Part 2 — Technical Requirements Application under the Agricultural Operation Practices Act for a confined feeding operation, manure collection area



| NRCB USE ONL | .Y | | Application number | Legal | land description |
|---|----------------------|--|---|----------------------|-------------------------------------|
| _ | _ | | RA24005 | | -41-24 W4M |
| Approval Amendment | | ☐ Authorization | | _ | |
| | N DISCLOSUF | RE | | | |
| This information is provisions of the I | s collected under t | he authority of the <i>A</i> ation and Protection | gricultural Operation Practices of Privacy Act. This information | | |
| Any construction prosecution. | n prior to obtain | ing an NRCB permi | t is an offence and is subje | ect to enforcement | action, including |
| I, the applicant, o | | t, have read and undo the best of my know | erstand the statements above wledge. | e, and I acknowledge | that the information |
| March 22 2024 | 1 | | | | |
| Date of signing | | | Signature | | |
| Wilpshaar Dai | ry Ltd | | Herco & Kir | stin Wilpshaar | |
| Corporate name (| if applicable) | | Print name | | |
| GENERAL INFO | ORMATION REC | QUIREMENTS | | | |
| · · | | _ | operation facilities and their ttach additional pages if need | | whether any of the |
| Proposed facili | | existing facilities. (a | ttach additional pages if fleet | | Dimensions (m) h, width, and depth) |
| Expanding Fre | ee stall Barn | | | 8 | 38.1 m x 32 m |
| New Lagoon | | | | 60 r | m x 60 m x 4.5 m |
| | | | | | |
| | | | | | |
| | | | | | |
| Existing faciliti | ies: list ALL existi | ng confined feeding o | operation facilities and their d | imensions | |
| Existing faciliti | | | | nsions (m) | NRCB USE ONLY |
| LAISTING Identiti | | | (length, w | dth, and depth) | MAGE COL CITE |
| Heifer barn | | | 67 m | x 30.5 m | |
| Dry cow shed | | | 29.75 | m x 16 m | |
| Free stall barr | 1 | | 92.7 | m x 32 m | |
| NRCB USE ONL | .Υ | | | | |
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Application under the Agricultural Operation Practices Act for a confined feeding operation, manure collection area, and/or manure storage facility(ies)

| Existing facilities continued | Dimensions (m) (length, width, and depth) | NRCB USE ONLY |
|---------------------------------------|---|---------------|
| Synthetic lined liquid manure storage | 60 m x 60 m x 4.5 m | |
| Milking parlor | 67 m x 29 m | |
| Liquid manure pit | 3.1 m x 3.1 m x 2.5 m | |
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| st updated September 11, 2023 | | |



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Application under the Agricultural Operation Practices Act for a confined feeding operation, manure collection area, and/or manure storage facility(ies)

| N/A | | | | | |
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| | | November | 2025 | | |
| Construction completion | date for proposed facilit | ties | | | |
| Additional information | | | | | |
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| Livestock numbers: Comp | plete only if livestock numb | pers are different f | rom what was idd | entified in the Part | 1 application. Note: if |
| livestock numbers increase priority for minimum distan Livestock categ (Available in the Schedule | in your Part 2 application, ace separation (MDS). gory and type a 2 of the Part 2 Matters | pers are different f a new Part 1 appli Permitted nu | Propose decre | ubmitted which ma sed increase or ase in number | 1 application. Note: if ay result in a loss of |
| livestock numbers increase priority for minimum distan Livestock category (Available in the Schedule Regula | in your Part 2 application, ace separation (MDS). gory and type e 2 of the Part 2 Matters ation) | a new Part 1 appli | Propose decre | ubmitted which ma sed increase or ase in number applicable) | Total |
| livestock numbers increase priority for minimum distan Livestock category (Available in the Schedule Regula | in your Part 2 application, ace separation (MDS). gory and type e 2 of the Part 2 Matters ation) | a new Part 1 appli | Propose decre | ubmitted which ma sed increase or ase in number | ay result in a loss of |
| livestock numbers increase priority for minimum distan Livestock category (Available in the Schedule Regula | in your Part 2 application, ace separation (MDS). gory and type e 2 of the Part 2 Matters ation) | a new Part 1 appli | Propose decre | ubmitted which ma sed increase or ase in number applicable) | Total |
| livestock numbers increase priority for minimum distan Livestock category (Available in the Schedule Regula | in your Part 2 application, ace separation (MDS). gory and type e 2 of the Part 2 Matters ation) | a new Part 1 appli | Propose decre | ubmitted which ma sed increase or ase in number applicable) | Total |
| livestock numbers increase priority for minimum distan Livestock categ (Available in the Schedule Regula | in your Part 2 application, ace separation (MDS). gory and type e 2 of the Part 2 Matters ation) | a new Part 1 appli | Propose decre | ubmitted which ma sed increase or ase in number applicable) | Total |
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| livestock numbers increase priority for minimum distan Livestock category (Available in the Schedule Regula | in your Part 2 application, ace separation (MDS). gory and type e 2 of the Part 2 Matters ation) | a new Part 1 appli | Propose decre | ubmitted which ma sed increase or ase in number applicable) | Total |
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| livestock numbers increase priority for minimum distan Livestock category (Available in the Schedule Regula | in your Part 2 application, ace separation (MDS). gory and type e 2 of the Part 2 Matters ation) | a new Part 1 appli | Propose decre | ubmitted which ma sed increase or ase in number applicable) | Total |
| livestock numbers increase priority for minimum distan Livestock category (Available in the Schedule Regula | in your Part 2 application, ace separation (MDS). gory and type e 2 of the Part 2 Matters ation) | a new Part 1 appli | Propose decre | ubmitted which ma sed increase or ase in number applicable) | Total |
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| livestock numbers increase priority for minimum distan Livestock category (Available in the Schedule Regula | in your Part 2 application, ace separation (MDS). gory and type e 2 of the Part 2 Matters ation) | a new Part 1 appli | Propose decre | ubmitted which ma sed increase or ase in number applicable) | Total |



