

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD
PUR24-100-ITT
Murray Centennial Public School Addition

ADDENDUM NO. 3

This addendum shall form an integral part of the bid documents for the above noted Bid and shall be read in conjunction therewith. This addendum shall, however, take precedence over all requirements as it pertains to the particular and specific items noted below.

PART 1: ANSWERS TO QUESTIONS

Question 1: Spec Section 26 00 01 is an Electrical Supplementary Bid Form that we are to upload to the bidding system. There is no place to upload this document on Bids & Tenders? Is this really required at the time of tender? Be advised that in the tendering process we receive pricing from electrical subcontractors up to a few minutes before closing and there is nothing we can do to change this. This leaves a very short time for us to complete this Bid Form and all the items you require. This is a recipe for mistakes, which creates problems for everyone. We would like to request that we provide this Electrical Bid Form within 24 - 48 hours of closing.

Answer 1: Mechanical and Electrical Supplementary Bid Forms noted in Mechanical & Electrical Specifications Project Manual Volume 2, Division 22, Section 22 00 01 Supplementary Bid Form & Division 26, Section 26 00 01 – Electrical Supplementary Bid Form, are no longer required to be submitted at time of tender. It is now required to be submitted by the three (3) low bidders no later than September 9th, 2024 at 2:00 pm local time to purchase_dept@kprdsb.ca.

Question 2: As per Drawing A4.1, RC4 specifies to remove existing gravel, BUR, Insulation, AVB, & Gypsum Board down to existing steel deck. Could you please provide more specific details regarding the composition of the existing roof assembly (i.e., Insulation thickness, vapor barrier type, thicknesses of assembly material)?

Answer 2: Refer to Part 2 Additional Information, Add (1): Architectural Addendum No 2 for revised drawing 1/A2.3 for additional information on existing roof assembly.

Question 3: The specifications contain section 08 91 00 LOUVRES. I have been unable to find any louvres designated on the drawings. Are there louvres to be priced on this project?

Answer 3: No louvres to be included in project as described in architectural scope. Refer to Architectural Addendum No 2 for revised Specification Section "08 91 00 - Louvres".

Question 4: Can EH Price be added as an equal for the duct silencers?

Answer 4: EH Price is acceptable alternative supplier for silencers. Refer to Part 2 Additional Information Add (3): Mechanical & Electrical Addendum ME-1

Question 5: Mechanical - can EH Price be listed as equivalent for the silencers?

Answer 5: EH Price is acceptable alternative supplier for silencers. Refer to Part 2 Additional Information Add (3): Mechanical & Electrical Addendum ME-1

Question 6: Construction Note 11 on Drawing A2.1 - ASSUME FIRE SEPARATIONS IN EXISTING BUILDING ARE COMPROMISED. PROVIDE NEW CONTINUOUS FIRESTOPPING AT LOCATIONS WHERE WORK TO EXISTING BUILDING ARE BEING PERFORMED - There is no way of knowing the extent of the remedial work required for this item. A quantity should be provided for the basis of the bid or alternatively a cash allowance value should be allotted for this work. Please advise.

Answer 6: Include in base contract 45 linear meters of fire separation repair as described in drawing 8/A4.1 and refer to Architectural Addendum No 2 for revised Specification Section "01 82 19 - Fire Rating and Assemblies". Include additional 50m2 of removal and reinstallation of existing acoustic ceiling tile and metal grid additional to what is shown on drawings to allow for fire separation repairs. Refer to Architectural Addendum No 2 for revised Specification Section "09 51 00 - Acoustic Ceiling".

Question 7: We would like to request an extension to the closing of this project to Thursday the following week.

Answer 7: The closing date for this project will not be extended further.

PART 2: ADDITIONAL INFORMATION

Add (1): Architectural Addendum No. 2, Prepared by Moffet and Duncan Architects Inc. (34 Pages)

Add (2): Civil Addendum No. 1, Prepared by CIMA + (1 Pages)

Add (3): Mechanical & Electrical Addendum ME-1, Prepared by CIMA + (4 Pages)

Add (4): Sewage System Design Addendum No. 1, Prepared by Cambium (3 Pages)

END OF ADDENDUM NO. 3

This Addendum forms part of the Tender Documents and amends the Tender Documents as described below.

1. **ARCHITECTURAL SPECIFICATIONS, PROJECT MANUAL VOLUME 1**

1.1 **INDEX TO PROJECT MANUAL**

- .1 Delete "Section 07 51 00 - Rubberized Built-up Roofing" from the list of sections.
- .2 Add "Section 07 15 13.15 - Built-up Roofing, Cold Applied".
- .3 Add "Section 31 23 00.1 - Backfill".
- .4 Add "Section 33 10 00.1 - Demolish Existing Cistern".

1.2 **DIVISION 01 - GENERAL REQUIREMENTS**

.1 **SECTION 01 82 19 - FIRE RATING AND ASSEMBLIES**

- .1 Refer to Subsection 1.2 Existing Building

- .1 Delete sentence .2

"Include cost to add two continuous layers of 400mm high fire rated drywall on both sides of corridor walls where work is undertaken in the existing school. Include for work in ex. Kindergarten 115, 120, 121, 135 and Classrooms 114-1, 114-2, 114.3."

- .2 Replace with:

“.2 For purposes of pricing firestopping include cost for 45 linear meters of fire separation repair as described below and as per Drawing 8/A4.1.

Repair to include two (2) layers of 400mm high fire rated gypsum board and continuous free caulking. Gypsum board and fire caulking are to be located on both sides of wall."

1.3 **DIVISION 04 - MASONRY**

.1 **SECTION 04 21 00 - CLAY UNIT MASONRY**

- .1 Refer to Subsection 2.1 Materials. Under .1 Brick, delete clauses .1 to .4, replace with clauses;

“.1 Masonry 1 (M1): Metric Modular (90 x 57 x 190cm), Running Bond, Blend - Brunswick Matt (1/3), Riverdale Matt (1/3), Brookview Matt (1/3).

- .2 Masonry 2 (M2): Metric Modular (90 x 57 x 190cm), Running Bond, -10 mm inset, Spring Hill Matt.

- .3 Masonry 3 (M3):Metric Modular (90 x 57 x 190cm), Soldier Course, Spring Hill Matt.
- .4 Masonry 4 (M4):Metric Modular (90 x 57 x 190cm), Common Bond (Headers every 6th Course), Blend - Brunswick Matt (1/3), Riverdale Matt (1/3), Brookview Matt (1/3). Provide brick tinting to match existing brick colour."

1.4 DIVISION 07 - THERMAL AND MOISTURE PROTECTION

.1 SECTION 07 51 00 - RUBBERIZED BUILT-UP ROOFING, HOT APPLIED

- .1 Delete Specification Section 07 51 00.
- .2 Replace with Section 07 51 13.15 "BUILT-UP ROOFING, COLD APPLIED", included in this Addendum.

1.5 DIVISION 08 - OPENINGS

.1 SECTION 08 91 00 - LOUVRES

- .1 Delete Specification Section 08 91 00 - Louvres entirely.

1.6 DIVISION 09 - FINISHES

.1 SECTION 09 51 00 - ACOUSTIC CEILING

- .1 Refer to Subsection 1.1 Ceiling Systems, add sentence:
 - ".3 For pricing purposes include for additional 50 square meters of removal and reinstallation of existing acoustic ceiling tile and metal grid from what is shown on drawings."

1.7 DIVISION 31 - EARTHWORK

- .1 Add Section 31 23 00.1 - BACKFILL included in this Addendum.

1.8 DIVISION 33 - UTILITIES

- .1 Add Section 33 10 00.1 - DEMOLISH EXISTING CISTERN included in this Addendum.

2. **ARCHITECTURAL DRAWINGS**

2.1 **Drawing A1.1 - Partial Site Plan**

- .1 Replace drawing A1.3 with enclosed Drawing A1.3 Addendum 2.
- .2 Refer to Dwg 1/A1.1 for inclusion of new water supply line and existing below grade hydro line.

2.2 **Drawing A1.3 - Demo Site Plan & Site Phasing Plan**

- .1 Replace Drawing A1.3 with enclosed Drawing A1.3 Addendum 2.
- .2 Refer to Dwg 1/A1.3 for revised note to remove and backfill existing septic tank & distribution box.
- .3 Refer to Dwg 1/A1.3 for revised note to decommission ex. fire fighting cistern.
- .4 Refer to Dwg 1/A1.3 for inclusion of existing underground hydro service to remain.
- .5 Refer to Dwg 3/A1.3 for inclusion of "Note 10" and inclusion of new water supply line.

2.3 **Drawing A2.0 - Interior Phasing Plan & RCP**

- .1 Replace Drawing A2.0 with enclosed Drawing A2.0 Addendum 2.
- .2 Refer to "DEMO RCP LEGEND" on Dwg 2/A2.0 for additional note "DENOTES AREA OF EX FIRE RATED ACOUSTIC CEILING TILE & TBAR GRID TO BE REMOVED & REINSTATED"
- .3 Refer to Dwg 9 & 10/A2.0 for additional area of ex ATC and lighting removal and reinstallation.

2.4 **Drawing A2.2 - Plan Details**

- .1 Refer to ADD-1 Plan detail 5/A2.2 and 7/A2.2 for revised Plan details to include new steel channel and flashing.

2.5 **Drawing A2.3 - Roof Plan**

- .1 Refer to ADD-2 for existing roof assembly noted on Dwgs and, new electrical roof penetrations.
- .2 Refer to ADD-3 for revised "Roof Construction Assemblies" legend.

2.6 **Drawing A3.0 - Exterior Elevations**

- .1 Refer to ADD-4 Elevation 3/A3.0 and 4/A3.0 for revised drawing to include new vertical steel channel.

2.7 Drawing A5.0

- .1 Replace Drawing A5.0 with enclosed Drawing A5.0 Addendum 2. Refer to Dwg 5/A5.0 for additional ceiling removal and reinstallation in existing Corridor H3 and H4. Refer to Drawing 1/A5.0 for revised ceiling removal and reinstallation in existing classrooms. Refer to revised notes in "Reflecting Ceiling Legend".

Attach: Section 07 51 13.15 Built-Up Roofing, Cold Applied
Section 31 23 00.1 - Backfill
Section 33 10 00.1 - Demolish Existing Cistern

Drawings:

A1.1 Addendum 2
A1.3 Addendum 2
A2.0 Addendum 2
A2.2 - ADD-1 Addendum 2
A2.3 - ADD-2 Addendum 2
A2.3 - ADD-3 Addendum 2
A3.0 - ADD-4 Addendum 2
A5.0 Addendum 2

END OF ARCHITECTURAL ADDENDUM NO. 2

PART 1 - GENERAL

1.1 WORK INCLUDED

- .1 Provision of complete 3 ply cold applied built-up roof, including air/vapour barrier, insulation, membrane, membrane flashing and metal counter flashing, all in conformance to class A roofing system and CAN/ULC S126.
- .2 The roofing shall be the approved system of one manufacturer, who shall provide the manufacturer's warranty specified herein.
- .3 Roofing system shall be a system tested in accordance with CAN/CSA A123.21 for wind uplift resistance, as specified below.
- .4 Confirm availability of all roofing products and place orders well in advance of anticipated date of roofing work. No additional costs will be permitted for substitutions required due to Contractor's failure to order materials in sufficient time to ensure delivery when required. Material shortages are expected to continue through the next year, and the Contractor is expected to be proactive in securing materials.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- .1 Steel Deck Section 05 31 00
- .2 Metal Fabrications Section 05 52 00
- .3 Wood nailing strips, curbs Section 06 10 00
- .4 Steel Siding Section 07 46 19
- .5 Sheet Metal Flashing and Trim Section 07 62 00
- .6 Mechanical Division 23

1.3 REFERENCES

- .1 American Society for Testing and Materials (ASTM)
 - .1 ASTM C 1177M Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
- .2 Canadian General Standards Board (CGSB).
 - .1 CGSB 37-GP-9Ma Primer, Asphalt, Unfilled, for Asphalt Roofing, Dampproofing and Waterproofing
 - .2 CGSB 37-GP-19M Cement, Plastic, Cutback Tar.
 - .3 CGSB 37-GP-56M Membrane, Modified, Bituminous, Prefabricated, and Reinforced for Roofing
 - .4 CAN/CGSB-37.29 Rubber- Asphalt Sealing Compound.
 - .5 CAN/CGSB - 51.33 Vapour Barrier Sheet, Excluding Polyethylene, for Use in Building Construction.
- .3 Canadian Roofing Contractor's Association (CRCA)
 - .1 CRCA Roofing Specifications Manual.

SECTION 07 51 13.15 BUILT-UP ROOFING, COLD APPLIED

- .4 Canadian Standards Association (CSA)
 - .1 CAN/CSA A123.21 Standard test method for the dynamic wind uplift resistance of mem-brane roofing systems
 - .2 CSA A123.4 Asphalt for Constructing Built-Up Roof Coverings and Waterproofing Sys-tems
 - .3 CSA A231.2 Precast Concrete Pavers
 - .4 CSA O80.1-M Specification of Treated Wood
- .5 Underwriters Laboratories of Canada (ULC)
 - .1 CAN/ULC-S701 Thermal Insulation, Polystyrene, Boards and Pipe Covering
 - .2 CAN/ULC -S702.2 Standard for Mineral Fibre Thermal Insulation for Buildings
 - .3 CAN/ULC-S704 Standard for Thermal Insulation, Polyurethane and Polyisocyanu-rate Boards, Faced
- .6 FM Approval Standard 4470 Single Ply, Polymer Modified Bitumen Sheet, Built Up Roof (BUR) and Liquid Applied Roof Assemblies for use in Class 1 and Non-combustible Roof Deck Construction

1.4 SUBMITTALS

- .1 Submit all required submittals as soon as possible after commencement of construction to ensure that materials can be ordered well in advance, to ensure availability in time for roofing work.
- .2 Submit testing reports, issued by a certified materials testing laboratory, certifying that the roofing system has been tested in accordance with CSA A123.21 for dynamic wind uplift resistance. Test results shall demonstrate that the roofing system sustained wind uplift pressures in excess of:
 - .1 -1.0 kPa for the field of the roof
 - .2 -1.3 kPa for the edge of the roof; edge zone is 3.4m wide.
 - .3 -2.4 kPa for the corners of the roof
- .3 Submit manufacturer’s data sheets for roofing system to be installed, including a list of all products to be incorporated.
- .4 Indicate in shop drawings flashings, control joints, tapered insulation details, roof drains and all re-quired roofing materials.
- .5 Provide layout for tapered insulation. List materials used.
- .6 Do not order materials until drawings have been reviewed and accepted by the Consultant. Sub-mittals to be in accordance with Section 01 33 23 of these specifications.
- .7 Submit confirmation from supplier when roofing materials are ordered.
- .8 Submit a draft copy of the roofing material manufacturer’s warranty for review and acceptance by the Owner, prior to ordering roofing materials. Warranty shall be accompanied by a letter from the manufacturer confirming the roofing subcontractor as an approved installer of their products.

- .9 Submit signed memo from manufacturer indicating acceptance of the inspection requirements as listed in Section.

1.5 **QUALITY ASSURANCE**

- .1 Roofing Subcontractor shall be approved by the roofing materials manufacturer as an installer of their products.
- .2 Carry out Work in accordance with recommendations of the Ontario Industrial Roofing Contractors Association (OIRCA) and the Canadian Roofing Contractors Association (CRCA). Use only com-petent mechanics. Roofing subcontractor to be member of OIRCA and / or CRCA.
- .3 Install all products in conformance with manufacturer's printed instructions.

1.6 **PRODUCT HANDLING**

- .1 Store materials on raised platforms in approved manner at Site preceding application, and protect from inclement weather at all times. Roofing felts and other absorbent materials which become wet will be rejected.
- .2 Store roofing felts, temperature sensitive materials and insulation in heated atmosphere 21oC for 24 hours before application in cold weather. Tarp all roofing felts. Supply manufacturers cold weather storage and application guideline if requested.
- .3 Store sealants at minimum + 5 C.

1.7 **PROTECTION**

- .1 Protect Work of other trades from roofing procedural damage. Cover vertical surfaces with tarpau-lins at hoisting locations.
- .2 When using open flame in connection with this Work, maintain at all times 3-9 kg dry chemical fire extinguishers fully charged and in operable condition at location where open flames are in use.
- .3 Locate kettles at grade level and minimum 2000mm from face of building.
- .4 Protect completed portions of roofing from damage due to traffic and materials handling/storage un-til completion of Work.

1.8 **ENVIRONMENTAL CONDITIONS**

- .1 Do not apply roofing materials during rain, fog, snow, or other damp or otherwise unsuitable surfaces.

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1.9 WARRANTY

- .1 Provide both a five (5) year Contractor's warranty and a twenty (20) year Manufacturer's warranty, as specified below.
- .2 Furnish a five (5) year "Workmanship, Labour and Material" warranty on the complete roofing system, including all materials and labour against leakage, subsurface moisture, degradation of materials and insulation thermal value, failure to stay in place, undue expansion, deformation, delamination, buckles, blisters, ridges and splitting seams.
- .3 Contractor's warranty shall include the OIRCA standard warranty for the first two years, plus an additional three years.
- .4 Provide a single source manufacturer's total system warranty for all work of this section against defects in materials and workmanship for a period of twenty (20) years. The written warranty shall be in a form approved by the Owner. The warranty shall cover all components of the roof system; including, but not limited to, the vapour retarder, roof insulation, roof membrane, flood coat/gravel and base flashings. The manufacturer shall supply all labour, materials, tools and equipment to repair and/or replace any material and/or workmanship defects, at no additional cost, for a period of twenty (20) years. The warranty shall not be pro-rated over the twenty (20) year period.
- .5 The warranty period shall commence at the date of issue of the Certificate of Substantial Performance.
- .6 Defective work shall include, but not be limited to: leaking, wind uplift, delamination of roofing materials, reduction of thermal value due to moisture in insulation, crazing and ridging. Dislodged surfacing and degradation of colour that detracts from its performance will also be judged as defective work and will require correction under the Contract.
- .7 All defective workmanship and material evident during the period of the Warranty must be repaired to restore the work to good condition and to the original intent of the Drawings and Specifications.
- .8 Warranty must cover repairs to other work damaged resulting from defects in the roofing system and from any work to repair said defects.
- .9 Within 24 hours of the Owners notification, repair any leaks into the building or roof assembly.
- .10 The warranty shall include at no additional cost warranted roof inspection and preventative maintenance and general house keeping in years two (2), five (5), ten (10), fifteen (15) and twenty (20). All membrane defects noted during these inspections must be corrected at the manufacturers cost/labour.

1.10 INSPECTION AND TESTING

- .1 An independent inspection and testing agency nominated by the Consultant will be appointed to inspect and test roofing and sheet metal work.

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- .2 Arrange site meeting with Roofing Inspector and Consultant, maximum two weeks prior to commencement of Work on Site. Obtain Inspector's instructions re procedures to be followed.
- .3 Co-operate with the Inspector and afford all facilities necessary to permit full inspection of the Work and testing of materials prior to their use. Act immediately on instructions given by the in-spector. Where the inspector deems a change is required which will involve a change in cost, obtain Consultants written approval BEFORE proceeding.
- .4 Make cut-outs for testing purposes when required and make good roofing at no extra cost to the Owner.
- .5 Pay Inspection and Testing Agency from cash allowance in Division 01.
- .6 Manufacturer inspections to be completed at a minimum of twice per week for the entire project duration. Inspection reports from manufacturer are to be issued to contractor, general contractor, owner, consultant and architect a minimum of 48 hours after each inspection. No additional costs will be accepted for manufacturer inspections.
- .7 Manufacturer representative to be present at pre-construction meeting to review project schedule.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

- .1 Built-up roof system including surfacing, membrane, coverboard, base insulation, underlayment board, accessories, flashings and vapour retarder on various structural decks.
- .2 Flashings and Fastening: Provide base flashings, perimeter flashings, detail flashings, and component materials and installation techniques that comply with requirements and recommendations of the following:
 - .1 CRCA Roofing Manual for construction details and recommendations.
 - .2 SMACNA Architectural Sheet Metal Manual for construction details.

2.2 PERFORMANCE REQUIREMENTS

- .1 General Performance: Roofing system shall remain weathertight and withstand, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, or installation.
- .2 Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.
- .3 Exterior Fire-Test Exposure:
 - .1 CAN/ULC S107, Class A

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- .4 Roof System in compliance with CSA123.21.
- .5 Installation is strict accordance with manufacturers installation guide.

2.3 PRIMER

- .1 High penetrating, solvent based primer to enhance adhesion between various substrates and asphalt adhesives. Basis of Design: Tremprime LV.

2.4 VAPOUR RETARDER

- .1 SBS Modified asphalt vapour control membrane with tri laminate, woven polyethylene surface, with fiberglass reinforced self-adhesive bituminous compound to ASTM D1970.
 - .1 Tensile Strength, Minimum, 12kN/m MD, 14kN/m XMD, ASTM D5147.
 - .2 Tear Resistance, Minimum, 550N MD, 480N XMD, ASTM D1970.
 - .3 Thickness, Minimum, 40Mils, ASTM D1970.
 - .4 Permeance, Maximum, 0.02 Perms, ASTM E96.
 - .5 Basis of Design: AVC Max
- .2 Vapour Retarder Primer: As required by manufacturer.

2.5 UNDERLAYMENT BOARD

- .1 Underlayment Board: Glass faced, gypsum roof underlayment board to ASTM C1177.
 - .1 Flute Spanability, pass @ 125mm, ASTM E661.
 - .2 Compressive Strength (PSI), Minimum, 900, ASTM C473.
 - .3 Thickness: 13mm
 - .4 Basis of Design: Dens Deck Prime by Georgia Pacific OR CGC Securock.
- .2 Fasteners/Plates: As approved in wind uplift testing report.

2.6 ROOFING MEMBRANE

- .1 Base Sheet: Trilaminar composite felt, non perforated, polyester/glass/polyester reinforced sheet, dusted with fine mineral surfacing on both sides and modified with SBS rubber. To meet the requirements of ASTM D 4601, type II with the following properties:
 - .1 Tensile Strength, minimum ASTM D 146, MD 28 kN/m, XMD 26 kN/m.
 - .2 Tear Strength, minimum, ASTM D 5147, MD 1150N, XMD 1000N.
 - .3 Thickness, minimum: 60mils.
 - .4 Plies: 3
 - .5 Basis of Design: BURmastic Composite Felt HT.
- .2 Membrane Adhesive: Cold applied, fibrated asphalt interplay and surfacing adhesive.
 - .1 Asphalt Content, Minimum, 50%, ASTM D6511.
 - .2 Nonvolatile Content, Minimum, 70%, ASTM D6511.
 - .3 VOC, Maximum, 250g/l, ASTM D6511.
 - .4 Coverage Rate: 1L/m².
 - .5 Surfacing Coverage Rate: 2L/m².
 - .6 Basis of Design: BURmastic Adhesive.

2.7 **ADHESIVES**

- .1 Insulation Adhesive Two-part, 1:1 ratio, solvent-free, elastomeric urethane adhesive. Basis of Design: Tremco Low Rise Foam or One Step Foamable Adhesive by HB Fuller.
- .2 Flashing Adhesive: Single Component, bitumen modified moisture curing poly urethane liquid applied waterproofing flashing adhesive – Vertical Grade.
 - .1 Low Temp Elongation @-25Deg C, Minimum, 500%, ASTM D412.
 - .2 Service Temperature, Minimum, -40Deg C, ASTM D412.
 - .3 Ultimate Elongation, Minimum, 700%, ASTM D412.
 - .4 Basis of Design: Tremlar LRM (V)

2.8 **ROOFING MEMBRANE ACCESSORIES**

- .1 General: Auxiliary materials recommended by roofing manufacturer for intended use and compatible with roofing.
- .2 Flexible Flashing Sheet: Flexible flashing sheet consisting of EPDM/SBR polymers reinforced with a polyester woven scrim.
 - .1 Breaking Strength, minimum, ASTM D 751, MD 1400 N, XMD 1250N.
 - .2 Tear Strength, minimum, ASTM D 751, MD 300 N, XMD 340N.
 - .3 Low Temperature Flexibility, pass, ASTM D 2136, -50 Deg C.
 - .4 Thickness, maximum, 1.3mm.
 - .5 Basis of Design: TRA Sheeting
- .3 Polymer-Modified Stripping Mastic (Vertical Grade): Polymer-modified single component roof elastomer.
 - .1 Tensile Strength, minimum, ASTM D 412, 207 kPa.
 - .2 Elongation @ 25 Deg C, minimum, ASTM D 412, 1000%.
 - .3 Elongation, @ - 34 Deg C, minimum, ASTM D 412, 100%.
 - .4 Low Temperature Flexibility @ -40 Deg C, ASTM D 3111, Pass.
 - .5 Basis of Design: Polyroof LV
- .4 Field Stripping Mastic: ELS Mastic or approved alternate.
- .5 Stripping Reinforcement Fabric: non-shrinking, non-rotting, vinyl coated, woven glass bonded mesh.
 - .1 Tensile strength at 70°, minimum:
 - .2 Warp threads: 65 lf/in (289 N)
 - .3 Filling threads: 75 lbf/in (311 N)
 - .4 Basis of Design: BURmesh
- .6 Sealant: High movement, medium modulus, uv-stable polyurethane sealant. Basis of Design: Tremseal Pro or Dymonic 100.
- .7 Insulation Cant Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.
- .8 Fasteners: Factory-coated steel fasteners and metal or plastic plates designed for fastening roofing components to substrate, tested by manufacturer for required pullout strength, and acceptable to roofing manufacturer.

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- .9 Termination Bar: 1 mm aluminum, with pre-punched holes at 406 mm o.c., metal snap-on cover, and sealant cup.
- .10 Primer: Asphaltic based, adhesion enhancing primer to improve bond between asphalt based materials with wood, concrete and metal to ASTM D 41. Basis of Design: Tremprime LV
- .11 Plumbing Stacks: Refer to Mechanical.
- .12 Roof Drains: Refer to Mechanical.
- .13 B Vent Flashing: Refer to Mechanical.
- .14 Wood Blocking: Douglas Fir dimensional lumber, dimensions to suit application.
- .15 Batt Insulation: Stone Wool.
- .16 Flue Filler: Stone Wool pre cut flute filler. Basis of Design: Protec Metal Flute Filler.
- .17 Vent and Conduit Flashing: SJ-39 aluminum pre insulated stack jacks 483mm high, completed with EPDM triple grommet seal and EPDM base seal, byThaler Metal Industries Inc.
- .18 Mechanical and Electrical Flashings:
 - .1 Thaler Model MERS-600 for single insulated pipes.
 - .2 Model MERS-605A for two pipes.
 - .3 Model MERS-630 for single, large diameter pipes.
 - .4 Thaler MEF-9 for gas pipe flashing.
 - .5 Thaler MEF-2 and MEF-AE4 for single/multiple flexible conduit flashing.
 - .6 Thaler MEF-AE1 for ridged conduit flashing.
 - .7 Refer to mechanical and Electrical drawings for locations of pipes and conduits penetrating the roof.
- .19 Ladder Supports: Refer to Mechanical.
- .20 Split Flashings: Thaler SPJ-3.
- .21 Expansion Joint Assembly: JM Expando Flash factory fabricated belows tpe expansion joint cover, or equal by Tremco.

2.9 ROOF INSULATION

- .1 General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with roofing.
- .2 Insulation: Closed cell polyisocyanurate, fiber reinforced facer, manufactured in accordance with ASTM C 1289, Type II, Class 1, Grade 2 (20psi).
 - .1 Thickness: 150mm (75mm per layer)
 - .2 Total Layers: 2
 - .3 Basis of Design: Atlas AC Foam III

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- .3 Coverboard: High density, asphalt impregnated wood fibre to CAN/ULC S706.1, Type II, Class 1.
 - .1 Thickness: 13mm. Basis of Design: BP Esgard coated all six sides.
- .4 Tapered Insulation: Isocyanurate to ASTM, Type II, Class 1, Grade 2. By Posi Slope, Accuplane or approved equal.
 - .1 Drain Sumps: 200mm x 200mm.
 - .2 Backslope: As indicated on drawings.
 - .3 Crickets: As indicated on drawings.
- .5 Insulation Adhesive Two-part, 1:1 ratio, solvent-free, elastomeric urethane adhesive. Basis of Design: Tremco Low Rise Foam or One Step Foamable Adhesive by HB Fuller.

2.10 SURFACING

- .1 Membrane Adhesive: Cold applied, fibrated asphalt interplay and surfacing adhesive.
 - .1 Asphalt Content, Minimum, 50%, ASTM D6511.
 - .2 Nonvolatile Content, Minimum, 70%, ASTM D6511.
 - .3 VOC, Maximum, 250g/l, ASTM D6511.
 - .4 Coverage Rate: 1L/m².
 - .5 Surfacing Coverage Rate: 2L/m².
 - .6 Basis of Design: BURmastic Adhesive.
- .2 Aggregate: 6mm to 13mm 100% snow white calcite. Washed free of fines, moisture, debris and splinters. By Coloured aggregates or approved equal.

PART 3 - EXECUTION

3.1 EXAMINATION

- .1 Examine surfaces and site conditions, with Installer, for compliance with requirements, prior to commencing work.
 - .1 Verify surfaces and site conditions are ready to receive work.
 - .2 Verify deck is supported and secure.
 - .3 Verify that roof openings and penetrations are in place, curbs are set and braced, blocking, curbs, wood cants, and nailers are anchored to roof deck at penetrations and terminations, that wood nailers match insulation thickness, and roof drain bodies are properly installed.
 - .4 Verify deck surfaces are clean, dry, and free of snow or ice.
- .2 Report: Provide written report to Owner indicating conditions that do not meet requirements.
- .3 Proceed with installation once non-complying conditions have been corrected.

3.2 PREPARATION

- .1 Clean substrate of substances and projections detrimental to roofing installation according to roofing manufacturer's written instructions.

