

1 ADDENDUM #5

All clauses set forth in the Bidding Documents, Contract Documents and General Requirements of the original Contract Documents shall apply to and govern this work. The addendum refers to changes and additions to the original Contract Documents and is to be read in conjunction with the same. All other parts of the original Contract Documents are to be considered as applying to the work of this Contract with the exceptions and changes as noted below.

1.1 ADDENDA

.1 Reference Addendum #2:

- .1 Reference Specifications Item #1.1.15.2.1:
 - .1 Add "ACO, Watts & JR Smith" as approved equals.
- .2 Reference Drawings Item #1.2.3.1:
 - .1 Reference Sketch SK-01:
 - .1 Tank pad to be located 5000mm away from the building.
- .3 Reference Drawings Item.#1.2.23:
 - .1 Delete paragraph in its entirety.

.2 Reference Addendum #3:

- .1 Reference Specifications Item #1.2.5.3.1:
 - .1 Delete wording "paragraph .2" and replace with "paragraph .3".
- .2 Reference Specifications Item #1.2.5.4:
 - .1 Add paragraph .2 as follows:
 - .2 HI-TUFF TPO by LEXCAN is accepted as an Approved Equal."
- .3 Reference Specifications Item #1.2.23 - addition of revised Section 27 51 16 - Public Address and Mass Notification Systems:
 - .1 Reference Paragraph 2.1.5.9:
 - .1 Add new paragraph .2 as follows:
 - .2 1xC-001t input/out control module". "
- .4 Reference Drawings Item #1.3.14.1.2:
 - .1 Delete as written and replace with the following
"Supply and installation of the platform and all associated work is within the scope of work of Division 05."
- .5 Reference Drawings Item #1.3.14.2.1:
 - .1 Delete as written and replace with the following
"Supply and installation of the platform and all associated work is within the scope of work of Division 05."
- .6 Reference Drawings Item #1.3.14.3.1:
 - .1 Delete as written with the following
"Supply and installation of the platform and all associated work is within the scope of work of Division 05."

- .7 Reference Drawings Item #1.3.14.4.1:
 - .1 Delete as written with the following
"Supply and installation of the platform and all associated work is within the scope of work of Division 05."
- .8 Reference Drawings Item #1.3.22.1.1:
 - .1 Delete paragraph in its entirety.

1.2 SPECIFICATIONS

- .1 Reference Section 05 50 00 - Metal Fabrications:
 - .1 Reference Paragraph 2.13:
 - .1 Add new paragraph .6 as follows:
".6 Refer to Detail M104 - Plumbing Details, Detail 8 for additional information .".
 - .2 Reference Paragraph 2.27
 - .1 Add new paragraph .14 as follows:
".14 Refer to Drawing M104 - Plumbing Details, Detail 6, Detail 9 and Detail 10 for additional information."
- .2 Reference Section 07 21 13 - Board Insulation:
 - .1 Reference Paragraph 2.1.1.9:
 - .1 Add new paragraph .7 as follows:
".7 Owens Corning Thermafiber Firespan®, 40 & 90."
 - .2 Reference Paragraph 2.3.7:
 - .1 Add new paragraph .2 as follows:
".2 WallGuard."
- .3 Reference Section 07 46 19 - Steel Siding:
 - .1 Reference Paragraph 2.1.2.1.3:
 - .1 Add new paragraph .3 as follows:
".3 Urban Accent Series by Ideal Roofing."
 - .2 Reference Paragraph 2.1.3.5:
 - .1 Add new paragraph .3 as follows:
".3 Supreme Interior Liner by Ideal Roofing."
- .4 Reference Section 07 52 00 - Modified Bituminous Membrane Roofing:
 - .1 Reference Paragraph 2.3.1.3:
 - .1 Add new paragraph .3 as follows:
".3 DensDeck prime."
 - .2 Reference Paragraph 2.4.2.2
 - .1 Add new paragraph .2 as follows:
".2 IKO MVP."
 - .3 Reference Paragraph 2.5.2.2:
 - .1 Add new paragraph .4 as follows:
".4 IKO Ikootherm."
 - .4 Reference Paragraph 2.5.3.3:
 - .1 Add new paragraph .3 as follows:
".3 IKO Ikootherm."

- .5 Reference Paragraph 2.5.4.2:
 - .1 Add new paragraph .2 as follows:
 - ".2 IKO Ikotherm."
- .6 Reference Paragraph 2.6.1.2:
 - .1 Add new paragraph .3 as follows:
 - ".3 IKO Protectoboard."
- .7 Reference Paragraph 2.7.3:
 - .1 Append wording: "IKO Protectobase."
- .8 Reference Paragraph 2.8.1.4:
 - .1 Add new paragraph .3 as follows:
 - ".3 IKO Torchflex TP 180 FF."
- .9 Reference Paragraph 2.8.2.4:
 - .1 Add new paragraph .3 as follows:
 - ".3 IKO Armourbond Flash."
- .10 Reference Paragraph 2.8.3.4:
 - .1 Add new paragraph .3 as follows:
 - ".3 IKO Torchflex TP 250 Cap."
- .11 Reference Paragraph 2.9.1.3:
 - .1 Add new paragraph .3 as follows:
 - ".3 LEXCAN ACCESSORIES by LEXCAN."
- .12 Reference Paragraph 2.13.1.4:
 - .1 Add new paragraph .3 as follows:
 - ".3 HI-TUFF TPO WALKWAYS by LEXCAN."
- .13 Clarification:
 - .1 For any roofing system proposed, Section 07 52 00 - Modified Bituminous Membrane Roofing requires the entire roof system to be by one manufacturer. At the shop drawing stage, the proposed system and it's various components must be approved in writing by the Roof System Manufacturer to ensure material compatibility and warranty compliance.

- .5 Reference Section 07 92 00 - Joint Sealants:
 - .1 Reference Paragraph 2.2.15.5.1:
 - .1 Delete paragraph as written and replace with following:
 - ".1 Rezi-Weld Flex (W.R. Meadows)."
 - .2 Reference Paragraph 2.2.17.4:
 - .1 Add new paragraph .3 as follows:
 - ".3 PenJoint 3004 (ASTC)."

- .6 Reference Section 08 56 56 - Service Window Units:
 - .1 Reference Paragraph 2.1.1:
 - .1 Add new paragraph .2 as follows:
 - ".2 CR Laurence, Model DW1800P."

- .7 Reference Section 08 80 00 - Glazing:
 - .1 Reference 2.6.5.1:
 - .1 Add new paragraph .6 as follows:
 - ".6 CR Laurence, Models D2301A72 or KV99272."

- .8 Reference Section 09 68 00 - Carpeting:
 - .1 Reference Paragraph 2.2.2.2:

- .1 Delete wording "100%" and replace with "10%".

- .9 Reference Section 10 21 13 - Toilet Compartments:
 - .1 Reference Paragraph 2.1.1:
 - .2 Delete paragraph as written and replace with "Solid Phenolic Partitions (or plastic partitions as per Addendum #3).".
 - .3 Add new paragraph .8 as follows:
 - .8 Acceptable Material for Phenolic Partitions:
 - .1 PH-FP-500 by Metpar."

