
AMENDMENT NO. 5

1) Requests for Clarification

Question 1: Our specification is missing sections: 08 80 50 Glazing, 08 90 00 Louvers and Vents, 09 21 16 Gypsum Board, 09 65 00 Resilient.

Response 1: All of the above mentioned sections were included in the specification document submitted for bid. This has been verified with the document on Merx.

Question 2: Section 1/510 shows what appears to be a suspended structural slab in the background. Can you clarify what this is?

Response 2: As it is not clear what this question is referring to, the only things suspended are the ceiling baffles which are identified and the prefinished metal roof (also identified) which is detailed on Dwg.A-511.

Question 3: Details at top of masonry wall of firing range differ from architectural/ structural. Structural shows top course bond beam, architectural shows pre-cast sill. Please clarify requirements.

Response 3: Provide a bond beam at top of masonry wall below the precast sill.

Question 4: Our supplier tells us that the galv. Trusses for firing range are too long for the galvanizing tank. Can a splice be designed if this is the case?

Response 4: Splices are acceptable at specific locations shown in attached sketch. Provide full penetration field weld and paint with zinc-rich paint as per specification.

Question 5: There is no room finish schedule for firing range and the painting specification is vague. Please provide finishing requirements for this structure. Also room schedule for training building shows paint ceiling only.

Response 5: Refer to Dwg.A-001. Refer to response to question 10.

Question 6: Please clarify framing system around louvers in firing range if not part of missing louver and vents specification.

Response 6: Refer to specification section 08 90 00 Louvers and Vents.

Question 7: Roof framing for firing range is exposed to weather. Should this be pressure treated material?

Response 7: All exposed timber to be pressure-treated, as noted at the bottom right of detail 1/ A-510.

Question 8: Door schedule calls for 2 aluminum doors. Please provide specification.

Response 8: Revise doors 101 & 107 from type FG to type G and from aluminum to hollow metal.

Question 9: Section 10 - Manufactured specialties under materials you ask for bird netting. Where is this to be installed? Also under installation you mention security bars, but nothing specified. Where and what is required for this?

Response 9: In the section 5/A-310 use bird netting where mesh fabric is indicated.

Question 10: The room finish schedule is showing walls as ACT & GBD while the ceiling shows paint. Please confirm the finishing of the walls.

Response 10: ACT is used in the classroom, corridor, and offices of the training building. Painted GWB ceiling is in Mechanical, Janitor, and washrooms.

Question 11: Please provide dimension and strength of concrete duct banks.

Response 11: Concrete strength: 25 MPa. As per Dwg.C-211 the concrete encased duct bank A and B shall be 500 mm x 500 mm with 4 -53mm conduits as per the arrangement on the drawing.

Question 12: In regards to the fixture Type "B" shown in Section 26 50 00.01. Is the same fixture shown on C-205 Type "SL-1". If the answer is yes the fixture Type "B" is not described as having a button type photo control.

Response 12: Light fixture type 'SL-1' as indicated on Dwg.C-205 is the type 'B' light fixture indicated in the lighting Fixture Schedule of specification section 26 50 00.01. This light fixture is to be complete with a button type photo control as per revised light fixture schedule in Addendum No. 2.

Question 13: In regards to the new high voltage installation. P12 shown on the drawing C-207 is shown as "unused". This pole is right in the way of the new pole line and should be removed (unless it is reused) with the hardware, please clarify.

Response 13: Pole P12 can be removed. Please make sure nothing is fed from it. On the drawings and visual inspection it looked unused.

Question 14: In regards to the electrical maintenance holes. On drawing C-204 above new pole P16 there is a EMH (electrical maintenance hole). Is this part of this contract and should be installed in the communications duct bank "A"? I would recommend placing a maintenance hole is this location seeing that the conduit run exceeds 300 meters.

Response 14: Yes, the EMH shown near pole P16 is for the communication duct bank "A". It is part of the contract. On the same drawing there are also two (2) other EMH shown.

Question 15: Where is Drawing E-1-2 as mentioned in General Notes on Drawing E-210?

Response 15: Electrical E-1-2 is Dwg.C-205, Site lighting plan.

Question 16: Please confirm if doors and frames at Firing Range Building are to have "Galvanized" finish as noted on detail 5/511-210, also if galvanized, advise finish.

Response 16: Refer to Sections 09 91 13 and 09 91 23 for galvanized metal finishes.

Question 17: Please provide specifications for toilet partitions shown in men's washroom 005 in training building.

Response 17: Refer to Section 10 21 13.13 included in Addendum No.02.

