



PURCHASING SECTION
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ADDENDUM No. 2

REQUEST FOR QUOTATIONS No.: 1220-040-2017-011

TITLE: **NEWTON SENIORS CENTRE INTERIOR
RENOVATION**

ADDENDUM ISSUE DATE: January 5, 2017

DATE: **PREFER TO RECEIVE QUOTATIONS ON OR
BEFORE JANUARY 9, 2017.**

INFORMATION FOR CONTRACTOR

Contractors are advised that Addendum No. 2 to RFQ 1220-040-2017-011 is hereby issued by the City. This addendum shall form part of the Contract Documents and is to be read, interpreted and coordinated with all other parts. The following information is provided for the above named project, to the extent referenced and shall become a part thereof. No consideration will be allowed for extras due to the Contractor or any sub-contractor not being familiar with this addendum. This Addendum No. 2 contains (74) pages in total including attachments.

QUESTIONS AND ANSWERS:

- Q1: Re: Addendum #1. Drawing A-2 mentions Drawing P1 which we have not seen and which indicates work that was not on the original Mechanical drawings. Please advise.
A1: Drawing A-2 in Addendum #1 is part of the Appendix C in Asbestos Report, and it is for reference only.
- Q2: Re: Addendum #1. Drawing A-2 mentions A6/A8/A10 and Dwg of R series. We do not have those drawings. Please advise.
A2: Drawing A-2 in Addendum #1 is part of the Appendix C in Asbestos Report, and it is for reference only.
- Q3: We are tendering this project and require some clarification for the rolling shutter: Construction note 12, drawing A-3 states: supply and install new motorized aluminum roll shutter to suit new opening size. Opening size is not provided. Please confirm height of shutter as none provided.

A3: 3900mm wide x 2100mm high.

Q4: Toilet Partitions: Please confirm series required (floor braced, overhead braced, floor to ceiling, ceiling hung).

A4: Floor braced.

Q5: Washroom Accessories: are toilet tissue dispensers, soap dispensers, and paper towel dispensers required? If so please provide models as none provided.

A5: See General Construction Note 5 in A-2.

Q6: Please provide specifications on the roller shade fabric material. Only the hardware is specified.

A6: Fabric: light control 3 (semi-sheer, no view through). Solid grey colour from the standard colour options

Q7: Please find attached specifications for alternate roller blinds approval.

A7: Newco Solar Solutions is approved as an acceptable alternative to the roller shades specified in the solicitation documents. See attached spec. sheet.

Q8: ASI Global Phenolic Partitions.pdf: Technical data for our proposed alternate to the specified toilet partitions.

A8: ASI Global Phenolic is approved as an acceptable alternative to the toilet partitions specified in the solicitation documents. See attached spec. sheet.

Q9: Proposed Alternates TD sheets.pdf: Technical data sheets for our proposed alternates to the washroom accessories on this project.

A9: Hand Dryer does not meet the specifications therefore is not approved as an acceptable alternative to the hand dryer specified in the solicitation documents. Sanitary Napkin Disposals, Mirrors, and Grab Bars are approved as an acceptable alternative to the washroom accessories specified in the solicitation documents. See attached spec. sheet.

Q10: co-8p-bn_adh.pdf: Technical data sheet for the proposed alternate to the specified corner guard.

A10: CS Acrovyn CO-8 does not meet the specifications, therefore is not approved as an acceptable alternative to the corner guard specified in the solicitation documents.

Q11: Are we to allow to replace the existing manual and motorized roller shades to room 115 (Crafts room)?

A11: The replacement of all window shading devices should be provided as a separate price. There are not motorized roller shades in Room 115; only manual.

Q12: Are we to include interior windows in the scope of the new blinds?

A12: New interior windows as per Construction Note 3 in drawing A-3.

Q13: What is the scope with regards to refinishing of maple doors?

A13: Protect floors in Auditorium 123 during construction. Re-finish floors not in contract.

Q14: Are "new" exit signs required?

A14: No.

Q15: Is the artwork to be removed by CoS?

A15: Yes.

Q16: Please provide floor transition detail at WR doors.

A16: Aluminium reducer trim to suit floor height difference.

Q17: Doors Tag 105,110: What veneer type will these be?

A17: Domestic Birch or match existing.

Q18: Can you please provide some building sections and ceiling heights in areas where wall and ceiling construction/demo is required?

A18: See attached for your reference original As-Built set from 1991, and As-Built set of Multipurpose 118 addition from 2006.

Q19: Does GC have to Remove & Reinstall dart boards and Egon (Visual) boards in meeting room?

A19: No.

Q20: As per dwg A-1 Demolition plan, existing wall outside the Washrooms between GL 11 & 13 needs to be demolished. What kind of new wall/partition is required in that area? There is no notation on Drawing A-2 regarding this wall. Please clarify.

A20: W1. See wall types in drawing A-3.

Q21: Re: Floor Transition. Please provide specifications for floor transition.

A21: Aluminium threshold or vinyl carpet edging to suit.

Q22: Re: Motorized Window Roller Shades. What are the sizes of existing openings?

A22: Auditorium 123: 2400mm x 2400mm. (4 units). Lobby 101: 2400mm x 2400mm (3 units).

Q23: I see within the supplementary specifications documents that your design firm has specified a Shaw product for the carpet tile. I am wondering if you or your design firm would be open to alternates?

A23: Provide product information for review.

- END OF ADDENDUM -



SECTION 12493

SHADES

Display hidden notes to specifier by using "Word"/"Preferences"/"View"/"Hidden Text".

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Interior manually-operated roller shades.
- B. Interior motorized roller shades.
- C. Solar shade panels for interior applications.
- D. Solar shade panels for exterior applications.

1.2 RELATED SECTIONS

- A. Section 06100 - Rough Carpentry: Wood blocking and grounds for mounting roller shades and accessories.
- B. Section 08500 - Windows: Coordination with window assemblies for installation of shades.
- C. Section 08600 - Skylights: Coordination with skylight assemblies for installation of shades.
- D. Section 08900 - Curtainwall: Coordination with curtainwall assemblies for installation of shades.
- E. Section 09260 - Gypsum Board Assemblies: Coordination with gypsum board assemblies for installation of shade pockets, closures and related accessories.
- F. Section 09510 - Acoustical Ceilings: Coordination with acoustical ceiling systems for installation of shade pockets, closures and related accessories.
- G. Division 16 - Electrical: Electric service for motor controls.

1.3 REFERENCES

- A. ASTM G 21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.
- B. NFPA 701 - Standard Methods of Fire Tests for Flame-Resistant Textiles and Films.
- C. Electric shade motors and all electronic control equipment shall comply with CSA/UR and ULC/UL Standards.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. [**Product Data**]: Manufacturer's data sheets on each product to be used, including:
 - 1. Manufacturer's product data sheets, specifications, performance data, physical properties and installation instructions for each item required.
 - 2. Product data for shade fabric including size limitations, fire resistance information and toxicity information. Identify available shade fabric colors, densities and weaves.
 - 3. Product data for shade film including size limitations, fire resistance information and toxicity information. Identify available performance characteristic including solar transmittance, reflection, absorbance, visible light transmittance, ultra-violet transmittance, shading coefficient and solar protection performance.
 - 4. Preparation instructions and recommendations.
 - 5. Storage and handling requirements and recommendations.
 - 6. Mounting details and installation methods.
 - 7. Detailed wiring diagrams and schematics of the entire system; each component of the system with a detailed list of components, wiring schematics and operational characteristics for every level of operation.
- C. Shop Drawings: Plans, elevations, sections, product details, installation details, operational clearances, wiring diagrams and relationship to adjacent work.
- D. Window Treatment Schedule: For all roller shades. Use same room designations as indicated on the Drawings and include opening sizes and key to typical mounting details.
- E. Selection Samples:
 - 1. One complete set of 3 inch by 5 inch (75 mm x 130 mm) shade fabric samples indicating full range of colors, densities and weaves available for initial selection.
 - 2. Full range color samples of steel and aluminum components.
- F. Verification Samples: For each finish product specified, one complete set of shade components, unassembled, demonstrating compliance with specified requirements. Shade fabric sample and aluminum finish sample as selected. Mark face of material to indicate interior faces.
- G. Maintenance Data: Methods for cleaning and maintenance of shades and finishes; precautions regarding cleaning materials and methods detrimental to fabrics films, finishes and performance; instructions for operating hardware and controls.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Obtain roller shades through one source from a single manufacturer with a minimum of ten years experience in manufacturing products comparable to those specified in this Section.
- B. Installer Qualifications: Installer trained and certified by the manufacturer with a minimum of five years experience in installing products comparable to those specified in this section.
- C. Fire-Test-Response Characteristics: Passes NFPA 701 small and large-scale vertical burn. Materials tested shall be identical to products proposed for use.

- D. Electrical Components: NFPA Article 100 listed and labeled by either UL or other testing agency acceptable to authorities having jurisdiction, marked for intended use, and tested as a system. Individual testing of components will not be acceptable in lieu of system testing.
- E. Anti-Microbial Characteristics: 'No Growth' per ASTM G 21.
- F. GREENGUARD Indoor Air Quality certification for low emitting interior building materials, furnishings, and finish systems
- G. Mock-Up: Provide a mock-up (manual shades only) of one roller shade assembly for evaluation of mounting, appearance and accessories.
 - 1. Locate mock-up in window designated by Architect.
 - 2. Do not proceed with remaining work until, mock-up is accepted by Architect.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver shades in factory-labeled packages, marked with manufacturer and product name, fire-test-response characteristics, and location of installation using same room designations indicated on Drawings and in the Window Treatment Schedule.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Install roller shades after finish work including painting is complete and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

1.8 WARRANTY

- A. Roller Shades: Warranty period shall be one (1) year from Date of Substantial Completion for roller shade components and five (5) years from Date of Substantial Completion for roller shade fabrics.
- B. Roller Shade Motors: Warranty period shall be manufacturer's standard five (5) year warranty for motors and controls.
- C. Solar Shade Panels: Warranty period shall be one (1) year from Date of Substantial Completion for solar shade panel components and five (5) years from Date of Substantial Completion for solar shade panel fabrics.
- D. Installation: Warranty period shall be one (1) year from Date of Substantial Completion, excluding scaffolding, lifts and similar items, and travel expenses.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Newco Products, which is located at: 1110 – 550 Sherling Place Port Coquitlam, B.C., V3B 0J6. Tel: 604-941-3111. Fax: 604-941-4471. Website: www.newcosolarsolutions.ca
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 ROLLER SHADES

- A. Control System Components:
 - 1. Clutch: Adjustment free clutch operated by one piece drive pulley shall be comprised of multi-banded steel to keep shade in desired position. Plastic components shall be glass reinforced polyester thermopolymer.
 - 2. Spring Assist Assembly: Shall provide even lift and lowering forces of maximum 6 lbs (2.7 kg) on fully assembled shade up to the maximum shade weight of 30 lbs (13.6 kg).
- B. Roller Tube (Axle):
 - 1. Chemically treated steel, coated with stove enamel on inner and outer surfaces. Maximum deflection of 0.28 inches (7 mm). Cut ends shall be treated to prevent corrosion. Tube wall thickness and diameter shall be designed by manufacturer to suit application.
 - 2. Extruded aluminum tube of 6061-T6 alloy designed for maximum deflection of 0.28 inches (7 mm). Tube wall thickness and diameter shall be designed by manufacturer to suit application.
 - a. Left hand installation.
 - b. Right hand installation.
 - c. Reverse roll shade.
 - d. Spring assist assembly, length as indicated on Drawings.
 - 3. End Plug: Heat stabilized wear resistant fiber reinforced plastic outside sleeve rotating freely on a centre shaft, providing the bearing surfaces for rollers.
- C. Bead Chain: Qualified #10-3/16 inch (4.8 mm) diameter stainless steel ball chain with 5/16 inch (8 mm) diameter ball stop and chain connectors. Length to suit application.
- D. Bead Chain: #10-3/16 inch (4.8 mm) diameter plastic beads with 0.25 inch (6 mm) spacing with polyester cord chain with chain connectors as required. Length to suit application. Color as selected from manufacturer full line.
- E. Brackets: Reversible 0.07 inch (1.8 mm) cold rolled steel with lock down retainer device.
- F. Fascia: Extruded 6063-T5 aluminum fascia with 0.07 inch (1.8 mm) cold rolled steel mounting brackets, reversible for right or left hand installation.
 - 1. Size: 3 inch (76 mm) by 0.062 inch (1.57 mm).
 - 2. Size: 4 inch (101 mm) by 0.062 inch (1.57 mm).
 - 3. Finish: Clear anodized.
 - 4. Finish: Electrostatically applied baked enamel coating.
 - a. Color: White.
 - b. Color: Rideau brown.
 - c. Color: Custom color as indicated on Window Treatment Schedule.
- G. Flat Hem Bar: 3/16 inch by 1 inch (4.8 mm x 25 mm) 6061-T6 aluminum flat bar inserted in sonically welded hem pocket and secured with VHB (very high bond) adhesive.
 - 1. Pocket Ends: Pocket ends of shade material shall be left open.
 - 2. Pocket Ends: Pocket ends of shade material shall be sonically welded.
- H. Hem Bar: 0.065 inch by 1 inch (1.6 mm x 25 mm) diameter 6061-T6 aluminum tube inserted in sonically welded hem pocket and secured with VHB (very high bond) adhesive.
- I. External Hem Bar: Curved extruded aluminum bar with color coordinated end caps and hem bar strip with adhesive peel off strip for attachment of shade material.
 - 1. Finish: Clear anodized.

2. Finish: Electrostatically applied baked enamel coating.
 - a. Color: White.
 - b. Color: Black.
 - c. Color: Custom color as indicated on Window Treatment Schedule.
- J. Safety Tension Device: Tension device shall hold the chain taut and close to the mounting surface in a manner that makes the tension device's position fixed and immobile.

2.3 MOTORIZED ROLLER SHADES

- A. Motor Controller: Controller shall align shades at the following positions:
 1. Full up, full down, and standard intermediate stop positions at 25 percent, 50 percent, and 75 percent of window height.
 2. Custom positions as indicated on Drawings.
- B. Switches: Provide local and master switches where indicated on Drawings. Master switches shall control all shades assigned to them and may override local switches.
- C. Motors (Hard Wired): Motor shall be tubular asynchronous and concealed inside extruded aluminum tube. All motors shall be wired per manufacturer's published electrical details which in turn will be wired to local and master switches, if applicable. Motors shall include the following:
 1. Asynchronous, single phase, intermittent duty type permanently lubricated motor, with built in capacitor operating at 120V 60 Hz.
 2. Resettable built-in thermal overload protector in accordance with UL and CSA specifications.
 3. Electromagnetic disc brake.
 4. Progressive or rapid limit switch.
 5. Three stage planetary gear mechanism.
 6. Capable of integration with lighting control and building automation systems.
 7. Acceptable Product: Somfy LT by Newco Products.
- D. Motors (Remote Control): Motors shall include the following:
 1. Built-in radio receiver.
 2. Electronic limit switches capable of being set by remote control transmitter.
 3. Group, individual or programmable control.
 4. Motors shall have user programmable intermediate stop.
 5. Each motor shall be capable of receiving up to 12 signals from different sources.
 6. Motors supplied with pigtail leads. Motors can be wired in parallel.
 - a. Provide a Nema type plug.
 7. Remote control shall be from same manufacturer as the motor.
 8. Acceptable Product: Somfy Altus-RTS by Newco Products.
- E. Hard Wire Switches:
 1. Decorator switch.
 2. Decorator IGC switch.
 3. Intellis 24 hour timer
 4. Digital keypad (coded keypad).
 5. Key switch.
- F. Remote Control Transmitters:
 1. Decorator wall mounted RTS switch (single or four channel).
 2. Telis hand held transmitter (single or four channel).
 3. Chronis RTS timer (wireless digital timer).

- G. Sun and Wind Sensors: Compatible with the motor and control system, and shall be from same manufacturer as the motor. Acceptable Product: Somfy by Newco Products.
- H. Wind Sensors: Compatible with the motor and control system, and shall be from same manufacturer as the motor. Acceptable Product: Somfy by Newco Products.
- I. Timers: Compatible with the motor and control system, and shall be from same manufacturer as the motor. Acceptable Product: Somfy by Newco Products.
- J. Timers and Sun Sensors: Compatible with the motor and control system, and shall be from same manufacturer as the motor. Acceptable Product: Somfy by Newco Products.
- K. Home Automation Interface: Compatible with the motor and control system, and shall be from same manufacturer as the motor. Acceptable Product: Somfy by Newco Products.
- L. Motorized System Components:
 - 1. Extruded aluminum tube of 6061-T6 alloy designed for maximum deflection of 0.28 inches (7 mm). Tube wall thickness and diameter shall be designed by manufacturer to suit application.
 - 2. Motor Brackets: Zinc plated steel brackets for maximum motor torque of 50 Nm.
 - 3. Idler Bracket: Zinc plated steel brackets with nylon bearings compatible with motor bracket.
 - 4. Intermediate Brackets: Zinc plated steel intermediate for multiple shade installations.
 - 5. Universal End Caps: Black composite end caps adaptable to roller tube profiles.
 - 6. Flexible Intermediate Bracket: Bracket mounted flexible shaft with universal joint for multiple shade installations for bay or curved glazing up to 44 degree angle. Maximum gap between fabric panels shall be 3½ inches (89 mm).
- M. Fascia: Extruded 6063-T5 aluminum fascia with 0.07 inch (1.8 mm) cold rolled steel mounting brackets, reversible for right or left hand installation.
 - 1. Size: 4 inch (101 mm) by 0.062 inch (1.57 mm).
 - 2. Finish: Clear anodized.
 - 3. Finish: Electrostatically applied baked enamel coating.
 - a. Color: White.
 - b. Color: Rideau brown.
 - c. Color: Custom color as indicated on Window Treatment Schedule.
- N. Flat Hem Bar: 3/16 inch by 1 inch (4.8 mm x 25 mm) 6061-T6 aluminum flat bar inserted in sonically welded hem pocket and secured with VHB (very high bond) adhesive.
 - 1. Pocket Ends: Pocket ends of shade material shall be left open.
 - 2. Pocket Ends: Pocket ends of shade material shall be sonically welded.
- O. Hem Bar: 0.065 inch by 1 inch (1.6 mm x 25 mm) diameter 6061-T6 aluminum tube inserted in sonically welded hem pocket and secured with VHB (very high bond) adhesive.
- P. External Hem Bar: Curved extruded aluminum bar with color coordinated end caps and hem bar strip with adhesive peel off strip for attachment of shade material.
 - 1. Finish: Clear anodized.
 - 2. Finish: Electrostatically applied baked enamel coating.

- a. Color: White.
- b. Color: Black.
- c. Color: Custom color as indicated on Window Treatment Schedule.

2.4 SOLAR SHADE PANELS

- A. Frame Components: Solar shade panels shall be anchored under tension in extruded aluminum frames. The extruded aluminum frames shall be designed to receive continuous polyethylene spline in each side frame, all properly assembled to insure screen tautness. Proper tension and spacer bars shall be provided on the solar panels in its frame so as not to be bent, crimped or mutilated in any manner.
 - 1. Screen Frame: 6063-T5 extruded aluminum, 7/16 inch by 1 inch by 0.050 inch frame with 0.220 inch spline groove to accept screen wire and shading fabric. Frame corners are joined with ABS Corner Keys with colors to match frame.
 - a. Fabrication: Rake head (angled).
 - b. Fabrication: Curved.
 - 2. Mounting Bars: Extruded aluminum top and bottom “h” mounting bars sized to suit aluminum solar panel frame.
 - 3. Spacer Bars: For oversized shade panels provide screen frame extrusions as intermediate mullions.
 - 4. Finish: Clear anodized.
 - 5. Finish: Electrostatically applied baked enamel coating.
 - a. Color: White.
 - b. Color: Dark bronze.
 - c. Color: Black
 - d. Color: Custom color as indicated on Window Treatment Schedule.
- B. Chimney Mounting System (CMS): For between jamb installations “h” mounting bars shall be installed on jamb sides as an additional reinforcement and minimize light penetration at the jambs.
- C. Accessories: Provide the following for attachment and mounting of solar shade panels:
 - 1. ABS swivel corner key for fabrication of geometric panel shapes.
 - 2. Stainless steel fasteners.

2.5 ROLLER SHADE MATERIAL

- A. Fire Tests: Shade fabric shall conform to NFPA 701: Standard Methods of Fire Tests for Flame Propagation of Textiles and Films, and NFPA 10 (Class A).
- B. Edges: Shade fabric edges shall be ultrasonically welded to prevent unravelling or fraying of the material.
- C. Acceptable Product: Phifer SheerWeave 1000 by Newco Products.
 - 1. Material: Ribbed weave vinyl coated fiberglass.
 - 2. Openness Factor: 25 percent.
- D. Acceptable Product: Phifer SheerWeave 2360 by Newco Products.
 - 1. Material: Vinyl coated fiberglass, basket weave design.
 - 2. Openness Factor: 10 percent.
- E. Acceptable Product: Phifer SheerWeave 2390 by Newco Products.
 - 1. Material: Vinyl coated fiberglass, basket weave design.
 - 2. Openness Factor: 5 percent.
- F. Acceptable Product: Phifer SheerWeave 2410 by Newco Products.

1. Material: Vinyl coated fiberglass, basket weave design.
 2. Openness Factor: 3 percent.
- G. Acceptable Product: Phifer SheerWeave 2500 by Newco Products.
1. Material: Vinyl coated fiberglass, basket weave design.
 2. Openness Factor: 1 percent.
- H. Acceptable Product: Phifer SheerWeave 3000 by Newco Products.
1. Material: Combination vinyl coated fiberglass and polyester.
 2. Openness Factor: 14 percent.
- I. Acceptable Product: Phifer SheerWeave 4000 by Newco Products.
1. Material: Vinyl-coated polyester.
 2. Openness Factor: 5 percent.
- J. Acceptable Product: Phifer SheerWeave 4100 by Newco Products.
1. Material: Vinyl-coated polyester.
 2. Openness Factor: 10 percent.
- K. Acceptable Product: Phifer SheerWeave 4400 by Newco Products.
1. Material: Vinyl-coated polyester.
 2. Openness Factor: 3 percent.
- L. Acceptable Product: Phifer SheerWeave 4800 by Newco Products.
1. Material: Vinyl-coated polyester.
 2. Openness Factor: 1 percent.
- M. Acceptable Product: Phifer SheerWeave 7000 by Newco Products.
1. Material: 100% Polyester with Acrylic Foamed Backing (PVC Free)
 2. Openness: Opaque
 3. Weight: 10 oz. per sq. yd (340 grams per sq. meter).
 4. Thickness: 0.018 inch (0.45 mm.)
- N. Acceptable Product: Phifer SheerWeave 7100 by Newco Products.
1. Material: PVC coated fiberglass laminated with a 2 ply 100% PVC blackout film.
 2. Openness: Opaque.
 3. Weight: 19.8 oz. per sq. yd (671 grams per sq. meter).
 4. Thickness: 0.023 inch (0.58 mm.)
- O. Acceptable Product: NRS- 80 Amber.
1. Gauge: 300.
 2. Solar Transmittance: 70 percent.
 3. Solar Reflectance: 12 percent.
 4. Solar Absorption: 18 percent.
 5. Visible Light Transmittance: 58 percent.
 6. Winter U-Value: 1.20.
 7. Ultraviolet Transmittance: Less than 1.00.
 8. Shading Coefficient: 0.86.
 9. Total Energy Rejected: 24 percent.
- P. Acceptable Product: RS-10 B/B Bronze/Silver/Bronze.
1. Gauge: 400.
 2. Solar Transmittance: 27 percent.
 3. Solar Reflectance: 19 percent.
 4. Solar Absorption: 54 percent.

5. Visible Light Transmittance: 15 percent.
 6. Winter U-Value 1.14.
 7. Ultraviolet Transmittance: Less than 1.00.
 8. Shading Coefficient: 0.48.
 9. Total Energy Rejected: 58 percent.
- Q. Acceptable Product: RS-10 G/G Grey/Silver/Grey.
1. Gauge: 400.
 2. Solar Transmittance: 23 percent.
 3. Solar Reflectance: 19 percent.
 4. Solar Absorption: 58 percent.
 5. Visible Light Transmittance: 9 percent.
 6. Winter U-Value: 1.14.
 7. Ultraviolet Transmittance: Less than 1.00.
 8. Shading Coefficient: 0.45.
 9. Total Energy Rejected: 60 percent.
- R. Acceptable Product: RS-10 G Grey/Silver.
1. Gauge: 300.
 2. Solar Transmittance: 10 percent.
 3. Solar Reflectance: 63 percent.
 4. Solar Absorption: 27 percent.
 5. Visible Light Transmittance: 7 percent.
 6. Winter U-Value: 1.10.
 7. Ultraviolet Transmittance: Less than 1.00.
 8. Shading Coefficient: 0.19.
 9. Total Energy Rejected: 83 percent.
- S. Acceptable Product: RSN-1050 Light Neutral Grey.
1. Gauge: 300.
 2. Solar Transmittance: 54 percent.
 3. Solar Reflectance: 12 percent.
 4. Solar Absorption: 34 percent.
 5. Visible Light Transmittance: 53 percent.
 6. Winter U-Value: 1.21.
 7. Ultraviolet Transmittance: Less than 1.00.
 8. Shading Coefficient: 0.73.
 9. Total Energy Rejected: 36 percent.
- T. Acceptable Product: Eclipse Light Reducing Shades by Newco Products.
1. Material: 4 ply, 100 percent opacity heavy duty fiberglass reinforced vinyl room darkening shade material.
- U. Color: As selected by Architect from manufacturer's standard colors.
- V. Color: Custom color.

2.6 SHADE PANEL FABRIC

- A. Fire Tests: Shade fabric shall conform to NFPA 701: Standard Methods of Fire Tests for Flame Propagation of Textiles and Films, and NFPA 10 (Class A).
- B. Acceptable Product: Phifer SheerWeave 3000 by Newco Products.
1. Material: Combination vinyl coated fiberglass and polyester.
 2. Openness Factor: 14 percent.
- C. Acceptable Product: Phifer SheerWeave 4000 by Newco Products.

1. Material: Vinyl-coated polyester.
 2. Openness Factor: 5 percent.
- D. Acceptable Product: Phifer SheerWeave 4100 by Newco Products.
1. Material: Vinyl-coated polyester.
 2. Openness Factor: 10 percent.
- E. Acceptable Product: Phifer SheerWeave 4400 by Newco Products.
1. Material: Vinyl-coated polyester.
 2. Openness Factor: 3 percent.
- F. Acceptable Product: Phifer Suntex 80 by Newco Products.
1. Material: Mildew and fade resistant vinyl coated polyester.
 2. Weight: 13.5 oz. per sq. yd (458 grams per sq. meter).
 3. Openness Factor: 25 percent.
 4. UV Blockage: 75 percent.
- G. Acceptable Product: Phifer Suntex 90 by Newco Products.
1. Material: Mildew and fade resistant vinyl coated polyester.
 2. Weight: 17.2 per sq. yd (583 grams per sq. meter).
 3. Openness Factor: 10 percent.
 4. UV Blockage: 90 percent.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Verify power panels and circuits are sufficient to accommodate roller shade manufacturer's requirements.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install roller shades level, plumb, square, and true according to manufacturer's written instructions. Allow proper clearances for window operation hardware.

3.4 MOUNTING

- A. Ensure suitable blocking and backing has been provided by others.
- B. Pocket installations shall have a minimum 4 inch (100 mm) inside dimension.
- C. For enclosed installations, bottom closure panel shall be minimum 1½ inch (30 mm) clear for shade to exit.

3.5 ADJUSTING

- A. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

3.6 CLEANING

- A. Clean roller shade surfaces after installation, according to manufacturer's written instructions.

3.7 PROTECTION

- A. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and installer that ensure that roller shades are without damage or deterioration at time of Substantial Completion.
- B. Touch-up, repair or replace damaged products in a manner approved by Architect, before Substantial Completion.

END OF SECTION

Phenolic provides superior strength, durability and a broad variety of patterns and colors.



Black Core Phenolic partitions sheets are fused at high temperature and pressure. In addition to strength and serviceability, a wide range of colors provides limitless design flexibility. For standard features see pages 18-19.

Options: Continuous Piano Hinges, Continuous Anodized Aluminum and Stainless Steel Brackets, Custom Colors, No-Sight Privacy Strips and Class "A" Fire Rated Material—Black Core Only.



BLACK CORE COLOR SELECTION:



COLOR-THRU SELECTION:



ASI GLOBAL STYLES



Floor Anchored/Overhead Braced

This economical and sturdy mounting style installs just about anywhere. An anodized aluminum anti-grip head rail secures partitions firmly to the walls.



Floor Anchored

Simplified construction permits ease of installation anywhere. For concrete floors only: 2" minimum penetration into floor required.



Ceiling Hung

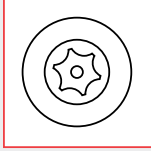
When used together with wall-hung fixtures, the entire floor is accessible for efficient cleaning. Structural steel ceiling supports are necessary to assure proper installation.



Floor to Ceiling Anchored

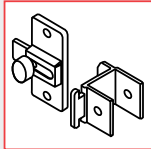
This mounting style is extremely stable and durable as pilasters are anchored into both the concrete floor and the structural ceiling support.

Solid Plastic (HDPE)



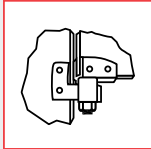
VANDAL-RESISTANT FASTENERS

Special driver installs fasteners which virtually eliminates unauthorized removal and ensures easy installation.



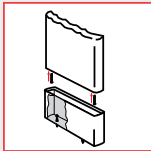
EMERGENCY ACCESS

Meets ADA requirements. Slotted keeper coupled with gravity hinges allows access in an emergency.



VAULT HINGE

Rugged, attractive wrap-around hinge. Extra strong for heavy-duty installations.



EASY-STALL SHOE

For floor anchored overhead braced.

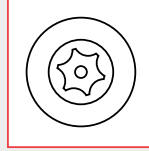
Easily adjusted leveling bolt.

True concrete anchor screws designed for lasting holding power.

Anchor rated at 2770 lbs. pullout strength.

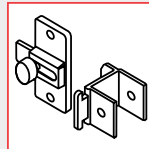
For use with Type 304 stainless steel or plastic mounting shoe.

Phenolic



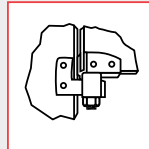
VANDAL-RESISTANT FASTENERS

Special driver installs fasteners which virtually eliminates unauthorized removal and ensures easy installation.



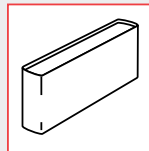
EMERGENCY ACCESS

Meets ADA requirements. Slotted keeper coupled with gravity hinges allows access in an emergency.



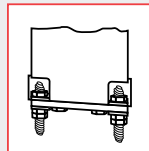
VAULT HINGE

Rugged, attractive wrap-around hinge. Extra strong for heavy-duty installations.



SHOE CONSTRUCTION

One-piece stainless steel, type 304, with #4 satin finish trim shoes are hemmed top and bottom for rigidity and sleek appearance.



FLOOR STUD MOUNTING SYSTEM

Heavy-duty $\frac{5}{16}$ " diameter mounting studs adjust height and level pilasters by turning the locknut adjusters.

For use with stainless steel shoe.

PART-1 GENERAL

1.01 DESCRIPTION

- A. Phenolic compartment work includes the following:
 - 1. Floor anchored/overhead braced partitions.
- B. Furnish all labor and materials necessary for the completion of work in this section as shown on the contract drawings and specified herein.
- C. Work in this section shall include but is not limited to:
 - 1. Toilet compartments
 - 2. Hardware for toilet compartments
 - 3. Shop drawings and working drawings
 - 4. Manufacturer's guarantee
- D. Related work specified elsewhere shall include accessories and anchorage/blocking for attachment of compartments.

1.02 PRODUCTS

- A. Submittal of shop drawings and details, for architect's approval.
- B. Colors shall be selected from the manufacturer's standard range of colors.
- C. Color and hardware samples shall be submitted for approval to the architect upon request.

PART-2 PRODUCTS

2.01 MANUFACTURER

- A. Toilet compartments to be supplied by Global Partitions Corp., Eastanollee, Georgia, 30538.

2.02 MATERIALS

- A. Doors shall be constructed of $\frac{3}{4}$ " solid phenolic core decorative plastic laminate with multiple resin-impregnated kraft and surface sheets fused at high temperature and pressure.
- B. Panels shall be constructed of $\frac{1}{2}$ " solid phenolic core decorative plastic laminate with multiple resin-impregnated kraft and surface sheets fused at high temperature and pressure.
- C. Pilasters shall be constructed of $\frac{3}{4}$ " solid phenolic core decorative plastic laminate with multiple resin-impregnated kraft and surface sheets fused at high temperature and pressure.

2.03 CONSTRUCTION

- A. Doors shall be constructed of $\frac{3}{4}$ " solid phenolic core decorative plastic laminate with multiple resin-impregnated kraft and surface sheets fused at high temperature and pressure; the edges being finished and polished.
- B. Panels shall be constructed of $\frac{1}{2}$ " solid phenolic core decorative plastic laminate with multiple resin-impregnated kraft and surface sheets fused at high temperature and pressure; the edges being finished and polished.
- C. Pilasters shall be constructed of $\frac{3}{4}$ " solid phenolic core decorative plastic laminate with multiple resin-impregnated kraft and surface sheets fused at high temperature and pressure; the edges being finished and polished. Pilasters shall include a mounting system comprising a $\frac{1}{4}$ " x $\frac{3}{4}$ " stainless steel bar attached to the pilaster having $\frac{3}{8}$ " zinc plated steel bolts secured to nuts imbedded within a contoured aperture transversely piercing the core at least 1" above the mounting end. Each mounting bar shall be secured to the building structure with $\frac{3}{8}$ " zinc plated steel studs.
- D. Headrail shall be provided to bridge all compartments and brace the end freestanding pilasters to the wall; the headrail to comprise anodized aluminum with satin finish, contoured to provide anti-grip features.

2.04 HARDWARE (NOTE: Refer to the ORDER INFORMATION CONTRACT for specific hardware to be supplied on your order.)

- A. All exposed door hardware shall be as noted:
 - 1. Heavy-duty diecast (vault) zamac hinge shall have gravity-acting cams and are fabricated from a die cast aluminum alloy with a brushed finish and wrap around flanges. The cam is constructed from a $\frac{3}{4}$ " diameter nylon rod and a $\frac{3}{8}$ " stainless steel pin. Slide latch, strike/keeper and hinges are through-bolted onto doors and pilasters using stainless steel vandal-resistant through bolts. Hinges are easily adjusted at the jobsite to a full close or partially open position, as required. Keeper provides for emergency access into the stall by lifting up on the bottom of the door.
 - 2. Optional: Continuous stainless steel hinge. Slide latch, strike/keeper and hinges are through bolted onto doors and pilasters using stainless steel, vandal-resistant through bolts.
- B. Panel and pilaster brackets shall be as noted:
 - 1. Stainless steel stirrup brackets shall be 2" long. Stirrup brackets shall be $\frac{1}{8}$ " thick and mounted with stainless steel, vandal-resistant screws. Panels shall be attached with stainless steel, vandal-resistant through bolts. The attachment of brackets to the adjacent wall construction shall be accomplished with 2 $\frac{1}{2}$ " stainless steel vandal-resistant screws and plastic anchors.
 - 2. Optional: Continuous heavy duty anodized extruded aluminum (6063-T5 alloy) wall brackets are pre-drilled. Wall brackets are mounted with stainless steel, vandal-resistant screws. The attachment of brackets to the adjacent wall construction shall be accomplished with 2 $\frac{1}{2}$ " stainless steel vandal resistant screws and plastic anchors.
 - 3. Optional: Continuous heavy duty stainless steel wall brackets are pre-drilled. Wall brackets are mounted with stainless steel, vandal-resistant screws. The attachment of brackets to the adjacent wall construction shall be accomplished with 2 $\frac{1}{2}$ " stainless steel vandal resistant screws and plastic anchors.
- C. Pilaster shoes shall be of type 304 steel #4 finish.
- D. Headrail shall be made of heavy-duty anodized extruded aluminum (6063-T5 alloy). Headrail is anti-grip and attaches to the top of the pilaster with stainless steel, tamper-resistant screws. Headrail is attached to the adjacent wall construction with a headrail bracket.
- E. Headrail brackets shall be made from a die cast aluminum alloy and shall be attached to the adjacent wall construction with 2 $\frac{1}{2}$ " stainless steel, tamper-resistant screws and plastic anchors.

PART-3 EXECUTION

3.01 PREPARATION

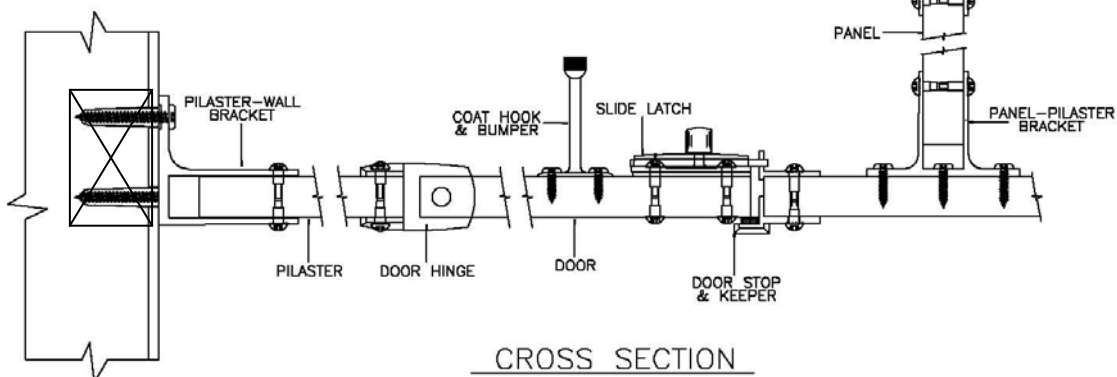
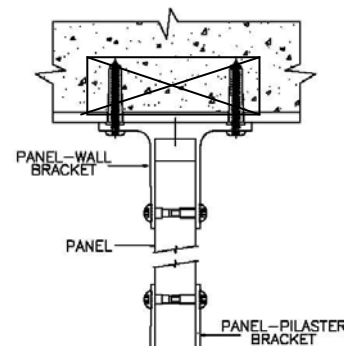
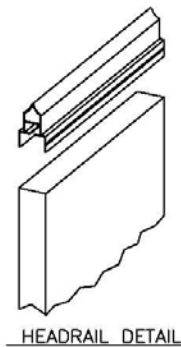
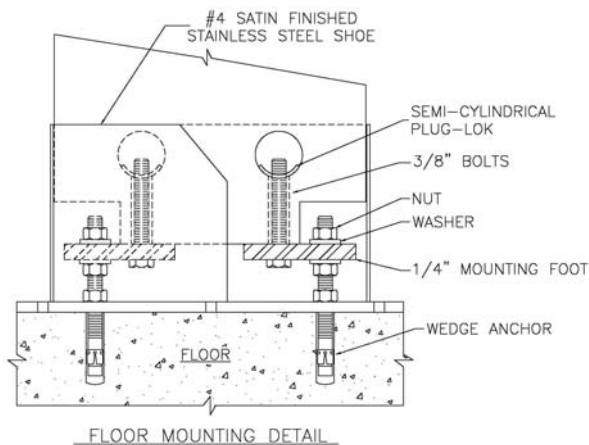
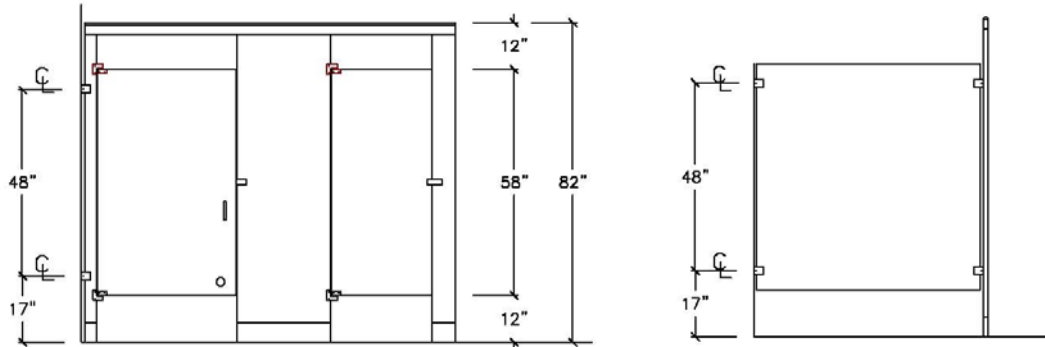
- A. Examine areas to receive toilet compartments for correct height and spacing of anchorage/blocking and plumbing fixtures that may affect installation of compartments. Report any discrepancies to the architect.
- B. Take complete and accurate measurements of toilet compartment locations.
- C. Start of work constitutes acceptance of job.

3.02 INSTALLATION

- A. Install compartments in a rigid, straight, plumb and level manner as shown on the shop drawings and manufacturer's installation instructions.
- B. All doors and panels to be mounted at 12" above the finished floor.
- C. Clearance at vertical edges of door shall be uniform top to bottom.
- D. No evidence of cutting, drilling and/or patching shall be visible on the finished work.
- E. Finished surfaces shall be cleaned after installation and be left free of all imperfections.

3.03 WARRANTY

- A. Global Steel Products Corp. guarantees its black core phenolic units, properly maintained, against delamination, breakage or corrosion for 10 years from the date of receipt by the customer. If materials are found defective during that period for the reasons listed above, the material will be replaced free of charge. No credits or allowances will be issued for any labor or expenses relating to the replacement of components covered under the warranty plan. All such expenses are to be borne by the buyer.



Consultants

PRIME CONSULTANT

Patkau Architects
L110 - 560 Beatty Street
Vancouver, B. C.
V6B 2L3

phone 683-7633
fax 683-7634

STRUCTURAL CONSULTANT

C. Y. Loh Associates Ltd.
1863 Powell Street
Vancouver, B. C.
V5L 1H8

phone 254-0868
fax 254-5166

MECHANICAL CONSULTANT

D. W. Thomson Consultants Ltd.
1690 West Broadway
Vancouver, B. C.
V6J 1X9

phone 731-4921
fax 738-4420

ELECTRICAL CONSULTANT

R. A. Duff and Associates Inc.
201 - 5511 West Boulevard
Vancouver, B. C.
V6M 3W6

phone 263-2556
fax 263-9141

List of Drawings

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Elevations
- A6

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- A8

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- A9

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- S4

Building Sections — Sheet 2
- S5

Concrete Sections
- S6

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- M2

Sections & Details
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Site Plan — Plumbing
- P2

Floor Plan — Plumbing

ELECTRICAL

- E1

Site Plan, Legend, Details
- E2

Floor Plan — Lighting, Power & Low Tension
- E3

Details & Schedules



CONSULTANTS

PATKAU ARCHITECTS
Prime Consultant

C.Y. LOH ASSOCIATES LTD.
Structural Engineer

D.W. THOMSON CONSULTANTS LTD.
Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

NEWTON SENIORS RECREATION FACILITY
Surrey, British Columbia

FILE NO. RevFac

DRAWING TITLE

LIST of DRAWINGS

SCALE

DRAWN BY

CHECKED BY

DATE June 26, 1991 DWG NO. A0

70 Avenue
THIS SECTION OF 70 AVE TO BE
CONSTRUCTED IN LATE 1991

137 A Street
(FUTURE PEDESTRIAN MALL)

Legal Description
LOT 57, N.W. 1/4
SECTION 16, TOWNSHIP 2
PLAN S4423
NEW WESTMINSTER DISTRICT
MUNICIPAL ADDRESS:

NOTES

1. PRE-CASTING CONC. BRANCH - 3 REQ'D SEE 2/507
2. 8'-0" x 8'-0" CONC. CHECKER/CHASSIS BOX FLUSH w/ PAVING
CENTERED BETWEEN (1) & (10) - SEE SDO
3. SITE SIGN - INCLUDE IN EACH ALLOWANCE - PROVIDE
W/6 ELEC. TO SIGN
4. EXTERIOR CARPENTRY GARAGE - NO ROOF OVER PROVIDE
TYP. GLASS BETWEEN (1) & (10) - SLOPE W/6 ON TO (2)
5. GAS METER ENCLOSURE - NO ROOF OVER. PROVIDE TYP. GLASS
ON GLOT REVEAL FOR GAS METER - COVERED W/ B.C. GAS
SLOPE GLASS TO GLOT
6. CONC. PAVING (4" x 12" WIDE CONC. DIVIDER STRIPS & GUIDES)
TO BACK OF MULTI-PURPOSE WINDING
7. PLUMBING STACKS & EXHAUST ELEMENTS TO BE GROUPED AS SHOWN
8. TOP OF SECONDARY ROOF STRUCTURE - TOP OF GUTTER
AT RIDGE = 116'-1'-0"
9. ROOF DRAIN (4 REQ'D) - 1 PER ROOF OF STORAGE SHED - SEE SDO
10. SCUPPER THROUGH CONC. END WALL - SEE DES - ON 12"x14" MC
SCUPPER @ GRADE
11. SCUPPER - ON 24" x 24" x 4" MC SCUPPER @ GRADE
12. PROVIDE 28" x 28" CLEAR OPENING THROUGH CEILING & ROOF
STRUCTURES ON CONT. NONCOMBUSTIBLE HOUR R.P.R. SHEET
IN ATTIC SPACE TO 18" ABOVE ROOF GUTTERING - CORRECT SIZE
& TYPE OF CURB w/ KITCHEN EXHAUST FAN
13. PROVIDE CONT. 24 HOUR F.M.R. ENCLOSURE CONTIGUOUS w/
JANITOR'S ROOM HS. AROUND DOMESTIC HOT WATER FLUE &
AIR SUPPLY IN ATTIC SPACE - PROVIDE CLEARANCE AS PER
CODE & MANUFACTURER'S RECOMMENDATIONS

REVISIONS

1. ROOF ACCESS HATCH - LOCATE IN PROXIMITY TO CUG. ACCESS HATCH
2. CAP. OF ROOF FOR GUTTER LINE - TYP. IN FUTURE SITE
DRAINAGE - SEE PLUMBING DRAWINGS
3. CONC. FENCE (INDICATED BY HATCHING) & ALL RELATED EXCAVATION
& EROSION WORK TO BE INCLUDED AS PART OF A SEPARATE PRICE -
THIS SEPARATE PRICE SHOULD INCLUDE ALL COSTS ASSOCIATED w/
THE CONSTRUCTION OF THIS ELEMENT - THE CONC. FENCE SHALL REST
ON UNDISTURBED NATIVE GROUND AS IDENTIFIED IN THE SOILS
REPORT - THE CONTRACTOR SHALL OBTAIN PERMITS FOR EXCAVATION FILL TO
4.55 FEET BELOW EXIST'G GRADE IN HIS PRICE (EXTRA EXCAVATION
FILL & CONC. WORK BEYOND THIS SCOPE WILL BE TREATED AS PER
THE REQUIREMENTS OF THE PROJECT'S 'REMARKS' & 'CONCRETE WORK')

SEALS



CONSULTANTS

PATKAU ARCHITECTS
Prime Consultant

C.Y. LOH ASSOCIATES LTD.
Structural Engineer

D.W. THOMSON CONSULTANTS LTD.
Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

NEWTON
SENIORS
RECREATION FACILITY
Surrey, British Columbia

FILE NO

Rev

DRAWING TITLE

SITE PLAN
ROOF PLAN

SCALE 1/16" = 1'-0"
DRAWN BY FS
CHECKED BY JH
DATE June 26, 1991 DWG NO

A1

Legend : Roof Plan

- ROOF DRAIN
- ROOF DRAIN/VAL - SEE DES, DES
- ROOF SLOPE DIRECTION
- SECONDARY ROOF STRUCTURE
TO CREATE SLOPE

Legend : Site Plan

- NEW TREE - N.I.C.
 - CONTIN. OF EXIST'G GRADE (AFTER TYPICAL REMOVAL - N.I.C.)
 - NEW FINISH SURFACE ELEVATION
 - EXIST'G SPOT ELEVATION
 - CONC. PAVING
- NOTE: SOFT LANDSCAPING N.I.C. - CONTRACTOR TO
PROVIDE ROUGH GRADING TO 6" BELOW
DESIGNER FINISH ELEVATIONS (CONTRACTOR TO
PROVIDE ROUGH GRADING, FINISH GRADING,
SUPPLY & INSTALLATION OF ALL HARD LANDSCAPING
ELEMENTS)

Parking N.I.C.

AS PRESCRIBED BY
PERMITS & LICENSES

SENIORS FACILITY
LIBRARY

OFF STREET LAND

NOTE: SEE NEWTON BRANCH LIBRARY
DRAWINGS FOR COMPLETE PARKING LAYOUT

Floor Space Ratio

SENIORS FACILITY 12,000 S.F.
LIBRARY 15,000 S.F.

SITE AREA 27,000 S.F.
27,000 S.F.

F.S.R. = 0.099

NOTES:

1. ALIGN BUILDING (GRID X) PARALLEL WITH PROPERTY LINE
AT 138 STREET (354' AT 1" SCALE) (WHICH IS ALSO ALIGNMENT
OF PARKING LOT)

2. BENCHMARK - FROM DISTRICT OF SURREY -
ORIENTED BENCHMARK SQUARE - LOCATED IN THE
INTERSECTION OF 72ND AVE. & 138 ST. - ELEV 220'-10" (66.91m)

138 ST

Construction Notes

Wall Types

W1 STUCCO
STUCCO LATH
PLYWD. SHEATHING
WOOD FRAMING
BATT INSULATION
AIR / VAPOUR BARRIER
GYPSUM BOARD
1/2"
2x8 AT 16" O.C.
R 20
6 mil. POLY.
5/8" TYPE 'X'
3/4 Hr. F.R. RATING

W2 STUCCO
STUCCO LATH
PLYWD. SHEATHING
WOOD FRAMING
BATT INSULATION
WOOD FRAMING
BATT INSULATION
AIR / VAPOUR BARRIER
GYPSUM BOARD
1/2"
2x8 AT 16" O.C. ON EDGE HORIZ.
R 20
2x8 AT 16" O.C.
R 20
6 mil. POLY.
5/8" TYPE 'X'
3/4 Hr. F.R. RATING

W3 ALUMINUM CLADDING
PLYWD. BACKING
BUILDING PAPER
PLYWD. SHEATHING
WOOD FRAMING
BATT INSULATION
AIR / VAPOUR BARRIER
GYPSUM BOARD
AL2
1/2"
1/2"
2x8 AT 16" O.C.
R 20
6 mil. POLY.
5/8" TYPE 'X'
3/4 Hr. F.R. RATING

W4 ALUMINUM CLADDING
PLYWD. BACKING
BUILDING PAPER
PLYWD. SHEATHING
WOOD FRAMING
BATT INSULATION
AIR / VAPOUR BARRIER
GYPSUM BOARD
AL2
1/2"
1/2"
2x8 AT 16" O.C.
R 20
6 mil. POLY.
5/8" TYPE 'X'
3/4 Hr. F.R. RATING

W5 WOOD FINISH
BUILDING PAPER
PLYWD. SHEATHING
WOOD FRAMING
BATT INSULATION
AIR / VAPOUR BARRIER
GYPSUM BOARD
1/2" G.I.G. FIR PLYWD.
1/2"
2x8 AT 16" O.C.
R 20
6 mil. POLY.
5/8" TYPE 'X'
3/4 Hr. F.R. RATING

W6 CAST IN PLACE CONCRETE
WOOD FRAMING
BATT INSULATION
AIR / VAPOUR BARRIER
GYPSUM BOARD
12" SEE STRUCTURAL
2x4 AT 16" O.C. (PRESSURE TREATED)
R 12
6 mil. POLY.
5/8" TYPE 'X'

W7 CAST IN PLACE CONCRETE
REDUCE TO 10" IN AREAS
INDICATED ON A5

W8 ALUMINUM CLADDING
RIGID INSULATION
DAMP-PROOFING
CONCRETE FND. WALL
CLADDING AS PER A12
ADHERE TO RIGID INSULATION
EXTEND DOWN TO 4" BELOW
FINISH GRADE (TYP.)
R 5 1" TYPE 2
FROM EL. 100'-0" TO EL. 101'-0"
FROM EL. 100'-0" TO EL. 101'-0"
SEE STRUCTURAL

W9 STUCCO
STUCCO LATH
PLY. SHEATHING
WOOD FRAMING
BATT INSUL.
PLY SHEATHING
ROOF MEMBRANE
1/2"
2x8 AT 16" O.C.
R 20
1/2"

Roof Types

R1 ROOF MEMBRANE
PLYWD. SHEATHING
RIGID INSULATION
AIR / VAPOUR BARRIER
PLYWD. SHEATHING
WOOD ROOF JOISTS
AS SPECIFIED
1/2"
R 20 4" TYPE 2
Elastophane Flam'
1/2"
SEE STRUCTURAL

R2 ROOF MEMBRANE
PLYWD. SHEATHING
RIGID INSULATION
AIR / VAPOUR BARRIER
PLYWD. SHEATHING
WOOD ROOF JOISTS
GYPSUM BOARD
AS SPECIFIED
1/2"
R 20 4" TYPE 2
Elastophane Flam'
1/2"
SEE STRUCTURAL
5/8" TYPE 'X'
3/4 Hr. F.R. RATING

R3 ROOF MEMBRANE
PLYWD. SHEATHING
AIR SPACE
PLYWD. SHEATHING
WOOD DECK
AS SPECIFIED
1/2" - SHIMS AS REQ'D TO MAKE SLOPE
1/2"
2 1/2" x 5 1/4" (FACE) T+6
3/4 Hr. F.R. RATING

R4 ROOF MEMBRANE
PLYWD. SHEATHING
RIGID INSULATION
AIR / VAPOUR BARRIER
PLYWD. SHEATHING
WOOD FRAMING
AIR SPACE
PLYWD. SHEATHING
WOOD DECK
AS SPECIFIED
1/2"
R 15 1 1/2" TYPE 2
Elastophane Flam'
1/2"
2x8 AT 16" O.C.
- SHIMS AS REQ'D TO MAKE SLOPE
1/2"
2 1/2" x 5 1/4" (FACE) T+6
3/4 Hr. F.R. RATING

R5 ROOF MEMBRANE
PLYWD. SHEATHING
RIGID INSULATION
AIR / VAPOUR BARRIER
PLYWD. SHEATHING
WOOD DECK
- APPLY SEALANT BETWEEN ALL WOOD DECK JOINTS ABOVE
ALL FRAMES - SEE D29
AS SPECIFIED
1/2"
R 20 3/4" TYPE 2
Elastophane Flam'
1/2"
2 1/2" x 5 1/4" (FACE) T+6
3/4 Hr. F.R. RATING

R6 ROOF MEMBRANE
PLYWD. SHEATHING
RIGID INSULATION
PLYWD. SHEATHING
WOOD DECK
- APPLY SEALANT BETWEEN ALL WOOD DECK JOINTS ABOVE
ALL FRAMES - SEE D32
AS SPECIFIED
1/2"
R 10 2" TYPE 2
1/2"
2 1/2" x 5 1/4" (FACE) T+6

R7 ROOF MEMBRANE
PLYWD. SHEATHING
RIGID INSULATION
PLYWD. SHEATHING
WOOD FRAMING
PLYWD. SHEATHING
BUILDING PAPER
STUCCO ON WIRE LATH
AS SPECIFIED
1/2"
R 20 4" TYPE 2
1/2"
SEE STRUCTURAL
1/2"

R8 ROOF MEMBRANE
PLYWD. SHEATHING
RIGID INSULATION
PLYWD. SHEATHING
WOOD DECK
PLYWD. SHEATHING
WOOD FRAMING
PLYWD. SHEATHING
BUILDING PAPER
STUCCO ON WIRE LATH
AS SPECIFIED
1/2"
R 10 2" TYPE 2
1/2"
2 1/2" x 5 1/4" (FACE) T+6
SEE STRUCTURAL
1/2"
SMOOTH FINISH

R9 ROOF MEMBRANE
PLYWD. SHEATHING
AIR SPACE
WOOD FRAMING
PLYWD. SHEATHING
WOOD DECK
AS SPECIFIED
1/2"
- SHIMS AS REQ'D TO MAKE SLOPE
SEE STRUCTURAL
1/2"
2 1/2" x 5 1/4" (FACE) T+6

Floor Types

F1 FLOOR FINISH
CONCRETE SLAB
VAPOUR BARRIER
COMPACTED GRAVEL
AS PER FINISH SCHEDULE
SEE STRUCTURAL
6 mil. POLY.

F2 WOOD FLOOR
WOOD SLEEPERS
RESILIENT PADS
VAPOUR BARRIER
CONCRETE SLAB
VAPOUR BARRIER
COMPACTED GRAVEL
3/4" HFD. WOOD
2x4 AT 16" O.C. PER'D BY SYSTEM
3/8"
6 mil. POLY.
SEE STRUCTURAL
6 mil. POLY.

F3 WOOD FLOOR
PLYWD. SHEATHING
WOOD FLOOR JOISTS
GYPSUM BOARD
3/4" HFD. WOOD (TO MATCH F2)
3/4"
2x8 AT 16" O.C.
5/8" TYPE 'X'
3/4 Hr. F.R. RATING

Ceiling Types

C1 SUSPENDED FURRING
GYPSUM BOARD
5/8" TYPE 'X'

C2 Ply Sheathing
Wood Joint
Gypsum Brd
1/2"
2x10 AT 16" O.C.
5/8" TYPE 'X'
3/4 Hr. F.R. RATING

Partition Types

P1 GYPSUM BOARD
WOOD FRAMING
GYPSUM BOARD
5/8" TYPE 'X'
2x6 AT 16" O.C.
5/8" TYPE 'X'
W/ RUBBER BASE BOTH SIDES
3/4 Hr. F.R. RATING (U.N.C.)

P2 AS PER P1 w/
BATT INSULATION
R12 (ACOUSTIC)
ALL INTERIOR PARTITIONS ARE TO BE P2
UNLESS NOTED OTHERWISE

P3 GYPSUM BOARD
RESILIENT CHANNELS
WOOD FRAMING
BATT INSULATION
RESILIENT CHANNELS
GYPSUM BOARD
5/8" TYPE 'X'
1/2"
2x6 AT 16" O.C.
R12 (ACOUSTIC)
1/2"
5/8" TYPE 'X'
W/ RUBBER BASE BOTH SIDES
3/4 Hr. F.R. RATING

P4 GYPSUM BOARD
RESILIENT CHANNELS
WOOD FRAMING
BATT INSULATION
GYPSUM BOARD
5/8" TYPE 'X'
1/2"
2x6 AT 16" O.C.
R12 (ACOUSTIC)
5/8" TYPE 'X'
W/ RUBBER BASE BOTH SIDES
3/4 Hr. F.R. RATING

P5 GYPSUM BOARD
WOOD FRAMING
BATT INSULATION
GYPSUM BOARD
5/8" TYPE 'X'
2x8 AT 16" O.C.
R12 (ACOUSTIC)
5/8" TYPE 'X'
W/ RUBBER BASE BOTH SIDES
3/4 Hr. F.R. RATING

P6 GYPSUM BOARD
WOOD FRAMING
GYPSUM BOARD
5/8" TYPE 'X'
2x10 AT 16" O.C.
5/8" TYPE 'X'
W/ RUBBER BASE BOTH SIDES
3/4 Hr. F.R. RATING

Materials

C CONCRETE

S STUCCO

GL GLAZING

GB GYPSUM BOARD (PAINT)
5/8" TYPE 'X'

FL ALUMINUM FLASHING
CLEAR ANODIZED FINISH

FL2 PREFINISHED G.I. FLASHING

AL ALUMINUM CLADDING
ADHERED TO RIGID INSUL. OR PLYWD. BACKING - SEE D-2 & D-16 FOR DETAILS

RM ROOF MEMBRANE

GLU GLUED-LAMINATED TIMBER

AL1 PERMANENT ALUMINUM CLAD HARDBOARD PANEL
'WEYERHAEUSER GLAZESAUFD'

RB RUBBER BASE

Notes

① ALL GYPSUM BOARD IN WASHROOMS
TO BE WATER RESISTANT

② ALL WOOD MEMBERS IN CONTACT W/ CONC.
TO BE 'PRESSURE TREATED'

③ MAINTAIN INTEGRITY OF 3/4 Hr. FIRE-
RESISTANCE RATING ON ALL ROOF,
FLOOR AND LOAD BEARING ASSEMBLIES.

④ LAP AND SEAL ALL JOINTS TO ENSURE
THAT INTEGRITY OF AIR/VAPOUR
BARRIER IS MAINTAINED TYPICALLY

RUBBER BASE AT ALL WALLS W/ GYP BRD
FINISH

⑤ Rigid Insulation
- continuous around perimeter of bldg
- Al cladding over rigid insul.
- continuous around perimeter except
for concrete walls

SEALS

CONSULTANTS

PATKAU ARCHITECTS
Prime Consultant

C.Y. LOH ASSOCIATES LTD.
Structural Engineer

D.W. THOMSON CONSULTANTS LTD.
Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

NEWTON
SENIORS
RECREATION FACILITY
Surrey, British Columbia

FILE NO

DRAWING TITLE

CONSTRUCTION NOTES

SCALE

DRAWN BY D.G. M.D.

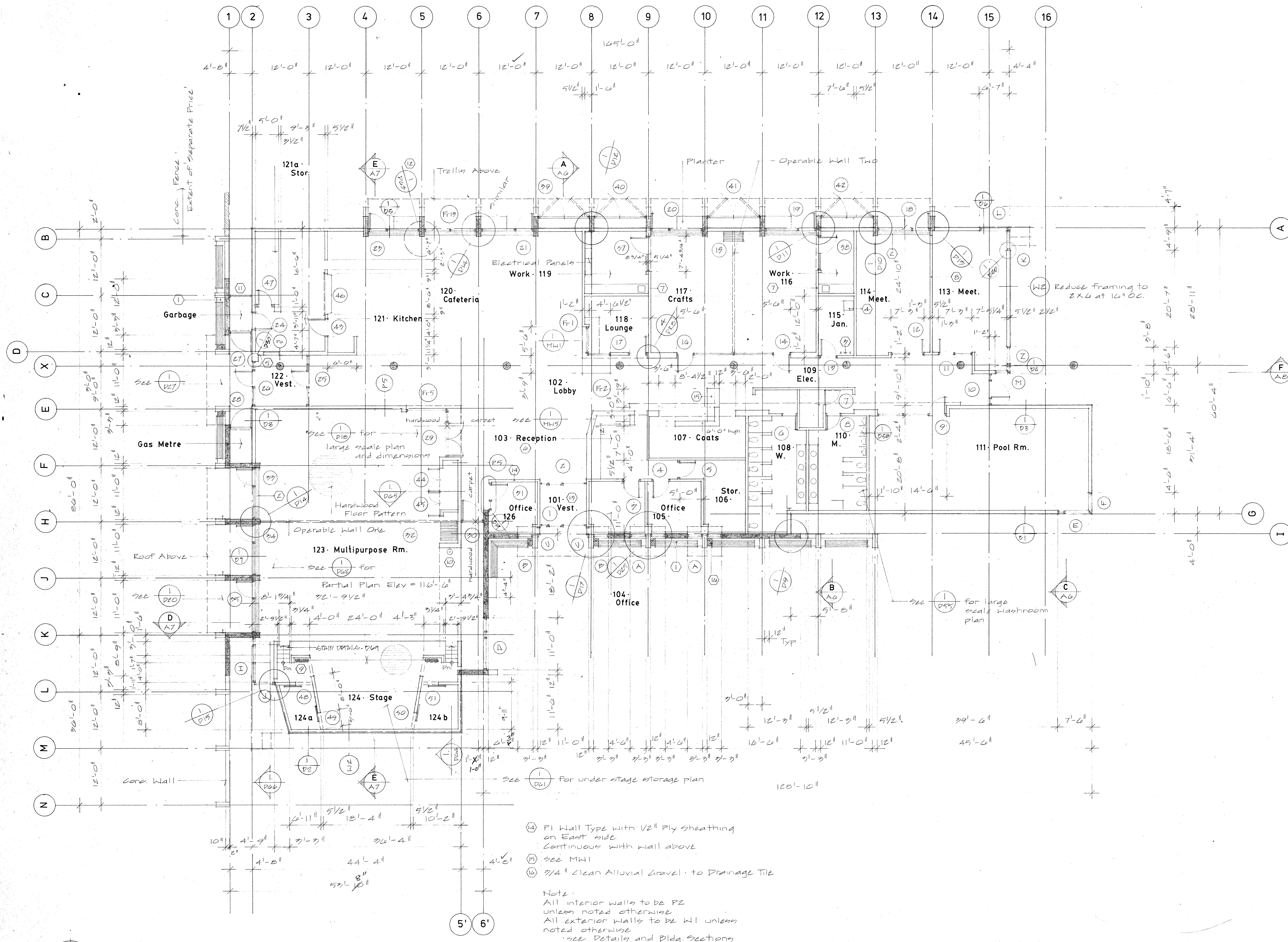
CHECKED BY J.H.

DATE JUNE 26, 1991

DWG NO

A2

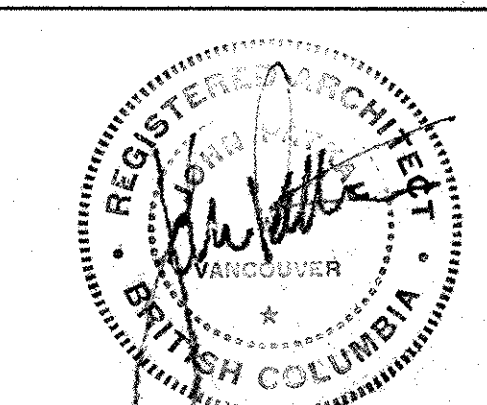




- NOTES**
- Conc. benches - see (1) typical
 - Floor Grill - typical see (1) D7
 - Steel Ladder to ceiling access hatch above
 - Janitors sink - see Mech.
 - Forced Flo Heater Coordinate size with Mech. Recess face of frame flush with face of drywall
 - See (1) for Partial Plan Elev. = 114'-0"
 - See (1) to locate walls
 - See (1) to locate wall
 - Stage Drapery
 - Drinking Fountain
 - Fixed 'Screen' as per Door No. 27
 - For Framing Dimensions of eaveatory windows above
 - See (1) for large scale plan

REVISIONS

SEALS



CONSULTANTS

PATKAU ARCHITECTS
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C.Y. LOH ASSOCIATES LTD.
Structural Engineer

D.W. THOMSON CONSULTANTS LTD.
Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

NEWTON SENIORS RECREATION FACILITY
Surrey, British Columbia

FILE NO. Ref: 10

DRAWING TITLE

GROUND FLOOR PLAN

SCALE 1/8" = 1'-0"
 DRAWN BY M.C.
 CHECKED BY [Signature]
 DATE June 26, 1991 DWG NO. **A3**

NOTES

- ① Return Air slot above egressory windows - see D36
- ② Light Track mounted on face of glulam beam
- ③ Light Track suspended from ceiling to U/s of Acoustic Panels
- ④ Suspended Acoustic Panel - see Price
- ⑤ Return Air Slot see D40

- ⑥ It is the responsibility of the Contractor to maintain the continuity of the 2 1/4 hr fire resistant rating behind and around all elec. mech. elements recessed into the roof structure
- ⑦ Light Track mounted on ceiling
- ⑧ Align drywall of wall with drywall of air supply
- ⑨ Provide drywall soffit at U/s of glulam beam - Make track flush with drywall

REVISIONS

SEALS



CONSULTANTS

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Structural Engineer

D.W. THOMSON CONSULTANTS LTD.
Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

**NEWTON
SENIORS
RECREATION FACILITY**
Surrey, British Columbia

FILE NO. Ref:ac

DRAWING TITLE

**REFLECTED
CEILING PLAN**

SCALE 1/8" = 1'-0"

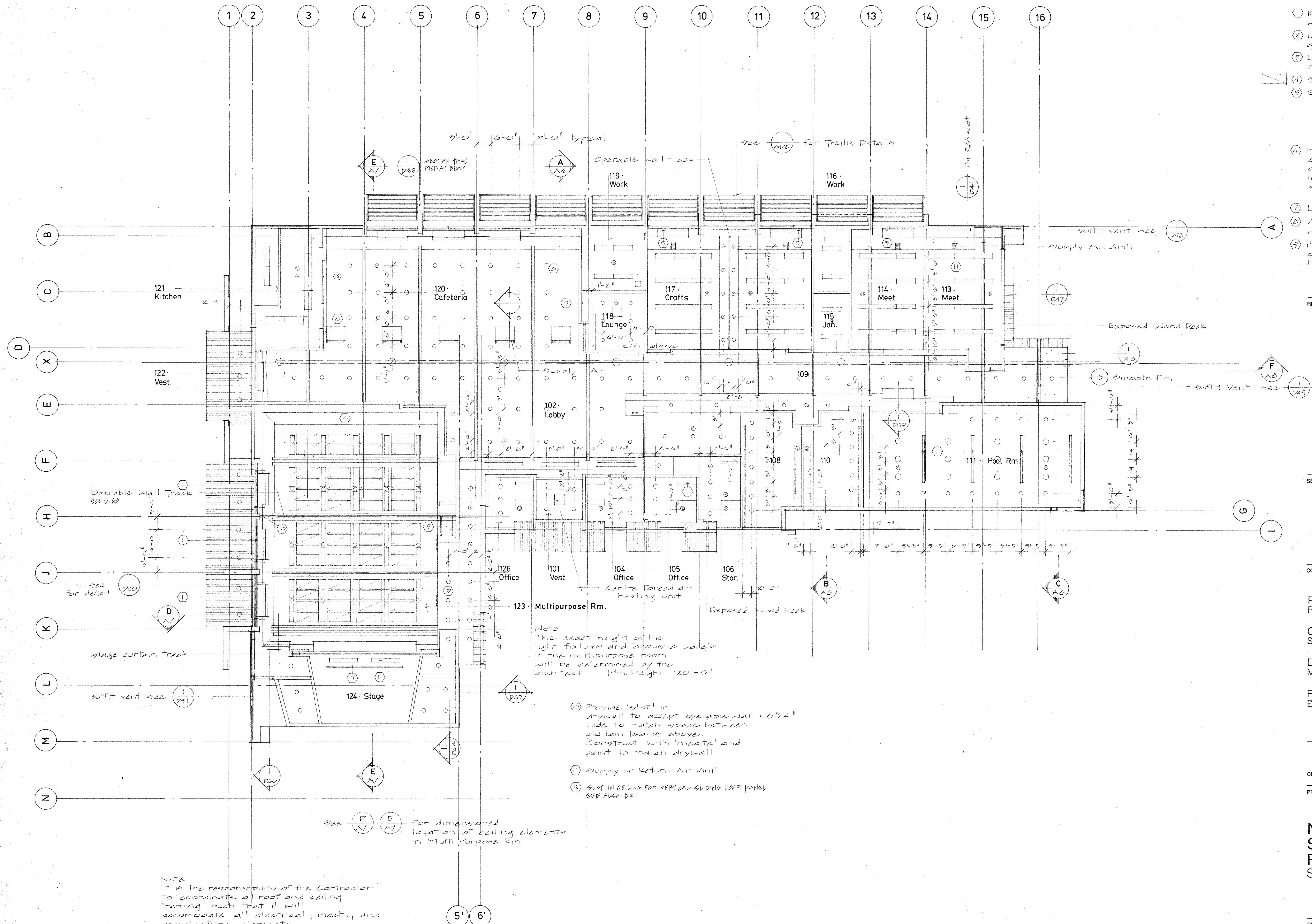
DRAWN BY MEE

CHECKED BY

DATE June 24, 1991

DWG NO.

A4



1. Reflected Ceiling Plan

1/8" = 1'-0"

Note:
All dimensions are parallel to ceiling plane. Elements in Drywall are dimensioned to fo drywall.

