

SILVER SPRINGS COMMUNITY CENTRE ADDITION

ADDRESS: 5720 SILVER RIDGE DRIVE NW, CALGARY, ALBERTA

STEVEN HO
ARCHITECTURE
INCORPORATED

612, 500 Country Hills Blvd. NE
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Tel: (403) 870-6169
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LEGAL DESCRIPTION:
LOT 23
BLOCK 42
PLAN 731 494

ALBERTA BUILDING CODE ANALYSIS

APPLICABLE BUILDING CODE: NATIONAL BUILDING CODE 2019 (AB EDITION)

PROJECT DESCRIPTION: ADDITION TO EXISTING BUILDING

MAJOR USE AND OCCUPANCY: GROUP A, DIV 2 (ASSEMBLY OCCUPANCY)

BUILDING AREA:
EXISTING LOWER FLOOR = 732.54 sq.m. (7,885 sf)
EXISTING UPPER FLOOR = 732.54 sq.m. (7,885 sf)

NEW ADDITION
LOWER FLOOR = 223.57 sq.m. (2,406 sf)
UPPER FLOOR = 216.28 sq.m. (2,328 sf)

TOTAL LOWER FLOOR = 956.11 sq.m. (10,291 sf)
TOTAL UPPER FLOOR = 948.82 sq.m. (10,213 sf)

NUMBER OF STOREY: TWO

NUMBER OF STREETS: TWO

BUILDING CLASSIFICATIONS: 3.2.2.25, GROUP A, DIV 2, UP TO 2 STOREYS

SPRINKLER SYSTEM: NO

STANDPIPE SYSTEM: NO

FIRE ALARM SYSTEM: YES (MORE THAN 300 AS PER 3.2.4.1)

HIGH BUILDING: NO

CONSTRUCTION TYPE: COMBUSTIBLE OR NON-COMBUSTIBLE

FLOOR ASSEMBLY: 45 MINS. IF OF COMBUSTIBLE CONSTRUCTION
ROOF ASSEMBLY: 45 MINS. IF OF COMBUSTIBLE CONSTRUCTION
LOADBEARING WALLS / COLUMNS: 45 MINS. IF OF COMBUSTIBLE CONSTRUCTION

STORAGE ROOM: 45 MINS. FIRE SEPARATION (PER ARTICLE 3.3.1.26)
CLOSURES 20 MIN. (PER 3.1.8.10)

STAIRS AND EXITS: 45 MINS. FIRE SEPARATION (PER ARTICLE 3.3.1.26)
CLOSURES 20 MIN. (PER 3.1.8.10)

FUEL FIRED APPLIANCE SERVICE ROOMS
1 HR. FIRE SEPARATION IF CONTAINING A FUEL-FIRED APPLIANCE (PER ARTICLE 3.6.2.1.(2))
CLOSURES 45 MIN. (PER 3.1.8.4)

EMERGENCY LIGHTING: YES

EXIT SIGN: YES

OCCUPANT LOAD:
EXISTING BUILDING = 268 PERSONS

NEW:
PARTY ROOM = 31.68 sq.m. (341 sf) / 0.95 = 34 PERSONS
VIEWING ROOM = 40.32 sq.m. (434 sf) / 0.95 = 43 PERSONS
LOWER FLOOR STORAGE = 24.71 sq.m. (266 sf) / 46 = 1 PERSON
GARAGE = 76.55 sq.m. (824 sf) / 46 = 2 PERSONS
ALL PURPOSE = 134.43 sq.m. (1,447 sf) / 0.95 = 142 PERSONS
UPPER FLOOR STORAGE = 29.91 sq.m. (322 sf) / 46 = 1 PERSON
NEW ADDITION = 223 PERSONS

TOTAL OCCUPANT LOAD = 491 PERSONS

PLUMBING FIXTURE:
MALE = 246 PERSONS
REQUIRED 5 PLUMBING FIXTURES
PROVIDED 5 TOILETS & 4 URINALS
(INCL. 2 BARRIER FREE TOILETS)

FEMALE = 246 PERSONS
REQUIRED 9 PLUMBING FIXTURES
PROVIDED 11 TOILETS
(INCL. 3 BARRIER FREE TOILETS)

EXITING AND MEANS OF EGRESS:
A) EGRESS DOORWAYS & NUMBER OF EXITS
PER ARTICLE 3.3.1.5 & 3.4.2.1 - TWO DOORWAYS REQUIRED
B) TRAVEL DISTANCE & DISTANCE BETWEEN EXITS
PER ARTICLE 3.3.1.6 & 3.4.2.5.(1)(c)
30m MAX DISTANCE TO EXIT FROM WITHIN ROOM OR FLOOR AREA
PER ARTICLE 3.4.2.3.(1)(b)
AT LEAST 1/2 OF MAXIMUM FLOOR AREA DIAGONAL,
BUT NOT LESS THAN 9m.

PROJECT TEAM:

OWNER

SILVER SPRINGS COMMUNITY ASSOCIATION
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

ARCHITECT

STEVEN HO ARCHITECTURE INCORPORATED
612, 500 COUNTRY HILLS BLVD. NE
CALGARY, ALBERTA T3K 5K3
TEL: 403-870-6169
EMAIL: info@shoarchitecture.com

STRUCTURAL ENGINEER

RECAD
110, 7920 42 ST SE
CALGARY, ALBERTA
TEL: 403-277-0890
EMAIL: info@recad.ca

MECHANICAL ENGINEER

EMBE CONSULTING ENGINEERS
SUITE 204, 110 12 AVE SW
CALGARY, ALBERTA T2R 0G7
TEL: 403-460-2277
EMAIL: info@embeconsulting.ca

ELECTRICAL ENGINEER

EMBE CONSULTING ENGINEERS
SUITE 204, 110 12 AVE SW
CALGARY, ALBERTA T2R 0G7
TEL: 403-460-2277
EMAIL: info@embeconsulting.ca

GEOTECHNICAL ENGINEER

-
-
CALGARY, ALBERTA
TEL: -
EMAIL: -

CIVIL ENGINEER

-
-
CALGARY, ALBERTA
TEL: -
EMAIL: -

SURVEYOR

-
-
CALGARY, ALBERTA
TEL: -
EMAIL: -

BY-LAW & SITE INFORMATION

OWNER

SILVER SPRING COMMUNITY ASSOCIATION

MUNICIPAL ADDRESS

5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

LEGAL ADDRESS:

LOT 23, BLOCK 42, PLAN 731 494

ZONING:

S-CS - SPECIAL SERVICE DISTRICT

SCOPE OF WORK

DEVELOPMENT PERMIT - NEW ADDITION TO EXISTING BUILDING

BUILDING AREA

EXISTING MAIN = 732.54 sq.m. (7,885 sf)
EXISTING UPPER = 732.54 sq.m. (7,885 sf)

NEW ADDITION MAIN = 223.57 sq.m. (2,406.50 sf)
NEW ADDITION UPPER = 216.28 sq.m. (2,328 sf)

TOTAL MAIN = 956.11 sq.m. (10,291.50 sf)
TOTAL UPPER = 948.82 sq.m. (10,213 sf)

ARCHITECTURAL DRAWING LIST

- A0.1 COVER SHEET
- A0.2 DOOR / WINDOW SCHEDULES
- A0.3 WALL / FLOOR / ROOF SCHEDULES
- A0.4 CONSTRUCTION NOTES
- A1.1 OVERALL SITE PLAN
- A1.2 ENLARGED SITE PLAN
- A2.1 KEY PLAN
- A2.2 LOWER FLOOR PLAN
- A2.3 UPPER FLOOR PLAN
- A2.4 LOWER FLOOR REFLECTED CEILING PLAN
- A2.5 UPPER FLOOR REFLECTED CEILING PLAN
- A2.6 LOWER FLOOR FLOORING PLAN
- A2.7 UPPER FLOOR FLOORING PLAN
- A2.8 ROOF PLAN
- A3.1 ELEVATION
- A3.2 ELEVATION
- A4.1 BUILDING SECTION

d		
c		
b		
a	ISSUED FOR REVIEW	MAY 18, 21
No.	REVISION	DATE

PROJECT
SILVER SPRINGS
COMMUNITY CENTRE
ADDITION

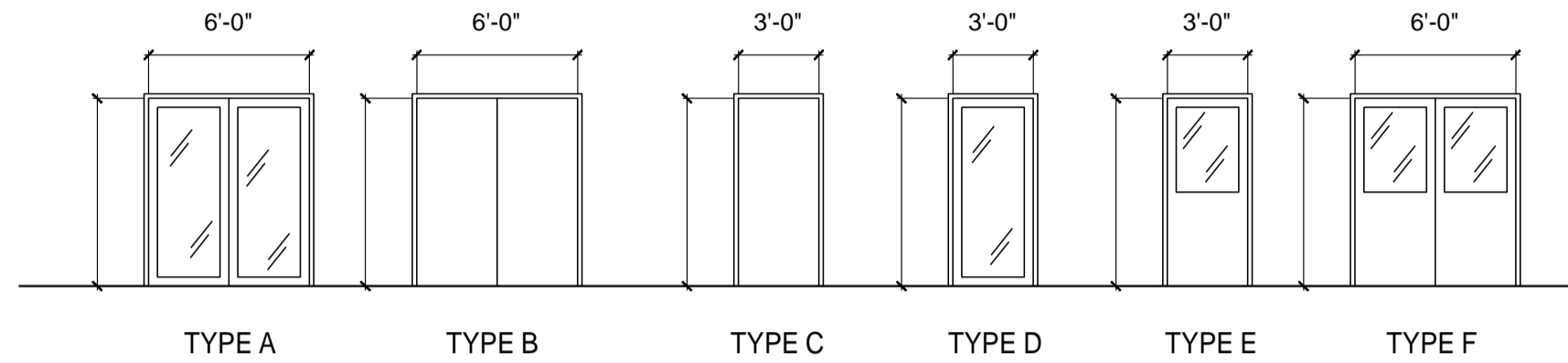
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

DETAIL
COVER SHEET

SCALE	AS SHOWN
DATE	MAY 18, 2021
DRAWN	SHO
CHECKED	
JOB No.	

DOOR SCHEDULE (LOWER FLOOR)

DOOR TYPE



NOTE: ALL DOOR HANDLE TO BE LEVER TYPE UNLESS OTHERWISE NOTED.

DOOR SCHEDULE (UPPER FLOOR)

WINDOW SCHEDULE



- NOTES:
- 1) WINDOW HARDWARE STYLE & FINISH SELECTED BY OWNER.
 - 2) ALL WINDOW SIZES TO BE CONFIRMED WITH MANUFACTURER PRIOR TO FRAMING.
 - 3) ALL WINDOWS SHALL BE INSTALLED WITH ALL REQUIRED PERIMETER FLASHINGS & SEALANTS TO ENSURE THAT EVERY WINDOW IS AIR-TIGHT AND WATER-TIGHT ALL-ROUND.
 - 4) REFER TO SPECIFICATIONS FOR ADDITIONAL WINDOW INFORMATION

NOTE: ALL DOOR HANDLE TO BE LEVER TYPE UNLESS OTHERWISE NOTED.

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PROJECT
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COMMUNITY CENTRE
ADDITION

5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

DETAIL
SCHEDULES

SCALE	AS SHOWN
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JOB No. 2018166
DRAWING No. A0.2
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NO.	LOCATION	DOOR			FRAME		HARDWARE	REMARKS
		SIZE	MAT.	FIN.	MAT.	FIN.		
L1	VESTIBULE L008	NEW 2 - 3'-0"x7'-0"	ALUM		ALUM		SWING DOOR	LOCKSET, WEATHERSTRIP, PANIC HARDWARE
L2	VIEWING AREA L004	NEW 2 - 3'-0"x7'-0"	ALUM		ALUM		SWING DOOR	LOCKSET, WEATHERSTRIP, PANIC HARDWARE
L3	VIEWING AREA L004	NEW 2 - 3'-0"x7'-0"	ALUM		ALUM		SWING DOOR	LOCKSET, WEATHERSTRIP, PANIC HARDWARE
L4	GARAGE L006	NEW 2 - 3'-0"x7'-0"	HOLLOW METAL		METAL PSF		SWING DOOR	LOCKSET, WEATHERSTRIP
L5	PARTY ROOM L001	NEW 3'-0"x7'-0"	ALUM		ALUM		SWING DOOR	LOCKSET
L6	WASHROOM L002	NEW 3'-0"x7'-0"	HOLLOW METAL		METAL PSF		SWING DOOR	PRIVACY LOCK, LEVER HARDWARE
L7	WASHROOM L003	NEW 3'-0"x7'-0"	HOLLOW METAL		METAL PSF		SWING DOOR	PRIVACY LOCK, LEVER HARDWARE
L8	PARTY ROOM L001	NEW 2 - 3'-0"x7'-0"	HOLLOW METAL		METAL PSF		SWING DOOR	LOCKSET
L9	STORAGE L005	NEW 2 - 3'-0"x7'-0"	HOLLOW METAL		METAL PSF		SWING DOOR	LOCKSET, 20 MINS F.R.R.
L10	MECHANICAL L007	NEW 3'-0"x7'-0"	HOLLOW METAL		METAL PSF		SWING DOOR	LOCKSET

7'-0" 7'-0" 7'-0" 7'-0" 7'-0" 7'-0"

NO.	LOCATION	DOOR			FRAME		HARDWARE	DOOR TYPE	REMARKS
		SIZE	MAT.	FIN.	MAT.	FIN.			
U1	HALLWAY U006	NEW 2 - 3'-0"x7'-0"	ALUM		ALUM		SWING DOOR	A LOCKSET, WEATHERSTRIP, PANIC HARDWARE	
U2	WASHROOM U004	NEW 3'-0"x7'-0"	HOLLOW METAL		METAL PSF		SWING DOOR	C PRIVACY LOCK, LEVER HARDWARE	
U3	STORAGE U003	NEW 2 - 3'-0"x7'-0"	HOLLOW METAL		METAL PSF		SWING DOOR	B LOCKSET, 20 MINS. F.R.R.	
U4	STORAGE U002	NEW 2 - 3'-0"x7'-0"	HOLLOW METAL		METAL PSF		SWING DOOR	B LOCKSET, 20 MINS. F.R.R.	
U5	ALL PURPOSE U001	NEW 3'-0"x7'-0"	HOLLOW METAL		METAL PSF		SWING DOOR	E LOCKSET	
U6	STORAGE U005	NEW 2 - 3'-0"x7'-0"	HOLLOW METAL		METAL PSF		SWING DOOR	B LOCKSET, 20 MINS. F.R.R.	
U7	ALL PURPOSE U001	NEW 2 - 3'-0"x7'-0"	HOLLOW METAL		METAL PSF		SWING DOOR	F LOCKSET	

NO	SIZE	QTY	GLAZING							FRAMES					RATING	TYPE	NOTES
			SINGLE GLAZING	DOUBLE GLAZING	CLEAR	TINTED	WIRED GLASS	SAFETY GLASS	WOOD	METAL	ALUM	PVC	THERMAL BREAK	PREFINISHED			
A	NOMINAL 10'-0" x 6'-0"	3															PICTURE
B	NOMINAL 6'-0" x 2'-6"	3															PICTURE
C	NOMINAL 10'-0" x 6'-0"	4															PICTURE



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BLOCK 42
PLAN 731 494

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No.	REVISION	DATE

PROJECT
SILVER SPRINGS
COMMUNITY CENTRE
ADDITION

5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

DETAIL
SCHEDULES

SCALE	AS SHOWN
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ROOM FINISH SCHEDULE

PARTY ROOM
FLOOR - MARMOLEUM SHEET
BASE - 4" VINYL
WALL - PAINTED GWB
CEILING - T-BAR CEILING

WASHROOM
FLOOR - RUBBER TILE
BASE - 4" VINYL
WALL - CERAMIC TILE / PAINTED GWB
CEILING - T-BAR CEILING

VIEWING AREA
FLOOR - RUBBER TILE
BASE - 4" VINYL
WALL - PAINTED GWB
CEILING - T-BAR CEILING

STORAGE / MECHANICAL / GARAGE
FLOOR - SEALED CONCRETE
BASE - n/a
WALL - CONCRETE / PAINTED GWB
CEILING - T-BAR CEILING

ALL PURPOSE ROOM
FLOOR - HARDWOOD
BASE - 6" MDF
WALL - PAINTED GWB
CEILING - T-BAR CEILING

UPPER FLOOR HALLWAY
FLOOR - MARMOLEUM SHEET
BASE - 4" VINYL
WALL - PAINTED GWB
CEILING - T-BAR CEILING

UPPER FLOOR STORAGE
FLOOR - MARMOLEUM SHEET
BASE - 4" VINYL
WALL - PAINTED GWB
CEILING - T-BAR CEILING

UPPER FLOOR WASHROOM
FLOOR - MARMOLEUM SHEET
BASE - 4" VINYL
WALL - CERAMIC TILE / PAINTED GWB
CEILING - T-BAR CEILING

WALL SCHEDULE

EW1 EXISTING FOUNDATION WALL (NO CHANGE)
- CONCRETE WALL

EW2 EXISTING EXTERIOR WALL (NO CHANGE)
- BRICK VENEER
- 8" CMU WALL
- STEEL STUD FURRING
- 1/2" DRYWALL

W1 NEW FOUNDATION WALL
- 8" CONCRETE FOUNDATION WALL (AS PER STRUCT.)
REBAR TOP & BTM (BACKFILL WITH NON-FROST SUSCEPTIBLE SOIL)
- EXTERIOR BITUMINOUS DAMP-PROOFING
- CONTINUOUS CONCRETE FOOTINGS (AS PER STRUCT.)

W2 NEW BEARING WALL
- 8" CONCRETE BLOCK WALL (AS PER STRUCT.)
- CONTINUOUS CONCRETE FOOTINGS (AS PER STRUCT.)

W3 NEW EXTERIOR WALL
- SMOOTH FINISH ACRYLIC STUCCO (TO MATCH EXISTING)
- FIBERGLASS REINFORCING MESH AND POLYMER CEMENT SKIM COAT
- CEMENT PLASTER - SCRATCH & BROWN COATS (3/4" MAX.)
- 8" CONCRETE BLOCK WALL
- CONTINUOUS CONCRETE FOOTINGS (AS PER STRUCT.)
- 3 5/8" STEEL STUDS @ 16" O.C. (AS PER STRUCT.)
- SPRAY FOAM INSULATION
- 1/2" GWB

W4 NEW INTERIOR WALL
- 1/2" GWB
- 3 5/8" STEEL STUDS @ 16" O.C.
- 1/2" GWB

W5 NEW INTERIOR PLUMBING WALL
- 1/2" GWB
- 6" STEEL STUDS @ 16" O.C.
- 1/2" GWB

W6 NEW EXTERIOR WALL
ASHRAE 90.1 COMPLIANT

- THIN BRICK BY GENERAL SHALE

ROOF SCHEDULE

R1 NEW ROOF
- SBS MEMBRANE
- COVER BOARD
- 2" POLYSIO INSULATION (R11.4)
- 2"-10" R23.6 TAPERED EPS SLOPE TO ROOF DRAIN
- SELF ADHERED VAPOUR BARRIER
- DENSDECK DECK BOARD
- OWSJ

FLOOR SCHEDULE

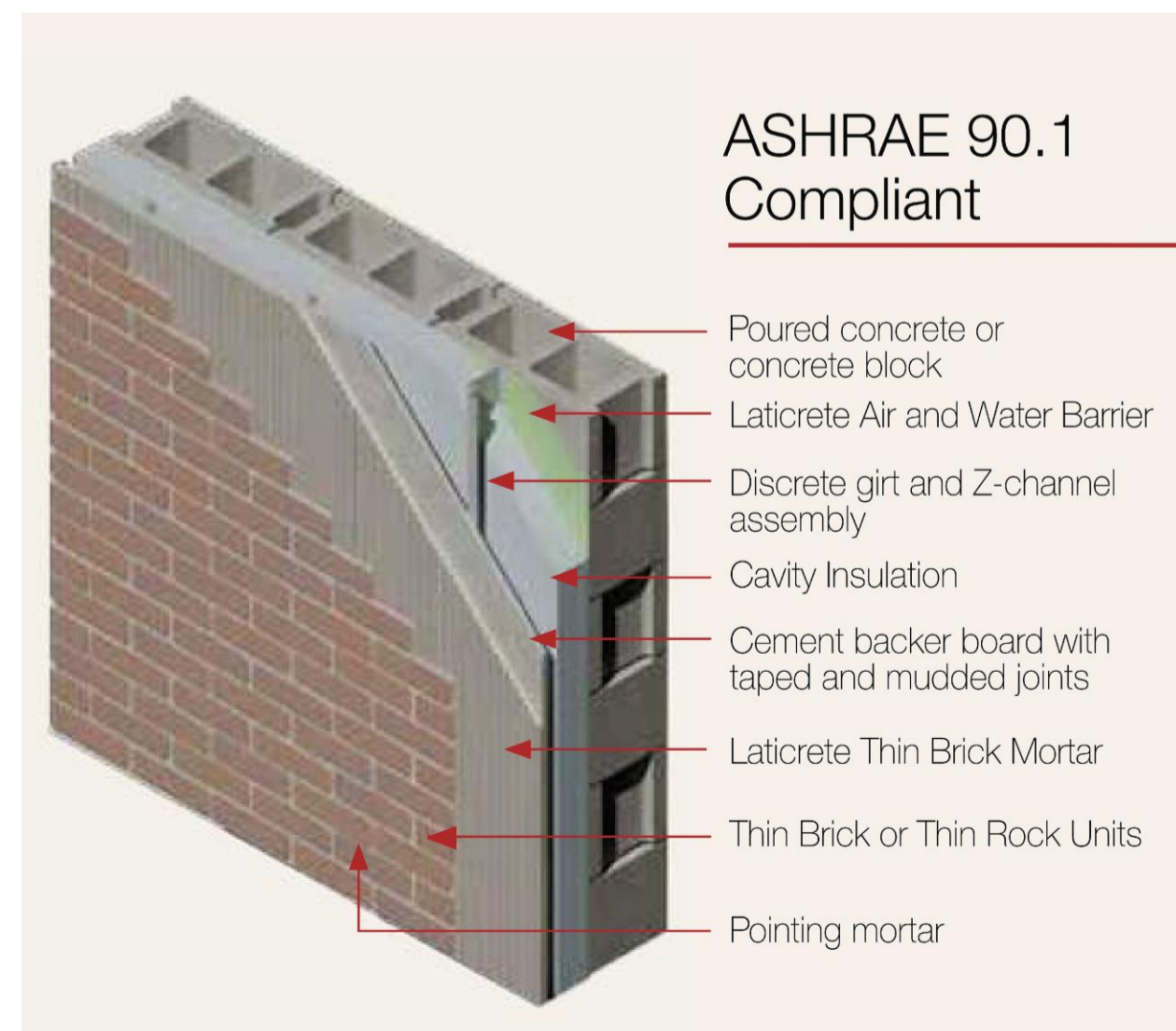
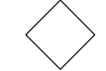
F1 NEW CONCRETE SLAB
- CONCRETE SEALER
- CAST IN PLACE CONC. SLAB AS PER STRUCTURAL
- VAPOUR BARRIER AS PER NEW CODE AND COMPLIES TO RADON GAS REQUIREMENTS
- 1 1/2" XPS INSULATION @ PERIMETER 1.2m
- 8" MIN. COMPACTED GRANULAR FILL AS PER STRUCTURAL
- SOLID BEARING
- PROVIDE SAW CUTS IN SLABS AT 20'-0" O.C. EACH WAY (SEAL JOINTS)

F2 NEW FLOOR
- FINISH FLOORING
- 4" CONCRETE TOPPING
- Q-DECK
- OWSJ AS PER STRUCTURAL

F3 EXISTING FLOOR
- CONCRETE TOPPING TO LEVEL WITH NEW FLOOR
- EXISTING CANTILEVER CONC SLAB TO REMAIN

- LATICRETE THIN BRICK MORTAR
- CEMENT BACKER BOARD WITH TAPED AND MUDDED JOINTS
- DISCRETE GIRT AND Z-CHANNEL ASSEMBLY
- 2" RIGID INSULATION
- LATICRETE AIR AND WATER BARRIER
- CONCRETE BLOCK AS PER STRUCTURAL
- FURRING CHANNEL
- 1 LAYER 1/2" GWB

CHECKED
JOB No. 2018166
DRAWING No. A0.3
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CONSTRUCTION NOTES

1.0 GENERAL REQUIREMENTS:

4.0 MASONRY / CULTURED STONE:

7.0 THERMAL AND MOISTURE PROTECTION:

8.0 DOORS AND WINDOWS: Refer to Door schedule A0.02 & Window schedule A0.02

3.4 Any changes in concrete grades without prior approval of the Structural Engineer, Landscape Architect and Architect are to be the Contractor's responsibility to correct.

7.27 Provide access panels to all fire dampers. All access panels in shaft walls to be rated metal closures. All branch ducts from ducts in shaft walls to have fire dampers at shaft-wall. Rated closures to have rating equal or greater than the separation containing them, except doors.

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PROJECT
SILVER SPRINGS
COMMUNITY CENTRE
ADDITION

5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

DETAIL
**CONSTRUCTION
NOTES**

SCALE AS SHOWN

DATE MAY 18, 2021

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DRAWING No. A0.4
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- 3.5 Contractor shall review drawings for extent of exposed architectural finish concrete and provide a topographic survey information, refer to survey drawings.
- 1.1 All site work to be carried out under the advice and supervision of soils mechanics and foundation engineers. All structural construction joints shall be sealed with a 2-part urethane based caulking prior to installation of damp-proofing. Contractor shall verify that all structural elements are in accordance with the design drawings and foundation structural design to be taken from RecAd.
- 1.2 All site work to be carried out under the advice and supervision of soils mechanics and foundation engineers. All structural construction joints shall be sealed with a 2-part urethane based caulking prior to installation of damp-proofing. Contractor shall verify that all structural elements are in accordance with the design drawings and foundation structural design to be taken from RecAd.
- 1.3 Mechanical design and specifications by AAGC Ltd.
- 1.4 Electrical design and specifications by AAGC Ltd.
- 1.5 Reserved.
- 1.6 Civil design by Civil Engineer.
- 1.7 Contractor to review and adhere to the requirements any required and approved Building Code equivalencies.
- 1.8 Sprinkler Design Engineer shall follow the performance specifications as outlined by the Mechanical Engineer, and shall acknowledge receipt of any required and approved Building Code equivalencies prior to undertaking the design.
- 1.9 The Contractor shall exercise proper precaution to verify dimensions shown on the drawings before laying out work and be responsible for any error resulting from his failure to exercise such precaution. Any discrepancy of dimensions shown in one location from the same dimensions shown in another location or on another consultant's drawings is to be brought to the attention of the Architect prior to proceeding with the work.
- 1.10 Do not scale drawings. Larger scale drawings take precedence over smaller scale drawings.
- 1.11 Maintain at all times on site, for reference, all approved Building Permit drawings, posting cards, copies of all reports from City, inspections, site review reports, site meeting minutes, addenda, clarification drawings or interim reports. Do not damage or mark approved Building Permit drawings. Maintain additional set of drawings for notation, on site, indicating all changes from the approved permit set, for use by consultants in preparation of "Record drawings" as required by the authorities having jurisdiction.
- 1.12 All deviations from these drawings to be approved by the Architect. Contractor is to keep a written record of all changes. Notify the Architect immediately of any proposed changes in the work, and do not proceed with changes until approved. On completion of work, return approved Permit drawings together with marked-up site set to Architect, clearly noting any information to fully describe building as-built.
- 1.13 All materials shall be new and of the quality and grade specified. No seconds, off grades or materials not meeting tolerance specifications will be accepted in the finished work.
- 1.14 All work performed on this project is to be in strict accordance with the most current edition of the Alberta Building Code. The conditions of the Building Permit can not be changed without written approval from the Authority Having Jurisdiction. All work is to conform to, or exceed the minimum standards of the Canadian Standards Association, local Municipal Building By-Laws, the Workers' Compensation Board and material supplied for this project, as applicable. It is incumbent on the contractor to be familiar with the applicable building code and to use and distribute the most current issued plans.
- 1.15 Interior dimensions are taken to the center line of walls. Exterior dimensions are taken to the face of exterior sheathing. Dimensions of concrete or masonry components are taken to the face of concrete or masonry. Dimensions of steel components are taken to the center line of steel.
- 1.16 Party walls are to be constructed for their full height as a continuous fire separation as per the wall schedule. No service penetrations, including but not limited to outlet boxes, into a party wall may be larger than 100mm square. Back to back service penetrations must be offset by a minimum of 300mm. All penetrations in party wall or corridor wall to be fire-rated. The 20mm air space between siles and studs must be open and unobstructed. It is incumbent on the general contractor to coordinate the work to ensure items such as the plumbing and gas lines to not infringe into the air space.
- 1.17 Shop Drawings are to be prepared by, and are the responsibility of, the General Contractor in general conformance with CCDC 2, GC 34. Shop drawings, complete with Assurance of Design and Commitment for Field Review Letters of Assurance, for all pre-manufactured building components, and as noted in the drawings, to be prepared by an engineer registered in the province of Alberta and submitted to the appropriate Engineer, and the Architect prior to manufacture. Follow up Field Review by the signing Engineer is mandatory, with letters and / or field reports to confirm.
- 1.18 Shop drawings and specifications, complete with Assurance of Design and Commitment for Field Review Letters of Assurance, for all guards and anchors are to be submitted to the Structural Engineer and the Architect for review and approval prior to manufacture. Final design drawings to be provided at the end of the job for inclusion in the record set submission.
- 1.19 Engineered sprinkler system shop drawings are to be and reviewed by the Mechanical Engineer and the Architect, prior to submission for sprinkler permit. Comments and/or instructions are to be addressed by the General and Sprinkler Contractors prior to submission for sprinkler permit.
- 1.20 The design of special elements requiring shop drawings is not to be considered final until the shop drawings have been reviewed by any consultant required to do so, including the Architect. Where shop drawings are required, the architectural drawings show only the general design intent and further design and finalization of the design forms part of the requirement for shop drawings.
- 1.21 Provide emergency access through locked doors and emergency signs to the Fire Warden's satisfaction.
- 1.22 Fire Safety Plan: Prior to occupancy, a "Fire Safety Plan" and "Record of Installed Fire Safety Systems" conforming to Article 2.8.2 of NBC 1995, shall be submitted to the Fire Prevention Office.
- 1.23 Specifications issued for architectural, structural, mechanical, electrical and landscape and reviewed shop drawings are to be taken in conjunction with, and form an integral part of, the Contract Documents.
- 1.24 The General Contractor shall coordinate with the Coordinating Registered Professional, and subsequently conduct, the requirements for the functional testing of fire and life emergency systems in accordance with the Alberta Building Code. This work must be completed prior to requesting an inspection for Substantial Performance or Occupancy.
- 1.25 The building Owner, and not the Building Official, has the ultimate responsibility for building code compliance.
- 2.0 SITE WORK:
- 2.1 For site and landscape information and details, the contractor shall refer to the drawings and specifications prepared by the Geotechnical Engineer, Electrical Engineer, Mechanical Engineer and the Landscape Architect.
- 2.2 Sidewalks, street lighting, trees and roadways to be repaired by the Contractor to the standards and satisfaction of the City Engineer for the City of Calgary.
- 3.0 CONCRETE:
- 3.1 All parts of suspended parking garage ramp and suspended slab to conform to CSA-S413-94. Top surface to have waterproof membrane pre-approved and conforming to CSA-S413-94. (Refer 7.7.1) No metal electrical conduits, junction and fixture boxes, and other services that can corrode shall not be embedded within the concrete slab or topping. No conduits, whether metal or otherwise shall be embedded in toppings.
- 3.2 All vertical concrete corners to be chamfered 20mm unless otherwise noted for larger chamfer.
- 3.3 All exposed concrete to be architectural finish - see structural notes for additional information on stripping concrete.

- 4.1 Bricks to be treated with water repellent, conforming to manufacturer's printed specifications.
- 4.2 Secondary building components including architectural, mechanical and semi-structural members and their connections to the structure shall be designed and inspected in the field for the supplier by a specialty structural engineer registered to practice in the province of Alberta.
- 4.3 Submit to the architect and structural engineer shop drawings, complete with Assurance of Design and Commitment for Field Review Letters of Assurance, together with calculations sealed by the specialty engineer indicating details of connections made to the building structure. Show all design loads applied to the building structure. The design and inspection of connections shall be the responsibility of the supplier.
- 4.4 Contractor to arrange for the provision of a test panel of a typical wall containing a typical window opening for review by the Owner, Architect, and Building Envelope Professional prior to the installation of brick or cultured stone.
- 4.5 The Contractor is to schedule an on-site meeting with the Architect, Building Envelope Professional and Masonry Sub-contractor to review the test panel prior to the installation of the balance of brick or cultured stone.
- 4.6 Masonry ties and anchorage are required for architectural masonry work shown on the architectural drawings. Masonry ties and anchorage shall have capacity to sustain design seismic and wind forces in accordance with applicable codes. See structural specifications for force loading design parameters.
- 4.7 All masonry ties are to be nickel plated or stainless steel assemblies consisting of, 47mm dia. corrosion resistant wire ties in slotted sheet metal anchor, spaced so that there is one tie per each 0.2m² of brick area at a maximum spacing of 600mm O.C. horizontally and 450mm O.C. vertically, unless specified otherwise by the specialty engineer. Corrugated metal sheet ties are not to be used. Ties must be securely anchored to the studs through the sheathing and not the sheathing alone. Additional ties to be installed at approx. 200mm O.C. at jambs and near edges.
- 4.8 Masonry anchors to concrete walls to be galvanized dove tail anchors inserted into dovetail slots cast into concrete, or metal ties as per note above attached with drilled-in inserts where slots are not installed.
- 4.9 Mortar for brick and concrete masonry to be type "S" with nominal 28 day strength of 12 MPa. Either use 50-50 Portland and masonry cements for the cementitious component, or, 90% Portland cement and 10% hydrated lime (by loose volume). Mortar to be fibre re-enforced, with the use of Fibremesh Harboureite, 12mm long fibres, batched and mixed in accordance with manufacturer's instructions.
- 4.10 Through wall flashings in brick veneer system to be Blueskin AG Thru-Wall Flashing with primer compatible with substrate, as supplied by Baker or prior approved alternative. To be reviewed by the Building Envelope Professional prior to application.
- 4.11 Caulking in brick veneer system to be: Polyurethane base, two-component sealant, conforming to CCSS 19-GP-24M, Type 1, self-leveling for horizontal joints, Type 2, non-sag for vertical portion of joints and to be installed strictly in accordance with manufacturer's specifications with respect to cleaning, primers, sealers, backing materials, temperatures and workmanship. Colour to match brick.
- 4.12 Cultured stone to be installed by sub-contractor completely familiar with the manufacturer's specifications and the requirements for cold or wet weather conditions. Cultured stone to be installed strictly in conformance with the manufacturer's specifications.
- 5.0 METALS:
- 5.1 For all masonry and concrete re-enforcing refer to structural.
- 5.2 Provide handrails to minimum 865mm, maximum 965mm above nosing for all stairs forming part of an exit route and having 3 or more risers. Provide handrails both sides of stairs 100mm or wider. Refer to details for specific dimensional requirements. Submit to the architect and structural engineer shop drawings, complete with Assurance of Design and Commitment for Field Review Letters of Assurance, together with calculations sealed by the specialty engineer indicating details of connections made to the building structure.
- 5.3 One handrail shall be continuous along the full length of each stair, including landings, as per Article 3.4.6.5.(3) of the Alberta Building Code.
- 5.4 Guards shall be 1070mm high and have no clear opening greater than 100mm. Handrails and guards to meet the loading requirements of Section 4.1 of the Alberta Building Code. Shop drawings shall be submitted for Architect's and Engineer's review prior to manufacture. Engineer to provide Field Review of installed guards, including field review report.
- 5.5 At least one handrail at the side of a stairway or ramp shall extend 300mm horizontally past top and bottom of the stair as per Article 3.4.6.5.(10) of the Alberta Building Code.
- 5.6 Handrails shall have a circular cross-section with an outside diameter not less than 30mm and not more than 50mm.
- 5.7 Contractor shall provide shop drawings for all decorative metal fences, gates and related accessories for review by the Landscape Architect and the Architect.

6.0 WOODS AND PLASTICS:

- 6.1 Wood framing shall be protected from rain and snow during construction. Moisture test wood framing which shall be dry, to less than 19% moisture content prior to and at the time of installing insulation and vapour barrier.
- 6.2 All exterior wood framing, wood sleepers and wood in contact with concrete to be pressure treated.
- 6.3 All wood framing to be separated from concrete by moisture barrier.
- 6.4 Moisture content shall be no greater than 19% as required by support blocking behind drywall to fit appliances as per manufacturer's specifications.
- 7.28 Provide access to every attic or roof space more than 900mm high as per Article 3.6.4.4 of the Alberta Building Code and shall not be less than 100mm in clear height. All other protected finishing are to be pre-finished aluminum or standard colour. Flashing over
- 7.29 Parapets for roof openings are to be pre-approved and inspected and tested by an independent (engineer) testing agency to be named prior to installation. Provide manufacturer's guarantee stating that waterproofing is guaranteed against leakage for a period of five years from the date of substantial performance. Provide certification that material conforms to the requirements of CSA-S413-94, to architect prior to use.
- 7.30 Waterproof membranes for decks over habitable areas to be approved for use in residential applications. Independent testing required as per note 7.6, above. Acceptable membrane products for decks over unhabitable spaces are: the two previously listed and Weatherdek GT-150 or other prior approved alternative. All membranes shall be installed in strict conformance with the manufacturer's instructions and the CCMC listing requirements.
- 7.31 Insulate all stud cavities where mechanical and plumbing lines run through. All drainage offsets within dropped ceiling spaces to be packed with mineral wool insulation to surround pipes. All spaces under slabs and showers to be packed with insulation. All jetted tubs to be on a minimum 12.5 mm thick Neoprene foam acoustic mat.
- 7.32 All window and door frames are to be sealed at shim space with closed cell expanding polyurethane foam sealant (such as PolyCell or pre-approved equivalent) applied as per manufacturer's specification.
- 7.33 Contractor to provide Architect with a copy of roofing and flashing test report from an independent (engineering) testing agency, to be named prior to start of roofing.
- 7.34 Moisture barrier to be 2 layers of continuous 30 minute rated building paper with all joints overlapped 150mm minimum, horizontally and vertically. Moisture barrier membranes shall be continuous and installed so that all joints are properly lapped in a "shingle" arrangement to direct water to the outside. All holes through moisture barriers, such as brick ties or other anchors, shall be sealed to maintain the integrity of the air barrier over the entire surface, and shall comply with CAN2-51.32-M77.
- 7.35 Provide peel and stick self-adhesive membrane, with primer compatible with substrate material, at all building openings and the top of built-up roof parapets as detailed. To be reviewed by the Building Envelope Professional. Membrane shall extend the full width of the framing, plus 150mm around opening on exterior, fully integrated and lapped with the air barrier membrane.
- 7.36 Provide peel and stick in a saddle flashing at all wall/wall and parapet/wall conditions. Contractor shall review sequence of material installation with the Building Envelope Professional and the Architect.
- 7.37 All wall plates to be set on sill gaskets and be anchored as per structural drawings.
- 7.38 Contractor shall provide shop drawings for connection of eaves-trough and through-parapet roof drains to rain water leaders and drains where drainage is taken back into the building. Drawings to indicate, but not limited to, metal flashing, membranes and caulking details. Shop drawings to be submitted prior to the start of installation.
- 7.39 All exterior sealants shall be multi-component based. Silicone based sealants are not acceptable for exterior use. Contractor to provide specifications for all proposed caulking and sealants to the architect for review prior to the start of installation.
- 7.40 Roof ventilation shall be made continuous (unless noted otherwise) so that maximum eave to eave ventilation is achieved. Dead spaces blocked by roof projections or other structures (such as fire-stop compartmentalization) shall be vented by pre-manufactured roof vents as located on roof plan, and counter-flashed as per Roofers Association recommendations. Size of roof vents to be determined dependant on specific type used. Clear vent area to be strictly in accordance with ventilation area requirements per Section 9.19.1 of the Alberta Building Code. Submit shop drawings for vents to Architect for review prior to manufacturing or ordering. Shop drawing to indicate the equivalent "effective clear area" for all vents.
- 7.41 All fire stops to be installed according to the requirements of the Alberta Building Code and to maintain the integrity of separations between units within concealed spaces, and with respect to service shafts.
- 7.42 Fire-stopping of concealed spaces to be in accordance with Alberta Building Code, Section 3.1.9, and to be installed with materials listed by a recognized testing agency (U.L.C., Warnock Hersey, etc.), by a contractor familiar with their use. Provide shop drawings, applicable test approval number, and mock-up of each condition prior to beginning of installation.
- 7.43 No service penetrations into a party wall may be larger than 100mm square. Back to back service penetrations must be offset a minimum of 300mm. All wiring, plumbing or other services are to run through the studs and not be contained within the 1" air space between studs of each side. All penetrations in party wall to be sealed to gypsum wall board.
- 7.44 Fire-stop systems shall maintain the integrity of separations between units within concealed spaces and with respect compartmentalization of attic and vent spaces within the roof.
- 7.45 Penetrations through wood floor assemblies shall be protected with Dow System No. SP81 fire-stop system components.
- 7.46 All units to have smoke alarms at each level installed according to Article 3.2.4.21 of the Alberta Building Code.
- 7.47 Sprinkler system shop drawings to be engineered by an engineer registered in the Province of Alberta and be reviewed by the Mechanical Engineer and the Architect prior to installation. Submit to the architect and mechanical engineer shop drawings, complete with Assurance of Design and Commitment for Field Review Letters of Assurance, together with hydraulic calculations sealed by the specialty engineer.

- 9.0 FINISHES:
- 9.1 All Exit stairs to have non-slip finish on treads. Stair nosings to be painted contrasting colour minimum of 25mm by full width of stair as per Article 3.4.6.1. of the Alberta Building Code.
- 9.2 All concrete floors and toppings in residential areas to be level, troweled and prepared to receive final flooring.
- 9.3 Point all raised door curbs in Parking Level yellow.
- 9.4 Refer to Room Finish Schedule and details for finishing notes.
- 9.5 Contractor to provide Architect with colour samples of all interior and exterior finishes for approval, prior to installation of material.
- 9.6 For additional finishing information, refer to the Interior Designer's drawings and specifications.
- 10.0 SPECIALTIES:
- 10.1 Sign Requirements:
1. Stairwells are to be numbered to indicate floor levels on stair side of wall as per Article 3.4.6.19. of the Alberta Building Code.
2. All Exit doors, other than those an electric hold open devices, connected to fire alarm system, to be signed "Fire Door - Keep Closed".
3. Sign to be posted at elevator lobby "In Case of Fire Use Stairs, Do Not Use Elevator".
4. All suite entry doors to bear unit number.
5. Provide Fire safety plan at main circulator panel.
6. Provide Street address at main entry to each building.
7. Elevator for emergency use (fire, ambulance, etc) shall be clearly labeled and identified at the main lobby.
- 10.2 All gas fireplaces to be tested and labeled by an approved testing agency, such as Warnock Hersey or U.L.C., install as per manufacturer's specification. Clearances to open-able windows may vary depending on model and size selected. Therefore shop drawings, including indication of vent locations must be submitted to Architect for review prior to being installed. Factory built fireplaces to conform to U.L.C. S610. Installation of fireplaces and flues to conform to CAN 1 - B149.1.
- 10.3 Contractor to confirm minimum clearances to opening windows for all direct vent fireplace flues.
- 10.4 Canopies, Skylights, Glass Roofs:
- Contractor to provide engineered, sealed shop drawings for all canopies, skylights and glass roofs for review by the architect and structural engineer, prior to manufacturing any components. Engineered shop drawings to be submitted complete with Assurance of Design and Commitment for Field Review Letters of Assurance. Contractor to provide documentation from glass supplier that all glass is minimum 6mm laminated safety glass or greater as determined by manufacturer's engineer.
- 10.5 Overhead garage doors to have "Safety Edge" for automatic retraction if unable to fully close under their own weight. Installation to be with full noise reduction package, with motor on rubber mounts and rubber door wheel guides.
- 10.6 Mailboxes are to comply with standards established by Canada Post Corporation. Final location to be reviewed and confirmed by the Architect and Interior Designer prior to installation.
- 10.7 Enter-phone system to be provided at each main building entrance and at the North vehicle ramp. Final location and layout to comply with requirements for accessibility and are to be reviewed by the Architect prior to final installation.
- 10.8 Recessed fire fighters lock box to be provided at the main building entrance. Final location and layout to comply with Fire Department regulations, and is to be reviewed by the Architect prior to final installation.
- 11.0 EQUIPMENT:
- 11.1 Main entry and parking garage elevator access doors equipped with hold-open devices and electric strike plates shall conform to Article 3.1.8.12 of the Alberta Building Code and shall be designed to release upon signal from the building fire alarm system.
- 11.2 Main entry and parking garage elevator access doors required to have automatic door openers shall be designed to release upon signal from the building fire alarm system.
- 12.0 CONVEYING SYSTEMS:
- 12.1 Elevator to be installed, inspected, and tested in accordance with Can 3-B44 "Safety Code for Elevators" and shall be accessible to the disabled in conformance with Article 3.5.2.1 of the Alberta Building Code. Elevator manufacturer to provide full specifications, manuals, guarantees etc. Engineer signing elevator shop drawings to provide letters of assurance and field review of components covered. See also electrical specifications. Provincial inspection certificate is required.
- Elevator also to conform to the following criteria:
1. Size, capacity and speed to Alberta Building Code 3.2.6.5.(4).
2. Interlock mechanism protected as per Alberta Building Code 3.2.6.5.(3).
3. Electrical conductors protected as per Alberta Building Code 3.2.6.9.
4. Elevator cab to accommodate stretcher as per Article 3.5.4.1 of the Alberta Building Code.
- 12.2 "In-car" emergency service switches to be provided.
- 15.0 MECHANICAL:
- 15.1 The mechanical systems are to be designed and installed as indicated in mechanical drawings and specifications.
- 15.2 The mechanical system is to be designed to provide the number of air changes per hour as indicated in mechanical drawings and specifications. Relief air to be provided in rooms requiring combustion air, and be capable of continuous operation. Doors are to be undercut 12.5mm for air circulation. See mechanical drawings for fan size, location and sound rating. Mechanical engineer to review fan shop drawings. Fan sound rating required to be 2.5 Sones maximum.
- 15.3 Provide access panels to all fire dampers. All access panels in shaft walls to be rated metal closures. All branch ducts from ducts in shaft walls to have fire dampers at shaft-wall. Rated closures to have rating equal or greater than the separation containing them, except doors.
- 15.4 All bathroom sinks are to be positioned such that the center-line of the sink is not less than 380mm from the nearest side wall.
- 15.5 All vestibules required as part of the life safety systems are to be ventilated and pressurized as per mechanical engineer's drawings.
- 15.6 Automatic sprinkler systems shall be provided as required by Article 3.2.2.18 of the Alberta Building Code.
- 16.0 ELECTRICAL:
- 16.1 The electrical systems are to be designed and installed as indicated in electrical drawings and specifications.
- 16.2 All automatic sprinkler systems required by Articles 3.2.2.18 of the Alberta Building Code shall comply with Articles 3.2.4.10. of the Alberta Building Code regarding electronic supervision and monitoring.
- 16.3 All fire alarm systems shall have a main control panel unit to receive alarm/supervision circuits and be connected to each annunciator/trouble signal device as per Article 3.2.4.9 of the Alberta Building Code.