- .10 Reference Section 10 28 13 - Toilet Accessories:
 - .1 Reference Paragraph 2.4.3.2:
 - .1 Add new paragraph .2 as follows:
 - .2 Bradley 5234-52."
 - .2 Reference Paragraph 2.4.4.3:
 - .1 Add new paragraph .6 as follows:
 - .6 Bradley 782."
 - .3 Reference Paragraph 2.4.5.4:
 - .1 Add new paragraph .4 as follows:
 - .4 Bradley 740."
 - .4 Reference Paragraph 2.4.7.4:
 - .1 Add new paragraph .2 as follows:
 - .2 Bradley 357."
 - .5 Reference Paragraph 2.4.8.6:
 - .1 Add new paragraph .2 as follows:
 - .2 Bradley 6542."
 - .6 Reference Paragraph 2.4.9.8:
 - .1 Add new paragraph .2 as follows:
 - .2 Bradley 8322-001."
 - .7 Reference Paragraph 2.4.10.6:
 - .1 Add new paragraph .3 as follows:
 - .3 Bradley 9115."
 - .8 Reference Paragraph 2.4.11.4:
 - .1 Add new paragraph .4 as follows:
 - .4 Bradley 9537."
 - .9 Reference Paragraph 2.4.12.4:
 - .1 Add new paragraph .2 as follows:
 - .2 Bradley 9094-18."
 - .10 Reference Paragraph 2.4.13.2:
 - .1 Add new paragraph .2 as follows:
 - .2 Bradley 9953-24."

- .11 Reference Section 10 80 00 - Other Specialties:
 - .1 Reference Paragraph 2.5:
 - .1 Delete paragraph in its entirety and replace with the following:
 - .2.5 Tray Slide
 - .1 Tray Slide, stationary design.
 - .2 3-bar, 31-13/16"W x 10" to 12" D, 1" O.D.
 - .3 Stainless steel tubing, 10 gauge stainless steel brackets.
 - .4 Acceptable material:

- .1 Global Industries Item #: WBB460702.
.2 advancetabco.com, TTR system."
- .12 Specification Section 21 05 01 - Common Work Results - Mechanical:
 - .1 Reference Paragraph 1.20.3:
 - .1 Add new paragraph .1 as follows:
"Reference Specification Section 25 05 60 - EMCS: Field Installation, Paragraph 3.4 for Conduit system requirements."
- .13 Reference Section 22 42 01 - Plumbing Specialties and Accessories:
 - .1 Reference Paragraph 2.15.2.10:
 - .1 Add "ACO" as an approved equal.
- .14 Reference Section 23 21 16 - Hydronic Systems: Steel:
 - .1 Reference Paragraph 2.2.3:
 - .1 Add new paragraph .1 as follows:
".1 Acceptable products: Victaulic, Shurjoint, Anvil Gruvlok, Grinnell or equal."
- .15 Reference New Section 23 21 17 - Press Joint Piping Systems Hydronic Systems:
 - .1 Attached and forming part of this addendum is "Section 23 21 17 - Press Joint Piping Systems Hydronic Systems".
- .16 Reference Section 26 05 21 - Wires and Cables:
 - .1 Reference Paragraph 3.1.5:
 - .1 Clarification:
In Heavy Equipment Bays 209, Machine Shop 210, Welding Bay 215, Wash Bay 216, Light Fleet 188, Parts 200 and Part Mezzanine 201, fixture drops are permitted to be extended from 1.5m to 4m provided that cables are sufficiently supported in accordance with Specification Section 26 05 29 - Hangers and Supports for Electrical Systems.
 - .2 Reference Paragraph 3.2.7:
 - .1 Clarification:
AC90 horizontal wiring in interior of gypsum walls is acceptable. However, AC90 horizontal wiring in exterior walls to be avoided in accordance with Section 26 05 21, Paragraph 3.1.6.
- .17 Reference Section 27 05 28 - Pathways for Communications Systems:
 - .1 Reference Paragraph 3.1.2:
 - .1 Clarification:
Tile rings rather than plastic rings are acceptable.
- .18 Reference Section 27 10 05 - Structured Cabling for Communications Systems:
 - .1 Reference Paragraph 2.3:
 - .1 Clarification:
Electrical wires and cables that are not located in a totally enclosed non-combustible raceways and are installed in a plenum in a building of non-combustible construction are to be FT6 rated in accordance with NBCC 2015 Article 3.1.5.21.2.
 - .2 Reference Paragraph 2.9.3:
 - .1 Delete wording "and each telephone drop".

For clarification, patch cords are only required for data outlets and not telephone outlets. Area cords are required for both data and telephone outlets.

- .19 Reference Section 26 27 26 - Wiring Devices:
 - .1 Reference Paragraph 3.2:
 - .1 Clarification:
 - .1 Receptacles to be tested for proper polarity and proper installation and operation for substantial completion. Voltage drop testing of receptacles is not required as long as branch circuit wiring is sized in accordance with Section 26 05 21- Wires & Cables, Article 3.1.6.

1.3 DRAWINGS

- .1 Reference Drawing C101 - Site Plan:
 - .1 To limit disruption to site operation during construction, trenching through existing asphalt driveway is unacceptable and Contractor shall drill and bore under asphalt driveway to install new sewer services, as per SK-02 - Boring Details, attached to and forming part of this addendum.
 - .2 Delete the following Note stating "143.3m of new 100mm sewer service sloped at 1.5% min c/w (4) 45 degree bends as shown." and replace with scope indicated on sketch SK-07 - Sanitary Service Plan and SK-08 - Sanitary Manhole, attached to and forming part of this addendum. These new sketches indicate the two separate runs of sanitary service with a new sanitary manhole.
- .2 Reference Drawing S101 - Foundation & Ground Floor Plan North:
 - .1 All concrete block wall strip footings shall step down at intersections with existing exterior frost wall footings and new interior column footings, in accordance with sketch SK-10 - Step Footing Detail, attached to and forming part of this addendum.
- .3 Reference Drawing S102 - Foundation & Ground Floor Plan South & Mezzanine Framing Plan:
 - .1 Reference Detail 2 - Mezzanine Framing Plan:
 - .1 Between grids 8 and 9 along gridline X, provide an opening in mezzanine slab for overhead door 200.2 track for full joist space. Provide L100 x 100 x 8.0 pour stop angle along last joist and coordinate guard railing with architectural. Joist supplier bridging and/or bracing tying joist system to beam along grid X shall be coordinated to avoid conflict with overhead door.
- .4 Reference Drawing S104 - Roof Framing Plan North:
 - .1 Steel Contractor shall supply and install overhead door steel header and jamb assembly in accordance with Architectural details 4/A403, 1/A406 and 3/A406. Acceptable member sizes are HSS152x102x8.0 and C200x17 minimum, fully welded together.
 - .2 Steel Contractor shall supply and install mechanical louvre header and jamb assembly in accordance with Architectural details 4/A308, 6/A402 and 7/A402. Acceptable horizontal and vertical member sizes are HSS152x152x6.4 minimum.
 - .3 Contractor to allow for additional snow drift loading at all AHUs with a drift load of 4.60kPa for a distance (xd) of 2750mm.

- .5 Reference Drawing S201 - Concrete Sections & Details:
- .1 Reference Detail 12 - Section Wash Bay Catch Pit:
 - .1 Clarifications:
 - .1 Wash pit shall be 1200mm x 1800mm as noted on A101.
 - .2 Refer to Detail 5/A309 for wash pit access ladder.
 - .2 Delete following note:

"Contractor to provide 610mm imp R11 manhole frame & grate. Slope slab to top of cover." Refer to architectural detail 7/A404 for galvanized bar grating and angle c/w anchor."
 - .3 Delete wash pit depth dimension "1000" and replace with "1500".
 - .4 Delete wash pit width dimension "915" and replace with "1200"3
 - .5 Delete footing width dimension "1425" and replace with "1700".
- .6 Reference Drawing A101 - Floor Plan - North:
- .1 Reference Detail 1/A101:
 - .1 The floor drain at Door 210.2 is to be shortened by 600mm and the slope to drain at Door 210.1 is to be moved 600mm to the south.
 - .2 Reference Roof Type Schedule:
 - .1 Clarification:

