



Rural Municipality of Ste. Anne

Municipal Standards

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by Resolution #2022-196



STE. ANNE
MUNICIPALITY



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Construction Completion Certificate

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1.0 GENERAL

The Developer is advised that the specifications contained in the Municipal Services Standards shall apply to the services required for the planned area. In the case of conflict between the Development Agreement and Municipal Services Standards, the Development Agreement shall govern.

The following are minimum Municipal Services Standards that must be met or exceeded for developments within the Rural Municipality of Ste. Anne. The RM may impose a more stringent standard as Council deems necessary.

The RM may waive the performance of any provisions required to be performed for its benefit by the Developer, provided that the waiver is in writing, and provided further that any such waiver shall extend only to the particular breach so waived or performance so excused and shall in no way be deemed to be a continuing waiver of such provision of any other term or provision of either the Municipal Services Standards or the Development Agreement.

It is the responsibility of the Developer to ensure that all necessary approvals have been obtained under Provincial or Federal Law prior to commencing any construction or development. Provincial, Federal or any other Departments where the necessary approvals may be applied for include, but are not limited to, Manitoba Transportation and Infrastructure, Department of Fisheries and Oceans Canada, Office of the Fire Commissioner, Railways, Pipelines, etc.

All road and drainage plans and specifications must be designed by a professional engineer registered to practice in the Province of Manitoba and submitted to Manitoba Environment, Climate and Parks and the RM for approval. All plans are to include an Engineer Geoscientists Manitoba (EGM) Certificate of Authorization. In addition, the following is applicable:

Where it has been determined that the Developer has not followed the established standards, the RM reserves the right to implement any measures deemed necessary, including utilizing its own forces, at the expense of the Developer, to ensure that the services have been properly constructed and maintained. In any situation where the RM utilizes its own forces to complete or maintain services as deemed necessary, this action will not release the Developer of any maintenance or other requirements to fulfill their obligation.

Prior to the commencement of any construction or development within the planned area, the Developer shall obtain written authority from the RM. Construction and development are deemed to including excavation, clearing and grubbing or stripping of top soil. This authority will only be provided after a satisfactory review of plans and confirmation that all required approvals has been obtained. Following receipt of this written commencement approval, an onsite meeting shall be held prior to construction of any works. Representatives of the Developer and the RM shall be present at the meeting. The Developer is encouraged to have their Engineer(s) and Contractor(s) at the site meeting. The meeting will be used to review the construction schedule/sequence and outline inspection procedures and quality control measures.

At the meeting, the Developer will also be required to identify any potential encroachments that may be necessary to carry out the works, as well as their plan to address them.

If the Developer fails to comply with the construction schedule/sequence, as well as all inspections procedures and quality control measures, then the RM shall be entitled to, at the sole expense of the Developer, carry out specific performance to obtain compliance.

The Developer is advised that their Engineer shall undertake all works necessary to complete design and contract administration, as-constructed plans, and related certification of gravel gradation, gravel and subgrade densities, etc. If the RM determines that construction supervision is not being completed on an ongoing basis the RM's Engineer shall be employed to provide the required services at the Developer's expense.

Upon completion of development, the Developer shall notify the RM. All structures are then to be inspected for compliance with plans and specifications and, if compliance is confirmed, the RM will issue a Construction Completion Certificate (Appendix A). The cost of conducting all such inspections is to be at the sole expense of the Developer, and shall be carried out under the authority of the RM, by any person or committee the RM may designate.

The maintenance period as provided for in the Development Agreement will commence after the RM notifies the Developer in writing that the work has been accepted, by endorsing the Construction Completion Certificate attached in Appendix A.

The development shall be inspected after the expiry of the maintenance period and any damage or deficiencies shall be remedied by the Developer before the RM finally accepts such service by endorsing the Final Acceptance Certificate that is in Appendix A.

Prior to the issuing of a Final Acceptance Certificate, the Developer shall prepare, at his own expense and cost, a sworn certificate by a Manitoba Land Surveyor attesting to proper location of the subdivision and all survey monuments.

Application for final certification shall be as per Development Agreement. All municipal services and additional facilities whether maintained in perpetuity by the RM or others must be completed in accordance to these standards prior to final certification application.

2.0 ROAD, SIDEWALKS, AND DRAINAGE

The road and drainage design shall conform to the road standards found in this document. The RM reserves the right to increase or decrease the required standards as it relates to site specific cases. The RM will determine whether the existing road(s) leading to the planned area require widening and or upgrading. The Developer shall submit a road plan for the area completed by a Professional Engineer.

The minimum road allowance width shall be 24 m, as determined by the RM. The road right-of-way radius for a cul-de-sac shall be a minimum of 18.3 m, unless otherwise determined by the RM.

The Developer shall proceed with the preparation of reports, design, specifications, installation of roads, drainage and other municipal services, works and improvements, as set out in the Municipal Services Standards, all costs at the sole expense of the Developer, including restoration of all works outside the subdivision boundary to pre-construction condition unless otherwise determined by the RM or in the Development Agreement.

All aggregate, sub-base and other construction material shall be available for inspection by the Municipal Agent upon request. The Municipal Agent shall have full access to materials for the inspection and control testing, both at the site of work and at any plant or borrow pit used for the supply of the materials, to determine whether the material being supplied is in accordance with Municipal specification. Road sections shall consist of a minimum asphalt (if required), base course, and sub-base course thickness as indicated, and geotextile.

2.1 Approved Materials

2.1.1 Granular Base

1. Use Class “A” Granular Material as described in latest revision of the Manitoba Infrastructure Standard Construction Specifications.

2.1.2 Granular Sub-Base

1. Use Class “C” Granular Material as described in latest revision of the Manitoba Infrastructure Standard Construction Specifications.

2.1.3 Geotextile

1. Use Class “2” Non-Woven Geotextiles as described in latest revision of the Manitoba Infrastructure Standard Construction Specifications Approved Products List.

2.1.4 Concrete

1. Cement to be according to CAN3-A23.1-M77; type GU.
2. Minimum 28 day compressive strength to be 32 MPa.

3. Slump to range between 50 - 80 mm.
4. Entrained air by volume to be 5 - 8% for 20 mm aggregate.

2.1.5 Asphalt Concrete

1. To be in accordance with the most recent version of the Manitoba Infrastructure Standard Construction Specifications, Aggregate for Bituminous Pavement Section 920.
2. Manitoba Infrastructure Bituminous Pavement Class “B”, Asphalt Cement 150/200 Type “A”.
3. Provide copy of mix design.

