PRIVATE APPROACH

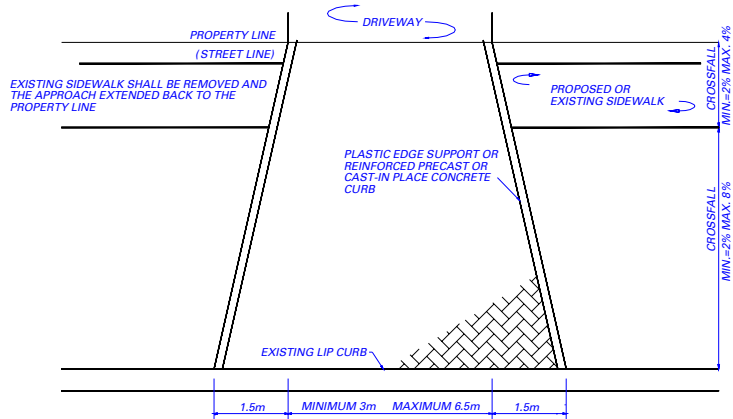
NOTE

- 1) SEE FIG. 22 FOR MANHOLE ISOLATION DETAIL IF REQUIRED.
- 2) IF CURB HEIGHT >80mm REFER TO FIG. 23.
- 3) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED).

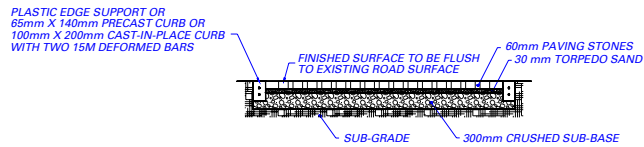
N.T.S.

FIGURE 14

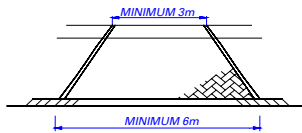
RESIDENTIAL PAVING STONE APPROACH ON NON-REGIONAL STREETS WITH EXISTING LIP CURB



PLAN VIEW



CROSS SECTION



FRONTAL PERSPECTIVE OF FINISHED PRIVATE APPROACH

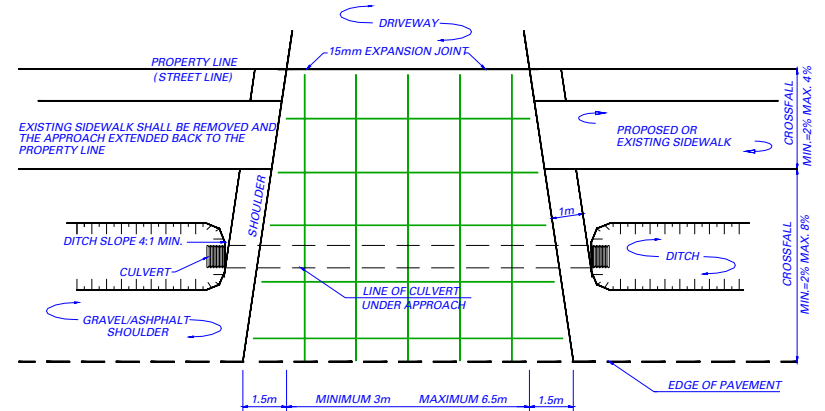
NOTE

- 1) IF CURB HEIGHT >80mm REFER TO FIG. 23
- 2) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED)