The roof steel is sloped to drain. The tapered insulation indicated in both R1 and R2 is only intended to supplement the 2 uniform layers of insulation to create positive slope to drain at any awkward locations. The roofing installer to provide a drainage plan at the shop drawing stage to show specifically how the drainage will be handled. An electronic base plan can be provided by the Consultant if required.
 - .3 Reference Wall Type Schedule:
 - .1 In Wall Type P7, "RFP" should read "FRP".
 - .4 Reference Door #200.2:
 - .1 An opening is being created in the last joist space of the mezzanine floor parallel to Grid X. The track for this door, as with the other overhead doors is to be high lift and extend up to and parallel to the roof joists, through the new opening.
- .7 Reference Drawing A102 - Floor Plan - South:
- .1 Reference Detail 1/A101:
 - .1 At Grid P22 there is a C4 column. The W-6 window will be modified and split in two sections as referenced via Drawing A709 of this Addendum.
 - .2 Reference Detail 2/A102:
 - .1 An opening is being created in the last joist space of the mezzanine floor parallel to Grid X. Provide a guard rail to Detail 11/A601 starting 100mm inside the exterior wall at Grid 8 and extending 8200mm south to connect to the guardrail shown along the north side of the opening between the mezzanine level and main floor level. Locate 90 mm from the face of the new opening to the inside face of the guardrail as with the other guardrails.
 - .3 Reference Wall Type Schedule:
 - .1 In Wall Type P7, "RFP" should read "FRP".
 - .4 Reference Roof Type Schedule:
 - .1 Clarification:

The roof steel is sloped to drain. The tapered insulation indicated in both

R1 and R2 is only intended to supplement the 2 uniform layers of insulation to create positive slope to drain at any awkward locations. The roofing installer to provide a drainage plan at the shop drawing stage to show specifically how the drainage will be handled. An electronic base plan can be provided by the Consultant if required.

- .5 Reference Room #157 - Survey:
 - .1 Position north wall such that the south face of the GWB finish extends to cover the concrete block wall on the west end.
- .6 Reference Room #185 PO Payroll:
 - .1 Add a 16mm layer of GWB to the face of the exposed P1 concrete block walls to 150mm above ceiling.
- .7 Reference Room #186 Branch Manager:
 - .1 Add a 16mm layer of GWB to the face of the exposed P1 concrete block walls to 150mm above ceiling.
- .8 Reference Drawing A201 - Building Elevations:
 - .1 Clarification:
The siding typically is to start 150mm above grade.
- .9 Reference Drawing A202 - Building Elevations:
 - .1 Reference Detail 1/A202:
 - .1 At Grid P22 there is a C4 column. The W-6 window will be modified and split in two sections as referenced via Drawing A709 of this Addendum.
 - .2 Reference Detail 2/A202:
 - .1 Some door numbers are shown improperly on the west elevation, please make the following changes:
 - .1 Delete wording "191.1" referencing this door, and replace with "191.2".
 - .2 Delete wording "191" referencing man-door, and replace with "191.1".
 - .3 Delete wording "199.1" referencing this door, and replace with "200.1".
 - .4 Delete wording "199.2" referencing this door, and replace with "200.2".
 - .2 Clarification:
The siding typically is to start 150mm above grade.
- .10 Reference Drawing A303 - Wall Sections:
 - .1 Reference Detail 3/A303:
 - .1 Clarification:
All canopies are located at the same vertical position as shown on this detail.
- .11 Reference Drawing A307 - Wall Sections:
 - .1 Reference Detail 2/A307:
 - .1 Delete reference to Bollard Detail. Typically bollard detail is as per Structural Drawings.
- .12 Reference Drawing A309 - Wall Sections:
 - .1 Reference Detail 1/A309:
 - .1 Heavy Equipment should read 209 and Handwash should read 206.

- .13 Reference Drawing A401 - Section Details:
 - .1 Reference Detail 2/A401:
 - .1 Ignore note "_x_x_ steel soffit".
 - .2 Reference Detail 4/A401:
 - .1 Clarification:
Provide thru wall flashing at all windows, shown but not referenced.
 - .3 Reference Detail 6/A401:
 - .1 Ignore note "_x_x_ steel soffit".

- .14 Reference Drawing A402 - Section Details:
 - .1 Reference Detail 1/A402:
 - .1 Delete the words "19mm Solid Pine Sill Paint" and replace with "19mm Solid Clear Pine Sill Painted, Typical at all Windows".

- .15 Reference Drawing A403 - Section Details:
 - .1 Reference Detail 4/A403:
 - .1 For notes "_x_x_ steel door jamb" and "_x_x_ steel door head and jamb", refer to structural for jamb sizes.

- .16 Reference Drawing A501 - Reflected Ceiling Plan - North:
 - .1 Reference Drawing Legend:
 - .1 The sprinkler head symbol is shown incorrectly in the legend and should be represented by 2 concentric circles or a single circle as shown on the plan. Refer to the mechanical documents for sprinkler design requirements.

- .17 Reference Drawing A502 - Reflected Ceiling Plan - South:
 - .1 Reference Drawing Legend:
 - .1 The sprinkler head symbol is shown incorrectly in the legend and should be represented by 2 concentric circles or a single circle as shown on the plan. Refer to the mechanical documents for sprinkler design requirements.

- .18 Reference Drawing A601 - Stair and Rail Details:
 - .1 Reference Detail 5/601:
 - .1 This step is shown with 2 risers and should be shown with 4 as per Detail 10/A601.

- .19 Reference Drawing A702 - Interior Room Elevations:
 - .1 Reference Detail 2/A702:
 - .1 The detail at the head jamb and sill for the sliding windows is to be similar to Detail 6 and 8/A709 with the GWB extended inside the throat of the aluminum frame.
 - .2 Reference Detail 4/A702:
 - .1 The detail at the head jamb and sill for the sliding windows is to be similar to Detail 6 and 8/A709 with the GWB extended inside the throat of the aluminum frame.
 - .3 Reference Detail 5/A702:
 - .1 The detail at the head jamb and sill for the sliding windows is to be

similar to Detail 6 and 8/A709 with the GWB extended inside the throat of the aluminum frame.

- .20 Reference Drawing A704 - Interior Room Elevations:
 - .1 Reference Room #176 Women's Washroom:
 - .1 Add vinyl wall protection at this washroom above the sink, 900mm wide x 400mm high.

- .21 Reference Drawing A709 - Doors, Windows, Frames and Details:
 - .1 Reference Detail 3/A709:
 - .1 Window Type W-6 to be modified as follows: Provide 2 window units with 5 equal horizontal sections each unit with a total length of each unit of 2300mm. Height to remain as shown. Left and right sections will each have an operable window as shown. The centre (11th window panel shown) will be removed to accommodate the column at Grid P22.

- .22 Reference Drawing M103 - Plumbing Schedules and Details:
 - .1 Reference Plumbing Fixture Schedule:
 - .1 Reference ID - EW-1:
 - .1 Fixture Acceptable Alternate: Bradley S19314SBFW.
 - .2 Notes: IS NOW - Provide Mixing Valve Lawler 911E complete with cold water bypass, Bradley S19-2100 EFX25 or equal.
 - .2 Reference ID - WF-1:
 - .1 Fixture Acceptable Alternate: Bradley MF2933-STD-IRP-LSD-TL.
 - .2 Notes: Add Color to be verified during shop drawing review.
 - .2 Reference Water Heater Schedule:
 - .1 Reference ID - DHWH-2:
 - .1 Make and Model IS NOW, Bradford White CEHD-120-9-33JCF Heavy Duty. Electric Coil kW IS NOW 9.0 kW.

- .23 Reference Drawing M105 - Mechanical Roof Plan:
 - .1 Reference Detail 1:
 - .1 Delete Unit identified as AHU-1 on the plan. Delete "AHU" tags on all units. Reference Drawing M301 and Drawing M302 for correct unit tags and exact placement.
 - .2 Add following Notes:
 - .1 "Reference Drawing M304 Detail 1 and Detail 8 for Exhaust Fans EF-5, EF-8, EF-10, EF-11, EF-12, EF-13, EF-14, EF-15, EF-16 and EF-17. Provide four (4) tieoffs and guy wires for each exhaust fan stack."
 - .2 "GC to provide for flashing membrane of all supports, curbs, penetrations, etc into roofing system. Curbs, supports and penetrations are to be supplied by Division 22 or 23."

