NOTICE OF HEARING
OPEN TO THE PUBLIC
DEVELOPMENT APPEALS BOARD

April 1, 2025, 4:00 pm
Committee Room E, Ground Floor, City Hall

(Please contact the City Clerk's Office at 306.975.3240 for further information).

1. CALL TO ORDER

2. APPEAL HEARINGS

   2.1 Appeal 9-2025 - Development Permit Denial - 1202/1204 College Drive

   2.2 Appeal 10-2025 - Development Permit Denial - 633 Guelph Crescent

3. ADJOURNMENT

RECEIVED
CITY CLERK'S OFFICE
February 19, 2025

A.1

City of Saskatoon Development Appeal Application- page 2

THIS PAGE WILL FORM PART OF THE PUBLIC RECORD FOR THE APPEAL

Applicant Name: James Zimmer

Registered Property Owner(s):
(if different from above): Parker Siemens

Location of Subject Property

Legal Description

Lot (s) 21, 22, 23, 43 Block 35 Plan No. 5527 / 101356253

Civic Address: 1204 College Drive 1202 College Drive

Present Status of Building or Structure Under Appeal:

(•) Construction not yet begun ( ) Under Construction ( ) Completed

Type of Construction:

( ) Residential ( ) Commercial ( ) Industrial ( ) Other (specify) Mixed use Residential and Commercial

Description of Development Appeal: (example: side yard deficiency, parking deficiency, etc.)

1) Side Yard Deficiency 2) Waste Space Defiency

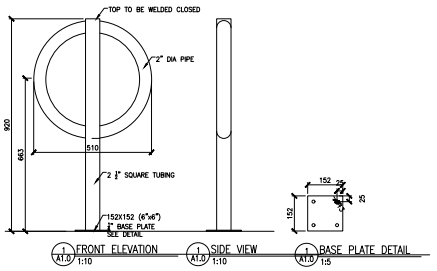
Reason for Development Appeal: (as per *The Planning and Development Act, 2007*, applicants have 5 days prior to the appeal hearing date to submit drawings and written materials)

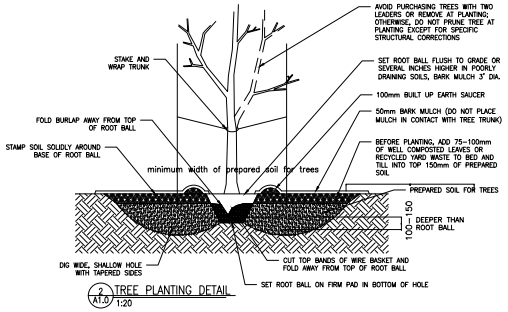
1) We are appealing the Side Yard requirement 1.5 metres, up to a height 12 metres and 3 metres or that portion of the building in excess of 12 metres in height, if any window, door or other opening is provided in the wall facing the adjacent property. A 0 metre Side Yard facing the adjacent property is permitted which we have, but we also have an inset of 3 metres at this Side Yard in our building configuration, which in turn has windows and door openings. So strictly speaking, a 3 metre Side Yard with doors, windows or other opening is permitted in the wall facing the other property, yet with our 3 metre yard above and / or beside a 0 metre yard windows and doors not permitted at 3 metres from adjacent property. With these units facing the east property quality of living will be much better with windows. 2) A waste space deficiency of 1.5 metres in length has also been included in our Appeal, however I regret that this was a misinterpretation of the Bylaw requirements with our site design. We will not be asking for relaxation of the waste space size requirement at this time, our intention is to adjust our design to accommodate a 3.0m x 7.5m waste space, possibly internally, if we are unable achieve this any other way. **BOTH SIDES OF THIS FORM MUST BE COMPLETED**

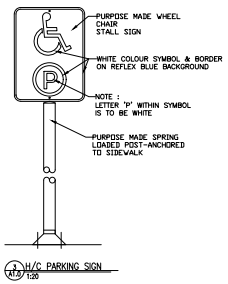

1202
SIGNAGE
SIGNAGE
SIGNAGE


1202

SITE DATA:
- ZONING: CSI - CORRIDOR STATION MIXED - USE I DISTRICT
- ADDRESS: 1202 AND 1204 COLLEGE DRIVE
- BUILDING FOOTPRINT: 722± M²
- PERMITTED USES: (ASSEMBLY / RETAIL / PERSONAL SERVICE / SHOPPING CENTRE) DWELLING UNITS NOT MAINFLOOR
- ACTIVE FRONTAGE - MINIMUM 30% OF SURFACE AREA OF GROUND FLOOR OF ALL STREET FACING FACADES TO CONTAIN TRANSPARENT OPENINGS (COLLEGE DRIVE, MUNROE AVENUE)
- SIDE WIDTH ISM: 25.91± M
- SITE AREA (MIN) 450 M²: 1074± M²
- FRONT YARD SETBACK: 4.0M
- SIDE YARD SETBACK: 2.0M AT FLANKING STREET / 0.0 M
- REAR YARD SETBACK: 6.0M
- BUILDING HEIGHT: MAX 27M (19.3± M BUILDING & 24.9± M ELEVATOR HEAD / STAIRWELLS / MECH MEZZ)
- AMENITY SPACE PER UNIT: 5M²
- ASSIGNED VISITOR PARKING STALLS: 6
- BARRIER FREE PARKING STALL: 1
- BIKE PARKING: 3 SHORT TERM BIKE STALLS MULTIPLE DWELLING; 2 SHORT TERM BIKE STALLS FOR MAIN FLOOR COMMERCIAL
- LOADING SPACE = 1 (7.5M X 3.0M)
- GARBAGE / RECYCLE STORAGE AND PICK UP SPACE = (7.5M X 3.0M)



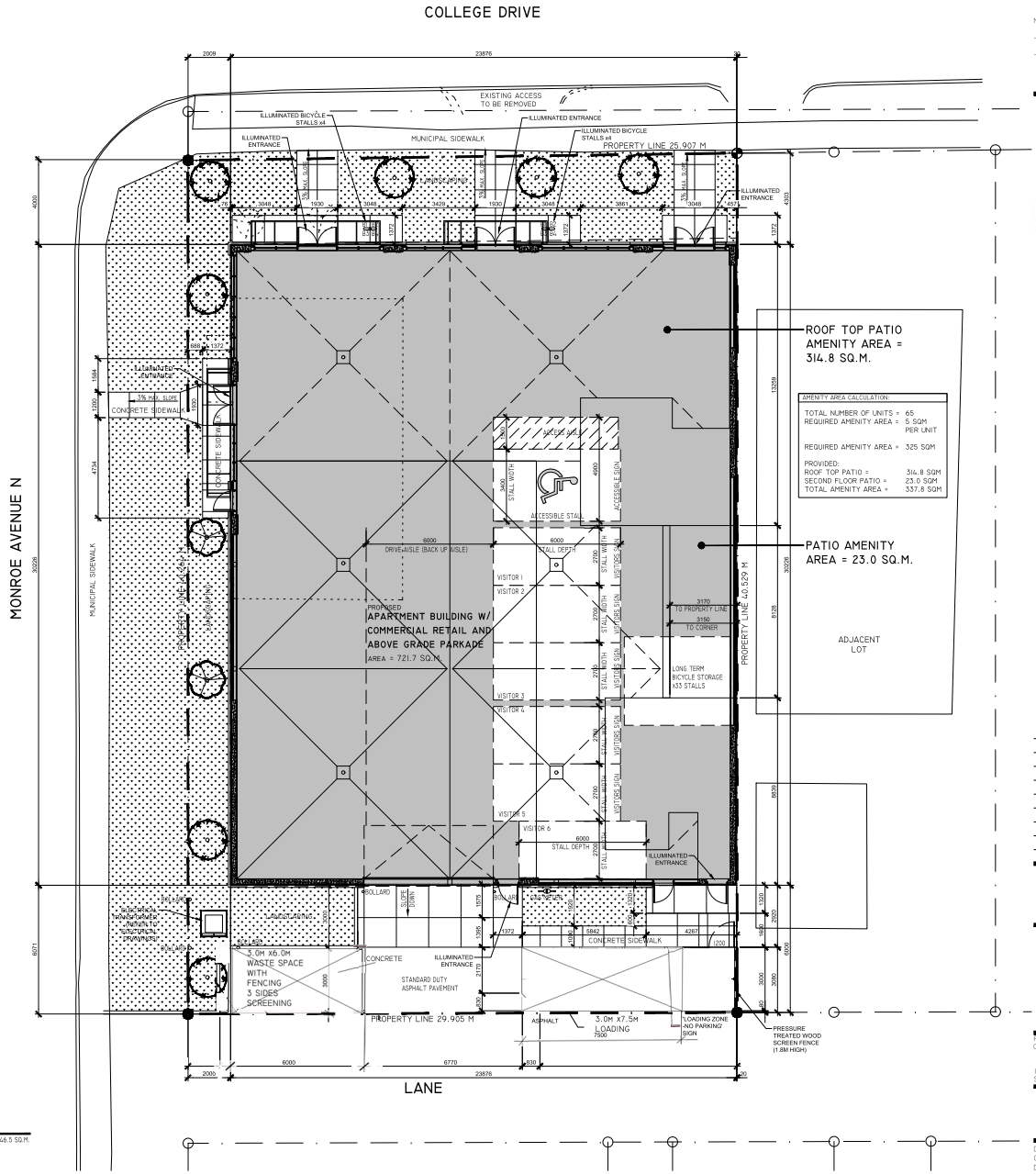




ADDRESS:

LEGAL
LOTS 1202 AND 1204
BLOCK
PLAN

CIVIC
ADDRESS 1202 COLLEGE DRIVE
MUNICIPALITY CITY OF SASKATOON
PROVINCE SASKATCHEWAN



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JAMES ZIMMER ARCHITECT
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(306) 931-6622

NOT FOR CONSTRUCTION

PROPOSED
COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATCHEWAN, SK

SITE PLAN

SCALE: AS NOTED

DRAWN: CDH SHEET: A 2.1
CHECKED: -
DATE: AUG. 23, 2024 2 OF — PAGES
JOB NO.: 2024-17

E1 E1: TYPICAL 1.0 HR FRR LOADBEARING EXTERIOR NONCOMBUSTIBLE CLAD CONCRETE SHEAR WALL CONSTRUCTION
[NBC 2020 TABLE D-2.1.1. 90MM CONCRETE = 1.0 HR]

- ACRYLIC STUCCO EXTERIOR EIFS SYSTEMS TO ADEX SYSTEM INC. DESIGN NO. ASI/WDEIFS 25-01(EIFS) ADEX-RS SYSTEMS CAN/ULC S134 [INTERTEK APPROVAL OCTOBER 9, 2018] (DEEMED NONCOMBUSTIBLE)
- 2" EIFS EXTERIOR NONCOMBUSTIBLE CLADDING, WOODPECKER RESISTANT ACRYLIC ADEX STUCCO FINISH AND PRIME COAT ON ADEX MESH 3" ADEX-GD OR ADEX FLAT INSULATION BOARD, INCLUDE NOT LESS THAN 1/4" DEEP DRAINAGE PATH FOR WATER THAT PENETRATES PAST THE EXTERIOR CLADDING.
- ADEX SYSTEMS WATER RESISTIVE BARRIER
- 10" CONCRETE SHEAR WALL
- NOTE; REFER TO PLAN FOR LOCATIONS WHERE EIFS CLADDING NEED NOT BE NONCOMBUSTIBLE.

E2 E2: TYPICAL NONCOMBUSTIBLE / NONCOMBUSTIBLE CLAD 1.0 HR FRR WALL WITH 1.0 HR LOAD BEARING EXTERIOR WALL CONSTRUCTION
[NBC 2020 TABLE 9.10.3.1.-A: NO. S1B; 1HR STC43]

- ACRYLIC STUCCO EXTERIOR EIFS SYSTEMS TO ADEX SYSTEM INC. DESIGN NO. ASI/WDEIFS 25-01(EIFS) ADEX-RS SYSTEMS CAN/ULC S134 [INTERTEK APPROVAL OCTOBER 9, 2018] (DEEMED NONCOMBUSTIBLE)
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- ADEX SYSTEMS WATER RESISTIVE BARRIER
- 5/8" TYPE X GLASROC / DENSGLAS SHEATHING, FIRETAPED
- 2 1/2" STEEL STUDS AT 16" O.C.
- 2 1/2" ROCKWOOL
- 5/8" TYPE X GYPSUM BOARD, FIRETAPED
- 1/2" PLYWOOD SHEATHING
- 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL
- 5 1/2" FIBERGLASS INSULATION
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED
- FRP (MAX FLAME SPREAD RATING 150) LINER TO 4' HIGH ON PARKADE SIDE

C1 C1: PARKADE CONCRETE DEMISING WALL CONSTRUCTION
1.5 HR

- EXPOSED CONCRETE FINISH
- CONCRETE WALL OR COLUMN (REFER TO STRUCTURAL) C/W NOT LESS THAN 1" CONCRETE COVER OVER REINFORCED STEEL
- EXPOSED CONCRETE FINISH

R1 R1: ELEVATOR FRAMING (LOBBY / CORRIDOR)
[N.B.C. 2020 TABLE: 9.10.3.1.-A; NO. W1D; 1.0 HR STC 32] (SIM TO)

ELEVATOR SIDE
- DOUBLE LAYER 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S) [ELEVATOR SIDE]
- 3/4" PLYWOOD SHEATHING SHAFT LINER (REFER TO STRUCTURAL)
- LOAD BEARING WALL 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL (WOOD BLOCKING FIRE STOPPING MAX 10 FT O.C. HORIZONTAL)
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)

R4 R4: PARKADE FRAMING
[N.B.C. 2020 TABLE: 9.10.3.1.-A; NO. W2D; 1.5 HR STC 36] (SIM TO)

PARKADE SIDE
- FRP LINER (MAX. FLAME SPREAD RATING 150) TO 48" HIGH
- DOUBLE LAYER 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)
- LOAD BEARING WALL 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL (WOOD BLOCKING FIRE STOPPING MAX 10 FT O.C. HORIZONTAL)
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)

R5 R5: TENANT / LAUNDRY FIRE SEPARATION
[N.B.C. 2020 TABLE: 9.10.3.1.-A; NO. S1B; 1.0 HR STC 39]

- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)
- 3 5/8" STEEL STUDS AT 16" O.C. C/W REQ'D BRIDGING AND BRACING
- 3 1/2" MINERAL WOOL INSULATION
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)

R6 R5: SPRINKLER / RETAIL FIRE SEPARATION
[N.B.C. 2020 TABLE: 9.10.3.1.-A; NO. S1B; 1.0 HR STC 36] (SIM TO)

SPRINKLER ROOM SIDE
- 1/2" PRIMED AND PAINTED PLYWOOD SHEATHING
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)
- 3 5/8" STEEL STUDS AT 16" O.C. C/W REQ'D BRIDGING AND BRACING
- 3 1/2" MINERAL WOOL INSULATION
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)

R7 R7: STEEL STUD FRAMED FIRE SEPARATION
[GYPSUM ASSOCIATION; NO. SWP 1072; 1.0 HR STC 45]

- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)
- 3 5/8" STEEL STUDS AT 16" O.C. C/W REQ'D BRIDGING AND BRACING
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)

F1 F1: STEEL STUD FURRING WALL CONSTRUCTION:

- 1/2" GYPSUM BOARD, TAPED, SANDED AND PAINTED EACH SIDE (WATER RESISTANT GYPSUM BOARD IN WASHROOMS)
- 3 5/8" STEEL STUDS 16" O.C.

F2 F2: STAIR FURRING WALL CONSTRUCTION:

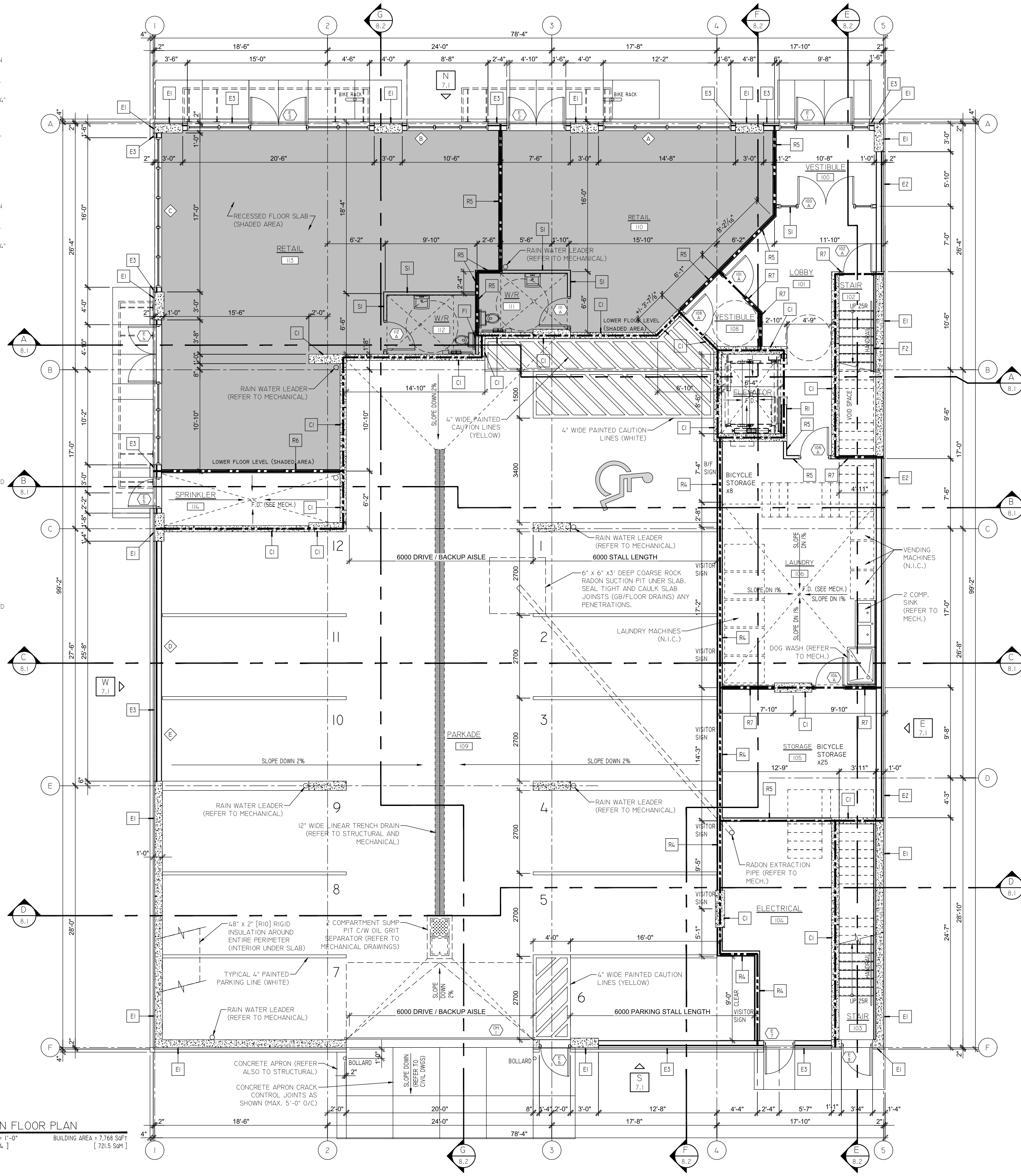
- 5/8" GYPSUM BOARD, TAPED, SANDED AND PAINTED
- 2" STEEL STUDS 16" O.C. (ANCHOR BACK TO CONCRETE WALL AS REQ'D)

S1 S1: INTERIOR STEEL STUD INSULATED WALL CONSTRUCTION:

- 1/2" GYPSUM BOARD, TAPED, SANDED AND PAINTED EACH SIDE
- 3 5/8" STEEL STUDS 16" O.C.
- 3 1/2" ACOUSTIC INSULATION
- 1/2" GYPSUM BOARD, TAPED, SANDED AND PAINTED EACH SIDE (WATER RESISTANT GYPSUM BOARD IN WASHROOMS)

S2 S2: INTERIOR STEEL STUD WALL CONSTRUCTION:

- 1/2" GYPSUM BOARD, TAPED, SANDED AND PAINTED EACH SIDE
- 3 5/8" STEEL STUDS 16" O.C.
- 1/2" GYPSUM BOARD, TAPED, SANDED AND PAINTED EACH SIDE



MAIN FLOOR PLAN
3/16" = 1'-0" [1 : 64]
BUILDING AREA = 7,768 SqFT [721.5 SqM]

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1202 COLLEGE DRIVE
SASKATCHEWAN, SK

MAIN FLOOR PLAN

SCALE: AS NOTED

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4 OF -- PAGES

E2

E2: TYPICAL NONCOMBUSTIBLE / NONCOMBUSTIBLE CLAD 1.0 HR FRR WALL WITH 1.0 HR LOAD BEARING EXTERIOR WALL CONSTRUCTION
[NBC 2020 TABLE 9.10.3.1.-A: NO. S1B; 1HR STC43]

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- ADEX SYSTEMS WATER RESISTIVE BARRIER
- 5/8" TYPE X GLASROC / DENSGLAS SHEATHING, FIRETAPED
- 2 1/2" STEEL STUDS AT 16" O.C.
- 2 1/2" ROCKWOOL
- 5/8" TYPE X GYPSUM BOARD, FIRETAPED
- 1/2" PLYWOOD SHEATHING
- 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL
- 5 1/2" FIBERGLASS INSULATION
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED
- FRP (MAX FLAME SPREAD RATING 150) LINER TO 4' HIGH ON PARKADE SIDE

E3

E3: TYPICAL 1.0 HR FRR LOADBEARING EXTERIOR WALL CONSTRUCTION
[NBC 2020 TABLE 9.10.3.1.-A: NO. W8A; NO. EW2A 1.0 HR]

- ACRYLIC STUCCO EXTERIOR EIFS SYSTEM
- 2" EIFS EXTERIOR NONCOMBUSTIBLE CLADDING, WOODPECKER RESISTANT ACRYLIC STUCCO FINISH AND PRIME COAT ON MESH 3" INSULATION BOARD, INCLUDE NOT LESS THAN 1/4" DEEP DRAINAGE PATH FOR WATER THAT PENETRATES PAST THE EXTERIOR CLADDING.
- WATER RESISTIVE BARRIER
- 1/2" PLYWOOD SHEATHING
- 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL
- 5 1/2" FIBERGLASS INSULATION
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED

E4

E3: TYPICAL 1.0 HR FRR LOAD BEARING EXTERIOR WALL CONSTRUCTION
[NBC 2020 TABLE 9.10.3.1.-A: NO. W8A; NO. EW2A 1.0 HR]

- ACRYLIC STUCCO EXTERIOR EIFS SYSTEM
- 2" EIFS EXTERIOR NONCOMBUSTIBLE CLADDING, WOODPECKER RESISTANT ACRYLIC STUCCO FINISH AND PRIME COAT ON MESH 3" INSULATION BOARD, INCLUDE NOT LESS THAN 1/4" DEEP DRAINAGE PATH FOR WATER THAT PENETRATES PAST THE EXTERIOR CLADDING.
- WATER RESISTIVE BARRIER
- 1/2" PLYWOOD SHEATHING
- 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL
- 5 1/2" FIBERGLASS INSULATION
- 3/4" PLYWOOD SHEATHING
- DOUBLE LAYER OF 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED

R1

R1: ELEVATOR FRAMING (LOBBY / CORRIDOR)
[N.B.C. 2020 TABLE: 9.10.3.1.-A; NO. W1D; 1.0 HR STC 32] (SIM TO)

ELEVATOR SIDE
- DOUBLE LAYER 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S) [ELEVATOR SIDE]
- 3/4" PLYWOOD SHEATHING SHAFT LINER (REFER TO STRUCTURAL)
- LOAD BEARING WALL 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL (WOOD BLOCKING FIRE STOPPING MAX 10 FT O.C. HORIZONTAL)
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)

R3

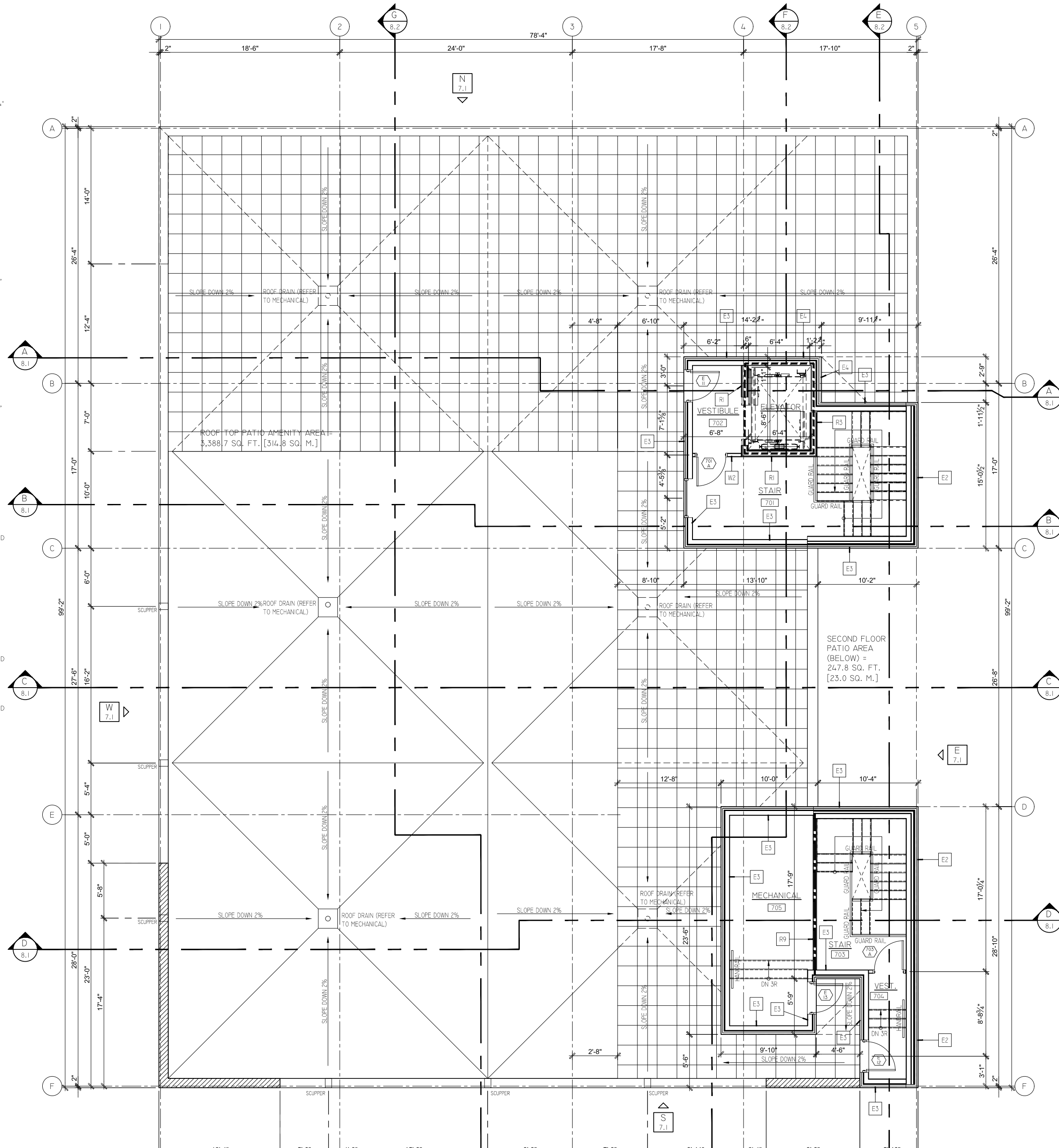
R1: ELEVATOR FRAMING (STAIR)
[N.B.C. 2020 TABLE: 9.10.3.1.-A; NO. W2D; 1.5 HR STC 36] (SIM TO)

ELEVATOR SIDE
- DOUBLE LAYER 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)
- 3/4" PLYWOOD SHEATHING SHAFT LINER (REFER TO STRUCTURAL)
- LOAD BEARING WALL 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL (WOOD BLOCKING FIRE STOPPING MAX 10 FT O.C. HORIZONTAL)
- DOUBLE LAYER 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)

R9

R9: SHAFT WALL CONSTRUCTION
[NBC 2020 TABLE 9.10.3.1.-A: NO. W1D; 1.0 HR; STC 32]

- 5/8" TYPE X GYPSUM BOARD; TAPED, SANDED AND PAINTED
- 2" X 4" WOOD STUDS, STUD SPACING (REFER TO STRUCTURAL)
- DOUBLE BOTTOM PLATE AND DOUBLE TOP PLATE
- 5/8" TYPE X GYPSUM BOARD; TAPED, SANDED AND PAINTED



FOURTH FLOOR PLAN
3/16" = 1'-0"
[1 : 64]
BUILDING AREA = 702 SqFt
[65.2 SqM]

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JAMES ZIMMER
ARCHITECT
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PROPOSED
COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATCHEWAN, SK

ROOF PLAN

SCALE: AS NOTED

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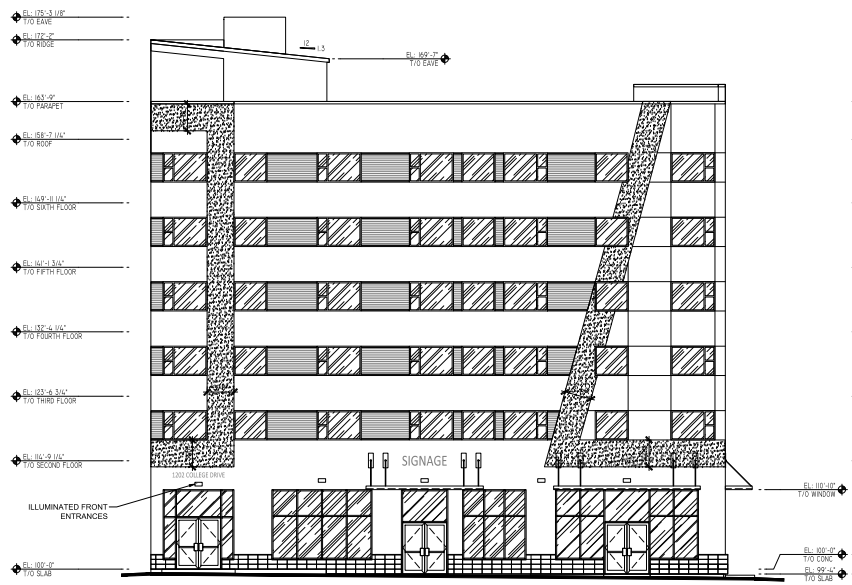
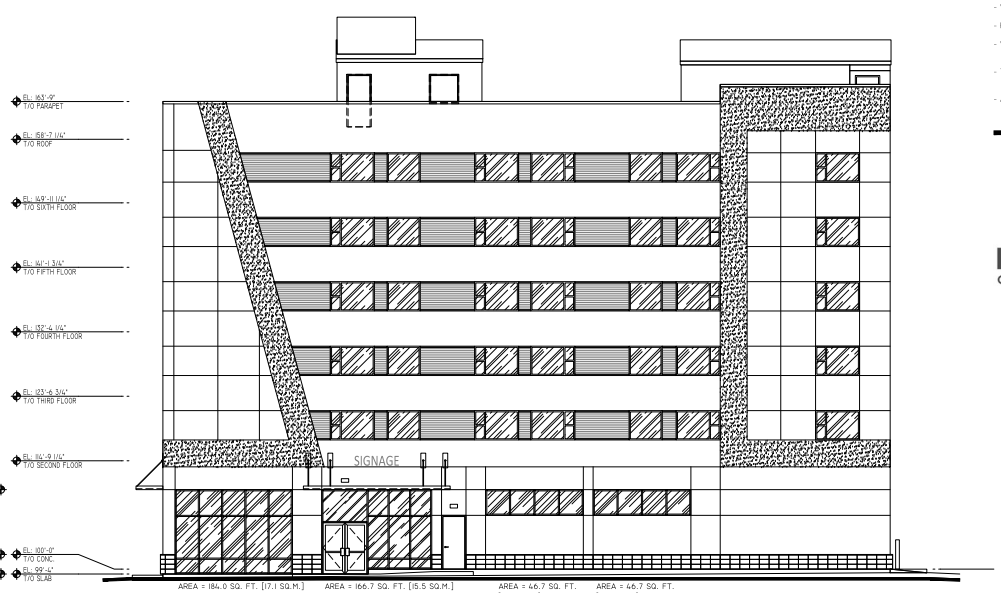
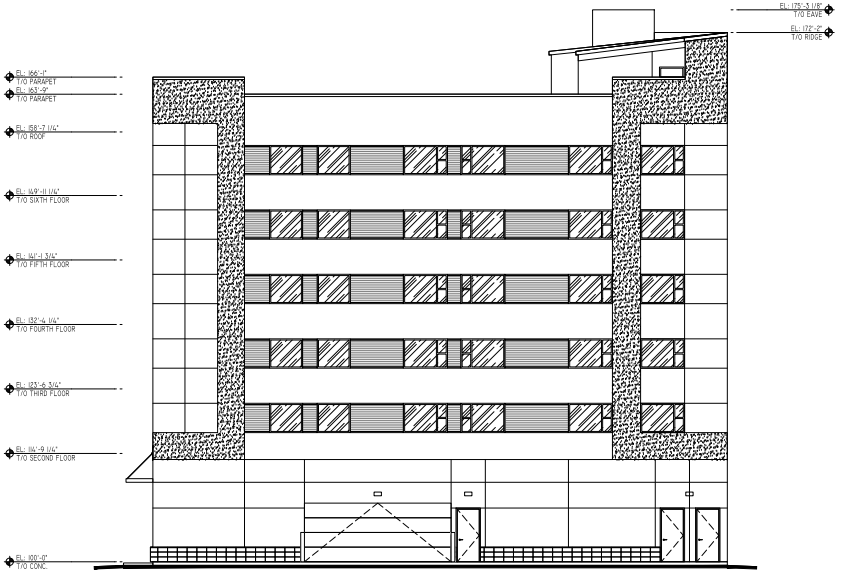


NORTH ELEVATION (COLLEGE DRIVE)
1/8" = 1'-0"
[1 : 96]

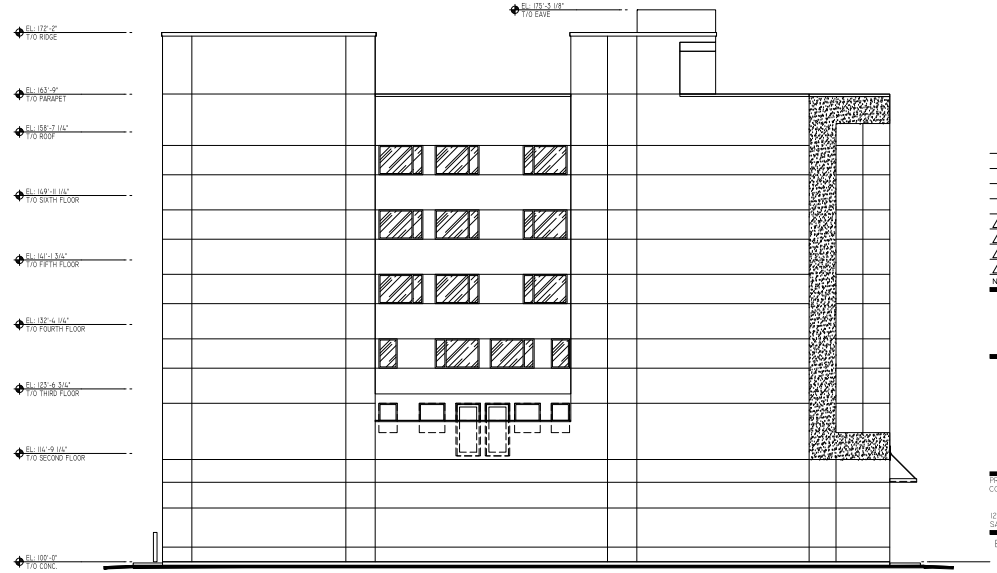


WALL AREA = 1,464.9 SQ. FT. [136.1 SQ.M.]
REQ'D TRANSPARENT AREA (30%) = 439.5 FT. [40.8 SQ.M.]
PROPOSED GLAZING AREA = 644.1 FT. [61.2 SQ.M.]

WEST ELEVATION (MUNROE AVE. N.)
1/8" = 1'-0"
[1 : 96]



SOUTH ELEVATION (LANE)
1/8" = 1'-0"
[1 : 96]



EAST ELEVATION
1/8" = 1'-0"
[1 : 96]

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1		

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COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATCHEWAN, SK

BUILDING ELEVATIONS

SCALE: AS NOTED

DRAWN: CDH
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- OF - PAGES

From: Jim Zimmer
To: Web E-mail - Development Appeals Board
Cc: michael.r@14northconstruction.ca; maggie@schwabplanning.ca
Subject: Appeal No. 9-2025 1202/1204 College Drive
Date: Wednesday, March 26, 2025 1:31:00 AM
Attachments: Closed Courtyard Detail.png
Closed courtyard Detail 2.png
Open Courtyard Plan.png
Enclosed Courtyard Plan.png

Dear Development Appeals Board: kindly accept the following as part of your review:

Please find a brief explanation for our for Appeal No, 9-2025 1202/1204 College Drive: the proposed new six storey mixed use building - apartment and with ground level commercial - at College Drive and Munroe Avenue.

The project is an exciting one in that it fits well with the new Corridor Station Zoning CS1 that has been adopted. The design intention is to try to achieve the intent of the bylaw, such as increased density, street level retail, pedestrian, bicycle and commuter oriented, and limited and screened parking. This new zoning has been a significant change from previous zoning.

A review of a preliminary design of the project revealed some shortfalls, for instance insufficient ground level transparent glazing on Munroe Avenue for "retail" presentation, incorrect grade slope up to accessible "retail" entrances on College Drive, a required accessible parking stall too far from building entry location, and loading zone and waste stall size. The design is being adjusted to fully conform to all of these requirements. Please withdraw our Appeal item regarding the Loading Stall encroaching the sideyard flanking landscaping, we will comply with the Bylaw.

The zoning permits zero sideyard to adjacent property at ground level and above, however zero sideyard to adjacent property at ground level but 1.5 metres sideyard if openings are facing the adjacent property and 3.0 metres sideyard above the 12.0 metre building height level if openings are facing the adjacent property. This is what we are Appealing. Regardless, there is no requirement for sideyard at adjacent property at the ground level floor.

We are proposing both zero sideyard to adjacent property at ground level and above, and zero sideyard to adjacent property at ground level and 3.0 metres sideyard with openings (doors and windows) facing the adjacent property.

In general the building is a basic box main floor retail / visitor parking / services and has five U-shaped floors above with residential apartments - there is no sideyard requirement for main floor abutting the adjacent property. The U-shaped floors above have stairs at the side, which frees up main floor space for parking maneuverabilty / circulation and possible future retail expansion. Two residential units per floor are planned on the interior of the U, they face the adjacent property, three metres away. There is not enough site depth to fit these interior units facing each other.

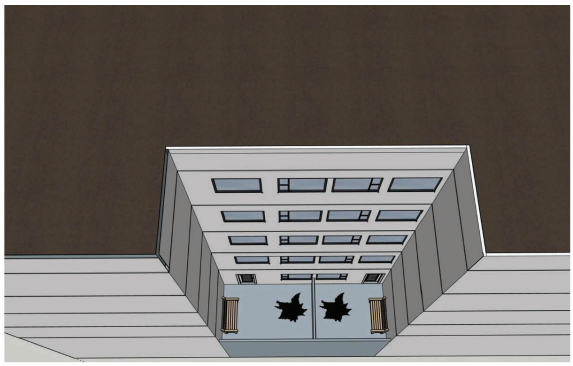
Window options for these particular interior residential units are: 1) no windows and doors, 2) windows and doors into an interior courtyard, ending with a slab wall at property line three metres away (forming a shear massive block of building at east sideyard), or by way of Appeal 3) windows and doors into a courtyard, but without a wall at property line (forming an inset stepped to break the shear massive slab of building at east sideyard)..

Option 1) is a non-starter regardless that it can still meet building code; Option 2) gives the neighbour a massive wall slab facing them; Option 3) makes the most sense - aside from the more amenable courtyard with fresh air and likely more daylight, the neighbour has a relief inset on the massive slab of building wall.