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LEGAL DESCRIPTION:
LOT 23
BLOCK 42
PLAN 731 494

No.	REVISION	DATE
d		
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a	ISSUED FOR REVIEW	MAY 18,21

PROJECT
SILVER SPRINGS
COMMUNITY CENTRE
ADDITION

5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA
DETAIL
**OVERALL
PLAN**

SCALE
DATE
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CHECKED

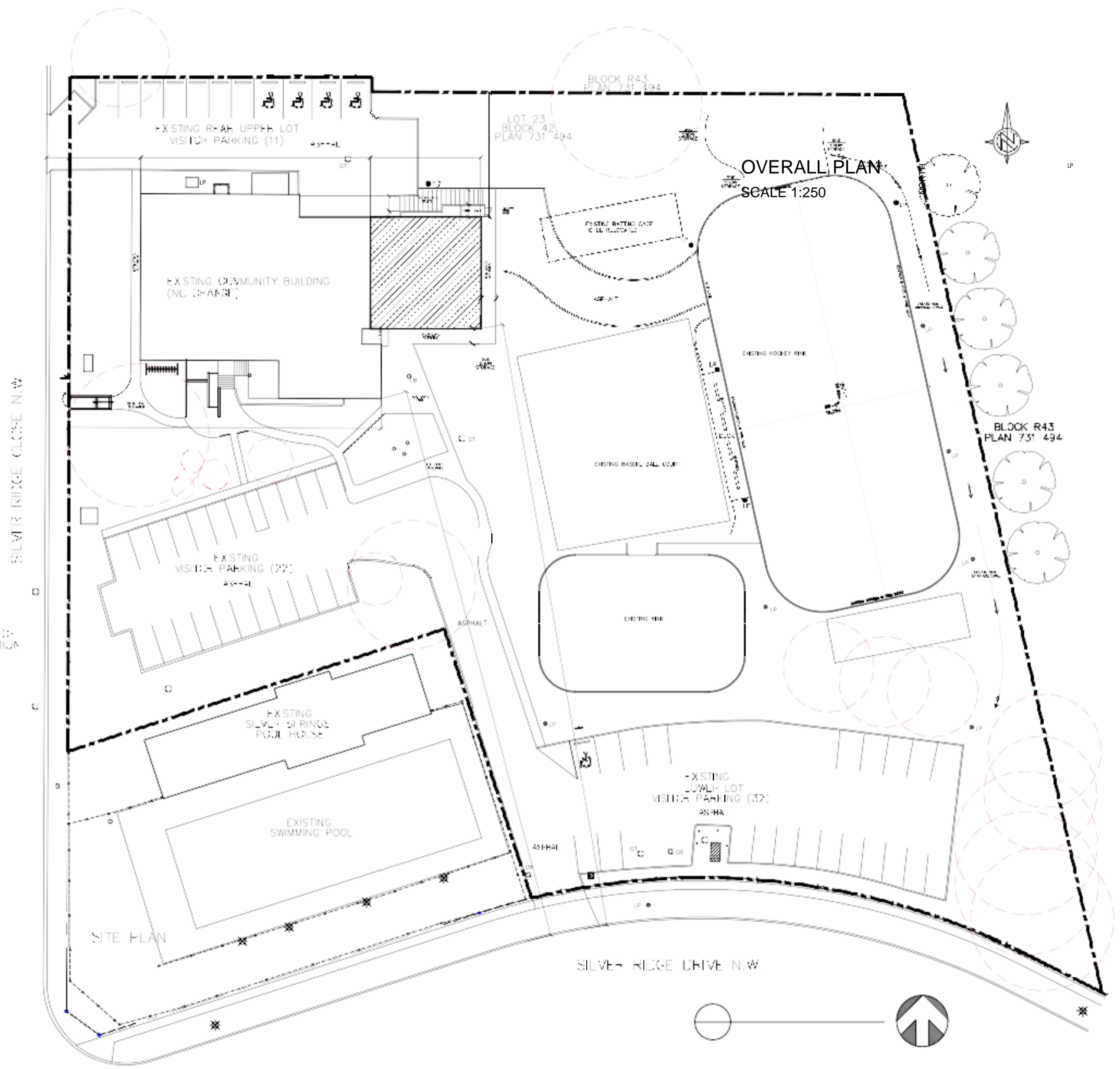
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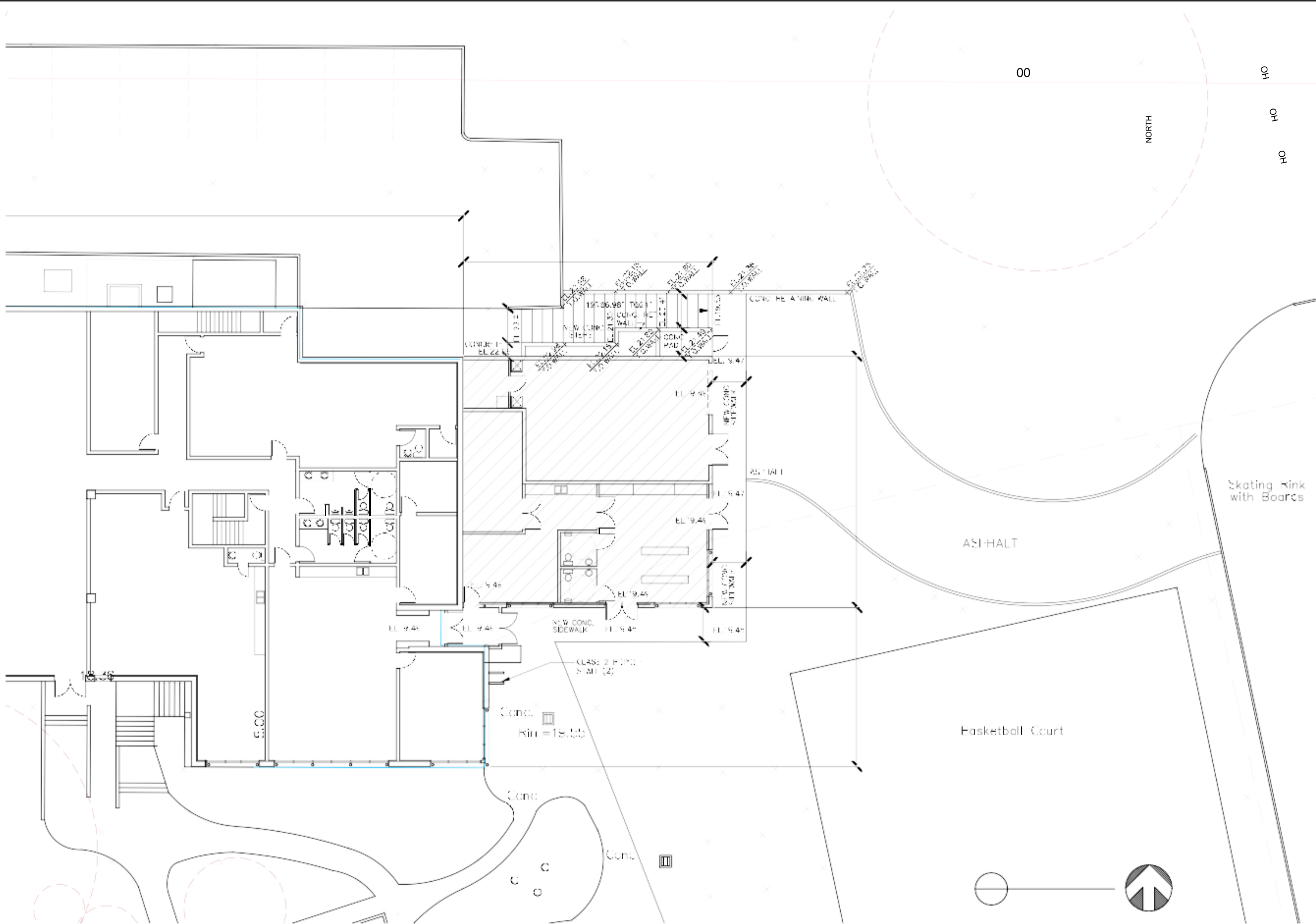
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Skating Rink with Boards

ASI-HALT

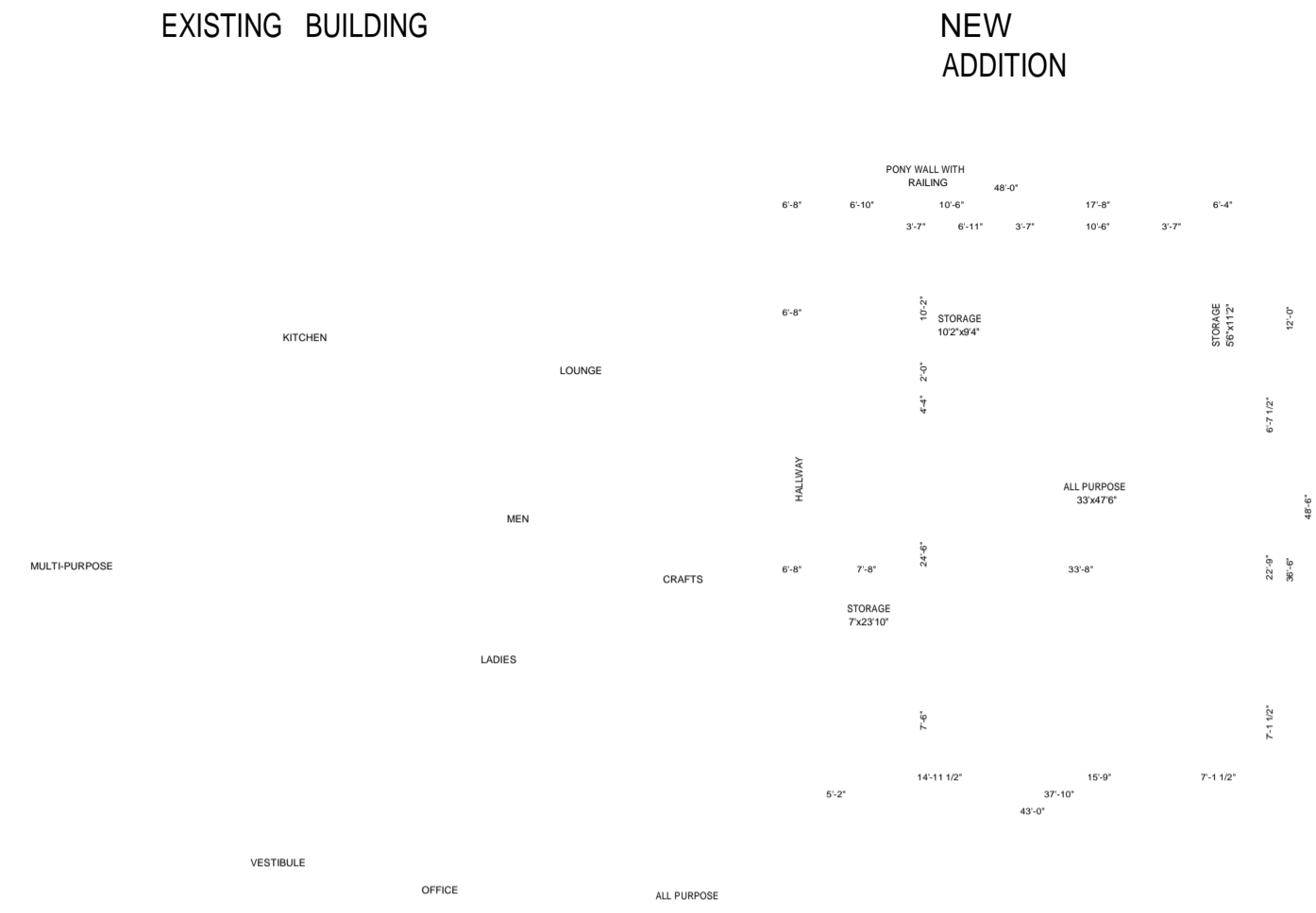
Basketball Court



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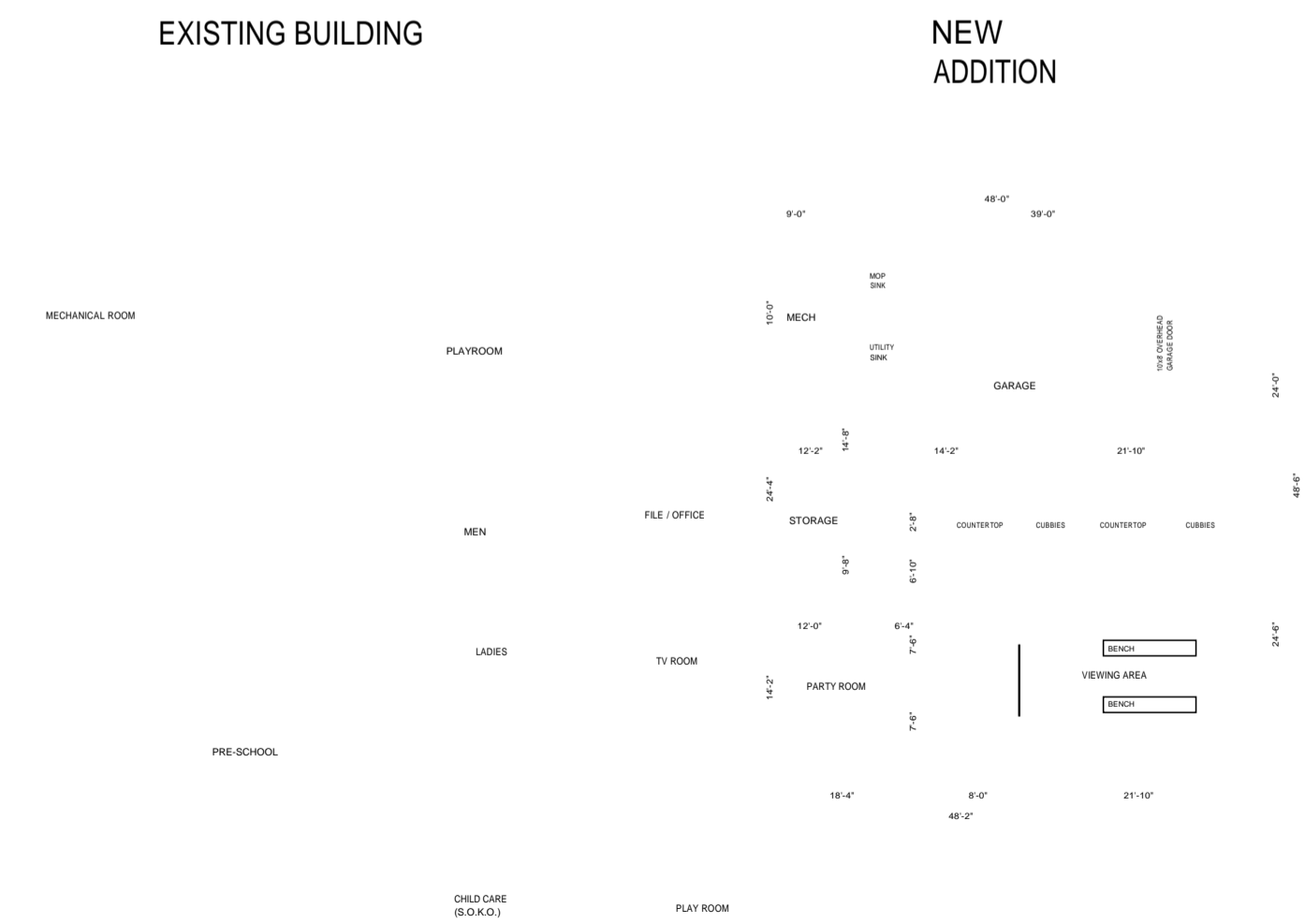
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OVERALL UPPER FLOOR PLAN
SCALE 3/32" = 1'-0"

LEGAL DESCRIPTION:
LOT 23
BLOCK 42
PLAN 731 494



OVERALL
LOWER
FLOOR
PLAN

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1	ISSUED FOR REVIEW	MAY 18,21

PROJECT
SILVER SPRINGS
COMMUNITY CENTRE
ADDITION

5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA
DETAIL
KEY PLAN

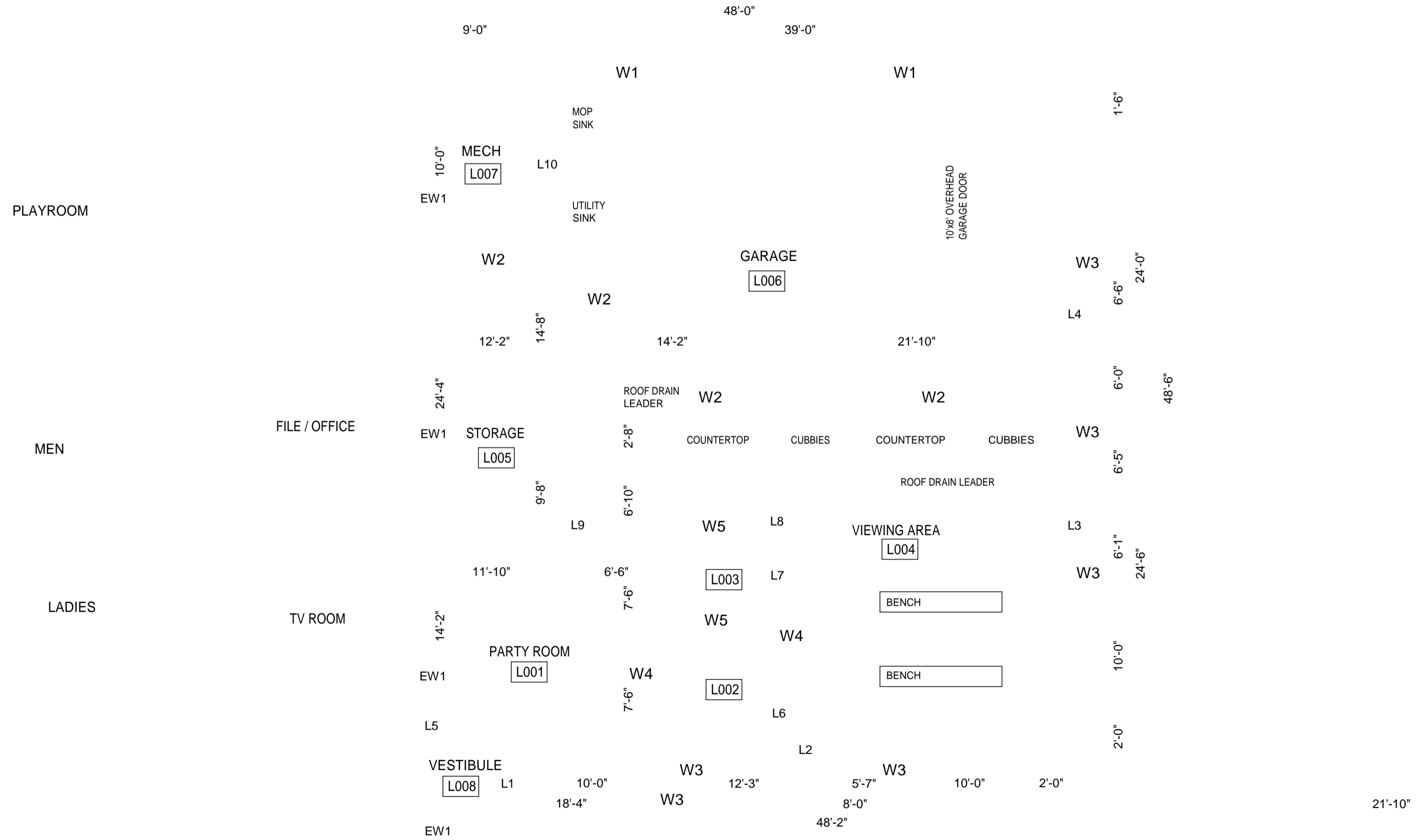
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EXISTING BUILDING

NEW ADDITION



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PLAN 731 494

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PROJECT
SILVER SPRINGS
COMMUNITY CENTRE
ADDITION

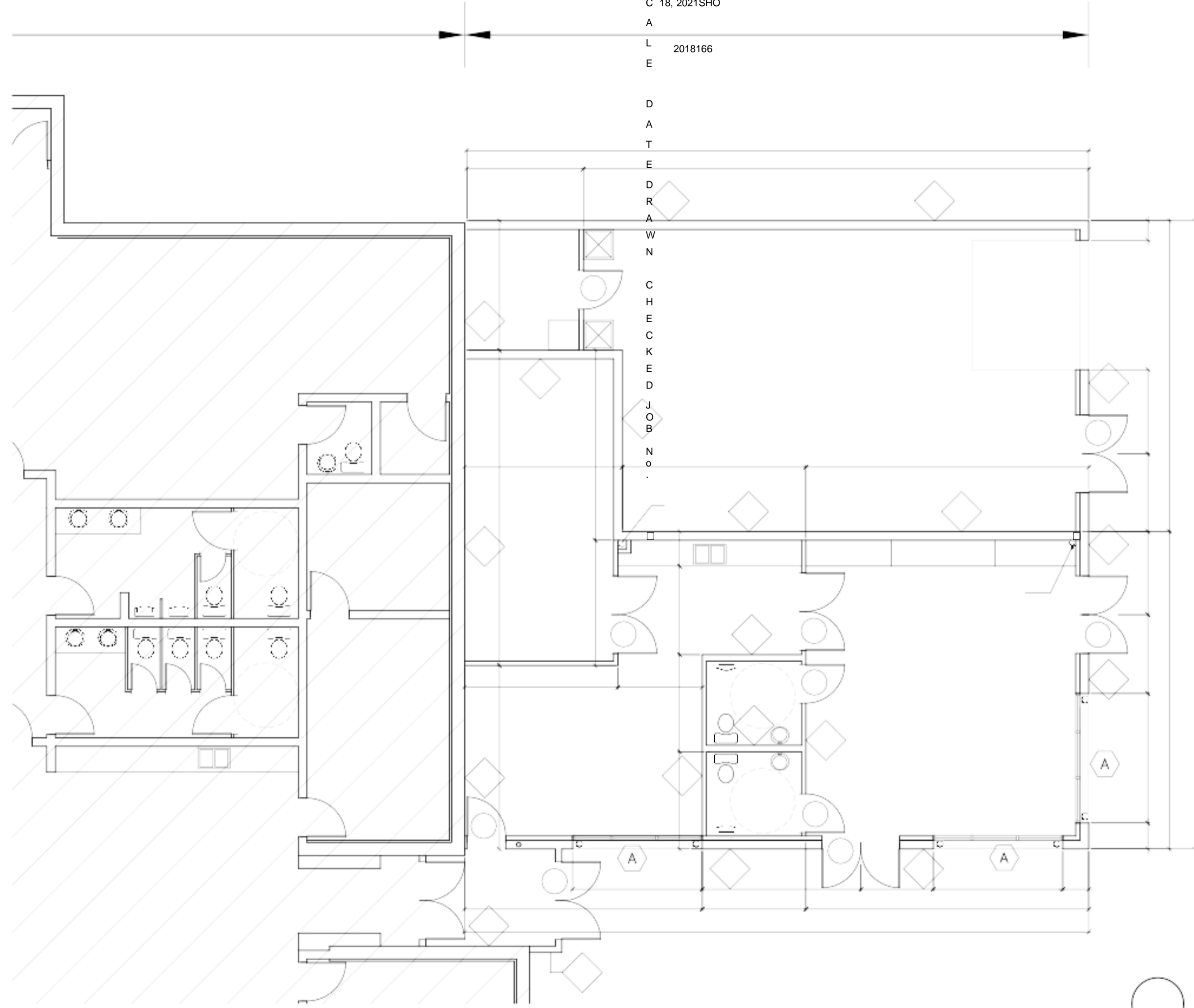
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

DETAIL
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PLAN**

OWER FLOOR PLAN

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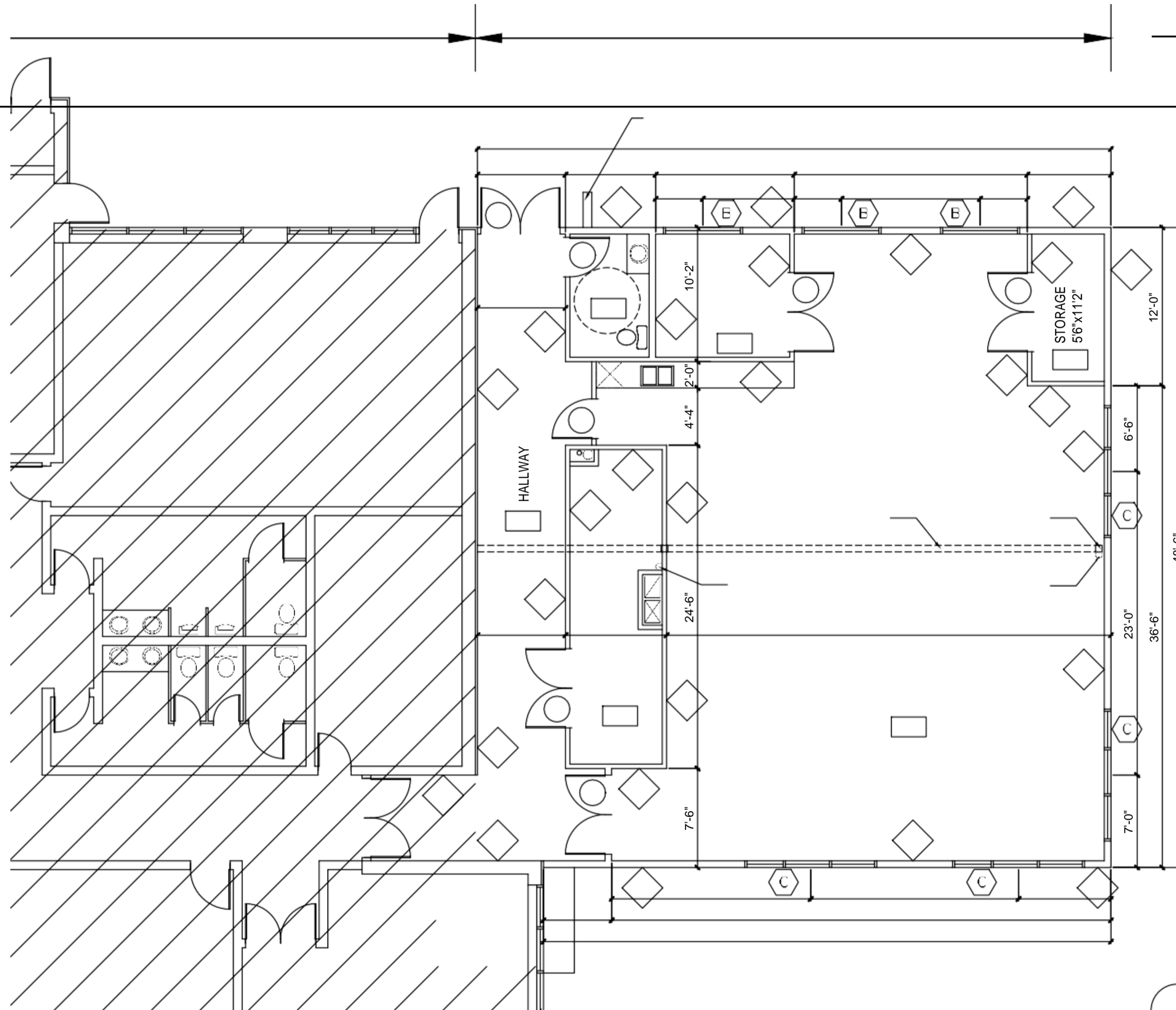
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UPPER FLOOR PLAN
SCALE 1/4" = 1'-0"



EXISTING BUILDING

NEW ADDITION

PLAYROOM

T-BAR CEILING
8'-6" A.F.F.

T-BAR CEILING
8'-6" A.F.F.

MEN

FILE / OFFICE

T-BAR CEILING
8'-6" A.F.F.

T-BAR CEILING
8'-6" A.F.F.

LADIES

TV ROOM

T-BAR CEILING
8'-6" A.F.F.

T-BAR CEILING
8'-6" A.F.F.

T-BAR CEILING
8'-6" A.F.F.

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PROJECT
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COMMUNITY CENTRE
ADDITION

5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

DETAIL
**LOWER FLOOR
REFLECTED
CEILING PLAN**

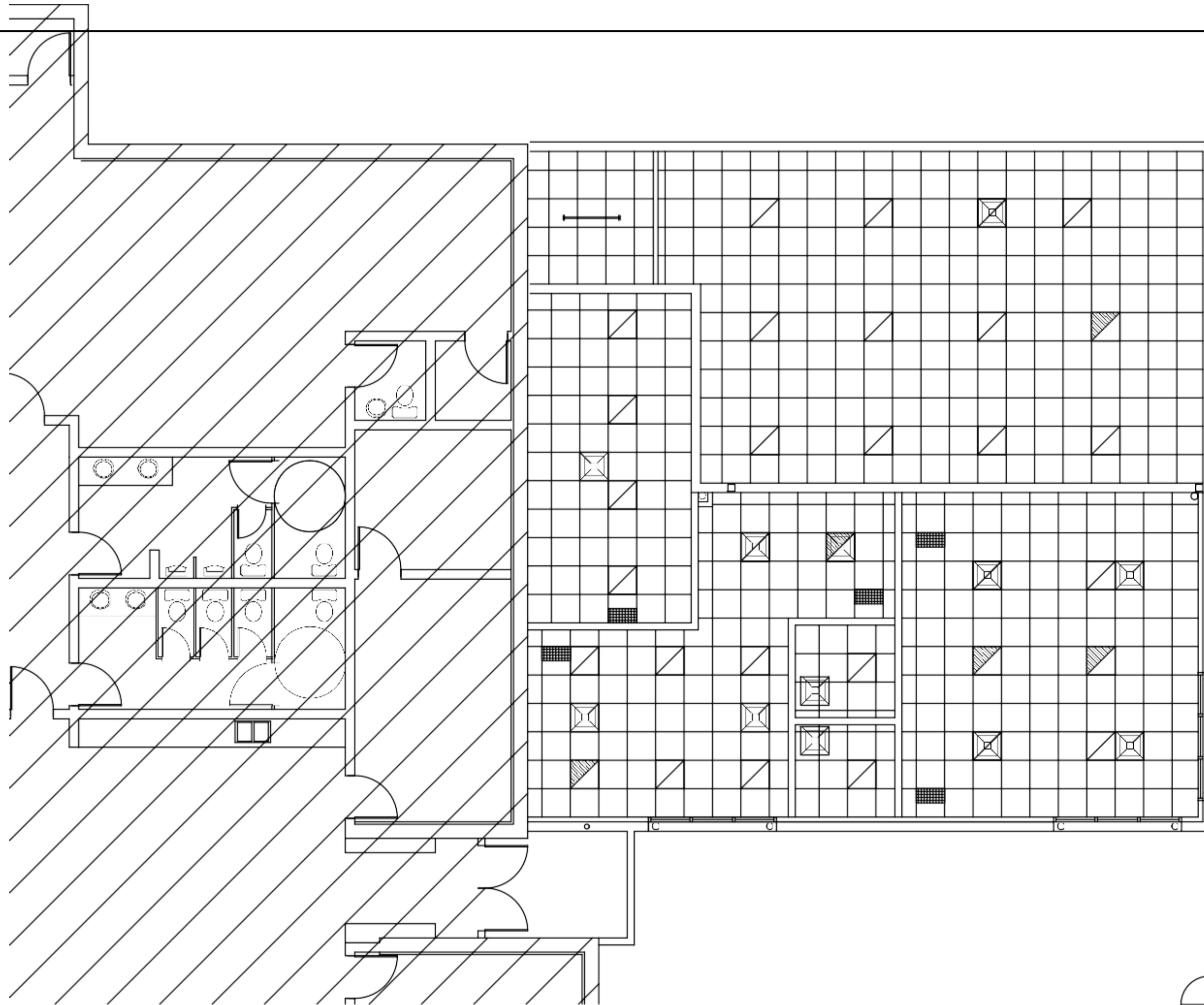
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LOWER FLOOR REFLECTED
CEILING PLAN
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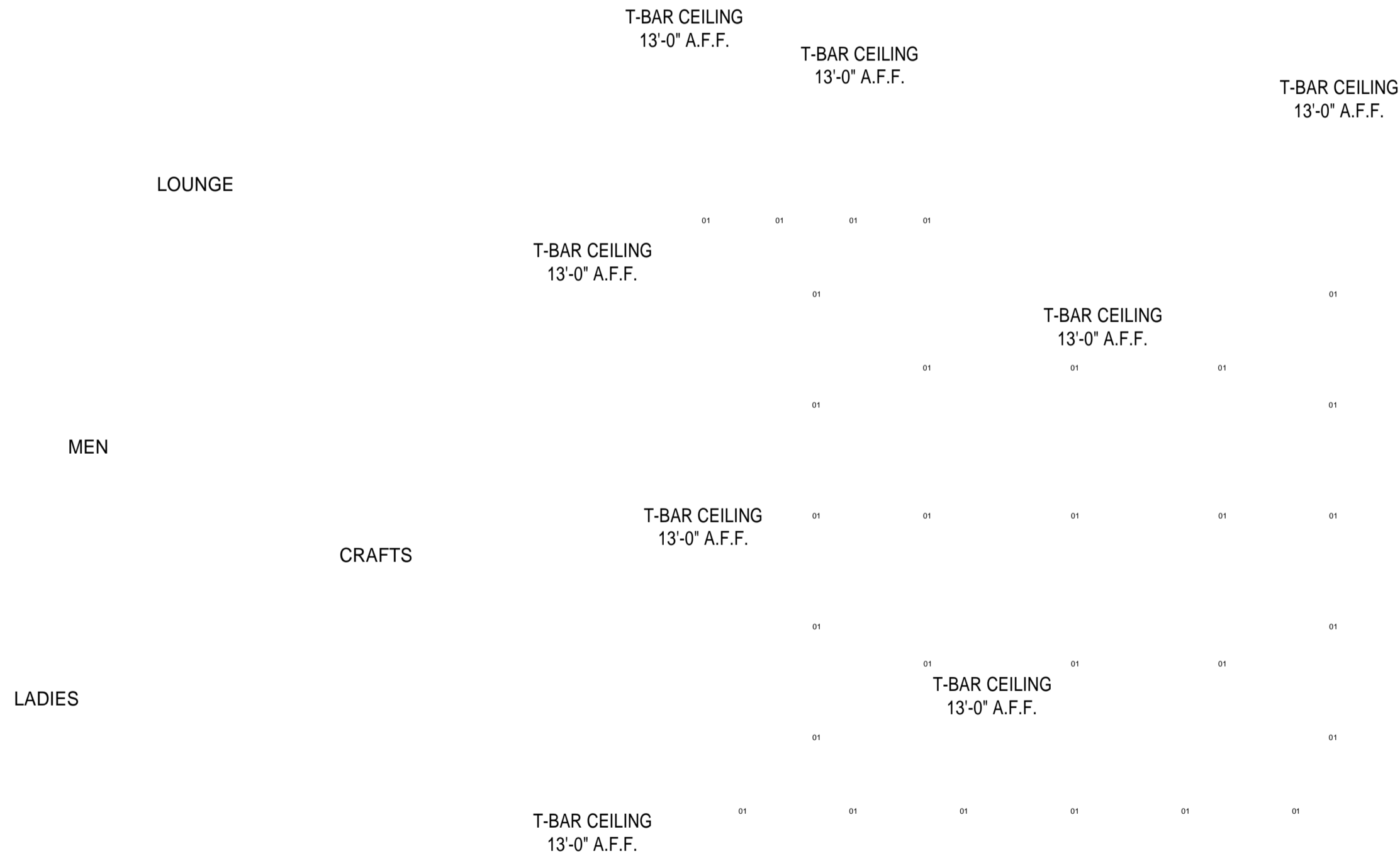
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EXISTING BUILDING

NEW ADDITION



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a	ISSUED FOR REVIEW	MAY 18,21

PROJECT
SILVER SPRINGS
COMMUNITY CENTRE
ADDITION

5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA
DETAIL
**UPPER FLOOR
REFLECTED
CEILING PLAN**

SCALE AS SHOWN

DATE MAY 18, 2021

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CHECKED

JOB No. 2018166

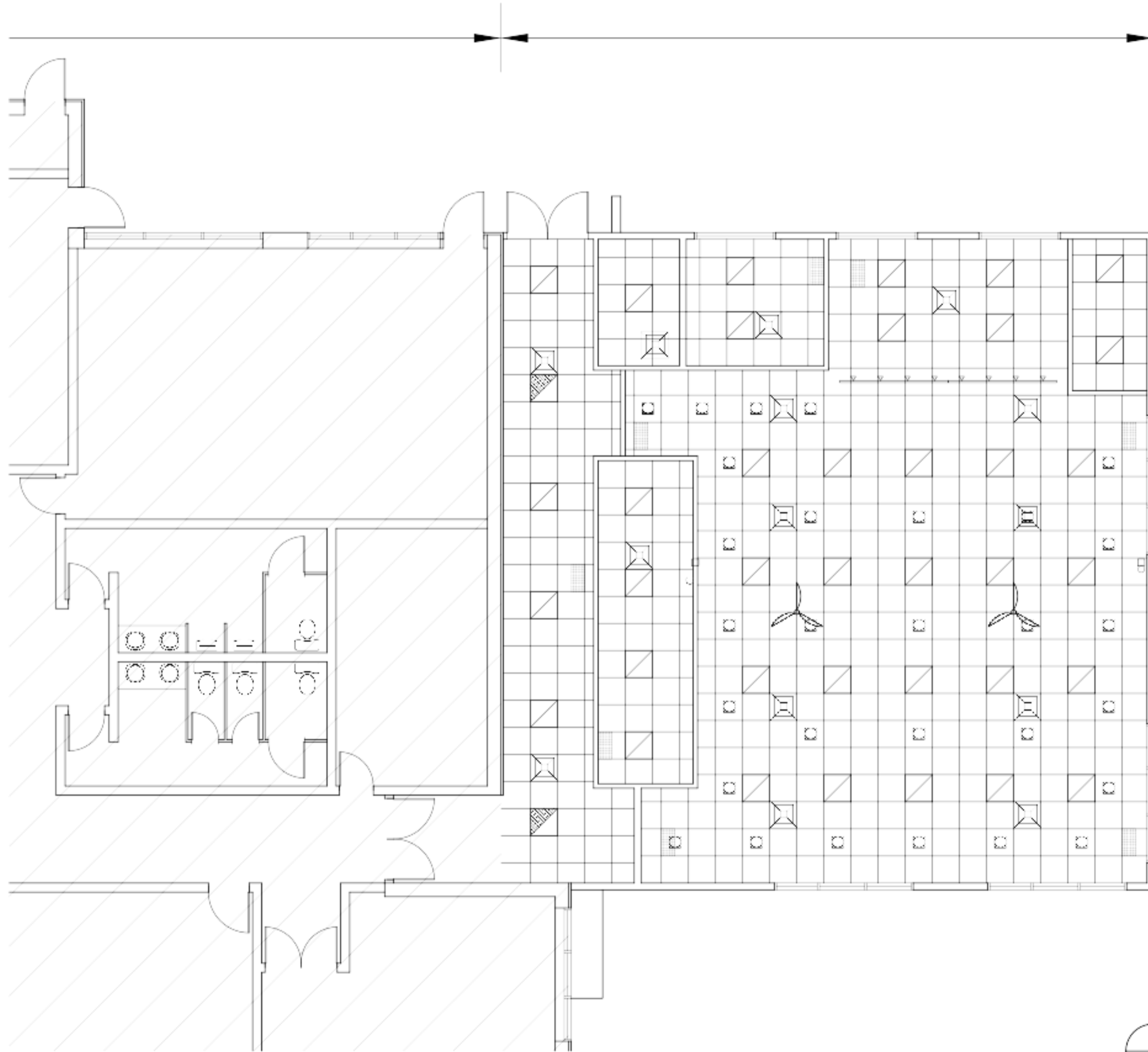
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FLOOR REFLECTED CEILING PLAN

SCALE 1/4" = 1'-0"



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PROJECT
SILVER SPRINGS
COMMUNITY CENTRE
ADDITION

5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

DETAIL
**LOWER FLOOR
FLOORING PLAN**

SCALE AS SHOWN

DATE MAY 18, 2021

DRAWN SHO

HARDWOOD FLOOR

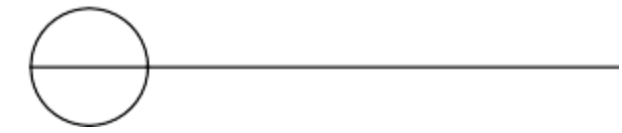
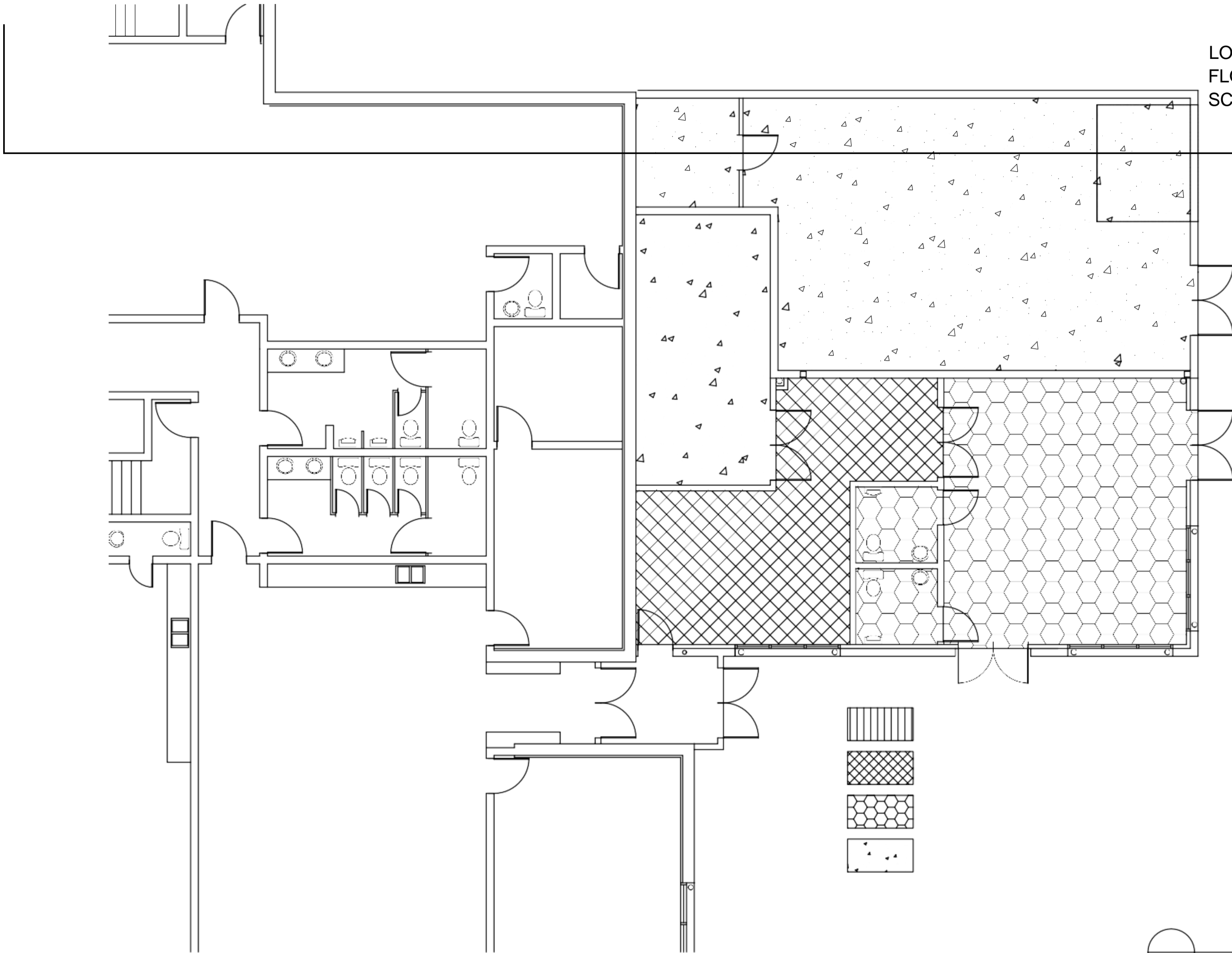
MARMOLEUM SHEET