2.1.6 Culverts

1. Culvert type:
 - a. Corrugated Steel Pipe: to CSA CAN3-G401-minimum thickness of 1.6 mm unless otherwise determined under a Licence to Construct Municipal Minor Water Control Works under the authority of Manitoba Transportation and Infrastructure.
 - i. Prefabricated end sections as indicated.
 - ii. Couplers and Bolts: of same material as pipe.

2.1.7 Material Testing

1. All road material shall be available for inspection and testing by the Municipal Engineer and/or by the testing laboratory so designated.
2. The Municipal Engineer shall be afforded full access for the inspection and control testing, both at the site of work and at any plant or borrow pit used for the supply of the materials, to determine whether the material being supplied is in accordance to specification.
3. The Developer's Engineer shall submit testing procedure and frequency and approved test results to the Municipal Engineer.

2.2 Design and Construction

2.2.1 General

1. Road and drainage construction will be completed according to the latest revision of the most recent version of the Manitoba Infrastructure Standard Construction Specifications.
2. Should there be any difference between the provisions of the most recent version of the Manitoba Infrastructure Standard Construction Specifications, the

Municipal Services Standards and Development Agreement shall supersede and prevail.

3. The Developer, if required by the RM, shall submit a drainage study for the planned area completed by a Professional Engineer. The drainage study shall provide details of the impact the drainage water from the planned area will have on the drainage system and lands downstream from the planned area. The study shall outline all remedial works required to be completed by the Developer to provide proper drainage capacities downstream from the development. The Developer shall be responsible for the costs of the drainage study and remedial works required.
4. The Developer, if required by the RM, shall submit a traffic study for the planned area completed by a Professional Engineer. The traffic study shall provide details of the anticipated traffic generated by the subdivision and provide recommendations for upgrades (as required) to meet acceptable servicing standards. The Developer shall be responsible for the costs of the traffic study and recommended upgrade works as required.

2.2.2 Roads

1. For rural subdivisions and subdivisions within the LUD with lots greater than or equal to 2 acres in area, gravel surface roads are to be constructed. Gravel surface roads shall have a minimum top width of 9.0 metres (see Appendix B, Drawing 1).
2. For subdivisions within the LUD with lots less than 2 acres in area, asphalt surface roads are to be constructed. Asphalt surface roads shall have a minimum top width of 7.5 metres with minimum 0.75 m gravel shoulders (see Appendix B, Drawings 2 and 3).
3. The road traffic surface width for a residential cul-de-sac shall have a minimum radius of 12.00 metres.
4. The road traffic surface width for an industrial cul-de-sac shall have a minimum radius of 15.00 metres.
5. The minimum road radius shall meet or exceed the following:
 - a. Residential (Urban or Rural)
 - i. 7.50 m
 - b. Industrial
 - i. 10.0 m.
6. If poor subgrade soil conditions are known prior to construction, or are encountered during construction, the Developer is to notify the Municipal Agent. The Municipal Agent shall inspect such conditions to determine if a geotechnical investigation is required. The Municipal Agent shall then provide written notice and instructions to the Developer should the investigation determine enhancements

to satisfy the minimum road cross-section listed below or any other remedy is required. Alternatively, the Municipal Agent may provide notice to the Developer that construction may proceed.

7. The minimum road cross-section listed below can be altered based on the recommendation of a geotechnical engineer upon completion of a geotechnical investigation and report for the development. The geotechnical report must be provided to the RM prior to approval. The RM will enlist their own engineer, at the developer's cost, to review the report and provide a recommendation for acceptance to the RM.
8. Road sections shall consist of a minimum asphalt (if required), base course and sub base course thickness as indicated:
 - .a Asphalt Surface Roads
 - .i 100 mm Asphalt
 - .ii 150 mm Base Course
 - .iii 300 mm Sub Base Course
 - .iv Geotextile
 - .b Gravel Surface Roads
 - .i 150 mm Base Course
 - .ii 300 mm Sub Base Course
 - .iii Geotextile
 - .c Heavy Traffic (Rural – As deemed necessary by Council)
 - .i 100 mm Asphalt
 - .ii 150 mm Base Course
 - .iii 450 mm Sub Base Course
 - .iv Geotextile
 - .d Industrial
 - .i 100 mm Asphalt (If deemed necessary by Council)
 - .ii 150 mm Base Course
 - .iii 450 mm Sub Base Course
 - .iv Geotextile
9. All roads shall be centered within the road allowance unless approved by the RM.
10. Minimum road cross fall shall be 3.0%.
11. The road right-of-way shall be cleared and grubbed as required for the construction of the roadways, ditches and utilities.
12. All topsoil and unsuitable material shall be removed, unless otherwise approved by the Municipal Agent

13. Remove any organics or silty material that has a plasticity index of 20 or less, with more than 20% of the soil particles passing the No. 200 sieve.
14. Placement of subgrade shall be compacted, in layers not exceeding 150 mm in compacted thickness, to 95% of Standard Proctor Density at optimum moisture content for the full length and width of the road and side slopes.
15. Aggregate shall be graded and compacted in lifts not exceeding 200 mm.
16. Sub base course aggregate to be compacted to an average of 98% of Standard Proctor Density with no test less than 96% Standard Proctor Density.
17. Base course aggregate to be compacted to an average of 100% of Standard Proctor Density with no test less than 98% Standard Proctor Density.
18. Asphaltic concrete to be compacted to an average of 97% of Standard Marshall Density with no test less than 95% Standard Marshall Density.
19. All the road side slopes, ditches and swales and non travelled portions of the right of way shall be spread with a minimum of 50 mm of topsoil and sod or hydro-seed.
20. At the discretion of the RM, the Developer shall prepare an engineer sealed traffic impact study to determine if turning lanes are required for entrances or exits.