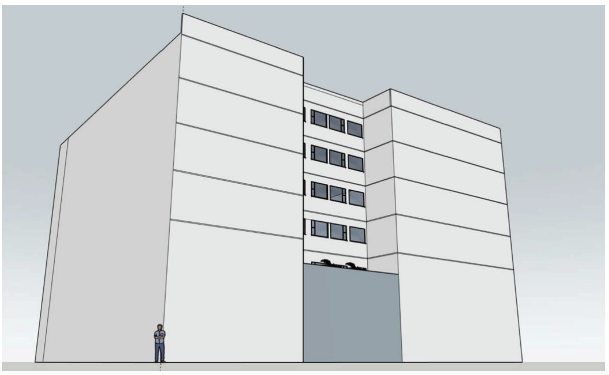
See schematic illustrations for reference:

James D. Zimmer Architect
109 - 2002 Quebec Avenue
Saskatoon SK S7K 1W4
306 - 931 - 6622

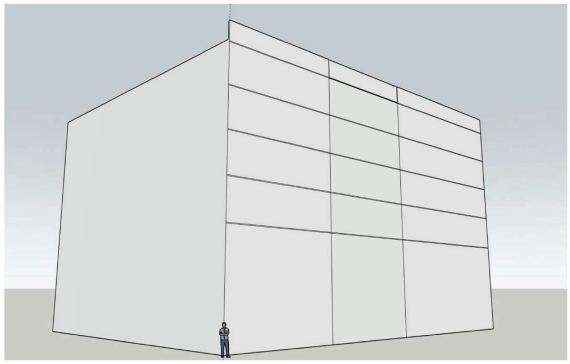
1202 College Open Courtyard



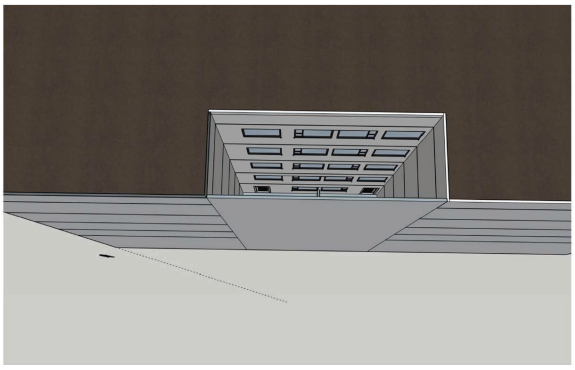
1202 open courtyard



1202 closed courtyard



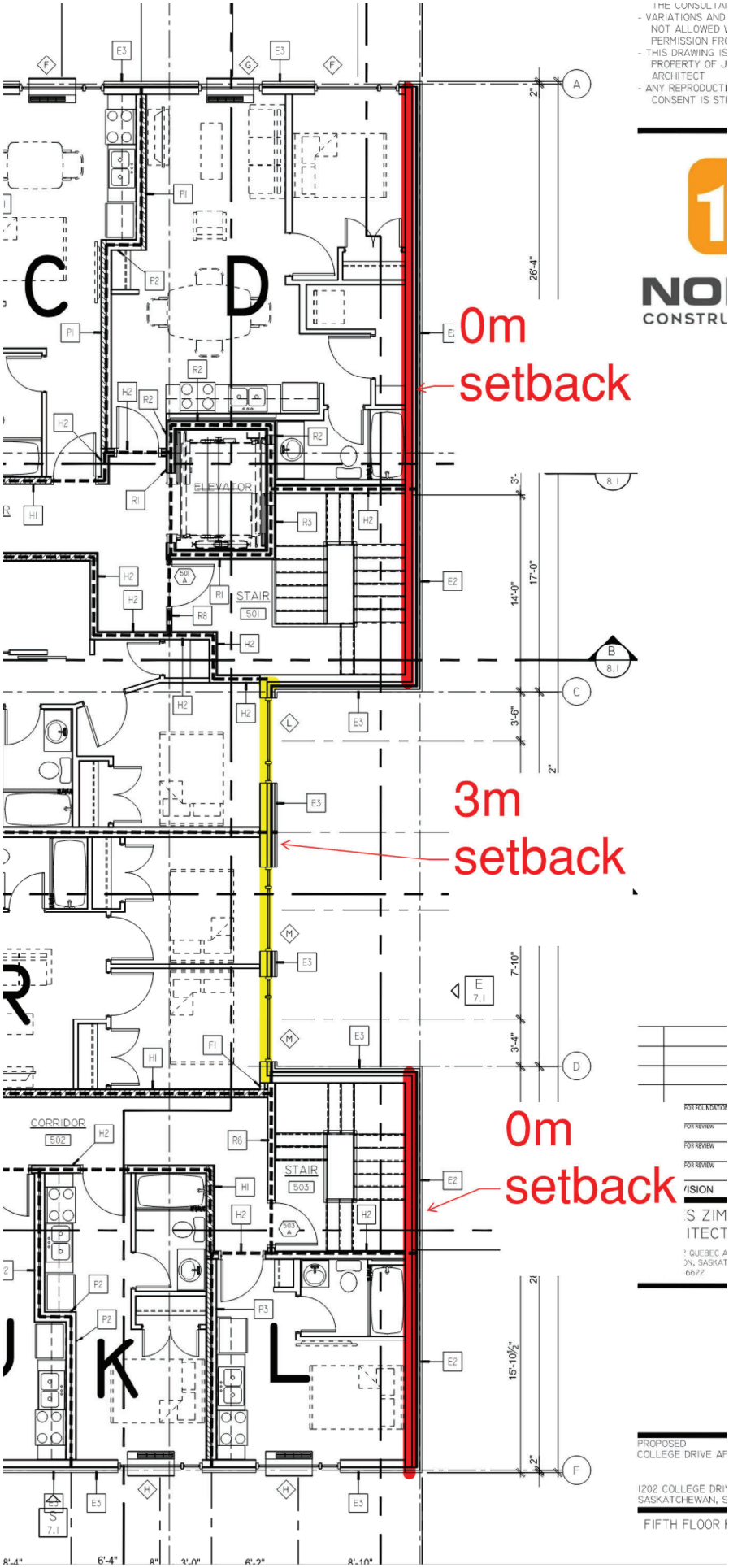
1202 closed courtyard

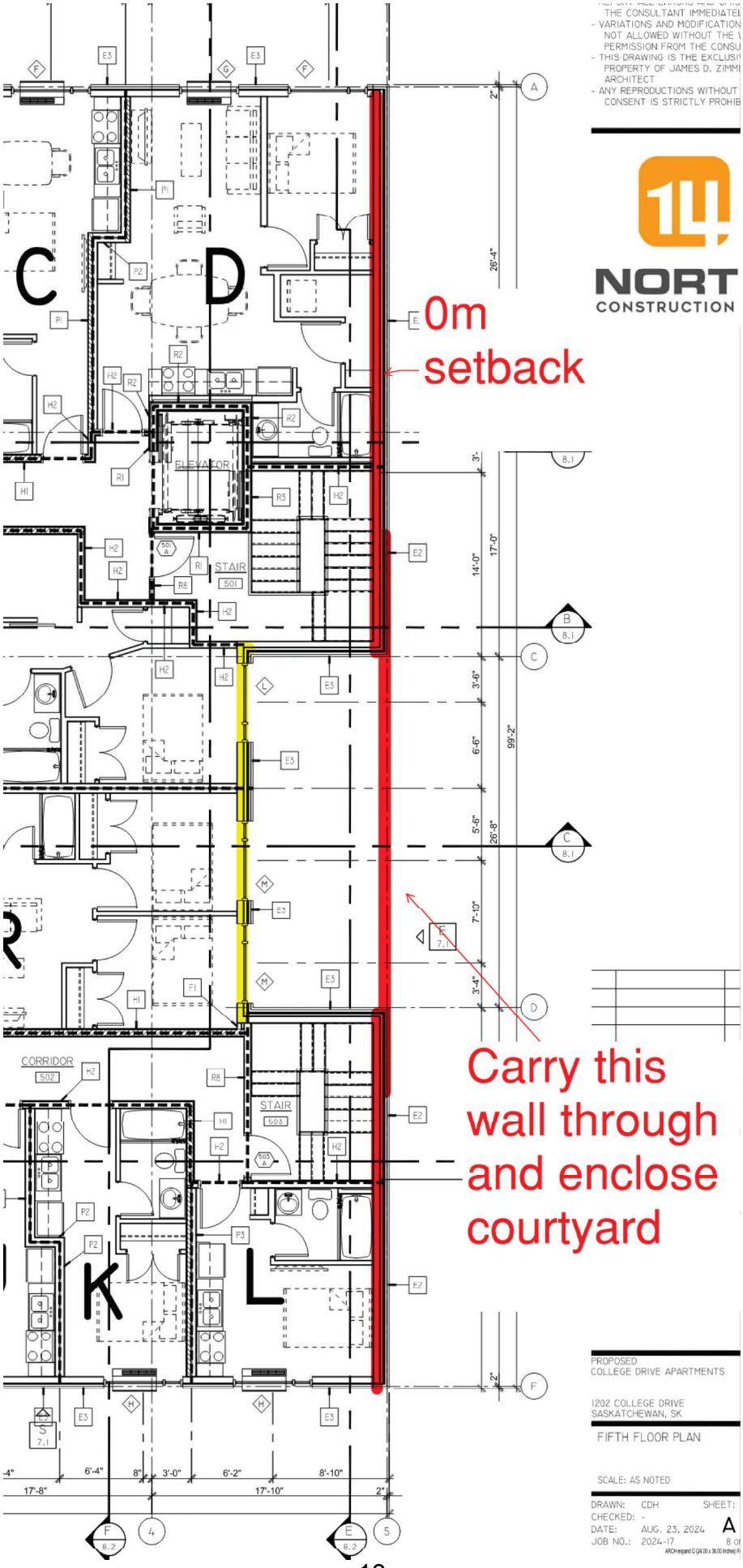


closed courtyard details

closed courtyard details

Open Courtyard Plan

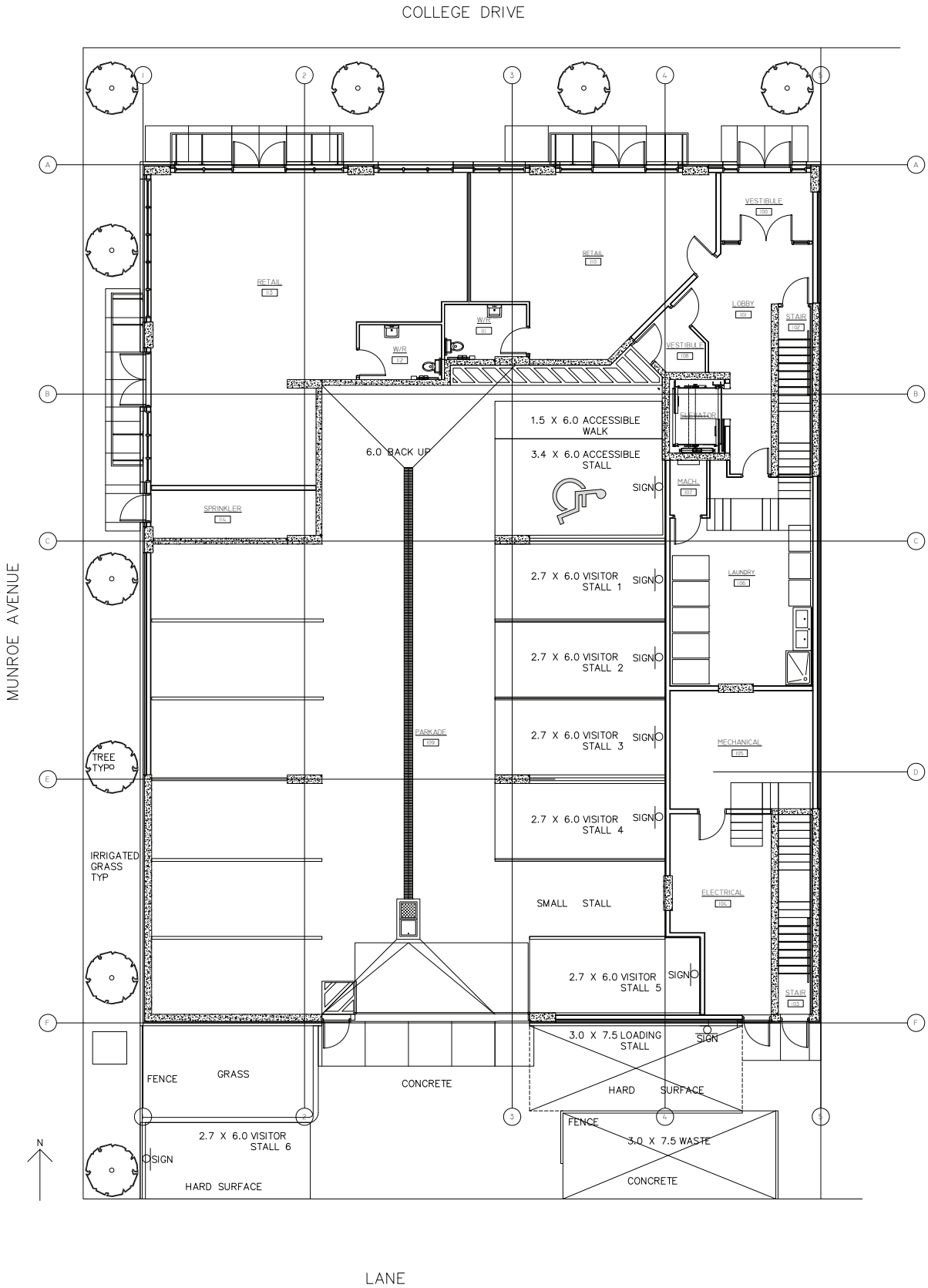


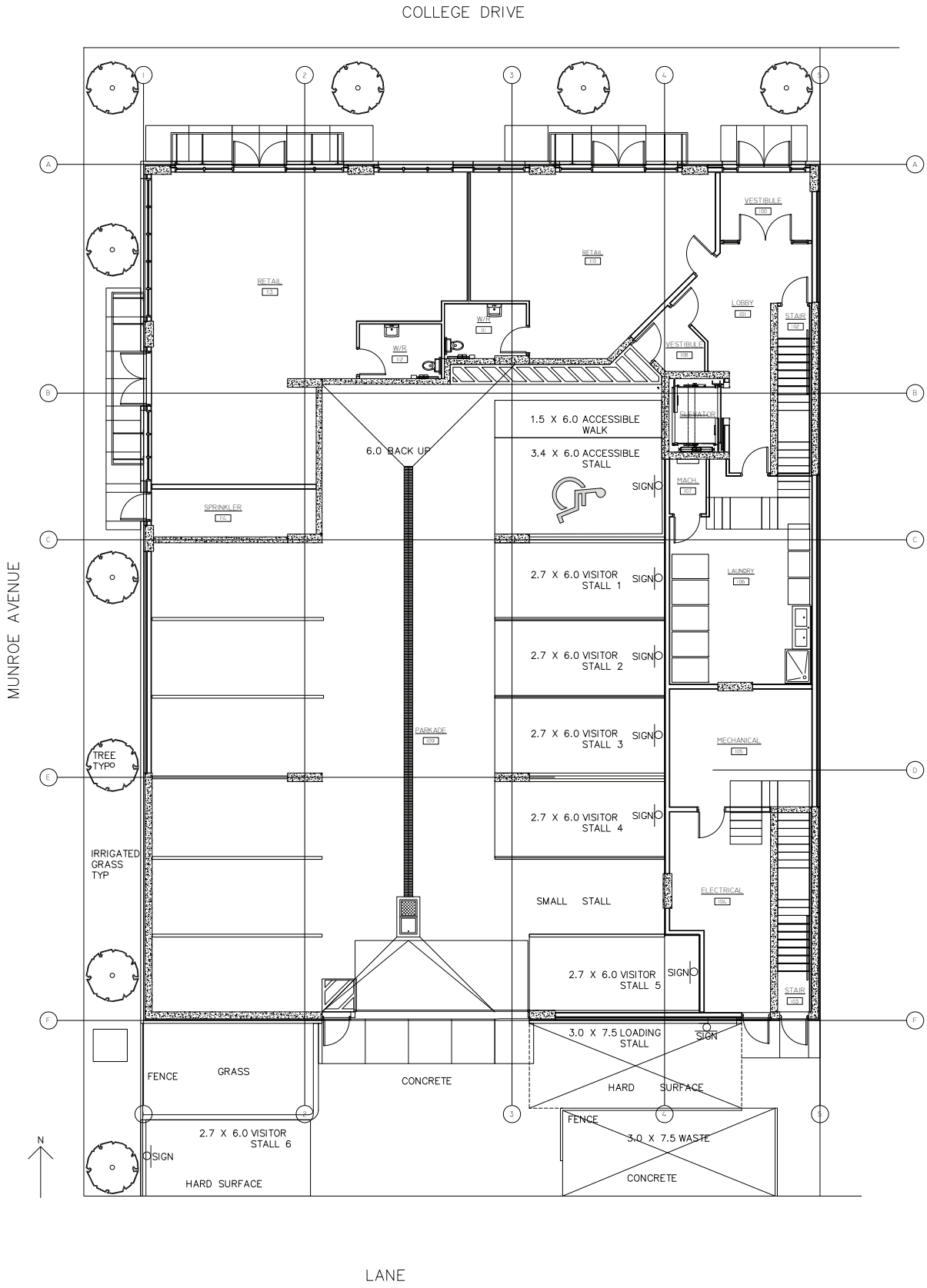

0m
setback
Carry this
wall through
and enclose
courtyard
NORT
CONSTRUCTION
ELEVATOR
STAIR
501
STAIR
503
CORRIDOR
502
PROPOSED
COLLEGE DRIVE APARTMENTS
1202 COLLEGE DRIVE
SASKATCHEWAN, SK
FIFTH FLOOR PLAN
SCALE: AS NOTED
DRAWN: CDH
CHECKED: -
DATE: AUG. 23, 2024
JOB NO.: 2024-17
SHEET: A

From: Jim Zimmer
To: Web E-mail - Development Appeals Board; michael.r@14northconstruction.ca
Cc: michael.r@14northconstruction.ca; maggie@schwabplanning.ca
Subject: Appeal No. 9-2025 1202 / 1204 COLLEGE DRIVE
Date: Wednesday, March 26, 2025 4:12:13 PM
Attachments: V1.pdf
2025-03-26_College_Drive_A2.1 SITE_EDIT.pdf

Please find attached our Site proposal for the above-referenced providing waste space and loading space, as such please withdraw this portion of our Appeal.

--
James D. Zimmer Architect
109 - 2002 Quebec Avenue
Saskatoon SK S7K 1W4
306 - 931 - 6622


COLLEGE DRIVE
MUNROE AVENUE
LANE
RETAIL
RETAIL
RETAIL
W/R
W/R
W/R
VESTIBULE
VESTIBULE
LOBBY
STAIR
1.5 X 6.0 ACCESSIBLE WALK
3.4 X 6.0 ACCESSIBLE STALL
SIGN
6.0 BACK UP
MECH.
SPRINKLER
2.7 X 6.0 VISITOR STALL 1
SIGN
LAUNDRY
2.7 X 6.0 VISITOR STALL 2
SIGN
PARKADE
2.7 X 6.0 VISITOR STALL 3
SIGN
MECHANICAL
TREE TYPO
2.7 X 6.0 VISITOR STALL 4
SIGN
IRRIGATED GRASS TYP
ELECTRICAL
SMALL STALL
2.7 X 6.0 VISITOR STALL 5
SIGN
STAIR
3.0 X 7.5 LOADING STALL
SIGN
FENCE
GRASS
CONCRETE
HARD SURFACE
FENCE
3.0 X 7.5 WASTE
CONCRETE
2.7 X 6.0 VISITOR STALL 6
SIGN
HARD SURFACE
N


COLLEGE DRIVE
MUNROE AVENUE
LANE
N
RETAIL
115
RETAIL
110
W/R
111
W/R
112
VESTIBULE
100
LOBBY
101
STAIR
102
VESTIBULE
108
MECH.
107
SPRINKLER
116
LAUNDRY
106
PARKADE
109
MECHANICAL
105
ELECTRICAL
104
STAIR
103
1.5 X 6.0 ACCESSIBLE WALK
3.4 X 6.0 ACCESSIBLE STALL
SIGN
6.0 BACK UP
2.7 X 6.0 VISITOR STALL 1
SIGN
2.7 X 6.0 VISITOR STALL 2
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2.7 X 6.0 VISITOR STALL 3
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2.7 X 6.0 VISITOR STALL 4
SIGN
SMALL STALL
2.7 X 6.0 VISITOR STALL 5
SIGN
3.0 X 7.5 LOADING STALL
SIGN
TREE TYPO
IRRIGATED GRASS TYP
FENCE
GRASS
CONCRETE
HARD SURFACE
FENCE
3.0 X 7.5 WASTE
CONCRETE
2.7 X 6.0 VISITOR STALL 6
SIGN
HARD SURFACE

City of Saskatoon
Planning and Development
222 3rd Avenue North
Saskatoon SK S7K 0J5
www.saskatoon.ca
tel (306) 975-2645
fax (306) 975-7712

R.1

February 19th, 2025

James Zimmer
James D Zimmer Architect
1249 8th St E
Saskatoon, SK S7H 0S5

SENT VIA EMAIL

Re: Development Permit Denial: APART-2025-00787
Proposal: Shopping Centre with Multiple Unit Dwelling (65 Dwelling Units)
Site Address: 1202/1204 College Drive
Zoning District: CS1 – Corridor Station Mixed-Use 1 District

The Planning and Development Division has reviewed your submitted Building and Development Permit application new shopping centre with a multiple unit dwelling. After review, the following deficiencies has been noted with the City of Saskatoon's Zoning Bylaw 9990:

1. Requirement: Section 10.4.4(2)(b) states for multiple unit dwellings or where dwelling units are erected above commercial, office or institutional, an interior side yard shall be provided for the part of the building containing such dwelling units of 1.5 metres, up to a height of 12 metres and 3 metres or that portion of the building in excess of 12 metres in height. No such side yard shall be required when no window, door or other opening is provided in the wall facing the adjacent property.

   Proposed: Dwelling units are provided on the 2nd to 6th floors, with windows and doors along the East wall facing the adjacent property. A 0-metre interior side yard setback is proposed from the East portion of building containing dwellings, to the East property line.

   Deficiency: This results in a East interior side yard deficiency of 1.5 metres for the first 12 metres of the building containing dwelling units, and a 3 metre East side yard for the portion of the building in excess of 12 metres in height that contain dwelling units.

2. Requirement: Section 5.2.6(2)(a) states waste spaces must be not less than 3 metres by 7.5 metres.

   Proposed: The shown waste space is 3 metres by 6 metres.

   Deficiency: This results in a waste space deficiency of 1.5 metres in length.

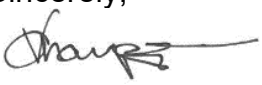
As consequence, the Planning and Development Division cannot approve your plans for a Development Permit.

I understand you wish to appeal this decision to the Development Appeal Board. To proceed with a appeal request please fill out the online Development Appeal application form available through the following link: https://capps.saskatoon.ca/development-appeals/ within 30 days of the date of this letter. Note there is a application fee of $50 for this process. Attached to this email is general information about the Development Appeal process, as well as a extract from the Planning and Development Act 2007.

Please note for this review, all dimension lines to the building were assumed to be from exterior finished building wall face, which may require clarification to should this proceed with a building and development permit application review.

If you have any questions about this information, please let me know.

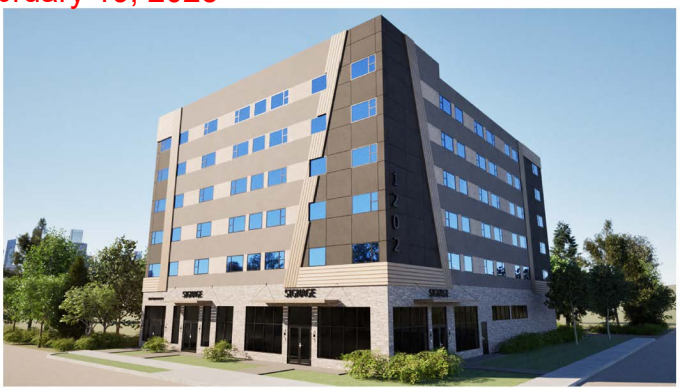
Sincerely,



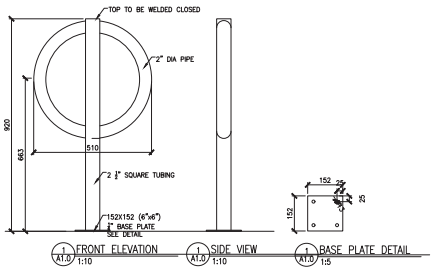
Vanessa Champagne
Planning and Development Division (306-975-2659)
vanessa.champagne@saskatoon.ca

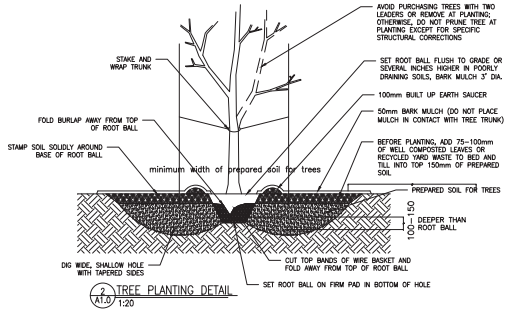
cc: Michael Robertson, 14 North Construction Ltd
Brent McAdam, Planning and Development
Development Appeal Board Secretary, City Clerks

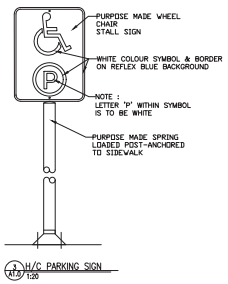
Received
City Clerk's Office
February 19, 2025



SITE DATA:
- ZONING: CS1 - CORRIDOR STATION MIXED - USE 1 DISTRICT
- ADDRESS: 1202 AND 1204 COLLEGE DRIVE
- BUILDING FOOTPRINT: 722± M²
- PERMITTED USES: (ASSEMBLY / RETAIL / PERSONAL SERVICE / SHOPPING CENTRE) DWELLING UNITS NOT MAINFLOOR
- ACTIVE FRONTAGE - MINIMUM 30% OF SURFACE AREA OF GROUND FLOOR OF ALL STREET FACING FACADES TO CONTAIN TRANSPARENT OPENINGS (COLLEGE DRIVE, MUNROE AVENUE)
- SIDE WIDTH ISM: 25.91± M
- SITE AREA (MIN) 450 M²: 1074± M²
- FRONT YARD SETBACK: 4.0M
- SIDE YARD SETBACK: 2.0M AT FLANKING STREET / 0.0 M
- REAR YARD SETBACK: 6.0M
- BUILDING HEIGHT: MAX 27M (19.3± M BUILDING & 24.9± M ELEVATOR HEAD / STAIRWELLS / MECH MEZZ)
- AMENITY SPACE PER UNIT: 5M²
- ASSIGNED VISITOR PARKING STALLS: 6
- BARRIER FREE PARKING STALL: 1
- BIKE PARKING: 3 SHORT TERM BIKE STALLS MULTIPLE DWELLING; 2 SHORT TERM BIKE STALLS FOR MAIN FLOOR COMMERCIAL
- LOADING SPACE = 1 (7.5M X 3.0M)
- GARBAGE / RECYCLE STORAGE AND PICK UP SPACE = (7.5M X 3.0M)



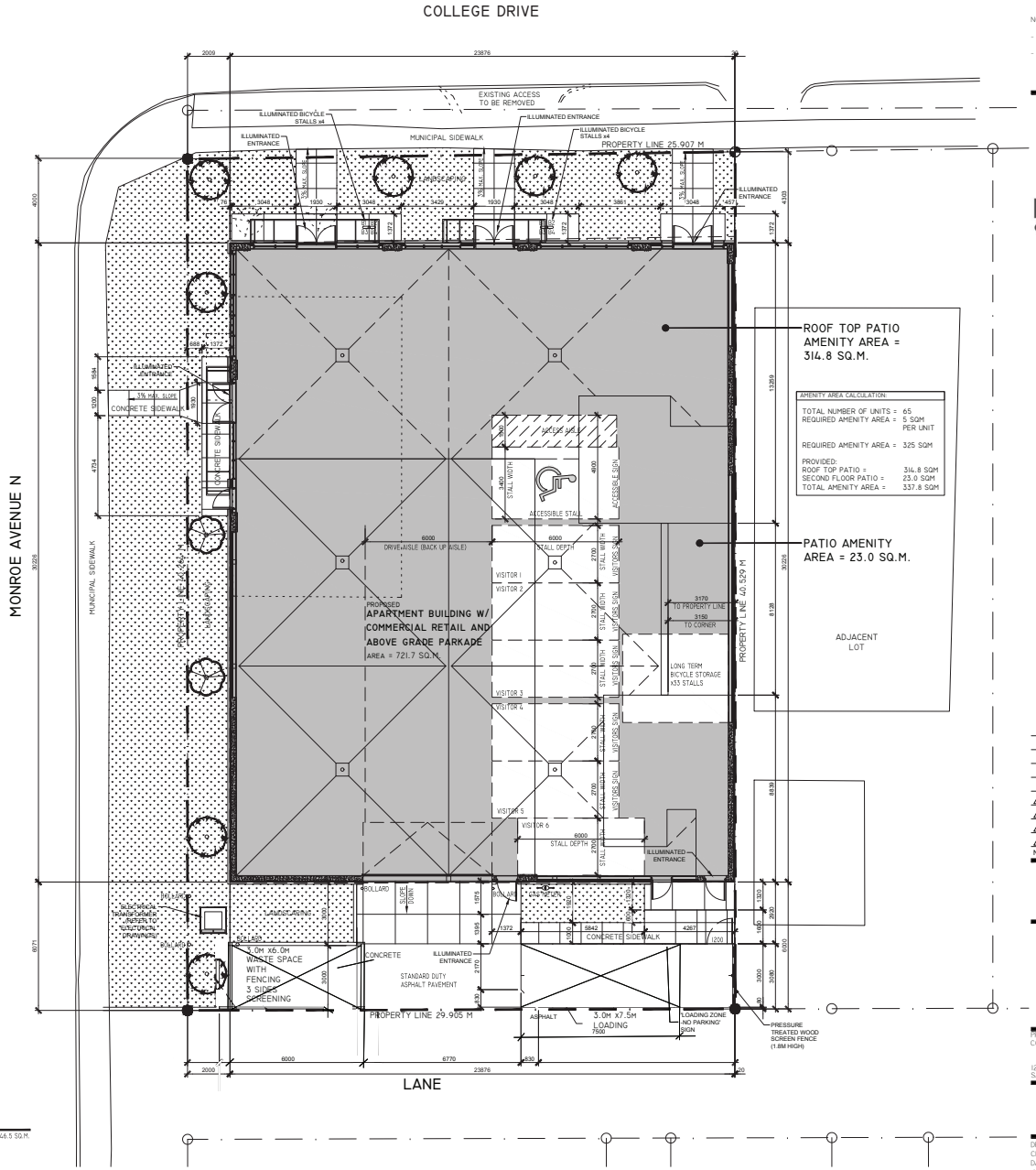




ADDRESS:

LEGAL
LOTS 1202 AND 1204
BLOCK
PLAN

CIVIC
ADDRESS 1202 COLLEGE DRIVE
MUNICIPALITY CITY OF SASKATOON
PROVINCE SASKATCHEWAN



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NORTH CONSTRUCTION LTD

No.	REVISION	DATE:
5	ISSUED FOR FOUNDATION PERMIT	FEB. 14 XXX
4	ISSUED FOR REVIEW	FEB. 10 XXX
3	ISSUED FOR REVIEW	DEC. 18 XXX
2	ISSUED FOR REVIEW	DEC. 18 XXX
1		

JAMES ZIMMER ARCHITECT
#109-2002 QUEBEC AVE, SASKATOON, SASKATCHEWAN
(306) 931-6622

NOT FOR CONSTRUCTION

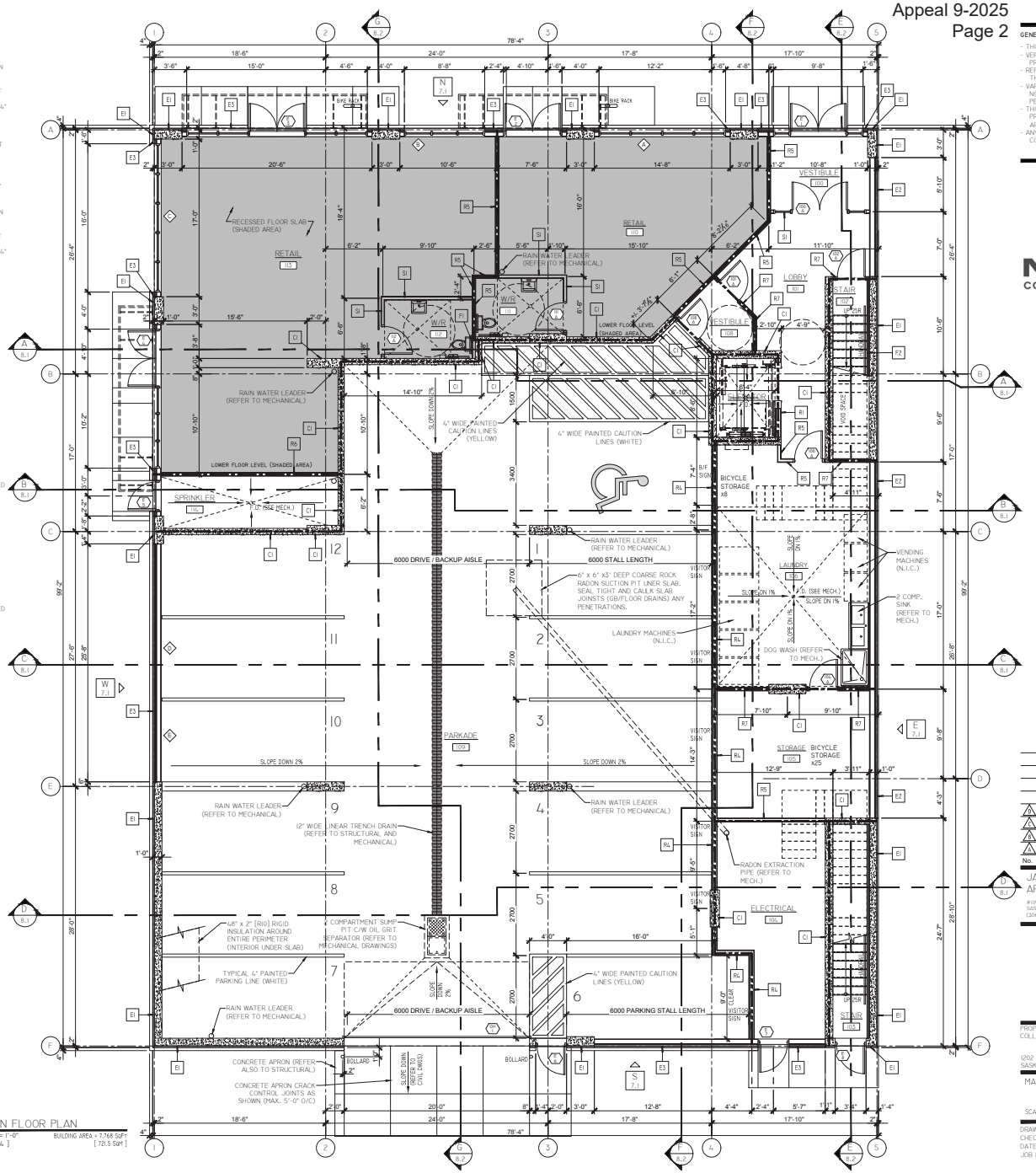
PROPOSED
COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATCHEWAN, SK

SITE PLAN

SCALE: AS NOTED

DRAWN: CDH SHEET: A 2.1
CHECKED: -
DATE: AUG. 23, 2024
JOB NO.: 2024-17
2 OF ... PAGES



E1 E1: TYPICAL 1.0 HR FRR LOADBEARING EXTERIOR NONCOMBUSTIBLE CLAD CONCRETE SHEAR WALL CONSTRUCTION
(NBC 2020 TABLE D-2.1.1. 90MM CONCRETE + 1.0 HR)

- ACRYLIC STUCCO EXTERIOR EIFS SYSTEMS TO ADEX SYSTEM INC., DESIGN NO. ASI/WDEIFS 25-01(EIFS) ADEX-RS SYSTEMS CAN/ULC S134 [INTERTEK APPROVAL OCTOBER 9, 2018] (DEEMED NONCOMBUSTIBLE)
- 2" EIFS EXTERIOR NONCOMBUSTIBLE CLADDING, WOODPECKER RESISTANT ACRYLIC ADEX STUCCO FINISH AND PRIME COAT ON ADEX MESH 3" ADEX-GD OR ADEX FLAT INSULATION BOARD, INCLUDE NOT LESS THAN 1/4" DEEP DRAINAGE PATH FOR WATER THAT PENETRATES PAST THE EXTERIOR CLADDING.
- ADEX SYSTEMS WATER RESISTIVE BARRIER
- 10" CONCRETE SHEAR WALL
- NOTE: REFER TO PLAN FOR LOCATIONS WHERE EIFS CLADDING NEED NOT BE NONCOMBUSTIBLE.

E2 E2: TYPICAL NONCOMBUSTIBLE / NONCOMBUSTIBLE CLAD 1.0 HR FRR WALL WITH 1.0 HR LOAD BEARING EXTERIOR WALL CONSTRUCTION
(NBC 2020 TABLE 9.10.3.1.-A: NO. S18; 1HR STC43)

- ACRYLIC STUCCO EXTERIOR EIFS SYSTEMS TO ADEX SYSTEM INC., DESIGN NO. ASI/WDEIFS 25-01(EIFS) ADEX-RS SYSTEMS CAN/ULC S134 [INTERTEK APPROVAL OCTOBER 9, 2018] (DEEMED NONCOMBUSTIBLE)
- 2" EIFS EXTERIOR NONCOMBUSTIBLE CLADDING, WOODPECKER RESISTANT ACRYLIC ADEX STUCCO FINISH AND PRIME COAT ON ADEX MESH 3" ADEX-GD OR ADEX FLAT INSULATION BOARD, INCLUDE NOT LESS THAN 1/4" DEEP DRAINAGE PATH FOR WATER THAT PENETRATES PAST THE EXTERIOR CLADDING.
- ADEX SYSTEMS WATER RESISTIVE BARRIER
- 5/8" TYPE X GLASROC / DENSGLAS SHEATHING, FIRETAPED
- 2 1/2" STEEL STUDS AT 16" O.C.
- 2 1/2" ROCKWOOL
- 5/8" TYPE X GYPSUM BOARD, FIRETAPED
- 1/2" PLYWOOD SHEATHING
- 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL
- 5 1/2" FIBERGLASS INSULATION
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED
- FRP (MAX FLAME SPREAD RATING 150) LINER TO 4' HIGH ON PARKADE SIDE

C1 C1: PARKADE CONCRETE DEMISING WALL CONSTRUCTION
1.5 HR

- EXPOSED CONCRETE FINISH
- CONCRETE WALL OR COLUMN (REFER TO STRUCTURAL) C/W NOT LESS THAN 1" CONCRETE COVER OVER REINFORCED STEEL
- EXPOSED CONCRETE FINISH

R1 R1: ELEVATOR FRAMING (LOBBY / CORRIDOR)
(N.B.C. 2020 TABLE: 9.10.3.1.-A; NO.: W19; 1.0 HR STC 32) (SIM TO)

ELEVATOR SIDE
- DOUBLE LAYER 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S) [ELEVATOR SIDE]
- 3/4" PLYWOOD SHEATHING SHAFT LINER (REFER TO STRUCTURAL)
- LOAD BEARING WALL, 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL (WOOD BLOCKING FIRE STOPPING MAX 10 FT O.C. HORIZONTAL)
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)

R4 R4: PARKADE FRAMING
(N.B.C. 2020 TABLE: 9.10.3.1.-A; NO.: W22; 1.5 HR STC 36) (SIM TO)

PARKADE SIDE
- FRP LINER (MAX. FLAME SPREAD RATING 150) TO 4.8" HIGH
- DOUBLE LAYER 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)
- LOAD BEARING WALL, 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL (WOOD BLOCKING FIRE STOPPING MAX 10 FT O.C. HORIZONTAL)
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)

R5 R5: TENANT / LAUNDRY FIRE SEPARATION
(N.B.C. 2020 TABLE: 9.10.3.1.-A; NO. S18; 1.0 HR STC 39)

- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)
- 3 5/8" STEEL STUDS AT 16" O.C. C/W REQ'D BRIDGING AND BRACING
- 3 1/2" MINERAL WOOL INSULATION
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)

R6 R6: SPRINKLER / RETAIL FIRE SEPARATION
(N.B.C. 2020 TABLE: 9.10.3.1.-A; NO. S18; 1.0 HR STC 36) (SIM TO)

SPRINKLER ROOM SIDE
- 1/2" PRIMED AND PAINTED PLYWOOD SHEATHING
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)
- 3 5/8" STEEL STUDS AT 16" O.C. C/W REQ'D BRIDGING AND BRACING
- 3 1/2" MINERAL WOOL INSULATION
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)

R7 R7: STEEL STUD FRAMED FIRE SEPARATION
(GYPSUM ASSOCIATION NO. SWP 1072; 1.0 HR STC 45)

- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)
- 3 5/8" STEEL STUDS AT 16" O.C. C/W REQ'D BRIDGING AND BRACING
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)

F1 F1: STEEL STUD FURRING WALL CONSTRUCTION:

- 1/2" GYPSUM BOARD, TAPED, SANDED AND PAINTED EACH SIDE (WATER RESISTANT GYPSUM BOARD IN WASHROOMS)
- 3 5/8" STEEL STUDS 16" O.C.