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Application under the Agricultural Operation Practices Act for a confined feeding operation, manure collection area, and/or manure storage facility(ies)

DECLARATION AND ACKNOWLEDGMENT OF APPLICANT CONCERNING WATER ACT LICENCE

issued by Alberta Environment and Protected Areas (EPA) for a confined feeding operation (CFO)

Date and sign one of the following four options

| <u>OP</u> | TION 1: Applying through the NRCB for both the AOPA permit and the Water Act licence |
|-----------|--|
| | I DO want my water licence application coupled to my AOPA permit application. |
| Sign | red thisday of, 20 |
| | |
| <u>OP</u> | FION 2: Processing the AOPA permit and Water Act licence separately |
| 1. | I (we) acknowledge that the CFO will need a new water licence from EPA under the <i>Water Act</i> for the development or activity proposed in this AOPA application. |
| 2. | I (we) request that the NRCB process the AOPA application independently of EPA's processing of the CFO's application for a water licence. |
| 3. | In making this request, I (we) recognize that, if this AOPA application is granted by the NRCB, the NRCB's decision will not be considered by EPA as improving or enhancing the CFO's eligibility for a water licence under the <i>Water Act</i> . |
| 4. | I (we) acknowledge that any construction or actions to populate the CFO with livestock pursuant to an AOPA permit in the absence of a <i>Water Act</i> licence will not be relevant to EPA's consideration of whether to grant the <i>Water Act</i> licence application. |
| 5. | I (we) acknowledge that any such construction or livestock populating will be at the CFO's sole risk if the <i>Water Act</i> licence application is denied or if the operation of the CFO is otherwise deemed to be in violation of the <i>Water Act</i> . This risk includes being required to depopulate the CFO and/or to cease further construction, or to remove "works" or "undertakings" (as defined in the <i>Water Act</i>). |
| 6. | AS RELEVANT: I (we) acknowledge that the CFO is located in the South Saskatchewan River Basin and that, pursuant to the <i>Bow, Oldman and South Saskatchewan River Basin Water Allocation Order</i> [Alta. Reg. 171/2007], this basin is currently closed to new surface water allocations. |
| | Provide: Water licence application number(s) 00403525-00-00 |
| Sign | ned this 22 day of March, 2024 |
| OP: | FION 3: Additional water licence not required |
| | I (we) declare that the CFO will not need a new licence from EPA under the Water Act for the |
| | development or activity proposed in this AOPA application. |
| 2. | Provide: Water license number(s) or water conveyance agreement details |
| Sigr | ned this <u>22</u> day of, 20 |
| | Signature of Applicant of Agent |
| Last u | pdated September 11, 2023 |



Application under the Agricultural Operation Practices Act for a confined feeding operation, manure collection area, and/or manure storage facility(ies)

<u>OPTION 4: Uncertain if Water Act licence is needed; acknowledgement of risk (for existing CFOs only)</u>

- 1. At this time, I (we) do not know whether a new water licence is needed from EPA under the *Water Act* for the development or activity proposed in this AOPA application.
- 2. If a new *Water Act* licence is needed, I (we) request that the NRCB process the AOPA application **independently of** EPA's processing of the CFO's application for a water licence.
- 3. In making this request, I (we) recognize that, if this AOPA application is granted by the NRCB, the NRCB's decision will not be considered by EPA as improving or enhancing the CFO's eligibility for a water licence under the *Water Act*.
- 4. I (we) acknowledge that any construction or actions to populate the CFO with additional livestock pursuant to an AOPA permit in the absence of a *Water Act* licence will **not** be relevant to EPA's consideration of whether to grant my *Water Act* licence application, if a new water licence is needed.
- 5. I (we) acknowledge that any such construction or livestock increase will be at the CFO's sole risk if the *Water Act* licence application is denied or if the operation of the CFO is otherwise deemed to be in violation of the *Water Act*. This risk includes being required to depopulate the CFO and/or to cease further construction, or to remove "works" or "undertakings" (as defined in the *Water Act*).
- 6. **AS RELEVANT:** I (we) acknowledge that the CFO is located in the South Saskatchewan River Basin and that, pursuant to the *Bow, Oldman and South Saskatchewan River Basin Water Allocation Order* [Alta. Reg. 171/2007], this basin is currently closed to new surface water allocations.

| [Alta. Reg. 171/2007], this basin is currently 7. Provide : Water license number(s) or water | |
|---|--|
| <u> </u> | |
| Signed this day of, 20 | |