NOTES

- ① 2 1/2" Diameter Galv Rain Water Leader - Typical
- ② Reduce 12" wall to 10" for all X-Hatched areas
Reduce from back
Front to remain flush
- ③ 2 1/2" Dia. Galv. Scupper
- ④ Galv. plate steel scupper

REVISIONS

SEALS

CONSULTANTS

PATKAU ARCHITECTS
Prime Consultant

C.Y. LOH ASSOCIATES LTD.
Structural Engineer

D.W. THOMSON CONSULTANTS LTD.
Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

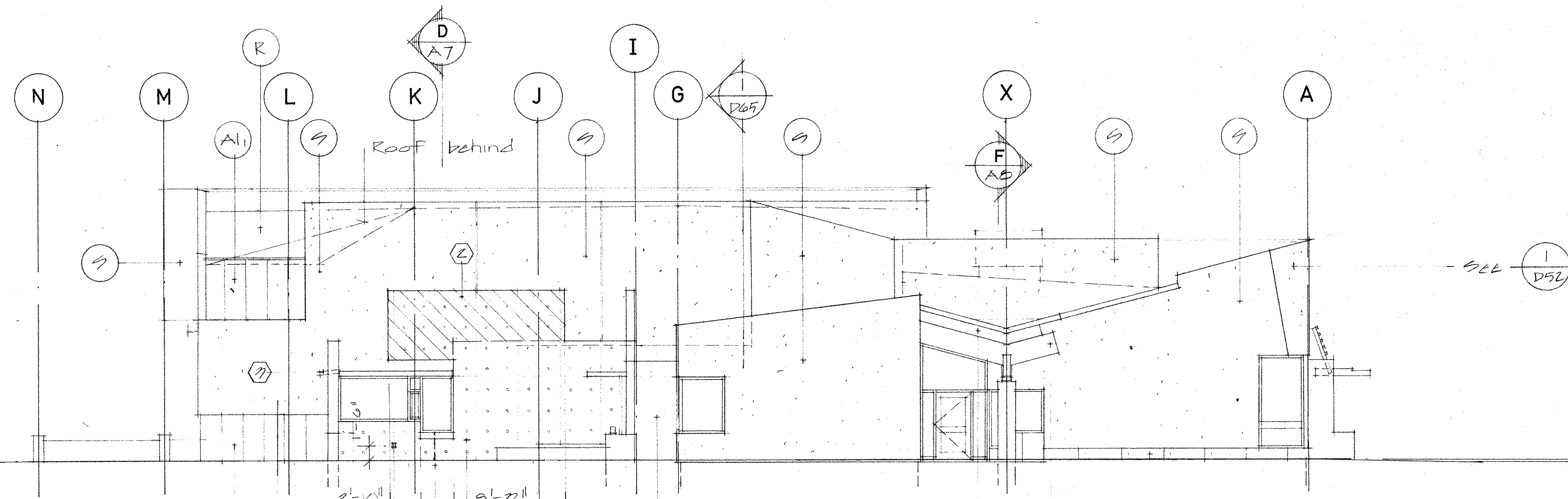
NEWTON SENIORS RECREATION FACILITY
Surrey, British Columbia

DRAWING TITLE

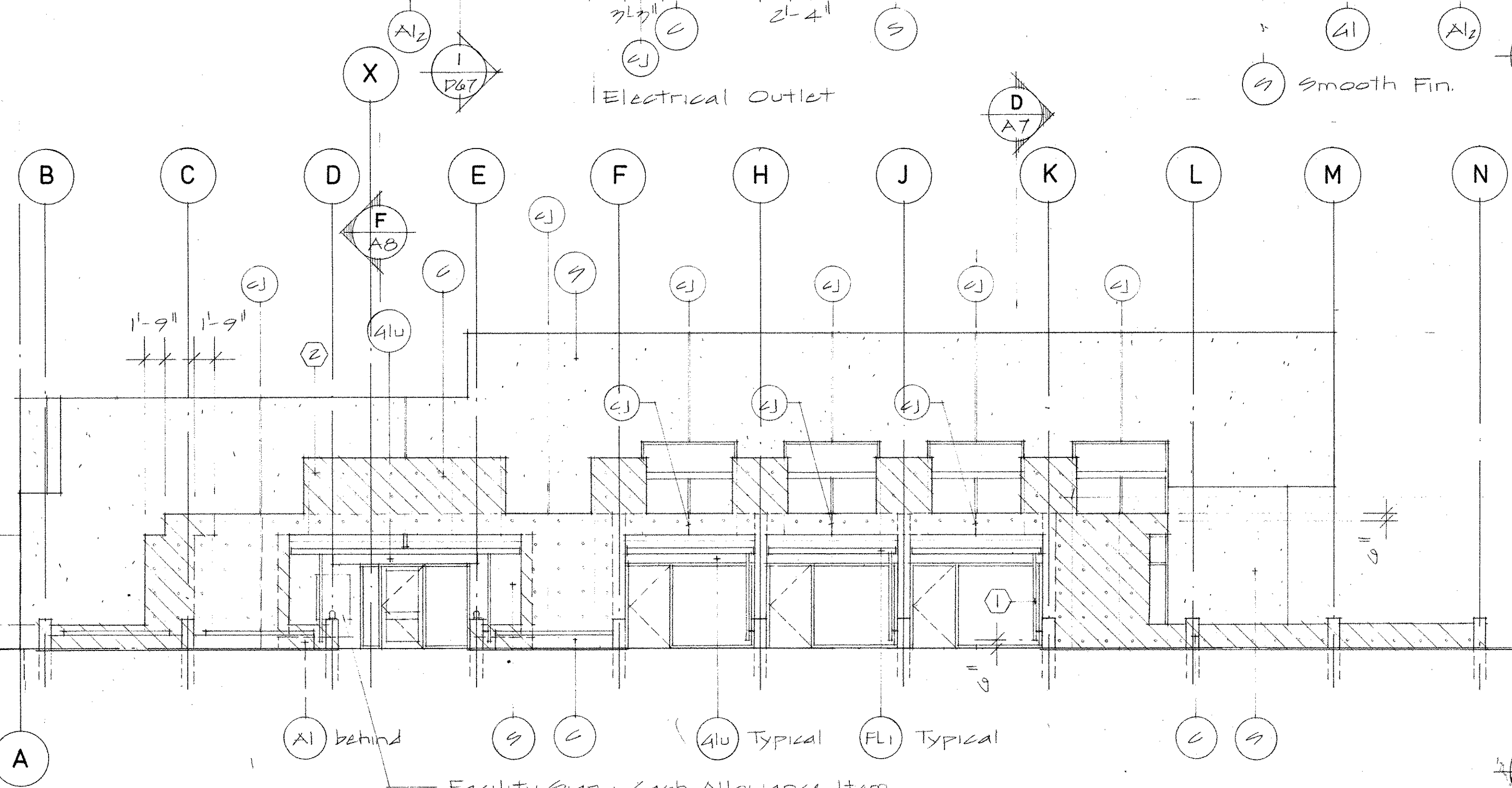
ELEVATIONS

SCALE 1/8" = 1'-0"

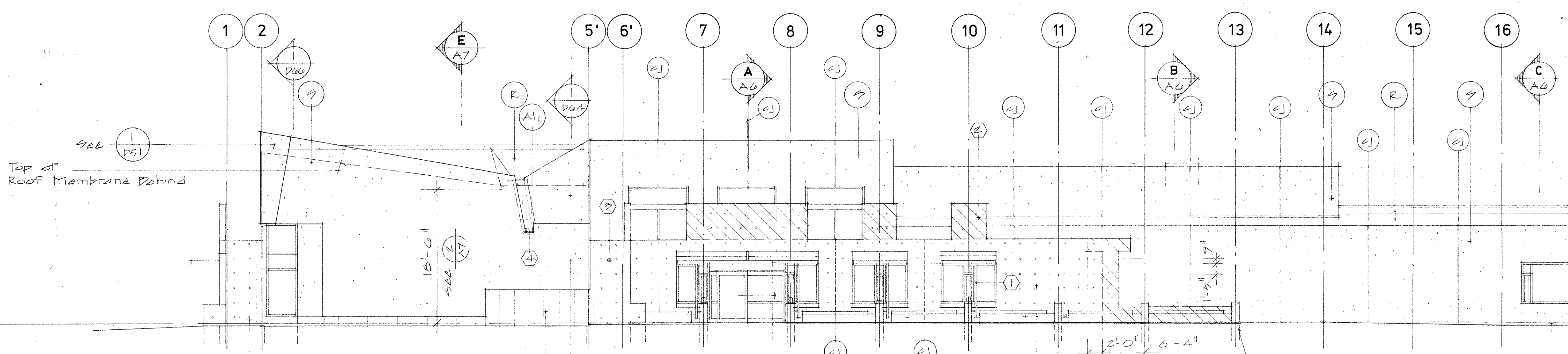
DRAWN BY M.C.
CHECKED BY J.W.
DATE June 20, 1991 DWG NO. A5



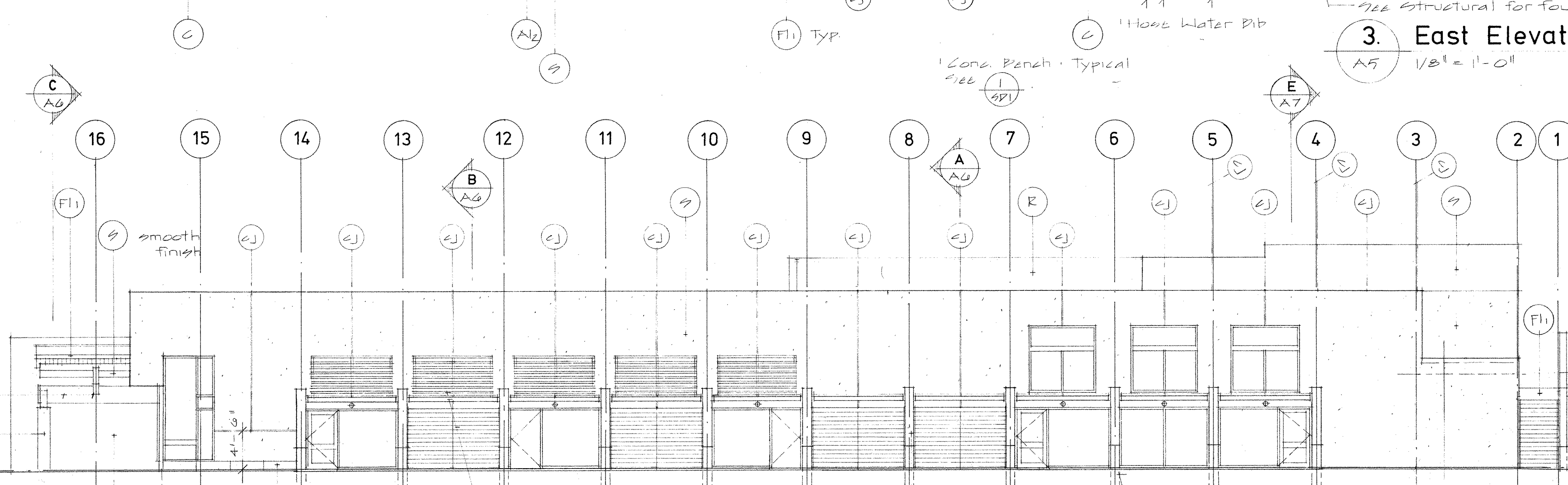
1. North Elevation
A5 1/8" = 1'-0"



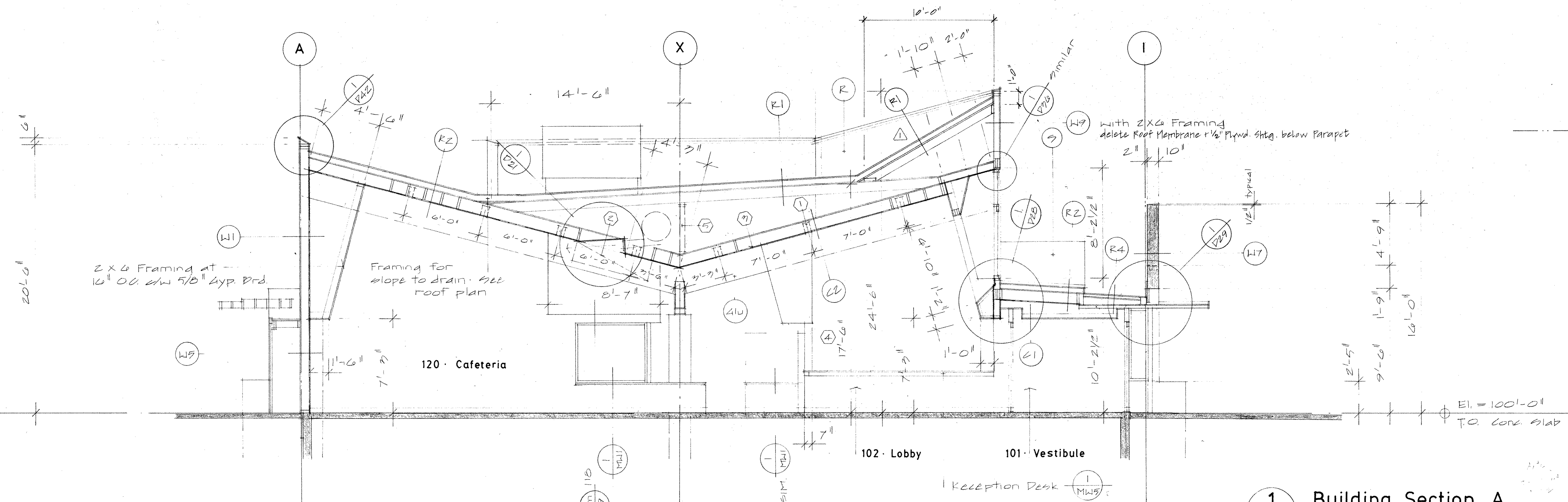
2. South Elevation
A5 1/8" = 1'-0"



3. East Elevation
A5 1/8" = 1'-0"



4. West Elevation
A5 1/8" = 1'-0"



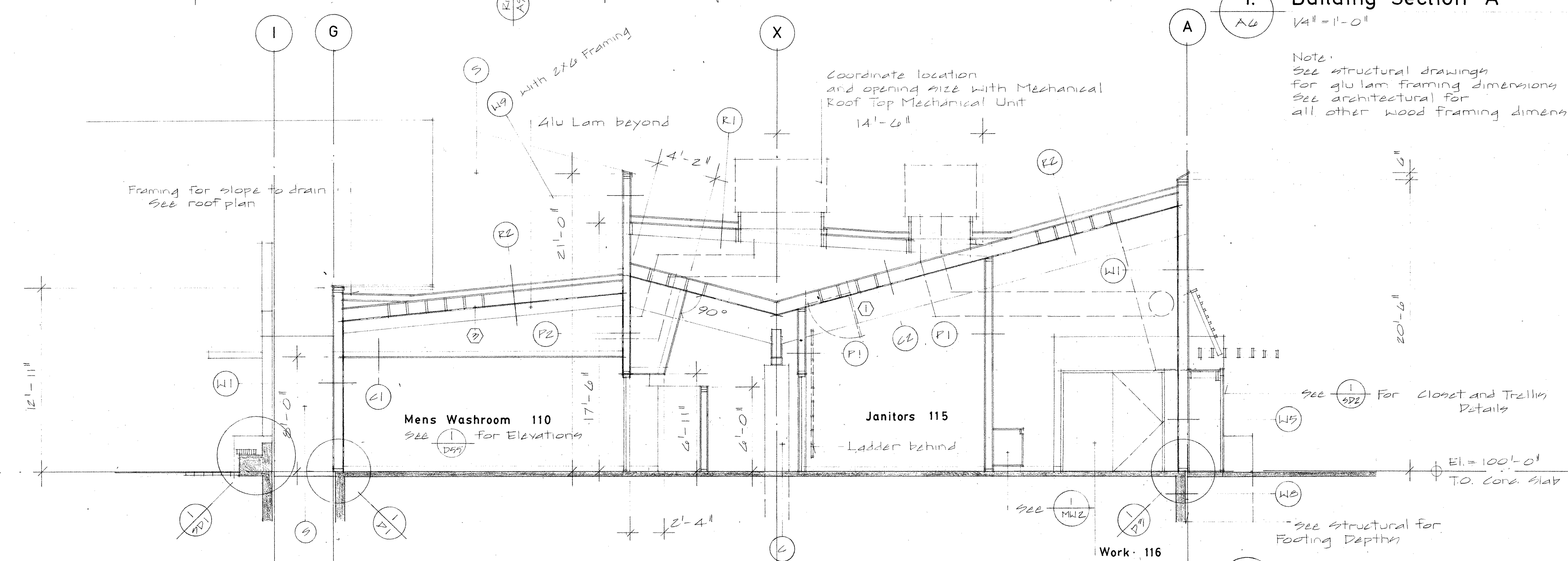
- NOTES
- ① Recessed Light Fixtures Beyond
 - ② Air Return Opening in wall behind glulam beam. Wrap drywall into openings size to be coordinated with mechanical
 - ③ 2 1/4 hr fire resistance rating continuous
 - ④ Dimension as per 2/A6
 - ⑤ Coordinate location of 2x6 pony wall with mechanical

REVISIONS

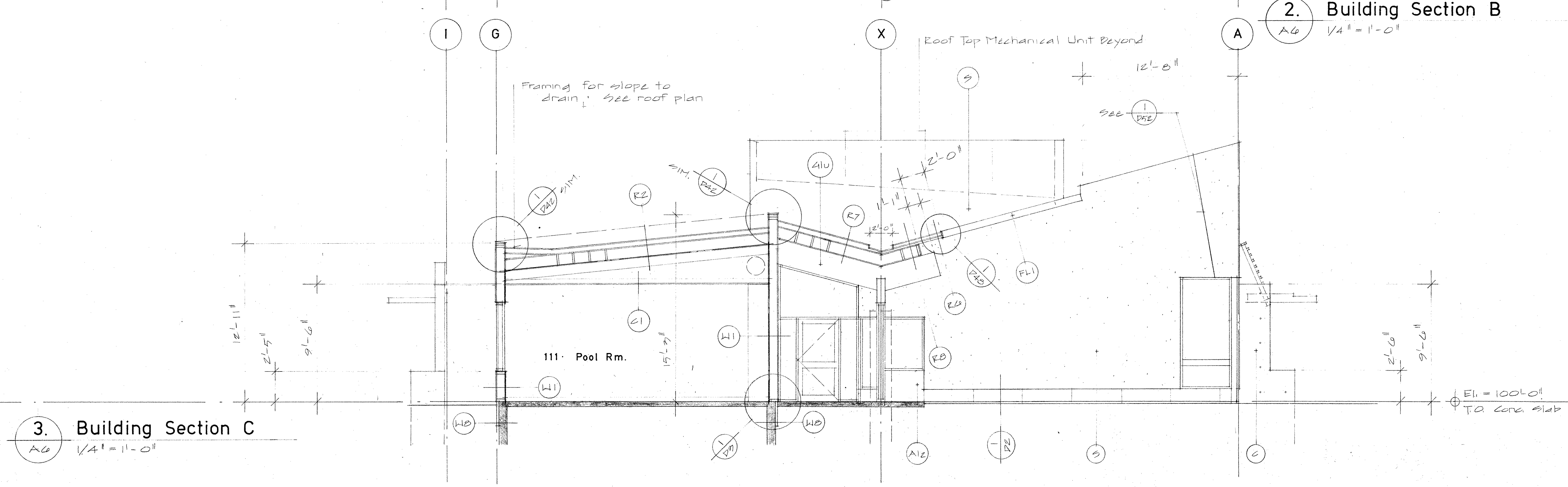
PARAPET WALL BRACE
APPENDUM 1, ISSUED JULY

1. Building Section A

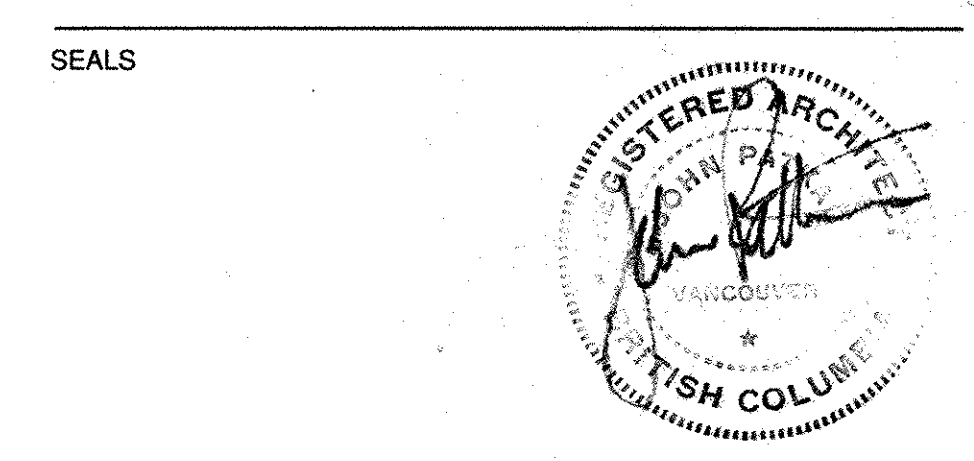
NOTE:
See structural drawings for glulam framing dimensions
See architectural for all other wood framing dimensions



2. Building Section B



3. Building Section C



CONSULTANTS

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C.Y. LOH ASSOCIATES LTD.
Structural Engineer

D.W. THOMSON CONSULTANTS LTD.
Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

NEWTON SENIORS RECREATION FACILITY
Surrey, British Columbia

FILE NO

Ref: 10

DRAWING TITLE


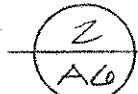
BUILDING SECTIONS

SCALE 1/4" = 1'-0"

DRAWN BY MRU

CHECKED BY

DATE June 20, 1991 DWG NO **A6**

- ① Modify ceiling framing to accommodate mech. duct penetration thru wall.
- ② 2x4 Framing
- ③ Form line
- ④ 9" Wide X 8'-1/2" Long Return Air Opening in drywall. Typical Drywall on end walls of slot
- ⑤ 2x6" Dia. Copper Scupper. ~~SEE~~ DETA
- ⑥ Light Fixtures
Suspend flush with U/s of 4x10 Lam beams
- ⑦ Galvanized Rain Water Leader
SEE 
- ⑧ Framing for slope to drain
SEE Roof Plan
- ⑨ SEE 17'-6" dimension on Roof to be one plane 
- ⑩ Suspended acoustic panels
- ⑪ Suspend light track to U/s acoustic panels

SEALS



PATKAU ARCHITECTS
Prime Consultant

D.W. THOMSON CONSULTANTS LTD.
Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
Electrical Engineer

PROJECT TITLE

**NEWTON
SENIORS
RECREATION FACILITY**
Surrey, British Columbia

DRAWING TITLE

BUILDING SECTIONS

DRAWN BY M.C.
CHECKED BY [Signature]
DATE June 26, 1991 DWG NO

A7

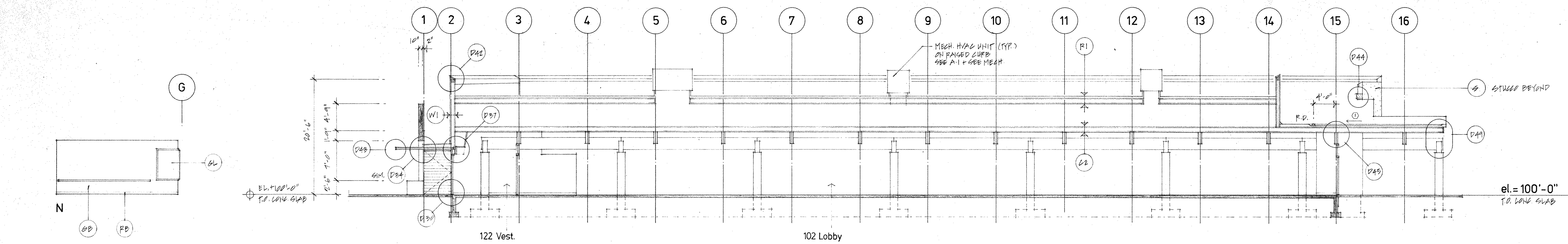
Note:
Height of light fixtures
and acoustic panels to be finalized by
Architect
All Allow for mounting height of
elcty. = 120" 0" to 4/4"

⑩ 3/4 hr. fire resistance rating
continuous

1. Building Section D

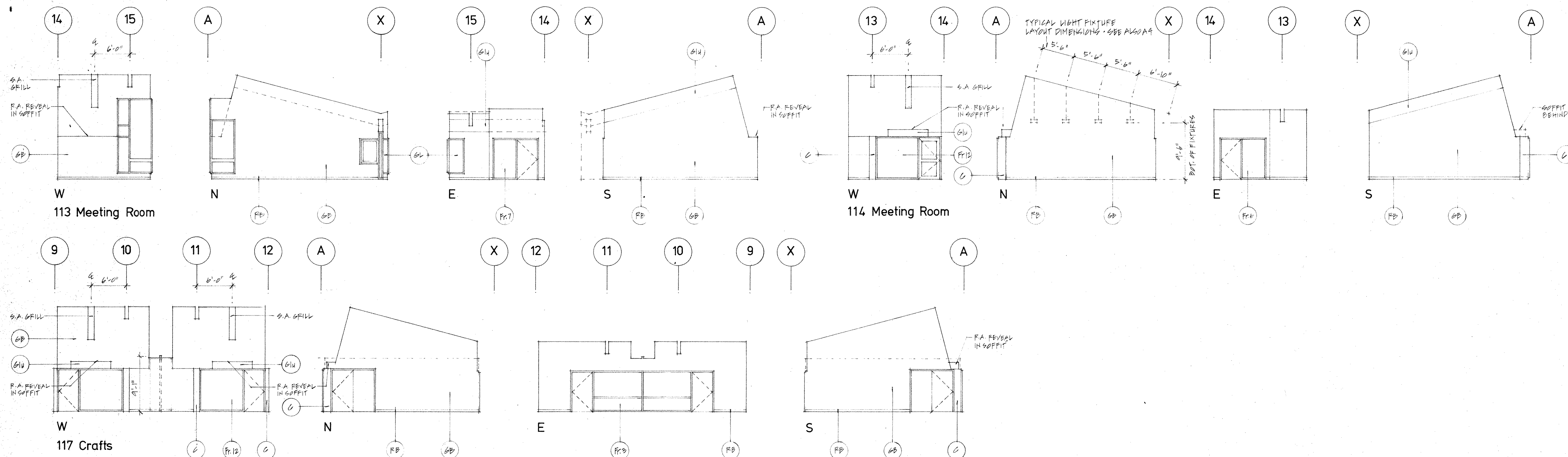
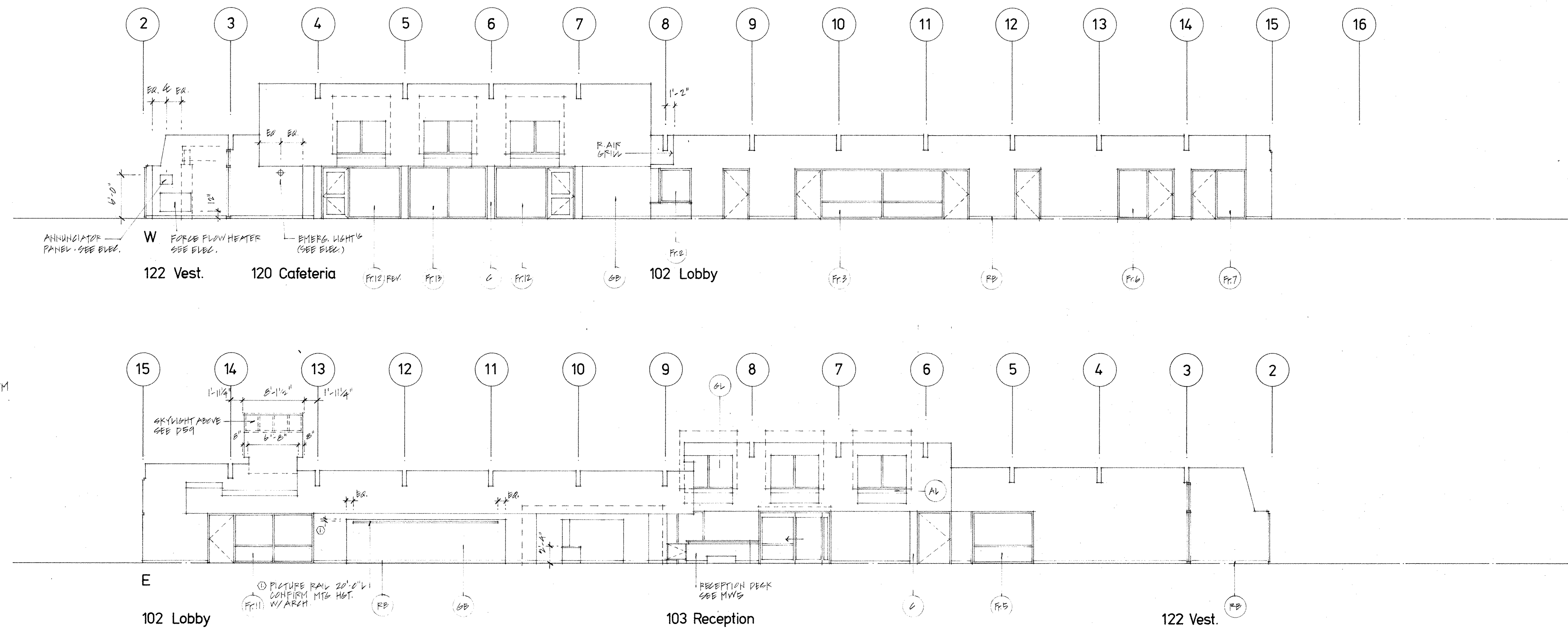
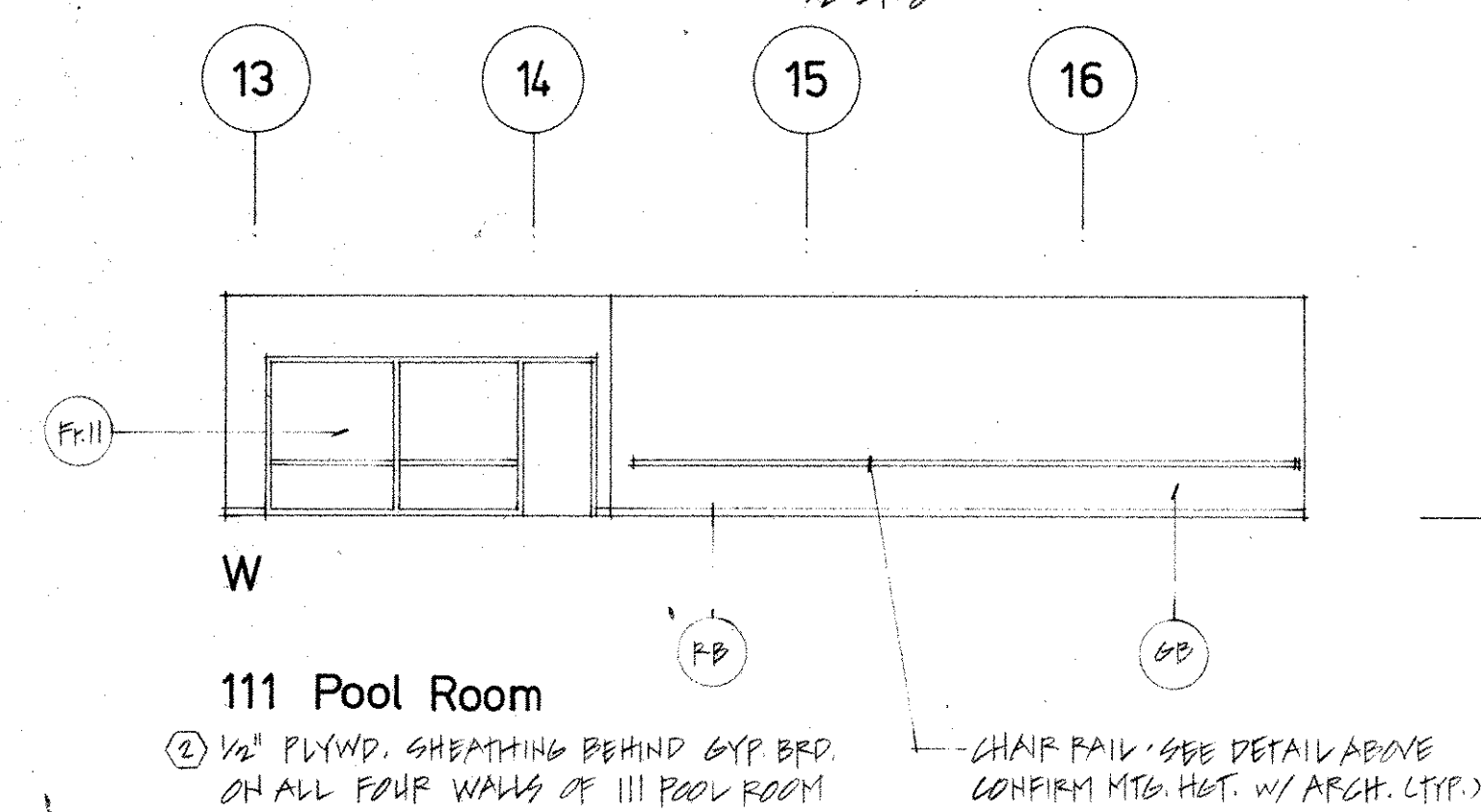
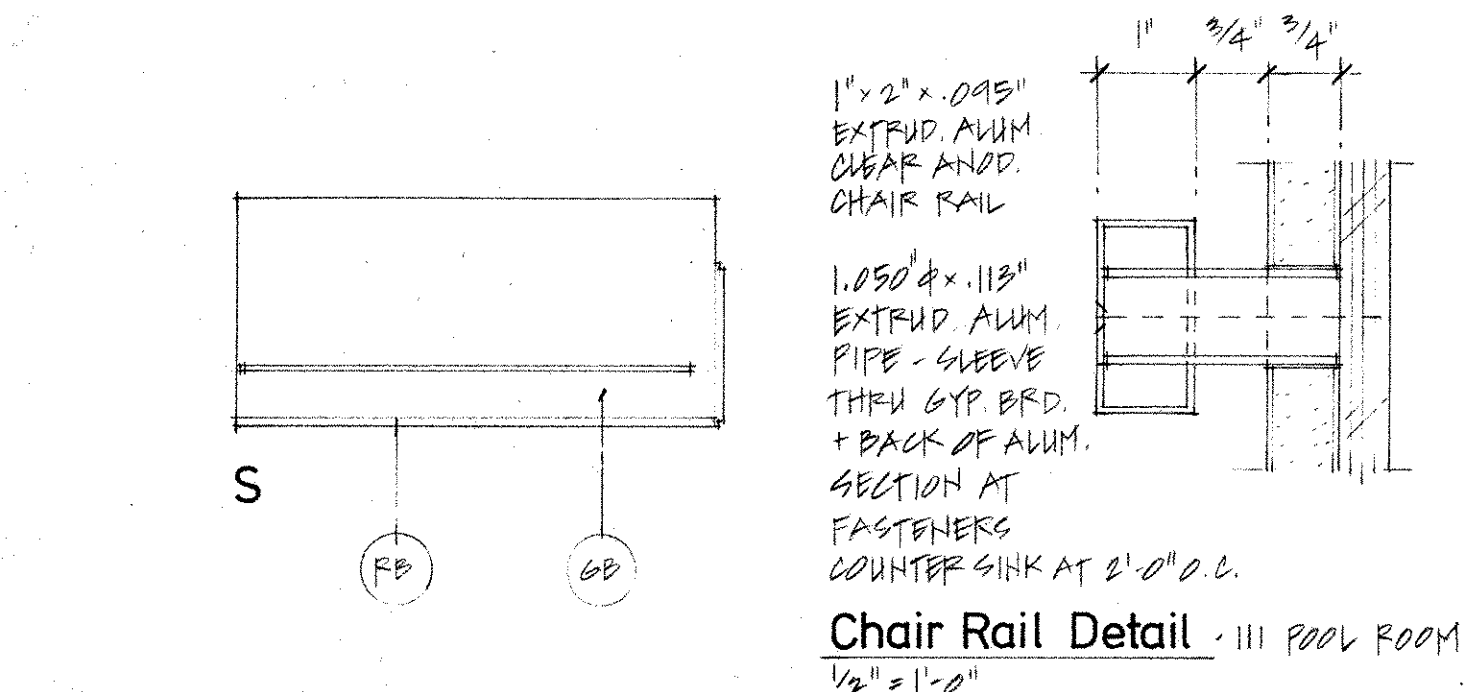
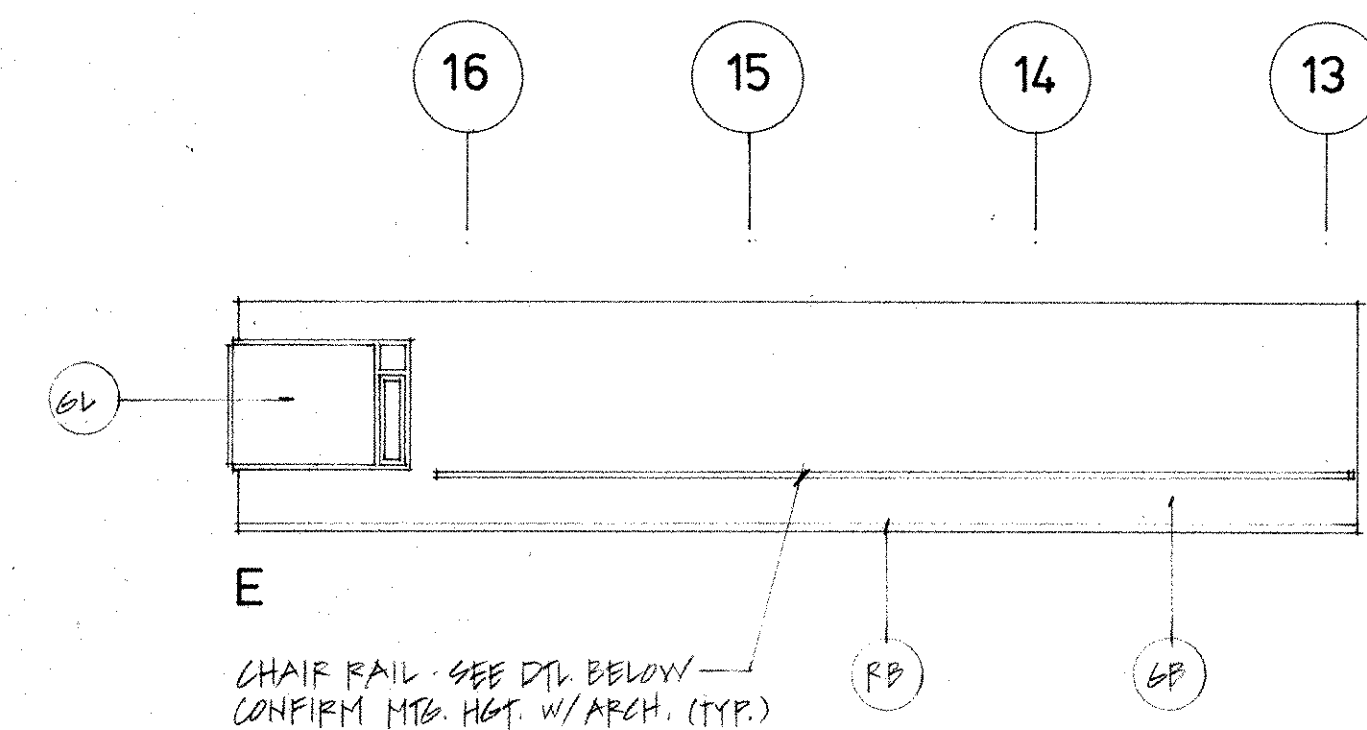
Building Section E

SCALE 1/4" = 1' - 0"



F Building Section

① SLOPE VALLEY FROM PARAPET EDGE SEE D49
BACK TO ROOF DRAIN



REVISIONS

SEALS



CONSULTANTS

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Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

NEWTON
SENIORS
RECREATION FACILITY
Surrey, British Columbia

DRAWING TITLE

BUILDING SECTION
INTERIOR ELEVATIONS

SCALE 1/8" = 1'-0"
DRAWN BY D.G.
CHECKED BY J.L.
DATE 11/15/2011 DWG NO. A8

PATKAU ARCHITECTS
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C.Y. LOH ASSOCIATES LTD.
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D.W. THOMSON CONSULTANTS LTD.
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R.A. DUFF & ASSOCIATES INC.
Electrical Engineer

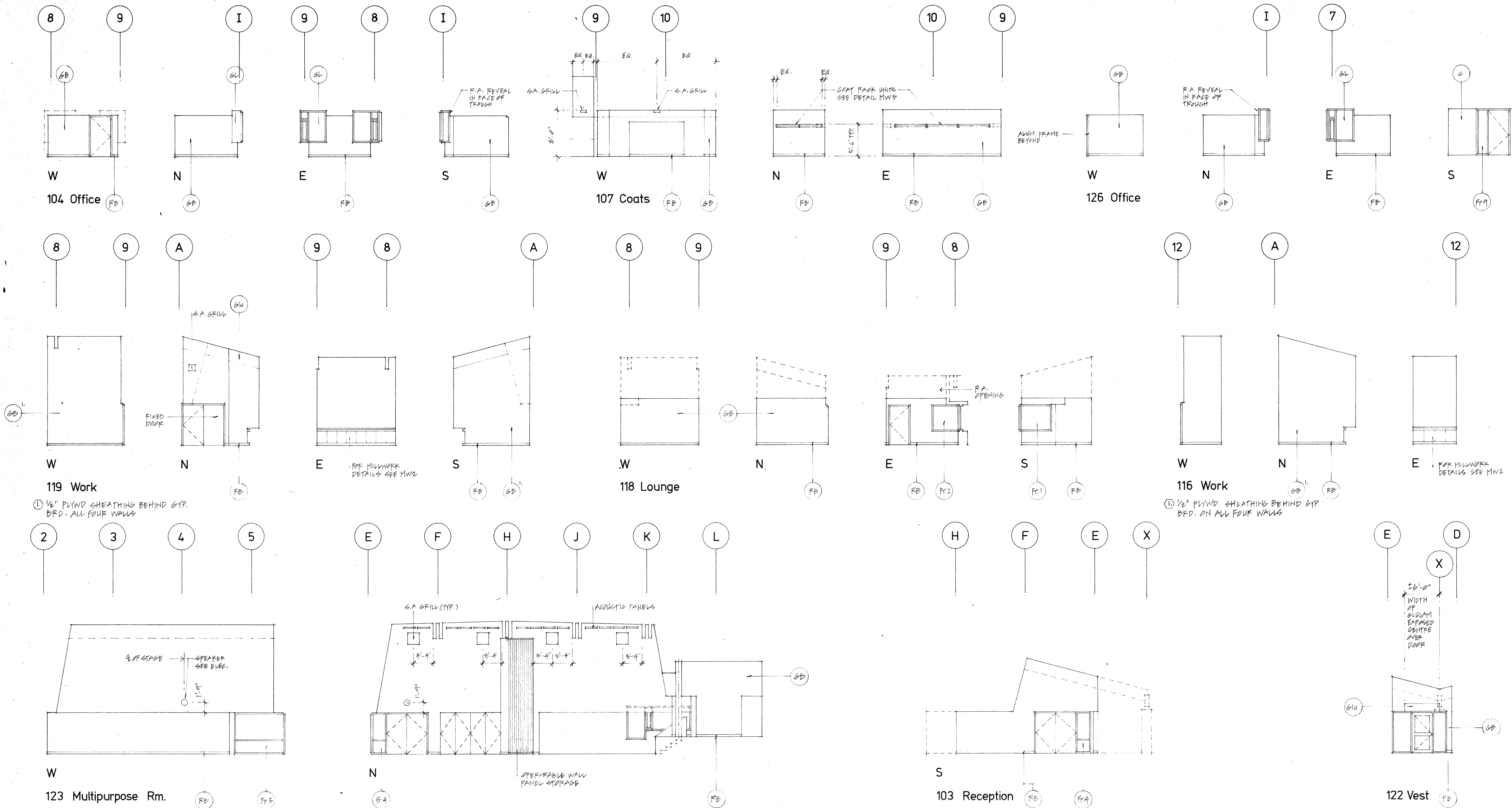
**NEWTON
SENIORS
RECREATION FACILITY**
Surrey, British Columbia

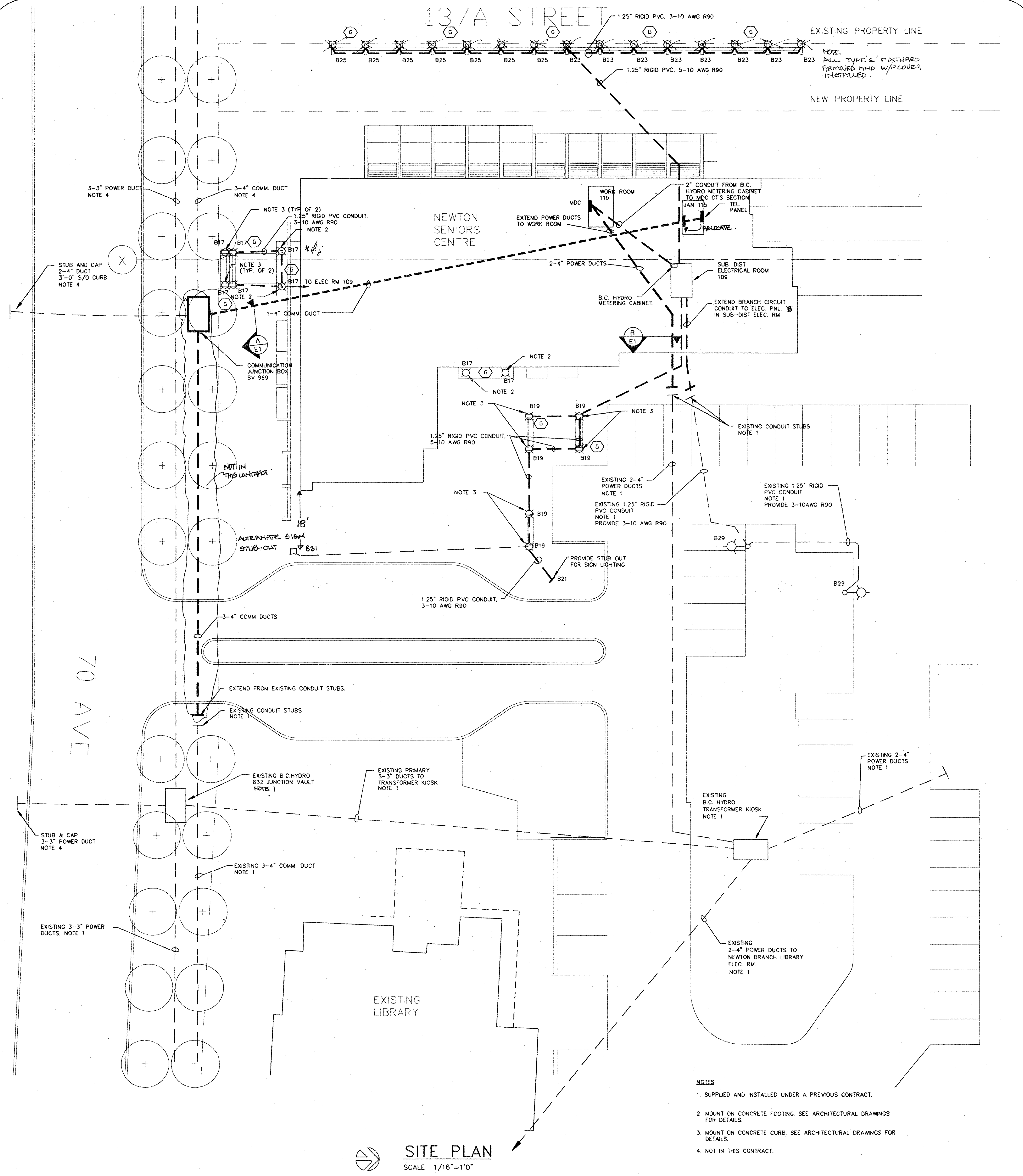
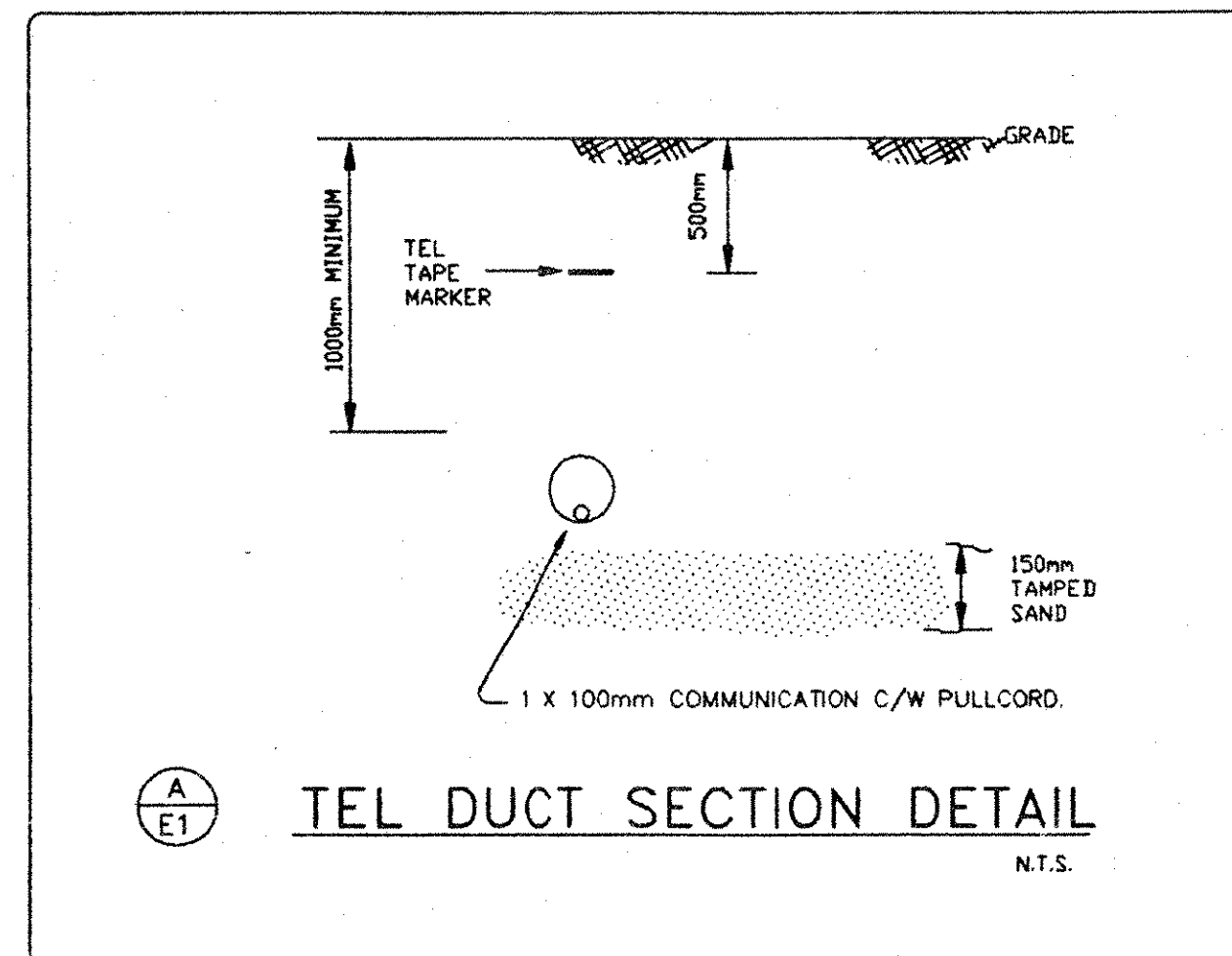
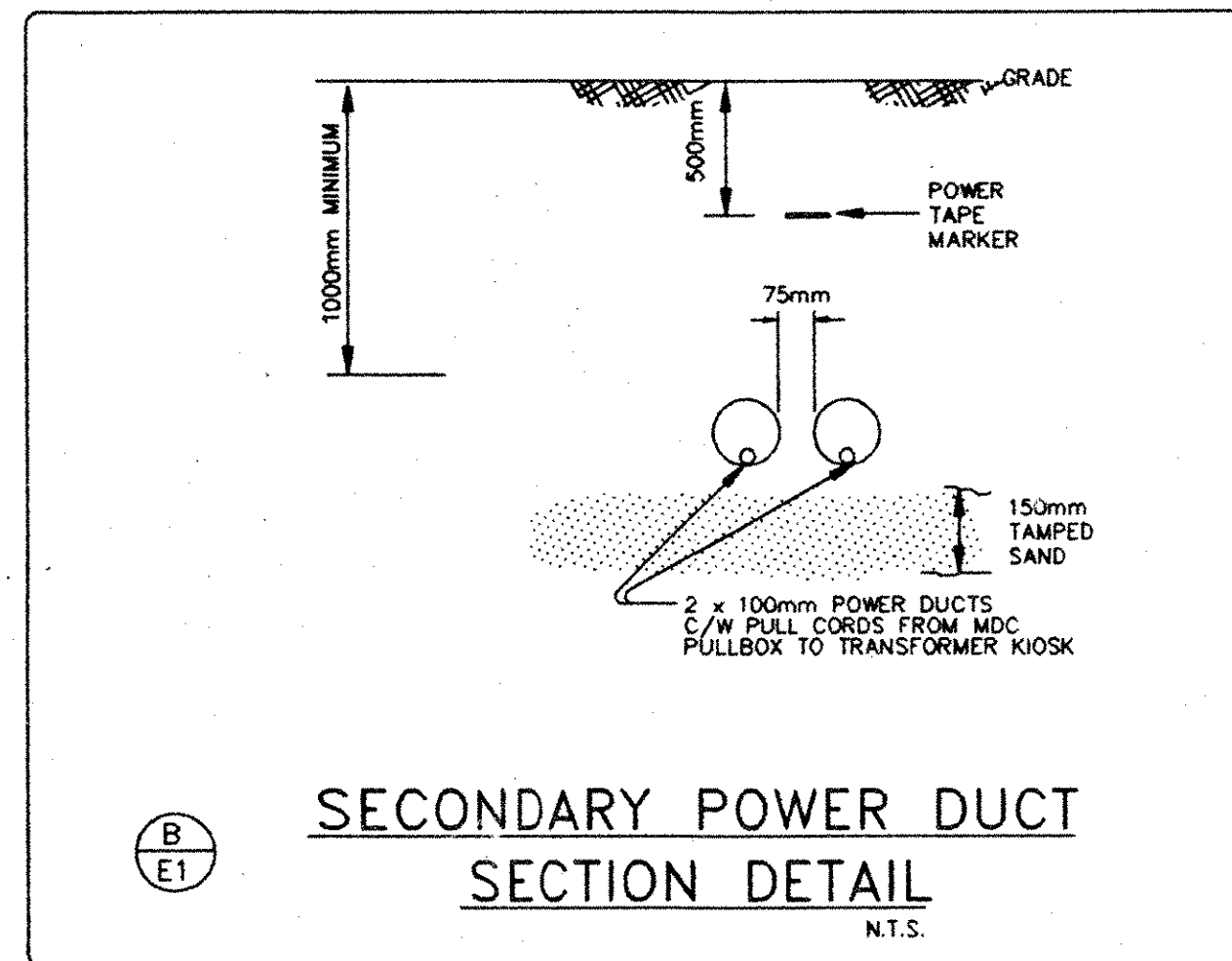
INTERIOR ELEVATIONS

SCALE 1/8" = 1'-0"
DRAWN BY D.C.
CHECKED BY J.H.
DATE JUL 26, 1991

DWG NO.

A9





LEGEND	
SYMBOL	DESCRIPTION
	FLUORESCENT LIGHT FIXTURE
	MINIATURE FLUORESCENT LIGHT FIXTURE, CEILING MTD.
	EXIT FIXTURE, WALL MTD.
	EXIT FIXTURE, CEILING MTD.
	EMERGENCY LIGHTING FIXTURE, WALL MTD.
	CONDUIT HOMERUN
	CLOCK
	SPEAKER, WALL MTD.
	SPEAKER, CEILING MTD.
	DIRECTIONAL PASSIVE INFRARED DETECTOR
	FIRE ALARM GONG
	FIRE ALARM MANUAL STATION
	FIRE ALARM KEY OPERATED MANUAL STATION
	END OF LINE RESISTOR
	HEAT DETECTOR 135°F F.T., R. OF R.
	HEAT DETECTOR 180°F F.T.
	CRAWL SPACE HEAT DETECTOR 135°F F.T., R. OF R.
	SMOKE DETECTOR, CLG. MTD.
	SMOKE DETECTOR, DUCT TYPE
	LOW PRESSURE SWITCH
	VALVE TAMPER SWITCH
	FLOW SWITCH
	MAGNETIC DOOR HOLDER
	MOTOR STARTER, MAGNETIC
	MOTOR STARTER, MANUAL
	MOTOR
	DISCONNECT SWITCH
	EQUIP. LABEL AND NUMBER
	JUNCTION BOX
	EMERGENCY POWER SUPPLY
	SINGLE POLE SWITCH, SWITCHLEG 0
	3 WAY, SINGLE POLE SWITCH
	4 WAY, SINGLE POLE SWITCH
	SINGLE POLE SWITCH WITH PILOT LIGHT
	SINGLE POLE SWITCH, DIMMER SWITCH
	SINGLE POLE, 3 WAY, DIMMER SWITCH
	FOUR-GANG SWITCH, NUMBER OF VERTICAL LINES DENOTES NUMBER OF SWITCHES
	DUPLEX RECEPTACLE, CSA 5-15R
	SINGLE 20A RECEPTACLE, CSA 5-20R
	WEATHERPROOF DUPLEX RECEPTACLE
	ISOLATED GROUND DUPLEX RECEPTACLE
	SPECIAL PURPOSE OUTLET, CSA CONFIGURATION 14-20R REFER TO DIAGRAMS 182 CANADIAN ELECTRICAL CODE PART 1
	SPLIT DUPLEX RECEPTACLE
	COMPUTER ISOLATED GROUND DUPLEX RECEPTACLE CAT. HUBBELL 5252-15
	FLOOR DUPLEX RECEPTACLE
	FLOOR ISOLATED GROUND DUPLEX RECEPTACLE
	FLOOR MTD. COMPUTER OUTLET
	WALL MTD. COMPUTER OUTLET
	WALL MTD. TELEPHONE OUTLET
	FLOOR TELEPHONE OUTLET
	TEL. OUTLET FOR FUTURE COMPUTER MODEM, STUB INTO CEILING SPACE
	CATV OUTLET
	FIXTURE TYPE
	H.I.D. LIGHT FIXTURE, CEILING MTD.
	H.I.D. LIGHT FIXTURE, SURFACE MTD.
	EXTERIOR LIGHTING POLE C/W 1 H.I.D. LIGHT FIXTURE
	EXTERIOR LIGHTING POLE C/W 2 H.I.D. LIGHT FIXTURES
	BASEBOARD HEATER I.D. LABEL
	BASEBOARD HEATER
	PHOTO-ELECTRIC CELL
	NETWORK TERMINAL WALL OUTLET
	NETWORK TERMINAL FLOOR OUTLET
	INFLOOR/UNDERGROUND CONDUIT/CABLE
	PUSH BUTTON
	BUZZER

ISSUED FOR TENDER JUNE 26, 1991

REVISIONS
 1. AS-BUILT WESTRADE ELECTRIC LTD. JUNE 30, 1992.

SEALS

CONSULTANTS

PATKAU ARCHITECTS
 Prime Consultant

C.Y. LOH ASSOCIATES LTD.
 Structural Engineer

D.W. THOMSON CONSULTANTS LTD.
 Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
 Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

NEWTON SENIORS RECREATION CENTRE
 Surrey, British Columbia

DRAWING TITLE

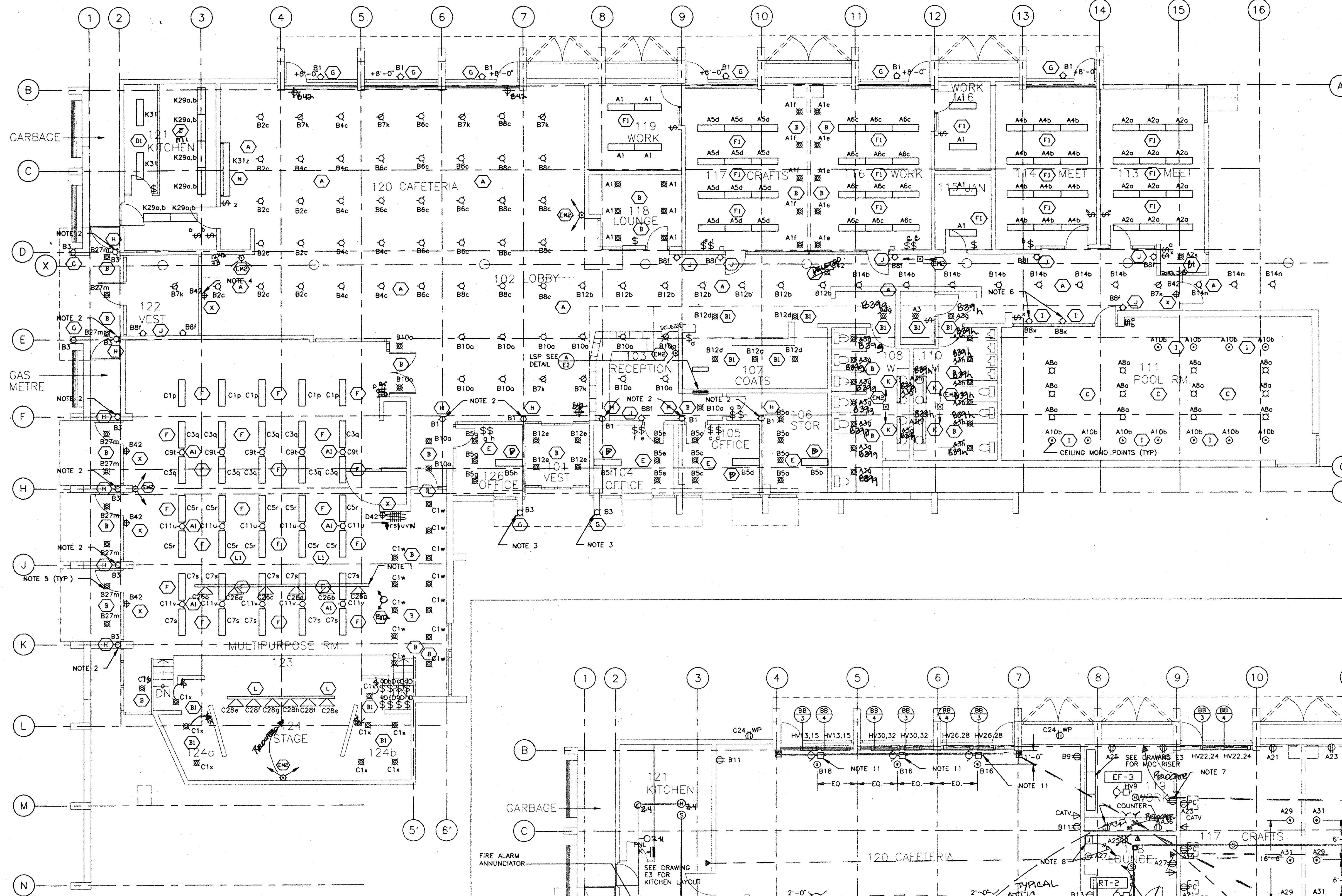
NOVA CONSTRUCTION LTD.
 AUG 17 1992
 RECEIVED

SITE PLAN
 LEGEND
 DETAILS

SCALE AS NOTED
 DRAWN BY KA/RHL/AAR/DNW
 CHECKED BY DNW/RAD
 DATE 91.06.24

DWG NO. E1 of 3
 ORIGINAL
 NOV - 6 1992

C1146 / 5451-03 / 91.06.17



FLOOR PLAN - LIGHTING

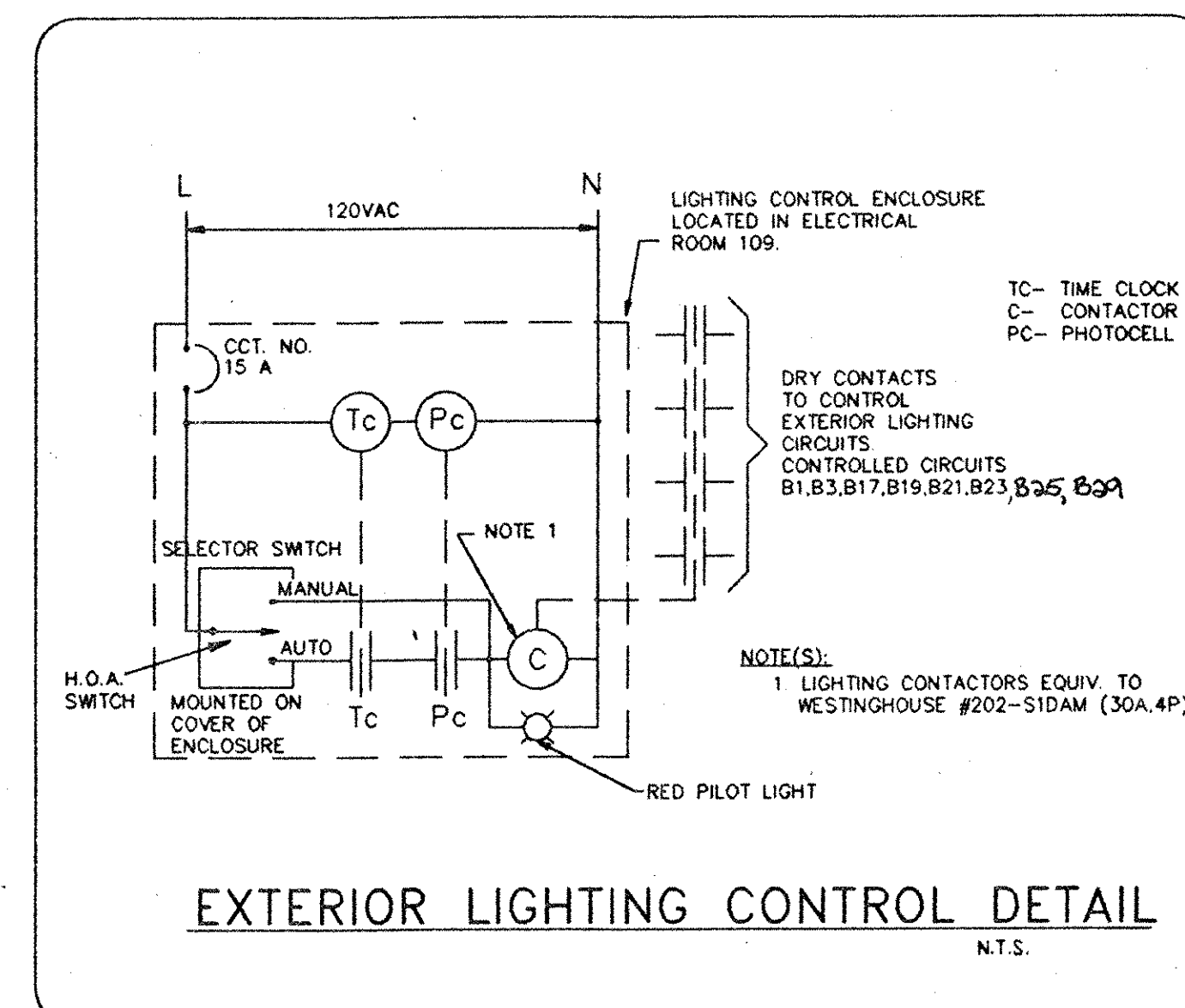
SCALE 1/8" = 1'-0"

GENERAL NOTES

SEE ARCHITECTURAL REFLECTED CEILING PLAN AND WALL ELEVATIONS FOR EXACT LOCATION OF FIXTURE LOCATIONS.

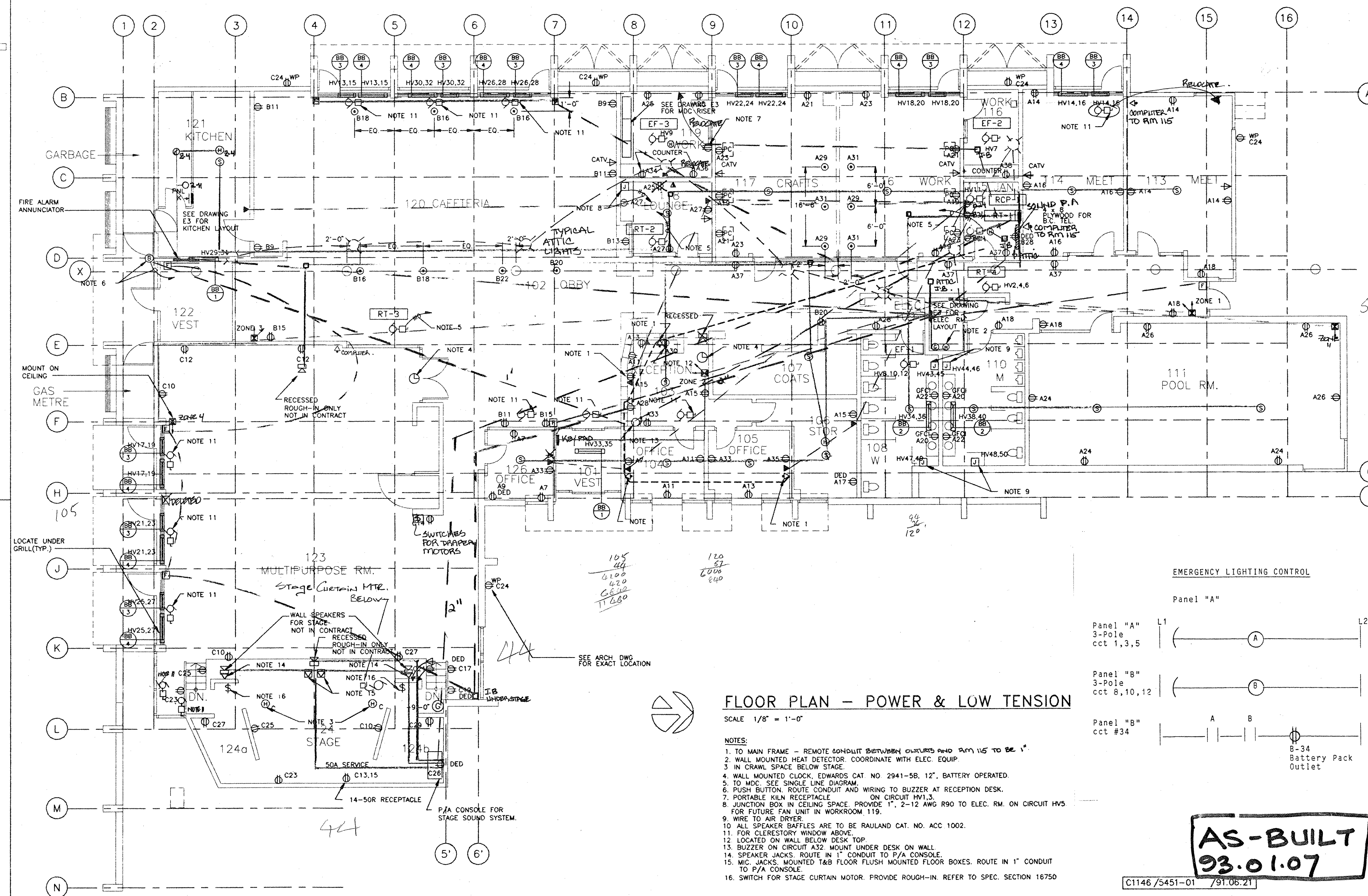
NOTES:

1. MOUNT ON TRACK ON CEILING. SUSPENDED MOUNTING.
2. LOCATE ON STUCCO WALL ABOVE LOWER ROOF RT. 111-5 TO 111-6.
3. MOUNT ON TOP OF CONCRETE.
4. MOUNT ON DOOR FRAME.
5. EXTERIOR FIXTURE TYPE 'B' ARE TO BE LISTED FOR DAMPED LOCATION.
6. MOUNT ON SKYLIGHT WALL.



EXTERIOR LIGHTING CONTROL DETAIL

N.T.S.



FLOOR PLAN - POWER & LOW TENSION

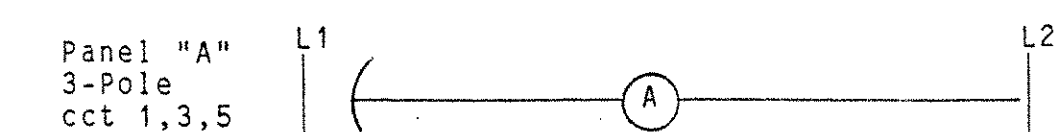
SCALE 1/8" = 1'-0"

NOTES:

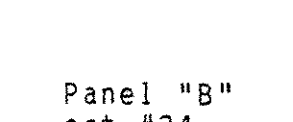
1. TO MAIN FRAME - REMOTE CONDUIT BETWEEN CHASES AND RM 115 TO BE 1".
2. WALL MOUNTED HEAT DETECTOR COORDINATE WITH ELEC. EQUIP.
3. IN CRAWL SPACE BELOW STAGE.
4. WALL MOUNTED CLOUT, EDWARDS CAT. NO. 2941-5B, 12", BATTERY OPERATED.
5. TO MIX. SEE SINGLE LINE DIAGRAM.
6. PUSH BUTTON, ROUTE CONDUIT AND WIRING TO BUZZER AT RECEPTION DESK.
7. PORTABLE KLN RECEPTACLE ON CIRCUIT 111.3.
8. JUNCTION BOX IN CEILING SPACE. PROVIDE 1"-2-12 AWG R90 TO ELEC. RM. ON CIRCUIT 115.
9. FOR FUTURE FAN UNIT IN WORKROOM 119.
10. ALL SPEAKER BAFFLES ARE TO BE RAULAND CAT. NO. ACC 1002.
11. FOR CLOSETORY WINDOW ABOVE.
12. LOCATED ON WALL BELOW DESK TOP.
13. BUZZER ON CIRCUIT A32 MOUNT UNDER DESK ON WALL.
14. SPEAKER JACKS, ROUTE IN 1" CONDUIT TO P/A CONSOLE.
15. M.C. JACKS, MOUNTED T&B FLOOR FLUSH MOUNTED FLOOR BOXES, ROUTE IN 1" CONDUIT TO P/A CONSOLE.
16. SWITCH FOR STAGE CURTAIN MOTOR. PROVIDE ROUGH-IN REFER TO SPEC. SECTION 16750

EMERGENCY LIGHTING CONTROL

Panel "A"



Panel "B"



Panel "C"



AS-BUILT
93.01.07

C1146/5451-01 7/91.06.21

NOTES

ISSUED FOR TENDER JUNE 26, 1991

REVISIONS
1. "AS-BUILT" WESTRADE ELECTRICAL LTD. JUNE 20, 1992

CONDUIT LEGEND

- SEALS
- COMPUTER CONDUIT
 - INTRUSION ALARM CABLE/WALL
 - SLAB CONDUIT I/A
 - SLAB CONDUIT CATV
 - SLAB CONDUIT TELEPHONE
 - SOUND P.A. CONDUITS
 - FIRE ALARM CONDUITS
 - EM LIGHTING CONDUITS
 - EM LIGHTING IN SLAB

CONSULTANTS

PATKAU ARCHITECTS
Prime Consultant

C.Y. LOH ASSOCIATES LTD.
Structural Engineer

D.W. THOMSON CONSULTANTS LTD.
Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

**NEWTON SENIORS
RECREATION CENTRE**
Surrey, British Columbia

DRAWING TITLE

**FLOOR PLAN
LIGHTING
POWER & LOW TENSION**

SCALE 1/8" = 1'-0"

DRAWN BY JF/EML/RHL/AAR/DNW

CHECKED BY DNW/RAD

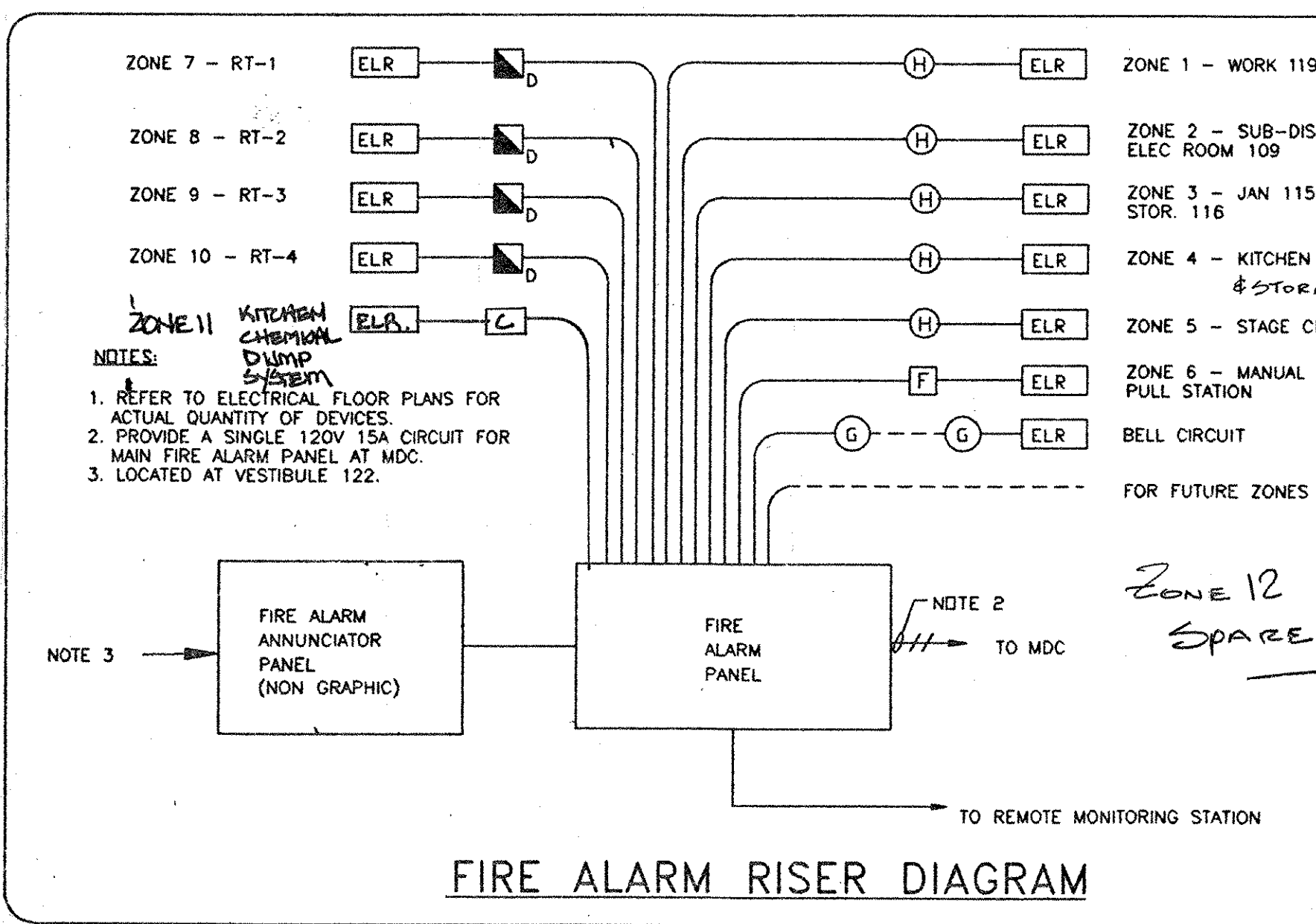
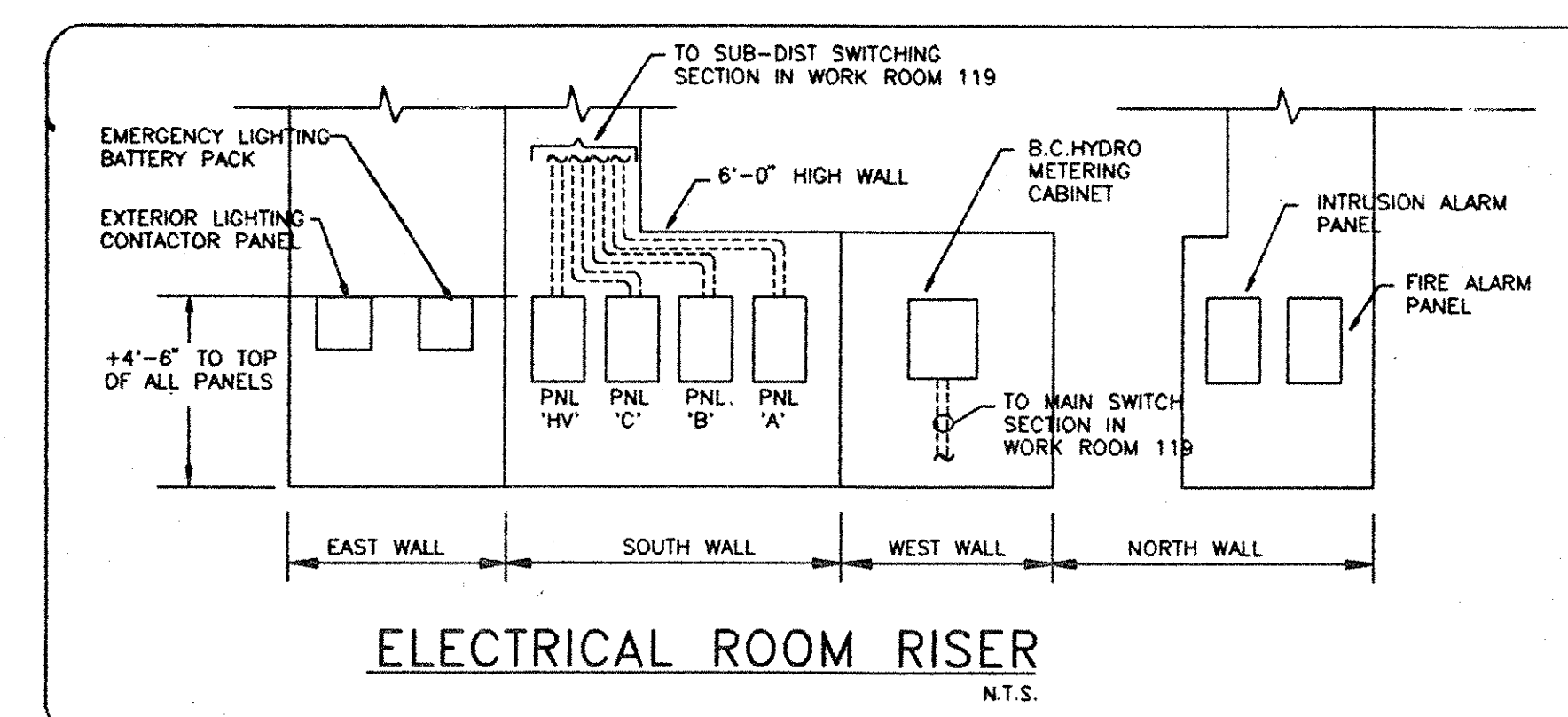
DATE 91.06.24

DWG NO. E2 of 3

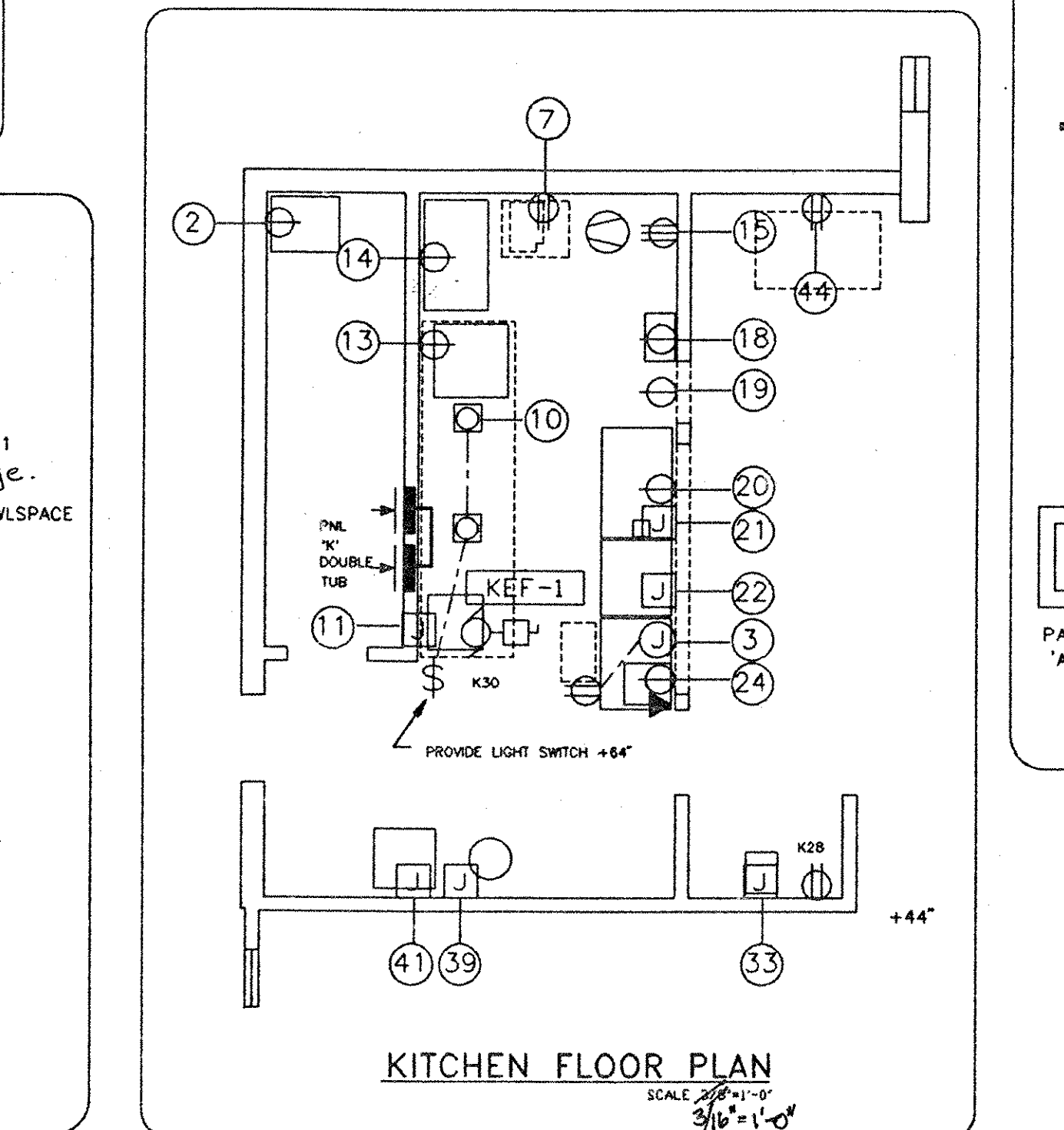
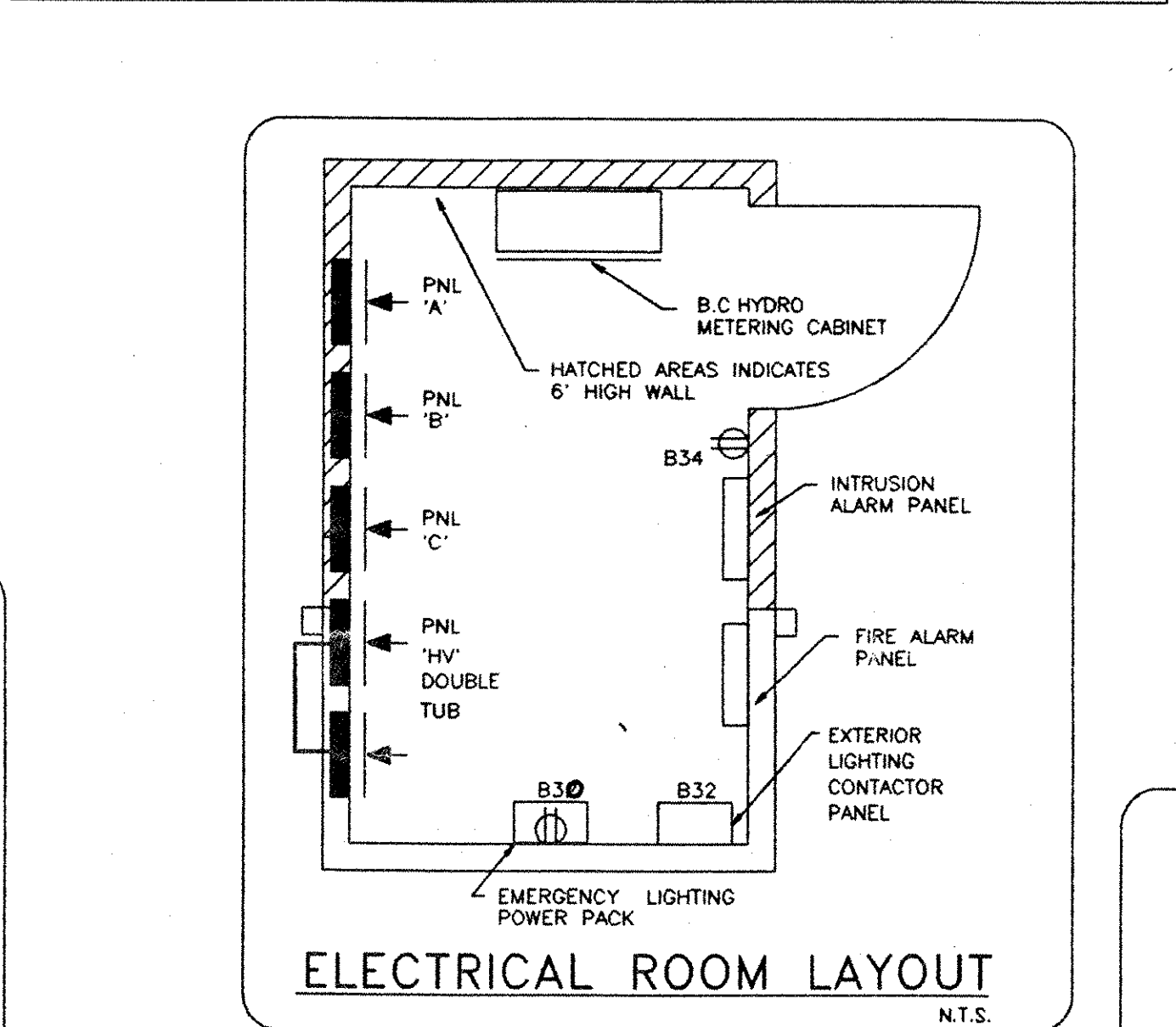
ORIGINAL

NOV - 6 1992

KITCHEN EQUIPMENT SCHEDULE									
EQUIP. NO.	DESCRIPTION	LOAD (H.P./KW/A)	CHARACT.	WIRE SIZE	CONN.	CCT NO(S)	MOUNTING	NOTES	
2	FREEZER	1/3 hp 7.5A	115/1/60	2 #12AWG R90	NEMA 5-15R	K13	+84"	1	
3	PLATE DISPENSER	1.1 KW	115/1/60	2 #12AWG R90	JUNC.	K15	+42"	1	
7	SLICER	1/4 hp	110/1/60	2 #12AWG R90	JUNC.	K17	+42"	1	
10	EXHAUST CANOPY	0.2A	115/1/60	2 #12AWG R90	JUNC.	K17	+42"	1	
11	STEAMER	23A	208/3/60	3 #10AWG R90	JUNC.	K13.5	LIGHTS +104"	1	
13	CONVECTION OVEN	1/3 hp 5.2A	120/1/60	2 #12AWG R90	NEMA 5-15R	K9	+12"	2	
14	COOKER	1/3 hp 8A	115/1/60	2 #12AWG R90	NEMA 5-15R	K11	+84"	1	
15	MIXER	1/8 hp 0.125KW	115/1/60	2 #12AWG R90	NEMA 5-15R	K8	+48"	1	
18	MICROWAVE OVEN	1.5KW 15A	120/1/60	2 #12AWG R90	NEMA 5-20R	K4	+58"	1	
19	COOLER	1/4 hp 5.0A	115/1/60	2 #12AWG R90	NEMA 5-15R	K6	+84"	1	
20	SANDWICH TABLE	1/4 hp	115/1/60	2 #12AWG R90	NEMA 5-15R	K14	+6"	1	
21	TOASTER	13.5A	208/1/60	2 #12AWG R90	JUNC.	K10.12	+6" TO COUNTER	1	
22	HOT FOOD TABLE	3 KW	208/1/60	2 #12AWG R90	JUNC.	K16.18	+6"	1	
24	CASH REGISTER		120/1/60	2 #12AWG R90	NEMA 5-15R	K22	+6"	1	
33	COFFEE/WATER URN	30A	120/208/1/60	4 #10AWG R90	JUNC.	K24.26	+44"	1	
39	PRE-RINSE/DISPOSER	1.5 hp	208/3/60	2 #12AWG R90	JUNC.	K23.25.27	+24"	1	
41	DISHMACHINE	9 KW 3 KW 42A	208/3/60	3 #8AWG R90	JUNC.	K17.19.21	+60.5"	1	
44	BANQUET CART	1.5KW 13.0A	120/1/60	2 #12AWG R90	NEMA 5-15P	K2	+12"	1	



PANELBOARD SCHEDULE				
PANEL	TYPE	FEEDER	BREAKERS	CIRCUITS
A	NBA42L3225	1.5'-4'-3AWG R90	36-15A SP 6-SPACES	1-36 37-42
B	NBA42L3225	1.5'-4'-3AWG R90	36-15A SP 7-SPACES	1-34.42 35-41
C	NBA42L3225	2'-4'-1AWG R90	32-15A SP 1-50A 2P 8-SPACES	1-12.14.16-34 13.15 35-42
HV	NBA42L3225	2.5'-4'-3AWG R90	40-15A 2P 1-15A 3P 9-20A 2P 40A 3P 8-SPACES	1.3.5.7.9.11.13.14.15.20.22.23.25.27 28.29.31.33 6.10.12 13-28.30.32 2.4.6.7.9.11.13.14.15.20.22.23.25.27 30.32.34
K	NBA42L3225	2.5'-4'-3 AWG R90	18-15A SP 1-15A 3P 1-20A 3P 2-20A 2P 1-30A 2P 1-50A 3P 49-SPACES	1-15A 3P 2-20A 2P 1-30A 2P 1-50A 3P 49-SPACES



EQUIPMENT SCHEDULE									
EQUIP. NO.	DESCRIPTION	LOCATION	HP OR KW OR AMP	CHARACTER	EQUIP. SUPPLY	DISC.	STARTER	CONTROL	
RT-1	ROOF TOP UNIT	MEETING/CRAFTS	53.0A	208/3/60	-	-	-	-	-
RT-2	ROOF TOP UNIT	CAFETERIA/LOUNGE	77.4A	208/3/60	-	-	-	-	-
RT-3	ROOF TOP UNIT	MULTIPURPOSE	145.0A	208/3/60	-	-	-	-	-
RT-4	ROOF TOP UNIT	BILLIARDS/OFFICE EAST	135.7A	208/3/60	-	-	-	-	-
KEF-1	EXHAUST FAN	KITCHEN	5.1A	208/3/60	-	-	-	-	-
EF-1	EXHAUST FAN	WASHROOMS	2.9A	208/3/60	-	-	-	-	-
EF-2	EXHAUST FAN	WORK ROOM	3.0A	120/1/60	-	-	-	-	-
EF-3	EXHAUST FAN	WORK ROOM	3.0A	120/1/60	-	-	-	-	-
ROP-1	RECIRC. PUMP	JANITOR ROOM	2.4A	120/1/60	-	-	-	-	-
BB-1	BASEBOARD HEATER	VESTIBULE 101/122	2.0KW	208/1/60	-	-	-	-	-
BB-2	BASEBOARD HEATER	WASHROOM 108/110	2.0KW	208/1/60	-	-	-	-	-
BB-3	BASEBOARD HEATER	UNDER FLOOR GRILL IN BUILDING PERIMETER	75KW	208/1/60	-	-	-	-	-
BB-4	BASEBOARD HEATER	UNDER FLOOR GRILL IN BUILDING PERIMETER	2.0KW	208/1/60	-	-	-	-	-

NOTES

'X' SHALL DENOTE RESPONSIBILITY OF DIVISION 16.
'-' SHALL DENOTE RESPONSIBILITY OF OTHERS OR NOT APPLICABLE.

