NOTE: PARKING AREA ASPHALT PAVEMENT, RELATED HARDSCAPING, AND PARKING AREA LINE PAINTING TO BE PRICED SEPARATELY

PROPERTY LINE

57 STANDARD PARKING STALLS + 2 ACCESSIBLE STALLS

ENCLOSED FENCE SIMILAR TO GARBAGE FENCE WITH POST ON CONCRETE BASE. FENCE TO BE 1535mm IN HEIGHT

SEE ELECTRICAL

GENERATOR

WELL

SMALL CAR

HC SIGN

GARBAGE & RECYCLING ENCLOSURE

PAINTED ASPHALT

PROPOSED ENERGY CENTRE
FFE: 695.5m

EXISTING SANITARY SEWER PUMP STATION

EXISTING FUEL TANK

CONCRETE WALKWAY

PROPOSED WATER LINE REFER TO CIVIL

HEATING GLYCOL RETURN & SUPPLY LINES REFER TO MECHANICAL

PROPOSED WATER LINES REFER TO CIVIL

PROPOSED SANITARY LINE REFER TO CIVIL

EXISTING POWER POLE REFER TO CIVIL

10 STANDARD PARKING STALLS

STORM PERIMETER DRAIN DISCHARGE REFER TO CIVIL

DRY RIVER BED WITH PLANTING

TYP. BOLLARD LIGHTING REFER TO LANDSCAPE

FIRE DEPARTMENT AND FIRE TANK FILL CONNECTION REFER TO MECHANICAL

5 CLAN POLES (N.I.C.)

BEAR SAFE GARBAGE BIN

FIRE TRUCK ACCESS ROUTE

PRINCIPAL ENTRANCE

ACCESSIBLE PEDESTAL

FDC

"PICK-UP / DROP-OFF AREA

TTC COMMUNITY SERVICES BUILDING
FFE: 694.8m

TYP. SNOW PIT AT ALL EXTERIOR DOORS C/W METAL BAR GRATING

TYP. EXTERIOR WOOD COLUMN REFER TO STRUCTURAL

TYP. PLANTER ISLAND REFER TO LANDSCAPE

EXTERIOR STAIRS 2 C/W METAL HANDRAILS/GUARDRAILS TROWELLED TACTILE WARNING AT TOP LANDING AND TREAD EDGES

ACCESSIBLE PEDESTAL

EXTERIOR STAIRS 1 C/W METAL HANDRAILS/GUARDRAILS TROWELLED TACTILE WARNING AT TOP LANDING AND TREAD EDGES

TYP. CIRCULAR CONCRETE BENCH W/WOOD SLAT SEATING SURFACE

EXTERIOR RAMP 1 C/W METAL HANDRAILS/GUARDRAILS TROWELLED TACTILE WARNING AT TOP LANDING AND RAMP SURFACE

FIRE PIT

MAIN EXIT TO FIRE PIT / GATHERING SPACE

NOTE: ALL SOFT LANDSCAPING, IRRIGATION, FIRE PIT, FIRE PIT LIGHTING, FIRE PIT SEATING TO BE PRICED SEPARATELY.

VEHICULAR ENTRANCE

PROPOSED CULVERT

AIRPORT DRIVE

PROPOSED SANITARY LINE REFER TO CIVIL

STORM PERIMETER DRAIN DISCHARGE REFER TO CIVIL

EXISTING SANITARY LINE REFER TO CIVIL

EXISTING POWER POLE REFER TO CIVIL

APPROXIMATE LOCATION OF UNDERGROUND PRIMARY FEEDERS BY ATCO, SEE ELEC

PROPOSED LOCATION OF NWTEL PEDESTAL, SEE ELEC

TRANSFORMER PAD (REFER TO ELECTRICAL)

EXISTING POWER POLE REFER TO CIVIL

EXISTING SWALE REFER TO CIVIL

EXISTING UTILITY BOX

EXISTING POWER POLE REFER TO CIVIL

EXISTING CULVERT REFER TO CIVIL

ALASKA HIGHWAY

EXISTING POWER POLE REFER TO CIVIL

STORM PERIMETER DRAIN DISCHARGE REFER TO CIVIL

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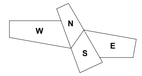
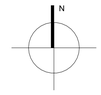
CONSULANTS IN JOINT VENTURE

KEY PLAN





NO.	DATE	DESCRIPTION
11	2025.02.06	ADDENDUM 08
10	2024.12.17	ISSUED FOR TENDER

REVISIONS

DESIGN BY
DNA & KZA

CHECKED BY
JR

DRAWN BY
JS / JT

DRAWING DATE
2021.12.01

SCALE
1 : 250

CONSULTANT

PROJECT NAME
COMMUNITY SERVICES BUILDING

CLIENT
TESLIN TLINGIT COUNCIL

PROJECT ADDRESS
TESLIN, YUKON

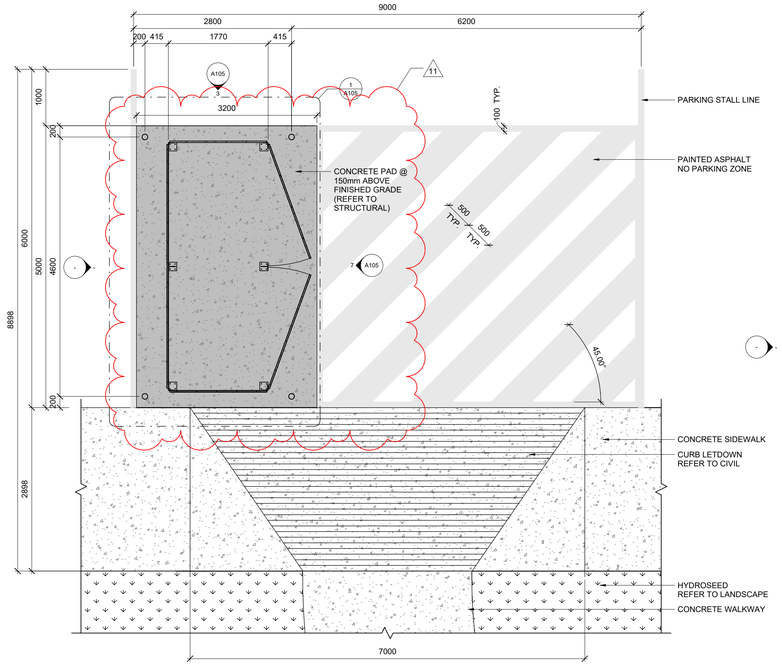
DRAWING
SITE PLAN

REVISION NO.
11

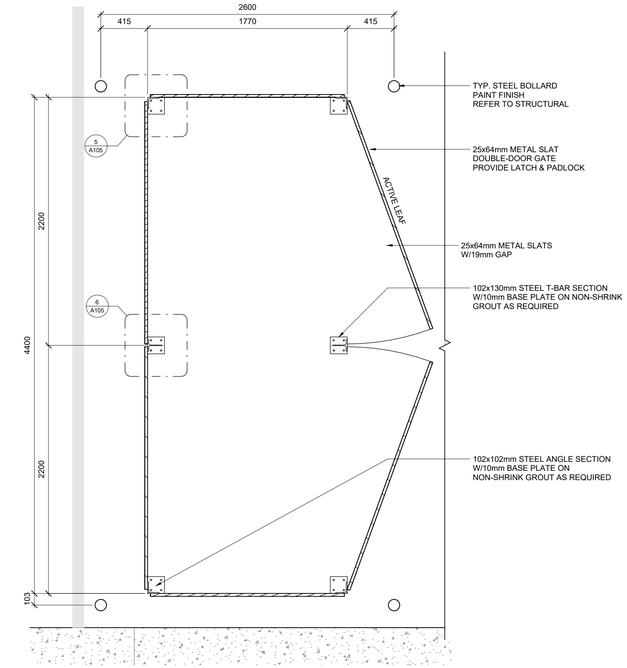
PROJECT NO. 0000

A101

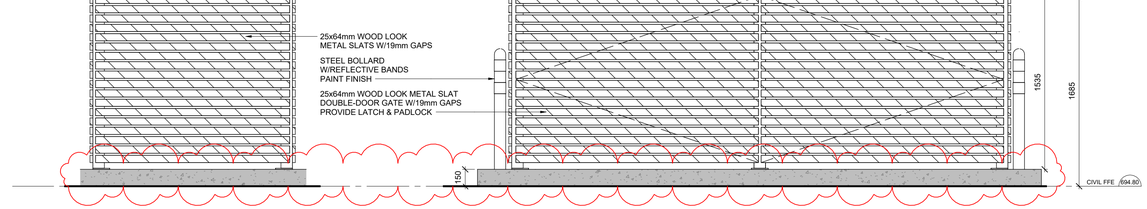
2025-02-04 4:39:39 PM



2 NO PARKING ZONE - PLAN
1 : 50

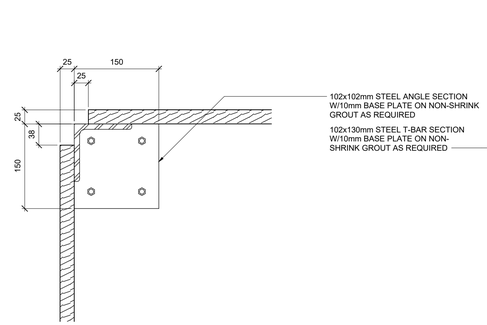


1 WASTE ENCLOSURE - PLAN
1 : 25

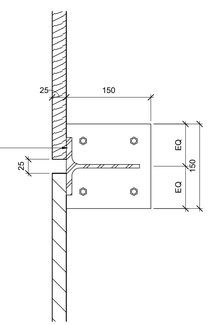


3 WASTE ENCLOSURE - ELEVATION 1
1 : 25

7 WASTE ENCLOSURE - ELEVATION 2
1 : 25



5 PLAN DETAIL - TYP. STEEL ANGLE SECTION
1 : 5



6 PLAN DETAIL - TYP. STEEL T-BAR SECTION
1 : 5

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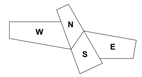
CONSULANTS IN JOINT VENTURE

KEY PLAN



NO.	DATE	DESCRIPTION
11	2025.02.06	ADDENDUM 08
10	2024.12.17	ISSUED FOR TENDER

REVISIONS

DESIGN BY
DNA & KZA

CHECKED BY
JR

DRAWN BY
JS

DRAWING DATE
11/05/21

SCALE
As indicated

CONSULTANT

PROJECT NAME
COMMUNITY SERVICES BUILDING

CLIENT
TESLIN TLINGIT COUNCIL

PROJECT ADDRESS
TESLIN, YUKON

DRAWING
SITE DETAILS

REVISION NO.
11

PROJECT NO. 0000

A105

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FLOOR PLAN GENERAL NOTES

1. FURNITURE N.I.C. UNLESS OTHERWISE NOTED.
2. ALL INTERIOR WALLS ARE 'P1' UNLESS NOTED OTHERWISE. REFER TO STRUCTURAL FOR SHEAR WALLS, TYP.

FIRE SEPARATION LEGEND

- FS / F-RR = 00 MINUTES
- FS / F-RR = 45 MINUTES
- FS / F-RR = 60 MINUTES

1 LEVEL 1 - NORTH AND WEST WINGS
1 : 75

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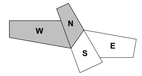
CONSULANTS IN JOINT VENTURE

KEY PLAN



NO.	DATE	DESCRIPTION
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15	2025.01.24	ADDENDUM 05
14	2025.01.21	ADDENDUM 04
13	2024.12.17	ISSUED FOR TENDER

REVISIONS

DESIGN BY
DNA & KZA

CHECKED BY
JR

DRAWN BY
JS, KA

DRAWING DATE
2021.04.30

SCALE
1:75

CONSULTANT

PROJECT NAME
COMMUNITY SERVICES BUILDING

CLIENT
TESLIN TLINGIT COUNCIL

PROJECT ADDRESS
TESLIN, YUKON

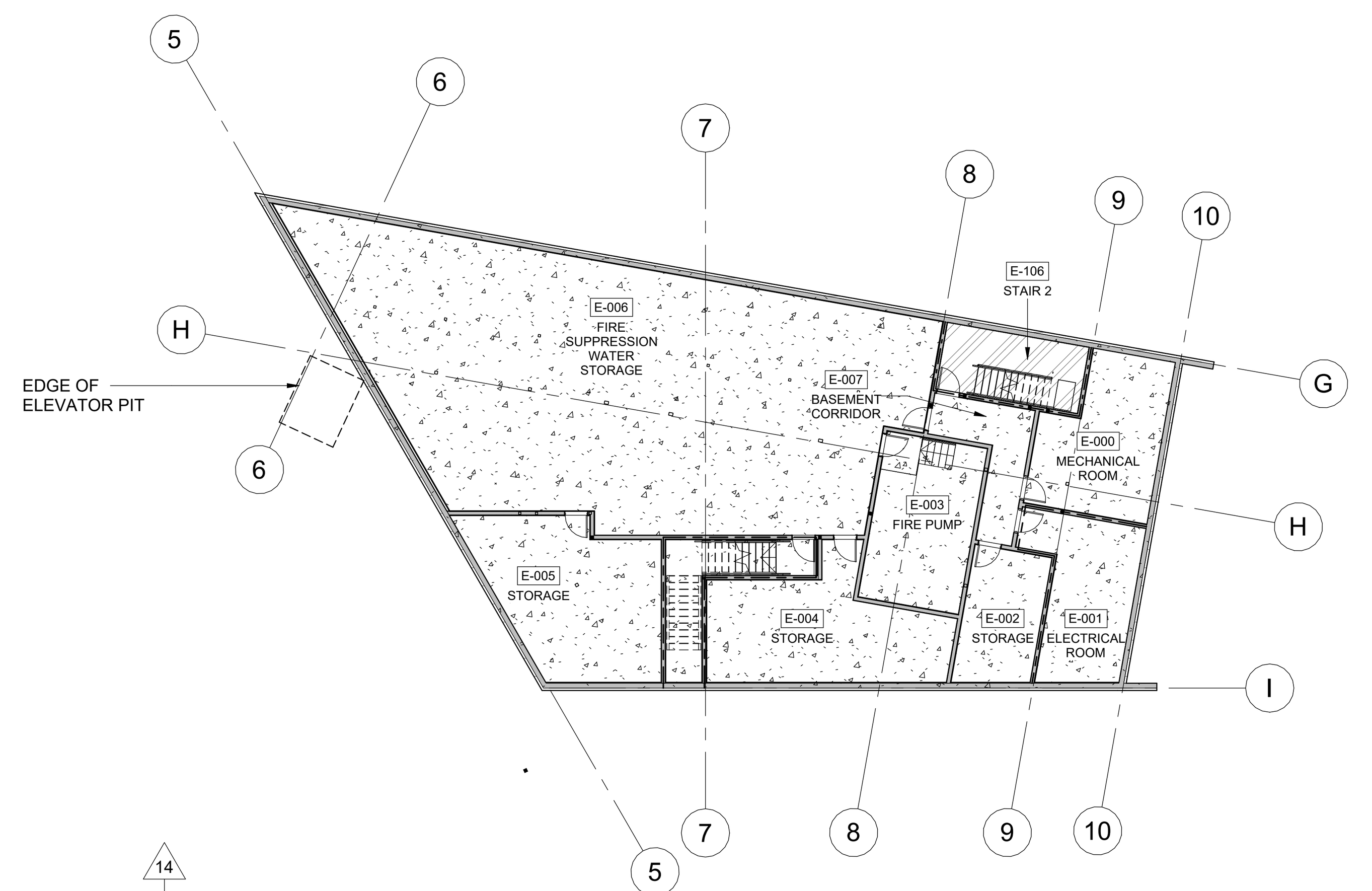
DRAWING
LEVEL 1 - FLOOR PLAN - NORTH AND WEST WINGS