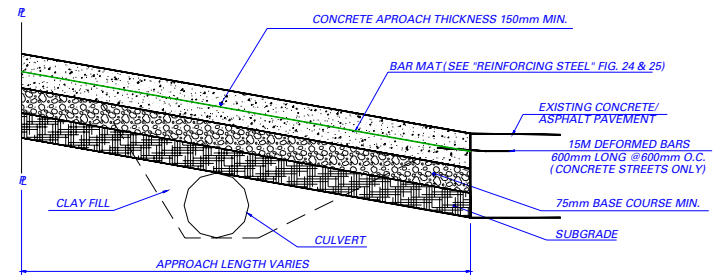


FIGURE 15

RESIDENTIAL CONCRETE APPROACH ON NON-REGIONAL STREETS WITH SHOULDERS



PLAN VIEW



LONGITUDINAL SECTION

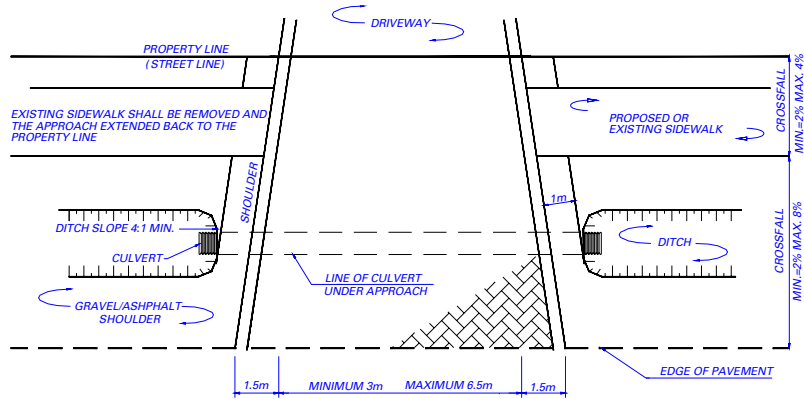
NOTE

- 1) SEE FIG. 22 FOR MAN-HOLE ISOLATION DETAIL IF REQUIRED.
- 2) CULVERT LENGTH AND DIAMETER AS DETERMINED BY THE PLAN APPROVAL/PERMIT TECHNOLOGIST.
- 3) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED)

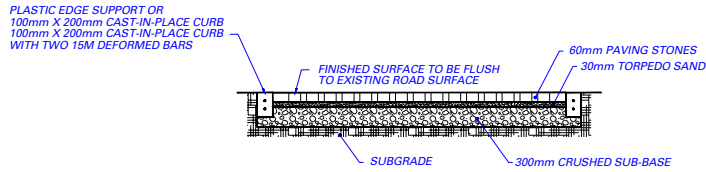


FIGURE 16

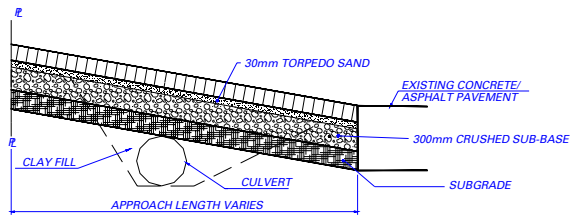
RESIDENTIAL PAVING STONE APPROACH ON NON-REGIONAL STREETS WITH SHOULDERS



PLAN VIEW



CROSS SECTION



LONGITUDINAL SECTION

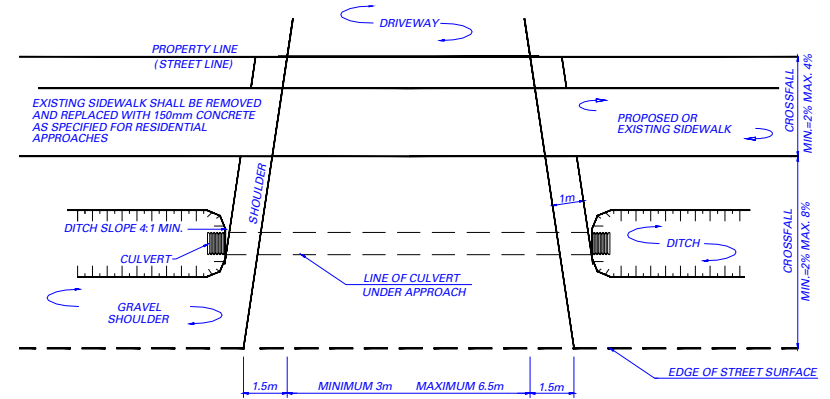
NOTE

- 1) CULVERT LENGTH AND DIAMETER AS DETERMINED BY THE PLAN APPROVAL/PERMIT TECHNOLOGIST.
- 2) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED).

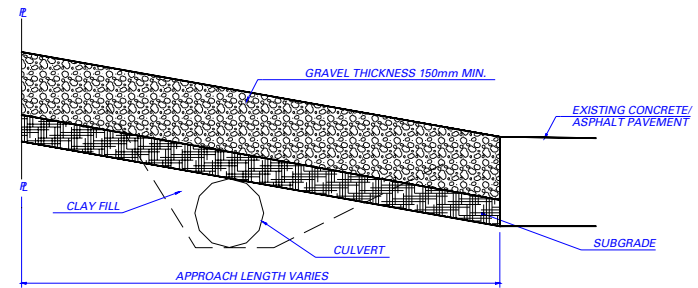
N.T.S.