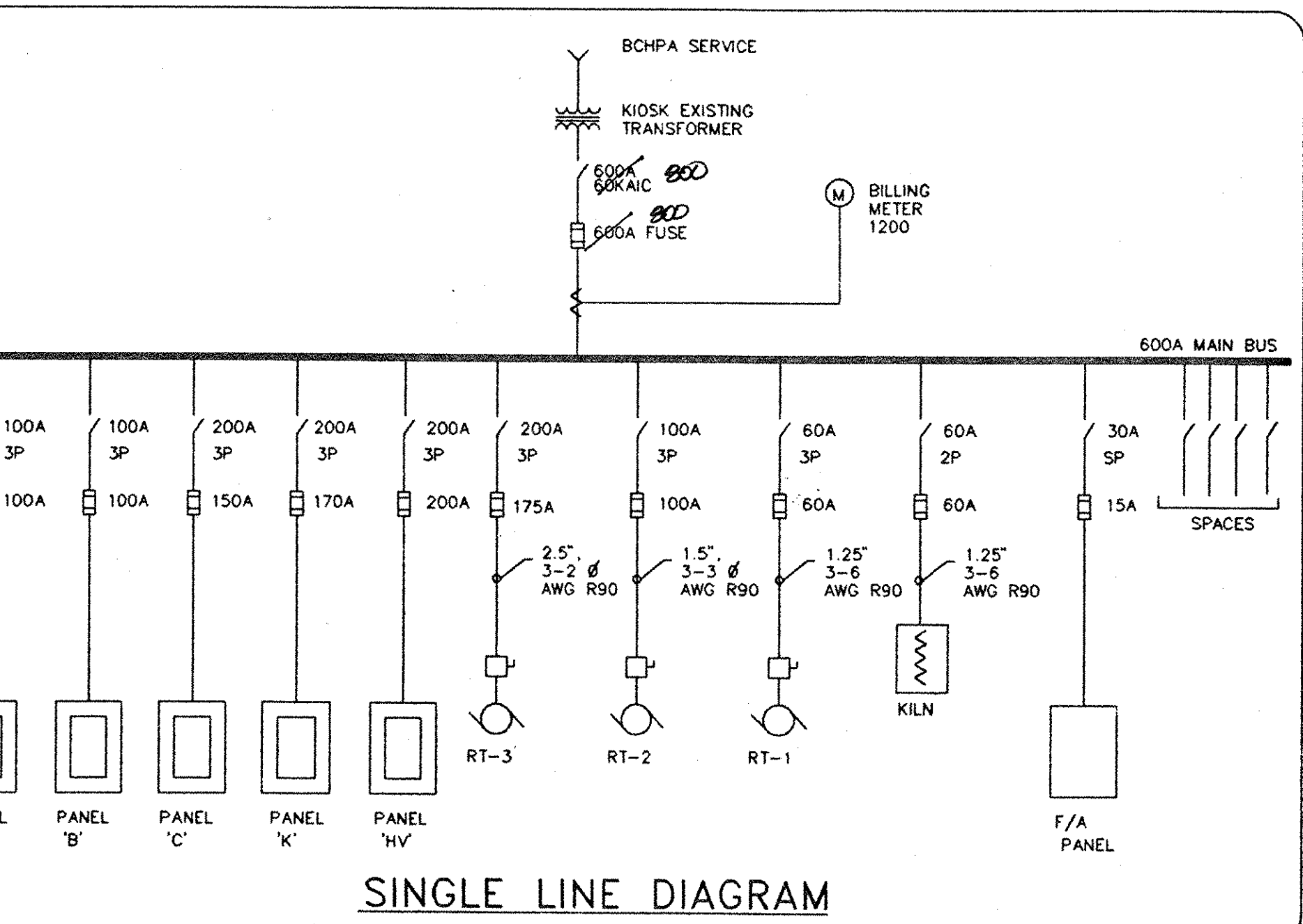
STARTER TYPES

TYPE A - MANUAL TYPE WITH BRUSHED STAINLESS STEEL FLUSH PLATE FOR INSTALLATION IN STANDARD SWITCHBOX.

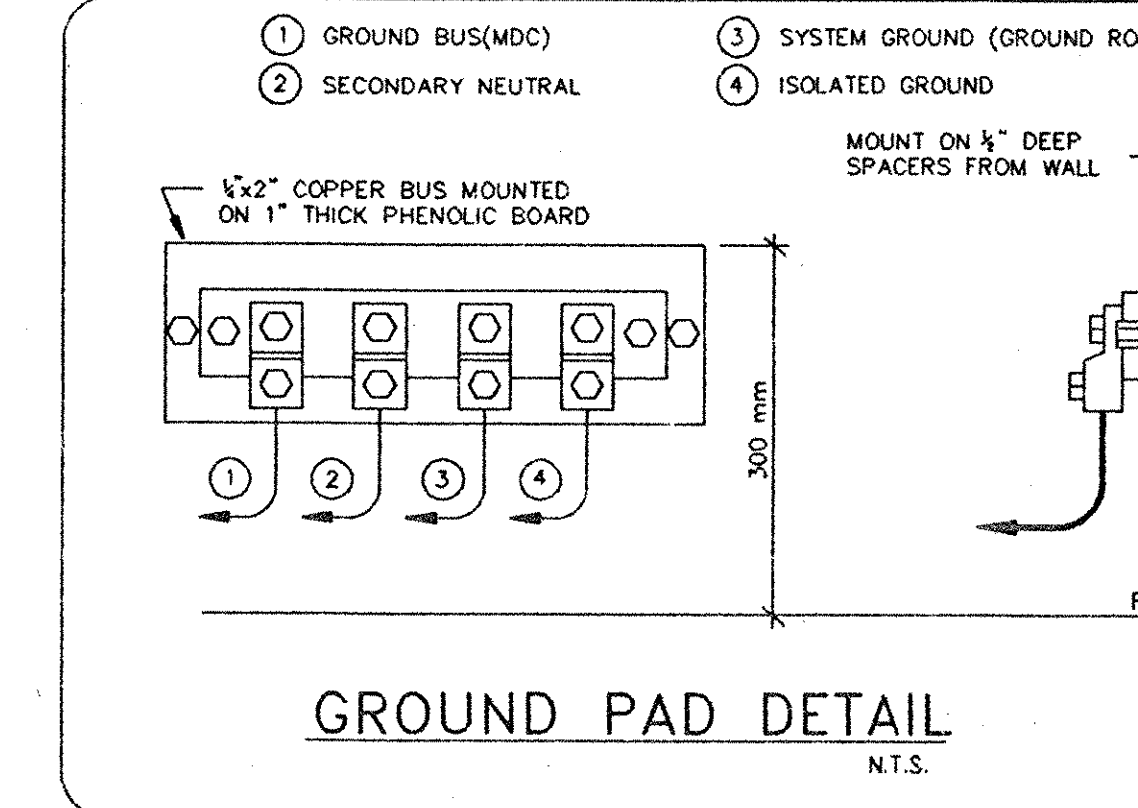
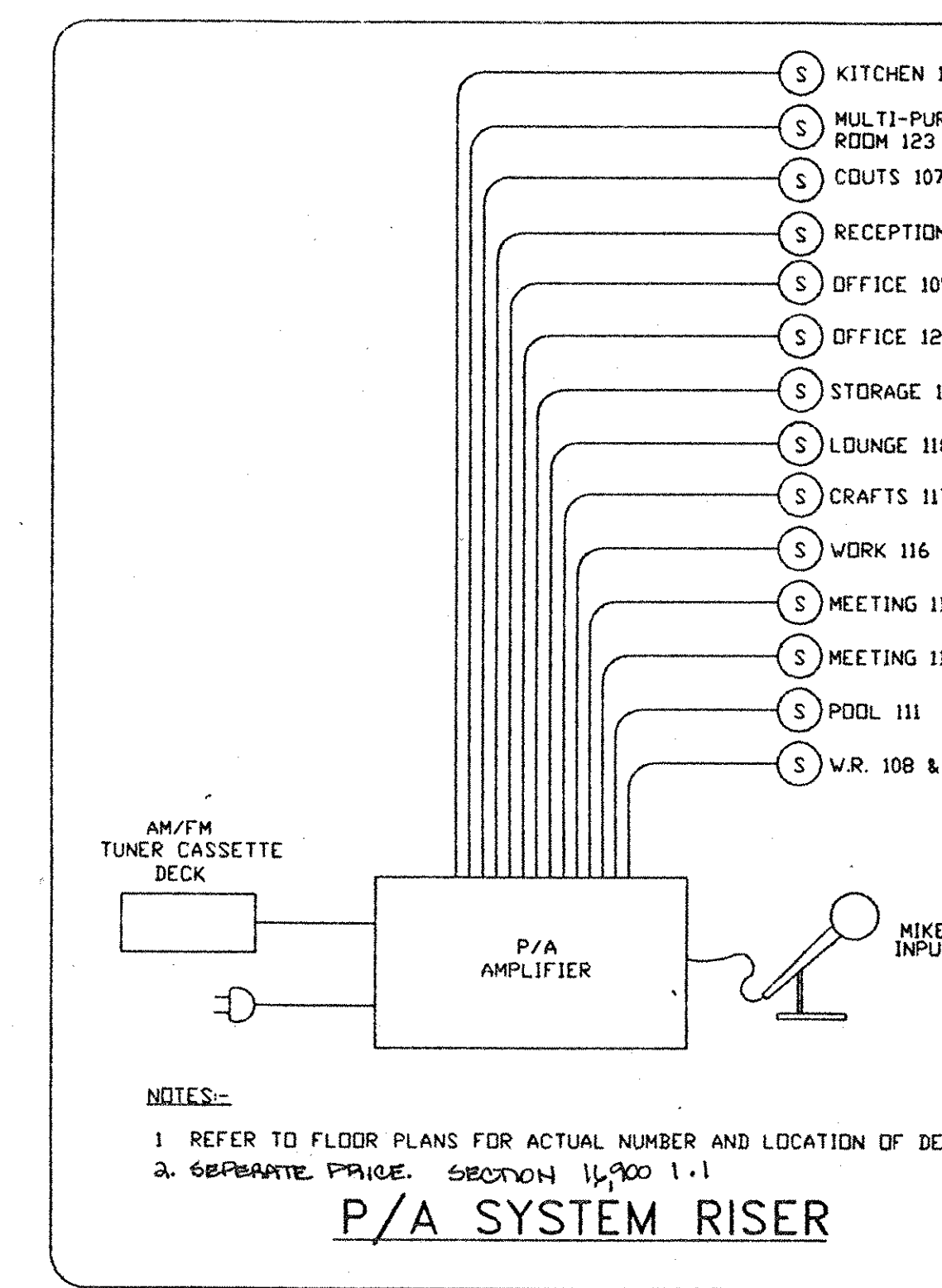
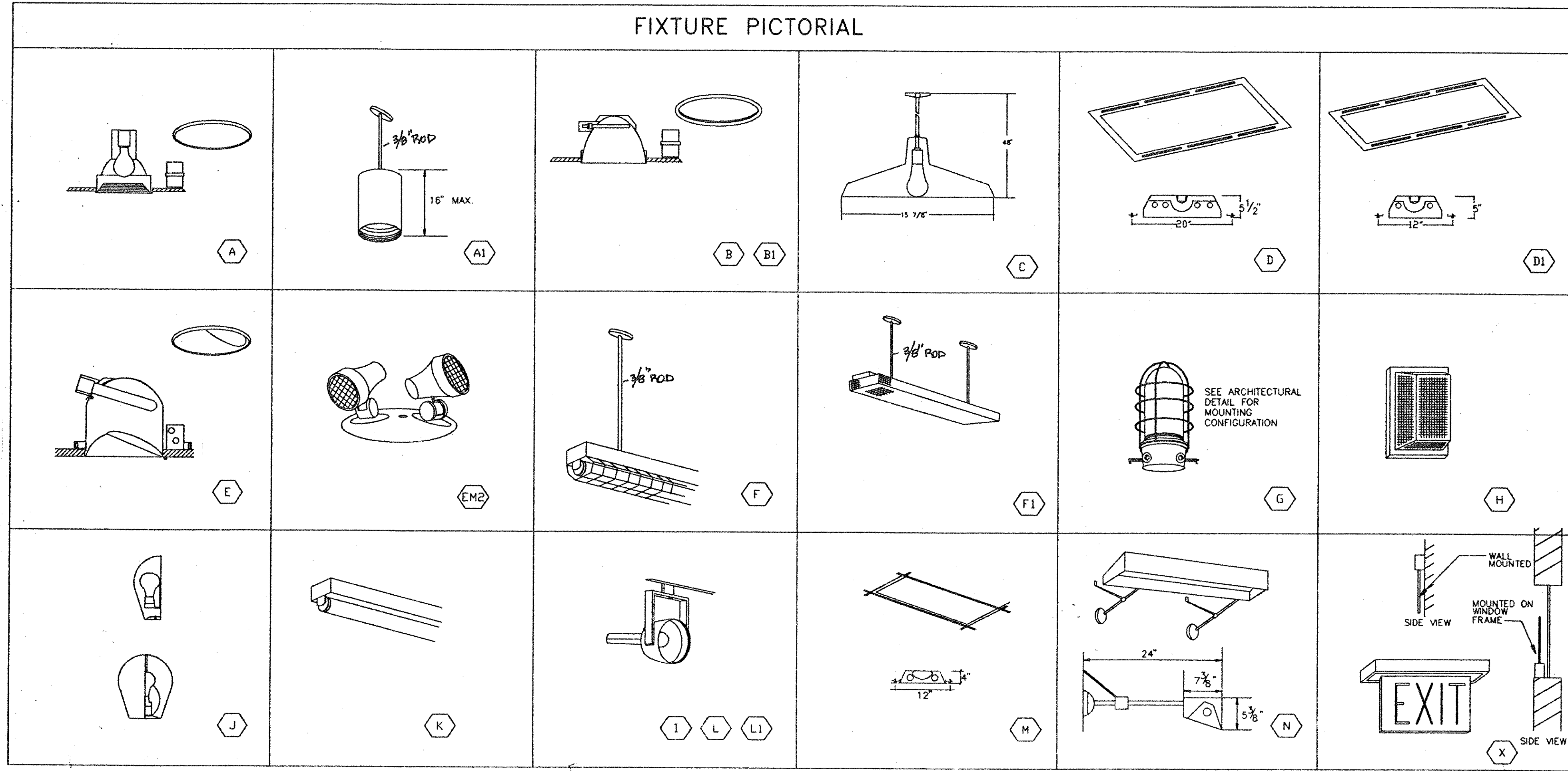
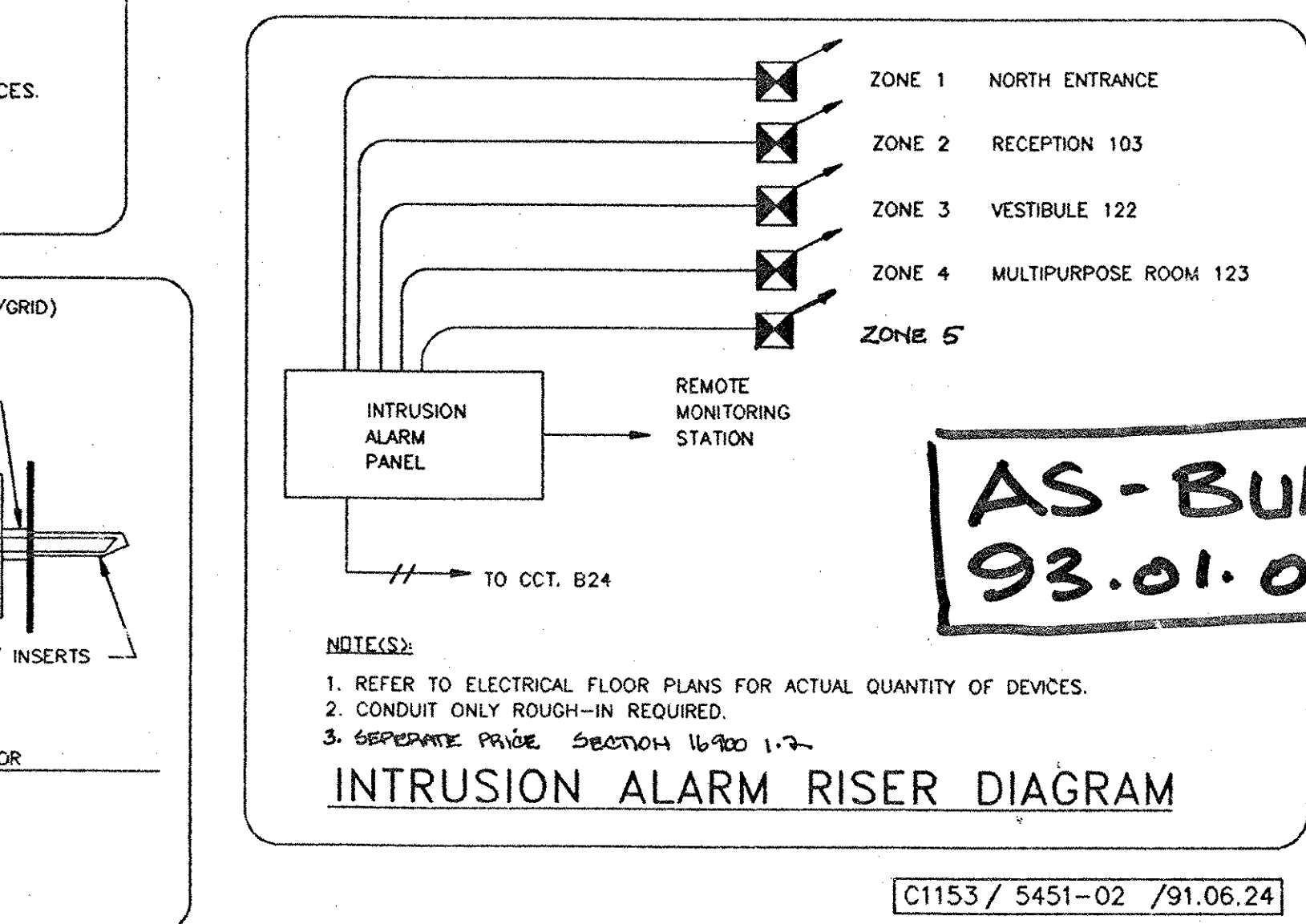
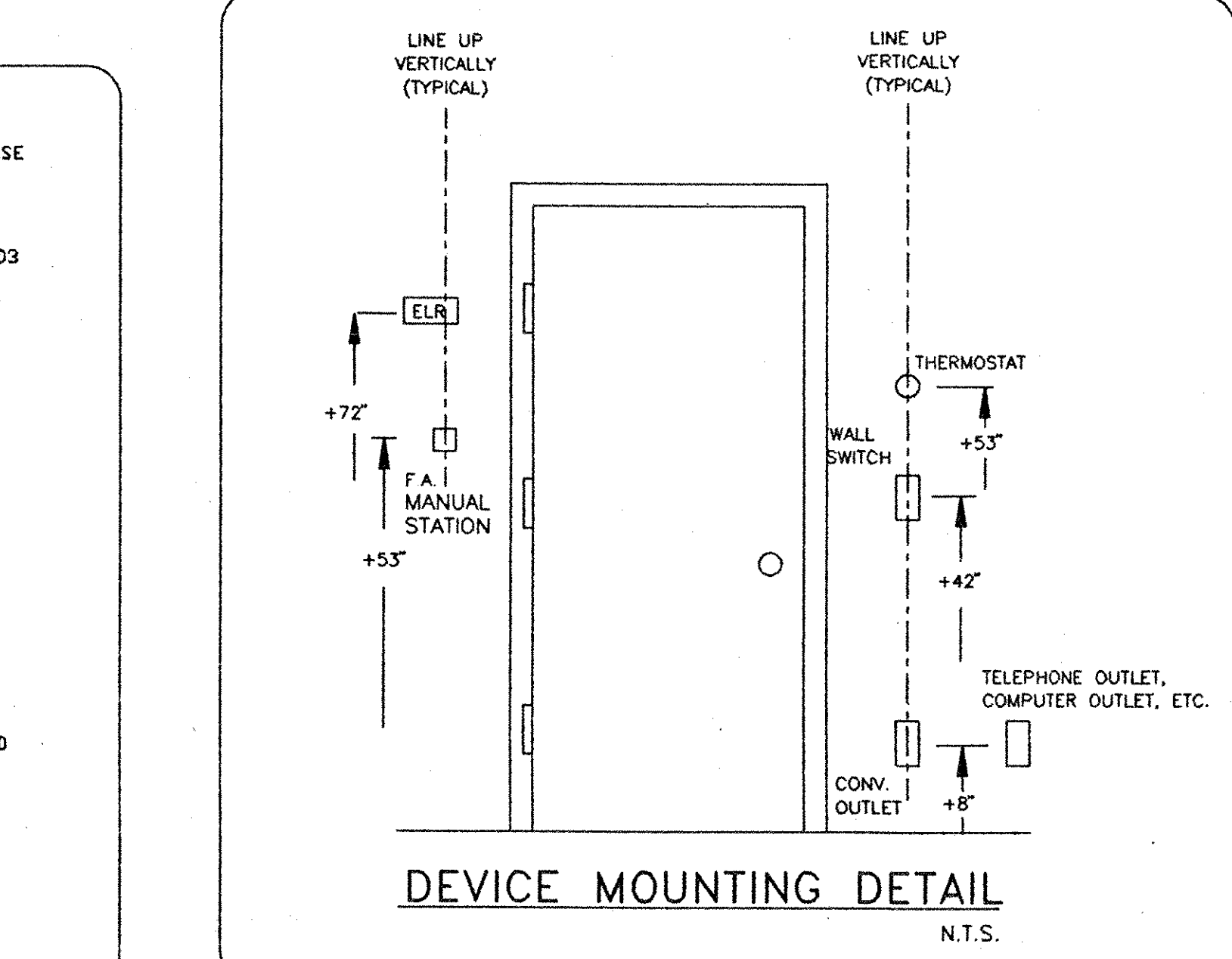
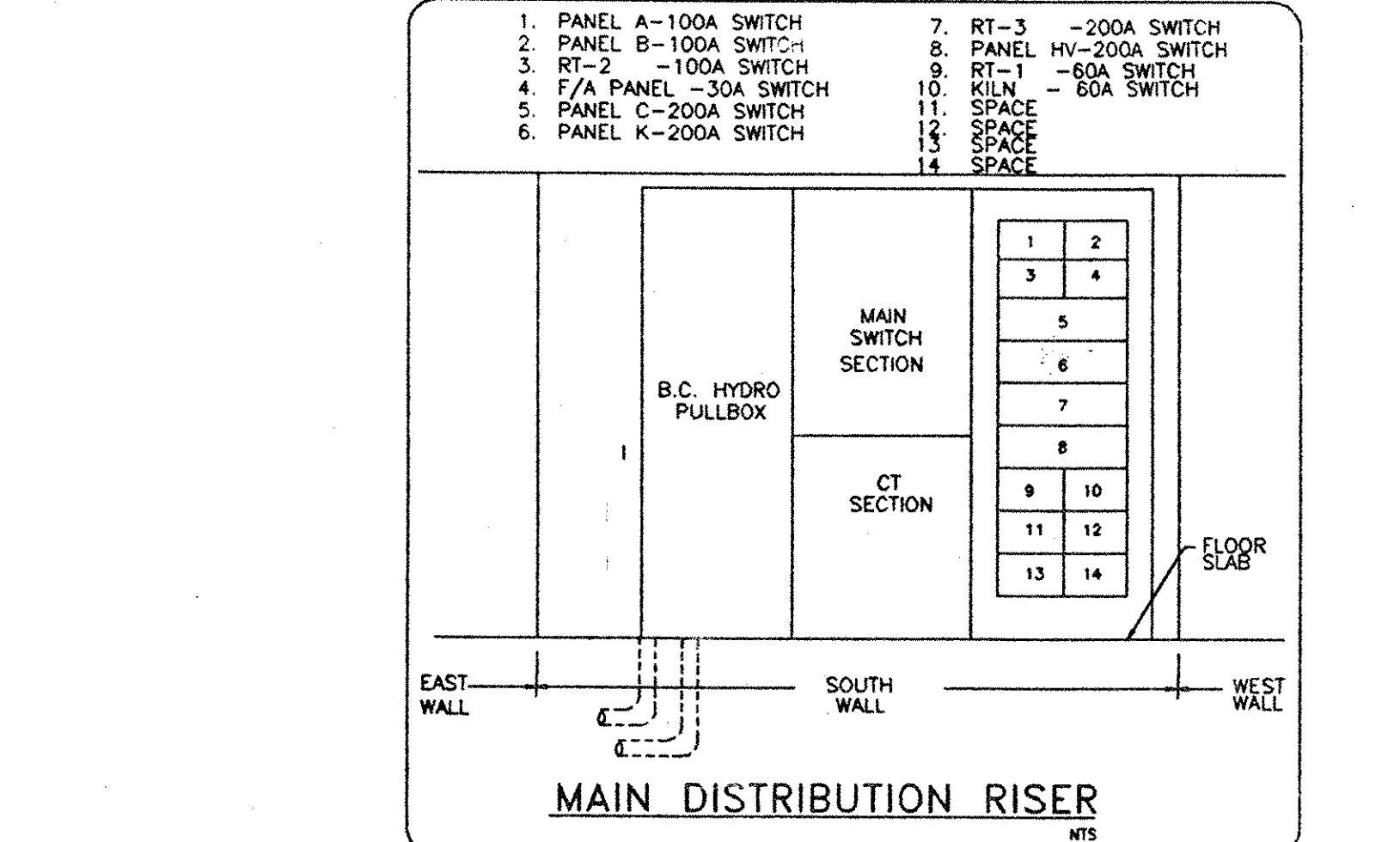
TYPE B - MANUAL IN GENERAL PURPOSE ENCLOSURE.

TYPE C - MAGNETIC IN GENERAL PURPOSE ENCLOSURE WITH 120/208 OR 240 VOLT HOLDING COILS, TWO SETS OF AUXILIARY CONTACTS AND HAND-OFF-AUTOMATIC SWITCHING.

1. CHROMALOX CAT. NO. WHC-2020 C/W INTEGRAL THERMOSTAT TO BE WIRE AND INSTALL BY DIV. 16.
2. CHROMALOX CAT. NO. CKM20-C 2000W (RECESSED IN BULKHEAD) C/W THERMOSTAT IN VERTICAL SPACE OF BULKHEAD, ALL WIRING (CONTROL AND POWERED BY DIV. 16).
3. CHROMALOX CAT. NO. FD-5075
4. CHROMALOX CAT. NO. FD-6220
5. INTERLOCK WITH ROOF TOP UNIT OR AIR VALVE. PROVIDE RELAYS AS REQUIRED FOR CONNECTION TO ROOF TOP UNITS OR AIR VALVE.
DIV. 15 TO CONNECT CONTROL WIRING.
6. ON SPEED SWITCH DIV. 15 TO SUPPLY DIV. 16 TO INSTALL AND CONNECT AS PER CONTROL REQUIREMENTS SET BY DIV. 15.
7. PROVIDE ON/OFF SWITCH DIV. 16 TO INSTALL AND CONNECT AS PER CONTROL REQUIREMENTS SET BY DIV. 15.
8. ROOF TOP UNIT PACKAGE IS C/W STARTERS. CONTROL WIRING TO BE BY DIV. 15.



FIXTURE SCHEDULE						
TYPE	MANUFACTURER	CATALOG	MOUNTING	MOUNTING HEIGHT	LENS	LAMPS
A	LITHONIA	RL5 LH100M	RECESSED	CEILING	FRESNEL	100W M.H.
A1	WE SLITE	ML447-B-8-10-120V-16	STEM	CEILING	FRESNEL	100W M.H.
B	HALO	H800-HP-810BA	RECESSED	CEILING	---	2-F13W
B1	HALO	H801-HP-810BA	RECESSED	CEILING	---	2-28WOTT
C	WE SLITE	MLR-76116	CABLE	CEILING	---	150W A19
D	CAM	SG A2-MFA02A	RECESSED	CEILING	ACRYLIC K19	4-F40WW
D1	CAM	TGF-1924-4	RECESSED	CEILING	ACRYLIC K19	2-F40WW
E	HALO	H7692-C	RECESSED	CEILING	---	2-9W
EM2	READY-LITE	RO-2	SURFACE	CEILING	---	2-12W QUARTZ
F	KEYSTONE	CS 240-HPF	STEM	SLOPE	WIREGUARD	2-F40 WW
F1	CAM	PWA-7124-4-120L	SURFACE	CEILING	ACRYLIC	2-F40 WW
G	NOMA	VAKS 100CG	SEMI	WALL/ ON	WIREGUARD	100W A19
H	ADI	224	SURFACE	WALL	PRISMATIC	100W A19
I	LIGHTOLIER	6282	SURFACE	CEILING	---	75W PAR30(H)
J	HALO	H2491	SURFACE	WALL	GLASS	75W A19
K	C & M	6048C-HPF	SURFACE	CEILING	---	1-F40 WW
L	LIGHTOLIER	6280	SURFACE	CEILING	---	150WPAR38 SP
L1	LIGHTOLIER	55215WH	SURFACE	CEILING	---	250WPAR38SP(H)
M	CAM	TGF-6944-4	RECESSED	CEILING	ACRYLIC K19	2-F40 WW
N	PEERLESS	CBAW68-248	SURFACE	WALL	---	2-F40 WW
X	MEPHILBEN	45ARW-6F	SURFACE	SEE	ACRYLIC	2-8W T5



NOTES

ISSUED FOR TENDER JUNE 26, 1991

REVISIONS

SEALS

CONSULTANTS

PATKAU ARCHITECTS
Prime Consultant

C.Y.LOH ASSOCIATES LTD.
Structural Engineer

D.W.THOMSON CONSULTANTS LTD.
Mechanical Engineer

R.A.DUFF & ASSOCIATES INC.
Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

NEWTON SENIORS RECREATION CENTRE
Surrey, British Columbia

NOVA CONSTRUCTION LTD.
LAUG 17 1992

RECEIVED

DRAWING TITLE

DETAILS & SCHEDULES

AS-BUILT
93.01.07

SCALE 1/8" = 1'-0"

DRAWN BY JF/EML/RHL/DNW/AAR

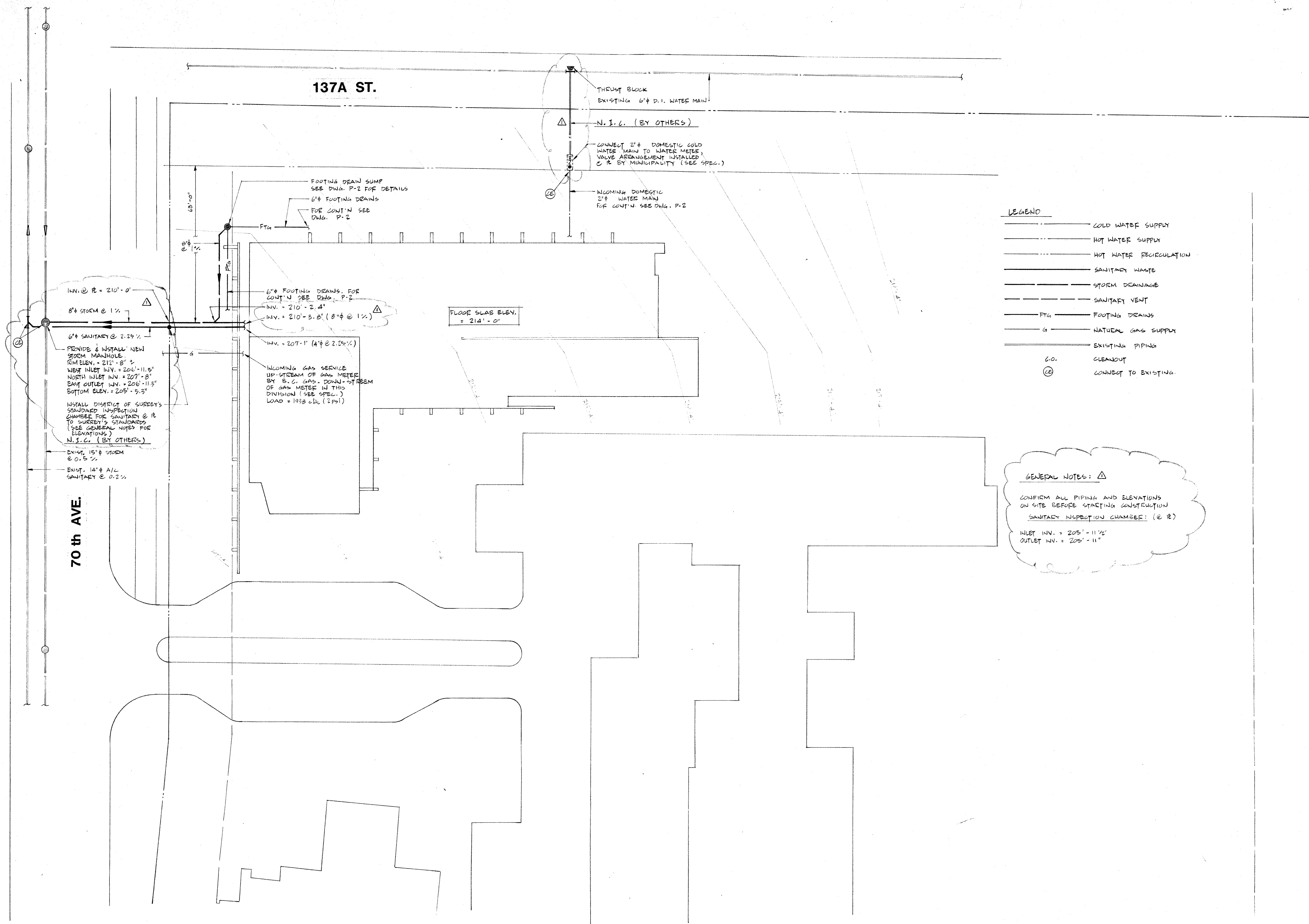
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DATE 91.05.24

DWG NO E3 of 3

ORIGINAL

NOV - 6 1992



LEGEND

—	COLD WATER SUPPLY
—	HOT WATER SUPPLY
—	HOT WATER RECIRCULATION
—	SANITARY WASTE
—	STORM DRAINAGE
—	SANITARY VENT
—	FTG — FOOTING DRAINS
—	G — NATURAL GAS SUPPLY
—	EXISTING PIPING
G.O.	CLEANOUT
Ⓢ	CONNECT TO EXISTING

△ COLD WATER MAIN, STORM & SANITARY CONNECTIONS & ELEVATIONS - JULY 19 '91

REVISIONS

SEALS

CONSULTANTS

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Prime Consultant

C.Y. LOH ASSOCIATES LTD.
Structural Engineer

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Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

**NEWTON
SENIORS
RECREATION FACILITY**
Surrey, British Columbia

DRAWING TITLE

**SITE PLAN
PLUMBING**

SCALE 1/16" = 1' - 0"

DRAWN BY *Jim*

CHECKED BY A.E.H.

DATE JUNE 26 1991

DWG NO

P-1

KITCHEN EQUIPMENT SCHEDULE

ITEM No.	DESCRIPTION	SUPPLY REQUIREMENTS	DRAINAGE REQUIREMENTS
1	CONVECTION OVEN	NATURAL GAS 80 cfm 3/4"	
2	RANGE	NATURAL GAS 364 cfm 1 1/4" → 3/4"	
3	STEAMER	1/2" HOT & 1/2" COLD	2" HUB DRAIN THROUGH 2" VENT
4	HAND BASIN	1/2" HOT & 1/2" COLD	1 1/2" SANITARY THROUGH 1 1/2" VENT
5	DISHMACHINE	3/4" HOT	2" SANITARY THROUGH 2" VENT
6	PRE-RINSE DISPOSER	1/2" HOT & 3/4" COLD	2" SANITARY THROUGH 2" VENT
7	SINK/DISHTABLE	1/2" HOT & 1/2" COLD	2" SANITARY THROUGH 2 1/2" VENT THROUGH ROOF
8	SINK/FAUCET	1/2" HOT & 1/2" COLD	2" SANITARY THROUGH 2" VENT
9	COFFEE/WATER URN	1/2" COLD	2" HUB DRAIN THROUGH 2" VENT

THIS TABLE IS INTENDED TO DESCRIBE THE CONNECTIONS REQUIRED FOR EACH PIECE OF EQUIPMENT. THE EQUIPMENT SHALL BE SUPPLIED & INSTALLED BY OTHERS.

GENERAL NOTES: #1

- CO-ORDINATE ROOF DRAINING & ROOF DRAIN LOCATION WITH ARCHITECT.
- 2" SANITARY INV. @ 210'-0" (210'-0" - 210'-0")
- 6" STORM INV. @ 210'-0" (210'-0" - 210'-0")
- INSTALL FOOTING DRAIN CLEAN-OUTS (C.O.) IN SOFT LANDSCAPING WHERE EVER POSSIBLE
- FOR ROOF DRAIN TYPE 'B' PROVIDE 3/4" R.W. AS CLOSE TO CORNER AS POSSIBLE
- FOR IRRIGATION VALVE BOXES PROVIDE 2" W x 2' L x 2' D OF REMOVABLE WOODEN COVER AND CONSTRUCTED ALL OF TREATED WOOD. INSTALL VALVE BOX IN A MANNER THAT WILL ALLOW EASY ACCESS TO THE VALVE FROM FINISHED SURFACE
- 4" R.D. 'A' R.W. BELOW
- 6" FTG (TYPICAL)
- 4" R.W.

GENERAL - JULY 18 '91

REVISIONS

SEALS

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Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

NEWTON
SENIORS
RECREATION FACILITY
Surrey, British Columbia

FILE NO Ref: 10

DRAWING TITLE

FLOOR PLAN
PLUMBING

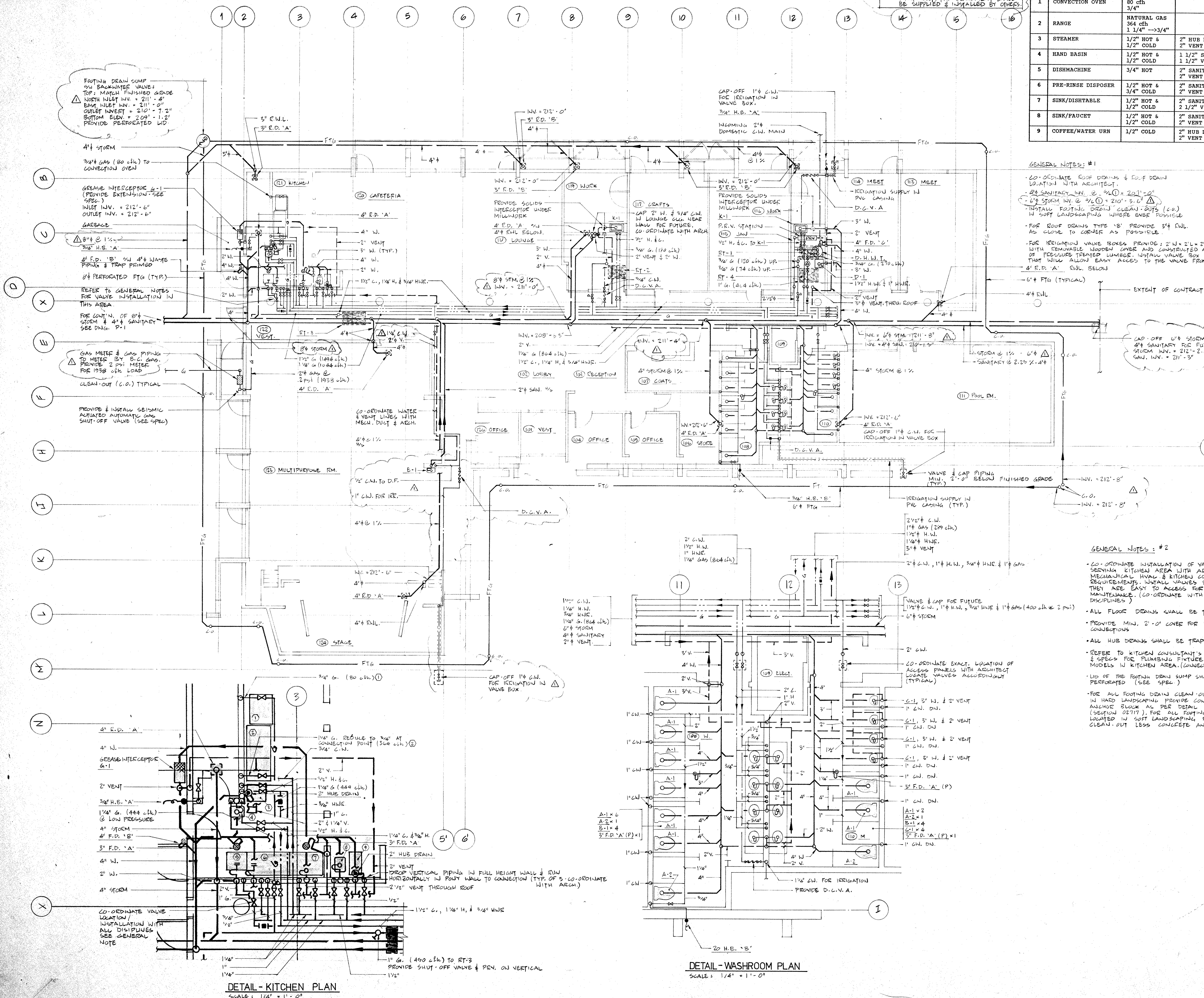
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DRAWN BY J.M.

CHECKED BY A.E.H.

DATE JUNE 26, 1991

DWG NO

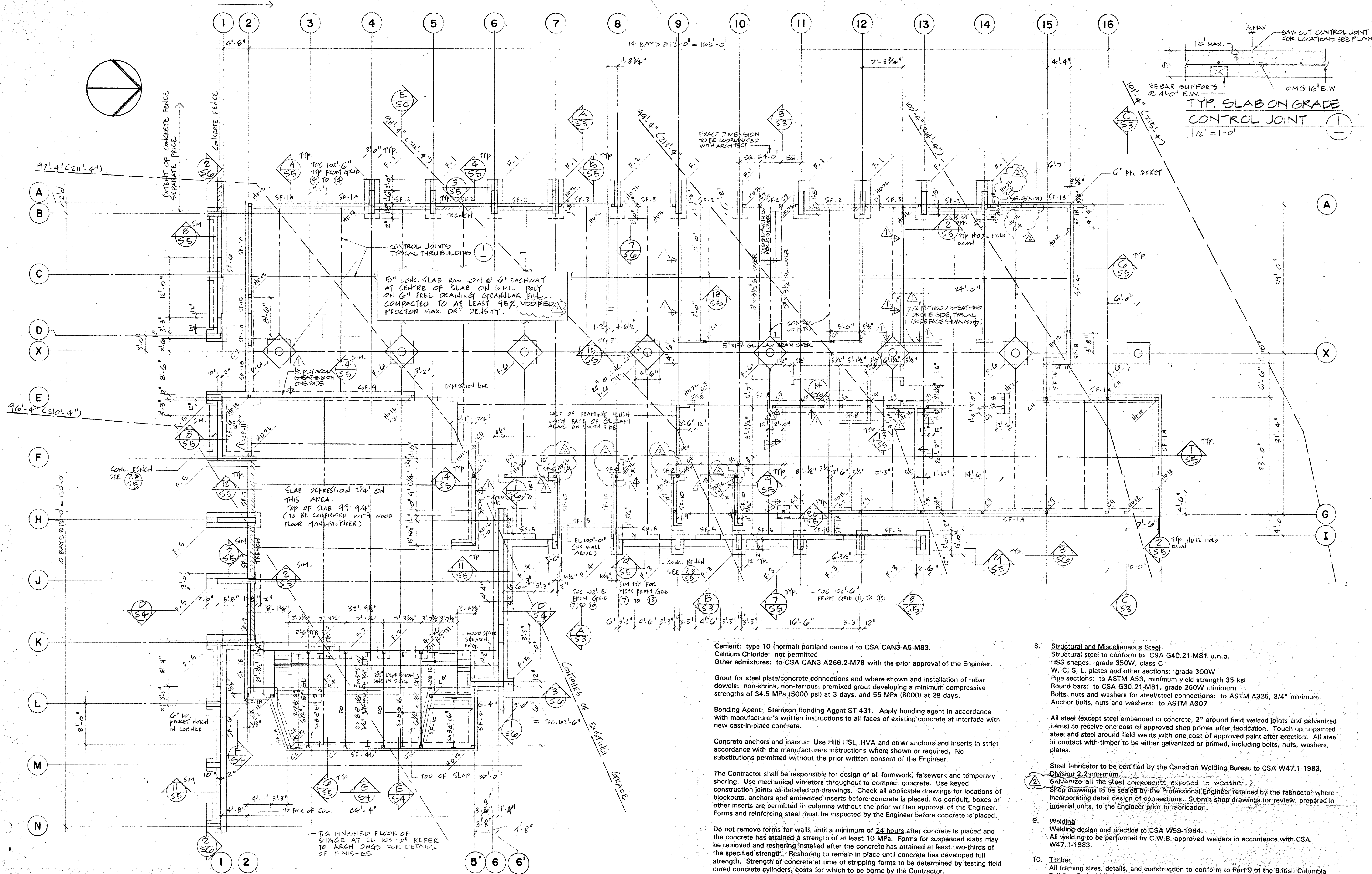


DETAIL - WASHROOM PLAN

SCALE: 1/4" = 1'-0"

DETAIL - KITCHEN PLAN

SCALE: 1/4" = 1'-0"



NOTES

- TOP OF SLAB EL 100'-0" REPRESENTS EL 24'-0" ON SITE PLAN. ALL FOOTINGS MUST BEAR ON UNDISTURBED NATIVE TILL.
- FOR LOCATIONS OF INTERIOR WALL NOT DIMENSIONED SEE ARCHITECTURAL DRAWINGS.
- MINIMUM FOOTING DEPTH IS 2'-0" FROM FINISHED GRADE FOR FROST PROTECTION.
- USE 2"x6" @ 16" STUDS FOR ALL INTERIOR WALLS NOT DIMENSIONED. PROVIDE SLAB THICKENING UNDER WHERE FOOTING NOT SHOWN.
- WHERE NOT SHOWN, THE LOCATIONS OF BUILT-UP POST SHALL CONFORM TO BEAM LOCATIONS ABOVE.
- USE HOLD-DOWN ANCHERS AT ENDS OF PLYWOOD-FACED STUD WALLS AND WHERE SHOWN (HD) COUNTERSINK BOLT HEAD FLUSH AT ENDS OF WALLS AS REQ'D.

BUILT-UP COLUMN SCHEDULE

TYPE	MEMBER	TYPE	MEMBER
C1	3-2x6	C7	4-2x8
C2	4-2x6	C8	5-2x8
C3	5-2x6	C9	6-2x8
C4	6-2x6	C10	7-2x8
C5	8-2x6	C11	13-2x8
C6	13-2x6		

REVISIONS

ISSUED FOR TENDER	JUNE 26/91
ADDENDUM NO. 1	JULY 10/91
ADDENDUM NO. 2	JULY 25/91

SEALS

CONSULTANTS

PATKAU ARCHITECTS
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C.Y. LOH ASSOCIATES LTD.
Structural Engineer

D.W. THOMSON CONSULTANTS LTD.
Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

NEWTON
SENIORS
RECREATION FACILITY
Surrey, British Columbia

FILE NO 9264 Rev 02

DRAWING TITLE

FOUNDATION / GROUND FLOOR
PLAN & GENERAL NOTES

SCALE 1/8" = 1'-0"

DRAWN BY P.L.

CHECKED BY CCY

DATE JUNE 26, 1991

DWG NO

S1/2

GENERAL NOTES

- This structure has been designed in accordance with the British Columbia Building Code 1985 (BCBC) including the design for seismic forces.
- Read structural drawings together with architectural, mechanical and other drawings for detail dimensions, locations of door and window openings, duct work, recesses, inserts and other items. In the event of discrepancies between drawings, the more stringent requirements shall be followed.
- Observe and enforce all construction safety measures required by the British Columbia Building Code 1985, Part 8, the Worker's Compensation Board and local building by-laws. Employ a qualified professional specialty Engineer registered in B.C. for the design of all false work and temporary support of all structural elements, earth banks, roads, etc. It is the sole responsibility of the Contractor to ensure that no part of the work is subjected to a load which endangers the safety of the building or workers. Use temporary bracing where necessary to support all loads to which structure may be subjected, including erection equipment and construction operations.
- Design Live Loads**
Ground snow load 44 psf
Roof snow load 35.2 psf
(plus snow build-up to BCBC 1985 where applicable)
Slabs on grade 150 psf
Basic wind pressure (1:30 probability) 11.5 psf
- Foundations**
Foundation design based on the geotechnical report prepared by Terra Engineering Ltd. dated August 8, 1990 (File No. 901-806). Contractor to conform to all recommendations contained in the geotechnical report.

Allowable soil bearing pressure for spread footings bearing on undisturbed native dense silt till: 150 kPa (3.13 ksf). Refer to geotechnical report for anticipated depths of bearing stratum.

Minimum depth of footings for frost cover: 2'-0" (600mm)
At changes in elevation of bearing stratum or grade, slope footings at 2H:1V maximum.

- Protect native soils from softening and frost. Remove all softened or frost damaged soils prior to placing of reinforcement and concrete. Immediately following excavation provide a 2" ground seal of lean concrete to protect the soil from softening. Ground seal is not included in footing depth.

Provide adequate means of removing water from excavations and trenches. Formwork and excavations to be free of water prior to and during concrete placement.

Soil conditions must be inspected by the Geotechnical Engineer to verify the conditions and confirm the allowable soil bearing pressure after excavation and prior to construction of formwork for footings and walls.

Provide a minimum of 8" (200mm) of free draining gravel below all interior and exterior slabs on grade on prepared sub-base. Compact to at least 95% Modified Proctor maximum density (ASTM D1557).

Do not backfill behind cantilever retaining walls until concrete has attained 28 day compressive strength.
- Concrete**
Provide concrete and perform work to CAN/CSA-A23.1-M90. Test concrete to CAN/CSA-A23.2-M90.
Concrete mix types:
A Exterior slabs, driveways, and other surfaces subject to de-icing salts
B Footings, interior slab on grade, other concrete.
C Concrete walls, all concrete exposed to view.

Properties of mixes:
Mix type
Minimum compressive strength at 28 days
Nominal size of coarse aggregate
Exposure classification
Air entrainment (Add Air-entraining agent)
Slump, before superplasticizer added (±20mm)
Superplasticizer
yes
yes
yes

A 35 MPa
20mm
C-1
5-8
80mm
yes
A 25 MPa
20mm
C-1
4-7
80mm
opt
yes
C 30 MPa
10mm
C-1
4-7
80mm
yes
yes

- Cement:** type 10 (normal) portland cement to CSA CAN3-A5-M83.
Calcium Chloride: not permitted
Other admixtures: to CSA CAN3-A266.2-M78 with the prior approval of the Engineer.

Grout for steel plate/concrete connections and where shown and installation of rebar dowels: non-shrink, non-ferrous, premixed grout developing a minimum compressive strengths of 34.5 MPa (5000 psi) at 3 days, and 55 MPa (8000) at 28 days.

Bonding Agent: Sternson Bonding Agent ST-431. Apply bonding agent in accordance with manufacturer's written instructions to all faces of existing concrete at interface with new cast-in-place concrete.

Concrete anchors and inserts: Use Hilti HSL, HVA and other anchors and inserts in strict accordance with the manufacturers instructions where shown or required. No substitutions permitted without the prior written consent of the Engineer.

The Contractor shall be responsible for design of all formwork, falsework and temporary shoring. Use mechanical vibrators throughout to compact concrete. Use keyed construction joints as detailed on drawings. Check all applicable drawings for locations of blockouts, anchors and embedded inserts before concrete is placed. No conduit, boxes or other inserts are permitted in columns without the prior written approval of the Engineer. Forms and reinforcing steel must be inspected by the Engineer before concrete is placed.

Do not remove forms for walls until a minimum of 24 hours after concrete is placed and the concrete has attained a strength of at least 10 MPa. Forms for suspended slabs may be removed and reshoring installed after the concrete has attained at least two-thirds of the specified strength. Reshoring to remain in place until concrete has developed full strength. Strength of concrete at time of stripping forms to be determined by testing field cured concrete cylinders, casts for which to be borne by the Contractor.
- Reinforcing Steel**
Use new deformed reinforcing bars conforming to CSA G30.12-M77, grade 400. Welded wire fabric to CSA G30.5-M1983. Place reinforcing steel to CAN/CSA-A23.1-M90.

Clear cover to reinforcement (unless noted otherwise):
3" surfaces of concrete cast against the ground
2" formed surfaces exposed to earth or weather
1 1/2" surfaces of beams and columns
3/4" surfaces of slabs, interior surfaces of walls

Splice reinforcement as follows (unless noted otherwise):
Bar size 10M 15M 20M 25M 30M 35M
Lap splice 17" 24" 30" 50" 70" 100"
Horizontal wall steel 30 x bar diameter
Welded wire mesh 12 inches
Stagger vertical and horizontal splices in walls.

All concrete to be reinforced. Minimum reinforcement for walls, curbs, including planters, architectural concrete and all other concrete not detailed: 15M @ 12" each way with matching dowels to all adjacent concrete elements.

Slabs on grade (interior and exterior): 152.4 x 152.4 MW13.3xMW13.3 welded wire mesh or 10M @ 16" E.W. placed at centre of slab. Provide supports at maximum 4'-0" o.c. each way and tie every third bar intersection.

Unless noted provide:
Corner bars to match horizontal wall reinforcement at wall intersections.
Dowels in footings to match vertical wall and column reinforcement. Dowels between adjacent concrete elements to match vertical and horizontal reinforcement.
Two 15M bars at the ends and tops of walls.
Two 15M bars around all wall and slab openings, extending 24" beyond edges.
Two 15M x 5'-0" long diagonal bars at corners of openings. Place at centre of wall or slab.
Provide nonferrous bolsters and all necessary carry bars required to maintain reinforcement in proper position.

Provide 500 kg of 15M bars, bent or straight to be used at the direction of the Engineer.

- Structural and Miscellaneous Steel**
Structural steel to conform to CSA G40.21-M81 u.n.o.
HSS shapes: grade 350W, class C
W, C, S, L plates and other sections: grade 300W
Pipe sections: to ASTM A53, minimum yield strength 35 ksi
Round bars: to CSA G30.21-M81, grade 260W minimum
Bolts, nuts and washers for steel/steel connections: to ASTM A325, 3/4" minimum.
Anchor bolts, nuts and washers: to ASTM A307

All steel (except steel embedded in concrete, 2" around field welded joints and galvanized items) to receive one coat of approved shop primer after fabrication. Touch up unpainted steel and steel around field welds with one coat of approved paint after erection. All steel in contact with timber to be either galvanized or primed, including bolts, nuts, washers, plates.

Steel fabricator to be certified by the Canadian Welding Bureau to CSA W47.1-1983, Division 2.2 minimum.
Galvanize all the steel components exposed to weather.
Shop drawings to be sealed by the Professional Engineer retained by the fabricator where incorporating detail design of connections. Submit shop drawings for review, prepared in Imperial units, to the Engineer prior to fabrication.
- Welding**
Welding design and practice to CSA W59-1984.
All welding to be performed by C.W.B. approved welders in accordance with CSA W47.1-1983.
- Timber**
All framing sizes, details, and construction to conform to Part 9 of the British Columbia Building Code 1985 unless noted or detailed otherwise.

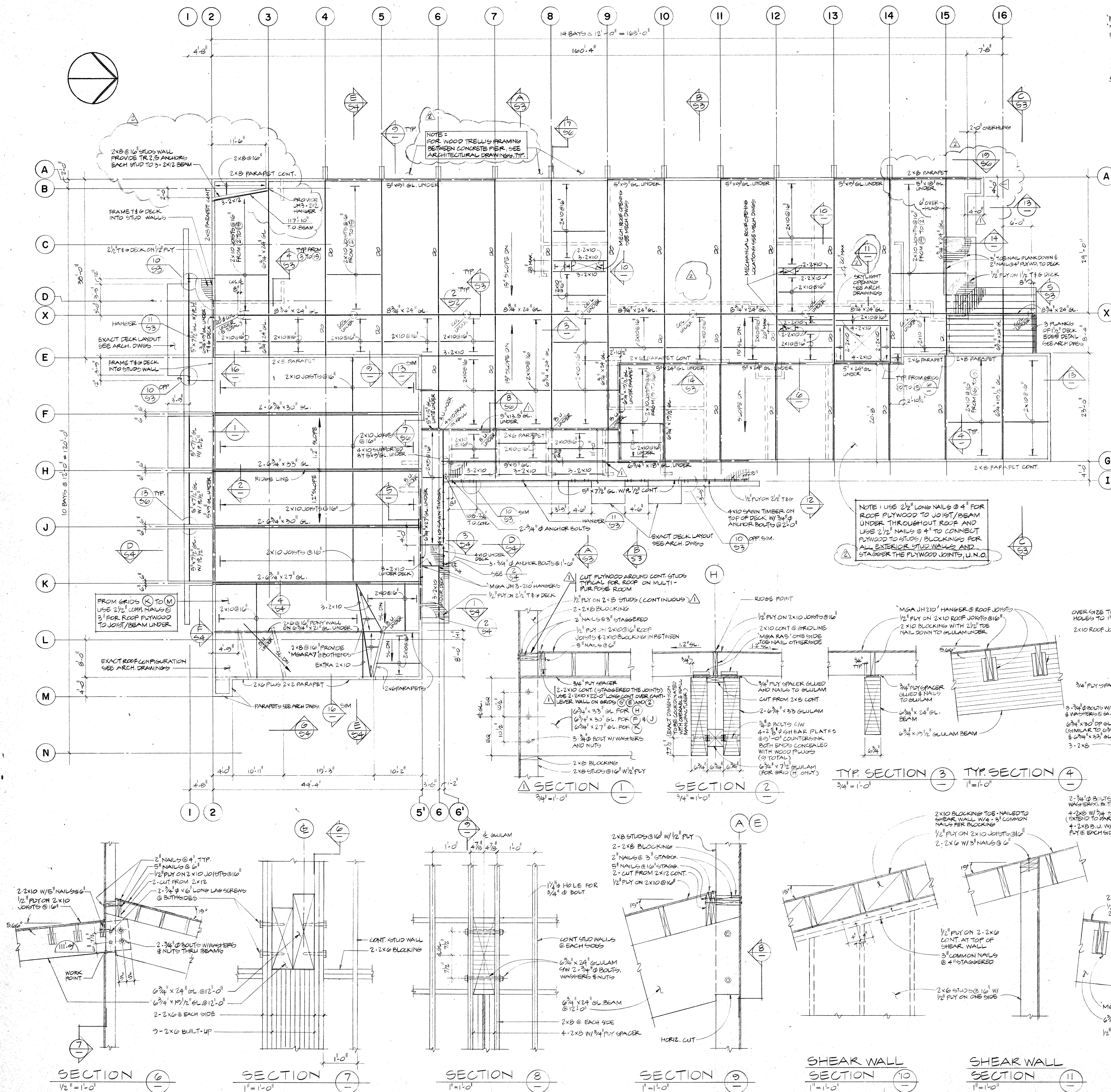
Sawn timber components:
Joists and purlins Hem-Fir or Douglas Fir-Larch No. 2 or better
studs, wall plates Douglas Fir-Larch, No. 2 or better
beams and stringers Hem-Fir or Douglas Fir-Larch, No. 1
posts and timbers Hem-Fir, No. 1
decking Select structural

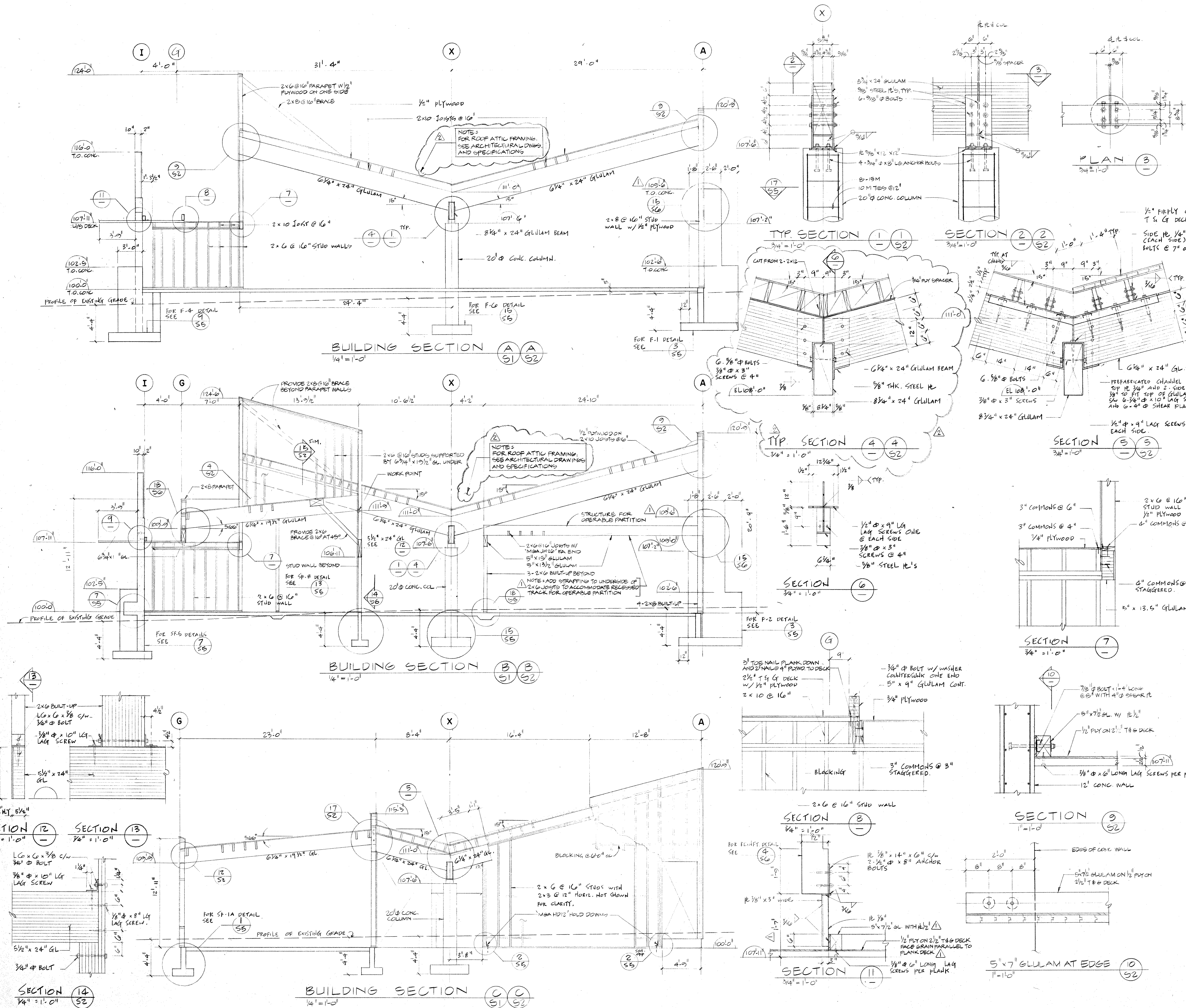
Glue laminated members:
design in accordance with CSA O86-M84, fabrication to CSA O122-1977
stress grade 24F-E for simply supported members
24F-E for continuous beams
quality interior where fully within interior spaces, exterior for members fully or partially outside.
appearance grade service grade



Plywood: Fir plywood to CSA O121-M78, not less than 1/2" for roof and walls.
Bolts, nuts, washers, lag bolts, shear plates and split rings: to CSA O86.

Framing Notes:
Provide built-up stud posts of full width of supported beams and carry in line to concrete foundations. Headers spanning over openings of 8 ft. or greater to be supported on double cripples. Provide beam hangers with top flange of 12 gauge galvanized steel for all flush beam/beam and beam/column connections. Provide 16 gauge joist hangers for all joists spanning 12 ft. or more when framed to face of supporting member. Provide horizontal blocking for stud walls at max. 6 ft o.c. Frame all openings as if loadbearing with double 2-2x10 members unless noted. Trim openings with double joists on 4 sides unless noted.

Fastenings:
Connect all members together using nails, bolts or screws - do not use staples. Glue and nail all plywood to joists. Fasten plywood to joists or studs with minimum 3" common nails at 6" o.c. along edges and 12" along intermediate supports except where noted otherwise. Fasten framing structure to concrete supports with 5/8" dia. x 8" long anchor bolts at maximum 4'-0" centres and within 1'-0" of ends of walls.
Note: For all bolts visually exposed, projection of threaded end to be less than 1/4" from the face of nut.
- Inspection**
Provide a minimum of 24 hours notice to the Engineer for routine inspections of:
reinforcing steel, prior to each concrete pour
timber framing, before concealment





REVISIONS		
	ISSUED FOR TENDER	JUNE 26/91
	ADDENDUM NO. 1	JULY 10/91
	ADDENDUM NO. 2	JULY 25/91

SEALS

CONSULTANTS

PATKAU ARCHITECTS
Prime Consultant

C.Y. LOH ASSOCIATES LTD.
Structural Engineer

D.W. THOMSON CONSULTANTS LTD.
Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
Electrical Engineer


CLIENT APPROVAL

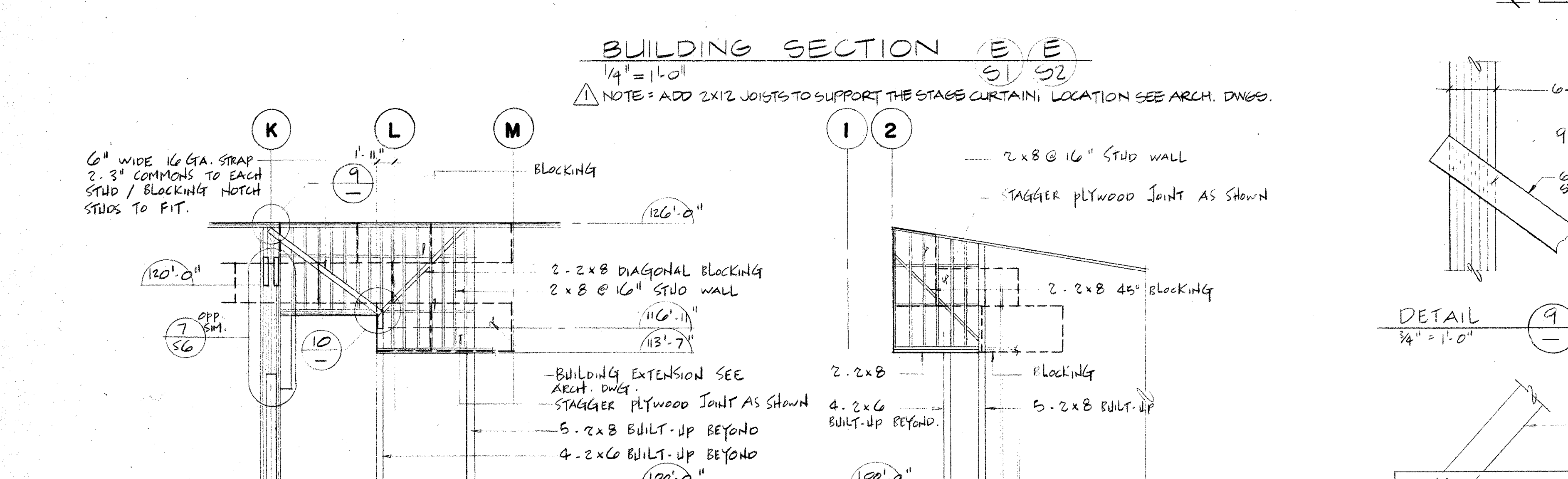
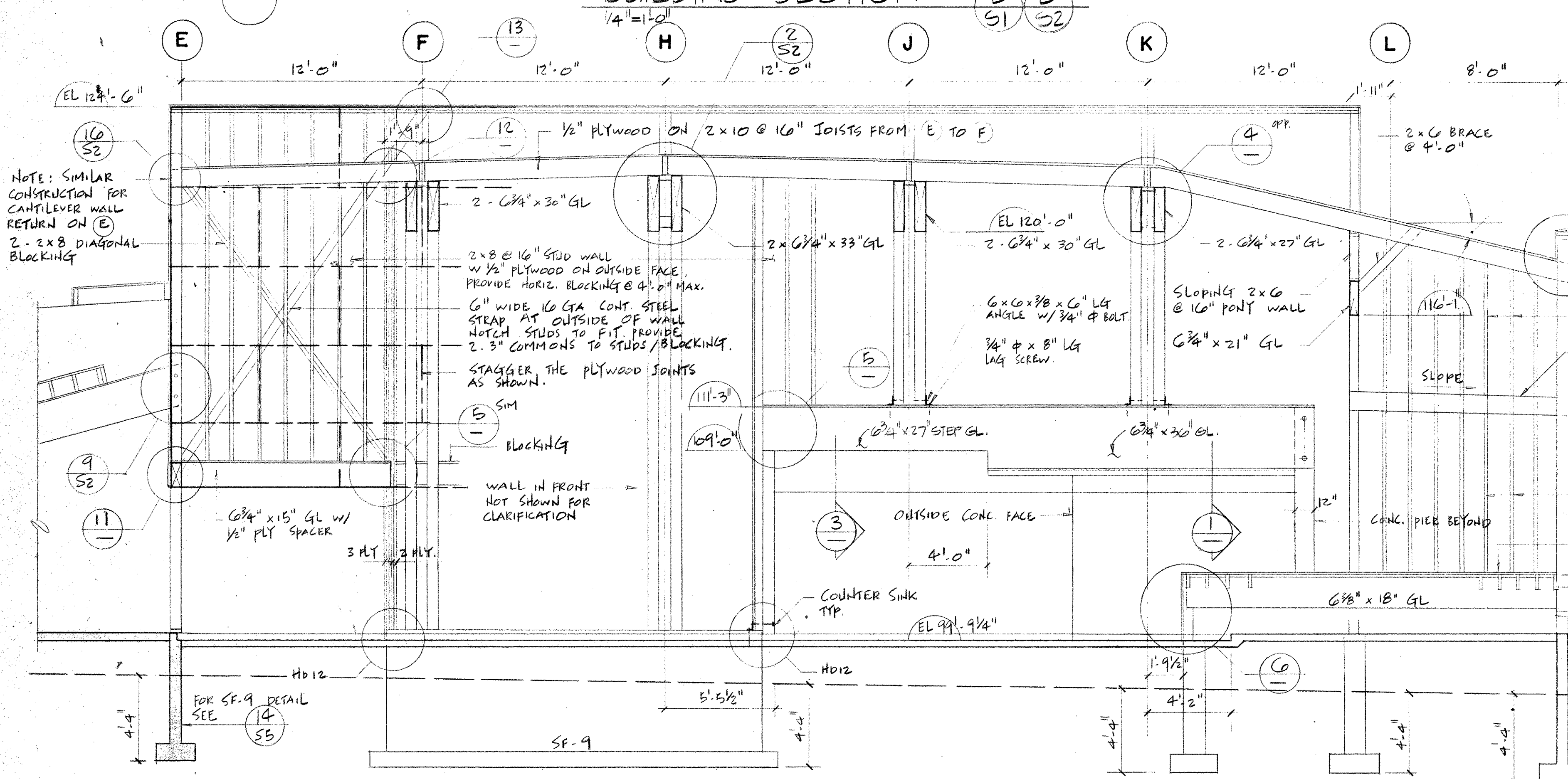
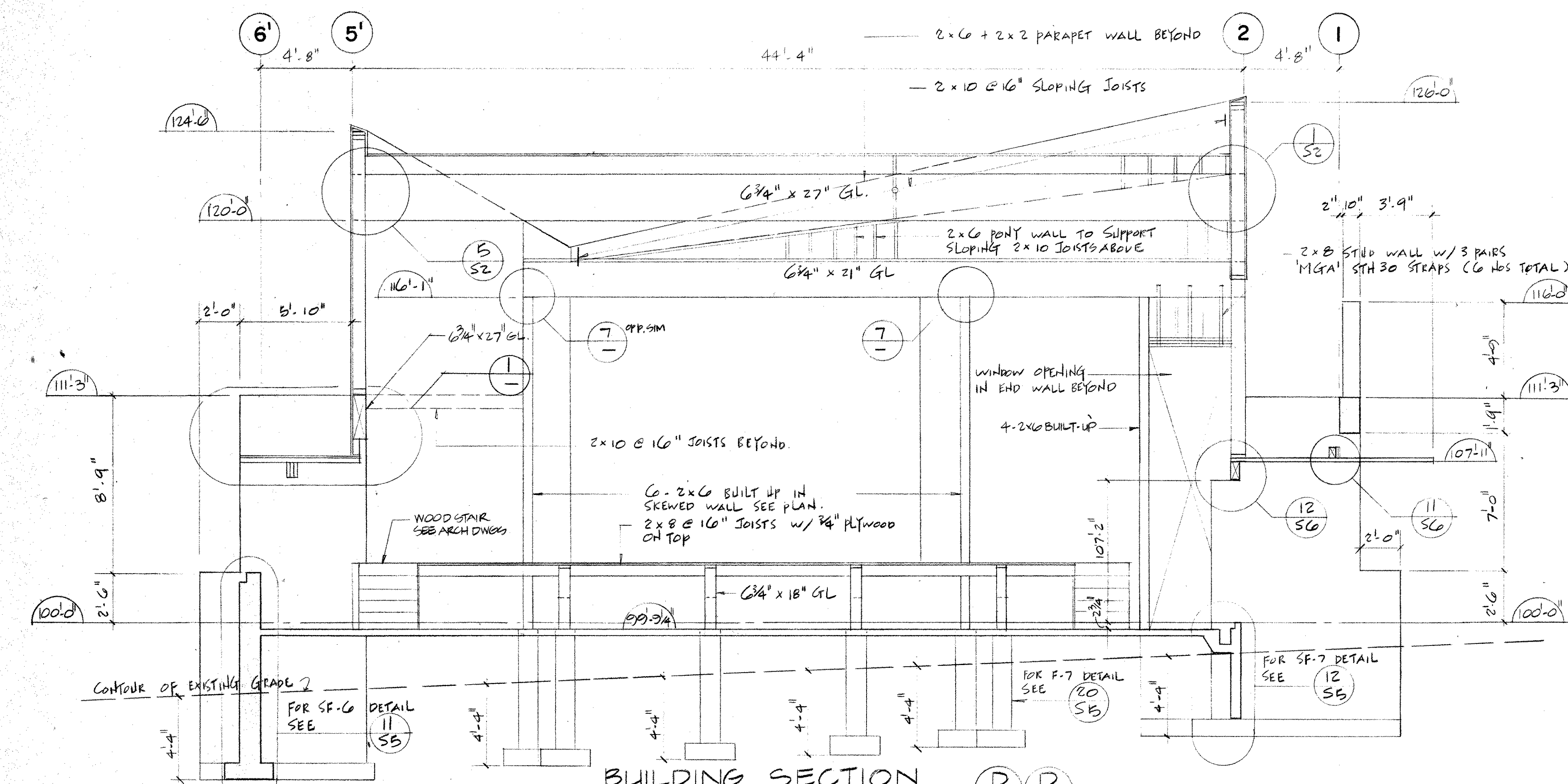
PROJECT TITLE