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| art 2 | 2 — Technical Requi | rements | | | | | NRCB Natural Resources |
| | nder the Agricultural Operation Practices Act for a | | | ection area, and/or n | nanure storage facili | ty(ies) | Conservation boa |
| | L ENVIRONMENTAL INFORMA | | | | | | |
| | this section for the worst case of the exist scription / name (as indicated on site | | ch is the closest t | to water bodies o | or water wells an | d for each of the prop | posed facilities) |
| xisting | | | | Propose | d 1: Lagoon | #2 | |
| | Livestock barn addition | | | _ | | | |
| ropose | d 2: Livestock barn addition | | | Propose | a 3: | | |
| | ity and environmental risk | | Faci | Propose | a 3: | | NRCB USE ONLY |
| | | Existing | Faci | • | Proposed 3 | Meets requirements | NRCB USE ONLY Comments |
| Facili | ity and environmental risk information What is the elevation of the floor of | _ | Proposed 1 | Proposed 2 | Proposed 3 | requirements | |
| Facili | ity and environmental risk information What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 | Existing >1 m ≤ 1 m | Proposed 1 | Proposed 2 | Proposed 3 | | |
| Facili | ity and environmental risk information What is the elevation of the floor of the lowest manure storage or | □ >1 m | Proposed 1 | Proposed 2 | Proposed 3 | requirements PYES NO | |
| Facili | ity and environmental risk information What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest | □ >1 m | Proposed 1 | Proposed 2 | Proposed 3 | requirements YES NO YES with | |
| Flood plain information | What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest known flood level? | □ >1 m ■ ≤ 1 m | Proposed 1 □ >1 m ■ ≤ 1 m | Proposed 2 | Proposed 3 | requirements YES NO YES with exemption YES NO YES NO YES SWITH | |
| Flood plain information a | What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest known flood level? How many springs are within 100 m of the manure storage facility or manure collection area? | □ >1 m ■ ≤1 m | Proposed 1 □ >1 m ■ ≤ 1 m | Proposed 2 | Proposed 3 | requirements YES NO YES with exemption YES NO | |
| Flood plain information el | What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest known flood level? How many springs are within 100 m of the manure storage facility or | □ >1 m ■ ≤ 1 m | Proposed 1 □ >1 m ■ ≤ 1 m | Proposed 2 | Proposed 3 | requirements YES NO YES with exemption YES NO YES with exemption YES NO YES WITH EXEMPTION | |
| Flood plain information el | What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest known flood level? How many springs are within 100 m of the manure storage facility or manure collection area? How many water wells are within 100 m of the manure storage facility or manure collection area? | □ >1 m ■ ≤1 m 0 | Proposed 1 □ >1 m ■ ≤ 1 m 0 | Proposed 2 | Proposed 3 | requirements YES NO YES with exemption YES NO YES with exemption YES NO | |
| Flood plain information | ity and environmental risk information What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest known flood level? How many springs are within 100 m of the manure storage facility or manure collection area? How many water wells are within 100 m of the manure storage facility or manure collection area? What is the shortest distance from the manure collection or storage facility to a surface water body? | □ >1 m ■ ≤1 m | Proposed 1 □ >1 m ■ ≤ 1 m | Proposed 2 | Proposed 3 | requirements YES NO YES with exemption YES NO YES with exemption YES NO YES NO YES WITH exemption YES NO YES WITH EXEMPTION YES NO YES WITH EXEMPTION | |
| Flood plain information el | What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest known flood level? How many springs are within 100 m of the manure storage facility or manure collection area? How many water wells are within 100 m of the manure storage facility or manure collection or storage facility or manure collection or storage facility to a surface water body? (e.g., lake, creek, slough, seasonal) | □ >1 m ■ ≤1 m 0 0 2249 m | Proposed 1 □ >1 m ■ ≤ 1 m 0 0 2249 m | Proposed 2 | Proposed 3 | requirements YES NO YES with exemption YES NO YES with exemption YES NO YES NO YES NO YES NO | |
| information and information an | ity and environmental risk information What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest known flood level? How many springs are within 100 m of the manure storage facility or manure collection area? How many water wells are within 100 m of the manure storage facility or manure collection area? What is the shortest distance from the manure collection or storage facility to a surface water body? | □ >1 m ■ ≤1 m 0 | Proposed 1 □ >1 m ■ ≤ 1 m 0 | Proposed 2 | Proposed 3 | requirements YES NO YES with exemption YES NO YES WITH EXEMPTION | |
| Surface water Flood plain information information | ity and environmental risk information What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest known flood level? How many springs are within 100 m of the manure storage facility or manure collection area? How many water wells are within 100 m of the manure storage facility or manure collection area? What is the shortest distance from the manure collection or storage facility to a surface water body? (e.g., lake, creek, slough, seasonal) What is the depth to the water table? | □ >1 m ■ ≤ 1 m 0 2249 m More than 4m | Proposed 1 □ >1 m ■ ≤ 1 m 0 0 2249 m More than 4m | Proposed 2 □ >1 m □ ≤ 1 m 0 2249 m More than 4m | Proposed 3 | requirements YES NO YES with exemption YES With exemption YES NO YES With exemption | |
| r Flood plain information a | ity and environmental risk information What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest known flood level? How many springs are within 100 m of the manure storage facility or manure collection area? How many water wells are within 100 m of the manure storage facility or manure collection area? What is the shortest distance from the manure collection or storage facility to a surface water body? (e.g., lake, creek, slough, seasonal) | □ >1 m ■ ≤1 m 0 2249 m More than | Proposed 1 □ >1 m ■ ≤ 1 m 0 0 2249 m More than | Proposed 2 | Proposed 3 | requirements YES NO YES with exemption YES NO YES WITH EXEMPTION | |

Last updated September 11, 2023

Additional information (attach supporting information, e.g. borehole logs, records, etc. you consider relevant to your application)

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${\bf Part~2-Technical~Requirements}$

Last updated September 11, 2023

Application under the Agricultural Operation Practices Act for a confined feeding operation, manure collection area, and/or manure storage facility(ies)

DISTANCE OF ANY MANURE STORAGE FACILITY (EXISTING OR PROPOSED) TO NEIGHBOURING RESIDENCES

| | | | | 1 | NRCB USE ONL | .Y | |
|---------------------|------------------------|--------------|-----------------------------|--------------------------|-----------------|-------------------------------------|-------------------|
| Neighbour name(s) | Legal land description | Distance (m) | Zoning (LUB) category | MDS category (1-4) | Distance (m) | Waiver attached (if required) | Meets regulations |
| Wilpshaar Dairy Ltd | 09-21-41-24-W4 | 690 m | | | | | |
| Sam Catellier | 14-15-41-24-W4 | 870 m | | | | | |
| Law | 05-15-41-24-W4 | 993 m | | | | | |
| Russel Wildeman | 11-16-41-24-W4 | 983 m | | | | | |
| Nobody, empty house | 12-21-41-24-W4 | 1106 m | | | | | |