FIGURE 17

RESIDENTIAL GRAVEL APPROACH ON NON-REGIONAL STREETS WITH SHOULDERS



PLAN VIEW



LONGITUDINAL SECTION

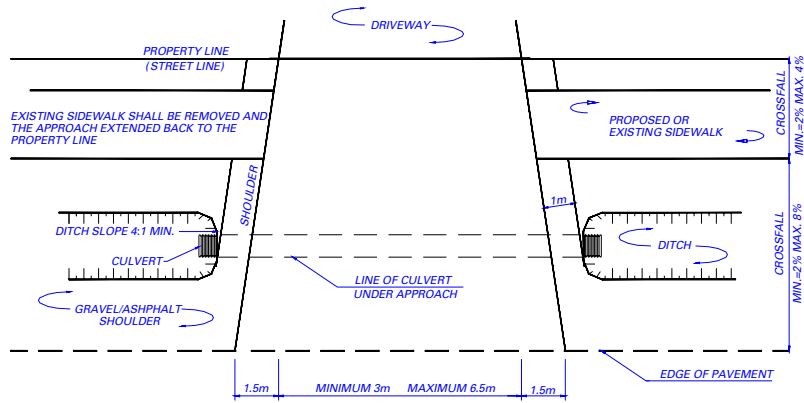
NOTE

- 1) CULVERT LENGTH AND DIAMETER AS DETERMINED BY THE PLAN APPROVAL/PERMIT TECHNOLOGIST.
- 2) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED).

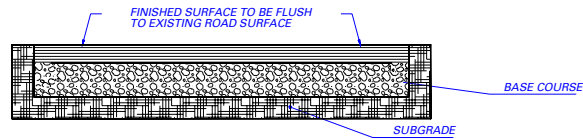
N.T.S.

FIGURE 18

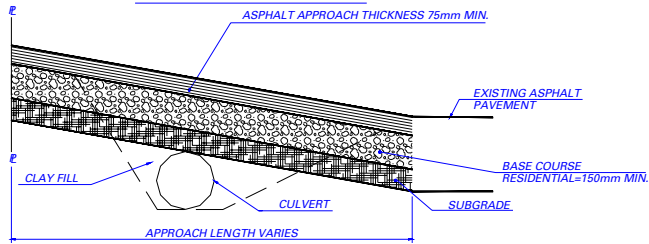
RESIDENTIAL ASPHALT APPROACH ON NON-REGIONAL STREETS WITH SHOULDERS



PLAN VIEW



CROSS SECTION



LONGITUDINAL SECTION

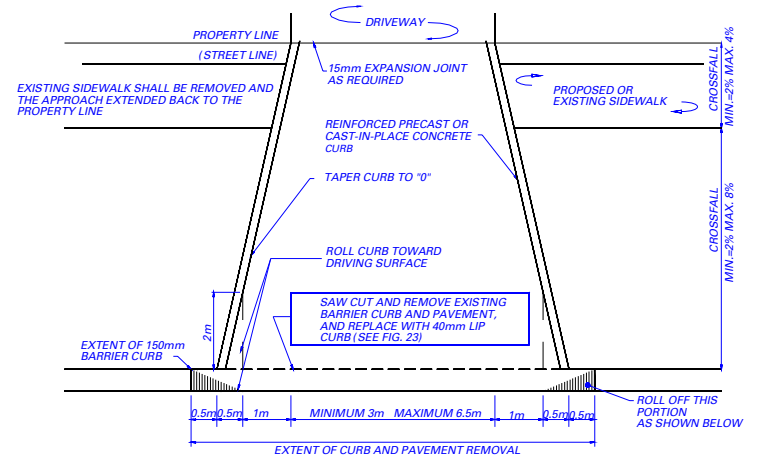
NOTE

- 1) CULVERT LENGTH AND DIAMETER AS DETERMINED BY THE PLAN APPROVAL/PERMIT TECHNOLOGIST.
- 2) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED).

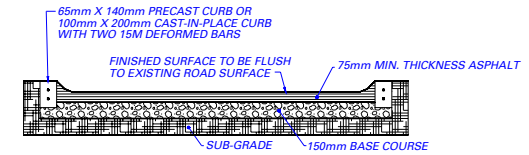
N.T.S.