NEWTON
SENIORS
RECREATION FACILITY
Surrey, British Columbia

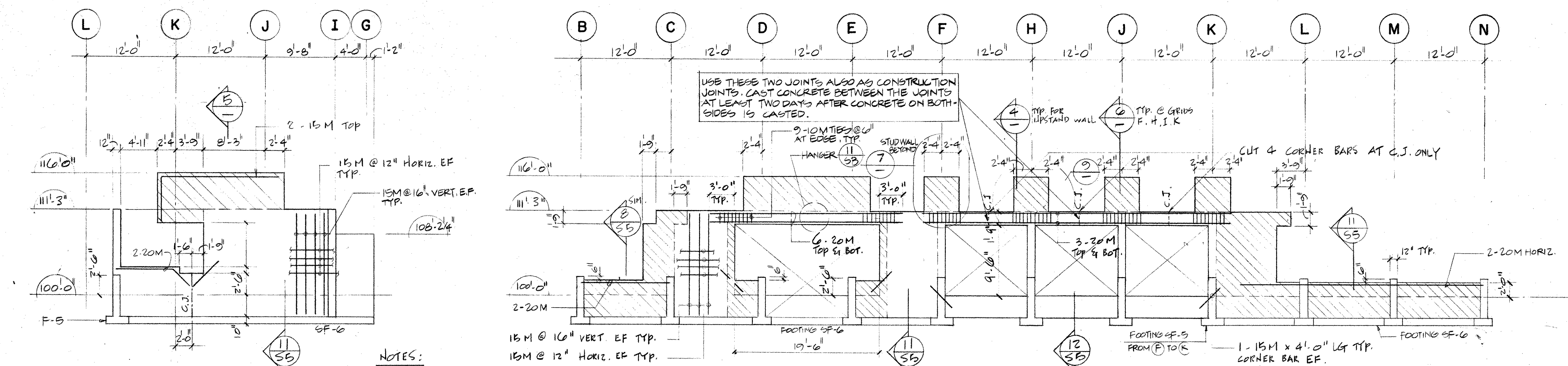
FILE NO 9264

BUILDING SECTIONS
SHEET 1

SCALE AS SHOWN
DRAWN BY ET
CHECKED BY CCY
DATE JUNE 26, 1991 DWG NO S3 

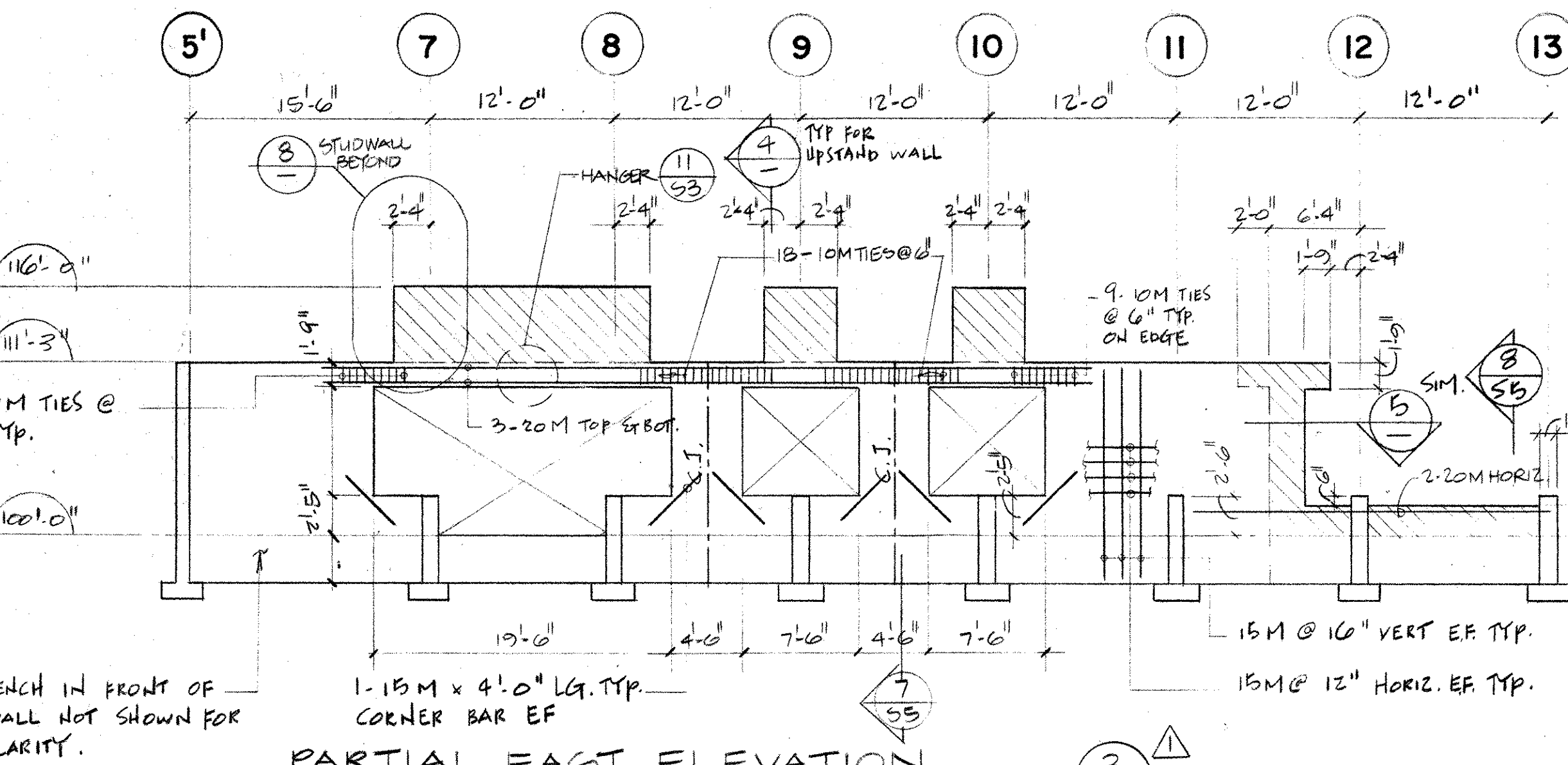




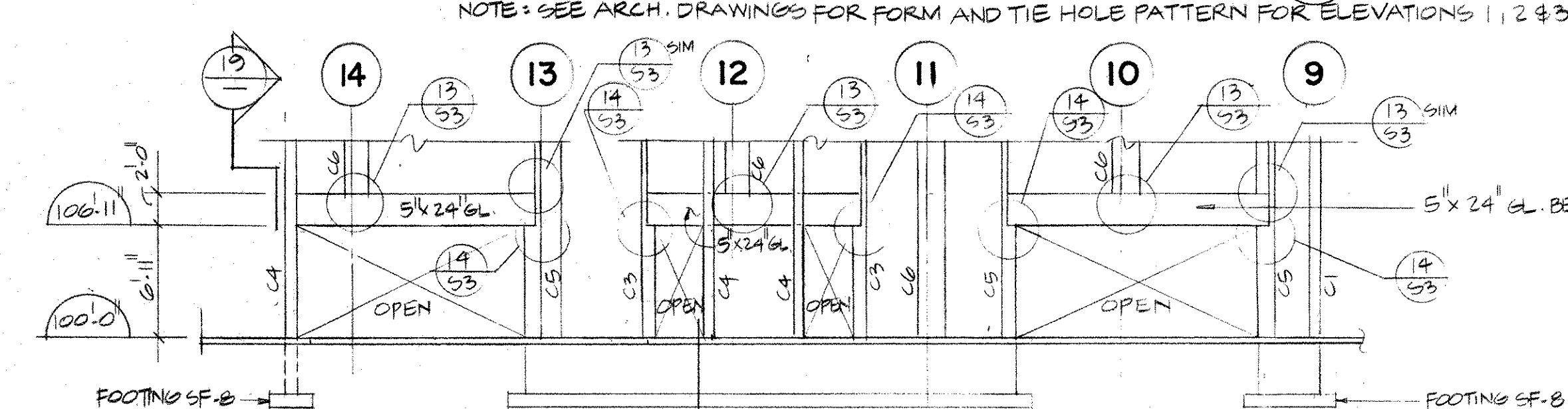


PARTIAL NORTH ELEVATION
1/8" = 1'-0"

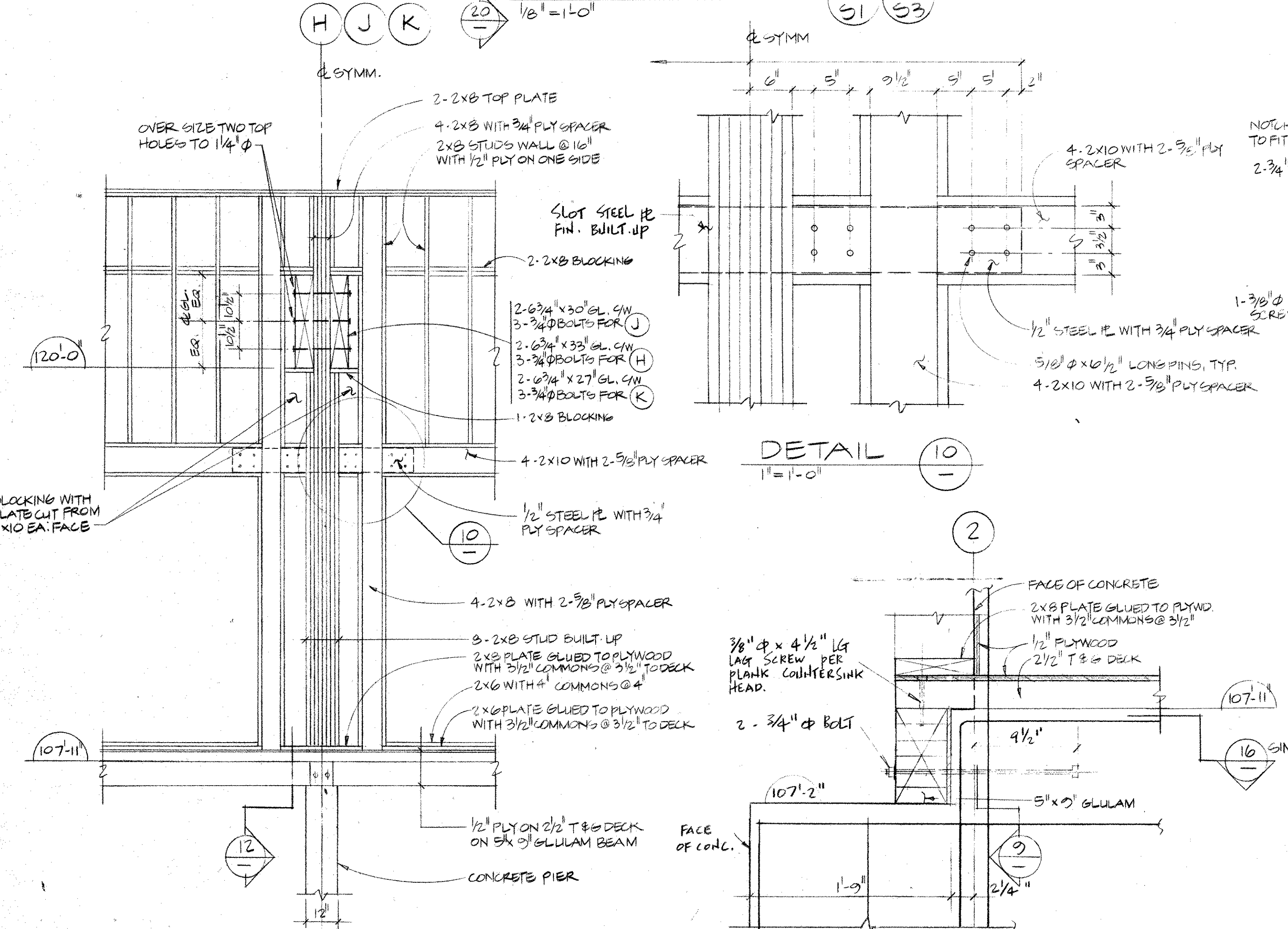
PARTIAL SOUTH ELEVATION
1/8" = 1'-0"



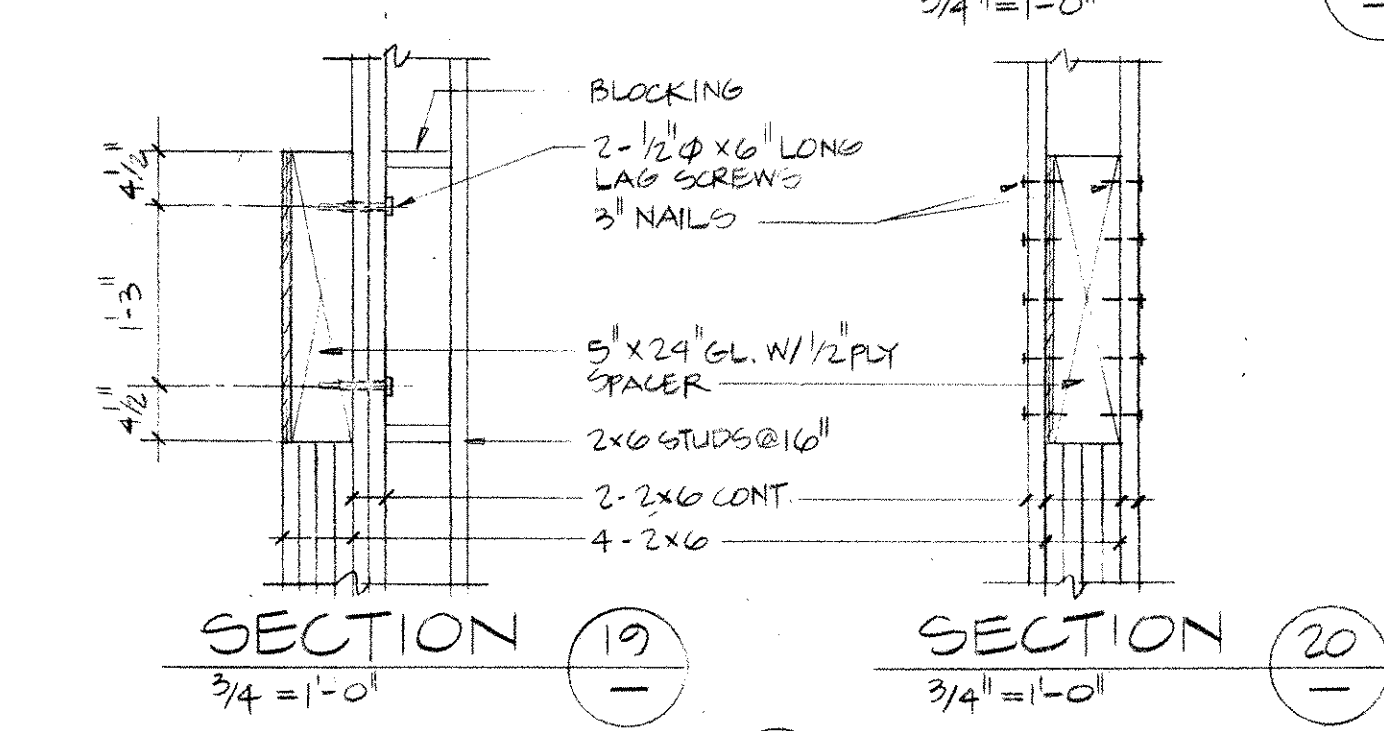
PARTIAL EAST ELEVATION
1/8" = 1'-0"



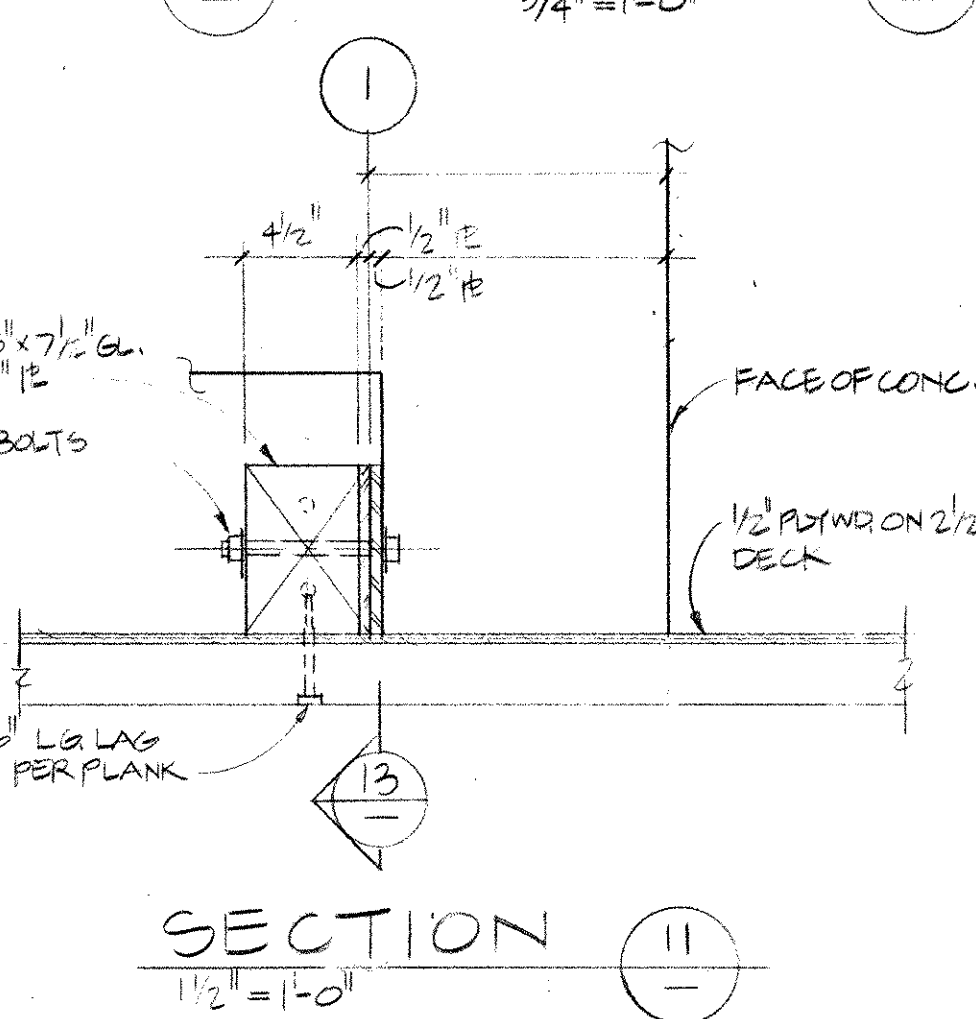
PARTIAL ELEVATION
1/8" = 1'-0"



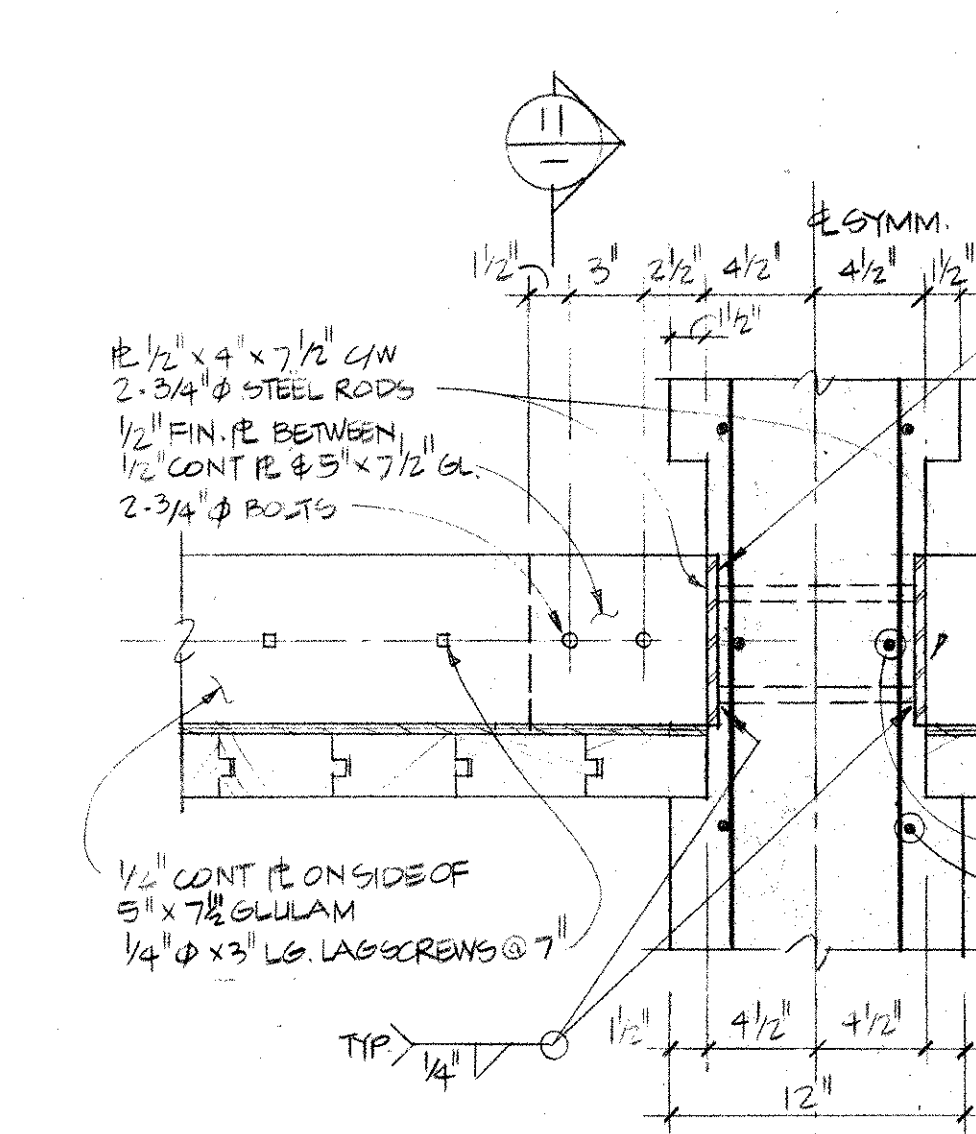
DETAIL 10
1" = 1'-0"



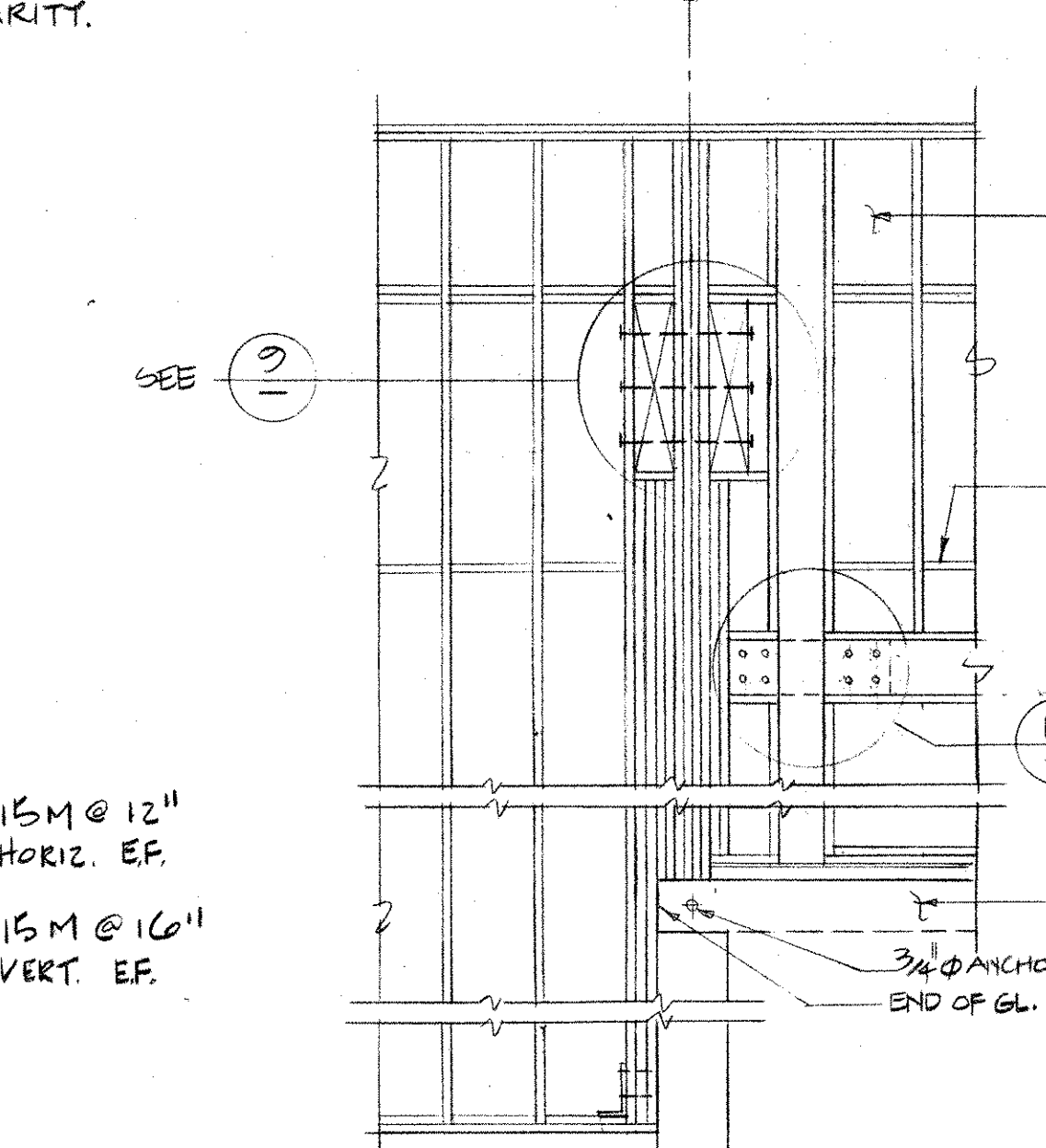
SECTION 19
3/4" = 1'-0"



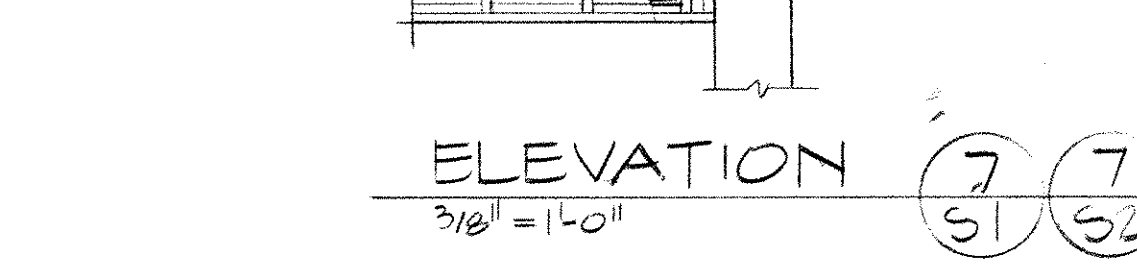
SECTION 20
3/4" = 1'-0"



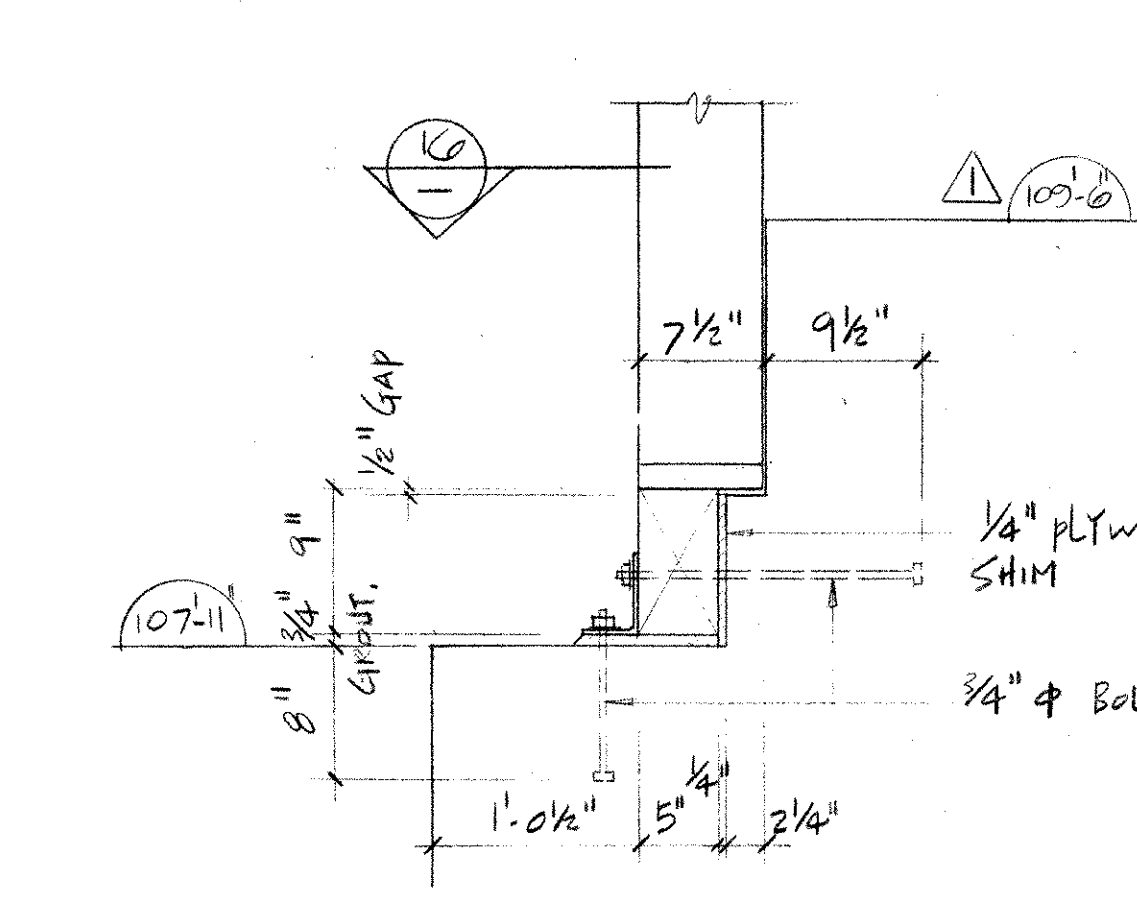
SECTION 11
1 1/2" = 1'-0"



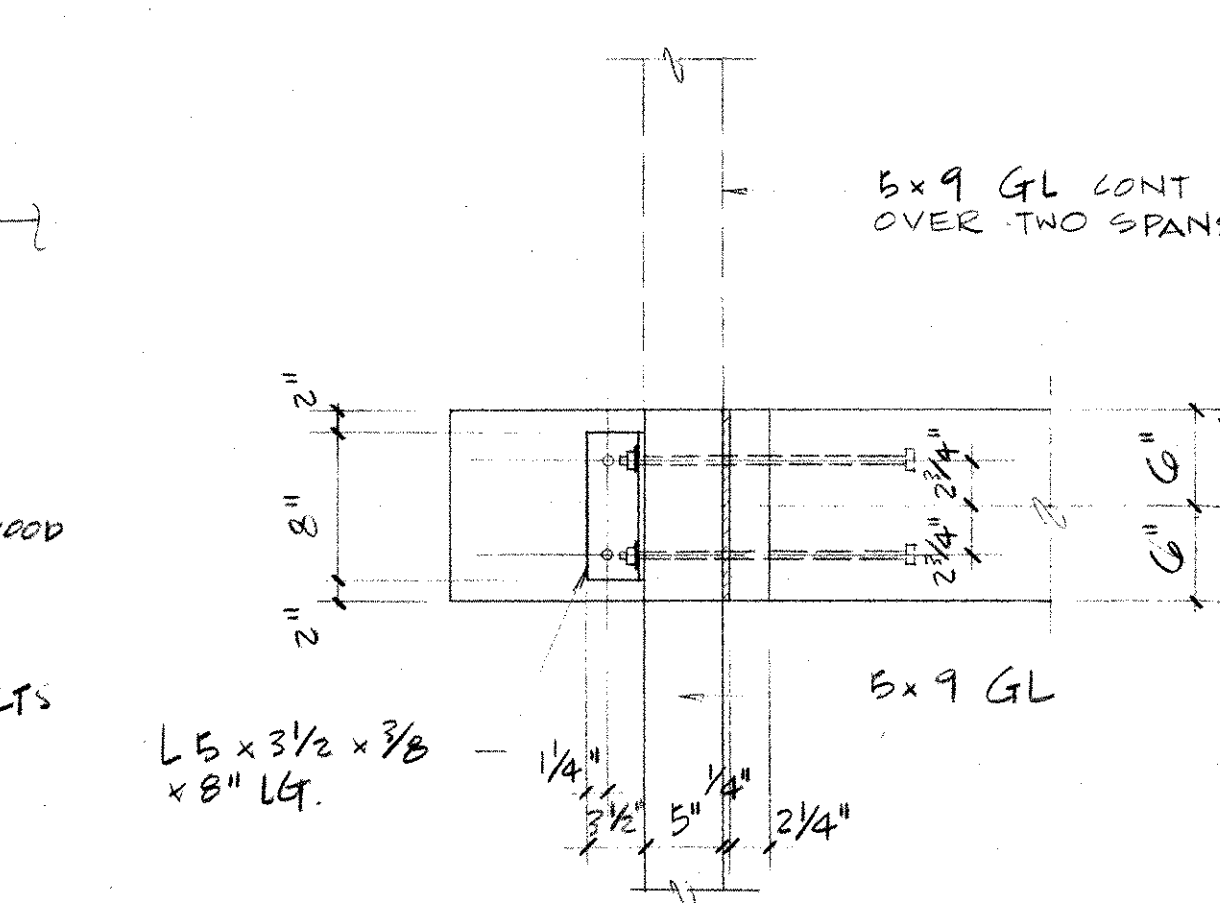
SECTION 6
3/4" = 1'-0"



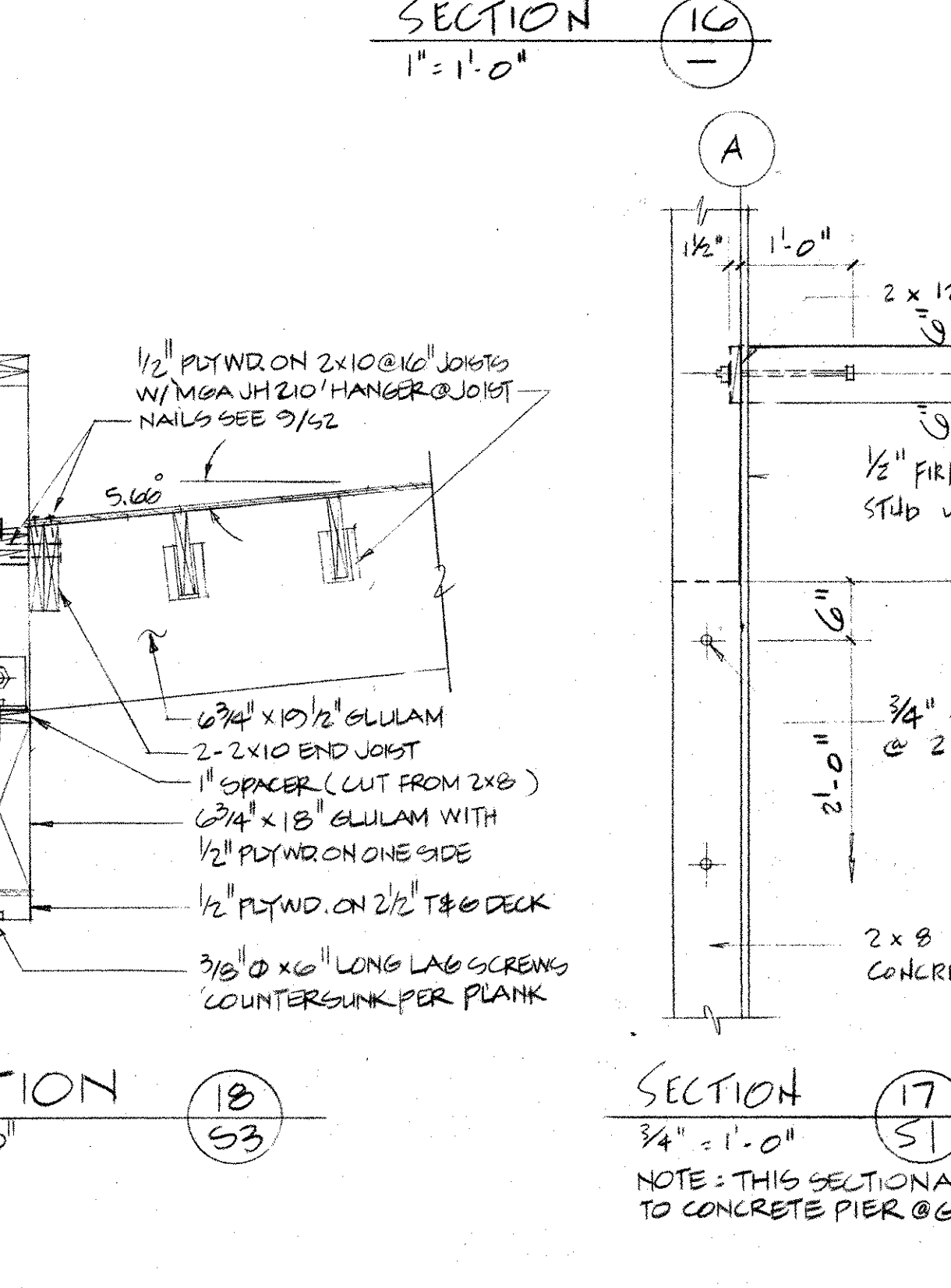
ELEVATION 7
3/8" = 1'-0"



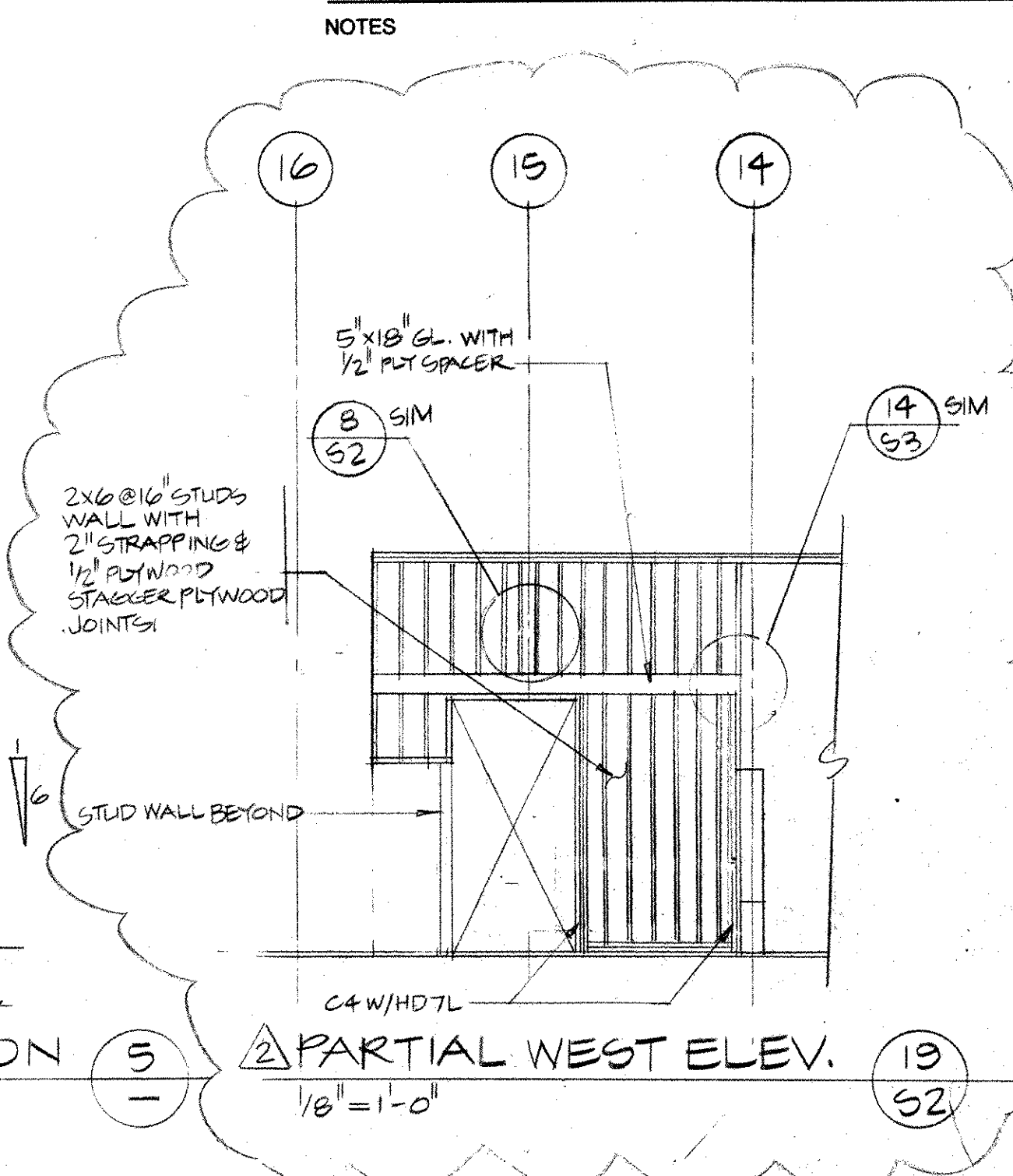
SECTION 15
1" = 1'-0"



SECTION 16
1" = 1'-0"



SECTION 17
3/4" = 1'-0"



PARTIAL WEST ELEV.
1/8" = 1'-0"

REVISIONS	ISSUED FOR TENDER	JUNE 26/91
ADDENDUM NO. 1	JULY 10/91	
ADDENDUM NO. 2	JULY 23/91	

SEALS

CONSULTANTS

PATKAU ARCHITECTS
Prime Consultant

C.Y. LOH ASSOCIATES LTD.
Structural Engineer

D.W. THOMSON CONSULTANTS LTD.
Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

NEWTON
SENIORS
RECREATION FACILITY
Surrey, British Columbia

FILE NO 9264

DRAWING TITLE

MISCELLANEOUS
SECTIONS & DETAILS

SCALE AS SHOWN

DRAWN BY ET

CHECKED BY CCY

DATE JUNE 26/1991

DWG NO S6

Legal Description

LOT 57
NW 1/4
SEC 16
T. 2
R. 2
PLAN 50433
N.W.D.

MUNICIPAL ADDRESS:
15795-76 AVE

Parking

AS PRESCRIBED BY DIST. OF SURVEY
PERMITS & LICENSE DEPT.
LIBRARY - 62 SPACES (INCL. 2 HANDICAP)
SENIOR'S CENTRE - 50 SPACES
(INCL. 2 HANDICAP SPACES)
OFF STREET LOADING - 1 SPACE

Floor Space Ratio

LIBRARY 15,000 FT²
FUTURE SENIORS CENTRE 12,000 FT²
SITE AREA 270,000 FT²
R.F.R. .097
27,000 FT² / 270,000 FT² = .097

RM-1

Legend

- Hardest Access Curb
- Property Line
- EXTENT OF CONTRACT
- EXIST. VEG. TO REMAIN
- Concrete Pavers
- + New Tree N.T.C.
- EXIST. CONTOURS
- X 0.0' New Finish Surface Elevation
- X EXIST. ELEVATION
- X TO AVE ELEVATIONS based on design by R.F. PINNIE and APPROX. Catch Basin - SEE MAP
- General Direction of Overland Flow
- EXIST. CONIFEROUS Tree - To Remain
- + EXIST. LIGHT POLE
- SITE LIGHTING POLE SEE ELECTRICAL

NOTES

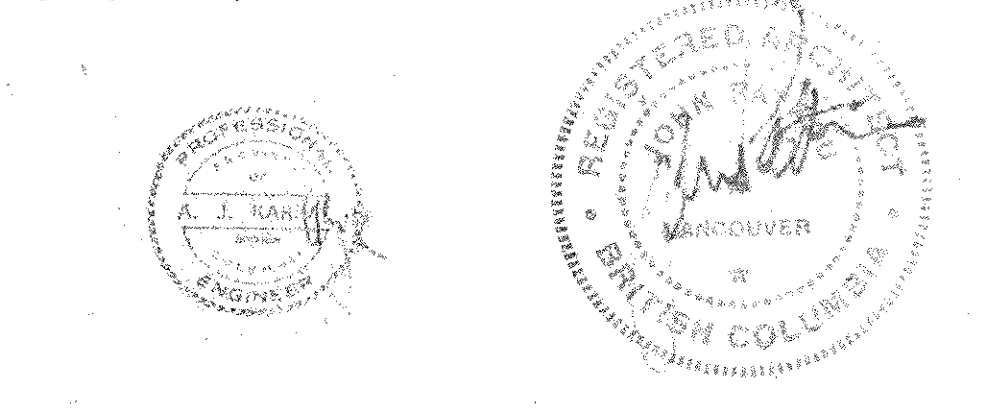
- cd. ① Critical Dimension: Furthest extent of Paving, Recycled to Setback - Confirm with Architect
- cd. ② Critical Dimension: Dimension and Location of Trees to be retained on site with Architect
- ③ 2'-0" HIGH CONC. FENCE
- ④ 8'-10'-0" TYP. CURB RADIUS IN DROP-OFF AREA
- ⑤ MEDIA CURB - ALL CONC. PAVES OUTSIDE OF SETBACK LINE TO BE INCLUDED IN CONTRACT
- ⑥ DRAINAGE RECEPTABLE
- ⑦ DRAINAGE RECEPTABLE FOR 100' CASH Allowance for Site Treatment
- ⑧ To be part of BUILDING COST PRICE
- ⑨ To be part of ON SITE DEVELOPMENT PRICE
- ⑩ SOFT LANDSCAPING - N.T.C. Provide Rough Grading
- ⑪ Conc. Curb Terminates
- ⑫ Drainage Ridge or Valley
- ⑬ Conc. Curb - SEE ③

REVISIONS

- ⑭ DETENTION SHALE 2' DEEP - Provide Rough Grading 0 Percent Slope
- ⑮ FICE DET. SHALES: PAVE WITH CHAIN LINK FENCE N.T.C.
- ⑯ HANDICAPPED AREAS SEE ③
- ⑰ PAVING PATTERN SEE ③
- ⑱ PARKING SHALES SEE ③

Issued for Tender P. 12, 1990

SEALS



CONSULTANTS

PATKAU ARCHITECTS
Prime Consultant

C.Y. LOH ASSOCIATES LTD.
Structural Engineer

D.W. THOMSON CONSULTANTS LTD.
Mechanical Engineer

R.A. DUFF & ASSOCIATES INC.
Electrical Engineer

CLIENT APPROVAL

PROJECT TITLE

**NEWTON
BRANCH LIBRARY**
Surrey, British Columbia

FILE NO MacB

DRAWING TITLE

**SITE PLAN
GRADING and
DRAINAGE PLAN**

SCALE AS NOTED
DRAWN BY M.B./D.R.
CHECKED BY
DATE DEC 12, 1990 DWG NO A1
ISSUED FEB 19, 1991

R-F

137A St

138 St

C-5

Proposed Library
Elev. T.O. Conc. Slab = 212'-0" (100'-0")
MBE = 212'-0"

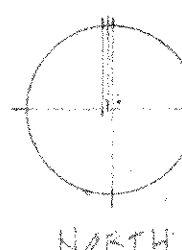
FUTURE SENIORS CENTRE
Proposed T.O. Conc. Slab = 214'-0"

1. Site Plan
A1

NOTE:
All Parking Lot Dimensions are Parallel or Perpendicular to EAST Property Line

NOTE

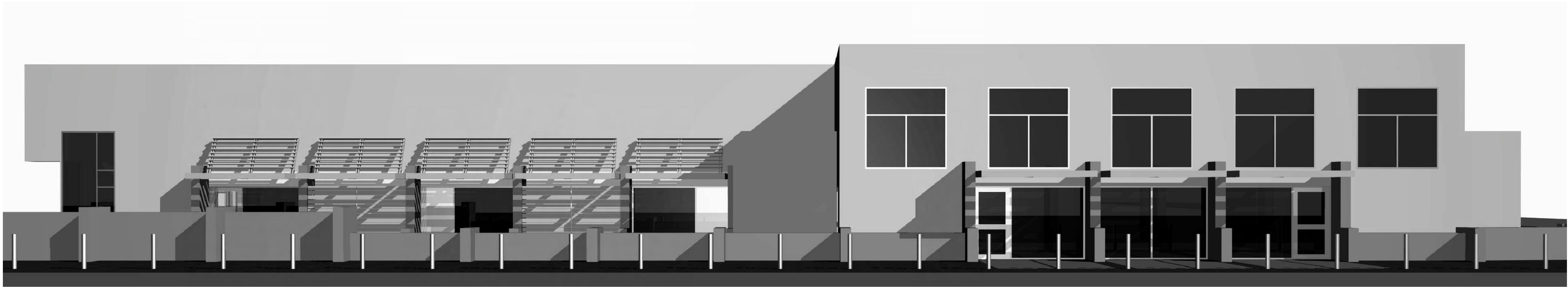
Contractor must prevent silt debris, topsoil entering existing ditches and storm sewers as per the Sediment Control Plan
Contractor to submit SEDIMENT CONTROL PLAN for Architectural Approval



NOTE:
THE SECTION OF 70 AVE between 137A St and 138 St is not constructed.
It will be built during the latter part of 1991

NOTE:
Move the lawn and/or smaller setbacks

NOTE:
1200m 7.9m setback 210'-0"



NEWTON SENIORS RECREATION CENTRE ADDITION & RENOVATION

13775 – 70th AVENUE SURREY B.C.

DRAWING INDEX

ELECTRICAL
MCL ENGINEERING LTD.

4736 WEST 4th AVENUE, VANCOUVER, B.C., CANADA V6T 1C2.
TEL. (604)222–9876, FAX (604)222–1639

- E101 SPECIFICATIONS-PAGE 1
- E102 SPECIFICATIONS-PAGE 2
- E201 POWER & LIFE SAFETY-PAGE 1
- E202 POWER & LIFE SAFETY-PAGE 2
- E301 LIGHTING-PAGE 1
- E401 TELECOM, SECURITY & AUDIO SYSTEM-PAGE 1
- E501 SECURITY SYSTEMS
- E601 AUDIO SYSTEM

MECHANICAL
QUADRA PACIFIC CONSULTANTS

#200–1650 ALBERNI ST., VANCOUVER, B.C., CANADA V6G 1A6.
TEL. (604)688–8671, FAX (604)688–9760

- M1 PARTIAL FLR. PLANS LEGEND & EQUIPMENT SCHEDULES - H.V.A.C.
- M2 SECTIONS AND DETAILS - H.V.A.C.
- P1 FOUNDATION PLAN - PLUMBING
- P2 GROUND FLOOR PLAN - PLUMBING

STRUCTURAL
READ JONES CHRISTOFFERSEN

1285 WEST BROADWAY, VANCOUVER, B.C., CANADA V6H 3X8.
TEL. (604)738–0048, FAX (604)738–1107

- S101 GENERAL NOTES AND TYPICAL DETAILS
- S201 FOUNDATION PLAN
- S202 ROOF PLANS
- S301 SECTIONS AND DETAILS
- S302 SECTIONS AND DETAILS

ARCHITECTURAL
BERNARD PERRETEN ARCHITECTURE INC.

431 HELMCKEN ST., VANCOUVER, B.C., CANADA, V6B 2E6.
TEL. (604)687–1303, FAX (604)687–4280

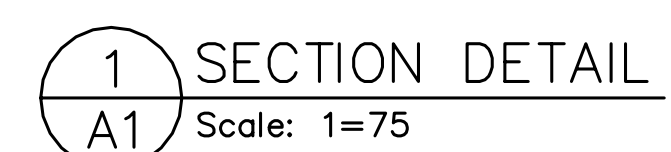
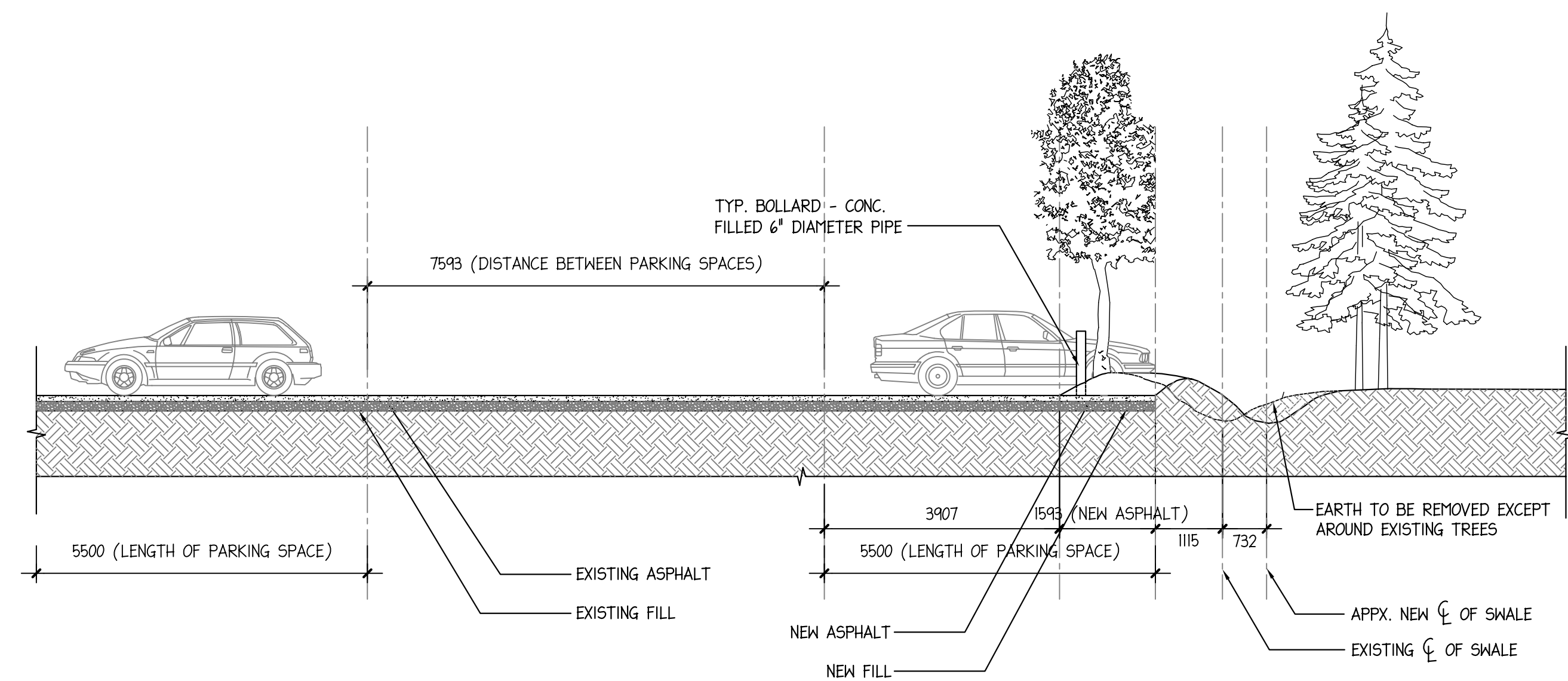
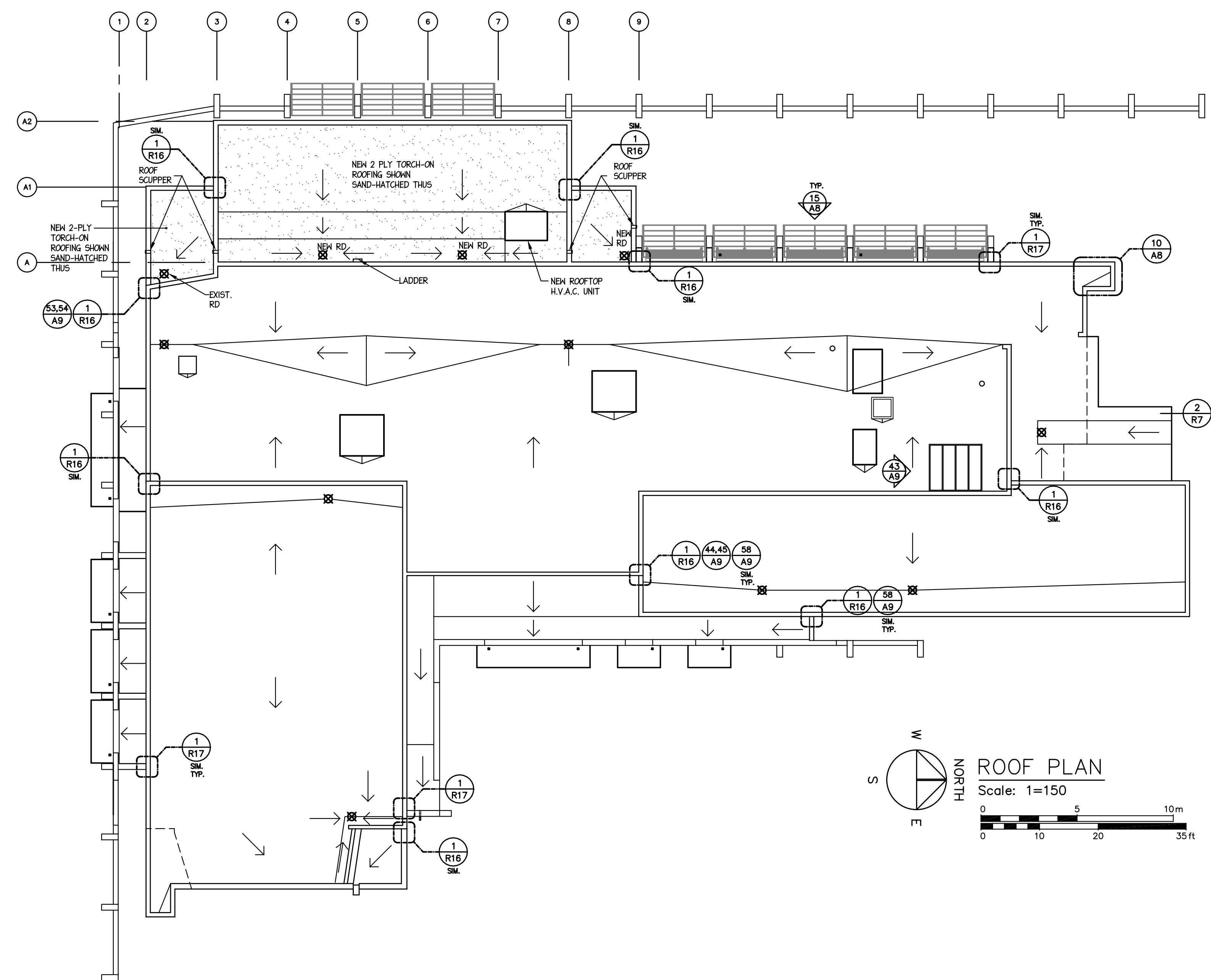
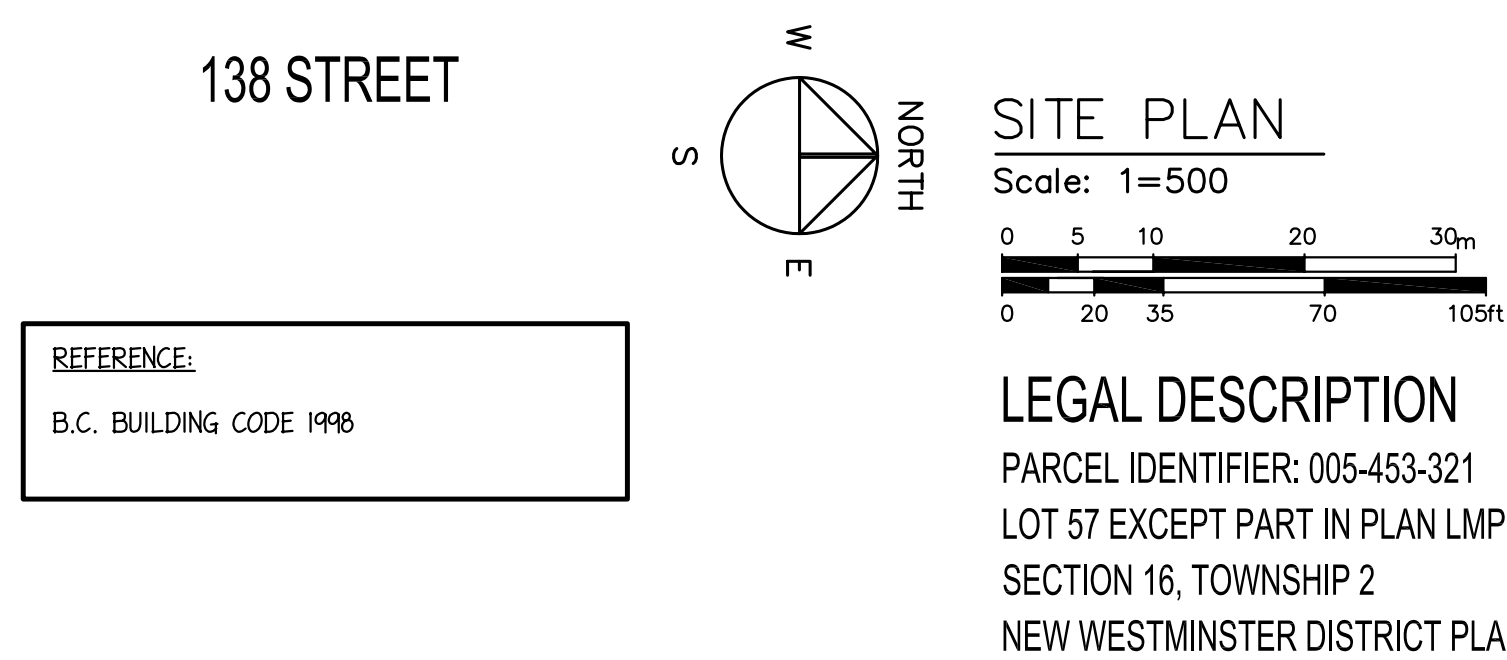
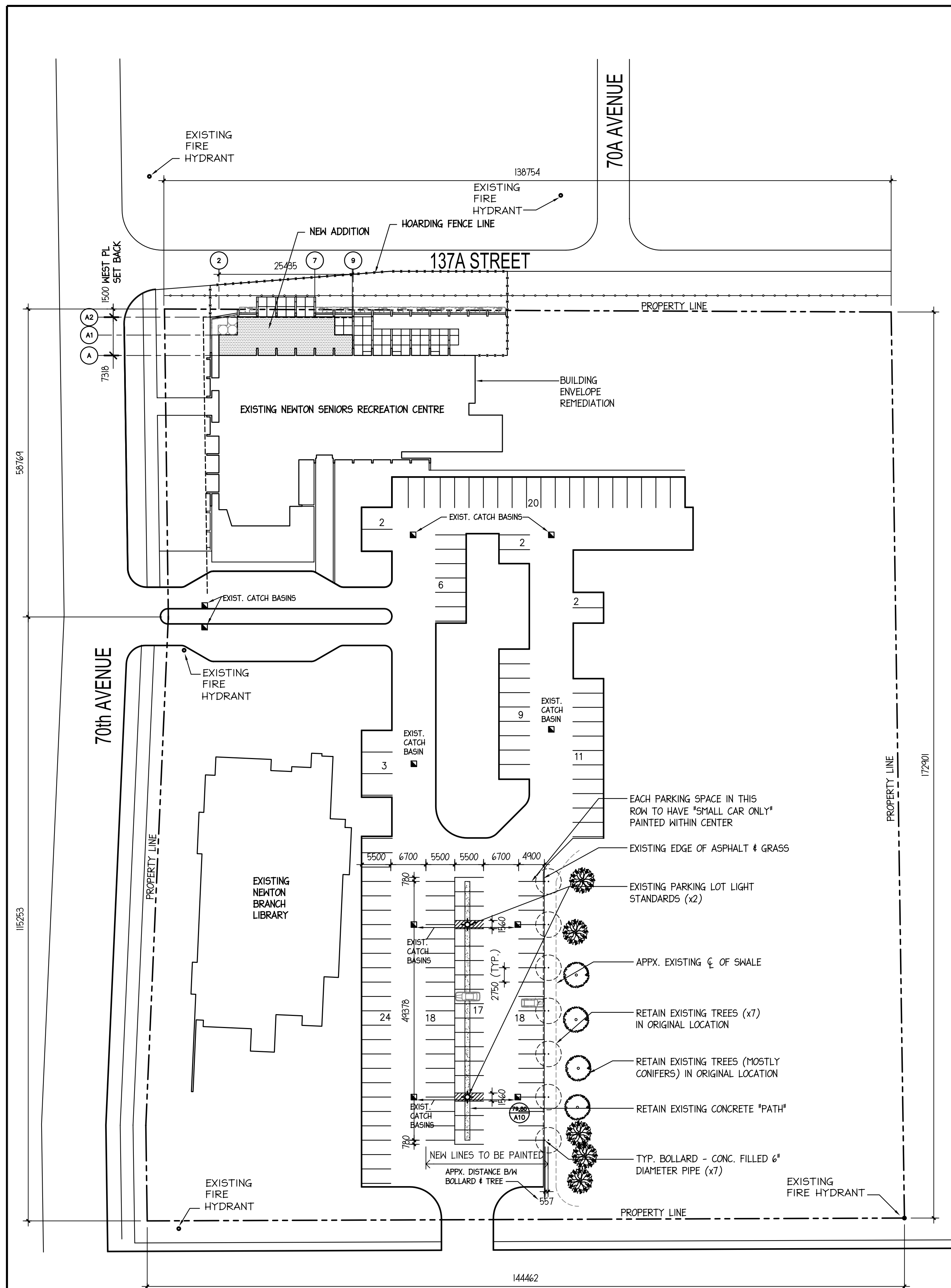
- A0 COVER SHEET
- A1 SITE PLAN
- A2 OVERALL BLDG. PLAN
- A3 PARTIAL FLR. PLAN
- A4 CEILING PLANS
- A5 EXTERIOR ELEVATIONS
- A6 SECTIONS
- A7 INTERIOR ELEVATIONS

LANDSCAPE
VAGELATOS & ASSOCIATES

431 HELMCKEN ST., VANCOUVER, B.C., CANADA, V6B 2E6.
TEL. (604)736–7400, FAX (604)731–7416

BERNARD PERRETEN ARCHITECTURE INC.

431 HELMCKEN ST., VANCOUVER, B.C., CANADA, V6B 2E6. TEL. (604)687–1303, FAX (604)687–4280



LEGEND

	CENTER LINE
	ROOM NUMBER
	DOOR NUMBER
	DOOR TYPE
	WALL SYMBOL
	WINDOW SYMBOL
	SECTION/DETAIL #
	SHEET NUMBER
	CEILING ELEVATION
	NEW ELEVATION
	EXIST. ELEVATION
	EXIST. ELEVATION

RECORD DRAWINGS	DEC. 21,06
ISSUED FOR TENDER	APRIL 25, 06
REVISION	DATE

**BERNARD PERRETEN
ARCHITECTURE INC.**

431 HELMCKEN ST., VANCOUVER, B.C., CANADA
V6B 2E6 TEL. 687-1303, FAX 687-4280

**NEWTON
SENIORS
RECREATION
CENTRE
ADDITION &
RENOVATION**

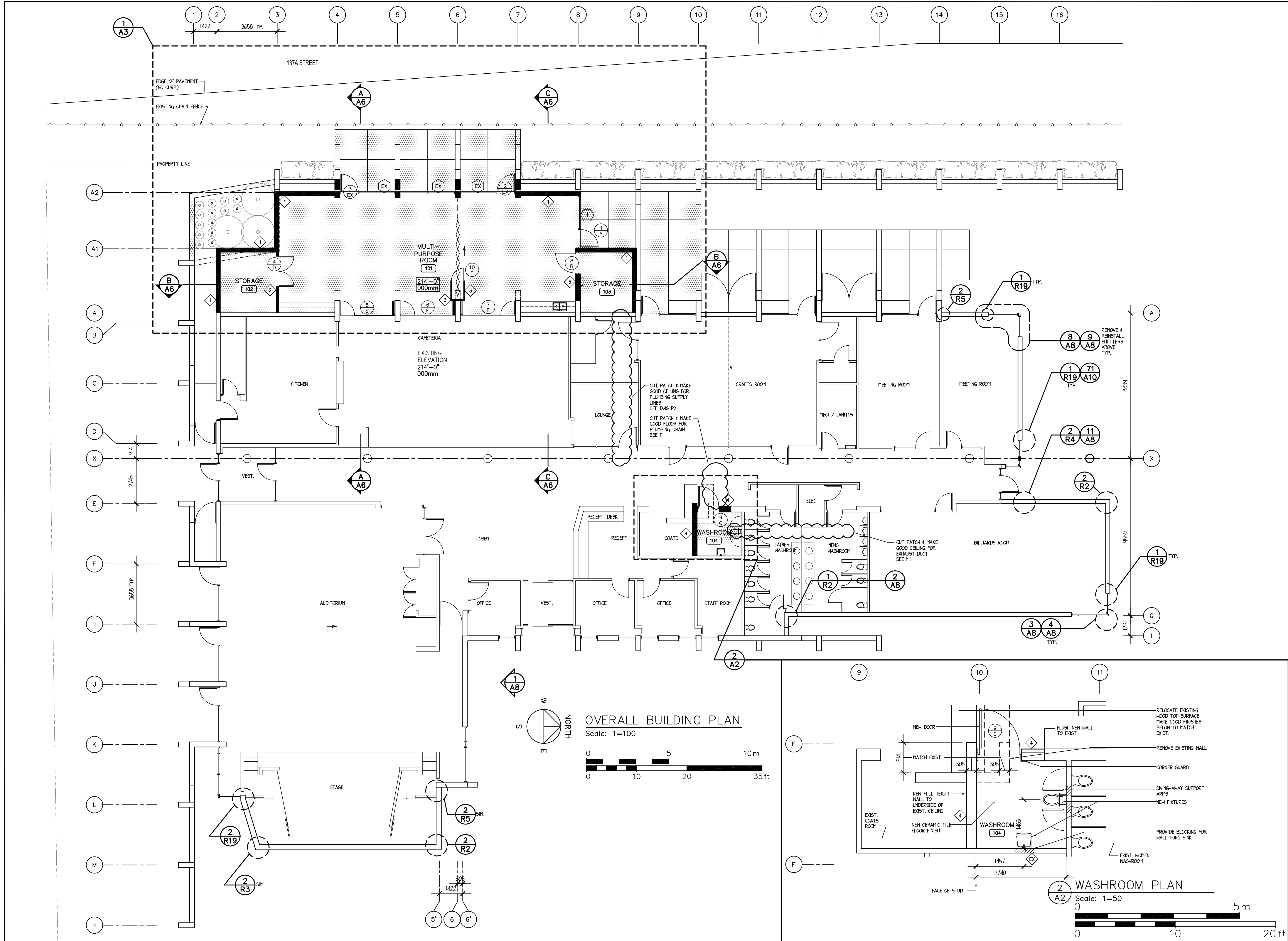
13775 70th AVENUE
SURREY, B.C.

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SITE PLAN

ROOF PLAN
PARKING CHANGE

Job No 0514	Sheet No A1
Scale AS NOTED	
Drawn JH	
Checked BP	
Date APRIL 25, 06	
	of 7



LEGEND

012

ROOM NUMBER

1A

DOOR NUMBER

88A

DOOR TYPE

88A

WALL SYMBOL

888

WINDOW SYMBOL

11

SECTION/DETAIL #

11

SHEET NUMBER

NEW ELEVATION

EXIST. ELEVATION

EXIST. ELEVATION

NEW WALL

EXIST. WALL

REMOVED WALL

RECORD DRAWINGS

DEC. 21,06

ISSUED FOR TENDER

APRIL 25, 06

REVISION

DATE

BERNARD PERRETEN
ARCHITECTURE INC.

431 HELMCKEN ST., VANCOUVER, B.C., CANADA
V6B 2E6 TEL. 687-1303, FAX 687-4280

NEWTON
SENIORS
RECREATION
CENTRE
ADDITION &
RENOVATION

13775 70th AVENUE
SURREY, B.C.

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Sheet Title

OVERALL BLDG
PLAN

WASHROOM PLAN 1:50

Job No 0514

Scale AS NOTED

Drawn KY/MC

Checked BP

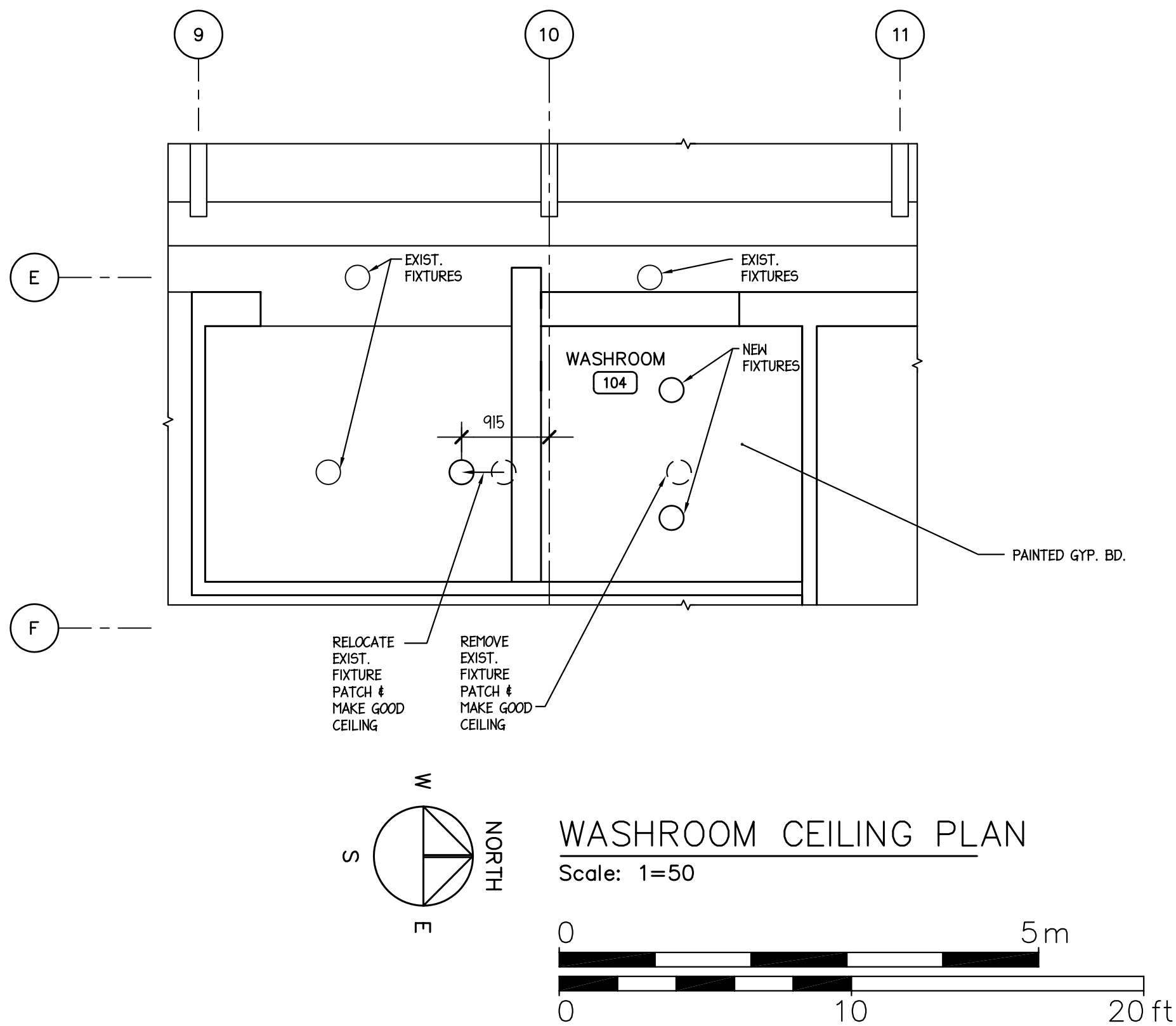
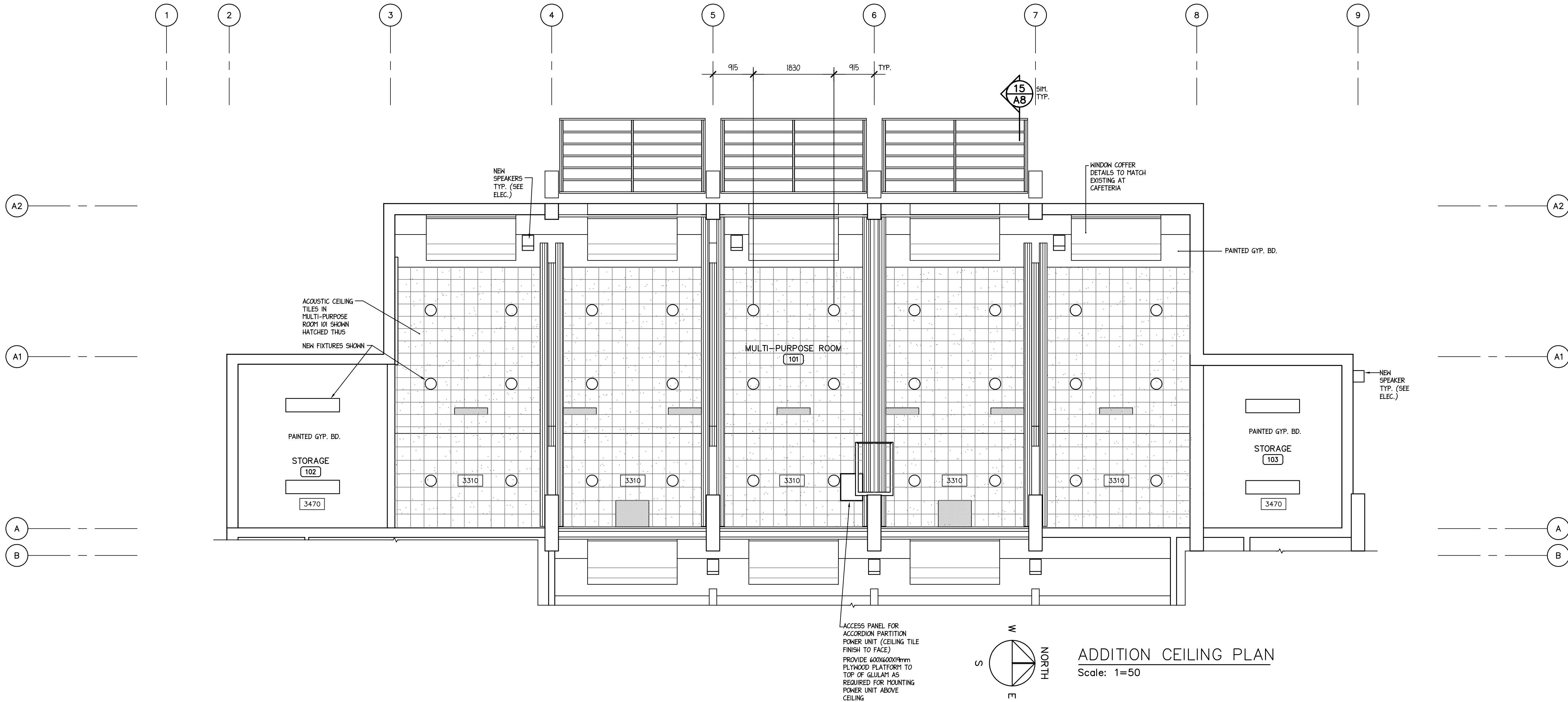
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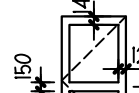
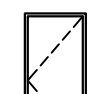
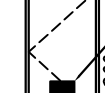
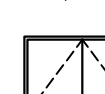
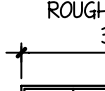
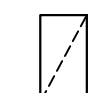
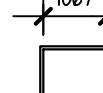

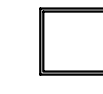
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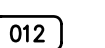



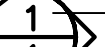
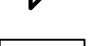




A2

of 7

A3



DOOR SCHEDULE		WALL SCHEDULE
<p> DOUBLE GLAZED, EXTERIOR WIDE STILE CLEAR ANODIZED ALUMINUM DOOR, IN STORE FRONT SYSTEM, TO MATCH EXISTING</p> <p>A SINGLE: 1067 X 2134</p> <p> MAPLE VENEER SOLID CORE WOOD DOOR IN PAINTED, PRESSED STEEL FRAME.</p> <p>B SINGLE: 1220 X 2438</p> <p> 400 x 200 RETURN AIR GRILLE SEE MECHANICAL</p> <p>MAPLE VENEER SOLID CORE WOOD DOOR IN PAINTED, PRESSED STEEL FRAME (PLASTIC WRAPPED SIDE JAMBS) STAINLESS STEEL KICK PLATE WASHROOM SIDE ONLY</p> <p>C SINGLE: 1220 X 2032</p> <p> MAPLE VENEER SOLID CORE WOOD DOOR IN PAINTED PRESSED STEEL FRAME.</p> <p>D PAIR: 914 X 2438</p> <p> ROUGH OPENING 3350</p> <p>DOUBLE GLAZED GLAZED, MAPLE FRAME, FOLDING DOORS</p> <p>E 4 - 812 X 2134 (CONFIRM SIZE TO FIT EXISTING ROUGH OPENING) EXTERIOR TYPE SYSTEM - FULLY WEATHERSTRIPPED</p>	<p> PAINT GRADE HARDBOARD FACE HOLLOW CORE DOOR.</p> <p>F SINGLE: 774 X 2893</p> <p>WINDOW SCHEDULE</p> <p> DOUBLE GLAZED, THERMALLY BROKEN CLEAR ANNOIDIZED ALUMINUM WINDOW, TO MATCH EXISTING SIZE 4 TYPE</p> <p>1 3165 X 2184</p> <p> DOUBLE GLAZED, THERMALLY BROKEN CLEAR ANNOIDIZED ALUMINUM WINDOW, TO MATCH EXISTING SIZE 4 TYPE</p> <p>2 2440 X 2440</p> <p> DOUBLE GLAZED, THERMALLY BROKEN CLEAR ANNOIDIZED ALUMINUM WINDOW</p> <p>3 2440 X 1000</p>	<p>TYPICAL EXTERIOR WALL</p> <ul style="list-style-type: none">- ACRYLIC STUCCO- BREATHER BOARD- 19 X 38 PRESSURE TREATED FURRING @ 200 O.C.- SHEATHING MEMBRANE- 13 PLYWOOD PRESSURE TREATED SHEATHING- 38 X 184 STUDS @ 400 O.C.- RSI 3.5 BATT INSULATION- 0.15 POLY VAPOUR BARRIER- 16 GYPSUM BOARD- FINISH AS PER SCHEDULE <p>TYPICAL INTERIOR PARTITION</p> <ul style="list-style-type: none">- FINISH AS PER SCHEDULE- 16 GYPSUM BOARD- 38 X 140 STUDS @ 400 O.C.- 16 GYPSUM BOARD- FINISH AS PER SCHEDULE <p>FOLDING PARTITION CLOSET WALL</p> <ul style="list-style-type: none">- FINISH AS PER SCHEDULE- 13 GYPSUM BOARD- 38 STEEL STUDS @ 400 O.C.- 13 GYPSUM BOARD PAINTED INSIDE <p>BATHROOM PARTITION</p> <ul style="list-style-type: none">- FINISH AS PER SCHEDULE- 16 GYPSUM BOARD- 38 X 84 STUDS @ 400 O.C.- SPACE AS REQUIRED- 38 X 84 STUDS @ 400 O.C.- 16 GYPSUM BOARD- FINISH AS PER SCHEDULE <p>EXPOSED CONCRETE WALL</p> <ul style="list-style-type: none">- FINISH AS PER SCHEDULE- 16 GYPSUM BOARD (MULTI-PURPOSE RM. SIDE)- 305 REINFORCED CONCRETE (SEE STRUCT.)- FINISH AS PER SCHEDULE

LEGEND	
 012	ROOM NUMBER
 1	DOOR NUMBER
 A	DOOR TYPE
 88A	WALL SYMBOL
 888	WINDOW SYMBOL
 1 1	SECTION/DETAIL #
 1	SHEET NUMBER
 2400	CEILING ELEVATION
 288.00	NEW ELEVATION
 288.00	EXIST. ELEVATION

RECORD DRAWINGS	DEC. 21,06
ISSUED FOR TENDER	APRIL 25, 06
REVISION	DATE

**BERNARD PERRETEN
ARCHITECTURE INC.**

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**NEWTON
SENIORS
RECREATION
CENTRE
ADDITION &
RENOVATION**

13775 70th AVENUE
SURREY, B.C.

