



899-2015 ADDENDUM 4

SOUTH END SEWAGE TREATMENT PLANT (SEWPCC) UPGRADING/EXPANSION PROJECT - CONTRACT 3 - BIOREACTOR, BLOWER BUILDING, AND SECONDARY CLARIFIERS STRUCTURAL CONCRETE & MISCELLANEOUS WORK

URGENT

**PLEASE FORWARD THIS DOCUMENT TO
WHOEVER IS IN POSSESSION OF THE BID
OPPORTUNITY**

ISSUED: March 14, 2016
BY: Owen Van Wallegghem, P.Eng.
TELEPHONE NO. 204 488-2214

**THIS ADDENDUM SHALL BE INCORPORATED
INTO THE BID OPPORTUNITY AND SHALL
FORM A PART OF THE CONTRACT
DOCUMENTS**

Template Version: A20150806

Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Bid Opportunity, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 10 of Form A: Bid may render your Bid non-responsive.

PART A – BID SUBMISSION

Replace: 899-2015 Bid Submission with 899-2015 Addendum 4 - Bid Submission. The following is a summary of changes incorporated in the replacement Bid Submission:

Form B(R3): Revised Items C.1, C.2.

Form B(R3): Add Item C.8, C.9.

Form B(R3): Add Item D.4.

Page numbering on some forms may be changed as a result.

PART E – SPECIFICATIONS

Revise: E1.2 to read: Add the following appendix, which is applicable to the Work:

Appendix G Sluice Gate and Flap Gate Shop Drawings

Add E15.6.5 Supply and installation of sodium bisulphite distribution piping, plug, plug valve, and connection to 2100 mm diameter concrete by-pass pipe shall be incidental to the work.

Add: E20 **E20. CAST-IN-PLACE CONCRETE CHAMBER #2 EXTENSION**

E.20.1 Contractor shall construct a cast-in-place concrete chamber extension to the existing by-pass chamber #2.

E20.2 The cast-in-place concrete chamber extension shall be constructed in accordance with the design drawings, the City of Winnipeg Standard Construction Specifications the applicable NMS Format specification sections included within this Bid Opportunity.

E.20.3 Measurement and Payment

E20.3.1 Measurement and payment shall be on a lump sum basis under the pay item "Cast-in-Place Concrete Chamber #2 Extension" on the bid form and shall include all labour, equipment, and materials required to construct the chamber.

Add: E21

E21. WEeping TILE

- E.21.1 For weeping tile encased in concrete, supply and install PVC piping per spec section 40 27 00.10 Polyvinyl Chloride Pipe and Fittings. Supply and install material specified in CW 3120 for remainder of weeping tile.
- E21.2 Supply and install Dresser (or Equal) transition couplings at changes of pipe material. Wrap transition couplings with Denso paste and Denso tape.
- E.21.3 Measurement and Payment
 - E21.3.1 Measurement and Payment for "Supply and Install Weeping Tile" shall be on a linear meter basis measured in accordance with Clause 4 of CW 3120.
 - E21.3.2 Supply and installation of pea gravel, geotextile wrap, and geotextile sock, as indicated on the drawings, shall be incidental to the work.

Revise: NMS Division 01
Section 01 11 00
Clause 1.2.C

Revise Description of Work in the table for the drawings noted:

Drawing Reference	Description of Work
1-0102-MDTL-A010	Details for applicable work as shown on the drawings and as detailed in the specifications.
1-0102-MGAD-S505	Supply and Install: <ul style="list-style-type: none"> • Rain water leader piping (RW) from the roof drain to exterior located between gridlines 2s and 3s and gridline Gs • Rain water leader piping (RW) from the roof drain to exterior located near gridlines 6s and Cs • 150-RW-CI01 wall embed near gridline Es between 3s and 4s encased in concrete wall • 100-VTA-CI01 embed between gridlines 6s,7s, Bs and Cs complete with puddle flange • 100-RW-CI01 wall embed west of gridlines 1s (on grayed gridline 4) between Es and Fs • 75-SPD-SS01 embeds between gridlines 5s, 6s, Cs and Ds • FD-1P at gridline 3s between Fs and Gs.
1-0102-MGAD-S506	Supply and Install: <ul style="list-style-type: none"> • 100-VTA-CI01 at gridlines 11s and Bs encased in concrete slab complete with puddle flange • 75-SPD-SS01 at gridlines 10s and Ds complete with puddle flange encased in concrete walls
1-0102-MGAD-S507	Supply and Install: <ul style="list-style-type: none"> • Concrete encased 100-RW-CI01 between gridlines 6s and 8s within the boundary of the electrical room • All roof drains and overflow drains (RD and OD) • 100-VTA-CI01 at gridlines 8s and Ds
1-0102-MGAD-R609	Supply and Install: <ul style="list-style-type: none"> • Fire dampers FD-R640-1, FD-R640-2, FD-R653-1. For information: <ul style="list-style-type: none"> • Blockouts along gridline 9r for EA, EF, and SA (3 places) • Blockouts SA and EA (6 places) in area between gridlines Hr, Jr, 9r, and 12r.

- Blockouts for SA and RA between gridlines Kr and Lr (2 places)
- Blockouts for SA south of Lr (2 places)
- Blockout for SA near gridline 10r, south of gridline Lr
- Blockout for intake louvres near gridlines Lr and 12r

HVAC ducting and equipment shown on the drawing is by others.

1-0102-PGAD-S003

Supply and Install:

- Concrete encased 900-ML-SS01, 350-RAS-SS01, 600-RAS-SS01
- Concrete encased 300-PD-SS01 and pipe embed in clarifier wall including interconnecting pipe spool with valve HV-S150C and flexible coupling.
- 250-SC-SS01 embeds located at gridlines Bs in tank TK-S140 and TK-S150

Remove and dispose existing 250-FSW-CS01 and 300-PD-CS01 pipe south of gridline Es and east of 6s as shown on the drawing. Supply and Install flange and blind flange of new termination of 250-FSW-CS01 and 300-PD-CS01 pipes.