FIGURE 19

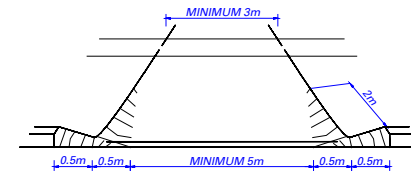
RESIDENTIAL ASPHALT APPROACH ON NON-REGIONAL STREETS WITH BARRIER CURB



PLAN VIEW



CROSS SECTION



FRONTAL PERSPECTIVE OF FINISHED PRIVATE APPROACH

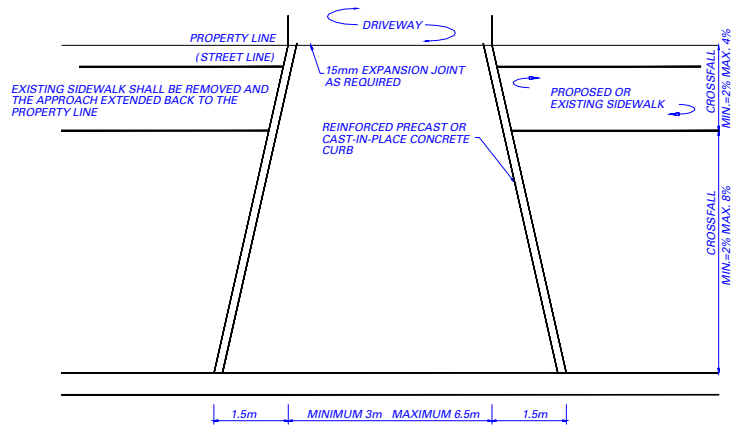
NOTE

- 1) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED)

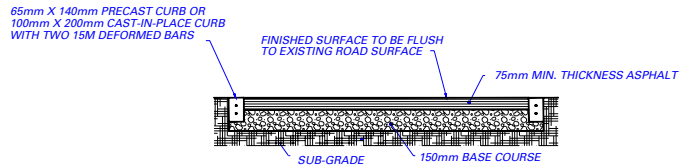
N.T.S.

FIGURE 20

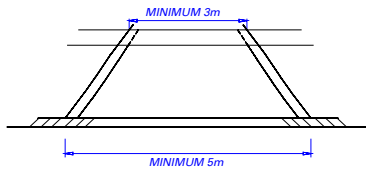
RESIDENTIAL ASPHALT APPROACH ON NON-REGIONAL STREETS WITH LIP CURB



PLAN VIEW



CROSS SECTION



FRONTAL PERSPECTIVE OF FINISHED PRIVATE APPROACH

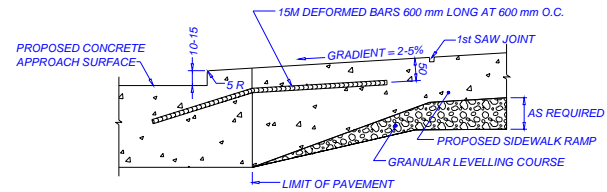
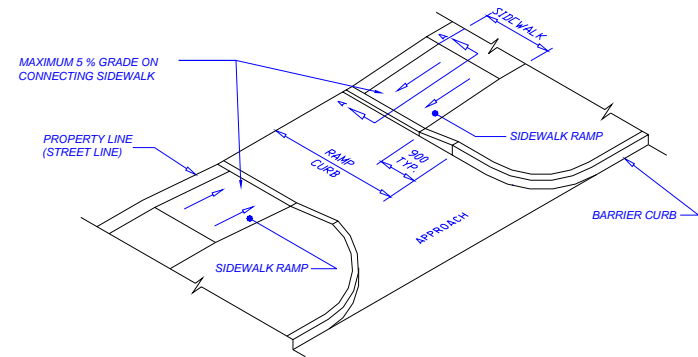
NOTE

- 1) IF CURB HEIGHT > 80mm REFER TO FIG. 23
- 2) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED)

N.T.S.

FIGURE 21

CURB RAMP DETAIL FOR CONCRETE APPROACHES



SECTION A-A

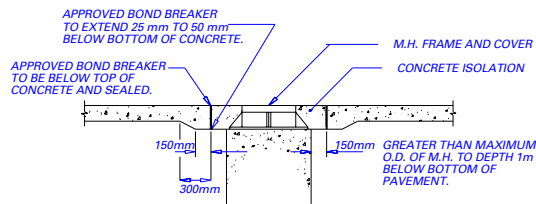
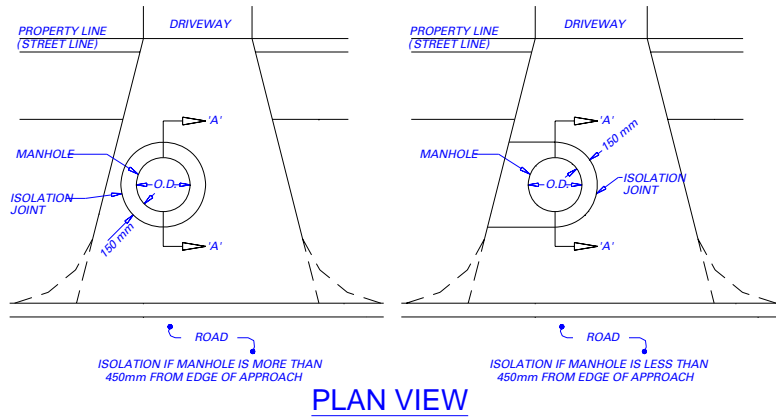
NOTE