REVISION NO.
17

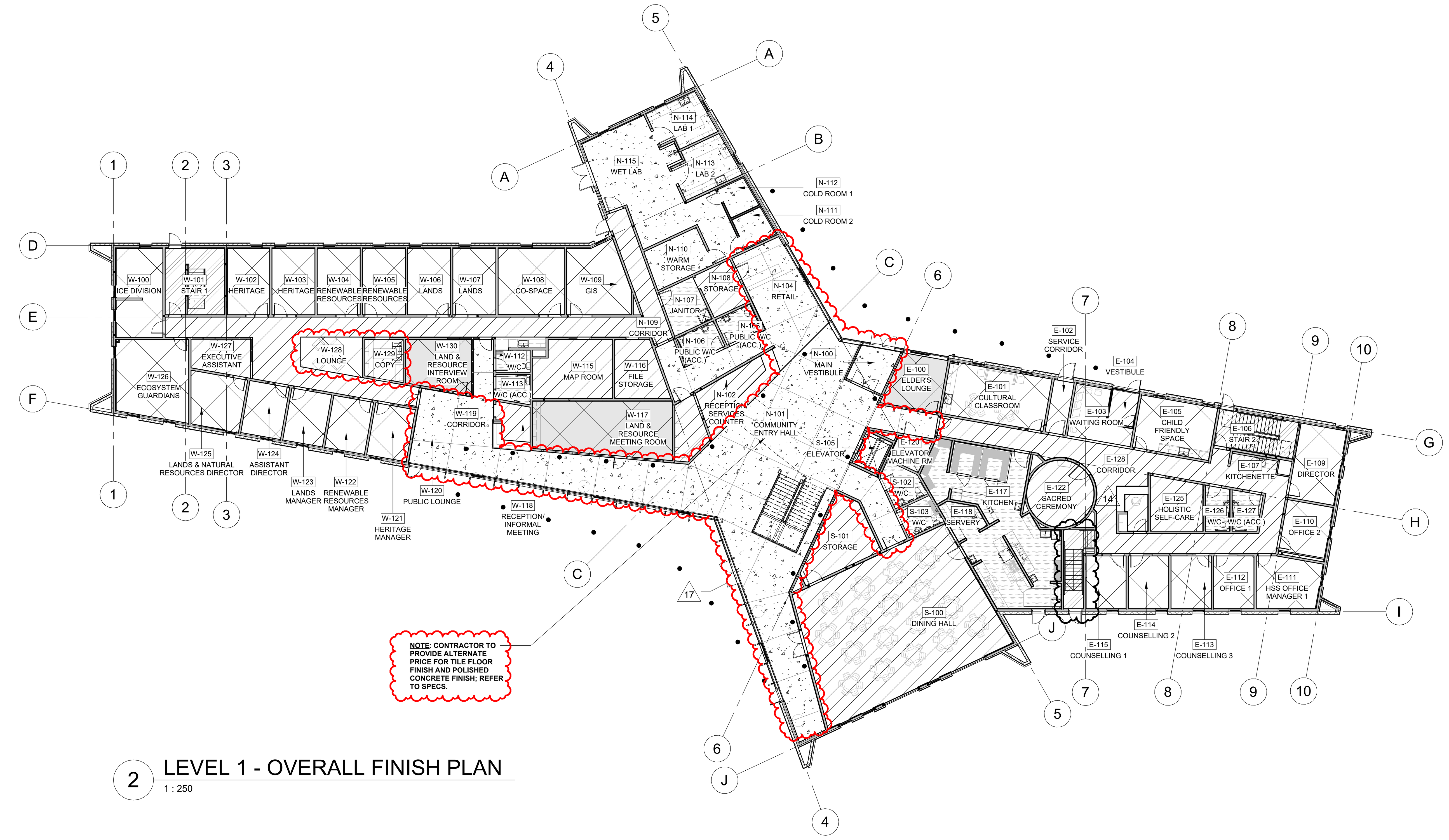
PROJECT NO. 5894

A205

2025-02-04 4:41:21 PM

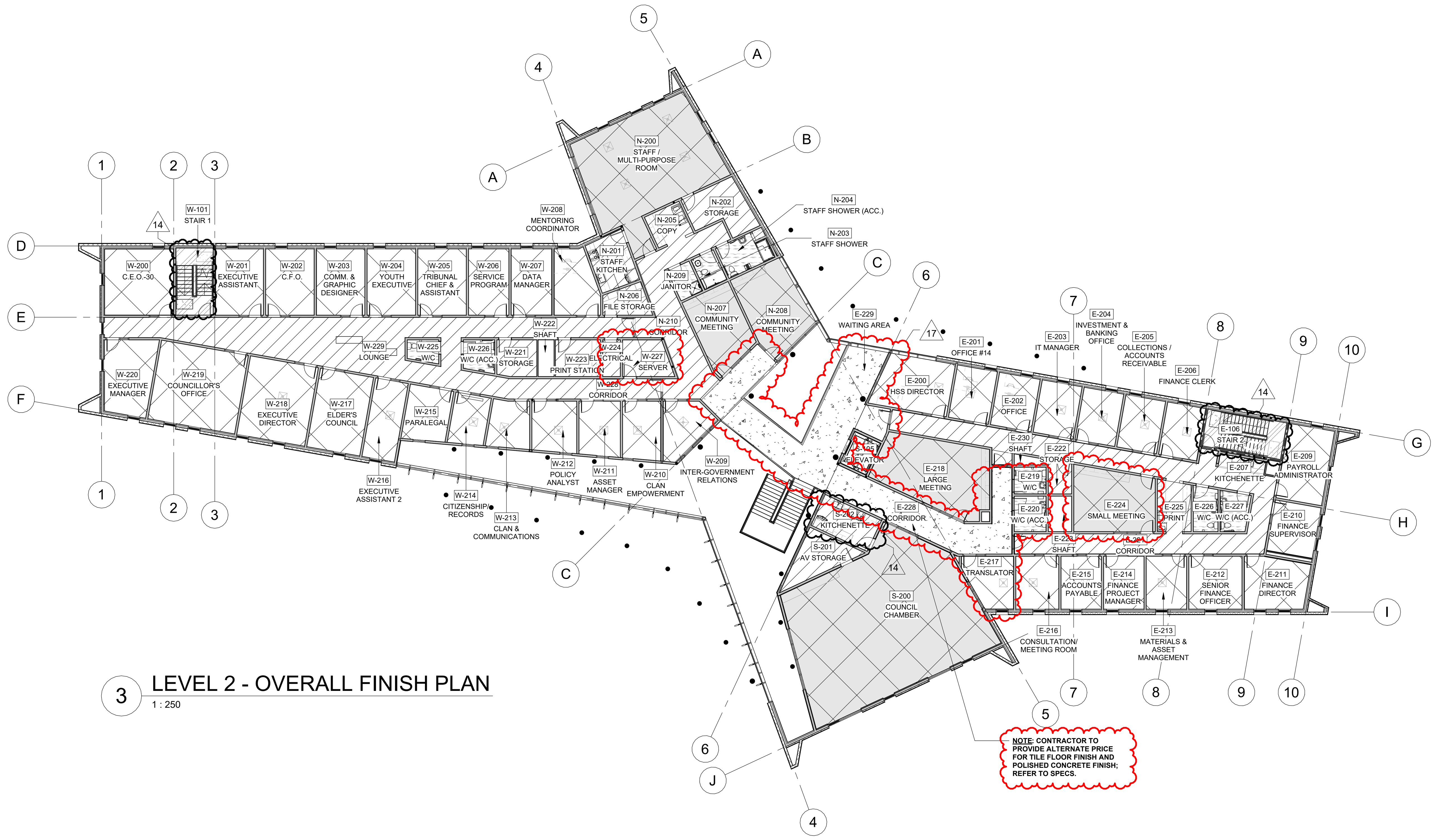


1 LEVEL 0 - OVERALL FINISH PLAN
1 : 250



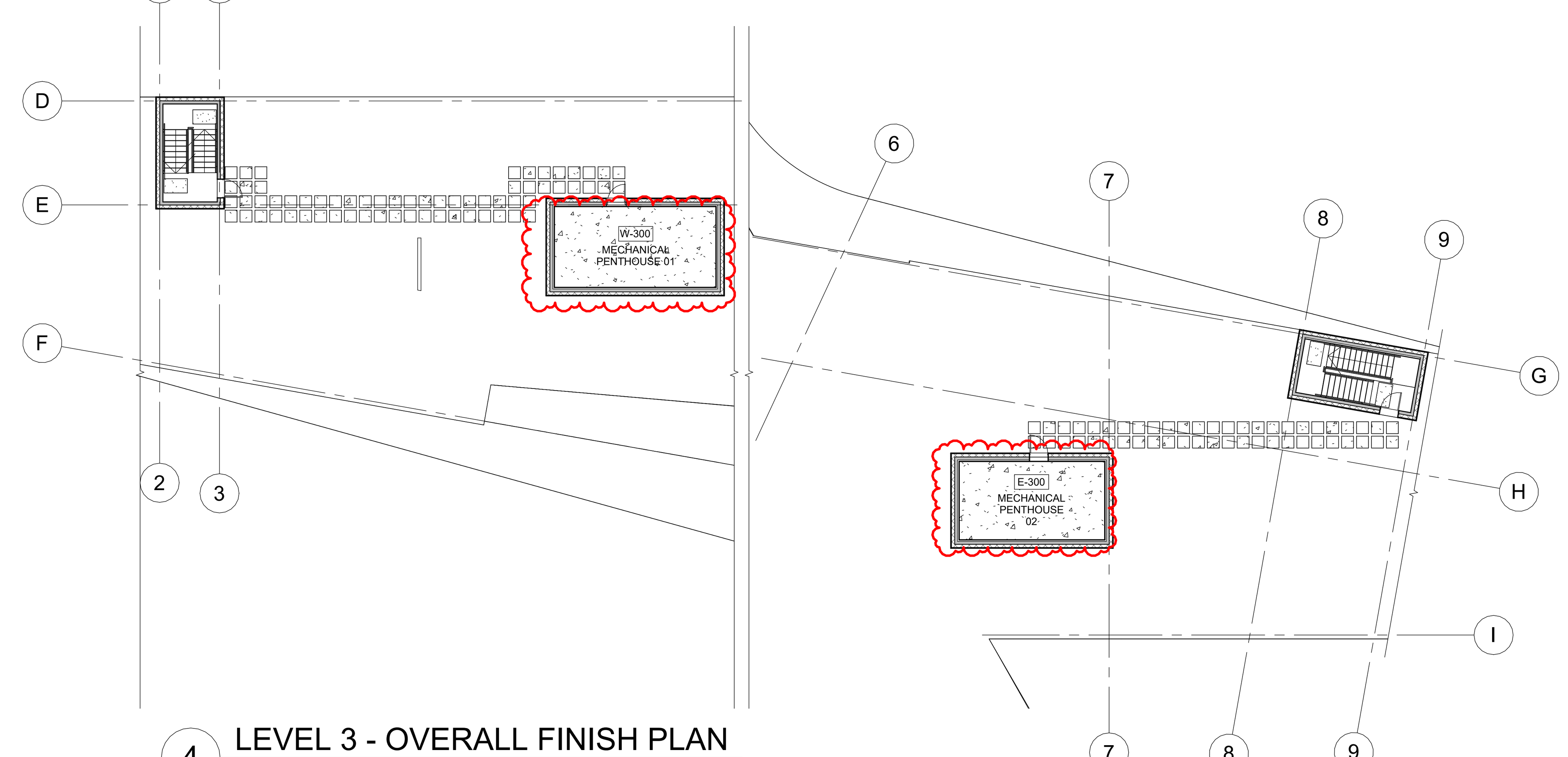
NOTE: CONTRACTOR TO PROVIDE ALTERNATE PRICE FOR TILE FLOOR FINISH AND POLISHED CONCRETE FINISH; REFER TO SPECS.

2 LEVEL 1 - OVERALL FINISH PLAN
1 : 250



NOTE: CONTRACTOR TO PROVIDE ALTERNATE PRICE FOR TILE FLOOR FINISH AND POLISHED CONCRETE FINISH; REFER TO SPECS.

3 LEVEL 2 - OVERALL FINISH PLAN
1 : 250



4 LEVEL 3 - OVERALL FINISH PLAN
1 : 250

FINISH PLAN LEGEND

MATERIAL HATCH	MATERIAL DESCRIPTION	MATERIAL HATCH	MATERIAL DESCRIPTION	MATERIAL HATCH	MATERIAL DESCRIPTION
	POLISHED CONCRETE NOTE: CONTRACTOR TO PROVIDE ALTERNATE PRICE FOR TILE FLOOR FINISH; REFER TO SPECS.		LUXURY VINYL TILE		RESILIENT SHEET FLOORING TYPE 2
	CARPET TILE - TYPE 1		RUBBER STAIRWELL SYSTEM		CERAMIC TILES
	CARPET TILE - TYPE 2		RESILIENT SHEET FLOORING TYPE 1		SEALED CONCRETE PER SECTION 03 35 00

NOTE
FOR ROOM N-100, N-101, N-104, W-119, W-120, W-228, W-229
CONTRACTOR TO PROVIDE ALTERNATE PRICE FOR TILE FLOOR FINISH AND POLISHED FLOOR FINISH; REFER TO SPECS.

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CONSULTANTS IN JOINT VENTURE

KEY PLAN

NO.	DATE	DESCRIPTION
17	2025.02.06	ADDENDUM 08
16	2025.01.21	ADDENDUM 04
13	2024.12.17	ISSUED FOR TENDER

REVISIONS

DESIGN BY
DNA & KZA

CHECKED BY
JR

DRAWN BY
JS

DRAWING DATE
2021.04.30

SCALE
1:250

CONSULTANT

PROJECT NAME
COMMUNITY SERVICES BUILDING

CLIENT
TESLIN TLINGIT COUNCIL

PROJECT ADDRESS
TESLIN, YUKON

DRAWING
FINISH PLANS

REVISION NO.
17

PROJECT NO.
5894

A221

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David Nairne + Associates Ltd

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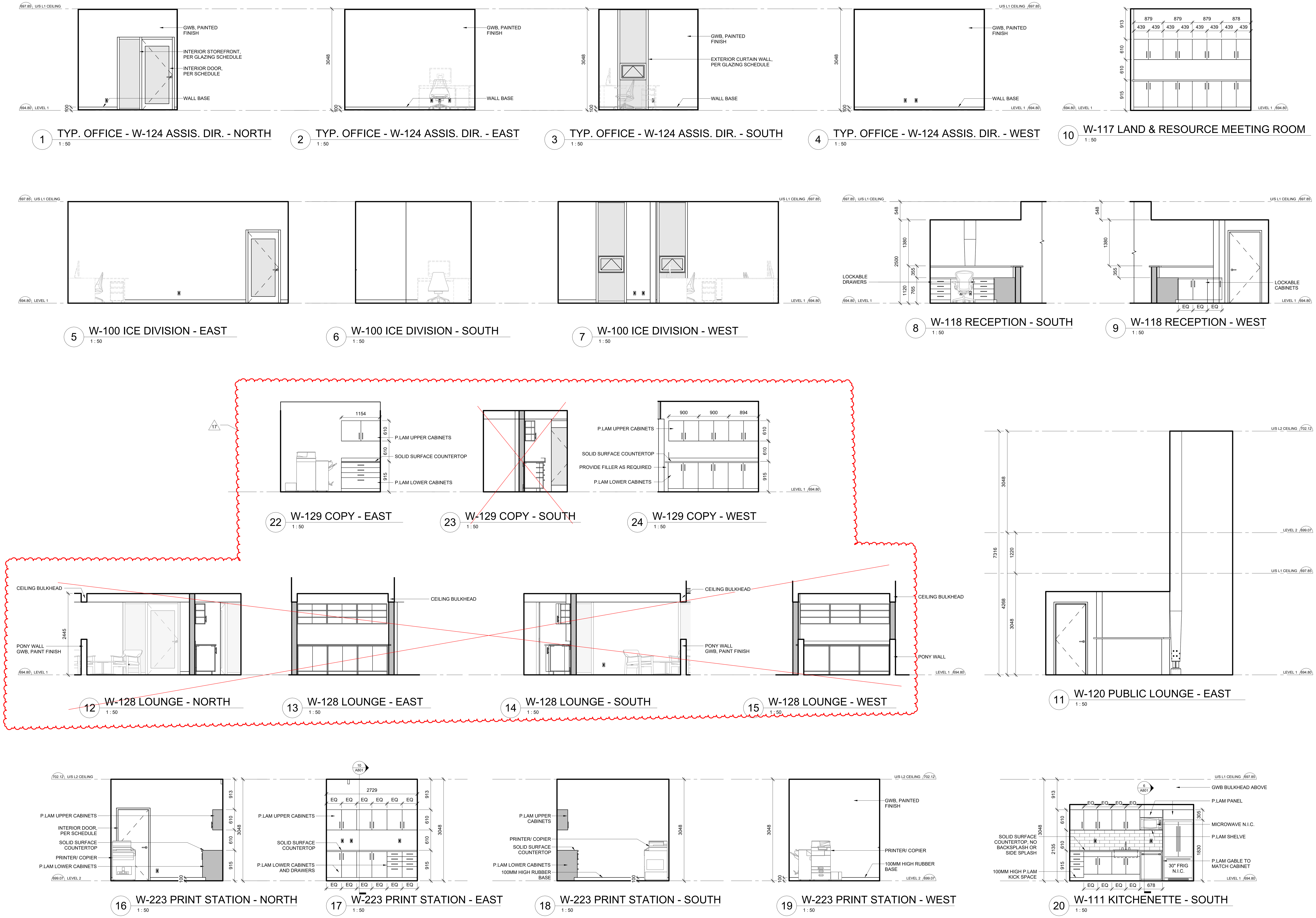
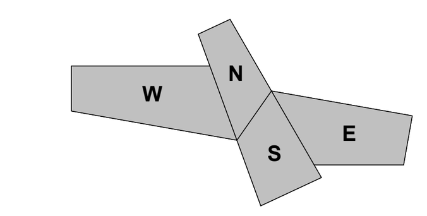
CONSULTANTS IN JOINT VENTURE



GWB, PAINTED FINISH
INTERIOR STOREFRONT, PER GLAZING SCHEDULE
INTERIOR DOOR, PER SCHEDULE
WALL BASE
EXTERIOR CURTAIN WALL, PER GLAZING SCHEDULE
U/S L1 CEILING 697.85
LEVEL 1 694.80
1 TYP. OFFICE - W-124 ASSIS. DIR. - NORTH 1 : 50
2 TYP. OFFICE - W-124 ASSIS. DIR. - EAST 1 : 50
3 TYP. OFFICE - W-124 ASSIS. DIR. - SOUTH 1 : 50
4 TYP. OFFICE - W-124 ASSIS. DIR. - WEST 1 : 50
10 W-117 LAND & RESOURCE MEETING ROOM 1 : 50
5 W-100 ICE DIVISION - EAST 1 : 50
6 W-100 ICE DIVISION - SOUTH 1 : 50
7 W-100 ICE DIVISION - WEST 1 : 50
LOCKABLE DRAWERS
LOCKABLE CABINETS
8 W-118 RECEPTION - SOUTH 1 : 50
9 W-118 RECEPTION - WEST 1 : 50
P.LAM UPPER CABINETS
SOLID SURFACE COUNTERTOP
P.LAM LOWER CABINETS
PROVIDE FILLER AS REQUIRED
22 W-129 COPY - EAST 1 : 50
23 W-129 COPY - SOUTH 1 : 50
24 W-129 COPY - WEST 1 : 50
CEILING BULKHEAD
PONY WALL GWB, PAINT FINISH
PONY WALL
12 W-128 LOUNGE - NORTH 1 : 50
13 W-128 LOUNGE - EAST 1 : 50
14 W-128 LOUNGE - SOUTH 1 : 50
15 W-128 LOUNGE - WEST 1 : 50
U/S L2 CEILING 702.12
LEVEL 2 699.07
11 W-120 PUBLIC LOUNGE - EAST 1 : 50
PRINTER/ COPIER
P.LAM LOWER CABINETS AND DRAWERS
100MM HIGH RUBBER BASE
16 W-223 PRINT STATION - NORTH 1 : 50
17 W-223 PRINT STATION - EAST 1 : 50
18 W-223 PRINT STATION - SOUTH 1 : 50
19 W-223 PRINT STATION - WEST 1 : 50
GWB BULKHEAD ABOVE
P.LAM PANEL
MICROWAVE N.I.C.
P.LAM SHELVE
P.LAM GABLE TO MATCH CABINET
30" FRIG N.I.C.
SOLID SURFACE COUNTERTOP, NO BACKSPLASH OR SIDE SPLASH
100MM HIGH P.LAM KICK SPACE
20 W-111 KITCHENETTE - SOUTH 1 : 50

KEY PLAN



NO.	DATE	DESCRIPTION
17	2025.02.06	ADDENDUM 08
13	2024.12.17	ISSUED FOR TENDER

REVISIONS

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DNA, KZA

CHECKED BY
JR, JS

DRAWN BY
SZ

DRAWING DATE
10/21/24

SCALE
1 : 50

CONSULTANT

PROJECT NAME
COMMUNITY SERVICES BUILDING

CLIENT
TESLIN TLINGIT COUNCIL

PROJECT ADDRESS
TESLIN, YUKON

DRAWING
INTERIOR ELEVATIONS

REVISION NO.
17

PROJECT NO.
5894

A707

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SECTION 03 35 00
CONCRETE FINISHING

Part 1 General

1.1 RELATED SECTIONS

.1 Section 03 110 00 - Concrete Forming

.2 Section 03 20 00 - Concrete Reinforcing

.3 Section 03 30 00 - Cast-in-Place Concrete

.4 Section 03 33 00 – Architectural Concrete

1.2 REFERENCES

.1 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-25.20- 95, Surface Sealer for Floors.

.2 Canadian Standards Association (CSA)

.1 CSA-A23.1- 04 , Concrete Materials and Methods of Concrete Construction.

1.3 PERFORMANCE REQUIREMENTS

.1 Product quality and quality of work in accordance with Section 01 61 00 - Common Product Requirements.

.2 Submit written declaration that components used are compatible and will not adversely affect finished flooring products and their installation adhesives.

1.4 PRODUCT DATA

.1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.

.2 Submit WHMIS MSDS - Material Safety Data Sheets in accordance with Section 02 81 01 - Hazardous Materials. WHMIS MSDS acceptable to Labour Canada and Health and Welfare Canada for concrete floor treatment materials. Indicate VOC content.

.3 Include application instructions for concrete floor treatment[s] .

.4 Product Data: Provide completed Material Data Safety Sheet and other documentation such as MSDS sheets, cut sheets, etc. with the following information:

.1 Recycled Content: submit manufacturer's data indicating percentage of post-consumer and post-industrial content.

.2 VOC Limits: submit MSDS sheets for all adhesives, sealants and coatings. Highlight VOC limits and chemical component limits.

1.5 WASTE MANAGEMENT AND DISPOSAL

.1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal and the Waste Reduction Workplan.

1.6 ENVIRONMENTAL REQUIREMENTS

.1 Temporary lighting:

.1 Minimum 1200 W light source, placed 2.5 m above floor surface, for each 40 sq m of floor being treated.