1-0102-PGAD-S009

Supply and Install:

- Slide gate SG-S150A
- Stop logs SL-S150B

Clarifier bridge, mechanism and feedwell is by others.

1-0102-PGAD-S010

Section A

Supply and Install:

- Concrete encased 900-ML-SS01, 600-RAS-SS01.

All clarifier lighting, scum through and mechanism is by others.

Section A1

Supply and Install:

- Concrete encased 350-RAS-SS01, 600-RAS-SS01, 900-ML-SS01, 250-SC-SS01
- Embeds for 250-SC-SS01, 100-SC-SS01, and 150-VTA-SS01 pipes

All clarifier lighting, scum through and mechanism is by others.

1-0102-PGAD-S013

Remove and dispose existing 250-FSW-CS01 and 300-PD-CS01 pipe between gridline 6s and 10s as shown on the drawing. Supply and Install flange and blind flange of new termination of 250-FSW-CS01 and 300-PD-CS01 pipes.

All piping is by others

1-0102-PGAD-S015

For Information. Clarifier mechanism and bridge is by others

1-0102-PGAD-S017

Supply and Install:

- Concrete encased 350-RAS-SS01, 600-RAS-SS01, and 900-ML-SS01.

1-0102-SGAD-S024

All Work as shown on the drawing is to be Supplied and Installed in Bid Op 899-2015. Walkway B west of Gridline 1s by others. **CMU Walls are by others.**

1-0102-SGAD-S050

Removal of existing drop shaft between gridlines 3 and 4 and north of gridline A shall be part of the Work. **The remainder of the demolition**

is by others.

Replace: NMS Division 1, Section 01 52 10 with 899-2015_Addendum_4-NMS_Section_015210_R01

Revise: NMS Division 07
Section 07 52 16
Clause 1.1.B Materials only applied to this Contract: Vapour Retardant under Clause 2.1.E.

Revise: NMS Division 31
Section 31 23 19.01
Clause 3.2.C Depressurization wells have been installed under Bid Op.333-2014 **and in Bid Op. 601-2015** to control overall groundwater levels between the elevations of 224.5 and 226.0. **Prior to the excavation of the Secondary Clarifier Cone Areas, groundwater depressurization shall occur to maintain water elevations between 222.0 and 223.0 as measured at the site boundary. Groundwater depressurization shall continue and water elevation levels shall be maintained between 222.0 and 223.0 until construction of the cones are complete and until authorization by the Contract Administrator is given to resume normal depressurization activities to maintain overall groundwater levels between 224.5 and 226.0.** As defined in these documents, the Contractor shall monitor the groundwater levels and operate the depressurization wells as necessary to maintain the specified groundwater elevations and as directed by the Contract Administrator.

Add: NMS Division 35
Section 35 20 16.25
Clause 2.7.D

4. Aquanox
5. Orbinox
6. Dynamic
7. Rodney Hunt
8. Waterman

Add: NMS Division 40
Section 40 27 02
Clause 2.4.A.1.e.4) Milliken 601N

Revise: NMS Division 40
Section 40 27 02
Clause 2.4.B

Mud Valve

1. Type V915 Mud Valve
 - a. Cast iron body tapered seat, bronze disc and seat ring, frame flanged, non rising type stem, bronze extension stem, 50 mm square operating nut for floor box operation, and stem guides for maximum unsupported stem length of 1.6 meters.
 - b. **Epoxy coating**
 - c. **Manufacturers and Products:**
 - 1) **Troy; A-25612 RB**
 - 2) **Clow; Fig. F-3085-T**
 - 3) **Dynamic Mud Valve**

Add: NMS Division 40
Section 40 27 02
Clause 2.5.B

Floor Box and Extension Stem

1. Plain type, for support of non-rising type stem.
2. Complete with solid extension stem, operating nut, and stem guide brackets.
3. Stem Guide: Space such that stem L/R ratio does not exceed 200.
4. Anchor Bolts: Type 304 SST.
5. Manufacturers and Products:
 - a. Neenah Foundry; R 7506.
 - b. Clow; No. F5690.

Revise: NMS Division 40
Section 40 27 02
Supplement 1

Revise **Manual Valve Schedule (75 mm and Larger)** to add the following Valves:

SEWPCC UPGRADING/EXPANSION PROJECT							
Manual Valve Schedule (75 mm and Larger)							
Location / Description	Tag Number	P&ID Number	Valve Type	Valve Type Number	Size (mm)	Commodity Code	Commodity
PROCESS MECHANICAL							
AREA R - BIOREACTORS / BLOWER BUILDING							
Post-Aerobic Zone	HV-R105E	1-0102-PPID-R002	Mud Valve	V915	200	PD	Process Drain
Post-Aerobic Zone	HV-R115E	1-0102-PPID-R003	Mud Valve	V915	200	PD	Process Drain
Post-Aerobic Zone	HV-R125E	1-0102-PPID-R004	Mud Valve	V915	200	PD	Process Drain
Bioreactor by-pass Channel 2	HV-R130A	1-0102-PPID-R006	Mud Valve	V915	150	PD	Process Drain
Mixed Liquor Channel	HV-R130B	1-0102-PPID-R006	Mud Valve	V915	150	PD	Process Drain
RAS Channel	HV-R400H	1-0102-PPID-R006	Mud Valve	V915	250	PD	Process Drain
Primary effluent Channel	HV-R140C	1-0102-PPID-R007	Mud Valve	V915	200	PD	Process Drain