F2 F2: STAIR FURRING WALL CONSTRUCTION:

- 5/8" GYPSUM BOARD, TAPED, SANDED AND PAINTED
- 2" STEEL STUDS 16" O.C. (ANCHOR BACK TO CONCRETE WALL AS REQ'D)

S1 S1: INTERIOR STEEL STUD INSULATED WALL CONSTRUCTION:

- 1/2" GYPSUM BOARD, TAPED, SANDED AND PAINTED EACH SIDE
- 3 5/8" STEEL STUDS 16" O.C.
- 3 1/2" ACOUSTIC INSULATION
- 1/2" GYPSUM BOARD, TAPED, SANDED AND PAINTED EACH SIDE (WATER RESISTANT GYPSUM BOARD IN WASHROOMS)

S2 S2: INTERIOR STEEL STUD WALL CONSTRUCTION:

- 1/2" GYPSUM BOARD, TAPED, SANDED AND PAINTED EACH SIDE
- 3 5/8" STEEL STUDS 16" O.C.
- 1/2" GYPSUM BOARD, TAPED, SANDED AND PAINTED EACH SIDE

NORTH

MAIN FLOOR PLAN

3/16" = 1'-0" [1 : 64]

BUILDING AREA = 7,768 SqFt [721.5 SqM]

GENERAL NOTES

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No.	REVISION	DATE:
A	ISSUED FOR FOUNDATION PERMIT	FEB 14 2025
A	ISSUED FOR REVIEW	FEB 18 2025
A	ISSUED FOR REVIEW	DEC 20 2024
A	ISSUED FOR REVIEW	OCT 30 2024

JAMES ZIMMER ARCHITECT
#109-2102 QUEBEC AVE, SASKATOON, SASKATCHEWAN
(306) 931-6622

NOT FOR CONSTRUCTION

PROPOSED
COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATCHEWAN, SK

MAIN FLOOR PLAN

SCALE: AS NOTED

DRAWN: CDH
CHECKED: -
DATE: AUG. 23, 2024
JOB NO.: 2024-17

SHEET: A 3.1
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E2 E2: TYPICAL NONCOMBUSTIBLE / NONCOMBUSTIBLE CLAD 1.0 HR FRR WALL WITH 1.0 HR LOAD BEARING EXTERIOR WALL CONSTRUCTION [NBC 2020 TABLE 9.10.3.1.-A: NO. 58b; 8R STC 62]

- ACRYLIC STUCCO EXTERIOR EIFS SYSTEMS TO ADEX SYSTEM INC. DESIGN NO. ASI/WDEIFS 25-01(EIFS) ADEX-RS SYSTEMS CAN/ULC S134 [INTERTEK APPROVAL OCTOBER 9, 2018] (DEEMED NONCOMBUSTIBLE)
- 2" EIFS EXTERIOR NONCOMBUSTIBLE CLADDING, WOODPECKER RESISTANT ACRYLIC ADEX STUCCO FINISH AND PRIME COAT ON ADEX MESH 3" ADEX-GD OR ADEX FLAT INSULATION BOARD, INCLUDE NOT LESS THAN 1/4" DEEP DRAINAGE PATH FOR WATER THAT PENETRATES PAST THE EXTERIOR CLADDING.
- ADEX SYSTEMS WATER RESISTIVE BARRIER
- 5/8" TYPE X GLASROC / DENSGLASS SHEATHING, FIRETAPED
- 2 1/2" STEEL STUDS AT 16" O.C.
- 2 1/2" ROCKWOOL
- 5/8" TYPE X GYPSUM BOARD, FIRETAPED
- 1/2" PLYWOOD SHEATHING
- 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL
- 5 1/2" FIBERGLASS INSULATION
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED
- FRP (MAX FLAME SPREAD RATING 150) LINER TO 4' HIGH ON PARKADE SIDE

E3 E3: TYPICAL 1.0 HR FRR LOADBEARING EXTERIOR WALL CONSTRUCTION [NBC 2020 TABLE 9.10.3.1.-A: NO. W#a; NO. EW2a 1.0 HR]

- ACRYLIC STUCCO EXTERIOR EIFS SYSTEM
- 2" EIFS EXTERIOR NONCOMBUSTIBLE CLADDING, WOODPECKER RESISTANT ACRYLIC STUCCO FINISH AND PRIME COAT ON MESH 3" INSULATION BOARD, INCLUDE NOT LESS THAN 1/4" DEEP DRAINAGE PATH FOR WATER THAT PENETRATES PAST THE EXTERIOR CLADDING.
- WATER RESISTIVE BARRIER
- 1/2" PLYWOOD SHEATHING
- 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL
- 5 1/2" FIBERGLASS INSULATION
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED

E4 E3: TYPICAL 1.0 HR FRR LOAD BEARING EXTERIOR WALL CONSTRUCTION [NBC 2020 TABLE 9.10.3.1.-A: NO. W#a; NO. EW2a 1.0 HR]

- ACRYLIC STUCCO EXTERIOR EIFS SYSTEM
- 2" EIFS EXTERIOR NONCOMBUSTIBLE CLADDING, WOODPECKER RESISTANT ACRYLIC STUCCO FINISH AND PRIME COAT ON MESH 3" INSULATION BOARD, INCLUDE NOT LESS THAN 1/4" DEEP DRAINAGE PATH FOR WATER THAT PENETRATES PAST THE EXTERIOR CLADDING.
- WATER RESISTIVE BARRIER
- 1/2" PLYWOOD SHEATHING
- 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL
- 5 1/2" FIBERGLASS INSULATION
- 3/4" PLYWOOD SHEATHING
- DOUBLE LAYER OF 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED

R1 R1: ELEVATOR FRAMING (LOBBY / CORRIDOR) [N.B.C. 2020 TABLE: 9.10.3.1.-A: NO. W#b; 1.0 HR STC 32] (SIM TO)

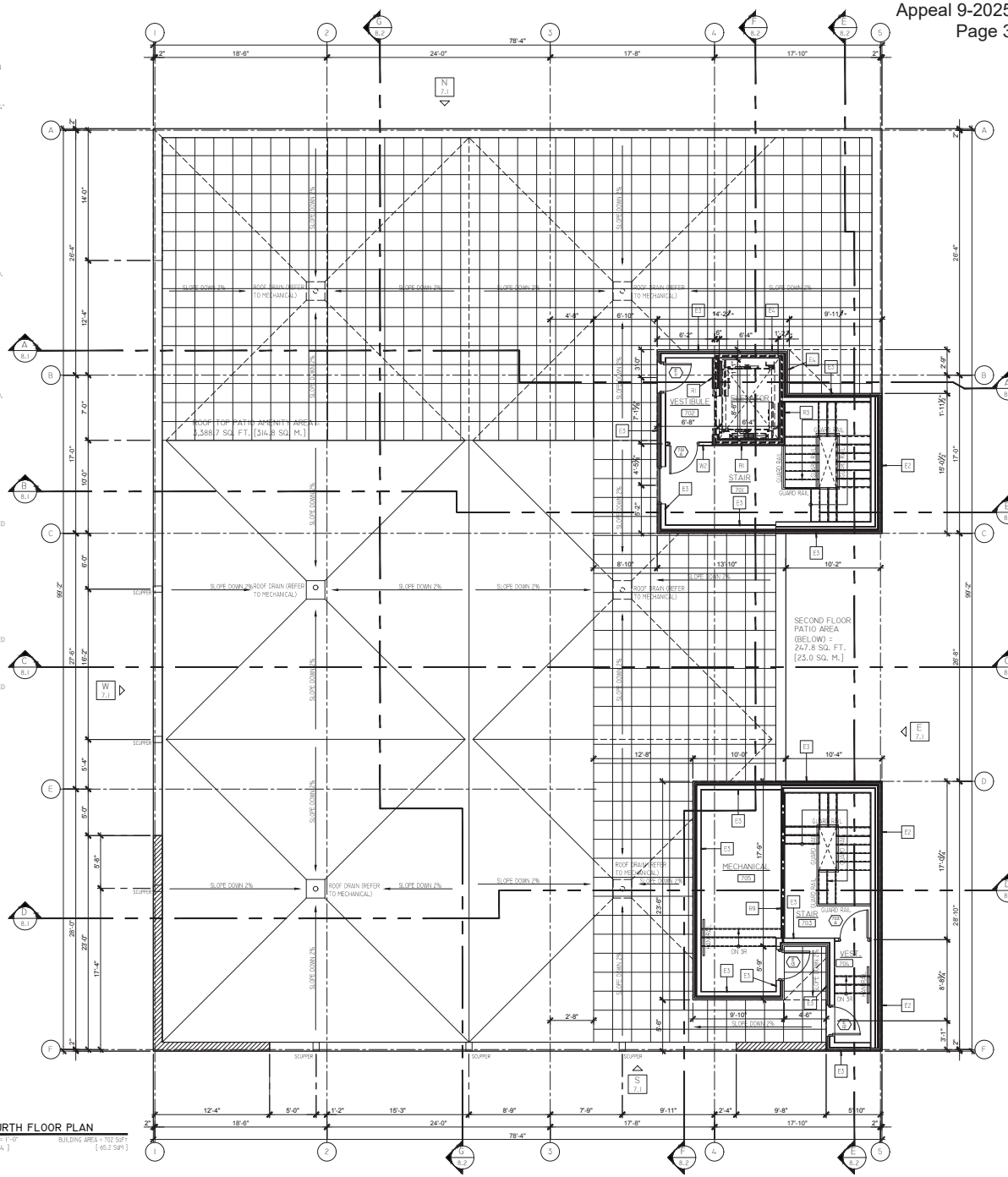
ELEVATOR SIDE
- DOUBLE LAYER 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S) [ELEVATOR SIDE]
- 3/4" PLYWOOD SHEATHING SHAFT LINER (REFER TO STRUCTURAL)
- LOAD BEARING WALL 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL (WOOD BLOCKING FIRE STOPPING MAX 10 FT O.C. HORIZONTAL)
- 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)

R3 R1: ELEVATOR FRAMING (STAIR) [N.B.C. 2020 TABLE: 9.10.3.1.-A: NO. W2a; 1.5 HR STC 36] (SIM TO)

ELEVATOR SIDE
- DOUBLE LAYER 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)
- 3/4" PLYWOOD SHEATHING SHAFT LINER (REFER TO STRUCTURAL)
- LOAD BEARING WALL 2" X 6" WOOD STUDS, STUD SPACING REFER TO STRUCTURAL (WOOD BLOCKING FIRE STOPPING MAX 10 FT O.C. HORIZONTAL)
- DOUBLE LAYER 5/8" TYPE X GYPSUM BOARD, TAPED, SANDED AND PAINTED EXPOSED SIDE(S)

R9 R9: SHAFT WALL CONSTRUCTION [NBC 2020 TABLE 9.10.3.1.-A: NO. W#b; 1.0 HR; STC 32]

- 5/8" TYPE X GYPSUM BOARD; TAPED, SANDED AND PAINTED
- 2" X 4" WOOD STUDS, STUD SPACING (REFER TO STRUCTURAL)
- DOUBLE BOTTOM PLATE AND DOUBLE TOP PLATE
- 5/8" TYPE X GYPSUM BOARD; TAPED, SANDED AND PAINTED



FOURTH FLOOR PLAN
3/16" = 1'-0" [1 : 64]
BUILDING AREA = 702 SQFT [65.2 SQM]

GENERAL NOTES
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4	ISSUED FOR FOUNDATION PERMIT	FEB. 14 2025
3	ISSUED FOR REVIEW	FEB. 10 2025
2	ISSUED FOR REVIEW	DEC. 20 2024
1	ISSUED FOR REVIEW	DEC. 12 2024

JAMES ZIMMER ARCHITECT
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SASKATOON, SASKATCHEWAN
(306) 931-6622

NOT FOR CONSTRUCTION

PROPOSED
COLLEGE DRIVE APARTMENTS

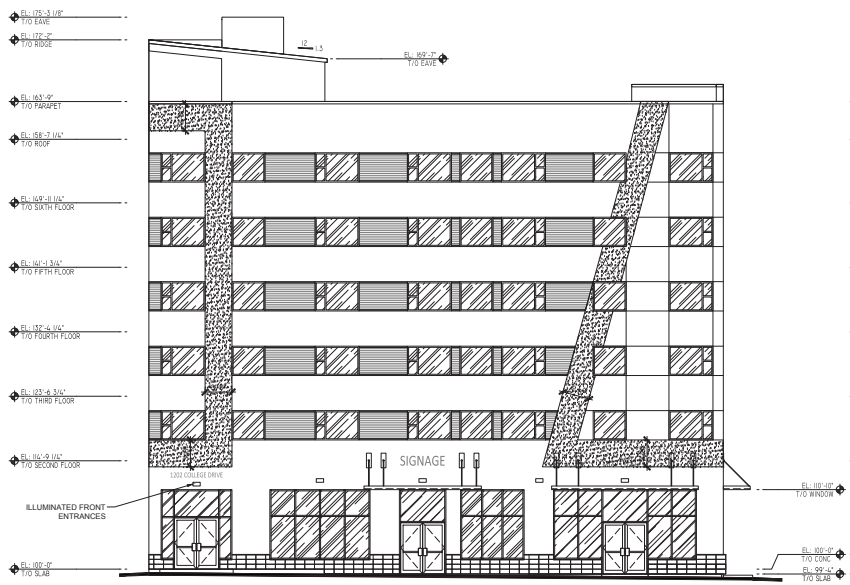
1202 COLLEGE DRIVE
SASKATCHEWAN, SK

ROOF PLAN

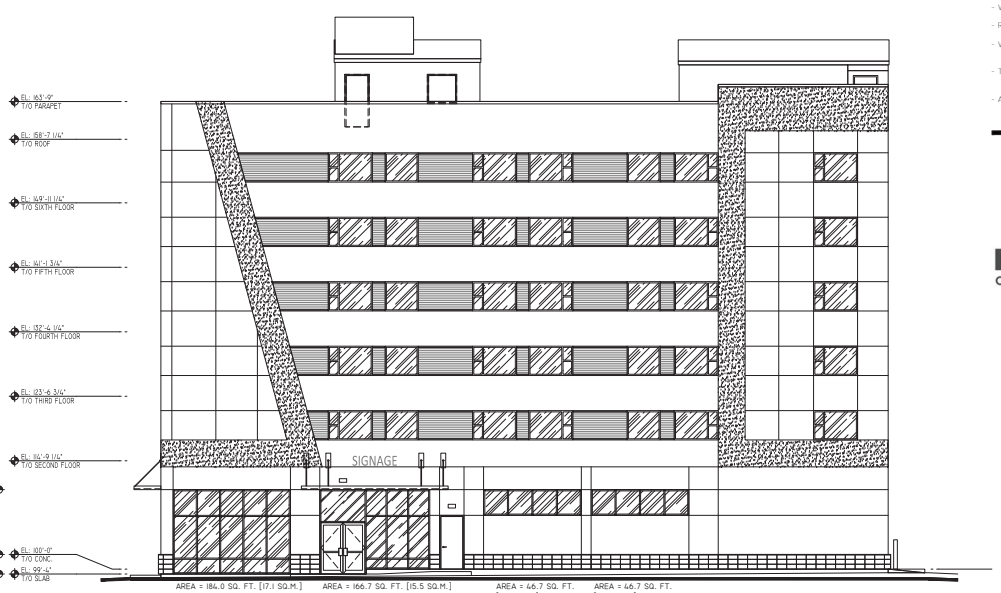
SCALE: AS NOTED

DRAWN: CDH
CHECKED: -
DATE: AUG. 23, 2024
JOB NO.: 2024-17

SHEET: A 3.7
10 OF -- PAGES

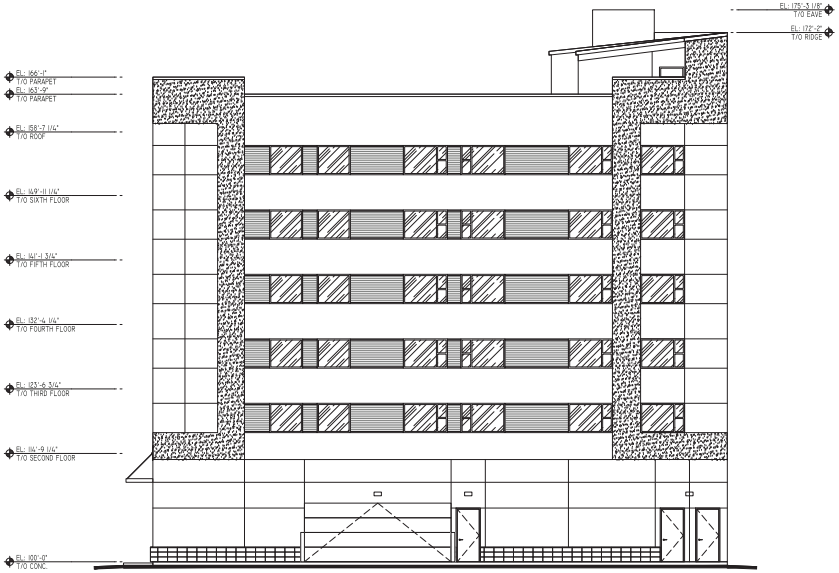


NORTH ELEVATION (COLLEGE DRIVE)
1/8" = 1'-0"
[1 : 96]

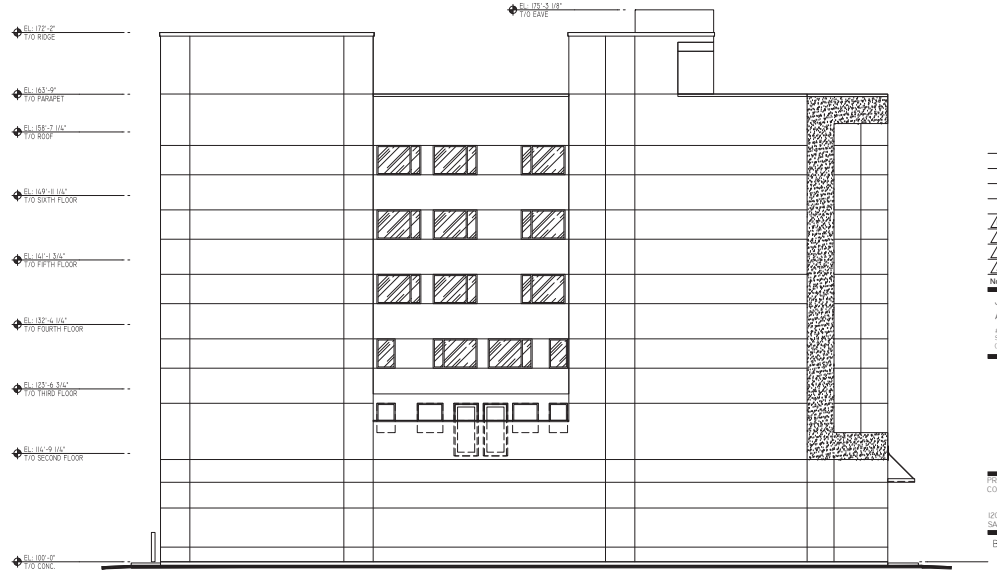


WEST ELEVATION (MUNROE AVE. N.)
1/8" = 1'-0"
[1 : 96]

WALL AREA = 1,464.9 SQ. FT. [136.1 SQ.M.]
REQ'D TRANSPARENT AREA (30%) = 439.5 FT. [40.8 SQ.M.]
PROPOSED GLAZING AREA = 444.1 FT. [41.2 SQ.M.]



SOUTH ELEVATION (LANE)
1/8" = 1'-0"
[1 : 96]



EAST ELEVATION
1/8" = 1'-0"
[1 : 96]

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PROPOSED
COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATCHEWAN, SK

BUILDING ELEVATIONS

SCALE: AS NOTED

DRAWN: CDH
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DATE: AUG. 23, 2024
JOB NO.: 2024-17
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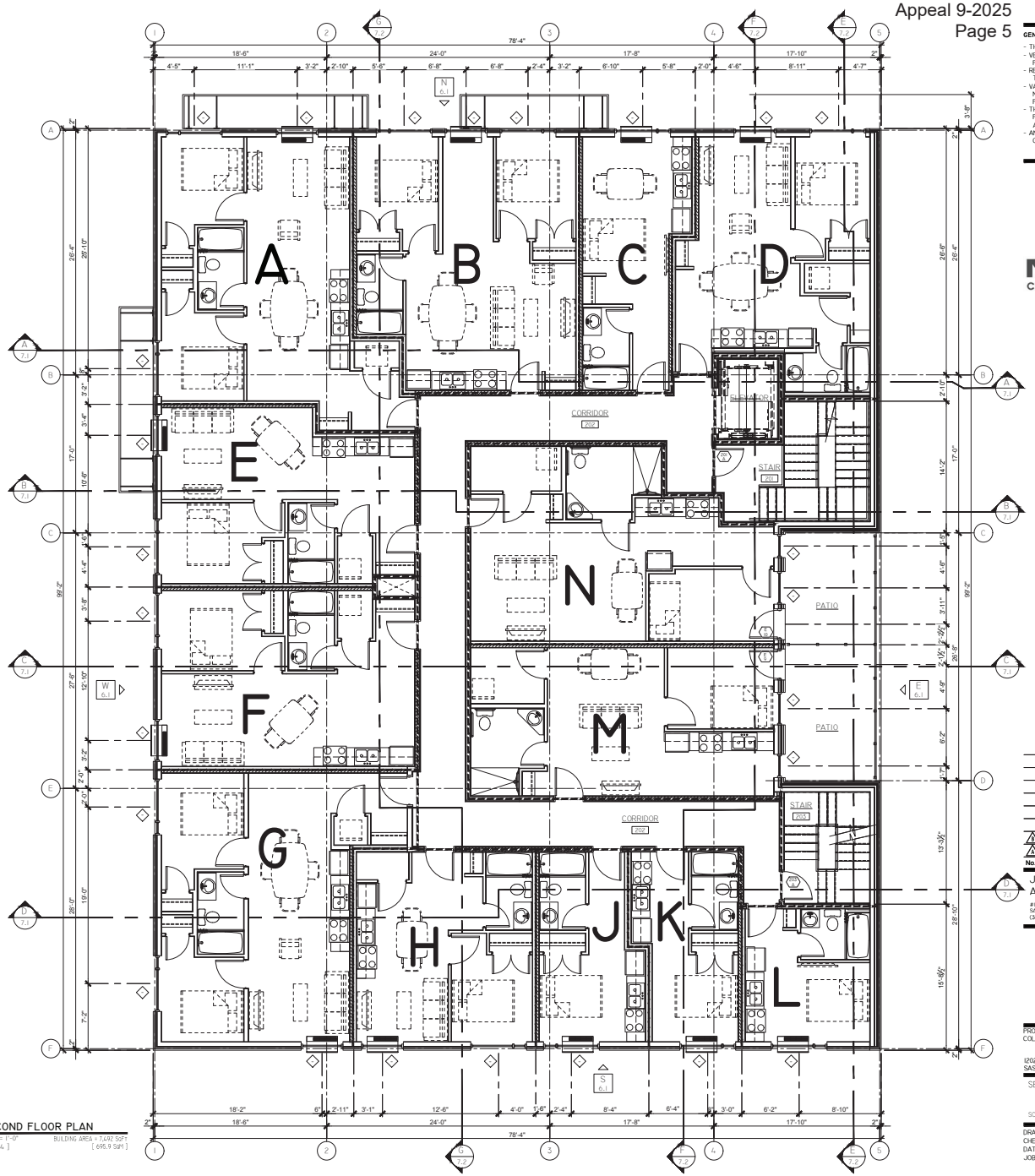

NORTH

SECOND FLOOR PLAN
3/16" = 1'-0"
[1 : 64]
BUILDING AREA = 7,492 SQFT
[695.9 SQM]

GENERAL NOTES

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1202 COLLEGE DRIVE
SASKATCHEWAN, SK

SECOND FLOOR PLAN

SCALE: AS NOTED

DRAWN: CDH
CHECKED: -
DATE: AUG. 23, 2024
JOB NO.: 2024-17

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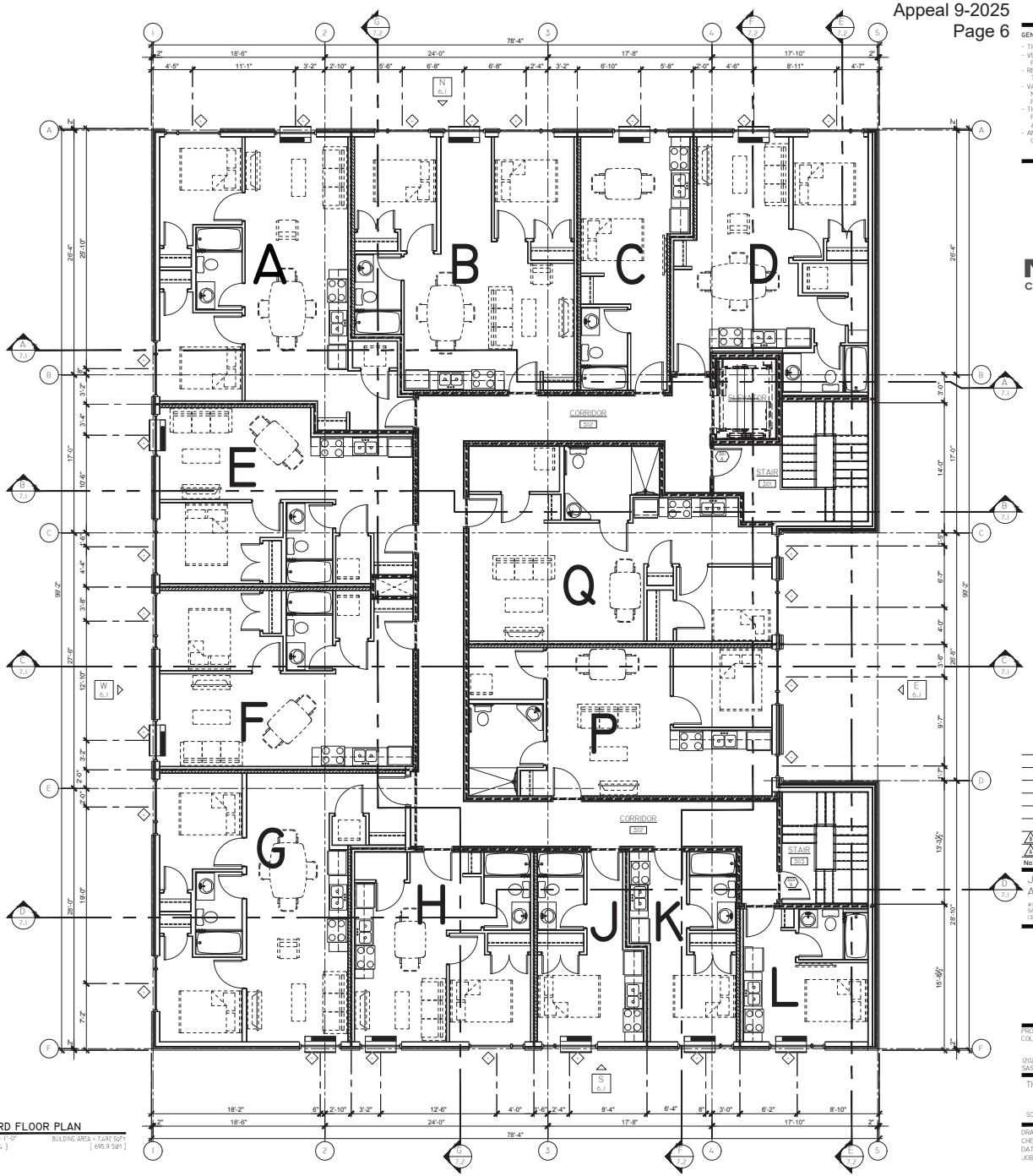

THIRD FLOOR PLAN
3/16" = 1'-0" [1 : 64]
BUILDING AREA = 7,492 SQFT [695.9 SQM]

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PROPOSED
COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATCHEWAN, SK

THIRD FLOOR PLAN

SCALE: AS NOTED

DRAWN: CDH
CHECKED: -
DATE: AUG. 23, 2024
JOB NO.: 2024-17
SHEET: A 3.3
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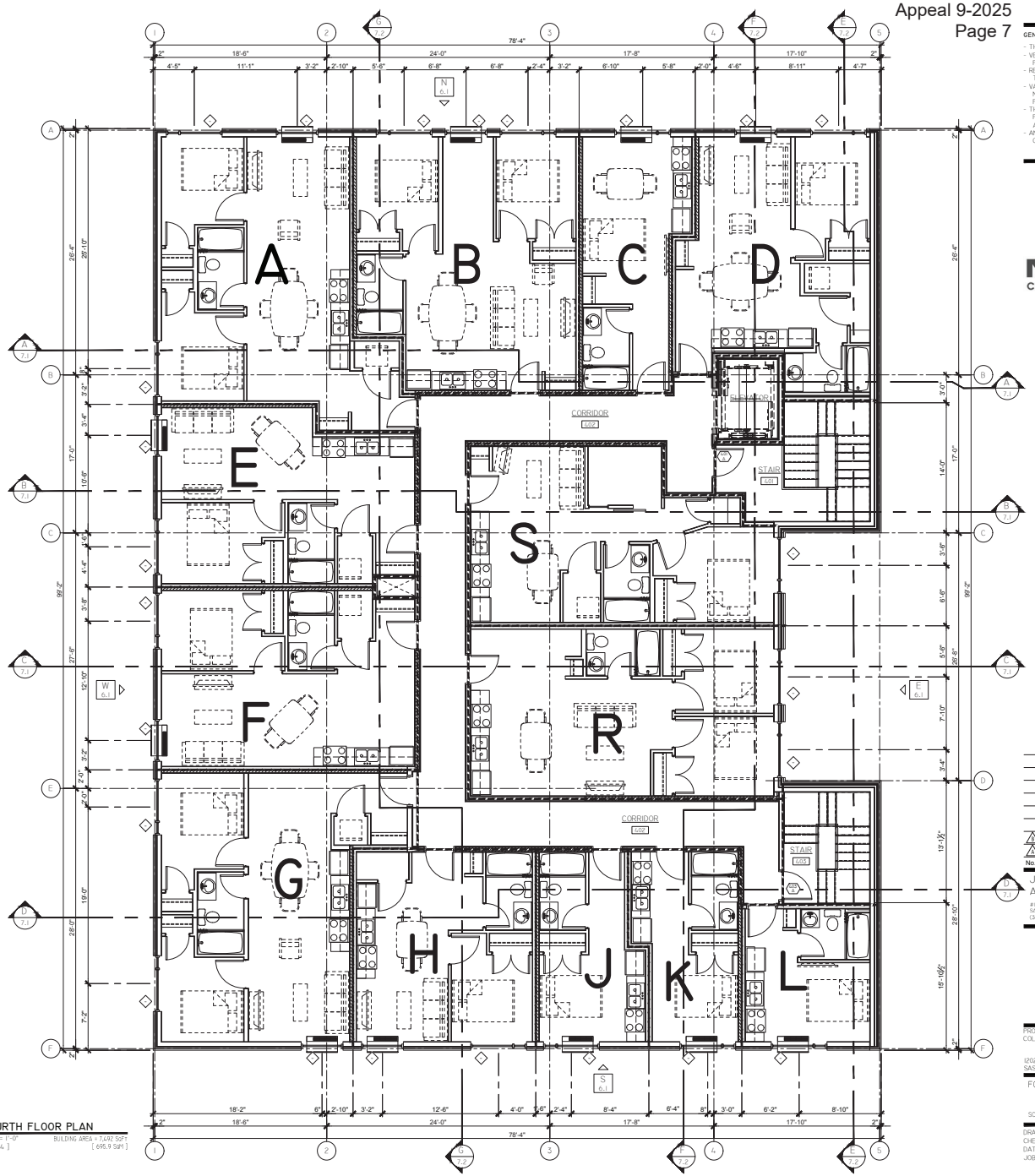

NORTH

FOURTH FLOOR PLAN
3/16" = 1'-0" [1 : 64]
BUILDING AREA = 7,492 SQFT [695.9 SQM]

GENERAL NOTES
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SASKATCHEWAN, SK

FOURTH FLOOR PLAN

SCALE: AS NOTED

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DATE: AUG. 23, 2024
JOB NO.: 2024-17
SHEET: A 3.4
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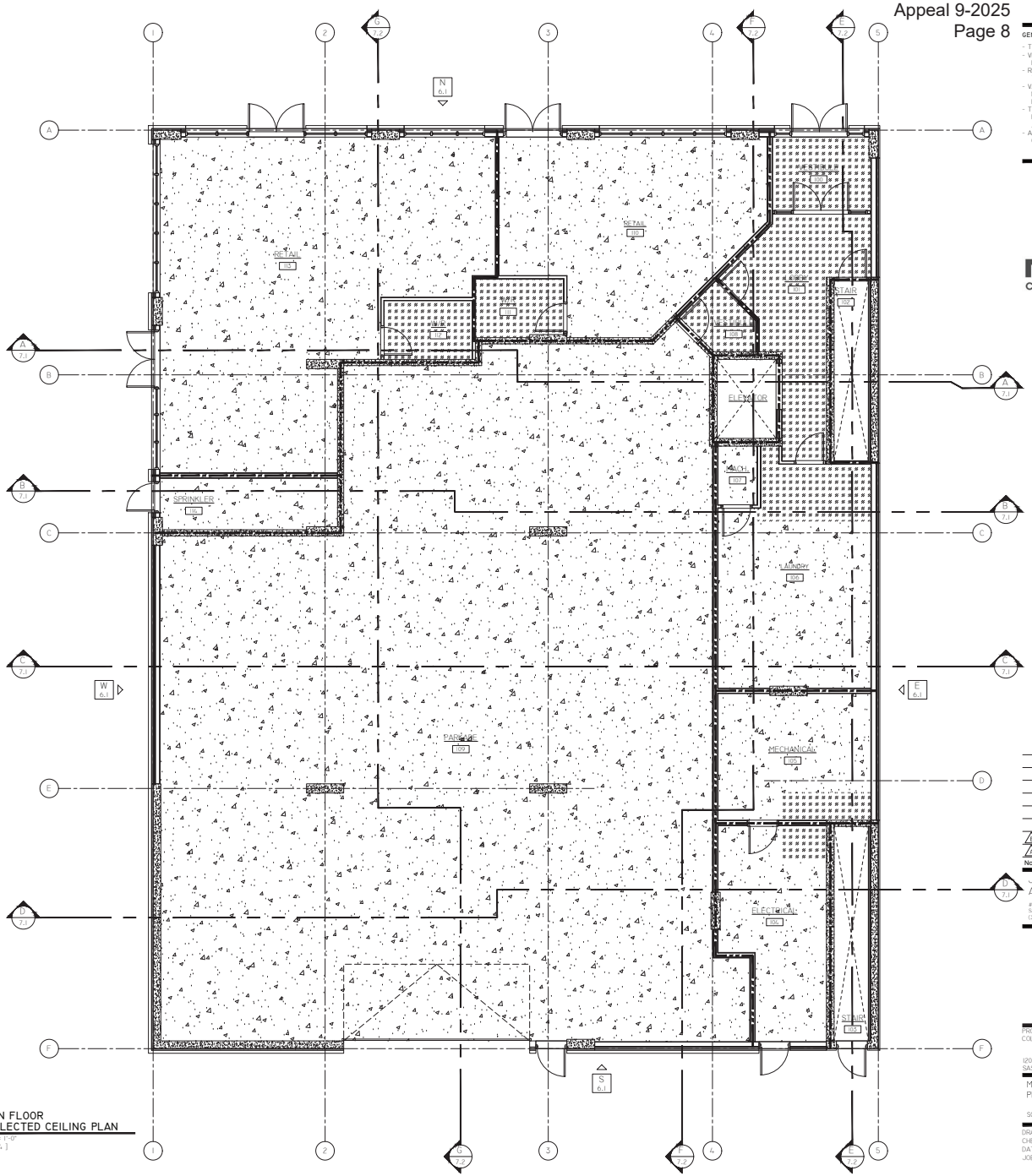

MAIN FLOOR
REFLECTED CEILING PLAN
3/16" = 1'-0"
[1 : 64]

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PROPOSED
COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATCHEWAN, SK

MAIN FLOOR REFLECTED CEILING PLAN

SCALE: AS NOTED

DRAWN: CDH
CHECKED: -
DATE: AUG. 23, 2024
JOB NO.: 2024-12

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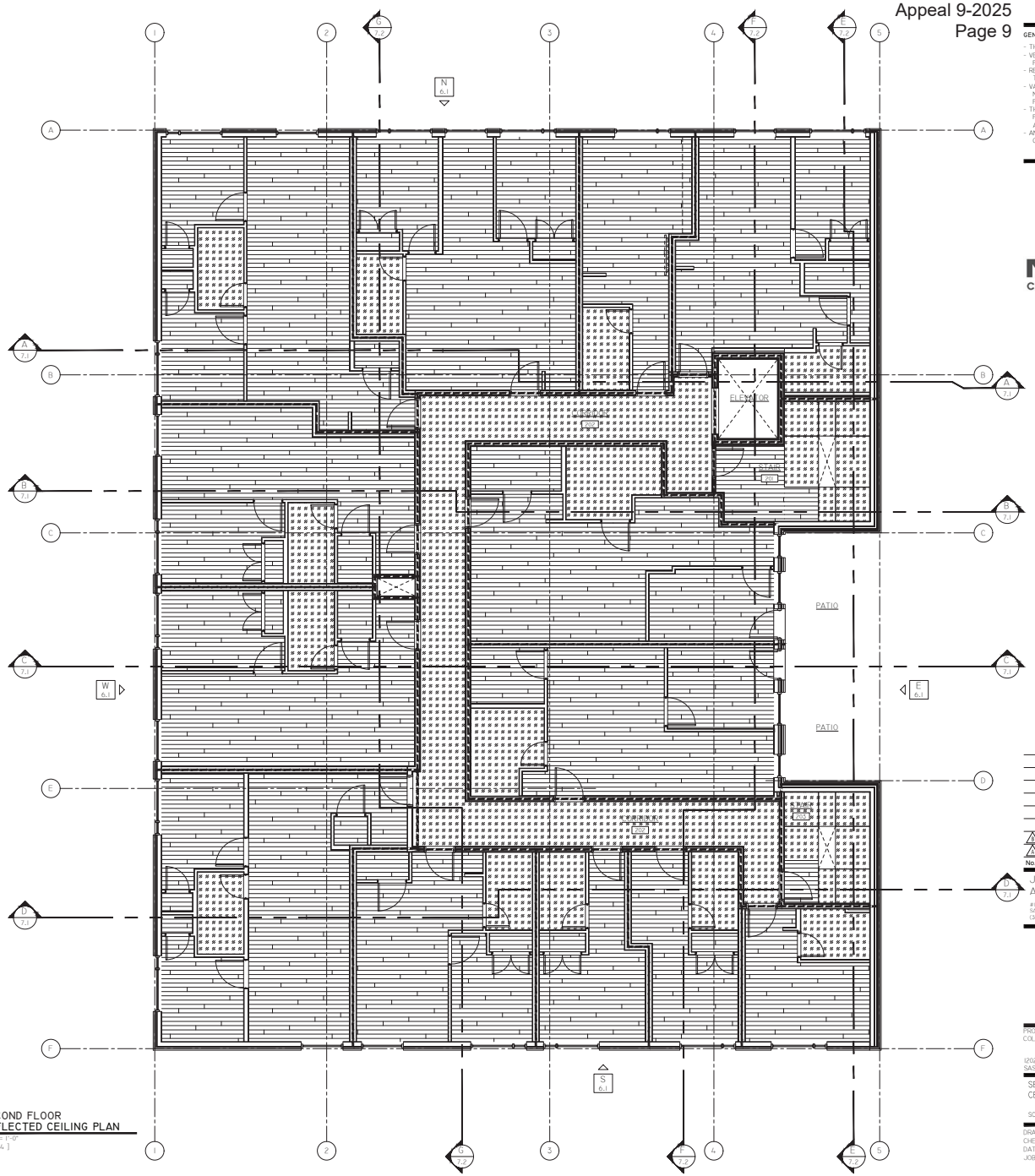