RUBBER TILE

SEALED CONCRETE

LOWER FLOOR
FLOORING PLAN
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LEGAL DESCRIPTION:
LOT 23
BLOCK 42
PLAN 731 494

d		
c		
b		
a	ISSUED FOR REVIEW	MAY 18,21
No.	REVISION	DATE

PROJECT
SILVER SPRINGS
COMMUNITY CENTRE
ADDITION

5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

DETAIL
**UPPER FLOOR
FLOORING PLAN**

SCALE AS SHOWN
DATE MAY 18, 2021
DRAWN SHO

HARDWOOD FLOOR

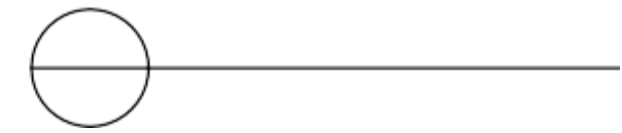
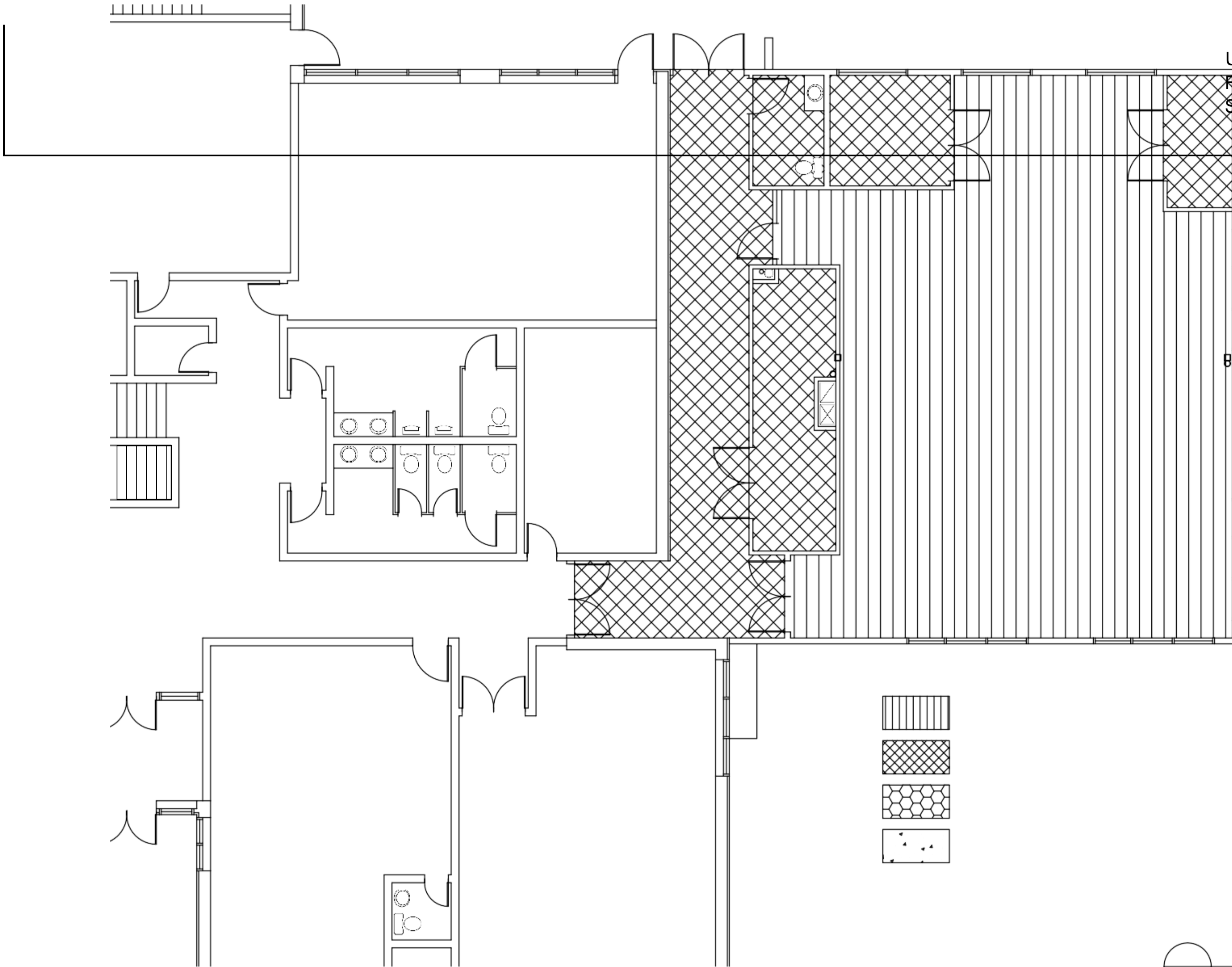
MARMOLEUM SHEET

RUBBER TILE

SEALED CONCRETE

CHECKED
JOB No. 2018166
DRAWING No. A2.7
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UPPER FLOOR
FLOORING PLAN
SCALE 1/4" = 1'-0"



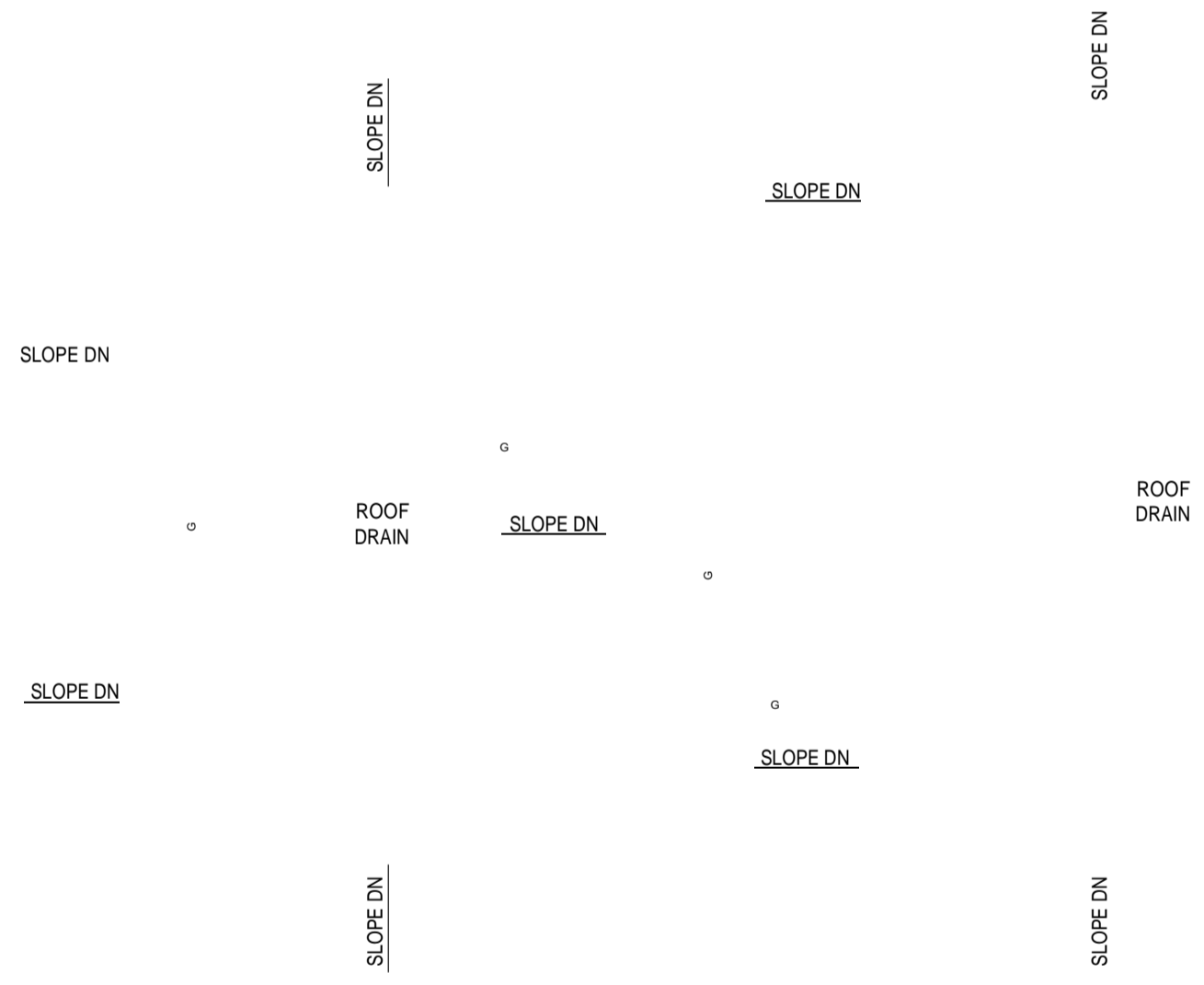
**STEVEN HO
ARCHITECTURE
INCORPORATED**

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Calgary, Alberta T3K 5K3
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LOT 23
BLOCK 42
PLAN 731 494

**EXISTING ROOF
(NOT IN CONTRACT)**



d		
c		
b		
a	ISSUED FOR REVIEW	MAY 18,21
No.	REVISION	DATE
PROJECT		
SILVER SPRINGS COMMUNITY CENTRE ADDITION		

5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA
DETAIL
ROOF PLAN

ROOF PLAN

EDATE
DRAWN CHECKED
JOB No.

AS SHOWN MAY 18, 2021 SHO

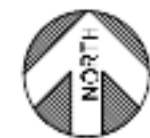
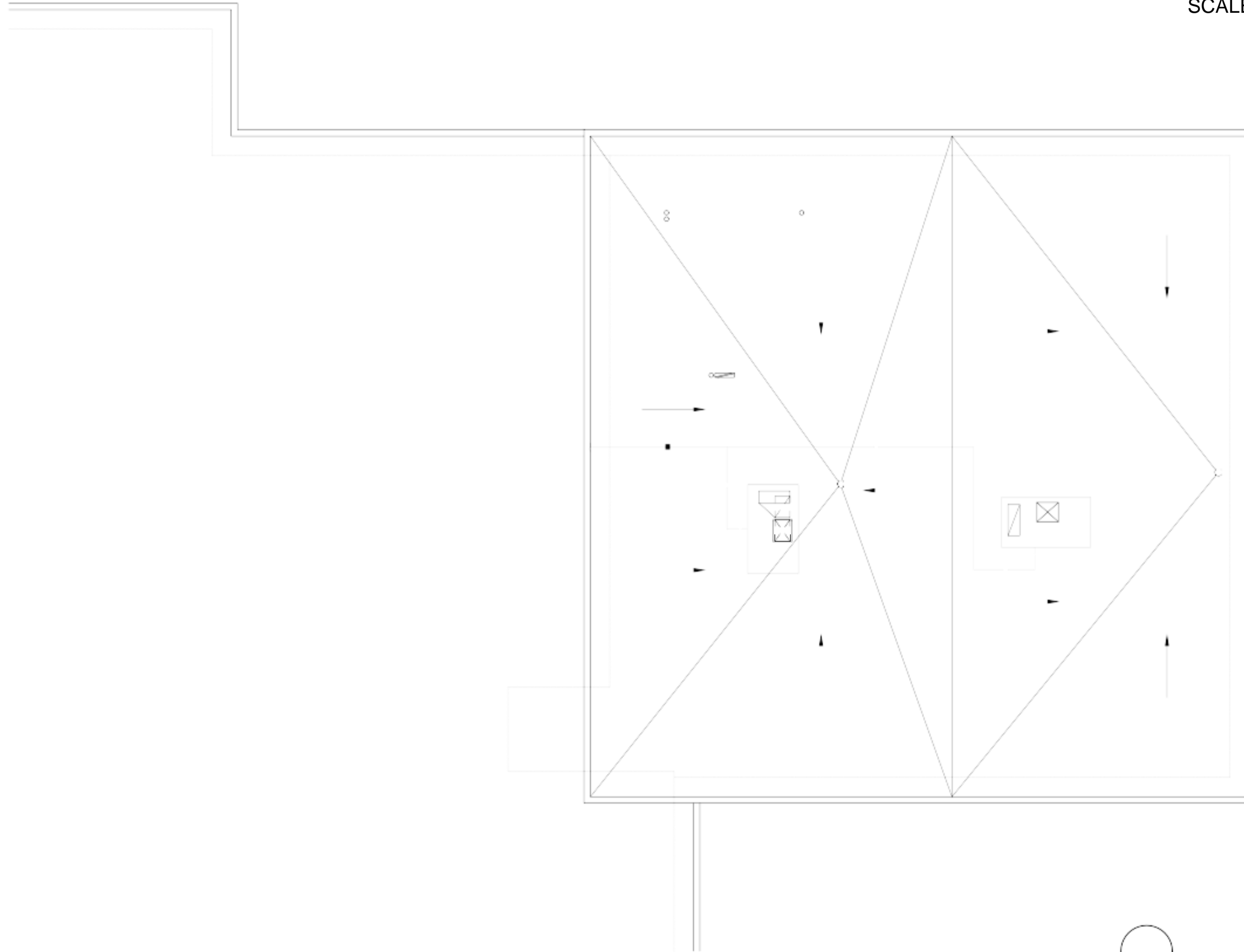
2018166

SCALE 1/4" = 1'-0"

DRAWING No.

A2.8

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LEGAL DESCRIPTION:
LOT 23
BLOCK 42
PLAN 731 494

No.	REVISION	DATE
a	ISSUED FOR REVIEW	MAY 18,21

PROJECT
SILVER SPRINGS
COMMUNITY CENTRE
ADDITION

5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA
DETAIL
ELEVATION

SCALE
DATE
DRAWN
CHECKED

EXISTING BUILDING

NEW ADDITION

4'-7"

14'-5"

11'-6"

4'-11"

14'-1"

30'-6"

11'-6"

L2

**SOUTH ELEVATION
SCALE 3/16" = 1'-0"**

NEW ADDITION

EXISTING BUILDING

4'-11"

14'-1"

29'-0"

10'-0"

U1

NEW CONCRETE STEPS

**NORTH ELEVATION
SCALE 3/16" = 1'-0"**

FAÇADE FINISHES LEGEND

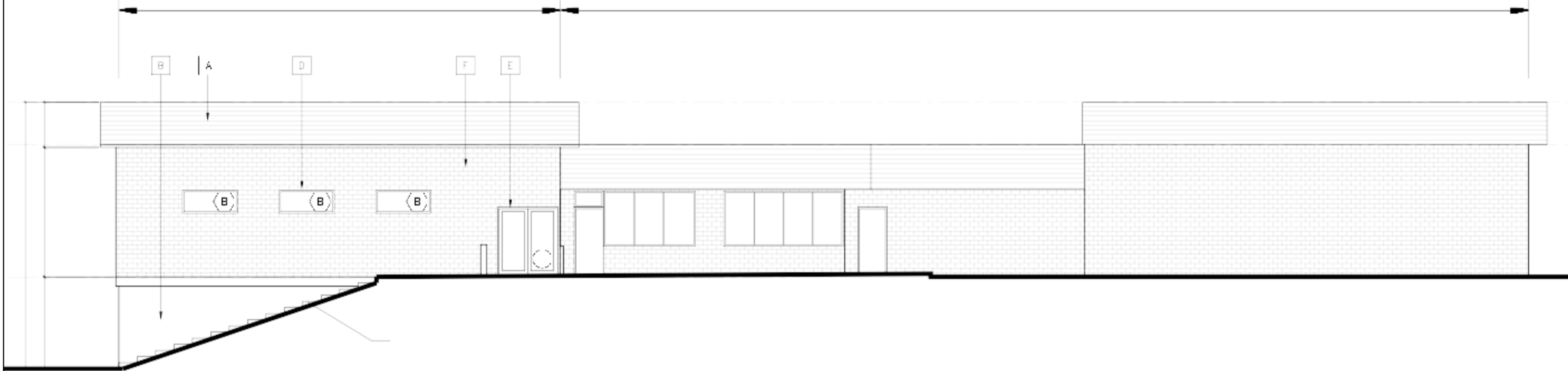
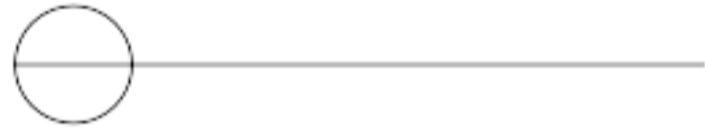
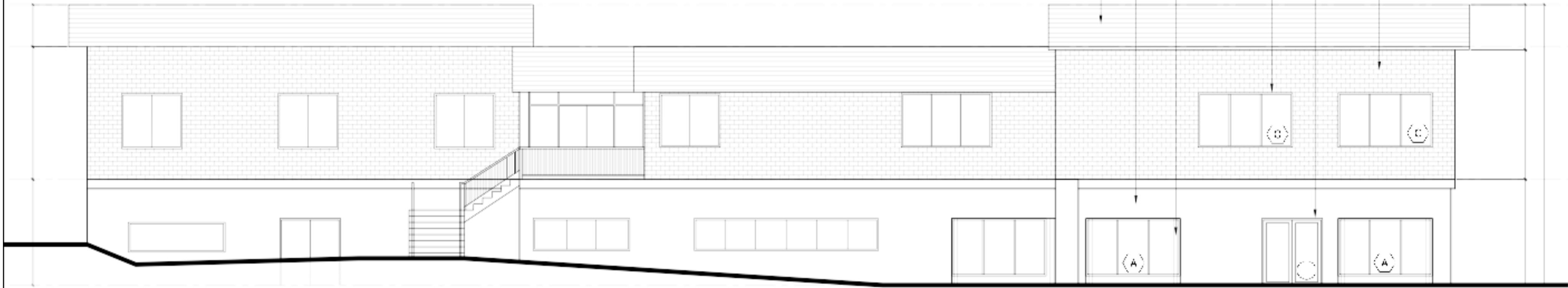
AS SHOWN MAY 18, 2021SHO

2018166

DRAWING No.

A3.1

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- 1 POLY METAL SIDING (SPECIAL COLOR TO MATCH EXISTING)
- 2 ACRYLIC STUCCO (COLOR TO MATCH EXISTING)
- 3 BLACK PAINTED STEEL HES COLUMN
- 4 BLACK COLOR ALUMINUM FRAME WINDOW
- 5 BLACK COLOR ALUMINUM 5 0-CLIPON DOOR
- 6 THIN BRICK (COLOR TO MATCH EXISTING)
- 7 HOLLOW CORE METAL DOOR AND FRAME (BLACK COLOR)
- 8 BLACK COLOR INSULATED METAL OVERHEAD DOOR

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LEGAL DESCRIPTION:
LOT 23
BLOCK 42
PLAN 731 494

EXISTING BUILDING

NEW ADDITION

EXISTING BUILDING

30'-6"
14'-1"
11'-6"

EL.19.45

EL.19.47

EL.19.47

4'-11"
14'-1"
30'-6"
11'-6"

EL.22.90

EL.19.96

STORAGE
GATE

NEW CONCRETE STEPS
19R@6.98"

**EAST ELEVATION
SCALE 3/16" = 1'-0"**

FACADE FINISHES LEGEND

d
c
b

a	ISSUED FOR REVIEW	MAY 18,21
No.	REVISION	DATE

PROJECT
SILVER SPRINGS
COMMUNITY CENTRE
ADDITION

5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA
DETAIL
ELEVATION

SCALE
DATE
DRAWN
CHECKED

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LEGAL DESCRIPTION:
LOT 23
BLOCK 42
PLAN 731 494

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a	ISSUED FOR REVIEW	MAY 18,21
No.	REVISION	DATE

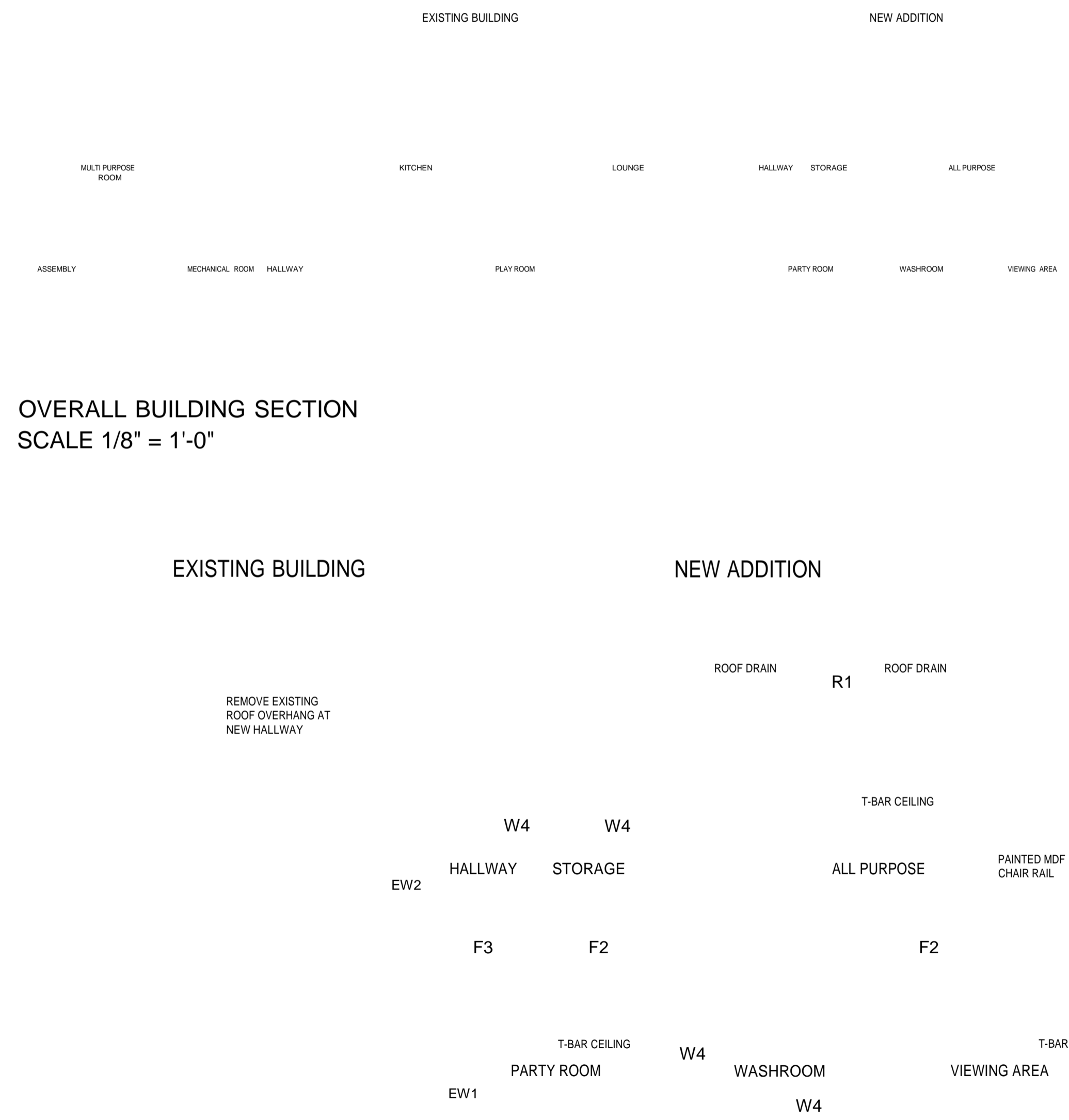
PROJECT
SILVER SPRINGS
COMMUNITY CENTRE
ADDITION

5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

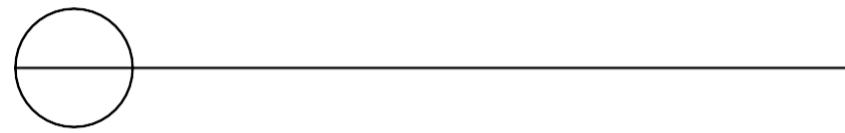
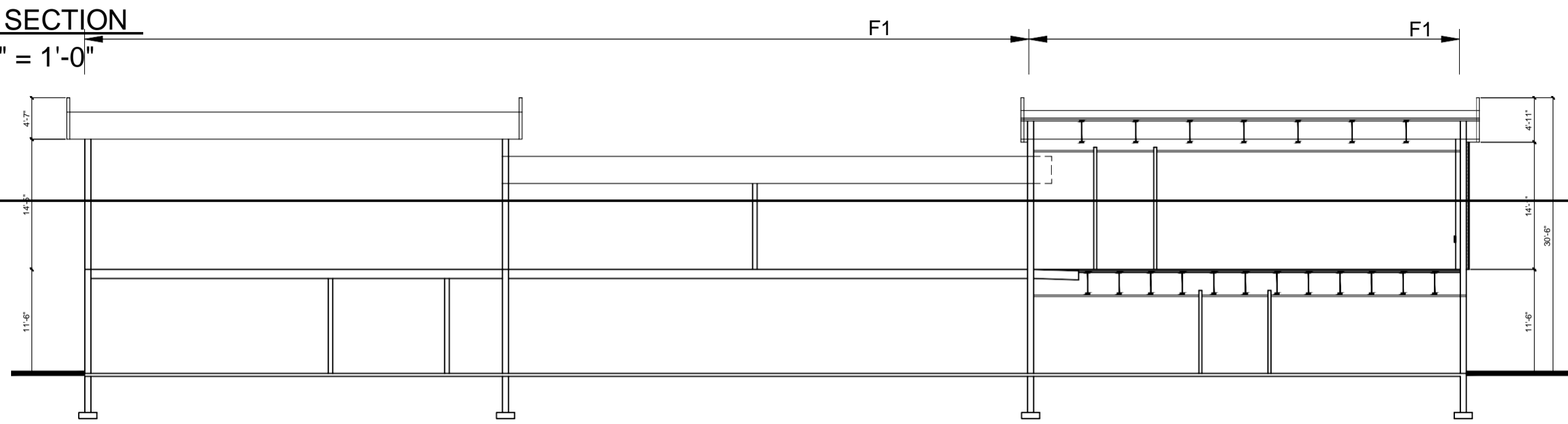
DETAIL
**BUILDING
SECTION**

SCALE	AS SHOWN
DATE	MAY 18, 2021
DRAWN	SHO

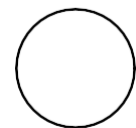
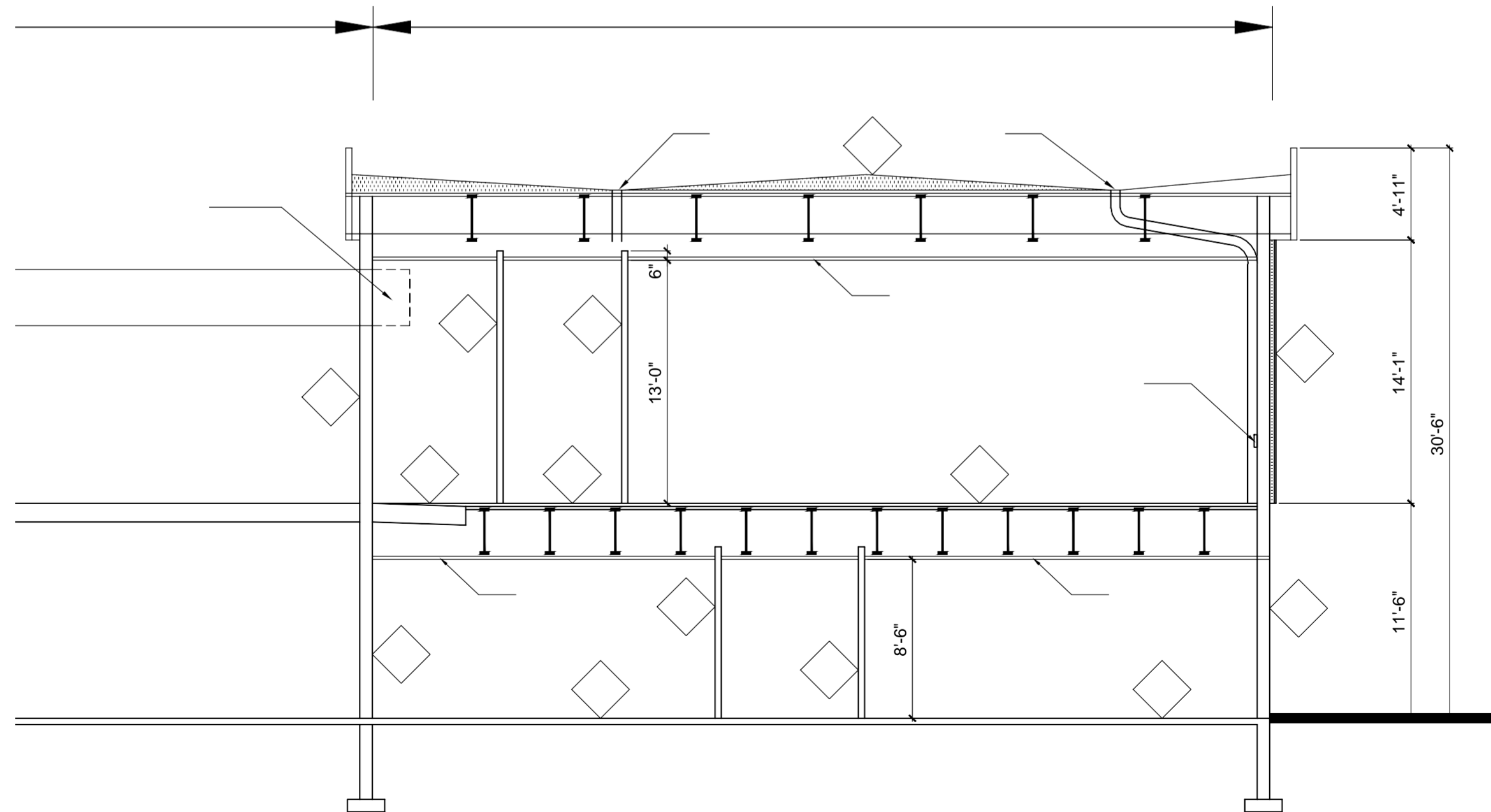
OVERALL BUILDING SECTION
SCALE 1/8" = 1'-0"



BUILDING SECTION
SCALE 1/4" = 1'-0"



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STAMP:

ADDRESS:

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CALGARY, ALBERTA

SHEET TITLE:

ADDITION FOUNDATION PLAN

SCALE: AS SHOWN DATE (D/M/Y) 07/04/2021

DRAWING: S1 REVISION: 0

SUBMISSION / REVISION :

DATE	DESCRIPTION

TRANSVERSE @ 12" o/c 15M
(2) 15M CONTINUOUS BOTTOM

DOWEL NEW FOOTING TO EXISTING WITH (3) 24" LONG 15M BARS.
---C/W MIN. 5" EMBEDMENT. EPOXY WITH HIL11 HIT-HY 200 OR EQUIV. TYP ALL LOCATIONS

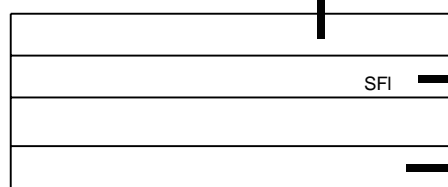
SFI (TYP. U N&)

ARCHITECTURAL:

GEOTECH INFO REQUIRED

GRADE AROUND PERIMETER

UNDERGROUND UTILITIES TO AVOID? (THERE IS A CATCHBASIN BESIDE THE BUILDING, DOES THAT DRAIN TO THE FRONT OF THE PROPERTY OR TO THE BACK?)



STRIP FOOTING SCHEDULE

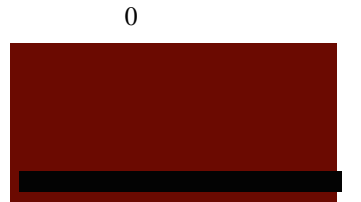
MARK	WIDTH	DEPTH	REINFORCEMENT
SFI	36"	12"	(3) 15M CONTINUOUS BOTTOM,
SF2	24"	12"	

07/04/21 I ISSUED FOR COORDINATION

M,
15M TRANSVERSE O 12" o/c

FOOTING PLAN
1/8" = 1'-0"

1. THIS DRAWING MUST NOT BE SCALED.
2. ALL ERRORS OR OMISSIONS MUST BE REPORTED TO THE DESIGN ENGINEER IMMEDIATELY.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & ELEVATIONS PRIOR TO COMMENCEMENT OF WORK.
4. VARIATIONS OR MODIFICATIONS TO WORK SHOWN SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE DESIGN ENGINEER.
5. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS.



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SHEET TITLE:

ADDITION UPPER FLOOR FRAMING
PLAN

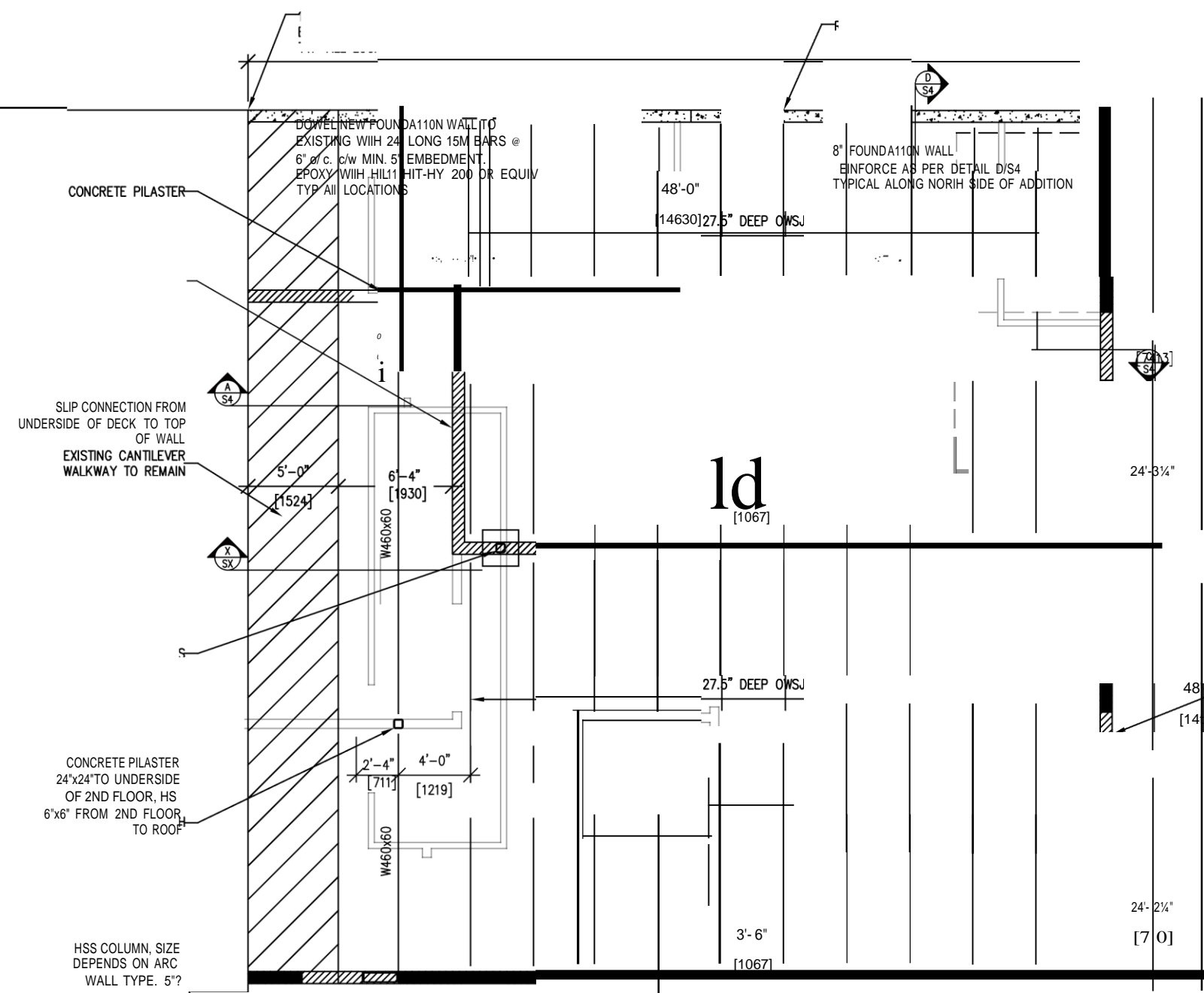
SCALE: AS SHOWN
DATE (D/M/Y): 07/04/2021

DRAWING: S2
REVISION: 0

SUBMISSION / REVISION :

DATE DESCRIPTION

07/04/21 | ISSUED FOR COORDINATION



ARCHITECTURAL:

NEED ARCHITECTURAL SECTIONS OR DETAILS FOR THE CONNECTION TO THE NEW BUILDING.

- WALL ASSEMBLIES
- FLOOR ASSEMBLY
- IS THE BLOCK WALL A FIRE WALL OR FIRE SEPARATION OR JUST A PARTITION
- IS THE 2ND FLOOR RATED? IF SO, HOW IS THE RATING ACHIEVED? (DRYWALL UNDERSIDE OF JOISTS? SPRAY?)

MECHANICAL:

- IS THERE A MECHANICAL CHASE?
- DUCTWORK PENETRATIONS THROUGH THE BLOCK WALL?
- MECHANICAL COMING FROM THE EXISTING BUILDING? IF SO, WHERE? OPENINGS AND REINFORCING OF THE EXISTING BUILDING NEEDS DETAILING

NEW LINTEL TYP. REFER TO LINTEL SCHEDULE FOR REINFORCEMENT REQUIREMENTS

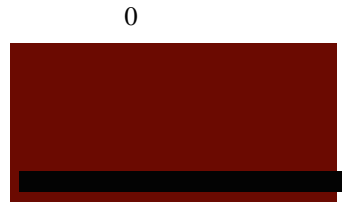
LINTEL SCHEDULE				
MARK	CLEAR SPAN	DEPTH "D"	WIDTH	REINFORCEMENT
L1				
L2				

ISC: UNRESTRICTED

- TO COMMENCEMENT OF WORK.
4. VARIATIONS OR MODIFICATIONS TO WORK SHOWN SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE DESIGN ENGINEER
 5. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS.

1 THIS DRAWING MUST NOT BE SCALED.
2. ALL ERRORS OR OMISSIONS MUST BE REPORTED TO THE DESIGNER

ENGINEER
IMMEDIATELY
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & ELEVATIONS PRIOR



RECAD

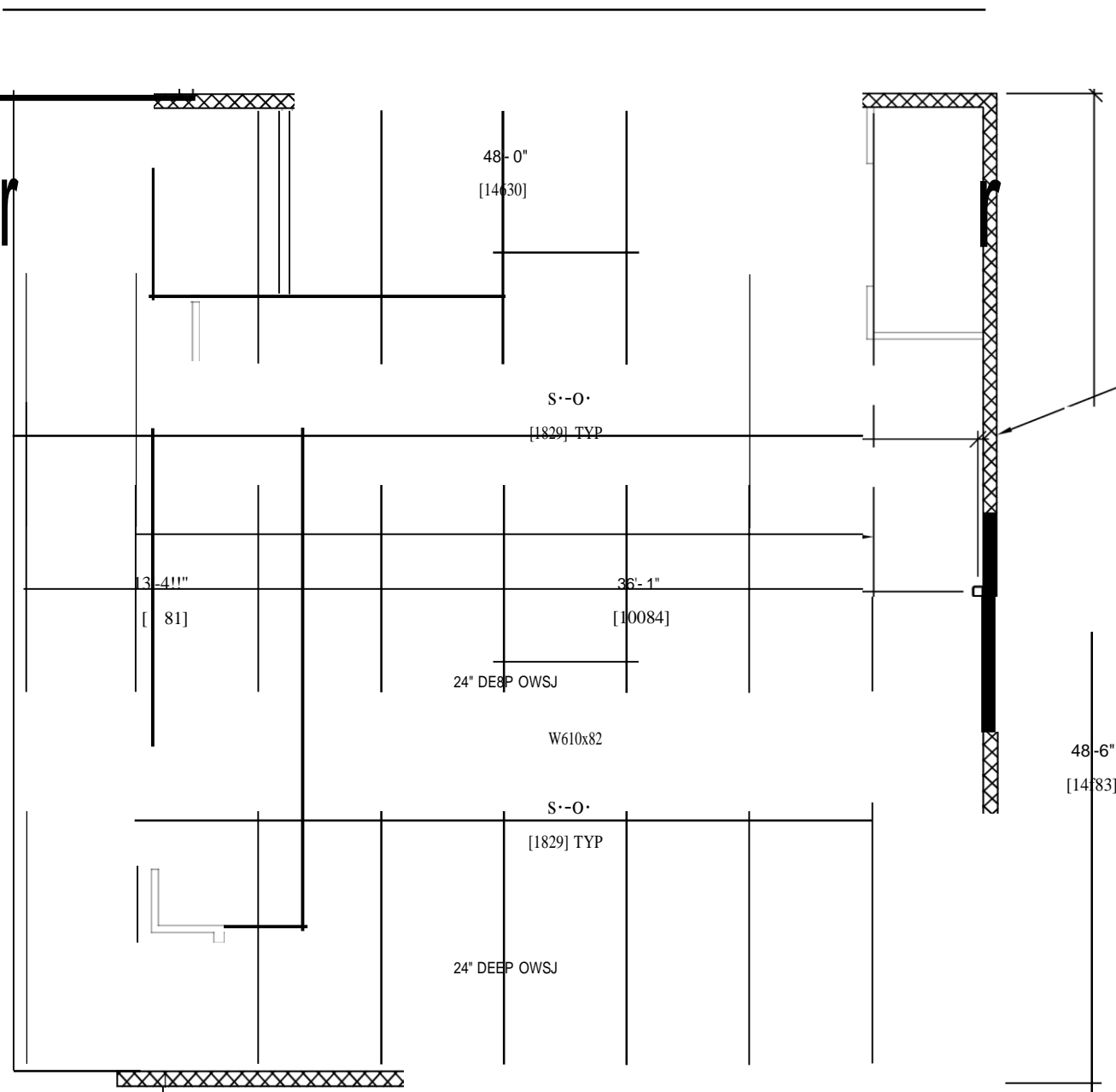
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CALGARY
PH: (403) 277-0890
INFO@RECAD.CA
STAMP:

ADDRESS:
5720 SILVER RIDGE DR NW
CALGARY, ALBERTA

SHEET TITLE:
ADDITION ROOF FRAMING PLAN

SCALE: AS SHOWN
DATE (D/M/Y): 07/04/2021

DRAWING: S3
REVISION: 0



NEW 8" CMU UPPER WALL TYP FOR
ADDITION U.N.O.
REINFORCE AS PER DETAIL X/SX

- ARCHITECTURAL:**
- NEED ARCHITECTURAL SECTIONS OR DETAILS FOR THE CONNECTION TO THE NEW BUILDING.
 - PARAPET HEIGHTS
 - ROOF SLOPES (AND METHOD OF SLOPING)
 - PARAPET ASSEMBLY
 - ROOF ASSEMBLY
- MECHANICAL:**
- ROOF TOP UNITS
 - PENETRATIONS

NEW LINTEL TYP.
REFER TO LINTEL SCHEDULE FOR
REINFORCEMENT REQUIREMENTS

LINTEL SCHEDULE

M.ABK.	CLEAB SEAN	QEEIJ "Q"	:tjQli	BEINEQBCEMENI
L1				
L2				

SUBMISSION / REVISION :DATE

DESCRIPTION

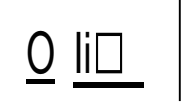
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5. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS.

0

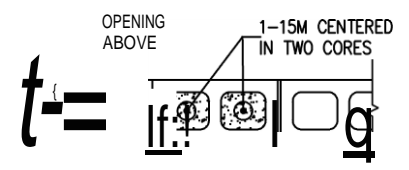
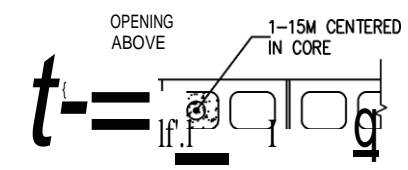
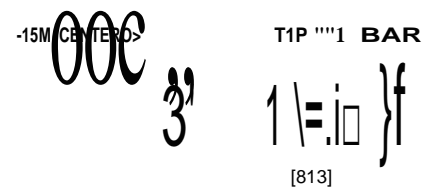
TYPICAL MASONRY DETAILS

1-15M CENTERED
IN CORE



INTERSECTION
SCALE: 1/2"=1'-0"

CORNER
SCALE: 1/2"=1'-0"



WALL END
SCALE: 1/2"=1'-0"

OPENING < 48"
SCALE: 1/2"=1'-0"

OPENING > 48"
SCALE: 1/2"=1'-0"

- A EXISTING CONCRETE WALKWAY TO NEW UPPER FLOOR CONNECTION
- S4 SCALE: 1/2"=1'-0"

ALL OF THESE DETAILS ARE VERY PRELIMINARY

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ADDRESS:
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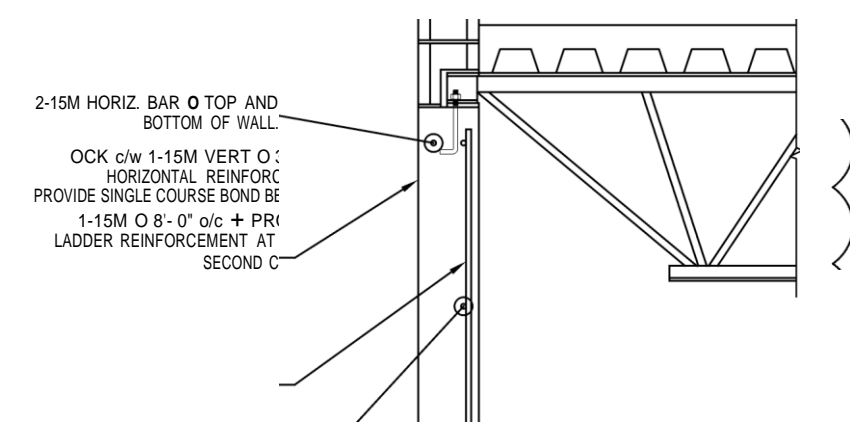
SHEET TITLE:
DETAILS

SCALE: AS SHOWN
DATE (D/M/Y): 07/04/2021
DRAWING: S4
REVISION: 0

THREE COURSE BOND BEAM c/w 2-15M BOTTOM

8" CMU WALL VERTICAL

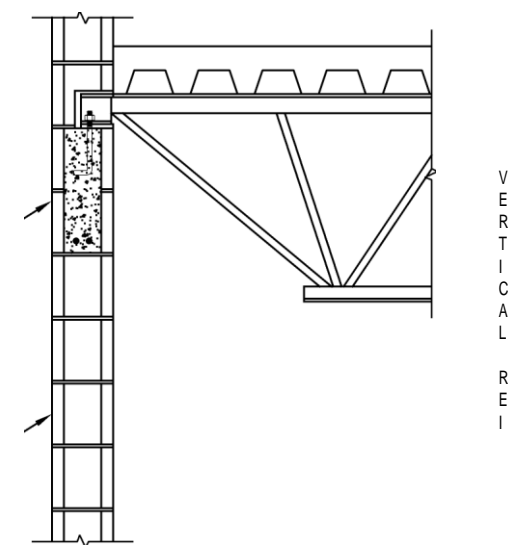
L4"x4"x1/4" CONTINUOUS DECK ANGLE
FASTEN TO CMU BOND BEAM WITH
1/2" ANCHOR BOLT @ 24" o/c



TWO COURSE BOND BEAM
c/w 2-15M BOTTOM

8" CMU WALL

ISC: UNRESTRICTED



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REINFORCEMENT: CORE FILL BLOCK c/w 1-15M VERT @ 32" o/c
 HORIZONTAL REINFORCEMENT: PROVIDE SINGLE COURSE BOND BEAM c/w 1-15M @ 8'-0" o/c +
 PROVIDE LADDER REINFORCEMENT AT EVERY SECOND COURSE

1,
1,

NEW
26"
DEEP
UPPER
FLOOR
ROWS

8'
CONCRETE
FOUNDATION
TIE WALL

A
WHERE FILL IS LESS THAN 8'-0"

15M HORIZ. BAR @ 16" o/c

SUBMISSION / REVISION:
 DATE | DESCRIPTION
 07/04/21 | ISSUED FOR COORDINATION

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4. VARIATIONS OR MODIFICATIONS TO WORK SHOWN SHALL NOT BE PERMITTED.