DRAWINGS

- Replace: 899-2015_DRAWING_1-0102-EGAD-S002_R00 with 899-2015_Addendum_4-DRAWING_1-0102-EGAD-S002_R02
- 899-2015_DRAWING_1-0102-MGAD-R603_R00 with 899-2015_Addendum_4-DRAWING_1-0102-MGAD-R603_R01
- 899-2015_DRAWING_1-0102-MGAD-R604_R00 with 899-2015_Addendum_4-DRAWING_1-0102-MGAD-R604_R01
- 899-2015_Addendum_2-DRAWING_1-0102-MGAD-R609_R01 with 899-2015_Addendum_4-DRAWING_1-0102-MGAD-R609_R02
- 899-2015_Addendum_1-DRAWING_1-0102-MGAD-R611_R00 with 899-2015_Addendum_4-DRAWING_1-0102-MGAD-R611_R01
- 899-2015_DRAWING_1-0102-MGAD-R612_R00 with 899-2015_Addendum_4-DRAWING_1-0102-MGAD-R612_R01
- 899-2015_DRAWING_1-0102-MGAD-R613_R00 with 899-2015_Addendum_4-DRAWING_1-0102-MGAD-R613_R01
- 899-2015_DRAWING_1-0102-MGAD-S502_R01 with 899-2015_Addendum_4-DRAWING_1-0102-MGAD-S502_R01
- 899-2015_Addendum_2-DRAWING_1-0102-MGAD-S503_R01 with 899-2015_Addendum_4-DRAWING_1-0102-MGAD-S503_R02
- 899-2015_Addendum_2-DRAWING_1-0102-MGAD-S504_R01 with 899-2015_Addendum_4-DRAWING_1-0102-MGAD-S504_R02
- 899-2015_Addendum_2-DRAWING_1-0102-MGAD-S603_R01 with 899-2015_Addendum_4-DRAWING_1-0102-MGAD-S603_R02
- 899-2015_Addendum_2-DRAWING_1-0102-PGAD-R002_R01 with 899-2015_Addendum_4-DRAWING_1-0102-PGAD-R002_R02
- 899-2015_Addendum_2-DRAWING_1-0102-PGAD-R003_R01 with 899-2015_Addendum_4-DRAWING_1-0102-PGAD-R003_R02
- 899-2015_Addendum_2-DRAWING_1-0102-PGAD-R004_R01 with 899-2015_Addendum_4-DRAWING_1-0102-PGAD-R004_R02

899-2015_Addendum_2-DRAWING_1-0102-PGAD-R014_R01 with 899-2015_Addendum_4-DRAWING_1-0102-PGAD-R014_R02

899-2015_DRAWING_1-0102-PGAD-S003_R00 with 899-2015_Addendum_4-DRAWING_1-0102-PGAD-S003_R01

899-2015_DRAWING_1-0102-PGAD-S010_R00 with 899-2015_Addendum_4-DRAWING_1-0102-PGAD-S010_R01

899-2015_DRAWING_1-0102-SDTL-R001_R00 with 899-2015_Addendum_4-DRAWING_1-0102-SDTL-R001_R01

899-2015_DRAWING_1-0102-SDTL-R007_R00 with 899-2015_Addendum_4-DRAWING_1-0102-SDTL-R007_R01

899-2015_Addendum_2-DRAWING_1-0102-SDTL-S003_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SDTL-S003_R02

899-2015_Addendum_2-DRAWING_1-0102-SDTL-S006_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SDTL-S006_R02

899-2015_Addendum_2-DRAWING_1-0102-SDTL-S010_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SDTL-S010_R02

899-2015_Addendum_2-DRAWING_1-0102-SGAD-R006_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-R006_R02

899-2015_Addendum_2-DRAWING_1-0102-SGAD-R014_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-R014_R02

899-2015_DRAWING_1-0102-SGAD-R015_R00 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-R015_R01

899-2015_Addendum_2-DRAWING_1-0102-SGAD-R016_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-R016_R02

899-2015_DRAWING_1-0102-SGAD-R021_R00 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-R021_R01

899-2015_Addendum_2-DRAWING_1-0102-SGAD-R023_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-R023_R02

899-2015_DRAWING_1-0102-SGAD-R025_R00 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-R025_R01

899-2015_DRAWING_1-0102-SGAD-R033_R00 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-R033_R01

899-2015_DRAWING_1-0102-SGAD-R034_R00 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-R034_R01

899-2015_Addendum_2-DRAWING_1-0102-SGAD-R037_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-R037_R02

899-2015_Addendum_2-DRAWING_1-0102-SGAD-R038_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-R038_R02

899-2015_Addendum_2-DRAWING_1-0102-SGAD-S004_R02 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-S004_R02

899-2015_Addendum_2-DRAWING_1-0102-SGAD-S005_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-S005_R02

899-2015_Addendum_2-DRAWING_1-0102-SGAD-S014_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-S014_R02

899-2015_Addendum_2-DRAWING_1-0102-SGAD-S015_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-S015_R02

899-2015_Addendum_2-DRAWING_1-0102-SGAD-S017_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-S017_R02

899-2015_Addendum_2-DRAWING_1-0102-SGAD-S022_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-S022_R02

899-2015_Addendum_2-DRAWING_1-0102-SGAD-S025_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-S025_R02

899-2015_Addendum_2-DRAWING_1-0102-SGAD-S029_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-S029_R02

899-2015_Addendum_2-DRAWING_1-0102-SGAD-S030_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-S030_R02

899-2015_Addendum_2-DRAWING_1-0102-SGAD-S033_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-S033_R02

899-2015_Addendum_2-DRAWING_1-0102-SGAD-S050_R01 with 899-2015_Addendum_4-DRAWING_1-0102-SGAD-S050_R02