- .24 Reference Drawing M202 - Heating Floor Plan South Side:
 - .1 Reference Detail 1:
 - .1 Provide cooling water line connection to FC-7 from nearest available tie-in point.
 - .2 Fuel tank T-1 to be located 5000mm away from building foundation wall.

- .25 Reference Drawing M203 - Heating Details:

- .1 Reference Detail 3:
 - .1 Add circuit setter balancing valve on outlet (HWR) of fan coil before isolation valve.
- .2 Reference Detail 21:
 - .1 Delete from "Duct Temperature Sensor" from the Scope of Work.
 - .2 Add Note:
 - .1 "Fan coil to be provided with 0-10 VDC connection to allow BMS contractor to control fan speed. All other controls work shown in schematic to be provided by BMS contractor Division 25."
- .26 Reference Drawing M204 - Heating Details and Schedules:
 - .1 Reference Detail 3:
 - .1 Add note: "Contractor to provide status point only for Pump P-1 and P-2; Control to be provided through boiler controller."
 - .2 Reference Detail 6:
 - .1 Add circuit setter balancing valve on outlet (HWR) of unit heater before isolation valve.
 - .3 Reference Detail 7:
 - .1 Add note: "Solenoid valve to be supplied by Division 25, installed by Division 23. All wiring, relays, conduit, etc by Division 25."
 - .4 Reference Detail 8:
 - .1 Add circuit setter balancing valve on outlet (HWR) of unit heater before isolation valve.
 - .5 Reference Detail 10:
 - .1 Add note: "Contractor to provide for draft regulator on exhaust flue. Alternate chimney arrangements with cleanout to minimize required installation space will be accepted."
 - .6 Reference Detail 12:
 - .1 Add note: "Pumps P-3, P-4, P-5, and P-6 to be controlled through BMS. See Drawing M204, Detail 4."
 - .7 Reference Detail 13 (Points Schedule):
 - .1 Delete note as written and replace with following:
"In addition to the above noted points, provide Bacnet RS 485 or Bacnet IP connection to chiller. Controls contractor to monitor 10 virtual points to be determined by owner through BMS Bacnet connection."
- .27 Reference Drawing M205 - Fuel Tank Relocation and Heating Details:
 - .1 Add note: "Volume of fuel to be pumped, polished and transferred per compartment is 1000 imperial gallons (2000 Imperial Gallons Total). Contractor to perform internal inspection using a borescope camera and provide written report on the condition of the tank prior to return to service. Polishing Contractor to have a certified coalescing filter system for polishing of fuel. Polishing Contractor to submit certification prior to start of work."
- .28 Reference Drawing M302 - Ventilation Floor Plan South Side:
 - .1 Reference Ventilation Note 3:
 - .1 Add following: "Acoustically lined ductwork not required on round ductwork branches off main duct."
- .29 Reference Drawing M303 - Ventilation Details:
 - .1 Reference Fan Coil Schedule:

- .1 Add note for clarification:
 - .1 "Fan coil to be provided with 0-10 VDC connection to allow BMS Contractor to control fan speed. All other controls work shown in schematic to be provided by BMS Contractor Division 25."

- .30 Reference Drawing M304 - Ventilation Details and Schedules:
 - .1 Reference Detail 3:
 - .1 Delete 3-way heating valve and replace with 2-way heating valve. Piping arrangement to be per Detail 3 on Drawing M203.
 - .2 Reference Motorized Damper Schedule:
 - .1 Add note: "Damper to be supplied and installed by Division 23. Actuator to be supplied and installed by Division 25."
 - .3 Reference Ceiling Exhaust / Return Registers / Grilles Schedule:
 - .1 Delete schedule and replace with schedule on attached sketch SK-11, attached and forming a part of this addendum.
 - .4 Reference Supply Diffuser Schedule:
 - .1 Delete schedule and replace with schedule on attached sketch SK-11, attached and forming a part of this addendum.
 - .5 Reference Welding Extraction Arm Schedule:
 - .1 Reference Tag "EA-1":
 - .1 Reference "Model" and Comments Columns:
 - .1 Remove requirement for "Telescopic" in both instances.
 - .2 Reference Tag "EA-2":
 - .1 Reference "Model" and Comments Columns:
 - .1 Remove requirement for "Telescopic" in both instances.

- .31 Reference Drawing M401 - Sprinkler Floor Plan North Side:
 - .1 Reference Detail 1:
 - .1 Add Note:

"Sprinkler heads shown under garage door are for reference only. Final installation may require multiple (four (4) +) sprinkler heads to provide the coverage required by NFPA 13. Contractor to provide all sprinkler heads required for a code compliant installation."

- .32 Reference Drawing M402 - Sprinkler Floor Plan South Side:
 - .1 Reference Detail 1:
 - .1 Add Note:

"Sprinkler heads shown under garage door are for reference only. Final installation may require multiple (four (4) +) sprinkler heads to provide the coverage required by NFPA 13. Contractor to provide all sprinkler heads required for a code compliant installation."

- .33 Reference Drawing E501 - North Floor Plan - Systems:
 - .1 Clarification:
 - .1 Communication cabling from exterior cameras to CCTV PoE switch rack mounted in data rack located in LAN Room 214 to be routed in 21mmC.

- .34 Reference Drawing E502 - South Floor Plan - Systems:
 - .1 Clarification:
 - .1 Communication cabling from exterior cameras to CCTV PoE switch rack mounted in data rack located in LAN Room 160 to be routed in 21mmC.

- .35 Reference Drawing E201 - North Floor Plan - Power:
- .1 Reference Detail 1/E201:
 - .1 In Heavy Equipment Bays 209, remove pump 'P-15' and associated combination magnetic motor starter, wiring and conduits.
- .36 Reference Drawing E203 - Mezzanine & Enlargement Plans:
- .1 Reference Detail 1/E203:
 - .1 In Mechanical Room 172, low voltage wiring between pumps 'P-3' and 'P-4' and BMS to be completed by Division 25.
 - .2 In Vestibule 208, low voltage wiring between pumps 'P-5' and 'P-6' and BMS to be completed by Division 25.
- .37 Reference Drawing E302 - South Floor Plan - Lighting:
- .1 Reference Detail 1/E302:
 - .1 In Laundry 174 and Locker Room 177, replace single pole switch located adjacent to latch side of the door with one (1) dimming switch.
 - .2 In Lunchroom 180, replace three way switch located adjacent to the latch side of the west door with one (1) dimming switch and wire to three way switch located adjacent to latch side of east door.
 - .3 In Parts 200, replace three way switch located adjacent to the latch side of the east door with one (1) dimming switch and wire to three way switch located adjacent to the latch side of the west door.
 - .4 In Parts 200, replace single pole switch located on the north wall with circuit designation '4b' with one (1) dimming switch
- .38 Reference Drawing E401 - North Floor Plan - Communications:
- .1 Reference Detail 1/E401:
 - .1 Clarification:
All communication cabling are to run in conduits from wire mesh tray through exposed areas down through concrete walls or through interior of columns to recess mounted wall plates.
- .39 Reference Drawing E501 - North Floor Plan - Systems:
- .1 Reference Detail 1/E501:
 - .1 Refer to SK-09 for additional information on paging riser, sketch is attached to and forming part of this addendum.
 - .2 Clarifications:
 - .1 In Heavy Equipment Bays 209, Machine Shop 210, Welding Bay 215 and Wash Bay 216, surface mounted speaker horns and exterior speaker horns are to be daisy chained as long as the wattage per channel of the amplifier allows it.
 - .2 In Light Fleet 188, SM. Engine 190, Tire Change 191, Parts 200 and Parts Mezzanine 201 surface mounted speaker horns are to be daisy chained as long as the wattage per channel of the amplifier allows it.
 - .3 In Crew Lounge 149, W. WR 176, Locker Room 177, M. WR 178 and Lunchroom 180 recess mounted speakers are to be daisy chained as long as the wattage per channel of the amplifier allows it.
 - .4 All door contacts are to be wired with 2c#18 in 16mmC concealed