D
S4 CONCRETE FOUNDATION WALL NORTH ELEVATION
 SCALE: 1/2"=1'-0"

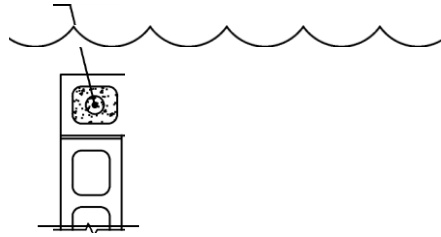
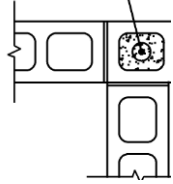


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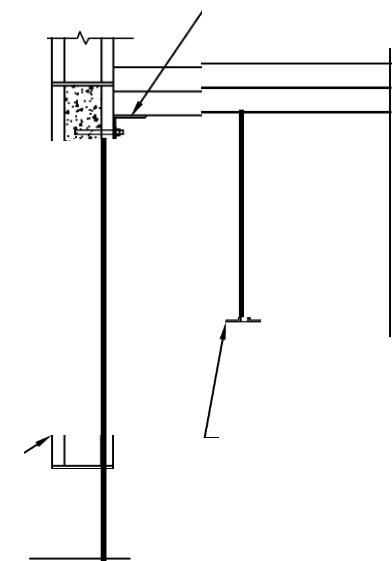
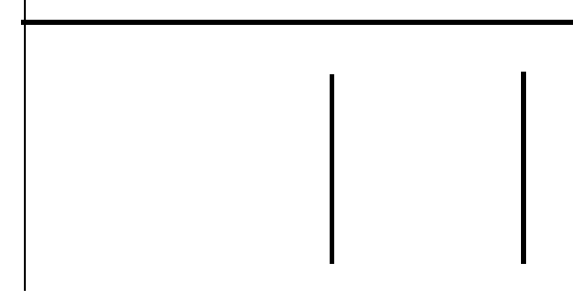
WITHOUT WRITTEN PERMISSION FROM THE
DESIGN ENGINEER
5. THIS DRAWING SHALL BE READ IN
CONJUNCTION WITH THE ARCHITECTURAL
MECHANICAL & ELECTRICAL DRAWINGS.

MASONRY WALL SOUTH ELEVATION
SCALE: 1/2"=1'-0"

1-15M CENTERED
IN CORE



C MASONRY WALL EAST ELEVATION
S4 SCALE: 1/2"=1'-0"



B
S4

SILVER SPRINGS COMMUNITY CENTRE ADDITION

5720 SILVER RIDGE DRIVE NW, CALGARY, ALBERTA

ISSUED FOR BUILDING PERMIT
21/05/10



EMBE CONSULTING ENGINEERS
SUITE 204, 110 12th AVENUE, S.W.
CALGARY, AB, T2R 0G7
403-460-2277
info@embeconsulting.ca

DO NOT SCALE DRAWINGS. THE CONTRACTOR SHALL
CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY
DISCREPANCIES BEFORE PROCEEDING WITH THE
WORKS

NO.	ISSUED	DATE
1.	95% REVIEW	21-04-27
2.	ISSUED FOR BP	21-05-10

SYMBOL LEGEND			
SYMBOL	DESCRIPTION	SPECIFICATIONS	MOUNTING
LIGHTING LEGEND			
	RECESSED DOWNLIGHT LUMINAIRE, TYPE XX	SEE SCHEDULE	CEILING RECESSED
	SURFACE MOUNTED DOWNLIGHT LUMINAIRE, TYPE XX	SEE SCHEDULE	CEILING SURFACE MOUNT
	PENDANT LUMINAIRE, TYPE XX	SEE SCHEDULE	CEILING SUSPENDED
	WALL SCONCE LUMINAIRE, TYPE XX	SEE SCHEDULE	WALL
	TRACK LUMINAIRE C/W TRACK HEADS INDICATED	SEE SCHEDULE	CEILING
	LINEAR WALL MOUNT LUMINAIRE, TYPE XX	SEE SCHEDULE	WALL
	SURFACE MOUNTED WRAP LUMINAIRE, LUMINAIRE TYPE XX	SEE SCHEDULE	CEILING SURFACE
	SURFACE/SUSPENDED LUMINAIRE, TYPE XX	SEE SCHEDULE	CEILING SURFACE /SUSPENDED
	1x4 LUMINAIRE, TYPE XX	SEE SCHEDULE	RECESSED
	2x2 LUMINAIRE, TYPE XX	SEE SCHEDULE	RECESSED
	2x4 LUMINAIRE, TYPE XX	SEE SCHEDULE	RECESSED
	STRIP LUMINAIRE, TYPE XX (SEE SCHEDULE FOR LENGTH)	SEE SCHEDULE	CEILING SURFACE /SUSPENDED
	IN GROUND LUMINAIRE, TYPE XX	SEE SCHEDULE	SEE LUMINAIRE SCHEDULE
	EXTERIOR POLE LUMINAIRE (SINGLE HEAD), TYPE XX	SEE SCHEDULE	SEE LUMINAIRE SCHEDULE
	EXTERIOR POLE LUMINAIRE (DOUBLE HEAD), TYPE XX	SEE SCHEDULE	SEE LUMINAIRE SCHEDULE
	EXTERIOR POLE LUMINAIRE (FOUR HEAD), TYPE XX	SEE SCHEDULE	SEE LUMINAIRE SCHEDULE
	BOLLARD, TYPE XX	SEE SCHEDULE	SEE LUMINAIRE SCHEDULE
EMERGENCY LIGHTING LEGEND			
	EXIT LIGHT, SEE FLOOR PLAN FOR DIRECTIONAL ARROWS WHERE APPLICABLE	SEE SCHEDULE	WALL, 84in/2134mm
	EXIT LIGHT, SEE FLOOR PLAN FOR DIRECTIONAL ARROWS WHERE APPLICABLE	SEE SCHEDULE	CEILING 144" AFF
	EXIT LIGHT C/W BATTERY PACK & REMOTE HEADS, SEE FLOOR PLAN FOR DIRECTIONAL ARROWS WHERE APPLICABLE	SEE SCHEDULE	WALL, 84in/2134mm
	EMERGENCY DOUBLE REMOTE HEADS	SEE SCHEDULE	6" BELOW CEILING OR WALL, 84in/2134mm
	EMERGENCY DOUBLE REMOTE HEADS	SEE SCHEDULE	6" BELOW CEILING
	VANDAL PROOF EMER. DOUBLE REMOTE HEADS	SEE SCHEDULE	6" BELOW CEILING OR WALL, 84in/2134mm
	VANDAL PROOF EMER. DOUBLE REMOTE HEADS	SEE SCHEDULE	6" BELOW CEILING
	BATTERY PACK C/W REMOTE HEADS	SEE SCHEDULE	WALL, 84in/2134mm
LIGHTING CONTROLS LEGEND			
	SINGLE POLE SWITCH, 15A	LEVITON DECORA SERIES, WHITE	WALL, 45in/1150mm
	3-WAY SWITCH, 15A	LEVITON DECORA SERIES, WHITE	WALL, 45in/1150mm
	SINGLE POLE SWITCH 'a' - SEE CIRCUIT FOR CONTROL	LEVITON DECORA SERIES, WHITE	WALL, 45in/1150mm
	DIMMER SWITCH - SEE CIRCUIT FOR CONTROLS	LEVITON DECOR ROCKER SIDE CONTROL, WHITE	WALL, 45in/1150mm
	VACANCY SWITCH	ACUTY WSX-VA-WH SERIES	WALL, 45in/1150mm
	VARIABLE SPEED SWITCH	ACUTY GR2400 CHELSEA DIGITAL SWITCH CHS-BWH-PWH	WALL, 45in/1150mm
	MASTER SWITCH - SEE LIGHTING CONTROL DETAILS.		WALL, 45in/1150mm
	OCCUPANCY SENSOR	ACUTY WSX SERIES	CEILING
	DIMMING OCCUPANCY SENSOR	ACUTY WSX SERIES	CEILING
	OCCUPANCY SENSOR	ACUTY WSX SERIES	WALL, 45in/1150mm
	DIMMING OCCUPANCY SENSOR	ACUTY WSX SERIES	WALL, 45in/1150mm
	DAYLIGHT SENSOR	ACUTY CM-ADC	CEILING
	WALL MOUNTED PHOTO CELL	ACUTY CM-ADC SERIES	SEE DRAWING
* HATCHED LUMINAIRE WITH 'NL' INDICATES LIGHTING TO BE ON NIGHT LIGHT CIRCUIT			

POWER LEGEND			
	DUPLEX RECEPTACLE - 120V/15A (5-15R)	LEVITON SERIES - WHITE	12in/305mm OR AS NOTED
	FOURPLEX RECEPTACLE - 120V/15A (5-15R)	LEVITON SERIES - WHITE	12in/305mm OR AS NOTED
	FOURPLEX RECEPTACLE - 120V/20A (5-20R)	LEVITON SERIES - WHITE	12in/305mm OR AS NOTED
	GFCI DUPLEX RECEPTACLE - 120V/15A (5-15RA)	LEVITON SMARTLOCK SERIES, WHITE	12in/305mm OR AS NOTED
	DUPLEX RECEPTACLE - 120V/20A (5-20R)	LEVITON SERIES - WHITE	12in/305mm OR AS NOTED
	GFCI DUPLEX RECEPTACLE - 120V/20A (5-20RA)	LEVITON SMARTLOCK SERIES, WHITE	12in/305mm OR AS NOTED
	GFCI FOURPLEX RECEPTACLE - 120V/15A (5-15RA)	LEVITON SMARTLOCK SERIES, WHITE	12in/305mm OR AS NOTED
	GFCI FOURPLEX RECEPTACLE - 120V/20A (5-20RA)	LEVITON SMARTLOCK SERIES, WHITE	12in/305mm OR AS NOTED
	TAMPER PROOF RECEPTACLE - 120V/15A	LEVITON AFTR1 SERIES	12in/305mm OR AS NOTED
	TAMPER PROOF RECEPTACLE - 120V/20A	LEVITON AFTR1 SERIES	12in/305mm OR AS NOTED
	USB DUPLEX RECEPTACLE - 120V/15A	LEVITON T5632, WHITE	12in/305mm OR AS NOTED
	USB DUPLEX RECEPTACLE - 120V/20A	LEVITON T5632, WHITE	12in/305mm OR AS NOTED
	HOSPITAL GRADE DUPLEX RECEPTACLE	LEVITON HOSPITAL GRADE SMARTLOCK SLIM	12in/305mm OR AS NOTED
	HOSPITAL GRADE FOURPLEX RECEPTACLE	LEVITON HOSPITAL GRADE SMARTLOCK SLIM	12in/305mm OR AS NOTED
	HOSPITAL GRADE GFCI DUPLEX RECEPTACLE	LEVITON HOSPITAL GRADE SMARTLOCK SLIM	12in/305mm OR AS NOTED
	HOSPITAL GRADE GFCI FOURPLEX RECEPTACLE	LEVITON HOSPITAL GRADE SMARTLOCK SLIM	12in/305mm OR AS NOTED
	HOSPITAL GRADE DUPLEX RECEPTACLE - 120V/20A	LEVITON HOSPITAL GRADE SMARTLOCK SLIM	12in/305mm OR AS NOTED
	HOSPITAL GRADE GFCI DUPLEX RECEPTACLE - 120V-20A	LEVITON HOSPITAL GRADE SMARTLOCK SLIM	12in/305mm OR AS NOTED
	DUPLEX RECEPTACLE - SWITCHED		12in/305mm OR AS NOTED
	PARKING LOT DUPLEX RECEPTACLE IN POST		SEE DETAIL
	PARKING LOT SINGLE RECEPTACLE IN POST		SEE DETAIL
	ISOLATED GROUND RECEPTACLE		12in/305mm OR AS NOTED
	FLOOR BOX C/W RECEPTACLE & DATA OUTLET (SEE DRAWING FOR QUANTITY AND RECEPTACLE TYPES)		FLOOR MOUNTED
	POWER PAC POLE C/W RECEPTACLE & DATA OUTLET (SEE DRAWING FOR QUANTITY AND RECEPTACLE TYPES)		FLOOR MOUNTED
	VACUUM OUTLET		
	SPECIAL RECEPTACLE	LEVITON SPEC GRADE, WHITE	12in/305mm OR AS NOTED
	HARDWIRED CONNECTION		12in/305mm OR AS NOTED
	DISCONNECT SWITCH		6in/1525mm OR AS NOTED
	JUNCTION BOX		
	MOTOR		
	MAGNETIC STARTER		WALL, 45in/1150mm
	SPEAKER		CEILING
	SPEAKER		
	THERMOSTAT		WALL MOUNTED
	CEILING FAN		CEILING
	RADIANT HEATER		WALL MOUNTED
	BASEBOARD HEATER	OULET SERIES	WALL MOUNTED
	FORCE FLOW HEATER	OULET SERIES	WALL MOUNTED
	ELECTRICAL PANEL - SEE PANEL SCHEDULE		WALL MOUNTED
	TELEPHONE TERMINAL BOARD		WALL MOUNTED
	TRANSFORMER		
FIRE ALARM LEGEND			

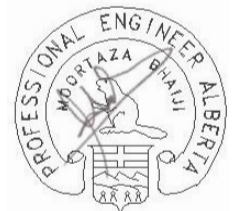
	FIRE ALARM CONTROL PANEL	SIMPLEX OR APPROVED EQUIVALENT	2400mm MAX AT TOP OF PANEL
	FIRE ALARM ANNUNCIATOR PANEL	SIMPLEX OR APPROVED EQUIVALENT	600mm MIN-1800mm MAX
	FIRE ALARM SMOKE DETECTOR	SIMPLEX OR APPROVED EQUIVALENT	CEILING
	FIRE ALARM HEAT DETECTOR	SIMPLEX OR APPROVED EQUIVALENT	CEILING
	FIRE ALARM COMBINATION HEAT/SMOKE DETECTOR	SIMPLEX OR APPROVED EQUIVALENT	CEILING
	FIRE ALARM RELAY DEVICE	SIMPLEX OR APPROVED EQUIVALENT	WALL
	FIRE ALARM MANUAL PULL STATION	SIMPLEX OR APPROVED EQUIVALENT	45in/1150mm
	FIRE ALARM COMBINATION HORN-STROBE 15cd UNLESS OTHERWISE INDICATED	SIMPLEX OR APPROVED EQUIVALENT	84in/2134mm
	FIRE ALARM STROBE 15cd UNLESS OTHERWISE INDICATED	SIMPLEX OR APPROVED EQUIVALENT	84in/2134mm
	FIRE ALARM HORN	SIMPLEX OR APPROVED EQUIVALENT	84in/2134mm
	LOW TEMPERATURE SENSOR	HONEYWELL T-1000	WALL
	FIRE ALARM SPEAKER 1W UNLESS OTHERWISE INDICATED	SIMPLEX OR APPROVED EQUIVALENT	CEILING
	FIRE ALARM COMBINATION SPEAKER STROBE 1W/15cd UNLESS OTHERWISE INDICATED	SIMPLEX OR APPROVED EQUIVALENT	84in/2134mm
	FIRE ALARM SPRINKLER TAMPER SWITCH	SIMPLEX OR APPROVED EQUIVALENT	
	FIRE ALARM SPRINKLER FLOW SWITCH	SIMPLEX OR APPROVED EQUIVALENT	
	FIRE ALARM COMBINATION BELL-STROBE 15cd UNLESS OTHERWISE INDICATED	SIMPLEX OR APPROVED EQUIVALENT	84in/2134mm
	FIRE ALARM BELL	SIMPLEX OR APPROVED EQUIVALENT	84in/2134mm
	MINI SUITE HORN WITH SEPARATE SILENCE	SIMPLEX OR APPROVED EQUIVALENT	84in/2134mm 45in/1143mm
	SMOKE ALARM C/W INTEGRAL CO ALARM	SIMPLEX OR APPROVED EQUIVALENT	CEILING
	FIRE ALARM ISOLATION MODULE (SEE FLOOR PLAN FOR NUMBERING)	SIMPLEX OR APPROVED EQUIVALENT	
	EMERGENCY FIRE PHONE	SIMPLEX OR APPROVED EQUIVALENT	57in/1450mm
	CO ALARM	SIMPLEX OR APPROVED EQUIVALENT	18in/457mm
SECURITY			
	CARD READER		WALL, 45in/1150mm
	KEY PAD		WALL, 45in/1150mm
	MAGNETIC DOOR HOLD OPEN DEVICE		WALL, 45in/1150mm
	HANDICAP PUSH BUTTON		WALL, 45in/1150mm
	BUZZER		WALL, 45in/1150mm
	DOOR RELEASE		WALL, 45in/1150mm
	MAGNETIC LOCK		WALL, 45in/1150mm
	ALARM CONTACT		WALL, 45in/1150mm
	SECURITY MOTION SENSOR		SEE DRAWING
	SECURITY CAMERA		SEE DRAWING
	PUSH BUTTON		43in/1100mm MAX
	ELECTRIC STRIKE		WALL, 45in/1150mm
	MOTION DETECTOR		WALL, 45in/1150mm
	MOTION DETECTOR		CEILING
COMMUNICATIONS			
	WIRELESS ACCESS POINT		CEILING
	SECURITY CONTROL PANEL		SEE DRAWING
	DATA OUTLET (4PORT WITH 4 DATA LINE)- NUMBER(4) INDICATES NUMBER OF PORTS(4) AND NUMBER OF DATA LINE(4)		12in/305mm OR AS NOTED
	VOICE AND DATA COMM. OUTLET (2PORT WITH 2 DATA LINE)		12in/305mm OR AS NOTED
	TELEPHONE OUTLET (2 PORT WITH 2 DATA LINE)		12in/305mm OR AS NOTED

	DATA OUTLET (2PORT WITH 2 DATA LINE)		12in/305mm OR AS NOTED
	TELEVISION OUTLET (HDMI AND COAX)		12in/305mm OR AS NOTED
TAGS/OTHER			
	LUMINAIRE TAG - SEE LUMINAIRE SCHEDULE		
	KITCHEN/ELECTRICAL EQUIPMENT TAG		
	MECHANICAL EQUIPMENT TAG		
	A.F.F. ABOVE FINISHED FLOOR		
	A.C. ABOVE COUNTER		
	NIGHT LIGHT - CIRCUIT TO NIGHT LIGHT BREAKER		
	EXISTING TO REMAIN		
	WEATHERPROOF		
	RELOCATED		
	REMOVE		
	RELOCATE		
	PANEL 'X' - CIRCUIT XX		
	CONDUIT HOME RUN FROM TRANSFORMER		
	CIRCLE DENOTES CEILING MOUNTED DEVICE		
	SQUARE DENOTES FLOOR MOUNTED DEVICE		
	EQUIPMENT TAG - SEE SCHEDULES		

NOTE: MOUNTING IS INDICATED FROM FINISHED FLOOR TO CENTER OF DEVICE. MOUNTING HEIGHTS INDICATED ON DRAWINGS OR SPECIFICATIONS HAVE PRECEDENCE OVER THIS LEGEND. ANY UNLISTED MOUNTING HEIGHTS TO BE CONFIRMED PRIOR TO INSTALLATION.
NOTE: APPROVED ALTERNATIVE MANUFACTURERS MAY BE ACCEPTED.

DRAWING LIST	
SHEET NUMBER	SHEET NAME
E000	ELECTRICAL COVER PAGE
E101	MAIN FLOOR PLAN - LIGHTING
E102	SECOND FLOOR PLAN - LIGHTING
E201	MAIN FLOOR PLAN - POWER & AUXILIARY
E202	SECOND FLOOR PLAN - POWER & AUXILIARY
E301	ELECTRICAL SCHEDULES & DETAILS
E302	ELECTRICAL SCHEDULES & DETAILS
E400	ELECTRICAL SPECIFICATIONS

ELECTRICAL	CONSTRUCTION ADMIN
PROJECT MANAGER: TOSIN OLOPADE E-MAIL: tolopa@embeconsulting.ca	MANSIMRAN GILL E-MAIL: mgill@embeconsulting.ca PHONE: 403-460-2277 EXT. 243
DESIGNER/DRAFTER: GERALD SCHMIDT E-MAIL: gschmidt@embeconsulting.ca	CHAD COATES E-MAIL: ccoates@embeconsulting.ca PHONE: 403-460-2277 EXT. 229



05/10/2021
Permit: P11984

CLIENT
STEVEN HO ARCHITECTURE INC.

PROJECT
SSCA BUILDING ADDITION
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

TITLE
ELECTRICAL COVER PAGE

PROJECT NUMBER: 21068
DRAWING NUMBER: E000

DRAWN/CHECKED: GS / TO

EMBE CONSULTING ENGINEERS
SUITE 204, 110 12th AVENUE, S.W.
CALGARY, AB, T2R 0G7
403-460-2277
info@embeconsulting.ca

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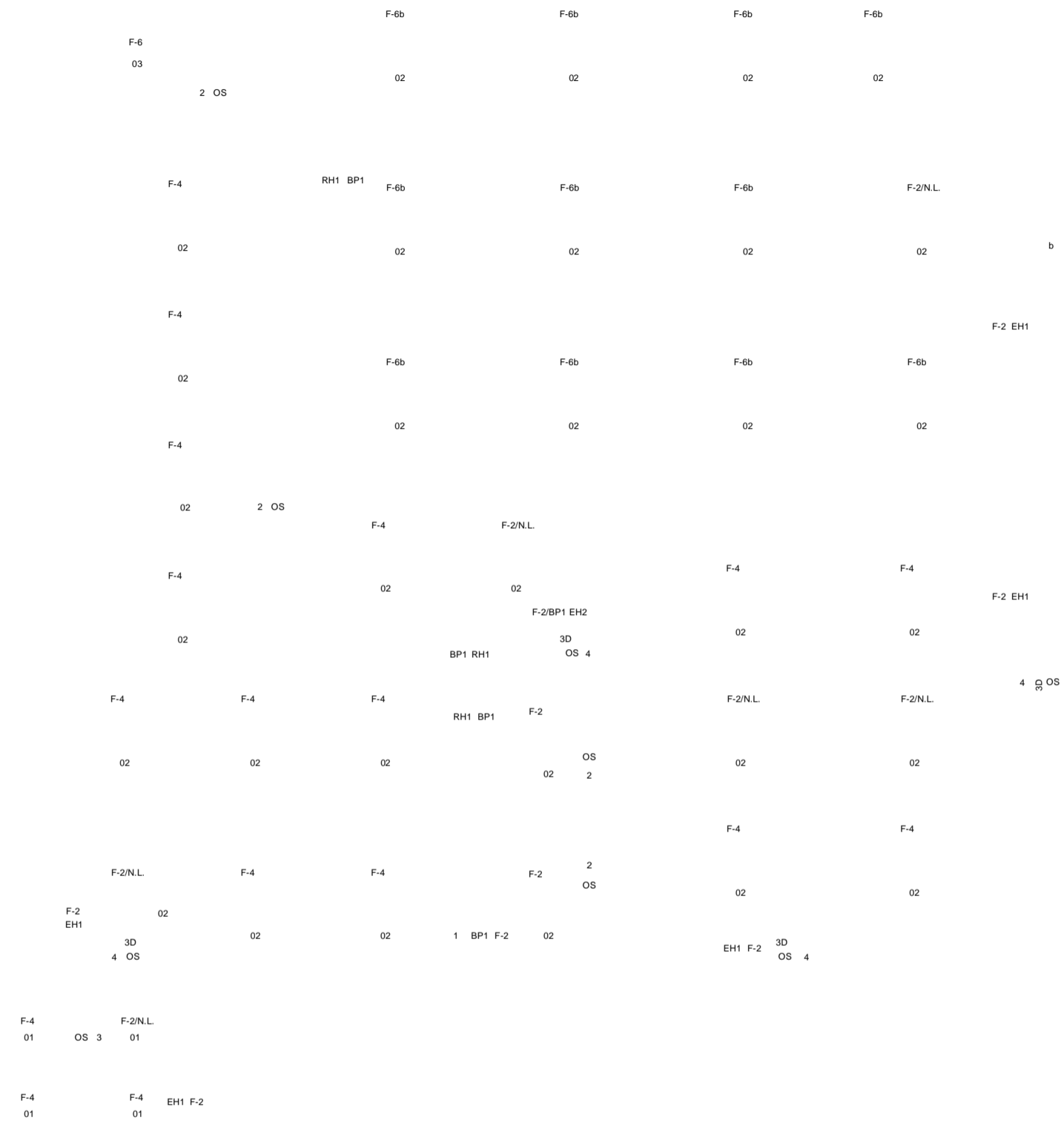
NO.	ISSUED	DATE
1.	95% REVIEW	21-04-27
2.	ISSUED FOR BP	21-05-10

GENERAL NOTES

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- ALL DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. WHERE DISCREPANCIES ARE FOUND, THEY SHOULD BE BROUGHT FORWARD PRIOR TO TENDER CLOSE.
- CONDUCTOR SIZES INDICATED IS MINIMUM REQUIRED. INCREASE CONDUCTOR SIZE (AND CONDUIT SIZE WHERE APPLICABLE) TO ACCOMMODATE VOLTAGE DROP PER CEC REQUIREMENTS.

NOTES

- PROVIDE MINIMUM #10 DC WIRING FOR ALL EMERGENCY REMOTE HEADS. INCREASE CONDUCTOR SIZE AS REQUIRED TO NEGATE VOLTAGE DROP AS PER THE C.E.C.
- PROVIDE AUTO-ON/AUTO-OFF WALL MOUNTED OCCUPANCY SENSOR TO CONTROL ROOM LIGHTING. PROVIDE ACUTY MODEL NO: 'WSX-PDT-WHT' OR APPROVED EQUIVALENT. SET MOTION SENSOR TO 20 MINUTE DELAY.
- PROVIDE AUTO-ON/AUTO-OFF CEILING MOUNTED OCCUPANCY SENSOR TO CONTROL ROOM LIGHTING. PROVIDE ACUTY MODEL NO: 'CMR-9' OR APPROVED EQUIVALENT. SET MOTION SENSOR TO 20 MINUTE DELAY.
- PROVIDE AUTO-ON/AUTO-OFF WALL MOUNTED 3-WAY DIMMABLE OCCUPANCY SENSOR TO CONTROL ROOM LIGHTING. PROVIDE ACUTY MODEL NO: 'WSX-PDT-D-WHT' OR APPROVED EQUIVALENT. SET MOTION SENSOR TO 20 MINUTE DELAY.



NORTH 01 MAIN FLOOR PLAN - LIGHTING
E101 SCALE: 1/4" = 1'-0"

NECB LIGHT POWER DENSITY CALCULATION - MAIN FLOOR				
SPACE BY SPACE METHOD (4.2.1.6.)				
SPACE	NECB LPD	AREA	WATTAGE	ACTUAL LPD
WASHROOMS	9.1 W/SQM	8.8 SQM	77 W	8.7 W/SQM
STORAGE ROOM	6.8 W/SQM	24.7 SQM	163 W	6.2 W/SQM
MECHANICAL ROOM	4.6 W/SQM	7.7 SQM	39 W	5.1 W/SQM
MULTI PURPOSE - PARTY ROOM	11.5 W/SQM	34.3 SQM	306 W	8.9 W/SQM
VIEWING ROOM (LOCKERS)	5.2 W/SQM	44.2 SQM	230 W	5.2 W/SQM
VEHICLE MAINTENANCE GARAGE	6.0 W/SQM	79.2 SQM	460 W	5.8 W/SQM
VESTIBULE (CORRIDOR)	7.1 W/SQM	6.8 SQM	40 W	5.9 W/SQM
TOTAL CONNECTED WATTAGE			1265 W	
TOTAL ALLOWABLE WATTAGE			1431 W	

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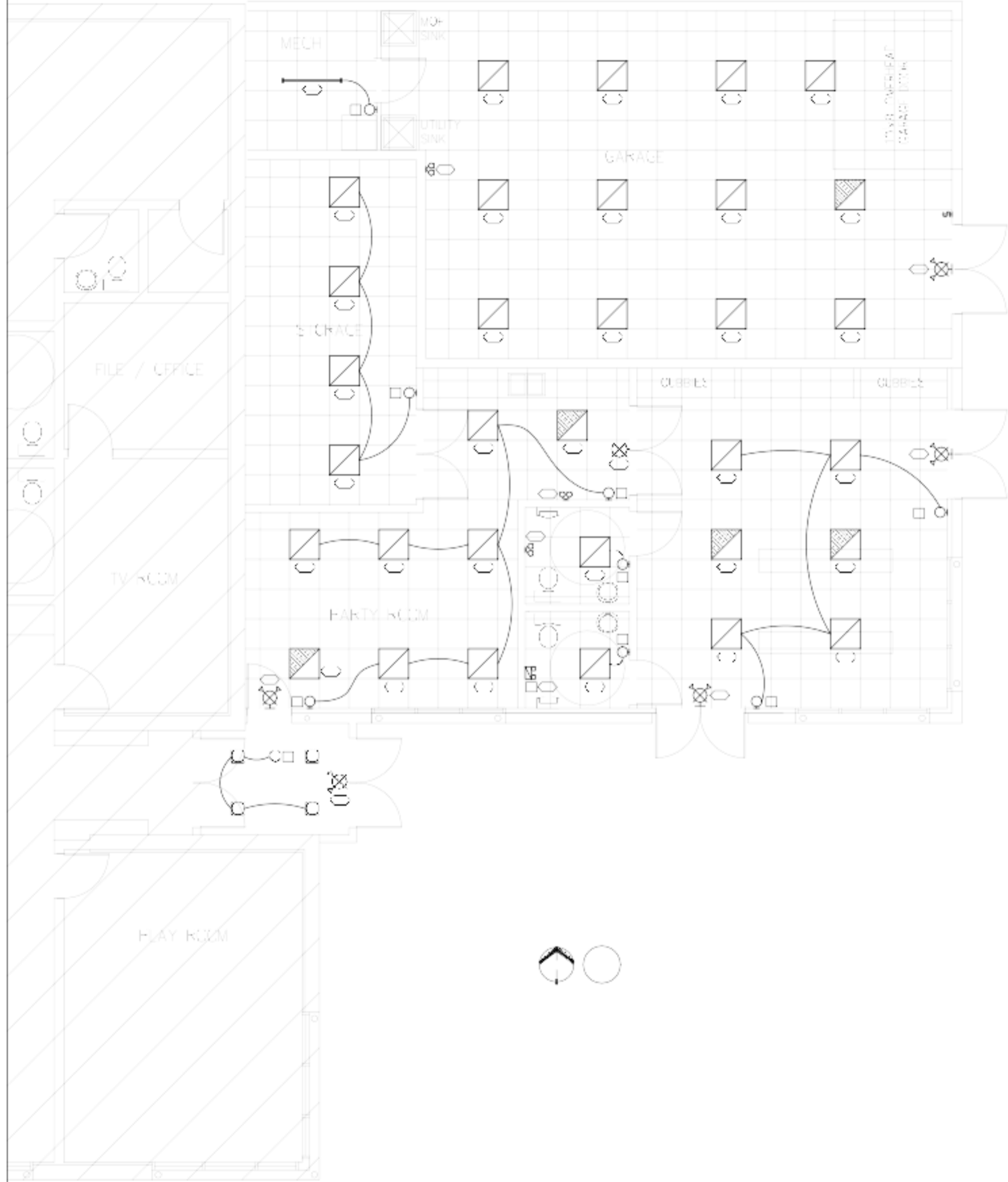
STEVEN HO
ARCHITECTURE INC.

PROJECT

SSCA BUILDING
ADDITION
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

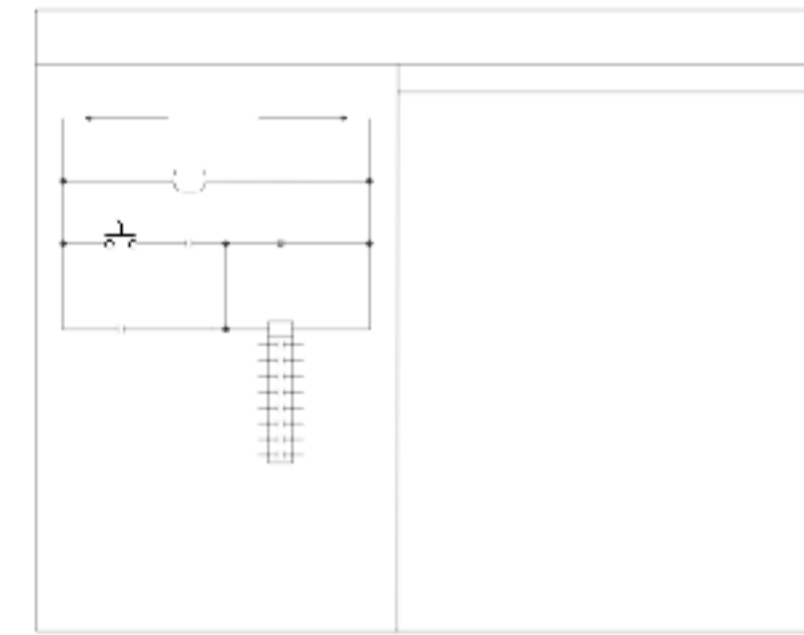
TITLE

MAIN FLOOR PLAN -
LIGHTING



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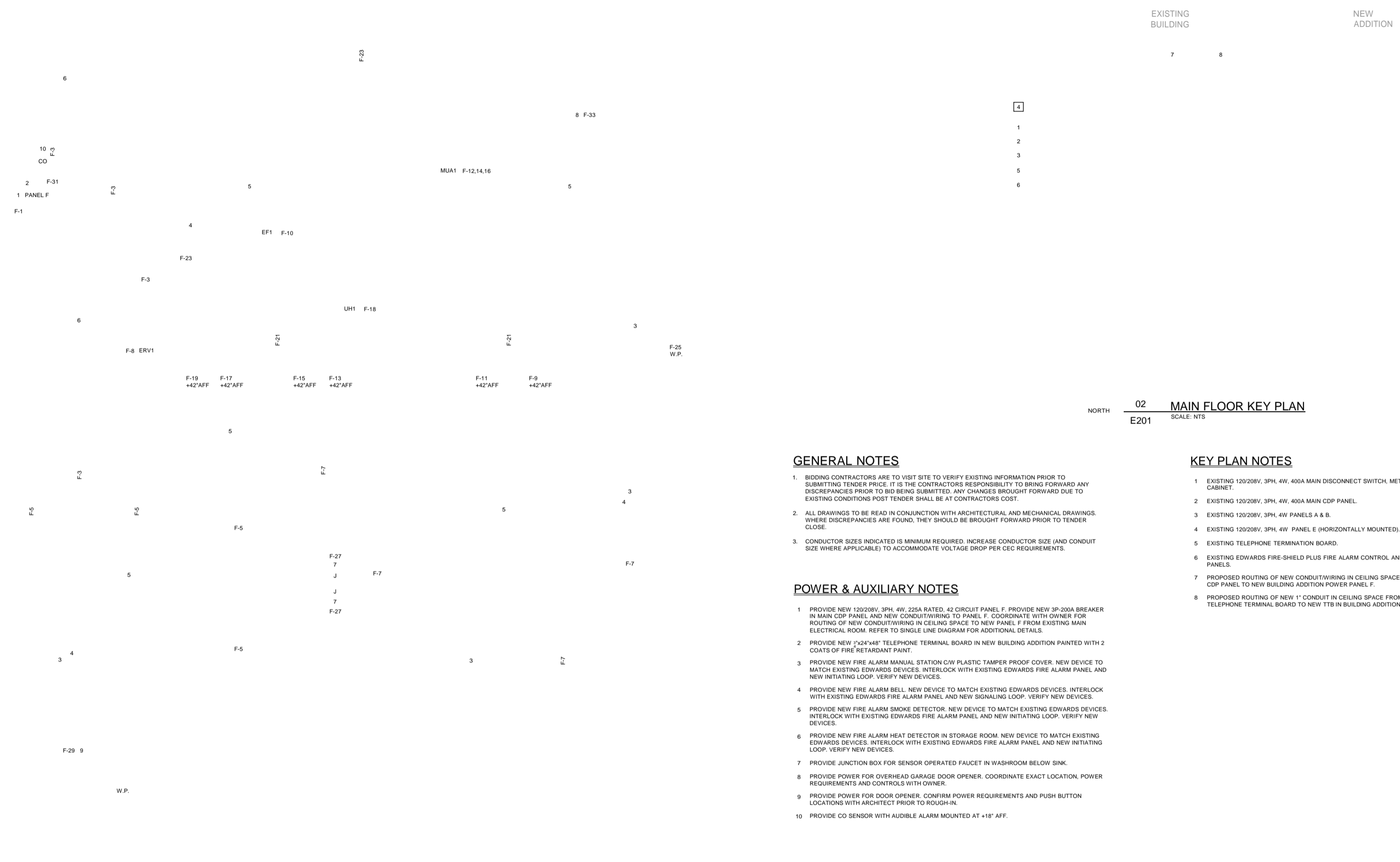




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EXISTING BUILDING
NEW ADDITION

4

- 1
- 2
- 3
- 5
- 6

NORTH 02 MAIN FLOOR KEY PLAN
E201 SCALE: NTS

GENERAL NOTES

- BIDDING CONTRACTORS ARE TO VISIT SITE TO VERIFY EXISTING INFORMATION PRIOR TO SUBMITTING TENDER PRICE. IT IS THE CONTRACTORS RESPONSIBILITY TO BRING FORWARD ANY DISCREPANCIES PRIOR TO BID BEING SUBMITTED. ANY CHANGES BROUGHT FORWARD DUE TO EXISTING CONDITIONS POST TENDER SHALL BE AT CONTRACTORS COST.
- ALL DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. WHERE DISCREPANCIES ARE FOUND, THEY SHOULD BE BROUGHT FORWARD PRIOR TO TENDER CLOSE.
- CONDUCTOR SIZES INDICATED IS MINIMUM REQUIRED. INCREASE CONDUCTOR SIZE (AND CONDUIT SIZE WHERE APPLICABLE) TO ACCOMMODATE VOLTAGE DROP PER CEC REQUIREMENTS.

KEY PLAN NOTES

- EXISTING 120/208V, 3PH, 4W, 400A MAIN DISCONNECT SWITCH, METER AND C/T CABINET.
- EXISTING 120/208V, 3PH, 4W, 400A MAIN CDP PANEL.
- EXISTING 120/208V, 3PH, 4W PANELS A & B.
- EXISTING 120/208V, 3PH, 4W PANEL E (HORIZONTALLY MOUNTED).
- EXISTING TELEPHONE TERMINATION BOARD.
- EXISTING EDWARDS FIRE-SHIELD PLUS FIRE ALARM CONTROL AND MONITORING PANELS.
- PROPOSED ROUTING OF NEW CONDUIT/WIRING IN CEILING SPACE FROM EXISTING CDP PANEL TO NEW BUILDING ADDITION POWER PANEL F.
- PROPOSED ROUTING OF NEW 1" CONDUIT IN CEILING SPACE FROM EXISTING TELEPHONE TERMINAL BOARD TO NEW TTB IN BUILDING ADDITION.

POWER & AUXILIARY NOTES

- PROVIDE NEW 120/208V, 3PH, 4W, 225A RATED, 42 CIRCUIT PANEL F. PROVIDE NEW 3P-200A BREAKER IN MAIN CDP PANEL AND NEW CONDUIT/WIRING TO PANEL F. COORDINATE WITH OWNER FOR ROUTING OF NEW CONDUIT/WIRING IN CEILING SPACE TO NEW PANEL F FROM EXISTING MAIN ELECTRICAL ROOM. REFER TO SINGLE LINE DIAGRAM FOR ADDITIONAL DETAILS.
- PROVIDE NEW 3"x24"x48" TELEPHONE TERMINAL BOARD IN NEW BUILDING ADDITION PAINTED WITH 2 COATS OF FIRE RETARDANT PAINT.
- PROVIDE NEW FIRE ALARM MANUAL STATION C/W PLASTIC TAMPER PROOF COVER. NEW DEVICE TO MATCH EXISTING EDWARDS DEVICES. INTERLOCK WITH EXISTING EDWARDS FIRE ALARM PANEL AND NEW INITIATING LOOP. VERIFY NEW DEVICES.
- PROVIDE NEW FIRE ALARM BELL. NEW DEVICE TO MATCH EXISTING EDWARDS DEVICES. INTERLOCK WITH EXISTING EDWARDS FIRE ALARM PANEL AND NEW SIGNALING LOOP. VERIFY NEW DEVICES.
- PROVIDE NEW FIRE ALARM SMOKE DETECTOR. NEW DEVICE TO MATCH EXISTING EDWARDS DEVICES. INTERLOCK WITH EXISTING EDWARDS FIRE ALARM PANEL AND NEW INITIATING LOOP. VERIFY NEW DEVICES.
- PROVIDE NEW FIRE ALARM HEAT DETECTOR IN STORAGE ROOM. NEW DEVICE TO MATCH EXISTING EDWARDS DEVICES. INTERLOCK WITH EXISTING EDWARDS FIRE ALARM PANEL AND NEW INITIATING LOOP. VERIFY NEW DEVICES.
- PROVIDE JUNCTION BOX FOR SENSOR OPERATED FAUCET IN WASHROOM BELOW SINK.
- PROVIDE POWER FOR OVERHEAD GARAGE DOOR OPENER. COORDINATE EXACT LOCATION, POWER REQUIREMENTS AND CONTROLS WITH OWNER.
- PROVIDE POWER FOR DOOR OPENER. CONFIRM POWER REQUIREMENTS AND PUSH BUTTON LOCATIONS WITH ARCHITECT PRIOR TO ROUGH-IN.
- PROVIDE CO SENSOR WITH AUDIBLE ALARM MOUNTED AT +18" AFF.

NORTH 01 MAIN FLOOR PLAN - POWER & AUXILIARY
E201 SCALE: 1/4" = 1' - 0"

05/10/2021
Permit: P11984

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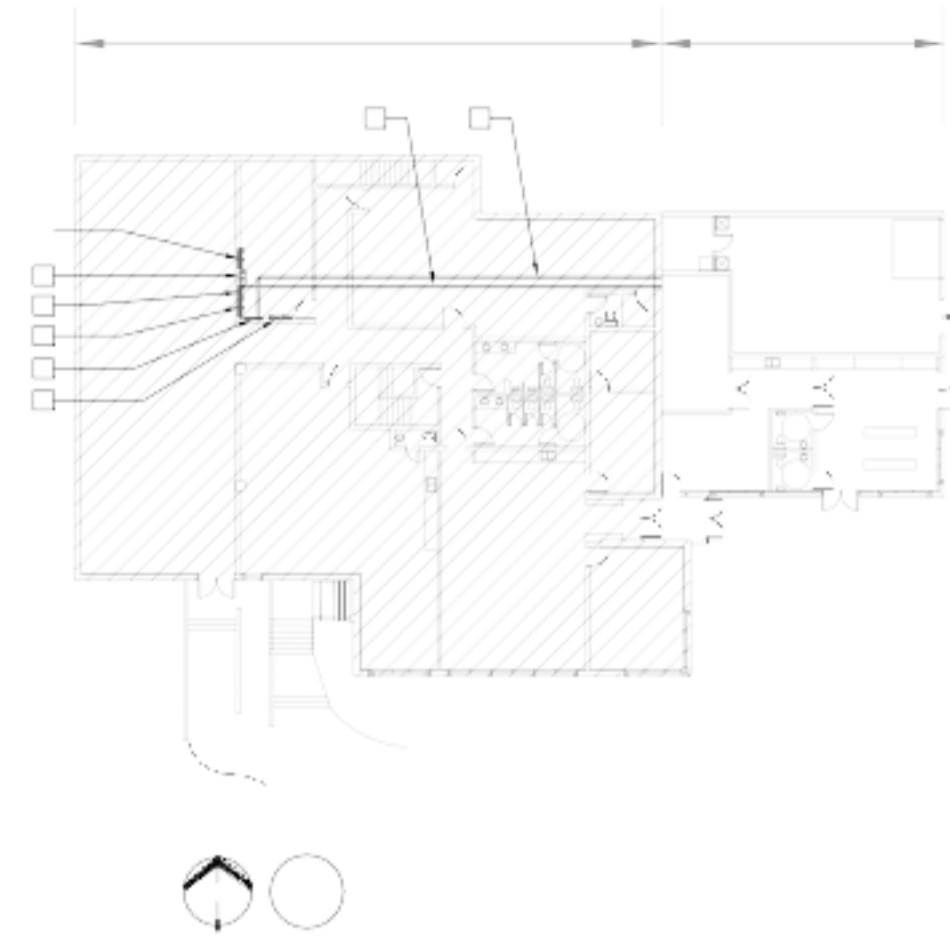
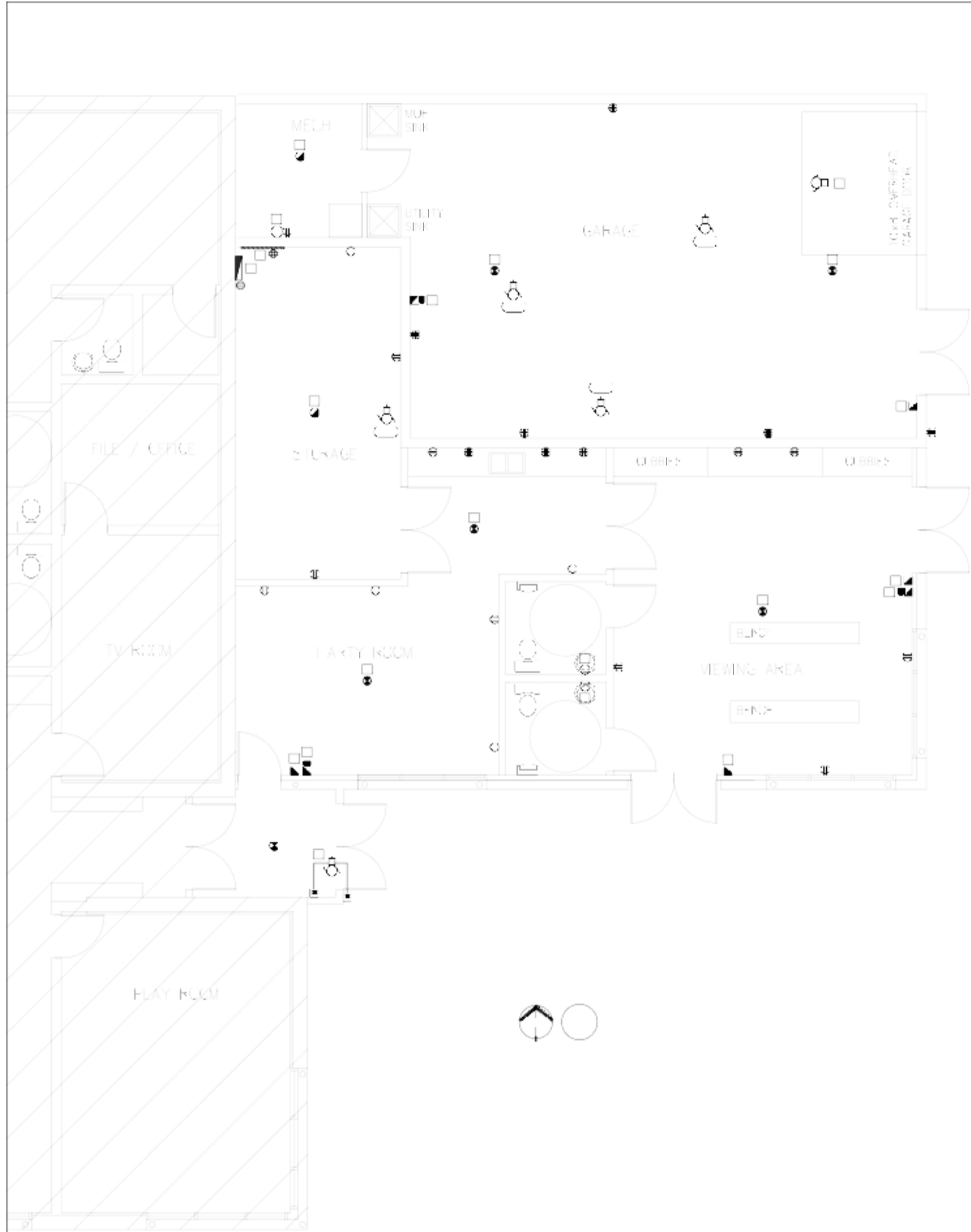
STEVEN HO
ARCHITECTURE INC.