Add: 899-2015_Addendum_4-DRAWING_1-0102-MDTL-A010_R00

899-2015_Addendum_4-DRAWING_1-0102-PGAD-S015_R00

899-2015_Addendum_4-DRAWING_1-0102-PGAD-S017_R00

QUESTION AND ANSWER

- Q1: As per Spec Section 01 64 00 – City Supplied Products. Please product quantities (c/w Tag #s) and any shop drawings for the slide & flap gates noted. Are there any wall embeds required for any of these slide or flap gates? Please clarify.
- A1: Refer to Addendum 2 for quantity and tag numbers of City Supplied products. Shop Drawings of the City-supplied slide and flap gates are located in Appendix G, included as part of this Addendum.
- Q2: Are the following Mud Valves, Valve Stem Extensions & Embedded Valve Boxes part of the supply & installation of this contract; A) Mud valve HV-R105E (PGAD-R002), Valve Stem (PGAD-R006), embedded valve box (PGAD-R010 & R015); Mud valve HV-R1115E (PGAD-R003), Valve Stem (PGAD-R007), embedded valve box (PGAD-R011); Mud valve HV-R125E (PGAD-R004), Valve Stem (PGAD-R008), embedded valve box (PGAD-R012 & R016); Mud valve HV-R130B (PGAD-R005), Valve Stem (PGAD-R015), embedded valve box (PGAD-R010 & R015); Mud valve HV-R400H (PGAD-R006), Valve Stem (PGAD-R014), embedded valve box (PGAD-R010 & R014); Mud valve HV-R140C (PGAD-R007), Valve Stem (PGAD-R015), embedded valve box (PGAD-R011 & R015)
- Please provide specs for the above
- A2: Yes. Additional information on the Mud Valves, Valve Stem Extensions & Embedded Valve Boxes is included in PART E of this Addendum.
- Q3: Re: Clarifier Drawing PGAD-S004 – There is no side view drawing included (re: Section H – PGAD-S015 is missing). Please provide.
- A3: Refer to Drawing No. 1-102-PGAD-S015 included in this addendum.

- Q4: PGAD-P002: Bullet 3 of the Summary of work for this dwg is • Embedded pipe for WAS Sump Mixing Pump". Please identify the embedded pipe to be provided in this contract.
- A4: No embedded pipe.
- Q5: Summary of work for PGAD-S003.
- The last bullet lists 250-SC-SS01 embeds. The drawing has the lines tagged as 250-SC-SS01. Which size is correct?
 - The drawing shows an embed 4027-607B on 2 lines 100-SC-SS01 at GL Ds/Es and 100-FSW-SS01 at GL Es/Ds East of 8s. These lines are not in the summary of work, should they be included for Contract 3?
 - Are the lines noted as Cut Back or Cut Back and Remove part of the scope of work for Contract 3?
 - Please provide details for the 3 lines around and connecting to the center feedwell of the Clarifiers.
- A5: Summary of work for PGAD-S003.
- 250-SC-SS01 is the correct size.
 - No these two embeds are not required under this contract.
 - Yes they are within the scope of this contract.
 - Refer to the drawings included in this addendum.
- Q6: Regarding drawing PGAD-S004
- To the west of where 300-PD-SS01 ties into the existing line, it notes to cut back (remove) EX 300-PD-CS01. Is the complete removal of this line in the scope for Contract 3?
 - Please provide drawing PGAD-S015 showing section H noted on this plan drawing.
 - Is the 4027-607B sleeve for line 450-RAS-SS01 West of 9s at GL Ds/Es part of the scope for contract 3?
- A6: Regarding drawing PGAD-S004
- Yes the 300-PD-CS01 should be removed under this contract.
 - Refer to Drawing No. 1-102-PGAD-S015 included in this addendum.
 - Yes the sleeve for 450-RAS-SS01 is under this contract.
- Q7: a. Trap primer connection will be provided at all drains with a p-trap.
b. Trap primer connection will be provided only at the drain closest to a running trap.
- A7: a. Correct.
b. No. Provide trap primer at each running trap.
- Q8: a. Will plastic PEX tubing be acceptable to run in lieu of copper tubing for trap primers?
b. Will PVC DWV pipe and fittings be acceptable for the encased / underground sanitary and roof drain lines in lieu of cast iron?
- A8: a. No.
b. No.
- Q9: a. Would we be correct in assuming the RW lines on the drawing shown dotted are concrete encased and are to be included in Contract 3 pricing?

b. Regarding the OD (Overflow Drain) lines, 2 of them run to the East, drop down and exit the building wall to discharge above grade. The other 2 lines run west but the routing is not clear. Do these 2 west bound lines join up with the standard 150-RD lines then drop down to the primary effluent channel or do they run separately to the channel?

A9: a. No. please refer to structural drawings for concrete encasement requirement.

b. Correct. The intent of the ones on the east side is to provide a visual means of overflow is taking place.

Q10: Regarding the FOA ducting north of gridline Ar, do the two 1000-FOA-SS01 lines require any sleeves or embeds at elevation 233.300?

A10: Tie ins for FOA are not part of this contract.

Q11: Reference drawing MGAD-S502:

a. There are two running traps shown on this drawing without clean out tags. Would we be correct to assume that all running traps should have FCO-1 cleanouts?

b. There are four pipe penetrations, two of them close to Grid Line 2s & Bs, lines 100-D-CI01 and 150-D-PV01 and two between Fs and Gs, lines 100-D-CI01 and 150-D-PV01. Which sleeve/embed detail, if any, should be used for these four locations?"

A11: Reference drawing MGAD-S502:

a. Correct.

b. Each penetration will include a seep ring.

Q12: Reference drawing MGAD-S504:

a. Is an embed required for 75-SPD-SS01 at gridlines 10s and Ds?

b. Regarding the trap primer that is shown along gridline Ds. Is the intent to run tubing to each drain inlet shown or will one feed to the closest drain inlet to serve the running trap suffice?"

A12: Reference drawing MGAD-S504:

a. By embed, we are assuming you mean puddle flange. If this is correct then the response is yes

b. Run each priming line to each running trap and each separately trapped floor drain.

Q13: Reference Summary of work pg. 19-20 and drawing MGAD-S505, S506 and S507.

a. It appears that a portion of the summary of work (maybe S506) is missing from the table. Summary of work for S505 would be better suited to S507 as there is no summary for S507. Please review.

b. For MGAD-S506 are embeds required for 100-VTA-CI01 and 75-SPD-SS01?

c. Is an embed required for the 75-VTA-CI01 line at gridline Ds & 8s?

A13: Reference Summary of work pg. 19-20 and drawing MGAD-S505, S506 and S507.

a. Refer to revised Description of Work, included as part of this Addendum.

b. Yes puddle flanges are required both of these penetrations.

c. No.