- in door frame.
- .5 Interior recess mounted speakers and interior/exterior surface mounted speakers to be wired to desk mounted amplifier in Scale House 145 with 2c#16 in 16mmC. Refer to attached sketch SK-09 for additional information.
- .40 Reference Drawing E502 - South Floor Plan - Systems:
 - .1 Reference Detail 1/E502:
 - .1 Door chimes to be c/w 16V, 10VA transformer. Acceptable manufacturer or approved equal: Carlon #DH110.
 - .2 Refer to SK-09 for additional information on paging riser, sketch is attached to and forming part of this addendum.
- .41 Reference Drawing E602 - Power Schematics, Elevation & Schedules:
 - .1 Reference Mechanical Equipment Schedule:
 - .1 Reference Equipment P-3/P-4 & P-5/P-6:
 - .1 Reference Remarks column:
Delete wording "Controls wiring to boiler control panel by Div.25" and replace with "Controls wiring to BMS by Div.25".
- .42 Reference Drawing E605 - Access Control Details:
 - .1 Reference Note 3:
 - .1 Clarification:
Fail safe door controller relay to be supplied and installed by Division 08 and wired by Division 28.

END OF SECTION

1 General

1.1 RELATED SECTIONS

- .1 Section 23 05 00 - Common Work Results for HVAC.
- .2 Section 23 05 01 - Installation of Pipework.
- .3 Section 23 05 22 - Valves - Bronze.
- .4 Section 23 05 93 - Testing, Adjusting and Balancing for HVAC.
- .5 Section 23 08 01 - Performance Verification of Mechanical Piping Systems.
- .6 Section 23 08 02 - Cleaning and Start-up of Mechanical Piping Systems.

1.2 REFERENCES

- .1 American Society for Testing and Materials International, (ASTM).
 - .1 ASTM A53/A53M, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc Coated Welded and Seamless.
 - .2 ASTM A135, Standard Specification for Electric-Resistance-Welded Steel Pipe.
 - .3 ASTM A795, Standard Specification for Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Fire Protection Use.
 - .4 ASTM B61, Standard Specification for Steam or Valve Bronze Castings.
 - .5 ASTM B62, Standard Specification for Composition Bronze or Ounce Metal Castings.
 - .6 ASTM E202, Standard Test Methods for Analysis of Ethylene Glycols and Propylene Glycols.
- .2 Manufacturer's Standardization of the Valve and Fittings Industry (MSS).
 - .1 MSS-SP-71, Cast Iron Swing Check Valves Flanged and Threaded Ends.
 - .2 MSS-SP-80, Bronze Gate, Globe, Angle and Check Valves.

1.3 SUBMITTALS

- .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit data for following:
 - .1 Valves.
 - .2 Couplings, Components.
- .3 Closeout Submittals.
 - .1 Provide maintenance data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals and include following:
 - .1 Special servicing requirements.

1.4 QUALITY ASSURANCE

- .1 Health and Safety.
 - .1 Do construction occupational health and safety in accordance with Section 01 35 29 - Health, Safety and Emergency Response Procedures.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Waste Management and Disposal.
 - .1 Separate waste materials for reuse in accordance with Section 01 74 00 - Cleaning and Waste Management.
 - .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
 - .3 Collect and separate for disposal paper packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan.
 - .4 Separate for reuse and place in designated containers Steel waste in accordance with Waste Management Plan.
 - .5 Fold up metal banding, flatten and place in designated area for recycling.

2 Products

2.1 PIPING

- .1 Steel pipe: to ASTM A53/A53M, minimum wall thickness Schedule 40 and to supplier installation instructions.

2.2 FITTINGS

- .1 Cold press mechanical joint fitting shall conform to material requirements of ASTM A420 or ASME B16.3 and performance criteria of IAPMO PS117. Sealing elements for press fittings shall be EPDM. Sealing elements shall be factory installed or an alternative supplied by fitting manufacturer.

2.3 GATE VALVES

- .1 Rising stem, screwed ends:
 - .1 To MSS-SP-80, Class 125, 860 kPa, bronze body, screw-in bonnet, solid wedge disc as specified Section 23 05 22 - Valves - Bronze.

2.4 GLOBE VALVES

- .1 To MSS-SP-80, Class 125, 860 kPa, lead free bronze body, screw-over bonnet, stainless steel disc or renewable composition disc suitable for service, as specified in Section 23 05 22 - Valves - Bronze.

2.5 SWING CHECK VALVES

- .1 To MSS-SP-71, Class 125, 860 kPa, lead free bronze body, screw-in cap, bronze swing disc, regrindable seat as specified Section 23 05 22 - Valves - Bronze.

2.6 BALL VALVES

- .1 To ASTM B62, 4 MPa WOG, lead free bronze body, hard chrome solid ball, TFE seal, PTFE adjustable packing, PTFE seat, lever handle.

2.7 SILENT CHECK VALVES

- .1 To ASTM B62, Class 125, 860 kPa, cast steel, wafer style, lead free brass seat rings, lead free brass inner valve, stainless steel spring heavy duty spring when in vertical down flow applications as specified Section 23 05 22 - Valves - Bronze.

2.8 LUBRICATED PLUG COCKS

- .1 To ASTM B61, Class 150, 1 MPa, lead free bronze body.

2.9 CIRCUIT BALANCING VALVES (CBV)

- .1 General:
 - .1 Y style globe valve, designed to provide precise flow measurement and control, with valved ports for connected to differential pressure meter.
 - .2 Accuracy:
 - .1 Readout to be within plus or minus 2% of actual flow at design flow rate.
- .2 Pressure die-cast dezincification resistant copper alloy or stainless steel construction, 1.7MPa, 121 degrees C, screwed ends, Teflon disc, screw-in bonnet.
 - .1 Flow control: at least four 4 full turns of handwheel with digital handwheel and tamperproof concealed mechanical memory.
- .3 Insulation: use prefabricated shipping packaging of 5.4R polyurethane as insulation see valves thermal insulation.
- .4 Drain connection:
 - .1 NPS3/4 valved and capped, suitable for hose socket.
 - .2 Incorporated into valve body or provided as separate item.

3 Execution

3.1 PIPING

- .1 Install pipework in accordance with Section 23 05 01 - Installation of Pipework, supplemented as specified herein.
- .2 Install press joint piping system in accordance with manufacturer's latest recommendations.
- .3 Visibly mark both ends of pipe with proper insertion depths prior to assembly and installation.

3.2 VALVES

- .1 Install valves as indicated in Section 23 05 22 - Valves - Bronze.
- .2 Install calibrated balancing valves for balancing purposes as indicated.

3.3 PRESSURE TESTS

- .1 Test system in accordance with Section 23 05 00 - Common Work Results - Mechanical.
- .2 Test pressure: test with water to greater of 1 1/2 times maximum system operating pressure or 860 kPa.