SECOND FLOOR
REFLECTED CEILING PLAN
3/16" = 1'-0"
[1 : 64]

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PROPOSED
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1202 COLLEGE DRIVE
SASKATCHEWAN, SK

SECOND FLOOR REFLECTED CEILING PLAN

SCALE: AS NOTED

DRAWN: CDH
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JOB NO.: 2024-12

SHEET:
A 4.2
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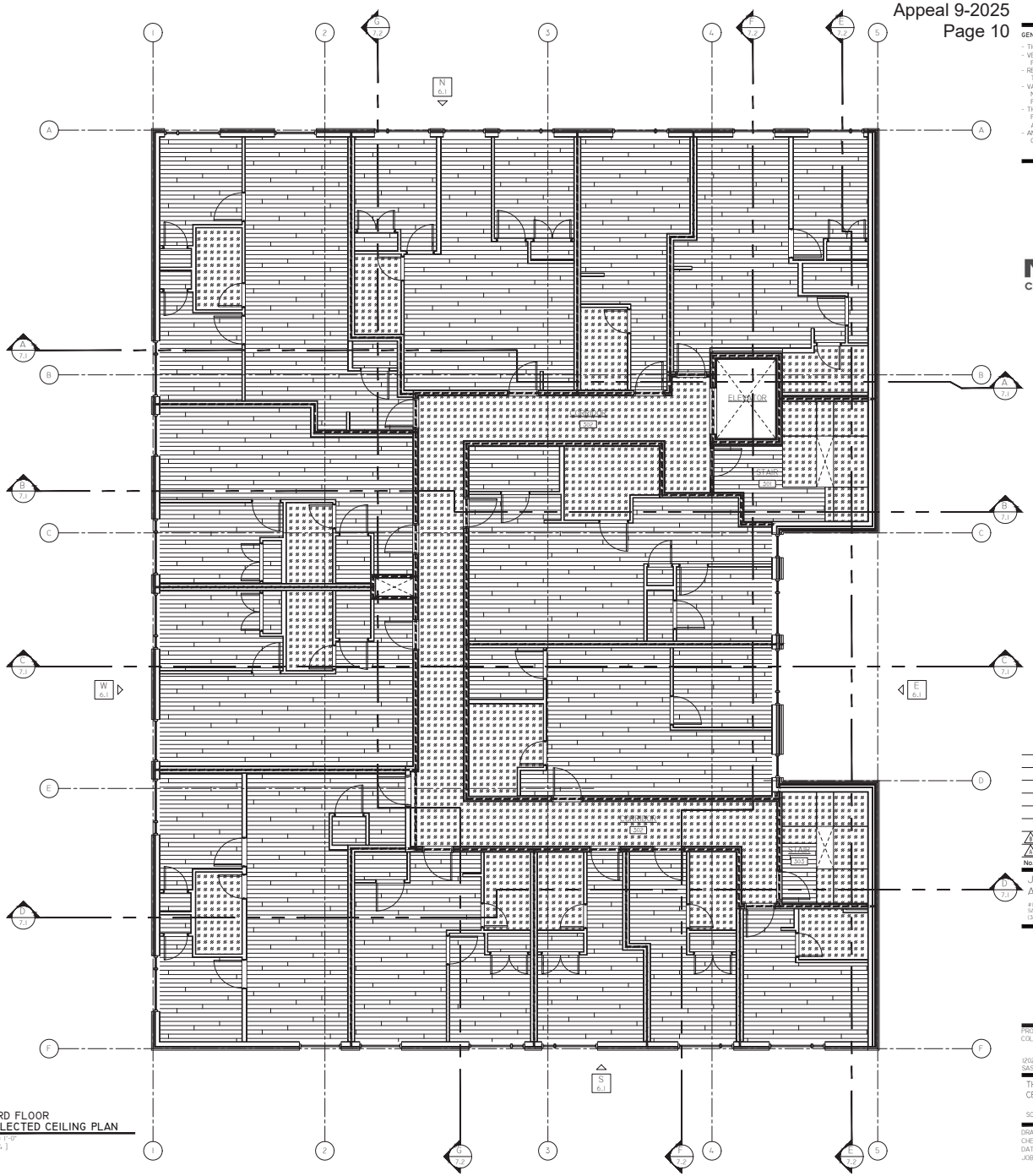

THIRD FLOOR
REFLECTED CEILING PLAN
3/16" = 1'-0"
[1 : 64]

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PROPOSED
COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATCHEWAN, SK

THIRD FLOOR REFLECTED
CEILING PLAN

SCALE: AS NOTED

DRAWN: CDH
CHECKED: -
DATE: AUG. 23, 2024
JOB NO.: 2024-12

SHEET: A 4.4
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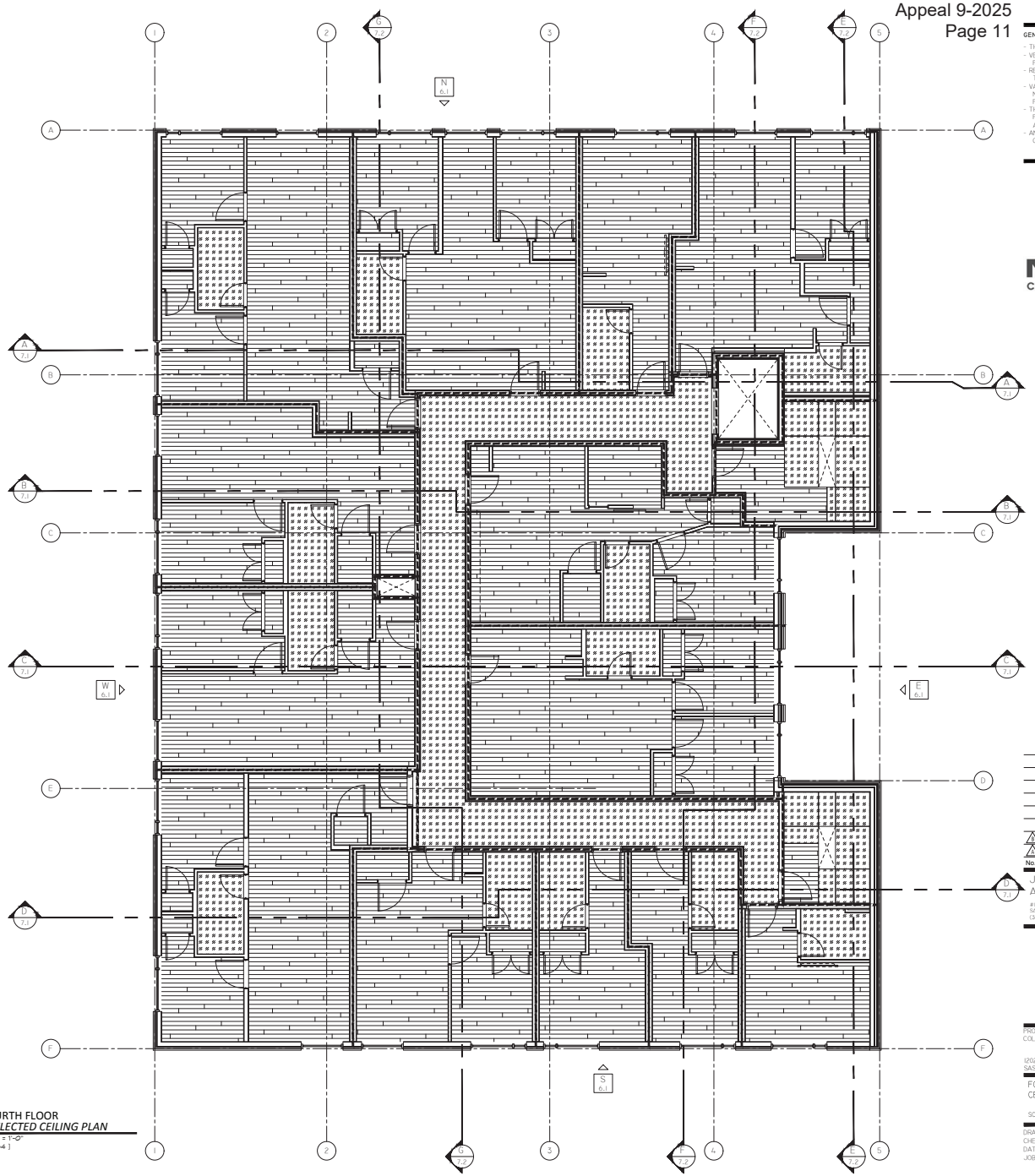

FOURTH FLOOR
REFLECTED CEILING PLAN
3/16" = 1'-0"
[1 : 64]

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(306) 931-6622

NOT FOR CONSTRUCTION

PROPOSED
COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATCHEWAN, SK

FOURTH FLOOR REFLECTED CEILING PLAN

SCALE: AS NOTED

DRAWN: CDH
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DATE: AUG. 23, 2024
JOB NO.: 2024-12

SHEET: A 4.4
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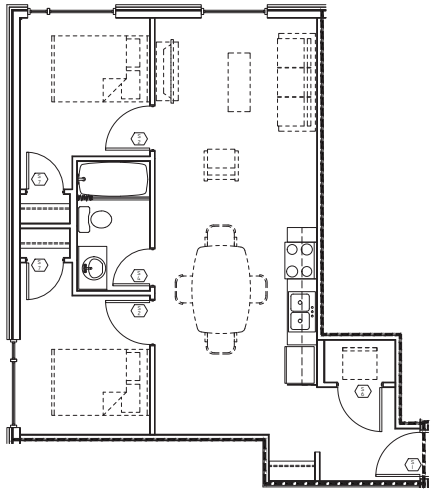
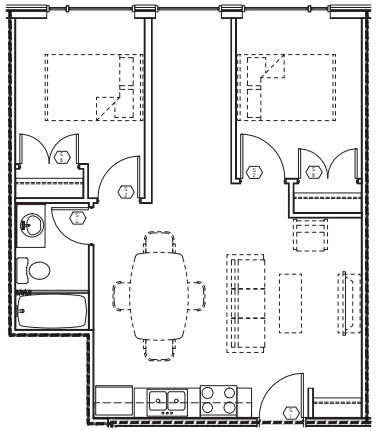
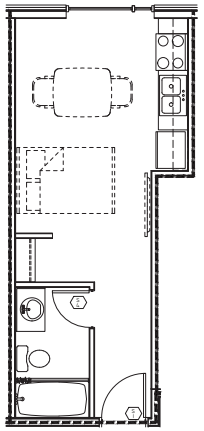


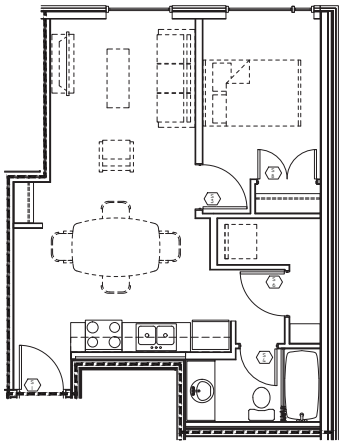
SUITE TYPE A
1/4" = 1'-0" SUITE AREA = 710 SqFt



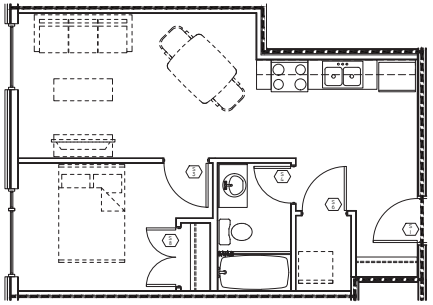
SUITE TYPE B
1/4" = 1'-0" SUITE AREA = 661 SqFt



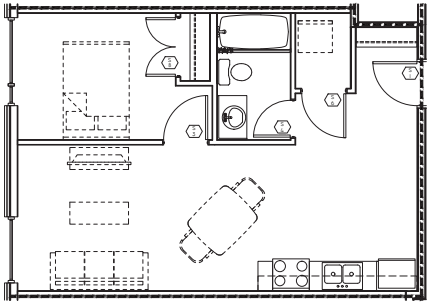
SUITE TYPE C
1/4" = 1'-0" SUITE AREA = 317 SqFt



SUITE TYPE D
1/4" = 1'-0" SUITE AREA = 584 SqFt



SUITE TYPE E
1/4" = 1'-0" SUITE AREA = 527 SqFt



SUITE TYPE F
1/4" = 1'-0" SUITE AREA = 560 SqFt

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2	ISSUED FOR REVIEW	DEC. 20 2024

JAMES ZIMMER ARCHITECT
#109-2102 QUEBEC AVE,
SASKATOON, SASKATCHEWAN
(306) 931-6622

NOT FOR CONSTRUCTION

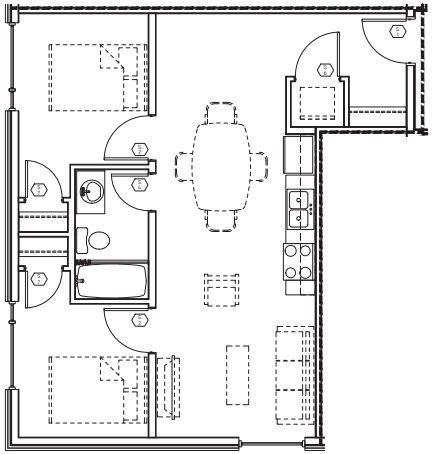
PROPOSED
COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATCHEWAN, SK

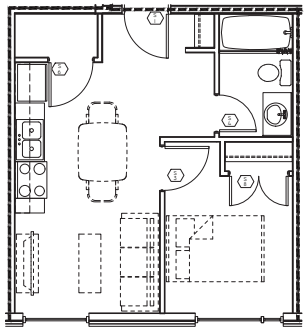
SUITE PLANS

SCALE: AS NOTED

DRAWN: CDH SHEET:
CHECKED: -
DATE: AUG. 23, 2024 A 5.1
JOB NO.: 2024-17 15 OF -- PAGES



SUITE TYPE G
1/4" = 1'-0" SUITE AREA = 708 SqFT



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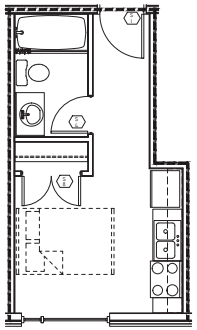

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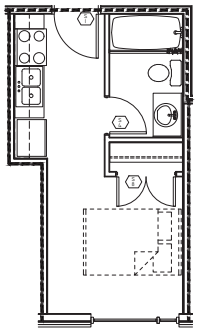

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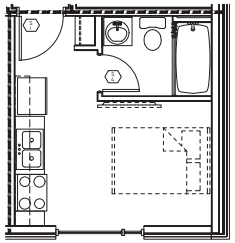
1/4" = 1'-0" SUITE AREA = 240 SqFT



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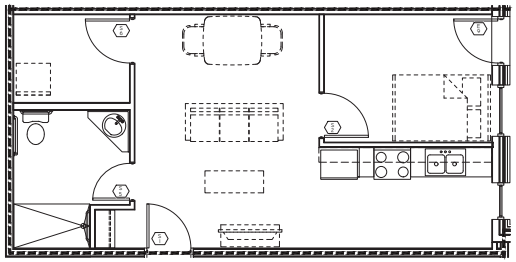

SUITE TYPE M
1/4" = 1'-0" SUITE AREA = 569 SqFT

GENERAL NOTES
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No.	REVISION	DATE:
3	ADDITIONAL	DEC 20 2024
2	ADDITIONAL	DEC 20 2024

JAMES ZIMMER ARCHITECT
#109-2002 QUEBEC AVE,
SASKATOON, SASKATCHEWAN
(306) 931-6622

NOT FOR CONSTRUCTION

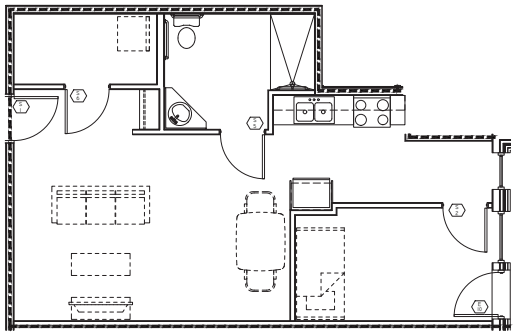
PROPOSED
COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATCHEWAN, SK

SUITE PLANS

SCALE: AS NOTED

DRAWN: CDH SHEET:
CHECKED: -
DATE: AUG. 23, 2024 A 5.2
JOB NO.: 2024-17 14 OF -- PAGES



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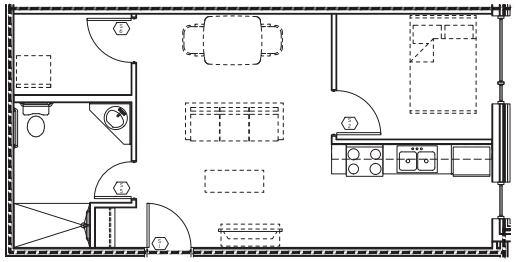
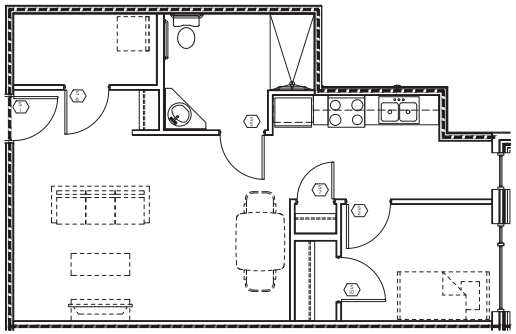


SUITE TYPE P
1/4" = 1'-0" SUITE AREA = 569 SqFt



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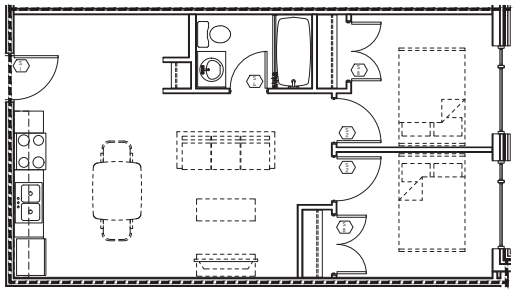

SUITE TYPE R
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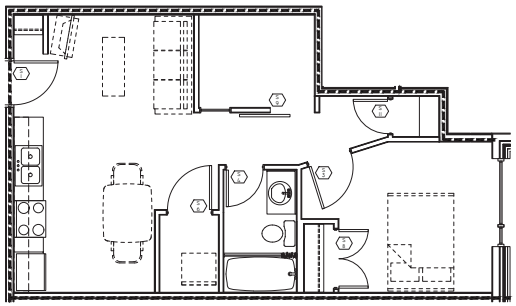

SUITE TYPE S
1/4" = 1'-0" SUITE AREA = 574 SqFt

GENERAL NOTES
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NORTH CONSTRUCTION LTD

No.	REVISION	DATE:
3	ISSUED FOR REVIEW	DEC 20 2024
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JAMES ZIMMER ARCHITECT
#109-2002 QUEBEC AVE,
SASKATOON, SASKATCHEWAN
(306) 931-6622

NOT FOR CONSTRUCTION

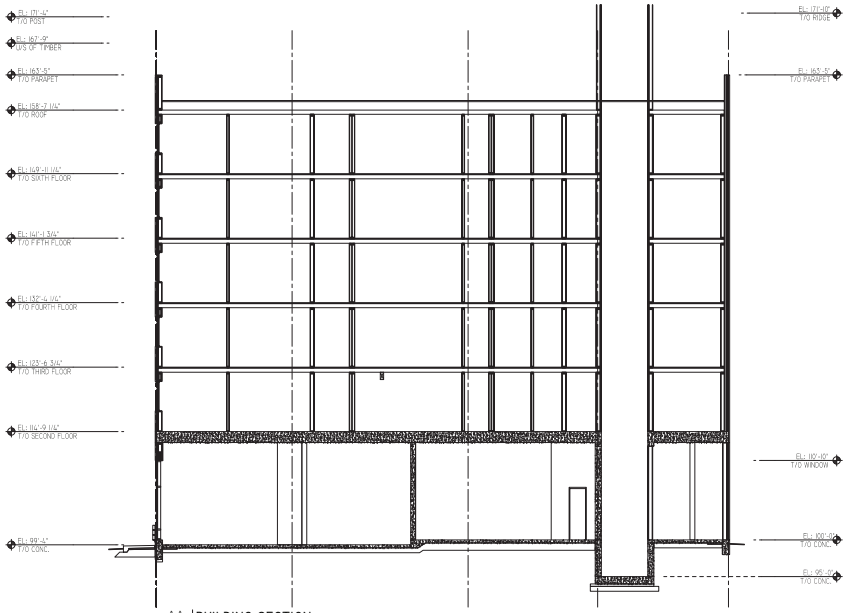
PROPOSED
COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATCHEWAN, SK

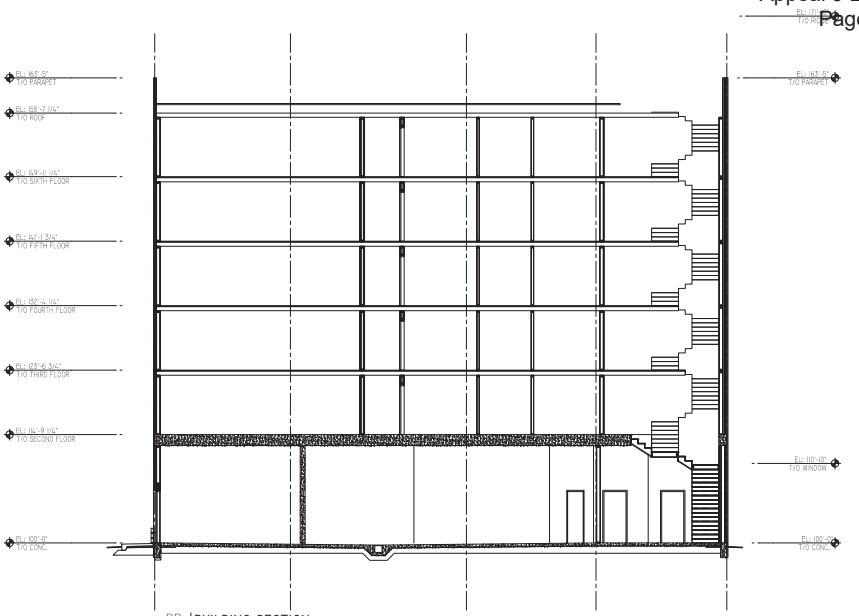
SUITE PLANS

SCALE: AS NOTED

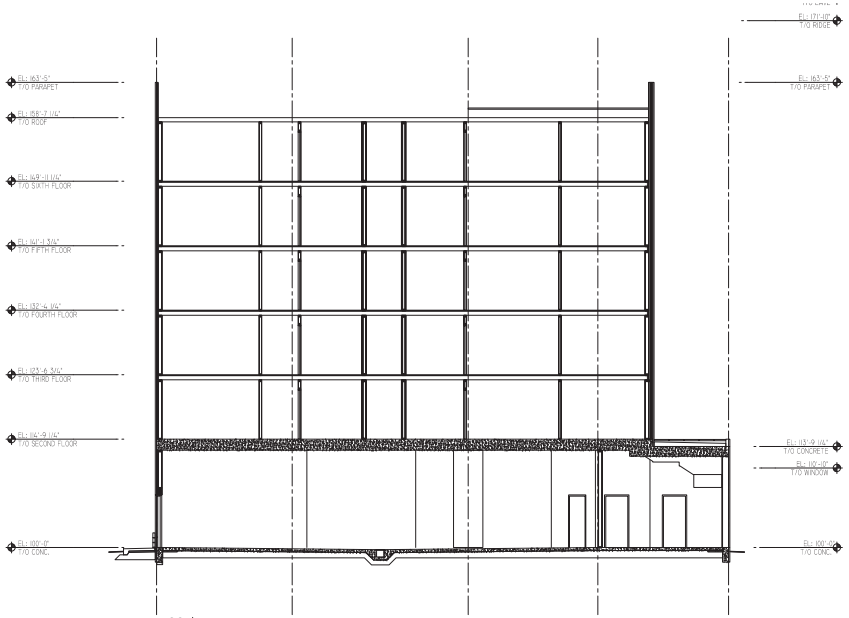
DRAWN: CDH SHEET:
CHECKED: -
DATE: AUG. 23, 2024 A 5.3
JOB NO.: 2024-17 15 OF -- PAGES



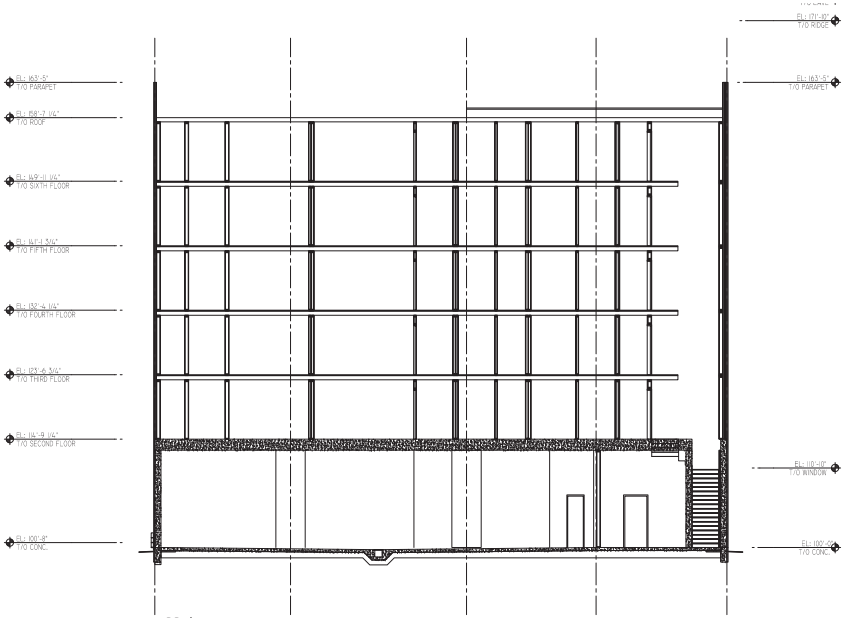
AA | BUILDING SECTION
3.1 | 1/8" = 1'-0"



BB | BUILDING SECTION
3.1 | 1/8" = 1'-0"



CC | BUILDING SECTION
3.1 | 1/8" = 1'-0"



DD | BUILDING SECTION
3.1 | 1/8" = 1'-0"

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NORTH CONSTRUCTION LTD

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JAMES ZIMMER ARCHITECT
#109-2002 QUEBEC AVE,
SASKATOON, SASKATCHEWAN
(306) 931-6622

NOT FOR CONSTRUCTION

PROPOSED
COLLEGE DRIVE APARTMENTS

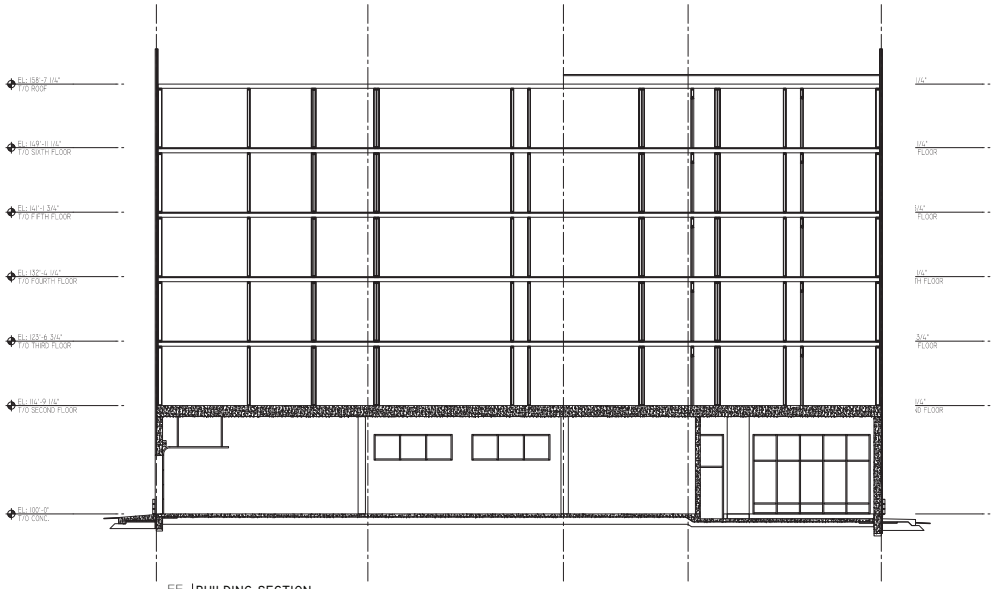
1202 COLLEGE DRIVE
SASKATCHEWAN, SK

BUILDING SECTIONS

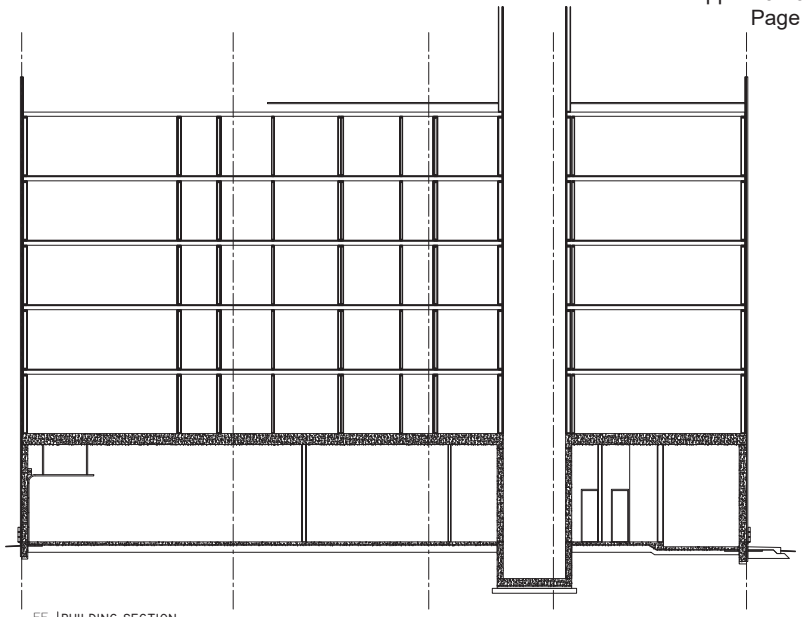
SCALE: AS NOTED

DRAWN: CDH
CHECKED: -
DATE: AUG. 23, 2024
JOB NO.: 2024-17

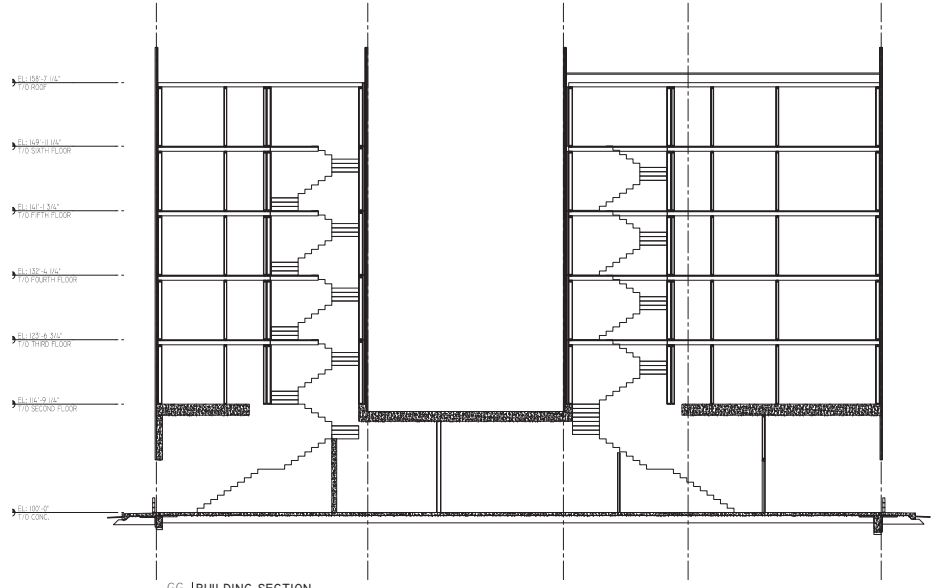
SHEET: A 7.1
-- OF -- PAGES



EE | BUILDING SECTION
3.1 | 1/8" = 1'-0"



FF | BUILDING SECTION
3.1 | 1/8" = 1'-0"



GG | BUILDING SECTION
3.1 | 1/8" = 1'-0"

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NORTH CONSTRUCTION LTD

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3	ISSUED FOR REVIEW	DEC. 20 2024
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JAMES ZIMMER ARCHITECT
#109-2002 QUEBEC AVE,
SASKATOON, SASKATCHEWAN
(306) 931-6622

NOT FOR CONSTRUCTION

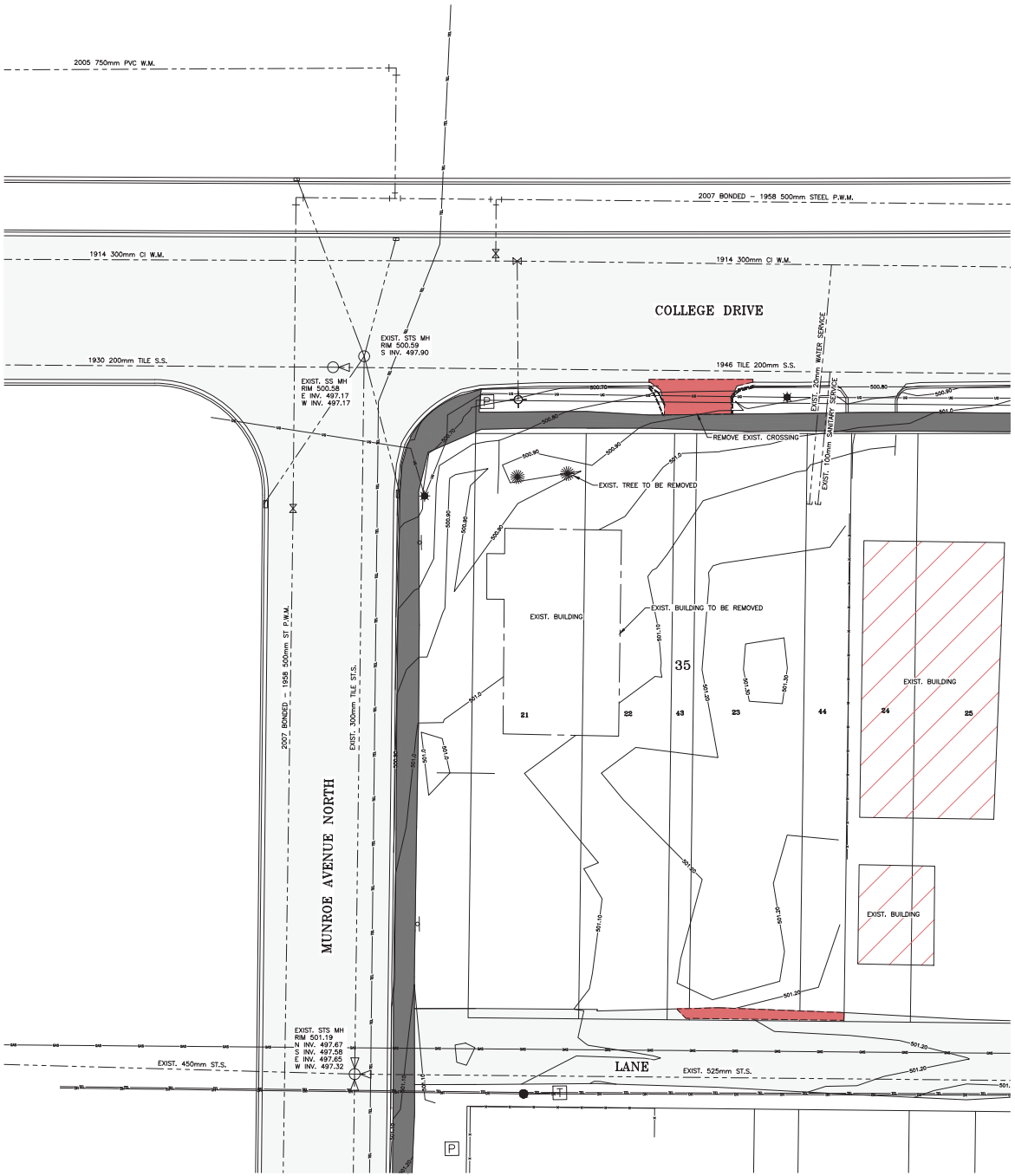
PROPOSED
COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATCHEWAN, SK

BUILDING SECTIONS

SCALE: AS NOTED

DRAWN: CDH SHEET:
CHECKED: -
DATE: AUG. 23, 2024 A 7.2
JOB NO.: 2024-17 -- OF -- PAGES



NOTES:

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SCALE 1:150
0 10m 20m

CATTERALL & WRIGHT
CONSULTING ENGINEERS

1231 – 8th STREET EAST
SASKATOON, SK S7H 0S5
TEL: (306) 343-7280 | www.cwce.ca

PRELIMINARY
NOT FOR CONSTRUCTION

LEGEND:

- EXIST. MANHOLE
- EXIST. CATCH BASIN IN CURB
- EXIST. FLOW DIRECTION
- EXIST. HYDRANT
- EXIST. VALVE
- EXIST. TEE
- EXIST. BEND
- EXIST. POWER POLE
- EXIST. LIGHT STANDARD
- EXIST. POWER PEDESTAL
- EXIST. PHONE PEDESTAL
- EXIST. SIGN
- EXIST. TREE
- EXIST. VERTICAL CURB & GUTTER
- EXIST. FENCE
- EXIST. GAS LINE
- EXIST. PHONE LINE
- EXIST. OVERHEAD POWER LINE
- EXIST. UNDERGROUND POWER LINE
- EXIST. GROUND CONTOUR
- VERTICAL CURB & GUTTER REMOVAL
- EXIST. CONCRETE
- DESIGN CONCRETE
- EXIST. ASPHALT
- ASPHALT REMOVAL
- EXIST. BUILDING

SCALE VERIFICATION
WHEN DRAWING IS PLOTTED FULL SIZE THIS LINE IS 60mm IN LENGTH.

DATE	REVISION
25/01/07	ISSUED FOR REVIEW

OWNER/CLIENT
14 NORTH CONSTRUCTION

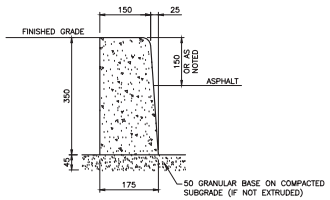
LOCATION
SASKATOON, SK

PROJECT
1202 COLLEGE DRIVE

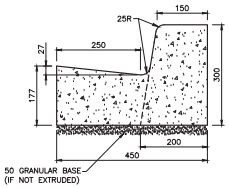
SHEET TITLE
EXIST. CONDITIONS & REMOVALS PLAN

SCALE	DESIGNED
1:150	RJR
DRAWN	CHECKED
DFA	
DATE	SHEET
24/12/04	1 of 3

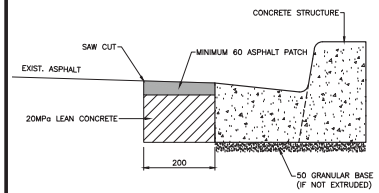
DRAWING NUMBER
799-00901



BARRIER CURB DETAIL
SCALE: NTS



VERTICAL CURB & GUTTER DETAIL
SCALE: NTS



GUTTER PATCH DETAIL
SCALE: NTS

SITE DESIGN C FACTOR		
TYPE	AREA (sq.m)	2 YR C
ASPHALT	65	0.95
CONCRETE	122	0.95
LANDSCAPING	143	0.10
BUILDING	716	0.95
TOTAL	1046	0.83

STORM WATER RUNOFF STORAGE CALCULATIONS

NOTE:
STORAGE CALCULATIONS BASED ON COS DDSM ONSITE STORAGE REQUIREMENT.