Q14: There is conflicting requirements between the drawings and the specifications regarding ground wells. The drawings indicate exact locations for these but in section 26 05 28 (Grounding and Bonding) item 3.4 D states

“install a ground well at each ground rod location” Which version is correct? (Drawing EGRD-S002 SHT001 for example)

- A14: Perimeter ground rods are not actually included in the scope of work, as finished grade will not be available, hence, the grounds rods and ground wells cannot be installed.
- Q15: For the concrete curb at the openings above the sump pump area in the clarifiers, on drawing SGAD-S014, the curb width is indicated, but there is no mention of how high the curb is. Can you clarify?
- A15: Curb matches ground floor level, EL 233.477.
- Q16: On detail SGAD-S022 there is a note adjacent to GL 7s that indicates “this wall acts as a beam see M/SGAD-S030”. However neither detail indicates the elevation of the bottom of the beam. Can you provide?
- A16: Underside of beam EL 231.037.
- Q17: Reference Drawing SGAD- S017, Secondary Clarifiers 4 & 5 – Roof Plan – Part A, Drawing SGAD-S028, Section ‘H’, and Drawing SDTL-S010 - Detail 1 & 2. The details for the Monorail Beam appears to be designed to work with a precast concrete roof; the roof over ‘Loading Area ‘B’ is cast-in-place concrete. Please revise the Details as required.
- A17: Details are for cast in place roof. Refer to the drawings issued in Addendum 2.
- Q18: Reference Drawing SDTL-A012 – Structural Standard Details (11), Post Embedment – Pipe Railing on Concrete Stairs. The Plan indicates “Abrasive Nosing Inserts. There are no specifications included in the Contract Documents; please provide.
- A18: Please refer to Specification Section 01 11 00, updated in Addendum 2.
- Q19: Reference Drawing PGAD-R002, Bioreactor 1 – Lower Level Plan – Part ‘A’, Drawing PGAD-R003, Bioreactor 2 – Lower Level Plan – Part ‘B’, and Drawing PGAD-R004, Bioreactor 3 – Lower Level Plan – Part ‘C’. All three plans indicate “Headloss Adjustment Plates (SS 316L)” near Gridline ‘6r’. Please clarify if these plates are included in this contract or not.
- A19: The headloss adjustment plates are not in this contract
- Q20: Reference: Drawing # 1-0102-SGAD-R0017&18, Grid lines Fr and Lr, please specify material at expansion joint between walls and base slabs.
- A20: Premolded Joint Filler per Specification Section 03 15 00, 2.5.
- Q21: Drawings ADTL-R001 Detail B (600mm pipe) and ADTL-R003 Detail B (150 mm pipe). Please provide pipe specifications, perforation sizing and perforation spacing.
- A21: For ADTL-R001 Detail B (600mm pipe), the detail required under this contract is Detail 2 shown on Drawing PGAD-R018. For ADTL-R003 Detail B (150 mm pipe), the detail required under this contract is Detail 1 shown on Drawing PGAD-R018. Only the concrete embeds are required under this contract. The perforated section of the pipe is not required under this contract.
- Q22: a. Volume (footage) of piping to be drained?
b. Nearest isolation valves for each line requiring draining?
c. Where do we drain the existing lines to?
d. How do we isolate the 600mm (24”) and the 350mm (14”) lines to Clarifier #4 center column once lines are tied in at flanges?
- A22: a. Refer to drawings
b. Coordination with the City for draining pipes is required. Some pipes do not have isolation valves and will require a temporary service shut down.

- c. Existing process drains or floor drains.
 - d. There are existing isolation valves at the plant.
- Q23: a. Are the RWL lines in the electrical room ceiling the only concrete encased RWL lines in the clarifier bldgs?
- b. Are the RWL lines shown on Bioreactor drawing MGAD-R509 concrete encased? To be installed as part of this Contract 3?
- A23: a. Refer to structural drawings for concrete encasement of drain pipes.
- b. Refer to structural drawings for concrete encasement of drain pipes.
- Q24: Slide gate suppliers are asking for a more detailed spec re the SS bird screens on front side of slide gates. They need further direction on requirements. (i.e.) Mount to slide gate frames? Size of openings? Distance from slide gate? Enclose just slide gate or the operator portion as well? ETC
- A24: The bird screen shall be mounted on the gate frame. Openings of about 10 mm. The operator does not need to be enclosed inside the screen.
- Q25: Questions regarding the precast double tees for the blower building.
- a. Section 034000 Precast concrete Part 2.3, C item 3; calls for LL = 2.4 kPa minimum, unless noted. The layout calls for LL = 1.0 kPa. Can you get confirmation of which one?
- b. Section 034000 Precast concrete Part 2.3, C item 4; Provision for an additional LL concentrate load of 1000 kg. Please identify the footprint for that load.
- A25: a. Use LL noted on drawings.
- b. Concentrated load is a point load to be applied anywhere along the member.
- Q26: What is the extent of removing shoring? Are we to remove, concrete dead men, rakers, I beam and lagging full height? Can we remove lagging and I beams 1 metre below grade.
- A26: Remove as required to suit construction. Yes, you can remove to 1 m below grade.
- Q27: Are pipe supports included in Contract 3 shown on SDTL-A009? Do you have locations on the plan drawings for the various sizes?
- A27: Pipe supports are not part of Contract 3.
- Q28: Is there any CMU / Masonry on this project? It's not believed there is as there is no spec section for it.
- A28: No, not part of Contract 3.
- Q29: Spec section 03 30 00 – 11 – 3.1.B.2 reads: Roughen and clean surfaces of previously placed concrete against which subsequent concrete will be placed. What amplitude of surface prep will be required? For example; is this a Water blasting, Sandblasting or wire brush surface prep?
- A29: Roughen surface by mechanical means to 6 mm profile.
- Q30: Is the concrete structure part of the foundations permit?
- A30: Permit will be obtained by City.
- Q31: Re: Drawing PDDL-A004 – Detail 4027-605 – Wall or Slab Pipe Penetration and Detail 4027-622 – Level Instrument Floor Pipe. Can all pipe embeds showing flange one end (FOE) or flange both ends (FBE) be installed with grooved ends in lieu of flanges?
- A31: No. Flanges shall be used.