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Sheet Title

CEILING PLANS

ADDITION CEILING PLAN
WASHROOM CEILING PLAN
SCHEDULES

Job No. 0514	Sheet No.
Scale AS NOTED	A4
Drawn KY	
Checked BP	
Date APRIL 25, 06	of 7

NOTES:

EXTERIOR CONCRETE (EXISTING)
SAND BLAST AND APPLY SEALER

EXISTING FACE SEALED STUCCO SYSTEM
REMOVE & REPLACE WITH ACRYLIC STUCCO RAINSCREEN SYSTEM

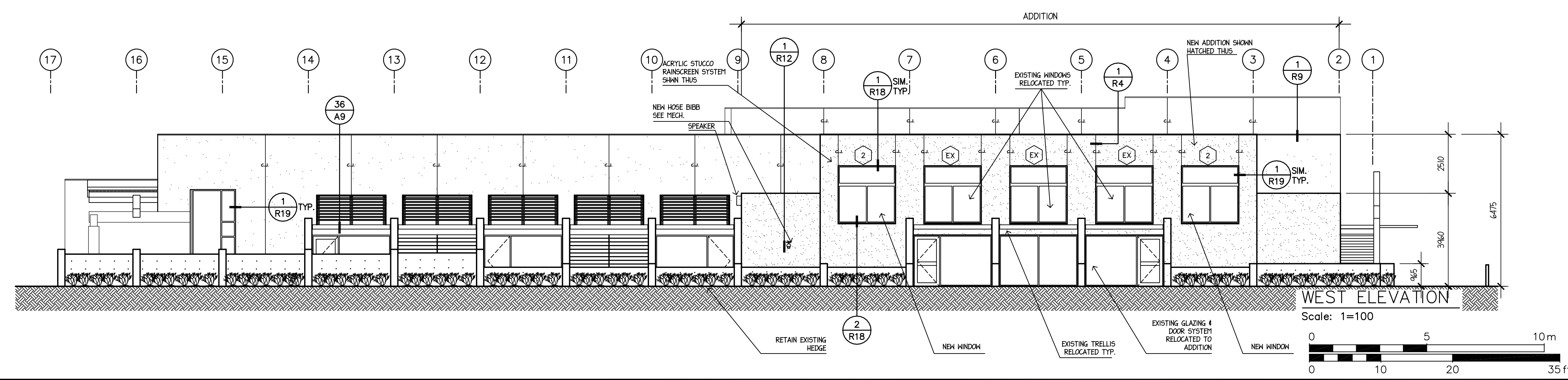
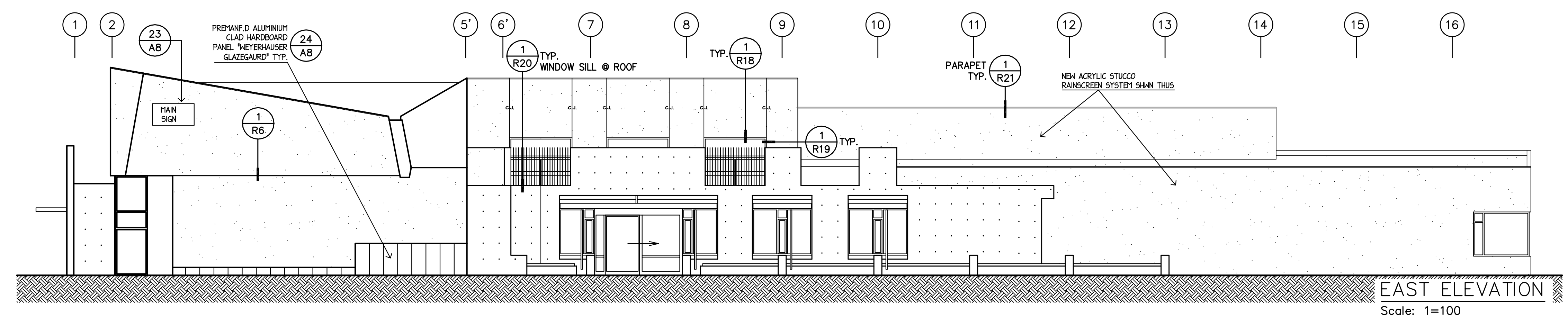
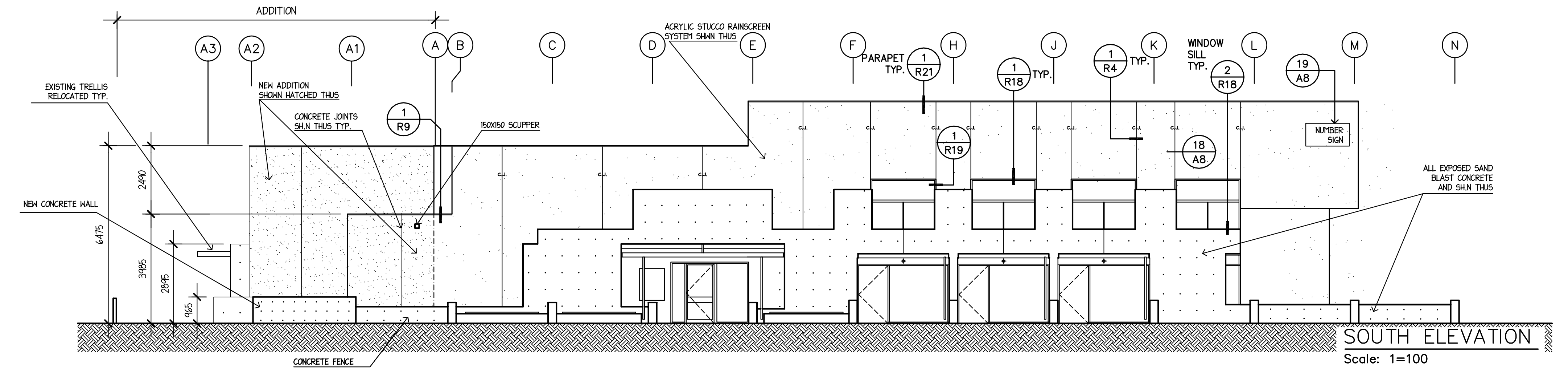
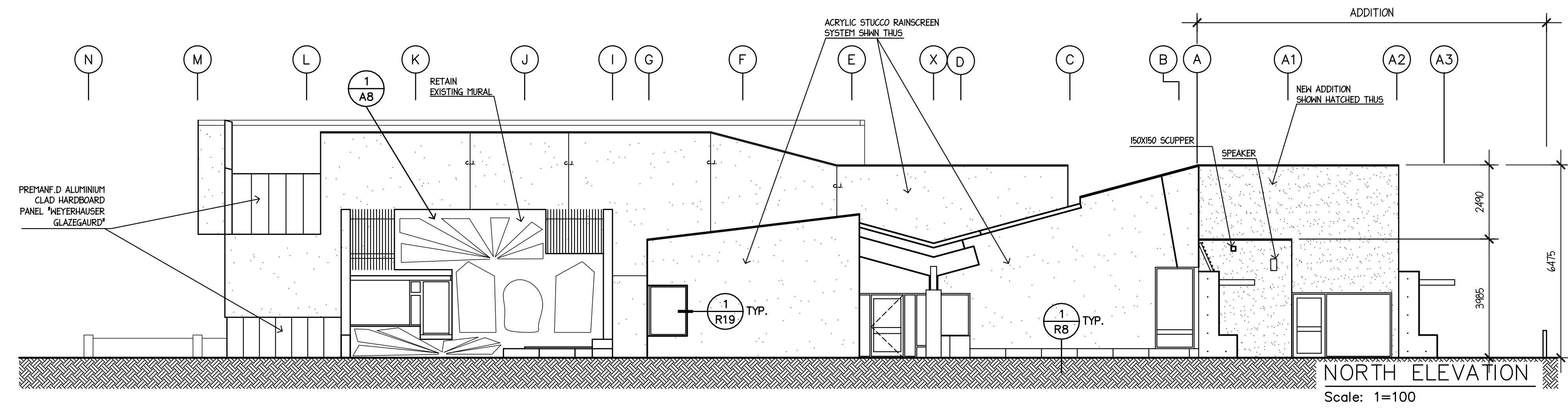
EXISTING WINDOWS
REMOVE & REINSTALL AND COORDINATE WITH NEW RAINSCREEN DETAIL

INSTALL FLASHINGS AND INSECT SCREEN AT BOTTOM OF DRAIN CAVITIES

ALL FLASHINGS TO BE 20 GAUGE ANODIZED ALUMINIUM

LEGEND

- 012 ROOM NUMBER
- 1 A DOOR NUMBER
A DOOR TYPE
- 888 WALL SYMBOL
- 888 WINDOW SYMBOL
- 1 1 SECTION/DETAIL #
1 SHEET NUMBER
- 2400 CEILING ELEVATION
- 888.00 NEW ELEVATION
888.00 EXIST. ELEVATION
- 888.00 EXIST. ELEVATION



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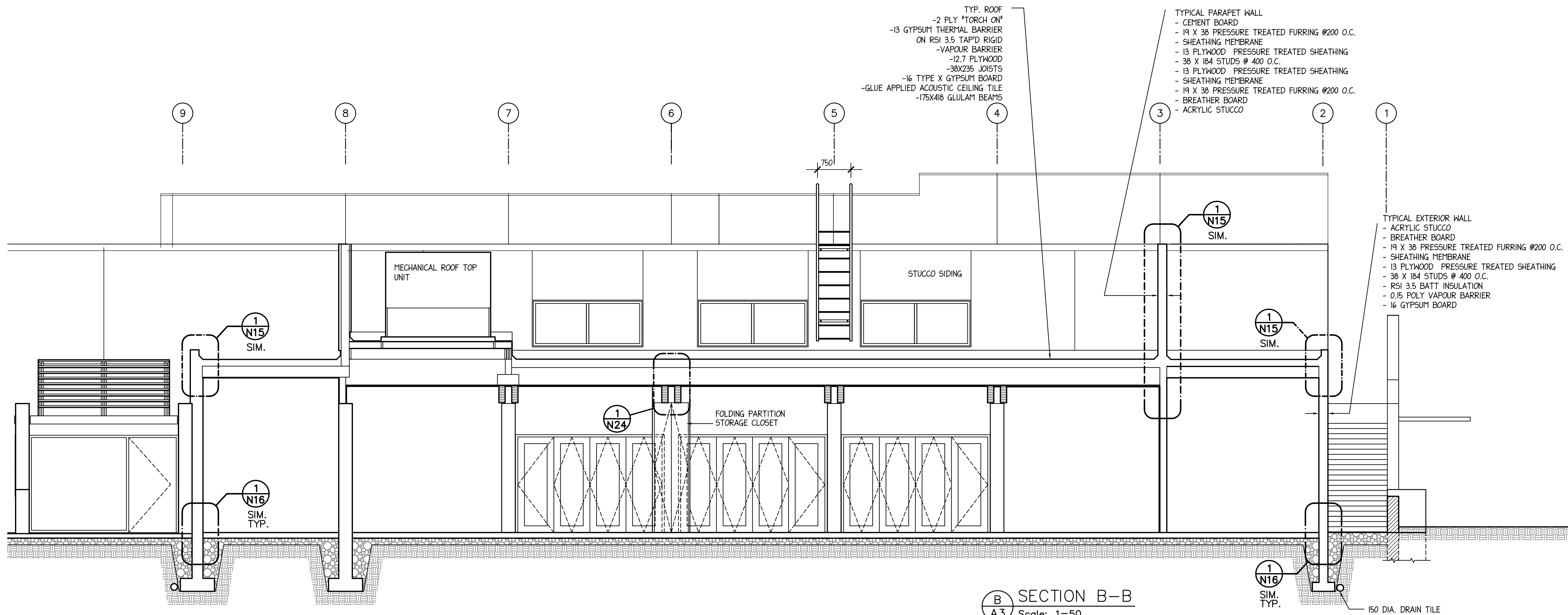
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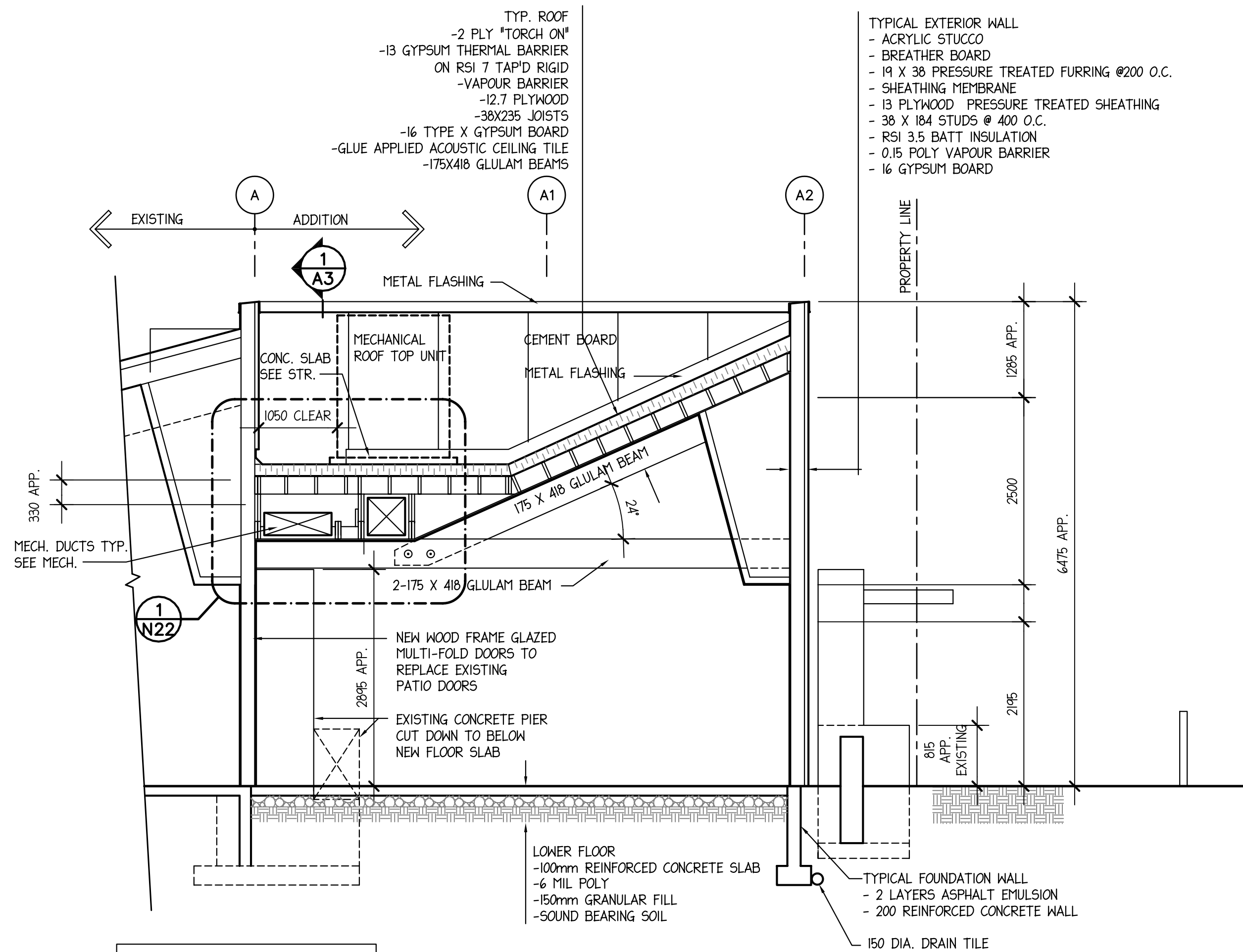
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Sheet Title
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ELEVATIONS**

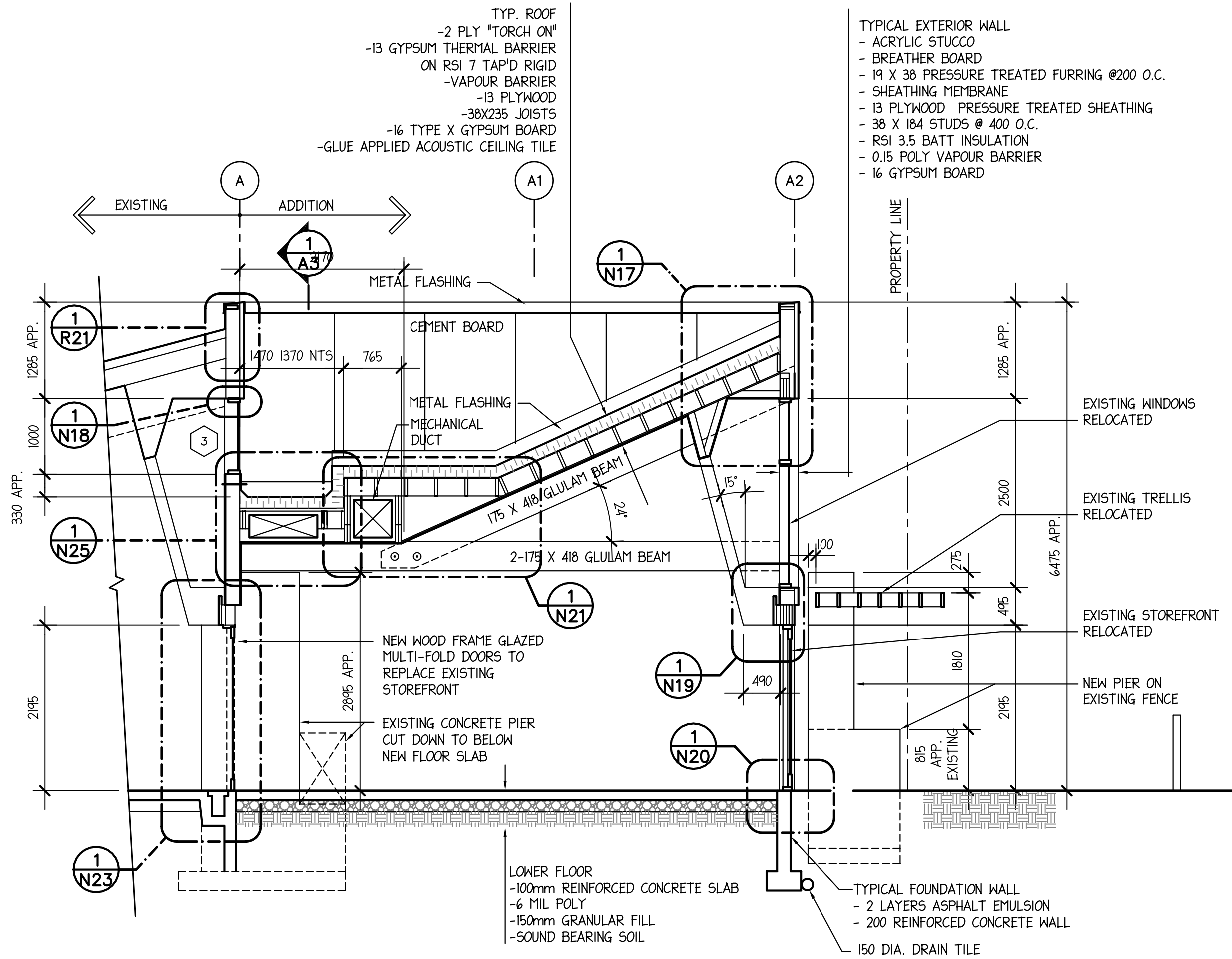
Job No. 0514	Sheet No.
Scale AS NOTED	A5
Drawn HB	
Checked BP	
Date APR 25, 06	of 7



B SECTION B-B
A3 Scale: 1=50



C SECTION C-C
A3 Scale: 1=50



A SECTION A-A
A3 Scale: 1=50

LEGEND

012	ROOM NUMBER
1 A	DOOR NUMBER DOOR TYPE
888	WALL SYMBOL
888	WINDOW SYMBOL
1 1	SECTION/DETAIL # SHEET NUMBER
2400	CEILING ELEVATION
888.00 888.00	NEW ELEVATION EXIST. ELEVATION
888.00	EXIST. ELEVATION

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








SECTIONS

Job No. 0514	Sheet No.
Scale AS NOTED	A6
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Checked BP	
Date APRIL 25, 06	of 7

ELECTRICAL SPECIFICATIONS			
DEFINITIONS			
1) THE "ELECTRICAL ENGINEER" IS THE PROJECT ENGINEER EMPLOYED BY MCL ENGINEERING LIMITED.	6) THE QUOTATION MUST INCLUDE A GRAND TOTAL DOLLAR AMOUNT DERIVED BY ADDING TOGETHER ALL THE TOTAL DOLLAR AMOUNTS DESCRIBED IN "A" THROUGH "I" OF ITEM #3 ABOVE.	15) OBTAIN AND PAY FOR ALL REQUIRED PERMITS BEFORE BEGINNING WORK.	C) A COPY OF THE ELECTRICAL CONTRACTOR'S LETTER TO THE ELECTRICAL ENGINEER WHICH CONFIRMS THAT ALL EXIT SIGNS AND EMERGENCY LIGHTS HAVE BEEN TESTED.
2) THE "ELECTRICAL DRAWINGS" ARE THE DRAWINGS PROVIDED BY THE ELECTRICAL ENGINEER FOR THIS PROJECT.		16) BEFORE COMMENCING WORK, OBTAIN TWO SETS OF ELECTRICAL DRAWINGS MARKED "FOR CONSTRUCTION".	D) BUILDING CODE SCHEDULES FROM THE SEISMIC ENGINEER.
3) THE "ELECTRICAL SPECIFICATIONS" ARE THOSE SPECIFICATIONS, NAMED AS INDICATED, WHICH ARE PRESENTED ON THE ELECTRICAL DRAWINGS.	WORK NOT INCLUDED		E) ALL AVAILABLE DOCUMENTS CONCERNING CUTLER-HAMMER, FEDERAL PIONEER, SQUARE D, OR SIEMENS.
4) THE "ELECTRICAL WORK" IS:	1) THE ELECTRICAL WORK DOES NOT INCLUDE:		F) ALL WARRANTIES WHICH APPLY TO THE EQUIPMENT AND SYSTEMS ASSOCIATED WITH THE ELECTRICAL WORK.
A) THE WORK DESCRIBED IN THE ELECTRICAL SPECIFICATIONS PRESENTED ON THE E100 SERIES DRAWINGS.	A) CUTTING AND CORING;		G) CONTACT INFORMATION FOR THE ELECTRICAL CONTRACTOR AND ALL SUPPLIERS OF EQUIPMENT AND SYSTEMS ASSOCIATED WITH THE ELECTRICAL WORK.
B) THE WORK DESCRIBED ON THE E200 SERIES DRAWINGS (POWER, LIFE SAFETY, MISCELLANEOUS);	C) RECYCLING;		H) THE ELECTRICAL ENGINEER WILL REVIEW THE ELECTRICAL OPERATION AND MAINTENANCE MANUAL AND FORWARD IT TO THE ARCHITECT. THE ARCHITECT WILL FORWARD THE MANUAL TO THE CONSTRUCTION MANAGER WHO WILL RETURN IT TO THE ELECTRICAL CONTRACTOR. CHANGES MUST BE MADE TO THE MANUAL AS DIRECTED BY THE ELECTRICAL ENGINEER. THE REVISED MANUAL MUST BE RESUBMITTED THROUGH THE REVIEW CHAIN.
C) THE WORK DESCRIBED ON THE E300 SERIES DRAWINGS (LIGHTING);	D) REMOVAL OF REFUSE FROM THE SITE;		I) WHEN THE ELECTRICAL ENGINEER CONFIRMS THAT ALL REQUIRED CHANGES HAVE BEEN MADE TO THE MANUAL, FORWARD THREE FINAL COPIES TO THE CONSTRUCTION MANAGER.
D) THE WORK ASSOCIATED WITH THE RACEWAY INFRASTRUCTURE DESCRIBED ON THE E400, E500, AND E600 SERIES DRAWINGS.	E) EXCAVATION AND BACKFILLING.		5) AT SUBSTANTIAL COMPLETION, INSTRUCT REPRESENTATIVES OF THE FACILITY OWNER ON OPERATING AND MAINTENANCE PROCEDURES FOR ALL INSTALLED EQUIPMENT AND SYSTEMS.
5) "TRACEWAY" REFERS TO A RACEWAY SYSTEM WHICH MAY INCLUDE CONDUIT, TUBING, MIREWAY, DUCTS, FITTINGS, CONNECTORS, FASTENERS, HUBS, BUSHINGS, PULL BOXES, PULL BOX COVERS, OUTLET BOXES, LOCK NUTS, GASKETS, SLEEVES, STRAPS, RED-ROD, WASHERS, HANGERS, METAL FRAMING, PULL CORDS, AND SEISMIC RESTRAINT ELEMENTS.	TEMPORARY POWER AND LIGHTING		6) EACH CIRCUIT BREAKER RATED BELOW 400 AMPERES MUST HAVE A PERMANENT TRIP UNIT WITH THERMAL AND MAGNETIC SENSORS FOR EACH POLE.
6) THE "ELECTRICAL CONTRACTOR" IS THE CONTRACTOR WHO UNDERTAKES THE ELECTRICAL WORK.	1) THE ELECTRICAL CONTRACTOR IS TO PROVIDE TEMPORARY POWER AND LIGHTING AS ARRANGED WITH THE CONSTRUCTION MANAGER.		POWER DISTRIBUTION – BRANCH CIRCUIT WIRING
7) "PROVIDE" MEANS SUPPLY AND INSTALL.	GENERAL REQUIREMENTS		1) UNLESS NOTED OTHERWISE, CIRCUITS WHICH SUPPLY RECEPTACLES MUST SUPPLY RECEPTACLES ONLY.
8) "CIRCUIT NUMBER" REFERS TO THE EXTENDED CIRCUIT NUMBER WHICH IS CONSTRUCTED FROM THE PANEL IDENTIFIER AND THE PANEL CIRCUIT NUMBER. FOR EXAMPLE, CIRCUIT NUMBER "1A12" INDICATES CIRCUIT 12 OF PANEL 1A.	1) COORDINATE THE ELECTRICAL INSTALLATION WITH THE WORK OF OTHER DISCIPLINES. OBTAIN, READ, AND UNDERSTAND THE ARCHITECTURAL DRAWINGS, STRUCTURAL DRAWINGS, MECHANICAL DRAWINGS, WHICH ARE PART OF THE DESIGN PACKAGE, DISTRIBUTED BY THE CONSTRUCTION MANAGER.		2) UNLESS NOTED OTHERWISE, CIRCUITS WHICH SUPPLY LUMINAIRES MUST SUPPLY LUMINAIRES ONLY.
	2) COORDINATE WITH THE MECHANICAL TRADES TO ENSURE THAT MECHANICAL EQUIPMENT IS NOT PLACED IN CONFLICT WITH ELECTRICAL EQUIPMENT.		3) UNLESS NOTED OTHERWISE, ONE 15-AMPERE BRANCH CIRCUIT MAY SUPPLY NO MORE THAN SIX DUPLEX 15-AMPERE RECEPTACLES.
	3) UNLESS SPECIFICALLY EXEMPTED BY THE CONSTRUCTION MANAGER, PERFORM ALL CLEANING ASSOCIATED WITH THE ELECTRICAL INSTALLATION AT THE END OF EACH WORK DAY, REMOVE ALL DEBRIS (ASSOCIATED WITH THE ELECTRICAL INSTALLATION) BEFORE IT PENETRATES THE WORK DAY. AT SUBSTANTIAL COMPLETION, THOROUGHLY CLEAN ALL INSTALLED EQUIPMENT AND ASSOCIATED SPACES.		4) EACH 5-20RA (20-AMPERE) DUPLEX RECEPTACLE MUST BE SUPPLIED FROM A DEDICATED CIRCUIT.
	4) UNLESS NOTED OTHERWISE, ALL SUPPLIED MATERIAL AND EQUIPMENT MUST BE NEW AND MANUFACTURED WITHIN ONE YEAR OF PURCHASE DATE.		ROOF VENT FLASHINGS
	5) UNLESS SPECIFICALLY EXEMPTED BY THE CONSTRUCTION MANAGER, PERFORM ALL CLEANING ASSOCIATED WITH THE ELECTRICAL INSTALLATION AT THE END OF EACH WORK DAY, REMOVE ALL DEBRIS (ASSOCIATED WITH THE ELECTRICAL INSTALLATION) BEFORE IT PENETRATES THE WORK DAY. AT SUBSTANTIAL COMPLETION, THOROUGHLY CLEAN ALL INSTALLED EQUIPMENT AND ASSOCIATED SPACES.		1) ROOF VENT FLASHINGS MUST BE USED TO FACILITATE PASSAGE THROUGH THE ROOF.
	6) UNLESS NOTED OTHERWISE, ALL EQUIPMENT AND SYSTEMS SUPPLIED AND/OR INSTALLED MUST BE COMPLETE AND FUNCTIONAL.		A) ALL LIQUID TIGHT FLEXIBLE CONDUIT WHICH ENCLOSES POWER WIRING;
	7) UNLESS NOTED OTHERWISE, ALL SUPPLIED MATERIAL AND EQUIPMENT MUST BE NEW AND MANUFACTURED WITHIN ONE YEAR OF PURCHASE DATE.		B) ALL TEKRO9 CABLE.
	8) ALL SUPPLIED MATERIAL AND EQUIPMENT MUST BE: A) UNDAMAGED; B) NON-DEFECTIVE; C) HANDLED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.		C) THE ELECTRICAL CONTRACTOR MUST SUPPLY THE FLASHINGS AND THE ROOFING CONTRACTOR MUST INSTALL THEM.
	9) ALL SUPPLIED MATERIAL AND EQUIPMENT MUST BE: A) UNDAMAGED; B) NON-DEFECTIVE; C) HANDLED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.		2) ROOF VENT FLASHINGS MUST: A) BE PREFABRICATED AND SELF SEALING; B) INCLUDE A GOOSENECK-SHAPED ALUMINUM FLASHING PIPE SLEEVE; C) BE CSA APPROVED TO THE MOST CURRENT VERSION OF CSA STANDARD 8272; D) BE THALER MFG SERIES OR AN APPROVED EQUIVALENT.
	10) ALL SUPPLIED MATERIAL AND EQUIPMENT MUST BE: A) UNDAMAGED; B) NON-DEFECTIVE; C) HANDLED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.		3) SUPPLY A SUFFICIENT NUMBER OF FLASHINGS TO ACCOMMODATE THE POWER WIRING TO THE ROOFTOP. REMOVE THE FLASHING FROM THE PHOTOCELL OR PHOTOCELL MOUNTING. RE-INSTALL THE PHOTOCELL OR PHOTOCELL MOUNTING.
	11) BEFORE THE CLOSE OF THE TENDER PERIOD, THE BIDDER MUST VISIT THE SITE AND BECOME FAMILIAR WITH ALL CONDITIONS WHICH MAY AFFECT THE SECURITY SYSTEM WORK. THE SECURITY SYSTEM CONTRACTOR'S PRICE MUST INCLUDE MANAGES FOR SITE CONDITIONS WHICH ARE OBSERVABLE AT THE TIME OF THE BIDDER'S SITE VISIT.		4) EACH 5-20RA (20-AMPERE) DUPLEX RECEPTACLE MUST BE SUPPLIED FROM A DEDICATED CIRCUIT.
	12) THE ELECTRICAL CONTRACTOR MUST PROVIDE THE CONSTRUCTION MANAGER WITH TEN SETS OF THE SECURITY SYSTEM CONTRACTOR'S SPECIFICATIONS FOR EACH TYPE OF EQUIPMENT OR MATERIAL TO BE INSTALLED. THE CONSTRUCTION MANAGER WILL: A) REVIEW THE SPECIFICATIONS; B) MAKE CHANGES TO THE SPECIFICATIONS IF REQUIRED; C) STAMP THE SPECIFICATIONS; D) RETAIN ONE SET; E) FORWARD THE REMAINING SETS TO THE ELECTRICAL ENGINEER.		LIFE SAFETY – EMERGENCY LIGHTING
	13) CONFIRM ALL DIMENSIONS (RELEVANT TO THE ELECTRICAL WORK) ON SITE. SELECT EQUIPMENT AND MATERIAL IN ACCORDANCE WITH THE CONFIRMED DIMENSIONS.		1) EMERGENCY LIGHTING HEADS AND EXIT SIGNS MUST NOT BE OBSTRUCTED BY FURNISHINGS, FITTINGS, OR FIXTURES.
	14) USE ONLY ONE MANUFACTURER FOR MULTIPLE COPIES OF THE SAME PRODUCT. (EXAMPLE: ALL FLUORESCENT LAMPS MUST BE FROM THE SAME MANUFACTURER.)		2) ALL EXIT SIGNS MUST: A) HAVE A DIE-CAST ALUMINUM HOUSING; B) HAVE A BRUSHED ALUMINUM FACE (IF SINGLE SIDED) AND BRUSHED ALUMINUM FACES (F DOUBLE SIDED); C) HAVE A BLACK POWDER COATED BODY; D) HAVE A HINGED FACEPLATE AND ONE-PIECE BACKBODY; E) HAVE CONCEALED SNAP-OUT DIRECTIONAL CHEVRONS; F) HAVE AN LED LIGHT SOURCE; G) INCLUDE A UNIVERSAL MOUNTING KIT WHICH CAN ACCOMMODATE WALL MOUNTING, END MOUNTING, AND CANOPY MOUNTING.
			3) UNLESS NOTED OTHERWISE, ALL EMERGENCY BATTERY PACKS AND LIGHTING HEADS MUST BE WHITE.
			4) ALL REMOTE LIGHTING FIXTURES MUST HAVE TWO HEADS.
			5) WHEN BATTERY PACKS AND EXIT SIGNS ARE CONNECTED TO GENERAL LIGHTING CIRCUITS, THE CONNECTION MUST BE MADE TO THE UNWITHEDED PART OF THE CIRCUIT.
			6) EACH BATTERY PACK MUST BE HARD-WIRED TO A 120-VOLT AC POWER SOURCE. BATTERY PACK POWER CONNECTIONS MUST NOT BE VISIBLE.
			7) AT SUBSTANTIAL COMPLETION, NORMAL POWER MUST BE REMOVED FROM EACH EMERGENCY LIGHTING EQUIPMENT FOR A MINIMUM OF 30 MINUTES. AT THE END OF THIS PERIOD, ALL CONNECTED EMERGENCY LIGHTS MUST PROVIDE THE REQUIRED LEVEL OF ILLUMINATION AND ALL CONNECTED EXIT SIGNS MUST BE FULLY ILLUMINATED.
			8) EACH BATTERY PACK MUST BE HARD-WIRED TO A 120-VOLT AC POWER SOURCE. BATTERY PACK POWER CONNECTIONS MUST NOT BE VISIBLE.
			9) AT SUBSTANTIAL COMPLETION, NORMAL POWER MUST BE REMOVED FROM EACH EMERGENCY LIGHTING EQUIPMENT FOR A MINIMUM OF 30 MINUTES. AT THE END OF THIS PERIOD, ALL CONNECTED EMERGENCY LIGHTS MUST PROVIDE THE REQUIRED LEVEL OF ILLUMINATION AND ALL CONNECTED EXIT SIGNS MUST BE FULLY ILLUMINATED.
			10) THE ELECTRICAL CONTRACTOR MUST SIGN A SIGNED LETTER TO THE ELECTRICAL ENGINEER WHICH STATES: "I, [NAME] OF [COMPANY] HEREBY VERIFY THAT NORMAL POWER WAS REMOVED FROM ALL BATTERY PACKS FOR A MINIMUM OF 30 MINUTES AND FOLLOWING THIS PERIOD ALL EMERGENCY LIGHTS PROVIDED THE REQUIRED LEVEL OF ILLUMINATION AND ALL EXIT SIGNS WERE FULLY ILLUMINATED."
			11) APPROVED EMERGENCY LIGHTING EQUIPMENT MANUFACTURERS ARE LISTED BELOW: A) DUAL-LITE; B) REALY-LITE; C) EMERG-LITE; D) LITHONIA; E) BEGHELLI; F) UNIGLO.
			LIFE SAFETY – FIRE DETECTION
			1) THE EXISTING FIRE ALARM CONTROL PANEL IS AN EDWARDS E5A 2000. IT IS LOCATED IN THE ELECTRICAL ROOM 2 WHICH IS SHOWN ON THE ELECTRICAL DRAWINGS.
			2) ADD A FIRE ALARM BELL TO THE NEW MULTI-PURPOSE ROOM IN THE LOCATION INDICATED ON THE ELECTRICAL DRAWINGS. THE NEW FIRE BELL MUST BE AN EDWARDS 4380-104H AS THERE ARE NO EXISTING FIRE BELL CIRCUITS. RUN A NOTIFICATION CIRCUIT FROM THE FIRE ALARM PANEL TO THE NEW BELL ALONG THE ROUTE INDICATED ON THE ELECTRICAL DRAWINGS.
			3) REMOVE THE EXISTING FIRE ALARM PULL STATION ON THE WEST WALL OF THE CAFETERIA (WHICH IS TO BE DEMOLISHED) AND MOVE IT NEXT TO ONE OF THE THREE NEW EXITS IN THE MULTI-PURPOSE ROOM. PROVIDE TWO ADDITIONAL PULL STATIONS AT THE NEW EXITS. EACH NEW PULL STATION MUST BE AN EDWARDS 270-SPO.
			4) ADD A NEW ZONE CARD TO THE CONTROL PANEL AND RUN THE NEW INITIATING CIRCUIT WIRING TO THE NEW PULL STATION. ADD AN END-OF-LINE RESISTOR IN STORAGE ROOM 103. THE NEW ZONE IS TO BE DESIGNATED AS "ZONE 12 – MULTI-PURPOSE ROOM 101 PULL STATIONS". UPDATE THE ANNUNCIATOR PANEL (AT THE SOUTH ENTRANCE) WITH THE NEW ZONE INFORMATION.
			5) ADD AN EDWARDS IONIZATION-TYPE SMOKE DETECTOR (WHICH IS COMPATIBLE WITH THE CONTROL PANEL) TO STORAGE ROOM 102 AND STORAGE ROOM 103.
			6) ADD A NEW ZONE CARD TO THE CONTROL PANEL AND RUN THE NEW INITIATING CIRCUIT WIRING TO THE NEW SMOKE DETECTORS. ADD AN END-OF-LINE RESISTOR IN STORAGE ROOM 102 AND STORAGE ROOM 103.
			7) DESIGNATE AS "ZONE 13 – STORAGE ROOMS 101/103 SMOKE DETECTORS". UPDATE THE ANNUNCIATOR PANEL (AT THE SOUTH ENTRANCE) WITH THE NEW ZONE INFORMATION.
			8) DISCONNECT AND REMOVE THE PHOTOCELL ON THE ROOF OF THE BUILDING IN PREPARATION FOR THE ENVELOPE REMEDIATION WORK. MAKE TEMPORARY ARRANGEMENTS SO THAT THE PHOTOCELL CAN OPERATE DURING THE CONSTRUCTION WORK. RE-INSTALL THE PHOTOCELL, RE-CONNECT, AND TEST THE PHOTOCELL.
			9) A 100-AMPERE DISCONNECT SWITCH (WHICH SERVES AS A ROOFTOP HVAC UNIT) IS MOUNTED ON A LOW WALL WHICH EMERGES FROM ROOF. DE-ENERGIZE THIS UNIT AND REMOVE IT FROM THE BUILDING ENVELOPE. PROVIDE TWO ADDITIONAL PULL STATIONS AT THE NEW EXITS. EACH NEW PULL STATION MUST BE AN EDWARDS 270-SPO.
			10) AT THE APPROPRIATE TIME, REINSTALL THE SWITCH IN ACCORDANCE WITH THE INSTRUCTIONS OF THE BUILDING ENVELOPE CONSULTANT.
			11) AN ELECTRICAL JUNCTION/PULL BOX IS LOCATED ON THE ROOF OF THE BUILDING IN PREPARATION FOR THE ENVELOPE REMEDIATION WORK. MAKE TEMPORARY ARRANGEMENTS SO THAT THE PHOTOCELL CAN OPERATE DURING THE CONSTRUCTION WORK. RE-INSTALL THE PHOTOCELL, RE-CONNECT, AND TEST THE PHOTOCELL.
			12) DISCONNECT AND REMOVE THE PHOTOCELL ON THE ROOF OF THE BUILDING IN PREPARATION FOR THE ENVELOPE REMEDIATION WORK. MAKE TEMPORARY ARRANGEMENTS SO THAT THE PHOTOCELL CAN OPERATE DURING THE CONSTRUCTION WORK. RE-INSTALL THE PHOTOCELL, RE-CONNECT, AND TEST THE PHOTOCELL.
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			94) DISCONNECT AND REMOVE THE PHOTOCELL ON THE ROOF OF THE BUILDING IN PREPARATION FOR THE ENVELOPE REMEDIATION WORK. MAKE TEMPORARY ARRANGEMENTS SO THAT THE PHOTOCELL CAN OPERATE DURING THE CONSTRUCTION WORK. RE-INSTALL THE PHOTOCELL, RE-CONNECT, AND TEST THE PHOTOCELL.
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			96) DISCONNECT AND REMOVE THE PHOTOCELL ON THE ROOF OF THE BUILDING IN PREPARATION FOR THE ENVELOPE REMEDIATION WORK. MAKE TEMPORARY ARRANGEMENTS SO THAT THE PHOTOCELL

TELECOM CABLING SPECIFICATIONS			
DEFINITIONS	2) THE CONSTRUCTION MANAGER WILL ARRANGE FOR:	3) A "COMMUNICATION CABLE ASSEMBLY" IS DEFINED HERE AS A COMMUNICATION CABLE AND ITS ASSOCIATED TERMINATIONS. EACH COMMUNICATION CABLE ASSEMBLY IS TO BE ASSIGNED A UNIQUE IDENTIFIER. ATTACH A PLASTIC TAPE LABEL (WHICH DISPLAYS THE UNIQUE IDENTIFIER) TO BOTH ENDS OF EACH COMMUNICATION CABLE. ALSO PLACE A PLASTIC TAPE LABEL (WHICH DISPLAYS THE IDENTIFIER) NEXT TO EACH TERMINATION.	HORIZONTAL TELEPHONE CABLING AND TERMINATIONS
1) THE "ELECTRICAL ENGINEER" IS THE PROJECT ENGINEER EMPLOYED BY MCL ENGINEERING LIMITED.	A) THE INSTALLATION OF TELECOM BACKBOARDS;		1) EACH HORIZONTAL TELEPHONE CABLE MUST:
2) THE "ELECTRICAL DRAWINGS" ARE THE DRAWINGS PROVIDED BY THE ELECTRICAL ENGINEER FOR THIS PROJECT.	B) CUTTING AND CORING REQUIRED TO PERMIT THE PASSAGE OF TELECOM RACEWAY.		A) BE CATEGORY 5E;
3) THE "TELECOM CABLING SPECIFICATIONS" ARE THOSE SPECIFICATIONS, NAMED AS INDICATED, WHICH ARE PRESENTED ON THE ELECTRICAL DRAWINGS.	GENERAL REQUIREMENTS		B) INCLUDE FOUR, BALANCED, 100 OHM, UNSHEATHED TWISTED PAIRS OF SOLID 24 AWG COPPER;
4) THE "TELECOM CABLING WORK" IS:	1) COORDINATE THE TELECOM CABLING INSTALLATION WITH THE WORK OF OTHER DISCIPLINES. OBTAIN, READ, AND UNDERSTAND THE ARCHITECTURAL, ELECTRICAL, STRUCTURAL, DRAWINGS, AND MECHANICAL DRAWINGS, (ASSOCIATED WITH THE TELECOM CABLING) DISTRIBUTED BY THE CONSTRUCTION MANAGER.	4) EACH TELEPHONE CABLE ASSEMBLY IDENTIFIER MUST TAKE THE FORM "TX", WHERE "T" STANDS FOR "TELEPHONE" AND "X" IS A WHOLE NUMBER WHICH IS UNIQUE IN THE SET OF TELEPHONE IDENTIFIER NUMBERS. THE FIRST TELEPHONE CABLE ASSEMBLY IDENTIFIER MUST BE "T001". ADDITIONAL TELEPHONE CABLE ASSEMBLY IDENTIFIERS MUST INCREASE CONSECUTIVELY IN INCREMENTS OF ONE (T002, T003, T004, ETC).	C) HAVE A WHITE PVC JACKET;
A) THE WORK DESCRIBED IN THE TELECOM CABLING SPECIFICATIONS;	2) UNLESS SPECIFICALLY EXEMPTED BY THE CONSTRUCTION MANAGER, PERFORM ALL CLEANING ASSOCIATED WITH THE TELECOM CABLING INSTALLATION. AT THE END OF EACH WORK DAY, REMOVE ALL DEBRIS (ASSOCIATED WITH THE TELECOM CABLING INSTALLATION) CREATED DURING THE COURSE OF THE WORK DAY. AT SUBSTANTIAL COMPLETION, THOROUGHLY CLEAN ALL INSTALLED EQUIPMENT AND ASSOCIATED SPACES.	WHERE TWO OF THE FOUR PAIRS OF A HORIZONTAL TELEPHONE CABLE ARE TERMINATED ON ONE JACK, AND THE OTHER TWO PAIRS ARE TERMINATED ON AN ADJACENT JACK:	D) BE PLENUM RATED AND MARKED "CMP".
B) THE WORK DESCRIBED ON THE E400 SERIES DRAWINGS WITH THE EXCEPTION OF THE RACEWAY (WHICH IS TO BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR).	3) ARRANGE FOR AND PAY FOR ALL LIFTING EQUIPMENT REQUIRED TO COMPLETE THE TELECOM CABLING WORK.	A) ASSIGN AN IDENTIFIER OF THE FORM "TXA" TO ONE JACK;	2) FIVE HORIZONTAL TELEPHONE CABLES ARE TO RUN FROM COMBINATION OUTLETS IN MULTI-PURPOSE ROOM 101 TO THE "MECHANICAL / JANITORS" ROOM.
5) "RACEWAY" REFERS TO A RACEWAY SYSTEM WHICH MAY INCLUDE CONDUIT, TUBING, WIREWAY, DUCTS, FITTINGS, CONNECTORS, FASTENERS, HUBS, BUSHINGS, PULL BOXES, PULL BOX COVERS, OUTLET BOXES, LOCK NUTS, GASKETS, SLEEVES, STRAPS, REDI-ROD, WASHERS, HANGERS, METAL FRAMING, PULL CORDS, AND SEISMIC RESTRAINT ELEMENTS.	4) UNLESS NOTED OTHERWISE, ALL EQUIPMENT AND SYSTEMS SUPPLIED AND/OR INSTALLED MUST BE COMPLETE AND FUNCTIONAL.	B) ASSIGN AN IDENTIFIER OF THE FORM "TXB" TO THE OTHER JACK.	3) WHERE A HORIZONTAL TELEPHONE CABLE IS TERMINATED AT A COMBINATION OUTLET, TWO OF THE FOUR PAIRS MUST TERMINATE ON AN RJ45 TELEPHONE JACK. THE OTHER TWO PAIRS MUST TERMINATE ON ANOTHER RJ45 TELEPHONE JACK. EACH PAIR OF TELEPHONE JACKS IS TO BE MOUNTED IN A DECORA INSERT. TELEPHONE JACKS MUST BE WHITE.
6) THE "TELECOM CABLING CONTRACTOR" IS THE CONTRACTOR WHO UNDERTAKES THE TELECOM CABLING WORK.	5) UNLESS NOTED OTHERWISE, ALL SUPPLIED MATERIAL AND EQUIPMENT MUST BE NEW AND MANUFACTURED WITHIN ONE YEAR OF PURCHASE DATE.	FOR EXAMPLE, THE TWO JACKS WHICH TERMINATE TELEPHONE CABLE T001 ARE TO BE LABELLED AS "T001A" AND "T001B" RESPECTIVELY.	4) EACH HORIZONTAL TELEPHONE CABLE WHICH TERMINATES IN THE "MECHANICAL / JANITORS" ROOM MUST TERMINATE ON IDC (BIV OR T10) CONNECTOR BLOCKS NEXT TO THE EXISTING TELEPHONE TERMINATIONS. TERMINATE EACH PAIR.
7) "PROVIDE" MEANS SUPPLY AND INSTALL.	6) ALL SUPPLIED EQUIPMENT AND MATERIAL MUST BE:	5) WHERE TELEPHONE CABLES TERMINATE ON IDC CONNECTORS, THE JACKS OR PAGES ALL CONNECTORS MUST BE NUMBERED CONSECUTIVELY FROM LEFT TO RIGHT AND TOP TO BOTTOM.	HORIZONTAL DATA CABLING AND TERMINATIONS
PROJECT DESCRIPTION	A) UNDAMAGED;	6) ALL PATCH PANEL PORTS MUST BE NUMBERED CONSECUTIVELY FROM LEFT TO RIGHT AND TOP TO BOTTOM.	1) ALL DATA TERMINATIONS MUST CONFORM TO THE TIA/EIA 568B PIN CONFIGURATION.
1) AN ADDITION OF APPROXIMATELY 162 SQUARE METERS IS TO BE CONSTRUCTED AT THE NEWTON SENIORS RECREATION CENTRE LOCATED AT 13775 - 70TH AVENUE, SURREY. ALSO, A NEW ACCESSIBLE WASHROOM IS TO BE CREATED WITHIN THE EXISTING BUILDING.	B) NON-DEFECTIVE;	7) ALL SUPPLIED EQUIPMENT AND MATERIAL MUST BE "APPROVED" AS DEFINED IN THE B.C. ELECTRICAL CODE.	2) EACH HORIZONTAL DATA CABLE MUST:
APPROVED TELECOM CABLING CONTRACTORS	C) HANDLED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.	8) ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH:	A) BE CATEGORY 5E;
1) THE FOLLOWING CONTRACTORS ARE APPROVED TO BID ON THIS PROJECT:	7) ALL SUPPLIED EQUIPMENT AND MATERIAL MUST BE "APPROVED" AS DEFINED IN THE B.C. ELECTRICAL CODE.	A) ALL B.C. ELECTRICAL DIRECTIVES AND BULLETINS;	B) INCLUDE FOUR, BALANCED, 100 OHM, UNSHEATHED TWISTED PAIRS OF SOLID 24 AWG COPPER;
A) BKS CABLECOM SYSTEMS (BRYAN SATAKA / 604-451-7999)	8) ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH:	B) ALL LOCAL MUNICIPAL ELECTRICAL REQUIREMENTS;	C) HAVE A BLUE PVC JACKET;
B) CYGNAL TECHNOLOGIES (PERRY RAYNARD / 604-244-1800)	A) ALL B.C. ELECTRICAL DIRECTIVES AND BULLETINS;	C) THE B.C. BUILDING CODE;	D) BE PLENUM RATED AND MARKED "CMP".
C) FIBER NET SERVICES (JEFF DESROCHERS / 604-294-9780)	B) ALL LOCAL MUNICIPAL ELECTRICAL REQUIREMENTS;	D) ALL WORKERS' COMPENSATION BOARD REGULATIONS;	3) TEN HORIZONTAL DATA CABLES ARE TO RUN FROM COMBINATION OUTLETS IN MULTI-PURPOSE ROOM 101 TO THE "MECHANICAL / JANITORS" ROOM.
COMMUNICATION PROTOCOLS	C) THE B.C. BUILDING CODE;	E) ALL OTHER APPLICABLE REGULATIONS, CODES, AND STANDARDS.	4) EACH HORIZONTAL TELEPHONE CABLE TERMINATED AT A COMBINATION OUTLET MUST TERMINATE ON A CATEGORY 5E, RJ45, FEMALE, SNAP-IN STYLE JACK MOUNTED IN A PATCH PANEL. THE TELECOM CABLING CONTRACTOR IS TO PROVIDE A NEW PATCH PANEL NEAR THE EXISTING PATCH PANELS.
1) AFTER THE SELECTION OF THE TELECOM CABLING CONTRACTOR, AND PRIOR TO THE START OF CONSTRUCTION, THE ELECTRICAL ENGINEER, WITH THE PERMISSION OF THE ARCHITECT AND THE CONSTRUCTION MANAGER, WILL HOLD A PRE-CONSTRUCTION MEETING ON SITE WITH THE SITE SUPERVISOR, THE TELECOM CABLING CONTRACTOR'S PROJECT MANAGER, AND THE TELECOM CABLING CONTRACTOR'S SITE FOREMAN.	D) ALL WORKERS' COMPENSATION BOARD REGULATIONS;	9) THE TELECOM CABLING SYSTEM IS TO BE A "STRUCTURED CABLEING SYSTEM". IT IS TO BE INSTALLED BY A MANUFACTURER-CERTIFIED SYSTEM VENDOR. THE STRUCTURED CABLING SYSTEM MUST INCLUDE A 25-YEAR WARRANTY BACKED BY THE MANUFACTURER AND OFFERED DIRECTLY TO THE END USER.	5) EACH HORIZONTAL DATA CABLE WHICH TERMINATES IN THE "MECHANICAL / JANITORS" ROOM MUST TERMINATE ON A CATEGORY 5E, RJ45, FEMALE, SNAP-IN STYLE JACK MOUNTED IN A PATCH PANEL. THE TELECOM CABLING CONTRACTOR IS TO PROVIDE A NEW PATCH PANEL NEAR THE EXISTING PATCH PANELS.
TELECOM CABLING WORK IS NOT TO BEGIN UNTIL THIS MEETING IS HELD. THIS MEETING WILL NOT BE HELD UNTIL THE TELECOM CABLING CONTRACTOR DESIGNATES BOTH A PROJECT MANAGER AND A SITE FOREMAN.	E) ALL OTHER APPLICABLE REGULATIONS, CODES, AND STANDARDS.	10) THE TELECOM CABLING INSTALLATION MUST CONFORM TO THE LATEST VERSION OF THE FOLLOWING:	DATA PATCH CORDS
2) DURING THE CONSTRUCTION PHASE, THE TELECOM CABLING CONTRACTOR MAY, WITH THE PERMISSION OF THE ARCHITECT AND THE CONSTRUCTION MANAGER, FAX E-MAIL QUESTIONS OR COMMENTS DIRECTLY TO THE ELECTRICAL ENGINEER, PROVIDED THAT A COPY OF EACH FAX OR E-MAIL IS ALSO SENT TO THE TELECOM CABLING CONTRACTOR.	9) THE TELECOM CABLING SYSTEM IS TO BE A "STRUCTURED CABLEING SYSTEM". IT IS TO BE INSTALLED BY A MANUFACTURER-CERTIFIED SYSTEM VENDOR. THE STRUCTURED CABLING SYSTEM MUST INCLUDE A 25-YEAR WARRANTY BACKED BY THE MANUFACTURER AND OFFERED DIRECTLY TO THE END USER.	A) TIA/EIA 568-B1 (COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD - PART 1);	1) FOR EACH NEW HORIZONTAL DATA PATCH PANEL PORT IN THE "MECHANICAL / JANITOR" ROOM, PROVIDE A BLUE, 2-METRE, CATEGORY 5E BOOTED PATCH CORD WITH AN RJ45 MALE JACK ON EACH END.
THE TELECOM CABLING CONTRACTOR MUST PLACE COMMENTS AND INQUIRES ON SEPARATE DOCUMENTS. AN INQUIRY DOCUMENT IS TO BE REFERRED TO AS A "REQUEST FOR INFORMATION" (RFI). EACH RFI IS TO BE NUMBERED BY THE TELECOM CABLING CONTRACTOR.	10) THE TELECOM CABLING INSTALLATION MUST CONFORM TO THE LATEST VERSION OF THE FOLLOWING:	B) TIA/EIA 568-B2 (COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD - PART 2);	2) FOR EACH NEW DATA JACK MOUNTED IN A COMBINATION OUTLET, PROVIDE A BLUE, 3-METRE, CATEGORY 5E BOOTED PATCH CORD WITH AN RJ45 MALE JACK ON EACH END.
DURING THE CONSTRUCTION PHASE, IF THE TELECOM CABLING CONTRACTOR BELIEVES THAT THE ELECTRICAL ENGINEER HAS MADE AN ERROR OR OMISSION, THE TELECOM CABLING CONTRACTOR MUST INFORM THE ELECTRICAL ENGINEER BY FAX OR E-MAIL (WITH COPIES AS INDICATED ABOVE) WITHOUT DELAY.	A) TIA/EIA 568-B1 (COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD - PART 1);	C) TIA/EIA 568-B3 (COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD - PART 3);	CATV HORIZONTAL CABLING AND TERMINATIONS
IF A RESPONSE IS WARRANTED, THE ELECTRICAL ENGINEER WILL PROVIDE ONE OR MORE OF THE FOLLOWING DOCUMENTS:	D) TIA/EIA 569-A (COMMERCIAL BUILDING STANDARD FOR TELECOMMUNICATIONS PATHWAYS AND SPACES);	D) TIA/EIA 569-A (COMMERCIAL BUILDING STANDARD FOR TELECOMMUNICATIONS PATHWAYS AND SPACES);	1) EACH HORIZONTAL CATV CABLE IS TO BE 75 OHM RG6/U QUAID SHIELD (BONDED). CONNECTORS ARE TO BE HEX CRIMP F-TYPE.
A) AN "RFI RESPONSE" (RFR);	E) TIA/EIA-607 (COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS).		2) TWO HORIZONTAL CATV CABLES ARE TO RUN FROM COMBINATION OUTLETS IN MULTI-PURPOSE ROOM 101 TO THE "MECHANICAL / JANITORS" ROOM.
B) A "CONTEMPLATED ELECTRICAL CHANGE ORDER" (CECO);			3) EACH HORIZONTAL CATV CABLE TERMINATED AT A COMBINATION OUTLET MUST TERMINATE ON A HEX CRIMP F-TYPE CONNECTOR MOUNTED IN A DECORA INSERT.
C) AN "ELECTRICAL SITE INSTRUCTION" (ESI).			4) PROVIDE A SIX-PORT CATV PATCH PANEL IN THE "MECHANICAL / JANITORS" ROOM. TERMINATE EACH OF THE TWO NEW HORIZONTAL CATV CABLES ON F-TYPE CONNECTORS MOUNTED IN THIS PATCH PANEL.
WITH THE PERMISSION OF THE ARCHITECT AND THE CONSTRUCTION MANAGER, EACH RFI WILL BE SENT TO THE TELECOM CABLING CONTRACTOR BY E-MAIL, WITH A COPY TO THE ARCHITECT AND THE CONSTRUCTION MANAGER.			TESTING
EACH CECO OR ESI WILL BE FORWARDED TO THE ARCHITECT. IF A GIVEN CECO OR ESI IS APPROVED BY THE ARCHITECT, IT WILL BE FORWARDED TO THE CONSTRUCTION MANAGER FOR DISTRIBUTION TO THE TELECOM CABLING CONTRACTOR.			1) A WIRE MAP VALIDATION TEST MUST BE PERFORMED AND DOCUMENTED FOR EACH TELEPHONE AND DATA CABLE.
CHANGES WHICH APPLY TO THE TELECOM CABLING CONTRACTOR WILL BE CLEARLY IDENTIFIED ON THE CECO.			2) EACH TELEPHONE CABLE IS TO BE TESTED FOR CONTINUITY AND POLARITY.
2) THE TELECOM CABLING CONTRACTOR MUST PROVIDE A CLEAR WRITTEN QUOTATION IN RESPONSE TO THE CECO.			3) EACH DATA CABLE ASSEMBLY (CABLE PLUS TERMINATIONS) MUST BE TESTED TO VERIFY THAT THE FOLLOWING PARAMETERS ARE WITHIN ACCEPTABLE LIMITS:
3) FOR EACH NUMBERED ITEM ON THE CECO WHICH APPLIES TO THE TELECOM CABLING CONTRACTOR, THE QUOTATION MUST INCLUDE A DOLLAR AMOUNT FOR EACH OF THE FOLLOWING:			A) CABLE LENGTH;
A) PARTS;			B) INSERTION LOSS;
B) LABOUR;			C) NEAR-END CROSSTALK (NEXT) LOSS;
C) PROFIT;			D) POWER SUM NEAR-END CROSSTALK (PSNEXT)
D) OVERHEAD;			E) EQUAL-LEVEL FAR-END CROSSTALK (ELFEXT);
E) SHIPPING;			F) POWER SUM EQUAL-LEVEL FAR-END CROSSTALK (PS ELFEXT);
F) PST.			G) RETURN LOSS;
4) FOR EACH NUMBERED ITEM ON THE CECO WHICH APPLIES TO THE TELECOM CABLING CONTRACTOR, THE QUOTATION MUST INCLUDE A DOLLAR AMOUNT DERIVED BY ADDING TOGETHER THE DOLLAR AMOUNTS DESCRIBED IN "A" THROUGH "F" OF ITEM #3 ABOVE.			H) PROPAGATION DELAY;
5) THE QUOTATION MUST INCLUDE A DOLLAR AMOUNT FOR EACH OF THE FOLLOWING:			I) DELAY SKEW.
A) TOTAL PARTS;			4) TEST CATV CABLES TO CONFIRM THAT THE SIGNAL STRENGTH AT THE USER OUTLET IS NOT LESS THAN +65DBM AND NOT MORE THAN +20DBM.
B) TOTAL LABOUR;			MISCELLANEOUS
C) TOTAL PROFIT;			1) A PVC CONDUIT EMERGES FROM THE GROUND AT THE EAST END OF THE NORTH SIDE OF THE BUILDING. (THIS CONDUIT APPARENTLY ORIGINATES AT ANOTHER BUILDING). THE CONDUIT TERMINATES AT A PULL BOX (MOUNTED ON THE EXTERIOR WALL OF THE BUILDING). A METALLIC RACEWAY RUNS FROM THE PULL BOX, TO THE EXTERIOR WALL OF THE BUILDING, TO THE ROOF.
D) TOTAL OVERHEAD;			2) THE RACEWAY SYSTEM JUST DESCRIBED CARRIES A 50/125 MULTIMODE FIBRE OPTIC CABLE. THE CABLE RUNS IN THE RACEWAY TO THE ROOF OF THE BUILDING. AFTER THE CABLE ENTERS THE BUILDING, THE CABLE EMERGES FROM THE RACEWAY AND RUNS ACROSS THE ROOF TO THE WEST SIDE OF THE BUILDING. HERE IT ENTERS ANOTHER RACEWAY SYSTEM AND IS CARRIED TO THE COMPUTER ROOM.
E) TOTAL SHIPPING;			3) DISCONNECT AND REMOVE THIS CABLE TO ALLOW FOR THE BUILDING ENVELOPE REMEDIATION AND FOR THE INSTALLATION OF NEW RACEWAY WITHIN THE BUILDING WALLS. INSTALL AND CONNECT A TEMPORARY FIBRE OPTIC CABLE TO MAINTAIN THE NETWORK CONNECTION DURING THE ENVELOPE REMEDIATION AND RACEWAY INSTALLATION.
F) TOTAL PST.			4) WHEN THE ENVELOPE AND RACEWAY WORK IS DONE, DISCONNECT AND REMOVE THE TEMPORARY CABLE. INSTALL NEW FIBRE OPTIC CABLE IN THE NEW RACEWAY AND ALONG THE ORIGINAL ROUTE TO PROVIDE FIBRE SERVICE AS IT EXISTING PRIOR TO THE CONSTRUCTION.
6) THE QUOTATION MUST INCLUDE A GRAND TOTAL DOLLAR AMOUNT DERIVED BY ADDING TOGETHER ALL THE TOTAL DOLLAR AMOUNTS DESCRIBED IN "A" THROUGH "F" OF ITEM #3 ABOVE.			PRIOR TO PERFORMING ANY WORK ON THE FIBRE INFRASTRUCTURE, CONTACT IAN MALCOLM, PROJECT MANAGER, INFRASTRUCTURE SERVICES, INFORMATION TECHNOLOGY DIVISION, CITY OF SURREY, 604-591-4165. DISCUSS THE DISCONNECTION AND RECONNECTION OF THE FIBRE LINK WITH MR. MALCOLM AND ADHERE TO ANY REQUIREMENTS HE MAY HAVE.
RELATED WORK PROVIDED BY OTHERS			TELECOM ROOM
1) THE ELECTRICAL CONTRACTOR WILL PROVIDE:			1) THE NEW ADDITION (MULTI-PURPOSE ROOM 101) WILL BE SERVED BY COMBINATION OUTLETS AS SHOWN ON THE TELECOM PLAN. COMBINATION OUTLETS DESCRIBED ON ANY SUCH OUTLET UP TO THREE METERS FROM THE LOCATION SHOWN ON THE DRAWINGS. THESE CHANGES MUST BE MADE AT NO ADDITIONAL COST TO THE CONTRACT.
A) TELECOM RACEWAY;			2) EACH COMBINATION OUTLET INCLUDES A MULTI-GANG BOX WHICH IS PARTITIONED INTO A POWER COMPARTMENT AND A TELECOM COMPARTMENT. THE TELECOM COMPARTMENT OF EACH COMBINATION OUTLET WILL BE CONNECTED TO DEDICATED TELECOM RACEWAY.
B) FIRESTOPPING FOR TELECOM RACEWAY;			3) THE TELECOM CABLING CONTRACTOR IS TO SUPPLY AND INSTALL THE TELECOM CABLING, TERMINATIONS, AND THE APPROPRIATE DECORA INSERTS ASSOCIATED WITH EACH COMBINATION OUTLET. THE ELECTRICAL CONTRACTOR WILL PROVIDE THE REMAINING INFRASTRUCTURE.
C) BONDING CONDUCTORS, BONDING BUSBARS, AND OTHER BONDING INFRASTRUCTURE.			IDENTIFICATION
			1) FOR EACH PIECE OF INSTALLED EQUIPMENT, MANUFACTURER AND APPROVAL LABELS MUST BE PRESENT, INTACT, LEGIBLE, AND EASILY VIEWABLE.
			2) PLASTIC TAPE LABELS ARE TO BE PRODUCED WITH A BROTHER P-TOUCH OR A SIMILAR LABELLING MACHINE. PLASTIC TAPE LABELS ARE TO BE WATERPROOF. UNLESS NOTED OTHERWISE, EACH PLASTIC TAPE LABEL IS TO HAVE BLACK UPPER CASE LETTERS ON A WHITE BACKGROUND.

AUDIO SYSTEM SPECIFICATIONS		
DEFINITIONS	GENERAL REQUIREMENTS	SUBMITTALS
1) THE "ELECTRICAL ENGINEER" IS THE PROJECT ENGINEER EMPLOYED BY MCL ENGINEERING LIMITED.	1) COORDINATE THE AUDIO SYSTEM INSTALLATION WITH THE WORK OF OTHER DISCIPLINES. OBTAIN, READ, AND UNDERSTAND THE ARCHITECTURAL, ELECTRICAL, STRUCTURAL DRAWINGS, MECHANICAL DRAWINGS, LANDSCAPE DRAWINGS, AND ALL OTHER DRAWINGS WHICH ARE PART OF THE DESIGN PACKAGE. DISTRIBUTED BY THE CONSTRUCTION MANAGER.	1) AT SUBSTANTIAL COMPLETION, SUBMIT AS-BUILT MARKUPS TO THE CONSTRUCTION MANAGER. THE CONSTRUCTION MANAGER IS TO FORWARD THESE DOCUMENTS TO THE ELECTRICAL ENGINEER.
2) THE "ELECTRICAL DRAWINGS" ARE THE DRAWINGS PROVIDED BY THE ELECTRICAL ENGINEER FOR THIS PROJECT.	2) UNLESS SPECIFICALLY EXEMPTED BY THE CONSTRUCTION MANAGER, PERFORM ALL CLEANING ASSOCIATED WITH THE ELECTRICAL INSTALLATION. AT THE END OF EACH WORK DAY, REMOVE ALL DEBRIS (ASSOCIATED WITH THE ELECTRICAL INSTALLATION) CREATED DURING THE COURSE OF THE WORK DAY. AT SUBSTANTIAL COMPLETION, THOROUGHLY CLEAN ALL INSTALLED EQUIPMENT AND ASSOCIATED SPACES.	2) AT SUBSTANTIAL COMPLETION, SUBMIT TO THE CONSTRUCTION MANAGER AN AUDIO SYSTEM OPERATION AND MAINTENANCE MANUAL. THE CONSTRUCTION MANAGER IS TO FORWARD THIS MANUAL TO THE ELECTRICAL ENGINEER.
3) THE "AUDIO SYSTEM SPECIFICATIONS" ARE THOSE SPECIFICATIONS, NAMED AS INDICATED, WHICH ARE PRESENTED ON THE ELECTRICAL DRAWINGS.	3) THE "AUDIO SYSTEM WORK" IS THE WORK DESCRIBED ON:	3) A BINDER (OR SET OF BINDERS) MUST CONTAIN THE PAGES OF THE MANUAL. EACH BINDER MUST BE BLACK, HAVE THREE "D" RINGS AND A HARD VINYL COVER.
4) THE "AUDIO SYSTEM WORK" IS THE WORK DESCRIBED ON:	A) THE AUDIO SYSTEM SPECIFICATIONS;	4) THE COVER AND SPINE OF THE BINDER MUST BE CLEARLY LABELLED "NEWTON SENIORS CENTRE / AUDIO SYSTEM OPERATION AND MAINTENANCE MANUAL".
A) THE AUDIO SYSTEM SPECIFICATIONS;	B) THE E600 SERIES DRAWINGS WITH THE EXCEPTION OF THE AUDIO SYSTEM RACEWAY WHICH WILL BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.	5) A TABLE OF CONTENTS MUST BE PRODUCED FOR THE MANUAL. A COPY OF THE TABLE OF CONTENTS MUST BE PLACED AT THE FRONT OF EACH BINDER.
B) THE E600 SERIES DRAWINGS WITH THE EXCEPTION OF THE AUDIO SYSTEM RACEWAY WHICH WILL BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.	C) "RACEWAY" REFERS TO A RACEWAY SYSTEM WHICH MAY INCLUDE CONDUIT, TUBING, WIREWAY, DUCTS, FITTINGS, CONNECTORS, FASTENERS, HUBS, BUSHINGS, PULL BOXES, PULL BOX COVERS, OUTLET BOXES, LOCK NUTS, GASKETS, SLEEVES, STRAPS, REDI-ROD, WASHERS, HANGERS, METAL FRAMING, PULL CORDS, AND SEISMIC RESTRAINT ELEMENTS.	6) THE MANUAL MUST BE DIVIDED INTO APPROPRIATE SECTIONS SEPARATED BY TABS WHICH ARE INDEXED TO THE TABLE OF CONTENTS.
C) "RACEWAY" REFERS TO A RACEWAY SYSTEM WHICH MAY INCLUDE CONDUIT, TUBING, WIREWAY, DUCTS, FITTINGS, CONNECTORS, FASTENERS, HUBS, BUSHINGS, PULL BOXES, PULL BOX COVERS, OUTLET BOXES, LOCK NUTS, GASKETS, SLEEVES, STRAPS, REDI-ROD, WASHERS, HANGERS, METAL FRAMING, PULL CORDS, AND SEISMIC RESTRAINT ELEMENTS.	D) THE "AUDIO SYSTEM CONTRACTOR" IS THE CONTRACTOR WHO UNDERTAKES THE AUDIO SYSTEM WORK.	7) THE AUDIO SYSTEM OPERATION AND MAINTENANCE MANUAL MUST INCLUDE:
D) THE "AUDIO SYSTEM CONTRACTOR" IS THE CONTRACTOR WHO UNDERTAKES THE AUDIO SYSTEM WORK.	7) "PROVIDE" MEANS SUPPLY AND INSTALL.	A) BUILDING CODE SCHEDULES FROM THE SEISMIC ENGINEER;
7) "PROVIDE" MEANS SUPPLY AND INSTALL.		B) ALL AVAILABLE DOCUMENTS CONCERNING INSTALLATION, MAINTENANCE, AND OPERATION OF THE EQUIPMENT AND SYSTEMS ASSOCIATED WITH THE AUDIO SYSTEM WORK;
PROJECT DESCRIPTION	1) AN ADDITION OF APPROXIMATELY 162 SQUARE METERS IS TO BE CONSTRUCTED AT THE NEWTON SENIORS RECREATION CENTRE LOCATED AT 13775 - 70TH AVENUE, SURREY. ALSO, A NEW ACCESSIBLE WASHROOM IS TO BE CREATED WITHIN THE EXISTING BUILDING.	C) ALL WARRANTIES WHICH APPLY TO THE EQUIPMENT AND SYSTEMS ASSOCIATED WITH THE AUDIO SYSTEM WORK;
1) AN ADDITION OF APPROXIMATELY 162 SQUARE METERS IS TO BE CONSTRUCTED AT THE NEWTON SENIORS RECREATION CENTRE LOCATED AT 13775 - 70TH AVENUE, SURREY. ALSO, A NEW ACCESSIBLE WASHROOM IS TO BE CREATED WITHIN THE EXISTING BUILDING.	APPROVED AUDIO SYSTEM CONTRACTORS	D) CONTACT INFORMATION FOR THE AUDIO SYSTEM CONTRACTOR AND ALL SUPPLIERS OF EQUIPMENT AND SYSTEMS ASSOCIATED WITH THE AUDIO SYSTEM WORK.
APPROVED AUDIO SYSTEM CONTRACTORS	1) THE FOLLOWING CONTRACTORS HAVE BEEN APPROVED TO BID ON THIS PROJECT:	3) THE ELECTRICAL ENGINEER WILL REVIEW THE AUDIO SYSTEM OPERATION AND MAINTENANCE MANUAL AND FORWARD IT TO THE ARCHITECT. THE ARCHITECT WILL FORWARD THE MANUAL TO THE CONSTRUCTION MANAGER WHO WILL RETURN IT TO THE AUDIO SYSTEM CONTRACTOR. CHANGES MUST BE MADE TO THE MANUAL AS DIRECTED BY THE ELECTRICAL ENGINEER. THE REVISED MANUAL MUST BE RESUBMITTED THROUGH THE REVIEW CHAIN.
1) THE FOLLOWING CONTRACTORS HAVE BEEN APPROVED TO BID ON THIS PROJECT:	A) PJS SYSTEMS (NORM STEINBERG / 604-678-8481)	4) WHEN THE ELECTRICAL ENGINEER CONFIRMS THAT ALL REQUIRED CHANGES HAVE BEEN MADE TO THE MANUAL, FORWARD THREE FINAL COPIES TO THE CONSTRUCTION MANAGER.
A) PJS SYSTEMS (NORM STEINBERG / 604-678-8481)	B) EMERGENT SYSTEMS CORPORATION (SHAWN ENNIS / 604-293-0103)	5) THE ELECTRICAL ENGINEER WILL REVIEW THE AUDIO SYSTEM OPERATION AND MAINTENANCE MANUAL AND FORWARD IT TO THE ARCHITECT. THE ARCHITECT WILL FORWARD THE MANUAL TO THE CONSTRUCTION MANAGER WHO WILL RETURN IT TO THE AUDIO SYSTEM CONTRACTOR. CHANGES MUST BE MADE TO THE MANUAL AS DIRECTED BY THE ARCHITECT. THE REVISED MANUAL MUST BE RESUBMITTED THROUGH THE REVIEW CHAIN.
B) EMERGENT SYSTEMS CORPORATION (SHAWN ENNIS / 604-293-0103)	C) COMMERCIAL ELECTRONICS (GORDON BRUCE / 604-669-5525)	6) AT SUBSTANTIAL COMPLETION, INSTRUCT REPRESENTATIVES OF THE FACILITY OWNER ON OPERATING AND MAINTENANCE PROCEDURES FOR ALL INSTALLED EQUIPMENT AND SYSTEMS.
C) COMMERCIAL ELECTRONICS (GORDON BRUCE / 604-669-5525)	D) LOGICAL SOLUTIONS (FRANK NAAKENS / 604-448-1303)	7) DO NOT USE FASTENERS WHICH CAUSE SPALLING OR CRACKING OF MATERIAL TO WHICH ANCHORAGE IS MADE.
D) LOGICAL SOLUTIONS (FRANK NAAKENS / 604-448-1303)	COMMUNICATION PROTOCOLS	8) SPACE FASTENERS EVENLY AND INSTALL THEM NEARLY.
COMMUNICATION PROTOCOLS	1) AFTER THE SELECTION OF THE AUDIO SYSTEM CONTRACTOR, AND PRIOR TO THE START OF CONSTRUCTION, THE ELECTRICAL ENGINEER, WITH THE PERMISSION OF THE ARCHITECT AND THE CONSTRUCTION MANAGER, WILL HOLD A PRE-CONSTRUCTION MEETING ON SITE WITH THE SITE SUPERVISOR, THE AUDIO SYSTEM CONTRACTOR'S PROJECT MANAGER, AND THE AUDIO SYSTEM CONTRACTOR'S SITE FOREMAN.	9) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
1) AFTER THE SELECTION OF THE AUDIO SYSTEM CONTRACTOR, AND PRIOR TO THE START OF CONSTRUCTION, THE ELECTRICAL ENGINEER, WITH THE PERMISSION OF THE ARCHITECT AND THE CONSTRUCTION MANAGER, WILL HOLD A PRE-CONSTRUCTION MEETING ON SITE WITH THE SITE SUPERVISOR, THE AUDIO SYSTEM CONTRACTOR'S PROJECT MANAGER, AND THE AUDIO SYSTEM CONTRACTOR'S SITE FOREMAN.	THE AUDIO SYSTEM WORK IS NOT TO BEGIN UNTIL THIS MEETING IS HELD. THIS MEETING WILL NOT BE HELD UNTIL THE AUDIO SYSTEM CONTRACTOR DESIGNATES BOTH A PROJECT MANAGER AND A SITE FOREMAN.	10) THE SEISMIC ENGINEER MUST CONFIRM THAT THEY ARE INSTALLED COMPLETELY AND CORRECTLY.
THE AUDIO SYSTEM WORK IS NOT TO BEGIN UNTIL THIS MEETING IS HELD. THIS MEETING WILL NOT BE HELD UNTIL THE AUDIO SYSTEM CONTRACTOR DESIGNATES BOTH A PROJECT MANAGER AND A SITE FOREMAN.	2) DURING THE CONSTRUCTION PHASE, THE AUDIO SYSTEM CONTRACTOR MAY, WITH THE PERMISSION OF THE ARCHITECT AND THE CONSTRUCTION MANAGER, FAX OR E-MAIL QUESTIONS OR COMMENTS DIRECTLY TO THE ELECTRICAL ENGINEER, PROVIDED THAT A COPY OF EACH FAX OR E-MAIL IS ALSO SENT TO THE CONSTRUCTION MANAGER AND THE ARCHITECT.	11) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
2) DURING THE CONSTRUCTION PHASE, THE AUDIO SYSTEM CONTRACTOR MAY, WITH THE PERMISSION OF THE ARCHITECT AND THE CONSTRUCTION MANAGER, FAX OR E-MAIL QUESTIONS OR COMMENTS DIRECTLY TO THE ELECTRICAL ENGINEER, PROVIDED THAT A COPY OF EACH FAX OR E-MAIL IS ALSO SENT TO THE CONSTRUCTION MANAGER AND THE ARCHITECT.	THE AUDIO SYSTEM CONTRACTOR MUST PLACE COMMENTS AND INQUIRES ON SEPARATE DOCUMENTS. AN INQUIRY DOCUMENT IS TO BE REFERRED TO AS A "REQUEST FOR INFORMATION" (RFI). EACH RFI IS TO BE NUMBERED BY THE AUDIO SYSTEM CONTRACTOR.	12) AFTER INSTALLATION, THE SEISMIC ENGINEER MUST CONFIRM THAT THEY ARE INSTALLED COMPLETELY AND CORRECTLY.
THE AUDIO SYSTEM CONTRACTOR MUST PLACE COMMENTS AND INQUIRES ON SEPARATE DOCUMENTS. AN INQUIRY DOCUMENT IS TO BE REFERRED TO AS A "REQUEST FOR INFORMATION" (RFI). EACH RFI IS TO BE NUMBERED BY THE AUDIO SYSTEM CONTRACTOR.	DURING THE CONSTRUCTION PHASE, IF THE AUDIO SYSTEM CONTRACTOR BELIEVES THAT THE ELECTRICAL ENGINEER HAS MADE AN ERROR OR OMISSION, THE AUDIO SYSTEM CONTRACTOR MUST INFORM THE ELECTRICAL ENGINEER BY FAX OR E-MAIL (WITH COPIES AS INDICATED ABOVE) WITHOUT DELAY.	13) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
DURING THE CONSTRUCTION PHASE, IF THE AUDIO SYSTEM CONTRACTOR BELIEVES THAT THE ELECTRICAL ENGINEER HAS MADE AN ERROR OR OMISSION, THE AUDIO SYSTEM CONTRACTOR MUST INFORM THE ELECTRICAL ENGINEER BY FAX OR E-MAIL (WITH COPIES AS INDICATED ABOVE) WITHOUT DELAY.	IF A RESPONSE IS WARRANTED, THE ELECTRICAL ENGINEER WILL PROVIDE ONE OR MORE OF THE FOLLOWING DOCUMENTS:	14) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
IF A RESPONSE IS WARRANTED, THE ELECTRICAL ENGINEER WILL PROVIDE ONE OR MORE OF THE FOLLOWING DOCUMENTS:	A) AN "RFI RESPONSE" (RFR);	15) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
A) AN "RFI RESPONSE" (RFR);	B) A "CONTEMPLATED ELECTRICAL CHANGE ORDER" (CECO);	16) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
B) A "CONTEMPLATED ELECTRICAL CHANGE ORDER" (CECO);	C) AN "ELECTRICAL SITE INSTRUCTION" (ESI).	17) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
C) AN "ELECTRICAL SITE INSTRUCTION" (ESI).	WITH THE PERMISSION OF THE ARCHITECT AND THE CONSTRUCTION MANAGER, EACH RFI WILL BE SENT TO THE AUDIO SYSTEM CONTRACTOR BY E-MAIL, WITH A COPY TO THE ARCHITECT AND THE CONSTRUCTION MANAGER.	18) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
WITH THE PERMISSION OF THE ARCHITECT AND THE CONSTRUCTION MANAGER, EACH RFI WILL BE SENT TO THE AUDIO SYSTEM CONTRACTOR BY E-MAIL, WITH A COPY TO THE ARCHITECT AND THE CONSTRUCTION MANAGER.	EACH CECO OR ESI WILL BE FORWARDED TO THE ARCHITECT. IF A GIVEN CECO OR ESI IS APPROVED BY THE ARCHITECT, IT WILL BE FORWARDED TO THE CONSTRUCTION MANAGER FOR DISTRIBUTION TO THE AUDIO SYSTEM CONTRACTOR.	19) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
EACH CECO OR ESI WILL BE FORWARDED TO THE ARCHITECT. IF A GIVEN CECO OR ESI IS APPROVED BY THE ARCHITECT, IT WILL BE FORWARDED TO THE CONSTRUCTION MANAGER FOR DISTRIBUTION TO THE AUDIO SYSTEM CONTRACTOR.	CONTEMPLATED ELECTRICAL CHANGE ORDERS	20) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
CONTEMPLATED ELECTRICAL CHANGE ORDERS	1) DURING CONSTRUCTION, THE AUDIO SYSTEM CONTRACTOR MAY RECEIVE A CONTEMPLATED ELECTRICAL CHANGE ORDER (CECO) FROM THE CONSTRUCTION MANAGER. THIS DOCUMENT WILL INCLUDE A NUMBERED LIST OF CONTEMPLATED CHANGES.	21) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
1) DURING CONSTRUCTION, THE AUDIO SYSTEM CONTRACTOR MAY RECEIVE A CONTEMPLATED ELECTRICAL CHANGE ORDER (CECO) FROM THE CONSTRUCTION MANAGER. THIS DOCUMENT WILL INCLUDE A NUMBERED LIST OF CONTEMPLATED CHANGES.	CHANGES WHICH APPLY TO THE AUDIO SYSTEM CONTRACTOR WILL BE CLEARLY IDENTIFIED ON THE CECO.	22) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
CHANGES WHICH APPLY TO THE AUDIO SYSTEM CONTRACTOR WILL BE CLEARLY IDENTIFIED ON THE CECO.	2) THE AUDIO SYSTEM CONTRACTOR MUST PROVIDE A CLEAR WRITTEN QUOTATION IN RESPONSE TO THE CECO.	23) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
2) THE AUDIO SYSTEM CONTRACTOR MUST PROVIDE A CLEAR WRITTEN QUOTATION IN RESPONSE TO THE CECO.	3) FOR EACH NUMBERED ITEM ON THE CECO WHICH APPLIES TO THE AUDIO SYSTEM CONTRACTOR, THE QUOTATION MUST INCLUDE A DOLLAR AMOUNT FOR EACH OF THE FOLLOWING:	24) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
3) FOR EACH NUMBERED ITEM ON THE CECO WHICH APPLIES TO THE AUDIO SYSTEM CONTRACTOR, THE QUOTATION MUST INCLUDE A DOLLAR AMOUNT FOR EACH OF THE FOLLOWING:	A) PARTS;	25) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
A) PARTS;	B) LABOUR;	26) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
B) LABOUR;	C) PROFIT;	27) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
C) PROFIT;	D) OVERHEAD;	28) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
D) OVERHEAD;	E) SHIPPING;	29) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
E) SHIPPING;	F) PST.	30) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
F) PST.	4) FOR EACH NUMBERED ITEM ON THE CECO WHICH APPLIES TO THE AUDIO SYSTEM CONTRACTOR, THE QUOTATION MUST INCLUDE A DOLLAR AMOUNT DERIVED BY ADDING TOGETHER THE DOLLAR AMOUNTS DESCRIBED IN "A" THROUGH "F" OF ITEM #3 ABOVE.	31) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
4) FOR EACH NUMBERED ITEM ON THE CECO WHICH APPLIES TO THE AUDIO SYSTEM CONTRACTOR, THE QUOTATION MUST INCLUDE A DOLLAR AMOUNT DERIVED BY ADDING TOGETHER THE DOLLAR AMOUNTS DESCRIBED IN "A" THROUGH "F" OF ITEM #3 ABOVE.	5) THE QUOTATION MUST INCLUDE A DOLLAR AMOUNT FOR EACH OF THE FOLLOWING:	32) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
5) THE QUOTATION MUST INCLUDE A DOLLAR AMOUNT FOR EACH OF THE FOLLOWING:	A) TOTAL PARTS;	33) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
A) TOTAL PARTS;	B) TOTAL LABOUR;	34) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
B) TOTAL LABOUR;	C) TOTAL PROFIT;	35) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
C) TOTAL PROFIT;	D) TOTAL OVERHEAD;	36) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
D) TOTAL OVERHEAD;	E) TOTAL SHIPPING;	37) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
E) TOTAL SHIPPING;	F) TOTAL PST.	38) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
F) TOTAL PST.	6) THE QUOTATION MUST INCLUDE A GRAND TOTAL DOLLAR AMOUNT DERIVED BY ADDING TOGETHER ALL THE TOTAL DOLLAR AMOUNTS DESCRIBED IN "A" THROUGH "F" OF ITEM #5 ABOVE.	39) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
6) THE QUOTATION MUST INCLUDE A GRAND TOTAL DOLLAR AMOUNT DERIVED BY ADDING TOGETHER ALL THE TOTAL DOLLAR AMOUNTS DESCRIBED IN "A" THROUGH "F" OF ITEM #5 ABOVE.	RELATED WORK PROVIDED BY OTHERS	40) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
RELATED WORK PROVIDED BY OTHERS	1) THE ELECTRICAL CONTRACTOR WILL PROVIDE:	41) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
1) THE ELECTRICAL CONTRACTOR WILL PROVIDE:	A) TELECOM RACEWAY;	42) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
A) TELECOM RACEWAY;	B) FIRESTOPPING FOR TELECOM RACEWAY;	43) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
B) FIRESTOPPING FOR TELECOM RACEWAY;	C) BONDING CONDUCTORS, BONDING BUSBARS, AND OTHER BONDING INFRASTRUCTURE.	44) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
C) BONDING CONDUCTORS, BONDING BUSBARS, AND OTHER BONDING INFRASTRUCTURE.		45) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
		46) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
		47) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.
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		100) THE SEISMIC ENGINEER MUST PROVIDE A COMPLETE DESIGN FOR EACH SEISMIC RESTRAINT SYSTEM TO BE INSTALLED.