- 1) SIDEWALK RAMP SURFACE SHALL BE GIVEN A TEXTURED BROOM FINISH ACROSS THE SIDEWALK.
- 2) 15M TIE BARS SHALL BE PLACED PRIOR TO THE PLACING OF ANY CONCRETE. TIE BARS SHALL BE BENT AS REQUIRED AND PLACED SO AS TO ENSURE A MINIMUM CONCRETE COVER OF 50mm.
- 3) WHEN REPLACING THE CONNECTING SIDEWALK AT AN APPROACH, THE SIDEWALK MUST MAINTAIN A 5% GRADE OR LESS (EXTRA PANELS MAY NEED TO BE REMOVED)

N.T.S.

FIGURE 22

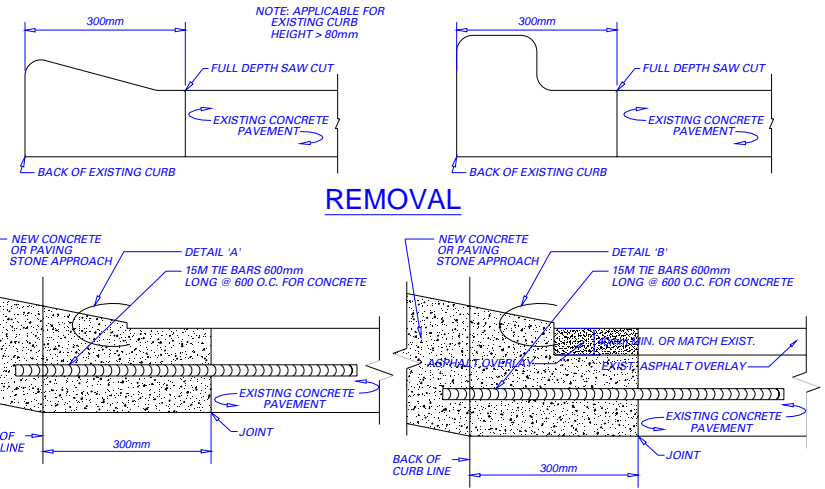
MANHOLE ISOLATION FOR CONCRETE APPROACHES



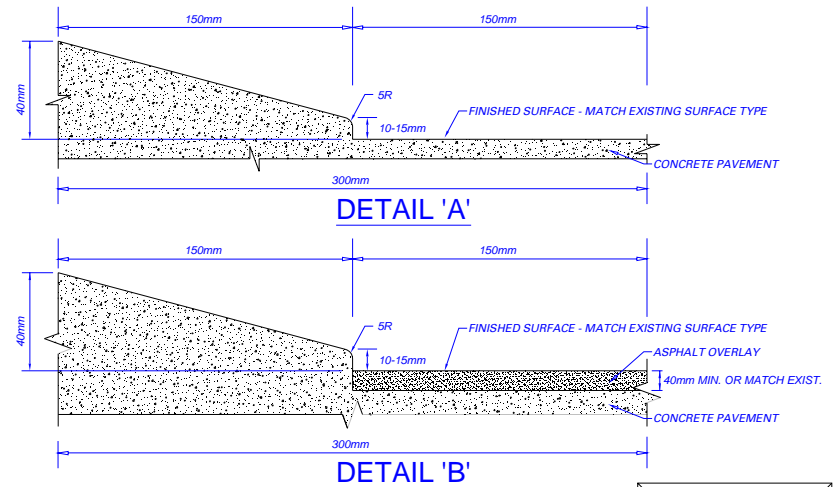
N.T.S.

FIGURE 23

CURB AND GUTTER REPLACEMENT FOR RESIDENTIAL APPROACHES; CONCRETE/PAVING STONE OR ASPHALT ON NON-REGIONAL STREETS WITH BARRIER OR LIP CURB >80mm