PROJECT

SSCA BUILDING
ADDITION
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

TITLE

MAIN FLOOR PLAN -
POWER & AUXILIARY



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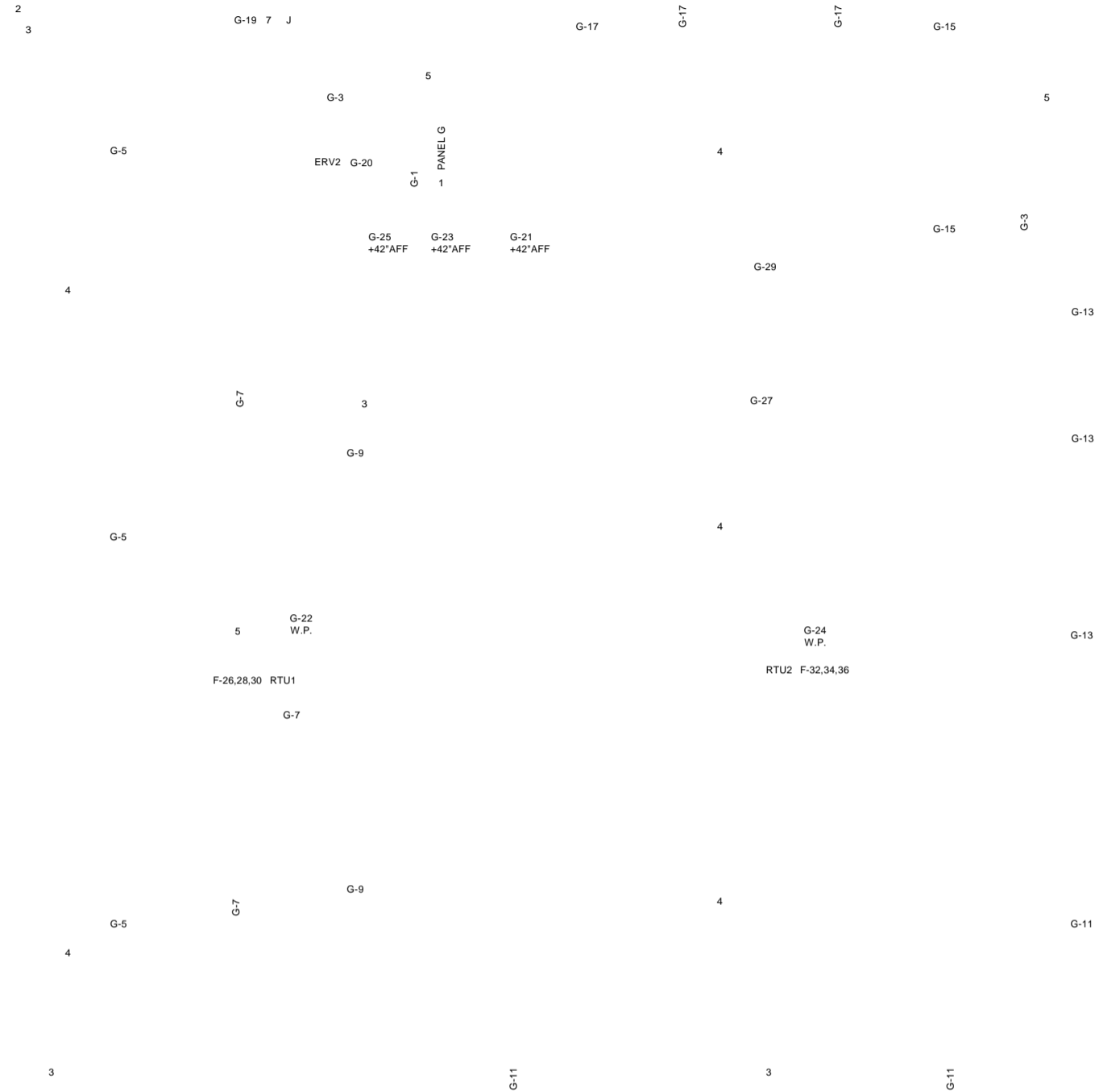
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- CONDUCTOR SIZES INDICATED IS MINIMUM REQUIRED. INCREASE CONDUCTOR SIZE (AND CONDUIT SIZE WHERE APPLICABLE) TO ACCOMMODATE VOLTAGE DROP PER CEC REQUIREMENTS.

POWER & AUXILIARY NOTES

- PROVIDE NEW 120/208V, 3PH, 4W, 225A RATED, 42 CIRCUIT PANEL G. PROVIDE NEW 3P-100A BREAKER IN PANEL F AND NEW CONDUIT WIRING TO NEW SUB-PANEL G. REFER TO SINGLE LINE DIAGRAM FOR ADDITIONAL DETAILS.
- PROVIDE NEW FIRE ALARM MANUAL STATION C/W PLASTIC TAMPER PROOF COVER. NEW DEVICE TO MATCH EXISTING EDWARDS DEVICES. INTERLOCK WITH EXISTING EDWARDS FIRE ALARM PANEL AND NEW INITIATING LOOP. VERIFY NEW DEVICES.
- PROVIDE NEW FIRE ALARM BELL. NEW DEVICE TO MATCH EXISTING EDWARDS DEVICES. INTERLOCK WITH EXISTING EDWARDS FIRE ALARM PANEL AND NEW SIGNALING LOOP. VERIFY NEW DEVICES.
- PROVIDE NEW FIRE ALARM SMOKE DETECTOR. NEW DEVICE TO MATCH EXISTING EDWARDS DEVICES. INTERLOCK WITH EXISTING EDWARDS FIRE ALARM PANEL AND NEW INITIATING LOOP. VERIFY NEW DEVICES.
- PROVIDE NEW FIRE ALARM HEAT DETECTOR IN STORAGE ROOM. NEW DEVICE TO MATCH EXISTING EDWARDS DEVICES. INTERLOCK WITH EXISTING EDWARDS FIRE ALARM PANEL AND NEW INITIATING LOOP. VERIFY NEW DEVICES.
- PROVIDE JUNCTION BOX FOR SENSOR OPERATED FAUCET IN WASHROOM BELOW SINK.



NORTH 01 SECOND FLOOR PLAN - POWER & AUXILIARY
E202 SCALE: 1/4" = 1' - 0"

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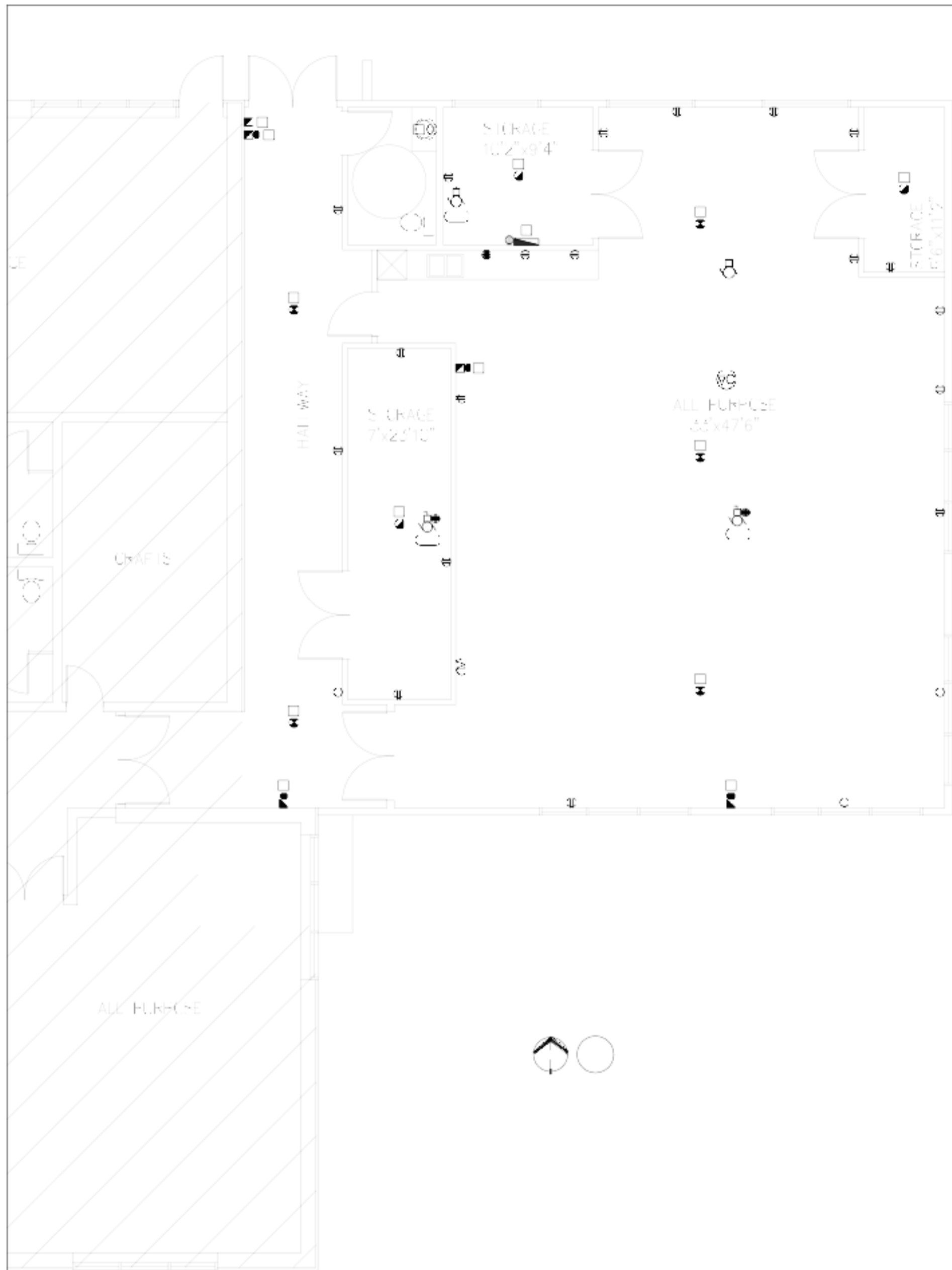
STEVEN HO
ARCHITECTURE INC.

PROJECT

SSCA BUILDING
ADDITION
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

TITLE

SECOND FLOOR PLAN
- POWER &
AUXILIARY




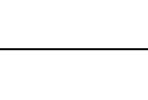





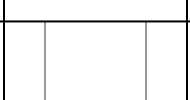


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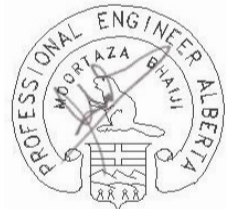
EXIT & EMERGENCY LIGHTING SCHEDULE							
TAGS	DESCRIPTION	PICTURE	MOUNTING	LOAD/VOLT	LAMP	COLOR TEMP	MANUFACTURER
BP1, BP2	EMERGENCY BATTERY UNIT (30 MIN RATED)		WALL 84IN(2133.6MM)	120VAC 72W/12VDC	2X4W LED	-	OPTION 1: STANPRO SLA12072-2S4LRWH OPTION 2: AIMLITE EBS12072-2MD4WLRWHT OPTION 3: LUMACELL RG12S-72-2-LD7
EH1	STEEL LED RUNNING MAN COMBO SIGN		CEILING-WALL 84IN(2133.6MM)	1.8W/120VAC	2X4W LED	-	OPTION 1: STANPRO PRMS103602-S-4LRWH OPTION 2: AIMLITE CSR12036UM-2MD4WLR OPTION 3: LUMACELL LSC-1250-W-2-LD7
EH2	STEEL RUNNING MAN SIGN		CEILING-WALL 84IN(2133.6MM)	1.9W/120VAC 0.9W/12VDC	-	-	OPTION 1: RMS0WH-UDC OPTION 2: RPS1UMWHT-UNCDV OPTION 3: LS3WU
RH1	EMERGENCY LIGHTING REMOTE HEAD		CEILING-WALL 84IN(2133.6MM)	4W PER HEAD/12VDC	2X4W LED	-	OPTION 1: STANPRO S2-06-24V4WLRWH OPTION 2: AIMLITE RMM2-06-24V4WLRWHT OPTION 3: LUMACELL MQM2LD7

LUMINAIRE SCHEDULE							
TAGS	DESCRIPTION	PICTURE	MOUNTING	LOAD/VOLT	LAMP	COLOR TEMP	MANUFACTURER
01	6" DOWNLIGHT		RECESSED	10W/120VAC	1000 LUMENS	4000K	OPTION 1: LITHONIA LIGHTING MODEL NO: LDN6-4010-L06-AR-LSS-MVOLT-GZ10 OPTION 2: EATON LIGHTING MODEL NO: HCB-10-D010-HM-12-840-41-MD-H-41-WD-BB OPTION 3: LIGHTOLIER MODEL NO: 6R-N-CEL-10-8-40K-M-210-LI-05-R-DL-BK
02	2' X 2' LED LUMINAIRE		RECESSED	38.3W/120VAC	4465 LUMENS	4000K	OPTION 1: STANPRO LIGHTING MODEL NO: L3PNL-2LS2-W/40K OPTION 2: EATON METALUX MODEL NO: 22FP4240C OPTION 3: 2FXP-38L-840-2-DS-UNV-DIM
03	4' STRIP LIGHT		SUSPENDED/SURFACE	39W/120VAC	4433 LUMENS	4000K	OPTION 1: COOPER LIGHTING MODEL NO: 4STZL4040R C/W AYC-CHAINSET OPTION 2: LITHONIA LIGHTING MODEL NO: ZL1N-L48-5000LM-FST-MVOLT-40K-80CRI-WH-HC36 OPTION 3: DAYBRITE LIGHTING MODEL NO: FSS-440L-840-UNV-DIM C/W CHAIN SUSPENSION KIT
04	WHITE 8' DUAL CIRCUIT TRACK LIGHTING W/ UNIVERSAL LAMPHOLDER		SURFACE	300W/120VAC	MAX. 75W PAR30	-	OPTION 1: HALO LIGHTING MODEL NO: L1700P OPTION 2: LIGHTOLIER MODEL NO: 6320-MW OPTION 3: JUNO MODEL NO: T308WH

* CONFIRM LIGHTING SPECIFICATION WITH INTERIOR DESIGN AND OWNER PRIOR TO ORDER.
** CONTRACTOR TO PROVIDE COMPATIBLE DIMMER SWITCH BASED ON LIGHT FIXTURE SELECTION AND FROM THE LISTED DIMMER SWITCHES ON FIXTURE SHOP DRAWINGS.

ELECTRICAL EQUIPMENT SCHEDULE					
TAGS	DESCRIPTION	LOAD	O/C	CONDUIT/WIRING	MODEL
CF1 - CF2	WHITE COMMERCIAL CEILING CIRCULATION FAN, FORWARD & REVERSE	120V, 1PH, 2W	1P-15A	21mmC-2#12 RW90XL CU	CANARM MODEL NO: CP56 F&R WHITE

MECHANICAL EQUIPMENT SCHEDULE														
TAGS	DESCRIPTION / LOCATION	LOAD	O/C	CONDUIT/WIRING	NOTES	LIGHTING CONTROL	MAGNETIC STARTER	VFD		CONTROL PANEL		THERMOSTAT		DISCONNECT
								MECH	ELEC	MECH	ELEC	MECH	ELEC	
EF1	EXHAUST FAN	120V, 1PH, 2W, 2.9A, 313W	1P-15A	21mmC-2#12 RW90XL CU	INTERLOCK WITH MUA1.									✓
ERV1	ENERGY RECOVERY VENTILATOR	120V, 1PH, 2W	1P-15A	21mmC-2#12 RW90XL CU	RUNS CONTINUOUSLY.									✓
ERV2	ENERGY RECOVERY VENTILATOR	120V, 1PH, 2W	1P-15A	21mmC-2#12 RW90XL CU	RUNS CONTINUOUSLY.									✓
MUA1	MAKE UP AIR UNIT	208V, 3PH, 4W, 16kW	3P-60A	27mmC-4#6 RW90XL CU	INTERLOCK WITH EF1.							✓		
RTU1	ROOF TOP UNIT	208V, 3PH, 4W, 21 MCA	3P-30A	21mmC-4#10 RW90XL CU	REFER TO MECHANICAL DRAWINGS.									
RTU2	ROOF TOP UNIT	208V, 3PH, 4W, 45 MCA	3P-70A	35mmC-4#4 RW90XL CU	REFER TO MECHANICAL DRAWINGS.									
UH1	UNIT HEATER	120V, 1PH, 2W, 3.8A	1P-15A	21mmC-2#12 RW90XL CU	CONTROLLED BY WALL MOUNTED THERMOSTAT.									



05/10/2021
Permit: P11984

CLIENT
STEVEN HO ARCHITECTURE INC.

PROJECT
SSCA BUILDING ADDITION
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

TITLE
ELECTRICAL SCHEDULES & DETAILS

PROJECT NUMBER: 21068
DRAWING NUMBER: **E301**
DRAWN/CHECKED: GS / TO

UTILITY
TRANSFORMER

EXISTING

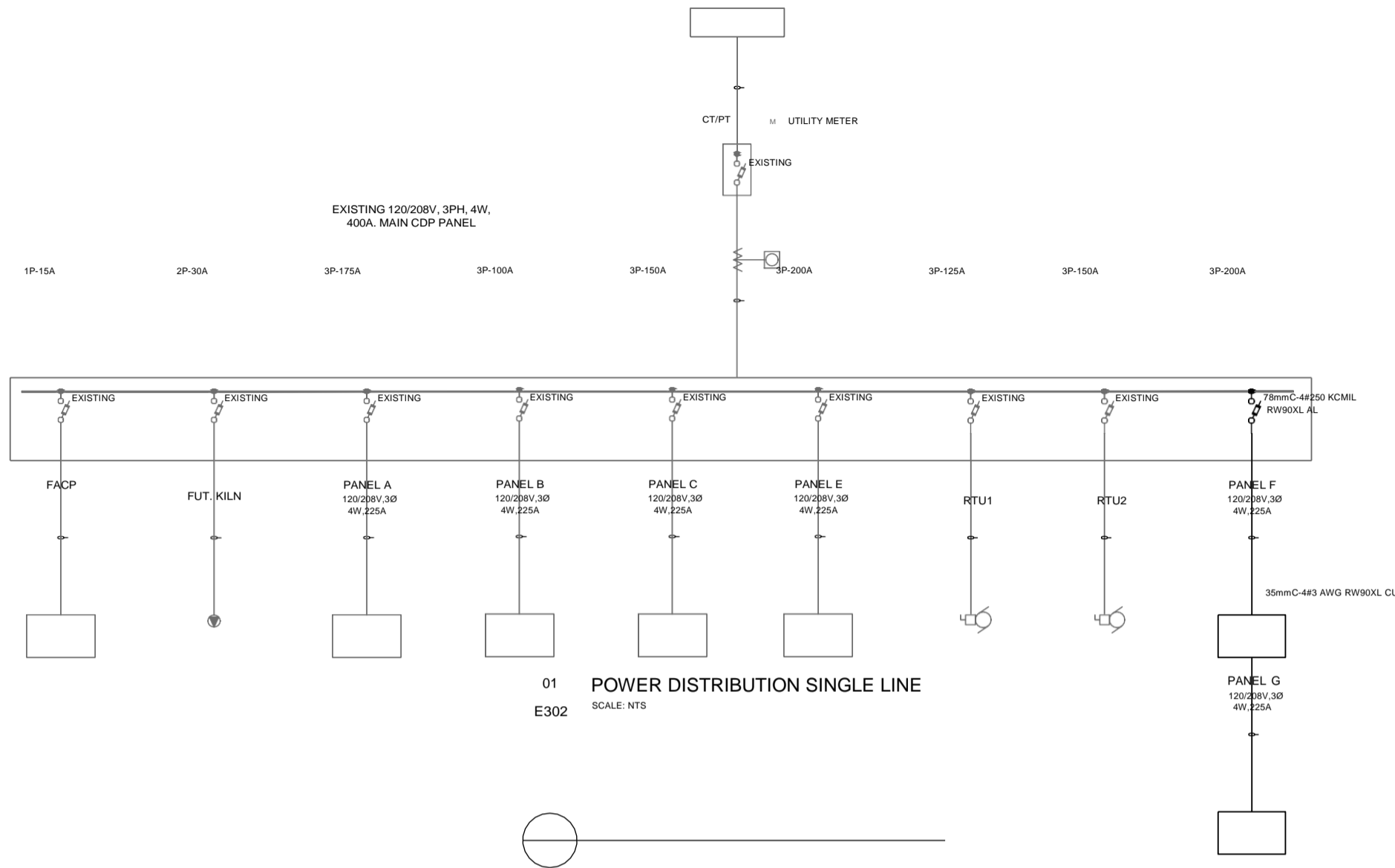
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SINGLE LINE SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	PADMOUNT TRANSFORMER. PROVIDE THE FOLLOWING • PAD • PROTECTIVE BOLLARDS/GUARDRAIL • BLAST WALL (IF NECESSARY) • SECONDARY CONDUIT AND WIRING • GROUND GRID AND GROUND TEST PER UTILITY REQUIREMENTS CONFIRM ALL REQUIREMENTS SET OUT BY UTILITY.
	PANEL. SEE PANEL SCHEDULE FOR EXACT REQUIREMENTS.
	METER CT/PT TRANSFORMERS TO UTILITY REQUIREMENTS. COORDINATE WITH UTILITY.
	CIRCUIT BREAKER. RATING AS INDICATED.
	FUSED DISCONNECT (3P-100A/100A INDICATES 100A FRAME WITH 100A FUSES)
	MOTOR CONNECTION. SEE MECHANICAL EQUIPMENT SCHEDULE.

- NOTES**
- ALL EQUIPMENT TO BE RATED FOR OPEN AIR MOUNTING UNLESS OTHERWISE SPECIFIED.
 - EQUIPMENT OVERCURRENT PROTECTIVE DEVICES SHALL BE SEPARATED FOR INTEGRATED EQUIPMENT RATING. CONTRACTOR TO PROVIDE LABELS ON ALL EQUIPMENT INDICATING SUCH RATING.
 - MATCH NEW EQUIPMENT WITH BASE BUILDING EQUIPMENT TO MAINTAIN SERIES RATING.
 - ALL CONDUCTORS INDICATED ARE RW90XL-600V-COPPER. SEE FOLLOWING NOTES.
 - CONDUCTOR SIZES INDICATED IS MINIMUM REQUIRED. INCREASE CONDUCTOR SIZE (AND CONDUIT SIZE WHERE APPLICABLE) TO ACCOMMODATE VOLTAGE DROP PER CEC REQUIREMENTS.
 - BELOW GRADE CONDUITS TO BE RIGID PVC UNLESS SPECIFICALLY INDICATED OTHERWISE.
 - ABOVE GRADE CONDUITS TO BE ELECTRICAL METALLIC TUBING (EMT) OR RIGID STEEL UNLESS SPECIFICALLY INDICATED OTHERWISE.
 - ALL CONDUITS TERMINATING AT TRANSFORMERS, MOTORS, VIBRATING EQUIPMENT TO BE WATERPROOF SEALED FLEXIBLE CONDUIT UNLESS SPECIFICALLY INDICATED OTHERWISE.
 - PROVIDE GROUND CONDUCTORS IN ALL BELOW GRADE CONDUITS AND IN ABOVE GRADE CONDUITS AS REQUIRED BY THE CANADIAN ELECTRICAL CODE.
 - VERIFY EXISTING INCOMING FAULT INTERRUPTING CAPACITY FROM BASE BUILDING DISTRIBUTION.
 - CONFIRM ALL EXISTING LOCATIONS ON SITE.

01 POWER DISTRIBUTION SINGLE LINE
E302 SCALE: NTS

EXISTING CDP PANEL											
CCT	DESCRIPTION	TRIP	A		B		C		TRIP	DESCRIPTION	CCT
1	SPARE	15A	0W	0W					15A	FIRE ALARM PANEL	2
3	SPARE	15A			0W	0W			15A		4
5	SPARE	15A					0W	0W	15A		6
7	SPARE	15A	0W	0W					15A		8
9		3P			30080W	0W			15A		10
11	PANEL F	-					30519W	0W	3P		12
13		200A	30752W	0W					-	BASEMENT PANEL E	14
15		3P			0W	0W			200A		16
17	PANEL A	-					0W	0W	2P	FUTURE KILN	18
19		175A	0W	0W					30A		20
21		3P			0W	0W			3P		22
23	PANEL B	-					0W	0W	-	RTU1	24
25		100A	0W	0W					125A		26
27		3P			0W	0W			3P		28
29	PANEL C	-					0W	0W	-	RTU2	30
31		150A	0W	0W					150A		32
TOTAL LOAD:			30752W		30080W		30519W				

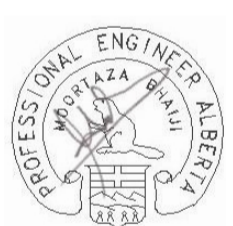
NEW PANEL F											
CCT	DESCRIPTION	TRIP	A		B		C		TRIP	DESCRIPTION	CCT
1	PANEL RECEPTACLE	15A	1200W	353W					15A	EXIT, EMERG. & NIGHT LIGHTS	2
3	STORAGE ROOM RECEPT.	15A			1200W	567W			15A	LIGHTING	4
5	PARTY ROOM RECEPT.	15A					1200W	460W	15A	LIGHTING	6
7	VIEWING ROOM RECEPT.	15A	1200W	500W					15A	ERV1	8
9	COUNTER RECEPT.	20A			1800W	313W			15A	EF1	10
11	COUNTER RECEPT.	20A					1800W	5333W	3P		12
13	COUNTER RECEPT.	20A	1800W	5333W					-	MUA1	14
15	COUNTER RECEPT.	20A			1800W	5333W			60A		16
17	COUNTER RECEPT.	20A					1800W	456W	15A	UH1	18
19	COUNTER RECEPT.	20A	1800W	0W							20
21	GARAGE RECEPT.	20A			1800W	0W					22
23	GARAGE RECEPT.	20A					1800W	0W			24
25	EXTERIOR WP GFI RECEPT.	15A	1200W	2520W					3P		26
27	SENSOR OPERATED FAUCET	15A			400W	2520W			-	RTU1	28
29	DOOR OPENER	15A					800W	2520W	30A		30
31	TTB RECEPTACLE	15A	1200W	5400W					3P		32
33	GARAGE DOOR OPENER	15A			1000W	5400W			-	RTU2	34
35	SPARE	15A					0W	5400W	70A		36
37	SPARE	15A	0W	7574W					3P		38
39	SPARE	15A			0W	8386W			-	PANEL G	40
41	SPARE	15A					0W	9183W	100A		42
TOTAL LOAD:			30080W		30519W		30752W				

NEW PANEL G											
CCT	DESCRIPTION	TRIP	A		B		C		TRIP	DESCRIPTION	CCT
1	PANEL RECEPTACLE	15A	1200W	453W					15A	EXITS, EMERG. & NIGHT LIGHTS	2
3	STORAGE ROOM RECEPT.	15A			1200W	306W			15A	HALLWAY & STOR. RM LIGHTING	4
5	HALLWAY RECEPT.	15A					1200W	383W	15A	ALL-PURPOSE RM LIGHTING	6
7	STORAGE ROOM RECEPT.	15A	1200W	421W					15A	ALL-PURPOSE RM LIGHTING	8
9	ALL-PURPOSE RM RECEPT.	15A			1200W	280W			15A	RECESSED LIGHTING	10
11	ALL-PURPOSE RM RECEPT.	15A					1200W	600W	15A	TRACK LIGHTING	12
13	ALL-PURPOSE RM RECEPT.	15A	1200W	400W					15A	CEILING FANS	14
15	ALL-PURPOSE RM RECEPT.	15A			1200W	0W			15A	SPARE	16
17	ALL-PURPOSE RM RECEPT.	15A					1200W	200W	15A	LIGHTING CONTROL CCT	18
19	SENSOR OPERATED FAUCET	15A	400W	500W					15A	ERV2	20
21	COUNTER RECEPTACLE	20A			1800W	1800W			20A	SERVICE RECEPT. ON RTU1	22
23	COUNTER RECEPTACLE	20A					1800W	1800W	20A	SERVICE RECEPT. ON RTU2	24
25	COUNTER RECEPTACLE	20A	1800W	0W							26
27	PROJECTOR RECEPT.	15A			600W	0W					28
29	MOTORIZED SCREEN	15A					800W	0W			30
31			0W	0W							32
33					0W	0W					34
35							0W	0W			36
37	SPARE	15A	0W	0W							38
39	SPARE	15A			0W	0W					40
41	SPARE	15A					0W	0W			42
TOTAL LOAD:			7574W		8386W		9183W				

PANEL INFORMATION				
LOCATION:	EX. ELEC. ROOM	VOLTAGE:	120/208V	
MOUNTING:	SURFACE	PHASES/WIRES:	3PH/4W	
BUS AMPERAGE:	400A	FAULT RATING:	CONFIRM	
LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED LOAD	
TOTAL	91351W		254A	
TOTAL ESTIMATED AMPS			254A	
TOTAL ESTIMATED AMPS /W MAX MOCPP MOTOR			254A	

PANEL INFORMATION				
LOCATION:	STORAGE ROOM	VOLTAGE:	120/208V	
MOUNTING:	SURFACE	PHASES/WIRES:	3PH/4W	
BUS AMPERAGE:	225A	FAULT RATING:	CONFIRM	
LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED LOAD	
LIGHTING	1380W	100%	1380W	
MECHANICAL	40572W	90%	36515W	
EQUIPMENT	1000W	50%	500W	
RECEPTACLES	22800W	25%	5700W	
PANEL G	25143W	50%	12572W	
TOTAL	90895W		56666W	
TOTAL ESTIMATED AMPS			157A	
TOTAL ESTIMATED AMPS /W MAX MOCPP MOTOR			157A	

PANEL INFORMATION				
LOCATION:	STORAGE ROOM	VOLTAGE:	120/208V	
MOUNTING:	SURFACE	PHASES/WIRES:	3PH/4W	
BUS AMPERAGE:	225A	FAULT RATING:	CONFIRM	
LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED LOAD	
LIGHTING	2643W	100%	2643W	
MECHANICAL	500W	100%	500W	
EQUIPMENT	400W	60%	240W	
RECEPTACLES	21600W	25%	5400W	
TOTAL	25143W		8783W	
TOTAL ESTIMATED AMPS			24A	
TOTAL ESTIMATED AMPS /W MAX MOCPP MOTOR			24A	



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Permit: P11984

CLIENT
STEVEN HO ARCHITECTURE INC.

PROJECT
SSCA BUILDING ADDITION
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

TITLE
ELECTRICAL SCHEDULES & DETAILS

PROJECT NUMBER: 21068 DRAWING NUMBER: **E302**

DRAWN/CHECKED: GS / TO

ELECTRICAL SPECIFICATIONS

1. **GENERAL**
 - A. THE SPECIFICATION COVERING THE BIDDING AND CONTRACT REQUIREMENTS, GENERAL REQUIREMENTS, AND ALL ASSOCIATED SECTIONS FORM AN INTEGRAL PART OF THIS SPECIFICATION AND SHALL BE READ IN CONJUNCTION HEREWITH.
 - B. THE INTENT OF THIS SPECIFICATION AND DRAWING IS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL ELECTRICAL SYSTEM.
2. **PERMITS, CERTIFICATES AND FEES**
 - A. THE INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF THE CANADIAN ELECTRICAL CODE AND ALL RELEVANT BY-LAWS OF A LOCAL ELECTRICAL AUTHORITY.
 - B. OBTAIN ALL PERMITS REQUIRED AND AFTER COMPLETE OF THE WORK, FURNISH TO THE ENGINEER A CERTIFICATE OF FINAL INSPECTION AND APPROVAL FROM THE INSPECTION DEPARTMENT. TAKE OUT ALL PERMITS REQUIRED AT THE BEGINNING OF THE WORK.
 - C. SUBMIT TWO (2) SETS OF DRAWINGS (OR MORE AS REQUIRED) TO THE ELECTRICAL INSPECTION

11. **OPERATING/MAINTENANCE MANUALS**
 - A. FOR EACH ITEM OF SPECIAL APPARATUS, SUPPLY SPECIFIC, INDEXED COPIES OF MANUALS, EACH COPY SHALL CONTAIN THE FOLLOWING:
 - b. A COPY OF EACH REVIEWED SHOP DRAWING
 - c. COMPLETE EXPLANATION OF OPERATION PRINCIPLES AND SEQUENCES.
 - d. RECOMMENDED MAINTENANCE PRACTICES AND PRECAUTIONS.
 - e. COMPLETE WIRING AND CONNECTION DIAGRAMS.
 - f. TEST READINGS
 - B. ENSURE THAT OPERATING AND MAINTENANCE INSTRUCTIONS ARE SPECIFIC AND APPLY TO THE MODELS AND TYPES OF EQUIPMENT PROVIDED.
12. **SUPERVISION**
 - A. THE ELECTRICAL INSTALLATION SHALL BE EXECUTED IN A SATISFACTORY WORKMANLIKE MANNER AND SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED. WORK NOT CONSIDERED SATISFACTORY TO THE ENGINEER SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
 - B. KEEP ON THE JOB DURING ITS PROGRESS. A COMPETENT FOREMAN, HOLDING A FIRST CLASS

- C. GROUND RODS SHALL BE MINIMUM 3000mm LONG BY 30mm IN DIAMETER COPPER CLAD STEEL GROUND RODS.
 - D. GROUND CONDUCTORS - BARE STRANDED 100 PERCENT COPPER CABLES. MINIMUM #3/0 AWG.
 - E. CONNECTION FROM GROUNDING GRID - THERMAWELDED CABLE CONNECTIONS AND CONNECTION TO GROUND RODS. FROM TWO POINTS ON THE GROUND LOOP, INSTALL A #3/0 GROUND CONDUCTOR IN 25mm CONDUIT TO MAIN GROUND BUS.
 - F. FROM GROUND BUS IN MAIN SWITCHGEAR, CONNECT ONE #3/0 GROUND CONDUCTOR IN 35mm CONDUIT TO THE WATER MAIN WITH APPROVED GROUND CLAMP AHEAD OF THE WATER METER.
 - G. INSTALL ONE #3/0 GROUND CONDUCTOR JUMPER OF FLEXIBLE COPPER STRAP CONDUCTOR AROUND THE WATER METER AND ASSOCIATED UNIONS AND VALVES TO GROUND BUILDING SIDE OF WATER SYSTEM.
 - H. PROVIDE A SEPARATE COPPER CABLE BONDING CONDUCTOR IN ALL CONDUITS INSTALLED UNDERGROUND OR IN CONCRETE SLABS.
 - I. PROVIDE A SEPARATE COPPER CABLE BONDING CONDUCTOR IN ALL UNDERFLOOR OR IN FLOOR RACEWAYS AND UTILIZE TO MAINTAIN GROUND CONTINUITY AT ALL DEVICES/BOXES.
23. **BRANCH CIRCUIT PANELBOARDS AND CIRCUIT BREAKERS**
 - A. FLUSH AND SURFACE MOUNTED AS INDICATED. COMPLETE WITH PANEL TRIM, HAVING CONCEALED HINGES

FIRE ALARM SPECIFICATIONS

1. THE FIRE ALARM SYSTEM AND ALL FIRE ALARM DEVICES TO CONFORM TO THE NATIONAL BUILDING CODE 2019 (CURRENT ENFORCED VERSION) OF THE AUTHORITY HAVING JURISDICTION. INSTALLATION OF FIRE ALARM DEVICES AND/OR SYSTEMS SHALL CONFORM WITH ULC STANDARD 5524-14(CURRENT ENFORCED VERSION) AND NFPA CODE. VERIFICATION OF THE FIRE ALARM SYSTEM SHALL CONFORM WITH ULC STANDARD 5537-13 (CURRENT ENFORCED VERSION).
2. REQUIREMENTS/RECOMMENDATIONS AND REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
3. **WIRING METHODS:**
 - 3.1. INSTALL WIRING TO CONFORM WITH THE REQUIREMENTS OF ALL CODES, INCLUDING THE CANADIAN ELECTRICAL CODE SECTION 32.
 - 3.1.1. ALL CONDUCTORS OF A FIRE ALARM SYSTEM SHALL BE
 - 3.1.1.a. INSTALLED IN METAL RACEWAY OF THE TOTALLY ENCLOSED TYPE.



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DEPARTMENT AND INCLUDE ALL COSTS FOR PRINTS, SURVEY, ETC. IN THE ELECTRICAL TENDER.

3. VOLTAGE RATINGS

A. OPERATING VOLTAGES TO CSA C235.

B. MOTORS, LIGHTING, ELECTRICAL HEATING, CONTROL AND DISTRIBUTION DEVICES, AND EQUIPMENT TO OPERATE SATISFACTORILY AT 60HZ WITHIN NORMAL OPERATING LIMITS ESTABLISHED BY ABOVE MENTIONED STANDARD. EQUIPMENT TO OPERATE IN EXTREME OPERATING CONDITIONS ESTABLISHED IN ABOVE STANDARD WITHOUT DAMAGE TO EQUIPMENT.

4. CIRCUITING

A. IN SOME CASES, CONDUIT AND WIRING IS NOT SHOWN, BUT THE REQUIREMENT FOR THE WORK IS INDICATED, THEY ARE NEVERTHELESS TO BE PROVIDED AS INDICATED.

B. CONNECT AND WIRE ALL DEVICES AND EQUIPMENT SHOWN AS INDICATED USING WIRING AND RACEWAY METHODS SPECIFIED.

C. PROVIDE ALL WIRING REQUIRED FOR OPERATION OF THE EQUIPMENT AND IN ACCORDANCE WITH THESE SPECIFICATIONS, THE ELECTRICAL CODE AND MANUFACTURER'S INSTRUCTIONS.

D. COMMON NEUTRALS ARE NOT TO BE USED IN CIRCUITS CONTAINING DIMMERS OR ISOLATED GROUND RECEPTACLES. PROVIDE A SEPARATE NEUTRAL PER CIRCUIT FOR SUCH INSTALLATIONS.

E. PROVIDE A SEPARATE #12 INSULATED GROUND PER CIRCUIT CONTAINING ISOLATED GROUND RECEPTACLES. EACH RECEPTACLE AND DATA OUTLET TO BE LABELED WITH PANEL DESIGNATION.

F. EACH RECEPTACLE AND DATA OUTLET TO BE LABELED WITH PANEL DESIGNATION.

5. WIRE AND CABLE

A. 1. ALL WIRING SHALL BE COPPER ONLY, NO NON-METALLIC-SHEATHED (NMD-7MMDM90) EXCEPT FOR BRANCH WIRING IN WOOD CONSTRUCTION. MINIMUM #12 AWG STRANDED FOR POWER CIRCUITS, #14 AWG MINIMUM FOR CONTROL, CIRCUITS, WIRE AND FEEDERS TYPE SHALL BE RW90XLP/IE INSULATED, 600V FOR EXTERIOR. INDOOR WIRING SHALL BE RW90XLP, 600V. COLOUR CODE BRANCH WIRING AS FOLLOWS:
 ***** EQUIPMENT GROUNDING CONDUCTOR - GREEN
 ***** NEUTRAL CONDUCTOR - WHITE
 ***** 120/208V PHASE CONDUCTOR - RED, BLACK, BLUE
 B. INSTALL ALL WIRES IN RACEWAYS, WIRE AND CONNECT EQUIPMENT TO CIRCUITS INDICATED.
 C. ALL FEEDERS AND MOTOR CIRCUITS TO BE WIRED IN CONDUIT. WHERE CONDUIT AND WIRE IS INDICATED, IT SHALL BE USED.
 D. ALL WIRING TO BE IN CONDUIT FOR FIRE ALARM, EMERGENCY LIGHTING AND EXIT SIGNS.
 E. CONDUIT SIZES INDICATED IN DRAWINGS ARE MINIMUM REQUIRED. INCREASE CONDUIT SIZE (AND CONDUIT SIZE WHERE APPLICABLE) TO ACCOMMODATE VOLTAGE DROP PER CE REQUIREMENTS.

6. OUTLET BOXES

A. OUTLET, JUNCTION AND SWITCH BOXES SHALL BE GALVANIZED PRESSED STEEL OF SIZE AND TYPE TO SUIT EACH INDIVIDUAL APPLICATION. BOX TYPE TO BE IBERVILLE 54131, 52171, 72171 53151, 54521, 51151, 55171 OR MBD ACCORDING TO SIZE RESTRICTION AND MOUNTING TYPE. TYPE 1121 UTILITY BOXES ARE NOT PERMITTED.

B. EACH OUTLET MUST BE SUITABLE IN ALL RESPECTS FOR THE APPLICATION, COMPLETE WITH ALL ACCESSORIES, PLASTIC RINGS AND COVERS.

C. ALL BOXES SHALL BE SIZED TO ACCOMMODATE THE NUMBER OF RACEWAYS AND CONDUCTORS. TELEPHONE BOXES SHALL BE SIZED TO TELEPHONE UTILITY COMPANY REQUIREMENTS.

D. ALL PULL AND JUNCTION BOXES MUST BE ACCESSIBLE AFTER THE BUILDING IS COMPLETE.

E. ALL PULL AND JUNCTION BOX TYPES AND SIZES SHALL COMPLY WITH THE REQUIREMENTS OF THE CURRENT CANADIAN ELECTRICAL CODE AND ALL RELEVANT BY-LAWS OF A LOCAL ELECTRICAL AUTHORITY.

7. WIRING DEVICES/COVERPLATES

A. WIRING DEVICES TO BE SPECIFICATION GRADE AS FOLLOWS:
 a. 120V, 15A/20A SWITCHES - LEVITON DECORA SERIES - WHITE
 b. 347V, 15A/20A SWITCHES - LEVITON DECORA SERIES - WHITE
 c. SINGLE/DOUBLE RECEPTACLES - LEVITON SERIES - WHITE
 d. GROUND FAULT RECEPTACLES - LEVITON SMARTLOOK SERIES - WHITE
 e. SPECIAL RECEPTACLES AS NOTED - LEVITON SPEC GRADE - WHITE
 f. SWITCH AND PILOT LIGHT - LEVITON - 5226-W/WHITE
 g. DIMMER SWITCHES 1000W - LEVITON - DECORA ROCKER SIDE CONTROL - WHITE
 h. CEILING MOUNT OCCUPANCY SENSOR- ACUTY-CMR-PDT-9-2P-120/347VAC (SEE LUMINAIRE SCHEDULE FOR LIGHT FIXTURE VOLTAGE)
 i. WALL MOUNT OCCUPANCY SENSOR SWITCH MANUAL ON/AUTO OFF CW DIMMING -ACUTY-WSX-PDT-D-SA-120/347-WH
 j. WALL MOUNT SENSOR SWITCH (FOR SMALL WASHROOM) WSPXDT-AUTO ON-120/347-WH
 k. WALL LIGHT CONTROL PHOTO SENSOR ACUTY- CMADC-DZ-WH
 l. DIMMER SWITCHES FOR LED'S
 LEVITON UNIVERSAL DIMMER-DSL06-300WLED-WHITE
 LEVITON 0-10V DIMMER-DS710-120V-960WLED-WHITE
 LEVITON UNIVERSAL DIMMER-DSM10-450WLED-WHITE
 LEVITON ATE04-L1, ATE06-L1, ATE08-L1, ATE09-L1, ATE10-L1, ATE11-L1, ATE12-L1, VPE04-1L, VPE06-1L, LEVITON ELV DIMMER-DS06C-300WLED-WHITE
 LEVITON FAN CONTROL DSF01-WHITE
 LEVITON UNIVERSAL DIMMER-DMX1-BLZ-300WLED-WHITE
 DO NOT GANG DIMMER SWITCHES. DEPARTER MANUFACTURE'S RECOMMENDATION IF GANGED. FOLLOW MANUFACTURER RECOMMENDATION FOR DIMMER SWITCH.
 m. DRYER/RANGE RECEPTACLES - LEVITON 278279 - WHITE
 n. HOSPITAL GRADE RECEPTACLE- LEVITON HOSPITAL GRADE SMARTLOOKPRO SLIM
 o. USB CHARGER RECEPTACLE - LEVITON 17632-WHITE
 CONFIRM ALL COLOURS WITH OWNER PRIOR TO PURCHASING.