Question 18: Dwg C-200 shows "Ex. granular storage lot to be removed" what is the quality of gran. To be removed?

Response 18: This area is finished with granular as opposed to being a grassed area. It is not a stockpile. Materials are required to be removed as required for the installation of the new works and to reinstate as indicated.

Question 19: Dwg C-200 shows "area to be cleared as specified", where is the specification for that? And what needs to be cleared?

Response 19: See Sections 31 22 13 and 31 23 33.01

Question 20: Is there a survey plan for existing site?

Response 20: Existing contours are shown on the plans.

Question 21: What is the extent of asphalt roadway to be done?

Response 21: Refer to drawing C-301 for extent of asphalt roadway.

Question 22: What is the required bonding if there is any? Is there an agreement to bond required?

Response 22: There are requirements for a Bid Bond, Performance Bond, and Labour & Material Payment Bond. Refer to "GC9 Contract Security" for detail requirements and alternates. (See Page 8 of 11 of the "Invitation to Tender" for the web link to contract documents).

Question 23: Is there a cash allowance or contingency allowance?

Response 23: No cash allowance or contingency included at this time.

Question 24: Do we have to submit 2 pages of "Invitation to Tender" or Bid and Acceptance form)BA) pg. 9 & 10 of 11

Response 24: Yes.

Question 25: What is the top surface layer of the rest of the site outside the bldg.; parking & asphalt road? In other words do we have to cover it with topsoil & sod?

Response 25: Refer to Drawing C-301 for landscaping requirements. Reinstatement requirements are indicated in the General Notes on the drawings.

Question 26: Dwg C-301, where it says existing abandoned septic bed, is there a dwg for landscaping for this project?

Response 26: No specific landscape plan. See response to question 25.

Question 27: Site grading plan C-203 is not clear, and no existing elevations or survey for this site, please clarify.

Response 27: Existing contours are on present on the drawings.

Question 28: Which ceiling baffle design is wanted - that depicted on drawing E-210 or that depicted on drawing A-310?

Response 28: Ceiling baffles are designed by the chosen manufacturer. Some components may require revision based on the chosen design.

Question 29: Section 11-67-23 Area 2.1 lists the bullet trap as using AR500 plates. However - there are 3 different plate thickness's listed (6mm/ 10mm/ 13mm). Which thickness is wanted?

Response 29: 10 mm nominal.

Question 30: Section 11-67-23 Area 2.1 lists the bullet traps deceleration chambers can be either 6mm or 10mm. Which thickness is wanted?

Response 30: 10 mm nominal.

Question 31: Section 11-67-23 Area 2.1 lists the bullet trap using 4 gallon bucket canisters for lead collection. There are also a statement about utilizing a lead conveyor system and a filtration system. What lead conveyor system is wanted?

Response 31: Use bucket canisters.

Question 32: Section 11-67-23 Area 2.3 lists the Shooters Booths with a polycarbonate panel in thickness between 3mm to 50mm. Which thickness is wanted? Also - are clear type booths the only option the Client is interested in - or might a Solid panel shooters booth also be acceptable?

Response 32: Use panels of 6 mm thickness, clear.

Question 33: Section 11-67-23 Area 2.3 - Are the Optional Barricades and pivot table tops for the shooters booths wanted?

Response 33: Yes.

Question 34: Section 11-67-23 Area 2.3 list 3 different Shooter Booth/ stall optional items. Specify which are wanted.

Response 34: All three options to be included.

Question 35: Door and Frame schedule: Doors 101 & 107 are noted as aluminum. The hardware schedule noted these doors as hollow metal. Should these doors be hollow metal doors & frames?

Response 35: Revise doors 101 & 107 from type FG to type G and from aluminum to hollow metal.

Question 36: Room Finish Schedule: the following rooms indicate acoustic tile for the walls and nothing for the ceilings - 011, 006, 007 & 008. Please confirm that the walls are painted gypsum board and the ceilings are acoustic tile.

Response 36: See response to question 5.

Question 37: There isn't a room finish schedule for the Firing Range, do the doors and walls require finish paint.

Response 37: Yes. Refer to the door schedule. Refer to the response for question 5 for walls.

Question 38: Confirm location and quantity of signs shown on drawing C-310.

Response 38: Refer to note on Drawing C-310 detail 1 - note 3. Confirm sign information and location with institution prior to construction.

Question 39: Provide a specification for the phenolic washroom partitions.

Response 39: Refer to Section 10 21 13.13 - Metal Toilet Compartments, included in Addendum No.02.