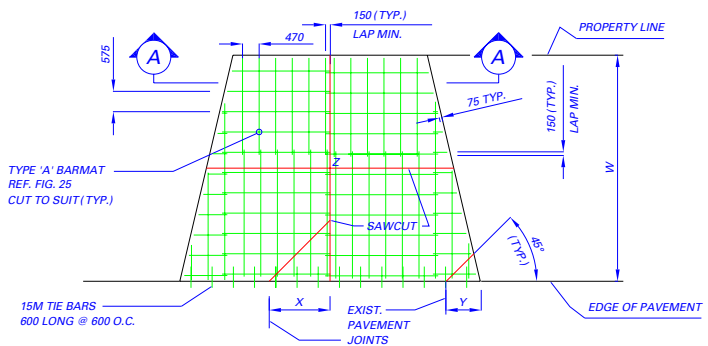
REPLACEMENT



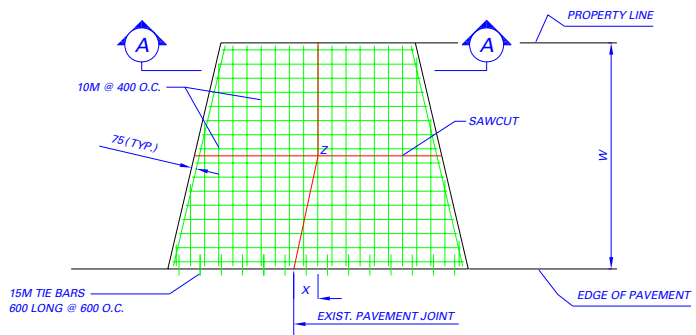
N.T.S.

FIGURE 24

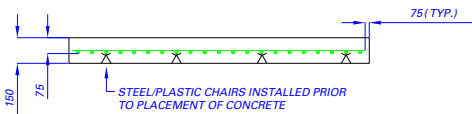
**RESIDENTIAL APPROACH REINFORCING STEEL
SAW CUT LAYOUTS
BAR MAT LAYOUT FOR APPROACHES**



ALTERNATIVE 1 - BAR MATS (12.7mm PLAIN)



ALTERNATIVE 2 - 10M (DEFORMED)



SECTION A-A

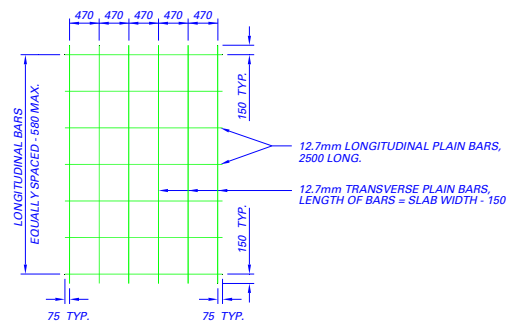
NOTE

- 1) DIMENSIONS ARE IN MILLIMETERS.
- 2) TRANSVERSE SAW CUT AT PAVEMENT JOINTS.
- 3) ALL SAW CUTS SHALL BE 50mm DEEP BY 3 mm WIDE SAW CUTTING LAYOUTS SHOWN ARE TWO POSSIBLE OPTIONS IF "W" > 4300 ADD SAWCUT AT W2, IF "X" < 1000 EXTEND SAWCUT TO POINT "Z", IF "Y" < 1000 NO SAWCUT REQUIRED

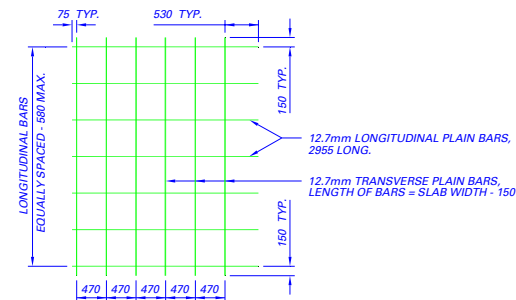


FIGURE 25

**COMMERCIAL APPROACH REINFORCING STEEL
AND
LAYOUT FOR TYPE "A" AND "B"
BAR MAT REINFORCEMENT**



BAR MAT 'A' REINFORCEMENT



BAR MAT 'B' REINFORCEMENT

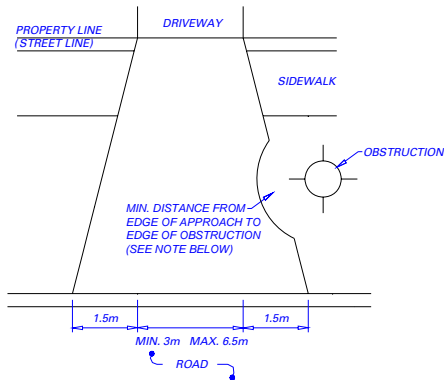
NOTE

- 1) ALL BAR MATS JOINTS TO BE ELECTRICALLY SPOT WELDED.
- 2) ALL DIMENSIONS ARE TO CENTRES OF BARS.
- 3) ALL DIMENSIONS ARE IN MILLIMETERS.