LAND BASE FOR MANURE AND COMPOST APPLICATION (complete only if an increase in livestock or manure production will occur)

| | | | | NRCB US | E ONLY |
|------------------------|-------------------------|-----------------------|---------------|---------------------|--|
| Name of land owner(s)* | Legal land description | Usable area** (ha) | Soil zone *** | Usable area (ha) | Agreement attached (if required) |
| Wilpshaar Dairy Ltd | SW / NE / SE21-41-24-W4 | 128 | Black | | |
| Van Sevenhoven | NE20-41-24-W4 | 64 | Black | | |
| Wilpshaar Dairy Ltd | SW25-41-24-W4 | 64 | Black | | |
| Van Sevenhoven | NW / NE / SE15-41-24-W4 | 192 | Black | | |
| Van Sevenhoven | NW / SW14-41-24-W4 | 128 | Black | | |
| | | | Total | | |

| st If you are not the registered landowner, you must attach copies of land | use agreements signed by all landowners. |
|---|--|
|---|--|

| ** | Available manure spreading area | (excluding setback areas from | residences, common b | odies of water, v | water wells, etc | c. as identified in Agd | lex 096-5 | Manure Spreading |
|----|---------------------------------|-------------------------------|----------------------|-------------------|------------------|-------------------------|-----------|------------------|
| R۵ | gulations) | | | | | | | |

| Regulations) | , | |
|--|---|-------------|
| *** Brown, dark brown, black, grey wooded, or irrigated | | |
| Additional information (attach any additional information as required) | | |
| | | |
| | | |
| | | |
| | | |

| This agreement is between | Manure Spreading Agre | ement | |
|--|---|--|--------------|
| | VIIPShaar I | Dairy manure produce | er, and |
| van Sevenha | | | |
| Length of agree | Manuel Manuel | e receiver. | |
| Length of agreement: This a (minimum of three years) | greement is valid for a time per | riod of 3 years | |
| Legal land location | Soil type ¹ | 0.000 | |
| NEOD W OU | | Acres suitable for manu spreading ² | ire |
| NE20-41-24-W4 | Dlack | 64 | |
| SW 14-41-24-04 | | 192 | |
| NIW 4- 41-24-W4 | Black | 64 | |
| | Black | 64 | |
| 1 | | | |
| ¹ Soil type choices: Dark brown and | brown, Grey wooded, Black, Irrigated. | | |
| ² Land within required setbacks from | water bodies, water wells, residences | , etc. is not to be included. | |
| Other comments: | | | |
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| Manure producer (confined Fe | eeding Operation \ Legal Land L | ocation SE 21-41-24 | -120 |
| | erang operation / Legar Lana L | occion <u>30 21 - 91 29</u> | |
| | 7 | | |
| | 110000 | = = = = Dis | shaar Dair |
| March 15 2024 | +lerman | nus Wilpshape Wills | |
| Date of signing Signat | ture Print name | Corporate nan | ile(ii appi) |
| | | | |
| Manure Receiver – Landowne | er(s) ³ | | |
| | | | |
| | | | |
| 200 | anhand | van Seventraven Sever | nhar Farm |
| March 15 2024 Date of signing Signat | Print name | Corporate nar | |
| Date of signing Signat | uie O Timenamo | | |
| | | | |
| | | Comparate no | me/if annl) |
| Date of signing Signat | ure Print name | Corporate nai | ne(ii appi) |
| ³ All registered owners of land, or au | thorized signing authorities must sign. | | |



Application under the Agricultural Operation Practices Act for a confined feeding operation, manure collection area and/or manure storage facility(ies)