Question 40: Mechanical drawing M-120 Shows the domestic main coming into the building with a building isolation valve, but does not indicate a meter or backflow prevention device. Are these two devices required and if so, please provide direction.

Response 40: Backflow preventer is not required as the training building is low hazard and zone isolation is employed in accordance with CSA B64. Water meter is not required.

Question 41: Mechanical drawing M-120 shows a gas meter on the west wall of the building. The gas utility supplier usually supplies the meter to the client, but Fenbrook already has their own main meter.

Who supplies and installs the exterior underground gas piping and new building gas sub-meter?

Our assumption is the piping and sub-meter are installed by the site services contractor (through General Contractor) and supplied by Fenbrook.

Response 41: Gas piping to be extended from the institution's gas distribution to the building by the contractor. Contractor to provide utility-grade sub meter at the training building.

Question 42: There is mention through the specifications and drawings about interlocking with the building BAS system, yet there are no specifications or directions regarding this system. Please supply a direction pertaining to the building automation and control system.

Response 42: Training building mechanical systems to be stand-alone control. Furnace status to be alarmed at institution central security desk.

Question 43: Attached is page 4 of section 05 12 23. Please clarify under 2.1.5 the shop paint primer compositions for type A and type B.

Response 43: Refer to standards listed under paragraph 1.1.3 of Section 05 12 23.

Question 44: Attached are cut sheet of metal roofing panels. Please clarify whether or not these alternate panels are acceptable for the construction of the metal roofing in the firing range.

Response 44: Manufacturer to confirm compliance with the specifications.

Question 45: On Drawing E-210 Note 01 it references a drawing E-1-2 for Exterior Lights and Controls. I do not see this drawing in my documents package. Please Clarify?

Response 45: Reference General Note 01 of Drawing E-210: Revise "Drawing E-1-2" to "Drawing C-205".

Reference Drawing Note 02 of Drawing E-210: Revise "Refer to Drawing E-1-1" to "Refer to Drawing C-204 for cable routing and to Drawing C-211 for trenching detail."

Reference Drawing Note 04 of Drawing E-210: Revise "Drawing E-1-2" to "Drawing C-205".

Reference Drawing Note 02 of Drawing E-220: Revise "Refer to Drawing C-XXX" to "Refer to Drawing C-204".

Reference Drawing Note 04 of Drawing E-220: Revise "pad mounted transformer" to "pole mounted transformer". Revise "Refer to Drawing C-XXX for size and exact routing of feeders" to "Refer to Drawing C-204 for exact routing of feeders and to Drawing C-208 for size of feeders".

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Reference Drawing Note 09 of Drawing E-220: Revise "Refer to Drawing E-1-1 for routing and trenching details" to "Refer to Drawings C-204 and C-211 for routing and trenching details". Revise "Refer to Drawing E-1-2 for location of light fixtures" to "Refer to Drawing C-205 for location of light fixtures".

Question 46: In order to upgrade the line in between P10 and P11 we would have to dead end the conductors at P10. We do not see the sense in upgrading the conductors from this point seeing that poles P1 to P11 have the same size conductor.

Response 46: The conductor from Pole P1 to P10 are being upgraded under another project.

Question 47: Between poles P11 and P13 there appears to be existing street lights which may come into the limits of approach (10 feet) of the neutral. The poles are 50' with 7' buried into the ground making the top of the pole 43', please review.

Response 47: The placement of the poles from the light poles shall be adjusted to stay within the allowed limits.

Question 48: The diagram on C-211 showing the elevation of poles 12 to 15 is incorrect, they are not suppose to be mounted in this configuration for a straight tangent, please see Specification 12.1 of the C.E.C. for the proper configuration.

Response 48: The elevation is a typical, please follow the required configuration.

Question 49: The elevation for P16 shown on C-211 is incorrect and will not work. There is too much hardware and not enough space especially for a load break switch. The transformer dimensions shown are wrong for a 75Kva transformer, it is twice the size as the one shown. We recommend a pad mount transformer and also deleting the load break switch.

Response 49: The transformer is to remain pole mounted. If there is space issues we can delete the load break switch for now please include it in the package.

Question 50: Drawing C - 200, a note on drawing reads "existing decommissioned septic bed to be removed as encountered". Can you provide us details on extend and construction of decommissioned septic bed? Do we strictly need to confine our self to the area marked on the same drawing?

Response 50: Actual construction of septic bed is unknown; PWGSC to provide information.

Question 51: Do we need to install below grade vertical and horizontal rigid insulation on firing range building?

Response 51: No.