SECTION 07 51 13.15 BUILT-UP ROOFING, COLD APPLIED

- .2 Prevent materials from entering roof drains and conductors and from contacting surfaces of other construction.
- .3 Substrate-Joint Penetrations: Prepare joints as required to prevent asphalt and adhesives from penetrating joints, entering building, or damaging roofing components or other construction.
- .4 Ensure curb heights achieve 300mm flashing height above finished roof surface.
- .5 Ensure parapets achieve minimum 50mm flashing height above top of cant throughout.
- .6 Only utilize portions of the property as previously allocated by the facility owner, conceal all materials in a secure staging area and never leave operating equipment running while not attended to.
- .7 Supply owner with adequate notice for crane lifts as required.
- .8 Maintain roof in good order throughout duration of project. Protect roof system from construction abuse and staging of other materials.
 - .1 Direct water and/or precipitation to plumbing or away from facility façade during construction period.
- .9 Protect all materials from damage throughout construction process.
- .10 Minimize heavy foot traffic or storage of material on completed roof membrane.

3.3 INSTALLATION, GENERAL

- .1 Install roofing membrane system components according to roofing manufacturer's written instructions, applicable referenced roofing system approval, and approved shop drawings.
- .2 Cooperate with testing agencies and personnel engaged or required to perform services for installing roofing.
- .3 Install roofing as per manufacturers cold-weather installation guidelines when temperatures are below 0 Deg C.

3.4 FLUTE FILLER (ACCOUSTICAL STEEL DECK)

- .1 Ensure deck flutes are free of debris, sediment or moisture.
- .2 Loose lay stone wool insulation in flutes of steel deck.
- .3 Apply pre fabricated flute filler in continuous application to fully conceal all flutes within intended application area.
- .4 Temporary ballast flute filler from movement or displacement.

3.5 UNDERLAYMENT BOARD (STEEL DECK)

- .1 Mechanically fasten underlayment board to underlying deck with a minimum of eight (16) fasteners per board and increase fastening pattern as required at perimeters and corners as per manufacturers wind uplift report.
- .2 Where indicated adhere underlayment board in continuous beads of low rise foam insulation adhesive. Apply insulation adhesive with a maximum spacing of 300 mm o.c. Increase adhesion pattern as required at perimeters and corners as per manufacturers wind uplift report.
- .3 Install boards with staggered joints and free of warp, defect or damage.
- .4 Stagger all end joints by a minimum 900mm.

3.6 VAPOUR RETARDER

- .1 Install self adhered membrane over primed surface as per manufacturer installation guidelines.
- .2 Install all vapour retarders to envelope insulation package by minimum of 100mm.
- .3 Install all vapour retarders free of damage, tears or defects.
- .4 Tie in vapour retarder to existing building envelope as provided.

3.7 INSULATION

- .1 Install base course of polyisocyanurate insulation in beads of low rise foam applied at a minimum coverage of 300mm o.c.
- .2 Install in continuous row with adjacent rows off set by minimum one half board length.
- .3 Ensure all insulation is installed free of warp, damage, defect or moisture throughout the roofing project.
- .4 Install secondary layer of polyisocyanurate insulation in beads of low rise foam applied at a minimum coverage of 300mm o.c.
- .5 Install tapered insulation in beads of low rise foam applied at a minimum coverage of 300mm o.c.
- .6 Install coverboard in beads of low rise foam applied at a minimum coverage of 150mm o.c.
- .7 Insulation Installation requirements:
 - .1 Install all insulation free of wrap, damage, defect or moisture damage.
 - .2 Only install as much insulation that can be made water tight by end of each day. Minimum requirement is four plies of membrane applied, base flashings installed and full temporary water cut off applied.
 - .3 Install each layer with off-set joints by minimum of 600mm.

SECTION 07 51 13.15 BUILT-UP ROOFING, COLD APPLIED

- .4 Butt boards together without gaps and cracks that will prevent asphalt retention.
- .5 All insulation is to be applied and stored in strict accordance with the manufacturers written guidelines.

3.8 MEMBRANE

- .1 Install three plies membrane ply sheet strict accordance with manufacturers installation manuals and spec data sheets.
 - .1 Each ply to be fully embedded in application of cold adhesive applied at 1.0L/m².
 - .2 Install plies starting at low point so water will run parallel or over ply seams, but not against.
 - .3 Install all plies free of wrinkles blisters and/or fishmouths.
 - .4 Do not walk on plies until adhesive has fully set up, all areas that receive in adequate adhesive will be required for repair as per manufacturers instructions.
 - .5 Extend all plies to top of cant.
 - .6 Ensure base flashing plies are installed at end of each day.
- .2 Do not use installed membrane as working surface or storage area for any materials.
- .3 Do not apply flood coat until membrane has been inspected and repairment has been completed as instructed by the inspector.

3.9 FLASHINGS

- .1 All non-bituminous substrates are to be primed prior to application of bituminous materials at manufacturers published coverage rate and requirements.
- .2 Flashings consist of one ply elastomeric flashing sheet set in cold-applied water proofing adhesive.
- .3 Flashing Membrane: Install flexible flashing sheet at roof edges and at penetrations through roof. Secure to substrates according to roofing manufacturer's written instructions.
 - .1 Prime substrates with primer as required.
 - .2 Flashing Sheet Application:
 - .1 All flashings are to extend a minimum of 150mm beyond toe of cant and leading edge to be concealed with reinforcing mesh and surfacing asphalt.
 - .3 Unless stated otherwise, extend base flashing up walls or parapets a minimum of 300 mm above insulation and 150 mm onto field of roofing.
 - .4 Mechanically fasten top of base flashing securely at terminations and perimeter of roofing. Termination bars must be applied same day as flashings are applied.
 - .5 Overcoat termination bar to prevent any moisture infiltration.
 - .6 Hand press flashing membrane into adhesive to ensure full adhesion is achieved.
 - .7 Reinforce all vertical seams with vertical stripping mastic and reinforcing mesh. Reinforcement must carry entire length of membrane seam.
 - .8 Reinforce leading edge of flashing membrane with application of reinforcing mesh mopped in polymer-modified asphalt.
 - .9 Seal top termination of base flashing with a metal termination bar.
 - .10 Where flashing membrane extend and terminated vertically beyond 300mm, utilize cold-applied flashing adhesive.
 - .11 Flashing Membrane to be cold applied waterproofing flashing adhesive.

- .4 Low Parapet Wall Flashing
 - .1 Adhere elastomeric sheeting completely to flashing surface, cant, and roofing with flashing adhesive.
 - .2 Ensure complete bond and continuity without wrinkles or voids. Lap sheeting ends 100 mm and adhere with flashing adhesive.
 - .3 Extend elastomeric sheeting up and over parapet at least 75 mm and face nail with 38 mm common roofing nails, 200 mm OC.

- .5 Flashing At Edges and Gutters
 - .1 Fabricate and install new one piece gutter with downspouts. Slope gutter to downspouts.
 - .2 Prior to setting and nailing horizontal flanges of gutter, uniformly trowel a 1.5 mm thick layer of cold flashing adhesive to roofing surface designated to receive metal flange.
 - .3 Nail flange to wood blocking 75 mm OC, staggered.
 - .4 Prime metal flange with asphaltic primer.
 - .5 Adhere sufficiently wide strip of elastomeric sheeting completely to flashing surface with flashing adhesive. Ensure complete bond and continuity without wrinkles or voids lap sheeting ends 100 mm and adhere with flashing adhesive. Elastomeric sheeting to cover gravel stop completely and overlap onto adjacent roof a minimum of 150 mm.

- .6 Wall Flashing
 - .1 Cut new reglet joint where reglet not present 300mm above the roof surface.
 - .2 Do not cover existing weep holes.
 - .3 Adhere elastomeric sheeting completely to flashing surface, cant and roofing with flashing adhesive.
 - .4 Ensure complete bond and continuity without wrinkles or voids. Lap sheeting ends 100 mm and adhere with flashing adhesive.
 - .5 Elastomeric sheeting width: sufficient to extend at least 150 mm beyond toe of cant onto roof surface and 300 mm above the roof surface.
 - .6 Secure top of elastomeric sheeting to vertical plane with termination bar. Mechanically fasten 300 mm OC. Overcoat bar with end lap stripping adhesive and membrane.
 - .7 Ensure wall envelope extends onto flashing sheet by a minimum of 100mm to continuously shed water.

- .7 Building Expansion Joints
 - .1 Fill joint with loose insulation.
 - .2 Provide 13 mm (1/2 inch) thick plywood to top of wood blocking, secured one side only.
 - .3 Apply foam rubber or 25 mm thick mineral fibre insulation to top of plywood.
 - .4 Install elastomeric sheeting centred over expansion joint.
 - .5 Fully adhere sheeting to horizontal and vertical blocking surfaces with flashing adhesive. Press sheeting into adhesive. Ensure complete bond and continuity without wrinkles or voids.
 - .6 Lap sheeting ends 100 mm and adhere with flashing adhesive.

- .8 Expansion Joint at Wall
 - .1 Extend vapour retarder from deck level up wall sufficiently and secure to wall.
 - .2 Fill joint with loose insulation.
 - .3 Install blocking, sheathing and compressible insulation as detailed on Drawings.
 - .4 Adhere elastomeric sheeting completely to flashing surface, cant and roofing with flashing adhesive.

SECTION 07 51 13.15 BUILT-UP ROOFING, COLD APPLIED

- .5 Ensure complete bond and continuity without wrinkles or voids. Lap sheeting ends 100 mm and adhere with flashing adhesive.
 - .6 Elastomeric Sheeting Width: sufficient to extend at least 150 mm beyond toe of cant onto roof surface and 200 mm above the roof surface.
 - .7 Secure top of elastomeric sheeting to vertical plane with a termination bar. Mechanically fasten 300 mm OC. Overcoat bar with end lap stripping adhesive and membrane.
- .9 Area Divider
- .1 Install elastomeric sheeting centred over area divider extending onto roof membrane a minimum of 150 mm beyond toe of cant on either side.
 - .2 Fully adhere sheeting with flashing adhesive. Press sheeting into adhesive. Ensure complete bond and continuity without wrinkles or voids.
 - .3 Lap sheeting ends 100 mm and adhere with flashing adhesive.
- .10 Control Joint
- .1 Install elastomeric sheeting centred over joint.
 - .2 Fully adhere sheeting to horizontal and vertical blocking surfaces with flashing adhesive. Press sheeting into adhesive. Ensure complete bond and continuity without wrinkles or voids.
 - .3 Lap sheeting ends 100 mm and adhere with flashing adhesive.
- .11 Curb Flashing
- .1 Fully adhere sheeting to horizontal and vertical blocking surfaces with flashing adhesive. Press sheeting into adhesive. Ensure complete bond and continuity without wrinkles or voids.
 - .2 Mechanically fasten sheeting on top face of curb.
 - .3 Lap sheeting ends 100 mm and adhere with flashing adhesive.
 - .4 If membrane does not terminate to inside face of curb, secure top edge with a termination bar. Mechanically fasten 300 mm OC. Overcoat bar with end lap stripping adhesive and membrane.
- .12 Projection Flashing
- .1 Prime top and bottom side of aluminium flange.
 - .2 Set flange in uniform bed of vertical grade stripping adhesive.
 - .3 Apply flashing adhesive to prepared area and Provide aluminum base over pipe and set into the flashing adhesive.
 - .4 Install penetration flashing in strict accordance with manufacturers written instructions.
 - .5 Ensure seals are tight fit, caulking is not acceptable.
 - .6 Provide clamp around pipe and rubber cap. Prime flange.
 - .7 Install elastomeric sheeting with stripping ply adhesive and membrane.
 - .8 Cover flange completely with 900mm x 900mm target patch.
 - .9 Remove wrinkles and voids. Lap flashing ply ends 100 mm.
- .13 Roof Drain
- .1 Install drain assembly in accordance with manufacturer's written installation guidelines.
 - .2 Prime bottom and top side of flange.
 - .3 Set flange in 6mm thick trowelling of polymer-modified mastic (vertical stripping mastic).
 - .4 Plug and seal drain to prevent water entry until service connection is completed. Do not allow water to accumulate to jeopardize roof system or weight load of structure.

SECTION 07 51 13.15 BUILT-UP ROOFING, COLD APPLIED

- .5 Provide 900 x 900 mm size elastomeric sheeting reinforcement, centred over drain; and fully adhered with flashing adhesive. Remove wrinkles and entrapped air.
 - .6 Apply mastic to exposed edge of membrane inside the drain opening.
 - .7 Clamp flashing collar to drain in bed of flashing adhesive.
 - .8 Trim excess sheeting within drain.
 - .9 Install three course of polymer-modified mastic and mesh around leading edge prior to top pour application.
- .14 Scuppers:
- .1 Extend field membrane into throat of scupper in all directions.
 - .2 Apply scupper flange into bed of vertical grade stripping mastic and fasten into place.
 - .3 Conceal flange in all directions with flashing membrane adhered in cold-applied flashing adhesive.
 - .4 Tie in leading edges with stripping adhesive and mesh.
- 3.10 **SURFACING**
- .1 Prior to applying flood coat ensure roof surface is swept clear of all construction debris, areas of heavy sediment may require primer. Repair all deficiencies, do not apply flood coat until inspector has examined the roof membrane.
 - .2 Prior to applying flood coat, install roof protection pads where indicated on drawing in cold-applied flashing adhesive.
 - .3 Apply cold applied flood coat over entire roof surface at rate of 2.0L/m², immediately broadcast calcite aggregate into cold applied flood coat at rate of 24.4kg/m².
 - .4 Apply double pour of top pour and aggregate at all roof corners. Sweep loose aggregate, prime surface prior to double pour.
 - .5 Rake aggregate neatly for clean/even coverage over entire roof surface, where aggregate is not adhered into top pour additional top pour will be required.
- 3.11 **FIELD QUALITY CONTROL**
- .1 Roofing Inspector: Owner will engage a qualified roofing inspector to perform roof tests and inspections.
 - .2 Roofing Inspector: Contractor shall engage a qualified roofing inspector for a minimum of every other production day on site to perform roof tests and inspections and to prepare start up, interim, and final reports.
 - .3 Repair or remove and replace non-complying components of roofing. Retest to demonstrate compliance. Reports to be delivered to owner, architect, consultants and contractor minimum 24 hours after each inspection.
- 3.12 **PROTECTING AND CLEANING**
- .1 Protect roofing from damage and wear during construction according to manufacturer's instructions.

SECTION 07 51 13.15 BUILT-UP ROOFING, COLD APPLIED

- .2 Correct deficiencies in or remove roofing that does not comply with requirements, repair substrates, and repair or reinstall roofing to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- .3 Clean overspray and spillage from adjacent construction.
- .4 Paint all gas lines yellow with two courses of exterior grade yellow paint.
- .5 Remove all construction waste, material and equipment from site.

END OF SECTION

PART 1 - GENERAL

1.1 SCOPE OF WORK

- .1 The work covered by this specification includes the supply of all labour, materials, consumables and equipment to:
 - .1 Backfill for void from the existing septic tank and equalization tank including surface restoration to match existing.

1.2 GENERAL

- .1 Comply with Division 01, General Requirements, and all documents referred to therein.
- .2 All construction to be carried out in accordance with the most current design criteria, standards and specifications of the Municipality, the Region, and OPSD/OPSS.
- .3 The Contractor shall arrange and pay for all necessary permits, fees, inspections and complete restoration whether on site or on any other property affected by the work.

1.3 PROTECTION

- .1 All existing utilities shown on the drawings are for reference purposes only. The Contractor shall be responsible for the field stakeout of all existing utilities on-site and off-site and shall be responsible for adequately protecting all existing utilities and services within the construction area. Furthermore, any damage to the existing utilities by the Contractor, or the activities of his subcontractors or suppliers shall be repaired at the expense of the Contractor. The Contractor shall be responsible to expose all existing stubs, services, and utilities prior to commencement of construction and to verify all existing inverts, depths, etc. to verify no conflicts exist. If a conflict exists, it shall be reported to the Engineer immediately. Work shall not proceed until the conflict is resolved.
- .2 The Contractor shall record location of maintained, re-routed and abandoned underground lines.

1.4 UTILITY SERVICES

- .1 The Contractor shall ensure that all existing hydrants, valve boxes, curb stop boxes, fire or police call boxes, or any other utility controls remain unobstructed and accessible during the construction of the work.
- .2 The Contractor shall not operate any valve, switch, or other control in any existing utility services without the written approval of the Architect and the utility concerned. All consumers affected by such operation shall be notified in writing by the Contractor a minimum of 48 hours before the operation and shall be advised of the probable time when service will be restored.
- .3 The Contractor shall pay all claims, damages, and all required rectification caused by his failure to comply with items .1 and .2 of this subsection.

SECTION 31 23 00 .1 - BACKFILL

1.5 BARRIER AND LIGHTS

- .1 The Contractor shall, at his own expense, supply, erect and maintain all required barriers, fences, lights, signage, etc., as may be necessary, or as ordered by the Architect, to ensure safety to the Public and to those engaged in any activities around and about the work.

1.6 NOTIFICATION OF AGENCIES

- .1 The Contractor shall be responsible for fully complying with the requirements of all official and other agencies governing all or any part of the work under this Contract. These requirements may affect methods of installation and construction methods and may include written notification of the appropriate authority prior to commencement of the Contract. Where a written notification of the above authorities is required, a copy of the said notification shall be submitted to the Architect. Work commencement notices required by the Municipality or Region shall be submitted at minimum 48 hours prior to the start of the work.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Fill material shall be select native backfill, compacted to 95% SPD.
- .2 Fill materials shall conform to the requirements of Section 31 23 00, Excavation and Fill, and these specifications. The Contractor shall advise the Consultant of the supplier(s) of the bedding aggregates prior to commencement of construction so that adequate samples can be obtained for grain size distribution testing.
- .3 All granular materials shall conform to the requirements of OPSS form 1010.

PART 3 - EXECUTION

3.1 CONSTRUCTION

- .1 The contractor shall fill the void left by the removed septic tank and equalizer tank with with select native backfill, compacted to 95% SPD from the site if available or granular B up to the subgrade of asphalt area on north side of school. Select backfill shall not be comprised of more than 50% clay. Organic soil is not permitted for use as select native fill.
- .2 The contractor shall coordinate all construction on private property with the property owner. Provide minimum 48 hr advanced notice of the scheduled work to the owner in writing. The contractor is to make every reasonable attempt to minimize the disruption to the property owner resulting from the work.
- .3 Existing septic tank and equalizer tank is not to be demolished until the new septic system is commissioned and the subject property's service has been transferred to the new septic system.

- .4 At the completion of the work, such properties are to be reinstated to original (pre-construction) condition and a written release is to be obtained from the property owner by the Contractor in a form acceptable to the Engineer. The contractor shall provide the Engineer with copies of the written releases prior to substantial performance.
- .5 The Contractor shall remain responsible to the Owner of any property for damage done to that property arising out of any act or neglect by the Contractor, or anyone acting under their authority, during the course of the work.

3.2 **MEASUREMENT FOR PAYMENT**

- .1 No measurement for payment will be made. Payment is to be based on Lump Sum amount for each existing septic system to be demolished as shown on the contract drawings.

3.3 **BASIS FOR PAYMENT**

- .1 Payment at the contract price shall be full compensation for all labour, equipment and materials necessary to complete the work.

END OF SECTION

PART 1 - GENERAL

1.1 SCOPE OF WORK

- .1 The work covered by this specification includes the supply of all labour, materials, consumables and equipment to:
 - .1 demolish existing fire fighting cisterns and reconfigure existing water services including surface restoration to match existing.

1.2 GENERAL

- .1 Comply with Division 01, General Requirements, and all documents referred to therein.
- .2 All construction to be carried out in accordance with the most current design criteria, standards and specifications of the Municipality, the Region, and OPSD/OPSS.
- .3 The Contractor shall arrange and pay for all necessary permits, fees, inspections and complete restoration whether on site or on any other property affected by the work.

1.3 DEFINITIONS

- .1 For excavation work, only two classes of excavation shall be considered, namely earth excavation and rock excavation.
- .2 Earth excavation under this contract shall comprise deposits of whatever nature, including shale that does not come under the classification of rock. For the purpose of this Contract, earth excavation shall include both surface and buried boulders regardless of size. All boulders shall be removed and disposed of off site at no extra cost.
- .3 Rock excavation shall be defined as material, which cannot be reasonably removed with a conventional trenching backhoe outfitted with either a Avey@ bucket or ATiger Teeth@. Blasting shall not be permitted without written authorization from the Consultant.

1.4 PROTECTION

- .1 All existing utilities shown on the drawings are for reference purposes only. The Contractor shall be responsible for the field stakeout of all existing utilities on-site and off-site and shall be responsible for adequately protecting all existing utilities and services within the construction area. Furthermore, any damage to the existing utilities by the Contractor, or the activities of his subcontractors or suppliers shall be repaired at the expense of the Contractor. The Contractor shall be responsible to expose all existing stubs, services, and utilities prior to commencement of construction and to verify all existing inverts, depths, etc. to verify no conflicts exist. If a conflict exists, it shall be reported to the Engineer immediately. Work shall not proceed until the conflict is resolved.
- .2 The Contractor shall record location of maintained, re-routed and abandoned underground lines.

SECTION 33 10 00.1 - DEMOLISH EXISTING CISTERN

1.5 UTILITY SERVICES

- .1 The Contractor shall ensure that all existing hydrants, valve boxes, curb stop boxes, fire or police call boxes, or any other utility controls remain unobstructed and accessible during the construction of the work.
- .2 The Contractor shall not operate any valve, switch, or other control in any existing utility services without the written approval of the Architect and the utility concerned. All consumers affected by such operation shall be notified in writing by the Contractor a minimum of 48 hours before the operation and shall be advised of the probable time when service will be restored.
- .3 The Contractor shall pay all claims, damages, and all required rectification caused by his failure to comply with items .1 and .2 of this subsection.

1.6 BARRIER AND LIGHTS

- .1 The Contractor shall, at his own expense, supply, erect and maintain all required barriers, fences, lights, signage, etc., as may be necessary, or as ordered by the Architect, to ensure safety to the Public and to those engaged in any activities around and about the work.

1.7 NOTIFICATION OF AGENCIES

- .1 The Contractor shall be responsible for fully complying with the requirements of all official and other agencies governing all or any part of the work under this Contract. These requirements may affect methods of installation and construction methods and may include written notification of the appropriate authority prior to commencement of the Contract. Where a written notification of the above authorities is required, a copy of the said notification shall be submitted to the Architect. Work commencement notices required by the Municipality or Region shall be submitted at minimum 48 hours prior to the start of the work.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Fill material shall be Granular B.
- .2 Fill materials shall conform to the requirements of Section 31 23 00, Excavation and Fill, and these specifications. The Contractor shall advise the Consultant of the supplier(s) of the bedding aggregates prior to commencement of construction so that adequate samples can be obtained for grain size distribution testing.
- .3 All granular materials shall conform to the requirements of OPSS form 1010.

PART 3 - EXECUTION

3.1 CONSTRUCTION

- .1 The existing fire fighting cistern is to be abandoned as indicated on the contract drawings.
- .2 For each cistern marked for demolition the contractor shall:
 - .1 Remove or cap/abandon all existing pipes and conduits.
 - .2 Pump out all remaining water from the cistern.
 - .3 Remove any floats, pumps and mechanical equipment.
 - .4 Excavate, remove and dispose the top of the concrete cistern including all access hatches and other attached appurtenances.
 - .5 Break down cistern walls to 300mm below parking lot subgrade elevation.
 - .6 Core four (4) holes in the base slab of the cistern. Minimum 150mm diameter holes spaced 300mm apart.
 - .7 Fill the cistern with Granular B up to the elevation of the parking lot subgrade.
- .3 The contractor shall coordinate all construction on private property with the property owner. Provide minimum 48 hr advanced notice of the scheduled work to the owner in writing. The contractor is to make every reasonable attempt to minimize the disruption to the property owner resulting from the work.
- .4 Existing cistern is not to be demolished until the new watermain is commissioned and the subject property's service has been transferred to the new watermain.
- .5 At the completion of the work, such properties are to be reinstated to original (pre-construction) condition and a written release is to be obtained from the property owner by the Contractor in a form acceptable to the Engineer. The contractor shall provide the Engineer with copies of the written releases prior to substantial performance.
- .6 The Contractor shall remain responsible to the Owner of any property for damage done to that property arising out of any act or neglect by the Contractor, or anyone acting under their authority, during the course of the work.

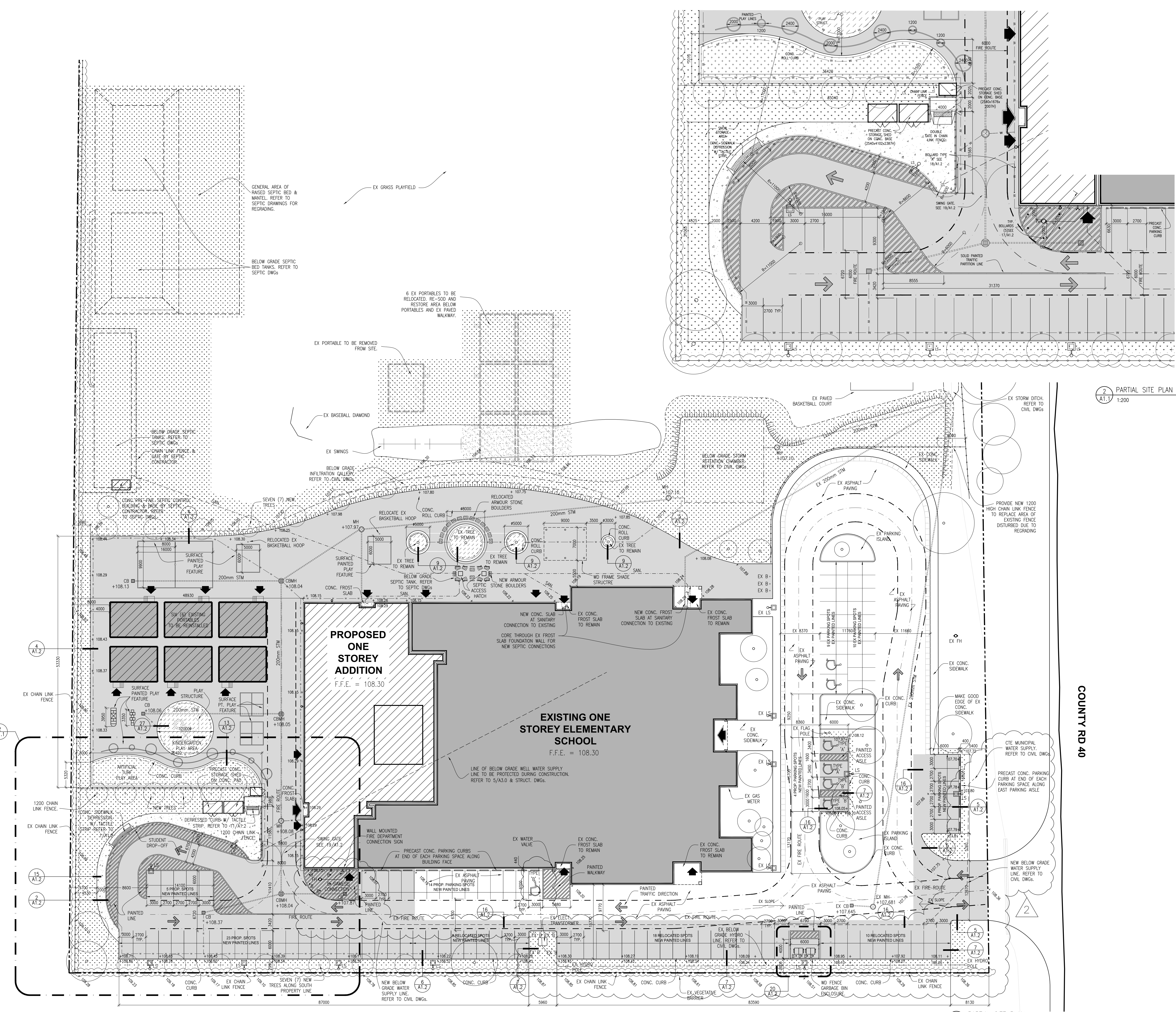
3.2 MEASUREMENT FOR PAYMENT

- .1 No measurement for payment will be made. Payment is to be based on Lump Sum amount for each existing cistern to be demolished as shown on the contract drawings.

3.3 BASIS FOR PAYMENT

- .1 Payment at the contract price shall be full compensation for all labour, equipment and materials necessary to complete the work.