3.4 CLEANING AND START UP

- .1 In accordance with Section 23 08 02 - Cleaning and Start-up of Mechanical Piping Systems.
- .2 Flush and clean in presence of Consultant.
- .3 Flush after pressure test for minimum of 4 hours.
- .4 Fill with solution of water and non-foaming, phosphate-free detergent 3% solution by weight. Circulate for minimum of 8 hours.
- .5 Refill system with clean water. Circulate for at least 4 hours. Clean out strainer screens/baskets regularly. Then drain.
- .6 Refill system with clean water. Circulate for at least 2 hours. Clean out strainer screens/baskets regularly. Then drain.
- .7 Drainage to include drain valves, dirt pockets, strainers, every low point in system.
- .8 Re-install strainer screens/baskets after obtaining Consultant's approval.
- .9 Refill system with clean water adding water treatment as specified.

3.5 PERFORMANCE VERIFICATION

- .1 In accordance with Section 23 08 01 - Performance Verification of Mechanical Piping Systems, supplemented as specified herein.

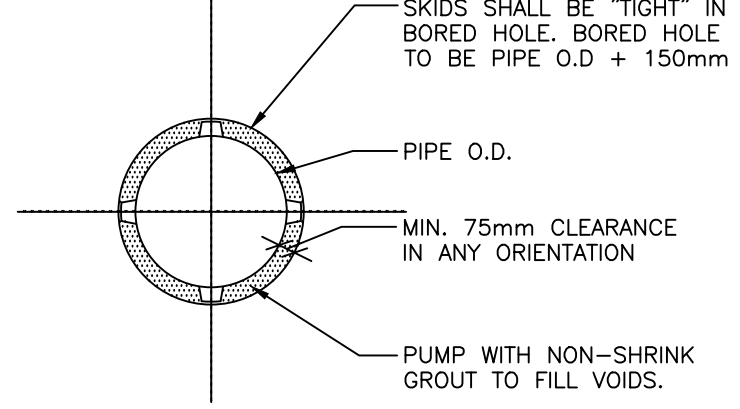
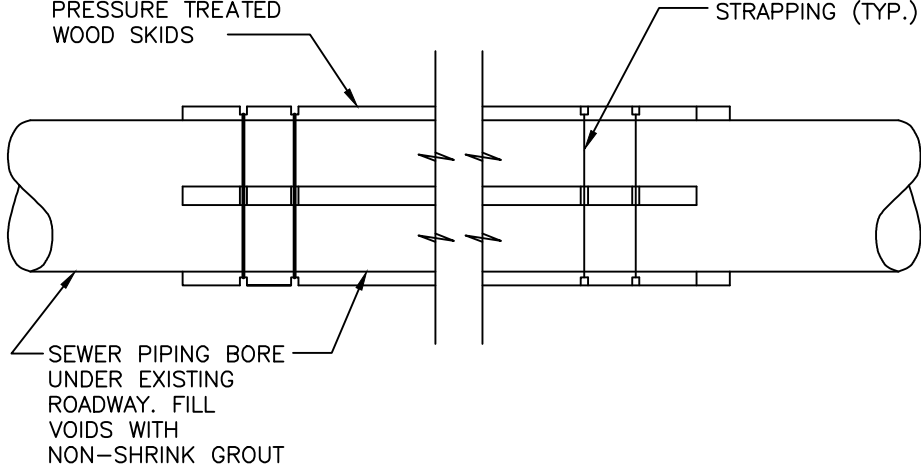
3.6 TESTING AND BALANCING

- .1 Balance water systems to within plus or minus 5% of design output.
- .2 Refer to Section 23 05 93 - Testing, Adjusting and Balancing for HVAC for applicable procedures and to Section 23 05 00 - Common Work Results - Mechanical.

3.7 GLYCOL CHARGING

- .1 Provide mixing tank and positive displacement pump for glycol charging.
- .2 Retest for concentration to ASTM E202 after cleaning.
- .3 Provide report to Consultant.

END OF SECTION



BORING DETAILS

1:10



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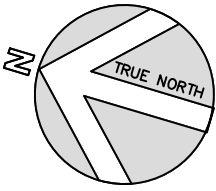
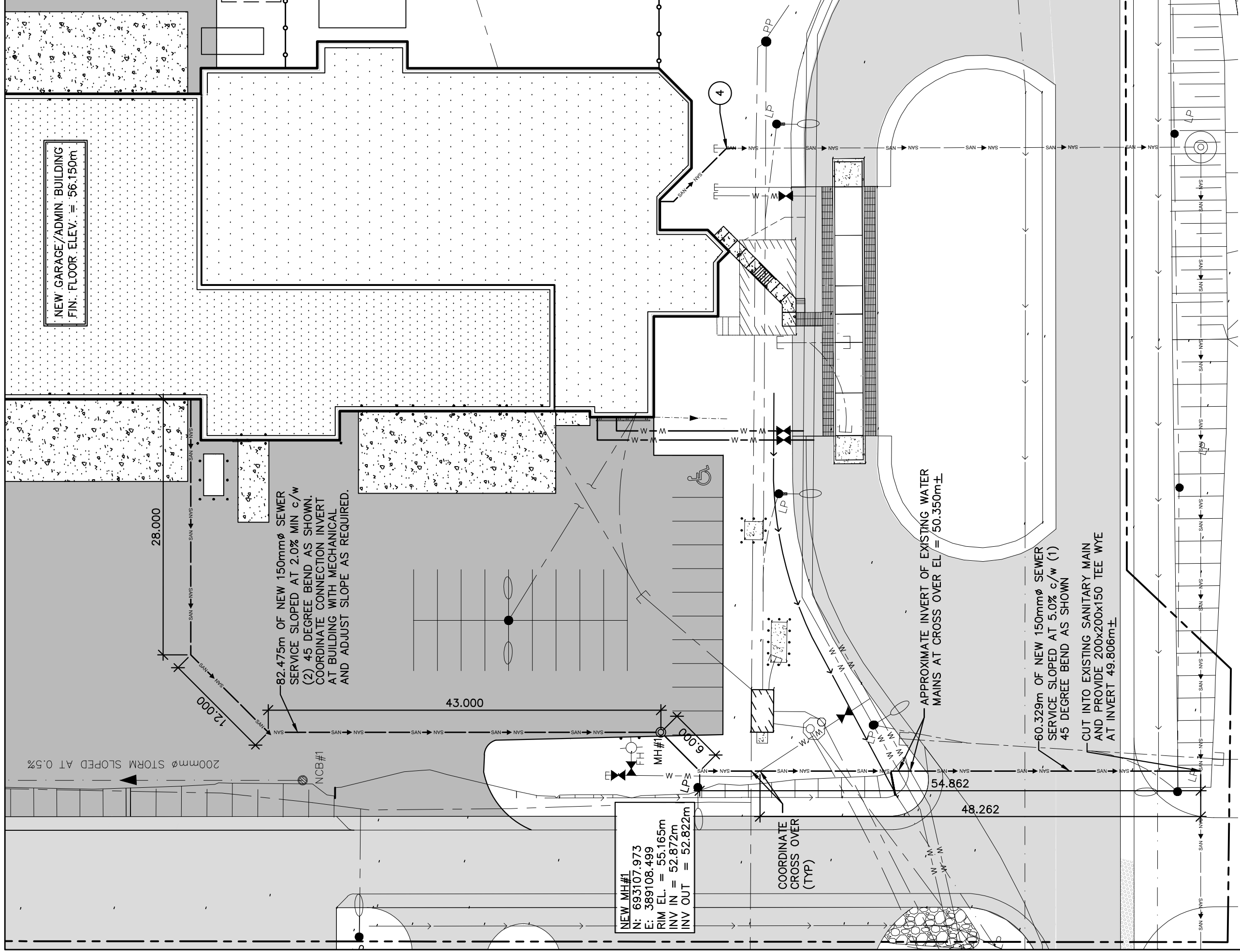
PROJECT TITLE
**Queens County Depot
Phase 5b**

SHEET TITLE
**Boring Details
Addenda #5**

Charlottetown, P.E.I., Canada, CIA 7L3 Phone (902) 368-2300

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REVISIONS:	DATE:	Feb. 1, 2019
	DRAWN BY:	SPM, E.I.T.
	PROJECT NUMBER:	171048
	DRAWING NUMBER:	SK-02