| Expantion freestall barn 2. | | ete a copy of this sect ete liner) | IOII IOI EACH D | arn, reedibt, and | Storage racill | y tor Solia M | mure, co | mposting materials, or compo |
|--|----------|---------------------------------------|------------------------|-------------------|----------------|-------------------|----------|------------------------------|
| anure storage capacity Length (m) Width (m) Depth below grade to the bottom of the liner (m) Estimated storage capacity (n. 88m 32m 0 TOTAL CAPACITY I plan to use a short-term solid manure storage (STMS) as part of my manure storage and handling plan for this CFO. The A quirements for STMS are set out in the NRCB Short-Term Solid Manure Storage Requirements Fact Sheet. Secrible the run-on and runoff control system secrible how the physical integrity of the liner will be maintained. Secrible the run-on and runoff control system secrible how the physical integrity of the liner will be maintained. Secrible the run-on and runoff control system secrible how the physical integrity of the liner will be maintained. Secrible the run-on and runoff control system secrible how the physical integrity of the liner will be maintained. Secrible the run-on and runoff control system secrible how the physical integrity of the liner will be maintained. Secrible the run-on and runoff control system secrible how the physical integrity of the liner will be maintained. Secrible the run-on and runoff control system secrible how the physical integrity of the liner will be maintained. Secrible the run-on and runoff control system secrible how the physical integrity of the liner will be maintained. Secrible the run-on and runoff control system secrible how the physical integrity of the liner will be maintained. Secrible the run-on and runoff control system secrible how the physical integrity of the liner will be maintained. Secrible the run-on and runoff control system secrible how the physical sys | | | | | Evnant | ion freestall | harn | |
| Length (m) Length (m) Width (m) Depth below grade to the bottom of the liner (m) Estimated storage capacity (n) | cility | description / nam | e (as indicated | on site plan) | 1. | - IOIT II CCStall | Jaiii | |
| Length (m) Width (m) Depth below grade to the bottom of the liner (m) Sam O TOTAL CAPACITY I plan to use a short-term solid manure storage (STMS) as part of my manure storage and handling plan for this CFO. The A quirements for STMS are set out in the NRCB Short-Term Solid Manure Storage Requirements Fact Sheet. Inface water control systems Describe the run-on and runoff control system Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be main | | | | | 2 | | | |
| Length (m) Width (m) Depth below grade to the bottom of the liner (m) Sam O TOTAL CAPACITY I plan to use a short-term solid manure storage (STMS) as part of my manure storage and handling plan for this CFO. The A quirements for STMS are set out in the NRCB Short-Term Solid Manure Storage Requirements Fact Sheet. Inface water control systems Describe the run-on and runoff control system Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be main | anure | e storage capacity | | | | | | |
| Sestimated storage capacity (n Salmated storage capacity (| | o octorage capacity | | | Danth | | - Ll | NDCD LICE ONLY |
| TOTAL CAPACITY I plan to use a short-term solid manure storage (STMS) as part of my manure storage and handling plan for this CFO. The A quirements for STMS are set out in the NRCB Short-Term Solid Manure Storage Requirements Fact Sheet. Inface water control systems Describe the run-on and runoff control system Describe the run-on and runoff control system Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will be maintained Describe how the physical integrity of the liner will | | Length (m) | W | idth (m) | | | | |
| I plan to use a short-term solid manure storage (STMS) as part of my manure storage and handling plan for this CFO. The A quirements for STMS are set out in the NRCB Short-Term Solid Manure Storage Requirements Fact Sheet. Inface water control systems Describe the run-on and runoff control system erms Describe the physical integrity of the liner will be maintained | | 88m | | 32m | | 0 | | |
| I plan to use a short-term solid manure storage (STMS) as part of my manure storage and handling plan for this CFO. The A quirements for STMS are set out in the NRCB Short-Term Solid Manure Storage Requirements Fact Sheet. **rface water control system** **escribe the run-on and runoff control system** **erms** **erms** **ner protection** **escribe how the physical integrity of the liner will be maintained | | | | | | | | |
| I plan to use a short-term solid manure storage (STMS) as part of my manure storage and handling plan for this CFO. The A quirements for STMS are set out in the NRCB Short-Term Solid Manure Storage Requirements Fact Sheet. Indicated the run-on and runoff control system erms Interprotection I | | | | | | | | |
| race water control systems escribe the run-on and runoff control system erms let protection escribe how the physical integrity of the liner will be maintained spect for cracks NRCB USE ONLY Requirements met: YES No. | | | | | | TOTAL CA | PACITY | |
| race water control systems escribe the run-on and runoff control system erms let protection escribe how the physical integrity of the liner will be maintained spect for cracks NRCB USE ONLY Requirements met: YES No. | | | | | | | | |
| er protection ascribe how the physical integrity of the liner will be maintained | | | | | | | | |
| er protection escribe how the physical integrity of the liner will be maintained espect for cracks | | | | tem | | | | |
| spect for cracks NRCB USE ONLY Requirements met: YES No. | | | non control sys | iciii | | | | |
| spect for cracks NRCB USE ONLY Requirements met: YES No. | | | | _ | | | | |
| spect for cracks NRCB USE ONLY Requirements met: YES NC | | | | _ | | | | |
| spect for cracks NRCB USE ONLY Requirements met: YES NC | | | | | | | | |
| espect for cracks NRCB USE ONLY Requirements met: YES NC | | | | | | | | |
| spect for cracks NRCB USE ONLY Requirements met: YES NC | | | | | | | | |
| Spect for cracks NRCB USE ONLY Requirements met: YES NO | ner p | rotection | | | | | | |
| NRCB USE ONLY Requirements met: YES \(\square{1}\) NO | | • • | ntegrity of the I | iner will be mair | ntained | | | |
| Requirements met: YES NO | spec | ct for cracks | | _ | | | | |
| Requirements met: YES NO | | | | | | | | |
| Requirements met: YES NO | | | | - | | | | |
| Requirements met: YES NO | | | | _ | | | | |
| Requirements met: YES NO | | | | | | | | |
| Requirements met: YES NO | | | | | | | | |
| Requirements met: YES NO | | | | | | | | |
| | | | | | | | | |
| st updated February 26, 2021 | | | | = | | NRCB USI | | |
| st updated February 26, 2021 | | | | - | | NRCB USI | | equirements met: YES |
| st updated February 26, 2021 | | | | - | | NRCB USE | | equirements met: YES |
| st updated February 26, 2021 | | | | - | | NRCB USE | | equirements met: YES |
| | <u> </u> | | | - | | NRCB USE | | equirements met: YES |



Application under the Agricultural Operation Practices Act for a confined feeding operation, manure collection area and/or manure storage facility(ies)

SOLID MANURE, COMPOST, & COMPOSTING MATERIALS: Barns, feedlots, & storage facilities - Concrete liner (cont.)

| Concrete liner details | | | | |
|---|-------------------|---|---------------|--|
| Concrete thickness | Method of sulp | hate protection: | | |
| 4" | Type 50 | | | |
| Concrete strength | Concrete reinf | nforcement size and spacing | | |
| 30 mpa | 10mm 12" O/ | C B/W | | |
| Concrete requirements can be found in Technical Guideline Ag Guideline minimums: Solid manure: 25MPa (D) Solid manure (wet): 30MPa (C) Method of sulphate protection: Type 50 or Type 10 with fly ash or equivalent Additional information (attach as required) | gdex 096-93 | NRCB USE ONLY Requirements r Condition requi Report attached | ired: YES NO | |
| NRCB USE ONLY | | | | |
| Nine month manure storage volume requirements met \Box | YES 🗆 | YES With STMS | | |
| Depth to water table: | Requ | uirements met: | YES NO | |
| Depth to Uppermost groundwater resource: | Requ | uirements met: | YES NO | |
| ERST completed: See ERST page for details | | | | |
| Surface water control systems | | | | |
| Requirements met: YES NO Details/comments: | | | | |
| | | | | |
| | | | | |
| Concrete liner details | | | | |
| | | | | |
| | | | | |
| Leakage detection system required: | s, please explair | ı why. | | |
| | | | | |
| | | | | |
| | | | | |
| Last updated February 26, 2021 | | | | |
| | - | | Page 12 of 24 | |