END OF SECTION



- LEGEND**
- PROPERTY LINE
 - EX CHAIN LINK FENCE
 - NEW CHAIN LINK FENCE
 - W NEW WEAVING TILE
 - FIRE ROUTE / TRUCK ACCESS
 - ↑ MAIN ENTRANCE
 - ↑ ENTRANCE
 - ↻ BARRIER-FREE PARKING LOOGE
 - ← PAINTED TRAFFIC DIRECTION
 - +112.40 FINISHED GRADES. REFER TO SITE GRADING DRAWING.
 - +112.40 EXISTING GRADES. REFER TO SITE GRADING DRAWING.
 - ▨ PAINTED LINES
 - SWIPE CONNECTION
 - ⊙ LIGHT STANDARD
 - ⊙ EXTERIOR WALL MOUNTED LIGHTING
 - ⊙ FH FIRE HYDRANT
 - ⊙ CBMH CATCH BASIN MANHOLE
 - ⊙ MH MANHOLE
 - ⊙ CB CATCH BASIN
 - B BOLLARD
 - NEW TREES
 - EX TREES
 - ▨ NEW SOD
 - ▨ NEW HEAVY DUTY ASPHALT. REFER TO CIVIL DWGS FOR AREAS OF FULL/PARTIAL DEPTH PAVING.
 - ▨ NEW CONCRETE SIDEWALK
 - ▨ NEW MULCH
 - ▨ NEW SYNTHETIC TURF
 - ▨ NEW GRAVEL PLAY AREA

2 PARTIAL SITE PLAN
A1.1 1:200

COUNTY RD 40

DATE	REVISIONS
8. AUG 27 2024	ISSUED FOR ADDENDUM #2
7. JULY 24 2024	ISSUED FOR TENDER/PERMIT
6. JUNE 11 2024	SITE PLAN REVIEW (4th SUBMISSION)
5. MAY 03 2024	SITE PLAN REVIEW (3rd SUBMISSION)
4. FEB 12 2024	COSTING
3. FEB 12 2024	SITE PLAN REVIEW (2nd SUBMISSION)
2. NOV 13 2023	SITE PLAN REVIEW (PRELIMINARY)
1. FEB 28 2023	PRELIMINARY SITE PLAN REVIEW

MURRAY CENTENNIAL PUBLIC SCHOOL ADDITION
654 County Road 40,
TRENTON ONTARIO K6V 6P4

KAWARtha PINE RIDGE DISTRICT SCHOOL BOARD
1994 Fisher Drive, Peterborough, Ontario K9J 6X8
DRAWING

PARTIAL SITE PLAN

ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT F. FERKUL
LICENCE #986

TRUE NORTH DWG. NORTH
2304 JOB NO.
AS NOTED SCALE
DATE
FEB 2024 PRINTED

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DWG. NO.
A1.1

1 PARTIAL SITE PLAN
A1.1 1:300

Construction Phasing

Preamble

As the school (Murray Centennial Public School) will be occupied during the construction period, the work within the contract will be phased to mutually accommodate and segregate school use and construction activities. The phasing sequence intent is as follows:

Phase 1

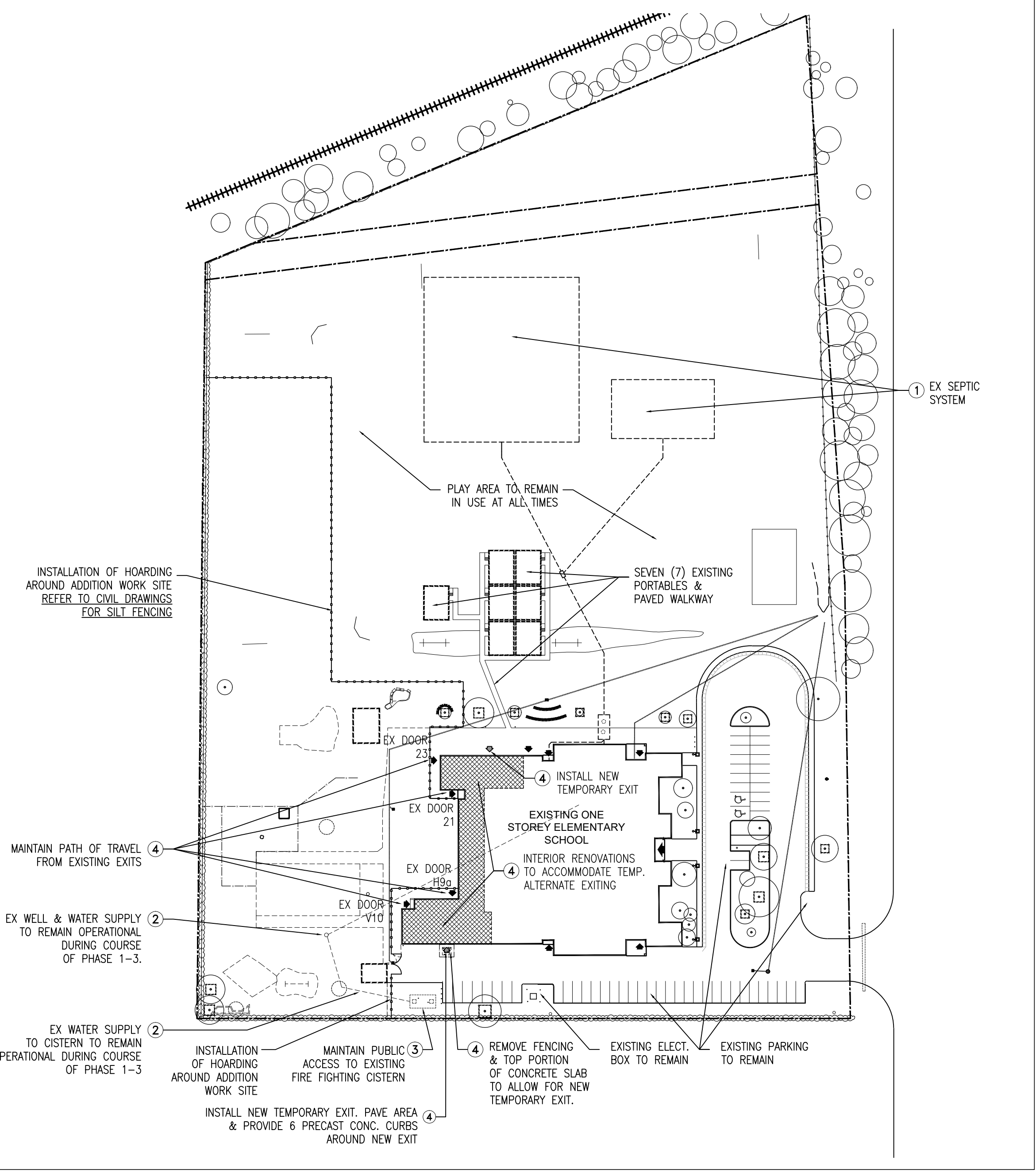
Below work will be completed between **October 1, 2024 & October 31, 2024**.

Phase 1 period work is to primarily prepare the school site by providing specific renovations to facilitate school functions during course of work. These are to include the following, but are not limited to:

- 1 Existing Septic system to remain operational during course of Phase 1 & 3.
- 2 Existing water supply to the school and fire fighting cistern is fed from a well located at the south-west of the school property. The existing water supply line to the building is to run below the proposed addition. This existing water supply line is to be protected and remain operational through Phase 1-3. This well is only to be decommissioned when the new water supply to the building, sprinkler system, and on-site fire hydrants are commissioned.
- 3 Maintain vehicular public access to the existing fire fighting cistern along the south side of the property. Access to the cistern is to be maintained throughout course of construction.
- 4 Interior renovations to existing classrooms and kindergarten rooms to accommodate alternate existing strategy during course of construction. Refer to drawings on sheet A2.0 for interior renovation phasing scope. Provide construction hoarding to maintain path of travel from existing exit doors 23, 21, H9a, and V10. Remove chain link ex fence & concrete pad at south side of school to accommodate new temporary exit. Locally re-pave area.

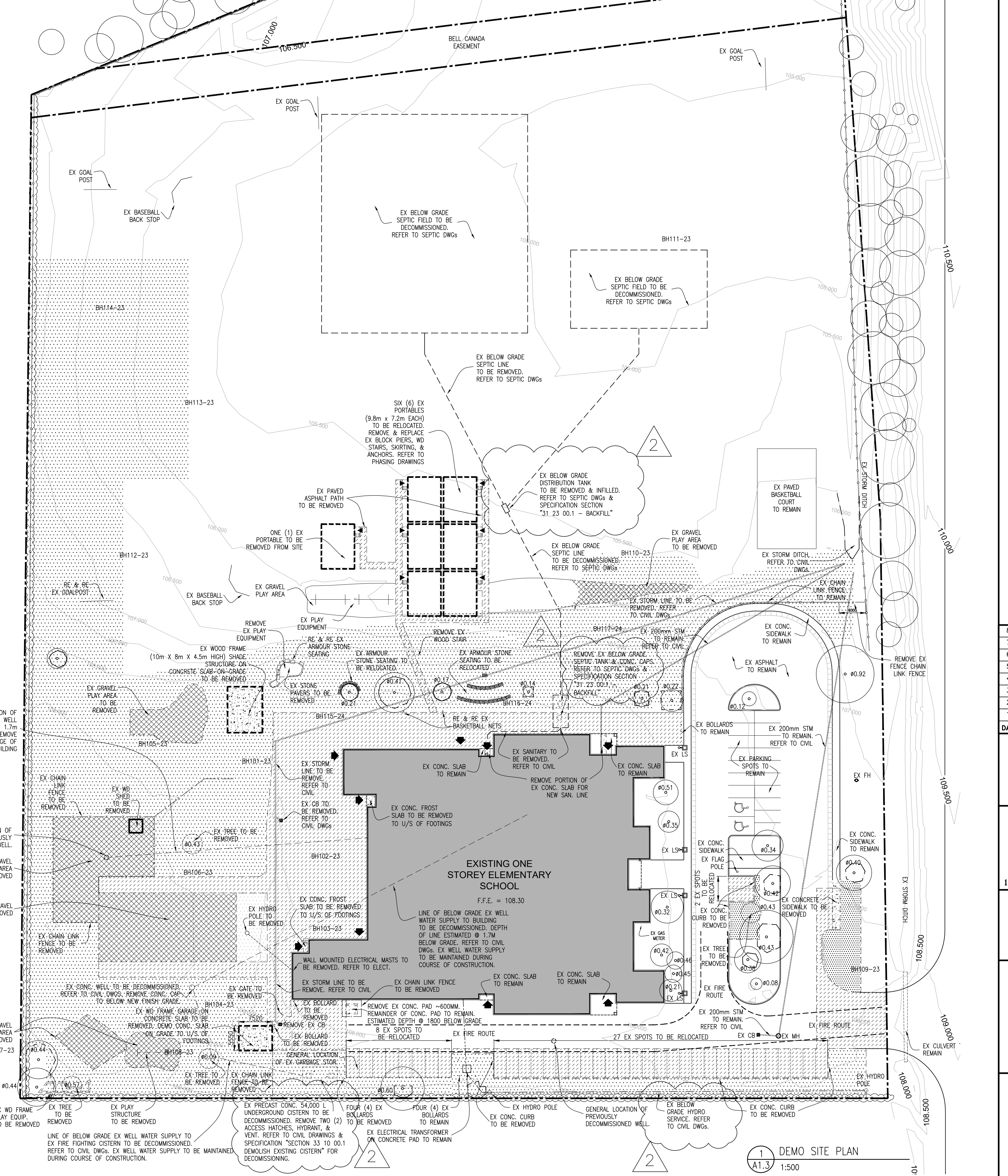
Work in this phase is a priority to ensure the existing school can be occupied and used for the remainder of the school year while construction of the addition continues. Refer to Civil, Electrical, Mechanical, and architectural demolition drawings for full scope of removals.

PHASE 1 DIAGRAM
A1.3 1:1000



DEMOLITION NOTE

DEMOLITION PLAN DESCRIBES GENERAL SCOPE OF REMOVALS TO BE PERFORMED ACROSS ALL PHASES OF WORK. REFER TO PHASING DRAWINGS FOR DURATION AND SCOPE OF DEMOLITION WORK TO BE PERFORMED IN EACH PHASE. DEMOLITION DRAWINGS AND PHASING DRAWINGS ARE TO BE READ IN CONJUNCTION FOR FULL SCOPE OF REMOVALS WORK.



- #### LEGEND
- PROPERTY LINE
 - EXISTING CHAIN LINK FENCE
 - EXISTING CHAIN LINK FENCE TO BE REMOVED
 - FIRE ROUTE / TRUCK ACCESS
 - EXISTING TO BE REMOVED UNLESS OTHERWISE NOTED
 - MAN ENTRANCE
 - ENTRANCE
 - NEW TEMPORARY EXIT
 - BARRIER-FREE PARKING LOOP
 - TREE PROTECTION ZONE, REFER TO CIVIL DWG.
 - EXISTING SAMESEX CONNECTION
 - EXISTING LIGHT STANDARD
 - EXISTING MANHOLE
 - EXISTING CATCH BASIN
 - EXISTING BOLLARD
 - EXISTING TREE TO BE REMOVED
 - EXISTING TREES
 - EXISTING SOOT TO BE REMOVED
 - EXISTING ASPHALT TO BE REMOVED
 - EXISTING GRAVEL TO BE REMOVED
 - EXISTING CONCRETE TO BE REMOVED

DATE	REVISIONS
8. AUG 27 2024	ISSUED FOR ADDENDUM #2
7. JULY 24 2024	ISSUED FOR TENDER/PERMIT
6. JUNE 11 2024	SITE PLAN REVIEW (4th SUBMISSION)
5. MAY 03 2024	SITE PLAN REVIEW (3rd SUBMISSION)
4. FEB 12 2024	COSTING
3. FEB 12 2024	SITE PLAN REVIEW (2nd SUBMISSION)
2. NOV 13 2023	SITE PLAN REVIEW (PRELIMINARY)
1. FEB 28 2023	PRELIMINARY SITE PLAN REVIEW

MURRAY CENTENNIAL PUBLIC SCHOOL ADDITION
654 County Road 40,
TRENTON ONTARIO K0V 6P4

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD
1994 Fisher Drive, Peterborough, Ontario K9J 6X8

DEMO SITE PLAN & SITE PHASING PLAN

TRUE NORTH DWG. NORTH

ARCHITECTS
ROBERT F. FERKUL
LICENCE #0886

2304

AS NOTED

FEB 2024

DATE PRINTED

MOFFET & DUNCAN
ARCHITECTS INC.
5055 DUNDAS ST. WEST
TORONTO, ONT. M9A 1B9
TEL: (416) 239-2775
FAX: (416) 239-9729
EMAIL: moffet@duncan.ca

DWG. NO.
A1.3

Phase 2

Phase 2 the intermediary phase, will commence **November 1, 2024** and will complete **June 30, 2025**. Phase 2 comprises the completion of the majority of building and site upgrades, including:

- 1 Remove ex storm system along west end of site. Refer to Civil drawings.
- 2 Provide new temporary 150w weeping tile from ex CB to outlet at ex north slope. Remove upon completion of new storm system. In lieu of weeping tile, provide pumps to remove storm water to north of school.
- 3 Revise location of construction hoarding
- 4 Complete majority of addition building
- 5 Install septic bed and biofilter system at west end of site

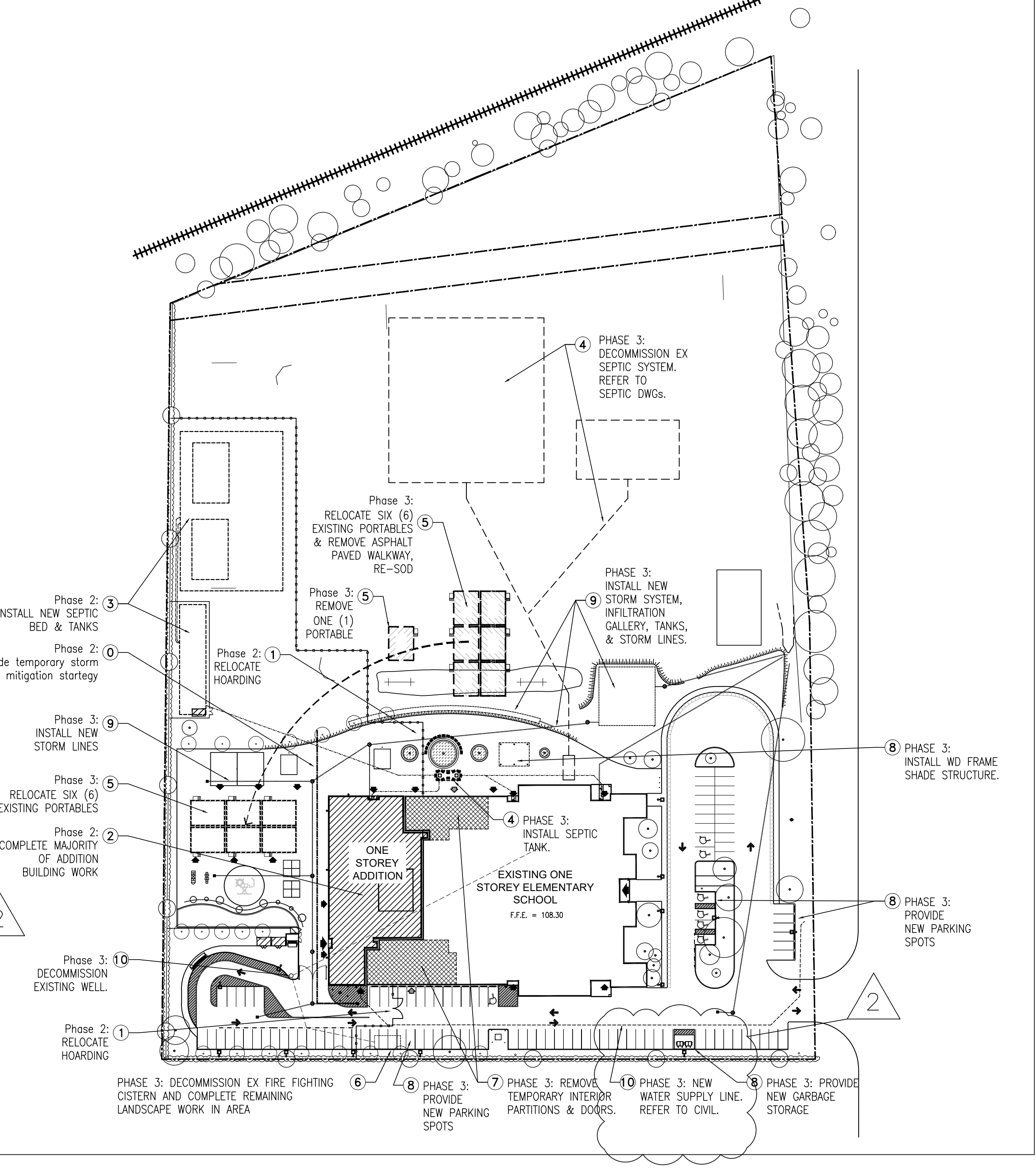
Phase 3

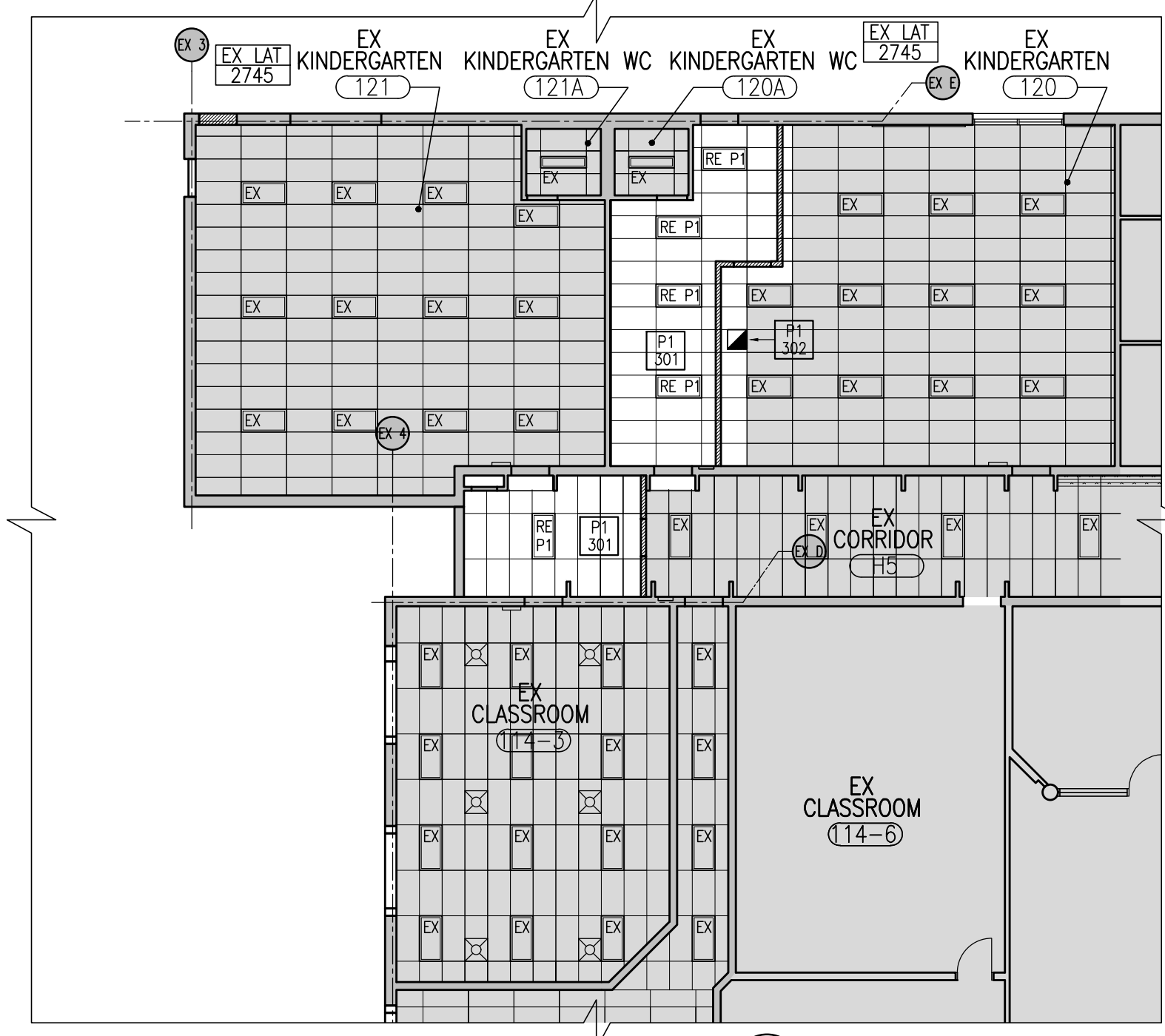
Phase 3 the final phase, will commence **July 1, 2025** and will complete **August 28, 2025**. Phase 3 comprises the substantial completion of the remaining work, along with commissioning of new services, and decommissioning of existing services, including:

- 1 New septic system to be completed and commissioned. Existing septic system to be decommissioned. Refer to Septic Drawings.
- 2 Relocate portables from temporary location north of the school building to the west play area. Remove temporary foundations and re-soil area.
- 3 Decommission existing fire fighting cistern upon completion of new water supply hook-up, new on-site fire hydrant, and new sprinkler system located within the addition.
- 4 Remove temporary interior partitions and doors as part of alternate existing strategy. Perform interior renovations. Refer to drawing 1/A2.1 & RCP drawing 1/A5.0 for final layout.
- 5 Complete remainder of site work.
- 6 Install new storm system. Refer to Civil Drawings.
- 7 Decommission existing well upon commissioning of new domestic water supply, sprinkler system, and on-site fire hydrant.

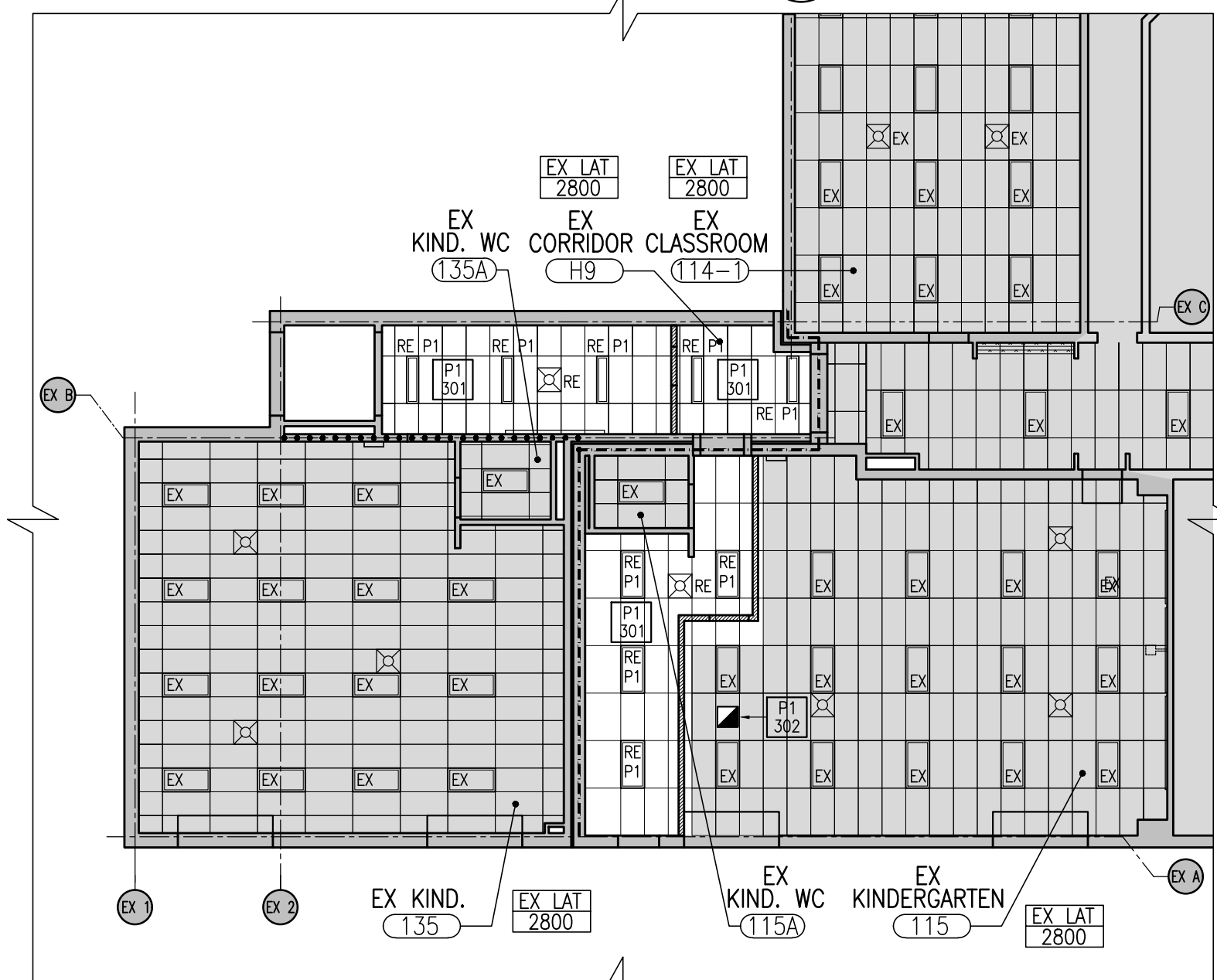
In this period the building is to be readied for full occupancy along with all asphalt areas (for vehicle and pedestrian) prior to **AUGUST, 2025**