- Q32: Re: Process Mech Spec – 40 27 00.08 - Data Sheet for General Service SS Pipe & Fittings (SS01) – 900mm & larger pipe – our suppliers are asking if the 6 mm external stiffening rings every 3.0 m as noted are required on all 36” concrete encased piping. This would include the bioreactor blower pipe and the clarifier center column piping.
- A32: Yes stiffening rings are required on all pipes including concrete encased.
- Q33: Re: Slide Gate Schedule – 35 20 16.25 Supplement #1 – Under remarks column – Are the SS bird screens required? If so, our suppliers are asking for a more detailed spec and mounting instructions.
- A33: The bird screen shall be mounted on the gate frame. Openings of about 10 mm. The operator does not need to be enclosed inside the screen.
- Q34: Re: Drawing SGAD-S017 for Secondary Clarifiers 4 & 5. Roof Plan, Part 'A' (rev1). This drawing now indicates a Steel Deck supported on Metal Studs. Please confirm if this new item is included in this contract. If so please issue the applicable details/specs
- A34: Portion with metal deck on steel studs is not part of Contract 3.
- Q35: 1Reference: Drawing # 1-0102-STD-L-S007 rev1, details 1&2, at expansion joints, a “300mm type wide strip waterstop on inside all around” is shown. Please specify what material or manufacturer and model # this is and method of attachment. This also occurs in other areas indicated on detail drawings issued with addendum #2.
- A35: Refer to Specification Section 03 15 00, 2.3.
- Q36: Throughout the various structural drawings for the Secondary Clarifiers there is a note indicating the 300mm Geofoam, 300mm Earth cover and 60 Mil PVC Sheet; some but not all are called out the summary of work as being by others. Some have since been adjusted by addendum. Please confirm that the intent of the summary of work is that all Geofoam, PVC Sheet and Earth cover at the Secondary Clarifiers is by others.
- A36: Yes, all geofoam, earth cover etc. on top of roof slab above secondary clarifier lower level is by others.
- Q37: Reference drawing number SGAD-S053; please confirm the owner intends shutdown flow from Secondary Clarifier No. 3 in order for the contractor to facilitate the demolition and re-construction of the effluent conduit as specified.
- A37: Yes the owner intends to shutdown clarifier 3 but note that this work can only take place in the winter season.
- Q38: Reference Drawing PDDL-R001 Bioreactor/Blower Building Details – Weir Details 4, 5 & 6 (Rev. 00 issued for Addendum 2), PGAD-R006 Bioreactor 1 – Upper Level Plan – Part 'A' (Rev. 01 issued for Addendum 2), and Drawing PGAD-R015, Bioreactors / Blower Building – Sections 'C' & 'D' (Rev. 01 issued for Addendum 2). Please clarify if these Weir Plates, now detailed, are included in this contract or not. If so please issue the applicable drawings for Bioreactors 2 & 3.
- A38: The weir plates are not included in this contract.
- Q39: Re: Spec 03 10 00 - D. Formwork with Form Liners - do all structures require form liner as specified? Drawings show form liner limited to clarifiers only. Please clarify extent of form liner required.
- A39: Yes, all structures require form lines as specified.
- Q40: Re: Spec 07 52 16 .SBS Roofing - please confirm extent of vapour retardant required as part of this contract as nothing is shown on the drawings.
- A40: This applies to roofs of all above grade buildings.
- Q41: Re Spec: 03 39 00 - Hardener - please confirm location of areas requiring hardener as part of this contract.
- A41: Hardener is not required to be provided in this contract
- Q42: Re: Addendum 1 - Dwg 1-012-PGAD-R002 - this drawing adds a reference to dwg PDDL-R001 which we are unable to locate - please advise.

- A42: Refer to Addendum 2.
- Q43: Dwg 1-012-SDTL A001 - Concrete Mix - please confirm if all Mix Type A requires S3 exposure as this is a significant cost premium.
- A43: Yes all Mix Type A are S3 exposure.
- Q44: Is there a BIM model of this project that can be provided?
- A44: Model will be provided to the successful bidder.
- Q45: Is there any information on the anticipated flow from the hydrant and the anticipated costs for the water?
- A45: The anticipated flow from the hydrant is not known. Assume standard City of Winnipeg water rate costs.
- Q46: Section 07 52 16 Item 1.1B. refers to a Vapour Retardant under Clause 2.1.F. that is part of this contract. Under 2.1 Materials item E is the Vapour Retardant, not F. Please clarify which product (E or F) is to be used and identify the locations where it goes.
- A46: Shall be under Clause 2.1.E. of the mentioned section. Refer to revision in this Addendum.
- Q47: Section 03 30 00 Concrete Item 2.2 C 2.a calls for 40 mm aggregate. Due to the problems associated with pumping this mix and with the amount of rebar in the walls this mix is typically not used. Will the requirement for 40mm aggregate be deleted?
- A47: 40 mm aggregate may be reduce to 20 mm during construction pending successful shrinkage tests.
- Q48: Section 03 15 00 Conc Jts & Access. Item 3.1 C Const. Jts in Susp. Slabs Restrained by Connecting Walls - Please confirm that this requirement is still required , as it will severely restrict the size of pours.ie If you were pouring a effluent channel slab 2 m wide you would be restricted to a 10 m long pour. This would require multiple pours.
- A48: Yes, this requirement is still required.
- Q49: Re: Drawing CGAD-R001 -
- a) Please confirm that all of the Concrete Encased piping along gridline Jr, Lin #150-RW-PV02 is to be part of Contract 3 item A.7.
- b) Please provide the specification for PV02 piping
- A49: a) Pipe along Jr is part of contract 3, item D.4.
- b) Refer to E21, included as part of this Addendum.
- Q50: can the excavation required for the bioreactor structures along GL Ar be done without compromising the foundations of the existing structure?
- A50: The existing structure is on piles at similar depth. Plan excavation in a manner that will minimize over-excavation next to existing structures.
- Q51: The excavation of the clarifier areas has been completed to an elevation of 224.788, which is the underside of void at the center of the clarifier areas. However, at the edge of the clarifier slab the ground only needed to be excavated to an elevation of 225.200. Is additional fill required below the voidform to get to this elevation to be paid for out of the unit prices for backfill? Or is this to be carried by the contractor? Similarly for the basement slab at the clarifiers, since the slab is at a higher elevation, the area will need to be built up.
- A51: Yes, the fill required below the clarifier voidform and below the basement slab are to be included in the unit prices for backfill. Refer to Note 4 on Drawing 1-0102-SGAD-S019 and Note 7 on Drawings 1-0102-SGAD-S020 to S023.