2.2.3 Drainage

1. The Developer shall obtain the necessary license under the Water Rights Act to connect drains and ditches within the planned area to existing drains external to the planned area and the Developer shall have obtained approval from all persons or authorities having authority over drainage works that will be affected by the run-off from the planned area prior to the commencement of any construction of the drainage works.
2. The Developer shall, through the Land Titles Office, register an easement agreement for titles within the planned area that may be affected.
3. Where required, the Developer shall ensure the subdivision design is in accordance with the Manitoba Transportation and Infrastructure requirements.
4. Some of the authorities having jurisdiction over drainage works are Water Resources Branch, Department of Fisheries and Oceans Canada, Railways, etc. All drainage works require approval of the RM.
5. All swale and ditch easements shall be indicated on the design plans.
6. For new subdivisions, storm water from a 1 in 25 year (1 in 50 year for MIT approval) storm event must be stored on-site and the run-off flow rate must be restricted to pre-construction flow rates for a 1 in 5 year storm event. A detention pond is preferred for on-site storage and any changes to storm water storage methods must be approved by Council.
7. The RM may include the requirement of an engineered drainage study in the Development Agreement.

8. If required in the Development Agreement, the Developer shall submit an engineered drainage study illustrating land drainage in a form sufficient to service the lands within the planned area and as to not create any run-off of flow from subject lands that is greater than that prior to the proposed development. The design storm frequency for ditches and culverts within the planned area shall be 20% (5 year return period) unless otherwise specified by the RM or approving authority.
9. Drainage plan for the planned area to be completed by a professional engineer.
10. Ditch slopes shall be at a 4:1 slope, minimum 3:1 slope for ditch back slopes, as per engineered design approved by the RM, if applicable.
11. Minimum ditch bottom width shall be 1 meter.
12. Minimum ditch grades shall be 0.10%.

2.2.4 Culverts, Driveways and Approaches

1. Municipal road crossing and private approach culverts shall be a minimum 450 mm diameter or as determined by flow capacities, whichever is greater. Gauge to be determined by depth of cover, loading and culvert diameter.
2. All culverts shall have a minimum slope of 0.2% or 50 mm drop, whichever is greater, from inlet to outlet. Invert of the culvert to be installed approximately 25 mm below proposed ditch bottom elevation.
3. All culverts shall have a minimum cover of 0.3 m from the top of the culvert to the road or driveway surface.
4. The length of the culvert shall be sufficient to traverse required road surface width and side slopes. The culvert shall have a minimum length of 14.0 metres for municipal roads and 7.9 metres for private approaches, unless otherwise approved by the Municipal Agent.
5. Bedding to be compacted granular material up to the top of the culvert.
6. Private approach side slopes shall be a minimum of 3:1.
7. Private approach culverts shall be installed so the ends of culvert are a minimum 2 m from the nearest property line and minimum 6 m from the nearest roadway intersection property line.
8. Exceptions to driveway specifications will be reviewed by Public Works based on existing conditions.
9. Install culvert end markers on all new culverts and culvert end repairs.
10. Private approach culvert size shall be as determined under a Licence to Construct Municipal Minor Water Control Works under the authority of Manitoba Transportation and Infrastructure.
11. Municipal road crossing culverts shall be as determined under an engineered drainage study, if any are required.

2.2.5 Lot Grading

1. All lots shall be graded to provide positive drainage away from buildings into a swale or ditch.
2. The lot grading shall also include a minimum of 250 mm of perching around the building so that run-off water is directed away from the house (see Appendix B, Drawings 4 and 5).
3. Where required, swales/ditches will be installed along common property lines to ensure runoff water does not flow from one lot and onto the next lot. Lot drainage shall be self-contained within the subdivision limits.
4. The Developer is responsible for obtaining and registering easements for all swales/ditches draining surface water from road right of ways and from more than two lots. The easements must be indicated on the design plans.
5. The Developer shall be responsible for construction of all swales and ditches within the subdivision including perimeter swales/ditches and swales/ditches along common property lines, unless otherwise approved by the RM. Plans to indicate ground elevation at house, at all lot corners and at grade break point of swales.
6. Sump pump effluent shall be directed to the rear of the property so as not to cause stress on municipal drains.
7. Urban residential yards to be ideally graded between 1.5% and 2.5%.
8. Maximum range of grades for urban residential yards to be 1.0% to 5.0%
9. Rural lots (large lots) to be graded at 2% from house down to existing ground elevation with allowance for perching.
10. Industrial lots (large lots) to be graded at 2% from building down to existing ground elevation with allowance for perching.
11. Lots to be graded with either back to front or split lot drainage designs. (See Appendix B, Drawings 4 and 5).
12. If required by the RM, a lot grading/landscaping maintenance plan is required to be provided by the Developer for the settlement centres of Richer and Giroux to ensure all properties remain well kept.

2.2.6 Sidewalks/Pathways

1. For subdivisions within the LUD with lots less than 2 acres in area, concrete sidewalks are to be constructed. The sidewalk is to be 1.5 m in width and shall have a concrete thickness of 125 mm. The concrete sidewalk is to be reinforced using 10M bars at 600 mm o/c poured on a minimum of 150 mm of compacted A-base granular material on geotextile.

2. For subdivisions outside the LUD and within the LUD with lots equal to, or greater than 2 acres in area, pathways are to be constructed. Pathways are to be 1.8 m wide and shall be constructed with 150 mm of granular A-base material on geotextile.
3. Continuity of sidewalks between sidewalks/pathways from adjacent and future developments is required.
4. Sidewalks/Pathways/Trails shall be located 0.5m from ROW.
5. Sidewalks/Pathways/Trails shall utilize a grade between 2-4%.
6. Sidewalks shall utilize a transverse joint at maximum horizontal distance of 1.5 m.
7. Sidewalks shall utilize ramp style connection to roads with warning strips at intersections.

2.2.7 Pedestrian Bridge

1. Where identified in the Development Agreement and municipal standards, a pedestrian bridge may be required within a development.
2. Pedestrian bridges must be designed and sealed by a Professional Engineer.
3. Travelled lanes on bridges to be a minimum width of 2.05 m.
4. Where required to permit surface travel under the bridge, the pedestrian bridge is to be designed to an adequate height and width to permit travel underneath the bridge based on the normal summer water level elevation. The final height of the bridge is to be determined by the design engineer.
5. The pedestrian bridge is to be constructed with fire resistant materials.
6. A hydraulic report may be required to determine the minimum pedestrian bridge elevation.
7. Manitoba Transportation and Infrastructure, DFO and other jurisdiction approval is required for any bridge crossing a provincial waterway. The developer is responsible to obtain any such required approvals.