.2 Electrical power:

.1 Provide sufficient electrical power to operate equipment normally used during construction.

.3 Work area:

.1 Make the work area water tight protected against rain and detrimental weather conditions.

.4 Temperature:

.1 Maintain ambient temperature of not less than 10 degrees C from 7 days before installation to at least 48 hours after completion of work and maintain relative humidity not higher than 40% during same period.

.5 Moisture:

.1 Ensure concrete substrate is within moisture limits prescribed by flooring manufacturer.

.6 Safety:

.1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials.

.7 Ventilation:

.1 Ventilate area of work as directed by Consultant by use of approved portable supply and exhaust fans.

.2 Ventilate enclosed spaces in accordance with Section 01 51 00 - Temporary Utilities.

.3 Provide continuous ventilation during and after coating application.

1.7 MOCK-UPS

.1 Provide under provisions of Section 01 45 00 - Quality Control.

.2 Floor and slab staining and sealing

.1 At location on Project selected by Architect, prepare mock-up 1.2 by 1.2 m for review and approval.

.3 Construct mock-up using processes and techniques intended for use on permanent work, including curing procedures. Include samples of control, construction, and expansion joints in mock-up panels.

.4 Mock-up shall be stained and sealed by the individual workers who will actually be performing the work for the Project.

.5 Obtain written approval of the mock-up from Architect before start of work.

.6 Retain approved mock-up through completion of the Work for use as a quality standard for finished work.

.7 Approved mock-up may become part of the completed Work if undisturbed at time of Substantial Completion.

Part 2 Products

2.1 MATERIALS

.1 Stain: for exposed concrete floors other than those located in Room N-110, N-111, N-112, N-113, N-114, N-115, W-300, E-300 and all rooms in basement. Water-based penetrating, reactive stain that chemically bonds with cured concrete to produce translucent colour effects.

.1 Colour: As selected by Architect from manufacturer's color charts.

.2 Standard of acceptance: Lithochrome Tintura Stain by Sika Scofield Co.

.2 Floor Sealer: for exposed concrete floors and stairs, as indicated shall be: Sikafloor Curehard 24; W.R. Meadows Sealtight HIAC-PLUS Acrylic Sealer; Euclid Chemical Euco Diamond Hard; or pre-approved equal.

.3 Clear Sealer (for areas with concrete floor hardener): Low VOC Enviroseal 7, or approved equivalent.

.4 Interior Wall Sealer: for exposed concrete wall: Sikagard Natural Look Clear Sealer, Low VOC or approved equivalent. Apply 2 coats.

.5 Exterior Wall Sealer: Refer to Section 03 33 00.

.6 Joint Sealant: to be self-levelling two-part polyurethane type, conforming to CGSB 19.24-M80, Type 1, Class B. Approved types are Sikaflex-2C NS/SL; Iso-flex 880 GC (self-levelling) Sealant; Vulkem 245, or other approved sealant. Colour as selected by Consultant from standard range. Primers, bond breakers, and backer rods as required to install the perimeter joint sealant system shall be provided in strict accordance with sealant manufacturer’s recommendations.

Part 3 Execution

3.1 EXAMINATION

.1 Verify that substrate surfaces are ready to receive work and elevations are as indicated on drawings.

3.2 SLAB AND FLOOR TOLERANCES

.1 Refer to Section 03 30 00 – Cast-in-Place Concrete

3.3 FLOOR AND SLAB FINISHING

.1 Finish concrete in accordance with CAN/CSA A23.1 Section 22. Finishing and treatment of slab or floor finishes, with a Class A finish.

.1 Steel trowelled finish for exposed concrete floors as indicated and for concrete slabs-on grade and suspended concrete:

.1 After the concrete has been properly placed, struck off and darbied or bullfloated, it shall not be worked until ready for trowelling. The lapse of time between darbying and power trowelling may vary from two to eight hours or more, depending on the weather conditions, concrete temperature and the concrete admixture.

.2 Trowelling shall begin when the water sheen has disappeared and/or the mix has stiffened sufficiently that the weight of a man standing on it leaves only a slight imprint on the surface.

.3 Trowelling shall be continued until the surface is dense, smooth and free of all minor blemishes such as trowel marks.

.4 Final hand trowelling shall be required to remove slight imperfections left by trowelling machines and to bring the surface to a dense, smooth, polished finish. It shall be continued until a ringing sound is heard as the trowel passes over the surface.

.2 Sealed floor finish for exposed concrete floors as scheduled: finish as for steel trowel finish and apply specified clear liquid sealer in two (2) coats in strict accordance with manufacturer’s printed directions.

.3 Non-slip finish for exposed concrete stair treads and landings: finish as for steel trowel finish and immediately after first trowelling provide a non-slip surface by light brushing or surface to texture approved by the Consultant followed by two (2) coat application of specified clear liquid sealer in accordance with manufacturer’s printed directions.

.2 Tool all crack control joints and construction joints as indicated on the drawings. Tooling shall be coordinated with concrete finishing. If necessary, re-tool joints at completion of finishing to give full-size joint with clean and sound substrate ready for sealant.

.3 Stained Concrete:

.1 Concrete surfaces shall be dry and properly prepared as described above. Protect surrounding areas from over-spray, run-off and tracking. Divide surfaces into small work sections using wall, joint lines, or other stationary breaks as natural stopping points.

.2 Apply water-based reactive stains full strength (undiluted) at the coverage rate recommended by the manufacturer and use application equipment described in the manufacturer's printed technical literature. The color of the liquid chemical stain has no resemblance to the final color produced on the concrete substrate.

.3 Apply water-based reactive stain to the substrate with an airless sprayer or HVLP sprayer.

.4 Reaction time depends on wind conditions, temperatures, and humidity levels.

.5 The second coat, if required, should be applied after the first coat has dried sufficiently and can be walked on without damage, normally 2-4 hours after application depending on temperature and humidity. A third coat could be applied 2-4 hours after the second coat.

.4 Sealed Concrete Floors and Stairs: All areas designated sealed polished concrete to have concrete hardener 1-1/2 lb. to 2 lb. Dry shake applied in two stages in strict conformance to manufacturer's instructions. Slip resistance: Coefficient of Friction to meet ASTM #C1028 of 6 when floor is wet.

.1 Moisture cure concrete for 3 days. Apply cure and seal protective wax as per manufacturer's specifications to concrete after concrete has been troweled and can be walked on.

.2 Remove cure and seal compound after a minimum of 28 days.

.3 Use "Johnson & Johnson Pro Strip" and hot water (165 - 200 deg. F.) Allow water and stripping solution to dwell on concrete for 15 to 20 minutes. Scrub with Black Pad fixed to a Clark Type dual rotary brush scrubber with pads affixed to the scrubber. Note: Keep the floor saturated with hot water during this procedure.

.4 Remove "mung" immediately with shop vac and squeegee. Do not allow material to resolidify on the slab.

.5 Rinse with hot water and shop vac material off slab.

.6 Repeat steps .3 to .5 until wax is removed.

.7 After initial wax curing removal use a red pad on a rotary brush scrubber to polish.

.8 Scrub with green pad to remove grit, follow with red pad scrubbing.

.9 For high gloss finish use white pad or hogs hair and buff at high speed.

.10 Reveal fine aggregate tips in concrete from dry shake with a silica carbide grit screen (range from 100 to 60). **Note: This procedure is to be done after concrete has cured for 28 days minimum.**

.11 Apply silane penetrating concrete sealer “Enviroseal 7" as per manufacturer’s specifications.

.12 Regular maintenance and cleaning: wet mop surface, use a biodegradable detergent.

3.4 CURING

.1 Cure and protect the surface of finishes and slabs in accordance with CAN/CSA A23.1 and/or as specified.

.2 See Section 03 30 00 for general curing and protection requirements including cold weather requirements.

3.5 PROTECTION OF FINISHED SURFACES

.1 Keep traffic which would affect and otherwise disturb the curing procedures off the finished surfaces for a period of seven (7) days minimum.

.2 Protect exposed concrete finishes and floors against damage until the building is accepted by the Owner.

.3 Protect floors against contamination by paint, oil, or other deleterious materials.

3.6 JOINT FILLERS AND SEALERS

.1 Provide joint fillers and sealers at interior slabs-on-grade at junction with vertical surfaces and where required.

.2 Particular care shall be taken to construct clean joints free from any foreign material which will impair the proper function of the joint.

.3 Joint filler material shall be anchored tot he previously poured concrete surface.

.4 Unless shown otherwise, joint filler shall extend for the full depth of the joint and shall terminate ½" below the top of the joint. The ½" space shall be filled joint sealer. Apply bond breaker tape before applying sealant if impregnated fibreboard is used.

END OF SECTION

SECTION 05 73 00
DECORATIVE METAL FENCE

Part 1 General

1.1 SECTION INCLUDES

.1 Aluminum fence systems, including connectors, fasteners, and required accessories including the following types and applications:

1.2 REFERENCE STANDARDS

.1 American National Standard / American Society of Safety Engineers (ANSI/ASSE):

.1 ANSI/ASSE A1264.1-2007 Safety Requirements for Workplace Walking/Working Surfaces and their Access; Workplace, Floor, Wall and Roof Openings; Stairs and Guardrail Systems.

.2 ASTM International

.1 A27/A27M-13, Standard Specification for Steel Castings, Carbon, for General Application

.2 ASTM A 47-99(2014), Standard Specification for Ferritic Malleable Iron Castings.

.3 ASTM A53/A53M 02, Specification for Pipe, Steel, Black and Hot Dipped, Zinc Coated Welded and Seamless.

.4 ASTM A 153/A 123M-16, Standard Specification for Zinc (Hot-Dip) Coatings on Iron and Steel Hardware.

.5 ASTM A500-13, Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.

.6 ASTM B 221M-13, Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric).

.7 ASTM B429//B241M-10e1, Standard Specification for Aluminum-Alloy Extruded Structural Pipe and Tube.

.8 ASTM E935-13e1, Standard Test Methods for Performance of Permanent Metal Railing Systems and Rails for Buildings.

.3 National Research Council Canada (NRC)

.1 National Building Code of Canada 2020 (NBC).

1.3 ADMINISTRATIVE REQUIREMENTS

.1 Sequencing:

.1 Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit in accordance with Section 01 33 00- Submittal Procedures.

.2 Product Data:

.1 Submit manufacturer's instructions, printed product literature and data sheets for railings and include product characteristics, performance criteria, physical size, finish and limitations.

.2 Submit manufacturer’s installation instructions with project specific annotations to suit project conditions.

.3 Shop Drawings:

.1 Submit drawings stamped and signed by professional engineer registered or licensed in Yukon Territory, Canada.

.2 Indicate profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories.

.3 Indicate installation of guardrails including but not limited to plans, elevations, sections, details of components, anchor details, and clearances to adjacent assemblies. Indicate critical field dimensions and conflicts.

.4 Indicate installation conditions at obstructions or at junction with adjacent construction as necessary to provide continuity of protection.

.4 Samples:

.1 For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

.2 Verification Samples: For each finish product selected, provided three samples, minimum size 150 mm square, representing actual product, color, and patterns.

.5 Manufacturer's Certificates: Certify products meet or exceed specified requirements.

.6 Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic cleaning and maintenance of all railing components.

1.5 QUALITY ASSURANCE

.1 Manufacturer Qualifications: Company specializing in providing products of the type specified in this section, with minimum of 15 years documented experience with products in use.

.2 Installer Qualifications: Company specializing in installing products of the type specified.

.3 Mock Up:

.1 Provide a complete mockup of a guardrail and or handrail on site for review by the Consultant. Make revisions to mockup as required by the Consultant.

.2 Mock-up must include all components of the system, including typical joints and connection hardware, and typical tie-ins to adjoining systems, all finished as specified.

.3 Modify the mock-up at no additional cost to the contract as may be required to meet design and performance requirements.

.4 Mock-up, if deemed to be in general conformance with the Specifications and Drawings by the Consultant, must remain on site as finished part of the work.

1.6 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.

1.7 WARRANTY

.1 Manufacturer's 10-Year Commercial Warranty: provide manufacturer's standard commercial limited warranty for defects in the structure and weld for 20 years; and protection against cracking, peeling, flaking or blistering to be determined per project.

Part 2 Products

2.1 MANUFACTURED UNITS

.1 Acceptable manufacturer and product list:

.1 SleekFence as manufactured by SleekFence or

.2 Approved alternate

2.2 DESIGN CRITERIA

.1 Installed guardrail assembly and anchorage shall conform to ANSI/ASSE A1264.1, structural requirements of NBCC 2020.

.1 In case of conflicting requirements, the more stringent requirement shall apply.

.2 Loads and load factors are determined in accordance with the National Building Code. Resistances must be determined by the applicable material design standards.

2.3 MODULAR ALUMINUM GUARDRAIL SYSTEM

.1 Fence:

.1 General: Provide products free from surface blemishes where exposed to view in the finished installation.

.2 Design:

.1 Colour: Woodgrain finish As selected by Consultant from manufacturer standard colours.

.2 Components:

.1 General: Provide all aluminum components of same alloy.

.2 Screen Fence and Gate: Aluminum, sizes indicated on approved shop drawings.

.1 16mm x 102mm horizontal slats

.2 Panel end frame and mounting channel as required.

.3 Post with cap: Aluminum, sizes indicated on approved shop drawings.

.1 101mm x 102mm x 3.5mm

.2 127mm x 203mm base plate

.3 Accessories:

.1 Screws: Color matched, stainless steel.

.2 Anchors and Inserts: As required to support work specified, in accord with approved shop drawings.

.3 Fittings and Fasteners: Same basic material as parts being joined, unless otherwise indicated. Do not use metals corrosive or incompatible with materials being fastened.

2.4 FABRICATION

.1 Fabricate fence and gate systems to comply with manufacturer's printed requirements, project design requirements, details, dimensions, finish and member sizes, including post spacing and anchorage, but not less than the structural requirements to support loading.

.2 Clearly mark component units for site assembly and installation.

.3 Use connections that maintain structural capacity of joined members.

2.5 FINISHES

.1 Powder Coated Finish: Factory electrostatically-applied.

Part 3 Execution

3.1 EXAMINATION

.1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for handrail installation in accordance with manufacturer's written instructions.

3.2 PREPARATION

.1 Prepare surrounding construction to receive railing system installations to comply with manufacturer's requirements.

.2 Review and coordinate setting drawings, shop drawings, templates, and instructions for assembly and installation of railing system.

3.3 INSTALLATION

.1 Install fence system and related components in strict accordance with manufacturer's printed installation instructions and approved project shop drawings.

.2 Preassemble fence system, including posts, and panels where shown, in easy to lift sections whenever possible.

.3 Adjust, level, and securely install fence system components.

3.4 CLEANING

.1 Progress and Final Cleaning: clean in accordance with Section 01 74 00- Cleaning.

.1 Leave Work area clean at end of each day.

3.5 PROTECTION

.1 Protect installed products and components from damage during construction.

.2 Repair damage to adjacent materials caused by hand rail installation.

3.6 FIELD QUALITY CONTROL

.1 The Design Engineer, responsible for the production of the shop drawings, must provide periodic field review during construction and must submit reports.

.2 Additional inspection and testing of materials workmanship may be carried out by a qualified independent Inspection Agency appointed by the Consultant.

.3 Review must include

.1 Checking that mill test reports are properly correlated to materials.

.2 Sampling fabrication and erection procedures for general conformity to the requirements of the specification.

.3 Checking that the welding conforms to the requirements of this specification.

.4 Checking fabricated members against specified member shapes.

.5 Checking that the base structure has sufficient back framing installed to receive the connection from the guard rails.

.6 Visual inspection of all welded connections including sample checking of joint preparation and fit-up.

.7 Sample checking of screwed and bolted joints.

.8 Sample checking that tolerances are not exceeded during fit-up or erection.

.9 Additional inspection and testing of welded connections as required by CSA W59.

.10 General Inspection of field cutting and alternations required by other trades.

.11 Submission of reports to the Consultant, the Contractor, and the authorities having jurisdiction covering the work inspected with details of deficiencies discovered.

END OF SECTION

PART 1 – GENERAL

1.1 WORK INCLUDED

.1 Furnish, deliver and install finish hardware.

.2 It is intended that the following list of hardware will cover finish hardware to complete the project. Bring to the Consultants attention any omissions, discrepancies that will affect work in this section during the bidding period.

1.2 RELATED SECTIONS

.1 Division 1 General Requirements

.2 06 20 23 Interior Finish Carpentry

.3 06 41 00 Architectural Wood Casework

.4 08 11 13 Hollow Metal Doors and Frames

.5 08 14 16 Flush Wood Doors

.6 08 14 16 Access Doors and Frames

.7 08 42 13 Aluminum-Framed Entrances

.8 08 44 13 Glazed Aluminum Curtain Walls and Windows

.9 Division 26 Electrical

.10 Division 28 Electronic Safety and Security

1.3 PRODUCTS SUPPLIED BUT NOT INSTALLED IN THIS SECTION

.1 Power supplies, compressor/control boxes, junction boxes installed by Division 26.

1.4 REFERENCES

.1 Door and Hardware Institute - Recommended locations for Architectural Hardware for Standard Steel Doors and Frames

.2 Door and Hardware Institute - Recommended locations for Architectural Hardware for Flush Wood Doors

.3 NFPA 80-Standard for Fire Doors and Windows, 1999 Edition

.4 Door and Hardware Institute - Sequence Format for Hardware Schedule

.5 Door and Hardware Institute - Key Systems and Nomenclature

.6 Door and Hardware Institute - Abbreviations and Symbols used in Architectural Door and Hardware Schedules and Specifications

.7 Door and Hardware Institute – Installation Guide for Doors and Hardware

.8 BC Building Code

1.5 SUBMITTALS

.1 Updated Finish Hardware Schedule:
Submit submittals in accordance with Section 01 30 00 Submittal Procedures. Prepare detailed hardware schedules in Door and Hardware (DHI) vertical format as detailed in Reference 1.4.4.

.2 Product Data:
Submit in a three ring binder six (6) copies of product data sheets with the finish hardware schedule showing items of hardware to be used on the project.

.3 Samples:
When requested in writing, provide (to the Consultants Site Office) one sample of each hardware item complete with fasteners, within thirty (30) calendar days of award of a purchase order. Samples to be clearly labeled with their hardware schedule designation and manufacturers' name and model number. Samples will be incorporated into the work.

.5 Templates:
Submit templates within to related trades when requested.

.6 Keying Schedule:
After a keying meeting between representatives of the Owner, furnish a keying schedule listing the levels of keying as well as an explanation of the key system's function, the key symbols used and the door numbers controlled. Utilize "Door and Hardware Institute - Key Systems and Nomenclature" as a guideline for nomenclature, definitions, and approach for selecting the optimal keying system. Provide 3 copies of keying schedule for review prepared and detailedin accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion. Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.

.7 Wiring Diagrams
Co-ordinate with related trades, meet with the owner and security provider and submit a written description of the functional use (mode of operation) of electrical hardware products specified. Include operation for ingress, egress, fire alarm, and after hours use where applicable. Include door and frame elevations showing the location of each item of electrical hardware to be installed, mode of operation including a diagram showing number and size of conductors. Indicate on elevation drawing items provided by related trades, include for back boxes, and 120V power sources. Provide point to point drawings showing terminal connections necessary for a complete installation.