B. COVER PLATES FOR WIRING DEVICES TO BE AS FOLLOWS:
 a. IN SERVICE AND MECHANICAL ROOMS - LEVITON SMOOTH STAINLESS STEEL S SERIES.
 b. ALL OTHER INTERIOR AREAS - LEVITON SMOOTH NYLON P SERIES - WHITE
 c. EXTERIOR AND WEATHERPROOF AREAS - LEVITON SERIES - GRAY
 C. PRIOR TO ORDERING, CONFIRM COLOUR OF ALL WIRING DEVICES AND COVERPLATES WITH ARCHITECT.
 D. WIRING DEVICES ADJACENT ONE ANOTHER SHALL BE ARRANGED IN A NEAT SYMMETRICAL PATTERN TO THE APPROVAL OF THE ENGINEER. WIRING DEVICES ARE TO BE STACKED AND ALIGNED BOTH VERTICALLY AND HORIZONTALLY.
 E. ALL WIRING DEVICES AND COVERPLATES IN EXISTING AREAS BEING RENOVATED SHALL BE REPLACED WITH NEW AS SPECIFIED ABOVE.
 F. PROVIDE MATCHING PLUGS WITH CORD FOR ALL SPECIAL RANGE AND DRYER RECEPTACLES. CONNECT TO ASSOCIATED EQUIPMENT.
 G. CONTRACTOR TO PROVIDE COMPATIBLE DIMMER BASED ON LIGHT FIXTURE SELECTION AND MANUFACTURER RECOMMENDATION. PROVIDE 0-10V WIRING FOR LOW VOLTAGE DIMMING CONTROL.

8. EMERGENCY LIGHTING/EXIT SIGNS

A. CONNECT REMOTE EMERGENCY LIGHTS AND EXIT LIGHTS TO BATTERY USING #10 AWG WIRE IN CONDUIT AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 B. WIRING OF EMERGENCY LIGHTING/EXIT LIGHTING SHALL BE INSTALLED PER CANADIAN ELECTRICAL CODE.
 C. FOR EXIT LIGHTS, PROVIDE DOUBLE FACE TYPES EXCEPT FOR FLAT FACE MOUNTED. PROVIDE DIRECTIONAL ARROWS WHERE INDICATED. CONNECT TO BATTERY AND TO AC CIRCUIT. PROVIDE AC AND DC LAMPS.
 D. PROVIDE VOLTAGE SENSING RELAY WHERE PATH OF EGRESS FOR EMERGENCY LIGHTING CROSSES THROUGH SEVERAL AREAS AND HAS A SEPARATE ELECTRICAL CIRCUIT AND BREAKER FOR LIGHTING.
 E. WIRE GUARDS TO BE INSTALLED ON ALL REMOTE HEADS IN LOCKER ROOMS AND GYMNASIUMS.

9. LUMINAIRES

A. ALL LUMINAIRES SHALL BE COMPLETE WITH LAMPS OR TUBES AND ACCESSORIES REQUIRED TO LEAVE THE FIXTURE COMPLETE IN POSITION AND OPERATING.
 B. PROVIDE ALL MOUNTING ACCESSORIES TRIMS AND ACCESSORIES TO SUIT THE CEILING AND INSTALLATION.
 C. FLUORESCENT LAMPS SHALL BE 41K FOR RAPID START. UNLESS SPECIFIED OTHERWISE.
 D. FLUORESCENT BALLASTS SHALL BE LOW NOISE, A RATING, RAPID START, THERMAL PROTECTION AUTOMATIC RESET HIGH POWER FACTOR, CEM CERTIFIED.
 E. LUMINAIRES ARE AS SPECIFIED IN LUMINAIRE SCHEDULE.
 F. ALL LUMINAIRES SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE, INDEPENDENT OF THE CEILING. LUMINAIRES SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE, INDEPENDENT OF THE CEILING AND ARE TO BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICTS BETWEEN LUMINAIRE, SUPPORTS, FITTINGS AND MECHANICAL OR STRUCTURAL BUILDING ELEMENTS.
 G. PROVIDE ALL ADDITIONAL SUPPORTS, HANGERS AND STEEL REQUIRED TO SUPPORT LUMINAIRES LOCATED UNDER MECHANICAL DUCTS.
 H. EXACT LOCATIONS OF ALL LUMINAIRES IN AREAS HAVING A CEILING, SEE ARCHITECTURAL REFLECTED CEILING DRAWINGS.
 I. FOR ALL LED LAMPS, PROVIDE ALL NECESSARY DRIVERS/TRANSFORMERS REQUIRED TO HAVE A FULLY FUNCTIONAL FIXTURE. PROVIDE COMPATIBLE DIMMER FOR LED LUMINAIRE BASED ON MANUFACTURER RECOMMENDATION.
 J. IT IS CONTRACTORS RESPONSIBILITY TO PERFORM ALL NECB CALCULATION AND GET APPROVALS FROM CITY IF DIFFERENT FIXTURE IS UTILIZED. SUBMIT ALTERNATE SPECIFICATION TO ENGINEER PRIOR TO TENDER CLOSE. ALTERNATE SPECIFICATIONS ARE ONLY VALID WITH ENGINEER'S WRITTEN APPROVAL. ALTERNATE SPECIFICATIONS ARE NOT ALLOWED FOR EXTERIOR LUMINAIRES. PROVIDE AS PER SPECIFICATIONS ON THE DRAWINGS.

10. SHOP DRAWINGS

A. SUBMIT SHOP DRAWINGS OF ELECTRICAL EQUIPMENT TO THE ENGINEER FOR REVIEW. FABRICATION OF EQUIPMENT SHALL NOT COMMENCE UNTIL SHOP DRAWINGS OF SUCH EQUIPMENT HAVE BEEN REVIEWED BY THE ENGINEER. FIVE (5) SETS SHALL BE SUBMITTED WITH LOCAL INSPECTION DEPARTMENT APPROVAL WHERE REQUIRED. INCLUDE MANUFACTURER'S CATALOGUE CUTS AND PHOTOMETRIC DATA FOR LIGHTING FIXTURES.
 B. SUBMIT SHOP DRAWINGS OF ALL ITEMS OF ELECTRICAL EQUIPMENT PRIOR TO INSTALLATION.

JOURNEYMAN CERTIFICATE AND NECESSARY ASSISTANTS. ALL SATISFACTORY TO THE ENGINEER. GIVE EFFICIENT SUPERVISION TO THE WORK, USING SKILL AND ATTENTION.

MISCELLANEOUS

A. PROVIDE LAMICOID PLATE LABEL ON ALL PANELS, TRANSFORMERS AND MECHANICAL EQUIPMENT WITH APPROPRIATE INFORMATION SUCH AS NAME, VOLTAGE AND CIRCUITING.
 B. PROVIDE TYPED PANEL SCHEDULES FOR ALL PANELS.
 C. ALL RECEPTACLE FACELATES TO BE LABELED WITH KROY THERMAL LABELING (OR EQUIVALENT) SHOWING THE CIRCUIT AND PANEL.
FIREPROOFING
 A. WHERE SLEEVES OR OPENINGS ARE INSTALLED IN WALLS, FLOORS, ROOF OR PARTITIONS TO ACCOMMODATE RACEWAYS OR CABLES, PROVIDE ALL NECESSARY SEALS, FITTINGS, BARRIERS, AND FIRE-RESISTANT MATERIALS TO RESTORE THE INSTALLATION TO ITS ORIGINAL FIRE RATING TO THE SATISFACTION OF THE GOVERNING AUTHORITIES.
CLEANING
 A. THIS CONTRACTOR AND/OR HIS SUB-CONTRACTOR(S) SHALL BE RESPONSIBLE FOR CLEANING UP ALL DEBRIS ACCUMULATED DURING THE COURSE OF THE WORK. UPON COMPLETION OF THE CONTRACT AND WHENEVER DIRECTED BY THE ENGINEER, THE COMPLETE INSTALLATION SHALL BE MAINTAINED IN A NEAT AND TIDY MANNER DURING ITS ENTIRE COURSE.
 B. AT THE COMPLETION OF THE WORK, A COMPLETE AND THOROUGH CLEAN-UP SHALL BE DONE ON THE SURFACES AND INTERIORS OR ALL EQUIPMENT. AN INDUSTRIAL TYPE VACUUM CLEANER SHALL BE USED AS PART OF THE CLEANING.
ACCURACY OF DATA
 A. DRAWINGS ARE SCHEMATIC, EXACT LOCATIONS, DISTANCES, LEVELS AND OTHER DIMENSIONS SHALL BE GOVERNED BY THE BUILDING AS CONSTRUCTED.
 B. DRAWINGS INDICATE FLOOR PLANS AND/OR DETAILS INDICATING LOCATION OF OUTLETS, ETC AND ASSOCIATED EQUIPMENT. THEY ARE DESIGN DRAWINGS AND DO NOT SHOW EVERY OFFSET, BEND, ELBOW OR JUNCTION BOX WHICH MAY BE REQUIRED FOR THE INSTALLATION IN THE SPACE PROVIDED. FOLLOW THE DRAWINGS AS CLOSELY AS IS PRACTICAL AND INSTALL ADDITIONAL BENDS, OFFSETS AND JUNCTION BOXES WHERE REQUIRED BY LOCAL CONDITIONS FROM THE MEASUREMENTS TAKEN AT THE BUILDING, SUBJECT TO APPROVAL AND WITHOUT ADDITIONAL COST TO THE OWNER. THE DRAWINGS AND SPECIFICATIONS SHALL BE COMPLETE AND WORKING DRAWINGS WITH ALL COMPONENTS IN SATISFACTORY AND OPERATING CONDITION. THESE DRAWINGS AND SPECIFICATIONS SHALL FORM A BASIS FOR THE TENDER PRICE AND SHALL BE USED TO PROVIDE A COMPLETE ELECTRICAL INSTALLATION AS DIRECTED IN EACH OF THE DOCUMENTS.
 C. ALL NOTES ON DRAWINGS WHICH MAKE EXCEPTION TO THESE SPECIFICATIONS HAVE PRECEDENCE EXCEPT ADDENDA WHERE SPECIFIC REFERENCE IS MADE.
 D. OUTLETS OR EQUIPMENT SHALL BE MOVED TO ANY POINT WITHIN A THREE METER RADIUS WHEN RELOCATING IS REQUESTED BY ENGINEER BEFORE WORK IS SUBSTANTIALLY COMPLETE.
MATERIAL STANDARDS
 A. ALL MATERIAL SUPPLIED SHALL BE NEW OF THE QUALITY SPECIFIED. ALL EQUIPMENT SHALL CONFORM TO THE STANDARDS OF THE CANADIAN STANDARDS ASSOCIATION AND SHALL BEAR THE NECESSARY CSA APPROVAL LABEL. FOR ANY MATERIAL NOT CSA APPROVED, OBTAIN THE APPROVAL OF THE LOCAL INSPECTION AUTHORITY AND BEAR ALL INSPECTION CHARGES LEVIED AND ANY MODIFICATION COSTS REQUIRED.
 B. UNLESS OTHERWISE SPECIFICALLY CALLED FOR IN THE SPECIFICATIONS, UNIFORMITY OF MANUFACTURERS SHALL BE MAINTAINED FOR ANY PARTICULAR TYPE OF EQUIPMENT THROUGHOUT THE PROJECT.
FINAL
 A. POINTS NOT SPECIFICALLY MENTIONED SHALL BE IN STRICT ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE AND REGULATIONS OF THE ELECTRICAL INSPECTION DEPARTMENT FROM WHICH THE PERMITS WAS OBTAINED. THE LATEST REVISION AND/OR AMENDMENTS TO THIS CODE WITH APPLICABLE DATE RESTRICTIONS SHALL ALSO GOVERN WORK ON THIS CONTRACT.
 B. LEAVE THE WORK COMPLETE TO THE APPROVAL OF THE ENGINEER.
GUARANTEE
 A. FURNISH A WRITTEN GUARANTEE/WARRANTY COUNTERSIGNED AND GUARANTEED BY THE GENERAL CONTRACTOR STATING THAT ALL WORK EXECUTED UNDER THIS CONTRACT WILL BE FREE FROM DEFECTS OF WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THIS WORK, EXCEPT FOR INCANDESCENT LAMPS WHICH SHALL BE FOR A PERIOD OF SIX (6) MONTHS.
 B. THE ABOVE PARTIES FURTHER AGREE THAT THEY WILL, AT THEIR OWN EXPENSE, REPAIR AND REPLACE ALL SUCH DEFECTIVE WORK AND OTHER WORK DAMAGED THEREBY, WHICH FAILS OR BECOMES DEFECTIVE DURING THE TERM OF THE GUARANTEE/WARRANTY PROVIDED THAT SUCH FAILURE IS NOT DUE TO IMPROPER USAGE.
 C. THE PERIOD OF THE GUARANTEE SPECIFIED SHALL IN NO WAY SUPPLANT ANY OTHER GUARANTEE OF A LONGER PERIOD, BUT SHALL BE BINDING ON WORK NOT OTHERWISE COVERED.
DISCONNECT SWITCHES & FUSES
 A. THREE PHASE MOTOR DISCONNECT SWITCHES AND THREE POLE UNFUSED, 600 VOLT IN EEMAC TYPE 1 ENCLOSURE UNLESS OTHERWISE NOTED.
 B. SINGLE PHASE DISCONNECT SWITCHES, SINGLE POLE TOGGLE SWITCH.
 C. INSTALL MOTOR AND CIRCUIT DISCONNECT SWITCHES AS REQUIRED BY CODE OR CALLED FOR IN TENDER DOCUMENTS.
 D. AMPERE AND HORSE POWER RATINGS AS REQUIRED BY THE CIRCUIT AND ASSOCIATED EQUIPMENT OR AS INDICATED.
 E. PROVIDE FUSE HOLDERS ON LOAD SIDE OF SWITCHES, AMPERE RATING EQUAL TO SWITCH RATINGS, SUITABLE FOR FUSES SPECIFIED.
 F. ALL FUSES TO BE 100,000 AMPERE MINIMUM INTERRUPTING CAPACITY OF THE CURRENT LIMITED TYPE. IN ADDITION, FUSES FEEDING MOTORS TO BE OF THE TIME DELAY TYPE. PROVIDE ONE FULL SET OF SPARE FUSES, THREE FOR EACH DIFFERENT AMPERE RATING USED, STORED IN SUITABLE ENCLOSURE.
 G. SWITCH MECHANISMS: QUICK MAKE AND QUICK BREAK ACTION WITH SELF-WIRING CONTACTS. SOLDERLESS PRESSURE LUG CONNECTORS. FOR SWITCHES 100 AMPERES AND OVER, PROVIDE NON-TRACKING ARC SHROUDS. ALL SWITCH POLES TO OPERATE TOGETHER FROM A COMMON OPERATING BAR. PROVIDE FOR PADLOCKING DISCONNECT SWITCHES IN "OFF" POSITION. DOORS TO BE INTERLOCKED AND COMPLETE WITH DEFEAT MECHANISM.
MOTORS
 A. EACH UNGROUNDED CONDUCTOR OF MOTOR BRANCH CIRCUIT SHALL BE PROTECTED BY AN OVERCURRENT DEVICE.
 B. THE BRANCH CIRCUIT CONDUCTORS AND CONTROL EQUIPMENT OF EACH MOTOR SHALL HAVE OVERLOAD PROTECTION PER MANUFACTURERS RECOMMENDATION EXCEPT AS PERMITTED BY CODE RULE 28-308.
 C. EACH MOTOR USED IN CONTINUOUS DUTY APPLICATION AND RATED MORE THAN 1 HP SHALL BE PROTECTED AGAINST OVERLOAD BY SEPARATE OVERLOAD DEVICE AND THERMAL PROTECTOR ON EACH PHASE.
 D. MAGNETIC MOTOR STARTERS TO BE ENCLOSED TYPE ACROSS THE LINE FULL VOLTAGE NON-REVERSING COMPLETE WITH CONTACTOR, ONE OVERLOAD RELAY PER PHASE "ON" PILOT LIGHT AND RESET BUTTON AND HOA SWITCH IN COVER. TWO SETS OF N.O. AUXILIARY CONTACTS IN ADDITION TO STANDARD HOLDING CONTACTS. CONTROL CIRCUIT FUSES: ALL TO BE HEAVY-DUTY OIL TIGHT UNLESS OTHERWISE SPECIFIED.
 E. SINGLE PHASE MANUAL MOTOR STARTERS TO BE TOGGLE OPERATED 120 VOLT COMPLETE WITH PILOT LIGHT AND OVERLOAD HEATER. MANUAL RESET AND TRIP INDICATING HANDLE.
 F. STARTERS TO HAVE QUICK MAKE QUICK BREAK TOGGLE SWITCH OPERATION, RATED VOLTS, AND POLES, TO SUIT APPLICATION. LOCKING TAB TO PERMIT LOCKING IN THE "ON" OF "OFF".
 G. SELECT OVERLOAD HEATER TO SUIT MOTORS.
 H. SIZE STARTER TO MOTOR AND CIRCUIT AND PROVIDE INTERLOCKING BETWEEN STARTERS AS REQUIRED.
 I. MOTOR STARTERS TO BE PROVIDED FOR ALL MOTORS HIGHER THAN 120V, GREATER THAN 1/3 HP AND MOTORS THAT ARE CONSTANT SPEED. MOTORS WITH VFD'S ARE EXCEPTED FROM STARTER REQUIREMENT, UNLESS NOTED OTHERWISE.
 J. ALL COMBINATION MOTOR STARTERS SHALL BE OF THE CIRCUIT BREAKER TYPE COMPLETE WITH HRC FORM J FUSES, UNLESS OTHERWISE INDICATED. COMBINATION STARTERS SHALL HAVE EXTERNAL OPERATING HANDLE WITH LOCK OFF FACILITIES. LOCK ON POSITION. ENTRY DOOR SHALL BE FITTED WITH SWITCH/DOOR INTERLOCK DEVICES.
 K. ALL THREE PHASE MAGNETIC MOTOR STARTERS TO BE ACROSS-THE-LINE MAGNETIC STARTERS, EXCEPT AS NOTED. EACH FVNR STARTER SHALL CONTAIN WITHIN ITS ENCLOSURES:
 a. CONTACTOR WITH THREE OVERLOAD DEVICES HAVING EITHER ONE FORM A AND ONE FORM B CONTACT, OR AN AUXILIARY RELAY. OVERLOAD TRIP CONTACTS SHALL BE WIRED TO THE LINE SIDE OF THE CONTACTOR COIL SUCH THAT THE NEUTRAL SIDE OF THE COIL IS WIRED DIRECTLY TO THE GROUNDED CIRCUIT.
 b. CONTROL TRANSFORMER OF ENOUGH VA CAPACITY TO PROVIDE 120-VOLT CONTROL COMPLETE WITH PRIMARY AND SECONDARY FUSES FOR ALL UNGROUNDED CONDUCTORS INSTALLED WITH STARTER. FUSES TO BE ENGLISH ELECTRIC "RED SPOT" FUSE FITTING CCRS154. SIZE FOR LOAD PLUS 20% SPARE CAPACITY.
 c. TWO SETS OF AUXILIARY CONTACTS (2NO AND 2NC) IN ADDITION TO STANDARD WITH PROVISION TO CONVERT ONE SET TO NORMALLY CLOSED.
 d. RED PILOT LIGHT TO INDICATE ENERGIZED MOTOR CIRCUIT AND WHERE CALLED FOR GREEN PILOT LIGHT TO INDICATE DE-ENERGIZED MOTOR CIRCUIT. PILOT LIGHTS SHALL LED BE PUSH-TO-TEST TRANSFORMER TYPE: HEAVY DUTY, OIL TIGHT.
 e. THERMISTOR CONTROL RELAY AND ACCESSORIES FOR ALL MOTORS 22.4 KW AND ABOVE.
 g. STARTERS FOR MOTORS 5HP AND LARGER SHALL HAVE SINGLE PHASE PROTECTION
 L. PROVIDE LAMICOID NAMEPLATES WITH WHITE AND BLACK LETTERING AS INDICATED. LABEL EVERY MOTOR TO SHOW THE MOTOR NUMBER, THE MOTOR NAME AND POWER SOURCE. EXAMPLE: "MOTOR #3-51, EMERGENCY EXHAUST, CCT, EAA-4", PERMANENTLY FASTEN THE NAMEPLATES TO THE EQUIPMENT, TO BE CLEARLY VISIBLE.
GROUNDING
 A. INSTALL COMPLETE GROUNDING SYSTEM AS INDICATED AND IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE AND ELECTRICAL INSPECTION AUTHORITY HAVING JURISDICTION.
 B. TESTS - MEASURE GROUND GRID RESISTANCE WITH AN EARTH TEST MEGGER AND INSTALL GROUND RODS AND CONDUCTORS AS REQUIRED UNTIL RESISTANCE TO GROUND COMPLIES WITH CODE REQUIREMENTS.

AND TRIM MOUNTING SCREWS, HINGED LOCKING DOOR AND FLUSH CATCH

PROVIDE THREE KEYS FOR EACH PANEL, INTERCHANGEABLE WITH PANELS OF SAME VOLTAGE.

THREE PHASE, 4 WIRE, 120/208V SOLID NEUTRAL, SEQUENCE STYLE BUSSING, FULL CAPACITY BOLT-ON MOULD CASE CIRCUIT BREAKERS, MAIN LUGS TYPE.

CIRCUIT BREAKERS TO BE OF SIZES AND NUMBER OF POLES AS INDICATED, MINIMUM 1" WIDE.

PANELS TO BE SIEMENS AS NOTED. ACCEPTABLE ALTERNATIVE MANUFACTURERS ARE SCHNEIDER, EATON AND CUTLER-HAMMER

PANEL DIRECTORY MUST BE ACCURATE. COPY OF PANEL DIRECTORY FOR EACH PANEL MUST BE SUBMITTED IN MAINTENANCE BROCHURES.

MOUNT PANEL DOORS AT 1800mm TO TOP

PROVIDE DOUBLE LUGS FOR PARALLEL NEUTRALS WHERE REQUIRED.

ALL CIRCUIT BREAKERS REQUIRED TO BE PART OF THIS CONTRACT UNLESS OTHERWISE SPECIFIED.

CIRCUIT BREAKER FOR EXIT LIGHTS, BATTERY PACK AND FIRE ALARM TO BE MARKED RED WITH BOLT-ON BREAKER INACCESSIBLE TO ALL BUT AUTHORIZED PERSONAL ONLY.

FROM EACH PANELBOARD INSTALLED FLUSH, PROVIDE 3/4" MM AND 2x25 MM SPARE CONDUITS FROM THE PANELBOARD TUB TO AN ACCESSIBLE LOCATION IN THE CEILING SPACE ABOVE.

PROVIDE LOCKING STRAPS TO PERMIT AUTOMATIC TRIPPING OF BREAKERS BUT PREVENT MANUAL SWITCHING, FOR EXIT LIGHTS, RECEPTACLES FEEDING EMERGENCY BATTERY PACKS, FIRE ALARM PANELS, DATA RACKS, SECURITY PANELS, UPS RECEPTACLES, AND WHERE DESIGNATED.

PROVIDE LAMICOID PLATE SECURELY AND PERMANENTLY ATTACHED TO THE EXTERIOR OF EACH PANELBOARD DOOR SHOWING PANELBOARD DESIGNATION, VOLTAGE AND SOURCE OF FEED.

CONDUIT

RIGID PVC CONDUIT TO BE USED FOR UTILITY SERVICE AND FOR BRANCH CIRCUIT WORK OUTDOORS, UNDERGROUND, BENEATH CONCRETE AND PAVED AREAS.

WIRING IN CONCRETE MASONRY CONSTRUCTION SHALL BE INSTALLED IN RIGID GALVANIZED STEEL (RGS) CONDUIT. CONDUITS INSTALLED IN AREAS EXPOSED TO MOISTURE SHALL HAVE WATERTIGHT FITTINGS, CONDUIT IN ALL OTHER AREAS SHALL BE EMT.

ALL WIRING IN FINISHED AREAS SHALL BE CONCEALED. CONDUITS SHALL BE RUN ON THE SQUARE AND PARALLEL TO THE BUILDING LINES. CONDUITS MAY BE EXPOSED IN MECHANICAL AND STORAGE ROOMS.

CONDUIT AND WIRING SHALL BE GROUPED WHERE POSSIBLE AND CLIPPED IN A NEAT AND WORKMANLIKE MANNER.

MAKE CONNECTIONS TO MECHANICAL MOTORS AND EQUIPMENT WITH LIQUID TIGHT FLEXIBLE CONDUIT AND CONNECTORS.

MINIMUM SIZED CONDUIT IS 13mm.

FLEXIBLE METALLIC CONDUIT MAY BE USED FOR SHORT CONNECTIONS TO INDOOR EQUIPMENT.

INSTALL ALL WIRING IN CONDUIT WITH THE NUMBER OF WIRES PER CONDUIT AND SIZE OF CONDUIT AS INDICATED AND IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE.

INSTALL CSA APPROVED EXPANSION FITTING COMPLY WITH GROUNDING JUMPER WHERE CONDUITS CROSS BUILDING EXPANSION JOINTS ION SLABS. PROVIDE BEND OR OFFSET IN CONDUIT ADJACENT TO BUILDING EXPANSION JOINT WHERE CONDUIT IS INSTALLED ABOVE SUSPENDED CEILING.

COMMUNICATIONS SPECIFICATIONS

PROVIDE ALL LABOUR, MATERIALS, EQUIPMENT AND OTHER SERVICES REQUIRED TO SUPPLY AND INSTALL A COMPLETE CABLE DISTRIBUTION SYSTEM TO CATEGORY 6 STANDARDS TO SUPPORT BOTH VOICE AND DATA. COMMUNICATION SYSTEMS AS SHOWN ON DRAWINGS AND/OR SPECIFIED HEREIN.

ALL CABLES TO BE INSTALLED TO CATEGORY 6 STANDARD.

ACCEPTABLE MATERIAL: BELDEN OR EQUIVALENT.

THE INSTALLATION SHALL CONFORM TO EIA/TIA-568-B-2.1 STANDARDS, CATEGORY 6.

ALL CABLES ARE TO BE TERMINATED ON LAN RACK MOUNTED PATCH PANEL. THE PATCH PANEL MUST HAVE ADEQUATE CAPACITY TO SERVICE THE NUMBER OF ANTICIPATED CABLE RUNS PLUS EXCESS CAPACITY OF 20%.

THE PATCH PANEL SHALL BE LOCATED ON THE TELEPHONE TERMINAL BOARD, MOUNTED ON THE LAN RACK.

THE PATCH PANEL SHALL BE BELDEN RJ45, CAT6 OR EQUIVALENT.

PROVIDE SUFFICIENT PATCH PANEL CAPACITY FOR THE INDICATED CABLE RUNS, PLUS 20% SPARE PORTS.

5/8" FIRE RESISTANT PLYWOOD BACKBOARD OF AT LEAST 4" ON A SIDE WALL WILL BE INSTALLED NEXT TO THE LAN RACK FOR THE PURPOSE OF MOUNTING TELCO AND RELATED ANCILLARY EQUIPMENT. IF THE SPECIFICATION FOR THE SIZE AND FIRE RATING OF THE BACKBOARD AS DICTATED BY THE TELCO REQUIREMENTS AND/OR BUILDING CODE EXCEEDS THE REQUIREMENTS MENTIONED HERE, THE REQUIREMENTS OF THE TELCO AND/OR BUILDING CODES ARE TO TAKE PRECEDENCE.

CONFIRM PLYWOOD REQUIREMENTS WITH DRAWING NOTES.

DUAL WALL FACEPLATES AND/OR SYSTEM FURNITURE FACEPLATES ARE TO BE USED. DATA JACKS TO BE BLACK, TELEPHONE JACKS TO BE WHITE.

THE NUMBERING SCHEME FOR THE PATCH PANEL, CABLES AND JACKS IS TO START AT '1'. NO DISTINCTION IS TO BE MADE BETWEEN VOICE AND DATA NUMBERING EACH OUTLET SHALL HAVE DOUBLE JACKS, ONE VOICE & ONE DATA UNLESS OTHERWISE INDICATED.

THE TELEPHONE CABLING IN SUFFICIENT QUANTITY TO SERVICE THE REQUIRED TELEPHONE LINES PLUS AT LEAST 20% EXCESS CAPACITY IS TO BE BROUGHT FROM THE TELEPHONE ROOM TO THE LAN ROOM, WITHIN 5' OF THE LAN RACK LEAVING SUFFICIENT SLACK.

THE TELEPHONE CABLING IS TO BE CONNECTED ON THE STANDARD TELCO BIX EQUIPMENT.

RJ45 QCBIX48D OR QCBIX36D TERMINATION BLOCKS ARE TO BE MOUNTED ON THE TELCO BIX EQUIPMENT. SUFFICIENT QCBIX48D TERMINATION BLOCKS MUST BE PROVIDED TO SERVICE THE REQUIRED TELEPHONE LINES PLUS 20% EXCESS CAPACITY. AS THIS EQUIPMENT WILL NOT BE SUPPORTING LAN DATA TRAFFIC, IT DOES NOT HAVE TO CONFORM TO CAT6 STANDARDS. THIS INSTALLATION MUST CONFORM TO THE STANDARDS OF THE LOCAL TELCO.

THE TELCO SHALL BE RESPONSIBLE FOR CROSS-CONNECTING THE TELEPHONE SERVICE TO THE QCBIX48D BLOCKS AND CLEARLY LABELING THE TELEPHONE NUMBERS ON THE QCBIX48D BLOCKS. PROVIDE BIX BLOCK MOUNT AS REQUIRED.

OWNERS PERSONNEL WILL BE RESPONSIBLE FOR CROSS CONNECTING THE TELEPHONE SERVICE FROM THE QCBIX48D BLOCKS TO THE PATCH PANEL UTILIZING RJ45 CAT6 STANDARD PATCH CABLES.

THIS CONTRACTOR IS TO SUPPLY SUFFICIENT 7' PATCH CABLES TO SERVICE THE INSTALLED CABLING.

PROVIDE ALL ELECTRICAL BOXES.

PROVIDE CABLE SUPPORTS/TIES TO RUN CABLE IN CEILING SPACE. PROVIDE 'J' HOOK EVERY 1000mm FOR FREE AIR CABLES IN CEILING SPACE. FREE AIR CABLES IN CEILING SPACE TO BE FT6 RATED.

LABEL EACH COMMUNICATION FACE PLATE AND EACH CABLE END. ALSO LABEL THE CABLES AT EACH PULL BOX AND PORTS ON THE PATCH PANEL.

EXCEPT WHERE INDICATED DIFFERENTLY, ALL CABLES TO BE INSTALLED IN CONDUIT. CONDUIT TO BE SIZED TO PROVIDE MINIMUM 4 CABLES.

THE CROSS CONNECT AND TIE-IN AT BOTH ENDS SHALL MEET THE SEQUENCE OF TIA(T568B), PERMITTING FLEXIBILITY TO CONNECT THE DATA EQUIPMENT USING THE SAME WIRE AND JACK SYSTEM.

MAINTAIN A MINIMUM DISTANCE OF 5 INCHES BETWEEN LAN AND POWER, OUTLETS AND CABLING.

MECHANICAL EQUIPMENT CONTROLS

LOW VOLTAGE WIRING, CONDUIT AND CONTROLS FOR MECHANICAL UNITS IS THE WORK OF THE MECHANICAL CONTRACTOR.

IN THE EVENT THE MECHANICAL CONTRACTOR HIRES THE ELECTRICAL CONTRACTOR TO DO CONTROLS, THE FOLLOWING SHALL BE ADHERED TO:
 a. PROVIDE ALL LINE AND LOW VOLTAGE CONTROL WIRING REQUIRED FOR MECHANICAL EQUIPMENT. TO INCLUDE WIRING OF ALL MECHANICAL CONTROL COMPONENTS. SEE MECHANICAL SPECIFICATIONS FOR DETAILS.
 b. REFER TO ALL SECTIONS OF MECHANICAL SPECIFICATIONS FOR CONTROL WIRING REQUIRED. EXACT LOCATIONS OF ALL CONTROL DEVICES SHALL BE AS DIRECTED BY MECHANICAL CONTRACTOR OR FROM MECHANICAL EQUIPMENT MANUFACTURER.
 c. VERIFY EXACT LOCATION OF ALL MECHANICAL CONTROL COMPONENTS REQUIRING WIRING BEFORE ROUGH-IN.
 d. ALL CONTROL WIRING SHALL BE IN CONDUIT.
 c. ELECTRICAL CONTRACTOR TO PROVIDE JUNCTION BOX FOR MOTORIZED DAMPERS NOTED ON MECHANICAL DRAWINGS. ALLOW FOR 1P-15A CIRCUIT IN NEAREST HOUSE PANEL CW 21C-2#12 CONDUIT/WIRING TO EACH MOTORIZED DAMPER LOCATION. CONFIRM WITH MECHANICAL CONTRACTOR FOR SEQUENCE OF OPERATION.

RECORDED DRAWINGS (AS BUILT DRAWINGS)

CONTRACTOR TO RECORD ACCURATELY THE LOCATIONS OF ALL OUTLETS AND CONDUIT RUNS AS INSTALLED ON SITE AND ITEMS BEING AT VARIANCE WITH THE ORIGINAL DRAWINGS. INCLUDE ALL PERTINENT NOTATIONS, REVISED CONDUCTOR COUNTS, ETC AND SHALL BE KEPT UP-TO-DATE AT ALL TIMES ON THE JOB SITE.

CONTRACTOR TO FURNISH ENGINEER WITH THESE RECORDED ITEMS IN A TIMELY MANNER AFTER THE COMPLETION OF THE JOB. SET OF DRAWINGS TO BE CLEARLY MARKED "AS BUILT" DRAWINGS ON EACH SHEET.

PROVIDE SEPARATE BREAKOUT PRICE, IF AUTOCAD AND PDF DRAWINGS ARE REQUIRED TO BE SUBMITTED TO OWNER. CONTRACTOR SHOULD ALLOW FOR \$1500 DRAFTING COSTS PAYABLE TO THIS ENGINEER.

INCORPORATED IN A CABLE HAVING A METAL ARMOUR OR SHEATH.

INSTALLED IN RIGID NON-METALLIC CONDUIT. OR

INSTALLED IN ELECTRICAL NON-METALLIC TUBING, WHERE EMBEDDED IN AT LEAST 50mm OF MASONRY OR POURED CONCRETE.

THE CONDUCTORS SHALL BE INSTALLED TO BE ENTIRELY INDEPENDENT OF ALL OTHER WIRING AND SHALL NOT ENTER A RACEWAY, BOX, OR ENCLOSURE OCCUPIED BY OTHER WIRING, EXCEPT AS MAY BE NECESSARY FOR CONNECTION TO

THE POINT OF SUPPLY;

A SIGNAL;

AN ANCILLARY DEVICE; OR

A COMMUNICATION CIRCUIT;

SIZE WIRING IN ACCORDANCE WITH CLASS 2 REQUIREMENTS, EXCEPT FOR A.C. SIGNAL CIRCUITS WHERE THE WIRING SHALL BE SIZED IN ACCORDANCE WITH CLASS 1 REQUIREMENTS BUT BE PROTECTED FROM MECHANICAL INJURY OR OTHER INJURIOUS CONDITIONS SUCH AS MOISTURE, EXCESSIVE HEAT OR CORROSIVE ACTION IN CONDUIT. CONNECT WIRING TO THE SCREW TERMINALS IN THE DEVICES.

PROVIDE MINIMUM 1 HOUR CONDUCTOR PROTECTION PER ARTICLE 3.2.7.10 OR PROVIDE CSA/ULC APPROVED 2 HOUR RATED CABLING BETWEEN FIRE ALARM CONTROL PANEL AND ANNUNCIATOR PANEL AND ALL FIRE ALARM RISERS.

ALL FIRE ALARM LOOP AND NOTIFICATION RUNS WIRING TO BE COPPER, TYPES FAS, OR MI, MINIMUM 14 AWG OR PER SYSTEM MANUFACTURER'S INSTRUCTIONS TRANSFER TO MAIN CONTROL CONDUCTORS TO BE PER MANUFACTURER'S REQUIREMENT (e.g. FIBRE), WITH SEPARATION AND PROTECTION, AS REQUIRED BY THIS SECTION.

ALL DEVICES TO BE INSTALLED IN ACCESSIBLE AREAS.

RELAYS, MODULES AND ISOLATORS TO BE WALL MOUNTED AND LABELED AS TO FUNCTION AND ZONES.

MECHANICAL CONNECTORS ARE NOT ACCEPTABLE. SOLDER AND INSULATE ALL JOINTS, IF WIRE CANNOT BE CONTINUOUS.

ALL INSTALLED FIRE ALARM DEVICES TO CONFORM TO THE FOLLOWING ARTICLES OF THE CURRENT LOCAL BUILDING CODE:
 4.a. AUDIBLE AND SIGNAL DEVICES: ARTICLE 3.2.4.18 & S524 SECTION 9
 4.b. TEMPORAL PATTERN 65dBm AND 110 dbA MAX. NOT LESS THAN 100dB ABOVE THE AMBIENT NOISE LEVEL WITHIN FLOOR
 4.b.a. VISUAL DEVICES: ARTICLE 3.2.4.19 AND CANULC STANDARD S526-06
 4.c. SMOKE DETECTION DEVICES: ARTICLE 3.2.4.10.11 &12
 4.d. MANUAL PULL STATION: ARTICLE 3.2.4.16

ALL FIRE ALARM EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS AND THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.

THE COST FOR SERVICES TO EMBE CONSULTING ENGINEERS FOR FIRE ALARM VERIFICATION AND INTEGRATED SYSTEM TESTING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. CONTRACTOR TO INCLUDE A COST OF \$1500 INCLUDING TRAVEL EXPENSE IN THE TOTAL TENDER PRICE. TO BE PAID TO EMBE CONSULTING TO WITNESS THE FIRE ALARM VERIFICATION.

FIRE ALARM VERIFICATION SHALL BE COMPLETED TWO WEEKS PRIOR TO THE DATE FOR SUBSTANTIAL COMPLETION OF THE CONTRACT.

WHEN THE FIRE ALARM SYSTEM HAS BEEN COMMISSIONED AND CERTIFIED IT SHALL BE FULLY DEMONSTRATED BY THIS CONTRACTOR TO THE AUTHORITIES HAVING JURISDICTION.

EMBE CONSULTING ENGINEERS SHALL PERFORM THE INTEGRATED SYSTEM TESTING FOR LIFE SAFETY ITEMS DURING FINAL INSPECTION/FIRE ALARM VERIFICATION. CONTRACTOR MUST PROVIDE COMPLETED CHECK LIST PRIOR TO FINAL INSPECTION.

CONTRACTOR TO INCLUDE A COST OF \$750 INCLUDING TRAVEL EXPENSE IN THE TOTAL TENDER PRICE. TO BE PAID TO EMBE CONSULTING TO PERFORM INTEGRATED SYSTEM TESTING FOR LIFE SAFETY ITEMS IF FIRE ALARM VERIFICATION WAS PERFORMED BY THIRD PARTY.



05/10/2021
Permit: P11984

CLIENT

STEVEN HO
ARCHITECTURE INC.