PHASE 2 & 3 DIAGRAM
A1.3 1:1000

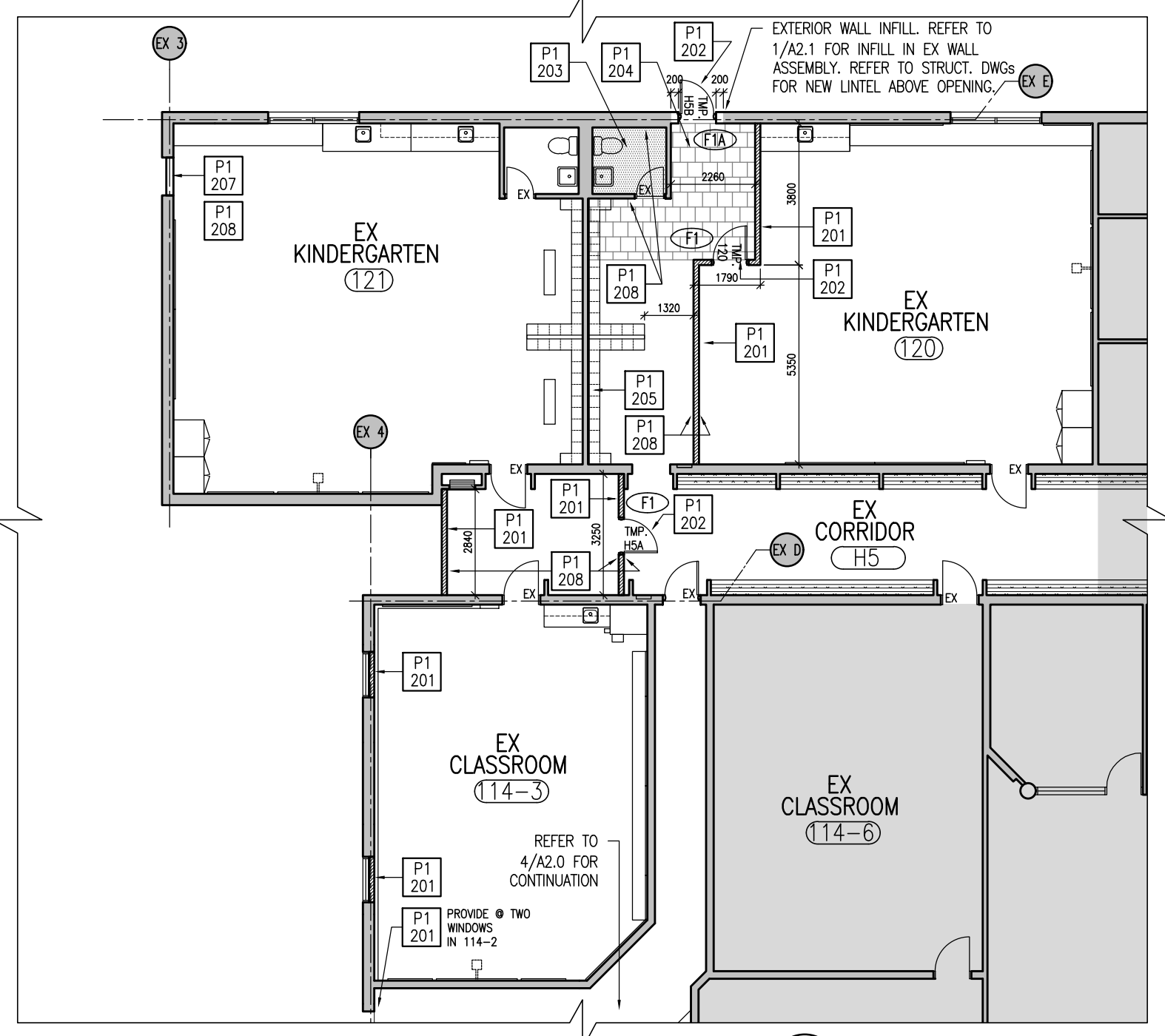




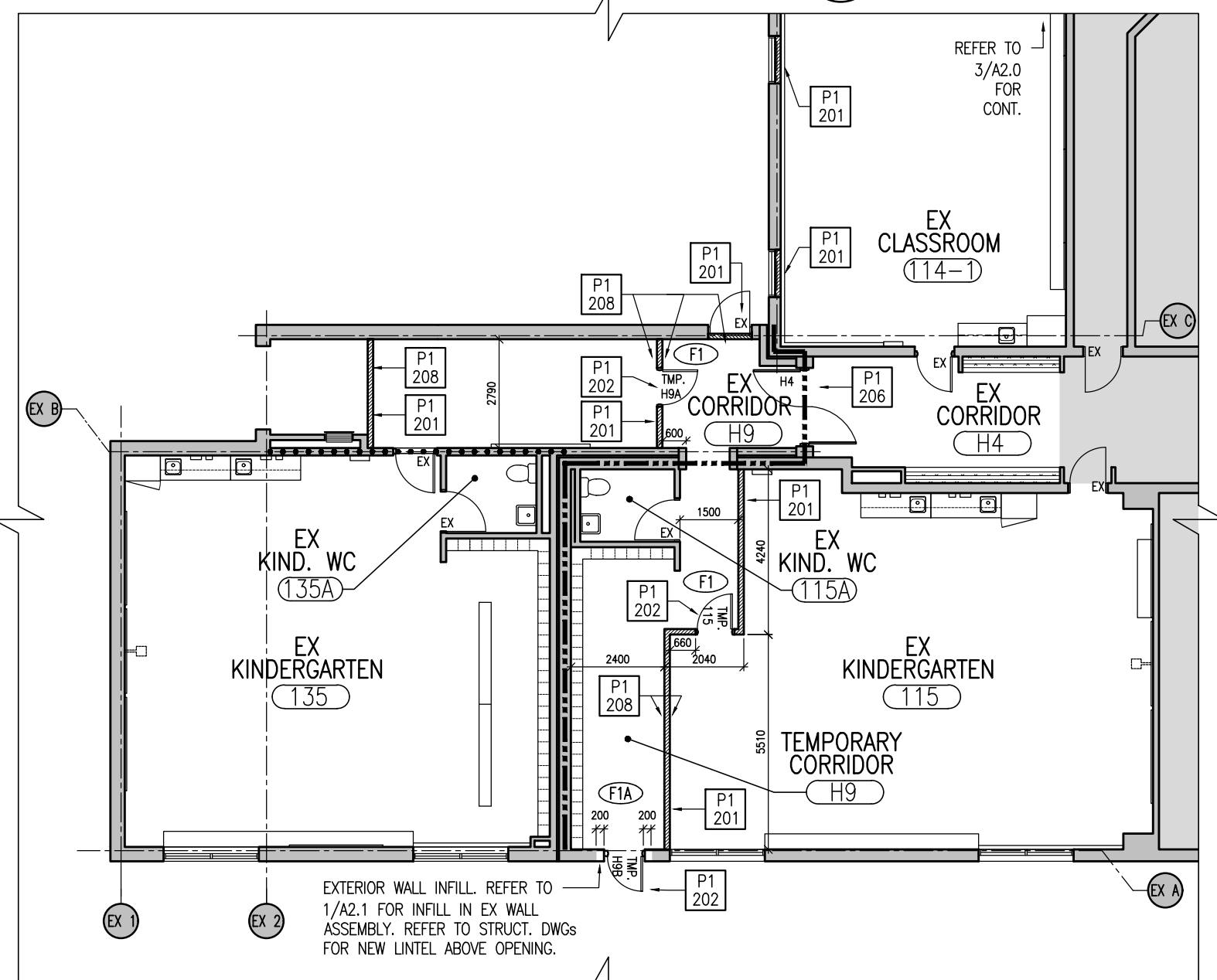
5 PHASE 1 - PROPOSED RCP
A2.0 1:150



6 PHASE 1 - PROPOSED RCP
A2.0 1:150



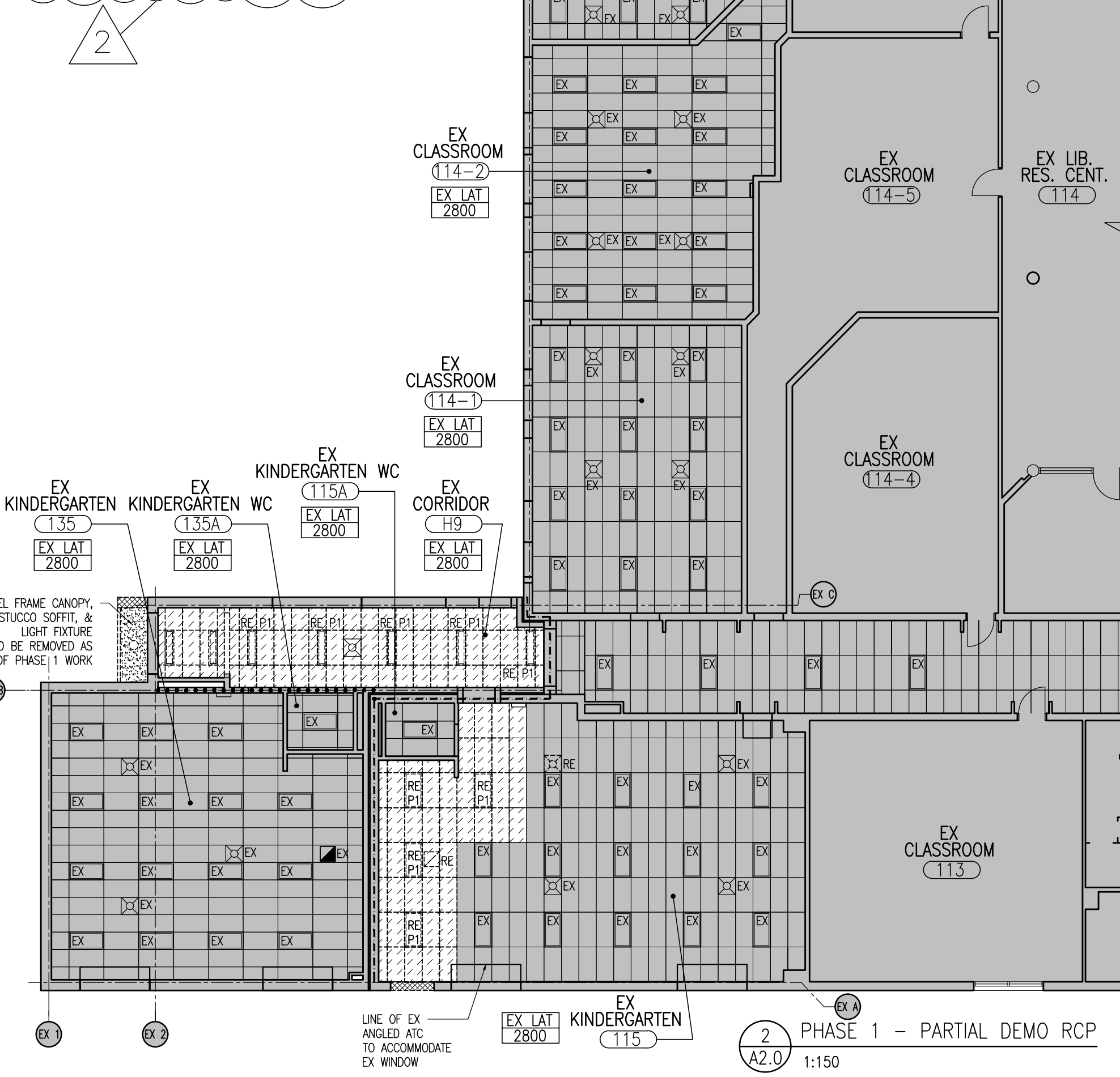
3 PHASE 1 - PROPOSED
A2.0 1:150



4 PHASE 1 - PROPOSED
A2.0 1:150

DEMO RCP LEGEND

- DENOTES EX ACUSTIC CEILING TILE TO REMAIN
- DENOTES AREA OF EX FIRE RATED ACUSTIC CEILING TILE & T&B GRID TO BE REMOVED
- EX LIGHT FIXTURES TO BE REMOVED. REFER TO ELEC. DWGS.
- EX LIGHT FIXTURES TO BE REMOVED, STORED, & REINSTATED. REFER TO ELEC. DWGS.
- EX RECESSED LIGHT FIXTURE TO REMAIN. REFER TO ELEC. DWGS.
- EX SUPPLY AIR DIFFUSER TO REMAIN. REFER TO MECH. DWGS.
- RETURN AIR GRILLE. REFER TO MECH. DWGS.
- CEILING EXHAUST FAN. REFER TO MECH. DWGS.
- CEILING HEIGHT FROM FF. REFER TO ROOM FINISH SCHEDULE
- DENOTES AREA OF EX FIRE RATED ACUSTIC CEILING TILE & T&B GRID TO BE REMOVED & REINSTATED



2 PHASE 1 - PARTIAL DEMO RCP
A2.0 1:150

PHASE 1(P1) DEMOLITION NOTES

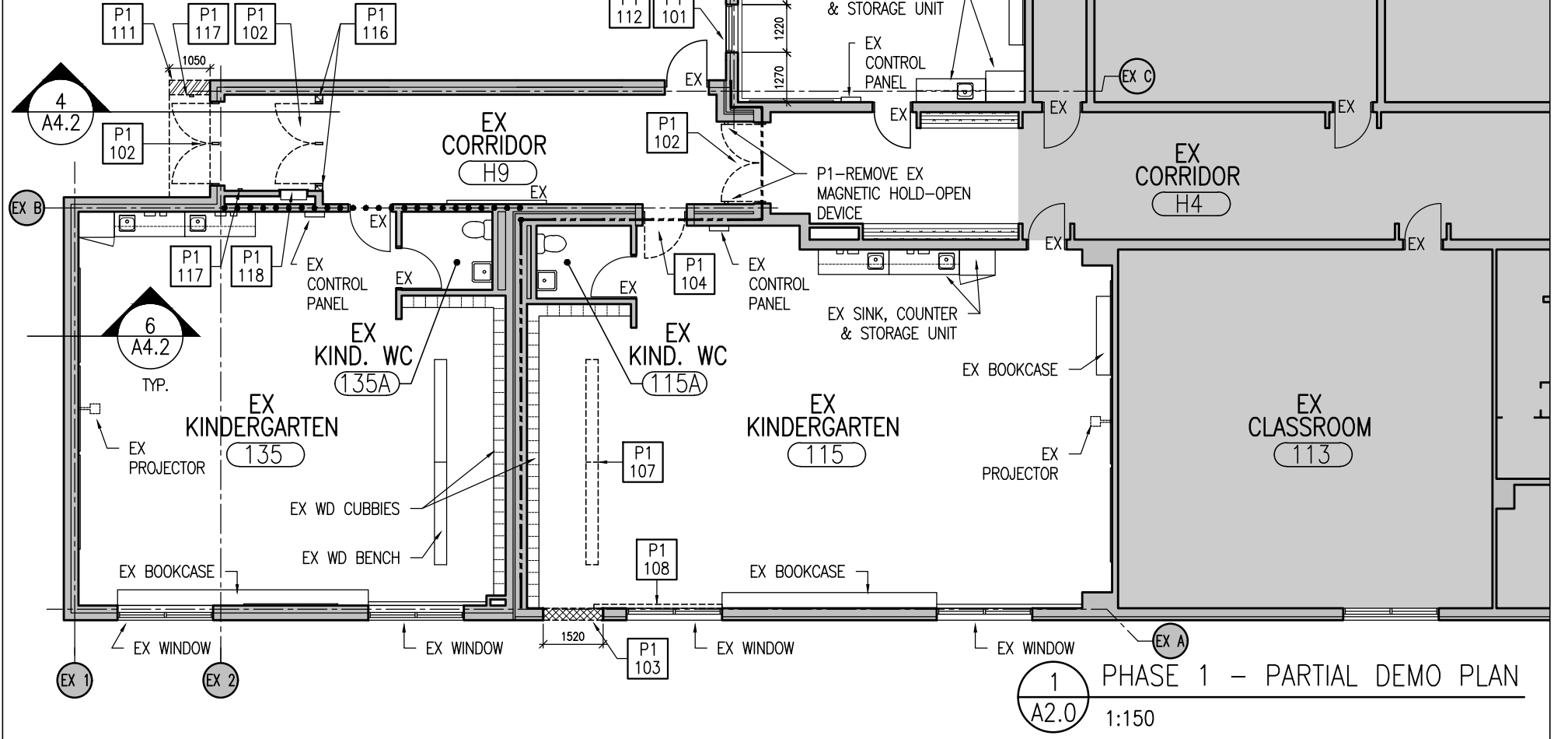
- P1 101 EX WINDOW TO REMAIN IN PHASE 1-2 TO BE REMOVED IN PHASE 3.
- P1 102 EX DOOR TO BE REMOVED.
- P1 103 EX EXTERIOR WALL TO BE REMOVED. 50 BRICK ON 250 CMU.
- P1 104 EX DOOR TO BE REMOVED, STORED, & REINSTATED AT END OF PHASE 3. EX HW FRAME TO REMAIN.
- P1 105 EX WALL MOUNTED VISUAL DISPLAY SURFACE TO BE REMOVED, STORED, & REINSTATED AT END OF PHASE 3 WHEN TEMPORARY EXTING IS REMOVED.
- P1 106 EX COAT RACKS TO BE REMOVED, STORED, & REINSTATED AT END OF PHASE 3 WHEN TEMPORARY EXTING IS REMOVED.
- P1 107 EX EX WID BENCH TO BE REMOVED, STORED, & REINSTATED AT END OF PHASE 3 WHEN TEMPORARY EXTING IS REMOVED.
- P1 108 EX RADATOR TO BE REMOVED. SEE MECHANICAL DRAWINGS.
- P1 109 EX LOW CUPBOARD, UPFERS, & SINK TO BE REMOVED. STORE SINK AND FAUCET FOR PHASE 3 REINSTALL. REMOVE PORTION OF EX WALL/FIN. SEE MECHANICAL DRAWINGS.
- P1 110 EX CANOPY, SOFFIT, AND LIGHTING TO BE REMOVED. REFER TO ELEC. DWGS.
- P1 111 EX EXTERIOR WALL TO BE REMOVED. 90 BRICK, 20 AIR SPACE, 75 SPRAY INSULATION, 190 CONC. BLOCK.
- P1 112 EX ROLLER BLINDS TO BE REMOVED
- P1 113 TRENCH EX CONC. SLAB ON GRADE (~100MM DEEP) TO PERFORM MECHANICAL WORK REFER TO MECH. DRAWINGS.
- P1 114 REMOVE EX VCT
- P1 115 REMOVE EX RUBBER SHEET FLOORING
- P1 116 EX 190 INTERIOR CONC. BLOCK PARTITION WALL TO BE REMOVED
- P1 117 EX PUSH BUTTONS & CARD READERS TO BE REMOVED. REFER TO ELEC. DWGS.
- P1 118 EX FORCED FLOW HEATER TO BE REMOVED. REFER TO MECH. DRAWINGS.

EXISTING PLAN LEGEND:

- DASHED LINE INDICATES ITEMS TO BE REMOVED UNLESS OTHERWISE NOTED
- DENOTES EXISTING WALLS TO REMAIN UNDISTURBED UNLESS OTHERWISE NOTED
- HEAVY DASHED LINE DENOTES EXISTING 2 HR FIRE WALL
- HEAVY DOTTED LINE DENOTES EXISTING 1 HR FIRE RATED SEPARATION

NOTE:

CONTRACTOR TO COORDINATE WITH OWNER STORAGE LOCATION FOR ITEMS TO BE REMOVED AND RE-INSTALLED.



1 PHASE 1 - PARTIAL DEMO PLAN
A2.0 1:150

PHASE 1 GENERAL RCP CONSTRUCTION NOTE:

1. REFER TO ELECTRICAL DRAWINGS FOR EXACT TYPE, LOCATION, AND NUMBER OF LIGHT FIXTURES, SPEAKERS, SMOKE DETECTOR, ETC.
2. REFER TO MECHANICAL DRAWINGS FOR EXACT NUMBER OF PENETRATIONS IN CEILING FOR DIFFUSERS, GRILLES, ACCESS OPENINGS, ETC. PROVIDE HANGERS & FRAMING TO SUIT MECHANICAL OPENINGS AND BALANCE.
3. PROVIDE OPENINGS THRU WALLS TO ACCOMMODATE INSTALLATION OF DUCTWORK, FOR FIRE DAMPERS AND EXACT NUMBER, SIZE & LOCATION OF DUCTWORK PENETRATION THRU WALLS REFER TO MECHANICAL DRAWINGS. REFER TO STRUCTURAL DRAWING FOR LINTEL TYPE.

PHASE 1 (P1) RCP CONSTRUCTION NOTES:

- P1 301 AREA OF NEW FIRE RATED AC TILE & GRID
- P1 302 REINSTALL RETURN AIR GRILLE. REFER TO MECH.
- P1 203 NEW RUBBER SHEET FLOORING. REFER TO RFS.
- P1 204 NEW VCT TO MATCH EXISTING
- P1 205 PROVIDE FIRE STOPPING AT ANY EXISTING WALL PENETRATIONS. FILL IN ANY EXPOSED FLUES AT ROOF LEVEL TO CREATE CONTINUOUS FIRE SEPARATION. REFER TO DETAIL 6/A4-1.
- P1 206 NEW DOUBLE GRESS DOOR C/W MAGNETIC HOLD-OPEN DEVICE
- P1 207 NEW 190 INFILL BLOCK WALL. TOOTH NEW BLOCK INTO EXISTING PAINT.
- P1 208 RUBBER BASE TRIM

PHASE 1 (P1) CONSTRUCTION NOTES:

- P1 201 NEW RATED PARTITION (1 HR FRR - ULC W407) TO UNDERSIDE OF EX METAL DECK.
- P1 202 16 TYPE 'X' GYPSUM BOARD TO UNDERSIDE OF EX METAL DECK.
- P1 203 92 METAL STUDS @ 400 O.C.
- P1 204 75 ROCK WOOL ACUSTIC INSULATION
- P1 205 16 TYPE 'X' GYPSUM BOARD TO UNDERSIDE OF DECK.
- P1 206 PAINT GYPSUM WALL.
- P1 207 NEW TEMPORARY DOOR (TMP. = TEMPORARY)

PHASE 1 & 3 - EXISTING SCHOOL RENOVATIONS GENERAL SCOPE OF WORK:

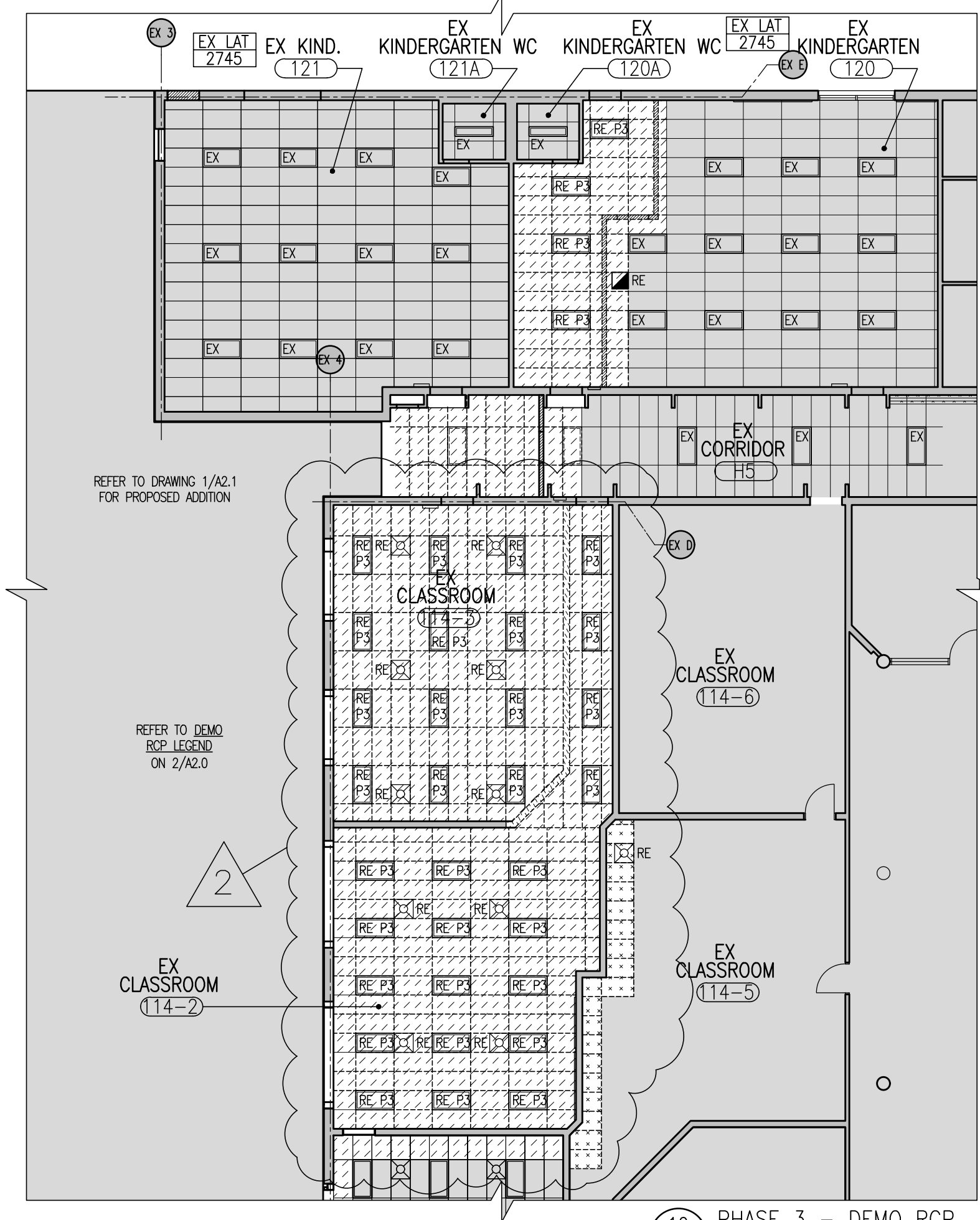
PHASE 1 (WORK TO BE PERFORMED IN PHASE 1) IS GENERALLY INDICATED ON DRAWINGS BY 'P1'. REFER TO SPECIFICATIONS FOR PHASING DATES.

AS THE NEW ADDITION WILL IMPACT EXISTING EXTING. RENOVATIONS TO THE EXISTING SCHOOL WILL BE REQUIRED TO ACCOMMODATE ALTERNATE TEMPORARY EXTING PLANS. IT IS CRITICAL ALL WORK IN PHASE 1 BE COMPLETE BY OCTOBER 31, 2024 TO ALLOW FOR SCHOOL ACTIVITIES TO FUNCTION. GENERALLY THE ALTERNATE EXTING STRATEGY WILL INCLUDE THE REMOVAL OF, BUT IS NOT LIMITED TO, EXISTING DOORS, NEW OPENING IN EXISTING EXTERIOR WALLS TO ACCOMMODATE NEW DOORS, AND REMOVAL OF MILLWORK AND FINISHES. RENOVATIONS ARE TO INCLUDE, BUT ARE NOT LIMITED TO, NEW TEMPORARY THIR RATED PARTITIONS, NEW DOORS, REDUCED LIGHTING, HVAC, AND PLUMBING, AND REPAIRED FINISHES.

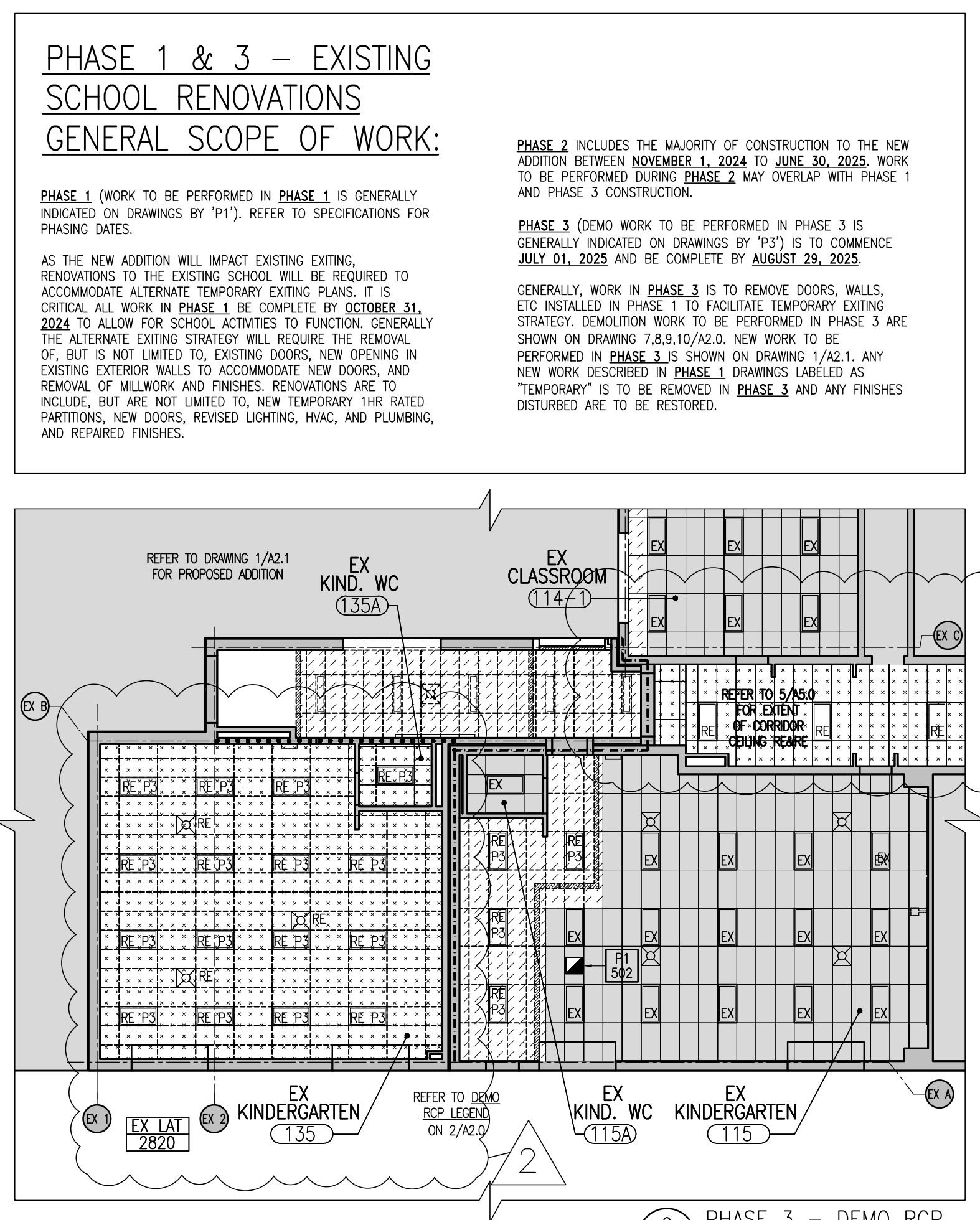
PHASE 2 INCLUDES THE MAJORITY OF CONSTRUCTION TO THE NEW ADDITION BETWEEN NOVEMBER 1, 2024 TO JUNE 30, 2025. WORK TO BE PERFORMED DURING PHASE 2 MAY OVERLAP WITH PHASE 1 AND PHASE 3 CONSTRUCTION.

PHASE 3 (DEMO WORK TO BE PERFORMED IN PHASE 3) IS GENERALLY INDICATED ON DRAWINGS BY 'P3' IS TO COMMENCE JULY 01, 2025 AND BE COMPLETE BY AUGUST 29, 2025.