Cd= 0.30 CITY OF SASKATOON DESIGN C FACTOR
Cp= 0.83 SITE DESIGN C FACTOR
A= 869-(200*Cd)
B= 33-(1055*Cd)

REQUIRED STORAGE
VOLUME(cu.m/ha)=A*(Cp-Cd)+B(Cp-Cd)^2
VOLUME(cu.m)= 37

SURFACE STORAGE: 1 cu.m
PIPE STORAGE: 1 cu.m
MANHOLE STORAGE: 3 cu.m
ROOF STORAGE: 716m² x 45mm = 32 cu.m

TOTAL STORAGE PROVIDED: 37 cu.m

NOTES:

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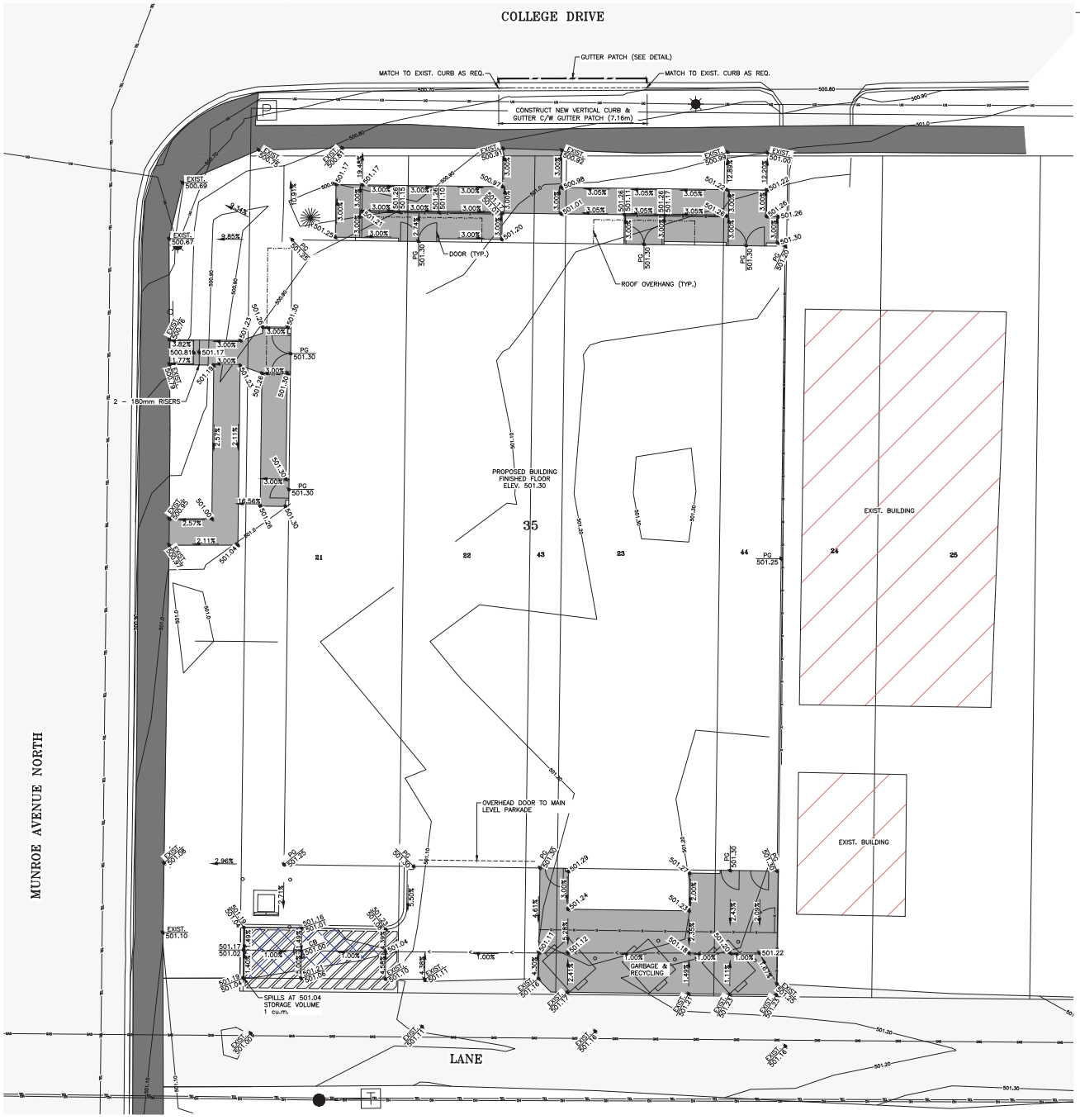

CATTERALL & WRIGHT
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1231 – 8th STREET EAST
SASKATOON, SK S7H 0S5
TEL: (306) 343-7280 | www.cwce.ca

PRELIMINARY
NOT FOR CONSTRUCTION

LEGEND:

- DRAINAGE DIRECTION & GRADE
- CATCH BASIN RIM ELEVATION
- PERIMETER GRADE ELEVATION
- EXIST. ELEVATION
- DESIGN ELEVATION
- CATCH BASIN / CATCH BASIN MANHOLE
- EXIST. CATCH BASIN IN CURB
- EXIST. POWER POLE
- EXIST. LIGHT STANDARD
- EXIST. POWER PEDESTAL
- EXIST. PHONE PEDESTAL
- EXIST. SIGN
- EXIST. TREE
- EXIST. VERTICAL CURB & GUTTER
- DESIGN VERTICAL CURB & GUTTER
- BARRIER CURB
- EXIST. FENCE
- EXIST. GAS LINE
- EXIST. PHONE LINE
- EXIST. OVERHEAD POWER LINE
- EXIST. UNDERGROUND POWER LINE
- EXIST. GROUND CONTOUR
- EXIST. ASPHALT
- DESIGN CONCRETE
- EXIST. CONCRETE
- EXIST. BUILDING
- PONDING AREA

SCALE VERIFICATION
WHEN DRAWING IS PLOTTED FULL SIZE THIS LINE IS 60mm IN LENGTH.

DATE	REVISION
25/01/07	ISSUED FOR REVIEW

OWNER/CLIENT
14 NORTH CONSTRUCTION

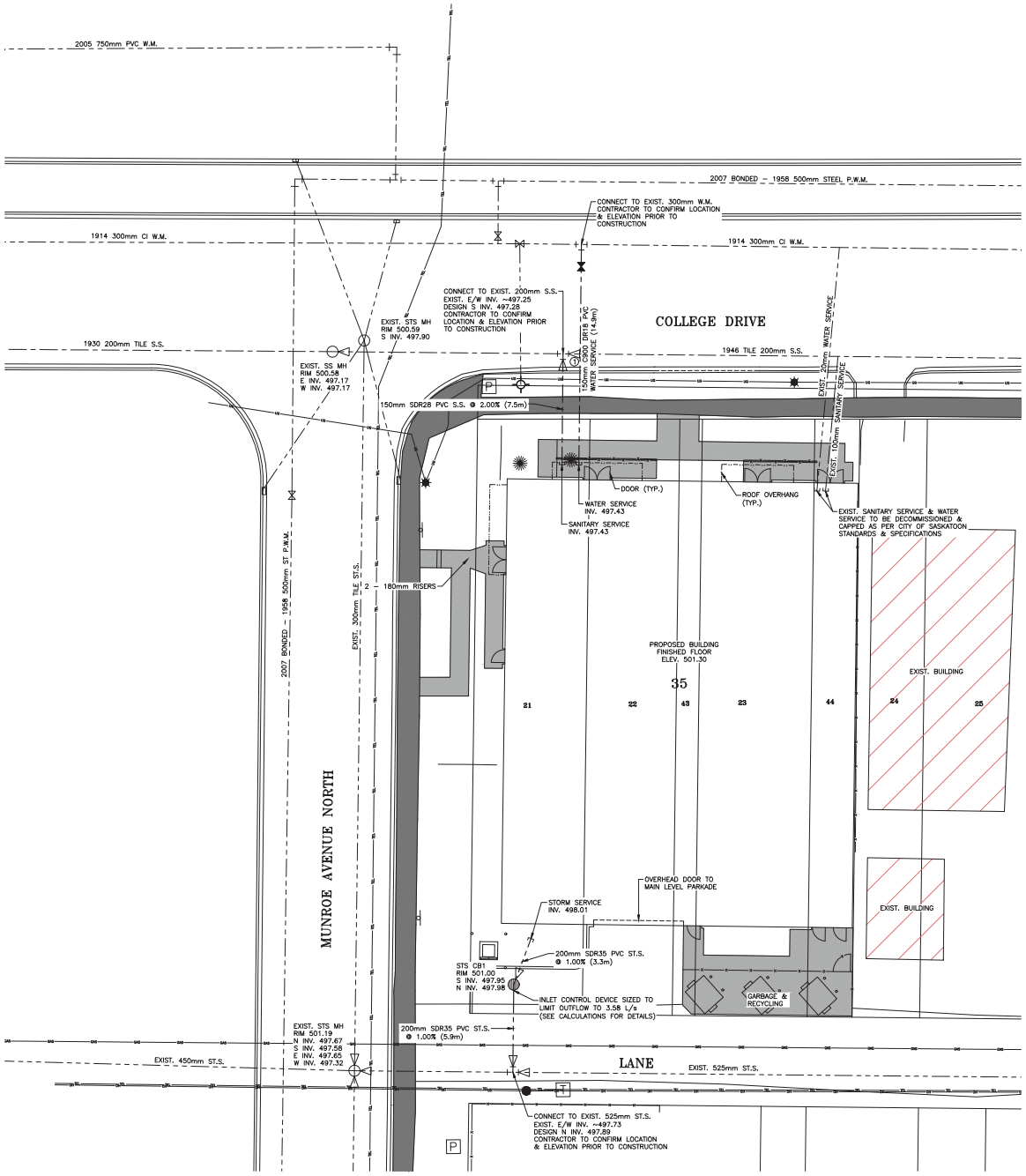
LOCATION
SASKATOON, SK

PROJECT
1202 COLLEGE DRIVE

SHEET TITLE
GRADING PLAN

SCALE	DESIGNED
AS SHOWN	RJR
DRAWN	CHECKED
DFA	
DATE	SHEET
24/12/04	2 of 3

DRAWING NUMBER 799-00902



PIPE CROSSING DATA:

① EXIST. 200mm S.S. INV. ~497.26
150mm W.M. INV. 497.43

STORM SEWER ID	BARREL DIAMETER
STS CB1	1200mm

ALLOWABLE DISCHARGE

NOTE:
STORAGE CALCULATIONS BASED ON COS DDSM MAXIMUM ALLOWABLE DISCHARGE RATE.

Cd= 0.3 CITY OF SASKATOON DESIGN C FACTOR

FLOW(L/s/ha)=114*Cd
FLOW(L/s)= 3.58

ORIFICE SIZE CALCULATION

Q= 0.00358 ALLOWABLE RELEASE RATE (cu.m/s)
K= 0.61 CONSTANT
A= 0.0008 AREA OF ORIFICE (sq.m)
g= 9.81 ACCELERATION OF GRAVITY (m/s²)
h= 3.09 HEAD (m)

Q=KA(2gh)^0.5
A= 0.0008sq.m
DIAMETER= 0.031m

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SCALE 1:150
0 10m 20m

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CONSULTING ENGINEERS
1231 – 8th STREET EAST
SASKATOON, SK S7H 0S5
TEL: (306) 343-7280 | www.cwce.ca

PRELIMINARY
NOT FOR CONSTRUCTION

LEGEND:

- MANHOLE
- CATCH BASIN / CATCH BASIN MANHOLE
- EXIST. CATCH BASIN IN CURB
- FLOW DIRECTION
- EXIST. HYDRANT
- EXIST. VALVE
- DESIGN VALVE
- TEE
- BEND
- EXIST. POWER POLE
- EXIST. LIGHT STANDARD
- EXIST. POWER PEDESTAL
- EXIST. PHONE PEDESTAL
- EXIST. SIGN
- EXIST. TREE
- EXIST. VERTICAL CURB & GUTTER
- DESIGN VERTICAL CURB & GUTTER
- BARRIER CURB
- FENCE
- EXIST. GAS LINE
- EXIST. PHONE LINE
- EXIST. OVERHEAD POWER LINE
- EXIST. UNDERGROUND POWER LINE
- EXIST. CONCRETE
- DESIGN CONCRETE
- EXIST. BUILDING

SCALE VERIFICATION
WHEN DRAWING IS PLOTTED FULL SIZE THIS LINE IS 60mm IN LENGTH.

DATE	REVISION
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OWNER/CLIENT
14 NORTH CONSTRUCTION

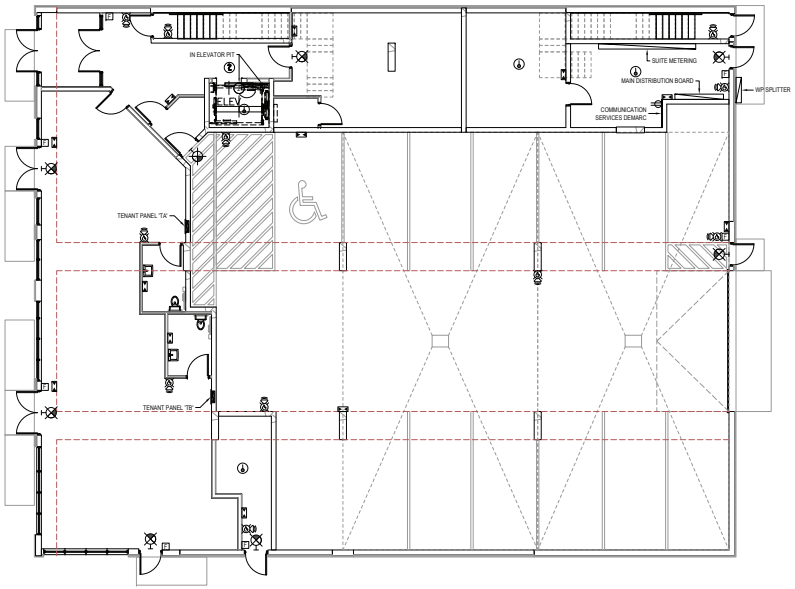
LOCATION
SASKATOON, SK

PROJECT
1202 COLLEGE DRIVE

SHEET TITLE
SERVICING PLAN

SCALE	DESIGNED
1:150	
DRAWN	CHECKED
DFA	
DATE	SHEET
24/12/04	3 of 3

DRAWING NUMBER 799-00903



NORTH

1 PARKADE/SITE PLAN
E1.1 1:100

ELECTRICAL SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	LINEAR SOURCE LIGHT FIXTURE - CEILING MOUNT NL= UNSWITCHED NIGHT LIGHT
	LINEAR SOURCE LIGHT FIXTURE - WALL MOUNT
	POINT SOURCE LIGHT FIXTURE - SURFACE/WALL MOUNT
3 K S D T	SWITCH 3=3WAY D=DIMMER K=KEYED T=TIMECLOCK
	PILOT LIGHT SWITCH
D S PIR DT	LIGHTING CONTROL WALL SWITCH OCCUPANCY SENSOR; D=DIMMER A=AUTOMATIC V=VACANCY PIR=PASSIVE INFRARED DT=DUAL TECHNOLOGY
P PIR DT	LIGHTING CONTROL CEILING OCCUPANCY SENSOR; A=AUTOMATIC V=VACANCY PIR=PASSIVE INFRARED DT=DUAL TECHNOLOGY P=PHOTOCONTROL
P PIR DT	LIGHTING CONTROL DIRECTIONAL OCCUPANCY SENSOR; A=AUTOMATIC V=VACANCY PIR=PASSIVE INFRARED DT=DUAL TECHNOLOGY P=PHOTOCONTROL
	LIGHTING CONTROL CEILING PHOTOCONTROL SENSOR
	PHOTO ELECTRIC CELL
	DUPLEX RECEPTACLE; IPLC = INTELLIGENT PARKING LOT CONTROL
	MICROWAVE RECEPTACLE
	GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
	SPLIT WIRE RECEPTACLE
	RECEPTACLE MODIFIERS (REFERS TO ALL RECEPTACLE TYPES WHERE SHOWN) • = COUNTER HEIGHT ↳ 20A T-SLOT	= TAMPER RESISTANT
	208V RECEPTACLE
	JUNCTION BOX / DIRECT CONNECTION
	208 VOLT JUNCTION BOX / DIRECT CONNECTION
	NORMAL POWER PANEL AS INDICATED
	MOTOR
	THREE PHASE MOTOR
	DISCONNECT SWITCH
	THERMAL SWITCH
	MOTOR CONTROL PUSH BUTTON STATION
	HEATER B=BASEBOARD F=FORCE FLOW
	THERMOSTAT
	SOLENOID VALVE
	SMOKE DETECTOR
	DUCT TYPE SMOKE DETECTOR
	SMOKE ALARM
	HEAT DETECTOR
	COMBINATION SMOKE/CARBON MONOXIDE ALARM
B	ELECTRIC WATER GONG
F	FIRE ALARM PULL STATION
	FIRE ALARM HORN/STROBE
	FIRE ALARM HORN C/W SILENCE BUTTON
	FIRE ALARM MONITOR (DRY CONTACT) MODULE
	FIRE ALARM ISOLATION MODULE
	COMBINATION SMOKE / FIRE DAMPER CONNECTION
	EMERGENCY BATTERY UNIT WITH NO LIGHTING HEADS OR 2 HEADS
	REMOTE EMERGENCY LIGHTS, SINGLE & DOUBLE
	COMBINATION EXIT SIGN EMERGENCY BATTERY UNIT WITH HEADS
	EXIT LIGHT - SURFACE/WALL MOUNT; SHADING INDICATES LIT FACE
TS	SPRINKLER TAMPER SWITCH
FS	SPRINKLER FLOW SWITCH
	COMBINATION CATSE COAX OUTLET
	BARRIER FREE DOOR PUSHBUTTON
	DOOR ACCESS CARD READER
ES	DOOR ACCESS DEVICE - ELECTRIC STRIKE
DC	DOOR ACCESS DEVICE - DOOR CONTACT

ABBREVIATIONS

AFF	- ABOVE FINISHED FLOOR
AFG	- ABOVE FINISHED GRADE
ATS	- AUTOMATIC TRANSFER SWITCH
BND	- BOND
CLG	- CEILING MOUNTED
C/W	- COMPLETE WITH
DMS	- DIGITAL METERING SYSTEM (CUSTOMER OWNED)
DIS	- DISCONNECT SWITCH
D/W	- DISHWASHER
E	- EXISTING TO REMAIN
EC	- EMPTY CONDUIT C/W PULL STRING
EM	- EMERGENCY
ER	- EXISTING AT RELOCATED POSITION
EXTG	- EXISTING
FACP	- FIRE ALARM CONTROL PANEL
FP	- FIRE PUMP
GND	- GROUND
LS	- LIFE SAFETY
MTD	- MOUNTED
NE	- NEW DEVICE EXISTING LOCATION
R	- REMOVE
R/R	- REMOVE AND REINSTALL
SLD	- SINGLE LINE DIAGRAM
UNDR	- UNDERGROUND
U/S	- UNDERSIDE
WAP	- WIRELESS ACCESS POINT
WP	- WEATHERPROOF
XP	- EXPLOSION PROOF

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REVISIONS

REVN:	DESCRIPTION	DATE:

PROJECT:
PROPOSED SIX STOREY APARTMENT WITH RETAIL

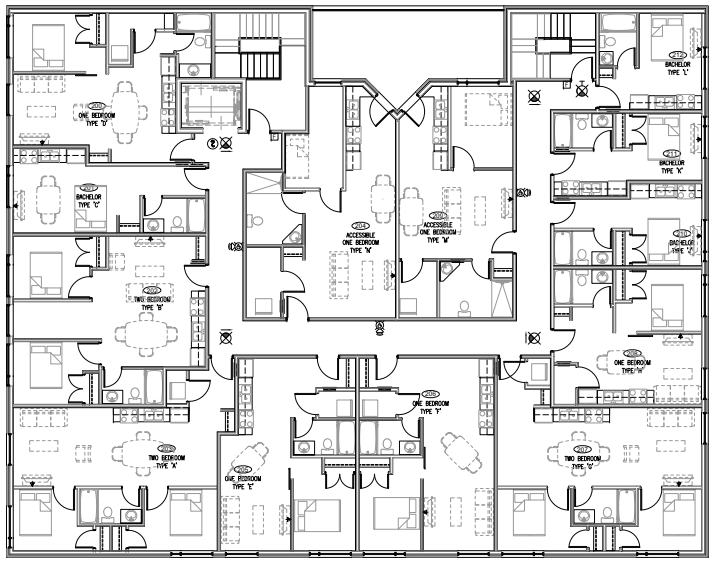
1202 COLLEGE DRIVE
SASKATOON, SASKATCHEWAN

CONTENTS:
PARKADE / SITE PLAN
ELECTRICAL LAYOUT

DRAWN: ARZ
CHECKED: LMP
DATE: DEC. 20/24
FILE: 24-016

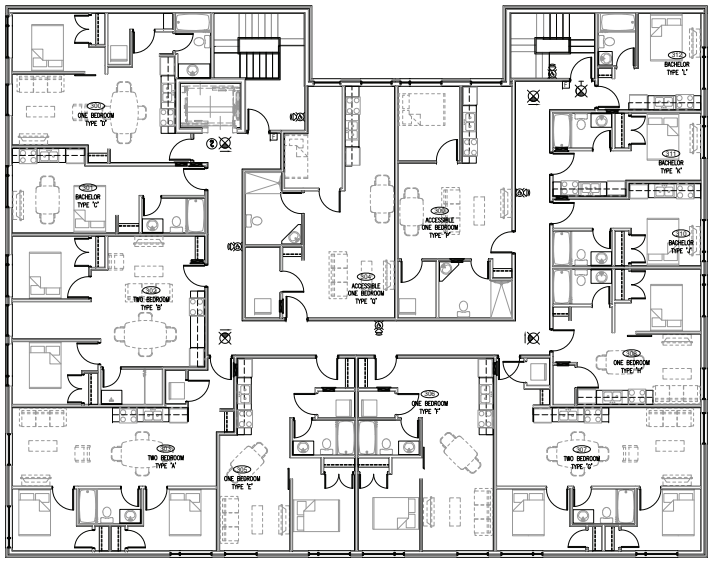
SHEET NO:
E1.1

ARCH. D 609.6x914.4 (24x36)

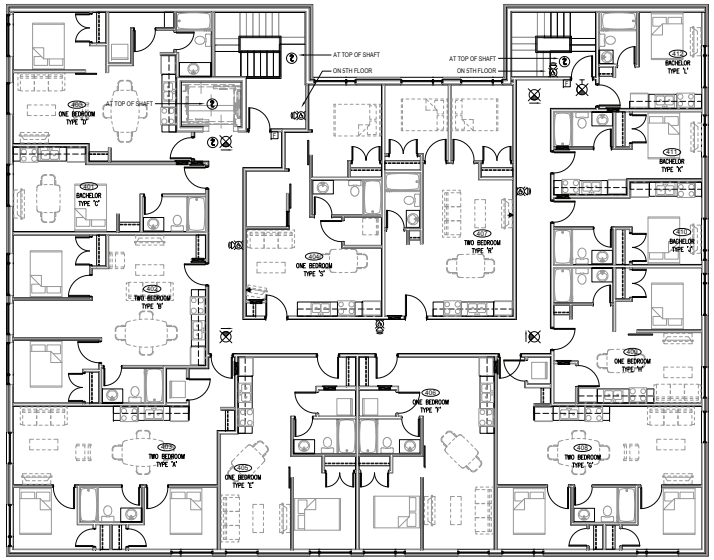


NORTH 1 SECOND FLOOR PLAN E2.1 1:100

COMBO CO/SMOKE ALARMS THIS FLOOR ONLY. OTHER FLOORS SMOKE ALARM ONLY AT THOSE LOCATIONS.



NORTH 2 THIRD FLOOR PLAN E2.1 1:100



NORTH 3 TYPICAL PLAN (4TH, 5TH, 6TH) E2.1 1:100

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REVISIONS

REVN:	DESCRIPTION	DATE:

PROJECT:
PROPOSED SIX STOREY APARTMENT WITH RETAIL

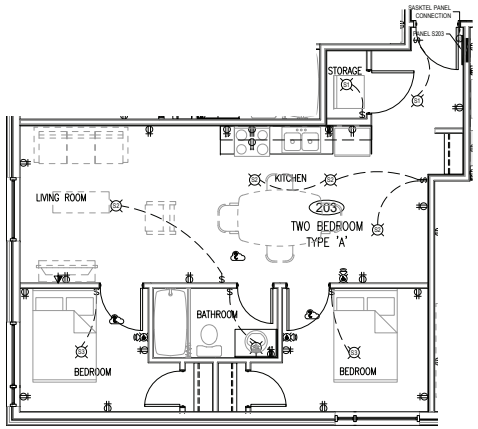
1202 COLLEGE DRIVE
SASKATOON, SASKATCHEWAN

CONTENTS:
OVERALL FLOOR PLANS
ELECTRICAL LAYOUT

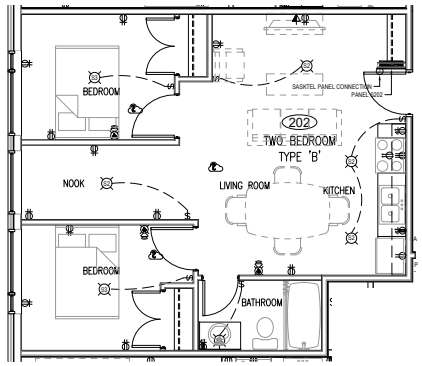
DRAWN: ARZ
CHECKED: LMP
DATE: DEC. 20/24
FILE: 24-016

SHEET NO:
E2.1

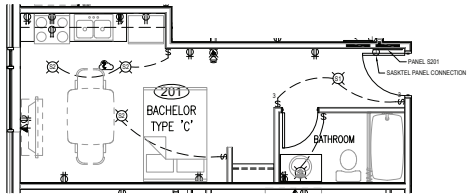
ARCH. D 609.6x914.4 (24x36)



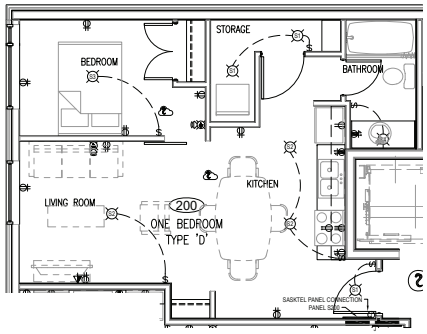
1 SUITE A PLAN
E3.1 1:50



2 SUITE B PLAN
E3.1 1:50



3 SUITE C PLAN
E3.1 1:50



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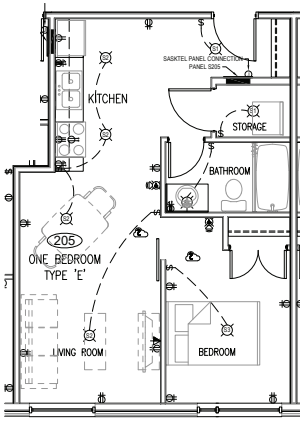
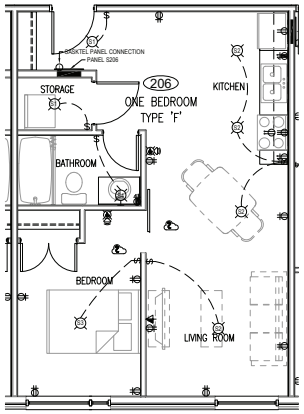
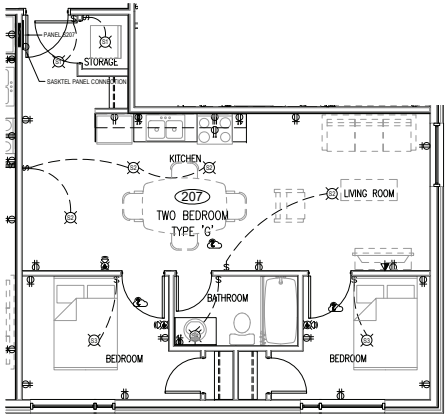
E3.1 1:50



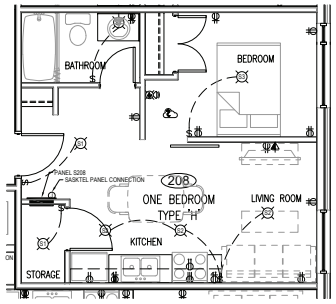
5 SUITE E PLAN
E3.1 1:50



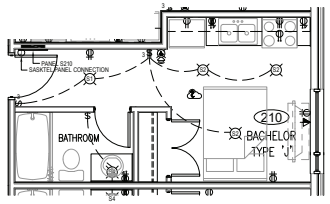
6 SUITE F PLAN
E3.1 1:50



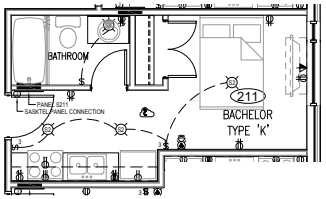
7 SUITE G PLAN
E3.1 1:50



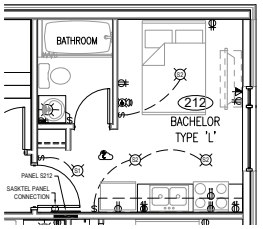
8 SUITE H PLAN
E3.1 1:50



9 SUITE J PLAN
E3.1 1:50



10 SUITE K PLAN
E3.1 1:50



11 SUITE L PLAN
E3.1 1:50

ARCH. D 609.6x914.4 (24x36)

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SASKATOON, SK S7L 6A8 OFFICE.PAEL@SHAW.CA

REVISIONS

REVN:	DESCRIPTION	DATE:

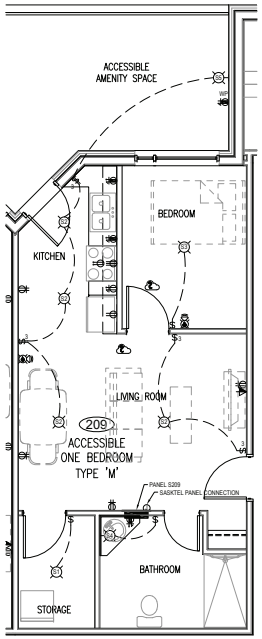
PROJECT:
PROPOSED SIX STOREY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE
SASKATOON, SASKATCHEWAN

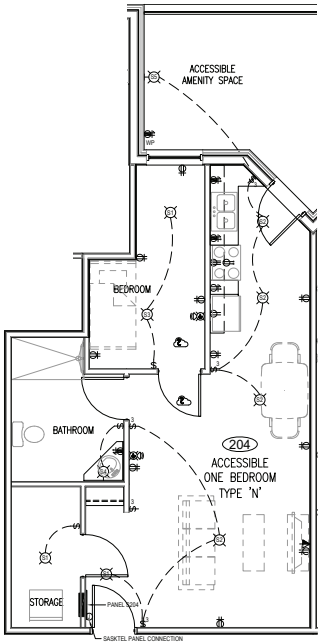
CONTENTS:
SUITE FLOOR PLANS
ELECTRICAL LAYOUT

DRAWN: ARZ
CHECKED: LMP
DATE: DEC. 20/24
FILE: 24-016

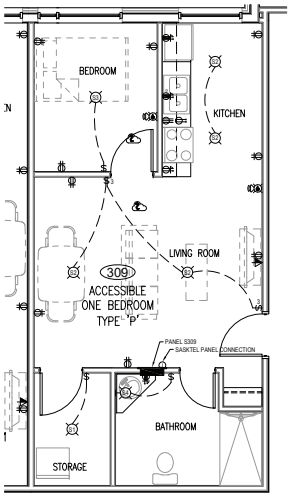
SHEET NO:
E3.1



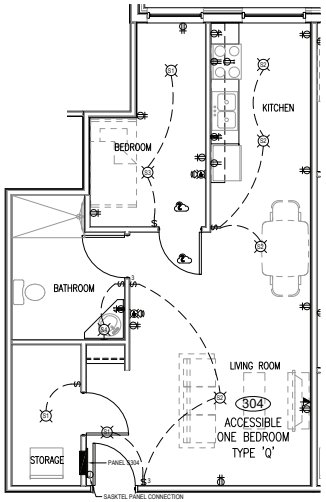
1 SUITE M PLAN E3.2 1:50



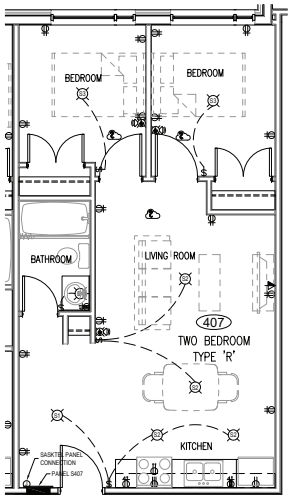
2 SUITE N PLAN E3.2 1:50



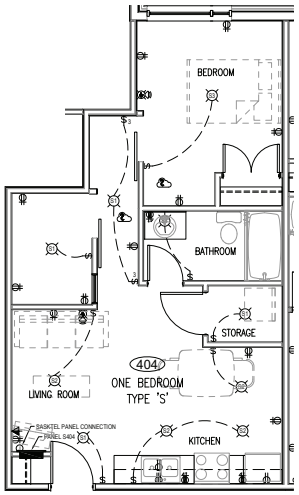
7 SUITE P PLAN E3.2 3



4 SUITE Q PLAN E3.2 1:50



5 SUITE R PLAN E3.2 1:50



6 SUITE S PLAN E3.2 1:50

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PROJECT:
PROPOSED SIX STOREY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE
SASKATOON, SASKATCHEWAN

CONTENTS:
SUITE FLOOR PLANS
ELECTRICAL LAYOUT

DRAWN: ARZ
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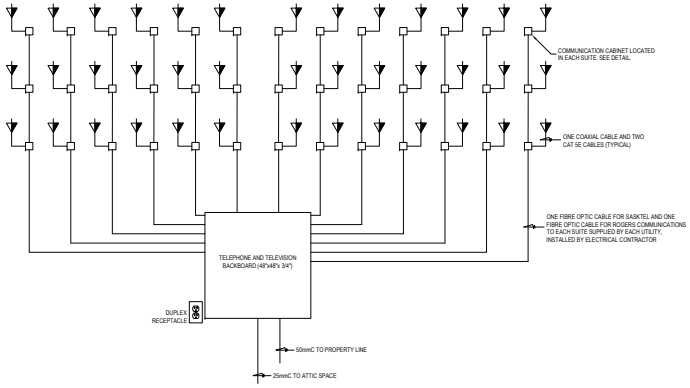
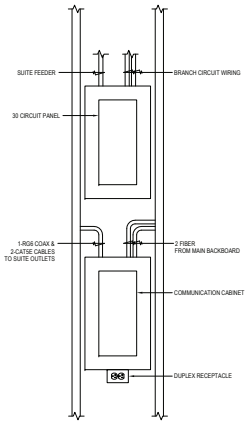
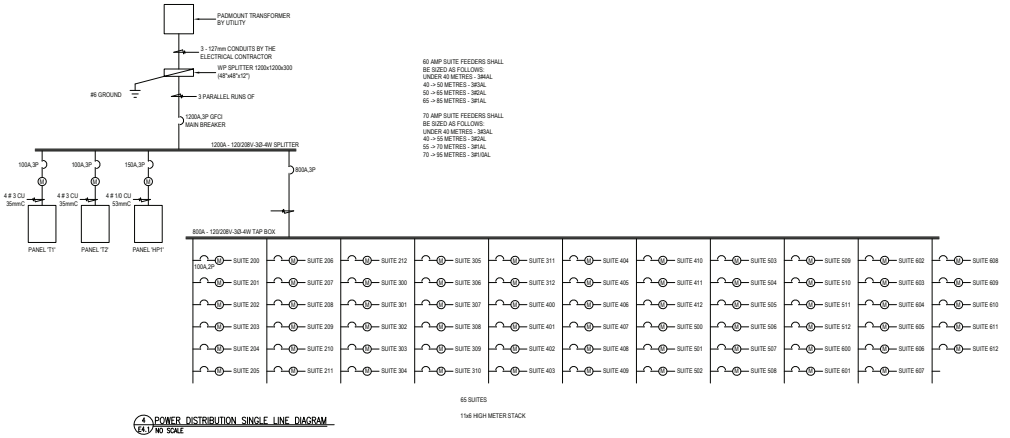
SHEET NO:
E3.2



1 CABLE TELEVISION CONDUIT SYSTEM SCHEMATIC
E4.1 NO SCALE



2 ELECTRICAL & COMMUNICATION CABINET DETAIL
E4.1 NO SCALE



3 POWER DISTRIBUTION SINGLE LINE DIAGRAM
E4.1 NO SCALE

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REVN:	DESCRIPTION	DATE:

PROJECT:
PROPOSED SIX STOREY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE
SASKATOON, SASKATCHEWAN

CONTENTS:
ELECTRICAL SCHEMATICS

DRAWN: ARZ
CHECKED: LMP
DATE: DEC. 20/24
FILE: 24-016

SHEET NO:
E4.1

ARCH D 609.6x914.4 (24x36)