PROJECT

SSCA BUILDING
ADDITION
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

TITLE

ELECTRICAL
SPECIFICATIONS

PROJECT NUMBER DRAWING NUMBER

21068

DRAWN/CHECKED

GS / TO **E401**

SILVER SPRINGS COMMUNITY CENTRE ADDITION

5720 SILVER RIDGE DRIVE NW, CALGARY, ALBERTA

ISSUED FOR BUILDING PERMIT
21/05/10

EMBE CONSULTING ENGINEERS

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WORKS

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PLUMBING LEGEND	
S	SANITARY BELOW
S	SANITARY ABOVE
EX-SAN	EXISTING SANITARY
V	SANITARY VENT
ST	STORM BELOW
ST	STORM ABOVE
WT	WEEPING TILE
CDP	CONDENSATE PIPE
GS	GREASE SANITARY
G	GAS LINE
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER - 140°F
DHW RECIRC	DOMESTIC HOT WATER RECIRC
EDCW	EXISTING DOMESTIC COLD WATER
R	RADON EXHAUST LINE
CA	COMPRESSED AIR
VACUUM	VACUUM LINE
FOV	FILTERED COLD WATER
HS	HEATING SUPPLY LINE
HR	HEATING RETURN LINE
CWS	CHILLED WATER SUPPLY LINE
CWR	CHILLED WATER RETURN LINE
CO	CLEAN OUT BELOW/ABOVE GRADE
PB	PIPE BREAK
FD	FLOOR DRAIN
HD	HUB DRAIN
FDD	FUNNEL FLOOR DRAIN
AD	AREA DRAIN
PD	PLANTER DRAIN
RD	ROOF DRAIN
SOV	SHUT OFF VALVE
GBV	GLOBE/BALANCING VALVE
CV	CONTROL VALVE
STR	STRAINER
RV	RELIEF VALVE
SV	SOLENOID VALVE
BPV	BACKFLOW PREVENTOR
CV	CHECK VALVE
HB	HOSE BIBB
HB	HOSE BIBB
TSV	THERMOSTATIC VALVE
P	PUMP
DT	DRAIN TRAP / P-TRAP
LB	LAUNDRY BOX
PRV	PRESSURE REDUCING VALVE
GC	GAS COCK
G	GAS METER
W	WATER METER
CWS	COLD WATER C/W STOPS
HWS	HOT WATER C/W STOPS
DF	DIRECTION OF FLOW
PR	PIPE RISE
PD	PIPE DROP
PTD	PIPE TEE DOWN
PTU	PIPE TEE UP

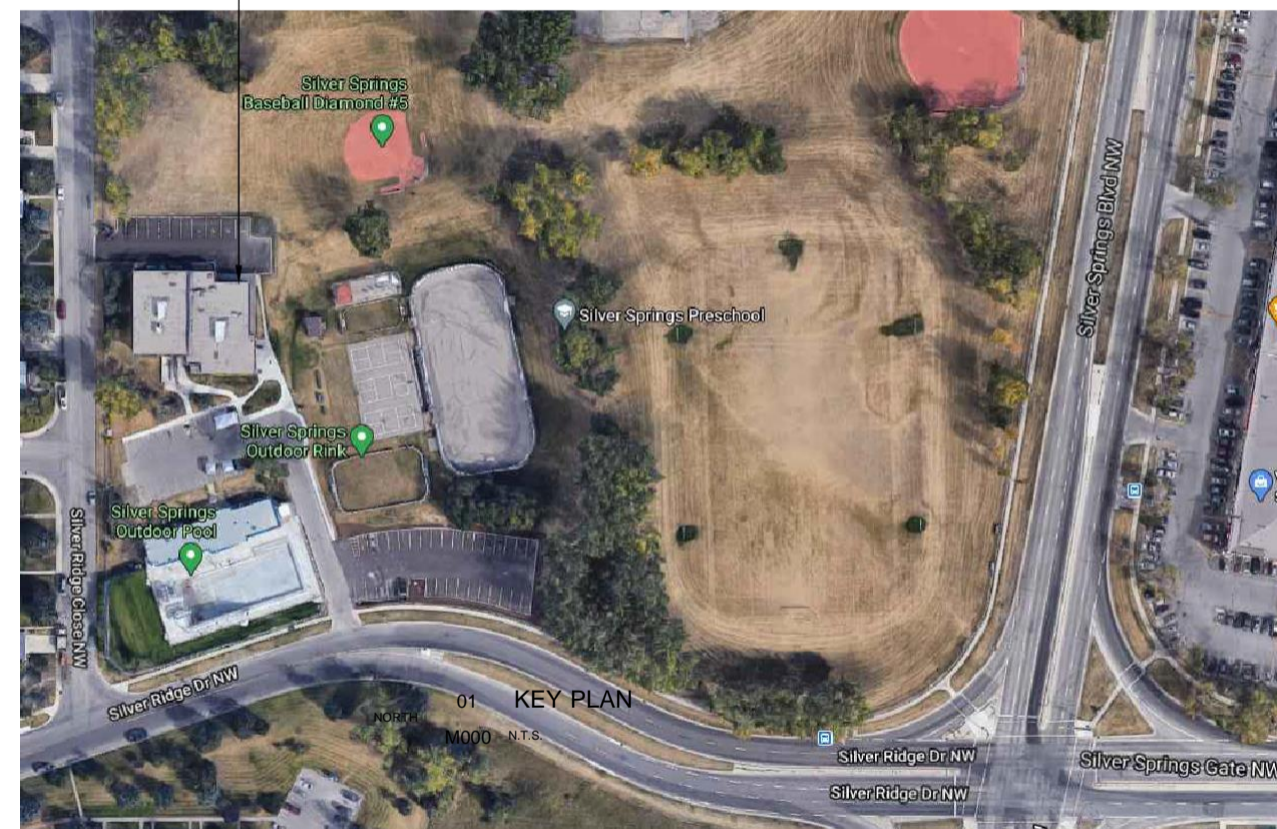
H.V.A.C. LEGEND	
SAD	SUPPLY AIR DUCT
RAD	RETURN AIR DUCT
EAD	EXHAUST AIR DUCT
FAD	FRESH AIR DUCT
SAD	SUPPLY AIR DIFFUSER
RAD	ROUND S/A DIFFUSER
SAG	SUPPLY AIR GRILLE
MAD	MAKE-UP AIR DIFFUSER
LD	LINEAR DIFFUSER
DG	DOOR GRILLE
RAG	RETURN AIR GRILLE
SWSG	SIDE WALL SUPPLY GRILLE
SWSRG	SIDE WALL RETURN GRILLE
L	LOUVER
EH	EXHAUST HOOD
FD	FLEX DUCT
EG	EXHAUST GRILLE
DB	DUCT BREAK
BD	BALANCING DAMPER
CD	BACKDRAFT DAMPER
MD	MOTORIZED DAMPER
FD	FIRE DAMPER
ODD	OPPOSED BLADE DAMPER
T	THERMOSTAT
R	REMOTE SENSOR
C	CONTROLLER
ADA	AIR DIRECTION ARROW
DUC	DOOR UNDERCUT (1" DEPTH)
DF	DIRECTION OF FLOW
CS	CARBON MONOXIDE SENSOR
CD	CARBON DIOXIDE DETECTOR
EF	EXHAUST FAN
SWSEF	SIDE WALL EXHAUST FAN
IH	INFRARED HEATER
FFH	FORCE FLOW HEATER
BBH	BASE BOARD HEATER
ND	NEW DUCT
ALD	ACOUSTICALLY LINED DUCTWORK
TID	THERMALLY INSULATED DUCTWORK
S/A	EXISTING SUPPLY AIR DUCT
R/A	EXISTING RETURN AIR DUCT
E/A	EXISTING EXHAUST AIR DUCT
F/A	EXISTING FRESH AIR DUCT
D	DEMOLITION
R	RELOCATE

FIRE PROTECTION LEGEND	
SP	SPRINKLER LINE
SP	PENDANT-TYPE SPRINKLER
SP	UP-RIGHT SPRINKLER
SP	DRY-TYPE SPRINKLER
SP	CONCEALED SPRINKLER
SP	SIDE-WALL SPRINKLER
TS	TEST STATION
T	TAMPER SWITCH
FS	FLOW STATION
FDC	FIRE DEPARTMENT CONNECTION
FE	FIRE EXTINGUISHER W/CABINET 5LB REG. 10LB KITCHEN
HC	FIRE HOSE CABINET

ABBREVIATION	
S/A	SUPPLY AIR DUCT
R/A	RETURN AIR DUCT
E/A	EXHAUST AIR DUCT
F/A	FRESH AIR DUCT
O/A	OUTSIDE AIR
BD	BALANCING DAMPER
FD	FIRE DAMPER
CW	COMPLETE WITH
T/A	TO ABOVE
T/B	TO BELOW
FA	FROM ABOVE
FB	FROM BELOW
T.O.S.	TOP OF SLAB
A.F.F.	ABOVE FINISH FLOOR
BOH	BACK OF HOUSE
FOH	FRONT OF HOUSE
DUC	DOOR UNDERCUT
RTU	ROOF TOP UNIT
FCU	FAN COIL UNIT
MUA	MAKE UP AIR UNIT
EF	EXHAUST FAN
FUR	FURNACE UNIT
CU	CONDENSING UNIT
CH	CHILLER UNIT
FF	FORCE FLOW UNIT
BB	BASEBOARD UNIT
IF	INFRARED HEATING UNIT
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DW	DOMESTIC WATER
DCVA	DOUBLE-CHECK VALVE ASSEMBLY
DCBP	DOUBLE-CHECK BACKFLOW PREVENTOR
RECIRC	RECIRCULATION WATER
NFHB	NON FREEZE HOSE BIBB
HB	HOSE BIBB
S	SANITARY LINE
ST	STORM LINE
SV	SANITARY VENT LINE
WS	WASTE STACK
WC	WATER CLOSET
LAV	LAVATORY
BT	BATHTUB
KS	KITCHEN SINK
SH	SHOWER
MS	MOP SINK
UR	URINAL
LB	LAUNDRY BOX
RWL	RAINWATER LEADER
FE	FIRE EXTINGUISHER

MECHANICAL	
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DESIGNER/DRAFTER: PATRICK CHAN E-MAIL: pchan@embeconsulting.ca	
CONSTRUCTION ADMINISTRATION	
MANSIMRAN GILL E-MAIL: mgill@embeconsulting.ca PHONE: 403-460-2277 EXT-243	
PROJECT LOCATION CHAD COATES E-MAIL: ccoates@embeconsulting.ca PHONE: 403-460-2277 EXT-229	

DRAWING LIST	
SHEET NUMBER	SHEET NAME
M000	MECHANICAL COVER PAGE
M101	LOWER FLOOR PLAN - DRAINAGE AND PLUMBING LAYOUT
M102	UPPER FLOOR PLAN - DRAINAGE AND PLUMBING LAYOUT
M201	LOWER FLOOR PLAN - H.V.A.C. LAYOUT
M202	UPPER FLOOR PLAN - H.V.A.C. LAYOUT
M203	ROOF PLAN - MECHANICAL LAYOUT
M301	SCHEDULES AND DETAILS
M401	MECHANICAL SPECIFICATIONS



SSCA BUILDING ADDITION
 5720 SILVER RIDGE DRIVE NW
 CALGARY, ALBERTA

MECHANICAL COVER PAGE

PROJECT NUMBER: 21068
 DRAWING NUMBER: **M000**
 DRAWN/CHECKED: PC / PC

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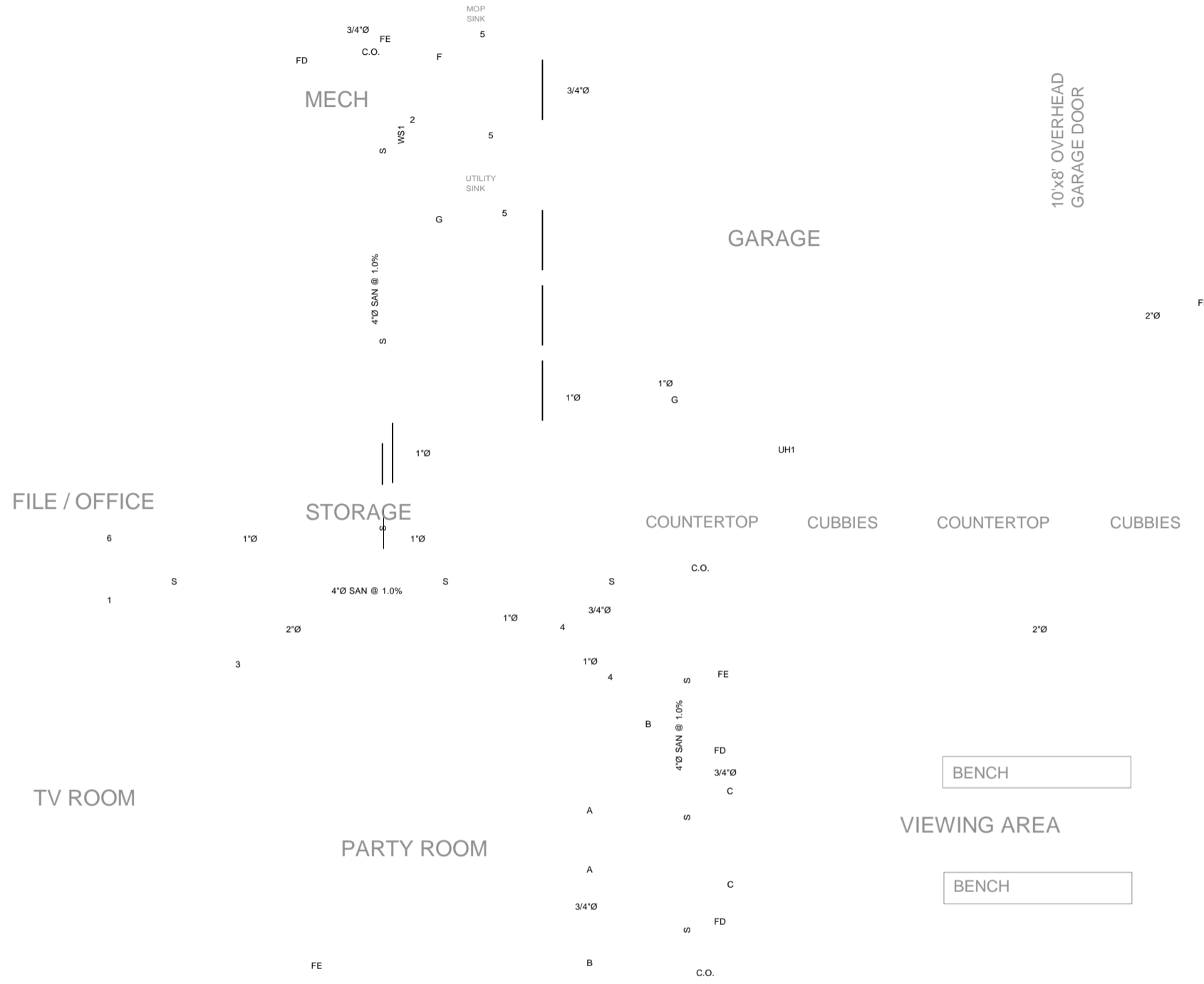
NO.	ISSUED	DATE
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1.	BUILDING PERMIT	21-05-10

GENERAL NOTES:

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- LOCATIONS OF SERVICES ARE APPROXIMATE, VERIFY ON SITE AND WITH CIVIL DRAWINGS.
- WHERE DISCREPANCIES ARE FOUND, CONTACT ENGINEER IN WRITING PRIOR TO SUBMITTING PRICE.
- SANITARY VENTING SIZED PER LOCAL PLUMBING CODES.

DRAINAGE AND PLUMBING NOTES:

- EXTEND NEW 4" SANITARY LINE FROM NEAREST EXISTING BUILDING SANITARY. CONTRACTOR TO INCLUDE A VIDEO CAMERA SURVEY TO DETERMINE THE EXACT LOCATION OF SANITARY SERVICES ON SITE.
- 4" SANITARY LINE DOWN FROM PLUMBING FIXTURES ABOVE. RUN DOWN IN WALL AND UNDER SLAB TO MAIN SANITARY LINE.
- EXISTING 2" WATER LINE TO BE EXTENDED TO NEW 2" HOSE BIB ON EXTERIOR WALL FOR RINK FILL. CONFIRM EXACT LOCATION WITH OWNER AND ARCHITECT PRIOR TO ROUGH-IN.
- EXTEND NEW 1" COLD WATER LINE FROM NEW 2" LINE AND EXTEND OUT TO PLUMBING FIXTURES.
- EXTEND COLD AND HOT WATER LINES UP TO PLUMBING FIXTURES ON UPPER FLOOR THROUGH MAIN FLOOR CEILING.
- EXTEND NEW 1" HOT WATER LINE FROM EXISTING BUILDING. CONFIRM EXACT LOCATION ON SITE.
- PROPOSED NEW LOCATION OF 2" HOSE BIB FOR RINK FILL. CONFIRM FINAL LOCATION AND REQUIREMENTS WITH OWNER AND ARCHITECT PRIOR TO ROUGH-IN AND INSTALLATION.
- EXTEND NEW GAS LINE OUT FROM NEAREST EXISTING TO NEW UNIT HEATER IN GARAGE. CONFIRM EXACT LOCATION ON SITE AND SIZE ACCORDING TO LOCAL CODES.



NORTH 01 LOWER FLOOR PLAN - DRAINAGE AND PLUMBING LAYOUT
M101 SCALE: 1/4" = 1'-0"

05/10/2021
Permit: P11984

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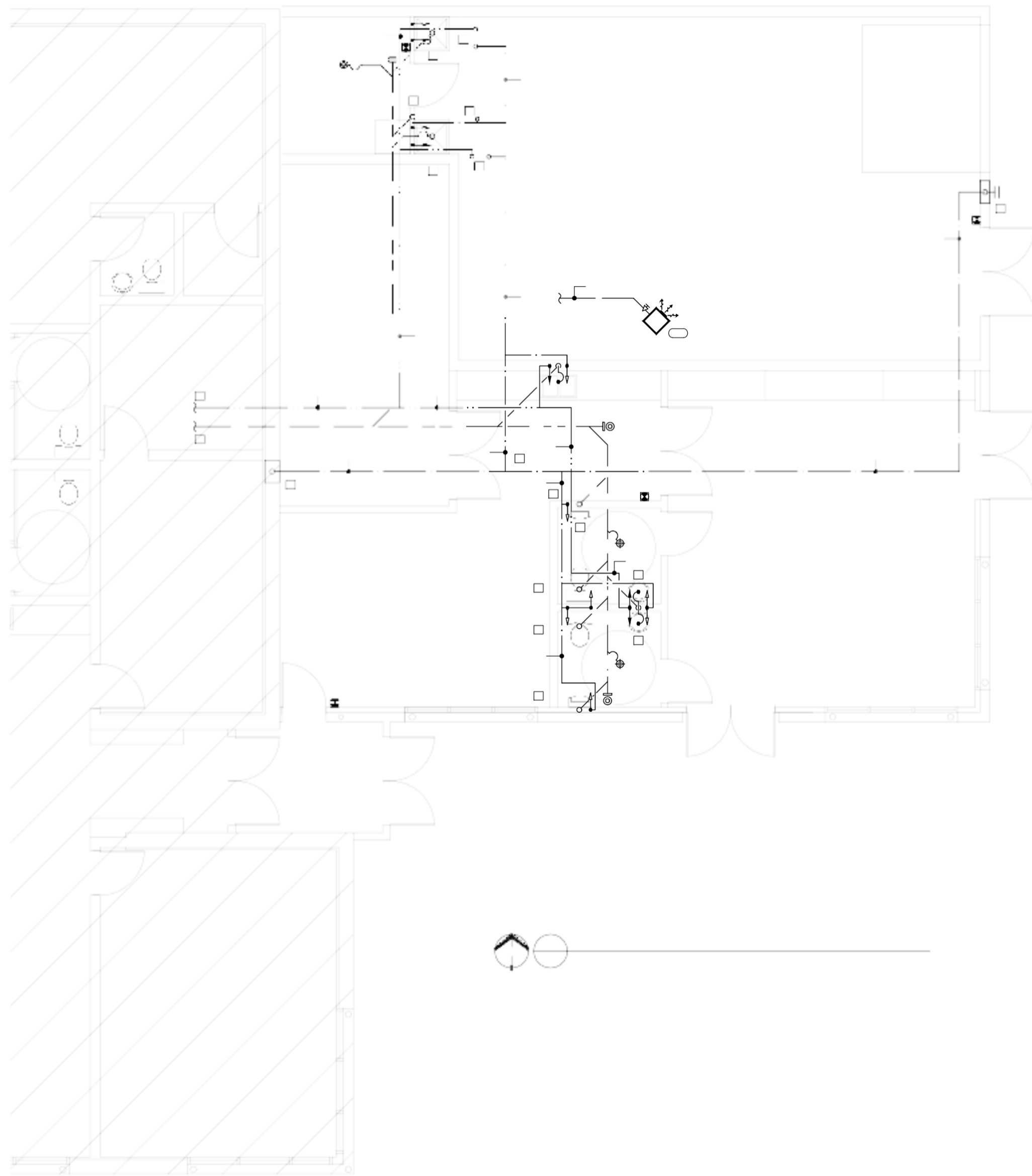
STEVEN HO
ARCHITECTURE INC.

PROJECT

SSCA BUILDING
ADDITION
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

TITLE

LOWER FLOOR PLAN
DRAINAGE AND
PLUMBING LAYOUT
Page 64 of 77



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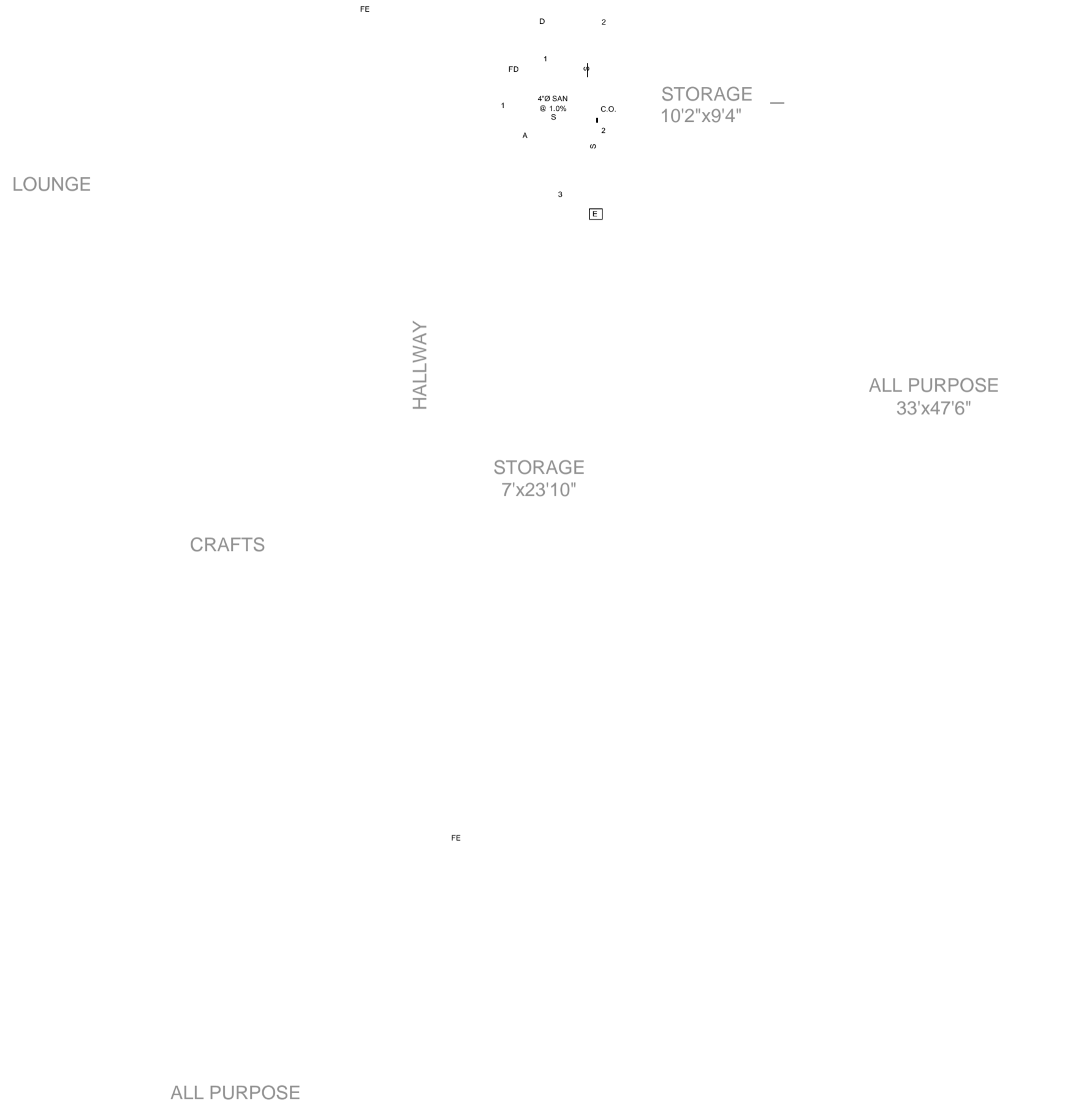
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- SANITARY VENTING SIZED PER LOCAL PLUMBING CODES.
- WS1 = 4"Ø SAN

DRAINAGE AND PLUMBING NOTES:

- UPPER FLOOR PLUMBING FIXTURE DRAINAGE TO RUN IN MAIN FLOOR CEILING BELOW AND OFFSET OVER TO WS1. SEE DRAWING 1M101 FOR CONTINUATION.
- UPPER FLOOR PLUMBING FIXTURE COLD AND HOT WATER LINES TO BE PLUMBED FROM MAIN FLOOR CEILING SPACE BELOW.
- EXTEND COLD WATER LINE AND SANITARY LINE UNDER COUNTER TO SERVICE DISHWASHER.



01 UPPER FLOOR PLAN - DRAINAGE AND PLUMBING LAYOUT
NORTH M102 SCALE: 1/4" = 1'-0"

05/10/2021
Permit: P11984

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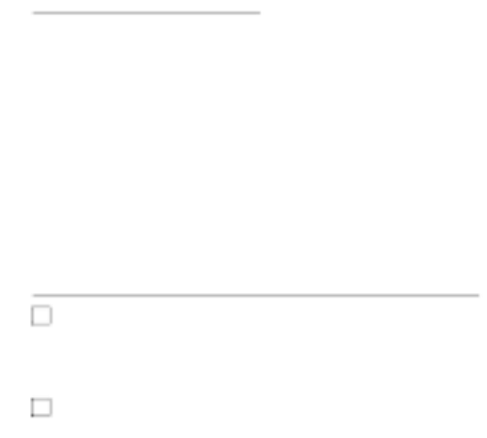
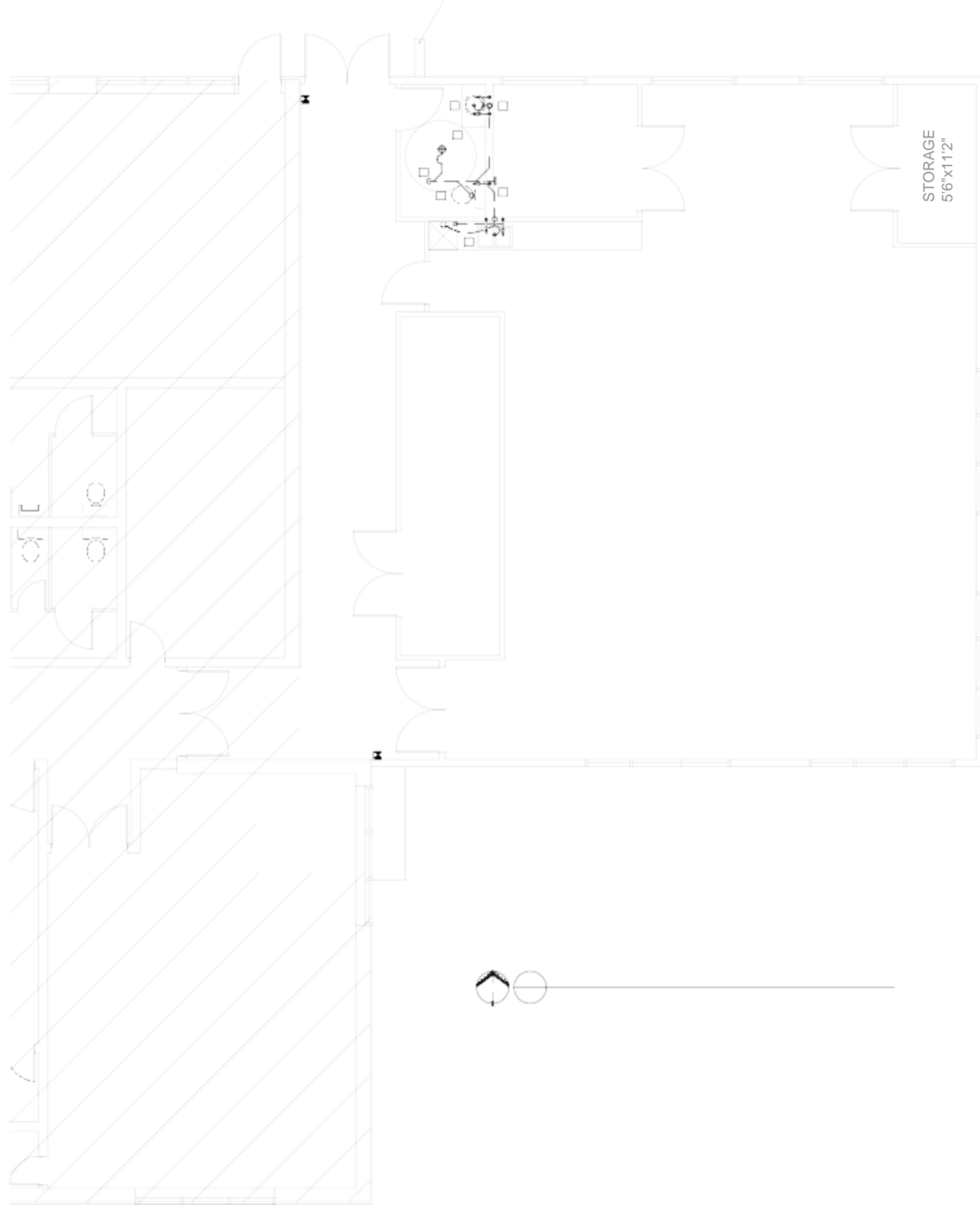
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ADDITION
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

TITLE

UPPER FLOOR PLAN
DRAINAGE AND
PLUMBING LAYOUT



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- WHERE DISCREPANCIES ARE FOUND, CONTACT ENGINEER IN WRITING PRIOR TO SUBMITTING PRICE.
- SANITARY VENTING SIZED PER LOCAL PLUMBING CODES.
- ALL BRANCH DUCTWORK TO HAVE BALANCING DAMPERS.
- RUN ALL DUCTWORK AT HIGHEST LEVEL POSSIBLE - WHERE JOIST SPACING AND WEBBING ALLOWS DUCTWORK TO BE RUN IN JOIST SPACE.

H.V.A.C. NOTES:

- EXISTING LOUVER TO BE RELOCATED TO NEW EXTERNAL WALL.
- NEW 18"x16" SUPPLY AIR AND RETURN AIR DUCTS FROM RTU1 (4 TON) DOWN THROUGH FIRE-RATED ENCLOSURE FROM ABOVE.
- PROVIDE ACOUSTICALLY-LINED RETURN AIR ELBOW.
- EXTEND 4"Ø FRESH AIR DUCT AND EXHAUST AIR DUCT UP AND OUT THROUGH SHAFT TO ROOF. PROVIDE FIRE DAMPERS AT ALL FLOOR PENETRATIONS.
- EXTEND 18.5"x4.5" EXHAUST DUCT UP FROM EXHAUST FAN UP THROUGH SHAFT AND OUT THROUGH ROOF. PROVIDE FIRE DAMPERS AT ALL FLOOR PENETRATIONS.
- EXTEND 12"Ø FRESH AIR DUCT FROM EXTERIOR SIDE WALL TO MINI MUA.
- EXTEND 5"Ø FLUE VENT OUT THROUGH SIDE WALL. ENSURE TEN FEET CLEARANCES FROM ALL FRESH AIR INTAKES. C/W BIRDSCREEN.
- PROVIDE THERMOSTAT FOR UNIT HEATER. CONFIRM EXACT MOUNTING LOCATION WITH OWNER.
- PROVIDE THERMOSTAT FOR RTU. CONFIRM EXACT MOUNTING LOCATION WITH OWNER.
- PROVIDE 16KW DUCT HEATER FOR MUA1 DUCT.



NORTH 01 LOWER FLOOR PLAN - H.V.A.C. LAYOUT
M201 SCALE: 1/4" = 1'-0"

05/10/2021
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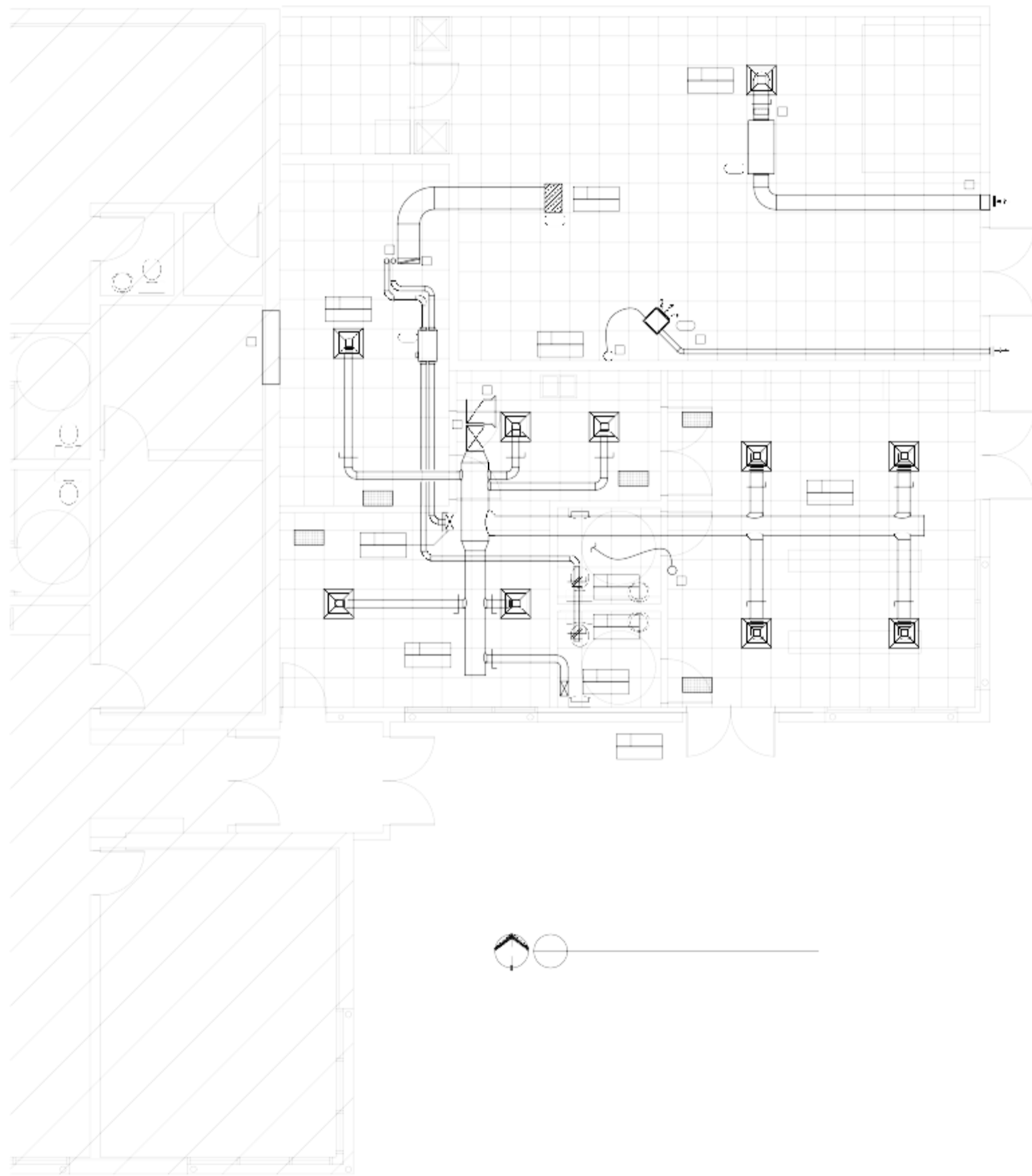
STEVEN HO ARCHITECTURE INC.

PROJECT

SSCA BUILDING ADDITION
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

TITLE

LOWER FLOOR PLAN H.V.A.C. LAYOUT



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- SANITARY VENTING SIZED PER LOCAL PLUMBING CODES.
- ALL BRANCH DUCTWORK TO HAVE BALANCING DAMPERS.
- RUN ALL DUCTWORK AT HIGHEST LEVEL POSSIBLE - WHERE JOIST SPACING AND WEBBING ALLOWS DUCTWORK TO BE RUN IN JOIST SPACE.

H.V.A.C. NOTES:

- NEW SUPPLY AIR AND RETURN AIR DUCTS FROM RTU2 (7.5 TON).
- PROVIDE ACOUSTICALLY-LINED RETURN AIR ELBOW.
- NEW 20"x14" SUPPLY AIR AND RETURN AIR DUCTS DOWN FROM RTU1 AND DOWN THROUGH FIRE-RATED ENCLOSURE TO MAIN FLOOR CEILING.
- 4"Ø FRESH AIR DUCT UP FROM BELOW THROUGH SHAFT AND OFFSET OVER TO RISE UP THROUGH ROOF. OFFSET TO ENSURE CLEARANCES ON ROOF ARE MET. (10' CLEAR FROM ALL EXHAUST), CW FIRE DAMPER AT WALL AND FLOOR PENETRATIONS.
- 4"Ø EXHAUST DUCT UP FROM BELOW AND OUT THROUGH ROOF ABOVE. CW FIRE DAMPERS AT FLOOR PENETRATIONS.
- 18.5"x4.5" EXHAUST AIR DUCT FROM BELOW THROUGH SHAFT AND UP AND OUT THROUGH ROOF. CW FIRE DAMPER AT ALL FLOOR PENETRATIONS.
- OFFSET 4"Ø FRESH AIR DUCT OVER AND OUT TO ENSURE CLEARANCES ON ROOF ARE MET. (10' CLEAR FROM ALL EXHAUSTS)
- EXTEND 4"Ø EXHAUST AIR DUCT FROM HRV AND OUT THROUGH ROOF.
- EXTEND 4"Ø FRESH AIR DUCT UP THROUGH ROOF ABOVE.
- NEW CEILING FAN. SUPPLIED AND INSTALLED BY ELECTRICAL.
- PROVIDE THERMOSTAT FOR RTU. CONFIRM EXACT MOUNTING LOCATION WITH OWNER.



01 UPPER FLOOR PLAN - H.V.A.C. LAYOUT
NORTH M202 SCALE: 1/4" = 1'-0"

CLIENT

05/10/2021
Permit: P11984

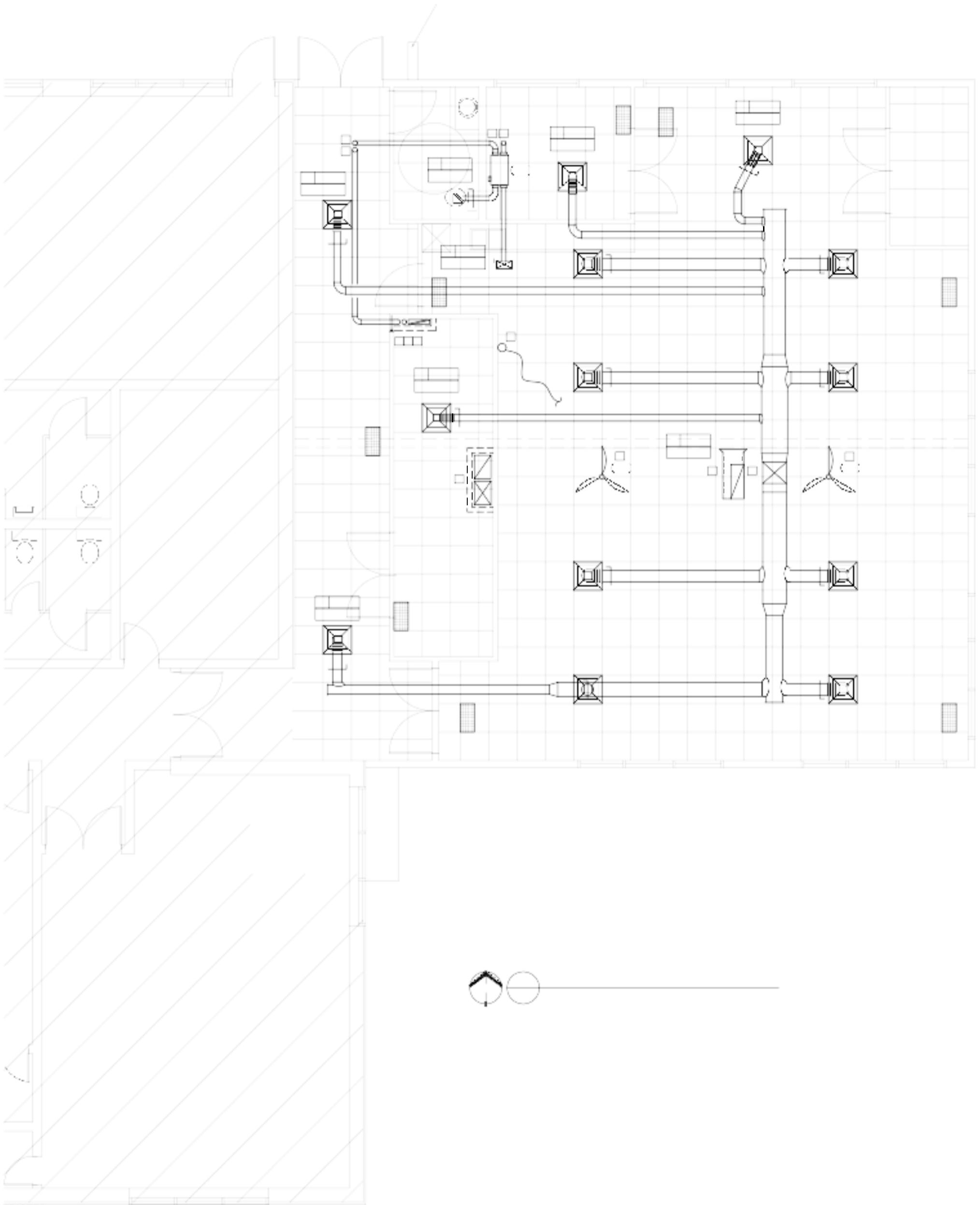
STEVEN HO
ARCHITECTURE INC.

PROJECT

SSCA BUILDING
ADDITION
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

TITLE

UPPER FLOOR PLAN
H.V.A.C. LAYOUT



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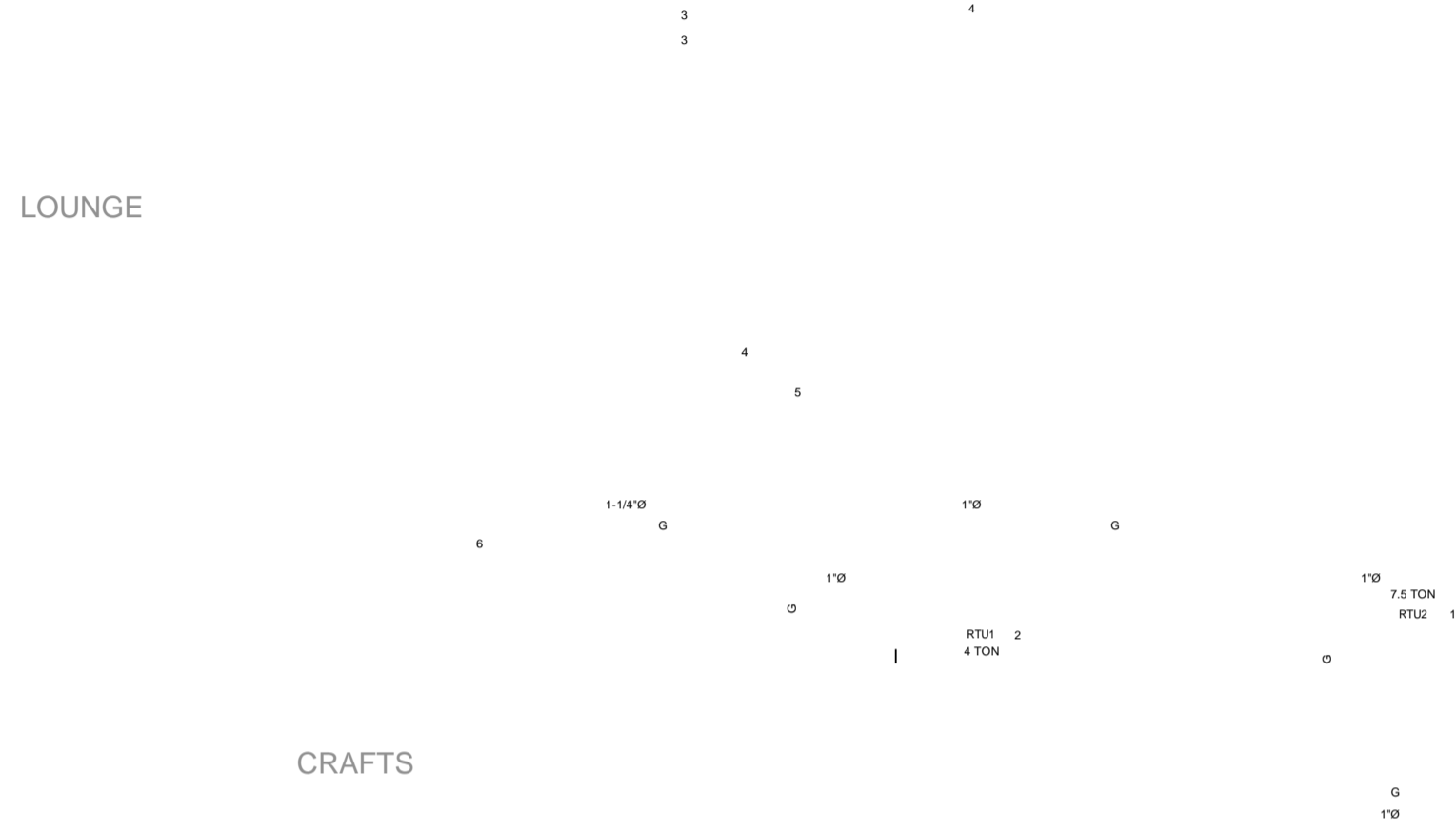
NO.	ISSUED	DATE
1.	95% REVIEW	21-04-27
1.	BUILDING PERMIT	21-05-10

GENERAL NOTES:

1. BIDDING CONTRACTORS ARE TO REVIEW ALL ARCHITECTURAL, MECHANICAL, ELECTRICAL, CIVIL AND STRUCTURAL DRAWINGS PRIOR TO SUBMITTING TENDER PRICE.
2. LOCATIONS OF SERVICES ARE APPROXIMATE. VERIFY ON SITE AND WITH CIVIL DRAWINGS.
3. WHERE DISCREPANCIES ARE FOUND, CONTACT ENGINEER IN WRITING PRIOR TO SUBMITTING PRICE.
4. SANITARY VENTING SIZED PER LOCAL PLUMBING CODES.
5. ALL BRANCH DUCTWORK TO HAVE BALANCING DAMPERS.
6. RUN ALL DUCTWORK AT HIGHEST LEVEL POSSIBLE - WHERE JOIST SPACING AND WEBBING ALLOWS DUCTWORK TO BE RUN IN JOIST SPACE.

H.V.A.C. NOTES:

1. NEW 7.5 TON RTU ON ROOF TO SUPPLY UPPER FLOOR. ENSURE 10 FOOT CLEARANCES FROM ANY EXHAUST DUCTS.
2. NEW 4 TON RTU ON ROOF TO SUPPLY MAIN FLOOR. DUCTS TO BE EXTENDED DOWN THROUGH FIRE-RATED ENCLOSURE TO MAIN FLOOR CEILING. ENSURE 10 FOOT CLEARANCES FROM ANY EXHAUST DUCTS.
3. 4"Ø FRESH AIR DUCTS UP FROM BELOW. C/W BIRDSCREEN. ENSURE 10 FEET CLEARANCES FROM ALL EXHAUSTS.
4. 4"Ø EXHAUST AIR DUCTS UP FROM BELOW. C/W BIRDSCREEN. ENSURE 10 FEET CLEARANCES FROM ALL FRESH AIR INTAKES.
5. 18.5"x4.5" EXHAUST AIR DUCT UP FROM BELOW. C/W GOOSENECK AND BACKDRAFT DAMPER. ENSURE 10' CLEARANCES FROM ALL FRESH AIR INTAKES.
6. EXTEND GAS LINE OVER FROM EXISTING LINE ON EXISTING ROOF. CONFIRM EXACT LOCATION ON SITE AND SIZE ACCORDING TO LOCAL CODES.



ALL PURPOSE

01 ROOF PLAN - MECHANICAL LAYOUT
NORTH M203 SCALE: 1/4" = 1'-0"

05/10/2021
Permit: P11984

CLIENT

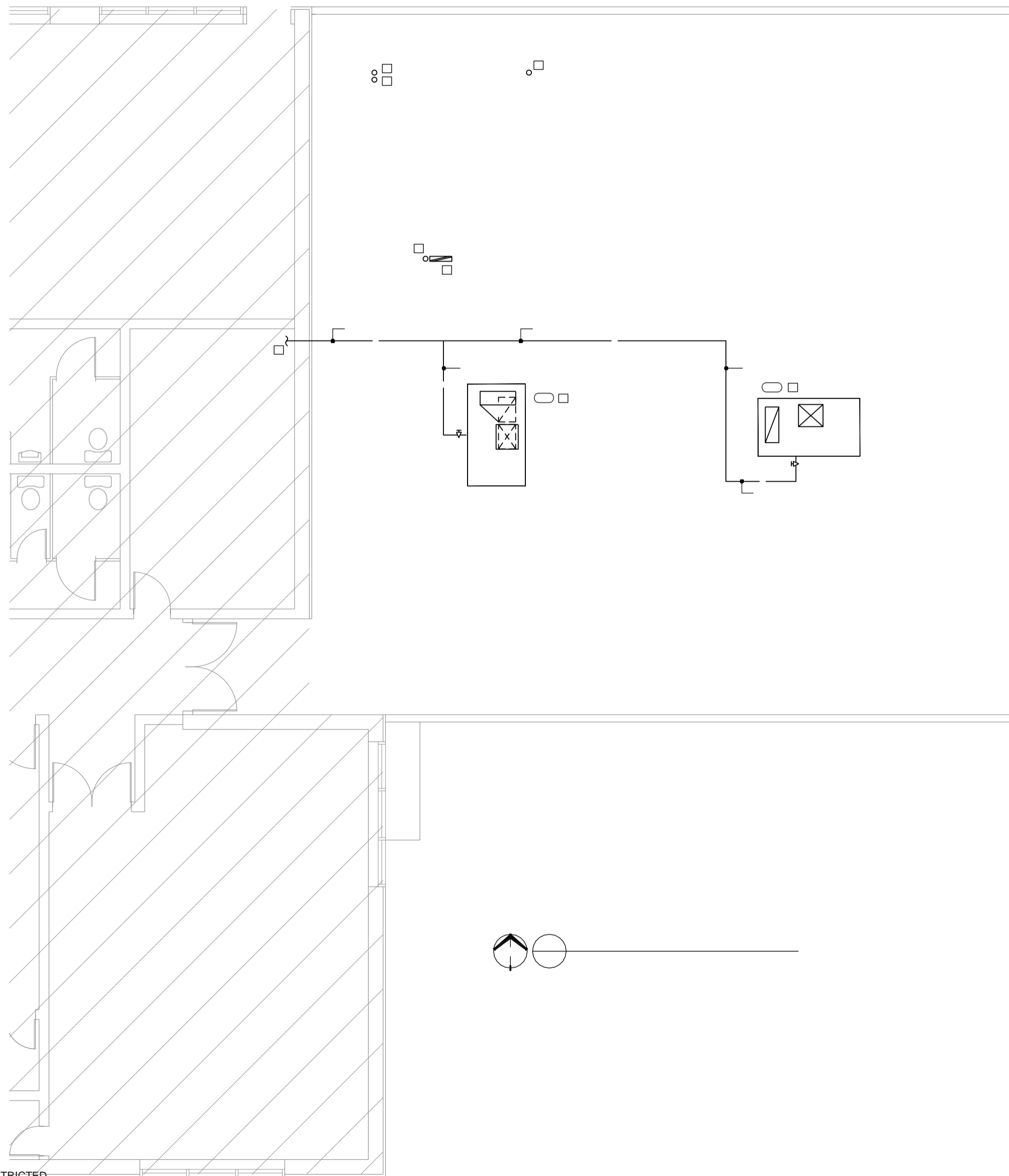
STEVEN HO
ARCHITECTURE INC.