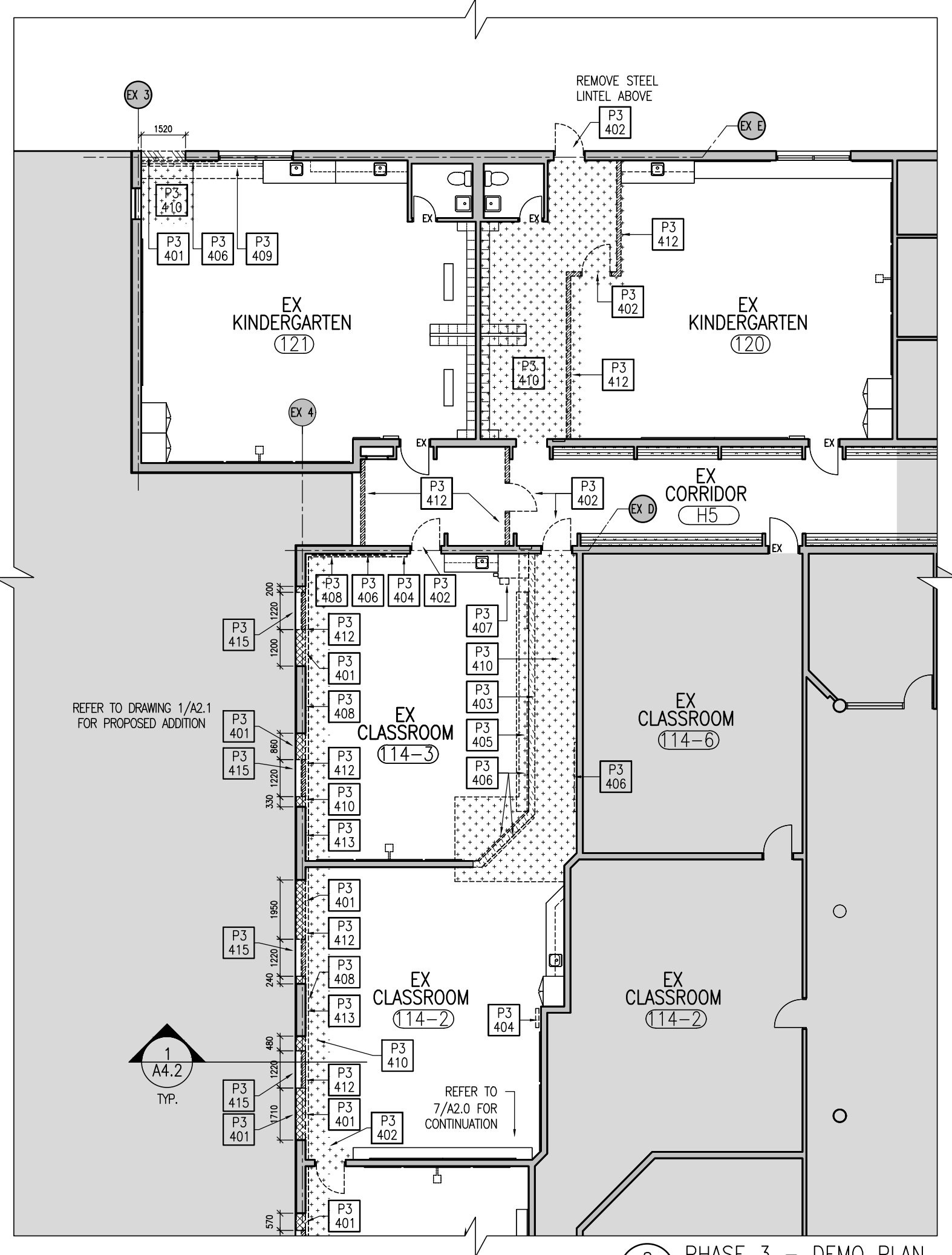
GENERALLY, WORK IN PHASE 3 IS TO REMOVE DOORS, WALLS, ETC. INSTALLED IN PHASE 1. TO FACILITATE TEMPORARY EXTING STRATEGY. DEMOLITION WORK TO BE PERFORMED IN PHASE 3 ARE SHOWN ON DRAWING 7.8.10/A2.0. NEW WORK TO BE PERFORMED IN PHASE 3 IS SHOWN ON DRAWING 1/A2.1. ANY NEW WORK DESCRIBED IN PHASE 1 DRAWINGS LABELED AS 'TEMPORARY' IS TO BE REMOVED IN PHASE 3 AND ANY FINISHES DISTURBED ARE TO BE RESTORED.



10 PHASE 3 - DEMO RCP
A2.0 1:150



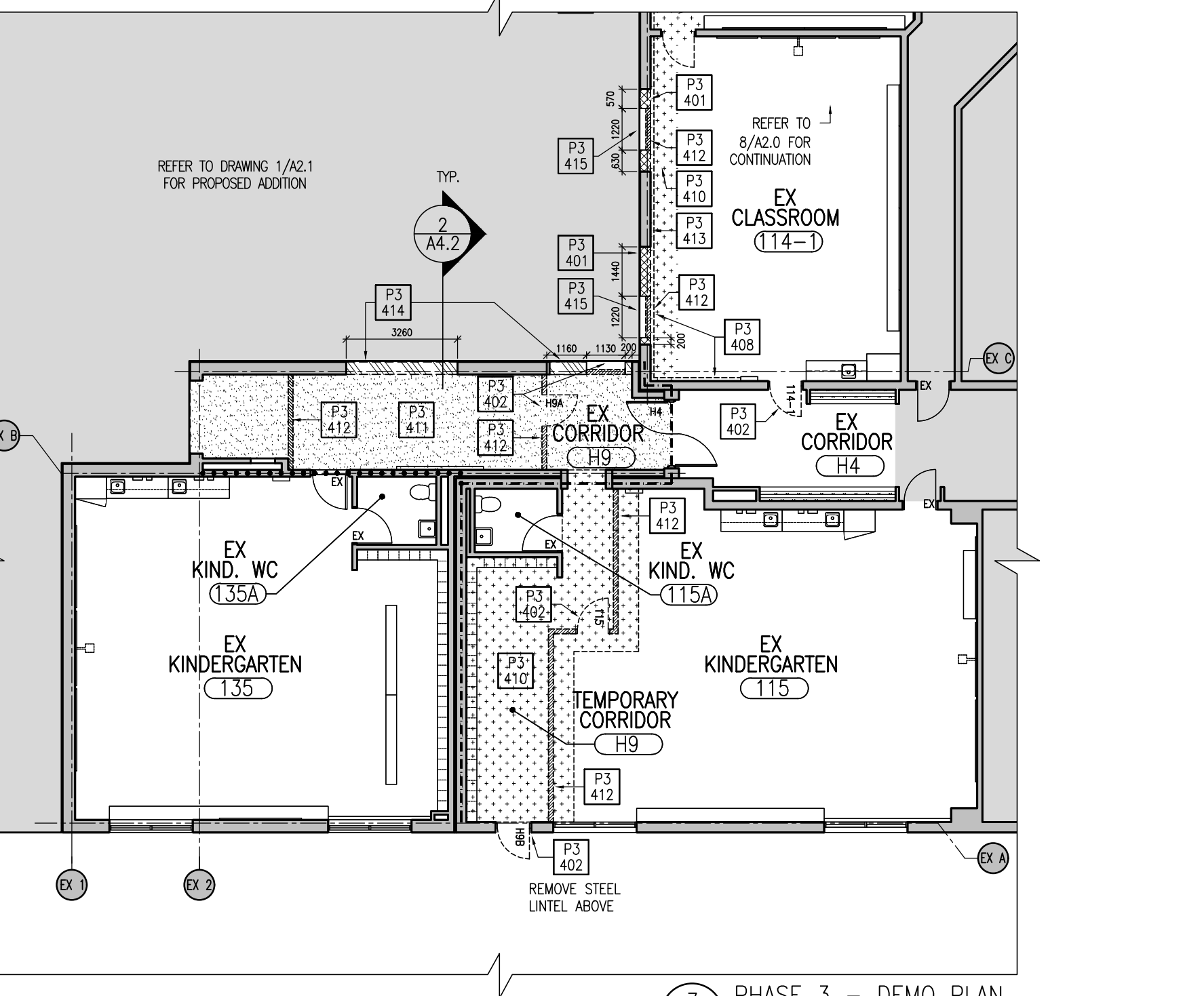
9 PHASE 3 - DEMO RCP
A2.0 1:150



8 PHASE 3 - DEMO PLAN
A2.0 1:150

PHASE 3(P3) DEMOLITION NOTES

- P3 401 EX EXTERIOR WALL TO BE REMOVED. 50 BRICK ON 250 CMU.
- P3 402 EX DOOR TO BE REMOVED.
- P3 403 EX EXTERIOR 190 BLOCK WALL TO BE REMOVED.
- P3 404 EX CP TO BE REMOVED.
- P3 405 EX BOOKSHELF TO BE REMOVED, STORED, AND RELOCATED.
- P3 406 EX WALL MOUNTED VISUAL DISPLAY SURFACE/COAT HOOK TO BE REMOVED, STORED, & REINSTATED.
- P3 407 EX TEACHER'S CLOSET TO BE REMOVED.
- P3 408 EX RADATOR TO BE REMOVED. REFER TO MECH. DWGS.
- P3 409 EX BOOK SHELF AND INTEGRATED WALL F/W RADATOR TO BE REMOVED. REFER TO MECH.
- P3 410 REMOVE EX VCT FLOORING.
- P3 411 REMOVE EX TERRAZZO FLOORING & COVE.
- P3 412 EX TEMPORARY PARTITION TO BE REMOVED
- P3 413 REMOVE COMPLETELY EX DRYWALL ON METAL FLOORING CHAINS & INSULATION TO UNDERSIDE OF EX METAL DECK
- P3 414 EX EXTERIOR WALL TO BE REMOVED. 90 BRICK, 20 AIR SPACE, 75 SPRAY INSULATION, 190 CONC. BLOCK.
- P3 415 REMOVE EX WINDOW



7 PHASE 3 - DEMO PLAN
A2.0 1:150

DATE	REVISIONS
8. AUG 27 2024	ISSUED FOR ADDENDUM #2
7. JULY 24 2024	ISSUED FOR TENDER/PERMIT
6. JUNE 11 2024	SITE PLAN REVIEW (4th SUBMISSION)
5. MAY 03 2024	SITE PLAN REVIEW (3rd SUBMISSION)
4. FEB 12 2024	COSTING
3. FEB 12 2024	SITE PLAN REVIEW (2nd SUBMISSION)
2. NOV 13 2023	SITE PLAN REVIEW (PRELIMINARY)
1. FEB 28 2023	PRELIMINARY SITE PLAN REVIEW

MURRAY CENTENNIAL PUBLIC SCHOOL ADDITION
654 County Road 40,
TRENTON ONTARIO K6V 6P4

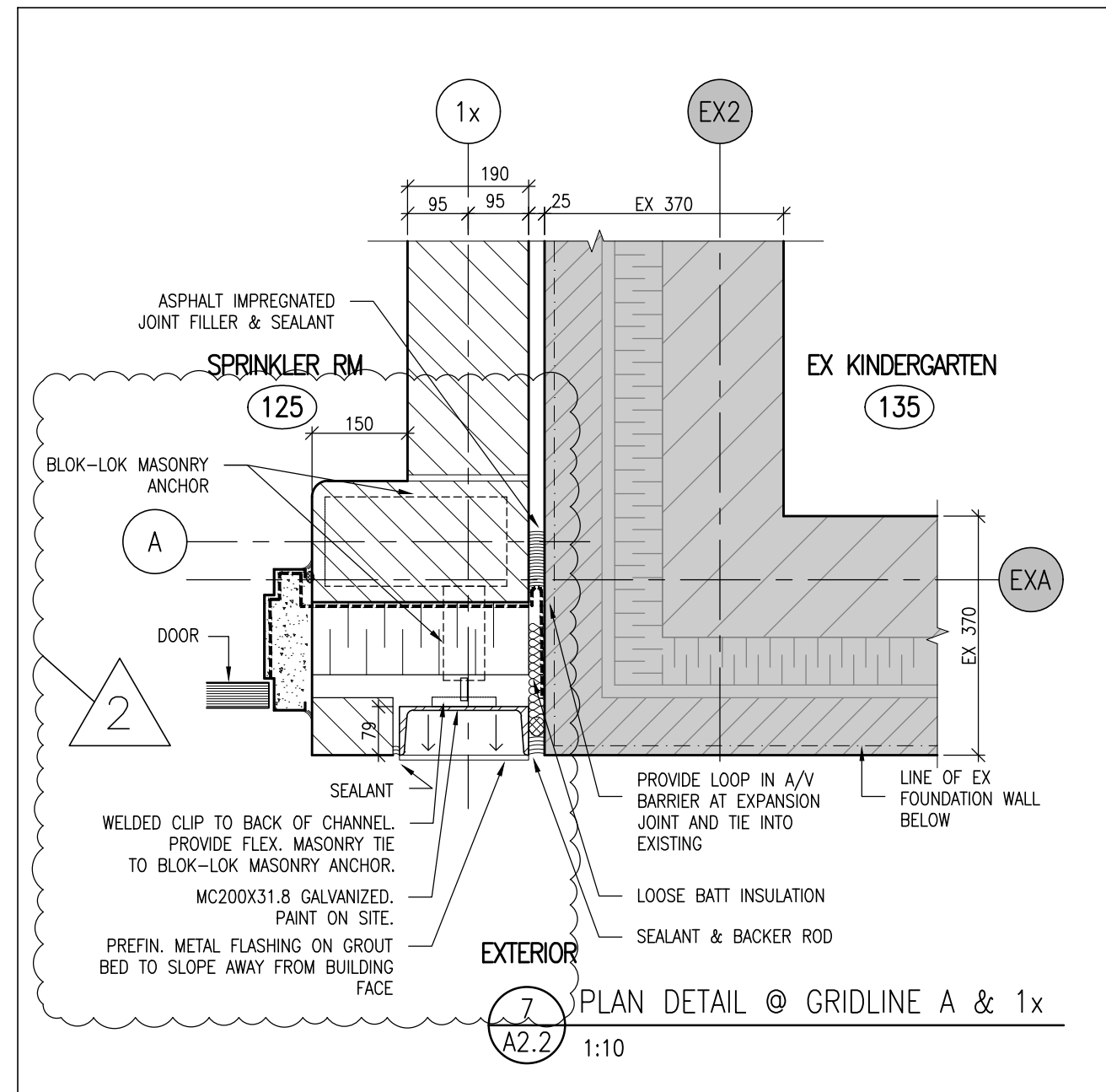
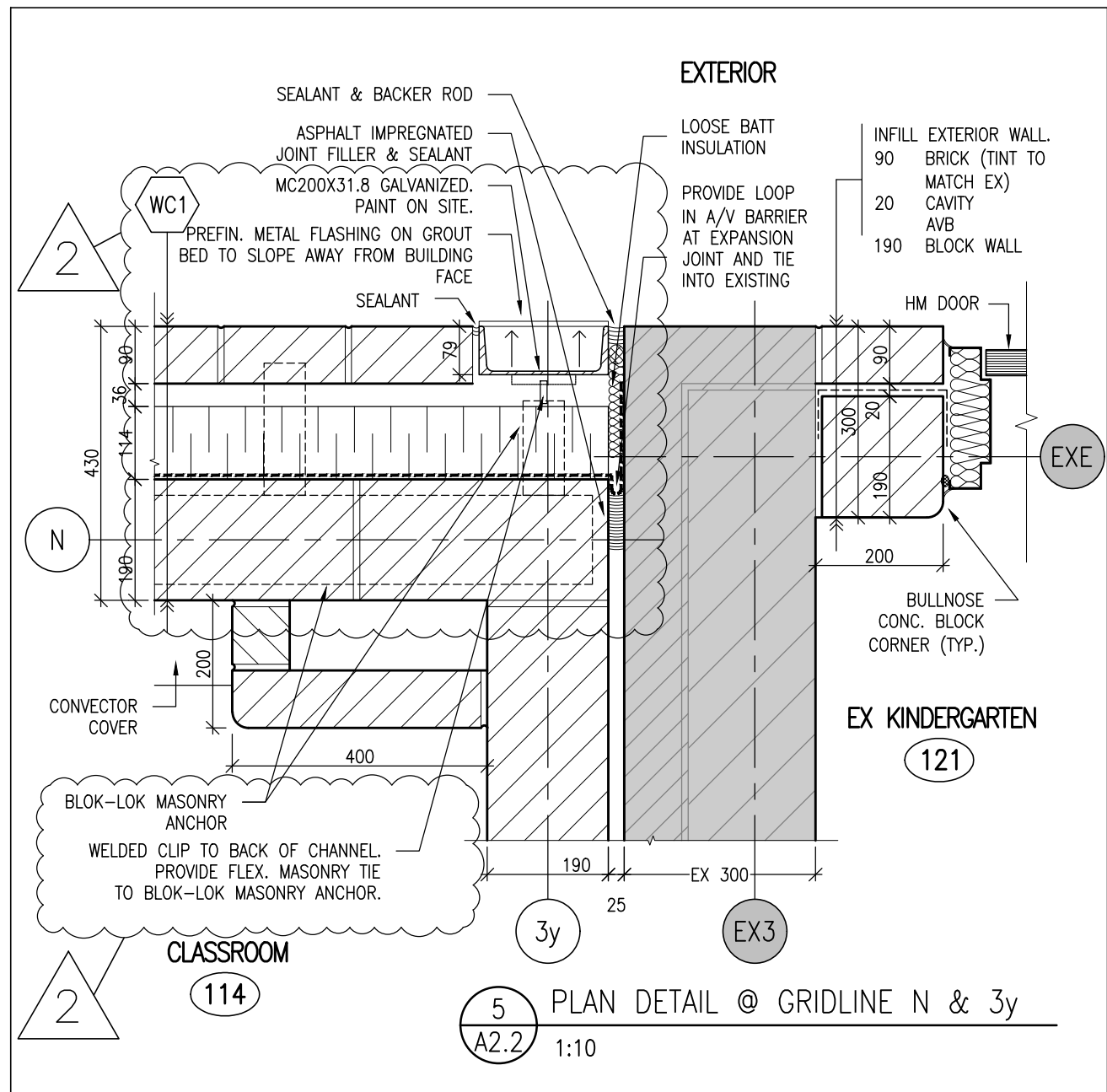
KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD
1994 Fisher Drive, Peterborough, Ontario K9J 6X8

INTERIOR PHASING PLAN & RCP

ONTARIO ASSOCIATION OF ARCHITECTS
ARCHITECTS
ROBERT F. FERKUL
LICENCE #986

TRUE NORTH DWG. NORTH
JOB NO. 2304
SCALE AS NOTED
DATE FEB 2024
PRINTED
DWG. NO. A2.0

MOFFET & DUNCAN architects inc.
5055 DUNDAS ST. WEST
TORONTO, ONT. M9A 1B9
TEL: (416) 239-2775
FAX: (416) 239-6729
EMAIL: moffet@moffetcd.ca



MURRAY CENTENNIAL PUBLIC SCHOOL – ADDITION
 KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD
PLAN DETAIL REVISIONS - REFER TO DWG A2.2

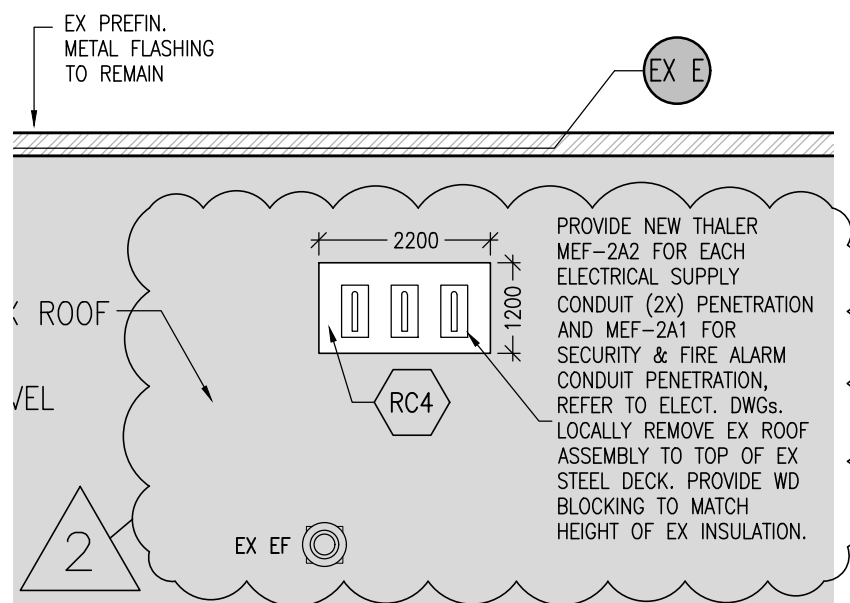
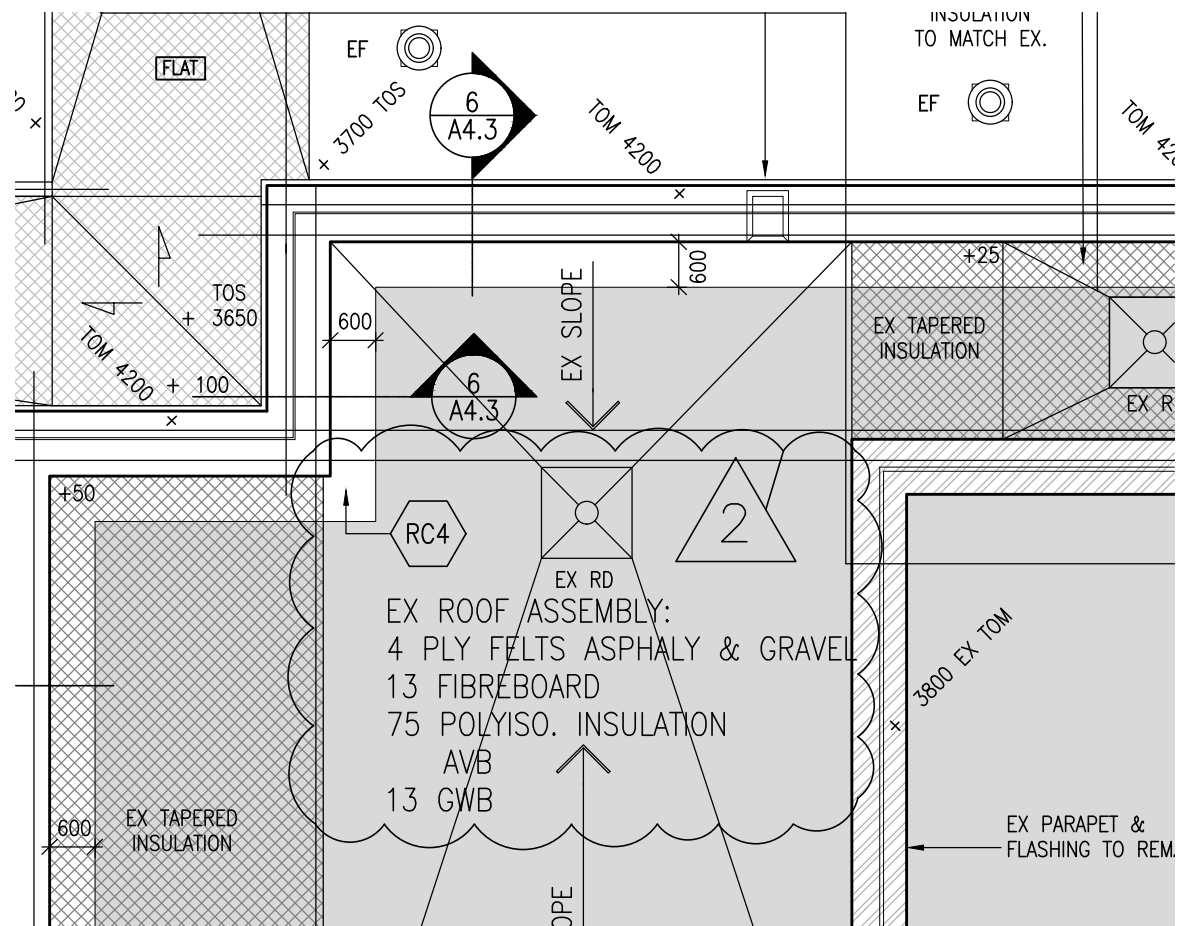
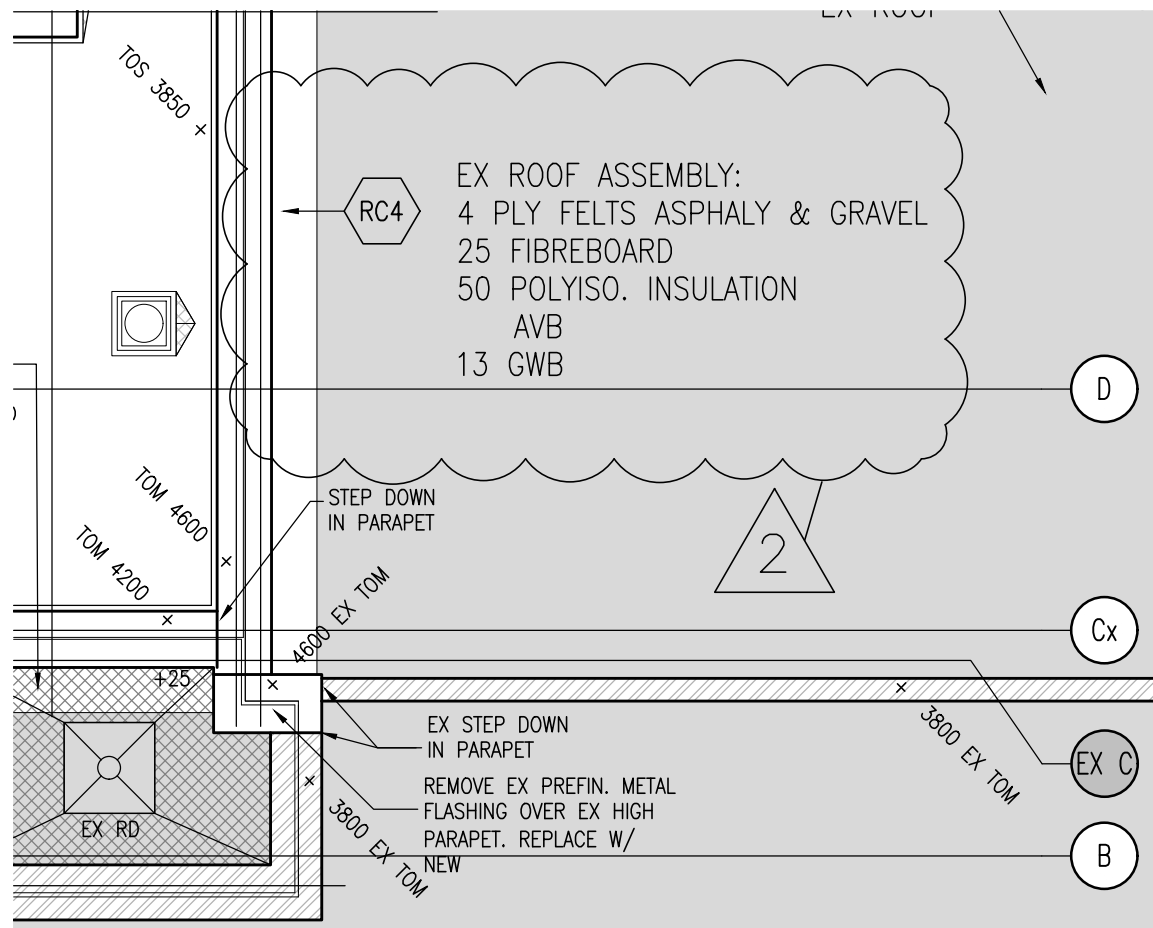
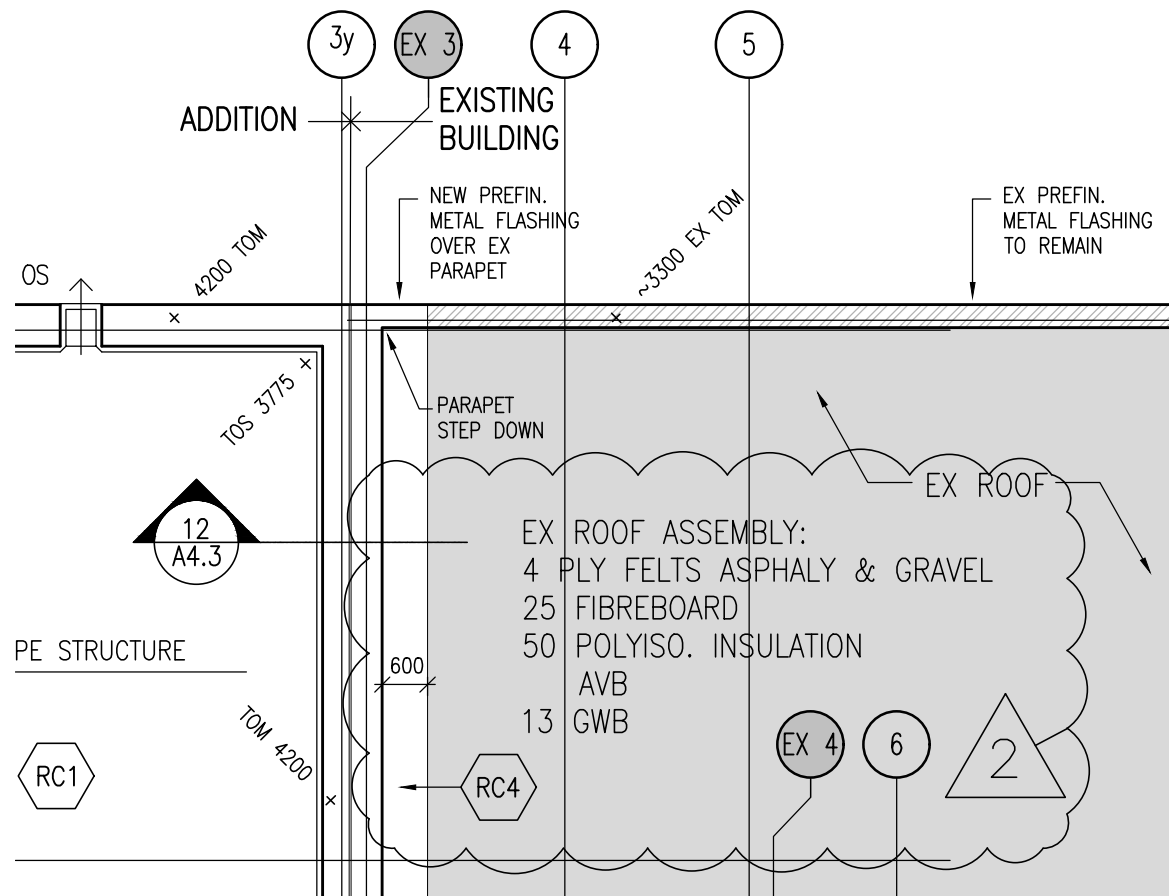
SCALE
1:10

DWG. NO.
ADD-1

MOFFET & DUNCAN ARCHITECTS INC.
 5052 DUNDAS ST. WEST TORONTO ONT. M9A 1B9 TELEPHONE (416)-239-2775

JOB #
 2304

ADDENDUM #2



MURRAY CENTENNIAL PUBLIC SCHOOL – ADDITION KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD PARTIAL ROOF PLAN - REV. EX ROOF ASSEMBLY, ELECT. ROOF PENETRATIONS, REF. DWG A2.3	SCALE	DWG. NO.
	1:100	ADD-2
MOFFET & DUNCAN ARCHITECTS INC. 5052 DUNDAS ST. WEST TORONTO ONT. M9A 1B9 TELEPHONE (416)-239-2775	JOB #	ADDENDUM #2
	2304	

ROOF CONSTRUCTION ASSEMBLIES

RC1 TYP. BUILT UP ROOF ASSEMBLY
 ROOF TO ACHIEVE R-35

SNOW WHITE CALCITE & COLD APPLIED FLOOD COAT
 3 PLY BUILT UP ROOF SYSTEM
 1 LAYER 13MM COVERBOARD
 TAPERED ISOCYANURATE INSULATION (VARIES)
 2 LAYER OF 75 POLYISOCYANURATE INSULATION
 ROOF VAPOUR RETARDER MEMBRANE
 13MM UNDERLAYMNT BOARD -MECHANICALLY FASTENED
 38 STEEL DECK (SEE STRUCT. DWGs)
 OWSJ/STRUCTURAL STEEL (SEE STRUCT. DWGs)
 CEILING PLENUM SPACE (VARIES)
 FINISH CEILING (REFER TO R.F.S.)