SYMBOL SCHEDULE	
	EQUIPMENT CONTROL STATION / REFER TO THE ACCOMPANYING IDENTIFIER AND THE EQUIPMENT CONTROL STATION SCHEDULE
	POWER OUTLET / INCLUDES ONE OR MORE POWER RECEPTACLES / REFER TO THE ACCOMPANYING IDENTIFIER AND THE POWER OUTLET SCHEDULE
	COMBINATION OUTLET / INCLUDES ONE OR MORE POWER RECEPTACLES AND ONE OR MORE TELECOM AND/OR AUDIO CONNECTORS / REFER TO THE ACCOMPANYING IDENTIFIER AND THE COMBINATION OUTLET SCHEDULE
	EQUIPMENT WHICH INCORPORATES ONE OR MORE ELECTRIC MOTORS / REFER TO THE ACCOMPANYING IDENTIFIER AND THE EQUIPMENT SCHEDULE
	BATTERY POWERED CLOCK / EDWARDS 2941-1B-S
	EXIT SIGN / SINGLE-FACE / ARROW INDICATES DIRECTION OF CHEVRON / REFER TO ACCOMPANYING IDENTIFIER AND EMERGENCY LIGHTING SCHEDULE
	BATTERY PACK WITH NO ATTACHED HEADS / REFER TO ACCOMPANYING IDENTIFIER AND EMERGENCY LIGHTING SCHEDULE
	BATTERY PACK WITH ATTACHED HEADS / REFER TO ACCOMPANYING IDENTIFIER AND EMERGENCY LIGHTING SCHEDULE
	REMOTE EMERGENCY LIGHTING FIXTURE / 2 HEADS / REFER TO ACCOMPANYING IDENTIFIER AND EMERGENCY LIGHTING SCHEDULE
	PULL STATION / REFER TO THE ELECTRICAL SPECIFICATIONS
	SMOKE DETECTOR / REFER TO THE ELECTRICAL SPECIFICATIONS
	BELL / REFER TO THE ELECTRICAL SPECIFICATIONS
	END-OF-LINE RESISTOR
	STROBE LIGHT

IDENTIFIER SCHEDULE (ALPHABETICAL)	
BP-X	BATTERY PACK "X" / "X" REPRESENTS THE BATTERY PACK NUMBER / REFER TO THE EMERGENCY LIGHTING SCHEDULE
CNTR	THIS IDENTIFIER WILL APPEAR NEXT TO AN OUTLET WHICH IS TO BE MOUNTED ABOVE A COUNTER / INSTALL THE CENTRE OF THE OUTLET BOX 300MM ABOVE THE COUNTER
CO-TX	COMBINATION OUTLET TYPE "X" / "X" REPRESENTS THE TYPE NUMBER / INCLUDES ONE OR MORE POWER RECEPTACLES AND ONE OR MORE TELECOM CONNECTORS / REFER TO THE COMBINATION OUTLET SCHEDULE
DED	WHEN THIS IDENTIFIER APPEARS NEXT TO A POWER OUTLET OR COMBINATION OUTLET, EACH POWER RECEPTACLE IN THE OUTLET IS TO BE SERVED FROM A SEPARATE DEDICATED CIRCUIT
FAB-TX	FIRE ALARM BOX TYPE "X" / "X" REPRESENTS THE TYPE NUMBER / REFER TO THE FIRE ALARM BOX SCHEDULE
FARD-X	FIRE ALARM RACEWAY DETAIL "X" / "X" REPRESENTS THE DETAIL NUMBER / REFER TO THE FIRE ALARM RACEWAY DETAILS
PO-TX	POWER OUTLET TYPE "X" / "X" REPRESENTS THE TYPE NUMBER / INCLUDES ONE OR MORE POWER RECEPTACLES / REFER TO THE POWER OUTLET SCHEDULE
RN-X	REFERENCE NOTE "X" / "X" REPRESENTS THE REFERENCE NOTE NUMBER / IDENTIFIER APPEARS
RTU-X	ROOFTOP UNIT "X" / "X" REPRESENTS THE UNIT NUMBER / REFER TO THE EQUIPMENT SCHEDULE
SFBP-X	SUPPLIED FROM BATTERY PACK "X" / "X" REPRESENTS THE BATTERY PACK NUMBER / REFER TO THE EMERGENCY LIGHTING SCHEDULE

EQUIPMENT SCHEDULE																									
IDENTIFIER	DESCRIPTION	SUPPLIED & INSTALLED BY	PHASE	NOMINAL SYSTEM VOLTAGE (V)	MINIMUM CIRCUIT AMPACITY (A)	FULL LOAD CURRENT (A)	DEDICATED CIRCUIT REQUIRED	BRANCH CIRCUIT MAIN DEVICE (BY EC)	BRANCH CIRCUIT CONDUCTORS (BY EC)	CONNECTION (BY EC)	NON-INTEGRAL MAGNETIC STARTER					LOCAL DISCONNECT				PILOT DEVICE / CONTROL SYSTEM			SCHEDULE REFERENCE NOTES		
											REQUIRED	SUPPLIED	INSTALLED & WIRED	START/STOP CONTROL	4/0/4 SECTOR SWITCH	REQUIRED	SUPPLIED	INSTALLED & WIRED	NOTE	DESCRIPTION	SUPPLIED	INSTALLED		WIRED	
RTU-101	ROOFTOP UNIT	MC	3	208	49.3		YES	3P60A HACR CB	#6 AWG CU	HARD-WIRED	NO					YES	EC	EC	EC	PROGRAMMABLE TSTAT	MC	MC	MC		
PSM-1	PROJECTION SCREEN MOTOR	OTH	1	120		1.0	NO	1P15A HACR CB	#12 AWG CU	HARD-WIRED	NO					NO				3-POSITION SWITCH	OTH	EC	EC		
SSM-1/2/3/4	SECURITY SHUTTER MOTOR	OTH	1	120		1.0	NO	1P15A HACR CB	#12 AWG CU	HARD-WIRED	NO					NO				3-POSITION SWITCH	EC	EC	EC	SRN-1 SRN-2	
WBM-1/2/3/4/5	WINDOW BLIND MOTOR	OTH	1	120		1.0	NO	1P15A HACR CB	#12 AWG CU	HARD-WIRED	NO					NO				3-POSITION SWITCH	OTH	EC	EC	SRN-3	
WSM-1/2/3/4/5	WINDOW SHADE MOTOR	OTH	1	120		1.0	NO	1P15A HACR CB	#12 AWG CU	HARD-WIRED	NO					NO				3-POSITION SWITCH	OTH	EC	EC	SRN-4	
SCHEDULE ABBREVIATIONS																									
CB	CIRCUIT BREAKER	MC				MECHANICAL CONTRACTOR			SCHEDULE REFERENCE NOTES																
DDC	DIRECT DIGITAL CONTROL	ODC				OVERHEAD DOOR CONTRACTOR			SRN-1	ONE SWITCH (ON THE SOUTH SIDE OF RM 101) WILL CONTROL SHUTTERS 1 AND 2. ANOTHER SWITCH (ON THE NORTH SIDE OF RM 101) WILL CONTROL SHUTTERS 3 AND 4.										SRN-3	DEDICATE ONE 15 AMPERE CIRCUIT TO THE FIVE WINDOW BLIND MOTORS.				
EXT	ELECTRICAL CONTROL EXTERIOR	OTH				OTHERS			SRN-4	DEDICATE ONE 15 AMPERE CIRCUIT TO THE FIVE WINDOW SHADE MOTORS.															
HACR	RATED FOR HEATING, AC, & REFRIG EQUIP	PB				PUSH BUTTON			SRN-2	DEDICATE ONE 15 AMPERE CIRCUIT TO THE FOUR SECURITY SHUTTER MOTORS.															
		REC				RECEPTACLE																			
		WP				WEATHERPROOF																			

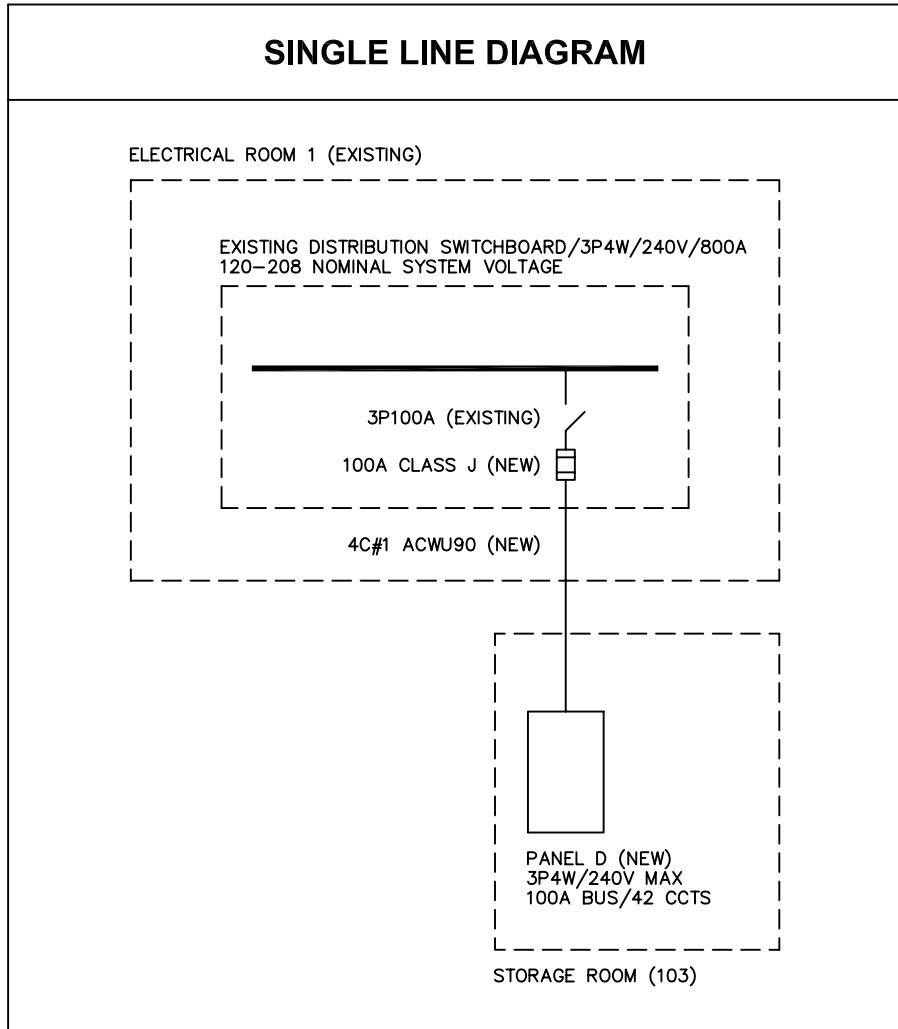
POWER OUTLET SCHEDULE					
IDENTIFIER	BOX	MOUNTING	ELEVATION OF BOX CENTRE UNLESS NOTED OTHERWISE	DEVICE(S)	COVERPLATE / COVER
PO-T1	1-GANG	FLUSH / WALL	300MM	125VAC 15-AMPERE (5-15R) SPECIFICATION GRADE DECORA-STYLE DUPLEX RECEPTACLE / WHITE FACE / HUBBELL HBL2152WA / LEVITON 16262W / PASS & SEYMOUR 26252-W	1-GANG TYPE 302-304 STAINLESS STEEL COVERPLATE WITH DECORA OPENING / HUBBELL S26 / LEVITON 84401-40 / PASS & SEYMOUR SS26
PO-T2	1-GANG	FLUSH / WALL	300MM	125VAC 20-AMPERE (5-20RA) SPECIFICATION GRADE DECORA-STYLE DUPLEX RECEPTACLE / WHITE FACE / HUBBELL HBL2162WA / LEVITON 16362W / PASS & SEYMOUR 26352-W	1-GANG TYPE 302-304 STAINLESS STEEL COVERPLATE WITH DECORA OPENING / HUBBELL S262 / LEVITON 84401-40 / PASS & SEYMOUR SS26
PO-T3	1-GANG	FLUSH / WALL	300MM	125VAC 20-AMPERE (5-20RA) SPECIFICATION GRADE GFCI DUPLEX RECEPTACLE / WHITE FACE / HUBBELL GF5362W / LEVITON 6899W / PASS & SEYMOUR 2094-W	1-GANG TYPE 302-304 STAINLESS STEEL COVERPLATE WITH DECORA OPENING / HUBBELL S26 / LEVITON 84401-40 / PASS & SEYMOUR SS26
PO-T4	1-GANG	FLUSH / WALL	450MM	125VAC 20-AMPERE (5-20RA) SPECIFICATION GRADE GFCI DUPLEX RECEPTACLE / WHITE FACE / HUBBELL GF5362W / LEVITON 6899W / PASS & SEYMOUR 2094-W	WEATHERPROOF / CAST ALUMINUM / LOCKABLE / RED DOT OCMVG
PO-T5	1-GANG	SURFACE / WALL	300MM	125VAC 15-AMPERE (5-15R) SPECIFICATION GRADE DECORA-STYLE DUPLEX RECEPTACLE / WHITE FACE / HUBBELL HBL2152WA / LEVITON 16262W / PASS & SEYMOUR 26252-W	GALVANIZED STEEL

COMBINATION OUTLET SCHEDULE					
IDENTIFIER	BOX	MOUNTING	ELEVATION OF BOX CENTRE UNLESS NOTED OTHERWISE	DEVICES	PLATE / COVER
CO-T1	4-GANG MIN 63.5MM DEEP 27MM CONDUIT KNOCKOUTS METAL PARTITION BETWEEN GANG 2 AND GANG 3	FLUSH / WALL	300MM	GANG 1 125VAC 15-AMPERE (5-15R) SPECIFICATION GRADE DECORA-STYLE DUPLEX RECEPTACLE / WHITE FACE / HUBBELL HBL2152WA / LEVITON 16262W / PASS & SEYMOUR 26252-W GANG 2 AS FOR GANG 1 GANG 3 WHITE 2-PORT DECORA TELECOM INSERT (LEVITON 41643-00W) / 2 RJ12 TEL JACKS GANG 4 WHITE 2-PORT DECORA TELECOM INSERT (LEVITON 41643-00W) / 2 RJ45 DATA JACKS	4-GANG TYPE 302-304 STAINLESS STEEL WITH DECORA OPENINGS / HUBBELL S264 / LEVITON 84412-40 / PASS & SEYMOUR SS264
CO-T2	4-GANG MIN 63.5MM DEEP 27MM CONDUIT KNOCKOUTS METAL PARTITION BETWEEN GANG 1 AND GANG 2	FLUSH / WALL	300MM	GANG 1 125VAC 15-AMPERE (5-15R) SPECIFICATION GRADE DECORA-STYLE DUPLEX RECEPTACLE / WHITE FACE / HUBBELL HBL2152WA / LEVITON 16262W / PASS & SEYMOUR 26252-W GANG 2 COAX CONNECTOR / WHITE DECORA INSERT FOR COAX CONNECTOR / LABEL THE CONNECTOR "CABLE TV" GANG 3 2X NEUTRIK 2-POLE FEMALE SPEAKON CONNECTOR / BLANK STAINLESS STEEL DECORA INSERT DRILLED TO ACCEPT NEUTRIK CONNECTOR GANG 4 AS FOR GANG 3	4-GANG TYPE 302-304 STAINLESS STEEL WITH DECORA OPENINGS / HUBBELL S264 / LEVITON 84412-40 / PASS & SEYMOUR SS264
CO-T3	PARTITIONED 2-GANG SHALLOW CAST IRON FLOOR BOX / WIREMOLD 880CM2-1	FLUSH / FLOOR		GANG 1 125VAC 15-AMPERE (5-15R) SPECIFICATION GRADE DECORA-STYLE DUPLEX RECEPTACLE / WHITE FACE / HUBBELL HBL5262W / LEVITON 5262AW / PASS & SEYMOUR 5262-AW GANG 2 WHITE 4-PORT TELECOM INSERT / TWO RJ12 TEL JACKS / TWO RJ45 DATA JACKS	2-GANG BRASS FLANGE / WIREMOLD 827B / TWO BRASS DUPLEX COVER PLATES / WIREMOLD 828B
CO-T4	4-GANG MIN 63.5MM DEEP 27MM CONDUIT KNOCKOUTS METAL PARTITION BETWEEN GANG 2 AND GANG 3	FLUSH / WALL	300MM	GANG 1 125VAC 15-AMPERE (5-15R) SPECIFICATION GRADE DECORA-STYLE DUPLEX RECEPTACLE / WHITE FACE / HUBBELL HBL2152WA / LEVITON 16262W / PASS & SEYMOUR 26252-W GANG 2 AS FOR GANG 1 GANG 3 WHITE DECORA BLANK GANG 4 WHITE DECORA BLANK	4-GANG TYPE 302-304 STAINLESS STEEL WITH DECORA OPENINGS / HUBBELL S264 / LEVITON 84412-40 / PASS & SEYMOUR SS264
GENERAL SCHEDULE NOTES					
1) THE TELECOM CABLEING CONTRACTOR IS TO SUPPLY AND INSTALL THE TELECOM CABLEING, TERMINATIONS, AND ASSOCIATED DECORA INSERTS.					
THE AUDIO SYSTEM CONTRACTOR IS TO SUPPLY AND INSTALL THE AUDIO CABLEING, TERMINATIONS, AND ASSOCIATED DECORA INSERTS.					
THE ELECTRICAL CONTRACTOR IS TO SUPPLY AND INSTALL ALL OTHER OUTLET INFRASTRUCTURE.					

EMERGENCY LIGHTING SCHEDULE						
IDENTIFIER	BATTERY PACK MAIN VOLTAGE	BATTERY PACK DC VOLTAGE	DESCRIPTION OF HEADS ON BATTERY PACK	DESCRIPTION OF REMOTE FIXTURES	DESCRIPTION OF REMOTE EXIT SIGNS	TOTAL LOAD (WATTS)
BP-1	120	12		THREE REMOTE FIXTURES, EACH WITH TWO 12VDC 12W PAR-18 QUARTZ HALOGEN HEADS	THREE REMOTE LED EXIT SIGNS EACH RATED AT 120VAC & 12WDC	78
SCHEDULE ABBREVIATIONS						
BP BATTERY PACK						
SCHEDULE NOTES						
1) THE 30 MINUTE RATING FOR EACH BATTERY PACK MUST EQUAL OR EXCEED THE TOTAL CONNECTED LOAD.						

LOAD INFORMATION	
MAXIMUM DEMAND LOAD AT PANEL 'D'	
1) 170 SM OF FLOOR AREA X 25 WPSM	4,250 W
2) AUDIO SYSTEM	1,440 W
3) TV	240 W
4) COMPUTERS	1,000 W
5) RTU101	17,781 W
6) FOLDING BLIND MOTOR	1,440 W
7) WINDOW BLIND MOTORS	600 W
8) PROJECTION SCREEN MOTOR	120 W
9) MICROWAVE	1,440 W
10) COFFEE MAKER	1,440 W
11) EXTERIOR LIGHTING	900 W
TOTAL MAXIMUM DEMAND LOAD	30,631 W
TOTAL MAXIMUM DEMAND LOAD (3 PHASE AMPS AT 208 VOLTS / PF=1.0)	85 A
TOTAL MAXIMUM DEMAND LOAD (3 PHASE AMPS AT 208 VOLTS / PF=0.95)	90 A

EQUIPMENT CONTROL STATION SCHEDULE						
IDENTIFIER	BOX	BOX MOUNTING	ELEVATION OF BOX CENTRE UNLESS NOTED OTHERWISE	DEVICE(S)	PLATE / COVER	
ECS-T1	1-GANG	FLUSH / WALL	1220MM	120VAC 15-AMPERE 1-POLE HEAVY DUTY INSTITUTIONAL SPECIFICATION GRADE 3-POSITION TOGGLE SWITCH WITH WHITE TOGGLE / SPRING RETURN TO CENTRE	1-GANG TYPE 302-304 STAINLESS STEEL COVERPLATE WITH TOGGLE SWITCH OPENING / HUBBELL S1 / LEVITON 84001-40 / PASS & SEYMOUR SS1	
ECS-T2	4-GANG	FLUSH / WALL	1220MM	SWITCHES PROVIDED BY BLIND CONTRACTOR	4-GANG TYPE 302-304 STAINLESS STEEL COVERPLATE WITH DECORA OPENINGS	



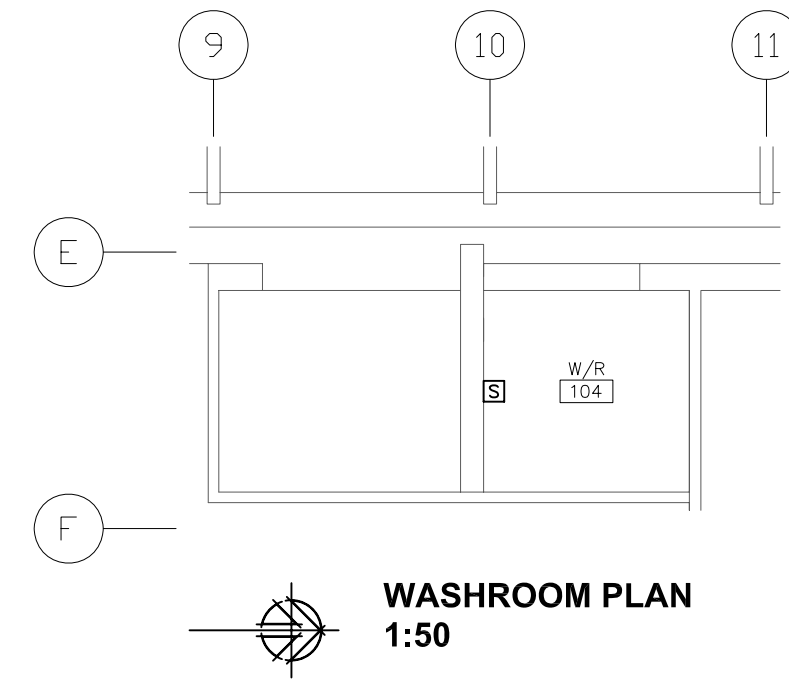
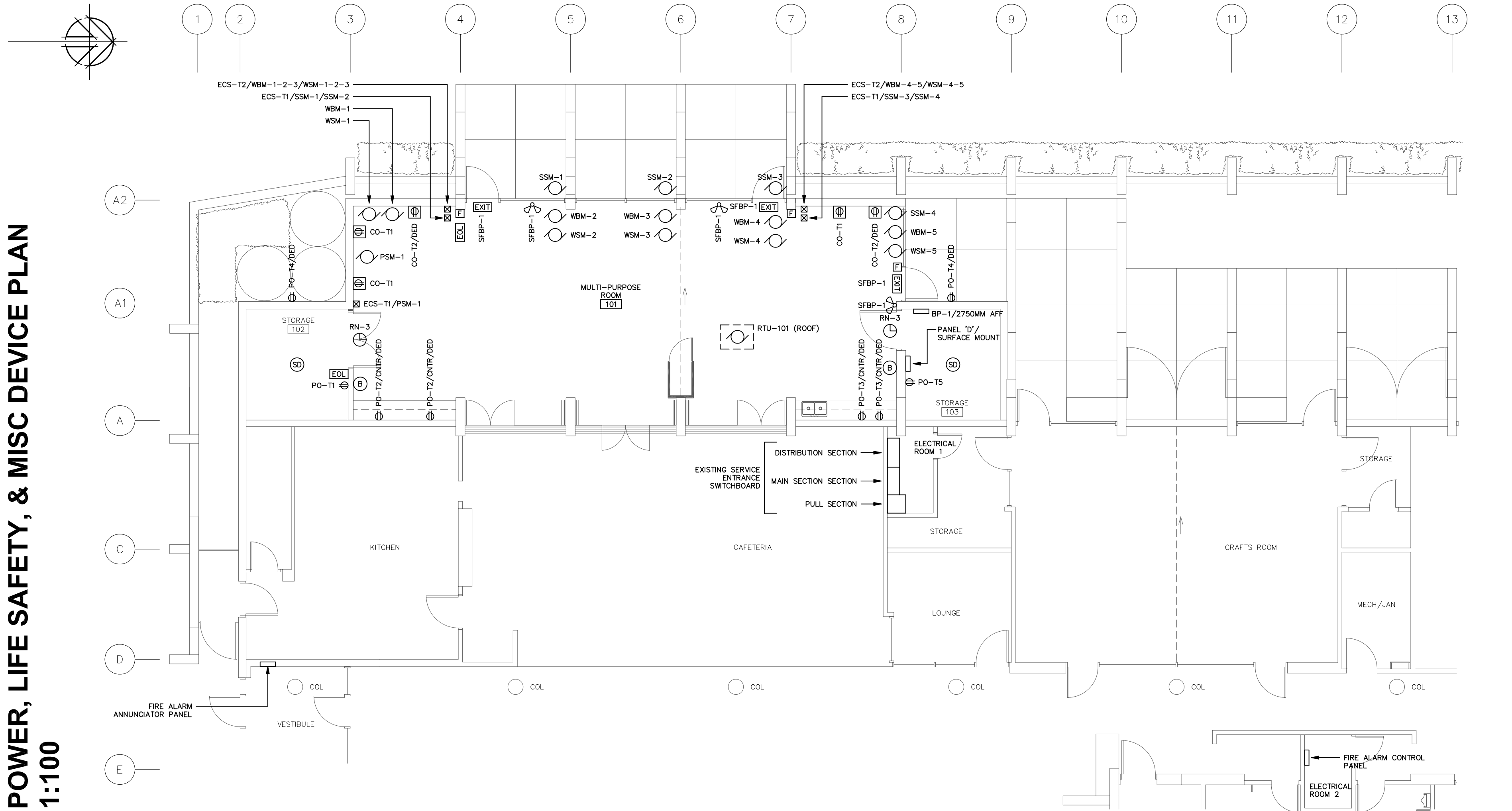
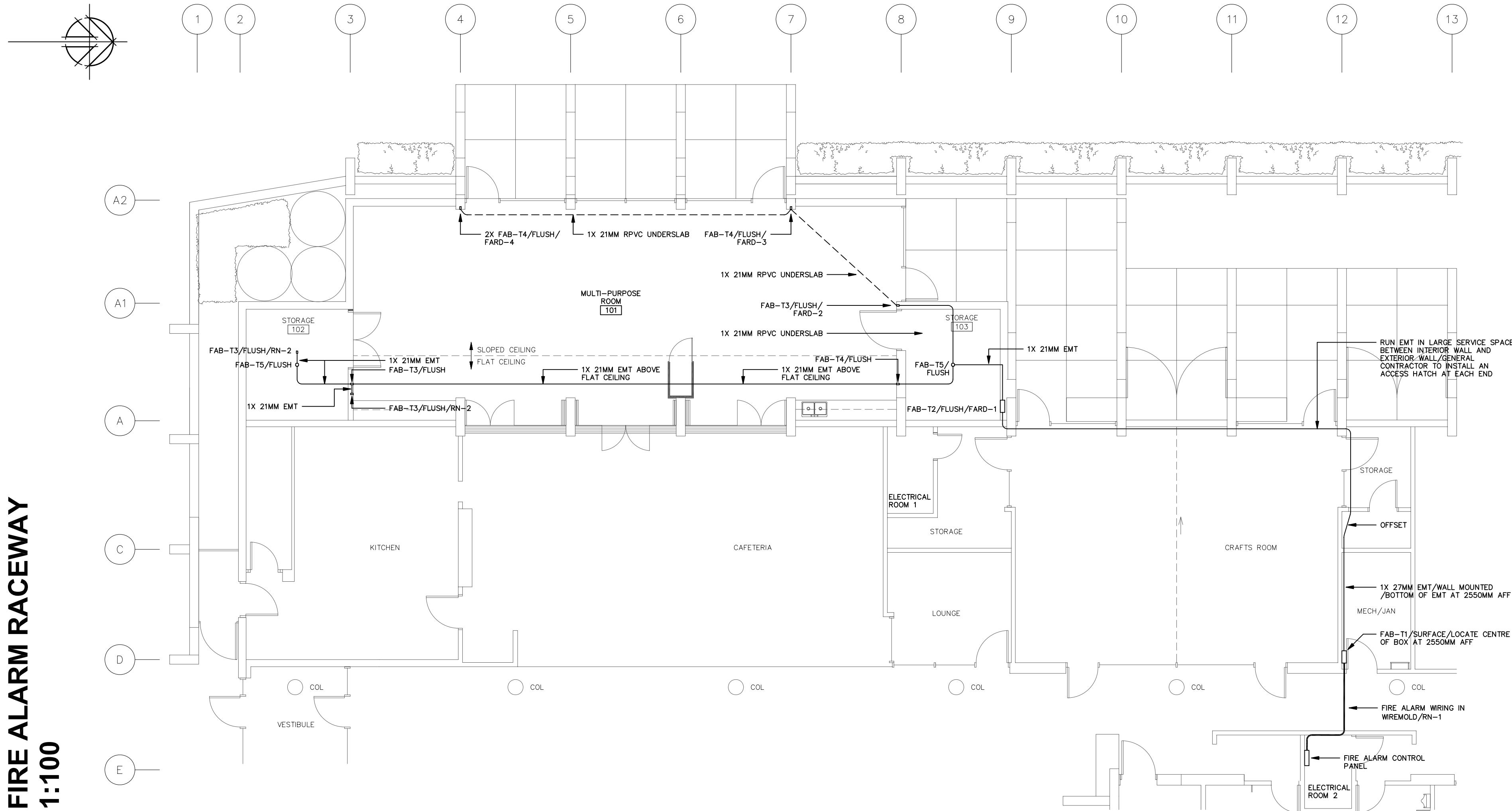
FIRE ALARM BOX SCHEDULE	
FAB-T1	FIRE ALARM BOX TYPE 1 / SURFACE MOUNT / NOMINAL SIZE 200MM W X 200MM H X 100MM D / GALVANIZED STEEL / SCREW-ON COVER / RED POWDERCOAT FINISH
FAB-T2	FIRE ALARM BOX TYPE 2 / FLUSH MOUNT / NOMINAL SIZE 200MM W X 200MM H X 100MM D / GALVANIZED STEEL WITH FLUSH MOUNT FLANGE / SCREW-ON COVER / RED POWDERCOAT FINISH
FAB-T3	FIRE ALARM BOX TYPE 3 / FLUSH MOUNT IN GWB CEILING OR STUD WALL / NOMINAL SIZE 50MM W X 75MM H X 75MM D (SINGLE-GANG DEEP) / GALVANIZED STEEL
FAB-T4	FIRE ALARM BOX TYPE 4 / FLUSH MOUNT IN CONCRETE WALL / NOMINAL SIZE 50MM W X 75MM H X 75MM D (SINGLE-GANG DEEP) / GALVANIZED STEEL MASONRY BOX WITH TWO 21MM KNOCKOUTS ON TOP FACE & TWO 21MM KNOCKOUTS ON BOTTOM FACE
FAB-T5	FIRE ALARM BOX TYPE 5 / FLUSH MOUNT IN GWB CEILING / STANDARD 100MM OCTAGONAL / GALVANIZED STEEL

FAULT CURRENT INFORMATION	
FAULT CURRENT UPPER BOUND AT SERVICE ENTRANCE	
MAXIMUM TRANSFORMER SIZE	500 KVA
IMPEDANCE	4%
SECONDARY RACEWAY TYPE	PVC
SECONDARY CONDUCTOR TYPE	AL QUAD
SECONDARY CONDUCTOR SIZE	500 KCM
NUMBER OF SECONDARY CONDUCTOR RUNS PER PHASE	2
LENGTH OF SECONDARY CONDUCTOR RUN	85 METRES
FAULT CURRENT AT SERVICE ENTRANCE WILL BE LESS THAN	12 KA RMS SYMM
FAULT CURRENT UPPER BOUND AT PANEL 'D'	
MAXIMUM ASSUMED FAULT CURRENT AT SERVICE ENTRANCE	12 KA
FEDER DESCRIPTION	4C #12 ACWU90
FAULT CURRENT AT PANEL 'D' WILL BE LESS THAN	9 KA
REQUIREMENTS	
1) THE FEEDER OVERCURRENT DEVICE FOR PANEL 'D' MUST BE FULLY RATED TO INTERRUPT 12 KA MINIMUM.	
2) ALL OVERCURRENT DEVICES IN PANEL 'D' MUST BE FULLY RATED TO INTERRUPT 10 KA MINIMUM.	

SCHEDULE FOR PANEL 'D'									
LOCATION	STORAGE ROOM 103			VOLTAGE RATING			240VAC		
TYPE	3PHASE/4WIRE			SYSTEM VOLTAGE			120/208VAC		
1P SPACES	42			BUS RATING			100A		
LOCATION/DESCRIPTION	CCT NO	CB RTG		CB RTG	CCT NO	LOCATION/DESCRIPTION			
CONTROL POWER FOR EXT LTG CONTACTORS	1	15			2	ROOF - RTU01			
EXTERIOR LTG	3	20			4				
101 - LTG ON SLANTED CLG	5	20			6				
101 - LTG ON FLAT CLG/102-LTG-103-LTG	7	20			8	SPARE			
102/103 - LTG	9	15			10	101 - SOUTHWEST BLINDS AND SHADES			
101 - DEDICATED COUNTER REC	11	20			12	EXIT SIGNS			
101 - DEDICATED COUNTER REC	13	20			14	101 - NORTHWEST BLINDS AND SHADES			
101 - DEDICATED COUNTER REC	15	20			16	EXTERIOR RECEPTACLES			
101 - DEDICATED COUNTER REC	17	20			18	PROJECTOR SCREEN			
101 - DEDICATED REC	19	15			20	HVAC CONTROL			
101 - DEDICATED REC	21	15			22	FLOOR REC			
101/102 - REC	23	15			24	BLANK			
SPARE	25	15			26	BLANK			
102/103 - REC	27	15			28	BLANK			
BLANK	29				30	BLANK			
BLANK	31				32	BLANK			
BLANK	33				34	BLANK			
BLANK	35				36	BLANK			
BLANK	37				38	BLANK			
BLANK	39				40	BLANK			
BLANK	41				42	BLANK			

FIRE ALARM RACEWAY
1:100

POWER, LIFE SAFETY, & MISC DEVICE PLAN
1:100



DRAWING REFERENCE NOTES	
RN-1	EXISTING FIRE ALARM CABLE RUNS FROM ELECTRICAL ROOM 2 TO THE MECH-JANITOR ROOM. THIS CABLE IS RUN IN WIREMOLD AS IT CROSSES THE HALLWAY. (THE WIREMOLD IS ATTACHED TO A BEAM.) REMOVE THE EXISTING WIREMOLD AND PLACE EXISTING AND NEW FIRE ALARM CABLE IN NEW 300BAC-WI WIREMOLD. THE NEW FIRE ALARM CABLE IS TO ENTER THE MECH-JANITOR ROOM AND RUN TO THE FIRE ALARM PULL BOX SHOWN ON THE RACEWAY PLAN. THE NEW FIRE ALARM CABLE WILL THEN CONTINUE TO THE NEW ADDITION VIA THE NEW FIRE ALARM RACEWAY AS SHOWN.
RN-2	THIS BOX IS FOR AN 'END-OF-LINE RESISTOR'. PROVIDE A BLANK TYPE 302 STAINLESS STEEL PLATE WITH AN 'EOL' LABEL.
RN-3	MOUNT CENTRE OF CLOCK 450MM ABOVE TOP OF DOOR.

FARD-1	FIRE ALARM RACEWAY DETAIL 1 (NTS)	
<div><div>PARTIAL PLAN OF FIRE ALARM RACEWAY</div><div>SECTION 'A'</div></div>		
<div><div><div>FRONT VIEW</div><div>SIDE VIEW</div></div><div><div>FRONT VIEW</div><div>SIDE VIEW</div></div></div>		
FARD-4	FIRE ALARM RACEWAY DETAIL 4 (NTS)	
<div><div>FRONT VIEW</div><div>SIDE VIEW</div></div>		

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RECORD	MAR 26/07
FOR CONSTRUCTION	JUN 26/06
ADDENDUM 1	MAY 12/06
FOR TENDER	APR 25/06
REVISION	DATE

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**NEWTON SENIORS
RECREATION
CENTRE
ADDITION &
RENOVATION**

**13775-70TH
AVENUE
SURREY, B.C.**

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Sheet Title
**POWER & LIFE
SAFETY -
PAGE 2**

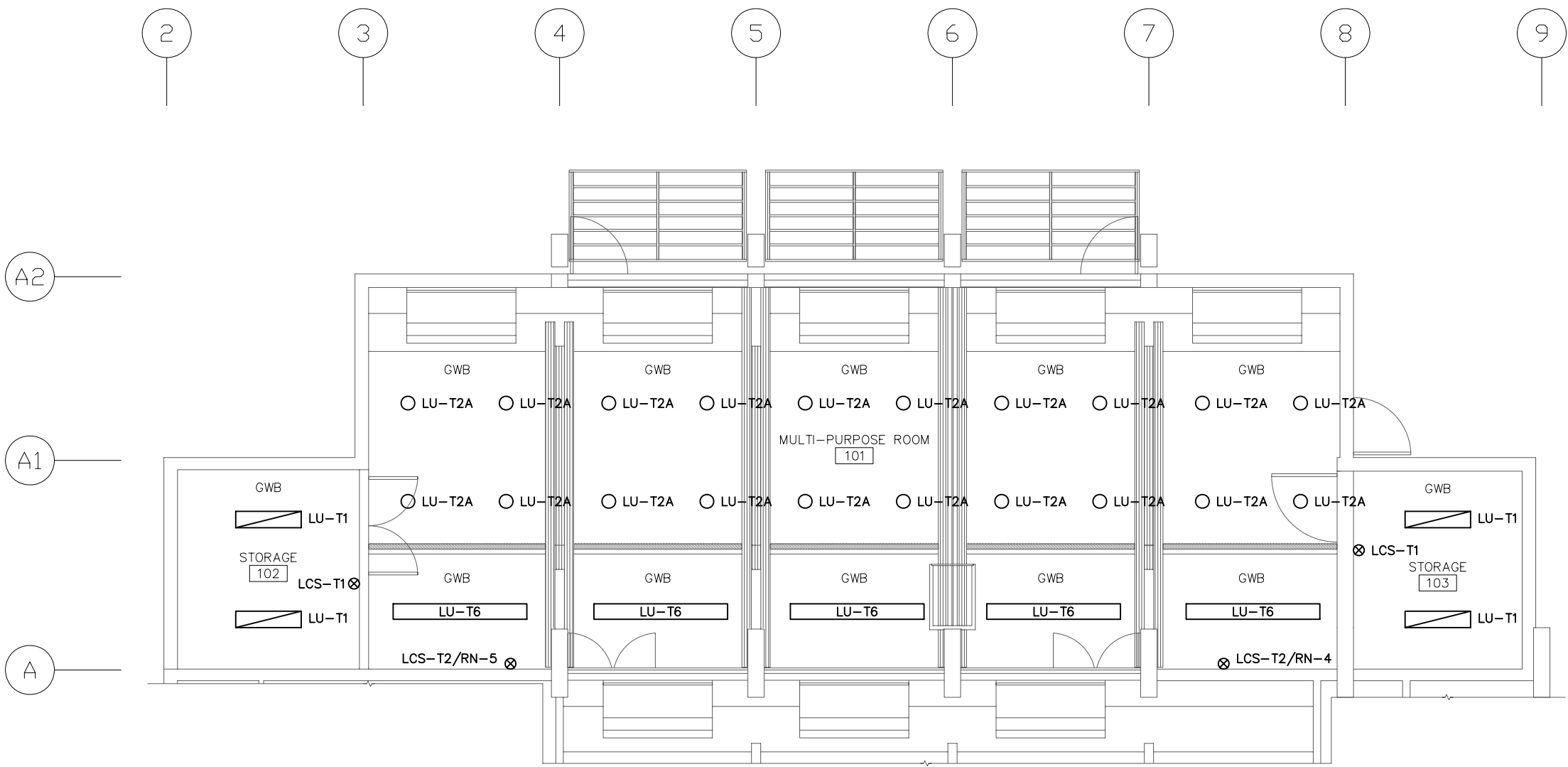
Job No	2005-08	Sheet No	
		E202	

SYMBOL SCHEDULE	
	LIGHTING CONTROL STATION / REFER TO THE ACCOMPANYING IDENTIFIER AND THE LIGHTING CONTROL STATION SCHEDULE
	RECESSED DOWNLIGHT
	RECESSED FLUORESCENT LUMINAIRE
LEGEND NOTES	
1) SYMBOLS ARE NOT SCALE DRAWINGS OF THE REPRESENTED OBJECT.	
2) SYMBOLS DO NOT CONVEY MOUNTING INFORMATION.	

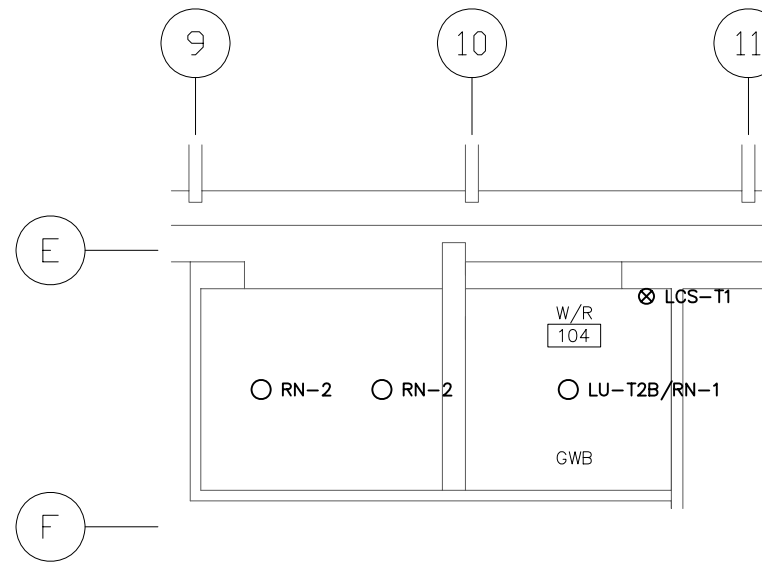
IDENTIFIER SCHEDULE (ALPHABETICAL)	
LCS-TX	LIGHTING CONTROL STATION TYPE "X" / "X" REPRESENTS THE TYPE NUMBER / REFER TO THE LIGHTING CONTROL STATION SCHEDULE
LU-TX	LUMINAIRE TYPE "X" / "X" REPRESENTS THE TYPE NUMBER / REFER TO THE LUMINAIRE SCHEDULE
RN-X	REFERENCE NOTE "X" / "X" REPRESENTS THE REFERENCE NOTE NUMBER / REFER TO THE REFERENCE NOTES ON THE PAGE WHERE THE REFERENCE NOTE IDENTIFIER APPEARS
SRN-X	SCHEDULE REFERENCE NOTE "X" / "X" REPRESENTS THE REFERENCE NOTE NUMBER / REFER TO THE SCHEDULE REFERENCE NOTES AT THE BOTTOM OF THE SCHEDULE

LUMINAIRE SCHEDULE							
IDENTIFIER	DESCRIPTION	MOUNTING	LAMP(S)	VOLTAGE	BALLAST(S)	LENS	COLOURS & FINISHES
LU-T1	1X4 LUMINAIRE WITH FLAT ACRYLIC LENS / FLANGE FOR GWB MOUNTING	RECESSED IN GWB CEILING	2-32W T8 FLUORESCENT / CCT 3500K / MIN CRI 86	120	ELECTRONIC INSTANT START	#12 PATTERN ACRYLIC	WHITE BODY / WHITE FLANGE
LU-T2A	FLUORESCENT DOWNLIGHT WITH 6-INCH APERTURE / 2 LAMPS / DIMMING	RECESSED IN GWB CEILING	2-26W QUAD TUBE COMPACT FLUORESCENT / CCT 3500K / MIN CRI 85	120	ELECTRONIC DIMMING		SPEC CLEAR REFLECTOR
LU-T2B	FLUORESCENT DOWNLIGHT WITH 6-INCH APERTURE / 1 LAMP / NON-DIMMING	RECESSED IN GWB CEILING	1-26W QUAD TUBE COMPACT FLUORESCENT / CCT 3500K / MIN CRI 85	120	ELECTRONIC		SPEC CLEAR REFLECTOR
LU-T3A	EXTERIOR WALL LUMINAIRE WITH TIGHT SPOT DOWNWARD DISTRIBUTION	SURFACE / WALL	1-100W METAL HALIDE	120	ELECTRONIC		BRONZE
LU-T3B	EXTERIOR WALL LUMINAIRE WITH FORWARD THROW DOWNWARD DISTRIBUTION	SURFACE / WALL	1-100W METAL HALIDE	120	ELECTRONIC		BRONZE
LU-T4	EXTERIOR WALL LUMINAIRE	SURFACE / WALL	1-26W COMPACT TT FLUORESCENT / CCT 3500K / MIN CRI 85	120	ELECTRONIC	CLEAR PRISMATIC POLY-CARB	BLACK BODY AND EYELID
LU-T5	EXTERIOR WALL LUMINAIRE	SURFACE / WALL	1-50W METAL HALIDE	120	HID	BORO-SILICATE GLASS	WHITE BODY
LU-T6	8-FOOT FLUORESCENT DIRECT/INDIRECT LUMINAIRE	SUSPENDED FROM CEILING	6-32W T8 FLUORESCENT / CCT 3500K / MIN CRI 86	120	ELECTRONIC		WHITE BODY
SCHEDULE GENERAL NOTES							
1) FOR EACH LUMINAIRE, PROVIDE ALL ACCESSORIES REQUIRED TO MAKE THE LUMINAIRE COMPLETE AND FUNCTIONAL.							
2) PROVIDE TWENTY HSA-6-25 (25 DEGREE) SLOPED CEILING ADAPTERS. (ONE FOR EACH OF THE TWENTY TYPE 2A DOWNLIGHTS ON THE SLOPED CEILING.)							

LIGHTING CONTROL STATION SCHEDULE					
IDENTIFIER	BOX	BOX MOUNTING	ELEVATION OF BOX CENTRE	DEVICE(S)	COVERPLATE / COVER
LCS-T1	1-GANG	FLUSH / WALL	1220MM	120VAC 20-AMPERE 1-POLE SPECIFICATION GRADE ROCKER SWITCH WITH WHITE ROCKER / HUBBELL HBL2121WA / LEVITON 5621-2W / PASS & SEYMOUR 2621-W	1-GANG TYPE 302-304 STAINLESS STEEL COVERPLATE WITH DECORA OPENING / HUBBELL 526 / LEVITON 84401-40 / PASS & SEYMOUR 5526
LCS-T2	4-GANG	FLUSH / WALL	1220MM	GANG 1 LUTRON DIVA ELECTRONIC FLUORESCENT 8-AMPERE 1-POLE DIMMER GANG 2 LUTRON DIVA ELECTRONIC FLUORESCENT 8-AMPERE 1-POLE DIMMER GANG 3 120VAC 20-AMPERE 1-POLE SPEC GRADE ROCKER SWITCH WITH WHITE ROCKER / HUBBELL HBL2121WA / LEVITON 5621-2W / PASS & SEYMOUR 2621-W GANG 4 120VAC 20-AMPERE 1-POLE SPEC GRADE ROCKER SWITCH WITH WHITE ROCKER / HUBBELL HBL2121WA / LEVITON 5621-2W / PASS & SEYMOUR 2621-W	4-GANG TYPE 302-304 STAINLESS STEEL COVERPLATE WITH FOUR DECORA OPENINGS
GENERAL SCHEDULE NOTES					
1) IN GENERAL, A GIVEN LIGHTING CONTROL STATION WILL CONTROL THE LUMINAIRES IN THE ROOM OR SPACE WHERE THE CONTROL STATION IS LOCATED. IF THE CONTROL SCHEME IS NOT OBVIOUS, A NOTE WILL BE PLACED NEXT TO THE LIGHTING CONTROL STATION.					

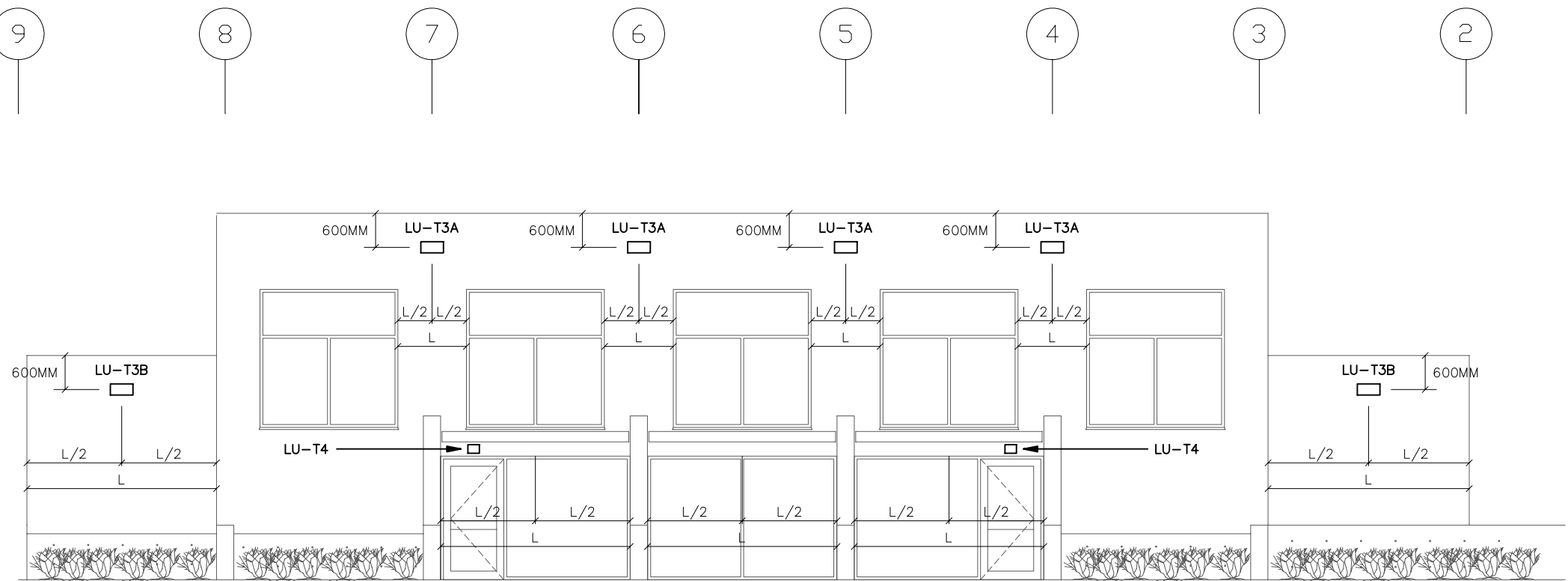


NEW ADDITION LIGHTING PLAN
1:100

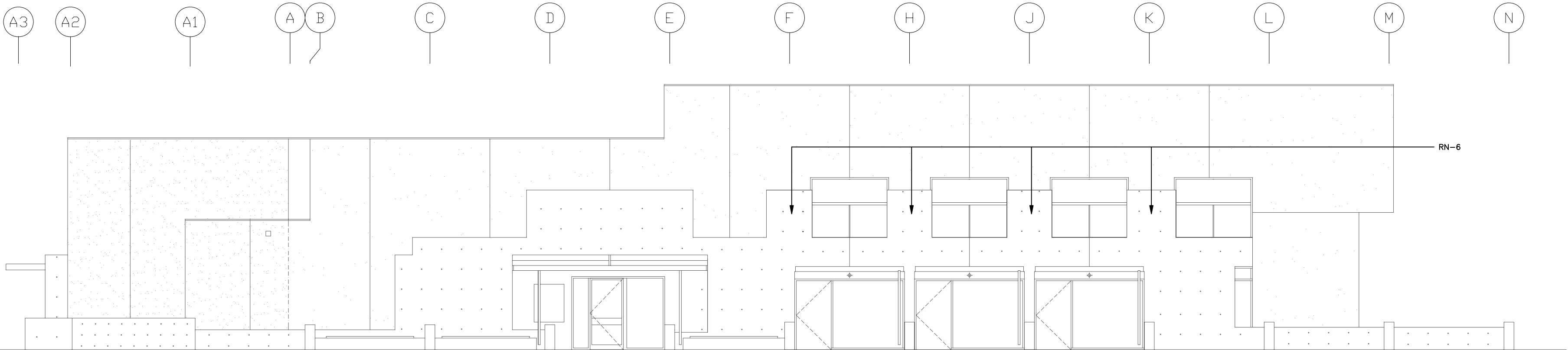


WASHROOM LIGHTING PLAN
1:50

DRAWING REFERENCE NOTES	
RN-1	NEW LUMINAIRE. EXTEND EXISTING NEARBY WIRING AS REQUIRED.
RN-2	EXISTING LUMINAIRE. RELOCATE TO THIS POSITION AND EXTENDING EXISTING NEARBY WIRING AS REQUIRED.
RN-3	DELETED
RN-4	THE GANG 1 DIMMER MUST CONTROL THE ROW OF FOUR TYPE 2A LUMINAIRES IN THE SLANTED CEILING (ON THE NORTH SIDE OF THE PARTITION), IMMEDIATELY TO THE WEST OF THE FLAT CEILING. THE GANG 2 DIMMER MUST CONTROL THE ROW OF FOUR TYPE 2A LUMINAIRES IN THE SLANTED CEILING (ON THE NORTH SIDE OF THE PARTITION), IMMEDIATELY TO THE WEST OF THE FOUR LUMINAIRES CONTROLLED BY THE GANG 1 DIMMER. THE GANG 3 SWITCH MUST CONTROL THE CENTRE TUBES IN THE TWO TYPE 6 LUMINAIRES ON THE NORTH SIDE OF THE PARTITION. THE GANG 4 SWITCH MUST CONTROL THE OUTSIDE TUBES IN THE TWO TYPE 6 LUMINAIRES ON THE NORTH SIDE OF THE PARTITION.
RN-5	THE GANG 1 DIMMER MUST CONTROL THE ROW OF SIX TYPE 2A LUMINAIRES IN THE SLANTED CEILING (ON THE SOUTH SIDE OF THE PARTITION), IMMEDIATELY TO THE WEST OF THE SIX LUMINAIRES CONTROLLED BY THE GANG 1 DIMMER. THE GANG 2 DIMMER MUST CONTROL THE ROW OF SIX TYPE 2A LUMINAIRES IN THE SLANTED CEILING (ON THE SOUTH SIDE OF THE PARTITION), IMMEDIATELY TO THE WEST OF THE SIX LUMINAIRES CONTROLLED BY THE GANG 1 DIMMER. THE GANG 3 SWITCH MUST CONTROL THE CENTRE TUBES IN THE THREE TYPE 6 LUMINAIRES ON THE SOUTH SIDE OF THE PARTITION. THE GANG 4 SWITCH MUST CONTROL THE OUTSIDE TUBES IN THE THREE TYPE 6 LUMINAIRES ON THE SOUTH SIDE OF THE PARTITION.
RN-6	DE-ENERGIZE, DISCONNECT, AND REMOVE THE FOUR EXISTING WALL-MOUNTED LUMINAIRES WHICH ARE LOCATED BEHIND THE STANDOFF CONCRETE PANELS. PROTECT THE BOXES AND CONDUCTORS IN PREPARATION FOR THE BUILDING ENVELOPE WORK. WHEN THE BUILDING ENVELOPE WORK IS COMPLETE, INSTALL FOUR NEW TYPE 5 (LU-T5) LUMINAIRES.



NEW ADDITION - WEST ELEVATION
1:100



SOUTH ELEVATION
1:100

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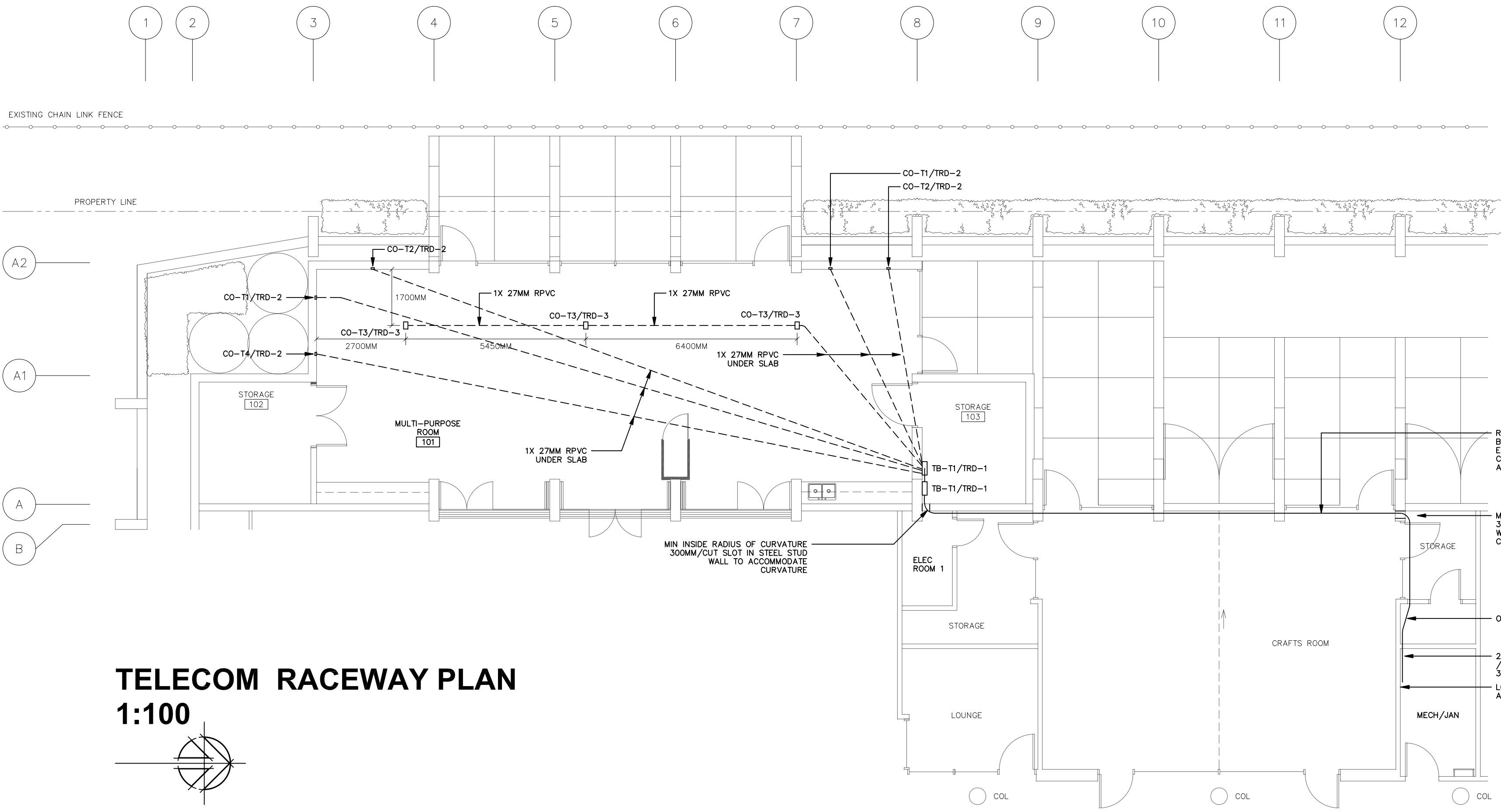
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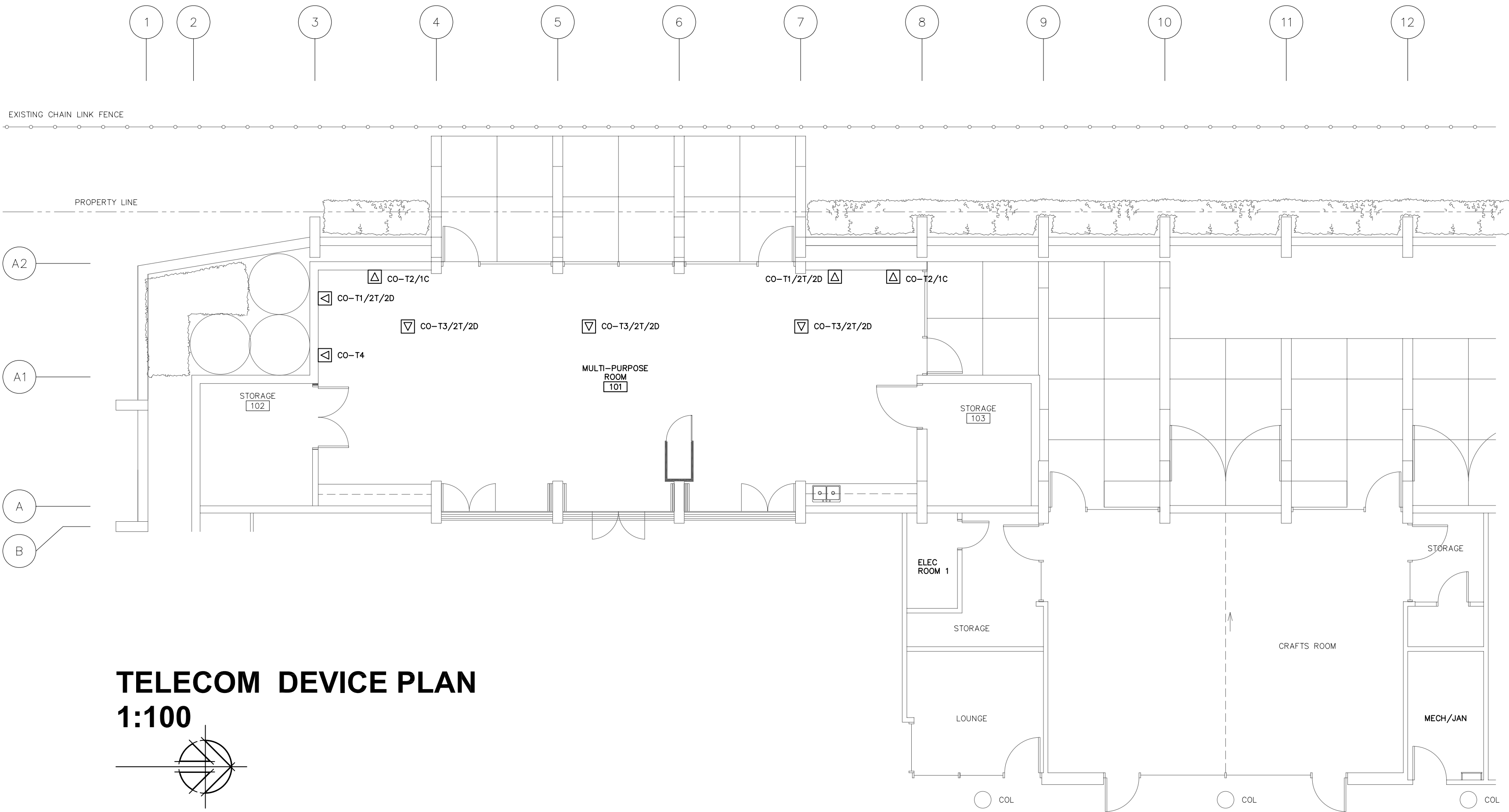
Sheet Title
LIGHTING --
PAGE 1

Job No	2005-05	Sheet No	
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E301



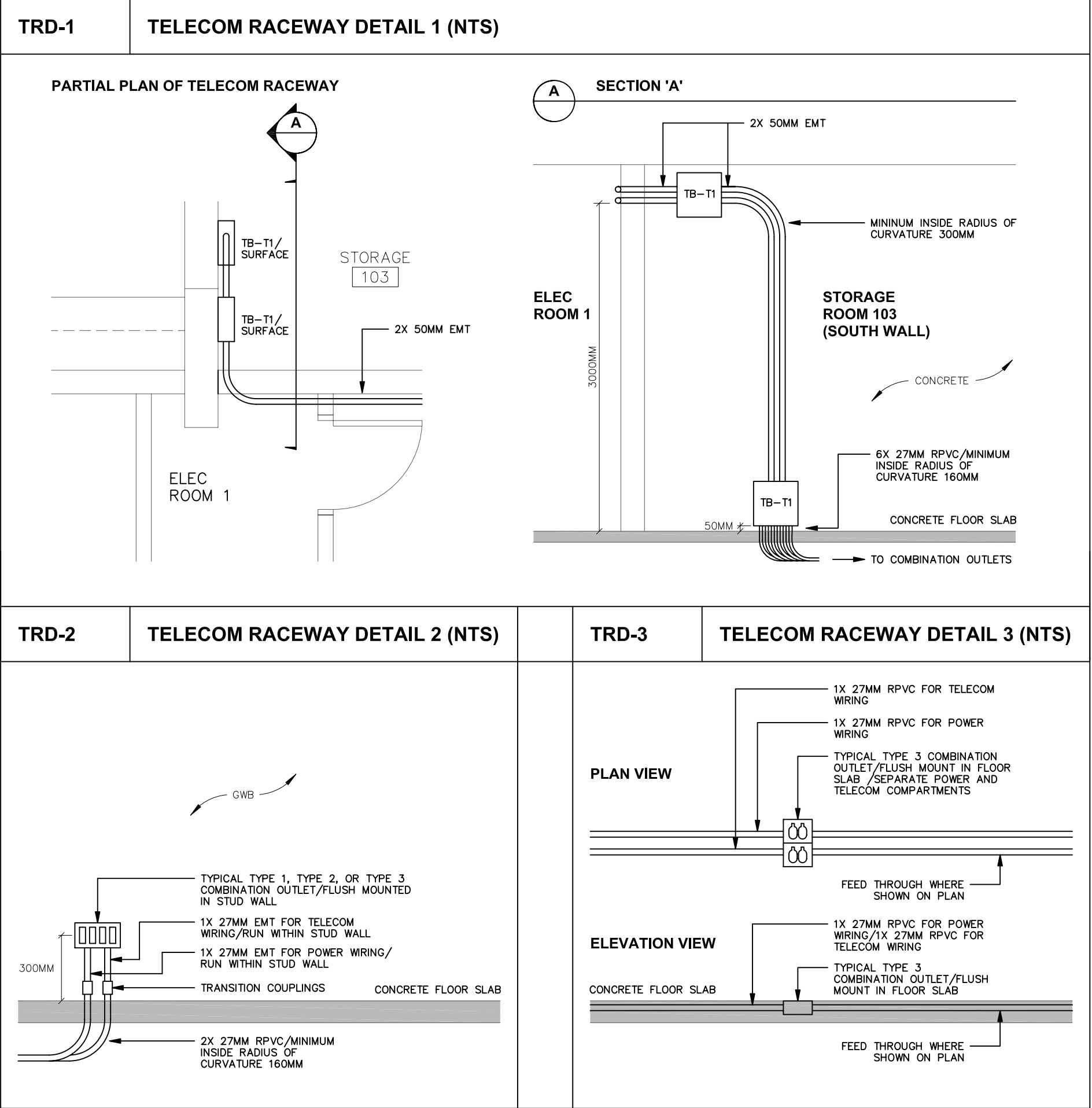
TELECOM RACEWAY PLAN
1:100



TELECOM DEVICE PLAN
1:100

IDENTIFIER SCHEDULE (ALPHABETICAL)	
RN-X	REFERENCE NOTE 'X' / 'X' REPRESENTS THE REFERENCE NOTE NUMBER / REFER TO THE REFERENCE NOTES ON THE PAGE WHERE THE REFERENCE NOTE IDENTIFIER APPEARS
TB-TX	TELECOM BOX TYPE 'X' / 'X' REPRESENTS THE TYPE NUMBER / REFER TO THE AUDIO BOX SCHEDULE
TRD-X	TELECOM RACEWAY DETAIL 'X' / 'X' REPRESENTS THE DETAIL NUMBER / REFER TO THE AUDIO RACEWAY DETAILS
XC	THIS IDENTIFIER WILL BE PLACED NEXT TO A TELECOM OUTLET OR COMBINATION OUTLET WHICH INCLUDES A COAX CONNECTOR OR A NUMBER OF COAX CONNECTORS / 'X' REPRESENTS THE NUMBER OF COAX CONNECTORS
XD	THIS IDENTIFIER WILL BE PLACED NEXT TO A TELECOM OUTLET OR COMBINATION OUTLET WHICH INCLUDES A DATA JACK OR A NUMBER OF DATA JACKS / 'X' REPRESENTS THE NUMBER OF DATA JACKS
XT	THIS IDENTIFIER WILL BE PLACED NEXT TO A TELECOM OUTLET OR COMBINATION OUTLET WHICH INCLUDES A TELEPHONE JACK OR A NUMBER OF TELEPHONE JACKS / 'X' REPRESENTS THE NUMBER OF TELEPHONE JACKS

SYMBOL SCHEDULE	
	COMBINATION OUTLET / INCLUDES ONE OR MORE POWER RECEPTACLES AND ONE OR MORE TELECOM AND/OR AUDIO CONNECTORS / REFER TO THE ACCOMPANYING IDENTIFIER AND THE COMBINATION OUTLET SCHEDULE
TELECOM BOX SCHEDULE	
TB-T1	TELECOM BOX TYPE 1 / SURFACE MOUNT / NOMINAL SIZE 406MM W X 406MM H X 150MM D / GALVANIZED STEEL / HINGE AND HASP COVER / GREY POWDERCOAT FINISH



SCHEDULE OF COMBINATION OUTLETS WITH TELECOM COMPONENTS					
IDENTIFIER	BOX	MOUNTING	ELEVATION OF BOX CENTRE UNO	DEVICES	PLATE / COVER
CO-T1	4-GANG MIN 63.5MM DEEP 27MM CONDUIT KNOCKOUTS METAL PARTITION BETWEEN GANG 2 AND GANG 3	FLUSH / WALL	300MM	GANG 1 125VAC 15-AMPERE (5-15R) SPECIFICATION GRADE DECORA-STYLE DUPLEX RECEPTACLE / WHITE FACE / HUBBELL HBL2152M / LEVITON 16262W / PASS & SEYMOUR 26252-W GANG 2 AS FOR GANG 1 GANG 3 WHITE 2-PORT DECORA TELECOM INSERT (LEVITON 41643-00W) / 2 RJ12 TEL JACKS GANG 4 WHITE 2-PORT DECORA TELECOM INSERT (LEVITON 41643-00W) / 2 RJ45 DATA JACKS	4-GANG TYPE 302-304 STAINLESS STEEL WITH DECORA OPENINGS / HUBBELL S264 / LEVITON 84412-40 / PASS & SEYMOUR S264
CO-T2	4-GANG MIN 63.5MM DEEP 27MM CONDUIT KNOCKOUTS METAL PARTITION BETWEEN GANG 1 AND GANG 2	FLUSH / WALL	300MM	GANG 1 125VAC 15-AMPERE (5-15R) SPECIFICATION GRADE DECORA-STYLE DUPLEX RECEPTACLE / WHITE FACE / HUBBELL HBL2152M / LEVITON 16262W / PASS & SEYMOUR 26252-W GANG 2 COAX CONNECTOR / WHITE DECORA INSERT FOR COAX CONNECTOR / LABEL THE CONNECTOR "CABLE TV" GANG 3 2X NEUTRIK 2-POLE FEMALE SPEAKON CONNECTOR / BLANK STAINLESS STEEL DECORA INSERT DRILLED TO ACCEPT NEUTRIK CONNECTOR GANG 4 AS FOR GANG 3	4-GANG TYPE 302-304 STAINLESS STEEL WITH DECORA OPENINGS / HUBBELL S264 / LEVITON 84412-40 / PASS & SEYMOUR S264
CO-T3	PARTITIONED 2-GANG SHALLOW CAST IRON FLOOR BOX / WIREMOLD 880CM2-1	FLUSH / FLOOR		GANG 1 125VAC 15-AMPERE (5-15R) SPECIFICATION GRADE DECORA-STYLE DUPLEX RECEPTACLE / WHITE FACE / HUBBELL HBL2152M / LEVITON 16262W / PASS & SEYMOUR 26252-W GANG 2 WHITE 4-PORT TELECOM INSERT / TWO RJ12 TEL JACKS / TWO RJ45 DATA JACKS	2-GANG BRASS FLANGE / WIREMOLD 827B TWO BRASS DUPLEX COVER PLATES / WIREMOLD 828R
CO-T4	4-GANG MIN 63.5MM DEEP 27MM CONDUIT KNOCKOUTS METAL PARTITION BETWEEN GANG 2 AND GANG 3	FLUSH / WALL	300MM	GANG 1 125VAC 15-AMPERE (5-15R) SPECIFICATION GRADE DECORA-STYLE DUPLEX RECEPTACLE / WHITE FACE / HUBBELL HBL2152M / LEVITON 16262W / PASS & SEYMOUR 26252-W GANG 2 AS FOR GANG 1 GANG 3 WHITE DECORA BLANK GANG 4 WHITE DECORA BLANK	4-GANG TYPE 302-304 STAINLESS STEEL WITH DECORA OPENINGS / HUBBELL S264 / LEVITON 84412-40 / PASS & SEYMOUR S264
GENERAL SCHEDULE NOTES 1) THE TELECOM CABLING CONTRACTOR IS TO SUPPLY AND INSTALL THE TELECOM CABLING, TERMINATIONS, AND ASSOCIATED DECORA INSERTS. THE AUDIO SYSTEM CONTRACTOR IS TO SUPPLY AND INSTALL THE AUDIO CABLING, TERMINATIONS, AND ASSOCIATED DECORA INSERTS. THE ELECTRICAL CONTRACTOR IS TO SUPPLY AND INSTALL ALL OTHER OUTLET INFRASTRUCTURE.					

ELECTRICAL DRAWING LIST

E101	SPECIFICATIONS -- PAGE 1
E102	SPECIFICATIONS -- PAGE 2
E201	POWER / LIFE SAFETY / MISC -- PAGE 1
E202	POWER / LIFE SAFETY / MISC -- PAGE 2
E301	LIGHTING -- PAGE 1
E401	TELECOM CABLING -- PAGE 1
E501	SECURITY SYSTEMS -- PAGE 1
E601	AUDIO SYSTEM -- PAGE 1

RECORD	MAR 26/07
FOR CONSTRUCTION	JUN 26/06
ADDENDUM 1	MAY 12/06
FOR TENDER	APR 25/06
REVISION	DATE

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ENGINEERING LIMITED
ELECTRICAL ENGINEERING SERVICES
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NEWTON
SENIORS
RECREATION
CENTRE
ADDITION &
RENOVATION

13775-70TH
AVENUE
SURREY, B.C.