2.2.8 Basements

1. As per the RM's by-laws, basements are permitted, but only where suitable.
2. In order to construct a basement below existing ground elevation, an engineer sealed geotechnical report may be required to be submitted to the RM for review and acceptance.
3. The geotechnical report must include the following as a minimum:
 - a. Test holes to determine soil stratigraphy and groundwater conditions. The number of test holes shall be representative of the entire development and must be confirmed with the RM.
 - b. Groundwater measurements from standpipe piezometers taken at stand intervals after installation (minimum six months of monitoring, unless

environmental conditions allow for modifications to monitoring requirements as determined by the RM).

- c. Basement recommendations including the maximum permissible basement excavation depth below existing ground elevation for each lot requesting a basement.
 - d. Site drainage including surface drainage and weeping tile system recommendations.
4. Submittal of a geotechnical report does not guarantee acceptance by the RM. Preparation of a geotechnical report is at the Developer's risk.

3.0 REQUIREMENTS FOR SUBDIVISION PLANS AND CONSTRUCTION

This document provides a guide for minimum requirements for submitting design(s), plans and specifications to the RM.

3.1 General

The Developer must obtain any necessary variations under the Municipal Zoning By-Law currently in effect at the time.

1. If required in the Development Agreement, the Developer shall submit an engineered drainage study illustrating land drainage in a form sufficient to service the lands within the planned area and as to not create any run-off of flow from subject lands that is greater than that prior to the proposed development.
 - .1 All engineering plans and specifications shall be designed, prepared, stamped, and signed by a qualified professional engineer registered in the Province of Manitoba.
 - .2 The Developer shall provide the RM with an electronic copy of the legal plan for the development, as prescribed by the Provincial Planning Branch, which is entered and registered in the Winnipeg Land Titles Office, before construction commences. This legal plan must be prepared by a Manitoba Land Surveyor, and is to include the following:
 - a. Land location, existing and proposed drains and roads, etc.;
 - b. All site widths and site areas;
 - c. Proposed road allowance and cul-de-sac dimensions and specifications;
 - d. Location of all existing buildings and structures, including on-site wastewater management system(s) on the affected land in relation to the proposed property lines;
 - e. Road names of newly created roads, after approval by Resolution of Council, and
 - f. Any other information required by the RM upon conditional approval of a development
 - .3 The Developer shall provide the RM with an electronic copy of the design plans and specifications. The development plans, as a minimum, shall bear the information outlined below.
 - .4 The Developer shall provide the RM with copies of approvals from any agency having jurisdiction and applicable approval authority i.e. Manitoba Transportation and Infrastructure, Manitoba Hydro, Department of Fisheries and Oceans Canada, Office of the Fire Commissioner, Railways, Pipelines, Office of Drinking Water, etc.
 - .5 Plans shall be drawn on standard 24" x 36" sheets.

- .6 Stationing shall be included on the plan view as well as the profile for all roads, water, and sewer plans.
- .7 General plans shall include the following:
 - a. Topography of area.
 - b. An established geodetic benchmark, location and elevation.
 - c. An established temporary geodetic benchmark, location and elevation at the construction site.
 - d. Key plan, land location, road names.
 - e. Identification of physical features i.e. major drains, major roads, etc.
 - f. Test hole logs if applicable.
- .8 Drainage plans shall include the following:
 - a. Existing topography of the subdivision, surrounding area and drainage ditch elevations.
 - b. Contours at 100 mm intervals
 - c. Existing and proposed drainage routing within and surrounding the subdivision.
 - d. All proposed and existing culvert elevations, lengths and diameter.
 - e. All drainage ditch and swale cross-sections, slopes and elevations.
 - f. Location of easements, if required, to accommodate ditches/swales on private property.
 - g. Expected capacity surface run-off discharging into the ditches and culvert flow capacity.
 - h. Drainage of lots and proposed ground elevation at buildings.
- .9 Road plans shall include the following:
 - a. Typical road cross section to include:
 - i. Gravel thickness, class and compaction requirements.
 - ii. Sub-base construction method.
 - iii. Traffic surface, shoulder width, side slopes, ditch bottom width, road slope (cross fall).
 - b. Plan/profile for road and drainage.
 - c. Road alignment within right of way.
 - d. Road grades and elevations at changes of grade.
 - e. Cul-de-sac turn around dimensions and offset.

3.2 Plan Review

- 1. The Developer shall submit an electronic copy of the design plans stamped "Preliminary", for all works required as outlined in the Development Agreement to the RM.

2. Upon review by the RM, the Developer shall respond to the written requests of the RM detailing the required revisions. The Developer shall address all required revisions indicated for the plans. All plans shall then be sealed by a Professional Engineer and resubmitted to the RM for approval.
3. The RM shall review all the sealed plans to ensure all previous revision requests have been properly addressed and to check if additional revisions are needed.
4. If the submitted sealed plans require further revisions, the Developer shall have the plans revised according to the written request of the RM. All the sealed plans will then be resubmitted to the RM and shall have the proper revision number indicated on the plans.
5. Once all revision requests from the RM have been properly addressed and approved, the RM shall notify the Developer that all the plans have been approved.

3.3 Specification Review

1. The Developer shall submit one electronic copy of the tender and specification document to the RM for review.
2. Upon review by the RM, the Developer shall respond to the written requests of the RM detailing the required revisions. Once the Developer has completed all the revisions as requested by the RM, the Developer shall resubmit the tender and specification document for review.
3. Upon review by the RM, to determine if all revisions have been completed and if no additional revisions are required, written approval shall be submitted to the Developer indicating the tender and specification documents are accepted. If during the second review or any subsequent review, additional revisions are requested by the RM, the Developer shall abide by each revision request and resubmit the tender and specification document to the RM. This process shall continue until the RM provides the Developer with written approval that the RM has accepted the tender and specification document.
4. Upon receipt of written approval the Developer shall submit to the RM one electronic copy of the tender and specification document that have been sealed by a Professional Engineer.