RC2 BUILT UP ROOF ASSEMBLY
 ROOF TO ACHIEVE R-35

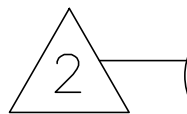
SNOW WHITE CALCITE & COLD APPLIED FLOOD COAT
 3 PLY BUILT UP ROOF SYSTEM
 1 LAYER 13MM COVERBOARD
 TAPERED ISOCYANURATE INSULATION (VARIES)
 2 LAYER OF 75 POLYISOCYANURATE INSULATION
 ROOF VAPOUR RETARDER MEMBRANE
 13MM UNDERLAYMNT BOARD -ADHERED
 76 ACOUSTIC STEEL DECK (SEE STRUCT. DWGs) W/ STONE
 WOOL FLUTE FILLER
 EXPOSED OWSJ/STRUCTURAL STEEL (SEE STRUCT. DWGs)

RC3 BUILT UP ROOF ASSEMBLY
 ROOF TO ACHIEVE R-35

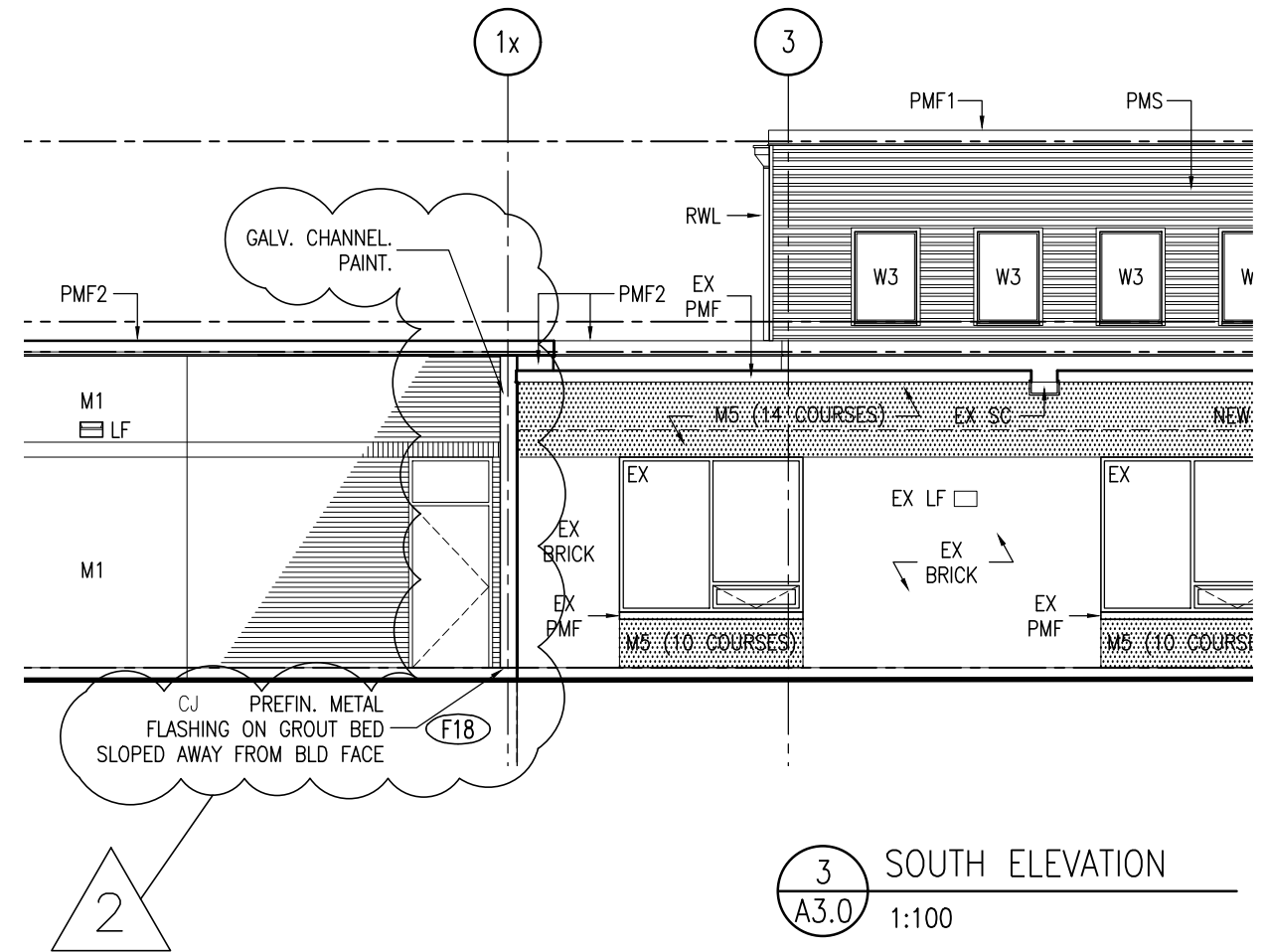
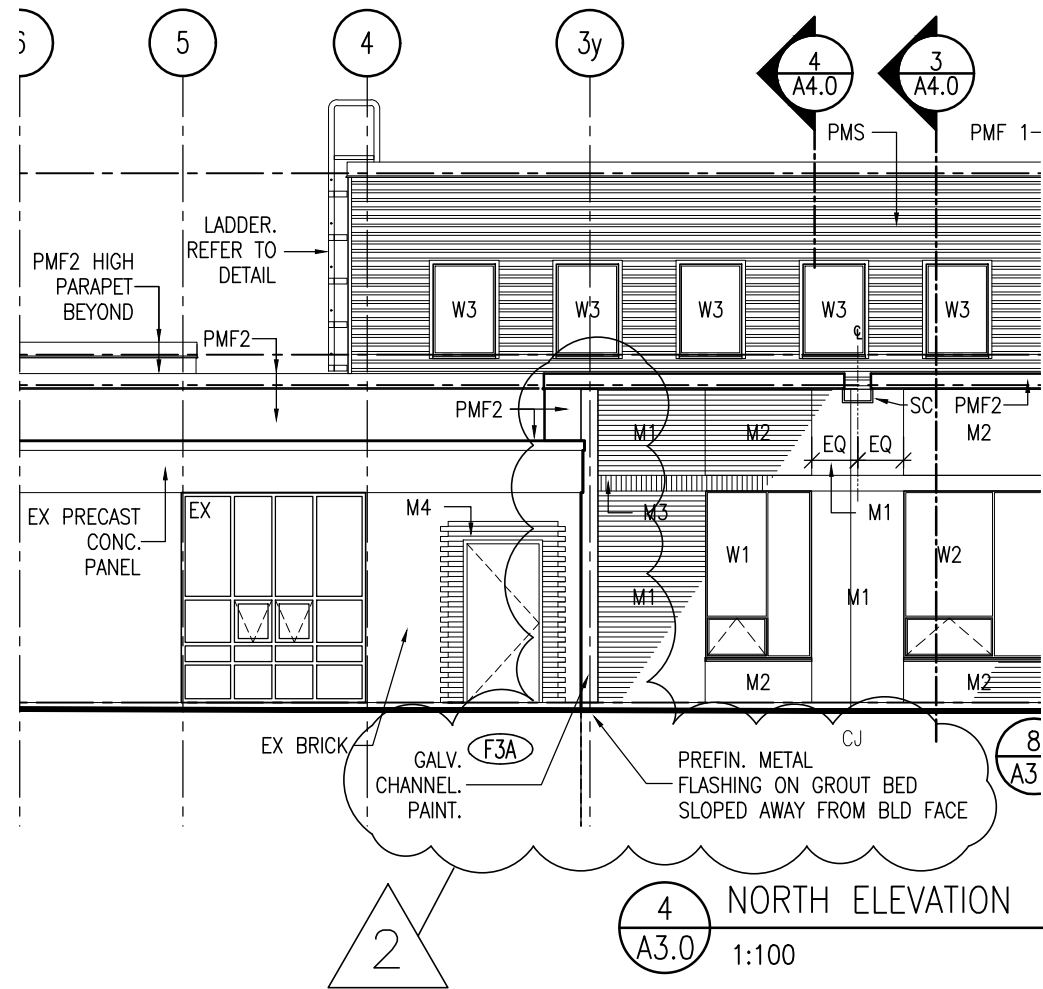
SNOW WHITE CALCITE & COLD APPLIED FLOOD COAT
 3 PLY BUILT UP ROOF SYSTEM
 1 LAYER 13MM COVERBOARD
 50 MAX CRICKETS TO SLOPE TO DRAIN
 2 LAYER OF 75 POLYISOCYANURATE INSULATION
 ROOF VAPOUR RETARDER MEMBRANE
 13MM UNDERLAYMNT BOARD -MECHANICALLY FASTENED
 38 STEEL DECK (SEE STRUCT. DWGs)
 OWSJ/STRUCTURAL STEEL (SEE STRUCT. DWGs)
 CEILING PLENUM SPACE (VARIES)
 FINISH CEILING (REFER TO R.F.S.)

RC4 RE-ROOFING EXISTING ROOF
 ROOF TO ACHIEVE R-35
 45 MIN FRR - ULC R201

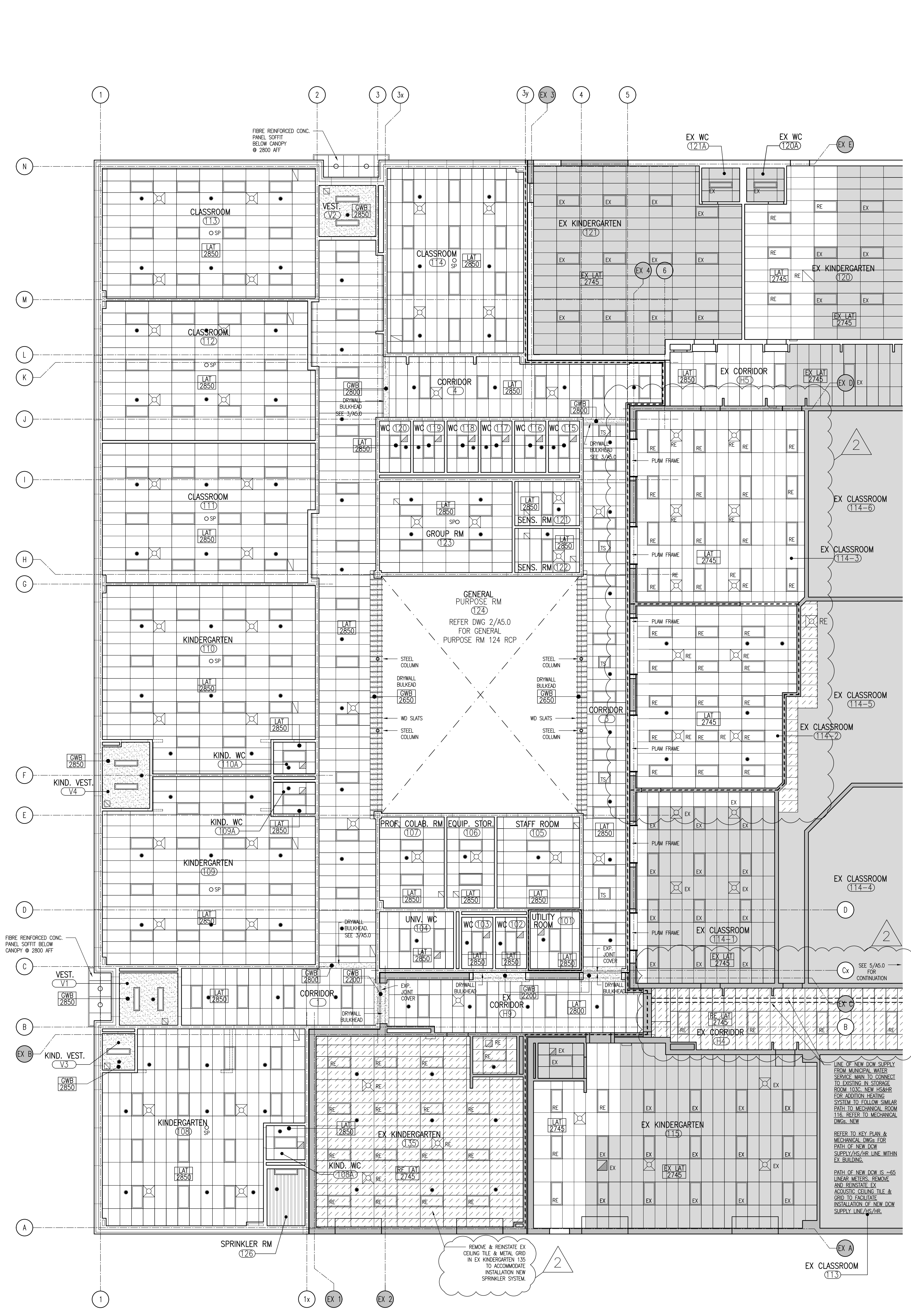
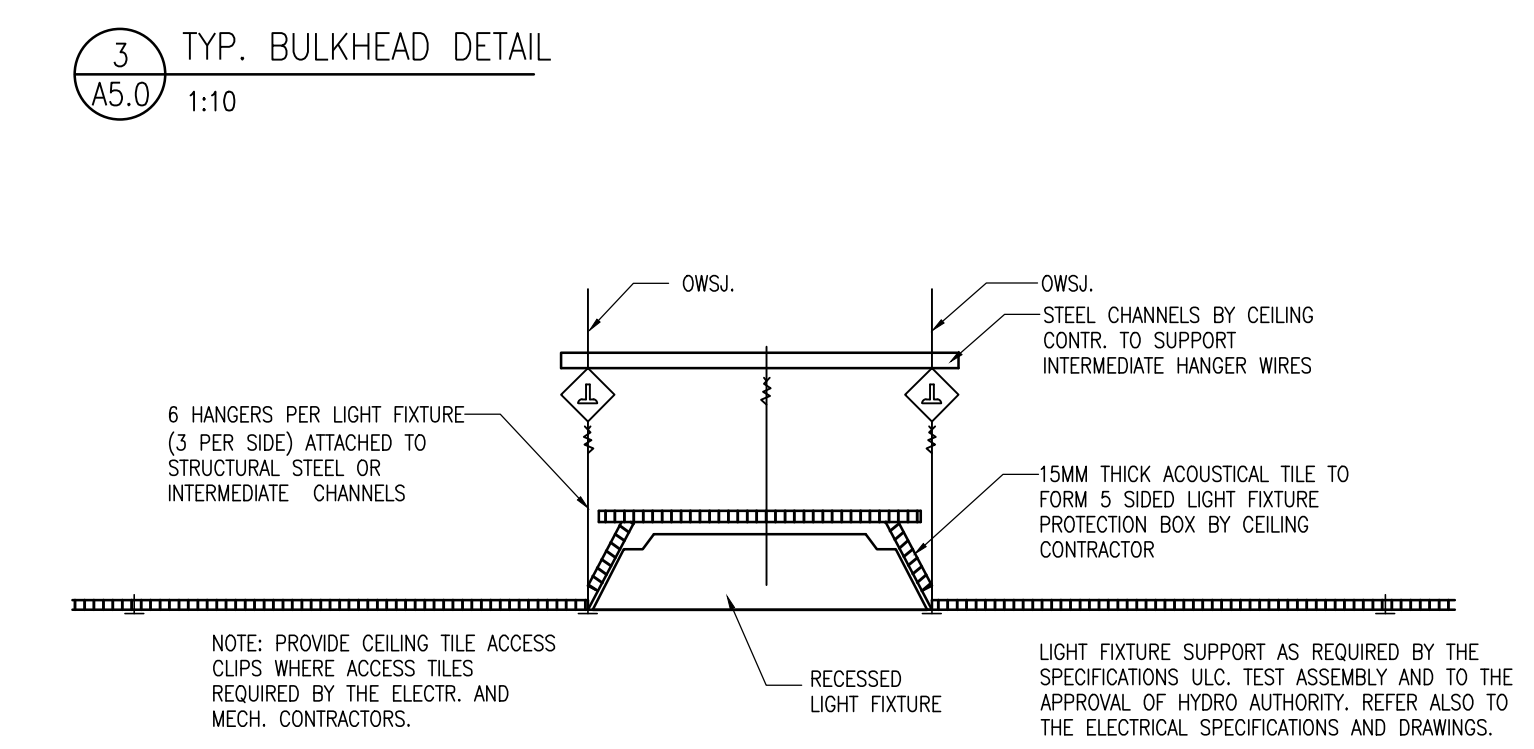
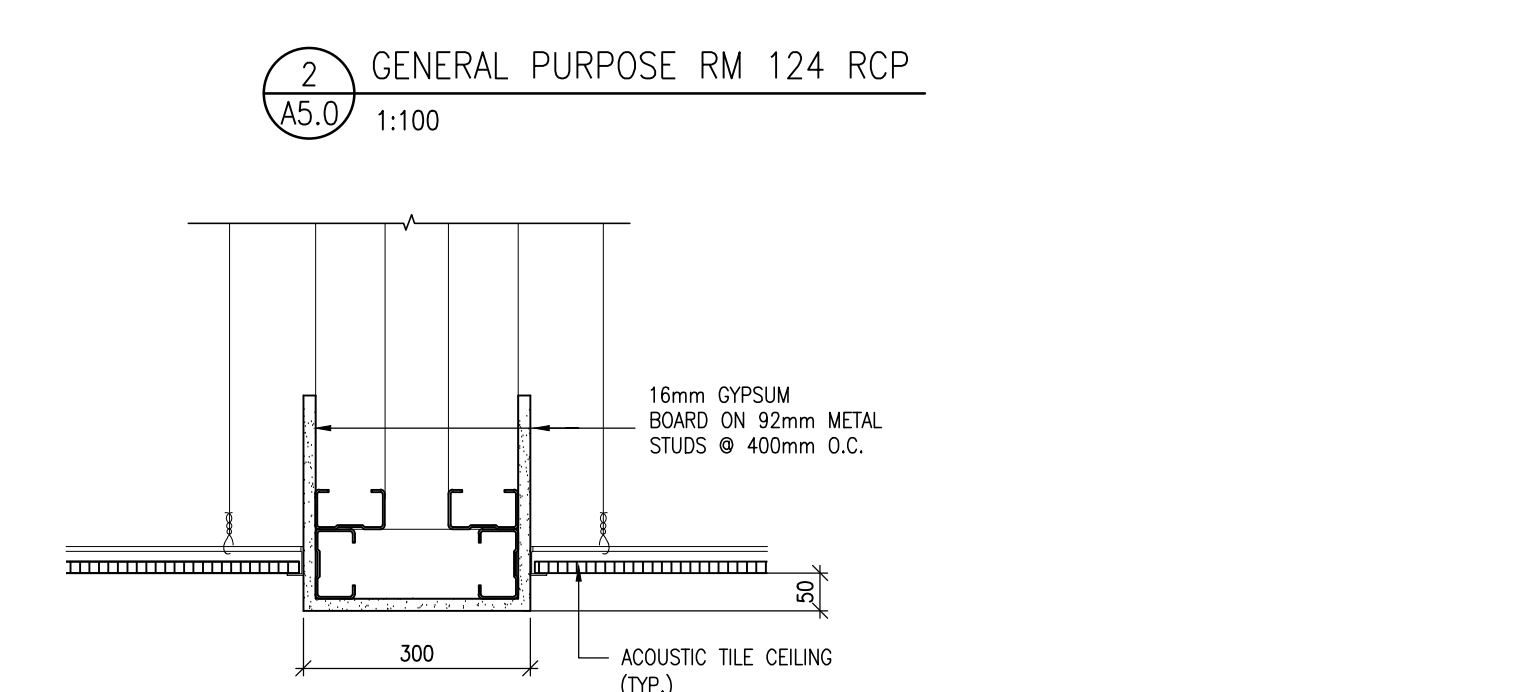
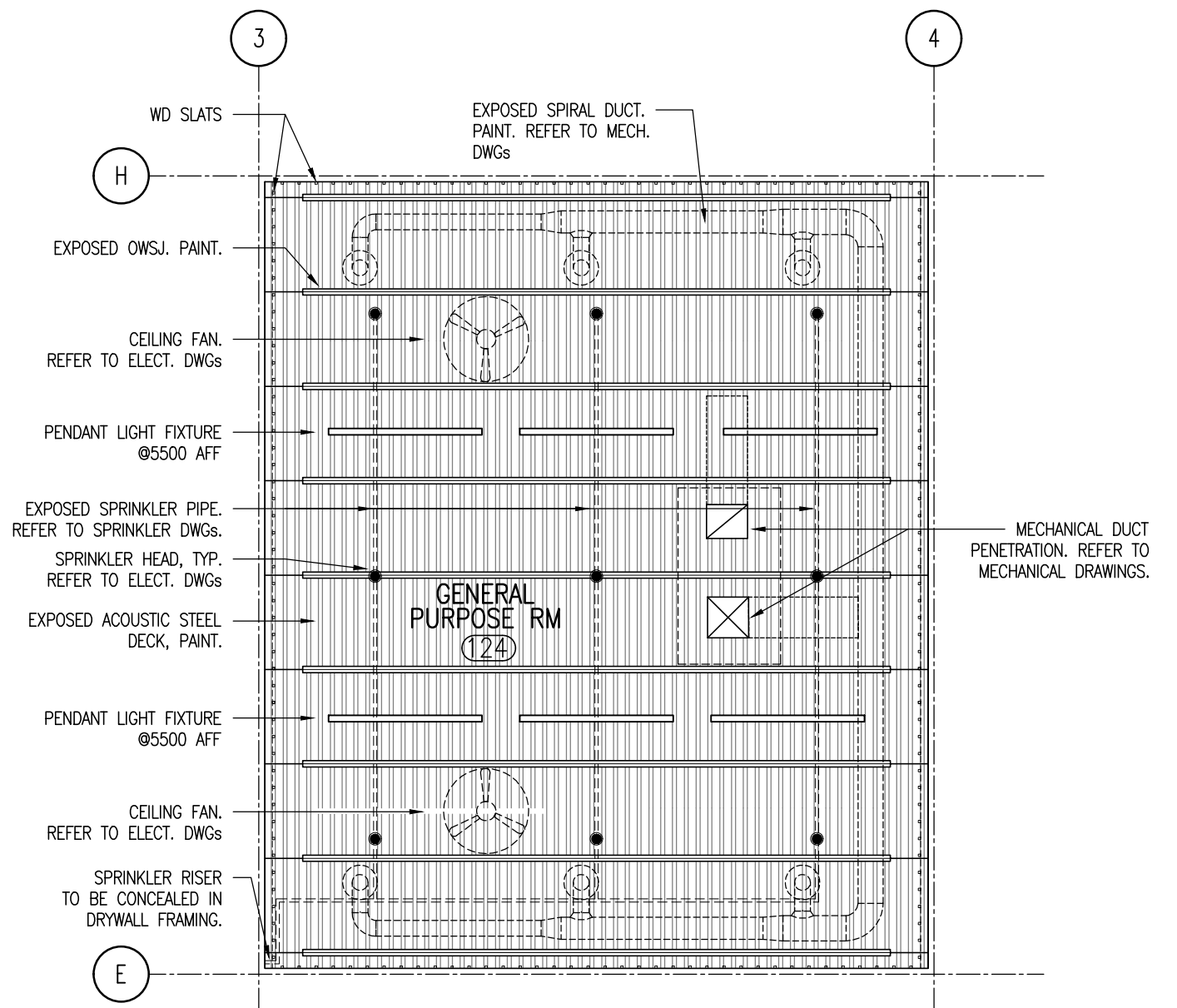
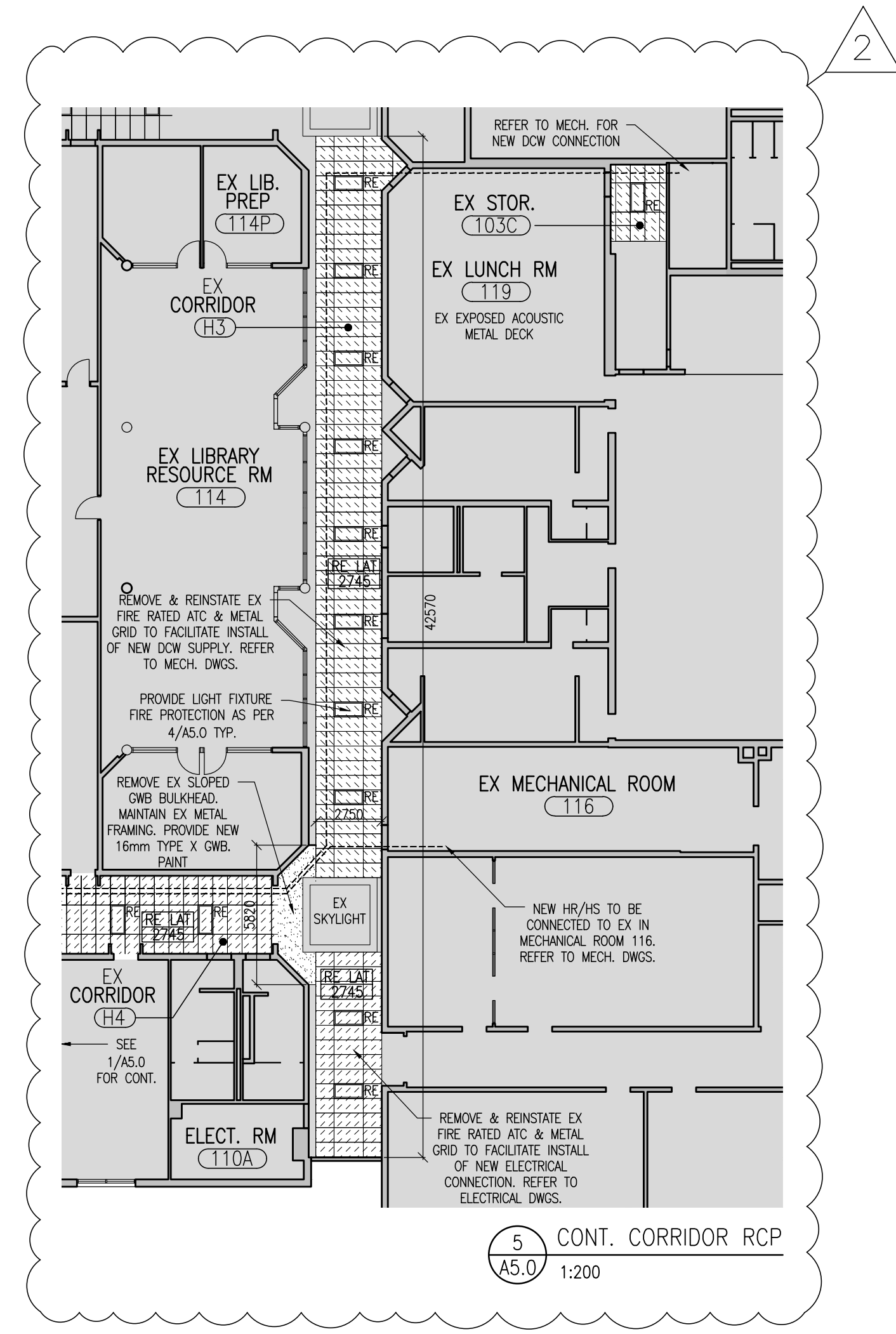
REMOVE EXISTING GRAVEL, BUR, INSULATION, AVB, &
 GYPSUM BOARD DOWN TO EXISTING STEEL DECK.
 PROVIDE NEW 13MM DENS-DECK SHEATHING,
 AVB, INSULATION, & SLOPED INSULATION TO
 MATCH EX THICKNESS. PROVIDE NEW SEBS BUR.
 OVERLAP EX ROOF MEMBRANE 600mm. TIE NEW
 AVB INTO EXISTING.
 REFER TO ROOF PLAN FOR EXISTING
 ROOF ASSEMBLY.