- Q52: Drawing SEP-339 does not show the demolition requirements for the channel and lower level tie in point adjacent to GL 7r at the existing building. Can you provide the extent of demolition required? Is the removal of the masonry veneer in these areas in this contract?
- A52: Removal of masonry veneer at Grid line 7r is not required as existing exterior walls cladded with metal siding.
- Q53: What pay item is the shoring removal to be included under?
- A53: Include removal of shoring under Item No. D.2 - Demolition of Existing Structures.
- Q54: Does the quantity of granular backfill on the tender form include the fill required at the weeping tile? If it does, can a separate unit price on the tender form be provided?
- A54: Assuming you are asking about the pea gravel, a separate unit price line item for the weeping tile has been included as part of FORM B (R3): PRICES, which forms part of this Addendum. Pea gravel is incidental to the weeping tile installation.
- Q55: In addendum 1, the tender form modified the unit prices for item C, but it does not appear to be clear where the cast-in-place connection to chamber to is to be included under. Is this to be included with item C.2?
- A55: Refer to item E20 included in this Addendum.
- Q56: When the liquid retaining areas are being filled with water, is there a restriction as to when the filling activities can occur? Is it acceptable to tie into the existing fire hydrants to fill the tanks? What is the liters per second that are available from the existing fire hydrants?
- A56: Filling of liquid retaining structures requires coordination with the Contract Administrator. The fire hydrants can be used to fill the tanks but coordination with the City is required. The flow available from the fire hydrants needs to be agreed to with the City during construction.
- Q57: Detail 2 on 0102-STD-L-S004 shows 15M @ 300 dowels for wall on GL Es/6s & 20M @ 300 Dowels for the wall connection on GL 6s/Fs. Section D Part B on 0102-SGAD-S025 indicated 25M @ 200 Dowels here. Please confirm what the correct detail is.
- A57: For connection to existing concrete at gridline 6s, use 20M@250 as shown in Section D Part B, except along doorway opening, use 15M@300 shown in Detail 2 on STD-L-S004.
- Q58: Detail 0330-101 on drawing 1-0102-SDTL-A006 titled "connection of new concrete to old concrete" shows injection hose waterstop required per 0315-810. This waterstop is not indicated in all locations that detail 0330-101 is called for on the building sections and standard details. For example at detail 2 on 1-0102-STD-L-S008 there is no waterstop indicated. Similarly for detail 2 on 1-0102-STD-L-S004 the connection at GL Es/6s does not indicate waterstop while the connection at GL Fs/6s does. Please clarify if injection hose waterstop is required at all locations where detail 0330-101 is indicated.
- A58: Yes, injection hose waterstop is required at all locations where detail 0330-101 is indicated.
- Q59: Is it acceptable to change the L Bars to U bars for the typical corner details? See standard detail 0330-003 drawing SDTL-A004d.
- A59: No. Provide bars as shown on detail.
- Q60: Is it acceptable to change the height of the vertical bars and do away with the long Lbar and replace with a straight vertical and cap off with U bar? Reference wall / roof slab detail on SGAD/R017 at GL Fr.
- A60: No, long bend is required for cantilevered walkway at top of wall.
- Q61: Weeping Tile pipe: CGAD-S001 & CGAD-R001 Weeping tile pipe is identified in the summary of work 01 11 00 as being part of the of Bid Op 899-2015. This pipe is also shown in on the MGAD drawings and CGAD-R001 has notes to see Drawing MGAD-R504 for continuation. Checking what MGAD section in the summary of work says, the weeping tile is not identified specifically as being part of the scope to carry under any of the drawings

where it is shown. Can you please clarify if any portion of the weeping tile pipe is to be carried under this contract by Mechanical or it will be the sole responsibility of the underground services contractor.

A61: Weeping Tile and associated stone, fill and geotextile as shown on the Drawings shall be supplied and installed under this Contract.

Q62: HV-1 to HV-4: HV-1 to 4 appears in the speciation 22 10 01 page 3-4 and are tagged on the drawings but the Summary of Work 01 11 00 does not identify these items to be part of this contract. Please clarify.

A62: These hose valves complete with hose racks will be surface mounted therefore they are not included in this contract.

Q63: Drawing MGAD-S507 on the summary of work page: Drawing 1-0102-MGAD-S507 is not shown under the summary of work page.

A63: Refer to revised Description of Work provided as part of this Addendum.

Q64: Trap Primer Requirements: 22 40 00 section 3.2.A.5 has 2 items that read:

c) "no attempt has been made to show trap primer routing on the drawings"

d) "terminate Trap primer lines 300 mm above finished floor neatly along the wall where the serving trap primer valve is located on the drawings"

Only 2 Trap primer Valves are identified on all the drawings. Drawings MGAD-R502, R503, R504, R505, R508, S502, S503, S505, do not have any Trap primer valve shown. We feel that the design responsibility to show the routing of this scope of work should be by the engineer. Alternatively a maintenance procedure that regularly would see water added to these traps would remove the need to have all trap primed and should be considered.

Please clarify (sic)

A64: Each trap primer valve includes a manifold that can feed to up to 30 traps, for this reason we do not need to have a trap primer valve on every drawing. The trap primer lines are not shown because they might interfere with the form work, therefore this work can be more efficiently done through site coordination.

Q65: Drawing MGAD-S506: Scope outlined under the summary of work 01 11 00 does not match what is shown on the drawings.