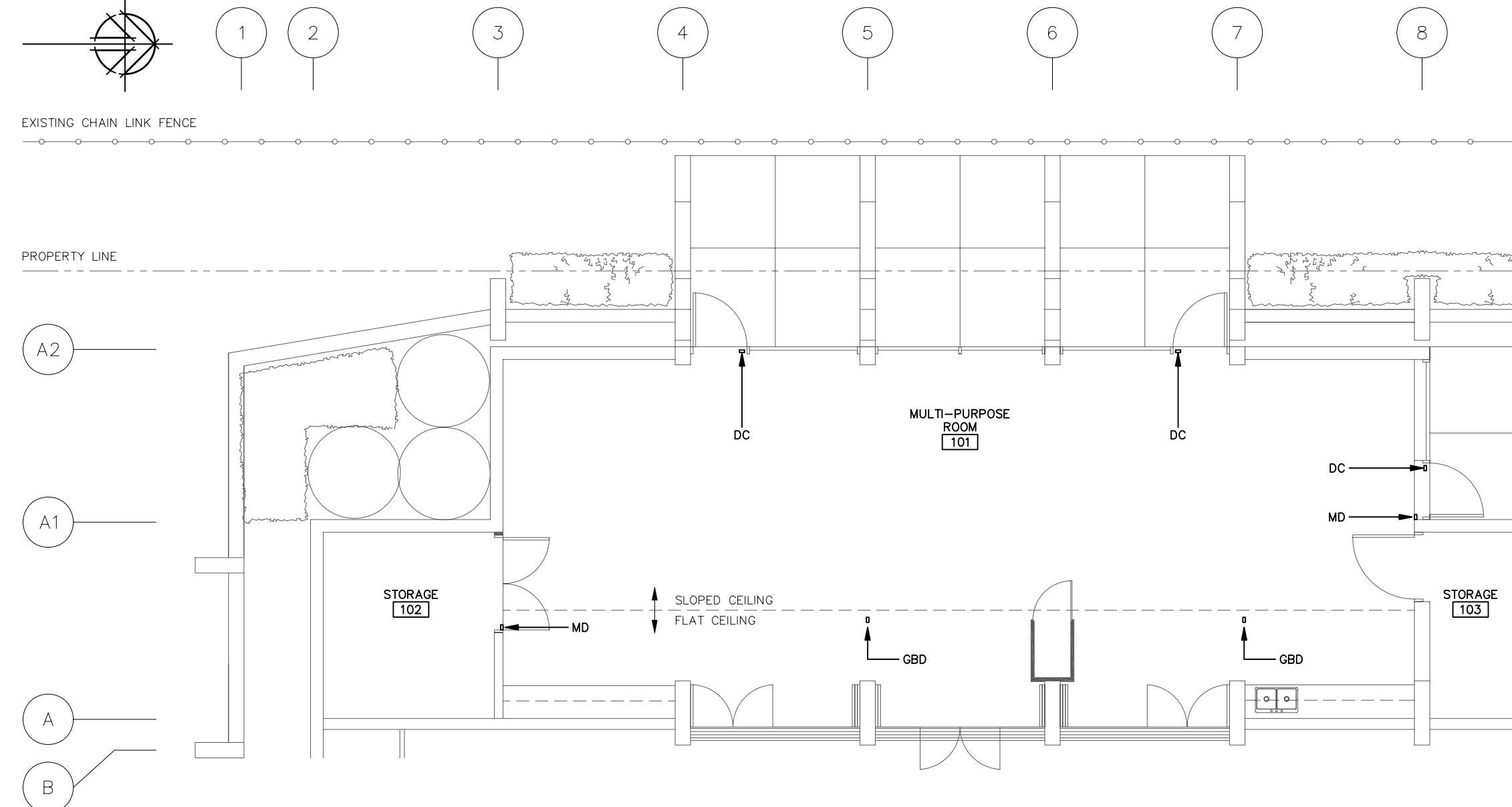
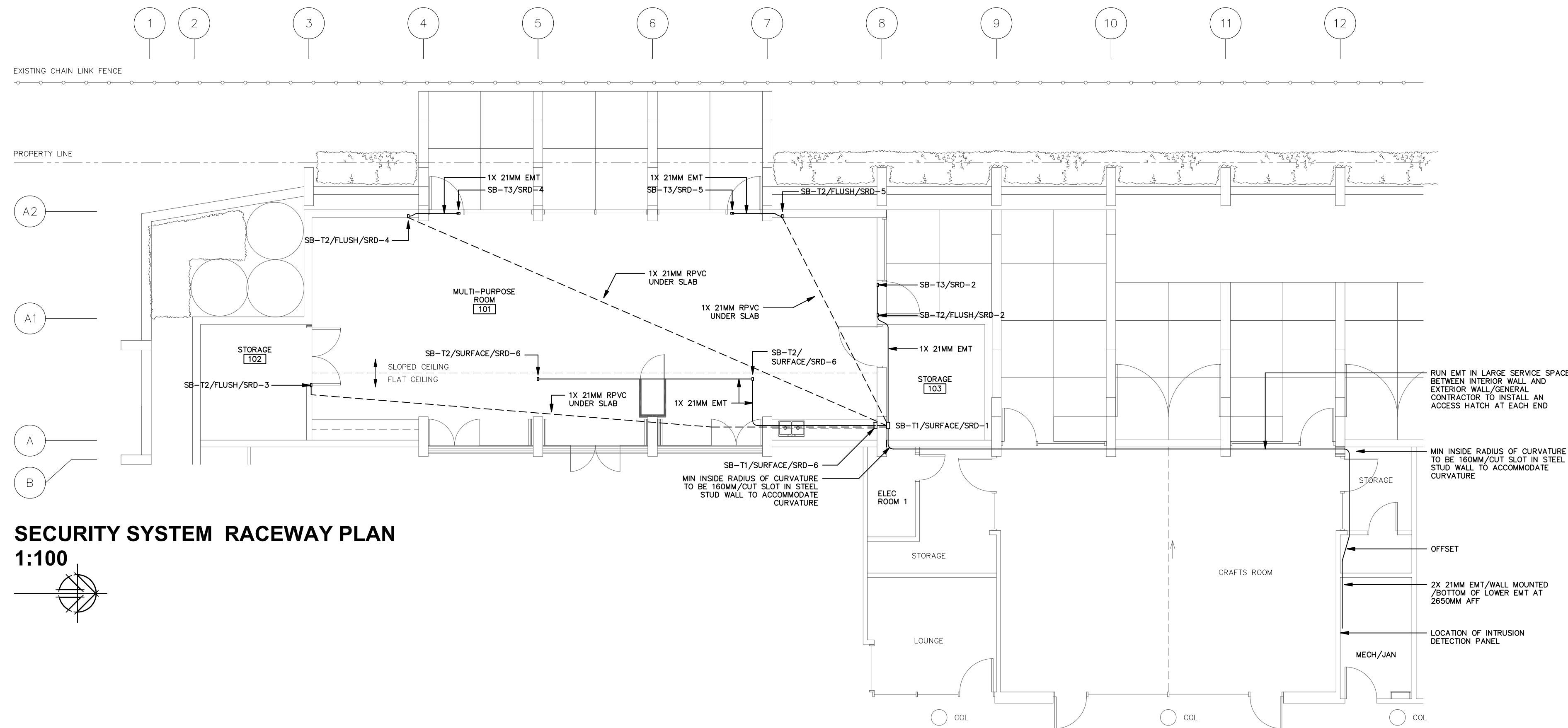
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Sheet Title

TELECOM CABLING
-- PAGE 1

Job No	2005-08	Sheet No	
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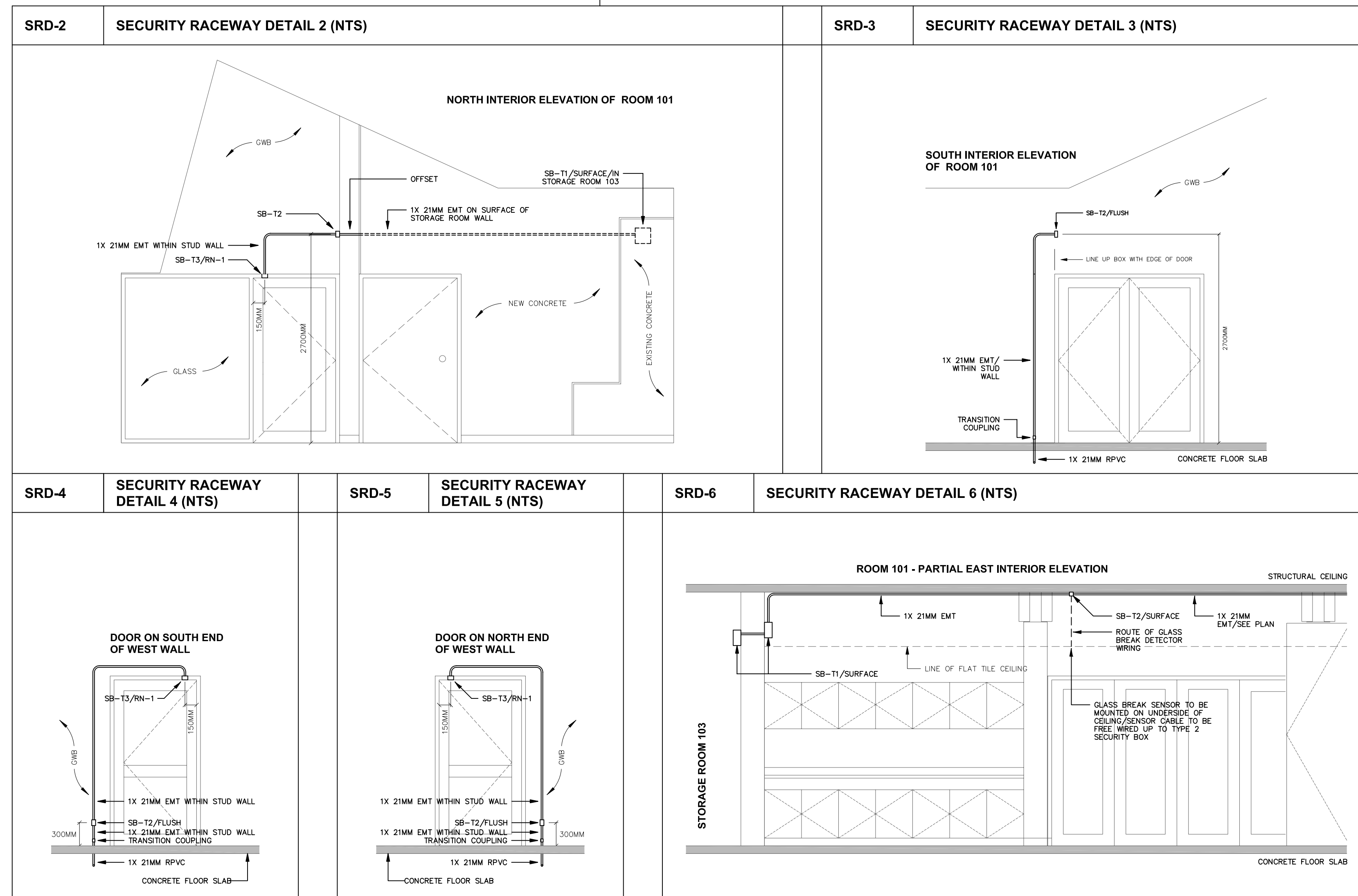
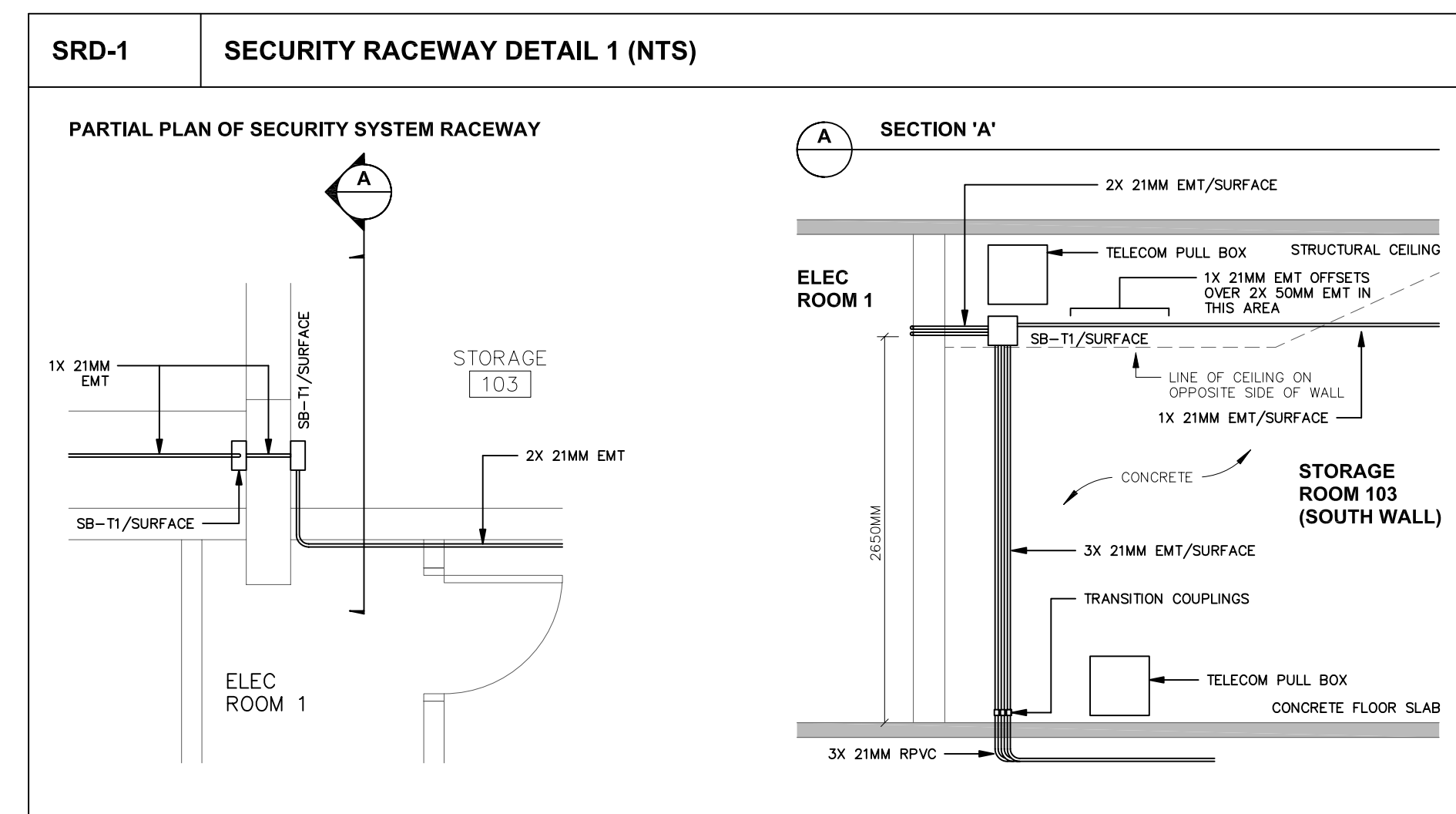
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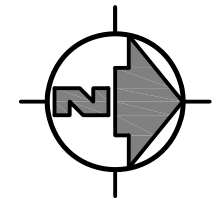
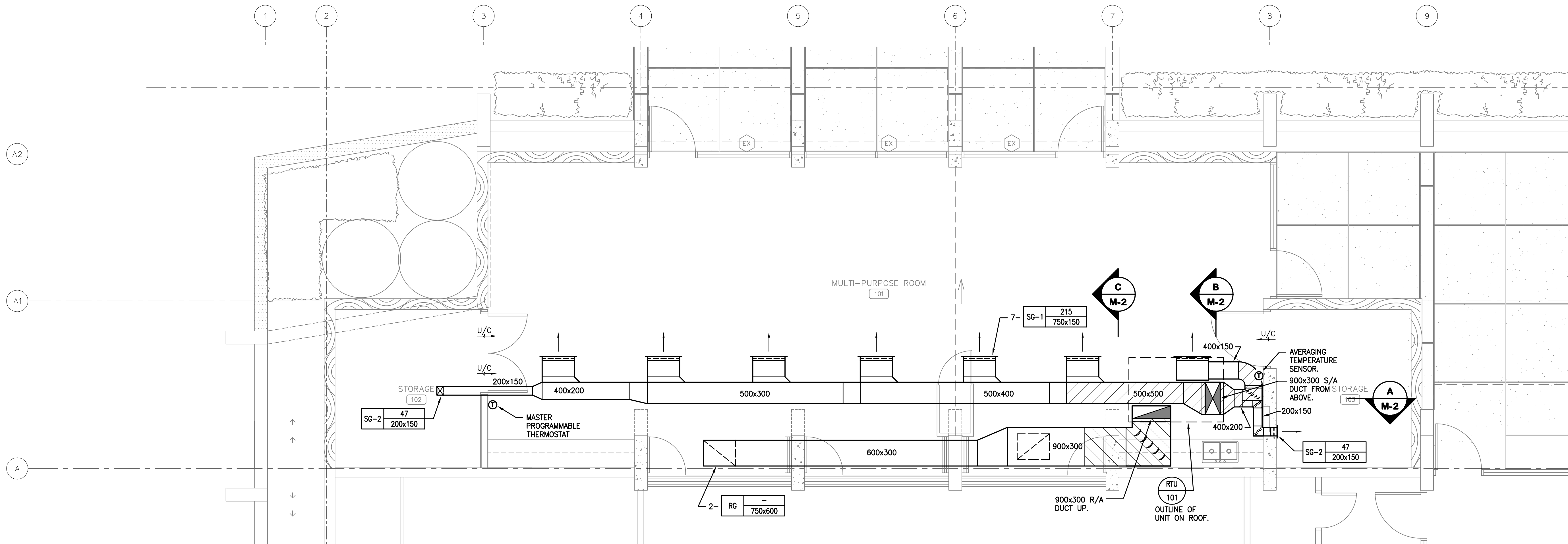


IDENTIFIER SCHEDULE (ALPHABETICAL)	
RN-X	REFERENCE NOTE "X" / "X" REPRESENTS THE REFERENCE NOTE NUMBER / REFER TO THE REFERENCE NOTES ON THE PAGE WHERE THE REFERENCE NOTE IDENTIFIER APPEARS
MD	MOTION DETECTOR
GBD	GLASS BREAK DETECTOR
DC	DOOR CONTACT
SB-IX	SECURITY BOX TYPE "X" / "X" REPRESENTS THE BOX NUMBER / REFER TO THE SECURITY BOX SCHEDULE
SRD-X	SECURITY RACEWAY DETAIL "X" / "X" REPRESENTS THE DETAIL NUMBER / REFER TO THE SECURITY SYSTEM RACEWAY DETAILS

SECURITY BOX SCHEDULE	
SB-T1	SECURITY BOX TYPE 1 / SURFACE MOUNT / NOMINAL SIZE 200MM W X 200MM H X 100MM D / GALVANIZED STEEL WITH HINGE HASP COVER AND GREY POWERCOATED FINISH
SB-T2	SECURITY BOX TYPE 2 / FLUSH MOUNT / NOMINAL SIZE 50MM W X 75MM H X 83.5MM D (SINGLE-DANG DEEP) / GALVANIZED STEEL / BLANK TYPE 302 STAINLESS STEEL COVER PLATE
SB-T3	SECURITY BOX TYPE 3 / MOUNT IN DOOR FRAME / NOMINAL SIZE 50MM W X 75MM H X 50MM D (SINGLE-DANG) / GALVANIZED STEEL

DRAWING REFERENCE NOTES	
<p>RN-1</p>	<p>THIS TYPE 3 SECURITY BOX IS TO ACCOMMODATE A FLUSH MOUNTED DOOR CONTACT AND ASSOCIATED WIRING.</p> <p>CUT A RECTANGULAR HOLE IN THE TOP SURFACE OF THE DOOR FRAME. THE HOLE SHOULD BE SLIGHTLY LARGER THAN THE BOX. SET THE BOX INTO THE HOLE WITH THE OPEN SIDE DOWN.</p>





ADDITION PLAN
SCALE = 1:50

ROOFTOP AIR CONDITIONING UNIT SCHEDULE							
ITEM	DESCRIPTION	LOCATION	SERVING	MAKE / MODEL	ELECTRICAL	PERFORMANCE	NOTES
RTU-101	SINGLE PACKAGED GAS HEATING/ELECTRIC COOLING UNIT	ROOF (ADDITION)	MULTIPURPOSE ROOM	CARRIER/ 48HJ009	208/3/60 49.3 AMPS MCA	<p>AIR FLOW = 1805 L/S (3400 CFM) E.S.P. = 300 Pa (1.2 IN W.C.) BHP = 2.2, RPM = 977</p> <p>COOLING: 2-STAGE COOLING T.C. = 30.2 KW (103.0 MBH) S.C. = 28.6 KW (97.6 MBH) EAT = 25.1°C DB/18.3°C WB (77°F/65°F) AMBIENT TEMP. = 29.5°C (85°F)</p> <p>HEATING: 2-STAGE COOLING NATURAL GAS HEATING INPUT: 3552.7 KW (120180 MBH) HEATING OUTPUT: 28.8/43.2 KW (98.4/147.6 MBH) EAT = 10°C (50°F) TEMP RISE = 22°C (40°F)</p>	c/w ECONOMIZER SECTION (ECONOMIZER + PROPORTIONAL), ALUMINIZED STEEL HEAT EXCHANGER, TYPE "A" FLUE VENT, FULLY PROGRAMMABLE THERMOSTAT, AVERAGING TEMPERATURE SENSOR, 600mm HIGH ROOF CURB (BOTTOM DISCHARGE), FILTER RACK c/w 50mm THICK PLEATED FILTER

MECHANICAL LEGEND

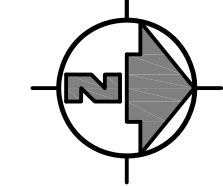
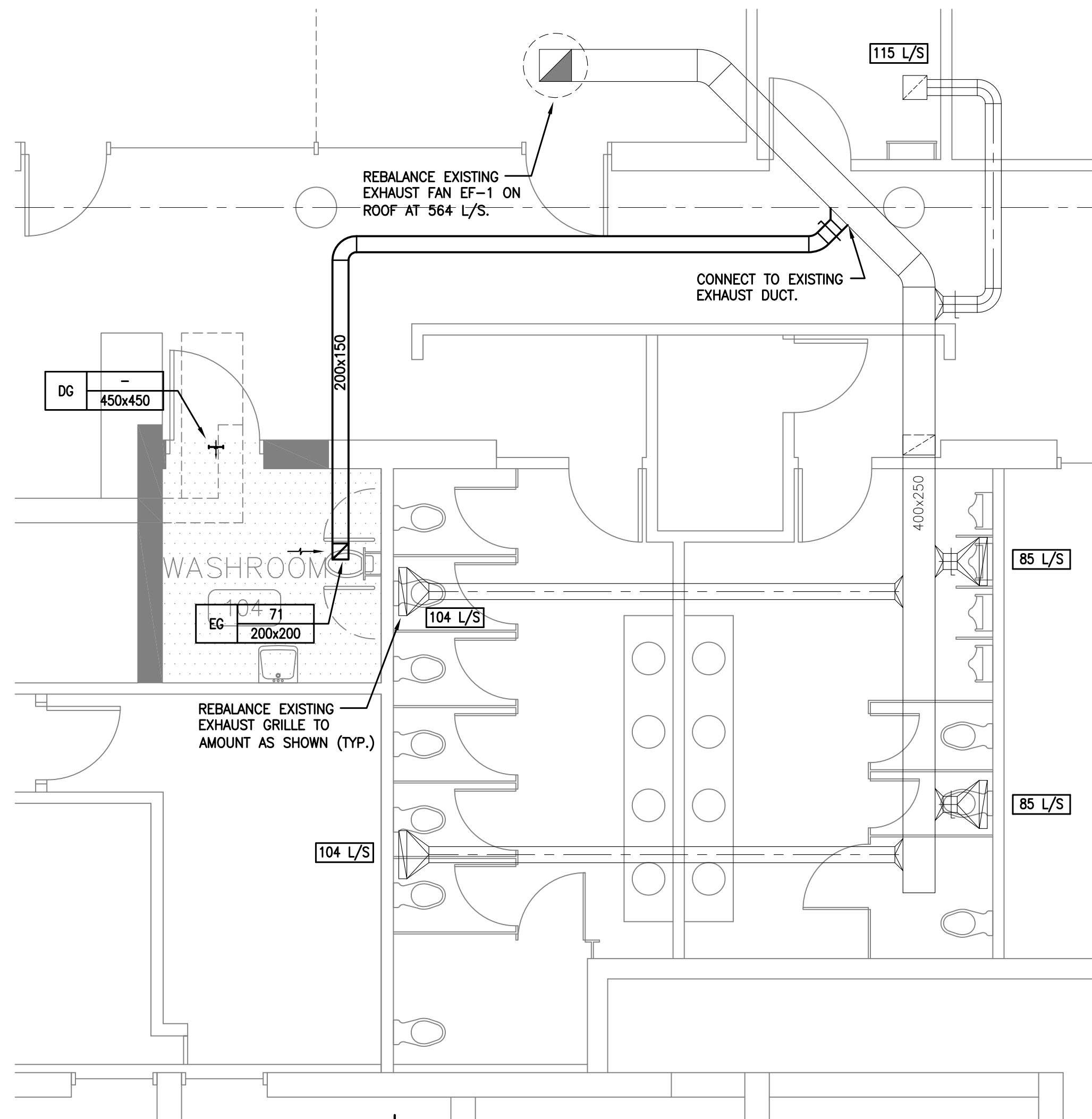
	EQUIPMENT TYPE ABBREVIATION		AIRFLOW (L/S)
	EQUIPMENT DESIGNATION		DIFFUSER DESIGNATION
	EQUIPMENT TAG		DIFFUSER DESCRIPTOR (SIZE, LENGTH, NECK DIA., ETC. IN mm)
	25mm ACOUSTICALLY INTERNALLY LINED DUCT		DIFFUSER TYPE. (SEE SPEC.)
	50mm ACOUSTICALLY INTERNALLY LINED DUCT		NEW DUCT
	FLEX DUCTING (SIZE TO MATCH DIFFUSER NECK SIZE)		EXISTING DUCT
	FIRE DAMPER		SUPPLY DUCT DOWN
	BALANCING DAMPER		SUPPLY DUCT UP
	BACKDRAFT DAMPER		RETURN OR EXHAUST DUCT DOWN
	FLEXIBLE DUCT CONNECTION		RETURN OR EXHAUST DUCT UP
	ELBOW WITH TURNING VANES		THERMOSTAT
	DUCT TRANSITION FROM RECTANGULAR TO ROUND		KEYNOTE
	DEFLECTROL WHERE SHOWN		EXISTING GRILLE AIR FLOW IN L/S
	SUPPLY AIR OUTLET		DOOR UNDERCUT BY GENERAL CONTRACTOR.
	OUTDOOR AIR OR SUPPLY AIR DUCT SECTION		
	RETURN, EXHAUST, OR RELIEF DUCT SECTION		

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DATE: JANUARY 2008

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WASHROOM PLAN
SCALE = 1:50

FINAL DESIGN DRAWINGS	07.02.12
ISSUED FOR TENDER	06.04.25
REVISION	DATE

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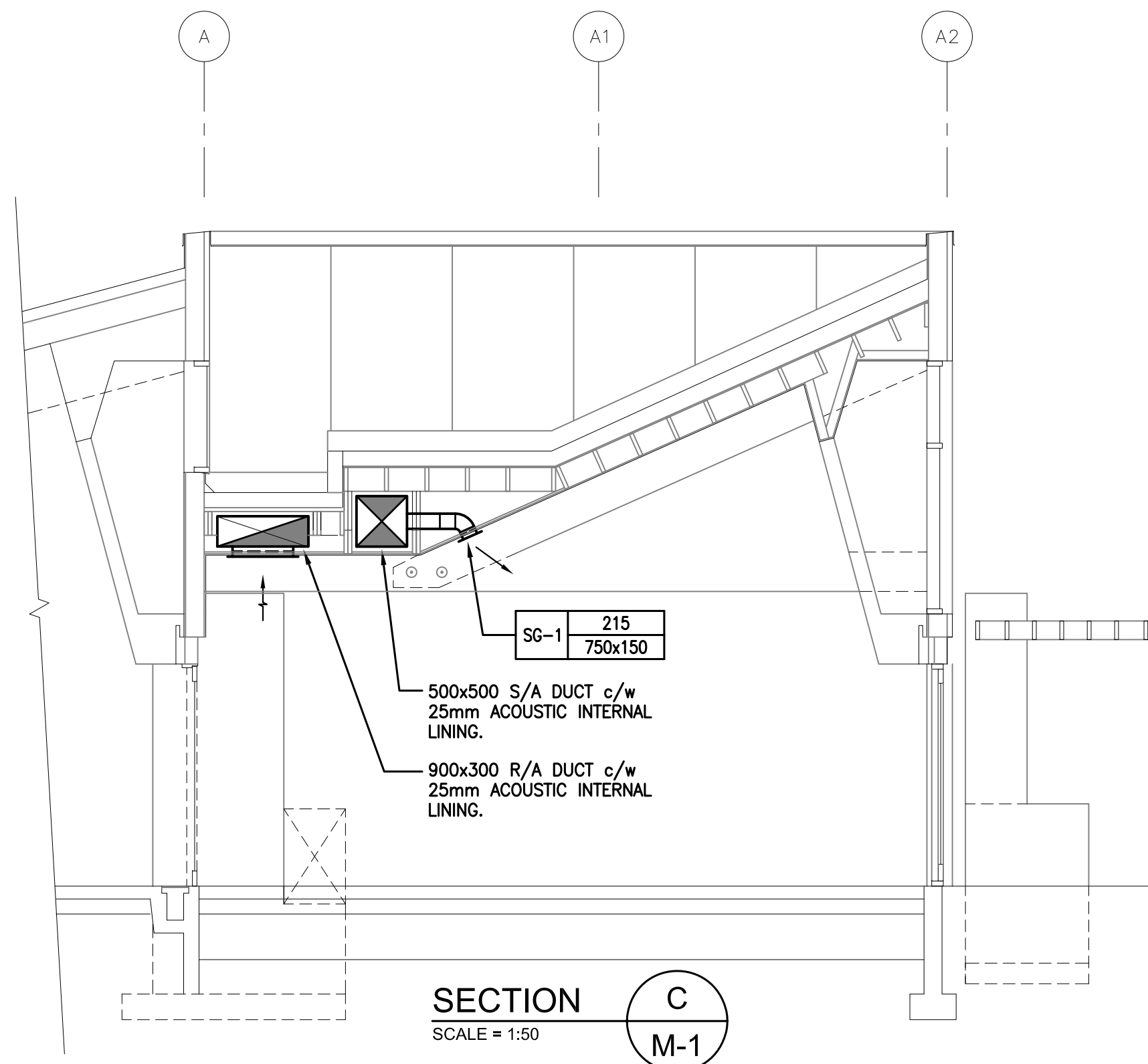
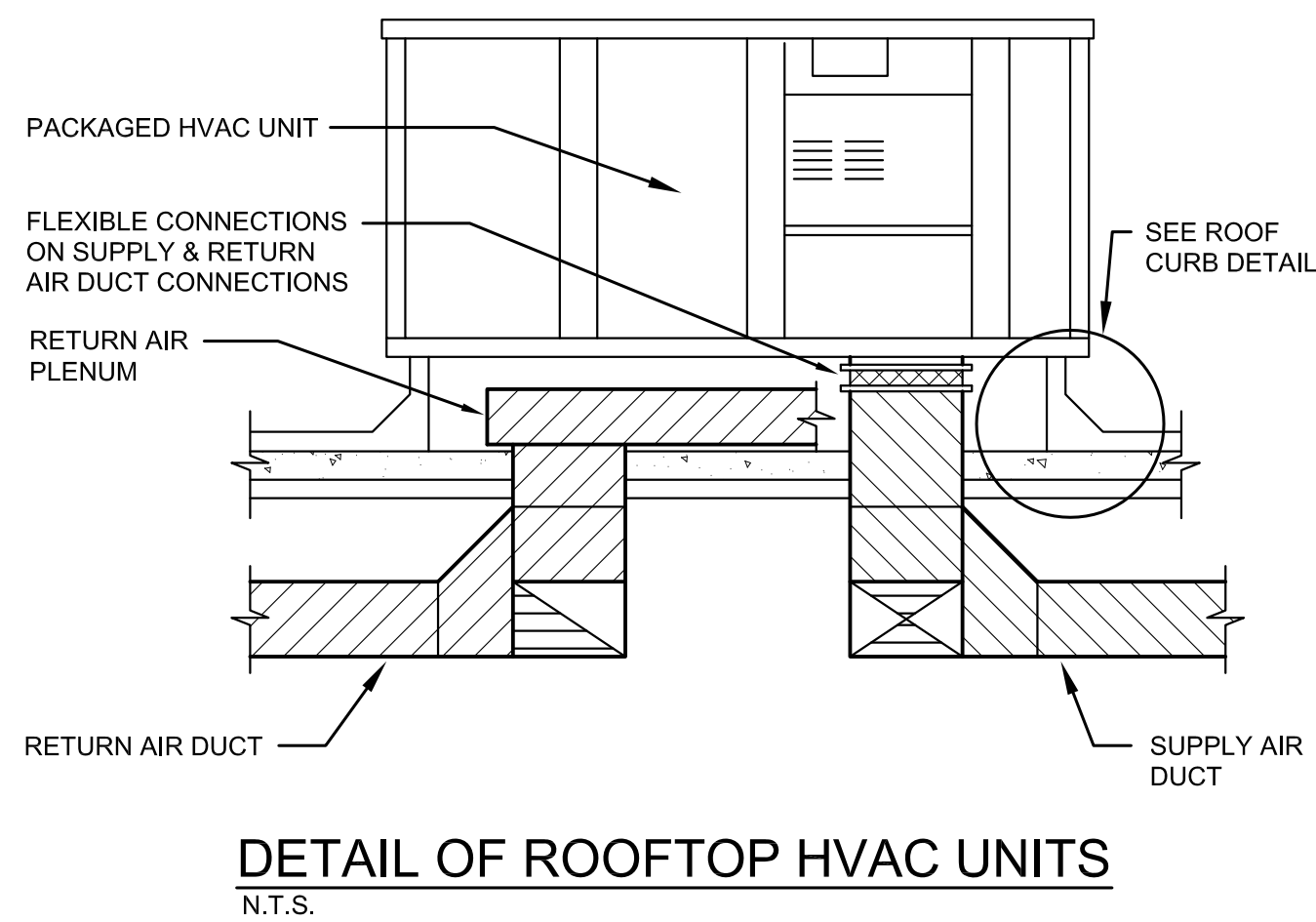
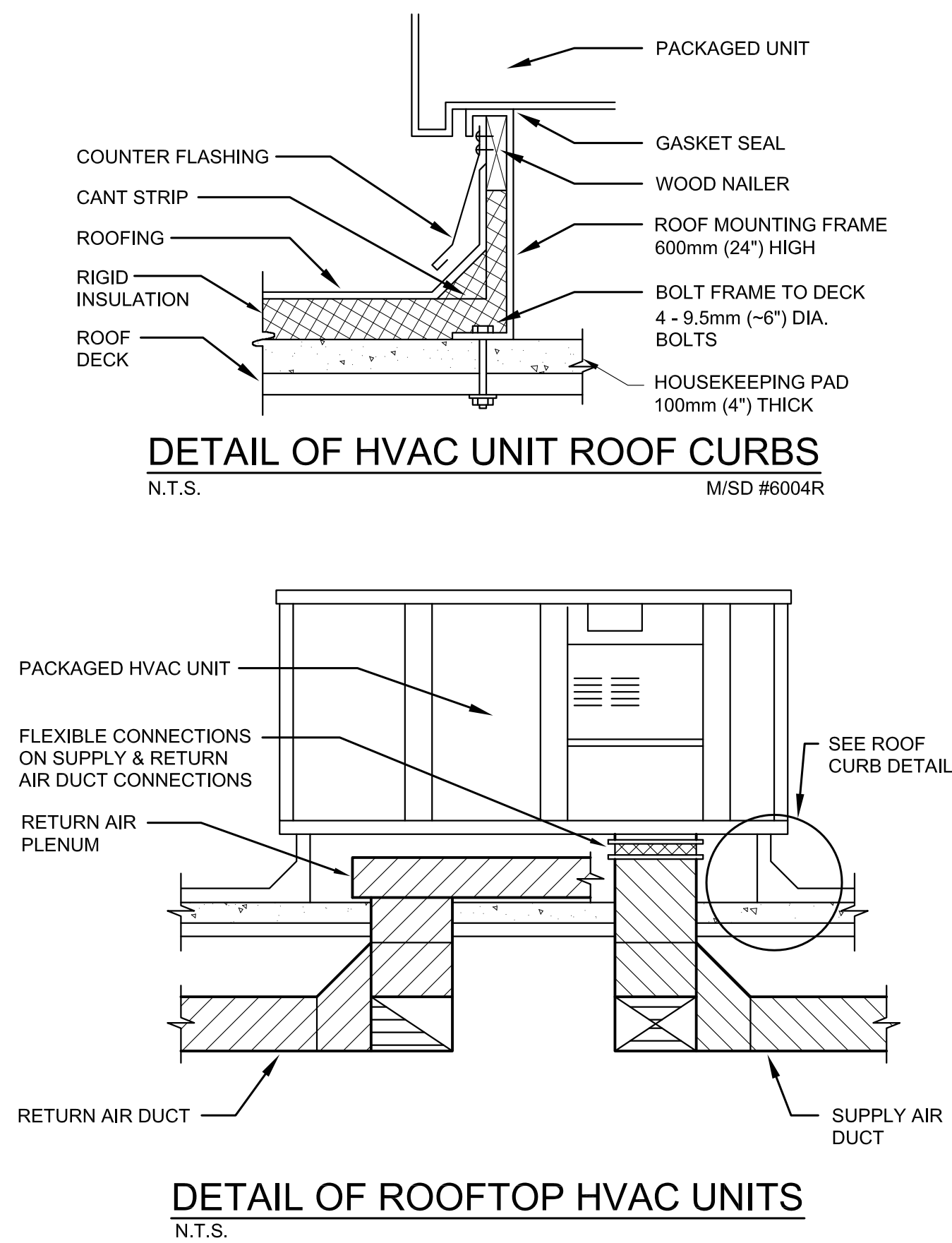
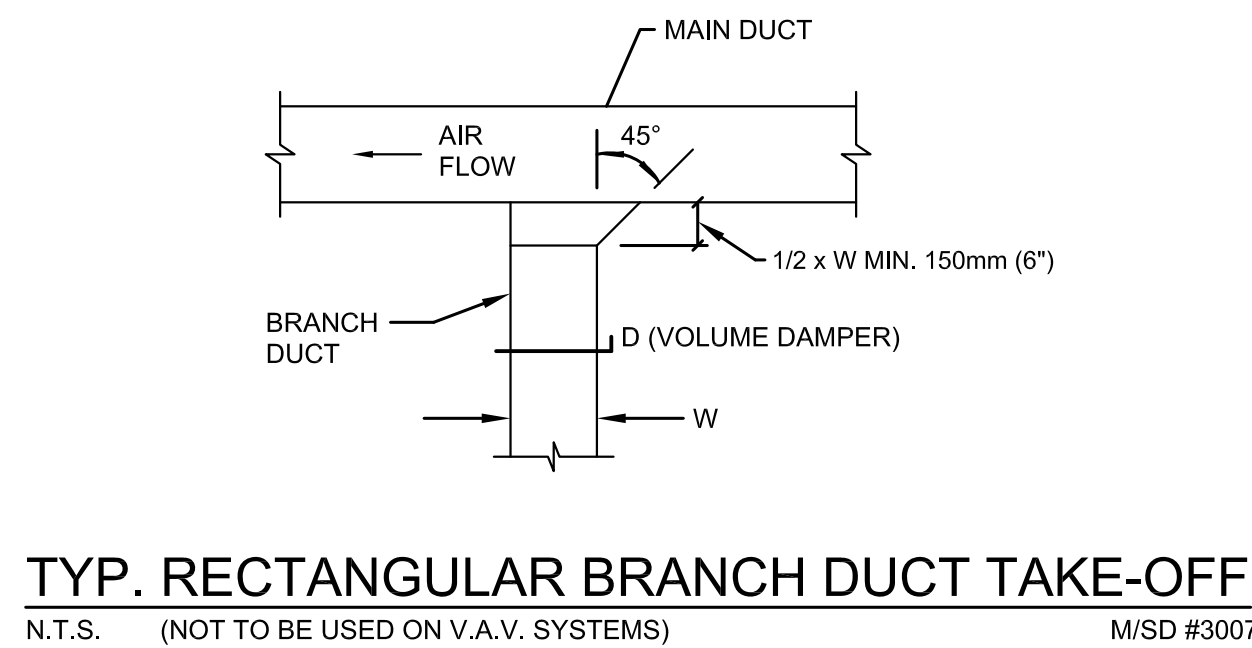
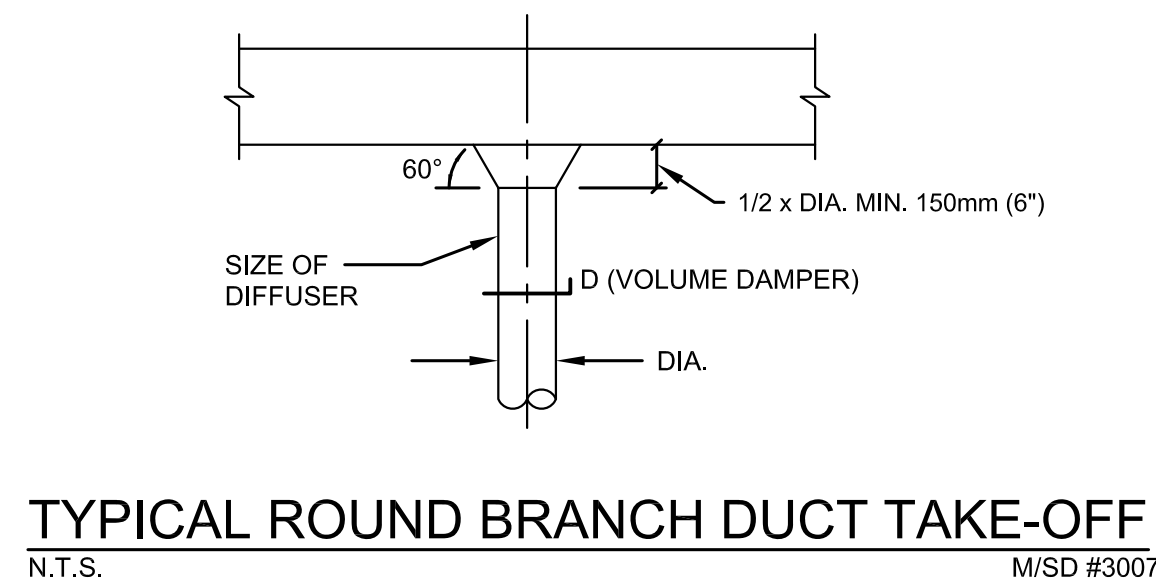
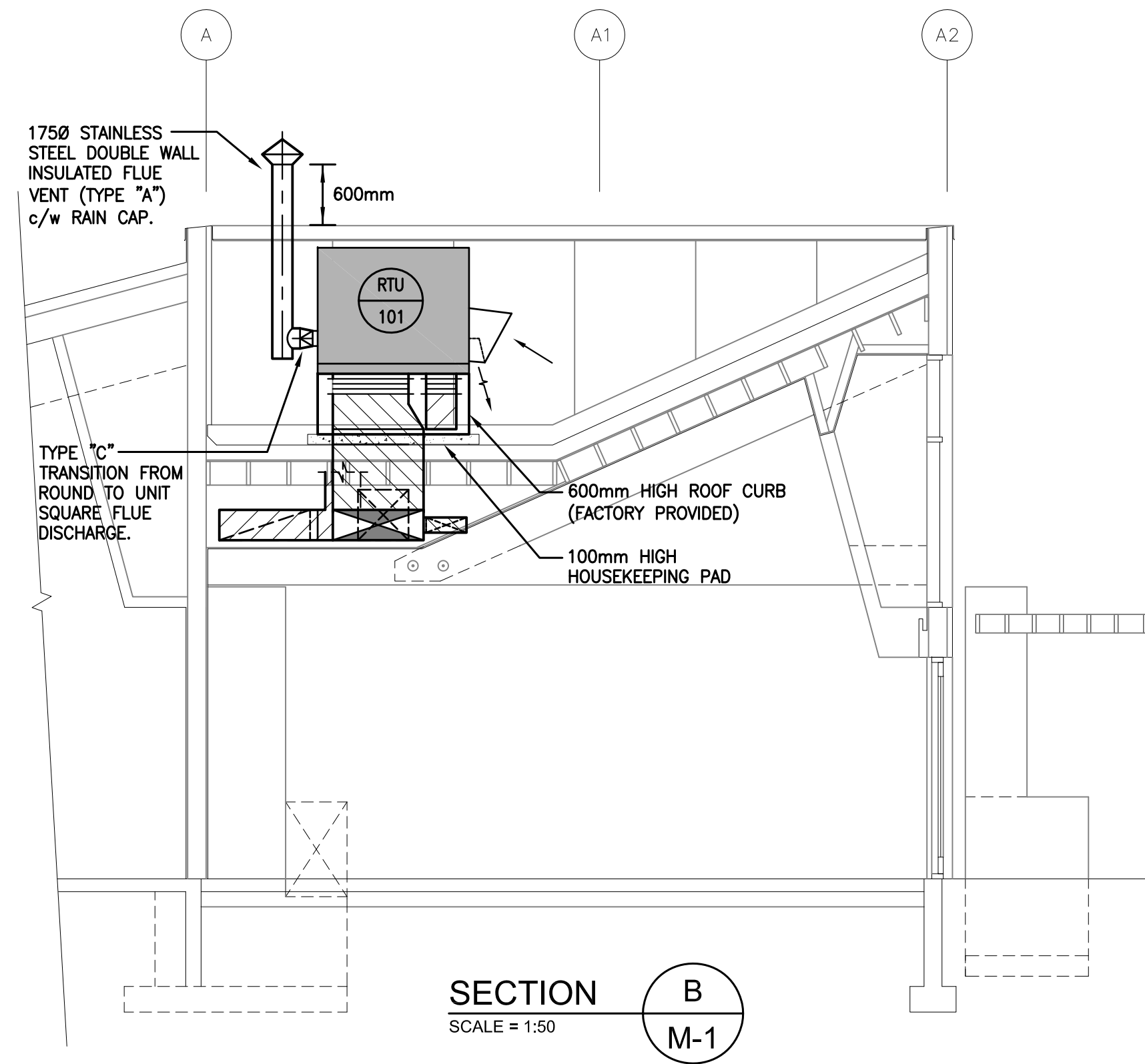
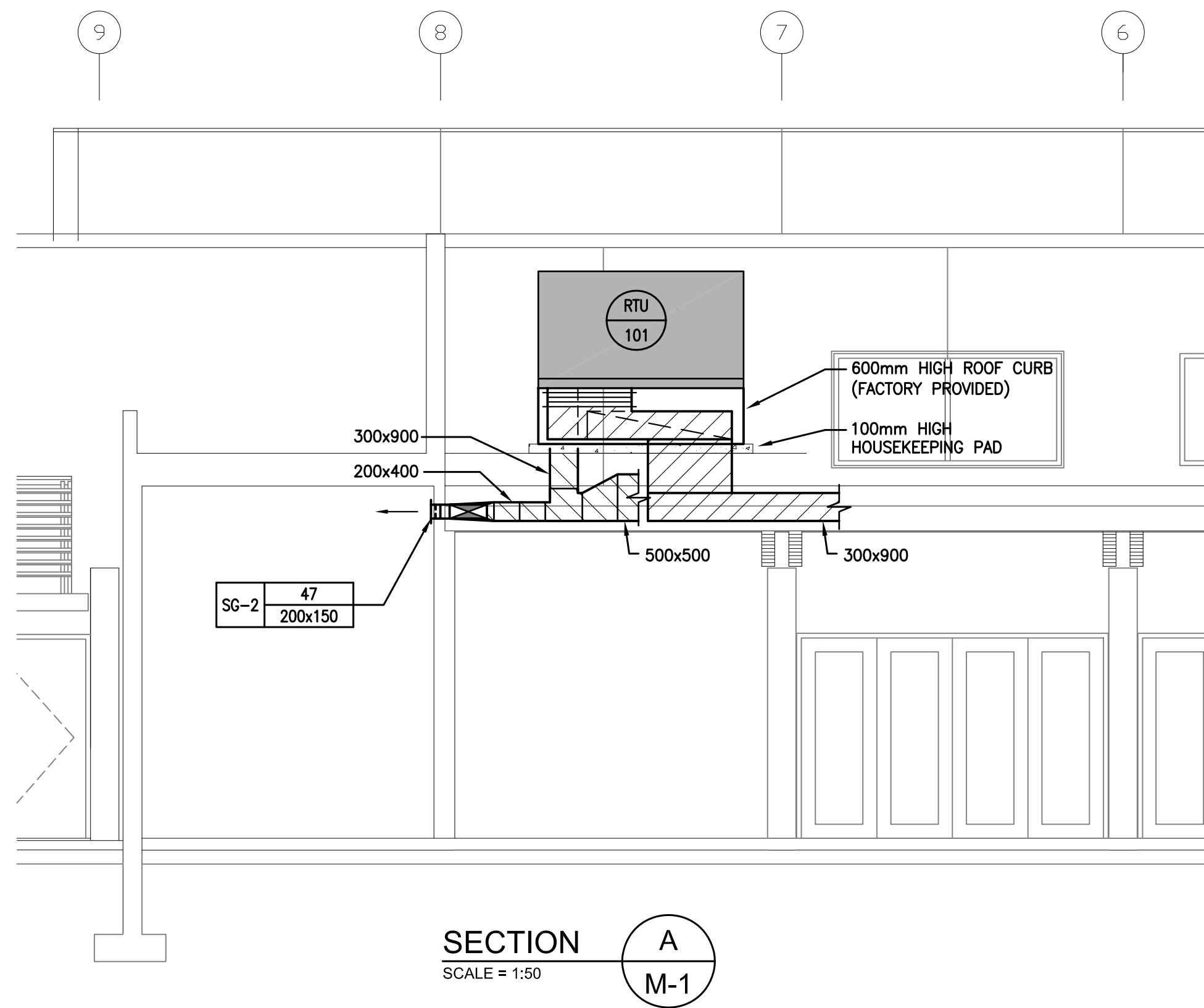
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Sheet Title

PARTIAL FLOOR PLANS, LEGEND & EQUIPMENT SCHEDULE - HVAC

Job No	Sheet No
Scale 1:50	M-1
Drawn RSE	
Checked HS	
Date 06.03.27	of 2



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FINAL DESIGN DRAWINGS	07.02.12
ADDENDUM M-1	06.05.04
ISSUED FOR TENDER	06.04.25
REVISION	DATE

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NEWTON SENIORS RECREATION CENTRE ADDITION & RENOVATION
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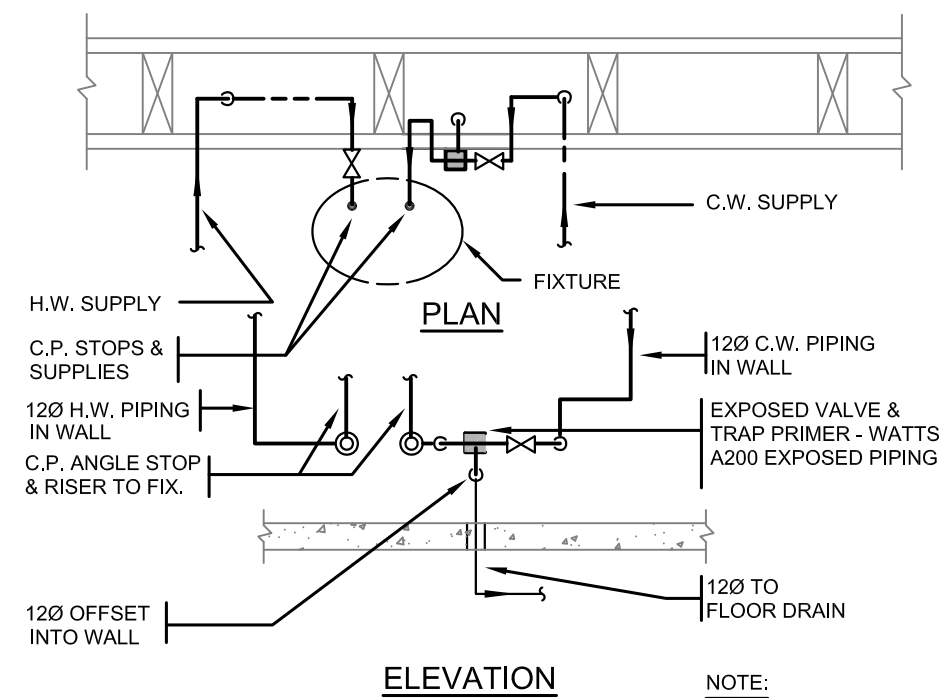
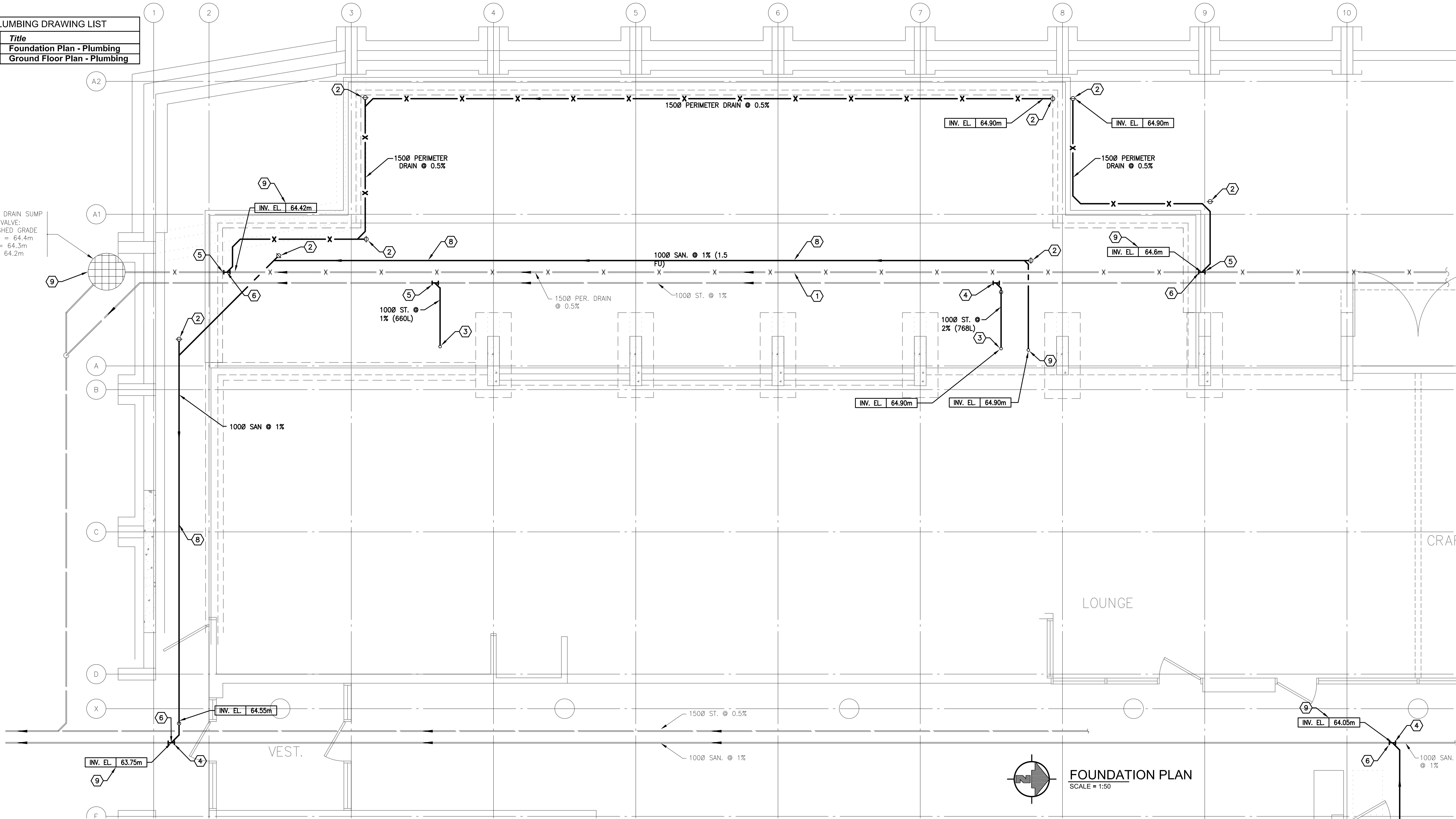
Sheet Title

SECTIONS and DETAILS - HVAC

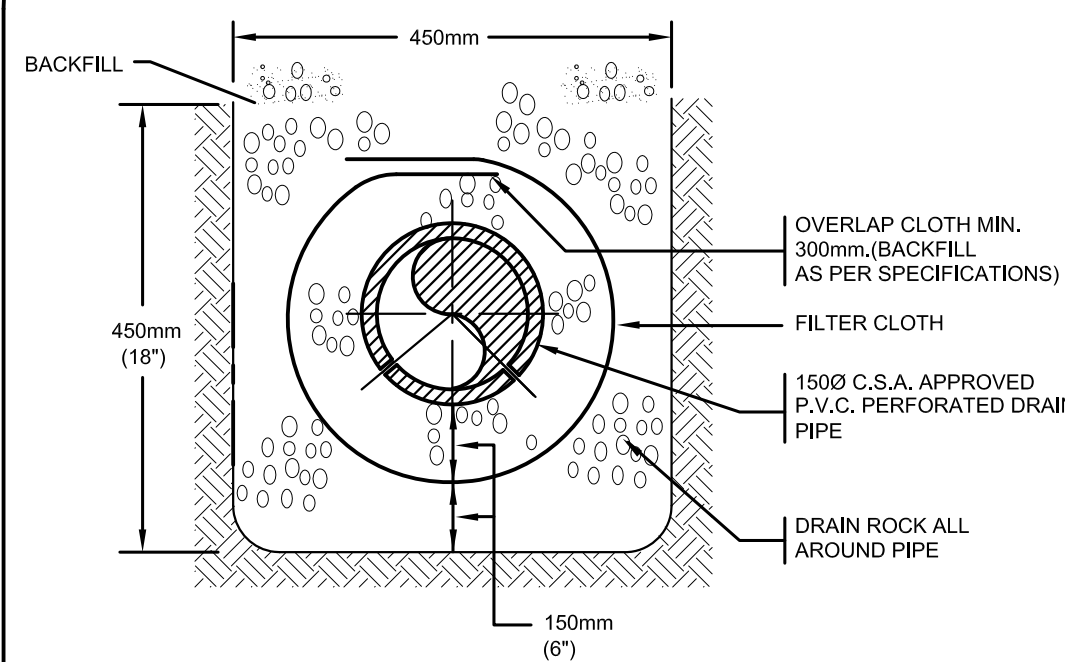
Job No	Sheet No
Scale 1:50	M-2
Drawn RSE	
Checked HS	
Date 06.04.21	of 2

PLUMBING DRAWING LIST	
Dwg.#	Title
P-1	Foundation Plan - Plumbing
P-2	Ground Floor Plan - Plumbing

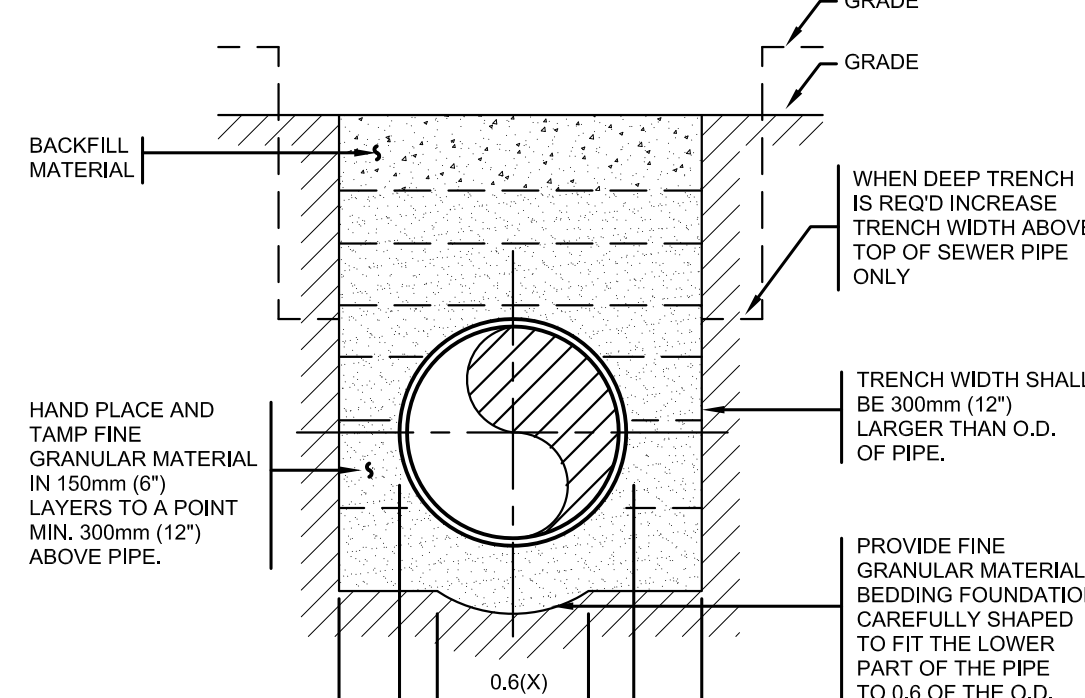
EXIST. PERIMETER DRAIN SUMP
C/W BACKWATER VALVE:
TOP: MATCH FINISHED GRADE
NORTH INLET INV. = 64.4m
EAST INLET INV. = 64.3m
OUTLET INVERT = 64.2m



TRAP PRIMER
N.T.S. PSD #3011



SUBSOIL & FOOTING DRAIN DETAIL
N.T.S. PSD #2020



PIPE BEDDING DETAIL
N.T.S. PSD #1001

KEYNOTES:

- 1500 EXIST. PERIMETER DRAIN
- 1000 C.O. TYPICAL
- 750 RWL
- CONNECT 1000 SAN. TO EXIST.
- CONNECT 1500 ST. TO EXIST.
- CONTRACTOR SHALL VERIFY THE LOCATION & ELEVATION OF EXISTING SERVICES BEFORE MAKING NEW CONNECTION.
- 120 WATER PRIMER (SEE DETAIL)
- 1000 SAN. BURIED IN SOIL (SEE DETAIL)
- INVERT ELEVATIONS SHOWN ON THIS DRAWING ARE BASED ON EXIST. PLUMBING DRAWINGS. CONTRACTOR SHALL VERIFY IT ON SITE PRIOR TO CONSTRUCTION.

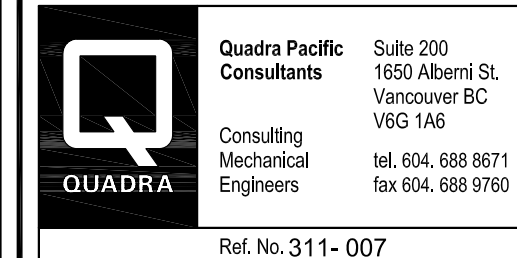
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ISSUED FOR TENDER	06.04.25
REVISION	DATE



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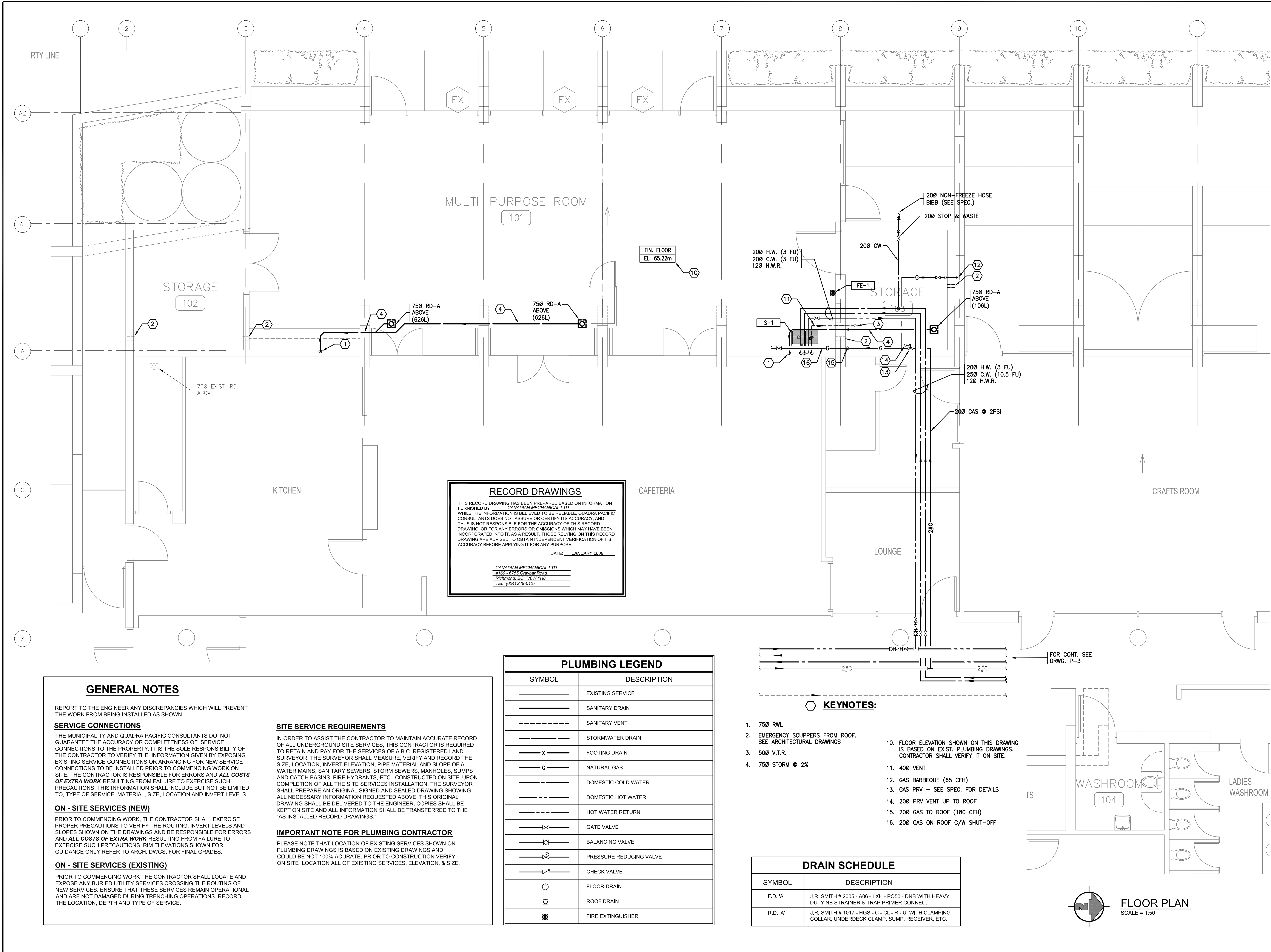
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Sheet Title

FOUNDATION PLAN
PLUMBING

Job No	311-007	Sheet No	
Scale	1:50		P-1
Drawn	S.G.L.		
Checked	S.G.L.		
Date	06.04.12	of	3



FINAL DESIGN DRAWINGS	07.02.12
NOTICE OF CHANGE M1	06.06.14
ISSUED FOR TENDER	06.04.25
REVISION	DATE



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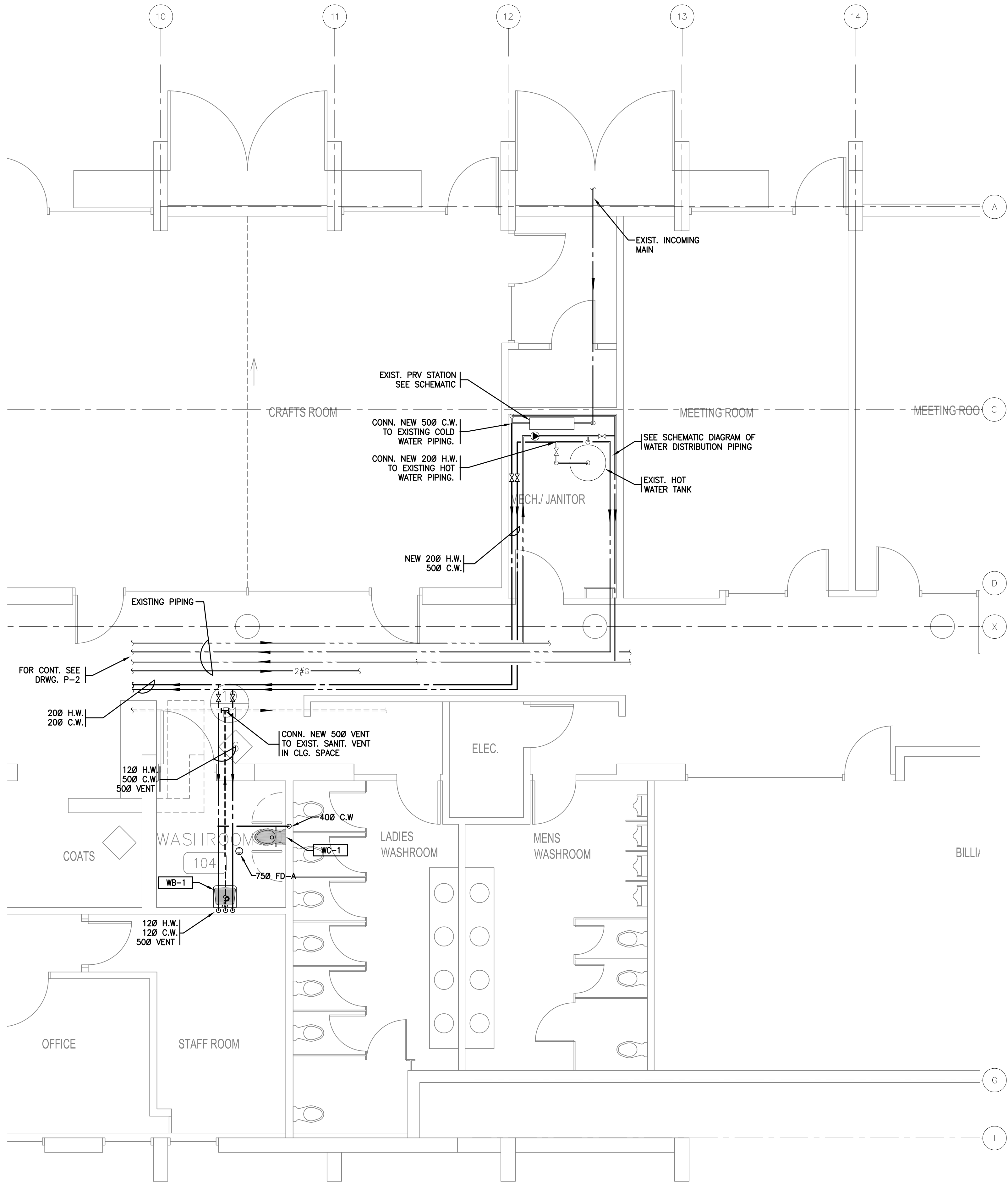
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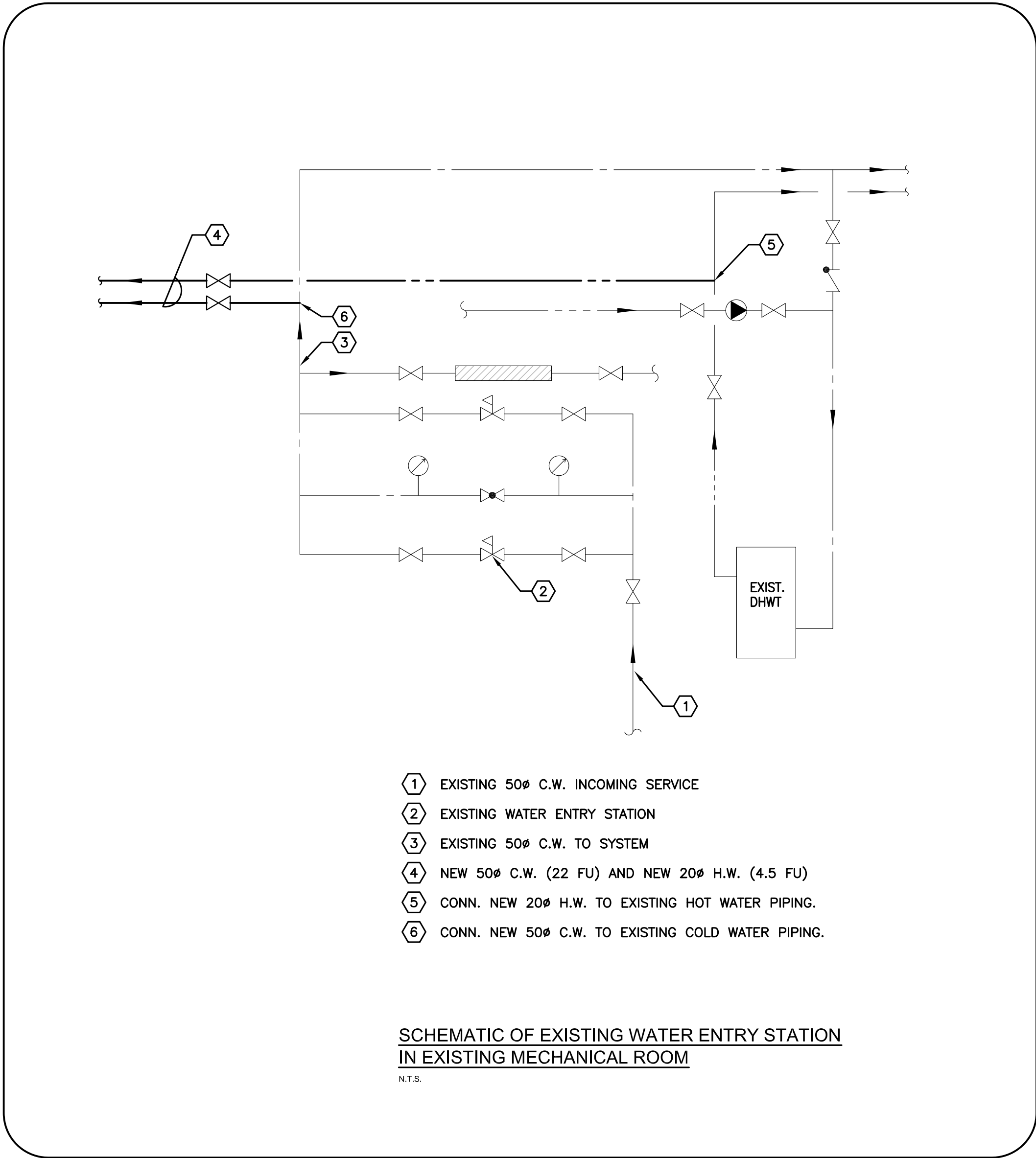
Sheet Title

GROUND FLOOR
PLAN - PLUMBING

Job No	311-007	Sheet No	P-2
Scale	1:50		
Drawn	S.G.		
Checked	S.G.L.		
Date	06.04.12	of	3



PARTIAL GROUND FLOOR PLAN
SCALE 1:50



- 1 EXISTING 50# C.W. INCOMING SERVICE
- 2 EXISTING WATER ENTRY STATION
- 3 EXISTING 50# C.W. TO SYSTEM
- 4 NEW 50# C.W. (22 FU) AND NEW 20# H.W. (4.5 FU)
- 5 CONN. NEW 20# H.W. TO EXISTING HOT WATER PIPING.
- 6 CONN. NEW 50# C.W. TO EXISTING COLD WATER PIPING.

SCHEMATIC OF EXISTING WATER ENTRY STATION
IN EXISTING MECHANICAL ROOM
N.T.S.

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DATE: JANUARY 2008

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FINAL DESIGN DRAWINGS	07.02.12
NOTICE OF CHANGE M1	06.06.14
REVISION	DATE

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fax 604.688.9760

Ref. No. 311-007

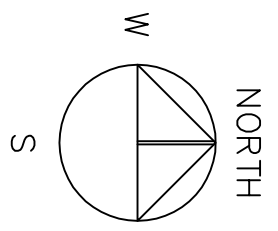
BERNARD PERRETEN
ARCHITECTURE INC.
431 HELMCKEN ST., VANCOUVER, B.C., CANADA
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NEWTON
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RECREATION
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SURREY, B.C.

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Sheet Title
PARTIAL GROUND
FLOOR PLAN
PLUMBING

Job No	311-007	Sheet No	P-3
Scale	1:50		
Drawn	S.G.L.		
Checked	S.G.L.		
Date	06.04.12	of	3



- | | |
|-------------------|------------|
| RECORD DRAWING | APRIL 2007 |
| ISSUED FOR TENDER | APR. 25/06 |
| REVISION | DATE |

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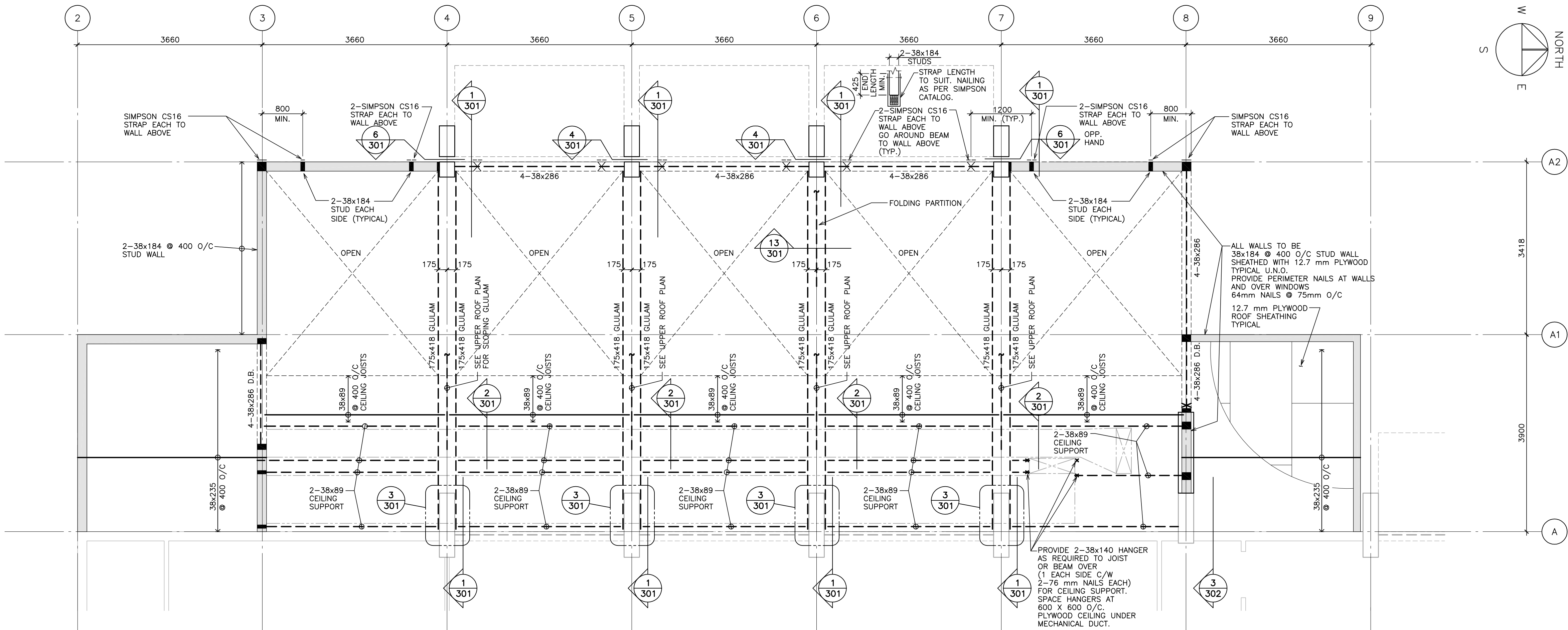
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SURREY, B.C.