${\bf Part~2-Technical~Requirements}$



Application under the Agricultural Operation Practices Act for a confined feeding operation, manure collection area and/or manure storage facility(ies)

| acil | lity descrip | tion / nan | ne <mark>(as indic</mark> | cated on site plan) | 1. | loon | | | |
|-----------|---|--------------|---------------------------|---------------------------------|------------------------|-------------------------|-------------------------------|---|--------------------------|
| | | | | | 2 | | | | |
| | | | (use one ro | ow in the table for EA | CH cell of | the synthe | tic lined stor | age, attach additiona | al pages if you |
| equi | i <mark>re more row</mark> | <u> </u> | | | | Slope run: | rise | NRCB US | SE ONLY |
| | Length (m) | Width (m) | Total depth (m) | Depth below ground level (m) | Inside end walls | Inside side walls | Outside walls | Calculated storage capacity (excl. 0.5 m freeboard) (m³) | Filled in lower 1/4? Y/N |
| 1. | 60m | 60m | 4.5m | 2.5m | 3:1 | 3:1 | 4:1 | | |
| 2. | | | | | | TOTA | L CAPACITY | | |
| ırf | ace water o | control eve | stome | | | | | | |
| | scribe the ru | | | ol system | | | | | |
| er | ms | | | | | | | | |
| | | | • | | | | _ | | |
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| | | | | | | | _ | | |
| | | | | | | | _ | | |
| ! | | | | | _ | | _ | | |
| | ing Scribe sealin | n practices | for nining | etc. that nenetrates t | he liner | | _ | | |
| | | g practices | for piping, | etc. that penetrates t | he liner | | _ | | |
| | | g practices | for piping, | etc. that penetrates t | he liner | | _ | | |
| | | g practices | for piping, | etc. that penetrates t | he liner | | | | |
| es | scribe sealing | | | | he liner | | _ | | |
| es | | | | | he liner | | | | |
| es | scribe sealing | | | | he liner | | - - - | | |
| Des | scribe sealing | | | | he liner | | - - - | | |
| Des | scribe sealing | | | | he liner | | | DNLY | |
| Des | scribe sealing | | | | he liner | | | | res □ no |
| n c | ased in Co | ncrete in b | oottom 1/4 | | | | Req | DNLY uirements met: \(\square | ∕ES □ NO |
| n c | ased in Co | ncrete in b | oottom 1/4 | | | | Req | | ∕ES □ NO |
| n c | ased in Co | ncrete in b | oottom 1/4 | | | | Req | | ∕ES □ NO |
| n c | ased in Co | ncrete in b | oottom 1/4 | | | | Req | | ∕ES □ NO |
| ne Des | ased in Co | ncrete in b | oottom 1/4 | | | | Req | | ∕ES □ NO |
| ne Des | ased in Co r protection scribe how the | ncrete in b | alls, bottom | n and outside walls ar | e protecte | d from eros | Req sion | | ∕ES □ NO |
| ne Des | ased in Co r protection scribe how the | ncrete in b | alls, bottom | | e protecte | d from eros | Req sion | | ′ES □ NO |
| n c | ased in Co r protection cribe how the | ncrete in b | alls, bottom | n and outside walls ar | e protecte | d from eros | Req sion | | ∕ES □ NO |
| ne Des | ased in Co r protection cribe how the | ncrete in b | alls, bottom | n and outside walls ar | e protecte | d from eros | Req sion | | ∕ES □ NO |
| n c | ased in Co r protection cribe how the | ncrete in b | alls, bottom | n and outside walls ar | e protecte | d from eros | Req sion | | ∕ES □ NO |
| n c | ased in Co r protection cribe how the | ncrete in b | alls, bottom | n and outside walls ar | e protecte | d from eros | Req sion — mage — | uirements met: 🗌 Y | ′ES □ NO |
| n c | ased in Co r protection cribe how the | ncrete in b | alls, bottom | n and outside walls ar | e protecte | d from eros | sion mage | uirements met: 🗌 Y | |

Page 13 of 24

${\bf Part~2-Technical~Requirements}$



Application under the Agricultural Operation Practices Act for a confined feeding operation, manure collection area and/or manure storage facility(ies)

| Provide synthetic liner material details | | |
|---|--------------------------------|-------------------------------|
| 60mil HDPE liner from Layfield | | |
| | | |
| | | |
| | | |
| | | |
| dditional information <mark>(attach copies of design/enginee</mark> i | ring reports) NRCB US | E ONLY |
| | | Requirements met: |
| | | Condition required: |
| | | Report attached: |
| | | |
| | | |
| | | |
| | | |
| | | |
| NRCB USE ONLY | | |
| Liquid manure storage volume calculator attached: 🔲 YE | ES NO | |
| Depth to water table: | Requi | rements met: |
| Depth to uppermost groundwater resource: | | rements met: |
| Depth to appenhast groundwater resource. | Kequi | Tements met. |
| | | |
| | | |
| ERST completed: see ERST page for details | | |
| EKST completed. See EKST page for details | | |
| Surface water control systems | | |
| Requirements met: YES NO | Details/comments: | |
| | | |
| | | |
| | | |
| | | |
| Synthetic liner requirements | | |
| Leakage detection system required: | ☐ YES ☐ NO | If yes, please explain why. |
| -carrage decession system required | _ ,13 _ ,13 | in year produce explain timy. |
| | | |
| | | |
| | | |
| | | |
| Construction plans approved by professional engineer: | | ☐ YES ☐ NO |
| Will liner be installed by manufacturer approved contractor | or and qualified third party?: | ☐ YES ☐ NO |
| Preparation of liner bed (comments): | | |
| | | |
| | | |
| | | |
| | | |
| Condition required: \square YES \square NO | | |
| | | |



HIGH DENSITY POLYETHYLENE (HDPE)

High Density Polyethylene (HDPE) is a versatile material that is used widely across many applications. One of the primary uses of HDPE is as a liner at the base of landfills, where its chemical resistance is put to use. HDPE applications also include pond linings and water containment projects.