.8 Operations and Maintenance Data
Prior to Substantial Completion, furnish to the owner, two (2) copies of an owner's operation and maintenance manuals in a three-ring binder with the following information:

1. Name of hardware distributor, address and contact name
2. Copy of final "as-built" finish hardware schedule
3. As installed "wiring diagrams, elevations, risers, point to point"
4. Copy of final keying schedule
5. Copy of floor plans with keying nomenclature assigned to door numbers as perthe approved keying schedule
6. Catalogue cut sheets and product specifications for each product
7. Parts list for each product
8. Installation instructions and templates for each product.

1.7 QUALITY ASSURANCE

.1 Review installation procedures with the Contractor's Designated Installers. Hold instruction meetings with installers prior to installation and subsequent review meetings during the installation period. Submit minutes of meetings to the Consultant.

.2 Substitutions
Only approved products specified are accepted. Make substitution requests in accordance with

Division 1. Include product data and indicate benefit to the project.

.3 Supplier Qualifications
Successful hardware distributor to have a minimum of five (5) years' experience in the door and hardware industry. Distributor to have on staff an Architectural Hardware Consultant (A.H.C.) whose name will be listed on the hardware schedule title page submittal and will be responsible for scheduling, detailing, (see Reference 1.5.4) ordering and co-ordination of the finishing hardware for this project. If so requested by the Consultant and or installer this individual will be required to visit the jobsite for any installation problems that may occur.

.4 Designated Installers
Hardware Installers must have a minimum of five (5) years' experience in installation of hardware. Provide verification of installer's qualification to Consultant for approval. Installers to attend review meetings with the Hardware Distributor.

1.8 DELIVERY, STORAGE AND HANDLING

.1 Marking and Packaging
Mark cartons with heading number, door number, and key-set symbol where applicable in original packaging provided by the manufacturer. Pack packaged hardware in suitable wrappings and containers to protect it from damage during shipping and storage.
Enclose accessories, fastening devices and other loose items with each applicable item of hardware.

.2 Delivery
Deliver hardware to related trades.

.3 Storage
Store in a clean, dry room with lockable man door and adequate shelving to permit organization so item numbers are readily visible.

1.9 WARRANTY

.1 Furnish warranties by the accepted manufacturers:

Hardware Item	**Length of Warranty**
Mortise Hinges	1year
Continuous Hinges	Lifetime
Electrified Continuous	1 Year
Locks (ND Series)	10 years
Deadbolts (B600)	3 years
F Locks	3 years
Exit Devices	3 years
Door Closers – Mechanical 4040XP series	30 years
Door Closers – Mechanical 1460 series	30 years
Door Operators - Electro Mechanical	2 years
Overhead Stops/Holders	1 year
Floor/Wall stops	1 year
Electric Strikes	5 years

1.10 MAINTENANCE

.1 Maintenance Service
After the building is occupied arrange an appointment with the maintenance staff from the Teslin Tlingit Council Community Services Building for instruction of proper use, servicing, adjusting and lubrication of hardware furnished. Submit to the consultant a list of attendees and meeting date.

.2 Extra Materials
Furnish the following items in proper manufacturer's cartons once the job has been completed:

1. 5 of each installation tool used for locks/passage/privacy, type of door closers, and exit

devices.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

Products listed in the hardware groups are from the manufacturers listed below:

ITEM	MANUFACTURER NAME
Sliding Door Hardware	KN Crowder
Full Mortise Hinges	Ives
Continuous Hinges	Ives
Locksets, Latch sets/Deadbolts	Schlage
Exit Devices	Von Duprin
Surface/Flush Bolts	Ives
Door Closers	LCN
Overhead Door Holders/Stops	Glynn Johnson
Door Pulls/Flatware	Ives
Wall/Floor Stops	Ives
Weather/Smoke/Sound Seals	Ives
Door Sweeps/Thresholds	Ives
Automatic Door Operators/Actuators	LCN
Electric Strikes	Von Duprin

2.1 MATERIALS

1. **Screws and Fasteners:**
Screws and fasteners to be matching finish to their product and to be manufacturer's standard. Door closers, door holders and exit devices installed on fire rated wood doors and hollow metal doors to be attached with fasteners to meet NFPA 80 requirements.

2. **Materials-Acceptable Manufacturers (Note: Supply products in a given category from the same manufacturer**):

.1 Mortise Hinges

Provide five knuckle bearing hinges with NRP option on reverse bevel doors with locking hardware. Hinge width to accommodate door closer projection, door trim and allow for 180-degree swing. Doors up to 2286mm in height, supply 3 hinges, doors greater than 2286mm in height add one hinge for every additional 760mm of door height. Doors 915mm wide and less furnish 114 mm high hinges, doors greater than 915mm wide furnish 127mm high hinges, heavy weight or standard weight as specified. Supply ferrous (steel), stainless steel material for all interior and/or fire-rated doors and stainless steel for exterior doors.

As Specified: Ives Hinges, 5BB1, 5BB1HW

.2 Continuous Hinges:

Provide Ives heavy duty edge mount/edge guard continuous gear type aluminum hinges. Ives aluminum hinges tested and approved to UL 10C (90 minutes). Material 6063-T6 aluminum, clear satin finish (628). Aluminum geared hinges certified to ANSI 156.26 Grade 1. Hinge length to suit door height. Hinge length 25mm (1") less door height.

Supply as Specified: Ives 112XY/ 027XY

.3 Double Acting Spring Hinges:

Supply As Specified: McKinney 1001

.4 Surface/Flush Bolts/Co-Ordinators:

Automatic Flush Bolts-Metal Doors:
Automatic flush bolts for metal doors to be fully automatic cUL listed for 3 hour fire doors, low actuation forces-top bolt has not spring tension, non –handed with ¾" throw with a 7/8" vertical adjustment. Optional rod lengths for non-rated openings as well as models

with auxiliary fire latch that eliminates the bottom bolt for cUL listed doors. Standard rod length 12", supply longer rod length to suit higher door heights. Provide dustproof strikes with auto flush bolts that incorporate bottom bolt.

Supply as Specified: Ives FB30 series.

Manual Flush Bolts-Metal Doors:
Manual flush bolt for metal doors to be cUL listed for 3-hour fire doors with 13mm (½") diameter bolt tip with 19mm (¾") throw. Standard rod length to be 305mm (12"), supply longer length rods to suit higher door heights. Provide dustproof strikes with flush bolts that incorporate a bottom bolt.

Supply as Specified: Ives FB458 series.

Co-Ordinators and Filler Bars
cUL listed for installation on labeled frames. COR series co-ordinator channels and fillers made of aluminum, furnished in 628 finish. Provide co-ordinators of correct size for use on pairs of doors when one door is required to close before the other. Provide filler bar to suit opening width to maintain architecturally clean lines. Provide mounting brackets for other soffit applied hardware. Co-ordinator units to be equipped with an override feature which allows the active door to close under extreme pressure.

Supply as Specified: Ives COR Series Bar Co-ordinators

Manual Flush Bolts – Wood Doors:

Supply as Specified: Ives FB358 series.

.5 Locksets/Deadlocks/Privacy Sets:

Cylindrical:
Extra heavy duty residential, commercial, institutional and industrial applications. Latch bolts to be steel with minimum ½" throw deadlocking on keyed functions. ¾" throw anti-friction latchbolt on pairs of fire doors. Provide manufacturer's standard wrought box strike for each latch or lock, with curved lip extended to protect frame. Locks and latchsets tested to exceed 8,000,000 cycles. Provide molex connections for electrified functions as a standard. Lock case to be steel, incorporate one piece spring cage and spindle. Precision solid brass 6-pin cylinder with nickel silver keys available in Schlage keyways. Levers to be solid with no plastic inserts.

Supply as Specified: Schlage "ND" series

.6 Exit Devices/Device Trims/Mullions:

Heavy Duty
Exit device to be cUL listed for panic hardware and fire exit hardware. Supply panic hardware and fire exit devices featuring coil compression springs on device mechanism subassemblies and dead latching mechanisms for active latch bolts. Supply exit devices with smooth mechanism case and "the quiet one" fluid dampener to eliminate noise associated with exit device operations. Non-handed device with touchpad assemblies with no exposed fasteners and cast end caps, reinforced aluminum with stainless steel touchpad and raised edge to minimize pinching. Roller strikes to be standard on rim and

surface vertical rod devices, mortise exit devices (626) complete with strikes that match the same finish as the device. Doors greater than 950mm wide supply long bar exit devices, doors greater than 2134mm high supply extension rods for surface vertical rod series. 1,000,000cycle testing independently certified by ETL.

Supply as Specified: Von Duprin 98 series

Narrow Style:
Exit device to be cUL listed for panic hardware and fire exit hardware. Supply exit devices and fire exit devices featuring coil compression springs on device mechanism subassemblies and dead latching mechanisms for active latch bolts. Supply exit devices with smooth mechanism case and “the quiet one” fluid dampener to eliminate noise associated with exit device operations. Non-handed device with touchpad assemblies

with no exposed fasteners and cast end caps, reinforced aluminum with stainless steel touchpad and raised edge to minimize pinching. Doors greater than 950mm wide supply long bar exit devices, doors greater than 2134mm (84”) high supply extension rods were required. Fits door stiles as narrow as 45mm (1 ¾”).

Supply as Specified: Von Duprin 35A series

.7 Door Closers:

Door closers to have the following features (see separate closer sections below for further information):

- Fully hydraulic, rack and pinion action with high strength cast iron cylinders and one-piece forged steel pistons.
- Include high efficiency, low friction pinion bearings.
- Hydraulic fluid of a type requires no seasonal adjustments, ULTRA X TM fluid has constant temperature control from -35 degrees Celsius to +49 degrees Celsius.
- Hydraulic regulation controlled by tamper-proof, non-critical screw valves, adjustable with a hex wrench.
- Separate adjustments for backcheck, general speed and latch speed.
- Door closers with special template (ST-) numbers include required associated product, information sheets and instructions
- Size 1 manual door closers to provide less than 5 pounds opening force on a 900mm door leaf.
- Door closer with Pressure Relief Valves are not accepted.
- Door closer bodies, arms, covers to be powder coated
- Closers with powder coat finishes to exceed a minimum 100-hour salt spray test, as described in ANSI A156.18 and ASTM B117.
- Closers detailed with plated finishes to include plated covers (or finish plates), arms and visible fasteners.

Medium Duty Mechanical (Interior/Exterior):
Non-sized (1-6) and non-handed cylinder body to have 1 ¼” (32mm) piston diameter with 5/8” (16mm) single heat-treated shaft. Track closer cylinder body non-sized (2-4) or (1-2). Closers to have forged steel main arm and forearm EDA and CUSH type arms). Optional arms to be interchangeable within the series of closers, except track arm type closers. Track arm type closers to have single lever arm with low friction track and roller assembly and provisions for an optional bumper to assist backcheck.

Supply as Specified: LCN1460 HD series

Heavy Duty Mechanical (Multiple Applications):
Non-sized (1-6) and non-handed cast iron cylinder body to have 1 1/2” piston diameter with 3/4” journal double heat-treated pinion shaft with 5/8” full complement bearings. XP closer hydraulic regulation controlled by tamper-proof, non- critical screw valves, abrasion resistant Vitron “O” ring, adjustable with a hex wrench. Closer to have “FAST” Power Adjust speed dial to show spring size power. Track closers non-sized 1-4. Closers to have

forged steel main arm and forearm (forged steel main arm and forearm EDA and CUSH type arms). Optional arms to be interchangeable within the series of closers, except track arm type closers. Track arm type closers to have single lever forged arm with low friction track and roller assembly and provisions for an optional bumper to assist backcheck.

Supply as Specified: LCN 4040XP series

"NOTE: LOW ENERGY OPERATORS SUPPLIED AND INSTALLED BY THIS SECTION"

Heavy Duty Electric Operator
Provide low energy automatic operator units that are electro-mechanical design. Powered by DC motor working through reduction gears. Spring force closing. Motor is off when door is in closing mode. Door can be manually operated with power on or off without damage to operator. Provide variable adjustments, including opening and

closing speed adjustment. Provide units with manual off/auto/hold-open switch, push and go function to activate power operator, vestibule interface delay, electric lock delay, hold-open delay adjustable from 2 to 30 seconds, and logic terminal to interface with accessories, mats, and sensors. Provide full length aluminum header, drop plates, angle brackets, or adapters for arms to suit details. Sequence operation of exterior and vestibule doors with automatic operators to allow ingress or egress through both sets of openings, consult with owner.

Supply as Specified: LCN 9542, 9553

Heavy Duty Electric Operator:
Non-sized (2-5) and non-handed cylinder body to have 38mm (1 1/2") piston diameter with 17mm (11/16") double heat-treated shaft and certified to exceed ten million (10,000,000) manual full load operating cycles by a recognized independent testing laboratory. Power operator to include:

- Provisions for separate conduits to carry high and low voltage wiring in compliance with the National Electrical code.
- "Second Chance" function: program within the on-board computer monitoring resistance during opening cycle. If resistance is present operator pauses for a few seconds, then attempts to open door again. If resistance does not exist door will open normally. If resistance still exists, door will pause and the unit will time out and door will close.
- "Breakaway" drive system: System within the motor/clutch assembly. If the door is forced closed while in the opening cycle, the clutch slips preventing damage to the operator, door and frame.
- "Soft Start" motor control: required for controlled start once actuator is depressed to extend the service life of drives components.
- "Built in Power Supply" to deliver 12V and 24V outputs up to a maximum of 1.0 amp.
- Certified by cUL for use on labeled doors.
- Independent adjustments for electrically controlled functions within controller module.
- Provide drop plates, brackets, or adapters for arms, long rod and shoe to suit details.

Supply as Specified: LCN 4640 series

.8 Actuators:

Wall Type
Wall plate switch to be hard-wired actuator with square, stainless steel touch plate 4 ¾" square. Engraved blue filled handicap symbol conforms to most accessibility codes. Units to include heavy grade components for vandal resistant mounting and weather resistant switch standard.

Supply as specified: LCN 8310-852T, 8310-836T

.9 Overhead Door Stops/Holders:

Medium-Duty Surface Mounting:
Surface overhead stops/holders to be stainless steel base, non-handed for single-acting doors with a channel/slide-arm design and offset jamb bracket to allow for simple field modifications of functions. Channel to be surface mounted to the door with thru bolts and the jamb bracket is surface mounted to the jamb.

Supply as Specified: Glynn-Johnson 450 series

Heavy Duty Surface Mounted:
Surface overhead stops/holders to be stainless steel base, non-handed for single-acting doors with a heavy-duty channel/slide-arm design and offset jamb bracket to allow for simple field modifications of functions. Channel to be surface mounted to the door with

thru bolts and the jamb bracket is surface mounted to the frame soffit.

Supply as Specified: Glynn-Johnson 90 series

Heavy Duty Concealed Mounting:
Concealed overhead stops/holders to be stainless steel base, non-handed for single or double-acting doors with a low-profile channel, mortised in the door and jamb bracket is mortised in the doorframe. Unit to be fully concealed when door is in the closed position. Units to be field adjustable for function changes if required.

Supply as Specified: Glynn-Johnson 100 series

.10 Door Pulls/Flatware:

Door Pulls are to be 19mm, 25.4 mm diameter
Flatware to be of stainless steel material, .050 gauge

Supply as Specified: 8145EZHD (Door Pull) mounting as indicated in the hardware sets.

Ives 8400 (Kickplates 40mm less door width single door and 25mm less door width double doors)

Ives 9264 (Door Pull) mounting as indicated in the hardware sets.

.11 Floor/Wall Stops:

Wall Stops (No Button on Locking Hardware):
Wall stops to be constructed of stainless steel base with special retainer cup that makes the rubber stop tamper resistant. Convex design of rubber bumper.

Supply as Specified: Ives WS407/406 CVX

Wall Stops (Projecting Button on Locking Hardware):
Wall stops to be constructed of stainless steel base with special retainer cup that makes the rubber stop tamper resistant. Concave rubber bumper to avoid damage to locks with projecting buttons.

Supply as Specified: Ives WS407/406CCV

Floor Stops:
Floor stops to be heavy-duty cast dome stop constructed of brass/bronze with grey, non-marring rubber bumper.

Supply as Specified: Ives FS439

.12 Door Holder/ Door Strike:

Supply as Specified: Ives FS455 Seres, Ives DP2 series

.13 Weather/Smoke/Sound Seals:

Supply as Specified:	Zero	429AA (head seal)
	Note: Mount head seal prior to soffit mounted hardware	
	Zero	328AA (jamb seal)
	Zero	188SBK PSA (jamb seal, head/jamb seal)
	Zero	8303AA (gasketing)

.14 Thresholds/Weatherstrip/Door Sweeps:

Supply as Specified:	Zero	8192AA (Door Sweep)
	Zero	625A (Threshold)

.15 Electric Strikes, Power Transfers,

Electric Strikes:
Grade 1, electric strikes to be cUL listed burglary-resistant and electric strike for fire doors and frames. A label for single doors and B label for double doors. Electric strikes to be

stainless steel construction, non-handed available in 12V or 24V AC or DC with continuous duty solenoid and accept ¾" throw latchbolts. Strike box to be adjustable to compensate for any misalignment of the door or frame with two piece plug connector for ease of installation.

Supply as Specified: Von Duprin 6000, 5100.

Power Supplies:
Power supplies to be tested and certified to meet UL294. Universal 120-240 VAC input, low voltage DC output, regulated and filtered. Power supplies to have 2A, 4A, 6A output,12/24VDC field selectable with jumper. Provide emergency release terminals, where required, that allow the release of devices upon activation of the fire alarm system complete with fire alarm input for initiating "no delay" exiting mode. Power supply to be flat mounting design and polarized locking connections for additional option boards specified.

Supply as Specified: Schlage Electronics PS-902

Power Transfer
Provide a means to transfer power from frame to door stile. Devices shall be reversible and allow a full 180° door swing with114mm x 114mm (4 1/2" x 4 1/2") butt hinges or 19mm (3/4") offset pivots. When door is in closed position, transfer unit shall be concealed. Transfer units shall contain ten 24awg UL approved conductors. Rating: 10 Amps at 24 VDC (Class 1 low voltage)

Supply as Specified: Von Duprin EPT

Molex Connectors:
Where scheduled in the hardware sets, provide each item of electrified hardware and wire harnesses with sufficient number and wire gauge with standardized Molex plug connectors to accommodate electric function of specified hardware. Provide Molex connectors that plug directly into connectors from harnesses, electric locking and power transfer devices. Provide through-door wire harness for each electrified locking device installed in a door and wire harness for each electrified hinge, electrified continuous hinge, electrified pivot, and electric power transfer for connection to power supplies.

Mortar Guards:
Provide and supply to hollow metal supplier to weld in place TA 6400 series by Thomas Access Control at frame locations where electrified hardware components are to be mounted. Provide handing of mortar guard boxes to the hollow metal frame supplier. Hollow Metal frame supplier is responsible for ensuring the proper location of required mortar boxes.

Junction Box:
Provide high quality NEMA 1, junction box to provide convenient installation for electrified hardware. Units are surface mounted 254mm (10") high, 254mm (10") wide, 152mm (6") deep and includes hinged door with twist turn lock, 20 position terminal strips to accept 24 to 12 gauge wire.

Supply as Specified: Von Duprin JB7

Provide products to connect with ENGAGE™ cloud bases web and mobile applications to manage settings, manage users, assign access privileges, and view audits and alerts. ENGAGE™ mobile app will commission and connect Schlage Control®, Schlage® CTE controller, NDEB, LEB, MTB.