ELECTRICAL SPECIFICATIONS

COMMON WORK RESULTS FOR ELECTRICAL

1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL NEW COMPLETE ELECTRICAL SYSTEM AS INDICATED ON DRAWINGS, AS REQUIRED BY CODE AND AS SPECIFIED HEREIN.
   - 1.1. TEMPORARY SERVICE AS REQUIRED.
   - 1.2. PRIMARY DISTRIBUTION BY ELECTRIC COMPANY.
   - 1.3. SECONDARY SERVICE AND METERING INSTALLATION BY CONTRACTOR.
   - 1.4. EMERGENCY AND EXIT LIGHTING SYSTEMS.
   - 1.5. TELEPHONE SYSTEM CONDUIT AND CABLES AS SHOWN ON THE DRAWINGS.
   - 1.6. STRUCTURED WIRING SYSTEM CONDUIT, CABLE TRAY AND CABLES AS SHOWN ON DRAWINGS.
   - 1.7. LIGHTING, HEATING AND POWER PANELS AND BRANCH CIRCUIT WIRING.
   - 1.8. WIRING DEVICES AND PLATES.
   - 1.9. INTERIOR AND EXTERIOR LIGHTING FIXTURES AND LAMPS, INSTALLATION AND WIRING.
   - 1.10. LIGHTING CONTROLS.
   - 1.11. CONNECTIONS TO EQUIPMENT FURNISHED BY OTHERS
   - 1.12. FINAL CONNECTIONS OF MISCELLANEOUS EQUIPMENT.
   - 1.13. TELEPHONES AND FINAL CONNECTION OF WIRING THERETO.
   - 1.14. SECURITY SYSTEM FURNISHED AND INSTALLED BY SECURITY CONTRACTOR, ROUGH-IN BY E.C.
2. ABBREVIATIONS:
   - 2.1. NEMA – NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
   - 2.2. ULC – UNDERWRITERS LABORATORIES OF CANADA
   - 2.3. EEMAC – ELECTRICAL EQUIPMENT MANUFACTURER'S ASSOCIATION OF CANADA
   - 2.4. CEMA – CANADIAN ELECTRICAL MANUFACTURER'S ASSOCIATION
   - 2.5. NBC – NATIONAL BUILDING CODE
3. THE WORD "PROVIDE" REFERS TO THE SUPPLY, DELIVERY AND INSTALLATION OF DEVICE OR EQUIPMENT REFERENCED TO THE LEVEL REQUIRED TO BE COMPLETE AND OPERATIONAL.
4. THIS CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO INSTALL ALL OF THE ELECTRICAL SERVICE FROM THE UTILITY COMPANY TRANSFORMER TO THE SERVICE ENTRANCE EQUIPMENT, INCLUDING CABLES, CONDUIT, PULL WIRE, AND GROUND ROD AND SLEEVE.
5. ELECTRICAL EQUIPMENT FURNISHED BY OTHER TRADES OR BY THIS CONTRACTOR AND SPECIFIED OR SHOWN ON CONTRACT DOCUMENTS SHALL BE INSTALLED AND CONNECTED BY THIS CONTRACTOR, EXCEPT AS OTHERWISE NOTED. PROVIDE BRANCH CIRCUIT CONNECTIONS TO ELECTRICALLY OPERATED EQUIPMENT FURNISHED BY OTHERS AS SPECIFIED IN OR SHOWN ON THE CONTRACT DOCUMENTS. TEMPORARY WIRING FOR OTHER CONTRACTORS SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR WHO SHALL BE ENTIRELY RESPONSIBLE FOR THE SAFE AND SATISFACTORY OPERATION OF SAID TEMPORARY WIRING. COMPLY WITH LATEST REQUIREMENTS OF OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA). PROVIDE PERSONNEL GROUND FAULT PROTECTION ON ALL TEMPORARY POWER AND LIGHTING CIRCUITS 30 AMPERES OR LESS. GROUND FAULT CIRCUIT INTERRUPTERS ON CONSTRUCTION CIRCUITS ARE NOT REQUIRED WHERE CIRCUIT IS A PERMANENT CIRCUIT TO BE A PART OF THE COMPLETED BUILDING. HOWEVER, CONTRACTOR SHALL PROVIDE APPROVED CORD SETS INCORPORATING GFCI PROTECTION FOR PERSONNEL.
6. ALL FINISH PAINTING IS TO BE PERFORMED BY GENERAL CONTRACTOR EXCEPT THAT THIS CONTRACTOR SHALL RESTORE TO ORIGINAL CONDITION ANY PAINTING DEFACED BY THIS CONTRACTOR AFTER ORIGINAL PAINTING.
7. ALL WORK SHALL BE DONE IN ACCORDANCE WITH:
   - 7.1. CANADIAN ELECTRICAL CODE.
   - 7.2. PROVINCIAL AND LOCAL CODES HAVING JURISDICTION.
   - 7.3. NFPA, NATIONAL FIRE PROTECTION ASSOCIATION.
   - 7.4. CERTAIN CODES AND STANDARDS AS SET UP BY VARIOUS TECHNICAL SOCIETIES SUCH AS ULC, NEMA, IEEE, ASTM, IES, IAND ANSI.
   - 7.5. THIS WORK SHALL BE GOVERNED ALSO BY LOCAL ESA REQUIREMENTS.
   - 7.6. PROVINCIAL OCCUPATIONAL HEALTH AND SAFETY ACT.
   - 7.7. PROVINCIAL ACCESSIBILITY LAWS AND STANDARDS.
8. ALL PERMITS, EXCLUDING BUILDING AND SIGNAGE PERMITS, REQUIRED BY LAWS, ORDINANCES AND BUILDING CODES HAVING JURISDICTION SHALL BE OBTAINED AT THE PROPER TIME BY AND AT THE EXPENSE OF THIS CONTRACTOR.
9. ALL ELECTRICAL WORK SHALL BE INSPECTED BY THE LOCAL AUTHORITY AGENCY HAVING JURISDICTION, INCLUDING LOCAL INSPECTION AUTHORITIES.
10. UPON COMPLETION OF THE WORK, THIS CONTRACTOR SHALL FURNISH TO THE ARCHITECT A CERTIFICATE OF INSPECTION AND APPROVAL FROM THE ABOVE DEPARTMENT BEFORE FINAL PAYMENT ON CONTRACT WILL BE ALLOWED.
11. TEST ALL WIRING AND CONNECTIONS FOR CONTINUITY AND GROUNDING BEFORE ANY EQUIPMENT IS CONNECTED. WHEN DIRECTED BY ARCHITECT, DEMONSTRATE BY PROPER VOLTAGE MEGGER TEST OF INSULATION RESISTANCE OF ANY CONDUCTORS AND REPLACE ALL CONDUCTORS WHICH FAIL SAID TESTS UNTIL ALL CONDUCTORS ARE FREE FROM INSULATION FAULTS.
12. ELECTRICAL LAYOUTS ARE SCHEMATIC. EXACT LOCATIONS ARE DETERMINED BY EXACT LOCATION OF EQUIPMENT, ETC., AND MAY BE REVISED TO SUIT THE CONSTRUCTION CONDITIONS AND AID IN COORDINATION WITH WORK OF OTHER CONTRACTORS.
13. ELECTRICAL DRAWINGS ARE INTENDED TO INDICATE APPROXIMATE LOCATIONS OF SWITCHES, RECEPTACLES, LIGHTING FIXTURES AND OTHER ITEMS OF VARIOUS ELECTRICAL SYSTEMS OF PROJECT. EXACT LOCATIONS AND ROUGH-IN DIMENSIONS FOR ALL WORK AND EQUIPMENT SHALL BE OBTAINED FROM ARCHITECT OR OWNER AS WORK PROGRESSES. SHOULD THE ELECTRICAL CONTRACTOR FAIL TO PROPERLY OBTAIN SUCH LOCATIONS OR DIMENSIONS, THE CONTRACTOR SHALL REVISED THE LOCATIONS AT THE CONTRACTOR'S EXPENSE WHEN REQUESTED BY ARCHITECT OR OWNER. ARCHITECT AND OWNER RESERVE THE RIGHT TO MAKE MINOR CHANGES IN LOCATION OF ELECTRICAL WORK OR EQUIPMENT PRIOR TO ROUGHING IN WITH NO ADDITIONAL COST.
14. MOUNTING HEIGHT OF EQUIPMENT IS FROM FINISHED FLOOR TO CENTRELINE OF EQUIPMENT UNLESS SPECIFIED OR INDICATED OTHERWISE. INSTALL ELECTRICAL EQUIPMENT AT THE FOLLOWING HEIGHTS UNLESS INDICATED OTHERWISE:
   - 14.1. LOCAL SWITCHES: 1200 MM
   - 14.2. WALL RECEPTACLES: GENERAL: 450 MM; ABOVE TOP OF CONTINUOUS BASEBOARD HEATER: 200 MM; ABOVE TOP OF COUNTERS OR COUNTER SPLASH BACKS: 100 MM; IN MECHANICAL ROOMS: 1400 MM
   - 14.3. PANELBOARDS: AS REQUIRED BY CODE OR AS INDICATED;
   - 14.4. COMMUNICATION OUTLETS: 450 MM
   - 14.5. WALL MOUNTED TELEPHONE AND INTERPHONE OUTLETS: 1500 MM
   - 14.6. FIRE ALARM PULL STATIONS: 1200 MM
   - 14.7. FIRE ALARM HORNS/BELLS: 2100 MM. CONFIRM WITH ARCHITECTURAL ELEVATIONS
   - 14.8. EMERGENCY LIGHTING BATTERY AND REMOTE UNITS: 2400 MM, OR IN THE CASE OF A LOW CEILING, WITHIN 300 MM OF CEILING
   - 14.9. EXIT SIGNS (WALL MOUNTED): 450 MM ABOVE TOP OF DOOR FRAME
   - 14.10. TELEVISION OUTLETS: 450 MM
   - 14.11. WALL MOUNTED SPEAKERS: 2100 MM. CONFIRM WITH ARCHITECTURAL ELEVATIONS
   - 14.12. CLOCKS: 2100 MM. CONFIRM WITH ARCHITECTURAL ELEVATIONS
   - 14.13. DOOR BELL PUSHBUTTONS: 1200 MM
   - 14.14. CLOSED CIRCUIT SURVEILLANCE CAMERAS: 3660 MM. IN LOCATIONS WHERE THIS MOUNTING HEIGHT IS NOT POSSIBLE, MOUNT JUST BELOW CEILING HEIGHT
   - 14.15. SECURITY KEYPADS: 1500 MM
   - 14.16. SECURITY SYSTEM CARD READERS: 1100 MM.
15. OWNER RESERVES THE RIGHT TO DIRECT REMOVAL AND REPLACEMENT OF ANY ITEM WHICH DO NOT PRESENT AN ORDERLY OR REASONABLY NEAT OR WORKMANLIKE APPEARANCE, PROVIDED THAT SUCH ITEM CAN BE PROPERLY INSTALLED IN SUCH ORDERLY WAY BY METHODS USUAL IN SUCH WORK. ADDITIONALLY, OWNER WILL DIRECT REMOVAL AND REPLACEMENT OF ANY ITEM WHICH DOES NOT COMPLY WITH CONTRACT DRAWINGS OR SPECIFICATIONS. SUCH REMOVALS OR REPLACEMENTS SHALL BE AT THE SOLE DISCRETION OF THE OWNER AND SHALL BE DONE BY CONTRACTOR, AT THE CONTRACTOR'S EXPENSE, WHEN SO DIRECTED IN WRITING BY THE OWNER.
16. THE MATERIALS AND EQUIPMENT INSTALLED IN THE WORK SHALL BE NEW AND MEET CSA STANDARDS OUTLINED IN THE C.E.C. AND MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND NO MATERIALS OR EQUIPMENT SHALL BE ORDERED UNTIL REVIEWED BY THE OWNER.
17. MANUFACTURER'S CATALOG CUTS MAY BE SUBMITTED FOR STANDARD CATALOG LIGHTING FIXTURES AND OTHER EQUIPMENT. CATALOG CUTS MAY BE MARKED UP TO MEET THE PROJECT SPECIFICATIONS. CUTS SHALL BE MARKED TO INDICATE MODEL NUMBER, SIZE, TYPE, COLOR, RATING, ETC., OF THE ITEM TO BE FURNISHED.
18. PROVIDE INSTRUCTION TO OWNER'S OPERATING PERSONNEL AS NECESSARY, SHOWING LOCATIONS AND PROPER OPERATION OF MAJOR ITEMS OF EQUIPMENT AND SYSTEM COMPONENTS AND REFERRING TO THE OPERATING INSTRUCTION MANUAL DESCRIBED BELOW AS A GUIDE.
19. COMPILE TWO (2) WRITTEN MANUALS OF OPERATING INSTRUCTIONS INCLUDING COPIES OF SHOP DRAWINGS AND A LISTING OF EQUIPMENT SUPPLIERS. ASSEMBLE IN 8-1/2" X 11" HARD BACKED INDEXED BINDER. MATERIAL SHALL BE AS FOLLOWS:
   - 19.1. TITLE PAGE: TITLE OF JOB, TENANT, ADDRESS, DATE OF SUBMISSION, CONTRACTOR, AND ENGINEER.
   - 19.2. INDEX.
   - 19.3. LIST OF MAJOR EQUIPMENT USED IN PROJECT ACCOMPANIED BY CONTRACTOR PURCHASE ORDER NUMBERS AND SUPPLIERS' NAMES AND ADDRESSES.
   - 19.4. ONE COPY OF EACH SHOP DRAWING GROUPED BY TYPES OF EQUIPMENT, I.E., LIGHTING FIXTURES, PANELBOARDS, ETC.
   - 19.5. SECTION FOR EACH SYSTEM, INCLUDING:
     - 19.5.5. BRIEF DESCRIPTION OF SYSTEM OPERATION WITH LOCATION OF MAJOR COMPONENTS.
     - 19.5.6. LIST OF ITEMS IN SYSTEM REQUIRING PERIODIC SERVICE. REQUIRES SEPARATE SECTION FOR EACH OF: ELECTRICAL DISTRIBUTION SYSTEM FROM THE SERVICE ENTRANCE TO EACH LIGHTING AND POWER PANEL AND OTHER SYSTEMS (I.E. CONTROL SYSTEMS AND ANY OTHER ELECTRICAL CONTRACTOR SYSTEM LISTED IN THESE SPECIFICATIONS.)
20. SUBMIT ONE (1) COMPLETED COPY TITLED "ELECTRICAL OPERATING INSTRUCTION MANUAL" ON THE BINDING EDGE OF BINDER TO OWNER FOR APPROVAL. AFTER OWNER'S REVIEW AND ANY CORRECTIONS REQUIRED ARE COMPLETED, SUBMIT TWO (2) IDENTICAL COPIES OF MANUAL TO THE OWNER.
21. ELECTRICAL CONTRACTOR SHALL GUARANTEE HIS WORKMANSHIP AND MATERIAL FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION AND LEAVE HIS WORK IN PERFECT ORDER AT COMPLETION.
22. SHOULD DEFECTS DEVELOP WITHIN GUARANTEE PERIOD, THIS CONTRACTOR SHALL, UPON NOTICE OF SAME, REMEDY DEFECTS AND HAVE DAMAGES TO OTHER WORK OR FURNISHINGS CAUSED BY DEFECTS OR WORK OR CORRECTING SAME REPAIRED AND/OR REPLACED AT HIS EXPENSE TO CONDITION BEFORE SUCH DAMAGE.
23. WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE, RECORD DRAWINGS OF THE ACTUAL INSTALLATION SHALL BE PROVIDED TO THE BUILDING OWNER. RECORD DRAWINGS SHALL INCLUDE AS A MINIMUM THE LOCATION AND RATING OF EACH PIECE OF EQUIPMENT, GENERAL CONFIGURATION OF WIRE AND CONDUITS INCLUDING SIZES AND ROUTING, ETC.
24. THE ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED, IS TO PROVIDE POWER WIRING FOR EACH ITEM OF ELECTRICAL EQUIPMENT AND MAKE FINAL CONNECTIONS TO MOTORS.

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

1. ALL BUILDING WIRING TO BE COPPER R90 INSTALLED IN EMT CONDUIT (MIN 21mm) EXCEPT WHERE OTHERWISE INDICATED. MINIMUM CONDUCTOR SIZE OF #12 AWG.
2. ARMOURED CABLE (AC90,'BX') WILL ONLY BE ALLOWED FOR DROPS TO LIGHTING FIXTURES WITHIN SUSPENDED CEILINGS. ENSURE THAT ALL CONDUIT IS DRY PRIOR TO WIRING INSTALLATION. SEAL ALL CONDUIT THAT MAY BECOME EXPOSED TO MOISTURE. FILL BOXES WITH PAPER, SPONGES OR FOAM OR SIMILAR APPROVED MATERIAL TO PREVENT ENTRY OF DEBRIS DURING CONSTRUCTION. REMOVE UPON COMPLETION OF WORK.
3. RUN CONDUIT PARALLEL TO BUILDING LINES EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.
4. DO NOT CUT STRUCTURAL MEMBERS EXCEPT WHERE SPECIFICALLY INDICATED.

GROUNDING AND BONDING

1. FURNISH AND INSTALL A COMPLETE GROUNDING SYSTEM IN COMPLIANCE WITH ALL REQUIREMENTS OF THE CANADIAN ELECTRICAL CODE.
2. BOND ALL STRUCTURAL STEEL TO EARTH, GROUND RODS OR PLATES, OR WATER SYSTEM.
3. BOND ALL ROOF MOUNTED EQUIPMENT TO NEC ACCEPTABLE GROUNDS ONLY.
4. A SEPARATE EQUIPMENT GROUNDING CONDUCTOR, MINIMUM SIZE PER C.E.C TABLE SHALL BE INSTALLED IN ALL FEEDERS, BRANCH CIRCUITS AND CONTROL CIRCUITS. CONDUCTOR INSULATION SHALL BE GREEN.
5. CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. ALL ENCLOSURES AND NON-CURRENT CARRYING METALS TO BE GROUNDED. ALL LOCK NUTS MUST CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON-CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS.
6. ALL RECEPTACLES SHALL BE BONDED TO A GROUND CONDUCTOR USING A #12 AWG MINIMUM BONDING JUMPER BETWEEN RECEPTACLE TERMINAL AND GROUND CONDUCTOR. METAL-TO-METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE FOR EITHER SURFACE MOUNTED BOXES OR FLUSH TYPE BOXES.
7. LIGHTING FIXTURES SHALL BE GROUNDED BY THE USE OF A PIGTAIL FASTENED ON BARE METAL THAT IS FREE OF PAINT.

RACEWAY AND BOXES

1. ELECTRICAL CONDUCTORS SHALL BE ENCLOSED IN CONTINUOUS GROUNDED EMT CONDUIT RACEWAY SYSTEM EXCEPT AS OTHERWISE NOTED.
2. RACEWAY AND ENCLOSURE SIZES SHALL BE AS SHOWN ON DRAWINGS OR, IF NOT SHOWN, SHALL BE SIZED TO COMPLY WITH THE O.E.S.C. FILL REQUIREMENTS FOR CONDUCTORS ENCLOSED.
3. PULL OR JUNCTION BOXES SHALL BE PROVIDED IN ALL RACEWAY SYSTEMS AT MAXIMUM OF 100 FOOT INTERVALS AND WHERE REQUIRED TO AVOID EXCESSIVE NUMBER OF BENDS, TO FACILITATE WIRE PULLING OR TO PROVIDE ACCESS TO RACEWAY SYSTEM.
4. RACEWAYS AND ENCLOSURES SHALL BE ADEQUATELY SUPPORTED FROM BUILDING STRUCTURE WITH APPROVED SUPPORT RODS AND/OR CLAMPS.
5. ALL CONDUIT SHALL BE RIGID HEAVYWALL GALVANIZED STEEL OR THIN WALL EMT WHERE PERMITTED BY CODE OR AS HEREINAFTER SPECIFIED. PVC TYPE 2 CONDUIT WITH RIGID GALVANIZED STEEL ELBOWS MAY BE USED UNDER FLOOR SLAB. MINIMUM CONDUIT SIZE SHALL BE 3/4".
6. ALL CONDUIT FITTINGS SHALL BE GALVANIZED MALLEABLE IRON OR STEEL. CONNECTORS AND COUPLINGS SHALL BE THREADED OR CUPPED SET SCREW TYPE, CONCRETE TIGHT. CONDUIT BODIES SHALL BE MALLEABLE IRON, THREADED FOR HEAVYWALL CONDUIT AND CUPPED SET SCREW TYPE FOR EMT, WITH CADMIUM FINISH AND CADMIUM PLATED SHEET STEEL COVERS. SYNTHETIC RUBBER GASKETS SHALL BE USED UNDER BODY COVERS EXPOSED TO WEATHER. EMT CONNECTORS SHALL BE INSULATED THROAT TYPE.
7. EMT THIN WALL CONDUIT MAY BE USED INSIDE HOLLOW PARTITIONS, AND ABOVE SUSPENDED CEILINGS AND EXPOSED ABOVE 8'-0" ABOVE FINISHED FLOOR OR ABOVE PANELBOARDS. EMT CONDUIT MAY NOT BE USED BURIED IN EARTH OR FILL, IN OR UNDER CONCRETE FLOOR OR IN POURED CONCRETE CONSTRUCTION. PVC CONDUIT USED UNDER FLOOR SLABS SHALL HAVE RIGID GALVANIZED STEEL ELLS AND METALLIC CONDUIT ABOVE FLOOR SLAB.
8. CONDUIT SHALL GENERALLY BE CONCEALED WHERE POSSIBLE. NO CONDUIT SHALL BE RUN IN SLAB, EXCEPT AS REQUIRED FOR FLOOR-MOUNTED DEVICES.
9. EXPOSED CONDUIT WILL BE PERMITTED IN ELECTRIC ROOMS, AND SIMILAR UNFINISHED SPACES, OVERHEAD IN AREAS WITHOUT CEILINGS AND ELSEWHERE AT THE DISCRETION OF THE OWNER.
10. DURING ROUGHING-IN, CAP ALL CONDUITS WHICH MAY BECOME FOULED WITH FOREIGN MATERIAL.
    - 10.1. FLEXIBLE CONDUIT SHALL BE USED FOR "MAKEUP" CONNECTIONS TO VIBRATING EQUIPMENT, MOTORS, AND AS OTHERWISE NECESSARY OR PERMITTED BY CODE. LIGHTING FIXTURES MAY BE SUPPLIED WITH SHORT LENGTHS (MAX. 6'-0") OF FLEXIBLE CONDUIT. GROUNDING SHALL BE GREEN GROUNDING CONDUCTOR AS SPECIFIED IN "GROUNDING".
    - 10.2. FLEXIBLE CONDUIT SHALL BE ULC APPROVED 1/2" MINIMUM TRADE SIZE.
    - 10.3. LIQUID-TIGHT FLEXIBLE CONDUIT AND LIQUID-TIGHT FITTINGS SHALL BE USED IN AREAS EXPOSED TO THE WEATHER OR EXCESSIVE MOISTURE.
11. NO MORE THAN FOUR (4) 90-DEGREE BENDS WILL BE ALLOWED IN ANY ONE CONDUIT RUN. WHERE MORE BENDS ARE NECESSARY IN ANY SINGLE RUN, A PULL BOX SHALL BE INSTALLED. PULL BOXES SHALL ALSO BE INSTALLED IN LONG RUNS AT A MAXIMUM SEPARATION OF 100'-0". ALL CONDUIT EXCEPT IN CONCRETE SLAB OR EARTH SHALL BE ROUTED PARALLEL OR PERPENDICULAR TO THE LINES OF THE BUILDING, AND NO OUT-OF-PLUMB OR DIAGONAL LINES WILL BE ACCEPTED.
12. OUTLETS SHALL BE PROVIDED FOR DEVICES, LIGHTING FIXTURES, MOTORS AND EQUIPMENT CONNECTIONS, SYSTEMS EQUIPMENT CONNECTIONS, SPECIAL OUTLETS, AND AS OTHERWISE REQUIRED.

IDENTIFICATION

1. PROVIDE NAMEPLATES ON ALL DISTRIBUTION EQUIPMENT INCLUDING THE FOLLOWING EQUIPMENT: PANELBOARDS, DISCONNECT SWITCHES, MOTOR STARTERS, AND CONTROL PANEL ENCLOSURES.
2. NAMEPLATES SHALL INDICATE FUNCTION OF EACH DEVICE. NAMEPLATES SHALL BE LAMINATED PHENOLIC WITH A WHITE SURFACE AND BLACK CORE. USE 1/16" THICK MATERIAL FOR PLATES UP TO 2" X 4". FOR LARGER SIZES, USE 1/8" THICK MATERIAL.
3. LETTERING SHALL BE CONDENSED GOTHIC. THE SPACE BETWEEN LINES SHALL BE EQUAL TO THE WIDTH OF THE LETTERS. USE 1/4" MINIMUM HEIGHT LETTERS WHICH OCCUPY FOUR TO THE INCH. INCREASE LETTER SIZE TO 3/4" ON LARGER PLATES.
4. FASTEN NAMEPLATES TO EQUIPMENT USING ADHESIVE MATERIAL THAT IS INTENDED FOR USE ON ENAMELED SURFACES. ADHESIVE SHALL BE NON-AGING FOR AN APPLICATION AND USAGE TEMPERATURE RANGE OF 0 TO 50 DEGREES CELSIUS.

SERVICE ENTRANCE SWITCHBOARD

1. SERVICE ENTRANCE BOARD TO BE SERVICE ENTRANCE RATED. VOLTAGE, PHASE AND BUS AMPERAGE RATINGS AS INDICATED ON DRAWINGS WITH MOLDED CASE BREAKERS RATED FOR 80% CONTINUOUS OPERATION, WITH MINIMUM INTERRUPTING CAPACITY OF 25KA (SYMMETRICAL).
2. BREAKERS TO BE THERMAL AND MAGNETIC TRIP UNITS WITH ADJUSTABLE SHORT-TIME RESPONSE.
3. BUSBARS AND MAIN TERMINALS TO BE 99.3% CONDUCTIVITY COPPER.
4. ENCLOSURE SHALL BE METAL, FREE STANDING, FLOOR MOUNTED, DEAD FRONT, INDOOR CSA TYPE 1, SPRINKLER PROOF. SEPARATE BARRIERED SECTION FOR METERING COMPARTMENT.

PANELBOARDS

1. PANELBOARDS SHALL BE THE PRODUCT OF ONE MANUFACTURER, HAVE COPPER BUSSING WITH FULL SIZED NEUTRAL, SEQUENCE PHASE BUSSING WITH ODD NUMBERED BREAKERS ON THE LEFT AND EVEN NUMBERED BREAKERS ON THE RIGHT. ALL BREAKERS TO BE BOLT ON STYLE. KEYED LOCKABLE PIANO HINGED DOOR. ALL PANELBOARDS TO BE KEYED ALIKE. BREAKERS FOR FIRE ALARM, EXIT SIGNAGE AND EMERGENCY LIGHTING. RATINGS TO BE AS FOLLOWS:
2. 250V CENTRAL DISTRIBUTION PANELBOARDS, BUS RATING AS INDICATED ON DRAWINGS, 22KA (SYMMETRICAL) INTERRUPTING CAPACITY C/W WITH MINIMUM OF TWO 200A 3P SPARE BREAKERS. ADDITIONAL BREAKERS AS SHOWN ON THE DRAWINGS.
3. 250V PANELBOARDS, MINIMUM 225A MAINS, 42 CIRCUITS, BUS RATING FOR 10KA (SYMMETRICAL) INTERRUPTING CAPACITY. PROVIDE SPARE BREAKERS AS SHOWN ON THE DRAWINGS.
4. CIRCUIT BREAKERS SHALL BE QUICK MAKE, QUICK BREAK, THERMAL MAGNETIC TRIP (ENCLOSURE COMPENSATED), MOLDED CASE TYPE, ULC LISTED. 15 AND 20 AMP SINGLE POLE BREAKERS SHALL CARRY THE ULC/CSA "SWD" MARKING. LINE SIDE TERMINALS FOR PANELBOARDS SHALL BE BOLTED TO MAIN BUSBARS. BREAKER RATINGS SHALL BE PER DRAWINGS.
5. THIS CONTRACTOR SHALL PROVIDE A TYPED CIRCUIT DIRECTORY CARD MOUNTED IN A FRAME WITH A CLEAR PLASTIC PROTECTIVE COVER ON INSIDE OF PANEL DOORS. FREE HAND DIRECTORY IS NOT ACCEPTED.

ELECTRICAL SERVICE AND METERING

1. METER BASE/ENCLOSURE PROVIDED BY ELECTRICAL CONTRACTOR TO MEET LOCAL UTILITY COMPANY METERING REQUIREMENTS AND INSTALLED BY THIS CONTRACTOR., METER SOCKET BY LOCAL UTILITY COMPANY COORDINATE FOR SUPPLY & INSTALLATION. REFER TO ONE-LINE DIAGRAM.

WIRING DEVICES

1. FURNISH AND INSTALL WIRING DEVICES, INCLUDING SWITCHES, RECEPTACLES AND POWER RECEPTACLES, TELEPHONE OUTLET BOXES, COVERPLATES AND BLANK OUTLET PLATES AS SHOWN OR DESCRIBED ON DRAWINGS. WIRING DEVICES SHALL BE HUBBELL OR EQUIVALENT PREMIUM SPECIFICATION GRADE AS MANUFACTURED BY BRYANT, EAGLE, SLATER, PASS & SEYMOUR, OR LEVITON. COLOR SHALL BE AS DIRECTED BY ARCHITECT OR OWNER. SWITCHES SHALL BE RATED 20A, 120V. FLOOR BOXES SHALL INCLUDE ELECTRICAL AND TELECOMMUNICATIONS BOXES IN ONE HOUSING. COVER SHALL SIT FLUSH WITH FLOORING. HUBBELL 3SFBSS OR EQUIVALENT.
2. INDOOR SERVICE POLES: EXTRUDED ALUMINUM, 4620 MM LENGTH, SATIN ALUMINUM FINISH, SQUARE. SCUFF BOOT AT BOTTOM. DIMENSIONS: APPROX 50x50 MM. BARRIER IN POLES TO SEPARATE POWER AND COMMUNICATIONS WIRING. COMPLETE WITH QUANTITY OF RECEPTACLES AND STRUCTURED WIRING OUTLETS AS INDICATED ON THE DRAWINGS.
3. RECESSED OUTLET BOXES SHALL BE STAMPED STEEL SUITABLE FOR THE DEVICE INSTALLED.
4. SURFACE MOUNTED OUTLET BOXES SHALL BE CAST IRON SUITABLE FOR THE DEVICE INSTALLED.
5. DUPLEX RECEPTACLES SHALL BE A MINIMUM OF 15 AMPERE RATING. GROUND FAULT CIRCUIT INTERRUPTER (GFCI) RECEPTACLES SHALL BE CLASS A, 120 VOLT, 15 AMP UNLESS OTHERWISE NOTED. EXTERIOR GFCI RECEPTACLES SHALL HAVE INTEGRAL INDICATOR LED.
6. COVERPLATES SHALL BE STAINLESS STEEL UNLESS OTHERWISE NOTED.
7. COVERPLATES FOR SURFACE MOUNTED BOXES SHALL BE STAMPED STEEL SUITABLE FOR THE PARTICULAR BOX AND DEVICE CONFIGURATION.
8. WIRING DEVICES UNLESS OTHERWISE PROPERLY AUTHORIZED, SHALL BE SAME MANUFACTURERS ONLY; NO ADDITIONAL MANUFACTURERS SHALL BE PERMITTED UNLESS SPECIFICALLY AUTHORIZED BY THE OWNER.
9. LOW VOLTAGE CONTROL DEVICES SHALL BE AS NOTED ON DRAWINGS OR AS REQUIRED TO MEET L.V. WIRING NOTED IN THE O.E.S.C. (WIRING TO BE MIN. FT-6 RATED)
10. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL MOTOR CONTROLS, INCLUDING STARTERS, SAFETY DEVICES AND REMOTE CONTROL STATIONS, UNLESS FURNISHED BY EQUIPMENT MANUFACTURER IN PRE-WIRED ASSEMBLIES.
11. FURNISH AND INSTALL MANUAL MOTOR STARTERS WITH OVERLOAD RELAYS IN EACH LINE CONDUCTOR FOR ALL FRACTIONAL HORSEPOWER MOTORS NOT EQUIPPED WITH BUILT-IN RUNNING OVERCURRENT PROTECTION, NOT REQUIRING AUTOMATIC CONTROLLERS.
12. MANUAL MOTOR STARTERS SHALL INCLUDE OVERLOAD RELAYS IN ALL LINE POLES SIZED TO TRIP SWITCH AT 125% OF MOTOR FULL LOAD RUNNING CURRENT, NEON PILOT LIGHTS, AND NEMA ENCLOSURES, AS MANUFACTURED BY GENERAL ELECTRIC, ALLEN BRADLEY, CUTLER HAMMER, SIEMENS, OR SQUARE D.
13. FURNISH AND INSTALL AUTOMATIC MOTOR STARTERS FOR 1 HP (unless noted otherwise) OR LARGER SINGLE PHASE AND THREE PHASE MOTORS OR MOTORIZED EQUIPMENT FURNISHED WITHOUT STARTERS, REQUIRING AUTOMATIC STARTERS FOR CONTROL REGARDLESS OF HORSEPOWER RATING. ALL THREE PHASE STARTERS SHALL HAVE ANTI-SINGLE PHASING, UNDERVOLTAGE PROTECTION, AND PHASE REVERSAL PROTECTION RELAYS EITHER INCLUDED IN STARTERS OR WIRED TO STARTER CONTROL CIRCUIT.
14. PROTECTIVE RELAYS SHALL HAVE ADJUSTABLE TIME DELAY RELAY IN CIRCUIT TO AVOID NUISANCE SHUT DOWNS. TIME MARK OR SIMILAR EQUIPMENT IS ACCEPTABLE, IF PROTECTION IS NOT PART OF STARTER. DO NOT RELY ON PROPERLY SIZED FUSES AND MOTOR STARTER OVERLOAD HEATERS ALONE TO AVOID SINGLE PHASING BURNOUTS.
15. ALL CIRCUIT BREAKERS FEEDING MOTOR LOADS SHALL BE HACR TYPE.
16. EQUIPMENT SHALL BE SAME MAKE AS MOTOR STARTERS. PUSHBUTTON STATIONS, SELECTOR SWITCHES, PILOT LIGHTS: HEAVY DUTY, OIL TIGHT, STANDARD SIZE, WITH TRANSFORMER TYPE PILOT LIGHTS, FLUSH MOUNTED WHERE PRACTICAL.
17. ANY ACCESS PANELS REQUIRED BUT NOT SPECIFIED OR SHOWN ON DRAWINGS SHALL BE FURNISHED BY THIS CONTRACTOR WITH DESIGN TO BE APPROVED BY ARCHITECT BEFORE INSTALLATION.

ENCLOSED SWITCHES AND CIRCUIT BREAKERS

1. DISCONNECT SWITCHES SHALL BE HEAVY-DUTY TYPE, ULC LISTED.
2. ALL SWITCHES SHALL HAVE SWITCH BLADES WHICH ARE FULLY VISIBLE IN THE "OFF" POSITION WHEN THE SWITCH DOOR IS OPEN. SWITCHES SHALL HAVE REMOVABLE ARC SUPPRESSORS WHERE NECESSARY TO PERMIT EASY ACCESS TO LINE SIDE LUGS. LUGS SHALL BE FRONT REMOVABLE AND ULC LISTED FOR 75 DEGREES C., ALUMINUM OR COPPER WIRES.
3. SWITCHES SHALL BE QUICK-MAKE, QUICK-BREAK. THE OPERATING HANDLE SHALL BE AN INTEGRAL PART OF THE BOX, NOT THE COVER. PROVISIONS FOR PADLOCKING THE SWITCH IN THE "OFF" POSITION WITH AT LEAST THREE LOCKS SHALL BE PROVIDED. SWITCHES SHALL HAVE A DUAL COVER INTERLOCK TO PREVENT UNAUTHORIZED OPENING OF THE SWITCH DOOR WHEN THE HANDLE IS IN THE "ON" POSITION, AND TO PREVENT CLOSING OF THE SWITCH MECHANISM WITH THE DOOR OPEN. THE HANDLE POSITION SHALL INDICATE WHETHER THE SWITCH IS "ON" OR "OFF".
4. SWITCHES SHALL BE FURNISHED IN NEMA 1 GENERAL PURPOSE ENCLOSURE EXCEPT ALL SWITCHES LOCATED OUTDOORS SHALL BE NEMA 3R WEATHERPROOF (WP). NEMA 3R ENCLOSURE SHALL BE MANUFACTURED FROM GALVANIZED STEEL. ENCLOSURES SHALL HAVE A GRAY BAKED ENAMEL FINISH, ELECTRODEPOSITED, ON CLEANED, PHOSPHATIZED STEEL.
5. SWITCHES SHALL BE RATED FOR AC. FUSIBLE SWITCHES MUST ACCEPT CLASS J FUSES AND HAVE PROVISIONS TO REJECT ALL FUSES EXCEPT CLASS J. THE ULC LISTED SHORT CIRCUIT RATING OF THE SWITCHES SHALL BE 200,000 RMS SYMMETRICAL AMPERES WHEN CLASS J FUSES ARE USED.
6. PRODUCT SHALL BE SQUARE D. EQUAL PRODUCT BY SIEMENS, GENERAL ELECTRIC OR CUTLER HAMMER MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.
7. DISCONNECT SWITCHES SHALL BE LOCATED WHERE SHOWN ON DRAWINGS AND ADJACENT TO ANY OTHER EQUIPMENT WHICH IS NOT VISIBLE FROM THE POWER SOURCE, WHETHER DISCONNECTS ARE SHOWN ON DRAWINGS OR NOT.

INTERIOR LIGHTING

1. INSTALL LIGHTING FIXTURES AS SHOWN ON THE DRAWINGS. ALL FIXTURES LISTED AND LABELED BY UNDERWRITERS LABORATORY AND DLC OR ENERGY START LISTED.
2. ALL FIXTURES ARE TO BE PROVIDED COMPLETE WITH TRIM PLATES AND ALL MOUNTING ACCESSORIES REQUIRED FOR A COMPLETE FIXTURE INSTALLATION.
3. LED RECESSED LIGHTING FIXTURES TO BE FURNISHED WITH THERMAL CUT OUTS AS REQUIRED BY THE CSA. ALL LAMP TYPES SHALL BE BY THE SAME MANUFACTURER. ALL LED LAMPS TO BE FURNISHED WITH ULC/CSA APPROVED DRIVERS.
4. USE LED, UNLESS NOTED OTHERWISE.
5. ALL LENSES ON LED FIXTURES ARE TO BE ACRYLIC AND MINIMUM OF 0.125 IN. THICK.
6. ALL RECESSED LED FIXTURES SHALL CARRY A ULC LISTING. THEY SHALL HAVE A THERMAL CUT OUT ON BOTH THE BALLAST AND THE FIXTURE ITSELF.
7. USE STEEL WIRE HANGERS FASTENED TO THE BUILDING STRUCTURE TO SUPPORT RECESSED FIXTURES AT TWO DIAGONAL CORNERS (TWO-CORNER DIAGONAL SUSPENDED). FIXTURES TO FIT TIGHT AGAINST CONSTRUCTION TO ELIMINATE LIGHT LEAKS.
8. WALL-MOUNTED FIXTURES SHALL BE MOUNTED PLUMB WITH BUILDING LINES AND INSTALLED WITH PROPER BOX AND COVER HARDWARE.
9. SURFACE-MOUNTED FIXTURES SHALL COVER MOUNTING HARDWARE. USE A CANOPY THAT IS NO LONGER THAN THE LENGTH AND WIDTH OF THE FIXTURE AND AT A HEIGHT THAT IS NO HIGHER THAN REQUIRED TO MOUNT FIXTURE ABSOLUTELY VERTICAL. CANOPY FINISH SHALL MATCH FIXTURE FINISH.
10. STEM-MOUNTED FIXTURES SHALL BE MOUNTED SO AS TO BE ABSOLUTELY VERTICAL AND HORIZONTAL. INSTALL AND SUPPORT AS SHOWN ON DRAWINGS.

EMERGENCY LIGHTING AND EXIT SIGNAGE

1. EMERGENCY UNIT EQUIPMENT SHALL BE PROVIDED TO MEET CSA C22.1. EMERGENCY BATTERIES SHALL BE SEALED LEAD ACID RATED FOR A MINIMUM OF 144 WATTS FOR ½ HR, SELF-TESTING C/W MANUAL TEST SWITCH, 120V INPUT, 24V DC OUTPUT. LIGHTING HEADS, WITH BATTERY UNIT OR REMOTE, SHALL BE LED SOURCE, 4W. UNITS SHALL HAVE A 5 YR WARRANTY. PROVIDE MINIMUM #10 AWG WIRING FOR REMOTE HEADS. UNITS SHALL BE DESIGNED TO MONITOR THE LIGHTING CIRCUIT IN THE LOCATION WHERE EMERGENCY LIGHTING IS SHOWN.
2. EXIT SIGNAGE SHALL BE RUNNING MAN STYLE SINGLE OR DOUBLE FACE, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, LED SOURCE, DC OPTION, WITH ENAMEL FINISH. PROVIDE 5 YR. WARRANTY.
3. PROVIDE SELF-CONTAINED EXIT SIGNS MEETING CSA C22.2 NO. 141 AND CSA C860 WHERE INDICATED ON DRAWINGS. UNITS SHALL MEET ALL REQUIREMENTS AS MENTIONED ABOVE.

COMMUNICATION WIRING

1. PROVIDE CABLING FOR TV/DATA AND TELEPHONE TO A COMBINED PANEL IN EACH SUITE.

DOOR ACCESS CONTROL

1. PROVIDE CONDUIT/WIRING ROUGH-IN FOR DOOR ACCESS SYSTEM.

VIDEO SURVEILLANCE

1. PROVIDE VIDEO SURVEILLANCE SYSTEM CONSISTING OF CAT 6 CABLING AND OUTLET BOXES FOR OWNER SUPPLIED CCTV SYSTEM.
2. INSTALL CABLE, BOXES AND SYSTEM COMPONENTS WHERE SHOWN ON DRAWINGS
3. INSTALL CAT 6 CABLE FROM EACH CAMERA BACK TO I.T. ROOM.