MURRAY CENTENNIAL PUBLIC SCHOOL – ADDITION KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD PARTIAL ROOF PLAN - REV. RC1,2,3,4. REF. DWG A2.3	SCALE NTS	DWG. NO. <div style="font-size: 2em; font-weight: bold; text-align: center;">ADD-3</div>
MOFFET & DUNCAN ARCHITECTS INC. 5052 DUNDAS ST. WEST TORONTO ONT. M9A 1B9 TELEPHONE (416)-239-2775	JOB # 2304	ADDENDUM #2



MURRAY CENTENNIAL PUBLIC SCHOOL – ADDITION KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD EXTERIOR ELEVATION REV. - REFER TO DWG A3.0	SCALE 1:100	DWG. NO. ADD-4
	MOFFET & DUNCAN ARCHITECTS INC. 5052 DUNDAS ST. WEST TORONTO ONT. M9A 1B9 TELEPHONE (416)-239-2775	JOB # 2304



REFLECTED CEILING LEGEND

	NEW ACOUSTIC CEILING TILE & METAL GRID. REFER TO RFS FOR FIRE RATING.
	REMOVE & REINSTATE EX. ACOUSTIC CEILING TILE & METAL GRID. REFER TO RFS FOR FIRE RATING.
	EXISTING ACOUSTIC CEILING TO REMAIN
	EXPOSED METAL DECK
	GYPNUM BOARD
	1220 X 610 RECESSED FLUORESCENT LIGHT. REFER TO ELEC. DWGS.
	1220 X 305 RECESSED FLUORESCENT LIGHT. REFER TO ELEC. DWGS.
	EX LIGHTING TO BE REINSTATE AS PART OF PHASE 3 (P3) WORK. REFER TO ELEC. DWGS.
	EXISTING LIGHT FIXTURE
	SPRINKLER HEAD. REFER TO SPRINKLER DRAWINGS.
	EXISTING SUPPLY AIR DIFFUSER. REFER TO MECH. DWGS.
	SUPPLY AIR DIFFUSER. REFER TO MECH. DWGS.
	RETURN AIR GRILLE. REFER TO MECH. DWGS.
	CEILING EXHAUST FAN. REFER TO MECH. DWGS.
	CEILING HEIGHT FROM FINISHED FLOOR. REFER TO ROOM FINISH SCHEDULE.
	CEILING FAN. REFER TO ELEC. DWGS.
	CEILING MOUNTED SPEAKER. REFER TO ELEC. DWGS.
	TUBULAR SKYLIGHT

- NOTES
- REFER TO ELECTRICAL DRAWINGS FOR EXACT TYPE, LOCATION, AND NUMBER OF LIGHT FIXTURES, SPEAKERS, SMOKE DETECTOR, ETC.
 - REFER TO MECHANICAL DRAWINGS FOR EXACT NUMBER OF PENETRATIONS IN CEILING FOR DIFFUSERS, GRILLES, ACCESS OPENINGS, ETC. PROVIDE HANGERS & FRAMING TO SUIT MECHANICAL OPENINGS AND BULKHEADS.
 - PROVIDE OPENINGS THRU WALLS TO ACCOMMODATE INSTALLATION OF DUCTWORK FOR FIRE DAMPERS AND EXACT NUMBER, SIZE & LOCATION OF DUCTWORK PENETRATION THRU WALLS. REFER TO MECHANICAL DRAWINGS. REFER TO STRUCTURAL DRAWING FOR UNIL TYPE.
 - REFER TO SPRINKLER DRAWINGS FOR EXACT NUMBER & TYPE OF SPRINKLER HEADS, HANGERS.

DATE	REVISIONS
8. AUG 27 2024	ISSUED FOR ADDENDUM #2
7. JULY 24 2024	ISSUED FOR TENDER/PERMIT
6. JUNE 11 2024	SITE PLAN REVIEW (4th SUBMISSION)
5. MAY 03 2024	SITE PLAN REVIEW (3rd SUBMISSION)
4. FEB 12 2024	COSTING
3. FEB 12 2024	SITE PLAN REVIEW (2nd SUBMISSION)
2. NOV 13 2023	SITE PLAN REVIEW (PRELIMINARY)
1. FEB 28 2023	PRELIMINARY SITE PLAN REVIEW

MURRAY CENTENNIAL PUBLIC SCHOOL ADDITION
654 County Road 40,
TRENTON ONTARIO K6V 6P4

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD
1994 Fisher Drive, Peterborough, Ontario K9J 6X8

REFLECTED CEILING PLAN

 ARCHITECTS ROBERT F. FERKUL LICENCE #986	TRUE NORTH	DWG. NORTH
2304	JOB NO.	
1:100	SCALE	
FEB 2024	DATE	
MOFFET & DUNCAN architects inc.	PRINTED	
5052 DUNDAS ST. WEST TORONTO, ONT. M9A 1B9 TEL: (416) 239-2775 FAX: (416) 239-6729 EMAIL: moffet@moffet.ca	DWG. NO.	
A5.0		

August 28, 2024

Moffet & Duncan Architects Inc.
5052 Dundas Street West
Toronto, ON
M9A 1B9

Attention: Andrea Comande, M.Arch., OAA

RE: C14-0588 CIVIL ADDENDUM MEMO – KPRDSB Murray Centennial PS – New Addition

Dear Mr. Comande:

Please find in attached information on specifications for:

- A) the demolition of the existing fire fighting cistern and
- B) for backfill of the void left by removal of existing septic tank and equalization tank.

Refer to the Contract Drawings for the location at which the specifications apply.

We trust this addresses your request, but should require any additional information or clarification, please contact the undersigned.

Sincerely,

CIMA Canada Inc.



Ron Albright, P.Eng.
Director, Associate Partner | Infrastructure – Municipal Engineering
ron.albright@cima.ca
RA:oa

Addendum No. ME-1

Project Name:	KPRDSB Murray Centennial PS	Date:	August 28, 2024
Description:	Addition	From:	Mahsa Doveirjavi Luigi Conforti
Address:	654 County Road 40 Trenton, ON	Project No:	C14-0588
Client Contact:	Moffet and Duncan Architect		

This addendum shall form an integral part of the TENDER.

Mechanical

1.1 Drawing M102

- .1 Refer to revised drawing. Work for certain areas shall be undertaken under Phase 3.
- .2 Disconnect and remove all diffusers and grilles in Classroom 114-2 and 135 as part of Phase 3 demolition plan and retain for reinstallation.
- .3 Re-install existing supply diffusers and connect to the existing supply duct. Re-install existing return grilles and connect to existing return ducts in Classroom 114-2 and 135. Provide fire damper at rated walls as part of Phase 3 construction plan to facilitate temporary exiting strategy.
- .4 Disconnect and remove the diffusers in Classroom 114-3 as shown on revised drawing and cut back duct in Classroom 114-3 as indicated in revised drawing.
- .5 Re-install existing supply diffuser and connect to the existing supply duct in Classroom 114-3.
- .6 Supply duct serving Classroom 114-3 to be complete with fire damper at rated walls as part of Phase 3 construction plan to facilitate temporary exiting strategy.
- .7 Existing exhaust fan grille in Washroom 135A to be removed as part of Phase 3 demolition plan and re-install after re-installation of RCP as part of Phase 3 construction plan.

Electrical

1.2 Drawing E100 and E101

- .1 All underground electrical services to be coordinated with all underground services prior to installation. Provide interference drawings and coordinate with all trades.

1.3 Drawing E102

- .1 Refer to revised drawing. Work for certain areas shall be undertaken under Phase 3.
- .2 Disconnect and remove all lighting in Classroom 135 and retain for reinstallation.

1.4 Drawing E301

- .1 All lighting and ceiling devices shall be removed and reinstalled in Classrooms 114-3 and 114-2 under Phase 3.
- .2 Corridors H3 and H4: Allow for the removal and reinstallation of all ceiling devices throughout the Corridors to support mechanical work. Devices required to be removed and reinstalled as follows:
 - .1 Lighting: 15
 - .2 Remote Heads: 6
 - .3 Exit Signs: 2
 - .4 Smoke Detectors: 7
 - .5 PA Speakers: 2

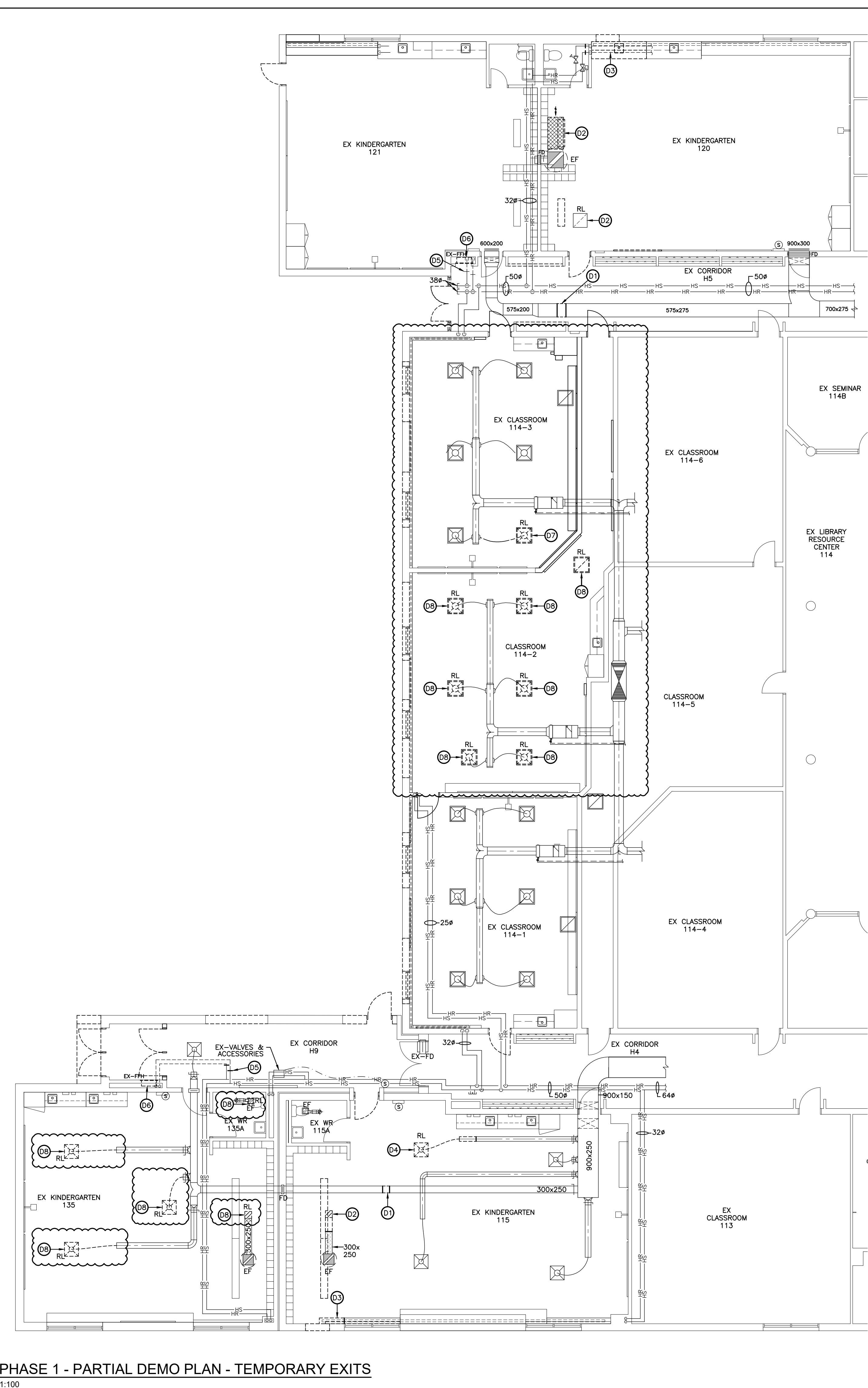
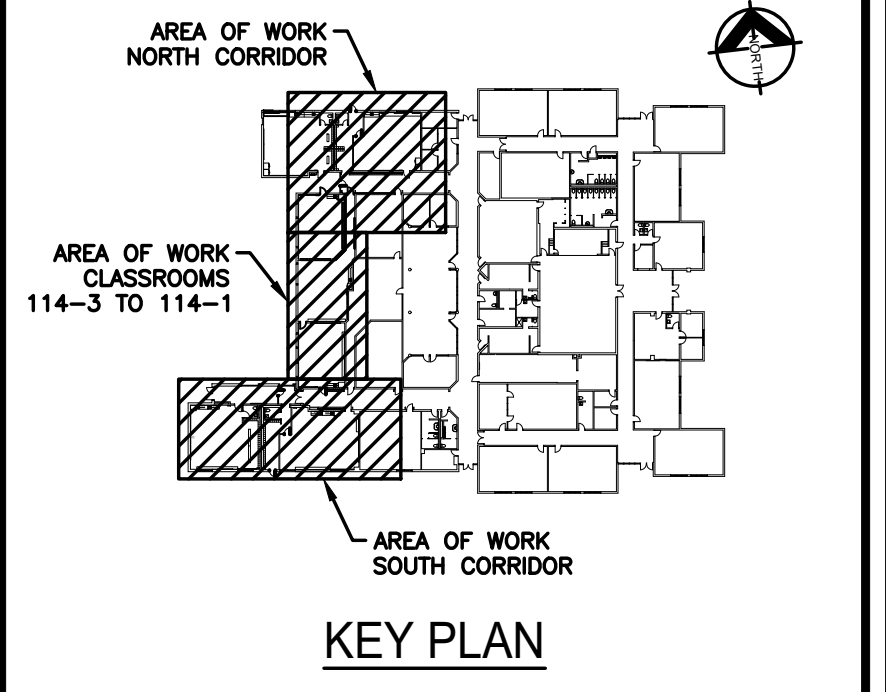
Attachments:

- **Revised Drawing M102 Partial First Floor Phase 1 HVAC Layout (1 – 30x42”)**
- **Revised Drawing E102 Partial Ground Floor Plan Temporary Exits (1 – 30x42”)**

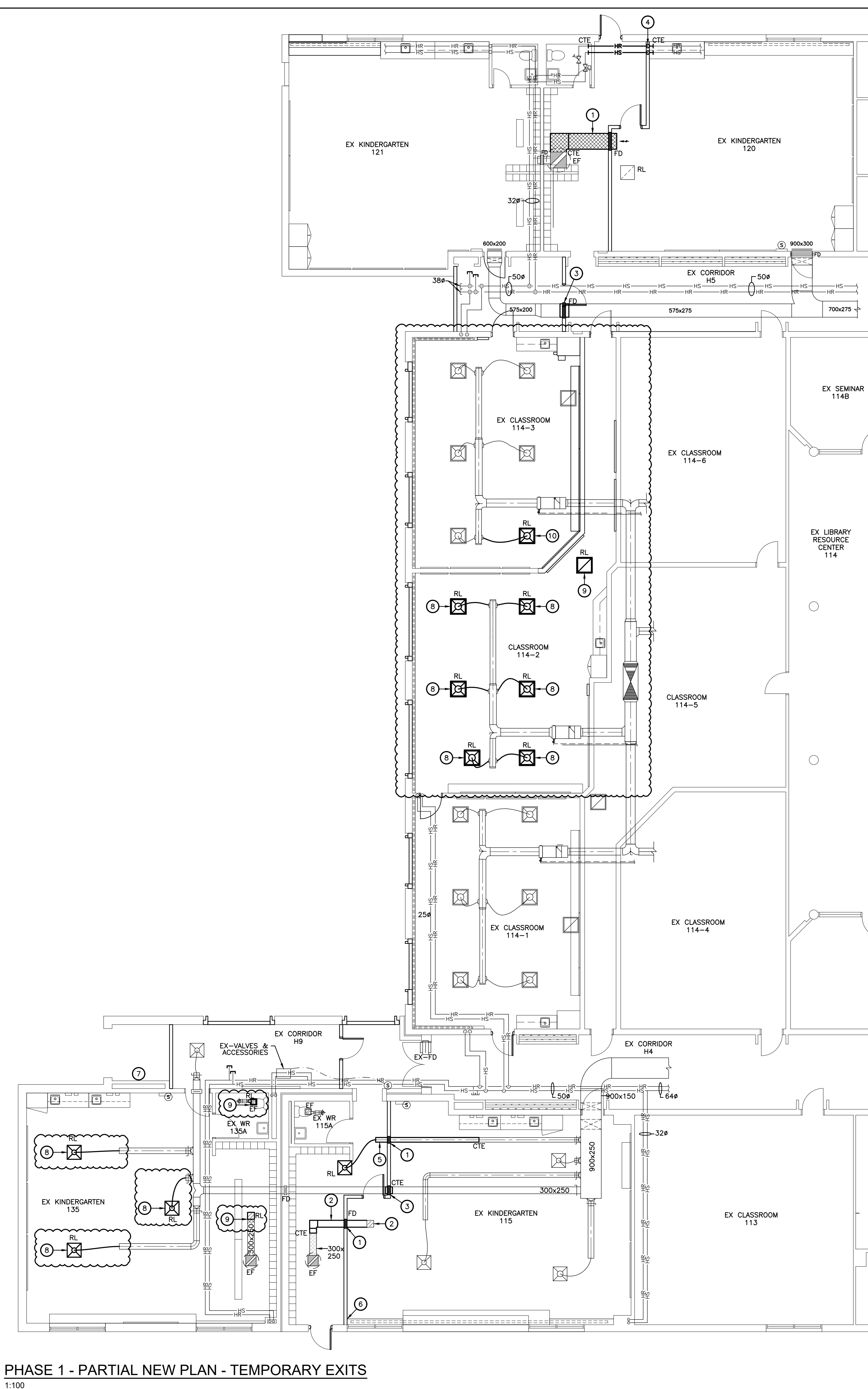
Cc: Andrea Comande MDA acomande@mdarch.ca
CIMA Cc: Mahsa Doveirjavi, Luigi Conforti, Brad Timson, Jeff Greer

DESIGN AND DETAILS SHOWN ON THIS DRAWING OR ASSOCIATED DOCUMENTATION ARE PRODUCED BY AND THE PROPERTY OF CIM+ COPY IN WHOLE OR PART IS PROHIBITED. THE CONTRACTOR MUST CHECK AND BE RESPONSIBLE FOR SITE CONDITIONS THAT MAY DIFFER FROM THESE PLANS AND NOTIFY CIM+ OF SAME.

ISSUES/REVISIONS		
No.	DESCRIPTION	DATE
1	RE-ISSUED FOR 50% COORDINATION	JAN 26 2024
2	ISSUED FOR 80% COORDINATION	FEB 9 2024
3	ISSUED FOR COSTING	FEB 13 2024
4	ISSUED FOR PERMIT & TENDER	APR 8 2024
5	RE-ISSUED FOR PERMIT & TENDER	JUL 31 2024
6	ADDENDUM No. ME-1	AUG 27 2024



PHASE 1 - PARTIAL DEMO PLAN - TEMPORARY EXITS
1:100



PHASE 1 - PARTIAL NEW PLAN - TEMPORARY EXITS
1:100

- DEMO WORKING NOTES:**
- 11 REMOVE SECTION OF DUCT TO FACILITATE INSTALLATION OF NEW FIRE DAMPER.
 - 12 REMOVE GRILLE AND CUT DUCT BACK AS INDICATED. RETAIN EXHAUST GRILLE FOR REINSTALLATION.
 - 13 CUT AND REMOVE ALL OR PORTION OF EXISTING WALL/FIN TO FACILITATE INSTALLATION OF NEW TEMPORARY EXIT DOOR.
 - 14 REMOVE DIFFUSER AND CUT BACK DUCT AS INDICATED. RETAIN EXISTING DIFFUSER FOR REINSTALLATION.
 - 15 CUT AND CAP THE HS & HR TO THE EXISTING FORCED FLOW HEATER.
 - 16 REMOVE EXISTING FORCE FLOW HEATER ALONG THE EXISTING WALL/CUT AND CAP ALL HWS/HR TO THE FFH, REMOVE ALL PIPING CONNECTION AND VALVES/TURN OVER DDC VALVES AND CONTROLS TO OWNER.
 - 17 REMOVE EXISTING DIFFUSER AND CUT BACK DUCT IN CLASSROOM 114-3
 - 18 DISCONNECT AND REMOVE ALL DIFFUSERS AND GRILLES IN CLASSROOM 114-2 AND 115 AS PART OF PHASE 3 DEMOLITION PLAN AND RETAIN FOR REINSTALLATION

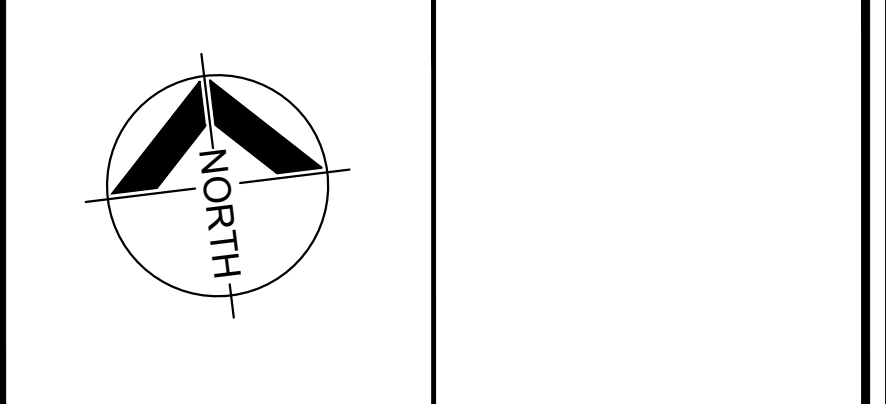
- NEW WORKING NOTES:**
- 1 EXTENDED EXISTING DUCT C/W NEW FIRE DAMPER AT PARTITION WALL.
 - 2 RELOCATE EXISTING EXHAUST GRILLE AND CONNECT TO EXTENDED EXHAUST DUCT.
 - 3 PROVIDE NEW FIRE DAMPER IN EXISTING DUCT.
 - 4 RE-CONNECT EXISTING HS & HR TO EXISTING WALL/FIN UNIT, RE-INSTALL ALL REQUIRED VALVES AND ACCESSORIES.
 - 5 RELOCATED EXISTING SUPPLY DIFFUSER AND CONNECT TO EXTENDED SUPPLY DUCT, PROVIDE FIRE DAMPER AT RATED WALL.
 - 6 RECONNECT SUPPLY & RETURNS AT END OF WALL/FIN AND REINSTALL ENCLOSURE WALL CAP AT NEW WALL.
 - 7 WALL TO BE REPAINTED AND RESTORED TO MATCH EXISTING BY GENERAL CONTRACTOR.
 - 8 RE-INSTALL EXISTING SUPPLY DIFFUSER AND CONNECT TO THE EXISTING SUPPLY DUCT.
 - 9 RE-INSTALL EXISTING RETURN GRILLES AND CONNECT TO EXISTING RETURN DUCTS

10 RE-INSTALL EXISTING SUPPLY DIFFUSER AND CONNECT TO EXTENDED SUPPLY DUCT.

- GENERAL NEW HVAC NOTES:**
1. THE CONTRACTOR SHALL INVESTIGATE AND CONFIRM SERVICES ON SITE PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO ENGINEER.
 2. ENSURE ALL SERVICES ARE CONCEALED WITHIN AVAILABLE CEILING SPACE. RUN ALL NEW SERVICES UP IN JOIST SPACE AND BETWEEN LIGHTS AS NOTED OR AS REQUIRED.
 3. ALLOW FOR THE INSULATION AND LABELING OF NEW.
 4. SUPPLY ACCESS DOORS FOR MECHANICAL DEVICES ABOVE DRYWALL CEILING AND TURN OVER TO GENERAL CONTRACTOR FOR INSTALLATION.
 5. ELECTRICAL CONTRACTOR TO PROVIDE BACK BOX, CONDUIT AND PULL STRING FOR WALL SENSORS. COORDINATE WITH ELECTRICAL.
 6. LABEL CEILING GRID AT ACCESS TO MECHANICAL EQUIPMENT AND DEVICES WITH LAMARCOD NAMEPLATE.
 7. TEMPORARILY SEAL ALL OPEN DUCTS THROUGHOUT CONSTRUCTION TO PREVENT DUST AND DIRT FROM ENTERING THE SYSTEM. WHERE THE CONTRACTOR DOES NOT CONFORM THEY ARE RESPONSIBLE FOR CLEANING OF THE SYSTEMS IN A MANNER APPROVED BY THE CONSULTANT.
 8. PERFORM DUCT LEAKAGE TESTS (SUPPLY AND RETURN) FOR ALL NEW AIR HANDLING SYSTEMS. ARRANGE FOR ENGINEER TO WITNESS AND SUBMIT REPORT.

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD
1904 Fisher Drive, Peterborough, Ontario K9J 6X6

CIM+ DES
415 BASELINE ROAD WEST
BOWMANVILLE, ON L1C 5M2
T 905.697.4464
www.cim.ca



MURRAY CENTENIAL PS ADDITION
654 COUNTY ROAD 40, R.R.#1
TRENTON ON

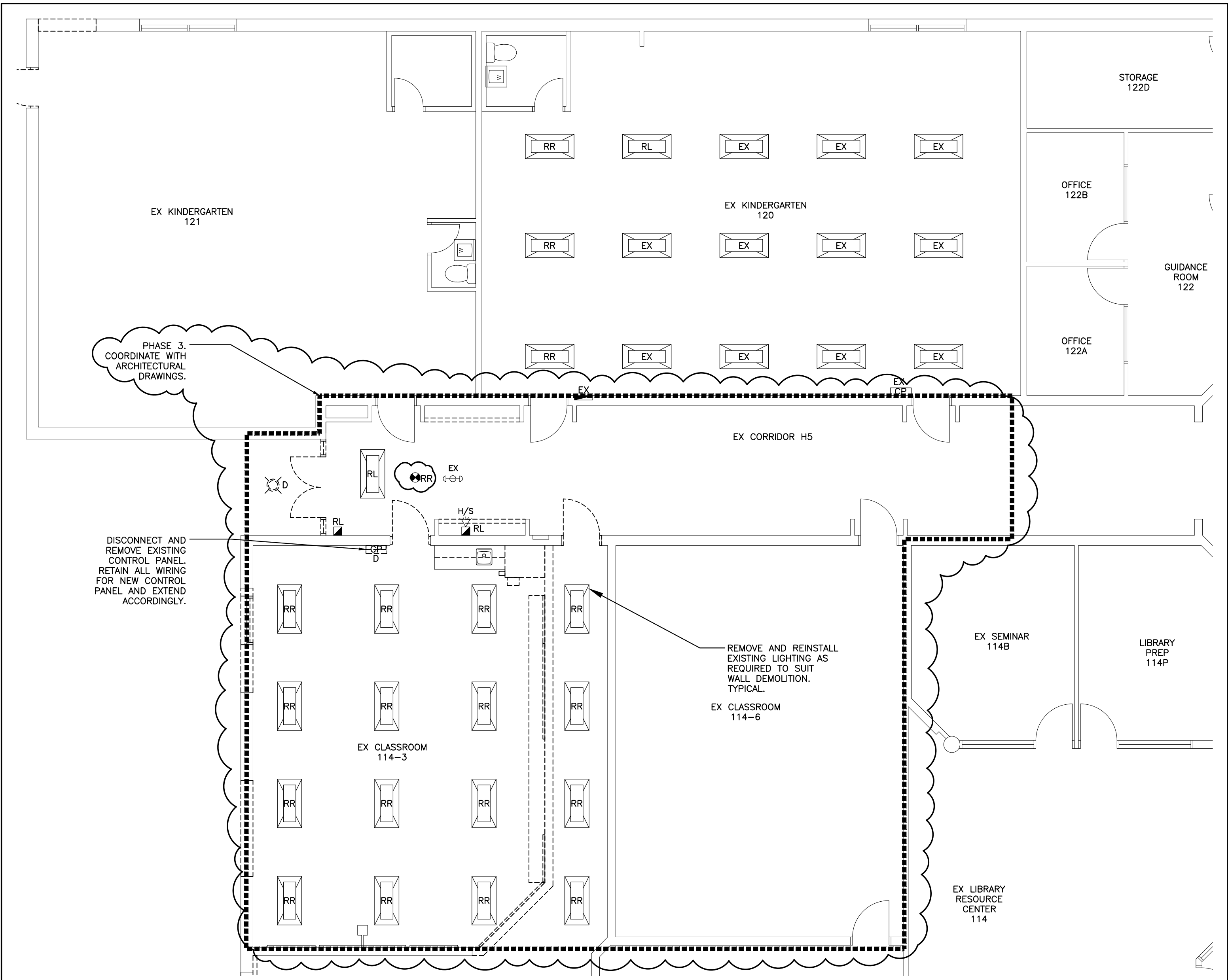
DATE: AUGUST 2023 SCALE: AS NOTED
DRAWN BY: MRC CHECKED BY: MD
CIM+ PROJECT NUMBER: C14-0588 SHEET SIZE: E1

**PARTIAL FIRST FLOOR
PHASE 1
HVAC LAYOUT**

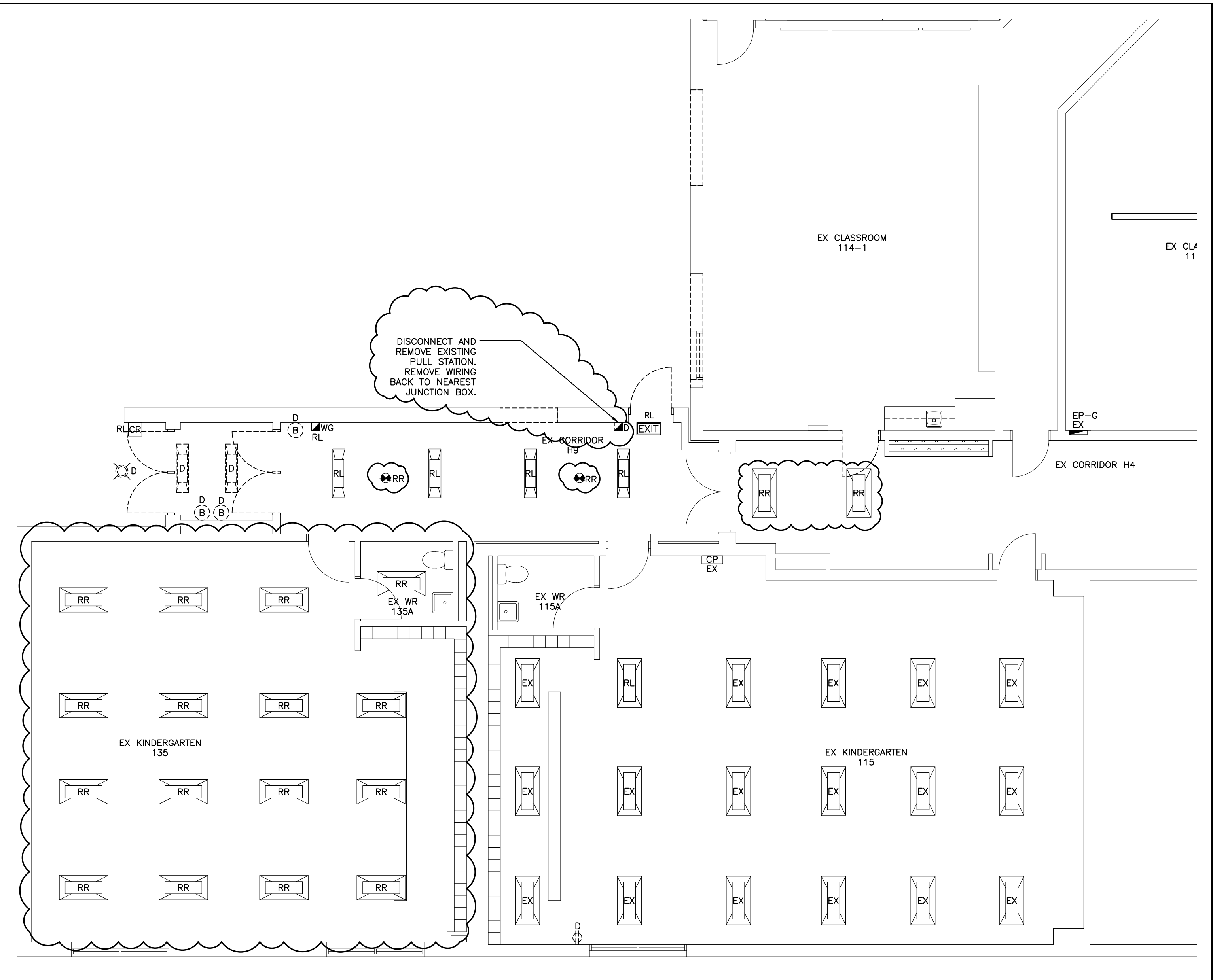
M102

DESIGN AND DETAILS SHOWN ON THIS DRAWING OR ASSOCIATED DOCUMENTATION ARE PRODUCED BY AND THE PROPERTY OF CIM+ COPY IN WHOLE OR PART IS PROHIBITED. THE CONTRACTOR MUST CHECK AND BE RESPONSIBLE FOR SITE CONDITIONS THAT MAY DIFFER FROM THESE PLANS AND NOTIFY CIM+ OF SAME.