Supply as Specified: MTB11/MTB15 to suite application
MT20 USB Enrollment reader
CTE Controller
2420 Smart Credentials

2.3 FINISHES

.1 Unless otherwise specified, finishes to be brushed chrome (BHMA 626/652).

Finishes are specified as follows:

ITEM	BHMA#	DESCRIPTION	BASE MATERIAL
Hinges	630	satin stainless steel	stainless steel
Hinges	652	satin chrome plated	steel
Continuous Hinges	689	anodized aluminum	aluminum
Lock Trim	626	satin chrome plated	brass/bronze
Exit Devices	626	satin chrome plated	brass/bronze
Door Closer	689	powder coat aluminum	steel
Door Pulls	630	satin stainless steel	stainless steel
Protective Plate	630	satin stainless steel	stainless steel
Door Stops/Holders			
Overhead	630	satin stainless steel	stainless steel
Wall/Floor	626	satin chrome plated	brass/bronze
Thresholds	628	anodized aluminum	aluminum
Weatherstrip	628	anodized aluminum	aluminum
Miscellaneous			
Electric Strikes	630	satin stainless steel	stainless steel

2.4 CYLINDERS, KEYING SYSTEMS AND KEY CONTROL

.1 Meet with the Owner to finalize keying requirements and obtain keying instructions in writing as outlined in Division 1. Locks, cylinders and keys shall be furnished with a new Schlage Factory Master keyed system.

.2 Provide temporary construction keying system during construction period. Permanent keys will be furnished to the Owner's Representative prior to occupancy. The Owner or Owner's Security Agent will void the operation of the construction keys.

.3 Permanent cylinders to be keyed by factory, combinated in sets or subsets, master keyed or great grand master keyed, as directed by Owner. Permanent keys, keyblanks and cylinders shall be stamped with the applicable blind code for identification. These visual key control marks or codes will not include the actual key cuts. Stamp cylinders with concealed visual keying for added security. Permanent keys will also be stamped "Do Not Duplicate" except for suite entry keys. Keys and cylinder identification stamping to be approved by the Consultant and Owner. Failure to properly comply with these requirements may be cause to require replacement of the cylinders and keys involved as deemed necessary at no additional cost to the Owner.

.4 Equip locks and cylinders with patent protected, full size cylinders with nickel silver blocking pin to check for patented feature on keys. Provide a minimum of six pins with nickel silver bottom pins. Cylinders must allow for multiplex master keying, combinated to Owner's instructions.

.5 Provide complete cross-index system, place keys on markers and hooks in the cabinet as determined by the final key schedule. Provide one each key cabinet, hinged panel type cabinet for wall mounting.

.6 Deliver permanent key blanks and other security keys direct to Owner's representative from factory by secure courier, return receipt requested. Failure to properly comply with these requirements may be cause to require replacement of cylinders and keys involved as deemed necessary at no additional cost to the Owner.

Keying requirements to be confirmed by owner.

PART 3 – EXECUTION

3.1 EXAMINATION

.1 Ensure that doors and frames are prepared and reinforced to receive finish hardware prior to installation.

.2 Ensure that door frames and finished floor are plumb and level to permit proper engagement and operation of hardware.

.3 Verify power is run to door opening requiring electrified hardware.

.4 Submit in writing a list of deficiencies determined as part of inspection required in 3.1.1 and 3.1.2 to supervising consultant prior to installation of finished hardware. Correct door frame installation before proceeding with finish hardware installation.

3.2 INSTALLATION

.1 Hardware Installers must have a minimum of five (5) years' experience in installation of hardware. Provide verification of installer's qualification to Consultant for approval. Installers to attend review meetings conducted by the hardware distributor.

.2 Install hardware at mounting heights as specified in the manufacturer's templates or specific references in approved hardware schedule or approved elevation drawings.

.3 Where mounting height is not otherwise specified, install hardware at mounting heights as indicated in 1.5.1, 1.5.2.

.4 Install hardware using only manufacturer supplied and approved fasteners in strict adherence with manufacturers published installation instructions.

.5 Ensure locksets / latchsets / deadlocks are of the correct hand before installation to ensure that the cylinder is in the correct position. **Handing is part of installation procedure.**

.6 Ensure that exit devices are of the correct hand and adjust device cam/drive screw for proper outside trim function prior to installation. Handing is part of installation procedure.

.7 Follow manufactures installation instructions. Adjustment of door closers is inclusive of spring power, closing speed, latching speed and back-check, valve screws to achieve backcheck (4040, 4040XP series) at the time of installation.

.8 Adjust delayed action door closers to forty (40) second delay for barrier free accessibility and movement of materials. Time period to be approved by Owner.

.9 Install head seal weatherstrip prior to installation of soffit mounted hardware. Trim, cut and notch thresholds and saddles neatly to minimally fit the profile of the door frame. Install thresholds and saddles in a bed of caulking completely sealing the underside from water and air penetration.

.10 Counter sink through bolt of door pull under push plate during installation.

.11 Install blocking material in cavities of metal and wood stud walls and partitions. Located concave and convex type door bumpers at the appropriate height to properly contact protruding door trim.

3.3 FIELD QUALITY CONTROL

.1 Verify each door leaf opens closes and latches. Inspect fire rated openings to ensure they are installed in compliance with NFPA 80 requirements. Test access control system and electrified hardware devices for proper operation with owner to sign off on verification of operation. Verify electric door release hardware operates to close the door upon activation of the fire alarm system.

.2 Perform bi-monthly on-site inspections during hardware installation and provide inspection reports listing progress of work, unacceptable work and corrective measures. Repair or replace as directed by the Consultant.

.3 Before completion of the work but after the hardware has been installed, submit a certificate to the Consultant stating that final inspection has been made and that hardware has been checked for installation and operation.

3.4 ADJUSTING AND CLEANING

.1 Check and make final adjustments to each operating item of hardware on each door to ensure proper operation and function.

.2 Adjust doors with self-closing devices or automatic closing devices for operation after the HVAC system is balanced and adjusted. Adjust spring power of non sized door closers to close and latch the door.

.3 Hardware to be left clean and free of disfigurements.

.4 Instruct owner personnel in the operation, adjustment and maintenance of hardware.

.5 Check locked doors against approved keying schedule.

3.5 PROTECTION

.1 Protect hardware from damage during construction. Wrap locks, panic hardware, and fire exit hardware, door pull trim with kraft paper or plastic bubble materials to protect finish from damage until date of substantial completion. Remove and reinstall or where necessary, use temporary hardware to maintain finish in new condition and maintain manufacturer’s warranty.

3.6 HARDWARE GROUPS

Legend: ↙Electrified Opening

Door#	HwSet#
001	01
002	02
003	03
004	04
005	04
006	02
007	04
008	01
009	04
101↙	05
102↙	06
103↙	07
104↙	08
105↙	08
106↙	09
107↙	10
108↙	05
109↙	10
110↙	08
111↙	11
112↙	12
113↙	13
114	14
115↙	15
116	16
117	17
118↙	18
119	16
120↙	19
121	20
122	20
123	20
124	20
125	20
126	20
127	20
128	20
129	21
130	21
131	22
132	23
133	24
134	25
135	26
136	21

Door#	HwSet#
137	21
138	27
139	28
140	29
141	30
142	22
143	31
144↙	15
145	20
146	20
147	20
148	20
149	20
150	20
151	20
152↙	19
153	20
154	20
155	20
156	20
157	20
158	20
159↙	15
160	21
161	21
162	20
163	20
164	32
165	33
166↙	34
167	35
168	36
169	21
170	21
171	37
172	38
173	24
174	39
175	39
176	37
201↙	40
202	20
203	20
204	20
205	20

Door#	HwSet#
206	20
207	20
208	20
209↙	19
210	20
211	20
212	20
213	20
214	20
215	20
216	20
217	20
218↙	40
219	41
220	21
221	21
222	42
223	43
224↙	40
225	21
226	21
227	20
228	44
229	45
230	46
231	43
232	44
233	45
234↙	40
235	20
236	20
237	20
238	20
239	20
240	20
241	20
242	20
243	20
244	20
245	20
246	20
247	20
248↙	19
249	20
250	20

Door#	HwSet#
251	20
252	20
253	20
254	20
255	20
256	20
257	03
258	46
259	47
260	43
261	48
262	48
263	38
264 ↙	40
265	38
266	03
267	49
268	02
269	21
270	21
301 ↙	50
302 ↙	51
303 ↙	51
304 ↙	52
E-101 ↙	53
E-102	54
E-103	54
MISC. HW SET	55

Legend:
Link to catalog cut sheet
Electrified Opening

Hardware Group No. 01

For use on Door #(s):
001 008

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4		652	IVE
1	EA	PASSAGE SET	ND10S RHO		626	SCH
1	EA	SURFACE CLOSER	4040XP REG		689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CVX		630	IVE
1	EA	SMOKE/SOUND SEAL	188SBK PSA X PERIMETER		BK	ZER

Hardware Group No. 02

For use on Door #(s):
~~002~~ ~~006~~ 268

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4		652	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO		626	SCH
1	EA	SURFACE CLOSER	1461 REG OR PA AS REQ STD		689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CVX		630	IVE

Hardware Group No. 03

For use on Door #(s):
003 257 266

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4		652	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO		626	SCH
1	EA	SURFACE CLOSER	1461 REG OR PA AS REQ STD		689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CVX		630	IVE
1	EA	SMOKE/SOUND SEAL	188SBK PSA X PERIMETER		BK	ZER

Hardware Group No. 04

For use on Door #(s):

004 005 007 009 002 006

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4		652	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO		626	SCH
1	EA	SURFACE CLOSER	4040XP DEL		689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CVX		630	IVE
1	EA	SMOKE/SOUND SEAL	188SBK PSA X PERIMETER		BK	ZER

Hardware Group No. 05 - CARD READER/ DOOR OPERATOR

For use on Door #(s):
101 108

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
1	EA	CONT. HINGE	112XY/ 027XY TO SUIT			711	IVE
1	EA	CONT. HINGE	112XY/ 027XY EPT TO SUIT			711	IVE
1	EA	POWER TRANSFER	EPT10 CON		✓	622	VON
1	EA	PANIC HARDWARE	9849-EO			711	VON
1	EA	ELEC PANIC HARDWARE	HD-QEL-9849-NL-OP-110MD-CON 24 VDC		✓	711	VON
1	EA	RIM CYLINDER	20-021 EV29 S			622	SCH
2	EA	LONG DOOR PULL	9264 48" 20" STD			BLK	IVE
1	EA	OH STOP	100S			BLK	GLY
1	EA	OH STOP	100S ADJ			BLK	GLY
1	EA	SURFACE CLOSER	4040XP LONG TOP JAMB			622	LCN
1	EA	SURF. AUTO OPERATOR	9542 LONG HDR2 ST-3625 AS REQ (120/240 VAC)		✓	GLBLK	LCN
1	EA	FLUSH CEILNG MTG PLT	4040XP-18G			689	LCN
1	EA	KEYSWITCH	8310-806K		✓	BLK	LCN
2	EA	36" LONG ACTUATOR	8310-836T		✓	630	LCN
1	EA	MOUNTING PLATE	9540-18			689	
1	EA	PERIMETER SEAL	BY ALUMINUM DOOR SUPPLIER				
1	EA	THRESHOLD	CT__ x FROST INSERT x CT__ X REQ. WIDTH/DEPTH TO MATCH FRAME PROFILE / SITE CONDITIONS			BLA	KNC
2	EA	DOOR SWEEP	8192BK X DR WIDTH			BK	ZER
1	EA	WIRE HARNESS	CON-___ TO SUIT				SCH
1	EA	WIRE HARNESS	CON-6W				SCH
1	EA	CARD READER	BY DIV 28		✓		UNK
2	EA	DOOR CONTACT	679-05HM		✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-2RS 120/240 VAC		✓	LGR	SCE

Hardware Group No. 06 - CARD READER

For use on Door #(s):
102

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4 NRP			630	IVE
1	EA	VANDL STOREROOM LOCK	ND96P6D RHO			626	SCH
1	EA	ELECTRIC STRIKE	6211 FSE CON 12/16/24/28 VAC/VDC			630	VON
1	EA	SURFACE CLOSER	4040XP SCUSH ST-1595 ST-3068			689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS			630	IVE
2	SET	JAMB SEAL	328AA (2 X H)			AA	ZER
1	EA	GASKETING (HEADER)	429AA- INSTALL PRIOR TO ANY HARDWARE			AA	ZER
1	EA	DOOR SWEEP	8192AA X DR WIDTH			AA	ZER
1	EA	THRESHOLD	625A X OPENING WIDTH			A	ZER
1	EA	WIRE HARNESS	CON-___ TO SUIT				SCH
1	EA	WIRE HARNESS	CON-6W				SCH
1	EA	CARD READER	BY DIV 28				UNK
1	EA	DOOR CONTACT	679-05HM			BLK	SCE
1	EA	POWER SUPPLY	PS902 120/240 VAC			LGR	SCE

Hardware Group No. 07 - CARD READER/ DOOR OPERATOR

For use on Door #(s):
103

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
1	EA	CONT. HINGE	112XY/ 027XY EPT TO SUIT			711	IVE
1	EA	POWER TRANSFER	EPT10 CON			622	VON
1	EA	ELEC PANIC HARDWARE	HD-QEL-98-NL-OP-110MD-CON 24 VDC			711	VON
1	EA	RIM CYLINDER	20-021 EV29 S			622	SCH
1	EA	LONG DOOR PULL	9264 48" 20" STD			BLK	IVE
1	EA	OH STOP	100S ADJ			BLK	GLY
1	EA	SURF. AUTO OPERATOR	9542 LONG HDR2 ST-3625 AS REQ (120/240 VAC)			GLBLK	LCN
1	EA	KEYSWITCH	8310-806K			BLK	LCN
2	EA	36" LONG ACTUATOR	8310-836T			630	LCN
1	EA	MOUNTING PLATE	9540-18			689	
1	EA	PERIMETER SEAL	BY ALUMINUM DOOR SUPPLIER				
1	EA	THRESHOLD	CT__ x FROST INSERT x CT__ X REQ. WIDTH/DEPTH TO MATCH FRAME PROFILE / SITE CONDITIONS			BLA	KNC
1	EA	DOOR SWEEP	8192BK X DR WIDTH			BK	ZER
1	EA	WIRE HARNESS	CON-___ TO SUIT				SCH
1	EA	WIRE HARNESS	CON-6W				SCH
1	EA	CARD READER	BY DIV 28				UNK
1	EA	DOOR CONTACT	679-05HM			BLK	SCE
1	EA	POWER SUPPLY	PS902 900-2RS 120/240 VAC			LGR	SCE

Hardware Group No. 08

For use on Door #(s):
104 105 110

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4 NRP		630	IVE
1	EA	PANIC HARDWARE	98-NL-OP-110MD		626	VON
1	EA	RIM CYLINDER	20-021		626	SCH
1	EA	45 DEGREE OFFSET PULL	8145EZHD 12" O		630	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH ST-1595 ST-3068		689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
2	SET	JAMB SEAL	328AA (2 X H)		AA	ZER
1	EA	GASKETING (HEADER)	429AA- INSTALL PRIOR TO ANY HARDWARE		AA	ZER
1	EA	DOOR SWEEP	8192AA X DR WIDTH		AA	ZER
1	EA	THRESHOLD	625A X OPENING WIDTH		A	ZER
1	EA	DOOR CONTACT	679-05HM		BLK	SCE

Hardware Group No. 09

For use on Door #(s):
106

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		630	IVE
1	EA	VANDL STOREROOM LOCK	ND96P6D RHO		626	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH ST-1595 ST-3068		689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
2	SET	JAMB SEAL	328AA (2 X H)		AA	ZER
1	EA	GASKETING (HEADER)	429AA- INSTALL PRIOR TO ANY HARDWARE		AA	ZER
1	EA	DOOR SWEEP	8192AA X DR WIDTH		AA	ZER
1	EA	THRESHOLD	625A X OPENING WIDTH		A	ZER
1	EA	DOOR CONTACT	679-05HM		BLK	SCE

Hardware Group No. 10 - DOOR OPERATOR

For use on Door #(s):
107 109

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
1	EA	CONT. HINGE	112XY/ 027XY EPT TO SUIT			711	IVE
1	EA	POWER TRANSFER	EPT10 CON			622	VON
1	EA	ELEC PANIC HARDWARE	HD-QEL-98-NL-OP-110MD-CON 24 VDC			711	VON
1	EA	RIM CYLINDER	20-021 EV29 S			622	SCH
1	EA	45 DEGREE OFFSET PULL	8145EZHD 12" O			BLK	IVE
1	EA	OH STOP	100S ADJ			BLK	GLY
1	EA	SURF. AUTO OPERATOR	9542 LONG HDR2 ST-3625 AS REQ (120/240 VAC)			GLBLK	LCN
1	EA	KEYSWITCH	8310-806K			BLK	LCN
2	EA	36" LONG ACTUATOR	8310-836T			630	LCN
1	EA	MOUNTING PLATE	9540-18			689	
1	EA	PERIMETER SEAL	BY ALUMINUM DOOR SUPPLIER				
1	EA	THRESHOLD	CT__ x FROST INSERT x CT__ X REQ. WIDTH/DEPTH TO MATCH FRAME PROFILE / SITE CONDITIONS			BLA	KNC
1	EA	DOOR SWEEP	8192BK X DR WIDTH			BK	ZER
1	EA	WIRE HARNESS	CON-___ TO SUIT				SCH
1	EA	WIRE HARNESS	CON-6W				SCH
1	EA	DOOR CONTACT	679-05HM			BLK	SCE
1	EA	POWER SUPPLY	PS902 900-2RS 120/240 VAC			LGR	SCE

Hardware Group No. 11 - CARD READER

For use on Door #(s):
111

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4 NRP			630	IVE
1	EA	POWER TRANSFER	EPT10 CON		✓	689	VON
1	EA	ELEC PANIC HARDWARE	HD-QEL-98-NL-OP-110MD-CON 24 VDC		✓	626	VON
1	EA	RIM CYLINDER	20-021			626	SCH
1	EA	45 DEGREE OFFSET PULL	8145EZHD 12" O			630	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH ST-1595 ST-3068			689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS			630	IVE
2	SET	JAMB SEAL	328AA (2 X H)			AA	ZER
1	EA	GASKETING (HEADER)	429AA- INSTALL PRIOR TO ANY HARDWARE			AA	ZER
1	EA	DOOR SWEEP	8192AA X DR WIDTH			AA	ZER
1	EA	THRESHOLD	625A X OPENING WIDTH			A	ZER
1	EA	WIRE HARNESS	CON-___ TO SUIT				SCH
1	EA	WIRE HARNESS	CON-6W				SCH
1	EA	CARD READER	BY DIV 28		✓		UNK
1	EA	DOOR CONTACT	679-05HM		✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-2RS 120/240 VAC		✓	LGR	SCE

Hardware Group No. 12 - CARD READER/ DOOR OPERATOR

For use on Door #(s):
112

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
5	EA	HINGE	5BB1 4.5 X 4 NRP			630	IVE
1	EA	ELECTRIC HINGE	5BB1 4.5 X 4 CON TW8		✓	630	IVE
1	EA	CONST LATCHING BOLT	FB51P			630	IVE
1	EA	DUST PROOF STRIKE	DP2			626	IVE
1	EA	VANDL STOREROOM LOCK	ND96P6D RHO 14-042			626	SCH
1	EA	ELECTRIC STRIKE	6223 FSE CON 12/16/24/28 VAC/VDC		✓	630	VON
1	EA	LOCK GUARD	LG14			630	IVE
1	EA	OH STOP	100S ADJ			630	GLY
1	EA	SURFACE CLOSER	4040XP SCUSH ST-1595 ST-3068			689	LCN
1	EA	SURF. AUTO OPERATOR	9542 AS REQ (120/240 VAC)		✓	ANCLR	LCN
1	EA	FLUSH CEILNG MTG PLATE	4040XP-18G SRT			689	LCN
1	EA	KEYSWITCH	8310-806K		✓	BLK	LCN
2	EA	36" LONG ACTUATOR	8310-836T		✓	630	LCN
1	EA	MOUNTING PLATE	9540-18			689	
2	EA	KICK PLATE	8400 250MM X SIZE TO SUIT B-CS			630	IVE
2	EA	GASKETING (JAMB)	328AA X REQ. HEIGHT			AA	ZER
1	EA	GASKETING (HEAD)	429AA-S X REQ. WIDTH			AA	ZER
1	EA	ASTRAGAL	43STST X REQ. HEIGHT			STST	ZER
2	EA	DOOR SWEEP	8192AA X DR WIDTH			AA	ZER
1	EA	THRESHOLD	625A X FRAME WIDTH			A	ZER
1	EA	WIRE HARNESS	CON-___ TO SUIT				SCH
1	EA	WIRE HARNESS	CON-6W				SCH
1	EA	CARD READER	BY DIV 28		✓		UNK
2	EA	DOOR CONTACT	679-05 TO SUIT DR MTRL.		✓	BLK	SCE

NOTE- CUT THE ASTRAGAL TO ACCOMODATE THE LATCH GUARD.