| | April 2023 High Density Polyethylene (HDPE), Black | | | | | | | |
|--------------------|--|---|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | Style | ASTM | HDPE 40 Smooth | HDPE 60 Smooth | HDPE 80 Smooth | HDPE 40 Textured | HDPE 60 Textured | HDPE 80 Textured |
| | Nominal Thickness | D5199 | 40 mil 1.0 mm | 60 mil 1.5 mm | 80 mil 2.0 mm | 38 mil 0.96 mm | 57 mil 1.45 mm | 76 mil 1.90 mm |
| | Asperity Height | D7466 | | | | 16 mil 0.4 mm | 16 mil 0.4 mm | 16 mil 0.4 mm |
| ies | Density | D792 | ≥ 0.94 mg/l | ≥ 0.94 mg/l | ≥ 0.94 mg/l | ≥ 0.94 mg/l | ≥ 0.94 mg/l | ≥ 0.94 mg/l |
| Typical Properties | | D6693 Yield Strength | 84 ppi 15 kN/m | 126 ppi 22 kN/m | 168 ppi 29 kN/m | 84 ppi 15 kN/m | 126 ppi 22 kN/m | 168 ppi 29 kN/m |
| Тур | | Break Strength | 152 ppi 27 kN/m | 228 ppi 40 kN/m | 304 ppi 53 kN/m | 60 ppi 10 kN/m | 90 ppi 16 kN/m | 120 ppi 21 kN/m |
| | Tensile Strength Type IV Die | Yield Elongation 33 mm Gauge Length | 12% | 12% | 12% | 12% | 12% | 12% |
| | | Break Elongation 50 mm Gauge Length | 700% | 700% | 700% | 100% | 100% | 100% |
| | Tear Resistance | D1004 | 28 lbs 125 N | 42 lbs 187 N | 56 lbs 249 N | 28 lbs 125 N | 42 lbs 187 N | 56 lbs 249 N |

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For up-to-date technical information, be sure to visit us online at www.LayfieldGroup.com



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HIGH DENSITY POLYETHYLENE (HDPE)

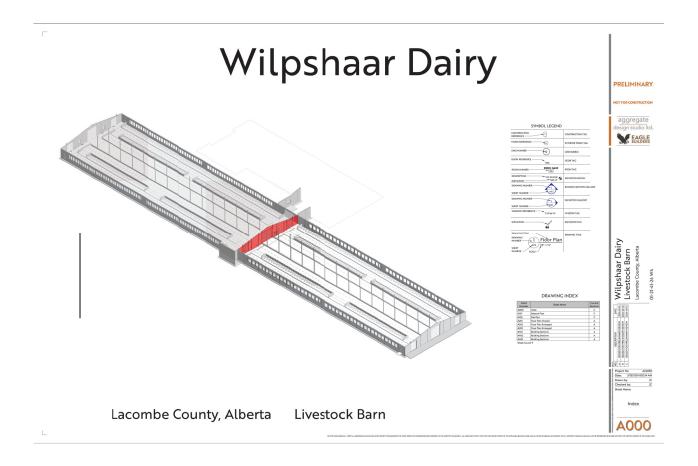
| Stress Cracking | D5397 | 500 Hours | 500 Hours | 500 Hours | 500 Hours | 500 Hours | 500 Hours |
|--|----------------|-----------------|------------------|------------------|-----------------|-----------------|------------------|
| Puncture Resistance | D4833 | 72 lbs 320 N | 108 lbs 480 N | 144 lbs 640 N | 60 lbs 267 N | 90 lbs 400 N | 120 lbs 534 N |
| Carbon Black Content | D6370 | 2.0-3.0 % | 2.0-3.0 % | 2.0-3.0 % | 2.0-3.0 % | 2.0-3.0 % | 2.0-3.0 % |
| Carbon Black Dispersion | D5596 | Cat 1 or 2 | Cat 1 or 2 | Cat 1 or 2 | Cat 1 or 2 | Cat 1 or 2 | Cat 1 or 2 |
| HPOIT | D5885 | 400 mins | 400 mins | 400 mins | 400 mins | 400 mins | 400 mins |
| Oven aging at 85° C HPOIT - % retained after 90 days | D5721 D5885 | 80% | 80% | 80% | 80% | 80% | 80% |
| UV Resistance High Pressure OIT (min. ave.)- % retained after 90 days | D7238 D5885 | 50% | 50% | 50% | 50% | 50% | 50% |
| Maximum Continuous use Temperature ¹ | | 60°C | 60°C | 60°C | 60°C | 60°C | 60°C |

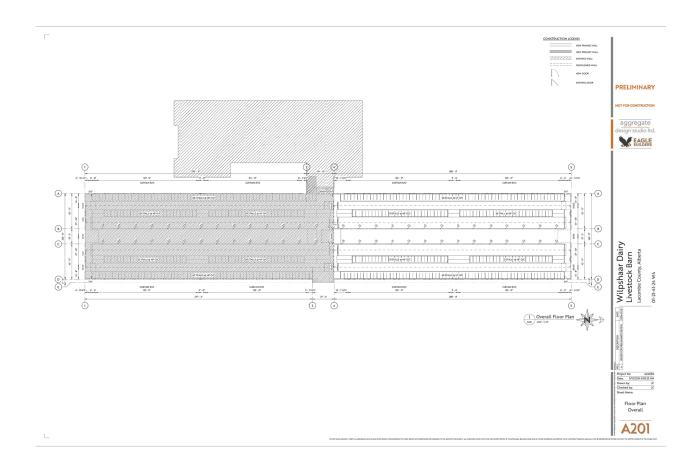
¹ Please contact Layfield Technical Services for more information

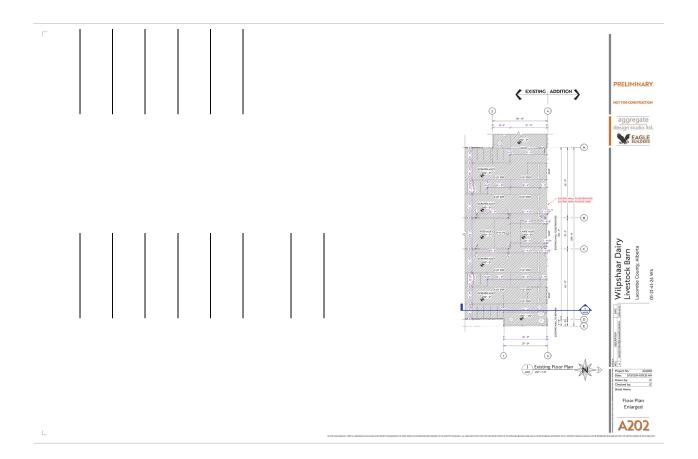
| April 2023 | HDPE Minimum Field Seam Strengths | | | | | | |
|------------------------|-----------------------------------|---------|---------|---------|----------|----------|----------|
| Style | ASTM | HDPE 40 | HDPE 60 | HDPE 80 | HDPE 40 | HDPE 60 | HDPE 80 |
| | D6392 | Smooth | Smooth | Smooth | Textured | Textured | Textured |
| Bonded Seam Strength | 25 mm | 80 ppi | 120 ppi | 160 ppi | 120 ppi | 120 ppi | 160 ppi |
| Test Temp 23°C, 73°F | (1") Strip | 14 N/mm | 21 N/mm | 28 N/mm | 21 N/mm | 21 N/mm | 28 N/mm |
| Peel Adhesion Strength | 25 mm | 52 ppi | 78 ppi | 104 ppi | 78 ppi | 78 ppi | 104 ppi |
| (Extrusion Welds) | (1") Strip | 9 N/mm | 14 N/mm | 18 N/mm | 14 N/mm | 14 N/mm | 18 N/mm |