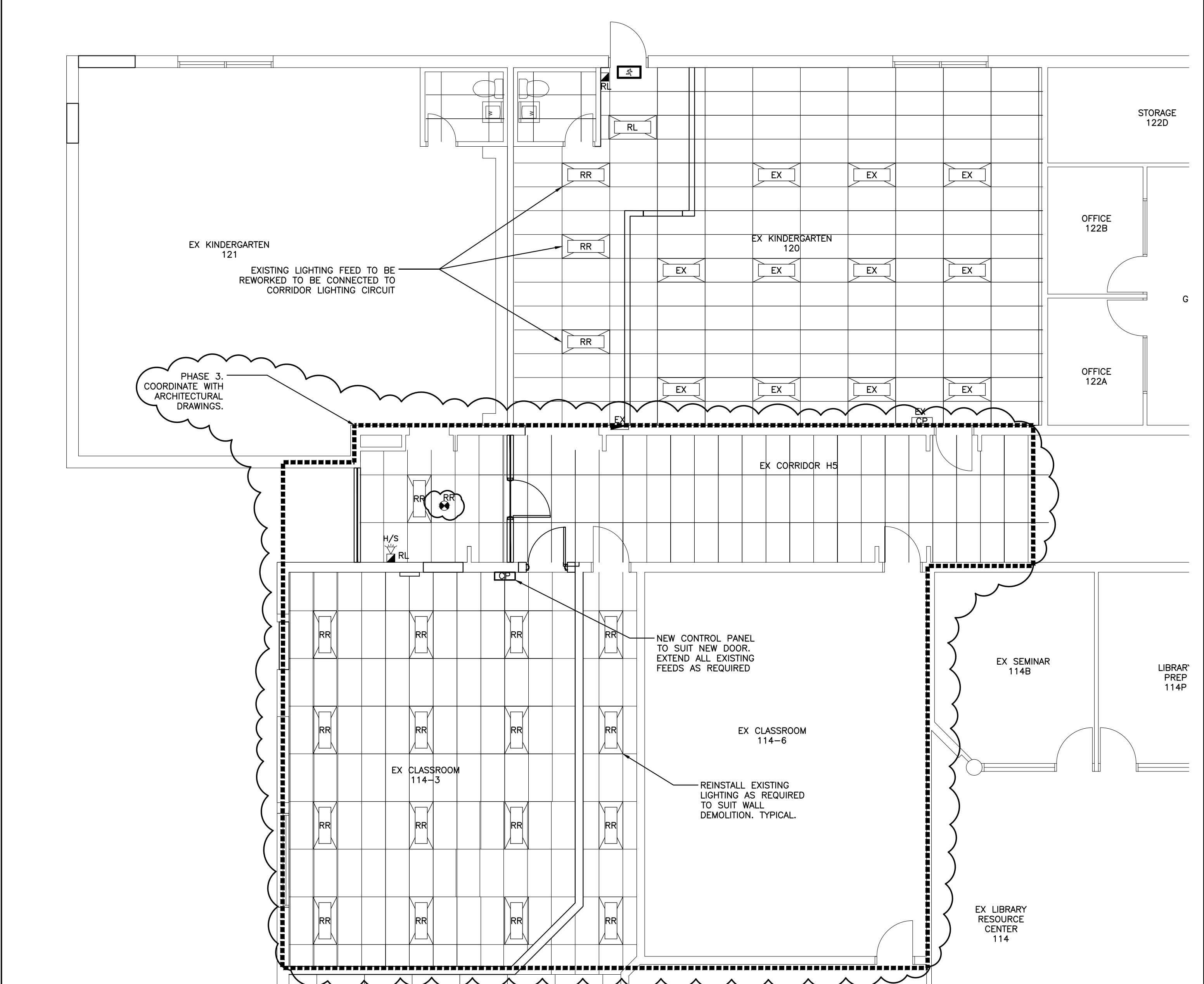
ISSUES/REVISIONS		
No.	DESCRIPTION	DATE
1	RE-ISSUED FOR 30% COSTING	NOV 7 2023
2	ISSUED FOR 50% COORDINATION	JAN 18 2024
3	ISSUED FOR 80% COORDINATION	FEB 9 2024
4	ISSUED FOR COSTING	FEB 13 2024
5	ISSUED FOR PERMIT & TENDER	JUN 13 2024
6	RE-ISSUED FOR PERMIT & TENDER	JUL 31 2024
7	ADDENDUM ME-1	AUG 27 2024



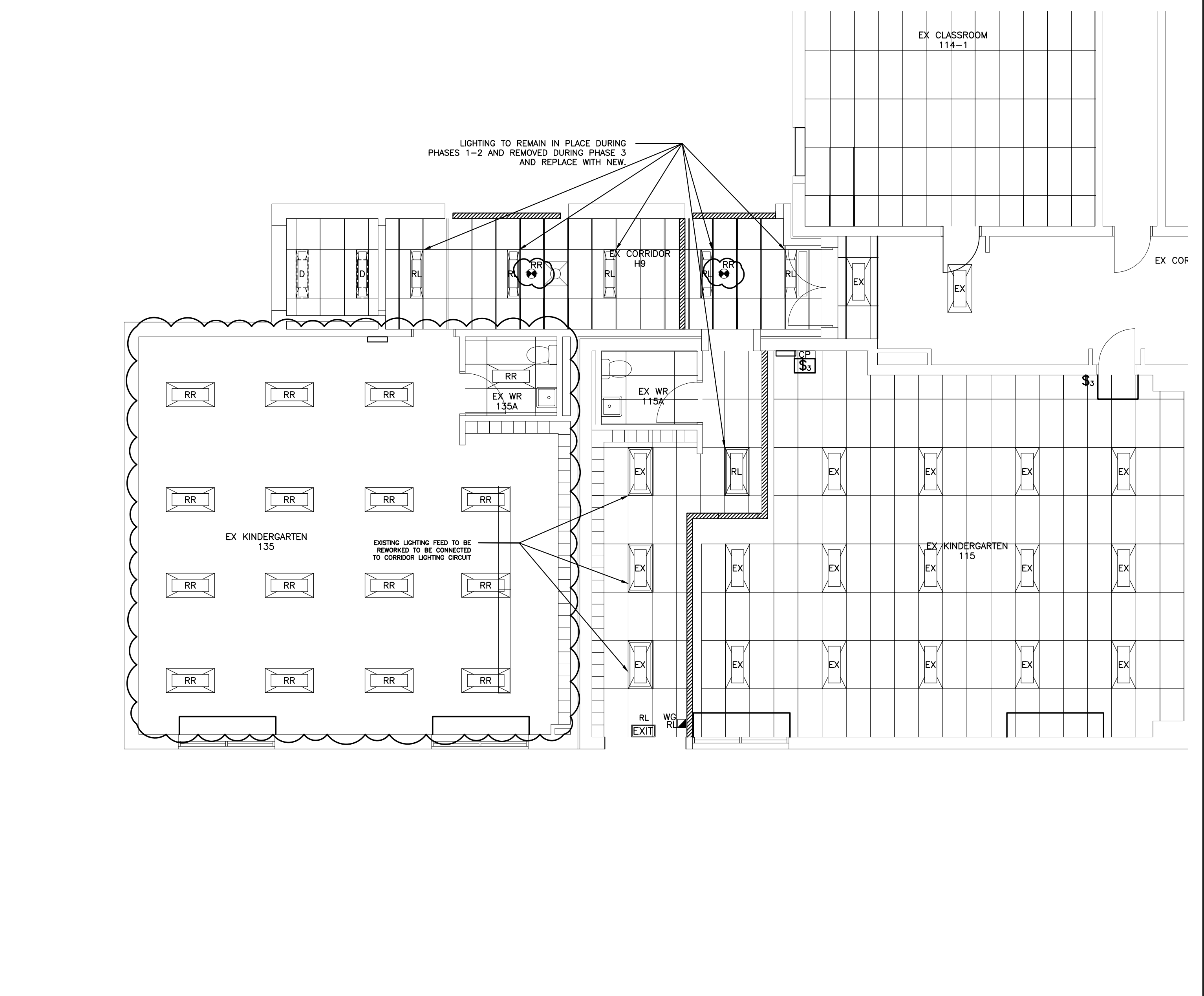
PARTIAL FLOOR PLAN - DEMO PHASE 1 AND 3
1:75




PARTIAL FLOOR PLAN - DEMO PHASE-1
1:75



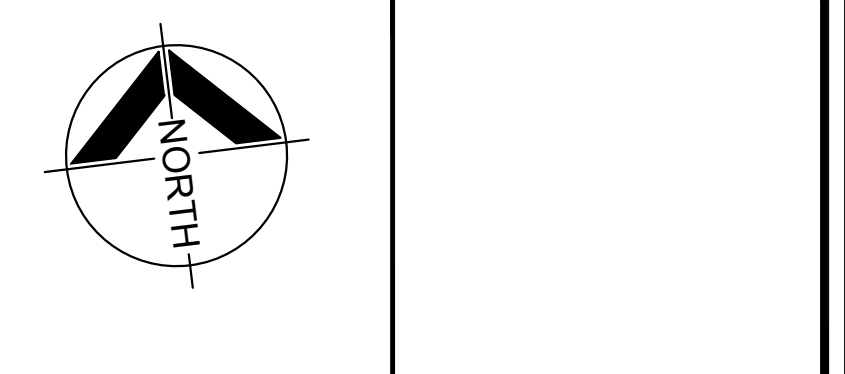
PARTIAL FLOOR PLAN - TEMPORARY PHASE-1 AND 3 PROPOSED
1:75



PARTIAL FLOOR PLAN - TEMPORARY PHASE-1 PROPOSED
1:75

 KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD
1904 Fisher Drive, Peterborough, Ontario K9J 6X6

CIM+ DES
415 BASELINE ROAD WEST
BOWMANVILLE, ON L1C 5M2
T 905.697.4464
www.cim.ca



MURRAY CENTENIAL PS ADDITION
654 COUNTY ROAD 40, R.R.#1
TRENTON ON

DATE: OCTOBER 2023 SCALE: AS NOTED
DRAWN BY: RJC CHECKED BY: LC/CR
CIM+ PROJECT NUMBER: C14-0588 SHEET SIZE: E1

PARTIAL GROUND FLOOR PLAN
TEMPORARY EXITS

E102



Environmental
 Geotechnical
 Building Sciences
 Construction Testing & Inspections

Telephone
 (866) 217.7900
 (705) 742.7900

Facsimile
 (705) 742.7907

Website
 cambium-inc.com

Mailing Address
 P.O. Box 325,
 Peterborough, Ontario
 Canada, K9J 6Z3

Locations
 Peterborough
 Kingston
 Barrie
 Ottawa
 Whitby

Laboratory
 Peterborough

 Professional Engineers
 Ontario



August 26, 2024

Moffet & Duncan Architects Inc.

Attn: Andrea Comande M.Arch., OAA

**Re: Sewage System Design Addendum
 Murray Centennial Public School
 Cambium Reference: 17462-002**

Dear Andrea,

Cambium Inc. (Cambium) was retained Moffet & Duncan Architects Inc. on behalf of Kawartha Pine Ridge District School Board (Client) to design a replacement sewage system to serve Murray Centennial PS located at 654 County Rd 40, Trenton, Ontario (Site).

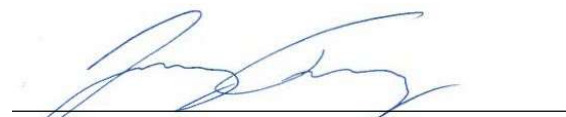
The objective of this letter is to provide sewage system design addenda information to support the tendering process as follows:

Figure	Edit Description
Figure 1: Sewage System Property Plan	Existing septic tank dimension, volume, and depth below ground surface added to drawing.
	Existing sewage system distribution box location added to drawing with approximate dimensions and requirement for removal.

Any questions or required clarification to any aspect of this letter should be directed to the undersigned.

Best regards,

Cambium Inc.



Jeremy Tracey, P.Eng.
 Project Engineer



Stew Dolstra, Honours, B.Sc., Dipl. BCIN
 Senior Project Manager

Encl. Cambium Qualifications & Limitations

P:\17400 to 17499\17462-002 Moffet & Duncan - Sewage & ECA - Murray Cent PS\Correspondence\Letters\2024-08-26 LTR M. Cent. Sewage System Addendum.docx



August 26, 2024

CAMBIUM QUALIFICATIONS AND LIMITATIONS

Limited Warranty

In performing work on behalf of a client, Cambium relies on its client to provide instructions on the scope of its retainer and, on that basis, Cambium determines the precise nature of the work to be performed. Cambium undertakes all work in accordance with applicable accepted industry practices and standards. Unless required under local laws, other than as expressly stated herein, no other warranties or conditions, either expressed or implied, are made regarding the services, work or reports provided.

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The findings and results presented in reports prepared by Cambium are based on the materials and information provided by the client to Cambium and on the facts, conditions and circumstances encountered by Cambium during the performance of the work requested by the client. In formulating its findings and results into a report, Cambium assumes that the information and materials provided by the client or obtained by Cambium from the client or otherwise are factual, accurate and represent a true depiction of the circumstances that exist. Cambium relies on its client to inform Cambium if there are changes to any such information and materials. Cambium does not review, analyze or attempt to verify the accuracy or completeness of the information or materials provided, or circumstances encountered, other than in accordance with applicable accepted industry practice. Cambium will not be responsible for matters arising from incomplete, incorrect or misleading information or from facts or circumstances that are not fully disclosed to or that are concealed from Cambium during the provision of services, work or reports.

Facts, conditions, information and circumstances may vary with time and locations and Cambium's work is based on a review of such matters as they existed at the particular time and location indicated in its reports. No assurance is made by Cambium that the facts, conditions, information, circumstances or any underlying assumptions made by Cambium in connection with the work performed will not change after the work is completed and a report is submitted. If any such changes occur or additional information is obtained, Cambium should be advised and requested to consider if the changes or additional information affect its findings or results.

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Site Assessments

A site assessment is created using data and information collected during the investigation of a site and based on conditions encountered at the time and particular locations at which fieldwork is conducted. The information, sample results and data collected represent the conditions only at the specific times at which and at those specific locations from which the information, samples and data were obtained and the information, sample results and data may vary at other locations and times. To the extent that Cambium's work or report considers any locations or times other than those from which information, sample results and data was specifically received, the work or report is based on a reasonable extrapolation from such information, sample results and data but the actual conditions encountered may vary from those extrapolations.

Only conditions at the site and locations chosen for study by the client are evaluated; no adjacent or other properties are evaluated unless specifically requested by the client. Any physical or other aspects of the site chosen for study by the client, or any other matter not specifically addressed in a report prepared by Cambium, are beyond the scope of the work performed by Cambium and such matters have not been investigated or addressed.

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Potential liability to the client arising out of the report is limited to the amount of Cambium's professional liability insurance coverage. Cambium shall only be liable for direct damages to the extent caused by Cambium's negligence and/or breach of contract. Cambium shall not be liable for consequential damages.

Personal Liability

The client expressly agrees that Cambium employees shall have no personal liability to the client with respect to a claim, whether in contract, tort and/or other cause of action in law. Furthermore, the client agrees that it will bring no proceedings nor take any action in any court of law against Cambium employees in their personal capacity.

Environmental

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Building Sciences

Construction Testing
& Inspections

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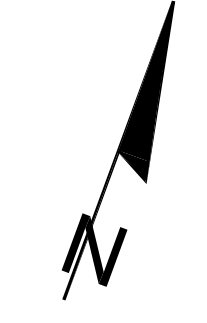
Peterborough



NOTE:
PORTIONS OF SEWAGE SYSTEM INSTALLATION WILL BE PHASED. REFER TO MECHANICAL, ELECTRICAL, CIVIL, ARCHITECTURAL DRAWINGS FOR INSTALLATION PHASING DETAILS.

MURRAY CENTENNIAL PS - SEWAGE SYSTEM DESIGN

654 County Road 40
Trenton, Ontario
KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD



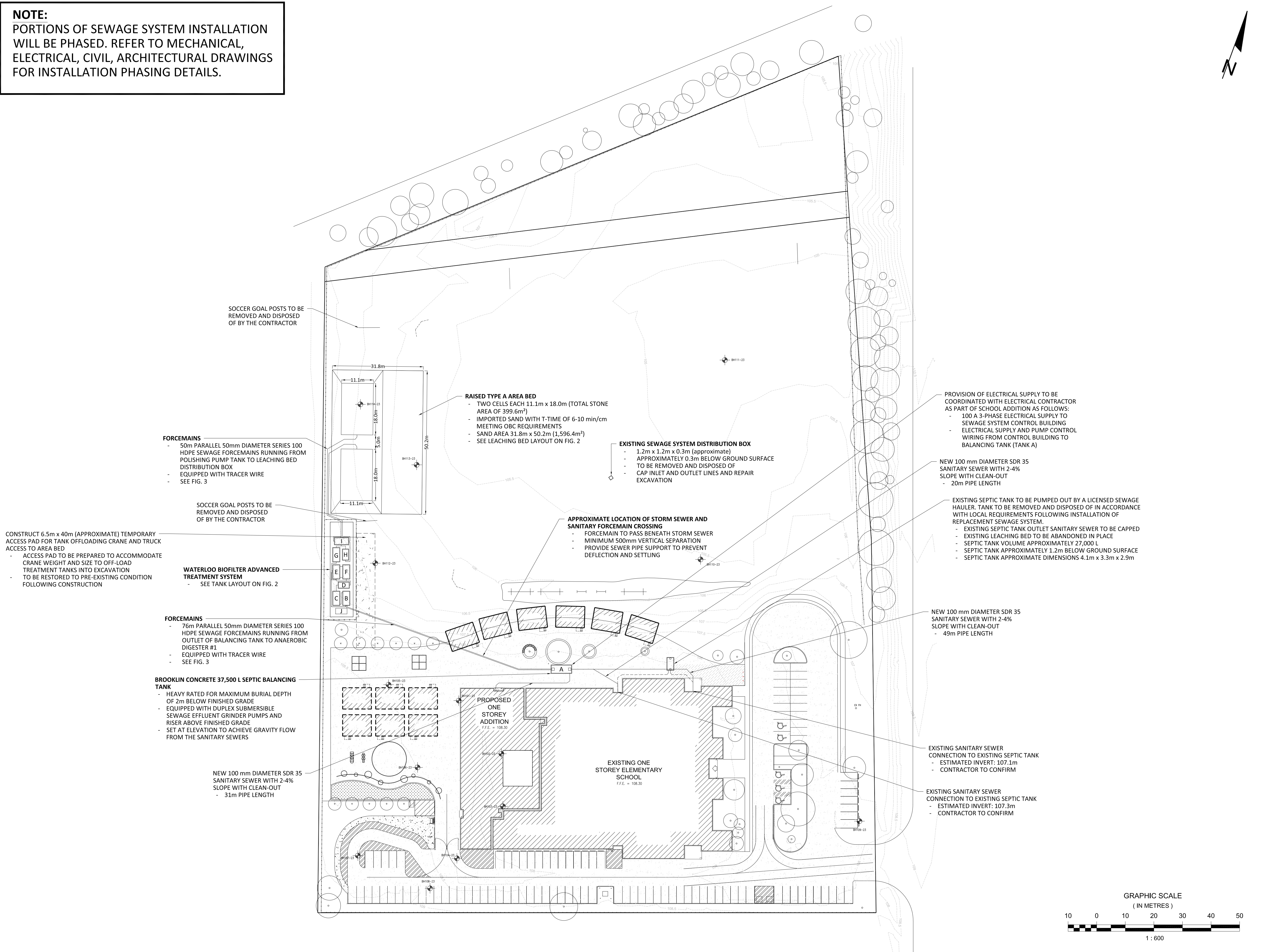
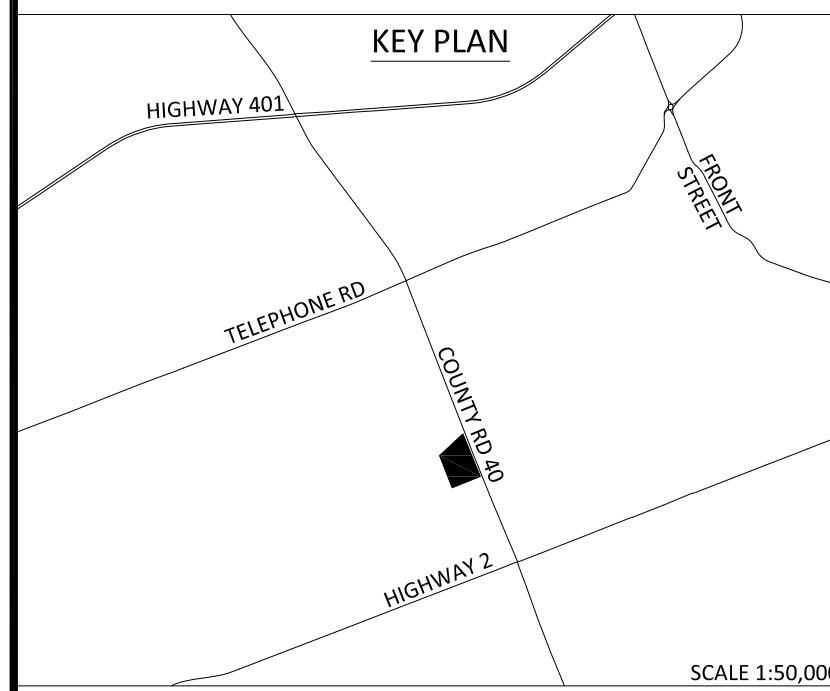
- SEWAGE SYSTEM LEGEND**
- A - 37,500 L Balancing Tank
 - B - 22,000 L Anaerobic Digester Tank #1
 - C - 22,000 L Anaerobic Digester Tank #2
 - D - 9,000 L Pump Tank
 - E - 30,000 L Biofilter Tank #1
 - F - 30,000 L Biofilter Tank #2
 - G - 22,000 L WaterNox-LS Tank
 - H - 9,000 L WaterNo-LS Tank
 - I - 22,000 L Polishing Biofilter and Pump Tank
 - J - Pre-fab Control Building

SEWAGE SYSTEM DESIGN CRITERIA

12,450 L/day Average Balanced Flow
18,000 L/day Peak Flow

TREATED EFFLUENT OBJECTIVES

10 mg/L Total Suspended Solids
10 mg/L Carbonaceous Biochemical Oxygen Demand
20 mg/L Total Inorganic Nitrogen



FORCEMAINS

- 50m PARALLEL 50mm DIAMETER SERIES 100 HDPE SEWAGE FORCEMAINS RUNNING FROM POLISHING PUMP TANK TO LEACHING BED DISTRIBUTION BOX
- EQUIPPED WITH TRACER WIRE
- SEE FIG. 3

RAISED TYPE A AREA BED

- TWO CELLS EACH 11.1m x 18.0m (TOTAL STONE AREA OF 399.6m²)
- IMPORTED SAND WITH T-TIME OF 6-10 min/cm MEETING OBC REQUIREMENTS
- SAND AREA 31.8m x 50.2m (1,596.4m²)
- SEE LEACHING BED LAYOUT ON FIG. 2

EXISTING SEWAGE SYSTEM DISTRIBUTION BOX

- 1.2m x 1.2m x 0.3m (approximate)
- APPROXIMATELY 0.3m BELOW GROUND SURFACE
- TO BE REMOVED AND DISPOSED OF
- CAP INLET AND OUTLET LINES AND REPAIR EXCAVATION

PROVISION OF ELECTRICAL SUPPLY TO BE COORDINATED WITH ELECTRICAL CONTRACTOR AS PART OF SCHOOL ADDITION AS FOLLOWS:

- 100 A 3-PHASE ELECTRICAL SUPPLY TO SEWAGE SYSTEM CONTROL BUILDING
- ELECTRICAL SUPPLY AND PUMP CONTROL WIRING FROM CONTROL BUILDING TO BALANCING TANK (TANK A)

NEW 100 mm DIAMETER SDR 35 SANITARY SEWER WITH 2-4% SLOPE WITH CLEAN-OUT

- 20m PIPE LENGTH

EXISTING SEPTIC TANK TO BE PUMPED OUT BY A LICENSED SEWAGE HAULER. TANK TO BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH LOCAL REQUIREMENTS FOLLOWING INSTALLATION OF REPLACEMENT SEWAGE SYSTEM.

- EXISTING SEPTIC TANK OUTLET SANITARY SEWER TO BE CAPPED
- EXISTING LEACHING BED TO BE ABANDONED IN PLACE
- SEPTIC TANK VOLUME APPROXIMATELY 27,000 L
- SEPTIC TANK APPROXIMATELY 1.2m BELOW GROUND SURFACE
- SEPTIC TANK APPROXIMATE DIMENSIONS 4.1m x 3.3m x 2.9m

APPROXIMATE LOCATION OF STORM SEWER AND SANITARY FORCEMAIN CROSSING

- FORCEMAIN TO PASS BENEATH STORM SEWER
- MINIMUM 500mm VERTICAL SEPARATION
- PROVIDE SEWER PIPE SUPPORT TO PREVENT DEFLECTION AND SETTLING

NEW 100 mm DIAMETER SDR 35 SANITARY SEWER WITH 2-4% SLOPE WITH CLEAN-OUT

- 49m PIPE LENGTH

EXISTING SANITARY SEWER CONNECTION TO EXISTING SEPTIC TANK

- ESTIMATED INVERT: 107.3m
- CONTRACTOR TO CONFIRM

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WATERLOO BIOFILTER ADVANCED TREATMENT SYSTEM

- SEE TANK LAYOUT ON FIG. 2

FORCEMAINS

- 76m PARALLEL 50mm DIAMETER SERIES 100 HDPE SEWAGE FORCEMAINS RUNNING FROM OUTLET OF BALANCING TANK TO ANAEROBIC DIGESTER #1
- EQUIPPED WITH TRACER WIRE
- SEE FIG. 3

BROOKLIN CONCRETE 37,500 L SEPTIC BALANCING TANK

- HEAVY RATED FOR MAXIMUM BURIAL DEPTH OF 2m BELOW FINISHED GRADE
- EQUIPPED WITH DUPLEX SUBMERSIBLE SEWAGE EFFLUENT GRINDER PUMPS AND RISER ABOVE FINISHED GRADE
- SET AT ELEVATION TO ACHIEVE GRAVITY FLOW FROM THE SANITARY SEWERS

NEW 100 mm DIAMETER SDR 35 SANITARY SEWER WITH 2-4% SLOPE WITH CLEAN-OUT

- 31m PIPE LENGTH

CONSTRUCT 6.5m x 40m (APPROXIMATE) TEMPORARY ACCESS PAD FOR TANK OFFLOADING CRANE AND TRUCK ACCESS TO AREA BED

- ACCESS PAD TO BE PREPARED TO ACCOMMODATE CRANE WEIGHT AND SIZE TO OFF-LOAD TREATMENT TANKS INTO EXCAVATION
- TO BE RESTORED TO PRE-EXISTING CONDITION FOLLOWING CONSTRUCTION

SOCCER GOAL POSTS TO BE REMOVED AND DISPOSED OF BY THE CONTRACTOR

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- Notes:
1. Plan details are based on a Context Plan for Murray Centennial Public School Addition by Moffet and Duncan Architects Inc, Job no. 2304, drawing no. A1.0, dated July, 2023.
 2. Distances on this plan are in metres and can be converted to feet by dividing by 0.3048.
 3. This plan is for illustrative purposes only.

REVISION	REVISED BY	DATE
FOR SITE PLAN APPROVAL	MAT	2023-11-09
REVISIONS TO TARMAC	MAT	2024-02-07
FOR SITE PLAN APPROVAL	MAT	2024-02-13
FOR COORDINATION	MAT	2024-03-08
ISSUED FOR TENDER	MAT	2024-03-22
RELOCATED PORTABLES REMOVED	MAT	2024-08-01
ADD EXISTING SEWAGE SYSTEM INFO.	MAT	2024-08-26



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SEWAGE SYSTEM PROPERTY PLAN

Project No.:	17462-002	Date:	August 2024
Horizontal Scale:	1:600	Rev.:	
Vertical Scale:	1:600	Figure:	1
Drawn By:	MAT	Checked By:	SD