FIRE ALARM SYSTEM

1. PROVIDE A COMPLETE FULLY FUNCTIONAL ADDRESSABLE INTELLIGENT FIRE ALARM SYSTEM AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.
2. SYSTEM SHALL CONSIST OF BUT NOT BE LIMITED TO THE FOLLOWING:
   - FIRE ALARM PANEL
   - AUTOMATIC AND MANUALLY ACTIVATED ALARM INITIATING AND MONITORING DEVICES.
   - AUDIBLE AND VISUAL NOTIFICATION DEVICES.
   - STANDBY POWER SUPPLIES.
   - SYSTEM PROGRAMMING AND COMMISSIONING.
   - TRAINING OF OPERATORS.
   - CONDUIT, WIRE AND ACCESSORIES REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
3. SYSTEM SHALL MEET THE RELEVANT REQUIREMENTS OF THE CODES AND STANDARDS:
   - CAN/ULC-S524-06, INSTALLATION OF FIRE ALARM SYSTEMS.
   - CAN/ULC-S525-07, AUDIBLE SIGNAL APPLIANCES FOR FIRE ALARM SYSTEMS.
   - CAN/ULC-S526-07, VISUAL SIGNAL DEVICES FOR FIRE ALARM SYSTEMS, INCLUDING ACCESSORIES
   - CAN/ULC-S527-99, STANDARD FOR CONTROL UNITS FOR FIRE ALARM SYSTEMS.
   - CAN/ULC-S528-05, MANUAL STATIONS FOR FIRE ALARM SYSTEMS, INCLUDING ACCESSORIES.
   - CAN/ULC-S529-02, SMOKE DETECTORS FOR FIRE ALARM SYSTEMS.
   - CAN/ULC-S530-1991, HEAT ACTUATED FIRE DETECTORS FOR FIRE ALARM SYSTEMS.
   - CAN/ULC-S531-02, STANDARD FOR SMOKE ALARMS.
   - CAN/ULC-S536-04, INSPECTION AND TESTING OF FIRE ALARM SYSTEMS.
   - CAN/ULC-S537-04, VERIFICATION OF FIRE ALARM SYSTEMS.
   - CAN/ULC-S541-07, SPEAKERS FOR FIRE ALARM SYSTEMS, INCLUDING ACCESSORIES.
   - CAN/ULC22.1-2018, CANADIAN ELECTRICAL CODE
   - NATIONAL, PROVINCIAL AND LOCAL BUILDING CODES
4. SYSTEM SHALL BE SUPERVISED, ADDRESSABLE, CLASS A, ZONED, NON-CODED, SINGLE STAGE, MICROPROCESSOR BASED. UTILIZING DIGITAL TECHNIQUES FOR DATA CONTROL AND DIGITAL AND MULTIPLEXING TECHNIQUES FOR DATA TRANSMISSION.
5. SYSTEM INCLUDES: CONTROL PANEL TO CARRY OUT FIRE ALARM AND PROTECTION FUNCTIONS INCLUDING RECEIVING ALARM SIGNALS, INITIATING GENERAL ALARM, SUPERVISING SYSTEM CONTINUOUSLY, ACTUATING ZONE ANNUNCIATORS, INITIATING TROUBLE SIGNALS AND PROVISION FOR SIGNALING TO MONITORING AGENCIES.
6. PROVIDE ZONE ISOLATORS, EVERY 15 DEVICES. BETWEEN FLOORS, AT TWO (2) HOUR RATED FIREWALLS AT THE PERIMETER OF FLOOR AREAS THAT EXCEED 2000 M3 AND AT SIGNALING DEVICES WITHIN RESIDENTIAL UNITS
7. PROVIDE AUXILIARY RELAYS: MINIMUM OF SIX, MOUNTED WITHIN THE MAIN PANEL FOR, FAN SHUTDOWN, ELEVATOR HOME, ELECTROMAGNETIC DOOR HOLD OPEN DEVICES AND EACH FIRE ALARM SIGNAL DEVICE CIRCUIT.
8. THE DISCONNECT/BYPASS SWITCHES SHALL ISOLATE THESE AUXILIARY RELAYS FOR TESTING PURPOSES AND SHALL APPEAR AS A "TROUBLE" WHILE BYPASSED. CONTACT TERMINAL SIZE: CAPABLE OF ACCEPTING 22-12 AWG WIRE
9. MASTER POWER SUPPLY PANEL TO PROVIDE 24VDC AND 5 VDC TO SYSTEM FROM 120VAC, 60HZ INPUT. THE POWER SUPPLY MODULE(S) SHALL BE SIZED FOR 140% OF THE INITIAL INSTALLATION. REMOTE BOOSTER POWER SUPPLIES ARE NOT PERMITTED.
10. THE MAIN FIRE ALARM CONTROL PANEL SHALL CONTAIN AN EMERGENCY POWER SOURCE (24V GEL CELL BATTERIES) TO POWER THE FIRE ALARM PANEL UPON A NORMAL AC POWER FAILURE FOR NOT LESS THAN 24 HOURS ON STANDBY AND THEN OPERATE THE SYSTEM FOR AT LEAST 30 MINUTES UNDER EMERGENCY CONDITIONS.
11. ADDRESSABLE MANUAL STATIONS SHALL BE PROVIDED TO CONNECT TO THE FIRE ALARM CONTROL PANEL DEVICE LOOPS. THE MANUAL STATION SHALL, ON COMMAND FROM THE CONTROL PANEL, SEND DATA TO THE PANEL REPRESENTING THE STATE OF THE MANUAL SWITCH. MANUAL FIRE ALARM STATIONS SHALL USE A KEY OPERATED TEST-RESET LOCK AND SHALL BE DESIGNED SO THAT AFTER ACTIVATION THEY CANNOT BE RESTORED TO NORMAL USE EXCEPT BY THE USE OF A KEY.
12. THERMAL FIRE DETECTORS SHALL BE RESTORABLE FIXED TEMPERATURE ELEMENT FIXED TEMPERATURE 93°C OR COMBINATION FIXED TEMPERATURE AND RATE OF RISE, NON-RESTORABLE FIXED TEMPERATURE ELEMENT, SELF-RESTORING RATE OF RISE, FIXED TEMPERATURE 57 °C, RATE OF RISE 9.4°C PER MINUTE.
13. SMOKE DETECTORS SHALL BE INTELLIGENT AND ADDRESSABLE AND SHALL USE A UNIPOLAR CHAMBER TO MEASURE SMOKE DENSITY AND SHALL, ON COMMAND FROM THE CONTROL PANEL, SEND DATA TO THE PANEL REPRESENTING THE ANALOG LEVEL OF SMOKE DENSITY CEILING MOUNTED WITH A TWIST-LOCK BASE. SUITE SMOKE DETECTORS SHALL BE COMBINATION SMOKE AND CARBON MONOXIDE DETECTORS.
14. THE DETECTORS SHALL PROVIDE A TEST MEANS WHEREBY THEY WILL SIMULATE AN ALARM CONDITION AND REPORT THAT CONDITION TO THE CONTROL PANEL. SUCH A TEST MAY BE INITIATED AT THE DETECTOR ITSELF (BY ACTIVATING A MAGNETIC SWITCH) OR MAY BE INITIATED REMOTELY ON COMMAND FROM THE CONTROL PANEL.
15. OPERATION OF ANY ALARM INITIATING DEVICE TO:
    - CAUSE AUDIBLE SIGNAL DEVICES TO SOUND THROUGHOUT BUILDING.
    - ALL VISUAL SIGNALS TO FLASH AT A RATE OF ONE FLASH PER SECOND.
    - CAUSE ZONE OF ALARM DEVICE TO BE INDICATED ON CONTROL PANEL AND REMOTE ANNUNCIATORS. INDICATION OF THE SPECIFIC DEVICE IN ALARM ON THE 80 CHARACTER ALPHANUMERIC LCD DISPLAY ON THE MAIN FIRE ALARM CONTROL PANEL AND ANY REMOTE ANNUNCIATORS.
    - CAUSE AIR CONDITIONING AND VENTILATING FANS TO SHUT DOWN OR TO FUNCTION SO AS TO PROVIDE REQUIRED CONTROL OF SMOKE MOVEMENT (IN ACCORDANCE WITH APPLICABLE CODES)
    - TRANSMIT A SIGNAL TO THE ELEVATOR CONTROLLER (TO CAUSE ELEVATOR TO RETURN TO "HOME" POSITION).
    - CAUSE FIRE DOORS AND SMOKE CONTROL DOORS IF NORMALLY HELD OPEN, TO CLOSE AUTOMATICALLY.
    - CAUSE MAGNETIC LOCKED DOORS TO RELEASE TO OPEN.
    - SHUTDOWN CENTRAL VACUUM SYSTEM, WHERE APPLICABLE.
17. A FACTORY- TRAINED TECHNICIAN SHALL PERFORM ALL SYSTEM SOFTWARE MODIFICATIONS, UPGRADES OR CHANGES.
18. PROVIDE ALL HARDWARE, SOFTWARE, PROGRAMMING TOOLS AND DOCUMENTATION NECESSARY TO MODIFY THE FIRE ALARM ON SITE. MODIFICATION INCLUDES THE ADDITION AND DELETION OF DEVICES, CIRCUITS, ZONES AND CHANGES TO SYSTEM OPERATION AND CUSTOM LABEL CHANGES FOR DEVICES OR ZONES. THE SYSTEM STRUCTURE AND SOFTWARE SHALL PLACE NO LIMIT ON THE TYPE OR EXTENT OF SOFTWARE MODIFICATIONS ON-SITE.
19. PERFORM START-UP, DEMONSTRATION AND TRAINING IN ACCORDANCE WITH SECTION 16010 – ELECTRICAL GENERAL REQUIREMENTS.
20. THE OWNER'S OPERATING PERSONNEL SHALL BE INSTRUCTED IN THE OPERATION OF THE SYSTEM.
21. WRITTEN DOCUMENTATION BEARING THE NAME AND SIGNATURE OF OWNER'S PERSONNEL WHO RECEIVED THE ABOVE INSTRUCTIONS SHALL BE INCLUDED IN THE OPERATING INSTRUCTIONS AND SERVICE MANUALS. DURATION: 1 HOUR MINIMUM.
22. WIRING SHALL BE #18 GAUGE MINIMUM FOR INITIATING DEVICE CIRCUITS AND #14 GAUGE MINIMUM FOR SIGNAL DEVICE CIRCUITS, THHN, 600 VOLT, SOLID COPPER, OR AS RECOMMENDED BY THE MANUFACTURER. SIGNAL CIRCUIT CONDUCTORS SHALL BE RED AND BLACK IN COLOUR.
23. MULTIPLEX COMMUNICATION LOOP WIRING SHALL BE TWISTED AND SHIELDED OR AS RECOMMENDED BY MANUFACTURER.
24. UPON COMPLETION OF THE INSTALLATION OF THE SYSTEM, A FACTORY TRAINED MANUFACTURER'S REPRESENTATIVE SHALL PERFORM A COMPLETE VERIFICATION AND INSPECTION OF ALL INSTALLED EQUIPMENT IN ACCORDANCE WITH THE LATEST EDITION OF CAN/ULS-S537, STANDARD FOR THE VERIFICATION OF FIRE ALARM SYSTEMS. VERIFICATION WILL ENSURE THE FOLLOWING:
    - THAT THE TYPE OF EQUIPMENT INSTALLED IS THAT DESIGNATED BY THE SPECIFICATION AND PLANS.
    - THAT SENSING DEVICES DETECT AND OPERATE UNDER SIMULATED CONDITIONS OF HEAT OR SMOKE.
    - THAT THE WIRING CONNECTIONS TO ALL EQUIPMENT ARE CORRECT AND IN ACCORDANCE WITH CSA AND ULC REQUIREMENTS.
    - THAT THE EQUIPMENT IS INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
    - THAT THE REGULATIONS CONCERNING THE SUPERVISION OF COMPONENTS HAVE BEEN ADHERED TO (E.G. STATIONS, DETECTORS, SIGNAL DEVICES, ETC.) AND ARE PROPERLY WIRED AND SUPERVISED.
    - THAT ANY SUBSEQUENT CHANGES NECESSARY TO CONFORM TO THE ABOVE WILL BE DONE BY THE CONTRACTOR WITH TECHNICAL ADVICE BY THE MANUFACTURER.
25. VERIFICATION MAY BE PERFORMED ONLY AFTER AIR BALANCING IS COMPLETE, SPRINKLER SYSTEM IS 100% COMPLETE, CHARGED AND READY FOR USE AND BUILDING IS AT A STATE OF COMPLETION THAT WILL ENSURE A REASONABLY DUST FREE ENVIRONMENT AND THE ABSENCE OF CONTAMINATING FUMES FROM VERIFICATION DATE TO FINAL COMPLETION.
26. IN EXISTING SYSTEMS, THE ADDITION OF ANY SIGNALING APPLIANCES SHALL REQUIRE ALL SIGNALING CIRCUITS TO BE REVERIFIED AND LOAD TESTED.
27. MANUFACTURER TO PROVIDE SUFFICIENT BACKUP PARTS ON SITE DURING VERIFICATION TO ACCOMMODATE ANY COMPONENT FAILURES. BACKUP PARTS NOT USED DURING VERIFICATION CAN BE REMOVED FROM SITE BY THE MANUFACTURER.
28. PROVIDE A POINT-BY-POINT CHECK LIST INDICATING DATE AND TIME OF EACH ITEM INSPECTED AND ALSO ISSUE A CERTIFICATE FOR HIS RECORDS CONFIRMING THAT INSPECTION HAS BEEN COMPLETED AND SYSTEM IS INSTALLED AND FUNCTIONING IN ACCORDANCE WITH THE SPECIFICATIONS. INCLUDED WITH THIS CERTIFICATE TO BE SATISFACTORY PROOF OF LIABILITY INSURANCE VALID FOR NOT LESS THAN ONE (1) YEAR FROM DATE OF FINAL INSPECTION. CERTIFICATE TO BE FREE FROM DEFINING AND QUALIFIED STATEMENTS WHICH WOULD MAKE IT UNACCEPTABLE BY THE OWNER.
29. A COPY OF THE INSPECTING TECHNICIAN'S REPORT, SHOWING THE LOCATION OF EACH DEVICE, AND CERTIFYING THE TEST RESULTS OF EACH DEVICE. THE REPORT SHALL ALSO INDICATE THE LEVEL OF DIRT ACCUMULATION AND THE SENSITIVITY SETTING OF EACH DEVICE. DEVICES SHOWING DIRT DEPRECIATION OF MORE THAN 10% SHALL BE REPLACED.
30. PROVIDE A CERTIFICATE OF VERIFICATION CONFIRMING THAT THE INSPECTION HAS BEEN COMPLETED, AND INDICATING THE CONDITION OF THE SYSTEM DURING THE INSPECTION AND CERTIFICATION.
31. PROVIDE ONE YEAR'S FREE MAINTENANCE WITH ONE INSPECTION BY MANUFACTURER DURING WARRANTY PERIOD. INSPECTION TESTS TO CONFORM TO CAN/ULC-S536. SUBMIT INSPECTION REPORT TO OWNER ENGINEER.

SUITE CIRCUITING

RANGE – SEPARATE 50A-208V CIRCUIT
DRYER – SEPARATE 30A-208V CIRCUIT (SHARED WITH EV CHARGING IN PARKADE, MANUALLY SWITCHED)
WASHER – SEPARATE 15A-120V CIRCUIT
REFRIGERATOR – SEPARATE 15A-120V CIRCUIT
BATHROOM GFI RECEPTACLES – SEPARATE 15A-120V CIRCUIT
KITCHEN WALL RECEPTACLE – SEPARATE 15A-120V CIRCUIT
STORAGE ROOM RECEPTACLE – SEPARATE 15A-120V CIRCUIT
MICROWAVE SHELF – SEPARATE 15A-120V CIRCUIT
DISHWASHER – SEPARATE – 15A-120V CIRCUIT
FAN COIL UNIT – SEPARATE – 15A-120 CIRCUIT
A/C UNIT – SEPARATE 20A-208V CIRCUIT (CONFIRM WITH MECHANICAL CONTRACTOR)
COUNTERTOP RECEPTACLE IN KITCHEN SHALL BE 5-20R TYPE CIRCUITED FROM 20A1P BREAKERS. DO NOT EXCEED 2 RECEPTACLES/CIRCUIT. UTILIZE GROUND FAULT CIRCUITS WITHIN 1.5m OF THE SINK.
THE REMAINDER OF THE LIGHTS AND RECEPTACLES SHALL BE DIVIDED UP SO THERE IS A MAXIMUM OF 12 OUTLETS PER CIRCUIT. DUPLEX RECEPTACLES IN BEDROOMS & LIVING ROOM SHALL BE CIRCUITED TO NO LESS THAN 2 DIFFERENT CIRCUITS PER ROOM.
THE BEDROOM RECEPTACLES SHALL BE CIRCUITED FROM ARC FAULT TYPE BREAKERS ALL RECEPTACLES WITH THE EXCEPTION OF THE RECEPTACLES ABOVE THE COUNTER TOPS OR BEHIND APPLIANCES SHALL BE TAMPERPROOF.

NOTES:

1. EMERGENCY LIGHTING AND EXIT LIGHTS SHALL BE AS FOLLOWS:
   - EMERGENCY BATTERY UNIT SHALL BE EMERGI-LITE 12ESL144 C/W TWO LIGHTING HEADS.
   - REMOTE EMERGENCY LIGHTING FIXTURES SHALL BE EMERGI-LITE EF9 AND EF9D.
   - EXIT LIGHTS SHALL BE EMERGI-LITE EX-10 SERIES C/W THIRD SOCKET. UNIVERSAL MOUNT.
   - CONNECT THIRD SOCKETS IN EXIT LIGHTS AND THE REMOTE EMERGENCY LIGHTS TO NEAREST BATTERY UNIT. DO NOT EXCEED 144 WATTS.
2. INTERCOM SYSTEM: PROVIDE A COMPLETE AND OPERATIONAL DOOR ENTRY SYSTEM.
3. PROVIDE GARAGE DOOR CONTROL SYSTEM.
4. ALL SUITE FIXTURES SHALL BE SPECIFIED BY THE DEVELOPER AND SUPPLIED BY THE ELECT CONTRACTOR
5. ELECTRICAL CONTRACTOR SHALL VERIFY ALL MECHANICAL LOADS FROM MECH. DRAWINGS. ALL T'STATS SHALL BE SUPPLIED BY MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
6. PROVIDE DUCT DETECTORS IN THE MAKE UP AIR UNIT ON THE DOWNSTREAM SIDE OF THE FILTERS.
7. THE ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE ALARM CONNECTIONS TO THE SPRINKLER SYSTEM FLOW AND TAMPER SWITCHES. CONTACT THE MECHANICAL ENGINEER FOR QUANTITIES.
8. UTILIZE WHITE DECORA SWITCHES IN ALL SUITES. P&S, COOPER, OR BUILDER APPROVED EQUIVALENT.
9. THE ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING TO THE SPRINKLER SYSTEM ALARM BELL LOCATED ON THE OUTSIDE OF THE BUILDING.
10. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIRE STOPPING ANY OPENINGS CREATED BY THE ELECTRICAL INSTALLATION IN ALL FIRE RATED WALLS & CEILINGS.

PALEY AND ASSOCIATES
CONSULTING ELECTRICAL ENGINEERS
3 - 2217 HANSELMAN COURT
SASKATOON, SK S7L 6A8
306.954.9544
OFFICE.PAEL@SHAW.CA

REVISIONS		
REV'N:	DESCRIPTION	DATE:

PROJECT:
PROPOSED SIX STOREY APARTMENT WITH RETAIL

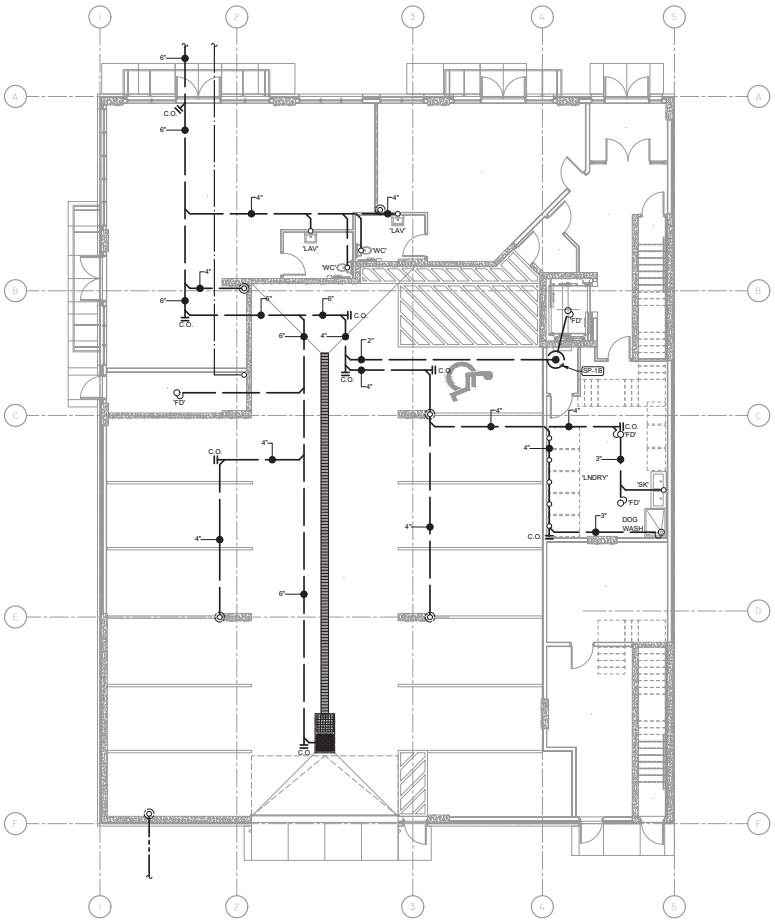
1202 COLLEGE DRIVE
SASKATOON, SASKATCHEWAN

CONTENTS:
ELECTRICAL SPECIFICATION

DRAWN: ARZ
CHECKED: LMP
DATE: DEC. 20/24
FILE: 24-016

SHEET NO:
E4.2

ARCH D 609.6x914.4 (24x36)



1 M1.1 FOUNDATION PLAN PLUMBING
SCALE: 1/8" = 1'-0"

LEGAL ADDRESS

1202 COLLEGE DRIVE , SASKATOON SK

BUILDING WATER LOAD SUMMARY

DOMESTIC WATER	200 GPM
SITE TOTAL WATER LOAD	200 GPM

SANITARY LOAD SUMMARY

6 STORY RESIDENTIAL BUILDING LOAD = 750 FU

SITE TOTAL LOAD = 750 FU - 8"Ø @ 1% CONNECTION

BUILDING GAS LOAD SCHEDULE

ITEM	DESCRIPTION	LOAD (MBH)
B-1A	BOILER	2000
B-1B	BOILER	2000
WH-1A	WATER HEATER	300
WH-1B	WATER HEATER	300
MUA-1	MAKE UP AIR UNIT	400
DRYER	DRYER STACKED X2	380
	FUTURE	620
	TOTAL METER (5 PSI)	6000

MECHANICAL CONTRACTOR INFORMATION

MINIMUM DISTANCE BETWEEN NATURAL GAS LINE & UNDERGROUND SERVICES = 6FT. MECHANICAL CONTRACTOR SHALL, BEFORE BEGINNING INSTALLATION INSIDE THE BUILDING, CHECK THE LOCATION AND INVERT ELEVATIONS OF ALL SERVICE LINES INCLUDING SANITARY, STORM, WATER, AND NATURAL GAS MAINS WITH LOCAL AUTHORITIES TO ENSURE THAT THESE SERVICES CAN BE INSTALLED AS SHOWN.

DRAWING LIST

PLUMBING GENERAL NOTES

1. ALL LINES SHOWN SCHEMATICALLY AND ARE A GENERAL GUIDELINE. ANY MAJOR DEVIATION FROM WHAT IS SHOWN IS TO BE APPROVED BY PS ENGINEERING.
2. ALL SEWER LINES TO RUN BELOW FLOOR OR WITHIN WALLS/CEILING SPACE UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
4. ALL PIPING TO FIXTURES AND EQUIPMENT TO RUN CONCEALED WHERE POSSIBLE.
5. MECHANICAL CONTRACTOR TO RUN A BEAD OF SILICONE AROUND THE BASE OF NEW WATER CLOSETS AND TUBS.
6. CONTRACTOR TO SUPPLY AND INSTALL PLUMBING VENTS, TRAP SEAL PRIMERS, CLEANOUTS, AND ISOLATION VALVES AS PER CODE.
7. SOLDERS AND FLUXES HAVING A LEAD CONTENT IN EXCESS OF 0.2% SHALL NOT BE USED.
8. PROVIDE FIRE STOPS AT ALL PIPING THAT PASSES THRU FIRE SEPARATIONS.
9. PVC AND PLASTIC PIPING MAY BE USED WHERE PERMITTED BY CODE. ALL PVC PIPING IN RETURN AIR PLENUMS TO BE XFR.
10. ALL PLUMBING TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL PLUMBING CODE, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND REGULATIONS.
11. PROVIDE A COPY OF PLUMBING AND GAS PERMITS TO OWNER.
12. PROVIDE ISOLATION VALVES ON ALL FIXTURES AS REQUIRED. ALL ISOLATION VALVES ARE TO BE ACCESSIBLE.
13. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES.
14. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
15. CONFIRM ALL SLOPES OF SANITARY AND/OR STORM SEWER PIPING BEFORE COMMENCING WORK.
16. ENSURE ALL MECHANICAL IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE OVERHEAD DOORS.

PLUMBING KEYNOTES

1

PLUMBING FIXTURE CONNECTION TABLE

PLUMBING FIXTURE / DEVICES	DCW	DHW	SAN	VACUUM BREAKER
	(in.)	(in.)	(in.)	
LAV-1 - LAVATORY - COUNTER MOUNT	1/2"	1/2"	1-1/2"	-
WC-1 - WATER CLOSET - FLUSH TANK	1/2"	-	3"	-
SK-1 - TWO-COMPARTMENT SINK	1/2"	1/2"	2"	-
BATH-1 - BATHTUB	1/2"	1/2"	2"	-
SHWR-1 - SHOWER	1/2"	1/2"	2"	-
FD-1 - FLOOR DRAIN	-	-	3"	-
AD-1 - AREA DRAIN	-	-	3"	-
LNDRY-1 - SUITE LAUNDRY MACHINE	1/2"	1/2"	2"	-

ALL FIXTURE PIPE SIZES AND REQUIREMENTS FOR FOR VACUUM BREAKERS ARE GENERAL ONLY, AND ARE TO BE USED IF NOT SPECIFICALLY NOTED OTHERWISE. IN ADDITION, PROVIDE VACUUM BREAKERS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

MECHANICAL CONSULTANT:
P.S. Engineering Inc
Mechanical Consulting Engineers
306 Sauer Rise, Saskatoon, SK. S7W 0J9
Contact: Odhner
Phone : (306) 715-6788
Email : odhner@pseng.ca

PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 80% REVIEW

CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

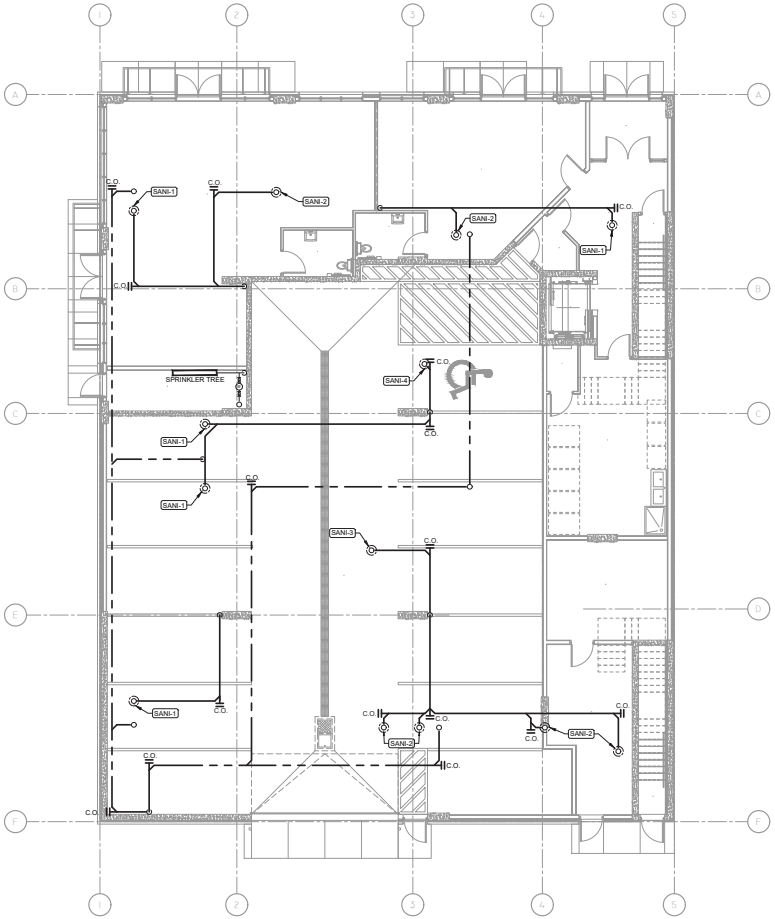
DRAWING TITLE:
FOUNDATION PLAN PLUMBING

PROJECT: 24S-039
DATE : 01/20/2025
SCALE : AS NOTED
DRAWN : I.R.
CHECKED : O.O.

DRAWING NUMBER:
M1.1
REV:0

THIS DRAWING IS NOT TO BE SCALED. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND OTHER DATA FROM THE PROJECT AND REPORT ANY DISCREPANCIES TO P.S. ENGINEERING BEFORE PROCEEDING WITH ANY WORK. ALL WORK TO COMPLY WITH ALL APPLICABLE CODES, STANDARDS AND REGULATIONS.

DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:



1 M1.2 PARKADE PLAN PLUMBING (SANITARY/STORM)
SCALE: 1/8" = 1'-0"

PLUMBING GENERAL NOTES

1. ALL LINES SHOWN SCHEMATICALLY AND ARE A GENERAL GUIDELINE. ANY MAJOR DEVIATION FROM WHAT IS SHOWN IS TO BE APPROVED BY PS ENGINEERING.
2. ALL SEWER LINES TO RUN BELOW FLOOR OR WITHIN WALLS/CEILING SPACE UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
4. ALL PIPING TO FIXTURES AND EQUIPMENT TO RUN CONCEALED WHERE POSSIBLE.
5. MECHANICAL CONTRACTOR TO RUN A BEAD OF SILICONE AROUND THE BASE OF NEW WATER CLOSETS AND TUBS.
6. CONTRACTOR TO SUPPLY AND INSTALL PLUMBING VENTS, TRAP SEAL PRIMERS, CLEANOUTS, AND ISOLATION VALVES AS PER CODE.
7. SOLDERS AND FLUXES HAVING A LEAD CONTENT IN EXCESS OF 0.2% SHALL NOT BE USED.
8. PROVIDE FIRE STOPS AT ALL PIPING THAT PASSES THRU FIRE SEPARATIONS.
9. PVC AND PLASTIC PIPING MAY BE USED WHERE PERMITTED BY CODE. ALL PVC PIPING IN RETURN AIR PLENUMS TO BE XFR.
10. ALL PLUMBING TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL PLUMBING CODE, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND REGULATIONS.
11. PROVIDE A COPY OF PLUMBING AND GAS PERMITS TO OWNER.
12. PROVIDE ISOLATION VALVES ON ALL FIXTURES AS REQUIRED. ALL ISOLATION VALVES ARE TO BE ACCESSIBLE.
13. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES.
14. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
15. CONFIRM ALL SLOPES OF SANITARY AND/OR STORM SEWER PIPING BEFORE COMMENCING WORK.
16. ENSURE ALL MECHANICAL IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE OVERHEAD DOORS.

PLUMBING KEYNOTES

(#)
1

PLUMBING FIXTURE CONNECTION TABLE

PLUMBING FIXTURE / DEVICES	DCW	DHW	SAN	VACUUM BREAKER
	(in.)	(in.)	(in.)	
LAV-1 - LAVATORY - COUNTER MOUNT	1/2"	1/2"	1-1/2"	-
WC-1 - WATER CLOSET - FLUSH TANK	1/2"	-	3"	-
SK-1 - TWO-COMPARTMENT SINK	1/2"	1/2"	2"	-
BATH-1 - BATHTUB	1/2"	1/2"	2"	-
SHWR-1 - SHOWER	1/2"	1/2"	2"	-
FD-1 - FLOOR DRAIN	-	-	3"	-
AD-1 - AREA DRAIN	-	-	3"	-
LNDRY-1 - SUITE LAUNDRY MACHINE	1/2"	1/2"	2"	-

ALL FIXTURE PIPE SIZES AND REQUIREMENTS FOR FOR VACUUM BREAKERS ARE GENERAL ONLY, AND ARE TO BE USED IF NOT SPECIFICALLY NOTED OTHERWISE. IN ADDITION, PROVIDE VACUUM BREAKERS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

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P.S. Engineering Inc
Mechanical Consulting Engineers
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PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 80% REVIEW

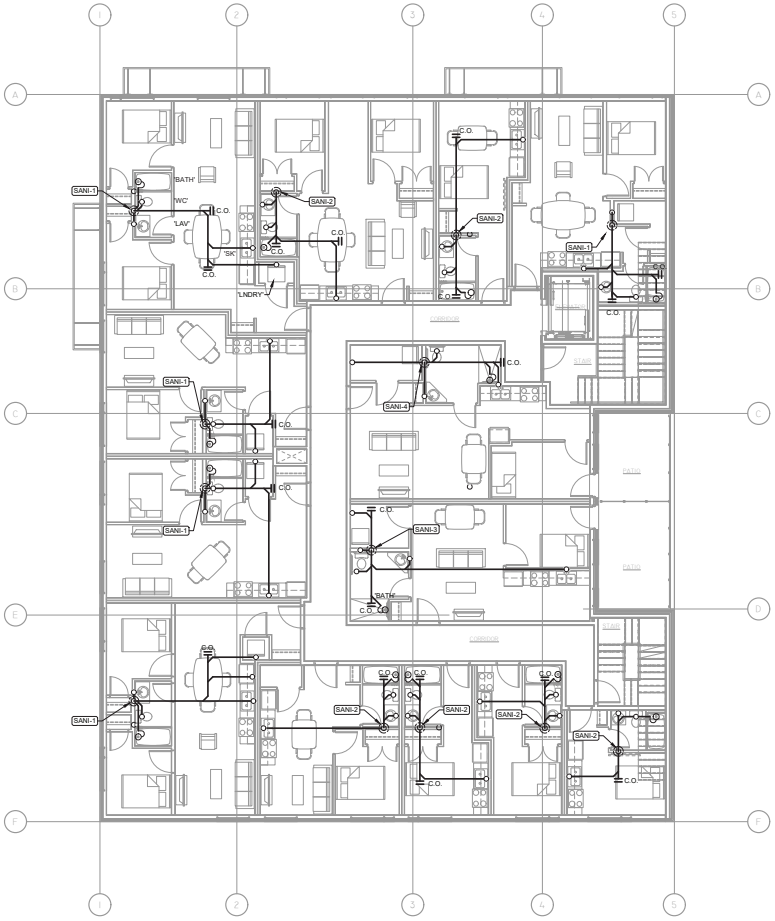
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
PARKADE PLAN PLUMBING (SANITARY/STORM)

PROJECT: 24S-039	DRAWING NUMBER: M1.2
DATE : 01/20/2025	
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 SECOND & THIRD FLOOR PLAN PLUMBING (SANITARY)
M1.3 SCALE: 1/8" = 1'-0"

PLUMBING GENERAL NOTES

1. ALL LINES SHOWN SCHEMATICALLY AND ARE A GENERAL GUIDELINE. ANY MAJOR DEVIATION FROM WHAT IS SHOWN IS TO BE APPROVED BY PS ENGINEERING.
2. ALL SEWER LINES TO RUN BELOW FLOOR OR WITHIN WALLS/CEILING SPACE UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
4. ALL PIPING TO FIXTURES AND EQUIPMENT TO RUN CONCEALED WHERE POSSIBLE.
5. MECHANICAL CONTRACTOR TO RUN A BEAD OF SILICONE AROUND THE BASE OF NEW WATER CLOSETS AND TUBS.
6. CONTRACTOR TO SUPPLY AND INSTALL PLUMBING VENTS, TRAP SEAL PRIMERS, CLEANOUTS, AND ISOLATION VALVES AS PER CODE.
7. SOLDERS AND FLUXES HAVING A LEAD CONTENT IN EXCESS OF 0.2% SHALL NOT BE USED.
8. PROVIDE FIRE STOPS AT ALL PIPING THAT PASSES THRU FIRE SEPARATIONS.
9. PVC AND PLASTIC PIPING MAY BE USED WHERE PERMITTED BY CODE. ALL PVC PIPING IN RETURN AIR PLENUMS TO BE XFR.
10. ALL PLUMBING TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL PLUMBING CODE, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND REGULATIONS.
11. PROVIDE A COPY OF PLUMBING AND GAS PERMITS TO OWNER.
12. PROVIDE ISOLATION VALVES ON ALL FIXTURES AS REQUIRED. ALL ISOLATION VALVES ARE TO BE ACCESSIBLE.
13. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES.
14. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
15. CONFIRM ALL SLOPES OF SANITARY AND/OR STORM SEWER PIPING BEFORE COMMENCING WORK.
16. ENSURE ALL MECHANICAL IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE OVERHEAD DOORS.
17. CONFIRM ALL ROUTING AND SIZING OF EXISTING PIPING ON SITE PRIOR TO CONSTRUCTION (CCTV FOR UNDERSLAB PIPING).

PLUMBING KEYNOTES

(#)
1

PLUMBING FIXTURE CONNECTION TABLE

PLUMBING FIXTURE / DEVICES	DCW	DHW	SAN	VACUUM BREAKER
	(in.)	(in.)	(in.)	
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BATH-1 - BATHTUB	1/2"	1/2"	2"	-
SHWR-1 - SHOWER	1/2"	1/2"	2"	-
FD-1 - FLOOR DRAIN	-	-	3"	-
AD-1 - AREA DRAIN	-	-	3"	-
LNDRY-1 - SUITE LAUNDRY MACHINE	1/2"	1/2"	2"	-

ALL FIXTURE PIPE SIZES AND REQUIREMENTS FOR FOR VACUUM BREAKERS ARE GENERAL ONLY, AND ARE TO BE USED IF NOT SPECIFICALLY NOTED OTHERWISE. IN ADDITION, PROVIDE VACUUM BREAKERS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

MECHANICAL CONSULTANT:
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PROJECT NO. 24S-039

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ISSUED FOR 80% REVIEW

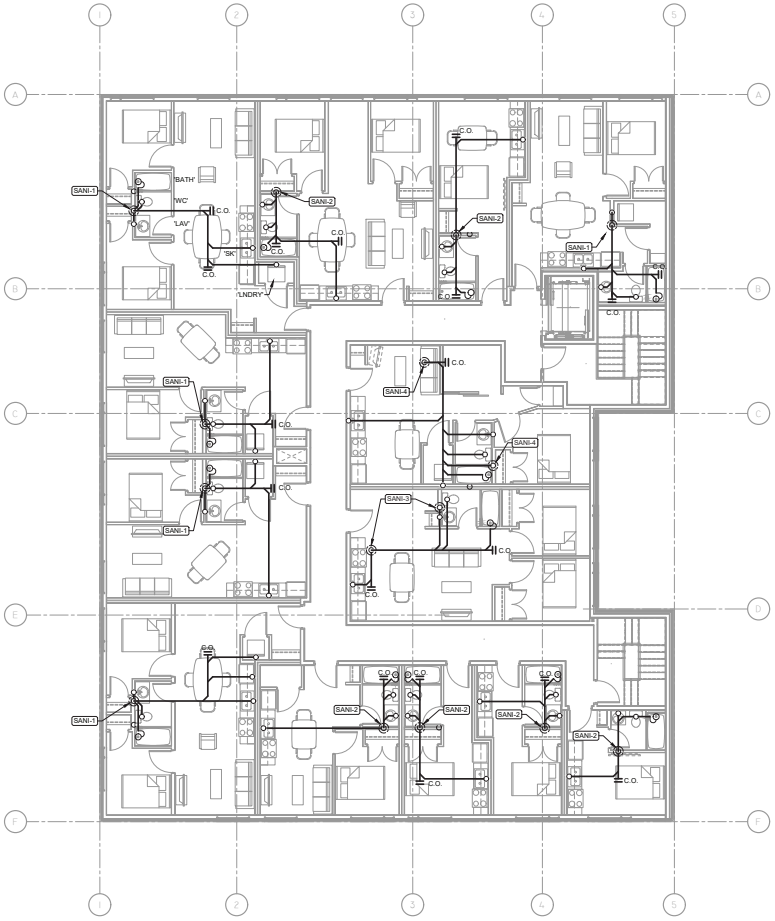
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
SECOND & THIRD FLOOR PLAN PLUMBING (SANITARY)

PROJECT: 24S-039	DRAWING NUMBER: M1.3
DATE : 01/20/2025	
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 FOURTH FLOOR PLAN PLUMBING (SANITARY)
M1.4 SCALE: 1/8" = 1'-0"

PLUMBING GENERAL NOTES

1. ALL LINES SHOWN SCHEMATICALLY AND ARE A GENERAL GUIDELINE. ANY MAJOR DEVIATION FROM WHAT IS SHOWN IS TO BE APPROVED BY PS ENGINEERING.
2. ALL SEWER LINES TO RUN BELOW FLOOR OR WITHIN WALLS/CEILING SPACE UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.
4. ALL PIPING TO FIXTURES AND EQUIPMENT TO RUN CONCEALED WHERE POSSIBLE.
5. MECHANICAL CONTRACTOR TO RUN A BEAD OF SILICONE AROUND THE BASE OF NEW WATER CLOSETS AND TUBS.
6. CONTRACTOR TO SUPPLY AND INSTALL PLUMBING VENTS, TRAP SEAL PRIMERS, CLEANOUTS, AND ISOLATION VALVES AS PER CODE.
7. SOLDERS AND FLUXES HAVING A LEAD CONTENT IN EXCESS OF 0.2% SHALL NOT BE USED.
8. PROVIDE FIRE STOPS AT ALL PIPING THAT PASSES THRU FIRE SEPARATIONS.
9. PVC AND PLASTIC PIPING MAY BE USED WHERE PERMITTED BY CODE. ALL PVC PIPING IN RETURN AIR PLENUMS TO BE XFR.
10. ALL PLUMBING TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL PLUMBING CODE, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND REGULATIONS.
11. PROVIDE A COPY OF PLUMBING AND GAS PERMITS TO OWNER.
12. PROVIDE ISOLATION VALVES ON ALL FIXTURES AS REQUIRED. ALL ISOLATION VALVES ARE TO BE ACCESSIBLE.
13. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES.
14. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
15. CONFIRM ALL SLOPES OF SANITARY AND/OR STORM SEWER PIPING BEFORE COMMENCING WORK.
16. ENSURE ALL MECHANICAL IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE OVERHEAD DOORS.