3.4 Construction

1. Construction shall not commence until the Developer receives confirmation in writing from the RM that all preliminary requirements have been met. No construction shall start before all plans and the specification have been approved by the RM and the construction commencement certificate (included in Appendix A) has been signed.
2. Prior to the start of construction works, if required by the RM, an onsite meeting between the Developer and their representatives including the Contractor(s) and Engineer(s), the RM and its representatives shall be arranged. The meeting will be used to determine the construction schedule/sequence and outline inspection procedures that will be implemented. At the meeting the Developer will also be required to identify any potential

encroachments (such as drains, fences, structures, driveways, etc.) that may be necessary to carry out the works, as well as their plan to address them.

3. Prior to the start of construction the Developer's Engineer shall stake project works required for location and elevation.
4. The Developer's Engineer shall be responsible for the layout and inspection of all services to ensure conformance with the approved detailed drawings, plans and specifications. The Developer's Engineer or their authorized representative shall have a presence on site at critical or sensitive times during construction.
5. The Developer's Engineer shall record all as-built grades, elevations, dimensions and locations of all works performed by the Contractor. Any changes to the plans as a result of the recorded as-built information shall be recorded for the completion of as-built plans.
6. During the course of construction, should any changes need to be made to the original plans approved by the RM, the Developer shall notify the RM immediately and request approval of the necessary revisions in writing prior to continuing construction. During the course of construction any damaged or destroyed survey monuments shall be replaced prior to final acceptance of work. According to the Canada Land Surveys Act the person who damages or destroys a survey monument is liable for payment of all cost in connection with the restoration or re-establishment of the monument(s) by a surveyor under instruction from the Surveyor General.
7. If the Developer is not performing the above in a satisfactory manner, as determined by the RM, the RM will remedy all unsatisfactory work as deemed necessary. All such work shall be charged at cost, subject to a 10% administration fee to the Developer.
8. The Developer shall be responsible for gravelling and maintaining all roads within the planned area in a passable and useable condition when such road is required as an access road or as a road upon which dwellings are being constructed, provided always that such installation, gravelling and maintenance shall be at the cost and expense of the Developer. The RM shall be the sole judge as to whether a road or bay is in passable or usable condition.
9. The Developer shall pay all of the costs and expenses of itself and the RM relating to the preparation of any new or revised Zoning By-Law or By-Laws, Plan or Plans of Subdivision, the cost and expense of obtaining approval for registration of the above, including all Manitoba Municipal Relations, The Property Registry and other fees and expenses, all survey costs, all legal fees and disbursements associated with the development.
10. The Developer shall appoint an accredited material testing firm to carry out quality control and testing to ensure that construction is in accordance with the approved design. It shall be the responsibility of the Developer to provide material testing services during construction to ensure compliance with standards. The Developer's Engineer shall review

all test results immediately once they become available. Where testing indicates that the required standards have not been met, the deficient areas shall be re-worked and subsequently re-tested on either side of the failed test until the standards have been met. A copy of all test results will be forwarded to the RM of Ste. Anne and the Municipal Engineer as soon as the Developer's Engineer receives them.

11. If requested by the RM, the Developer shall provide staking certificates prepared by a Manitoba Land Surveyor for each newly created building lot.

4.0 LETTER OF CREDIT AND INSURANCE

4.1 Letter of Credit

As indicated in the Development Agreement, the Developer shall provide to the RM with an Irrevocable Letter of Credit covering the labour and material for all of the services to be installed by the Developer pursuant to the Development Agreement. The value of the Letter of Credit shall be determined by the RM. The value of the Letter of Credit shall be in a form approved by the RM and shall be provided prior to the commencement of any constructions works with in the development area as outlined in the Development Agreement. The value of the Letter of Credit as determined by the RM shall stay in effect until final acceptance of the construction works has been certified.

4.2 Insurance

As indicated in the Development Agreement, the Developer shall ensure that all contractors maintain a contractor's liability insurance policy to provide coverage in an amount and form satisfactory to the RM and provide evidence of such. Minimum coverage shall be:

- a) Statutory Worker's Compensation - as required by law;
- b) Contractor's public liability and property damage:
 - i) bodily injury - each person \$500,000 — each accident \$1,000,000
 - ii) property damage - each accident \$500,000
- c) Automobile public liability and property damage (owned and non-owned vehicles):
 - i) bodily injury - each person \$500,000 - each accident \$1,000,000
 - ii) property damage - each accident \$500,000.

5.0 MATERIAL TESTING

Testing of the road material shall at a minimum be done to the following requirements. Copies of all test results are to be forwarded to the RM and its Engineer within three days of receipt of the test results. The RM shall be notified 48 hours in advance of any testing and the RM or RM's representative shall be present during all material testing. Testing cannot be scheduled on weekends or holidays. The test shall include but not be limited to the following:

5.1 Road Subgrade Material

- .1 Complete proctor density testing of all types of subgrade materials and provide acceptable representative gradation results and densities from a certified lab as approved by Engineer.
- .2 Provide standard density testing with nuclear densometer of the road subgrade at a minimum of 50 metre intervals and staggered across road surface.

5.2 Granular Material

- .1 Complete sieve analysis and proctor density testing of all types of granular materials and provide acceptable representative gradation results and densities from a certified lab as approved by Engineer.
- .2 Provide standard density testing with nuclear densometer of the road sub base course at a minimum of 50 metre intervals and staggered across road surface.
- .3 Provide standard density testing with nuclear densometer of the road base course at a minimum of 50 metre intervals and staggered across road surface.
- .4 Provide additional testing as deemed necessary by the Engineer to verify quality control is being maintained.

5.3 Asphalt Material

- .1 One test will be taken for each 500 tonnes or portion thereof of asphalt placed on day of operation.
- .2 One test consists of an asphalt marshal analysis that is to include forming three briquettes, unit weight, stability, flow, A/C content, sieve analysis, maximum Theoretical specific gravity for void analysis.
- .3 Provide standard density testing with nuclear densometer of the asphalt at a minimum of 50 metre intervals and staggered across road surface and take one core sample every 150 m of road.

5.4 Concrete Material

- .1 Concrete sampling and inspection is to be by the Contractor. Testing of cylinders for each pour is to be performed by an independent inspection agency that is CSA approved.

- .2 One test will be taken for each individual placing operation that exceeds 7.5 m³ or at least one test for each 40 m³ of concrete placed on day of operation.
- .3 One test consists of a slump test, air content test (for air entrained concrete) and compressive strength tests on three lab cured cylinders (one for 7 day break and two for 28 day breaks).
- .4 Two additional site cured cylinders will be taken during cold weather concreting and be cured on job site under the same conditions as concrete it represents.