Hardware Group No. 13

For use on Door #(s):
113

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
2	EA	CONT. HINGE	112XY/ 027XY TO SUIT			711	IVE
2	EA	DUMMY PUSH BAR	350			711	VON
2	EA	LONG DOOR PULL	9264 48" 20" STD			BLK	IVE
1	EA	OH STOP	100S			BLK	GLY
1	EA	OH STOP	100S ADJ			BLK	GLY
1	EA	SURFACE CLOSER	4040XP REG OR PA AS REQ SPEC			622	LCN
1	EA	SURF. AUTO OPERATOR	9542 LONG HDR2 ST-3625 AS REQ (120/240 VAC)			GLBLK	LCN
1	EA	FLUSH CEILNG MTG PLATE	4040XP-18G SRT			693	LCN
1	EA	KEYSWITCH	8310-806K			BLK	LCN
2	EA	36" LONG ACTUATOR	8310-836T			630	LCN
2	EA	MOUNTING PLATE	9540-18			689	

~~Hardware Group No. 14~~

~~For use on Door #(s):~~
~~114~~ Refer to Hardware Group 20

~~Provide each SGL door(s) with the following:~~

~~QTY~~		~~DESCRIPTION~~	~~CATALOG NUMBER~~			~~FINISH~~	~~MFR~~
~~3~~	~~EA~~	~~HINGES~~	~~BY PC350~~				~~UNK~~
~~1~~	~~EA~~	~~ENTRANCE/OFFICE LOCK~~	~~ND50P6D RHO~~			~~622~~	~~SCH~~
~~1~~	~~EA~~	~~WALL STOP~~	~~WS406/407CVX~~			~~BLK~~	~~IVE~~

~~NOTE: PROVIDED EXTENDED LIP STRIKE TO SUIT PC350 FRAMES.~~

Hardware Group No. 15 - CARD READER

For use on Door #(s):
115 144 159

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
3	EA	HINGES	BY PC350				UNK
1	EA	STOREROOM LOCK	ND80P6D RHO			622	SCH
1	EA	ELECTRIC STRIKE	BY PC350				UNK
1	EA	SURFACE CLOSER	4040XP REG OR PA AS REQ SPEC			622	LCN
1	EA	WALL STOP	WS406/407CVX			BLK	IVE
1	EA	WIRE HARNESS	CON-___ TO SUIT				SCH
1	EA	WIRE HARNESS	CON-6W				SCH
1	EA	CARD READER	BY DIV 28				UNK
1	EA	DOOR CONTACT	679-05HM			BLK	SCE

NOTE: PROVIDED EXTENDED LIP STRIKE TO SUIT PC350 FRAMES.

Hardware Group No. 16

For use on Door #(s):
116 119

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGES	BY PC350			UNK
1	EA	CLASSROOM LOCK	ND70P6D RHO		622	SCH
1	EA	WALL STOP	WS406/407CVX		BLK	IVE

NOTE: PROVIDED EXTENDED LIP STRIKE TO SUIT PC350 FRAMES.

Hardware Group No. 17

For use on Door #(s):
117

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 5 X 4.5		652	IVE
1	EA	PASSAGE SET	ND10S RHO		626	SCH
1	EA	SURFACE CLOSER	4040XP HCUSH ST-3068		689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE

Hardware Group No. 18 - DOOR OPERATOR

For use on Door #(s):
118

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
1	EA	CONT. HINGE	112XY/ 027XY EPT TO SUIT			711	IVE
1	EA	DUMMY PUSH BAR	350			711	VON
1	EA	LONG DOOR PULL	9264 48" 20" STD			BLK	IVE
1	EA	OH STOP	100S ADJ			BLK	GLY
1	EA	SURF. AUTO OPERATOR	9542 LONG HDR2 ST-3625 AS REQ (120/240 VAC)		✓	GLBLK	LCN
1	EA	KEYSWITCH	8310-806K		✓	BLK	LCN
2	EA	36" LONG ACTUATOR	8310-836T		✓	630	LCN
1	EA	MOUNTING PLATE	9540-18			689	
1	EA	PERIMETER SEAL	BY ALUMINUM DOOR SUPPLIER				

Hardware Group No. 19 - CARD READER

For use on Door #(s):
120 152 209 248

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4 NRP			652	IVE
1	EA	FIRE EXIT HARDWARE	98-L-NL-F-06			626	VON
1	EA	RIM CYLINDER	20-021			626	SCH
1	EA	ELECTRIC STRIKE	6111 FSE CON 12/24 VAC/VDC		✓	630	VON
1	EA	SURFACE CLOSER	4040XP EDA			689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS			630	IVE
1	EA	WALL STOP	WS406/407CVX			630	IVE
1	EA	SMOKE/SOUND SEAL	188SBK PSA X PERIMETER			BK	ZER
1	EA	WIRE HARNESS	CON-___ TO SUIT				SCH
1	EA	WIRE HARNESS	CON-6W				SCH
1	EA	CARD READER	BY DIV 28		✓		UNK
1	EA	DOOR CONTACT	679-05HM		✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 120/240 VAC		✓	LGR	SCE

Hardware Group No. 20

For use on Door #(s):

121	122	123	124	125	126
127	128	145	146	147	148
149	150	151	153	154	155
156	157	158	162	163	202
203	204	205	206	207	208
210	211	212	213	214	215
216	217	227	235	236	237
238	239	240	241	242	243
244	245	246	247	249	250
251	252	253	254	255	256
114					

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGES	BY PC350			UNK
1	EA	ENTRANCE/OFFICE LOCK	ND50P6D RHO		622	SCH
1	EA	WALL STOP	WS406/407CVX		BLK	IVE
1	EA	ACOUSTIC SOUND SEAL	BY DOOR SUPPLIER			UNK

NOTE: PROVIDED EXTENDED LIP STRIKE TO SUIT PC350 FRAMES.

Hardware Group No. 21

For use on Door #(s):

129	130	136	137	160	161
169	170	220	221	225	226
269	270				

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4		652	IVE
1	EA	PRIVACY LOCK	ND40S RHO		626	SCH
1	EA	KICK PLATE	8400 10" X LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	SMOKE/SOUND SEAL	188SBK PSA X PERIMETER		BK	ZER
1	EA	COAT AND HAT HOOK	510C		626	IVE

Hardware Group No. 22

For use on Door #(s):
131 142

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4		652	IVE
1	EA	ENTRANCE/OFFICE LOCK	ND50P6D RHO		626	SCH
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CVX		630	IVE
1	EA	COAT AND HAT HOOK	510C		626	IVE

Hardware Group No. 23

For use on Door #(s):
132

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 5 X 4.5		652	IVE
1	EA	CLASSROOM DEADBOLT	B663P6		626	SCH
2	EA	DOOR PULL, 1″ ROUND	8103HD 10″ STD		630	IVE
~~1~~	~~EA~~	~~PUSH PLATE~~	~~8200 4" X 16" CFC~~		~~630~~	~~IVE~~
1	EA	OH STOP	100S		BLK	GLY
1	EA	SURFACE CLOSER	4040XP REG X ST-1630		689	LCN
1	EA	KICK PLATE	8400 250MM X SIZE TO SUIT B-CS		630	IVE
1	EA	SMOKE/SOUND SEAL	188SBK PSA X PERIMETER		BK	ZER

Hardware Group No. 24

For use on Door #(s):
133 173

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 5 X 4.5		652	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO		626	SCH
1	EA	SURFACE CLOSER	4040XP H		689	LCN
1	EA	ARMOR PLATE	8400 36" X 1 1/2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CVX		630	IVE

Hardware Group No. 25

For use on Door #(s):
134

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	DOUBLE ACTING SPRING HINGES	1001 6X4-1/2"		652	MKY
1	EA	CLASSROOM LOCK	ND70P6D RHO		626	SCH
1	EA	OH STOP & HOLDER	100H		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	ARMOR PLATE	8400 36" X 1 1/2" LDW B-CS		630	IVE
1	EA	SMOKE/SOUND SEAL	188SBK PSA X PERIMETER		BK	ZER

Hardware Group No. 26

For use on Door #(s):
135

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4 NRP		652	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO		626	SCH
1	EA	SURFACE CLOSER	1461 CUSH		689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
1	EA	SMOKE/SOUND SEAL	188SBK PSA X PERIMETER		BK	ZER

Hardware Group No. 27

For use on Door #(s):
138 229

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY/ 027XY TO SUIT		711	IVE
~~1~~	~~EA~~	~~PANIC HARDWARE~~	~~98-L-06~~		~~711~~	~~VON~~
1	EA	SURFACE CLOSER	4040XP LONG TOP JAMB		622	LCN
1	EA	FLUSH CEILNG MTG PLT	4040XP-18G		689	LCN
1	EA	WALL STOP	WS406/407CVX		BLK	IVE
1	EA	ACOUSTIC SOUND SEAL	BY DOOR SUPPLIER			UNK
2	EA	LONG DOOR PULL	9264 48" 20" STD		BLK	IVE
1	EA	CYLINDER ONLY DEADBOLT	B664P6		626	SCH

Hardware Group No. 28

For use on Door #(s):
139

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 5 X 4.5		652	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO		626	SCH
1	EA	SURFACE CLOSER	1461 H STD		689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CVX		630	IVE

Hardware Group No. 29

For use on Door #(s):
140

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
~~2~~	~~EA~~	~~PANIC HARDWARE~~	~~9850WDC-L-06-SNB~~		~~626~~	~~VON~~
~~2~~	~~EA~~	~~RIM CYLINDER~~	~~20-021~~		~~626~~	~~SCH~~
2	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
2	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
1	EA	SMOKE/SOUND SEAL	188SBK PSA X PERIMETER		BK	ZER
1	SET	JAMB SEAL	328AA (2 X H)		AA	ZER
4	EA	LONG DOOR PULL	9264 48" 20" STD		BLK	IVE
2	EA	FLUSH BOLTS	FB358		626	IVE
2	EA	DOOR HOLDER	FS455		626	IVE
1	EA	DOOR STRIKE	DP2		626	IVE
1	EA	CYLINDER ONLY DEADBOLT	B664P6		626	SCH

Hardware Group No. 30

For use on Door #(s):
141

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGES	BY PC350			UNK
1	EA	CLASSROOM LOCK	ND70P6D RHO		622	SCH
1	EA	SURFACE CLOSER	1461 CUSH STD		622	LCN
1	EA	ACOUSTIC SOUND SEAL	BY DOOR SUPPLIER			UNK

NOTE: PROVIDED EXTENDED LIP STRIKE TO SUIT PC350 FRAMES.

Hardware Group No. 31

For use on Door #(s):
143

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGES	BY PC350			UNK
1	EA	CLASSROOM LOCK	ND70P6D RHO		622	SCH
1	EA	OH STOP	450S SHIM TO SUIT		630	GLY
1	EA	SURFACE CLOSER	1461 REG OR PA AS REQ STD		622	LCN
1	EA	ACOUSTIC SOUND SEAL	BY DOOR SUPPLIER			UNK

NOTE: PROVIDED EXTENDED LIP STRIKE TO SUIT PC350 FRAMES.

Hardware Group No. 32

For use on Door #(s):
164

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGES	BY PC350			UNK
1	EA	CLASSROOM LOCK	ND70P6D RHO		622	SCH
1	EA	OH STOP	450S SHIM TO SUIT		630	GLY

NOTE: PROVIDED EXTENDED LIP STRIKE TO SUIT PC350 FRAMES.

Hardware Group No. 33

For use on Door #(s):
165

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4		652	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO		626	SCH
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CVX		630	IVE

Hardware Group No. 34 - CARD READER

For use on Door #(s):
166

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4			652	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO			626	SCH
1	EA	ELECTRIC STRIKE	6211 FSE CON 12/16/24/28 VAC/VDC			630	VON
1	EA	SURFACE CLOSER	4040XP REG			689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS			630	IVE
1	EA	WALL STOP	WS406/407CVX			630	IVE
1	EA	WIRE HARNESS	CON-6W				SCH
1	EA	CARD READER	BY DIV 28				UNK
1	EA	DOOR CONTACT	679-05HM			BLK	SCE
1	EA	POWER SUPPLY	PS902 120/240 VAC			LGR	SCE

Hardware Group No. 35

For use on Door #(s):
167

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4 NRP		652	IVE
1	EA	ENTRANCE/OFFICE LOCK	ND50P6D RHO		626	SCH
1	EA	SURFACE CLOSER	1461 CUSH		689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
1	EA	COAT AND HAT HOOK	510C		626	IVE

Hardware Group No. 36

For use on Door #(s):
168

Provide each SL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	HARDWARE	ALL HARDWARE BY DOOR SUPPLIER		

Hardware Group No. 37

For use on Door #(s):
171 176

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4 NRP		652	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO		626	SCH
1	EA	SURFACE CLOSER	1461 HCUSH STD		689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE

Hardware Group No. 38

For use on Door #(s):
172 263 265 172A

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4		652	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO		626	SCH
1	EA	SURFACE CLOSER	1461 REG OR PA AS REQ STD		689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CVX		630	IVE
1	EA	SMOKE/SOUND SEAL	188SBK PSA X PERIMETER		BK	ZER
1	EA	COAT AND HAT HOOK	510C		626	IVE

Hardware Group No. 39

For use on Door #(s):
174 175

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 5 X 4.5		652	IVE
1	EA	ENTRANCE/OFFICE LOCK	ND50P6D RHO		626	SCH
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CVX		630	IVE
1	EA	SMOKE/SOUND SEAL	188SBK PSA X PERIMETER		BK	ZER
1	EA	COAT AND HAT HOOK	510C		626	IVE

Hardware Group No. 40 - CARD READER/ CARD READER

For use on Door #(s):
201 218 224 234 264

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
3	EA	HINGES	BY PC350				UNK
1	EA	STOREROOM LOCK	ND80P6D RHO			622	SCH
1	EA	ELECTRIC STRIKE	BY PC350				UNK
1	EA	MAGNETIC LOCK	M450 TJ450 12/24 VDC			628	SCE
1	EA	SURFACE CLOSER	4040XP			622	LCN
1	EA	WALL STOP	WS406/407CVX			BLK	IVE
1	EA	WIRE HARNESS	CON-___ TO SUIT				SCH
1	EA	WIRE HARNESS	CON-6W				SCH
2	EA	CARD READER	BY DIV 28				UNK
1	EA	DOOR CONTACT	679-05HM			BLK	SCE
1	EA	POWER SUPPLY	PS902 900-2RS 120/240 VAC			LGR	SCE

NOTE TO ARCHITECT- CHECK THE COMPATIBILITY OF MAGNETIC LOCK WITH PC350 DOOR AND FRAME SUPPLIER BEFORE ORDERING.
NOTE:- THE CYLINDRICAL LOCKS NEEDS MINIMUM STILE WIDTH OF 4.5" TO BE INSTALLED.
NOTE: PROVIDED EXTENDED LIP STRIKE TO SUIT PC350 FRAMES.

Hardware Group No. 41

For use on Door #(s):
219

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
3	EA	HINGES	BY PC350				UNK
1	EA	CLASSROOM LOCK	ND70P6D RHO			622	SCH
1	EA	SURFACE CLOSER	1461 REG OR PA AS REQ STD			622	LCN
1	EA	WALL STOP	WS406/407CVX			BLK	IVE
1	EA	ACOUSTIC SOUND SEAL	BY DOOR SUPPLIER				UNK

NOTE: PROVIDED EXTENDED LIP STRIKE TO SUIT PC350 FRAMES.

Hardware Group No. 42

For use on Door #(s):
222

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGES	BY PC350			UNK
1	EA	STOREROOM LOCK	ND80P6D RHO		622	SCH
1	EA	SURFACE CLOSER	1461 REG OR PA AS REQ STD		622	LCN
1	EA	WALL STOP	WS406/407CVX		BLK	IVE
1	EA	ACOUSTIC SOUND SEAL	BY DOOR SUPPLIER			UNK

NOTE: PROVIDED EXTENDED LIP STRIKE TO SUIT PC350 FRAMES.

Hardware Group No. 43

For use on Door #(s):
223 231 260

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4		652	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO		626	SCH
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
1	EA	FLOOR STOP	FS439		630	IVE

Hardware Group No. 44

For use on Door #(s):
228 232

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGES	BY PC350			UNK
1	EA	CLASSROOM LOCK	ND70P6D RHO		622	SCH
1	EA	OH STOP	450S SHIM TO SUIT		630	GLY
1	EA	ACOUSTIC SOUND SEAL	BY DOOR SUPPLIER			UNK

NOTE: PROVIDED EXTENDED LIP STRIKE TO SUIT PC350 FRAMES.

Hardware Group No. 45

For use on Door #(s):
229 ~~233~~

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGES	BY PC350			UNK
1	EA	CLASSROOM LOCK	ND70P6D RHO		622	SCH
1	EA	WALL STOP	WS406/407CVX		BLK	IVE
1	EA	ACOUSTIC SOUND SEAL	BY DOOR SUPPLIER			UNK

NOTE: PROVIDED EXTENDED LIP STRIKE TO SUIT PC350 FRAMES.

Hardware Group No. 46

For use on Door #(s):
230 258

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4		652	IVE
1	EA	PASSAGE SET	ND10S RHO		626	SCH
1	EA	KICK PLATE	8400 250MM X SIZE TO SUIT B-CS		630	IVE
1	EA	WALL STOP	WS406/407CVX		630	IVE

Hardware Group No. 47

For use on Door #(s):
259

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4		652	IVE
1	EA	CLASSROOM LOCK	ND70P6D RHO		622	SCH
1	EA	KICK PLATE	8400 10" X LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CVX		630	IVE

Hardware Group No. 48

For use on Door #(s):
261 262

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4		630	IVE
1	EA	PRIVACY LOCK	ND40S RHO		626	SCH
1	EA	KICK PLATE	8400 10" X LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	SMOKE/SOUND SEAL	188SBK PSA X PERIMETER		BK	ZER
1	EA	COAT AND HAT HOOK	510C		626	IVE

Hardware Group No. 49

For use on Door #(s):
267

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4		652	IVE
1	EA	PASSAGE SET	ND10S RHO		626	SCH
1	EA	OH STOP	90S		630	GLY

Hardware Group No. 50

For use on Door #(s):
301

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 5 X 4.5 NRP		630	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO		626	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS		630	IVE
1	EA	GASKETING	8303AA X X 1@HD / 2@JMB		AA	ZER
1	EA	DOOR SWEEP	8192AA X DR WIDTH		AA	ZER
1	EA	THRESHOLD	625A X OPENING WIDTH		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE

NOTE TO ARCHITECT- KEY NEEDED TO GET TO THE ROOF AND FREE INGRESS ALL THE TIME. CONFIRM THIS IS SUITED.