1
 SK SK

SANITARY SERVICE PLAN
 SCALE: 1:400



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PROJECT TITLE
 Queens County Depot
 Phase 5b

SHEET TITLE
 Sanitary Service
 Plan
 Addenda #5

REVISIONS:

DATE: Feb. 1, 2019
 DRAWN BY: SPM, EIT

PROJECT NUMBER: 171048
 DRAWING NUMBER: SK-07

HEAVY DUTY MUNICIPAL R11 FRAME C/W
MANHOLE FRAME & COVER, SEE SITE PLAN
FOR TOP OF COVER ELEVATIONS

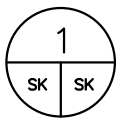
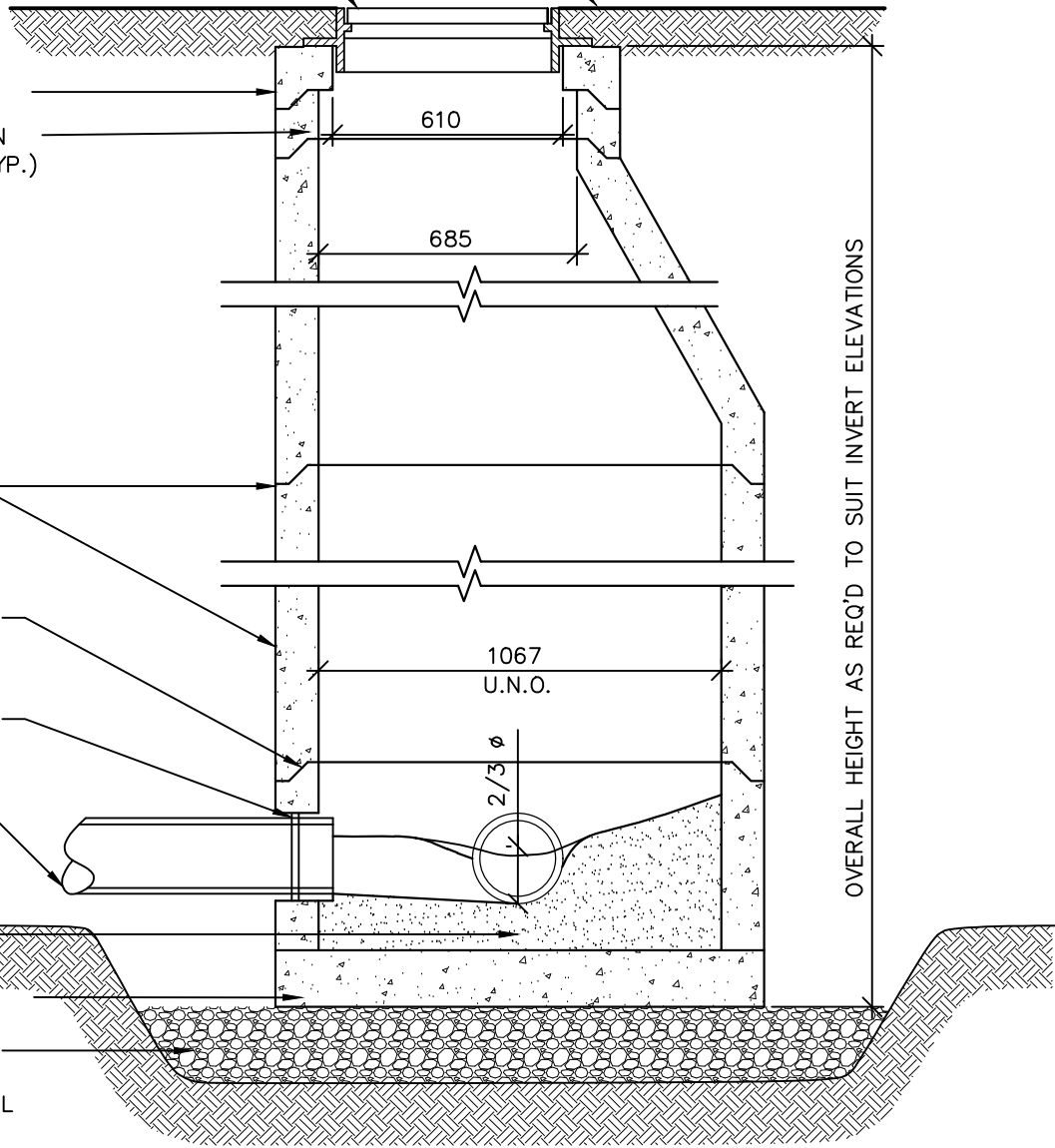
FINISHED GRADE TO BE LEVEL WITH
TOP OF FRAME & COVER, SEE SITE
PLAN FOR APPLICABLE MATERIAL

ADJUSTMENT GRADE RINGS
RAMNEK SEALANT BETWEEN
CONSECUTIVE COURSES (TYP.)

PRECAST CONCRETE
SECTIONS
ALL JOINTS TO BE MADE
WATERTIGHT W/ O-RING
GASKET (TYP.)