FOUNDATION PLAN

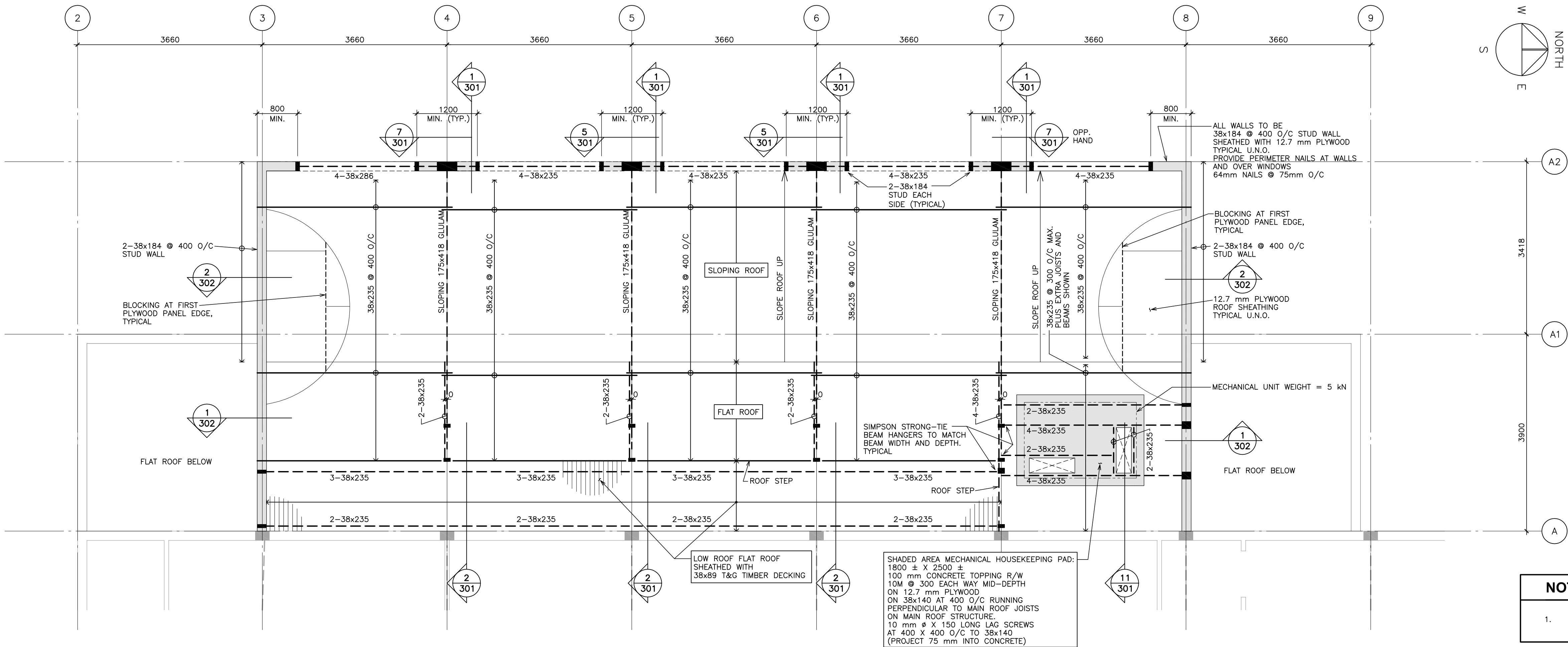
Job No	39518-01	Sheet No <div style="font-size: 2em; text-align: center;">S201</div>
Scale	1 : 50	
Drawn	RCK	
Checked	CCY	
Date	APR. 25/06	
		of

RKoller W:\39500\39518 Newton Seniors Recreation Centre - Surrey, BC\39518-01 Addition and Renovation\39518-01 S201.dwg 07-04-09 11:10:53

1. THIS DRAWING SHOWS EXISTING CONDITIONS UNLESS NOTED OTHERWISE



GROUND FLOOR PLAN SHOWING LOWER ROOF FRAMING OVER



LOWER ROOF PLAN SHOWING UPPER ROOF FRAMING OVER

NOTES	
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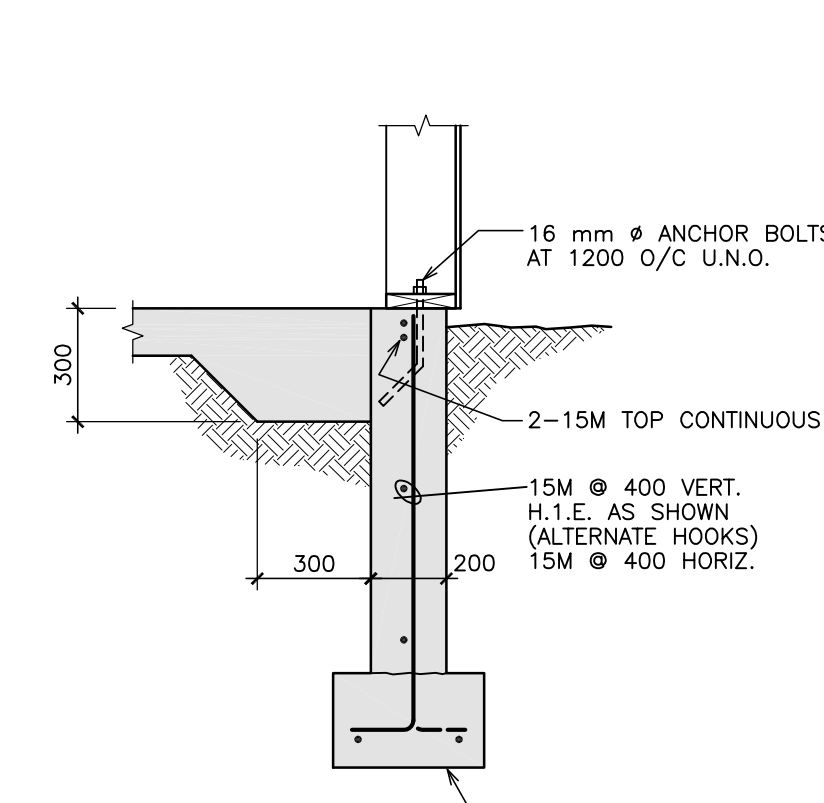
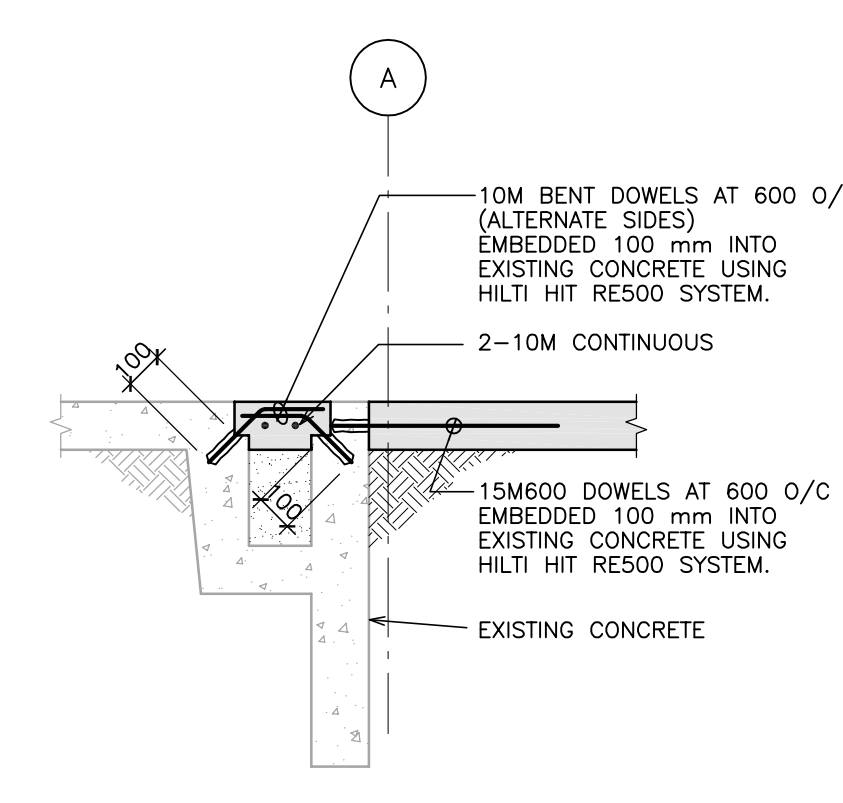
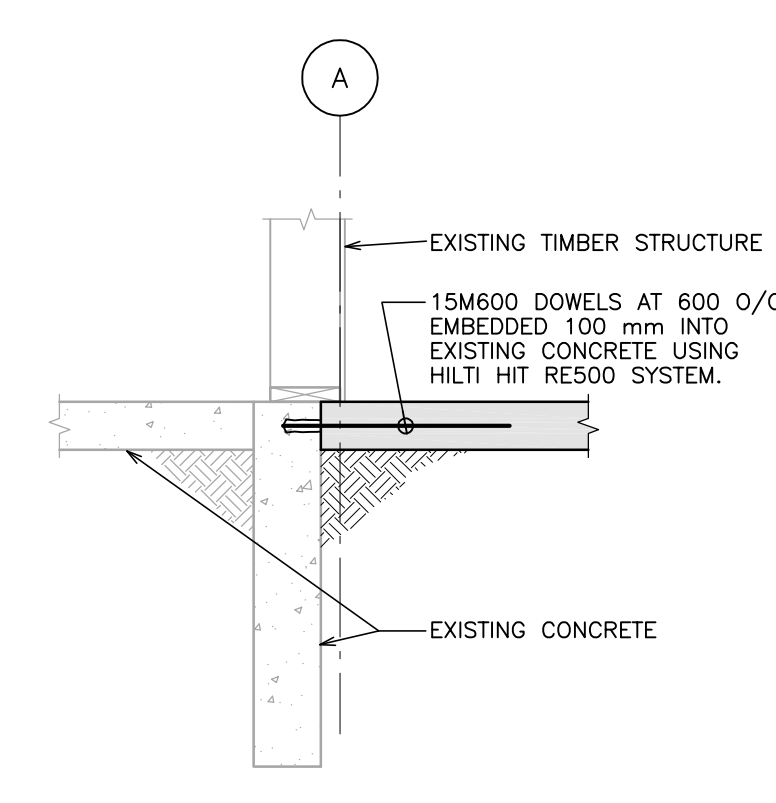
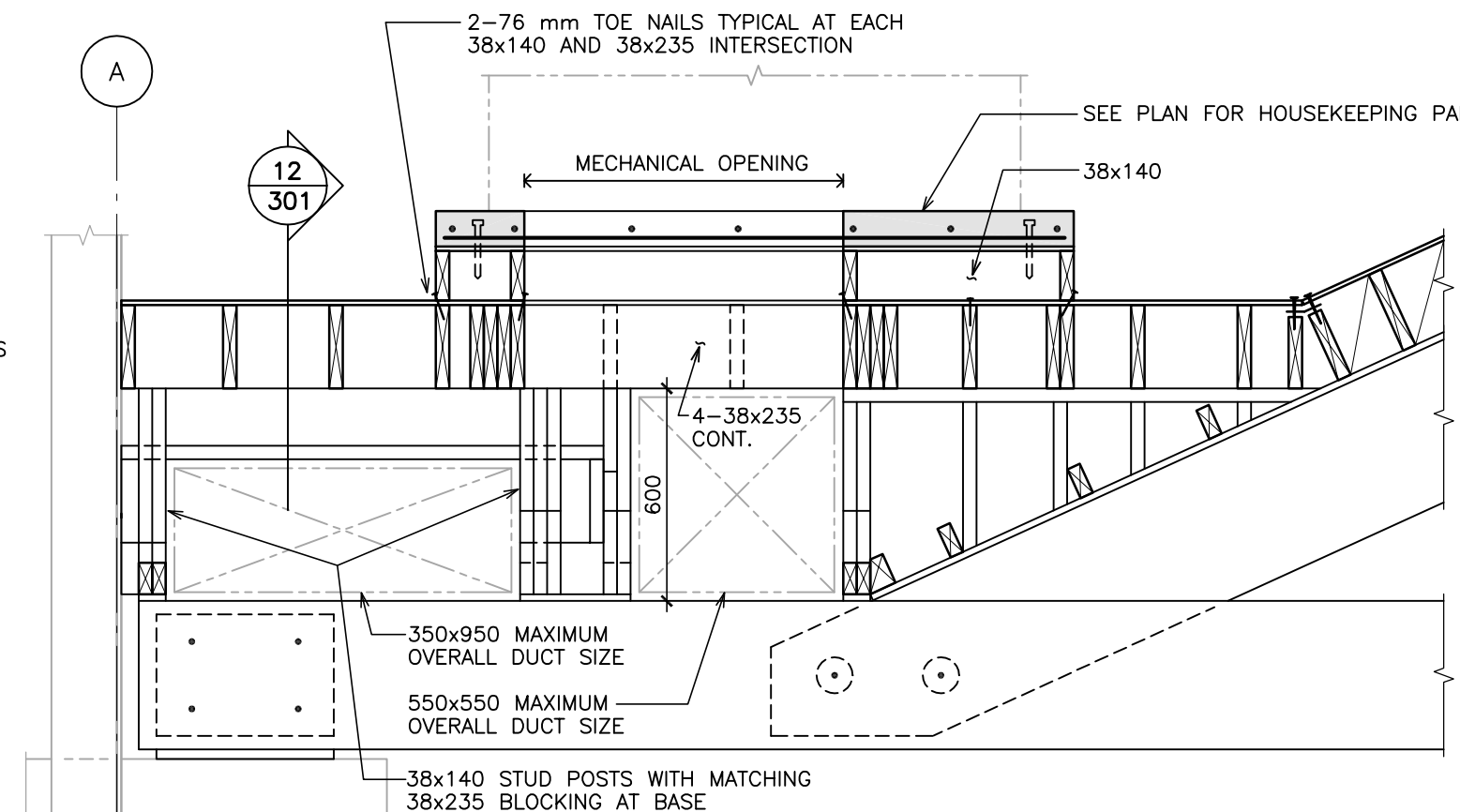
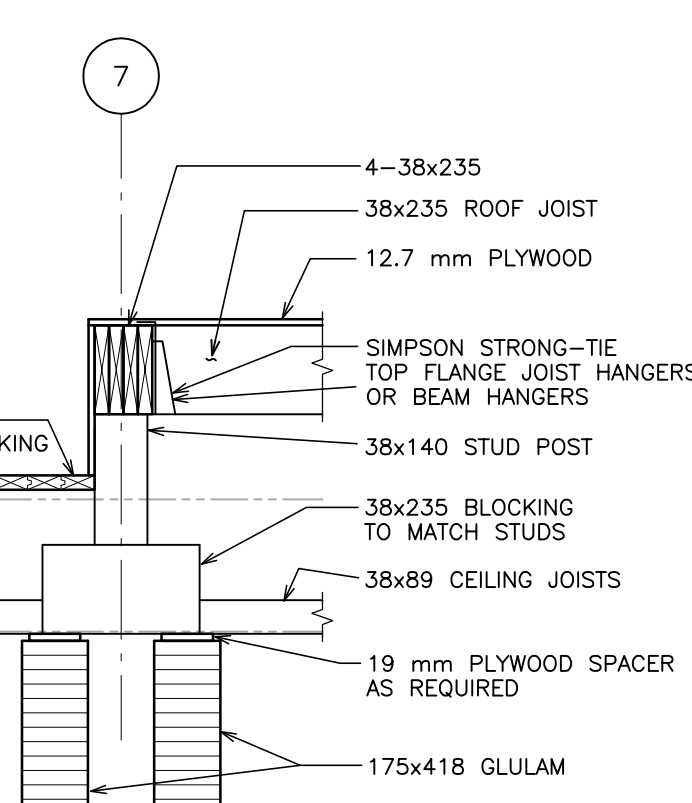
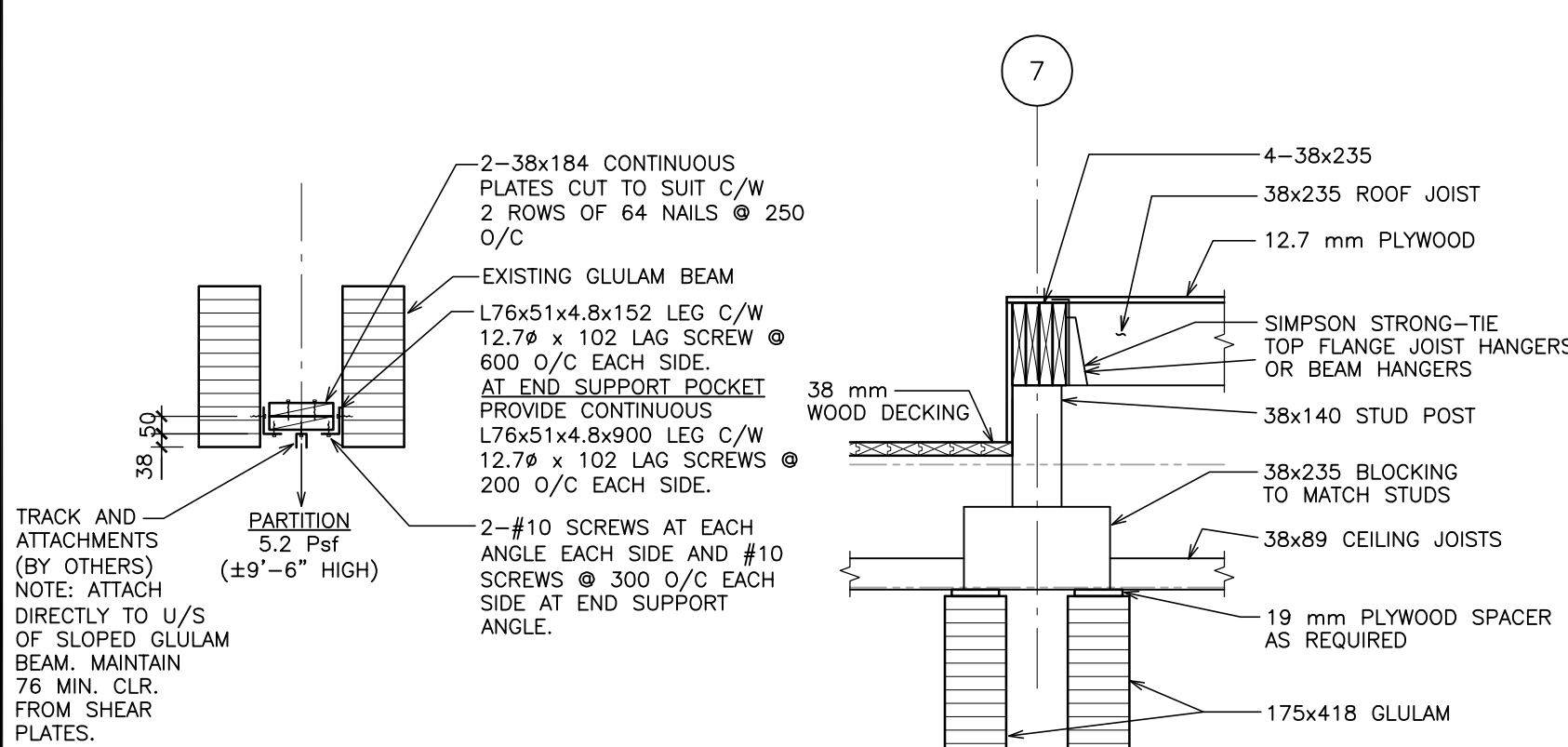
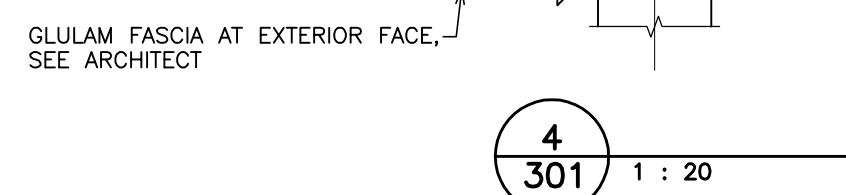
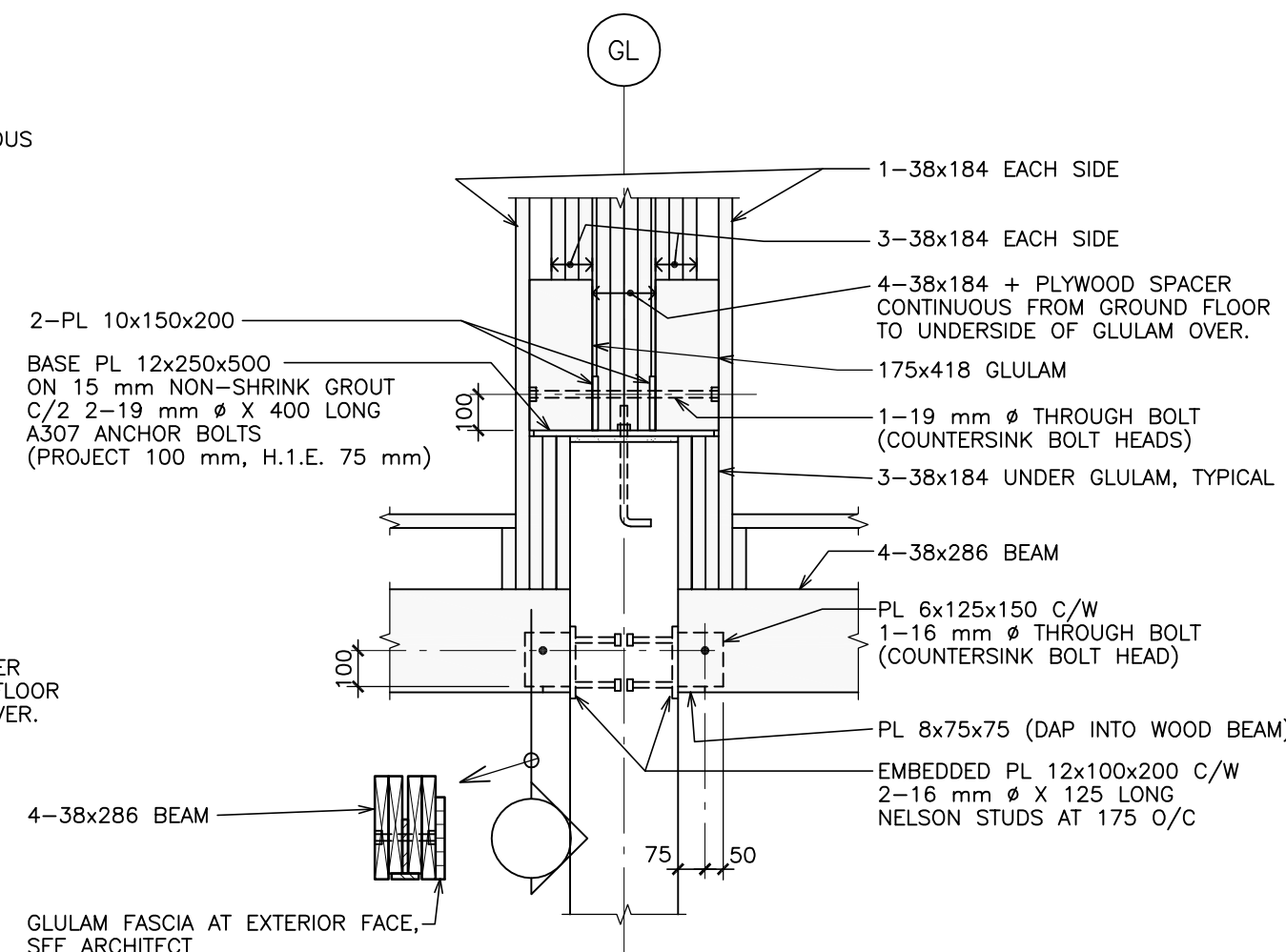
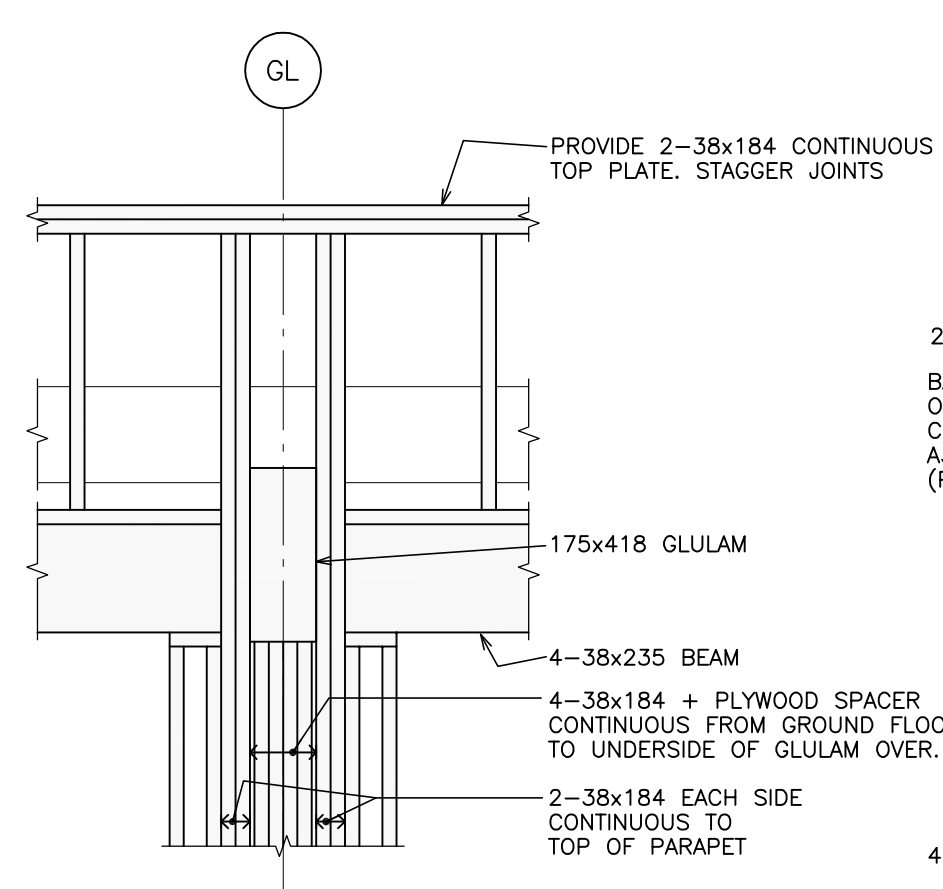
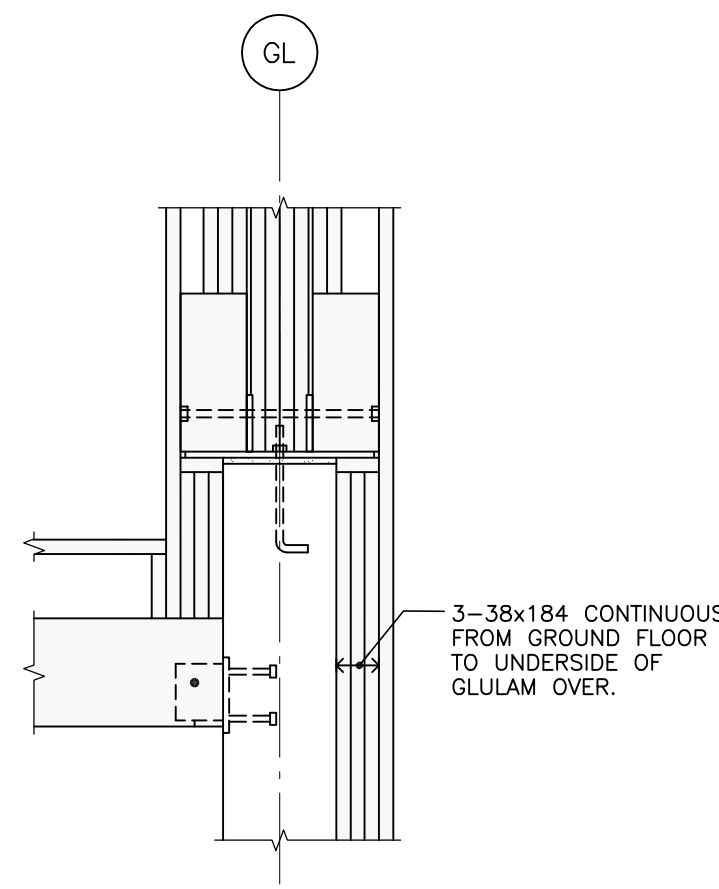
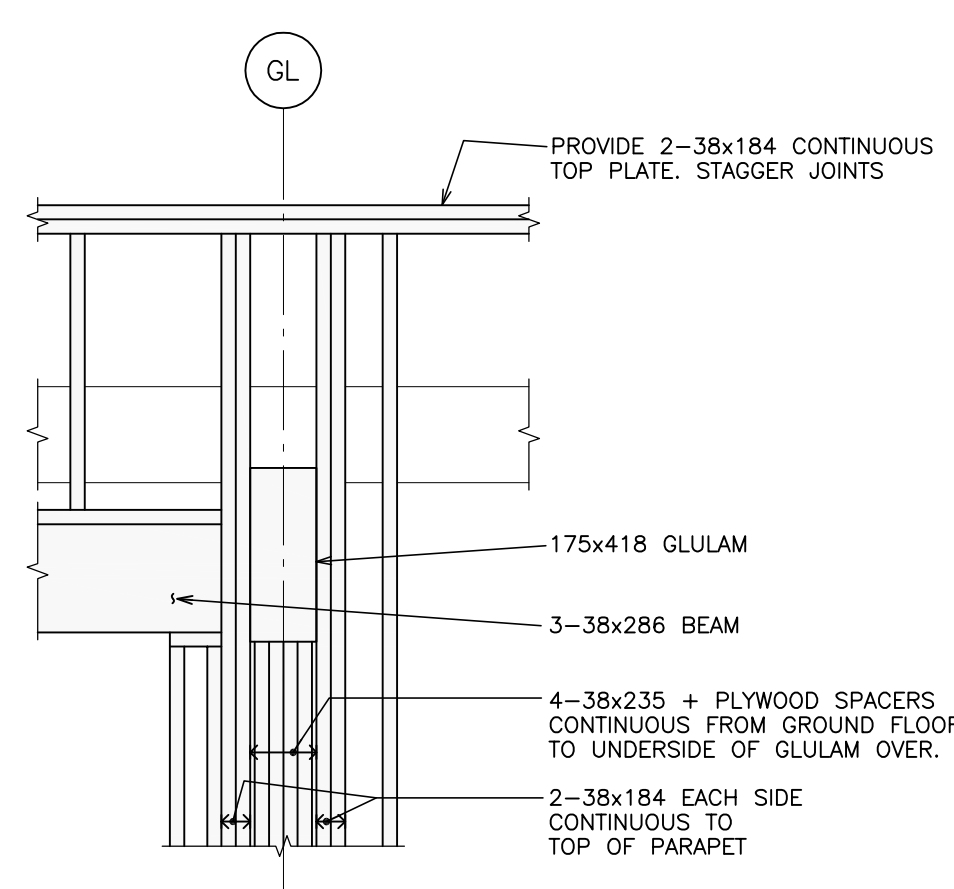
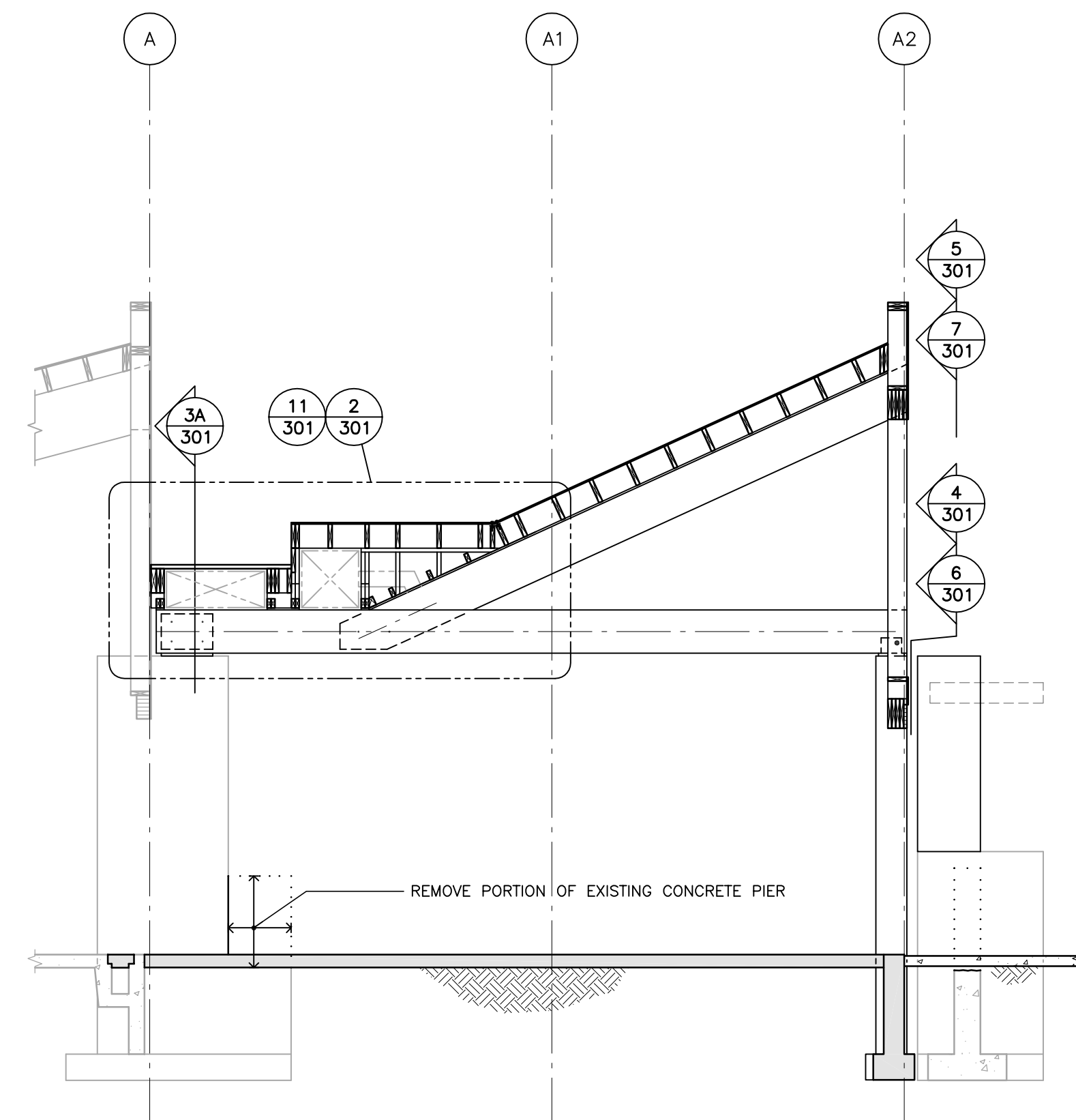
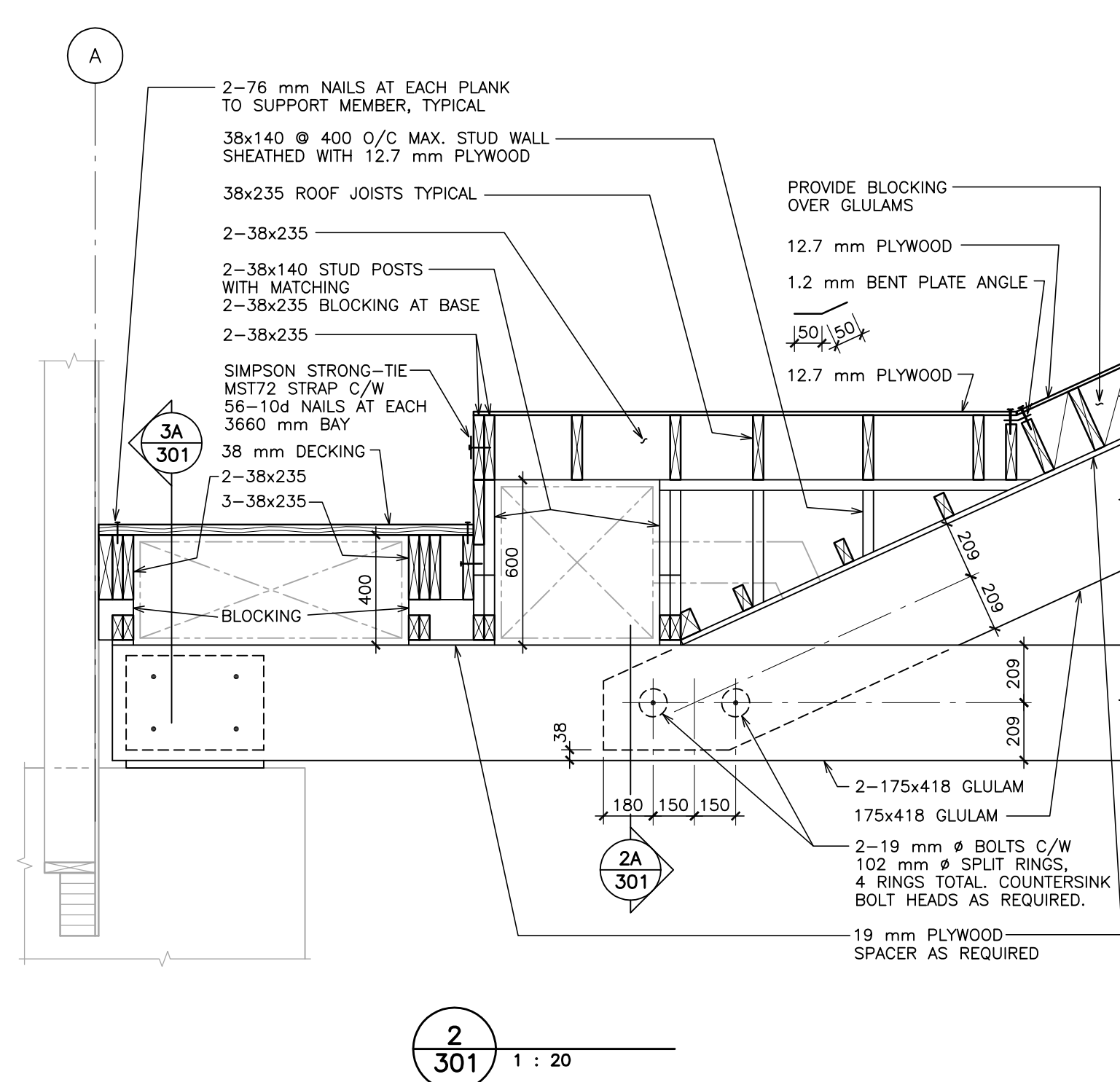
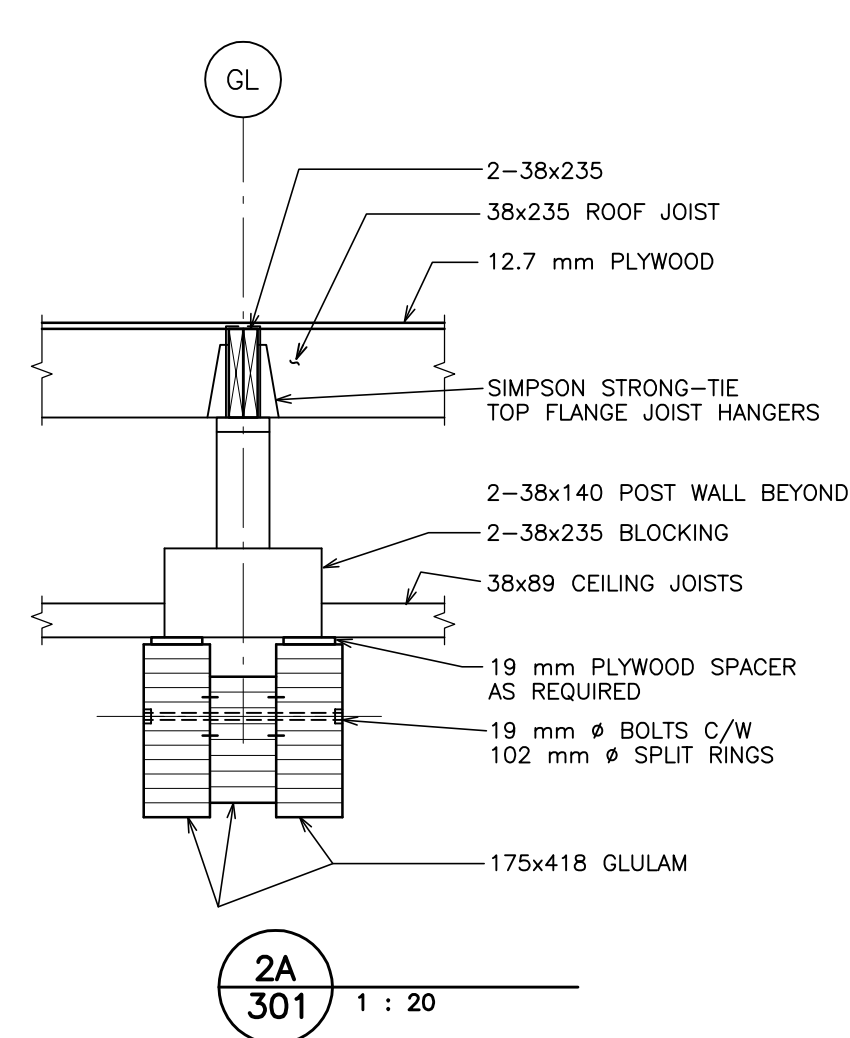
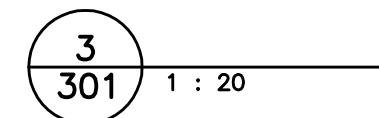
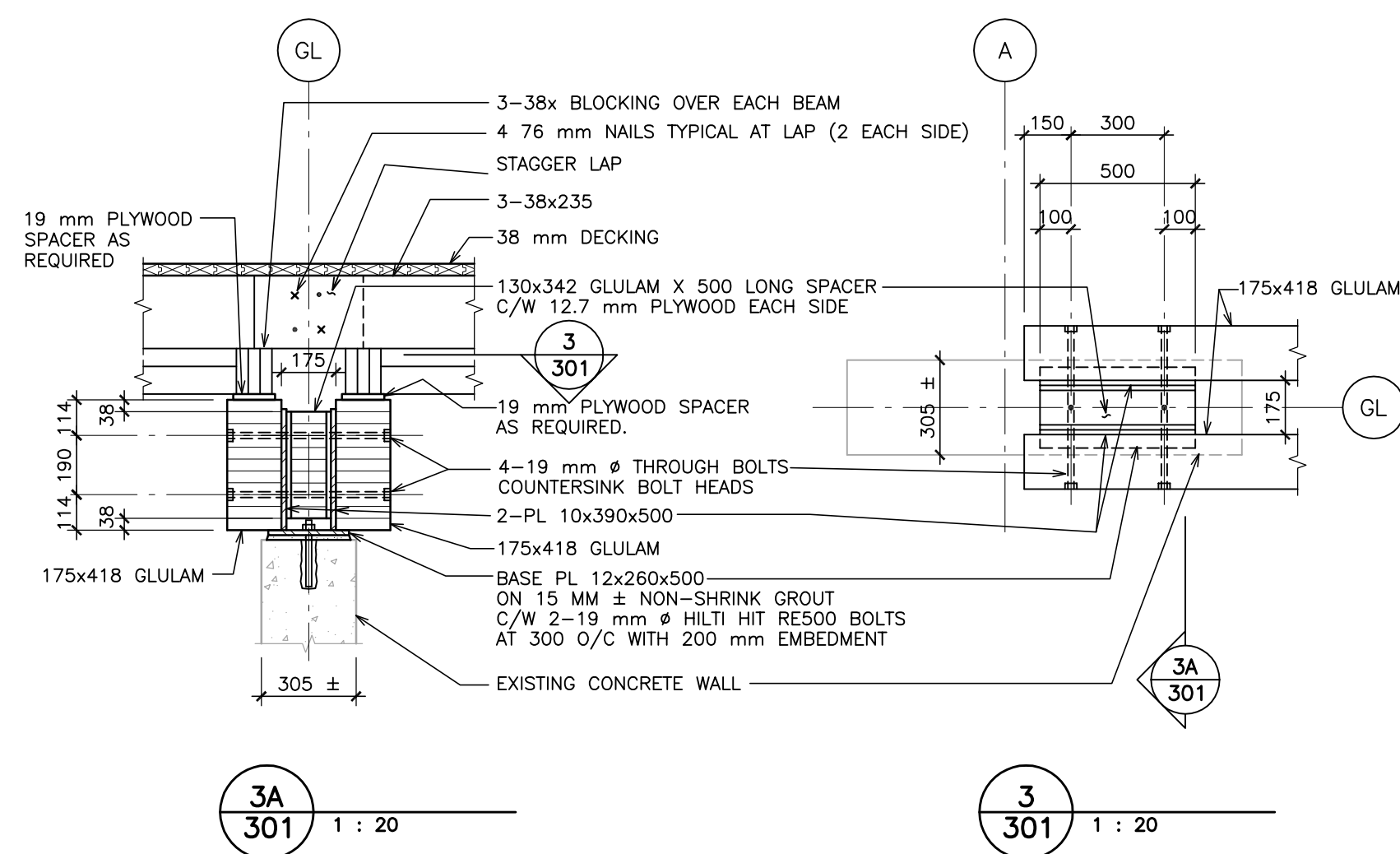
NEWTON SENIORS RECREATION CENTRE ADDITION & RENOVATION

SURREY, B.C.

Sheet Title

ROOF PLANS

Job No	39518-01	Sheet No	S202
Scale	1 : 50	Drawn	
Checked	CCY	Date	
Date	APR. 25/06	of	



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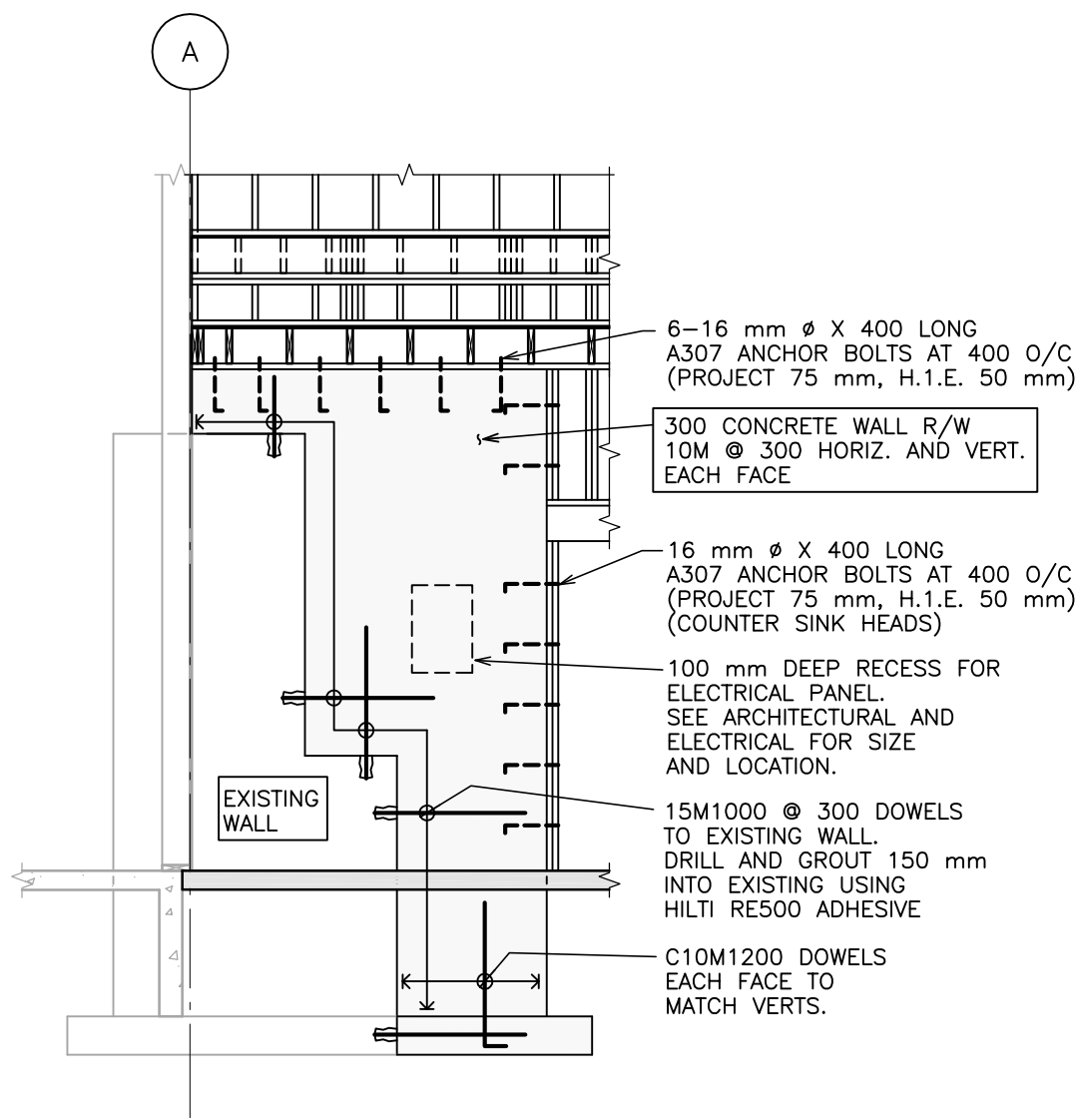
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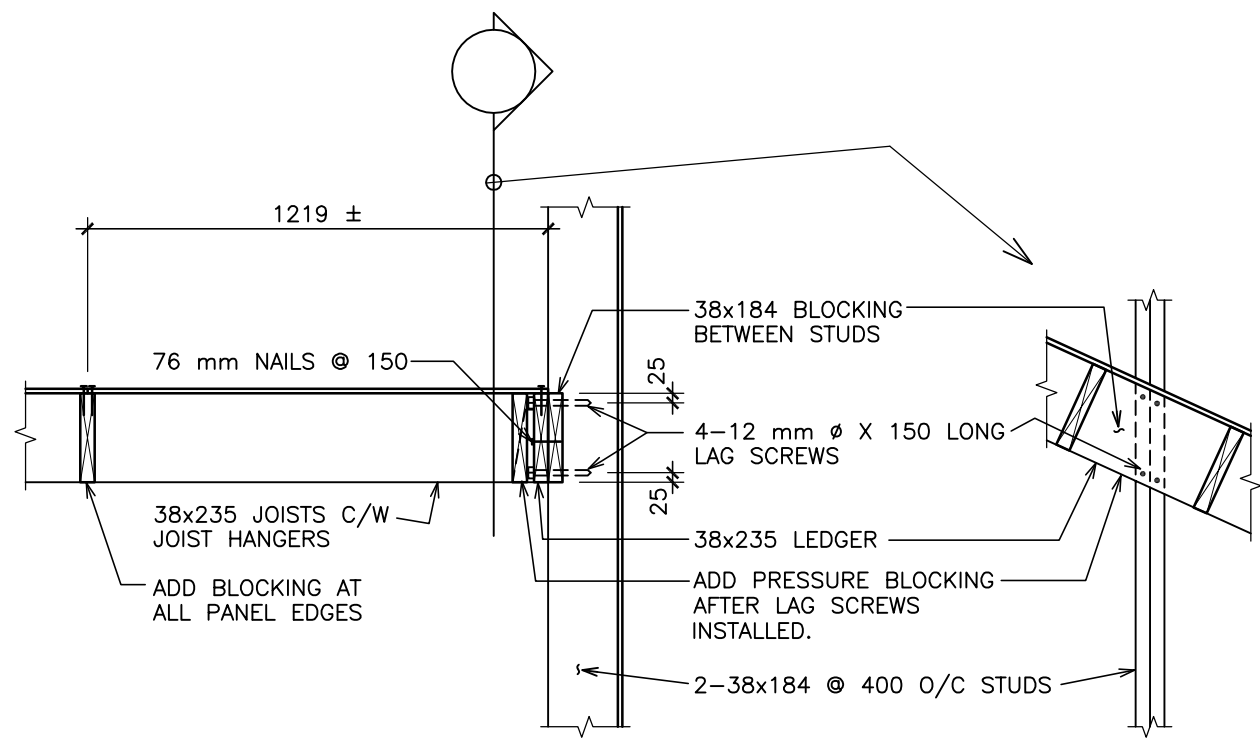
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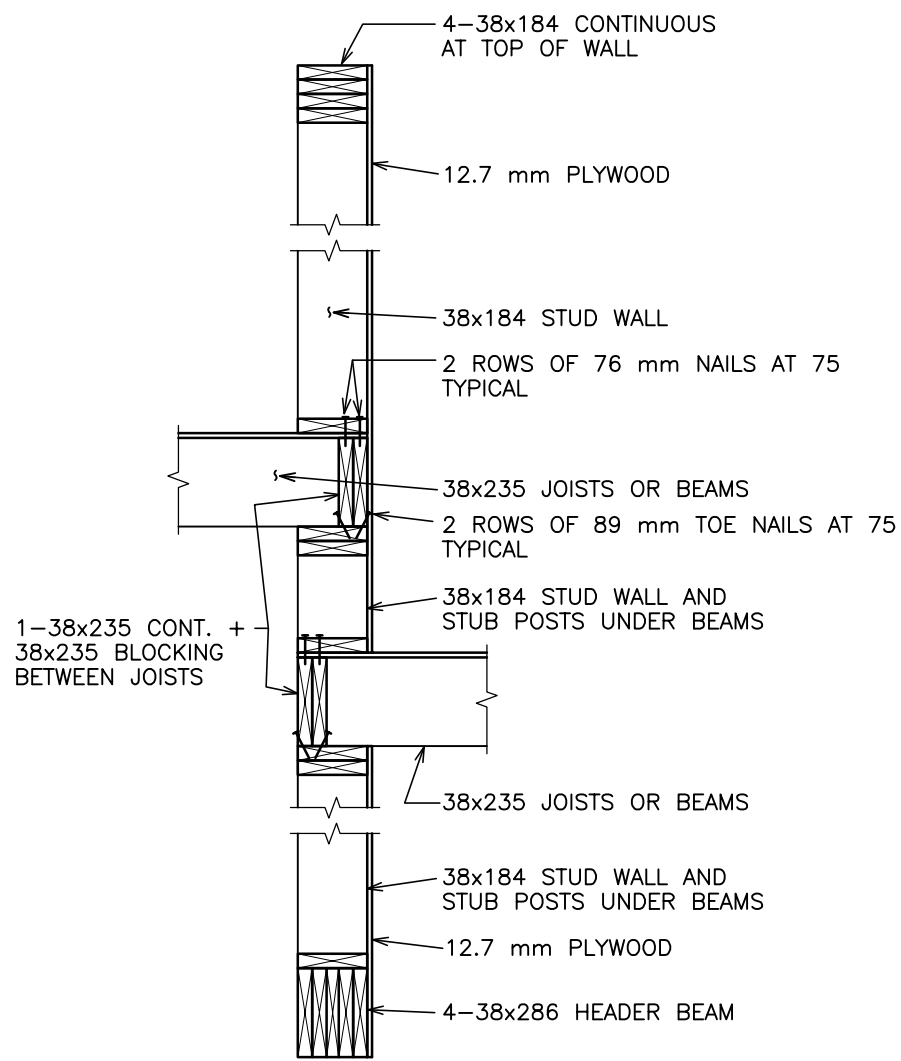
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Scale	AS NOTED	
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Checked	CCY	
Date	APR. 25/06	



3
302 1 : 50



2
302 1 : 20



1
302 1 : 20

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SECTIONS AND DETAILS

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Scale	AS NOTED		
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Checked	CCY		
Date	APR. 25/06	of	.



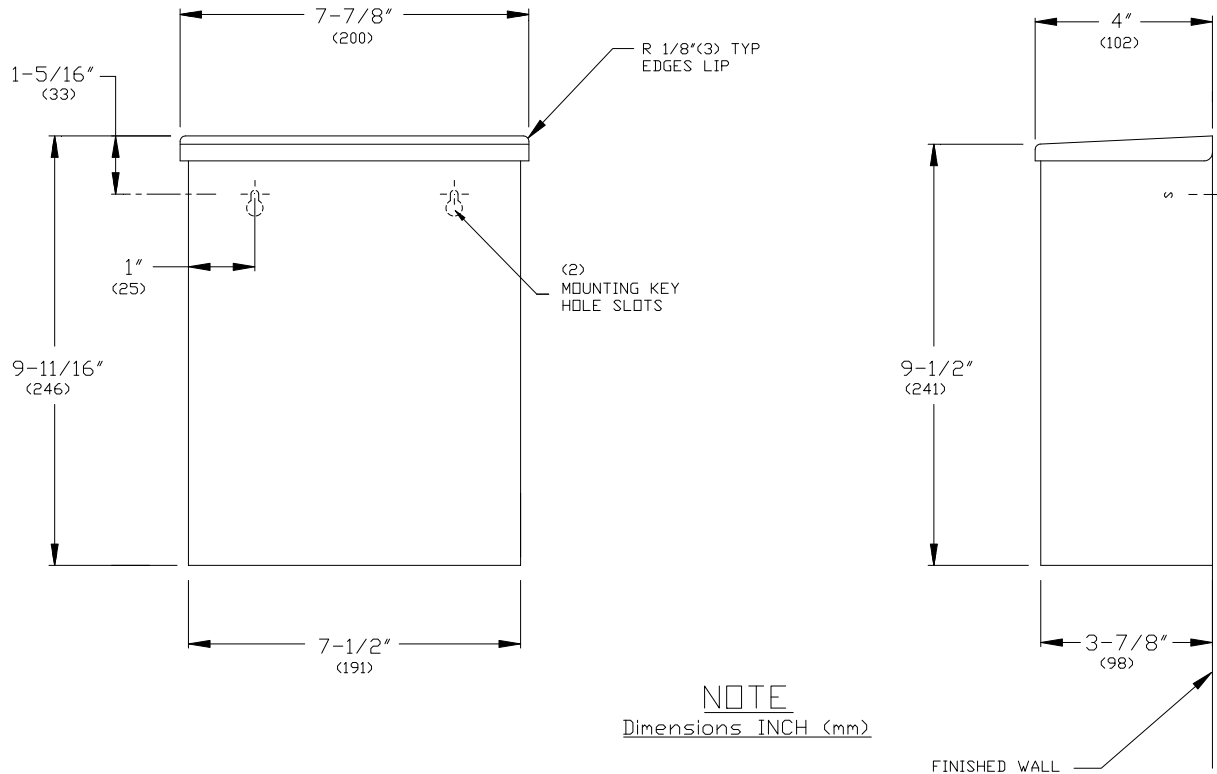
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www.americanspecialties.com

MODEL №: 0852

ISSUED: 01/87

REVISED: 03/12

SURFACE MOUNTED SANITARY NAPKIN DISPOSAL



SPECIFICATION

Surface Mounted Sanitary Napkin Disposal shall have top cover door and cabinet of 22 gauge type 304 stainless steel alloy 18-8. All exposed surfaces shall be satin finish and be protected during shipment with PVC film easily removable after installation. Capacity shall be 1.2 gal (4.5L). Top cover is attached to cabinet with a full length $\frac{3}{16}"$ diameter ($\varnothing 4.8$) stainless steel multi-staked piano hinge. Structural assembly of body and door components shall be of welded construction.

Surface Mounted Sanitary Napkin Disposal shall be Model № 0852 of American Specialties Inc., 441 Saw Mill River Road, Yonkers, New York 10701-4913

INSTALLATION

Surface mount unit on wall or partition using № 10 self tapping screws (by others). Two (2) mounting holes through back are keyhole slots for ease in hanging unit on pre-installed screws. For compliance with 2010 ADA Accessibility Standards, install unit so that top cover is 44" (1118) MAX above finished floor.

OPERATION

User lifts lid to deposit waste material. Maintenance schedule determines trash removal cycle. Unit is emptied by opening top door and removing wax paper collection bag. Waxed paper liner bags are furnished by others.



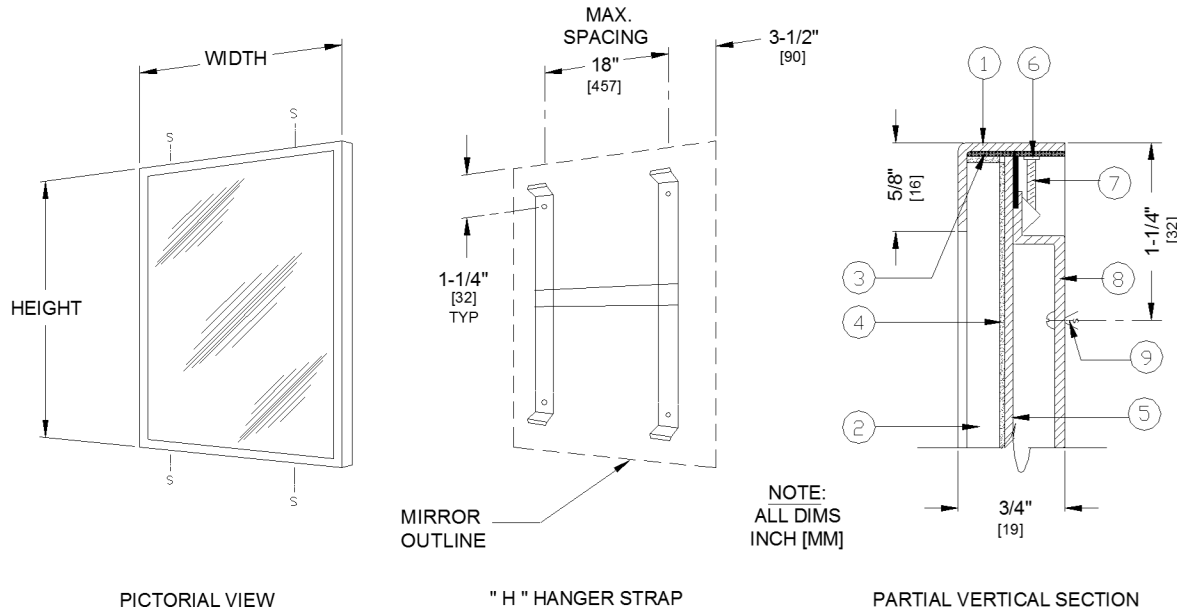
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(914) 476.9000 • (914) 476.0688
www.americanspecialties.com

MODEL №: 0600

ISSUED: 01/87

REVISED: 7 NOV 2014

INTER-LOK STAINLESS STEEL FRAMED MIRROR



DESCRIPTION

- | | |
|--|---|
| 1. 18 GAUGE STAINLESS STEEL FRAME | 6. MOUNTING NUT |
| 2. 1/4" (6mm) PLATE GLASS MIRROR | 7. TAMPERPROOF MOUNTING & LOCKING
SCREWS 10-32 X 1-1/4" (32mm) |
| 3. SHOCK-ABSORBING EDGE CUSHION | 8. HANGER STRAP- 18 GAUGE |
| 4. NON-ABSORBENT FILLER | 9. INSTALLATION SCREW-FURNISHED BY INSTALLER |
| 5. 20 GAUGE CORROSION PROTECTED STEEL BACK | |

SPECIFICATION

Inter-Lok Stainless Steel Framed Mirror shall have frame fabricated of alloy 18-8 stainless steel, type 304, 18 gauge with mitered corners welded and polished. All exposed surfaces shall be N° 4 satin finish. Mirror glazing shall be ____ (insert glazing option) and shall be warranted for 15 years against silver spoilage. All edges of mirror shall be protected with friction and chafe absorbing fillers. Back of mirror shall be protected by full size shock-absorbing water-resistant filler and full size one piece 20 gauge corrosion protected steel. An 18 gauge corrosion protected steel 'H' bracket shall be supplied. Mirror shall be secured to vertical bracket with corrosion protected allen head locking screws furnished.

Inter-Lok Stainless Steel Framed Mirror shall be Model N° 0600-____ (insert glazing option) _____ (note size W x H) as manufactured by American Specialties, Inc., 441 Saw Mill River Road, Yonkers, New York 10701-4913

MATERIALS

- Frame:** 18-8, type 304, 18gauge (.048 in. <1.2mm> thick) stainless steel. Unitized all welded construction. Corners mitered, welded and polished. Exposed surfaces shall have a N° 4 satin finish. Edges and corners are burr free.
- Glass:** Standard glazing is N°1 quality, 1/4" inch (6.4mm) thick plate/float, silver coated and hermetically sealed with a uni-form coating of electrolytic copper plating, and warranted against silver spoilage for 15 years. Mirrors meet Federal Spec DD-M-411C, ASTM C-1503, and ASTM C-1036-91.
- Filler:** Expanded polyethylene microcell foam sheet material, abrasion resistant and shock absorbing, water resistant, 1/8" inch (3.2mm) total layer thickness.

INSTALLATION

Install bracket level and plumb as per diagram location using N°10 self tapping screws (by others). Hang mirror on bracket and tighten locking screws at top & bottom. For compliance with ADA Accessibility Guidelines, bottom edge of reflecting surface should be no higher than 40" (1016mm) above finished floor.

GLAZING OPTIONS

Units are supplied with 1/4" thick plate glass. Other glazing options are available. For a complete description, see the **MIRROR GLAZING OPTIONS** chart.

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Desert Ray Products

WATROUS, INC.

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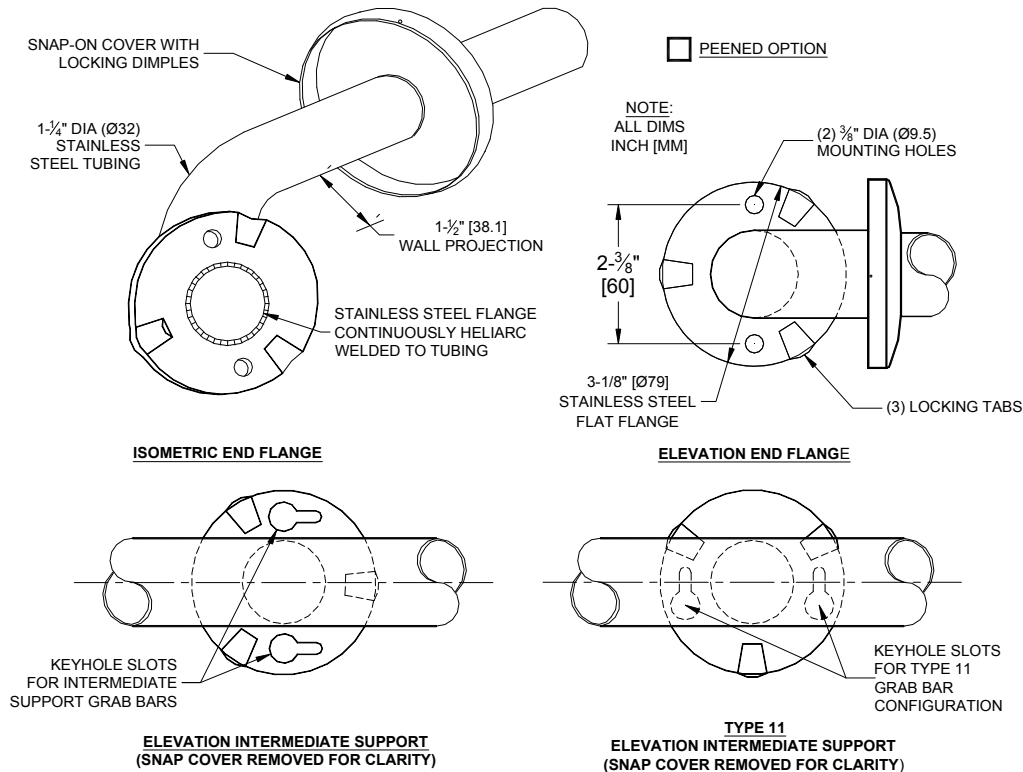
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441 Saw Mill River Road, NY 10701
(914) 476.9000 • (914) 476.0688
www.americanspecialties.com

MODEL №: 3700

ISSUED: 01/87

REVISED: 06 Nov 2012

1-1/4" DIA (Ø32) GRAB BAR SERIES WITH SNAP-ON FLANGE COVERS



SPECIFICATION

Grab Bar with Snap-On Flange Covers for concealed mounting shall be type 304 stainless steel alloy 18-8. Tubing shall be 1-1/4" diameter (Ø32) x 18 gauge [0.048"] (1.2). Snap-on cover shall be 22 gauge [0.03"] (0.8). Flange shall be 1/8" (3) thick and shall be Heliarc welded to tubing with a continuous concealed bead. End flanges shall have two (2) 3/8" diameter (Ø9.5) mounting holes. Center posts (if any) shall have (2) keyhole slots to ease installation access. All exposed surfaces shall have a satin finish and shall be protected during shipment with a plastic bag. For optional non-slip surface add suffix -P (peened).

1-1/4" Diameter (Ø32) Grab bar with Snap-On Flange Covers shall be Series № 3700 of American Specialties, Inc., 441 Saw Mill River Road, Yonkers, New York 10701- 4913

STRENGTH

ASI Grab Bars are designed to meet and exceed ADA requirements as published in CABO/ANSI A117.1 and 2010 ADA Accessibility Standards. Mounting to the wall is a critical part of the system to meet this requirement. To withstand the shear, tension or pullout, and torsion loads generated by the maximum loading, the fastener system must be adequately sized.

INSTALLATION

Use grab bar as template to mark mounting holes locations and pre-drill holes. Install bar using two (2) № 10 self-tapping pan head screws and flat washers (by others) or other fastener system (by others) to suit conditions for each flange. Appropriate anchoring and backing must be provided in accordance with local building codes or as specified on Architects Plans prior to wall finishing. For compliance with 2010 ADA Accessibility Standards install unit so that the top of the grab bar is 33" (840) minimum above finished floor (AFF) to 36" (915) maximum AFF. Anchors are available from ASI and must be specified separately for each grab bar style scheduled (see 3900 series).



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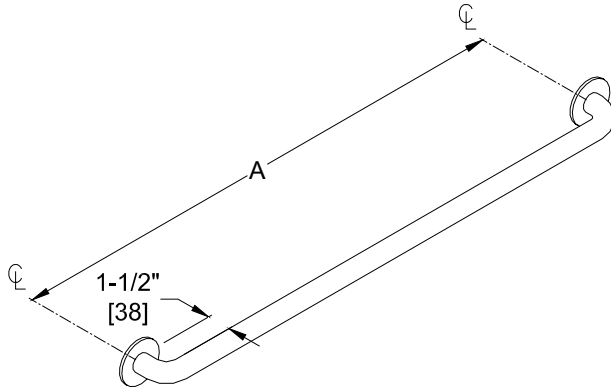
MODEL No: GRABBAR CONFIG

ISSUED: 09/96

REVISED: 23 FEB 2015

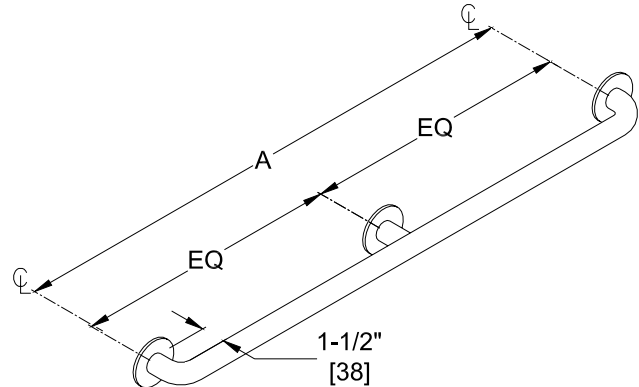
GRAB BAR CONFIGURATIONS (PG 1 OF 3)

TYPE -01



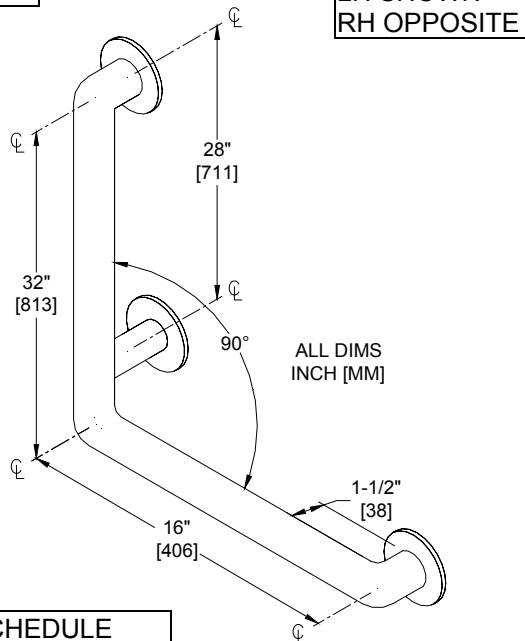
SCHEDULE			
QTY.	DIM. A	QTY.	DIM. A
	12" [305]		36" [914]
	18" [457]		42" [1067]
	24" [610]		48" [1219]
	30" [762]		

TYPE -02



SCHEDULE	
QTY.	DIM. A
	52" [1321]
	54" [1372]
	60" [1524]
	72" [1829]

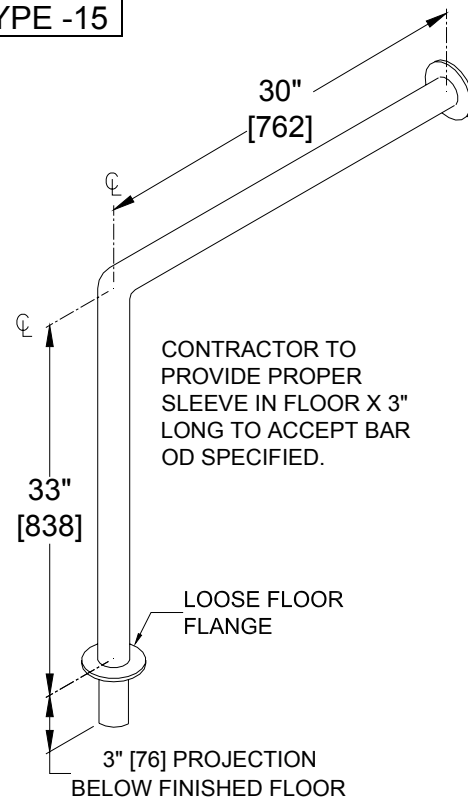
TYPE -04



SCHEDULE	
QTY.	HAND
	LH
	RH

MODEL No MUST SPECIFY
-LH OR -RH

TYPE -15



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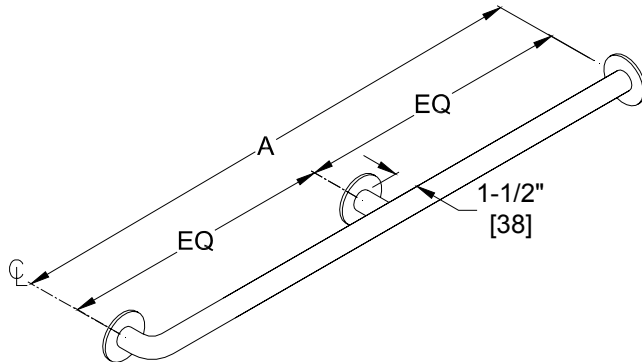
MODEL №: GRABBAR CONFIG

ISSUED: 09/96

REVISED: 23 FEB 2015

GRAB BAR CONFIGURATIONS (PG 2 OF 3)

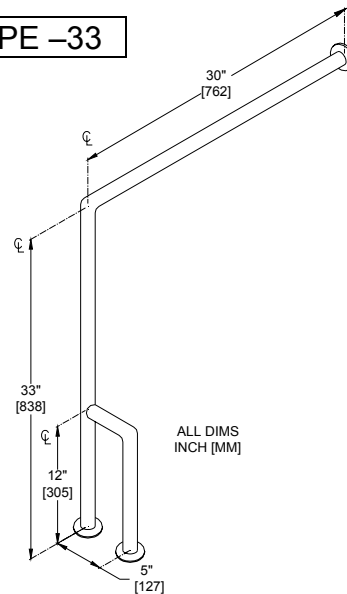
TYPE -24



* No center support

SCHEDULE			
QTY.	DIM. A	QTY.	DIM. A
	12" [305]*		36" [914]
	18" [457]*		42" [1067]
	24" [610]		48" [1219]
	30" [762]		54" [1372]

TYPE -33



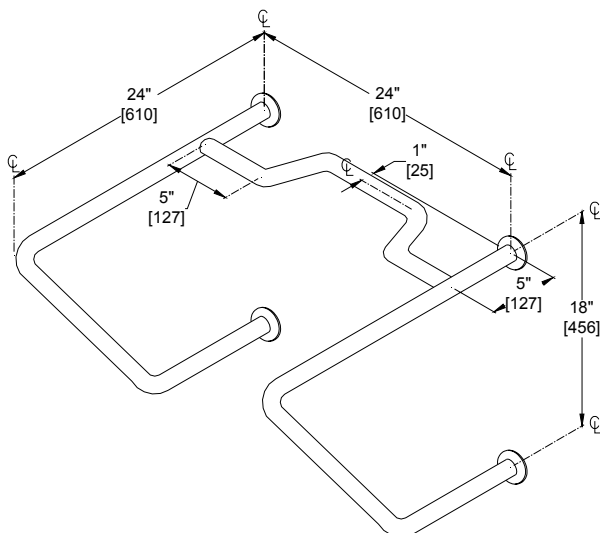
RH SHOWN
LH OPPOSITE

ALL DIMS
INCH [MM]

MODEL № MUST SPECIFY LH OR -RH

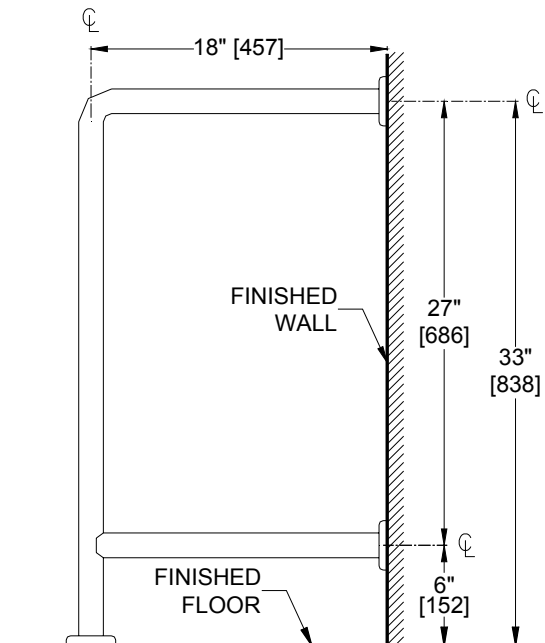
SCHEDULE	
QTY.	HAND
	LH
	RH

TYPE -34



FOR BEDPAN FLUSH VALVE USE

TYPE -75



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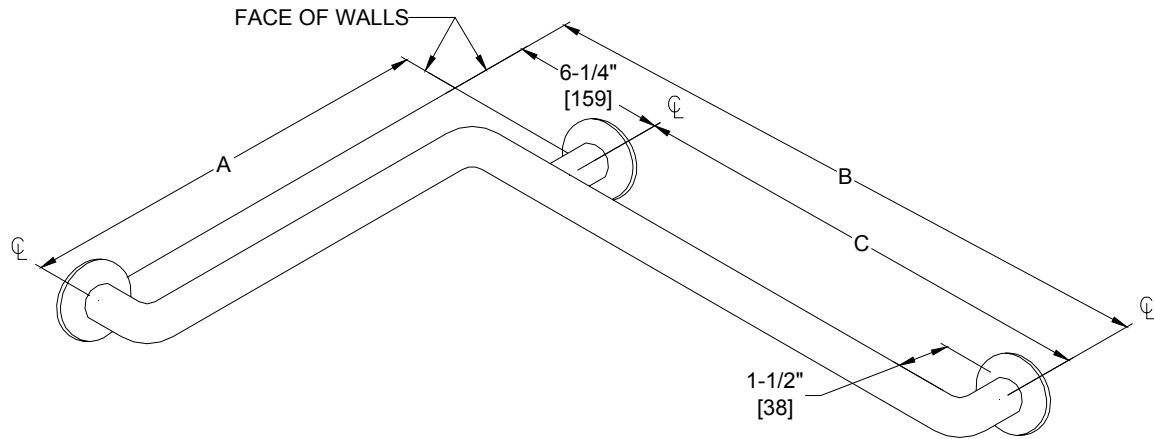
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MODEL No: GRABBAR CONFIG

ISSUED: 09/96

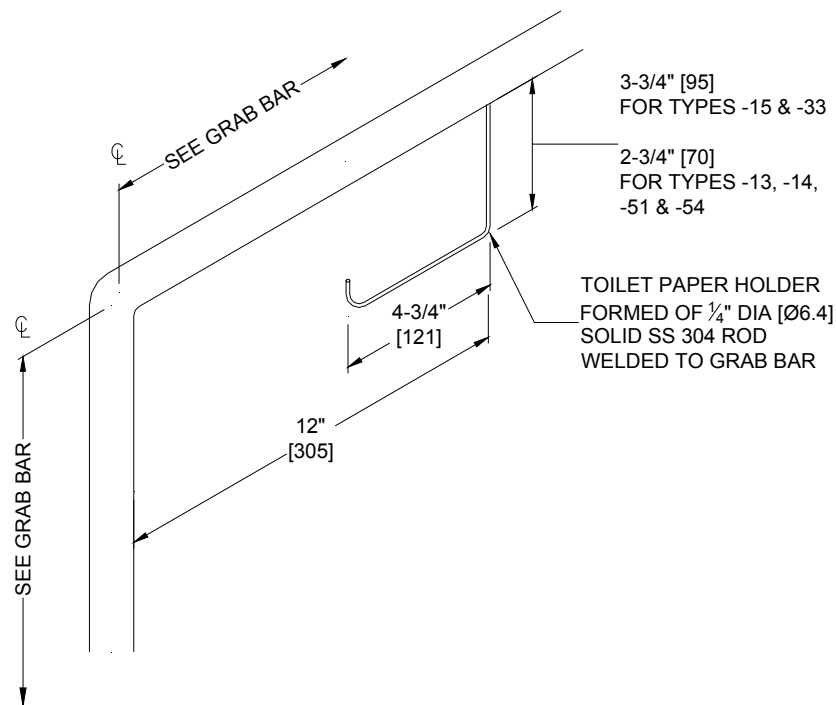
REVISED: 23 FEB 2015

GRAB BAR CONFIGURATIONS (PG 3 OF 3)



SCHEDULE				
QTY	TYPE	A	B	C
	50	24" [610]	36" [914]	29-3/4" [756]
	56	36" [914]	54" [1372]	47-3/4" [1213]
	57	42" [1069]	54" [1372]	47-3/4" [1213]
	60	18" [457]	30" [762]	23-3/4" [603]
	74	18-1/8" [460]	33-1/8" [841]	26-7/8" [683]

OPTION -25



Option -25 Toilet Paper Holder is welded on to Grab Bars of the Swing Up or Swing Away configurations 3413, 3451, 3454 and Fixed Types -15, -33

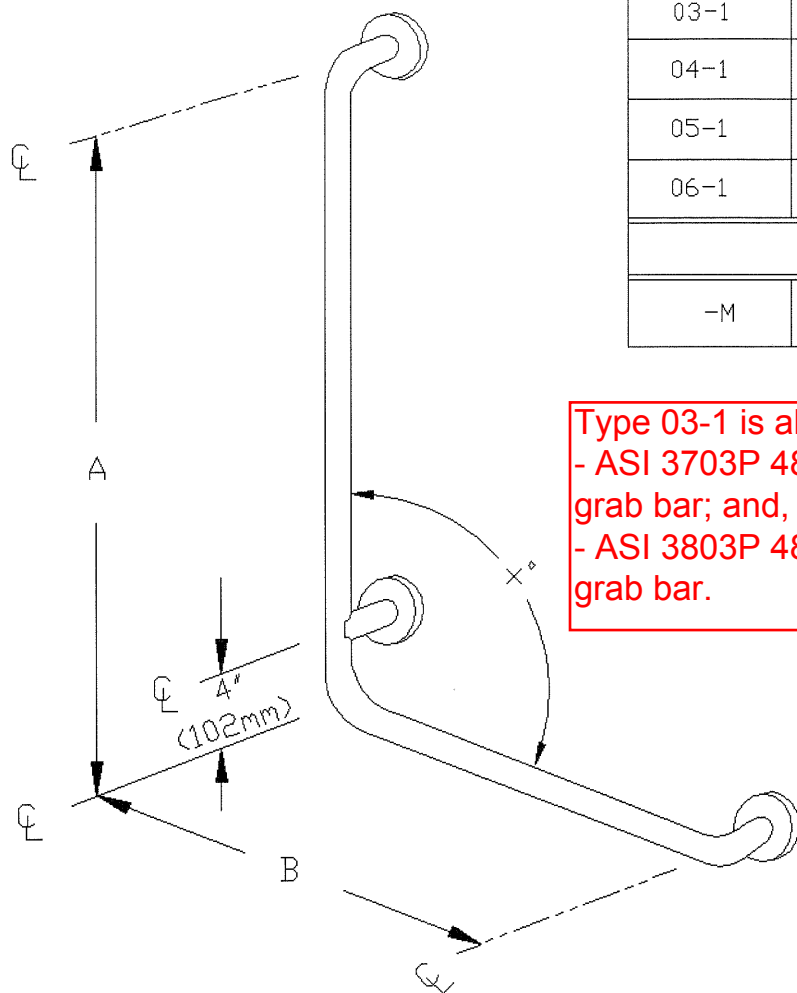
Accessory Specialties

AMERICAN DISPENSER

Desert Ray Products

WATROUS, INC.

THIS MANUFACTURER RESERVES THE RIGHT TO MAKE CHANGES IN DESIGN OR DIMENSIONS WITHOUT FORMAL NOTICE




STANDARD TYPES									
TYPE	A	* B	△	LH	RH	ANGLE	SUPPORT	Y	N
03-1	12" (305mm)	12" (305mm)	✓			120°			✓
04-1	32" (813mm)	16" (406mm)	✓			90°	4" FROM CENTER OF HORIZONTAL BAR	✓	
05-1	32" (813mm)	* 9-1/2" (241mm)	✓			97°			✓
06-1	32" (813mm)	* 9-1/2" (241mm)	✓			97°	4" FROM CENTER OF HORIZONTAL BAR	✓	
MODIFIED TYPE									
-M									

Type 03-1 is also available in a 24" x 24" version:

- ASI 3703P 48120 refers to a 32mm (1-1/4") 120° peened 610mm x 610mm (24" x 24") grab bar; and,
- ASI 3803P 48120 refers to a 38mm (1-1/2") 120° peened 610mm x 610mm (24" x 24") grab bar.

NOTE:

1. FOR 1-1/2" O.D. GRAB BARS, THIS DIMENSION IS 11"(279mm)
2. LH SHOWN, RH OPPOSITE

CUST. No.	CUSTOMER NAME	SO. No.
CUST. PG. No.		DATE
 AMERICAN SPECIALTIES, INC. 441 SAW MILL RIVER ROAD, YONKERS, NY 10701-9986 TEL. (914) 476-9000 FAX. (914) 476-0688		
PROJECT NAME		
LOCATION		
ARCHITECT		
CONTRACTOR		
TITLE ORDER ENTRY FORMAT SPECIFICATION " 90°, 97°, AND 120° VERTICAL ANGLE GRAB BAR "		
DRAWN BY JOSE V.	JOB NO.	DWG. NO.
DATE 5/22/95		

KEY	REVISION	AUTHORIZED BY	DATE

GRAB BAR #: FILLIN STYLE & TYPE

**PEENED IF
P IN BOX**