6.0 CONTRACT ADMINISTRATION

The Developer shall provide the RM and affected landowners five days written notice prior to commencement of any construction work in the planned area.

The Developer shall file a copy of all As Built plans with the RM for their review. Final As Built plans shall be forwarded to the RM prior to transfer of ownership of services and property.

The Developer's Contract Administrator shall meet the minimum requirements listed below but shall not be limited to the following.

6.1 Road and Drainage Works

The Developer's Engineer shall provide resident administration during construction of the road(s), sidewalk(s), and drainage to ensure all testing requirements outlined in Section 5 are adhered to and specification requirements are met. The Resident Administrator shall be onsite on a full-time basis for concrete and asphalt works and at the discretion of the Developer's Engineer, shall provide spot checks for subgrade and granular works. In addition the elevation of the road subgrade, sub-base course, base course, asphalt, gutter and drainage (cross-section) shall be recorded at minimum 10 m intervals and provided to the RM. A copy of all records of these tests and elevations shall be provided to the RM.

A summary of all weigh scale tickets for the granular and asphalt materials shall be provided to the RM if requested.

7.0 EASEMENTS

Any and all easements required for the development shall be legally registered prior to the sale of any lot(s) within the development area.

APPENDIX

Appendix A

Certificate of Commencement

Construction Completion Certificate

Final Acceptance Certificate

Appendix B

Drawing 1: Typical Gravel Road Cross-Section

Drawing 2: Typical Asphalt Road Cross-Section

Drawing 3: Heavy and Industrial Asphalt Road Cross-Section

Drawing 4: Typical Residential Split Lot Grading

Drawing 5: Typical Residential Back to Front Grading

Appendix A

Certificate of Commencement

Construction Completion Certificate

Final Acceptance Certificate

Certificate of Commencement



STE. ANNE
MUNICIPALITY

Rural Municipality of Ste. Anne

CERTIFICATE OF COMMENCEMENT

DEVELOPMENT LOCATION: _____

DEVELOPMENT NAME: _____

DEVELOPER: _____

Take notice that the Development Agreement made between the Rural Municipality of Ste. Anne as governing body and _____ as Developer, dated ____ day of _____, 20__, in respect to required actions preceding commencement of construction as outlined in the Development Agreement have been completed to the satisfaction of the Rural Municipality of Ste. Anne on the ____ day of _____, 20__, for the lands legally described in the Certificate of Title No. _____.

The following is a short description of the actions:

The Developer agrees to follow all requirements of the development agreement and schedule all required inspections at the Developers cost.

The undersigned hereby certify the above information is correct and that they are persons required or authorized to give this notice.

DEVELOPER

Date: _____

RM OF STE. ANNE

Date: _____

Construction Completion Certificate



STE. ANNE
MUNICIPALITY

Rural Municipality of Ste. Anne

CONSTRUCTION COMPLETION CERTIFICATE

DEVELOPMENT LOCATION: _____

DEVELOPMENT NAME: _____

DEVELOPER: _____

CONTRACTOR: _____

SERVICES INSTALLED: _____

I _____ of the firm _____

hereby certify that the services noted herein are complete as defined by the Servicing Agreement for the above mentioned Development and constructed according to the RM of Ste. Anne Municipal Standards. Copies of "As-Constructed" Plans and Designs and all test records for the above mentioned Services have been submitted to the RM of Ste. Anne. I hereby recommend these Services for approval of this Construction Completion Certificate. Minor deficiencies indicated on the attached list shall be corrected as soon as possible and no later than

DEVELOPERS AGENT Date: _____

APPROVAL:

MUNICIPAL ENGINEER Date: _____

RM OF STE. ANNE Date: _____

Date Maintenance Period to Start: _____

Date Maintenance Period to Expire: _____

Final Acceptance Certificate



STE. ANNE
MUNICIPALITY

Rural Municipality of Ste. Anne

FINAL ACCEPTANCE CERTIFICATE

DEVELOPMENT LOCATION: _____

DEVELOPMENT NAME: _____

DEVELOPER: _____

CONTRACTOR: _____

SERVICES INSTALLED: _____

This letter will serve as a **Certificate of Acceptance** for the works named above which were required to be constructed in accordance with the RM of Ste. Anne Municipal Standards. There are no outstanding deficiencies in the works, and by this letter of acceptance, the RM of Ste. Anne will now assume responsibility for maintenance of the works.

APPROVAL:

DEVELOPER

Date: _____

MUNICIPAL ENGINEER/
PUBLIC WORKS SUPERVISOR

Date: _____

RM OF STE. ANNE

Date: _____

Appendix B

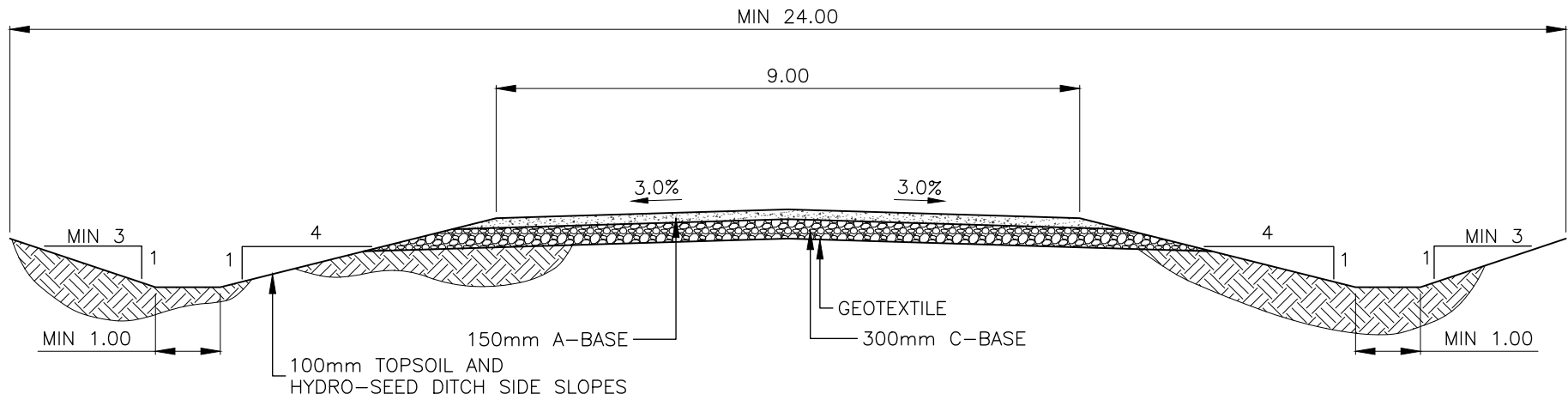
Drawing 1: Typical Gravel Road Cross-Section