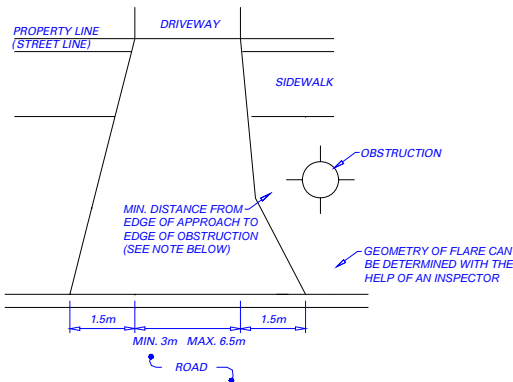


FIGURE 26

APPROACHES LOCATED ADJACENT TO OBSTRUCTIONS, INCLUDING BUT NOT LIMITED TO; FIRE HYDRANTS, HYDRO POLES AND COMMUNICATION PEDESTALS



INCORRECT APPROACH CONSTRUCTION



CORRECT APPROACH CONSTRUCTION

PLAN VIEW

NOTE

- 1) APPROACHES MUST BE CONSTRUCTED TO MAINTAIN THE MIN. 1.5m* CLEARANCE
 - 2) OBSTRUCTIONS INCLUDE, BUT NOT LIMITED TO; LAMP STANDARDS, HYDRO POLES AND FIRE HYDRANTS
 - 3) AREA INSPECTORS ARE AVAILABLE TO HELP WITH GEOMETRY OF APPROACH FLARES
- * FOR TREES THE MIN. DISTANCE IS 2.0m



APPROVALS/ PERMITS, INSPECTIONS, RE-INSPECTIONS & MANHOLE ADJUSTMENTS

APPROVALS/PERMITS for private approaches/walks are coordinated through one of two divisions of the Public Works Department.

For approvals of:

- 1) ALL COMMERCIAL / INDUSTRIAL Private Approaches/Walks & RESIDENTIAL/FARM PRIVATE Approach/Walks on REGIONAL STREETS

Contact – Private Approach Technician 986-5239
Traffic Assessment Branch
Transportation Division
101-1155 Pacific Ave., Winnipeg, MB R3E 3P1

- 2) RESIDENTIAL / FARM Private Approaches on NON-REGIONAL STREETS

Contact – Plan Approval/Permit Technologist 986-4113
Technology Services Branch
Engineering Division
106-1155 Pacific Ave., Winnipeg, MB R3E 3P1

Always contact the applicable technician/technologist when constructing, removing, relocating or modifying a private approach/walk. The technician/technologist will determine if an approval/permit is required for the proposed works.

An approval/permit is always required to construct a new private approach/walk or for their reconstruction. When hiring a **LICENSED PRIVATE APPROACH CONTRACTOR** you should verify that an approval/permit has been obtained.

INSPECTIONS of Private Approaches/Walks are performed by the City of Winnipeg, Public Works, Engineering Division.

When you obtain a private access approval/permit, you will be provided with the name and phone number of the inspector for the area.

TO ARRANGE FOR AN INSPECTION:

A.M. RESIDENTIAL INSPECTION – Call prior to the end of the previous business day

P.M. RESIDENTIAL INSPECTION – Call prior to noon of the current business day

COMMERCIAL INSPECTION – Provide at least 24 hours notice to the Area Inspector. Calls received on Fridays (or the last business day of the week in the event of holidays) will be accommodated on Mondays (or the first business day of the week in the event of holidays)

Your Area Approach Inspector can assist you with any concerns/question you may have about the materials or layout of your approach/walk.

RE-INSPECTION FEE

Where an inspection takes place and the private approach cannot be approved by the designated employee because

- (a) the work is not at a stage where an inspection of the work can take place; or
- (b) the work has not been carried out in compliance with the By-law;

an inspection fee of \$30.00 is payable by the **LICENSED CONTRACTOR** to the City.

MANHOLE & CATCH BASIN ADJUSTMENT (CW 3210 & CW 2130)