Question 52: Drawing S-211 - The bottom chord struts call for W250x26 sections, this material is not manufactured. Please advise,\

Response 52: Use W250x28.

Question 53: Drawing A-511 - Sections 6, 7, 8, 9, requires structural items to be galvanized. No galvanizing is asked for on the structural drawings. Please clarify which items are to be galvanized.

Response 53: All exposed steel is to be galvanized as per specification Sections 05 12 23 and 05 50 01.

Question 54: As per 1/A-310 Epoxy Coat All Form Work Tie End, Is the Epoxy Coat finished by us or is it prefinished?

Response 54: By Contractor.

Question 55: Is there any painting to be done to Firing Range Roof Trusses (2/A510)?

Response 55: Use a clear fire retardant wood preservative in accordance with Section 09 91 13, paragraph 2.5.6.

Question 56: The specification section "Concrete Forming & Accessories Section 031000" item 2.1.3 specifies a Douglas fir ply form liner. This is somewhat outdated and excessively expensive system. Typically a CSA approved 11/16" form ply would be used for architectural concrete and can accommodate the pattern desired. An example would be a "Peri-Form Maximo" system or similar. Please advise if the Douglas Fir Liner can be deleted.

Response 56: Yes.

Question 57: The Architectural Concrete Wall is shown as a monolithic pour from footing on top. Can this be modified to allow a construction joint at grade or just below grade? Consolidation of a high wall can be tricky, and lead to excessive honeycomb and other imperfections. Please advise.

Response 57: Wall must be poured monolithically as it was designed to act as a free standing wall.

Question 58: Please confirm admixtures for the wall concrete are allowed. Specifically super plasticizer.

Response 58: Yes, using superplasticizers is acceptable.

Question 59: Would you please consider extending the tender closing for this job so that we could get better subcontractor coverage and better pricing on this job?

Response 59: The tender closing date was extended to Tuesday, January 22nd, 2013.

Question 60: As PWGSC intends to complete the concrete foundations before the end of March, has there been any geotechnical investigations to determine the frost depth? This information will be important for GCs to allow a proper budget to get rid of the frost as well as allowing for imported backfill material as the saturated excavated material will not be suitable for backfill.

Response 60: See the geotechnical report.

Question 61: Paving structure specified in soils report is different than what is shown on C-209. Which one is to be followed?

Response 61: Drawing C-209.

Question 62: Exit signs are being fed off lighting circuits. You can't do this as per Ontario Electrical Code 46-400 (1) they must be dedicated circuits to emergency systems only with the breaker locked.

Response 62: Emergency and exit lights are revised to be fed from circuit 40 of panel B. All type D1 light fixtures are revised to be fed from circuit 38 of panel B. Update load description of panel schedule accordingly. Provide lock-on device for circuit 40 of panel B. Revise size of breaker for circuit 42 from 15A single pole to 20A single pole. Circuit 42 shall service the sanitary pumps in the pumping chamber per Drawing C-202. Provide 2#10+GND-27mmC from breaker to main disconnect in control and alarm panel shown on Drawing C-202.

Question 63: Electrical maintenance holes are shown on drawing C-211 (OPSD 2110.01) as "cast in place", the specification describes "precast" and "cast in place". Please clarify which can be used.

Response 63: Precast as per OPSD standards.

Question 64: The lighting supports for fixture type "A1", is there a required finish or coating these steel members should be treated with as they are exposed to the elements?

Response 64: All channels and angles supporting light fixture type A1 shall be galvanized steel.

Question 65: Drawing C-208 indicates that a temporary 12.5/7.2 kV, 3 phase generator will be required to provide power while we make the final connection at P10 for the proposed training building. This connection generally takes 30 minutes, the cost to install the temporary generator (including transformer, ground grid, air brake etc.) will be substantial and we will still have to disconnect power to make the final connection. Please confirm that the generator is required otherwise we will not include it in our pricing.

Response 65: The generator is required.

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Question 66: Question: On Bid and Acceptance Form (BA) what is PBN stands for?

Response 66: Procurement Business Number

Question 67: Is the contractor required to supply and install a temporary generator as per note on C-208? Please clarify why a temporary generator must be used.

Response 67: Yes, the contractor is required to supply and install a temporary generator.

The power for the firing range and training building is provided by extending the existing overhead power line. To make the connection to this overhead power line , it will have to be de-energized. Hence temporary power shall have to be provided so that the site remains operational during that period. It has been noted on the electrical drawing E-1-3

All other terms and conditions remain the same.

End of Amendment No. 5.