PROJECT

SSCA BUILDING
ADDITION
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

TITLE

ROOF PLAN
MECHANICAL LAYOUT



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-
-
-
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-





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WORKS

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GAS COMPANY INFORMATION	
EXTEND NEW GAS LINE FROM NEAREST EXISTING LINE.	
GAS PIPING SIZED BASE ON LENGTH OF PIPE APPROXIMATELY 300 FEET FROM GAS METER TO TENANT GAS EQUIPMENT AND FOR PRESSURES OF 7 IN W.C. TO 14 IN W.C. BASE ON A PRESSURE DROP OF 1 IN W.C.	
RTU1	150 CFH
RTU2	150 CFH
UNIT HEATER	150 CFH
TOTAL GAS LOAD	450 CFH
	450,000 BTUH

ENERGY RECOVERY VENTILATOR SCHEDULE							
TAG	LOCATION / SERVICE	MAKE	MODEL	AIRFLOW	MINIMUM PERFORMANCE	ELECTRICAL (V/PH/Hz)	REMARKS
ERV1	WASHROOM/CEILING	JCI	JCH-ERV-DS (LOW PROFILE)	60 CFM	60% ENTHALPHY EFFICIANCY	120/1/60	INSTALLED IN ACCORDANCE W/ MANUFACTURER'S RECOMMENDATIONS. DRAIN TO NEAREST DRAIN. PROVIDE CONDENSATE PUMP AS REQUIRED. ERV TO RUN CONTINUOUSLY SET AT MEDIUM SPEED FOR 60 CFM.

MINI MAKE-UP AIR SCHEDULE							
TAG	LOCATION/SERVE	MAKE	MODEL	AIRFLOW	ELECTRICAL (V/PH/Hz)	REMARKS	
MUA1	GARAGE/TRACTOR AREA	THERMOLEC	MINI MUA FER-12-20-208/3	600 CFM	208/3/60 16 KW	ELECTRIC MAKE-UP AIR UNIT C/W INTEGRAL CONTROL. INTERLOCK WITH EXHAUST FAN EF1. SET DISCHARGE AIR TEMPERATURE TO 19°C. INSTALL AS PER MANUFACTURER INSTRUCTIONS.	

UNIT HEATER SCHEDULE								
TAG	LOCATION	MAKE	MODEL	HEATING CAPACITY (INPUT / OUTPUT)	WEIGHT	FLUE SIZE	ELECTRICAL (V/PH/Hz)	REMARKS
UH1	GARAGE	REZNOR	UDAP-150	150MBH / 124 MBH	172 LBS	5"Ø	120/1/60, 3.8A	UNIT HEATER TO BE CONTROLLED BY WALL-MOUNTED THERMOSTAT

FAN SCHEDULE							
TAG	LOCATION/SERVE	MAKE	MODEL	AIRFLOW	E.S.P.	ELECTRICAL (V/PH/Hz)	REMARKS
EF1	GARAGE	BROAN	L700	650	0.25"	120/1/60 2.9A, 313W	INTERLOCK EXHAUST FAN TO LIGHT SWITCH

CEILING FAN SCHEDULE							
TAG	LOCATION	MAKE	MODEL	DIAMETER	ELECTRICAL	REMARKS	
CF1,CF2	UPPER FLOOR ALL-PURPOSE ROOM	CANARM	OCEAN BREEZE BPT	42"Ø	120/1/60 FHP	C/W 60W LIGHT, REMOTE CONTROL	

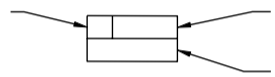
ROOF TOP UNIT SCHEDULE															
TAG NO.	LOCATION / SERVES	MANUFACTURER	MODEL	NOMINAL COOLING CAPACITY	ARI SEER / EER	HEATING CAPACITY		BLOWER DATA			ELECTRICAL DATA			WEIGHT	ACCESSORIES
						INPUT	OUTPUT	SUPPLY	ESP (Pa)	O/A%	MCA (A)	MOCP (A)	VOLT/PH/Hz		
RTU1	ROOF	LENNOX / ALLIED	KGB048S4B	4 TON	SEER 14.0 / EER 12.3	44 KW (150 MBH)	35 KW (120 MBH)	755 L/s (1,600 CFM)	250 Pa (1.0")	15%	21A	30A	208/3/60	352 KG	SEE NOTES: 1,2,3,4,5,6,7,8,9,10,11
RTU2	ROOF	LENNOX / ALLIED	KGB092S4M	7.5 TON	IEER 13.0 / EER 11.0	53 KW (180 MBH)	42 KW (144 MBH)	1,415 L/s (3,000 CFM)	250 Pa (1.0")	15%	45A	70A	208/3/60	489 KG (1,075 LBS)	SEE NOTES: 1,2,3,4,5,6,7,8,9,10,11

NOTES:

- BELT DRIVE, BOTTOM DISCHARGE
- PROVIDE 14" ROOF CURB, NON-FUSED DISCONNECT SWITCH
- PROVIDE HAIL GUARDS
- PROVIDE TEMPERATURE ECONOMIZER, BAROMETRIC RELIEF DAMPER AND WEATHER HOOD
- COMMERCIAL PROGRAMMABLE THERMOSTAT, 2-STAGE HEATING, 1-STAGE COOLING, 7-DAY PROGRAMMABLE COMFORTSENSE 7500, LOCATE THERMOSTAT AS SHOWN ON FLOOR PLAN
- PROVIDE 2-STAGE HEATING FOR 3 TON & GREATER. PROVIDE 2-STAGE COOLING FOR 7.5 TON & GREATER.
- PROVIDE CONVENIENCE OUTLET
- PROVIDE MERV 8 FILTER
- HIGH STATIC FAN. PROVIDE MULTI-SPEED FAN FOR 7.5 TON & GREATER.
- HIGH STATIC FAN. PROVIDE MULTI-SPEED FAN FOR 7.5 TON & GREATER.
- POWER EXHAUST, CONTROLLED BY INTEGRAL UNIT CONTROLLER.
- HORIZONTAL SUPPLY & RETURN.
- PROVIDE SMOKE DETECTOR IN RETURN DUCT OF RTU'S SERVING MULTIPLE FLOORS TO SHUTDOWN UNIT IF SMOKE IS DETECTED.
- PROVIDE ITEMIZED PRICE FOR RTU SCREENING, ENVISOR BY CITYSCAPES INC., VERTICAL SYSTEM WITH LOUVERED PANELS, NO TOP TRIM, TUFCOAT 4550 ABS PANEL COATING. CONFIRM STYLE & COLOR WITH ARCHITECT.
- STAINLESS STEEL HEAT EXCHANGER.
- PROVIDE CO2 SENSOR IN RETURN DUCT, INTEGRAL UNIT CONTROLLER TO CONTROL O/A DAMPER POSITION. MODULATE TO 10% MINIMUM.
- COMMUNICATE WITH BMS VIA BACNET, COORDINATE WITH CONTROLS CONTRACTOR & BUILDING OPERATOR.

PLUMBING FIXTURE SCHEDULE											
TAG NO.	FIXTURE	MANUFACTURER	CAT. #	MODEL	ACCESSORIES	TRIM/SUPPLIES	TRAP	DRAIN	VENT	C.W.	H.W.
A	WATER CLOSET ADA COMPLIANT	AMERICAN STANDARD	2467 100	CADET FLOWISE RIGHT HEIGHT ELONGATED PRESSURE-ASSISTED 4.2L TOILET	WHITE WITH SEAT AND COVER, BOLTS, NUTS AND CAPS.	OFFSET FLUSH, FLEXIBLE C/W STOPS ON SUPPLIES	INTEGRAL	4"	1-1/2"	1/2"	-
B	URINAL	TBD	TBD	TBD	TBD	TBD	INTEGRAL	1-1/2"	1-1/2"	1/2"	-
C	WALL-HUNG LAVATORY BASIN	AMERICAN STANDARD	0955 000 WHITE	MURRO	KNEE GUARD 0059 020, STOPS ON SUPPLIES	SLOAN ETF-80 C/W 4" TRIM PLATE, HARDWIRED TRANSFORMER AND MIXING VALVE, CONTROL MODULE. ENSURE CONTROL IS INSTALLED RECESSED.	P-TRAP	1-1/2"	1-1/4"	1/2"	1/2"
D	LAVATORY BASIN	TBD	TBD	TBD	TBD	TBD	P-TRAP	1-1/2"	1-1/4"	1/2"	1/2"
E	KITCHEN SINK	TBD	TBD	TBD	TBD	TBD	P-TRAP	1-1/2"	1-1/4"	1/2"	1/2"
F	JANITOR'S SINK	FIAT	MSB2424	MOLDED STONE MOP SERVICE STATION	STAINLESS STEEL DRAIN, STAINLESS STEEL BUMPER GUARDS	CRANE 830AA WALL-MOUNT C/W PAIL HOOK, VACUUM BKR, HOSE CONNECTION, 5' HOSE	P-TRAP	3"	1-1/2"	1/2"	1/2"
G	UTILITY SINK	TBD	TBD	TBD	TBD	TBD	P-TRAP	3"	1-1/2"	1/2"	1/2"

CONFIRM ALL PLUMBING FIXTURES WITH OWNER



GRILLE, DIFFUSER & LOUVRE SCHEDULE				
TAG	SERVICE	MANUFACTURER	CATALOG NUMBER	REMARKS
S1	SUPPLY/TRANSFER	EH PRICE	SPD/31/B12	DOUBLE DEFLECTION GRILLE, FLAT BORDER, COUNTERSUNK (FINISH:WHITE)
S2	SUPPLY	EH PRICE	520/FL/A/B12	DOUBLE DEFLECTION GRILLE, FLAT BORDER, COUNTERSUNK (FINISH:WHITE)
S3	MAKE-UP AIR	EH PRICE	920/L/A/B12	DOUBLE DEFLECTION (STEEL STAINLESS)
R1	RETURN/EXHAUST	EH PRICE	80/F/A/B12	EGG CRATE GRILLE (FINISH: WHITE)

NECK SIZE OR GRILLE SIZE AIR FLOW (CFM)
R1 24"x24"

PROVIDE DAMPERS FOR EXHAUST GRILLES
PROVIDE MOUNTING KITS FOR T-BAR AND DRYWALL WHERE REQUIRED
CONFIRM WITH ARCHITECT

NOTES:

- SUSPEND CEILING DIFFUSER FROM STRUCTURAL SUPPORTING MEMBER WITH 12 GA GALVANIZED STEEL PIPE DIAGONALLY OPPOSED AT 45°. (TYP. OF 2) AS REQUIRED FOR SEISMIC CONSTRAINT.
- STEEL CLIP SECURE TO STRUCTURE. CONFIRM WITH ENGINEER.
- MECHANICAL CLAMP FASTENER (STAINLESS STEEL GEAR CLAMP).
- RIGID DUCTWORK. SEE SPECIFICATIONS FOR SUPPORT DETAILS
- BALANCING DAMPER WHEN SPEC'D
- METAL FLEXIBLE DUCTWORK C/W 1" [25MM] THICK THERMAL INSULATION W/ JACKET
- ATTACH SUSPENSION WIRE TO DIFFUSER SEISMIC TAB SUPPORTS INTEGRAL TO DIFFUSER
- SUSPENDED CEILING CEILING DIFFUSER AS SPECIFIED

01 CEILING DIFFUSER SUSPENSION
M301 NTS

ACOUSTIC TRANSFER AIR ELBOW. PROVIDE MINIMUM OF TWO 90° TURN. REFER TO FLOOR PLAN FOR SIZE.

1" THICK ACOUSTIC LINER INSIDE DUCTWORK

WIRE MESH

02 ACOUSTIC ELBOW DETAIL
M301 NTS

CEILING TYPE AS PER ARCHITECTURAL DRAWINGS



SSCA BUILDING ADDITION
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

SCHEDULES AND DETAILS

PROJECT NUMBER: 21068
DRAWING NUMBER: M301



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MECHANICAL SPECIFICATION

1. SITE CONDITIONS
 - .1 BEFORE TENDERING:
 - .1 EXAMINE SITE AND OBTAIN ALL CONDITIONS AFFECTING THE WORK OF THIS DIVISION.
 - .2 OBTAIN ALL ADDENDA AND CLARIFICATIONS.
 - .3 EXAMINE ALL DRAWINGS, ARCHITECTURAL, STRUCTURAL AND ELECTRICAL AND REPORT ANY DISCREPANCIES AT ONCE AND IN TIME FOR VERIFICATION AND CORRECTION OF DRAWINGS AND SPECIFICATIONS.
2. SCOPE
 - .1 PROVIDE ALL LABOUR, MATERIALS, EQUIPMENT, SERVICES TO COMPLETE THE WORK OF THE MECHANICAL DIVISION AS SPECIFIED HERE-IN AND AS SHOWN ON THE DRAWINGS.
 - .2 COMMISSION ALL SYSTEMS, ADJUST AND BALANCE THE SYSTEMS TO MAKE FULLY OPERATIONAL PRIOR TO TURN OVER TO THE OWNER.
 - .3 AT TURN OVER TO THE OWNER, DEMONSTRATE THE SYSTEMS AND THEIR OPERATION TO THE OWNERS OPERATING PERSONNEL. PROVIDE DETAILED INSTRUCTIONS COMPLETE WITH MANUALS, WRITTEN DESCRIPTIONS AND SEMINARS.
 - .4 OBTAIN WRITTEN ACCEPTANCE FROM THE OWNER THAT THE OWNERS OPERATING PERSONNEL ARE FULLY CONVERSANT WITH ALL SYSTEMS.
3. INTENT OF THE DRAWINGS AND SPECIFICATIONS
 - .1 INFORMATION REQUIRED IN LAYING OUT THE WORK SHALL BE OBTAINED BY REFERENCE TO ALL CONTRACT DOCUMENTS. CHANGES REQUIRED TO ACCOMMODATE ALL ASPECTS OF THE PROJECT SHALL NOT BE MADE WITHOUT PRIOR APPROVAL.
 - .2 DRAWINGS SHOW THE GENERAL LOCATION AND ROUTE OF EQUIPMENT, PIPING, DUCTWORK, ETC., BUT MAY NOT SHOW ALL NECESSARY OFF-SETS. IT IS THE INTENT, HOWEVER, THAT THE INSTALLATION BE NEAT, STRAIGHT, ETC., MAKING BEST USE OF THE SPACE, CONSERVING HEADROOM AND PROVIDING SPACE FOR FURRING.
 - .3 INSTALLATION SHALL BE COORDINATED WITH ALL TRADES TO PREVENT INTERFERENCE. WITH PRIOR APPROVAL LOCATIONS AND ROUTES OF SERVICES MAY BE CHANGED PROVIDING THE DESIGN CONDITIONS ARE NOT CHANGED AND NO EXTRA COST IS INVOLVED.
4. CONFIRMATION OF INSTALLATION
 - .1 CONTRACTOR SHALL PROVIDE WRITTEN CONFIRMATION TO THE DESIGN ENGINEER OF THE FOLLOWING:
 - A) THE DATE OF PROPOSED CONSTRUCTION START FOR INSTALLATION OF MECHANICAL SYSTEMS.
 - B) THE DATE OF UNDERGROUND PIPING COMPLETION PRIOR TO BACKFILLING. NOTIFY THE ENGINEER 48 HOURS PRIOR TO COMPLETION AND ARRANGE FOR A REVIEW OF THE INSTALLATION PRIOR TO COVERING.
 - C) THE DATE OF COMPLETION OF PLUMBING AND SHEET METAL ROUGH-IN. NOTIFY THE ENGINEER 48 HOURS PRIOR TO COMPLETION AND ARRANGE FOR A REVIEW OF THE INSTALLATION PRIOR TO COVERING.
 - D) THE DATE OF EQUIPMENT START-UP. NOTIFY THE ENGINEER 48 HOURS PRIOR TO START-UP DATE AND TIME.
 - E) THE DATE OF FINAL FINISHING. NOTIFY THE ENGINEER 48 HOURS PRIOR TO COMPLETION AND ARRANGE FOR A REVIEW OF THE INSTALLATION.
 - F) THE DATE OF TURN OVER TO THE OWNER.
5. CODES AND REGULATIONS
 - .1 ALL WORK IS INTENDED TO COMPLY WITH THE LATEST APPLICABLE PROVINCIAL BUILDING REGULATIONS AND LOCAL CODES. SHOULD THE DOCUMENTS INDICATE CONSTRUCTION METHODS OR MATERIALS OF A LESSER STANDARD, THE WORK SHALL BE DONE TO CONFORM TO CODE STANDARDS. HOWEVER, IN NO INSTANCE SHALL THE STANDARDS ESTABLISHED BY THE DOCUMENTS BE REDUCED.
6. PERMITS AND FEES
 - .1 PROVIDE ALL NOTICES, OBTAIN THE NECESSARY PERMITS AND PAY ALL FEES WHICH ARE REQUIRED TO COMPLETE THE WORK SPECIFIED HEREIN.
 - .2 FURNISH CERTIFICATES AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH THE CODES AND REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION. ALL CHANGES REQUESTED BY THE AUTHORITY SHALL BE MADE AT NO EXTRA CHARGE.
7. CO-ORDINATION
 - .1 OBTAIN CLARIFICATION FROM ENGINEER WHERE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS NOT CLEAR.
8. STANDARDS OF MATERIALS AND WORKMANSHIP
 - .1 ALL MATERIALS AND EQUIPMENT SHALL BE NEW, UNIFORM AND OF FIRST CLASS QUALITY. THEY SHALL BE CONSTRUCTED TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND SHALL CONFORM TO ALL APPLICABLE CODES, FIRE LAWS, REGULATIONS AND TO THE REQUIRED STANDARDS OF CSA, ASHRAE, ASME, NFPA, ASTM, CUA, CGA, ETC. WHERE THE LATEST EDITION SHALL APPLY. EQUIPMENT AND MATERIAL NOT OF THIS STANDARD SHALL BE REMOVED AND REPLACED.
9. SUBMITTAL OF SHOP DRAWINGS
 - .1 SHOP DRAWINGS MUST BE SUBMITTED FOR ALL EQUIPMENT AND SYSTEMS TO BE INSTALLED.
 - .2 SHOP DRAWINGS SHALL BE SUBMITTED DIGITALLY.
10. GUARANTEE
 - .1 GUARANTEE ALL LABOR, MATERIALS, EQUIPMENT ETC. INSTALLED UNDER THIS CONTRACT FOR A PERIOD OF 12 MONTHS AFTER FINAL ACCEPTANCE OF THE COMPLETED CONTRACT.
 - .2 EXTENDED WARRANTY AS PROVIDED BY SOME EQUIPMENT SUPPLIERS SHALL IN NO WAY BE VOIDED BY THIS CLAUSE.
11. FOREMANS SUPERVISION
 - .1 ALL THE WORK SHALL BE CARRIED OUT UNDER THE CONTINUOUS SUPERVISION AND RESPONSIBILITY OF A COMPETENT FULL TIME SUPERINTENDENT WITH EXPERIENCE IN WORK OF THIS CLASS AND SIZE.
12. MAINTENANCE OF A CLEAN AND SAFE PROJECT
 - .1 REMOVE ALL DEBRIS PERTAINING TO THIS PORTION OF THE CONTRACT, AT REGULAR INTERVALS TO MAINTAIN A CLEAN AND SAFE PROJECT.
 - .2 ABIDE BY ALL PROVINCIAL AND FEDERAL SAFETY REGULATIONS.
13. RECORD DRAWINGS
 - .1 PROVIDE THE OWNER WITH TWO (2) SETS OF RECORD DRAWINGS & 1 SET IN DIGITAL PDF FORMAT.
 - .2 SHOW RECORD CONDITIONS WITH RESPECT TO MATERIALS, SIZES, ROUTES AND LOCATION. PLOT LOCATIONS OF ACCESS DOORS, VALVES, DAMPERS, ETC.
 - .3 PLOT ACCURATELY ALL UNDERGROUND PIPING, DUCTWORK, ETC., SHOWING INVERT ELEVATIONS,

15. SLEEVES, ESCUTCHEONS, FIRE PROOFING
 - .1 SUPPLY AND INSTALL SLEEVES FOR ALL SERVICES PASSING THROUGH WALLS, FLOORS, PARTITIONS, CEILINGS, ETC. SLEEVES SHALL BE FABRICATED OF THE APPROPRIATE MATERIALS FOR EACH CONSTRUCTION PENETRATED TO OBTAIN PROPER SEALS, FIRE RATINGS, ETC.
 - .2 SLEEVES SHALL BE SIZED APPROPRIATELY TO OBTAIN THE REQUIRED ANNULAR SPACE FOR THE INSTALLATION OF SEALS, FIRE STOPPING MATERIALS, ETC.
 - .3 IN FINISHED AREAS INSTALL ESCUTCHEON PLATES TO CONCEAL THE SLEEVE SEALING MATERIALS.
 - .4 WHERE SLEEVES OR OPENINGS ARE INSTALLED IN WALLS, FLOORS, ROOF OR PARTITIONS TO ACCOMMODATE PIPES OR DUCTS, PROVIDE ALL NECESSARY SEALS, FITTINGS, BARRIERS, AND FIRE-RESISTANT MATERIALS TO RESTORE THE INSTALLATION TO ITS ORIGINAL FIRE RATING TO THE SATISFACTION OF THE GOVERNING AUTHORITIES. SUBMIT SHOP DRAWINGS OF ALL PROPOSED MATERIALS TO BE USED INDICATING APPROPRIATE F AND FT RATINGS.
 - .5 SUPPLY AND INSTALL FIRE STOPPING MATERIALS OF THE PROPER F AND FT PROVIDE SHOP DRAWINGS INDICATING THE METHOD OF INSTALLATION AND SYSTEM TO BE USED FOR EACH SPECIFIC APPLICATION. ALL MATERIALS SHALL BE OF THE SAME APPROVED MANUFACTURER.
16. SYSTEM ACCEPTANCE AND TURN OVER PROCEDURES
 - .1 PROVIDE WRITTEN CONFIRMATION TO THE ENGINEERS AND THE OWNER TWO WEEKS PRIOR TO THE DATE WHEN SYSTEMS WILL BE COMPLETE AND READY FOR TURN OVER.
 - .2 ALL SYSTEMS AND EQUIPMENT SHALL BE OPERATIONAL, BALANCED, AND IN GOOD WORKING CONDITION
17. ELECTRIC MOTORS
 - .1 ELECTRIC MOTORS FOR ALL DRIVEN EQUIPMENT SUPPLIED BY THIS DIVISION SHALL BE PROVIDED AND INSTALLED BY THIS DIVISION.
18. NAMEPLATES, VALVE TAGS, PIPE AND DUCTWORK IDENTIFICATION
 - .1 EACH PIECE OF MECHANICAL EQUIPMENT SHALL BE COMPLETE WITH A LAMICOID NAMEPLATE SECURELY FASTENED IN A CONSPICUOUS PLACE ON THE EQUIPMENT.
19. PIPING HANGERS AND SUPPORTS
 - .1 INSTALL ALL PIPING AND EQUIPMENT USING APPROVED HANGERS AND SUPPORTS REQUIRED FOR A SAFE AND TRADEMANLIKE INSTALLATION.
 - .2 SUSPENDED PIPING SHALL BE SUPPORTED BY ADJUSTABLE ROD HANGERS SIZED AS FOLLOWS:

PIPE SIZE	HANGER ROD DIAMETER
2 (50MM) AND UNDER	3/8 (9.5MM)
2-1/2 (63.5MM) AND 3 (75MM)	1/2 (12.7MM)
4 (100MM) AND 5 (125MM)	5/8 (15.9MM)
6 (150MM)	3/4 (19.0MM)
8 (200MM) TO 12 (300MM)	7/8 (22.2MM)
 - .3 HANGER SPACING FOR PLUMBING AND DRAINAGE SERVICES SHALL COMPLY WITH THE PLUMBING CODE.
 - .4 HANGER SPACING FOR FIRE PROTECTION SERVICES SHALL COMPLY WITH THE N.F.P.A. CODES.
 - .5 HANGER SPACING FOR OTHER SERVICES SHALL BE AS FOLLOWS:

NOMINAL PIPE DIAMETER	MAXIMUM SPAN
UP TO AND INCLUDING 1 (25MM)	7-0 (2.1M)
1-1/3 (32MM) TO 5 (125MM)	10-0 (3.0M)
6 (150MM) AND LARGER	15-0 (4.6M)

 IN ADDITION, PROVIDE A HANGER WITHIN 2-0 (600MM) ON EACH SIDE OF A VALVE, ELBOW OR TEEL.
20. THERMOMETERS
 - .1 THERMOMETERS IN PIPING SYSTEMS SHALL BE ADJUSTABLE ANGLE TYPE COMPLETE WITH:
 - * DUST-TIGHT METAL CASE WITH 225MM SCALE.
 - * RED READING ORGANIC LIQUID FILLED TUBE.
 - * WHITE FACE WITH BLACK LETTERING, CLEAR LENS.
 - * RANGE NORMALLY 32TO 240OF (00 TO 115OC) FOR HOT WATER AND 00 TO 120OF (-170 TO 49OC) FOR CHILLED WATER.
 - * TEMPERATURE MARKING IN 2OF (1OC) INCREMENTS, IN BOTH IMPERIAL AND METRIC SCALES.
 - .2 PROVIDE THERMOMETERS IN THE FOLLOWING LOCATIONS IN PIPELINES:
 - * EACH HOT OR COLD WATER STORAGE TANK.
 - * AND WHERE SPECIFICALLY SHOWN.
21. TESTING AND BALANCING, AIR
 - .1 AIR
 - .1 BALANCE THE COMPLETE AIR SYSTEM INCLUDING AIR VOLUMES AND CONTROL SETTINGS UNDER MAXIMUM SYSTEM PRESSURE DROP CONDITIONS (FILTER AT REPLACEMENT CONDITION). THE ENTIRE SYSTEM SHALL BE TESTED FOR NOISE, TIGHTNESS OF JOINTS AND PROPER FUNCTIONING OF THE SYSTEM. NOISE TESTS SHALL BE MADE UNDER MINIMUM SYSTEM PRESSURE DROP CONDITIONS (HIGHEST AIR VELOCITIES AND CLEAN FILTER CONDITIONS). THIS SECTION SHALL MAKE ALL NECESSARY ALTERATIONS AND REPEAT THE TESTS UNTIL SATISFACTORY OPERATION IS ACHIEVED. A REPORT WILL BE ISSUED.
22. PIPES AND FITTINGS
 - .1 DOMESTIC WATER
 - .1 INTERIOR ABOVE GRADE
 - .1 TYPE L HARD COPPER WITH WROUGHT COPPER, BRONZE OR CAST BRONZE FITTINGS. SOLDERED JOINTS TO BE WITH 95/5 TIN/ANTIMONY SOLDER. ALL MAINS, HORIZONTAL AND VERTICAL RISERS, SHALL BE INSTALLED USING COPPER PIPING.
 - .2 SANITARY VENT AND STORM
 - .1 INTERIOR ABOVE GRADE
 - .1 MEDIUM WEIGHT CAST IRON OR DWV COPPER. JOINTS, MECHANICAL, CAULKED, CAST BRONZE WITH 50/50 LEAD/TIN SOLDER.
 - .2 INTERIOR BURIED
 - .1 MEDIUM WEIGHT CAST IRON WITH MECHANICAL JOINT OR PVC PLASTIC PIPING WITH SOLVENT FITTINGS.
23. PIPING INSTALLATION
 - .1 KEEP OPEN ENDS OF PIPE FREE FROM SCALE AND DIRT.
 - .2 GRADE PIPING IN ORDER THAT AIR MAY BE ELIMINATED WHEN SYSTEMS ARE FILLED.
 - .3 ENSURE NO CONTACT BETWEEN COPPER AND FERROUS METAL.
 - .4 PROVIDE DIELECTRIC INSULATING COUPLINGS WHERE PIPE OF DISSIMILAR METALS ARE JOINTED.
 - .5 SLOPE ALL PIPING TO A LOW POINT FOR DRAINING.
 - .6 SUPPORT PIPING WITH ADJUSTABLE RING OR CLEVIS HANGERS AND RODS. PERFORATED BAND IRON, WIRE, OR CHAIN NOT ALLOWED. PIPING RUNNING ABOVE ROOF TO BE MOUNTED ON UNISTRUT PIPE PIER SUPPORT SYSTEM.
 - .7 PAINT ALL PIPING EXPOSED OUTSIDE TO PREVENT CORROSION.
24. VALVE TYPES

25. VALVE LOCATIONS
 - .1 PROVIDE VALVES AS OUTLINED BELOW AND AS SHOWN ON DRAWINGS:
 - .1 AT BASE OF ALL PIPING RISERS CONTAINING WATER.
 - .2 AT INLET AND OUTLET OF ALL APPARATUS.
 - .3 AT ALL BRANCH TAKE-OFFS.
 - .4 ONE SHUT-OFF AND ONE BALANCING VALVE FOR ALL HEAT TRANSFER EQUIPMENT.
 - .5 UPSTREAM OF UNIONS OR FLANGES AT EACH PIECE OF EQUIPMENT.
 - .6 AT WATER SUPPLIED TO ALL FIXTURES.
 - .7 DRAIN VALVES WITH HOSE CONNECTIONS AT ALL LOW POINTS FOR COMPLETE DRAINING OF SYSTEMS.
26. THERMAL INSULATION
 - .1 SUPPLY AND INSTALL INSULATION FOR MECHANICAL SYSTEMS AS SPECIFIED HERE-IN. BOTH CONCEALED AND EXPOSED PIPING SHALL BE INSULATED.
 - .2 INSTALL ALL INSULATION IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. USE APPROPRIATE SADDLES TO PREVENT DISTORTION TO INSULATING MATERIALS AND JACKET COVERINGS.
 - .3 INSULATE AS FOLLOWS:

SERVICE	THICKNESS	INSULATION TYPE
DOMESTIC COLD & HOT WATER (SUPPLY & RECIRCULATION) (CONCEALED & EXPOSED)	25MM FOR ALL PIPE SIZES	FIBERGLASS MOULDED HEAVY JACKET SEAL ALL EXPOSED PIPE INSULATION WITH ASJ SEAL ALL EXPOSED ENDS WITH VAPOUR BARRIER MASTIC.
EXHAUST AIR DUCTWORK	25MM	FLEXIBLE RIGID FIBERGLASS FOIL FACED DUCT INSULATION FOR 4 METERS BACK FROM EXTERIOR WALL
AIR CONDITION SUPPLY DUCT	25MM	FLEXIBLE FIBERGLASS FOIL FACED DUCT INSULATION
CAST IRON DRAINAGE (SOUND)	50MM	HEAVY DENSITY PIPE INSULATION COMPLETE WITH ASJ JACKET

 PIPE FITTINGS AND VALVES SHALL BE INSULATED USING PRE-FORMED FIBREGLASS FITTINGS, FINISHED WITH PRE-FORMED PVC COVERS, FLANGES, VALVE BONNETS, AND COUPLINGS SHALL BE INSULATED WITH OVER SIZED PIPE INSULATION AND FINISHED AS REQUIRED.
27. FLOOR DRAINS & TRENCH DRAINS
 - .1 WASHROOMS, KITCHENS, AND OTHER FINISHED AREAS WATTS DRAINAGE FD-100-C EPOXY COATED CAST IRON BODY AND REVERSIBLE CLAMPING COLLAR WITH PRIMARY AND SECONDARY WEEP HOLES. 15MM (1/2 INCH) THICK POLISHED NICKEL BRONZE STRAINER, NICKEL BRONZE TAMPER RESISTANT SCREWS. MINIMUM 3/8(76mm) PIPE SIZE.
 - .2 KITCHEN HUB DRAINS WHERE INDICATED HUB DRAIN WATTS DRAINAGE FC-100-C-DD EPOXY COATED CAST IRON BODY AND REVERSIBLE CLAMPING COLLAR WITH PRIMARY AND SECONDARY WEEP HOLES. NICKEL BRONZE INDIRECT DRAIN WASTE HUB, TAMPER RESISTANT SCREWS. MINIMUM 3/8(76mm) PIPE SIZE.
 - .3 PROVIDE TRAPS FOR DRAINS CONNECTING DIRECTLY TO SANITARY WASTE SYSTEM.
 - .4 PROVIDE TRAP PRIMER CONNECTIONS FOR ALL DRAINS WITHOUT A PERMANENT INDIRECT WATER SOURCE.
 - .5 FOR OTHER SPECIAL DRAINS REFER TO DRAWINGS.
 - .6 ALL DRAINS SHALL BE MINIMUM 4/8(100mm) DIAMETER UNLESS OTHERWISE INDICATED ON DRAWINGS.
28. BACKWATER VALVES
 - .1 PROVIDE BACKWATER VALVES WHERE THERE IS A POSSIBILITY OF SEWAGE BACKUP, WHERE REQUIRED BY CODE OR WHERE SHOWN ON THE DRAWINGS.
29. BACKFLOW PREVENTORS
 - .1 BACKFLOW PREVENTION DEVICES, AS APPROVED BY THE GOVERNING BODY, ARE TO BE INSTALLED IN POTABLE WATER LINES IN ACCORDANCE WITH THE PLUMBING CODE.
30. CLEANOUTS
 - .1 CLEANOUTS TO BE THE FOLLOWING TYPE:
 - .1 CONCRETE FLOORS: - WATTS CO-200-RX-4
 - .2 FINISHED FLOORS: - WATTS CO-200-T-1
 - .3 CERAMIC OR TERRAZZO FLOORS WATTS CO-200-US-1.
 - .4 CARPETED FLOORS: - WATTS CO-200-RC-1.
 - .5 RISERS WATTS CO-460-S COMPLETE WITH ACCESS COVER.
31. PLUMBING FIXTURES
 - .1 ALL FIXTURES SHALL BE FREE FROM FLAWS OR BLEMISHES AND SUBJECT TO THE APPROVAL. ALL FINISHED SURFACES SHALL BE CLEAR, SMOOTH AND BRIGHT AND GUARANTEED NOT TO CRAZE, COLOR OR SCALE.
 - .2 FIXTURE SUPPORT MUST BE SUCH THAT THEY WILL NOT COME LOOSE WITH ORDINARY USAGE AND THAT ANCHORING WILL BE RIGID. REINFORCE WALL BEHIND FIXTURES IF REQUIRED FOR PROPER SUPPORT.
 - .3 REFER TO FIXTURES SCHEDULE ON DRAWINGS.
 - .4 WHEELCHAIR ACCESSIBLE LAVATORY P-TRAP AND ANGLE VALVE ASSEMBLIES SHALL BE COVERED WITH THE MOLDED, ANTI-MICROBIAL TRUEBRO, INC. LAVATORY GUARD, UNDERSINK PROTECTIVE PIPE COVER ACCESSORY. COLOUR WHITE. COVER SHALL BE SECURED WITH SNAP CLIP FLUSH, RE-USEABLE FASTENERS. ANGLE STOP SHALL HAVE LOCK-LID LOCKING ACCESS COVERS.
32. AIR CHAMBERS
 - .1 PROVIDE AIR CHAMBERS ON THE HOT AND COLD SUPPLY LINES OF EACH FIXTURE OR GROUP OF FIXTURES.
 - .2 AIR CHAMBERS SHALL BE 450MM LONG AND TWO PIPE SIZES LARGER THAN THE PIPING AT THE POINT OF INSTALLATION.
33. FIRE EXTINGUISHERS
 - .1 SUPPLY AND INSTALL FIRE EXTINGUISHERS WHERE SHOWN ON THE DRAWINGS OR AS PER REQUIRED BY NFPA-10. INSTALL FIRE EXTINGUISHERS IN ACCORDANCE WITH NFPA-10. PORTABLE FIRE EXTINGUISHERS.
 - .2 DRY CHEMICAL FIRE EXTINGUISHERS TO BE THE AMMONIUM PHOSPHATE TYPE, UL APPROVED.

34. DUCTWORK

- .1 MATERIAL
 - .1 USE GALVANIZED SHEET STEEL WITH G 60 COATING TO ASTM 525, UNLESS OTHERWISE SPECIFIED.
 - .2 JOINT SEALER COMPOUND SHALL BE MINNESOTA MINING AND MANUFACTURING OR OTHER APPROVED MANUFACTURER. DUCT TAPE SHALL BE DURO-DYNE OR OTHER APPROVED MANUFACTURER.
 - .3 FLEXIBLE HOSE SHALL BE FLEXMASTER, WIRE REINFORCED FABRIC FLEX, NON-COMBUSTIBLE, MAXIMUM LENGTH 3.0M.
 - .4 ACCESS PORTS SHALL BE LAWSON-TAYLOR, 32MM DIAMETER.
 - .5 FLEXIBLE CONNECTIONS SHALL BE VENTFABRICS, DURO DYNE OR DYNE-AIR. SUBMIT FLEXIBLE CONNECTIONS FOR REVIEW BEFORE INSTALLATION.
 - .6 FIRE DAMPERS SHALL BE UNDERWRITERS LABORATORIES LABELED. FIRE DAMPERS IN SUPPLY AIR DUCTS SHALL HAVE THE BLADES CLEAR OF THE AIR FIRE-STOP FLAPS SHALL BE AS SHOWN IN THE UNDERWRITERS LABORATORIES LIST FOR THE SPECIFIC CEILING ASSEMBLY USED. SUBMIT SHOP DRAWINGS FOR ALL DAMPERS AND FIRE STOP FLAPS TO BE INSTALLED.
 - .7 ACOUSTIC INSULATION SHALL BE 1 (INCH) 25MM THICK RIGID COATED GLASS O FIBREGLASS INSULATION WITH K VALUE AT 24 DEG C OF 0.035 W/M DEG C COATED TO PREVENT FIBRE EROSION AT VELOCITIES UP TO 20M/S 24KG/M3. MINIMUM. WHERE INDICATED ON DRAWINGS USE 50MM (2 INCH) THICK INSULATION.
 - .8 BALANCING OR SPLITTER DAMPERS SHALL BE RATTLE FREE AND LEAK RESISTANT. BEARING RODS SHALL BE SIZED TO SUIT THE DAMPER SIZE. NEOPRENE SEALS SHALL BE USED TO MINIMIZE LEAKS.
- .2 INSTALLATION
 - .1 INSTALL DUCTS IN LOCATIONS, SHAPES AND SIZES SHOWN. LAYOUT DUCTWORK IN ADVANCE TO ASSURE THAT IT WILL FIT IN THE SPACE PROVIDED.
 - .2 CONSTRUCT LOW PRESSURE RECTANGULAR DUCTS FOR SYSTEMS LESS THAN 2 (0.5 KPA) STATIC PRESSURE AND UNDER 2000 FPM (10.2 M/S) VELOCITY. LOGITUDINAL JOINTS SHALL BE PITTSBURGH LOCK SEAM AT EDGE OF DUCT AND GROOVED SEAM ON FACE OF DUCT.
 - .3 SEAL ALL JOINTS OF DUCTS OVER 0.25 KPA. ALL SUPPLY DUCTWORK UP TO VARIABLE VOLUME BOXES AND ALL WASHROOM EXHAUST DUCTWORK. BRUSH JOINTS WITH THE COMPOUND BEFORE AND AGAIN AFTER ASSEMBLY.
 - .4 WHERE DUCTWORK PASSES THROUGH A WALL OR FLOOR, OTHER THAN WHEN A FIRE DAMPER IS REQUIRED, PACK AROUND THE DUCT USING A FIRE RESISTANT MATERIAL TO ENSURE A SOUND AND AIRTIGHT JOINT.
 - .5 MAKE CHANGES OF DIRECTION OF HORIZONTAL DUCTS WITH ELBOWS HAVING AN INSIDE RADIUS NOT LESS THAN THREE QUARTERS OF THE WIDTH OF THE DUCT. MAKE CHANGES OF DIRECTION FROM HORIZONTAL TO VERTICAL DUCT WITH ELBOWS HAVING AN INSIDE RADIUS EQUAL TO THE DEPTH OF THE DUCT. WHERE THIS IS NOT POSSIBLE DUE TO THE BUILDING CONSTRUCTION, USE TURNINGS VANES.
 - .6 INSTALL ACCESS PORTS AT CONVENIENT LOCATIONS IN ALL MAIN DUCTS AND MAIN BRANCH TAKE-OFFS WITH AIRTIGHT COVERS AND EXTENSION SLEEVES THROUGH INSULATION TO ALLOW AIR METER READINGS.
 - .7 INSTALL FLEXIBLE CONNECTIONS AT EACH AIR HANDLING UNIT AND FAN DUCT CONNECTION.
 - .8 INSTALL MANUAL DUCT DAMPERS BALANCING WHERE SHOWN ON THE DRAWINGS. FABRICATE DAMPERS OF GALVANIZED STEEL 18 US GAUGE OR HEAVIER.
 - .9 WHERE DUCT IS ACOUSTICALLY LINED, DUCT DIMENSIONS SHOWN ARE NET, INSIDE OF LINING. INSTALL ACOUSTIC INSULATION INTERNALLY TO DUCTWORK WHERE SHOWN. MINIMUM REQUIREMENT IS 3.0M EXTENDING FROM ANY SUPPLY FAN, AND TO ANY RETURN/EXHAUST FAN AND WHERE ELSE AS SHOWN ON THE LAYOUT DRAWINGS.
 - .3 INSTALL AND MANUFACTURE DUCTWORK IN ACCORDANCE WITH SMACNA.
 - .1 MAKE ALL LAPS IN THE DIRECTION OF AIR FLOW. USE RIVETS AND BOLTS WHERE POSSIBLE.
 - .2 DUCTS SHALL BE BRACED, STIFFENED, AND TIGHT SO THEY WILL NOT BREATHE, RATTLE, VIBRATE OR SAG. CROSS-BREAK ALL RECTANGULAR DUCTS WITH HEIGHTS OR WIDTHS 300MM OR LARGER.
 - .3 HANG ALL DUCTWORK SECURELY AND IN A RIGID MANNER.
 - .4 SUPPORT ALL VERTICAL DUCTS AT EACH FLOOR, ON ALL SIDES, WITH ANGLE RIVETED TO THE DUCTS.
36. GRILLES, REGISTERS, DIFFUSERS, LOUVRES
 - .1 PROVIDE ALL GRILLES, REGISTERS, DIFFUSERS, LOUVRES AS SHOWN IN THE SCHEDULE ON THE DRAWINGS.
37. EQUIPMENT
 - .1 REFER TO EQUIPMENT SCHEDULES ON DRAWINGS.
 - .2 ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND INSTRUCTIONS.
 - .3 INSTALL ALL EQUIPMENT PLUMB AND LEVEL.
 - .4 SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT TO BE SUPPLIED AND INSTALLED UNDER THIS DIVISION.
38. CONTROL SYSTEMS
 - .1 NEW ROOF TOP UNIT RTU1 AND RTU2 SHALL BE CONTROLLED BY RELOCATED 7-DAY PROGRAMMABLE THERMOSTAT. FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED HOURS.
 - .2 INTERLOCK MU1 TO EXHAUST FAN EF1.
 - .3 INTERLOCK EXHAUST FAN EF1 TO LIGHT SWITCH.
 - .4 ALL CONTROLS SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. CONTRACTOR SHALL PROVIDE ALL CONTROL COMPONENTS NECESSARY INCLUDING WIRING, CONDUITS, RELAYS, TRANSFORMERS, TIMER, SWITCHES AND OTHER DEVICES TO MAKE THE EQUIPMENT OPERATE AS SPECIFIED.

05/10/2021
Permit: P11984

CLIENT

STEVEN HO
ARCHITECTURE INC.

PROJECT

SSCA BUILDING
ADDITION
5720 SILVER RIDGE DRIVE NW
CALGARY, ALBERTA

TITLE

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PROJECT NUMBER	DRAWING NUMBER
21068	M401
DRAWN/CHECKED	PC / PC

CLEAN-OUTS, ETC.

14. OPERATING AND MAINTENANCE MANUALS AND INSTRUCTIONS

- .1 PREPARE THREE (3) COMPLETE SETS & 1 SET IN DIGITAL PDF FORMAT OF OPERATING AND MAINTENANCE INSTRUCTIONS FOR THE MECHANICAL EQUIPMENT AND SYSTEMS AND PRESENT FOR APPROVAL TO THE ARCHITECT AT LEAST TWO MONTHS PRIOR TO PROJECT COMPLETION.
- .2 ADVISE AND INSTRUCT THE OWNER OR HIS REPRESENTATIVE ON THE LOCATION, FUNCTION AND GENERAL MAINTENANCE AND OPERATION OF ALL EQUIPMENT PARTS INSTALLED.

.1 VALVES FOR THROTTLING SERVICE SHALL BE GLOBE TYPE. SHUT-OFF AND ISOLATING VALVES SHALL BE GATE TYPE. ALL SUITABLE FOR SYSTEM WORKING PRESSURE.

.2 DOMESTIC HOT WATER SYSTEM RELIEF VALVES TO BE ALL BRASS, TEMPERATURE AND PRESSURE RATED.

.3 WATER SYSTEMS (HOT/COLD DOMESTIC WATER

- .1 USE FULL PORT BALL VALVES WITH THREADED/FLANGED ENDS FOR ISOLATION/SHUTOFF. PROVIDE STEM EXTENSIONS, AS NECESSRY TO ACCOMMODATE PING INSULATION. OPERATING PRESSURE SHALL NOT EXCEED 80% OF THE VALVE PRESSURE CLASS. PROVIDE MANUAL GEAR OPERATORS FOR VALVES 6" AND LARGER.

CLASS ABC, SIZE TO BE 2.27 KG.

.3 FIRE EXTINGUISHERS LOCATED IN PUBLIC AREAS, CORRIDORS, ETC., TO BE COMPLETE WITH CABINETS CONFORMING TO N.F.P.A. NO. 10, FOR RECESSED TYPE, CABINET TO BE LARSEN'S 2409-R1. FOR SEMI-RECESSED TYPE TO BE LARSEN'S 2409-SR, FOR SURFACE MOUNT CABINET TO BE LARSEN'S BE 2409-SM. CONFIRM ALL CABINETS WITH ARCHITECT FOR COLOR AND DOOR STYLE PRIOR TO INSTALLATION.

.4 DRY CHEMICAL FIRE EXTINGUISHERS TO BE THE SODIUM BICARBONATE TYPE, UL APPROVED CLASS 40 BC, SIZE TO BE 4.8 KG. - COMMERCIAL KITCHENS.