Hardware Group No. 51

For use on Door #(s):
302 303

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4 NRP			630	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO			626	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH			689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS			630	IVE
1	EA	GASKETING	8303AA X X 1@HD / 2@JMB			AA	ZER
1	EA	DOOR SWEEP	8192AA X DR WIDTH			AA	ZER
1	EA	THRESHOLD	625A X OPENING WIDTH			A	ZER
1	EA	DOOR CONTACT	679-05HM		✓	BLK	SCE

Hardware Group No. 52

For use on Door #(s):
304

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4			652	IVE
1	EA	STOREROOM LOCK	ND80P6D RHO			626	SCH
1	EA	SURFACE CLOSER	4040XP REG			689	LCN
1	EA	KICK PLATE	8400 8" X LDW B-CS			630	IVE
1	EA	GASKETING	8303AA X X 1@HD / 2@JMB			AA	ZER
1	EA	DOOR SWEEP	8192AA X DR WIDTH			AA	ZER
1	EA	THRESHOLD	625A X OPENING WIDTH			A	ZER
1	EA	DOOR CONTACT	679-05HM		✓	BLK	SCE

NOTE TO ARCHITECT- KEY NEEDED TO GET TO THE ROOF AND FREE INGRESS ALL THE TIME. CONFIRM THIS IS SUITED.

Hardware Group No. 53

For use on Door #(s):
E-101

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4 NRP		630	IVE
1	EA	CONST LATCHING BOLT	FB51P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	VANDL STOREROOM LOCK	ND96P6D RHO 14-042		626	SCH
1	EA	LOCK GUARD	LG14		630	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH ST-1595 ST-3068		689	LCN
2	EA	KICK PLATE	8400 250MM X SIZE TO SUIT B-CS		630	IVE
2	EA	GASKETING (JAMB)	328AA X REQ. HEIGHT		AA	ZER
1	EA	GASKETING (HEAD)	429AA-S X REQ. WIDTH		AA	ZER
1	EA	ASTRAGAL	43STST X REQ. HEIGHT		STST	ZER
2	EA	DOOR SWEEP	8192AA X DR WIDTH		AA	ZER
1	EA	THRESHOLD	625A X FRAME WIDTH		A	ZER
2	EA	DOOR CONTACT	679-05 TO SUIT DR MTRL.		BLK	SCE

NOTE- CUT THE ASTRAGAL TO ACCOMODATE THE LATCH GUARD.

Hardware Group No. 54

For use on Door #(s):
E-103 E-102

Provide each RU door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
	EA		COMPLETE BY OVERHEAD DOOR SUPPLIER		

Hardware Group No. 55

For use on Door #(s):
MISC. HW SET

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
10	EA	EXTRACTOR TOOL	35-057		SCH
50	EA	KEY BLANKS	35-270 S FAMILY		SCH
24	EA	MASTER KEY	49-270	468	SCH
10	EA	CUT CONSTRUCTION KEY	48-097	468	SCH
1	EA	KEY CABINET	AWC-150-S 150 CAP.	GRY	TEL

Building Element	Location	Substrate	Colour	Finish
Exterior Cladding – Main Building				
Wall – Phenolic, wood	Typical	Phenolic	Trespa, NW07, Montreux Sunglow	Satin
Wall – Phenolic, White	West Wing	Phenolic	Trespa, A03, White	Satin
Wall – Phenolic, Red	South Wing	Phenolic	Trespa, A12.3.7, Carmine Red	Satin
Wall – Phenolic, Black	North Wing	Phenolic	Trespa, A90, Black	Satin
Wall – Phenolic, Blue	East Wing	Phenolic	Trespa, A23.0.4 Mineral Blue	Satin
Soffit - Metal	Typical	Steel	Lux V-Groove Soffit, Fawn	SMP
Roof Fascia	Roof	ACM	~~Trespa, A90,~~ Black	Satin
Roof Overhang Flashing and Cap Flashing	Roof	Galv. Steel	Cascadia, Black	SMP
Flashing at Reveals & Window Heads	Typical	Galv. Steel	Cascadia, Black	SMP
Roof Membrane	Roof	SBS	Soprema, Grey	-
Roof Vents	Roof	Steel	White	Pre-finished
Openings				
Hollow Metal Door Frames - Exterior	Typical	Galv. Steel	BM HC-166 Kendall Charcoal	Semi-Gloss Light Industrial Paint
Hollow Metal Doors - Exterior		Galv. Steel	BM HC-166 Kendall Charcoal	Semi-Gloss Light Industrial Paint
Hollow Metal Door Frames - Interior	Typical	Galv. Steel	BM HC-166 Kendall Charcoal	Semi-Gloss Latex Paint
Hollow Metal Doors - Interior	Typical	Galv. Steel	BM HC-166 Kendall Charcoal	Semi-Gloss Latex Paint
Wood Doors - Veneer	Typical	Plain Sliced White Oak	Clear	W.B. Varnish
Aluminum Frames and Doors	Typical	Aluminum	Black	Anodized
Aluminum Curtain Wall	Typical	Aluminum	Black	Anodized
Spandrel	Typical	Glass	3-967, Black-Gray	-
Overhead Coiling Shutter	Kitchen	Aluminum	Clear Anodized	-
Mechanical Louvers and Hoods	Typical	Galv. Steel	BM 2134-30, Iron Mountain	Powder Coated
Roof Vents	Roof	Steel	Black	Pre-finished
Interior Wall Finishes				
Gypsum Wallboard	Typical	GWB	BM OC-117, Simply White	Latex Paint
Concrete Walls	Typical	Concrete	BM OC-117, Simply White	Semi-Gloss Latex Paint

Building Element	Location	Substrate	Colour	Finish
Wall Tile	Typical	Ceramic	Olympia Arctic White	Mapei 38 Avalanche Grout
Resilient Base	Typical	Rubber	Charcoal	-
Wood Columns (Exposed)	Typical			W.B. Varnish
Steel Columns (Exposed)	Typical	Intumescent Coating	BM 2120-10, Jet Black	Silicone Alkyd
Fiberglass Reinforced Panels	Kitchen	FRP	Bright White	Pebbled
Wood Slat Walls	Typical		Light Cherry	
Interior Floor Finishes				
Entrance Floor Grille	Entries	Aluminum	Black	-
Stairwell System	Stairwells	Rubber	Charcoal	-
Safety Flooring	Kitchen	-	Forbo, 174922 Concrete	-
Luxury Vinyl Tile – Type 1	As shown in A221 including but not limited to ~~Atrium,~~ Corridor, storage, kitchen, copy room, ~~Washroom,~~ Dining Hall, Reception	Vinyl	Interface, Textured Stone, Polished Cement, non-directional	-
Carpet Tile - Type 1	Office as shown in A221	Carpet, Shaw	Distort 5T127_26515 Sight(~65%) & Glitch 5T128_26515 Sight(~25%) & Manipulate 5T130_26515 Sight (~10%)	Ashlar
Carpet Tile - Type 2	Meeting Rooms & Council Chamber as shown in A221	Carpet, Shaw	Distort 5T127_26515 Sight (~50%) & Glitch 5T128_26515 Sight (~20%) & Manipulate 5T130_26515 Sight (~20%) & Color Form 5T112_81326 Hyper Green (~10%)	Ashlar
Vinyl Sheet Flooring	Washroom, Janitor	Altro Flooring		
Alternative Floor Tiles	Atrium Floor Tiles	Porcelain	Tierra Sol, Oslo, Cenere 12x24	
Interior Ceiling Finishes				
Gypsum Board Ceilings	Typical	GWB	Ceiling White	Matte Latex Paint
Acoustic Ceiling Tile	Typical	-	Standard White	Pre-Finished
Corridor Slat Suspended Ceiling	Corridor	SVG D.Fir Wood	Light Cherry	W.B. Varnish
Slat Suspended Baffle	Atrium, Council Chamber, Dining Room	Metal	Coriander	

Building Element	Location	Substrate	Colour	Finish
Millwork				
Cabinets – P.Lam	Typical	Formica	7747-58 Pencil Wood	Matte Finish
Upper Cabinets – P.Lam	Typical	Formica	7747-58 Pencil Wood	Matte Finish
Counters – Solid Counter	Typical	Formica Everform	781 Luna Concrete	-
Equipment				
Walk-in Cooler	Kitchen	Metal	Standard White	Pre-Finished
Elevator	Typical	Metal	Stainless	-
Roller Shades	Typical	Polyester	TBD	
Sealants				
Sealant	Perimeter of door frames		Black	
Sealant	Perimeter of grey doors frames		Grey	
Sealant	Perimeter of white windows/doors frames		White	
Sealant – Perimeter of Grey Frames			Grey	
Sealant – Porcelain sinks			Transparent	
Sealant – solid Counters			Transparent	
ENERGY CENTRE				
Soffit – Phenolic	Energy Centre	Phenolic	Trespa, NW07, Montreux Sunglow	-
Wall – Phenolic	Energy Centre	Phenolic	Trespa, NW07, Montreux Sunglow	-
Wall - Corrugated Metal	Energy Centre	Galv. Steel	Westform, Brite White	SMP
Roof – Standing Seam Metal	Energy Centre	Galv. Steel	Westform, Brite White	SMP
Roof Fascia	Roof	Galv. Steel	Cascadia, Bright White	SMP
Roof Overhang Flashing and Cap Flashing	Roof	Galv. Steel	Cascadia, Bright White	SMP
Mechanical Louvers and Hoods	Typical	Galv. Steel	White	Powder Coated
Hollow Metal Door Frames - Exterior	Typical	Galv. Steel	BM HC-166 Kendall Charcoal	Semi-Gloss Light Industrial Paint

Building Element	Location	Substrate	Colour	Finish
Hollow Metal Doors - Exterior		Galv. Steel	BM HC-166 Kendall Charcoal	Semi-Gloss Light Industrial Paint
Overhead Roller Door		Galv. Steel	White	Powder Coated
Flashing at Reveals & Window Heads	Typical	Galv. Steel	Cascadia, Bright White	SMP
Floor	Energy Centre	Concrete		Sealed Concrete
Gypsum Wallboard	Typical	GWB	BM OC-117, Simply White	Latex Paint

SECTION 09 21 16
GYPSUM BOARD ASSEMBLIES

Part 1 General

1.1 SECTION INCLUDES

.1 Gypsum board and joint treatment.

.2 Acoustic insulation.

.3 Tile backer board.

.4 Non-load-bearing steel framing systems for interior partitions, including shaftwall separations.

.5 Metal furring.

.6 Suspension systems for interior ceilings and soffits.

.7 Grid suspension systems for gypsum board ceilings.

1.2 RELATED REQUIREMENTS

.1 Division 06 Section Rough Carpentry, for concealed blocking and plywood to support items attached to or built into gypsum board assemblies.

.2 Division 07 Sections for firestopping requirements for sealing gypsum board partitions required to resist passage of environmental tobacco smoke.

.3 Division 07 Section Joint Sealants, for acoustical joint sealants installed in gypsum board assemblies.

1.3 PRE-INSTALLATION MEETING

.1 Convene a pre-installation meeting at Project site minimum three weeks before commencing work of this Section.

.2 Include parties directly affecting work of this Section, including, board manufacturer’s technical representative, and installer’s job foreman

.1 Review material selections, special details and conditions,

.2 Review quality control requirements, required inspections, and certifying procedures.

.3 Review and finalizing of construction schedule related to other work affecting installation and verification of availability of materials, installer's personnel, equipment, and facilities required to make progress and avoid delays.

.4 Review preparation and installation procedures, quality of execution, and coordination and scheduling required with related work.

.5 Review weather and forecasted weather conditions and procedures for coping with unfavourable conditions.

.6 Tour, inspect, and discuss conditions, connections to building structure, and other preparatory work performed by other installers.

.7 Record and submit copies of minutes including discussions, decisions, agreements, and disagreements to each party attending and concerned parties not in attendance.

1.4 SUBMITTALS FOR REVIEW

.1 Product Data: For gypsum board and backing panels, joint tape, acoustic insulation, corner beads, and edge trim. Indicate locations of use.

.2 Shop Drawings:

.1 Indicating details for anchorage and bracing for seismic restraint, stamped and signed by a professional structural engineer, responsible for their preparation.

.2 Plans and elevations showing locations of control joints.

.3 Samples for Initial Selection: 12 inch (300 mm) long samples of exposed trim reveal mouldings around openings, and between adjacent gypsum boards.

.4 Design Data:

.1 Fire Performance System Design Listings: Submit system design listings, including illustrations from a qualified testing and inspection agency that are applicable for each fire-resistance-rated assembly.

.1 Delegated Design Submittal: Delegated design professional engineer's Letter of Assurance for commitment.

1.5 SUBMITTALS FOR INFORMATION

.1 Delegated Design Submittals: For elevator shaftwall assemblies and seismic restraint of gypsum board wall assemblies, indicating compliance to performance/design criteria, including shop drawings, analysis data, and supporting information, signed and sealed by the delegated design professional responsible for their preparation.

.2 Qualifications Statements: For Installer, and delegated design professional engineer.

.3 Certificates and Labels: Provide certificate signed by manufacturer of gypsum board for each batch or package of gypsum board indicating that products do not contain specified gases. Label each batch or package with similar information.

.4 Fire Performance Certification: Provide certificate signed by manufacturer of gypsum board assembly components certifying that their products comply with specified requirements, comply with ULC, UL or GA-600 designations as specified, and are approved for use by local authorities having jurisdiction.

1.6 CLOSEOUT SUBMITTALS

.1 Delegated Design Submittals: Delegated design professional engineer's Letter of Assurance for compliance.

1.7 QUALITY ASSURANCE

.1 Installer Qualifications: Company specializing in performing the work of this section with minimum five years documented experience on projects similar in size and scope to this Project.

Part 2 Products

2.1 PERFORMANCE REQUIREMENTS

.1 Delegated Design: Engage a qualified professional engineer, as defined in Division 01 Section Quality Assurance and Quality Control, to design anchorage and bracing for seismic restraint of gypsum board wall assemblies, and design of elevator shaftwall assemblies, including attachments to building structure.

.2 Structural Performance Requirements, General:

.1 Design assemblies to withstand the loads, including minimum inward and outward design air pressures (lateral loading), and provide structurally sound assemblies, in accordance with applicable code and the authorities having jurisdiction, within the specified deflection limits. Include and comply with the following.

.1 Lateral loadings on typical partitions, partitions surrounding stairs, partitions surrounding plenums and air shafts, partitions surrounding atriums,

.2 Live Loads: Provide interior wall and partition assemblies engineered to resist a minimum lateral load of 5 lbf/sq. ft (24 Pa) without evidencing material failure, structural distress of supporting framing members, or other detrimental effects.

.3 Evidence of failure includes deflections exceeding those indicated below, bending stresses causing studs to break or to distort, and end-reaction shear causing runners to bend or to shear and studs to become crippled, and failure of air and smoke-tight seal.

.2 Maximum Allowable Deflection of Support Framing under Load:

.1 Gypsum Board Partitions and Shaftwall Assemblies: Framing not supporting tile, L/240 in height; framing supporting tile or plaster, L/360 in height.

.2 Gypsum Board Ceilings: L/360 of distance between supports.

.3 Wall Assembly Movement: Design assembly to accommodate construction tolerances, deflection of building structural members, and clearances of intended openings.

.4 Partitions Supporting Shelves with Heavy Loads: Where partitions are indicated to support heavy-loaded shelving, verify loads to be supported with Consultant and consult with stud manufacturer for recommended construction, including deflection limits or seismic forces, and provide one or more of the following:

.1 Increase stud thickness, except at walls with STC ratings.

.2 Closer stud spacing.

.3 Deeper stud size (space permitting, as determined by Consultant).

.4 Plywood sheathing.

.3 Seismic Restraints: Design anchorages, bracing and suspension systems to withstand seismic loads and sway displacement as calculated in accordance with applicable code, and to ASTM E580/E580M.

.4 Elevator Shaftwall Metal Framing:

.1 Design shaftwall enclosure components so that the completed system will withstand the minimum inward and outward air pressure recommended by the elevator manufacturer, and based on elevator velocities and quantities of elevators in each shaft, but not less than 10 lbf/sq. ft (48 Pa), without failing and while maintaining an airtight and smoke-tight seal. Apply design loads transiently and cyclically under in-service conditions for maximum heights of partitions indicated.

.2 Evidence of failure includes deflections beyond specified limits, bending stresses causing studs to break or to distort, and end-reaction shear causing runners to bend or to shear and studs to become crippled.

.5 Fire-Resistance-Rated Assemblies: Where indicated, provide fire rated assemblies identical to that of assemblies tested for fire resistance per ASTM E119 or CAN/ULC-S101, by a testing and inspecting agency acceptable to authorities having jurisdiction.

.1 Materials for gypsum board assemblies indicated or specified in fire rated assemblies, are indicative; provide and install materials in strict accordance with the requirements of accepted tested assemblies.

.6 STC-Rated Assemblies: Provide materials and construction identical to those tested in assembly indicated according to ASTM E90 and classified according to ASTM E413 by an independent testing agency.

2.2 MATERIALS - GENERAL

.1 Use board materials free of sulphur or similar gases harmful to health or adjacent construction materials, during manufacturing, and in installed products.

.2 Single-Source Responsibility for Panel Products: Obtain each type of gypsum board and other panel products from a single manufacturer.

.3 Single-Source Responsibility for Finishing Materials: Obtain finishing materials from either the same manufacturer that supplies gypsum board and other panel products or from a manufacturer acceptable to gypsum board manufacturer.

.4 Panel Products Sizes: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.3 MANUFACTURERS

.1 Products: Subject to compliance with requirements provide gypsum board assembly products manufactured by:

.1 CertainTeed.

.2 CGC.

.3 Georgia-Pacific Canada.

2.4 FRAMING SYSTEMS

.1 Framing Members, General: Comply with AISI S220 for conditions indicated, unless more stringent requirements are indicated in applicable code.

.1 Steel Sheet Components: Comply with AISI S220 requirements for metal unless otherwise indicated.

.2 Protective Coating: ASTM A653/A653M, G60 (Z180) coating, or equivalent corrosion resistance. Galvannealed products are not acceptable.

.2 Studs and Tracks - General: AISI S220; C shape, galvanized sheet steel, 0.91 mm thickness (20 gauge), except at wall assemblies with STC ratings.

.1 Identification: Colour code steel studs for thickness in accordance with AWCC colour code chart.

.2 At wall assemblies with STC ratings use B18 Hard Board Studs by Bailey Metal Products Limited, subject to compliance with manufacturer's published limitations.

.3 Studs and Tracks – Shaft Wall Assemblies: ASTM C645; galvanized sheet steel.

.1 Studs: Manufacturer's standard profile for repetitive members, corner and end members, and fire-resistance-rated assembly indicated, 0.0358-inch (0.91 mm thick, 20 gauge), CH shape unless otherwise indicated.