Drawing 2: Typical Asphalt Road Cross-Section

Drawing 3: Heavy and Industrial Asphalt Road Cross-Section

Drawing 4: Typical Residential Split Lot Grading

Drawing 5: Typical Residential Back to Front Grading




1
1

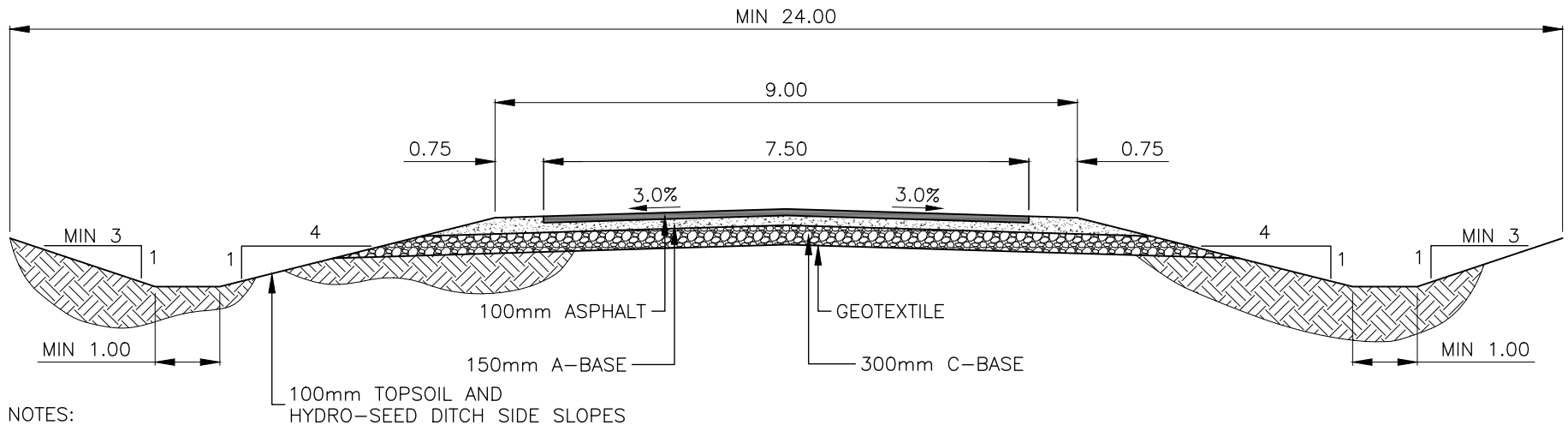
TYPICAL GRAVEL SURFACE ROAD CROSS-SECTION
SCALE: 1:100

NOTES:

- TOP SOIL AND ORGANICS TO BE REMOVED FOR ROAD BED PREPARATION

Apr 20, 2022 - 2:59pm - C:\Projects\2021\10 - New Rd\31428 - Municipal Standards - Standard\04 - Design\Plan\Road Cross-section.dwg

| | | |
|--|-----------------|--|
|  <p>JR Cousin Consultants Ltd. 91A Scurfield Blvd. Winnipeg MB R3Y 1G4 p. [204] 489-0474 f. [204] 489-0487 www.jrcc.ca ENGINEERING EXCELLENCE SINCE 1981</p> | DATE: 22/04/20 | CLIENT: RURAL MUNICIPALITY OF STE. ANNE |
| | SCALE: AS NOTED | PROJECT: MUNICIPAL STANDARDS |
| | PLAN NO.: 1 | TITLE: TYPICAL GRAVEL SURFACE ROAD CROSS-SECTION |



NOTES:

- TOP SOIL AND ORGANICS TO BE REMOVED FOR ROAD BED PREPARATION

2 TYPICAL ASPHALT SURFACE ROAD CROSS-SECTION
2
SCALE: 1:100



JR Cousin Consultants Ltd.

91A Scurfield Blvd. Winnipeg MB R3Y 1G4
p. (204) 489-0474
f. (204) 489-0487
www.jrcc.ca

ENGINEERING EXCELLENCE SINCE 1981

DATE: 22/04/20

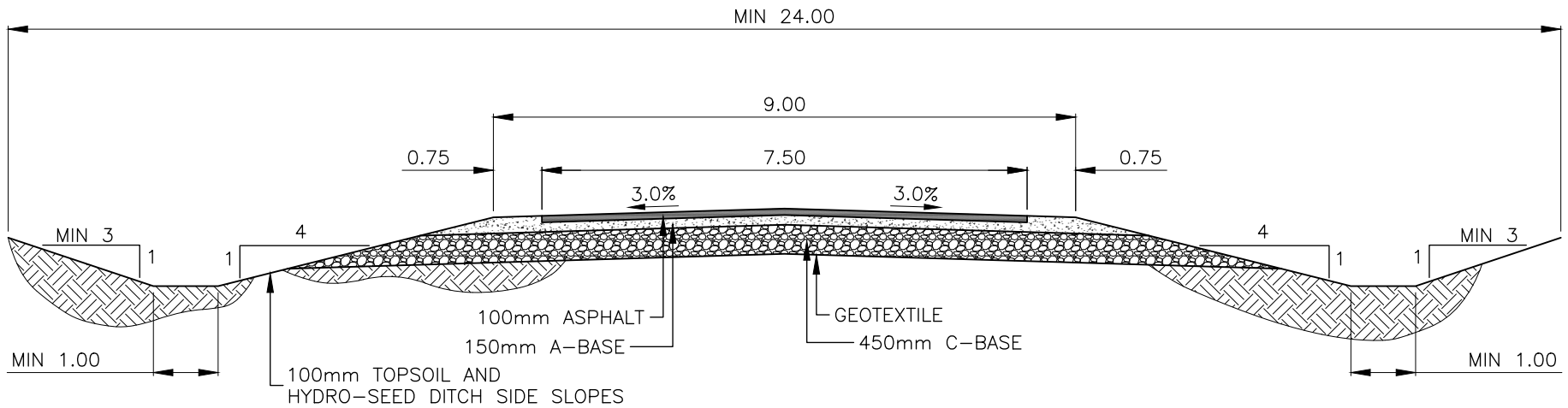
CLIENT: RURAL MUNICIPALITY OF STE. ANNE

SCALE: AS NOTED

PROJECT: MUNICIPAL STANDARDS

PLAN NO.: 2

TITLE: TYPICAL ASPHALT SURFACE ROAD CROSS-SECTION



NOTES:

- TOP SOIL AND ORGANICS TO BE REMOVED FOR ROAD BED PREPARATION



HEAVY TRAFFIC AND INDUSTRIAL ASPHALT ROAD CROSS-SECTION

SCALE: 1:100



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f. (204) 489-0487

www.jrcc.ca

ENGINEERING EXCELLENCE SINCE 1981

DATE: 22/04/20

CLIENT: RURAL MUNICIPALITY OF STE. ANNE

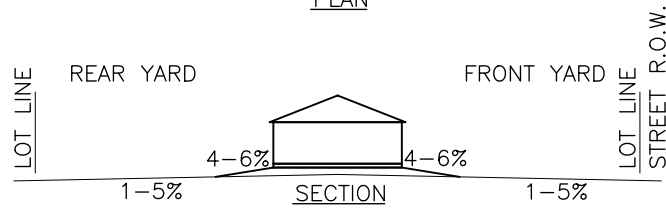
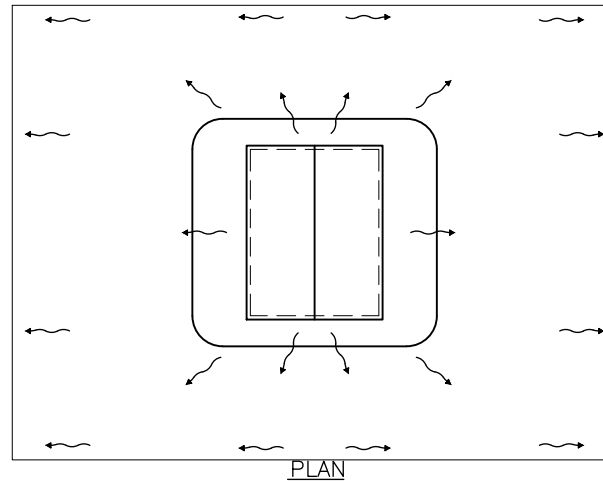
SCALE: AS NOTED

PROJECT: MUNICIPAL STANDARDS

PLAN NO.: 3

TITLE: HEAVY TRAFFIC AND INDUSTRIAL ASPHALT ROAD CROSS-SECTION


HOUSE PERCHING TO BE COMPLETED BY HOMEOWNER



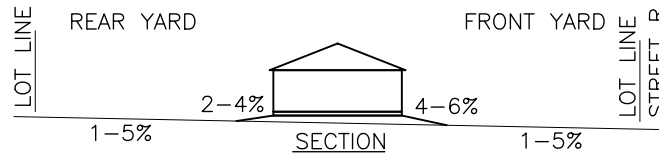
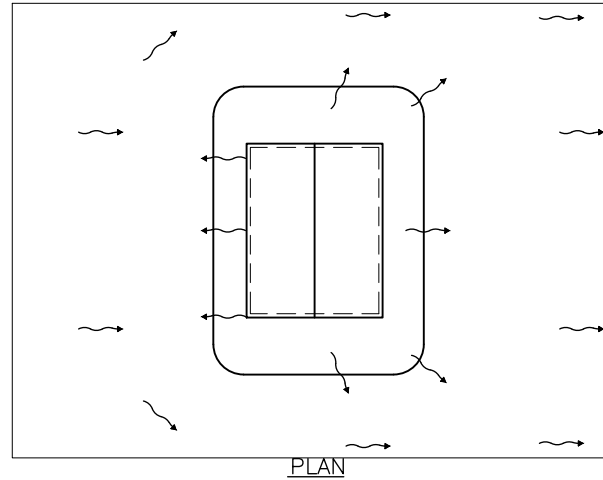
LOT GRADING SPLIT AT APPROXIMATE MIDPOINT OF HOUSE



Apr 20, 2022 - 2:59pm C:\Users\jrc\OneDrive\Documents\Projects\2022\20220420\20220420_04_Typical Residential Split Lot Drainage.dwg


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|---|-----------------|--|
|  <p>JR Cousin Consultants Ltd. 91A Scurfield Blvd. Winnipeg MB R3Y 1G4 p. [204] 489-0474 f. [204] 489-0487 www.jrcc.ca ENGINEERING EXCELLENCE SINCE 1981</p> | DATE: 22/04/20 | CLIENT: RURAL MUNICIPALITY OF STE. ANNE |
| | SCALE: AS NOTED | PROJECT: MUNICIPAL STANDARDS |
| | PLAN NO.: 4 | TITLE: TYPICAL RESIDENTIAL SPLIT LOT GRADING |

HOUSE PERCHING TO BE COMPLETED BY HOMEOWNER



5 TYPICAL RESIDENTIAL BACK TO FRONT LOT DRAINAGE

Apr 20, 2022 - 2:21pm 03/20/2021 - 10:00am 03/11/2021 - 10:00am 03/11/2021 - 10:00am 03/11/2021 - 10:00am 03/11/2021 - 10:00am 03/11/2021 - 10:00am 03/11/2021 - 10:00am 03/11/2021 - 10:00am 03/11/2021 - 10:00am 03/11/2021 - 10:00am

| | | |
|---|-----------------|--|
|  <p>JR Cousin Consultants Ltd. 91A Scurfield Blvd. Winnipeg MB R3Y 1G4 p. (204) 489-0474 f. (204) 489-0487 www.jrcc.ca ENGINEERING EXCELLENCE SINCE 1981</p> | DATE: 22/04/20 | CLIENT: RURAL MUNICIPALITY OF STE. ANNE |
| | SCALE: AS NOTED | PROJECT: MUNICIPAL STANDARDS |
| | PLAN NO.: 5 | TITLE: TYPICAL RESIDENTIAL BACK TO FRONT LOT GRADING |