INTEGRAL GASKET (TYP.)
PVC SANITARY LINE,
SEE SITE PLAN FOR
INVERT ELEVATIONS

BENCHING (TYP.)
PRECAST CONCRETE
BASE
150mm MIN. OF CLASS 'A'
COMPACTED GRANULAR
BASE ON UNDISTURBED SOIL



SECTION: SANITARY MANHOLE

1:20



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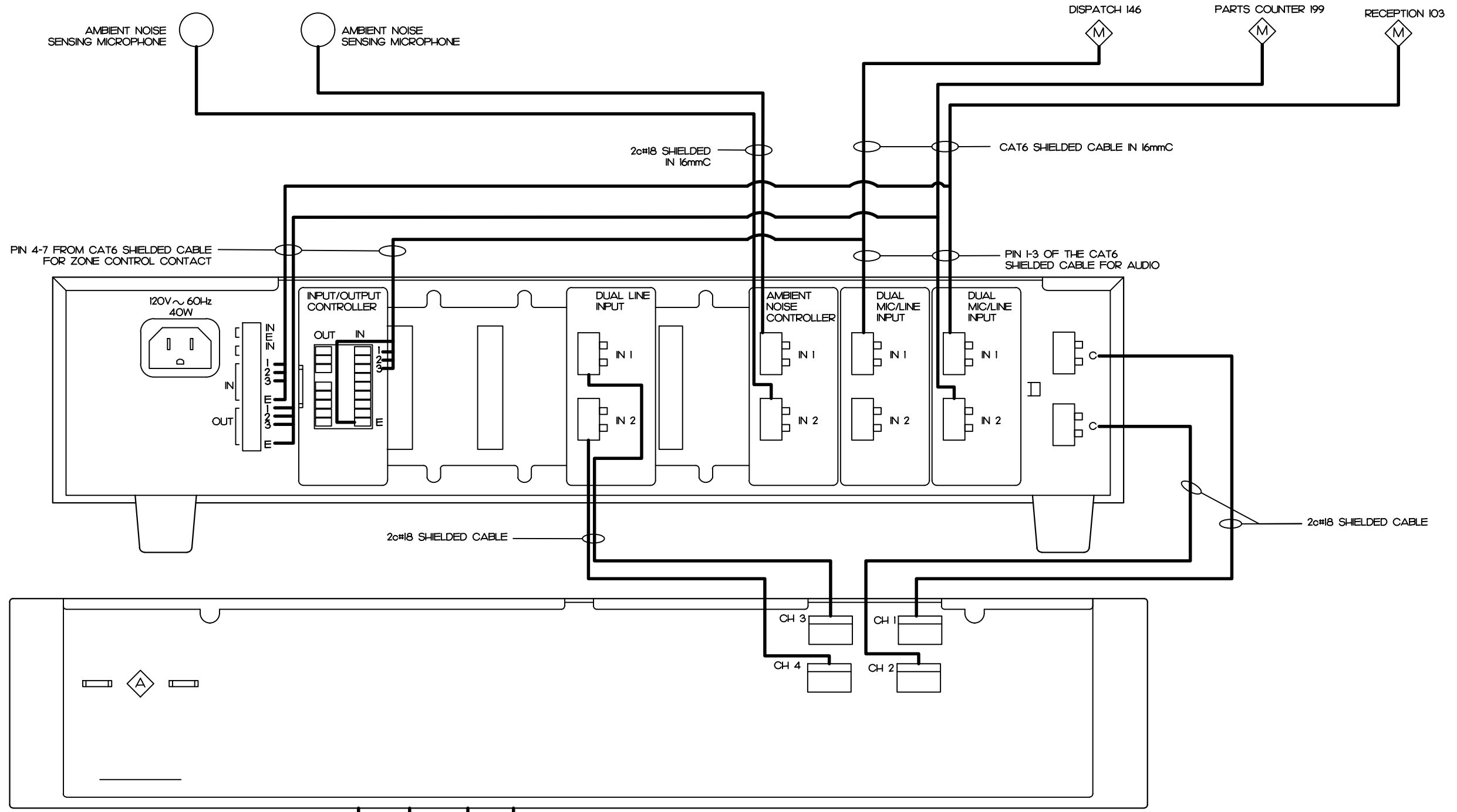
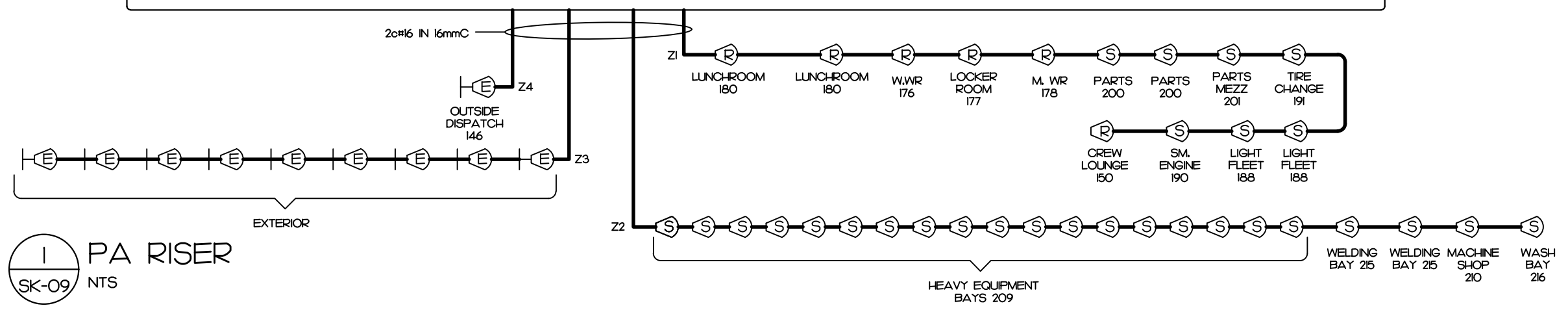
PROJECT TITLE
Queens County Depot
Phase 5b

SHEET TITLE
Sanitary Manhole
Details
Addenda #5

REVISIONS:
DATE: Feb. 1, 2019
DRAWN BY: SPM, E.I.T.
PROJECT NUMBER: 171048
DRAWING NUMBER: SK-08

Charlottetown, P.E.I., Canada, CIA 7L3 Phone (902) 368-2300 Fax (902) 566-3768 www.colesassociates.com

PA RISER
SK-09 NTS



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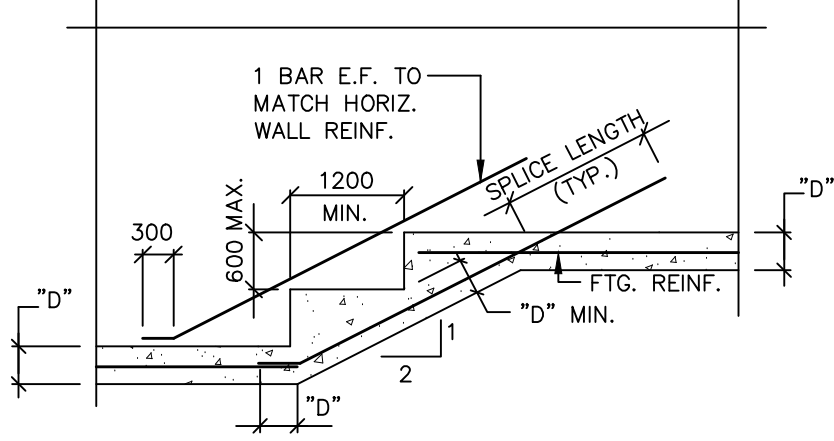
DATE: Feb. 4, 2019
 DRAWN BY: M.E.M., C.E.T.
 PROJECT NUMBER: 171048
 DRAWING NUMBER: SK-09

REVISIONS:

SHEET TITLE: PA Riser
 PROJECT TITLE: Queens County Depot Phase 5b

Coles Associates
 architecture, engineering, project management

CLIENT: PEI Department of Transportation Infrastructure and Energy



1 STEPPED WALL FOOTING DETAIL

SUPPLY DIFFUSER SCHEDULE

MARK	MANUFACTURER	TYPE	NECK SIZE (MM)	CLG SIZE (mm)	CAPACITY LPS	NC LEVEL	S.P. in.wg	REMARKS
S-1	TITUS	OMNI	150 Ø	600 x 600	0-75	NC-16	0.042	LAY-IN GYPROC FRAME WHERE REQUIRED
			200 Ø	600 x 600	75-150	NC-16	0.042	
			250 Ø	600 x 600	151-205	NC-16	0.042	
			300 Ø	600 x 600	206-280	NC-16	0.042	
			350 Ø	600 x 600	281-325	NC-16	0.042	
S-2	TITUS	300 RL	600X600	-	533-1066	NC-50	0.090	GYPROC FRAME WHERE REQUIRED
S-3	TITUS	300 RL	900X600	-	805-1609	NC-30	0.090	GYPROC FRAME WHERE REQUIRED
S-4	TITUS	300 RL	600X300	-	258-604	NC-30	0.090	GYPROC FRAME WHERE REQUIRED

CEILING EXHAUST/RETURN REGISTERS/GRILLES SCHEDULE

MARK	MANUFACTURER	TYPE	CLG SIZE (in)	CAPACITY LPS	NC LEVEL	SP in.wg	REMARKS
E/R-1	TITUS	PAR	24 x 24 DIA 6	0-56	NC-22	0.1	LAY-IN TYPE
			24 x 24 DIA 8	56-99	NC-22	0.1	LAY-IN TYPE
			24 x 24 DIA 10	99-142	NC-22	0.1	LAY-IN TYPE
			24 x 24 DIA 12	142-185	NC-22	0.1	LAY-IN TYPE
			12 x 12	185 - 250	NC-22	0.1	LAY-IN TYPE
			14 x 14	250 - 347	NC-22	0.1	LAY-IN TYPE
E/R-1	TITUS	350RL	16 x 16	347 - 383	NC-25	0.1	LAY-IN TYPE
			20 x 20	383 - 609	NC-25	0.1	LAY-IN TYPE
			24 x 24	609 - 1066	NC-25	0.1	LAY-IN TYPE

* PROVIDE GYPROC FRAME IN WASHROOMS AND ELSEWHERE WHERE REQUIRED. PROVIDE EGG CRATE DIFFUSER ON END OF ALL OPEN DUCTS IN GARAGE AREAS.