.2 Runner Tracks: Manufacturer's standard J-shape track with manufacturer's standard long-leg length, but at least 2 inches (51 mm) long and matching studs in depth, metal thickness matching studs.

.3 Slip-Type Head Joints: Where indicated, provide one of the following:

.1 Single Long-Leg Track System: ASTM C645 top track with 2-inch (51 mm) deep flanges in thickness not less than indicated for studs, installed with studs friction fit into top track and with continuous bridging located within 12 inches (300 mm) of the top of studs to provide lateral bracing.

.2 Double-Track System: ASTM C645 top outer track, inside track with 4-inch (102 mm) deep flanges in thickness not less than indicated for studs and fastened to studs, and outer track sized to friction fit inside runner.

.3 Deflection Track: Steel sheet top track manufactured to prevent cracking of finishes applied to interior partitions resulting from deflection of structure above; in thickness not less than indicated for studs and in width to accommodate depth of studs.

.4 Firestop Tracks: Top track manufactured to allow partition heads to expand and contract with movement of structure while maintaining continuity of fire-resistance- rated assembly indicated; in thickness not less than indicated for studs and in width to accommodate depth of studs.

.4 Flat Strap and Backing Plate for Blocking and Bracing for Fixture Attachment: Steel sheet in length and width indicated.

.1 Minimum Base-Steel Thickness: 0.032-inch (0.836 mm).

.5 Cold-Rolled Channel Bridging: Steel, 0.0538-inch (1.367-mm) minimum base-steel thickness, with minimum 1/2-inch (13 mm) wide flanges.

.1 Depth: 1-1/2 inches (38 mm).

.2 Clip Angle: Not less than 1-1/2 x 1-1/2 inches (38 x 38 mm), 0.068-inch (1.72-mm-) thick, galvanized steel.

.6 Furring Channels (Furring Members):

.1 Hat-Shaped, Rigid Furring Channels: ASTM C645.

.1 Minimum Base-Steel Thickness: 0.0296-inch (0.752 mm).

.2 Resilient Furring Channels: 1/2-inch (13 mm) deep, steel sheet members; designed to reduce sound transmission.

.1 Minimum Base-Metal Thickness: 0.0179 inch (0.455 mm).

.2 Configuration: Asymmetrical or hat shaped.

2.5 SUSPENSION SYSTEMS

.1 Wire: ASTM A641, Class 1 zinc coating, soft temper:

.1 Tie Wire: Minimum 0.062-inch (1.59 mm) diameter wire, or double strand of minimum 0.048-inch (1.21) diameter wire.

.2 Hanger Wire: Minimum 0.16-inch (4.12 mm) diameter.

.2 Carrying Channels (Main Runners): Cold-rolled, commercial-steel sheet with a base-metal thickness of 0.0538-inch (1.367 mm) and minimum 1/2-inch (13 mm) wide flanges.

.1 Depth: As required to support ceiling loads within performance limits established by referenced installation standards.

.3 Furring Channels (Furring Members):

.1 Hat-Shaped, Rigid Furring Channels: ASTM C645, 7/8 inch (22 mm) deep, galvanized.

.1 Minimum Base-Metal Thickness: 0.033 inch (0.836 mm).

.2 Resilient Furring Channels: 1/2-inch (13 mm) deep, steel sheet members; designed to reduce sound transmission.

.1 Minimum Base-Metal Thickness: 0.0179 inch (0.455 mm).

2.6 CONFIGURATION: ASYMMETRICAL OR HAT SHAPED.GYPSUM BOARD MATERIALS

.1 Standard Gypsum Board: ASTM C1396/C1396M, paper-faced, 5/8 inch (15.9 mm) thick; maximum available length in place; tapered edges, ends square cut.

.2 Fire Rated Gypsum Board (Indicated as Type X): ASTM C1396/C1396M, fire resistive type, UL, ULC, or ITS rated; 5/8 inch (15.9 mm) thick, maximum available length in place; ends square cut, tapered edges.

.3 Flexible Gypsum Board: ASTM C 1396/C 1396M. Manufactured to bend to fit radii and to be more flexible than standard regular-type gypsum board of same thickness.

.1 Thickness: 1/4 inch (6.4 mm).

.2 Long Edges: Tapered.

.4 Moisture-and Mould-Resistant Gypsum Board: ASTM C1396/C1396M; moisture-and mould-resistant core, paper-faced; 5/8 inch (15.9 mm) thick, maximum available length in place; ends square cut, tapered edges.re rated.

.1 Mould Resistance: ASTM D3273, score of 10 as rated according to ASTM D3274.

.5 Gypsum Shaftliner Board: ASTM C1396/C1396M, Type X, manufacturer’s proprietary fire-resistive liner panels with moisture-and mould-resistant core and surfaces, thickness as indicated, maximum available size in place; bevelled edges, ends square cut.

2.7 TILE BACKING PANELS

.1 Glass-Mat, Water-Resistant Tile Backer Board: ASTM C1178/C1178M, regular type or Type X core as indicated, with manufacturer’s standard edges.

.1 Mould Resistance: ASTM D3273, score of 10 as rated according to ASTM D3274.

.2 Thickness: As indicated.

2.8 FRAMING AUXILIARY MATERIALS

.1 General: Provide auxiliary materials that comply with referenced installation standards.

.1 Fasteners for Steel Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

.2 Powder-Actuated Fasteners for Attaching Suspension System Hangers: Fastener systems equipped with clips or other devices for attaching hangers of type indicated, and capable of sustaining, without failure, a load equal to 10 times that imposed by construction as determined by testing according to ASTM E1190 by an independent testing agency.

.3 Seismic Stabilizer Bars: Manufacturer's standard perimeter stabilizers designed to accommodate seismic forces.

.4 Seismic Struts: Manufacturer's standard compression struts designed to accommodate seismic forces.

.5 Isolating Strips: Provide one of the following:

.1 Closed cell polyethylene foam strip, 3/16 inch (4.7 mm) thick, width to suit stud sizes, lengths as required.

.1 Product: FoamSealR manufactured by Owens Corning.

.2 Self-adhesive Modified Bituminous Sheets: SBS modified bitumen laminated to high-density polyethylene film with release liner on adhesive side, nominal total thickness of 1.0 mm.

.1 Product: Sopraseal Stick manufactured by Soprema, or Blueskin SA manufactured by Henry Company.

2.9 AUXILIARY MATERIALS

.1 Sound Attenuation Blankets for Sound-Rated Partitions: CAN/ULC-S702 Type 1, preformed mineral wool blankets, unfaced, friction fit, conforming to the following:

.1 Product: ComfortBatt manufactured by Rockwool, or comparable product.

.2 Density: 2.4 lb/cu. ft (32 kg/sq. m).

.3 Size: 48 inches (1200 mm) x width to suit stud space.

.4 Thickness: As indicated.

.5 Flame/Smoke Properties: 0/0 in accordance with CAN/ULC-S102, and ASTM E84.

.2 Acoustical Sealant: As specified in Division 07 Section Joint Sealants.

.3 Acoustical Separation Tape: Open cell compressible rubber, self-adhering sealant tape 5/16-inch x 1.5 inches (8 x 38 mm) wide, colour black.

.1 Product: Acousti-Gasket Tape by Acoustical Surfaces, Inc., or comparable product.

.4 Corner Beads, casing beads, control joints and edge trim: ~~Metal corner bead.~~ to ASTM C1047, zinc-coated, 0.5mm base thickness, perforated flanges, one-piece length per location.

.1 ~~Basis of Design Product: Fry Reglet DMCT-375.~~

.5 Edge Trim: ASTM C1047, GA-216; Type U, LC or L casing beads. Use tear-away beads to greatest extent possible.

.1 Basis of Design Tear-Away Trim Product: As manufactured by Trim-Tex Drywall Products.

.6 Exposed Trim Reveal Mouldings around Openings, and between Adjacent Gypsum Boards:

.1 Aluminum, alloy 6063T with chemical conversion coating, reveal profile, depth and width as indicated.

.2 Profiles: L, Z, pocket type and others as indicated, and as selected by Consultant from Fry Reglet product range.

.7 Joint Materials: ASTM C475. Types as recommended for use with specified products as recommended by board and joint treatment materials manufacturers for application indicated.

.1 Joint Tape for Interior Gypsum Board: Paper reinforcing tape, 2 inches (50 mm).

.2 Joint Tape for Tile Backing Panels: As recommended by panel manufacturer.

.3 Joint Compound for Interior Gypsum Board: Asbestos-free dust-controlled; VOC-free.

.4 Joint Compound for Tile Backer Units: As recommended by panel manufacturer.

.8 Fasteners: ASTM C1002, unless otherwise indicated.

.1 Screws complying with ASTM C954 for fastening panels to structural metal stud framing, from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.

.9 Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.

Part 3 Execution

3.1 EXAMINATION

.1 Examine areas and substrates including welded hollow-metal frames and support framing, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.

.2 Examine panels before installation. Reject panels that are wet, moisture damaged, and mould damaged.

.3 Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 METAL STUD INSTALLATION

.1 Install studs in accordance with ASTM C840, and manufacturer's written instructions.

.2 Fire-Resistance-Rated Partitions: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.

.3 Isolating Strips: Install continuous isolating strips as follows:

.1 Where studs abut uninsulated surfaces or dissimilar metals.

.2 Where studs abut exterior walls.

.3 Under floor tracks at slabs on grade, wet or damp areas.

.4 Other locations indicated.

.4 Align and secure top and bottom runners at 24 inches (600 mm) o.c.

.1 Firestop Track: Install to maintain continuity of fire-resistance-rated assembly indicated.

.5 Metal Stud Spacing: 16 inches (400 mm) o.c, unless otherwise indicated. Retain 16 inches (400 mm) where framing supports wall-hung equipment or cabinets.

.6 Align stud web openings horizontally.

.7 Secure studs to tracks using fastener method. Do not weld.

.8 Stud splicing: Not permissible.

.9 Fabricate corners using a minimum of three studs.

.10 Fit runners under and above openings; secure intermediate studs to same spacing as wall studs.

.11 Window and Door Opening Framing: Install double studs at opening frame jambs not more than 2 inches (50 mm) from each side of openings. Install stud tracks on each side of opening, at frame head height, and between studs and adjacent studs.

.12 Brace stud framing assembly rigid.

.13 Blocking: Bolt or screw steel channel blocking to studs. Install blocking for support of plumbing fixtures, toilet partitions, wall cabinets, toilet accessories, hardware, and equipment.

.14 Extend stud framing to underside of ceiling or up to structure above, as indicated.

.1 Where indicated to extend stud framing to ceiling only, attach ceiling runner securely to acoustic ceiling track, unless otherwise detailed, in accordance with manufacturer's written instructions.

.2 Where partitions are indicated with stud framing extending through the ceiling to the structure above, maintain clearance under structural building members to avoid deflection transfer to studs.

.1 Provide slip-type head joints; install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.

.15 Coordinate placement of insulation in stud spaces after stud frame erection.

.16 Sound-Rated Partitions:

.1 Install framing to comply with sound-rated assembly indicated.

.2 Where two studs are erected to form sound-rated partitions, install stud bracing plates linking stud pairs, only at mid-height.

.3 Provide 1/4-inch (6 mm) clearance between end of bracing plate and board.

.17 Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch (3 mm) from the plane formed by faces of adjacent framing.

3.3 WALL FURRING INSTALLATION

.1 Erect furring using indirect method of attachment to concrete walls or similar solid surfaces.

.2 Erect furring channels horizontally; space maximum 24 inches (600 mm) o.c, unless otherwise indicated, and not more than 4 inches (100 mm) from floor and ceiling lines. Secure in place on alternate channel flanges at maximum 24 inches (600 mm) o.c.

3.4 RESILIENT FURRING CHANNEL INSTALLATION

.1 Install furring channel framing to comply with sound-rated assembly indicated, otherwise install as follows:

.1 Install resilient channels perpendicular to framing members.

.2 Spacing on Walls: 24 inches (600 mm) o.c.

.3 Locate channels not more than 6 inches (150 mm) from wall-ceiling intersections.

.4 Provide fastenings not more than 6 inches (150 mm) of channel ends.

.5 Anchor channels ends at framing members with 1/8-inch (3 mm) space between abutting ends.

.6 Where fire blocking is indicated, install channels to facilitate fastening of gypsum board to channels.

3.5 FURRING FOR FIRE RATINGS

.1 Install furring as required for fire resistance ratings indicated and to GA-600 requirements.

3.6 STANDARD CEILING SUSPENSION SYSTEM INSTALLATION

.1 Install in accordance with ASTM C754, GA-216 and manufacturer's written instructions.

.2 Coordinate location of hangers with other work.

.3 Install ceiling framing independent of walls, columns, and above ceiling work.

.4 Reinforce openings in ceiling suspension system which interrupt main carrying channels or furring channels, with lateral channel bracing. Extend bracing minimum 24 inches (600 mm) past each end of openings.

.5 Laterally brace entire suspension system.

3.7 GRID SUSPENSION SYSTEM

.1 Install direct hung interior ceiling systems in accordance with the manufacturer's written instructions. Furnish and install hanger devices in coordination with other work.

.2 Interconnect main furring runners with furring tees at 24 inches (600 mm) o.c. Install furring tees on all four sides around recessed lighting fixtures and other openings in ceiling.

.3 Install additional hangers around light fixtures as required to support additional weights of light fixtures. Verify weights of light fixtures prior to installation of suspension system and hangers. Wrap hanger wires tightly at least three full turns.

.4 Provide recesses and openings where indicated for lighting fixtures, registers, access panels and other items to be installed in ceilings. Provide additional member where required by opening condition.

.5 Installation Tolerances: Install suspension systems that are level to within 1/8 inch in 12 feet (3 mm in 3.65 m) measured lengthwise on each member that will receive finishes and transversely between parallel members that will receive finishes.

3.8 ACOUSTIC ACCESSORIES INSTALLATION

.1 Install acoustic accessories to achieve STC required ratings indicated.

.2 Place acoustic insulation in partitions tight within spaces, around cut openings, behind and around electrical and mechanical items within or behind partitions, and tight to items passing through partitions.

.1 Conform to ASTM C919 and with insulation manufacturer’s instructions for closing off sound-flanking paths around or through assemblies, including sealing partitions above acoustical ceilings.

.3 Allow for air space within partitions.

.4 Lay acoustic insulation in ceilings where indicated.

.5 Install acoustic sealant at gypsum board assembly perimeter as follows:

.1 Under Wall Framing: Two beads. Alternatively, install two continuous strips of acoustical separation tape.

.2 Base Layer: Seal with 3/8 inch (10 mm) bead.

.3 Face Layer: Seal with 3/8 inch (10 mm) bead.

.4 Seal around perimeters of penetrations of partitions by conduit, pipe, duct work, rough-in boxes. Seal around perimeters of boxes and penetrations in boxes, as specified in Electrical Consultant’s documents.

3.9 GYPSUM BOARD INSTALLATION

.1 Install gypsum board in accordance with ASTM C840, supplemented by manufacturer’s written instructions.

.2 Install interior gypsum board in the following locations, and where indicted:

.1 Standard Type: Vertical and horizontal surfaces, unless otherwise indicated.

.2 Fire Rated Type: Where required for fire resistance rated assembly.

.3 Moisture-and Mould-Resistant Type: Washrooms, Change Rooms, and Showers.

.4 Glass-Mat, Water-Resistant Tile Backer Type: Behind tiled finishes

.3 Create reveals around doors and windows and where indicated using reveal mouldings.

.4 Erect single layer standard gypsum board in most economical direction horizontal vertical, with ends and edges occurring over firm bearing.

.5 Erect single layer fire rated gypsum board vertically, with edges and ends occurring over firm bearing.

.6 Use screws when fastening gypsum board to metal furring or framing.

.7 Use nails or screws when fastening gypsum board to wood furring or framing. Staples may only be used when securing the first layer of double layer applications.

.8 Double Layer Applications: Unless otherwise required for fire resistance ratings, install double layer gypsum board as follows:

.1 Apply gypsum board for first layer, placed perpendicular to framing or furring members. Use fire rated gypsum backing board for fire rated partitions and ceilings.

.2 Place second layer with fasteners perpendicular to first layer. Offset joints of second layer from joints of first layer.

.9 Treat cut edges and holes in moisture resistant gypsum board with sealant.

.10 Place control joints consistent with lines of building spaces as directed.

.11 Place corner beads at external corners as indicated. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials as indicated.

.12 Curved Surfaces:

.1 Install panels horizontally (perpendicular to supports) and unbroken, to extent possible, across curved surface plus 12-inch (300-mm-) long straight sections at ends of curves and tangent to them.

.2 For double-layer construction, fasten base layer to studs with screws 16 inches (400 mm) o.c. Centre gypsum board face layer over joints in base layer, and fasten to studs with screws spaced 12 inches (300 mm) o.c.

3.10 TILE BACKER BOARD INSTALLATION

.1 Install tile backing board over framing in accordance with manufacturer's written instructions.

.2 Install with 1/4-inch (6 mm) gap where panels abut other construction or penetrations.

.3 Where tile backing boards abut other types of panels in same plane, shim surfaces to produce a uniform plane across panel surfaces.

.4 Tape joints and corners, unless otherwise recommended by board manufacturer.

3.11 SHAFT WALL ASSEMBLIES

.1 General: Install gypsum board shaft wall assemblies to conform to requirements of fire rated assemblies indicated, to manufacturer’s written installation instructions, and to ASTM C754 other than stud-spacing requirements.

.2 Install supplementary framing in gypsum board shaft wall assemblies around openings and as required for blocking, bracing, and support of gravity and pullout loads of fixtures, equipment, services, heavy trim, furnishings, wall-mounted door stops, and similar items that cannot be supported directly by shaft wall assembly framing.

.3 Penetrations: At penetrations in shaft wall, maintain fire rating of shaft wall assembly by installing supplementary steel framing around perimeter of penetration and fire protection behind boxes containing wiring devices, and similar items.

.4 Isolate perimeter of gypsum panels from building structure to prevent cracking of panels, while maintaining continuity of fire-rated construction.

.5 Firestop Tracks: Where indicated, install to maintain continuity of fire-resistance-rated assembly indicated.

.6 Cant Panels: At projections into elevator shafts exceeding 4 inches (102 mm), install 1/2 inch (13 mm) or 5/8 inch (16 mm) thick gypsum board cants covering tops of projections.

.1 Slope cant panels at least 75 degrees from horizontal. Set base edge of panels in adhesive and secure top edges to shaft walls at 24 inches (600 mm) o.c, with screws fastened to shaft wall framing.

.2 Where steel framing is required to support gypsum board cants, install framing at 24 inches (600 mm) o.c, and extend studs from the projection to shaft wall framing.

3.12 INSTALLATION OF TRIM ACCESSORIES

.1 General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

3.13 FINISHING OF GYPSUM BOARD

.1 General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

.2 Prefill open joints, rounded or beveled edges, and damaged surface areas.

.3 Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.

.4 Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C840:

.1 Level 1: Walls concealed from view, including those in above finished ceilings.

.2 Level 4: Walls and ceilings exposed to view.

.1 Primer and its application to surfaces are specified in Division 09 Section Painting.

3.14 TOLERANCES

.1 Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 ft (3 mm in 3 m) in any direction.

3.15 PROTECTION

.1 Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

.2 Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

.3 Remove and replace panels that are wet, moisture damaged, and mold damaged.

.1 Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.

.2 Indications that panels are mould damaged include, but are not limited to, fuzzy or splotchy surface contamination and discolouration.

END OF SECTION