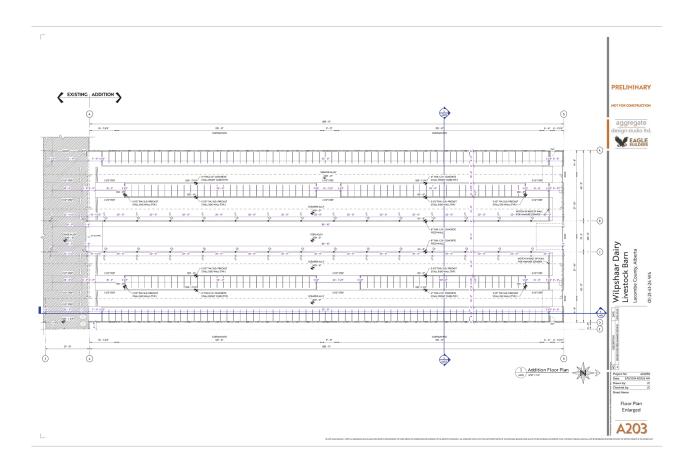
For up-to-date technical information, be sure to visit us online at www.LayfieldGroup.com

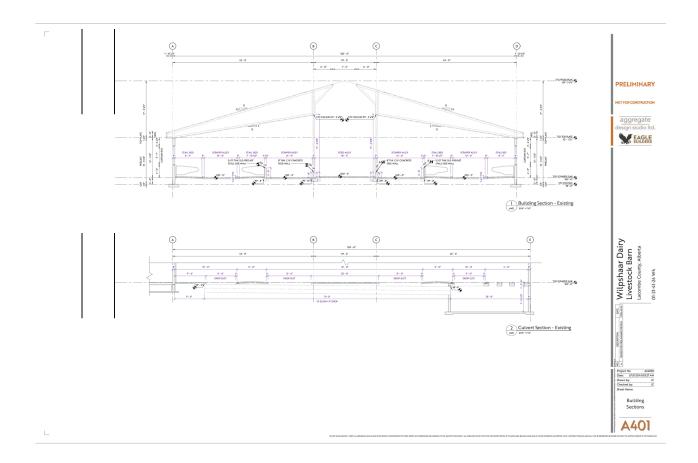


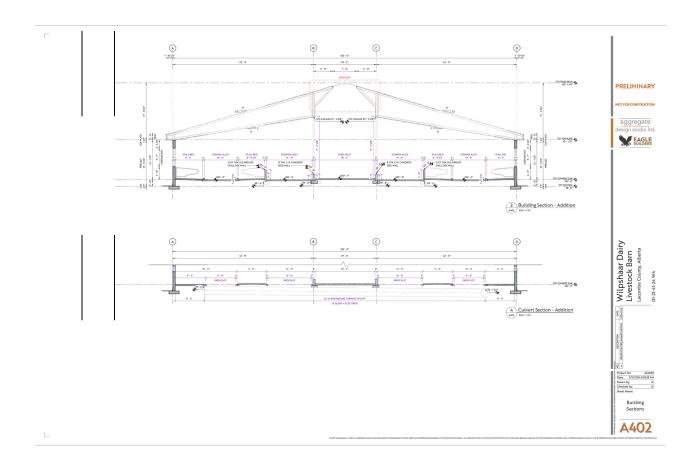


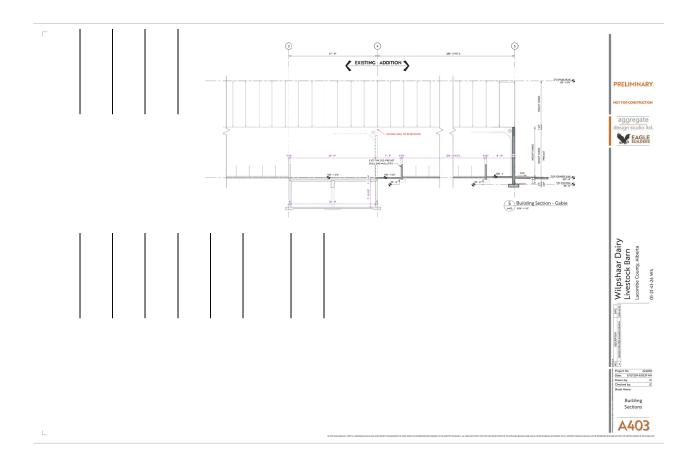














LICENCE AMENDMENT

| | _ | PURSUANT TO T OF THE <i>WATER</i> | |
|---|----------------------|--------------------------------------|--|
| - | _ | | |
| LICENCE No. | 00403525-00-00 | | |
| FILE No. | 00403525 | | |
| PRIORITY No. | 2017-10-26-002 | | |
| AMENDMENT No. | 00403525-00-01 | | |
| LICENSEE: | Wilpshaar Dairy L | td. | |
| The Licence is amended as | follows: | | |
| 1. Change the Birdhill I | Farms Ltd. to Wilpsh | naar Dairy Ltd. (the Licensee). | |
| Designated Director unde Todd Aasen, P.Eng. Red Deer North Saskatcher | | | |
| November 20, 2018 Dated | | | |
| - | | | |
| | <u> </u> | | |
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