A65: Refer to revised Description of Work provided as part of this Addendum.

Q66: Topping concrete strength f'c?

A66: Refer to Specification 03 30 00.

Q67: Two 300mm wide walls are shown between Kr and Mr: Are they proud of the top of the DT or do they stop underneath the flange?

A67: Refer to Section E.

Q68: Can DTs be wider than shown on layout? Based on the number of DTs shown for a given portion, they averaged about 2410mm wide or less.

A68: Width of double tees can be wider. Coordinate openings per note on Section D.

Q69: Specification section 03 30 00 1.8 C.1 indicates that the contractor must provide continuous protecting for slabs on grade to prevent the subgrade from freezing due to cold weather. Does this apply to the slabs on voidform on this project? Does the ground below the Bioreactor and Clarifier building slabs on void need to be prevented from freezing over the 2016-2017 winter if the concrete to the slabs is completed?

A69: No, grade under slabs with voidform will not need protection from freezing.

- Q70: Is the sodium bisulfite system incidental to the sewer and water works? If so, what section of the tender documents should it be priced under.
- A70: Supply and installation of sodium bisulphite distribution piping, plug, plug valve, and connection to 2100 diameter concrete by-pass pipe shall be incidental to the by-pass sewer pipe, as indicated in this Addendum.
- Q71: Usually catch basins are paid for in the unit each, but these 2 catch basins are by the vertical meter. Can you confirm whether the vertical meter measurement is from rim to invert of the pipe? Or is the measurement for payment from the catch basin rim to bottom of the sump?
- A71: Rim to sump for both catch basins.
- Q72: The couplers vary in size from 200mm up to 900mm. I have taken a look through the drawings and specifications and was not able to see anything regarding the coupler requirements/specifications (i.e. material for couplers and bolts, pressure ratings, etc.). If I have missed it, can you please let me know what section it is in?
- A72: We use ROBAR only on Ductile Iron Pipe (section 40 27 01 Process Piping Specialties Clause 2.3.B.3).
- Q73: Re: As per Spec Section 35 20 16.25 - Clarifier Stop Log and Slide Gates. Are there additional stop logs or slide gates required as part of this contract? Are the stop logs on the bioreactors part of this contract?
- A73: The stop logs to be supplied under this contract shall be per section 35 20 16.25. The stop logs in the bioreactors are not in this contract.
- Q74: Re: Clarifier Drawings PGAD-S003, S004, S005 and S013. Is any of the thatched piping shown (cut back piping) on these drawings to be removed under this contract? Existing 250-FSW-CS01 & 300-PD-CS01. Please clarify.
- A74: Yes these pipes shall be removed. The extent of removal is shown on drawing PGAD-S013.
- Q75: Re: Clarifier Drawing PGAD-S004 - How are the four (4) tie-in locations shown on this drawing to be isolated which the tie-ins are completed under this contract?
- A75: Refer to Section 01 52 10(R1) Construction Sequence supplied as part of this Addendum.
- Q76: For the revised Summary of Work 01 11 00 (R1), issued by addendum 2, drawing SGAD-S024 indicates that all the work shown on this drawing is to be completed by this contract. Are the masonry walls to be in the contract? The reference to drawing SGAD-S014 indicates that the masonry walls are not to be part of the contract. Can you confirm if any of the masonry walls are in the contract?
- A76: No, there are no masonry walls in this contract.
- Q77: On drawing SGAD-S017 reissued by addendum 2, there has been some steel roof deck and steel studs added for the roof and walls of Walkway A. Can you provide a specification for these? Also we will need to know what the roof elevation of Walkway A is. Drawing SGAD-S024 does not provide the elevation.
- A77: There are no roof deck or steel studs in this contract.
- Q78: For drawing SGAD-S050 which was issued with Addendum 2, can you confirm that all the demolition along the existing GL A is included in this project? The summary of work for this drawing was not updated with the Addendum.
- A78: Existing drop shaft demolition is part of this contract. Remainder of demolition is by others.
- Q79: For detail 1/SDTL-S009, can you clarify the extent of the concrete ledge that supports the slab? Also, there does not appear to be a section showing this slab support, all the sections are through locations that have beam support pilasters.
- A79: Concrete ledge is continuous under edge of slab. See detail 8, on SDTL-S013.

- Q80: Drawing ECRT-R001 indicates a concrete trench from the outside wall of the electrical room to the future electrical equipment, and the summary of work 01 11 00 further indicates that this is to be in our contract. However, the detail on C/ECRT-R002 indicates to refer to the structural drawings for additional information. The structural drawings do not have any details on this portion of the trench. Is this to be in our contract? If it is can more details be provided? Or is this to be a precast trench that is just placed on top of the finished slab?
- A80: The portion of the concrete trench shown on 1-0102-ECRT-0001 001 from the outside wall into the interior of the building (that leads to the future switchgear) is to be included in this contract. This is to be built into the concrete floor (recessed), and to have a steel removable cover – for future installation of electrical service cabling. The exterior portion from the Roxtec penetration (at the outside wall) out to the service transformers is not included in the contract. The Roxtec penetration assemblies are to be included in this contract. This is not a precast trench on top of the slab. The trench shall not interfere with the travel way and shall be recessed into the floor.
- Q81: When the liquid retaining areas are being filled with water, is there a restriction as to when the filling activities can occur? Is it acceptable to tie into the existing fire hydrants to fill the tanks? What is the liters per second that are available from the existing fire hydrants?
- A81: Filling of liquid retaining structures requires coordination with the Contract Administrator. The fire hydrants can be used to fill the tanks but coordination with the City is required. The flow available from the fire hydrants needs to be agreed to with the City during construction.
- Q82. Contractor's Pollution Liability Insurance - This clause requests coverage on a per occurrence basis, our annual policy is on a per claim basis. Please ask the owner if CPL coverage on a per claim basis would be acceptable.
- A82: If a per occurrence policy is not available, The City of Winnipeg will accept a "claims made" policy with a 12 month extended reporting period.