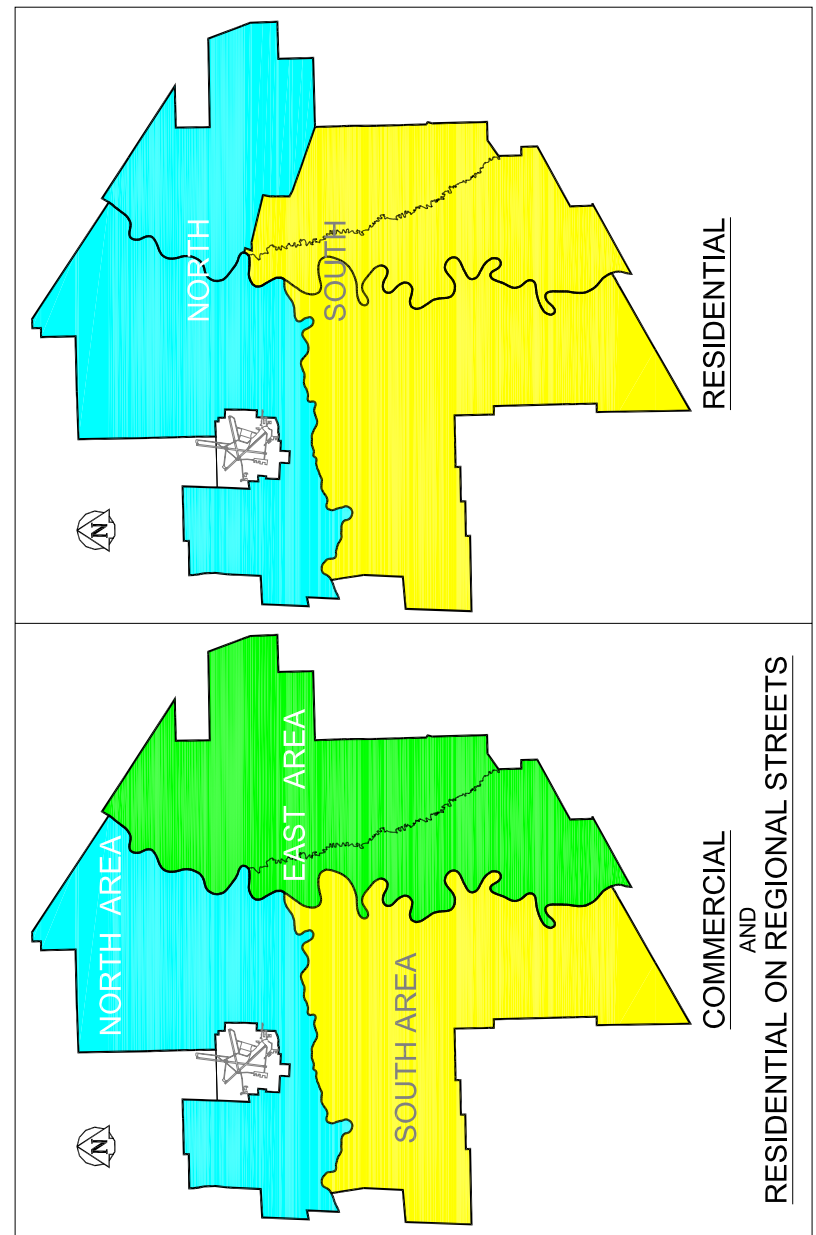
When an approach has a manhole/catch basin located in it an adjustment (which includes the supply and installation of cast iron rings and/or pre-cast concrete rings and grouting) may be needed. Any minor adjustments which are required are the financial responsibility of the property owner. Only a City of Winnipeg Licensed Sewer/Water Contractor (See Contacts; Pg. 48) can perform adjustments involving curb stops and water valves. For any major adjustments

Contact –



Remember to give a minimum of one (1) week notice when requesting a manhole adjustment to ensure that work can be completed in a timely manner.

APPROACH INSPECTION BOUNDARIES



CONTACTS

Senior Technologist (Licensing, Inspections & Compliance) 986-4112
Plan/Approval Permit Technologist (Residential on Non- Regional Streets Permits/Approvals) 986-4113
Private Approach Technician (All Commercial & Residential On Regional Streets Permits and Approvals) 986-5239
 Customer Services Branch 986-3184
Streets By-Law No. 1481/77 www.winnipeg.ca
Private Access By-Law No. 49/2008..... www.winnipeg.ca
 Standard Construction Specifications..... www.winnipeg.ca/matmgt/Spec/Default.stm
 Approved Products..... www.winnipeg.ca/matmgt/Spec/Default.stm
 Snap Edge Canada Ltd. www.snapedge.ca
 Licensed Sewer/Water Contractors www.winnipeg.ca/waterandwaste/dept/licensedContractors.stm

Contact	Telephone	Other Contact Information
North Residential Approach Inspector*	(204) 471-7631	
South Residential Approach Inspector*	(204) 391-2870	
North Area Commercial Approach Inspector	(204) 794-4062	
South Area Commercial Approach Inspector	(204) 794-4373	
East Area Commercial Approach Inspector	(204) 794-4370	

* Residential Approach Inspector telephone numbers are only active during the construction season (approximately May to November, weather dependent)

CUSTOMER NOTES



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Engineering Division
Public Works Department
The City of Winnipeg
106-1155 Pacific Avenue
Winnipeg, Manitoba R3E 3P1