PLUMBING KEYNOTES

1

PLUMBING FIXTURE CONNECTION TABLE

PLUMBING FIXTURE / DEVICES	DCW	DHW	SAN	VACUUM BREAKER
	(in.)	(in.)	(in.)	
LAV-1 - LAVATORY - COUNTER MOUNT	1/2"	1/2"	1-1/2"	-
WC-1 - WATER CLOSET - FLUSH TANK	1/2"	-	3"	-
SK-1 - TWO-COMPARTMENT SINK	1/2"	1/2"	2"	-
BATH-1 - BATHTUB	1/2"	1/2"	2"	-
SHWR-1 - SHOWER	1/2"	1/2"	2"	-
FD-1 - FLOOR DRAIN	-	-	3"	-
AD-1 - AREA DRAIN	-	-	3"	-
LNDRY-1 - SUITE LAUNDRY MACHINE	1/2"	1/2"	2"	-

ALL FIXTURE PIPE SIZES AND REQUIREMENTS FOR FOR VACUUM BREAKERS ARE GENERAL ONLY, AND ARE TO BE USED IF NOT SPECIFICALLY NOTED OTHERWISE. IN ADDITION, PROVIDE VACUUM BREAKERS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

MECHANICAL CONSULTANT:
P.S. Engineering Inc
Mechanical Consulting Engineers
306 Sauer Rise. Saskatoon, SK. S7W 0J9
Contact: Odhner
Phone : (306) 715-6788
Email : odhner@pseng.ca

PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 80% REVIEW

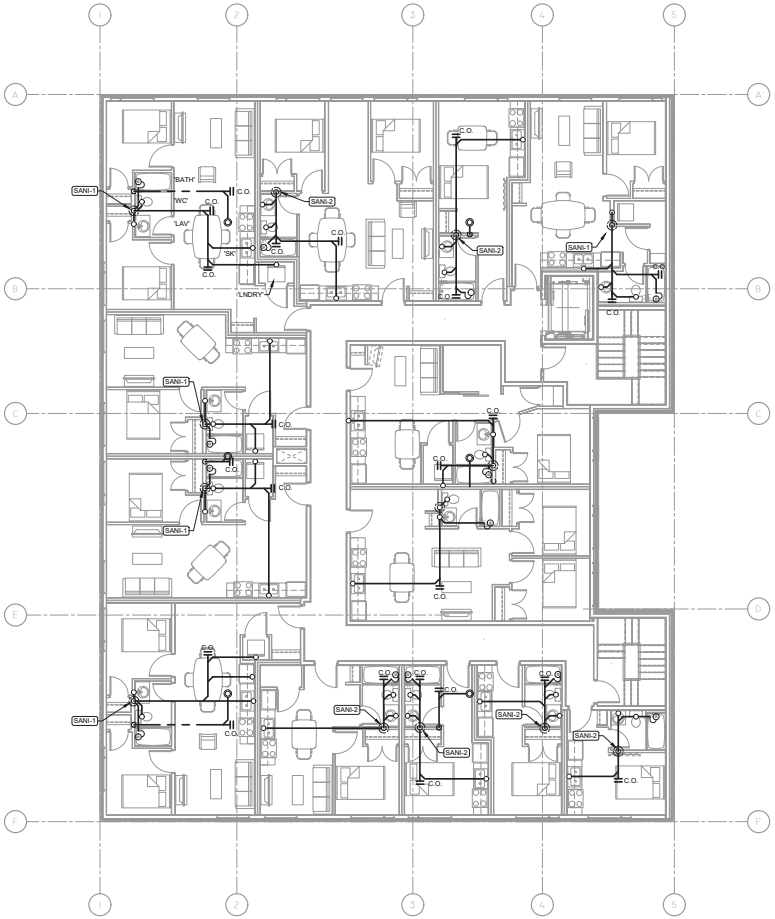
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
FOURTH FLOOR PLAN
PLUMBING (SANITARY)

PROJECT: 24S-039	DRAWING NUMBER: M1.4
DATE : 01/20/2025	
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 M1.5 FIFTH & SIXTH FLOOR PLAN PLUMBING (SANITARY)
SCALE: 1/8" = 1'-0"

PLUMBING GENERAL NOTES

1. ALL LINES SHOWN SCHEMATICALLY AND ARE A GENERAL GUIDELINE. ANY MAJOR DEVIATION FROM WHAT IS SHOWN IS TO BE APPROVED BY PS ENGINEERING.
2. ALL SEWER LINES TO RUN BELOW FLOOR OR WITHIN WALLS/CEILING SPACE UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
4. ALL PIPING TO FIXTURES AND EQUIPMENT TO RUN CONCEALED WHERE POSSIBLE.
5. MECHANICAL CONTRACTOR TO RUN A BEAD OF SILICONE AROUND THE BASE OF NEW WATER CLOSETS AND TUBS.
6. CONTRACTOR TO SUPPLY AND INSTALL PLUMBING VENTS, TRAP SEAL PRIMERS, CLEANOUTS, AND ISOLATION VALVES AS PER CODE.
7. SOLDERS AND FLUXES HAVING A LEAD CONTENT IN EXCESS OF 0.2% SHALL NOT BE USED.
8. PROVIDE FIRE STOPS AT ALL PIPING THAT PASSES THRU FIRE SEPARATIONS.
9. PVC AND PLASTIC PIPING MAY BE USED WHERE PERMITTED BY CODE. ALL PVC PIPING IN RETURN AIR PLENUMS TO BE XFR.
10. ALL PLUMBING TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL PLUMBING CODE, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND REGULATIONS.
11. PROVIDE A COPY OF PLUMBING AND GAS PERMITS TO OWNER.
12. PROVIDE ISOLATION VALVES ON ALL FIXTURES AS REQUIRED. ALL ISOLATION VALVES ARE TO BE ACCESSIBLE.
13. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES.
14. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
15. CONFIRM ALL SLOPES OF SANITARY AND/OR STORM SEWER PIPING BEFORE COMMENCING WORK.
16. ENSURE ALL MECHANICAL IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE OVERHEAD DOORS.

PLUMBING KEYNOTES

(#) 1

PLUMBING FIXTURE CONNECTION TABLE

PLUMBING FIXTURE / DEVICES	DCW	DHW	SAN	VACUUM BREAKER
	(in.)	(in.)	(in.)	
LAV-1 - LAVATORY - COUNTER MOUNT	1/2"	1/2"	1-1/2"	-
WC-1 - WATER CLOSET - FLUSH TANK	1/2"	-	3"	-
SK-1 - TWO-COMPARTMENT SINK	1/2"	1/2"	2"	-
BATH-1 - BATHTUB	1/2"	1/2"	2"	-
SHWR-1 - SHOWER	1/2"	1/2"	2"	-
FD-1 - FLOOR DRAIN	-	-	3"	-
AD-1 - AREA DRAIN	-	-	3"	-
LNDRY-1 - SUITE LAUNDRY MACHINE	1/2"	1/2"	2"	-

ALL FIXTURE PIPE SIZES AND REQUIREMENTS FOR FOR VACUUM BREAKERS ARE GENERAL ONLY, AND ARE TO BE USED IF NOT SPECIFICALLY NOTED OTHERWISE. IN ADDITION, PROVIDE VACUUM BREAKERS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

MECHANICAL CONSULTANT:
P.S. Engineering Inc
Mechanical Consulting Engineers
306 Sauer Rise, Saskatoon, SK. S7W 0J9
Contact: Odhner
Phone : (306) 715-6788
Email : odhner@pseng.ca

PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 95% REVIEW

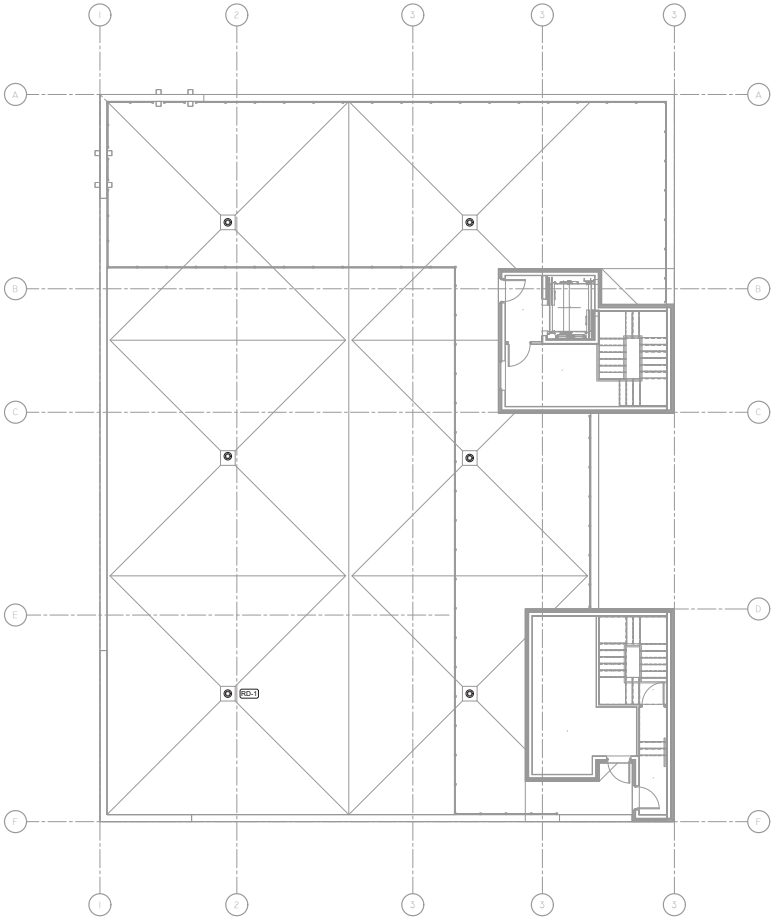
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
FIFTH & SIXTH FLOOR PLAN PLUMBING (SANITARY)

PROJECT: 24S-039	DRAWING NUMBER: M1.5
DATE : 01/20/2025	
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 M1.6 ROOF PLAN PLUMBING
SCALE: 1/8" = 1'-0"

PLUMBING GENERAL NOTES

1. ALL LINES SHOWN SCHEMATICALLY AND ARE A GENERAL GUIDELINE. ANY MAJOR DEVIATION FROM WHAT IS SHOWN IS TO BE APPROVED BY PS ENGINEERING.
2. ALL SEWER LINES TO RUN BELOW FLOOR OR WITHIN WALLS/CEILING SPACE UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
4. ALL PIPING TO FIXTURES AND EQUIPMENT TO RUN CONCEALED WHERE POSSIBLE.
5. MECHANICAL CONTRACTOR TO RUN A BEAD OF SILICONE AROUND THE BASE OF NEW WATER CLOSETS AND TUBS.
6. CONTRACTOR TO SUPPLY AND INSTALL PLUMBING VENTS, TRAP SEAL PRIMERS, CLEANOUTS, AND ISOLATION VALVES AS PER CODE.
7. SOLDERS AND FLUXES HAVING A LEAD CONTENT IN EXCESS OF 0.2% SHALL NOT BE USED.
8. PROVIDE FIRE STOPS AT ALL PIPING THAT PASSES THRU FIRE SEPARATIONS.
9. PVC AND PLASTIC PIPING MAY BE USED WHERE PERMITTED BY CODE. ALL PVC PIPING IN RETURN AIR PLENUMS TO BE XFR.
10. ALL PLUMBING TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL PLUMBING CODE, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND REGULATIONS.
11. PROVIDE A COPY OF PLUMBING AND GAS PERMITS TO OWNER.
12. PROVIDE ISOLATION VALVES ON ALL FIXTURES AS REQUIRED. ALL ISOLATION VALVES ARE TO BE ACCESSIBLE.
13. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES.
14. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
15. CONFIRM ALL SLOPES OF SANITARY AND/OR STORM SEWER PIPING BEFORE COMMENCING WORK.
16. ENSURE ALL MECHANICAL IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE OVERHEAD DOORS.

PLUMBING KEYNOTES

1

PLUMBING FIXTURE CONNECTION TABLE

PLUMBING FIXTURE / DEVICES	DCW	DHW	SAN	VACUUM BREAKER
	(in.)	(in.)	(in.)	
LAV-1 - LAVATORY - COUNTER MOUNT	1/2"	1/2"	1-1/2"	-
WC-1 - WATER CLOSET - FLUSH TANK	1/2"	-	3"	-
SK-1 - TWO-COMPARTMENT SINK	1/2"	1/2"	2"	-
BATH-1 - BATHTUB	1/2"	1/2"	2"	-
SHWR-1 - SHOWER	1/2"	1/2"	2"	-
FD-1 - FLOOR DRAIN	-	-	3"	-
AD-1 - AREA DRAIN	-	-	3"	-
LNDRY-1 - SUITE LAUNDRY MACHINE	1/2"	1/2"	2"	-

ALL FIXTURE PIPE SIZES AND REQUIREMENTS FOR FOR VACUUM BREAKERS ARE GENERAL ONLY, AND ARE TO BE USED IF NOT SPECIFICALLY NOTED OTHERWISE. IN ADDITION, PROVIDE VACUUM BREAKERS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

MECHANICAL CONSULTANT:
P.S. Engineering Inc
Mechanical Consulting Engineers
306 Sauer Rise. Saskatoon, SK. S7W 0J9
Contact: Odhner
Phone : (306) 715-6788
Email : odhner@pseng.ca

PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 90% REVIEW

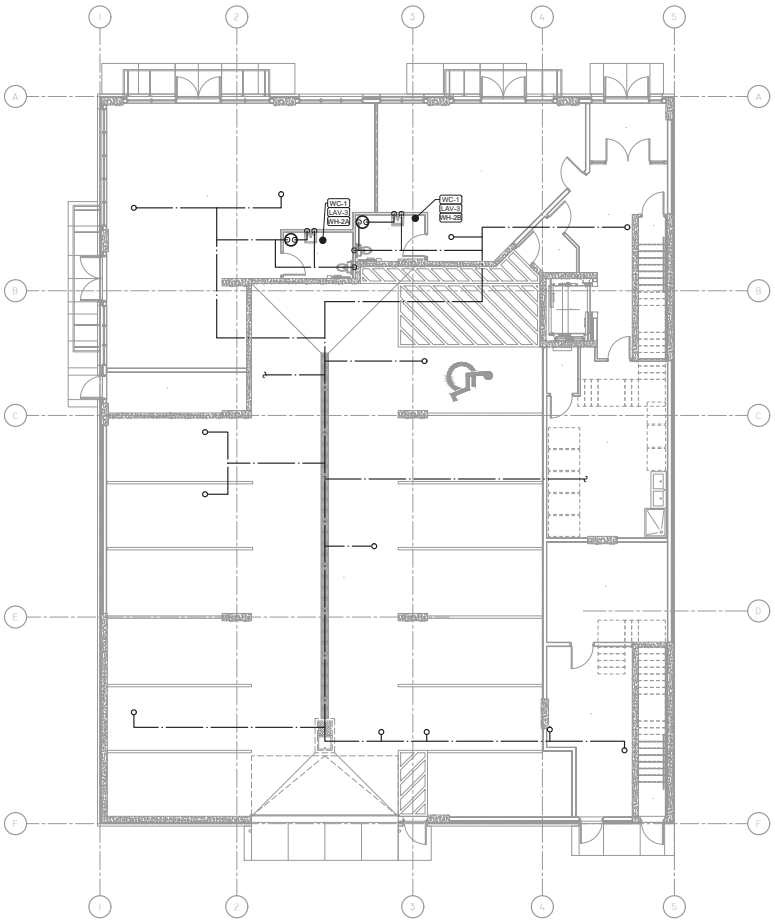
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
ROOF PLAN PLUMBING

PROJECT: 24S-039	DRAWING NUMBER: M1.6
DATE : 01/20/2025	
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 M2.1 PARKADE PLAN PLUMBING (DOMESTIC)
SCALE: 1/8" = 1'-0"

PLUMBING GENERAL NOTES

1. ALL LINES SHOWN SCHEMATICALLY AND ARE A GENERAL GUIDELINE. ANY MAJOR DEVIATION FROM WHAT IS SHOWN IS TO BE APPROVED BY PS ENGINEERING.
2. ALL SEWER LINES TO RUN BELOW FLOOR OR WITHIN WALLS/CEILING SPACE UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.
4. ALL PIPING TO FIXTURES AND EQUIPMENT TO RUN CONCEALED WHERE POSSIBLE.
5. MECHANICAL CONTRACTOR TO RUN A BEAD OF SILICONE AROUND THE BASE OF NEW WATER CLOSETS AND TUBS.
6. CONTRACTOR TO SUPPLY AND INSTALL PLUMBING VENTS, TRAP SEAL PRIMERS, CLEANOUTS, AND ISOLATION VALVES AS PER CODE.
7. SOLDERS AND FLUXES HAVING A LEAD CONTENT IN EXCESS OF 0.2% SHALL NOT BE USED.
8. PROVIDE FIRE STOPS AT ALL PIPING THAT PASSES THRU FIRE SEPARATIONS.
9. PVC AND PLASTIC PIPING MAY BE USED WHERE PERMITTED BY CODE. ALL PVC PIPING IN RETURN AIR PLENUMS TO BE XFR.
10. ALL PLUMBING TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL PLUMBING CODE, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND REGULATIONS.
11. PROVIDE A COPY OF PLUMBING AND GAS PERMITS TO OWNER.
12. PROVIDE ISOLATION VALVES ON ALL FIXTURES AS REQUIRED. ALL ISOLATION VALVES ARE TO BE ACCESSIBLE.
13. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES.
14. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
15. CONFIRM ALL SLOPES OF SANITARY AND/OR STORM SEWER PIPING BEFORE COMMENCING WORK.
16. ENSURE ALL MECHANICAL IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE OVERHEAD DOORS.

PLUMBING KEYNOTES

(#)
1

PLUMBING FIXTURE CONNECTION TABLE

PLUMBING FIXTURE / DEVICES	DCW	DHW	SAN	VACUUM BREAKER
	(in.)	(in.)	(in.)	
LAV-1 - LAVATORY - COUNTER MOUNT	1/2"	1/2"	1-1/2"	-
WC-1 - WATER CLOSET - FLUSH TANK	1/2"	-	3"	-
SK-1 - TWO-COMPARTMENT SINK	1/2"	1/2"	2"	-
BATH-1 - BATHTUB	1/2"	1/2"	2"	-
SHWR-1 - SHOWER	1/2"	1/2"	2"	-
FD-1 - FLOOR DRAIN	-	-	3"	-
AD-1 - AREA DRAIN	-	-	3"	-
LNDRY-1 - SUITE LAUNDRY MACHINE	1/2"	1/2"	2"	-

ALL FIXTURE PIPE SIZES AND REQUIREMENTS FOR FOR VACUUM BREAKERS ARE GENERAL ONLY, AND ARE TO BE USED IF NOT SPECIFICALLY NOTED OTHERWISE. IN ADDITION, PROVIDE VACUUM BREAKERS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

THIS DRAWING IS NOT TO BE SCALED. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND OTHER DATA FROM THE PROJECT AND REPORT ANY DISCREPANCIES TO P.S. ENGINEERING BEFORE PROCEEDING WITH ANY WORK. ALL WORK TO COMPLY WITH ALL APPLICABLE CODES, STANDARDS AND REGULATIONS.

DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

MECHANICAL CONSULTANT:
P.S. Engineering Inc
Mechanical Consulting Engineers
306 Sauer Rise, Saskatoon, SK, S7W 0J9
Contact: Odhner
Phone : (306) 715-6788
Email : odhner@pseng.ca

PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 90% REVIEW

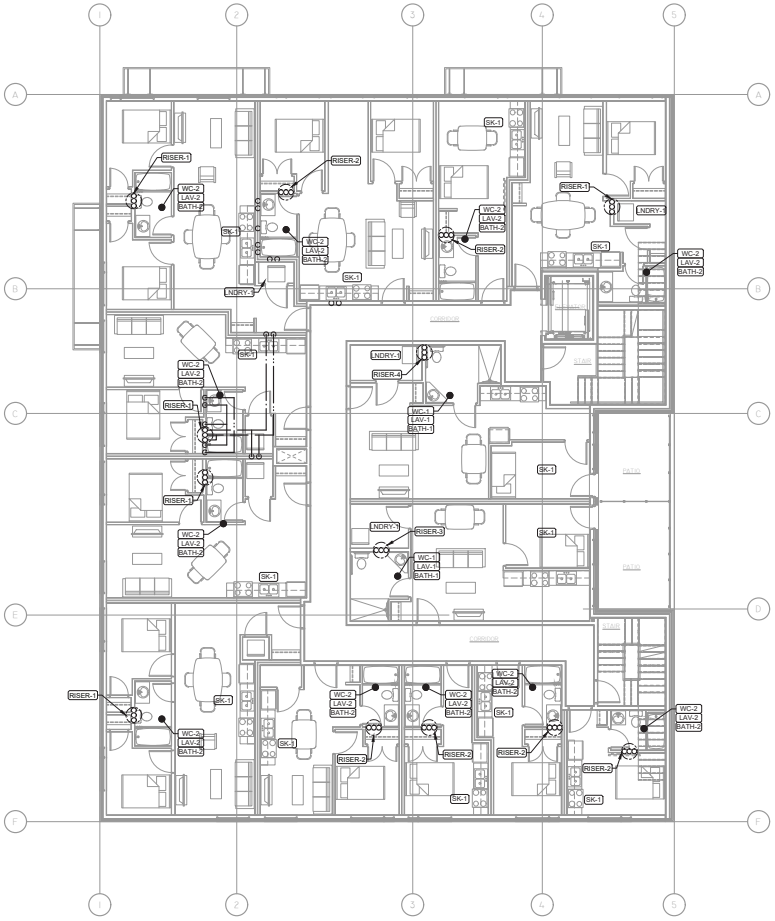
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
PARKADE PLAN PLUMBING (DOMESTIC)

PROJECT: 24S-039	DRAWING NUMBER: M2.1
DATE : 01/20/2025	
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 M2.2 SECOND FLOOR PLAN PLUMBING (DOMESTIC)
SCALE: 1/8" = 1'-0"

PLUMBING GENERAL NOTES

1. ALL LINES SHOWN SCHEMATICALLY AND ARE A GENERAL GUIDELINE. ANY MAJOR DEVIATION FROM WHAT IS SHOWN IS TO BE APPROVED BY PS ENGINEERING.
2. ALL SEWER LINES TO RUN BELOW FLOOR OR WITHIN WALLS/CEILING SPACE UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
4. ALL PIPING TO FIXTURES AND EQUIPMENT TO RUN CONCEALED WHERE POSSIBLE.
5. MECHANICAL CONTRACTOR TO RUN A BEAD OF SILICONE AROUND THE BASE OF NEW WATER CLOSETS AND TUBS.
6. CONTRACTOR TO SUPPLY AND INSTALL PLUMBING VENTS, TRAP SEAL PRIMERS, CLEANOUTS, AND ISOLATION VALVES AS PER CODE.
7. SOLDERS AND FLUXES HAVING A LEAD CONTENT IN EXCESS OF 0.2% SHALL NOT BE USED.
8. PROVIDE FIRE STOPS AT ALL PIPING THAT PASSES THRU FIRE SEPARATIONS.
9. PVC AND PLASTIC PIPING MAY BE USED WHERE PERMITTED BY CODE. ALL PVC PIPING IN RETURN AIR PLENUMS TO BE XFR.
10. ALL PLUMBING TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL PLUMBING CODE, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND REGULATIONS.
11. PROVIDE A COPY OF PLUMBING AND GAS PERMITS TO OWNER.
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13. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES.
14. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
15. CONFIRM ALL SLOPES OF SANITARY AND/OR STORM SEWER PIPING BEFORE COMMENCING WORK.
16. ENSURE ALL MECHANICAL IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE OVERHEAD DOORS.

PLUMBING KEYNOTES

(#)
1

PLUMBING FIXTURE CONNECTION TABLE

PLUMBING FIXTURE / DEVICES	DCW	DHW	SAN	VACUUM BREAKER
	(in.)	(in.)	(in.)	
LAV-1 - LAVATORY - COUNTER MOUNT	1/2"	1/2"	1-1/2"	-
WC-1 - WATER CLOSET - FLUSH TANK	1/2"	-	3"	-
SK-1 - TWO-COMPARTMENT SINK	1/2"	1/2"	2"	-
BATH-1 - BATHTUB	1/2"	1/2"	2"	-
SHWR-1 - SHOWER	1/2"	1/2"	2"	-
FD-1 - FLOOR DRAIN	-	-	3"	-
AD-1 - AREA DRAIN	-	-	3"	-
LNDRY-1 - SUITE LAUNDRY MACHINE	1/2"	1/2"	2"	-

ALL FIXTURE PIPE SIZES AND REQUIREMENTS FOR FOR VACUUM BREAKERS ARE GENERAL ONLY, AND ARE TO BE USED IF NOT SPECIFICALLY NOTED OTHERWISE. IN ADDITION, PROVIDE VACUUM BREAKERS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

MECHANICAL CONSULTANT:
P.S. Engineering Inc
Mechanical Consulting Engineers
306 Sauer Rise, Saskatoon, SK. S7W 0J9
Contact: Odhner
Phone : (306) 715-6788
Email : odhner@pseng.ca

PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 95% REVIEW

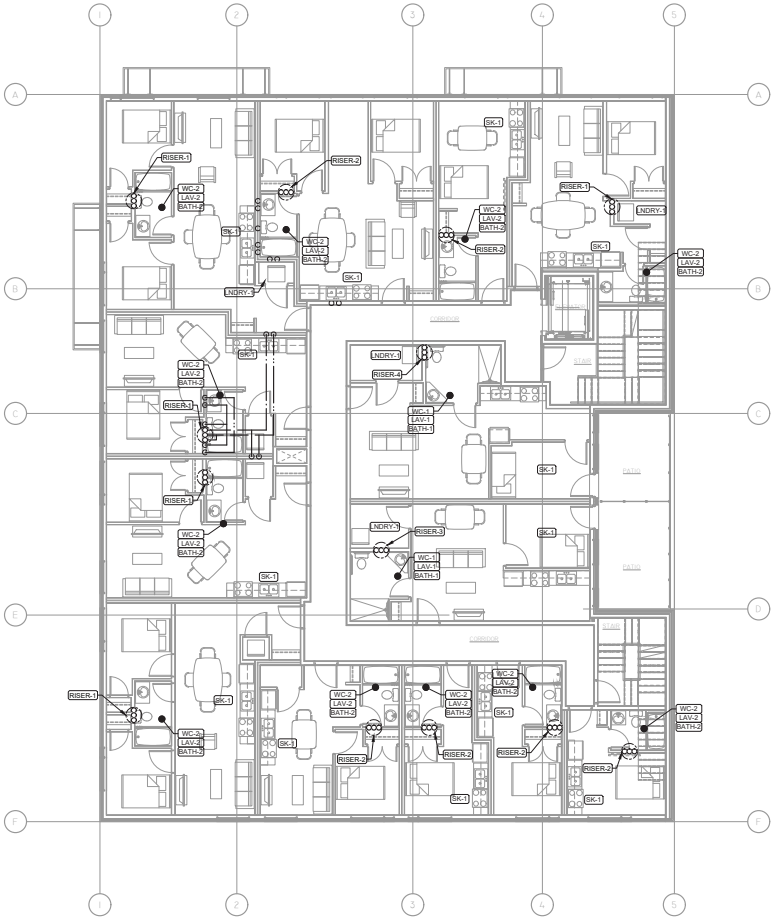
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
SECOND FLOOR PLAN PLUMBING (DOMESTIC)

PROJECT: 24S-039	DRAWING NUMBER: M2.2
DATE : 01/20/2025	
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



PLUMBING GENERAL NOTES

1. ALL LINES SHOWN SCHEMATICALLY AND ARE A GENERAL GUIDELINE. ANY MAJOR DEVIATION FROM WHAT IS SHOWN IS TO BE APPROVED BY PS ENGINEERING.
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14. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
15. CONFIRM ALL SLOPES OF SANITARY AND/OR STORM SEWER PIPING BEFORE COMMENCING WORK.
16. ENSURE ALL MECHANICAL IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE OVERHEAD DOORS.

PLUMBING KEYNOTES

(#)

1

PLUMBING FIXTURE CONNECTION TABLE

PLUMBING FIXTURE / DEVICES	DCW	DHW	SAN	VACUUM BREAKER
	(in.)	(in.)	(in.)	
LAV-1 - LAVATORY - COUNTER MOUNT	1/2"	1/2"	1-1/2"	-
WC-1 - WATER CLOSET - FLUSH TANK	1/2"	-	3"	-
SK-1 - TWO-COMPARTMENT SINK	1/2"	1/2"	2"	-
BATH-1 - BATHTUB	1/2"	1/2"	2"	-
SHWR-1 - SHOWER	1/2"	1/2"	2"	-
FD-1 - FLOOR DRAIN	-	-	3"	-
AD-1 - AREA DRAIN	-	-	3"	-
LNDRY-1 - SUITE LAUNDRY MACHINE	1/2"	1/2"	2"	-

ALL FIXTURE PIPE SIZES AND REQUIREMENTS FOR FOR VACUUM BREAKERS ARE GENERAL ONLY, AND ARE TO BE USED IF NOT SPECIFICALLY NOTED OTHERWISE. IN ADDITION, PROVIDE VACUUM BREAKERS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

THIS DRAWING IS NOT TO BE SCALED. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND OTHER DATA FROM THE PROJECT AND REPORT ANY DISCREPANCIES TO P.S. ENGINEERING BEFORE PROCEEDING WITH ANY WORK. ALL WORK TO COMPLY WITH ALL APPLICABLE CODES, STANDARDS AND REGULATIONS.

DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

MECHANICAL CONSULTANT:
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306 Sauer Rise. Saskatoon, SK. S7W 0J9
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Email : odhner@pseng.ca

PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 80% REVIEW

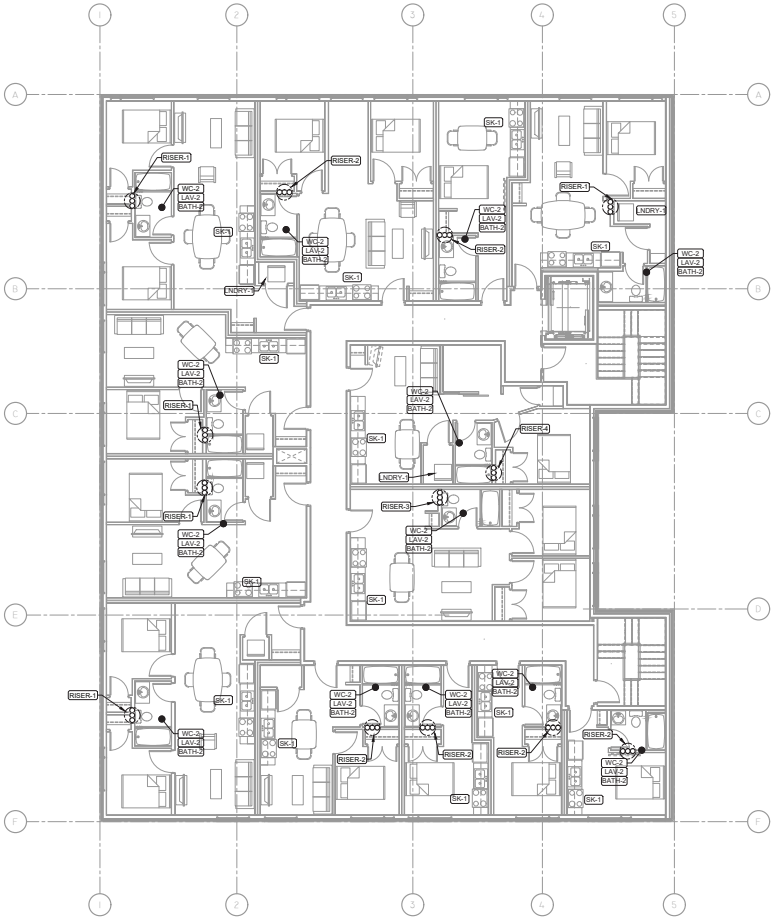
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
THIRD FLOOR PLAN PLUMBING (DOMESTIC)

PROJECT: 24S-039	DRAWING NUMBER: M2.3
DATE : 01/20/2025	
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 M2.4 FOURTH, FIFTH, AND SIXTH FLOOR PLAN PLUMBING (DOMESTIC)
SCALE: 1/8" = 1'-0"

PLUMBING GENERAL NOTES

1. ALL LINES SHOWN SCHEMATICALLY AND ARE A GENERAL GUIDELINE. ANY MAJOR DEVIATION FROM WHAT IS SHOWN IS TO BE APPROVED BY PS ENGINEERING.
2. ALL SEWER LINES TO RUN BELOW FLOOR OR WITHIN WALLS/CEILING SPACE UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
4. ALL PIPING TO FIXTURES AND EQUIPMENT TO RUN CONCEALED WHERE POSSIBLE.
5. MECHANICAL CONTRACTOR TO RUN A BEAD OF SILICONE AROUND THE BASE OF NEW WATER CLOSETS AND TUBS.
6. CONTRACTOR TO SUPPLY AND INSTALL PLUMBING VENTS, TRAP SEAL PRIMERS, CLEANOUTS, AND ISOLATION VALVES AS PER CODE.
7. SOLDERS AND FLUXES HAVING A LEAD CONTENT IN EXCESS OF 0.2% SHALL NOT BE USED.
8. PROVIDE FIRE STOPS AT ALL PIPING THAT PASSES THRU FIRE SEPARATIONS.
9. PVC AND PLASTIC PIPING MAY BE USED WHERE PERMITTED BY CODE. ALL PVC PIPING IN RETURN AIR PLENUMS TO BE XFR.
10. ALL PLUMBING TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL PLUMBING CODE, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND REGULATIONS.
11. PROVIDE A COPY OF PLUMBING AND GAS PERMITS TO OWNER.
12. PROVIDE ISOLATION VALVES ON ALL FIXTURES AS REQUIRED. ALL ISOLATION VALVES ARE TO BE ACCESSIBLE.
13. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES.
14. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
15. CONFIRM ALL SLOPES OF SANITARY AND/OR STORM SEWER PIPING BEFORE COMMENCING WORK.
16. ENSURE ALL MECHANICAL IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE OVERHEAD DOORS.

PLUMBING KEYNOTES

(#)
1

PLUMBING FIXTURE CONNECTION TABLE

PLUMBING FIXTURE / DEVICES	DCW	DHW	SAN	VACUUM BREAKER
	(in.)	(in.)	(in.)	
LAV-1 - LAVATORY - COUNTER MOUNT	1/2"	1/2"	1-1/2"	-
WC-1 - WATER CLOSET - FLUSH TANK	1/2"	-	3"	-
SK-1 - TWO-COMPARTMENT SINK	1/2"	1/2"	2"	-
BATH-1 - BATHTUB	1/2"	1/2"	2"	-
SHWR-1 - SHOWER	1/2"	1/2"	2"	-
FD-1 - FLOOR DRAIN	-	-	3"	-
AD-1 - AREA DRAIN	-	-	3"	-
LNDRY-1 - SUITE LAUNDRY MACHINE	1/2"	1/2"	2"	-

ALL FIXTURE PIPE SIZES AND REQUIREMENTS FOR FOR VACUUM BREAKERS ARE GENERAL ONLY, AND ARE TO BE USED IF NOT SPECIFICALLY NOTED OTHERWISE. IN ADDITION, PROVIDE VACUUM BREAKERS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

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PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 95% REVIEW

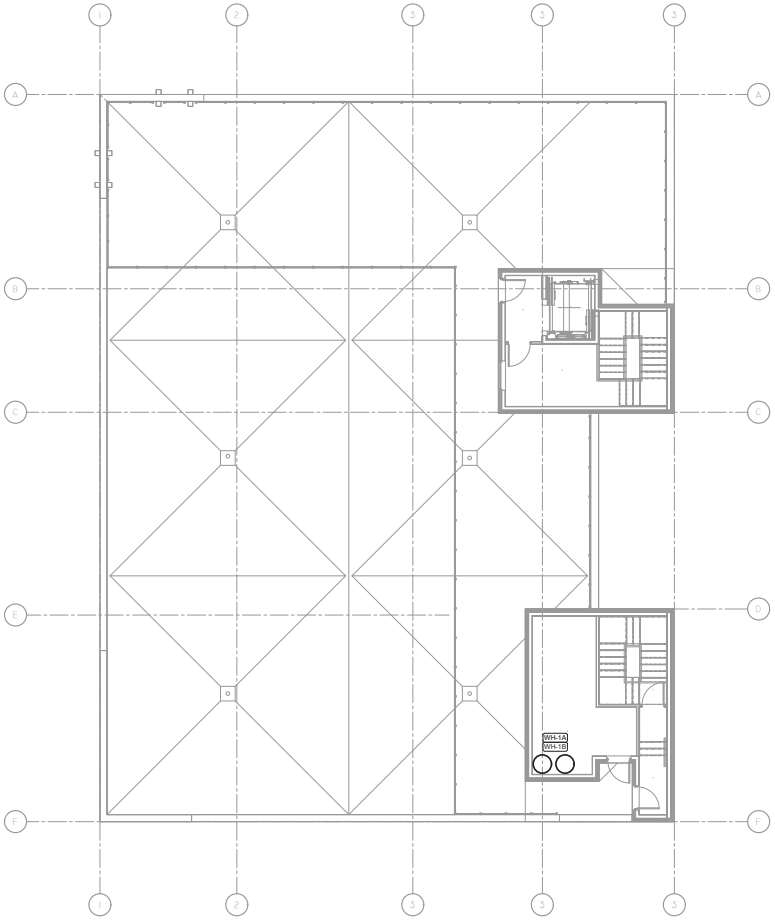
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
FOURTH, FIFTH, AND SIXTH FLOOR PLAN PLUMBING (DOMESTIC)

PROJECT: 24S-039	DRAWING NUMBER: M2.4
DATE : 01/20/2025	
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 M2.5 ROOF PLAN PLUMBING (DOMESTIC)
SCALE: 1/8" = 1'-0"

PLUMBING GENERAL NOTES

1. ALL LINES SHOWN SCHEMATICALLY AND ARE A GENERAL GUIDELINE. ANY MAJOR DEVIATION FROM WHAT IS SHOWN IS TO BE APPROVED BY PS ENGINEERING.
2. ALL SEWER LINES TO RUN BELOW FLOOR OR WITHIN WALLS/CEILING SPACE UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
4. ALL PIPING TO FIXTURES AND EQUIPMENT TO RUN CONCEALED WHERE POSSIBLE.
5. MECHANICAL CONTRACTOR TO RUN A BEAD OF SILICONE AROUND THE BASE OF NEW WATER CLOSETS AND TUBS.
6. CONTRACTOR TO SUPPLY AND INSTALL PLUMBING VENTS, TRAP SEAL PRIMERS, CLEANOUTS, AND ISOLATION VALVES AS PER CODE.
7. SOLDERS AND FLUXES HAVING A LEAD CONTENT IN EXCESS OF 0.2% SHALL NOT BE USED.
8. PROVIDE FIRE STOPS AT ALL PIPING THAT PASSES THRU FIRE SEPARATIONS.
9. PVC AND PLASTIC PIPING MAY BE USED WHERE PERMITTED BY CODE. ALL PVC PIPING IN RETURN AIR PLENUMS TO BE XFR.
10. ALL PLUMBING TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL PLUMBING CODE, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND REGULATIONS.
11. PROVIDE A COPY OF PLUMBING AND GAS PERMITS TO OWNER.
12. PROVIDE ISOLATION VALVES ON ALL FIXTURES AS REQUIRED. ALL ISOLATION VALVES ARE TO BE ACCESSIBLE.
13. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES.
14. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
15. CONFIRM ALL SLOPES OF SANITARY AND/OR STORM SEWER PIPING BEFORE COMMENCING WORK.
16. ENSURE ALL MECHANICAL IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE OVERHEAD DOORS.

PLUMBING KEYNOTES

(#)
1

PLUMBING FIXTURE CONNECTION TABLE

PLUMBING FIXTURE / DEVICES	DCW	DHW	SAN	VACUUM BREAKER
	(in.)	(in.)	(in.)	
LAV-1 - LAVATORY - COUNTER MOUNT	1/2"	1/2"	1-1/2"	-
WC-1 - WATER CLOSET - FLUSH TANK	1/2"	-	3"	-
SK-1 - TWO-COMPARTMENT SINK	1/2"	1/2"	2"	-
BATH-1 - BATHTUB	1/2"	1/2"	2"	-
SHWR-1 - SHOWER	1/2"	1/2"	2"	-
FD-1 - FLOOR DRAIN	-	-	3"	-
AD-1 - AREA DRAIN	-	-	3"	-
LNDRY-1 - SUITE LAUNDRY MACHINE	1/2"	1/2"	2"	-

ALL FIXTURE PIPE SIZES AND REQUIREMENTS FOR FOR VACUUM BREAKERS ARE GENERAL ONLY, AND ARE TO BE USED IF NOT SPECIFICALLY NOTED OTHERWISE. IN ADDITION, PROVIDE VACUUM BREAKERS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

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Email : odhner@pseng.ca

PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 90% REVIEW

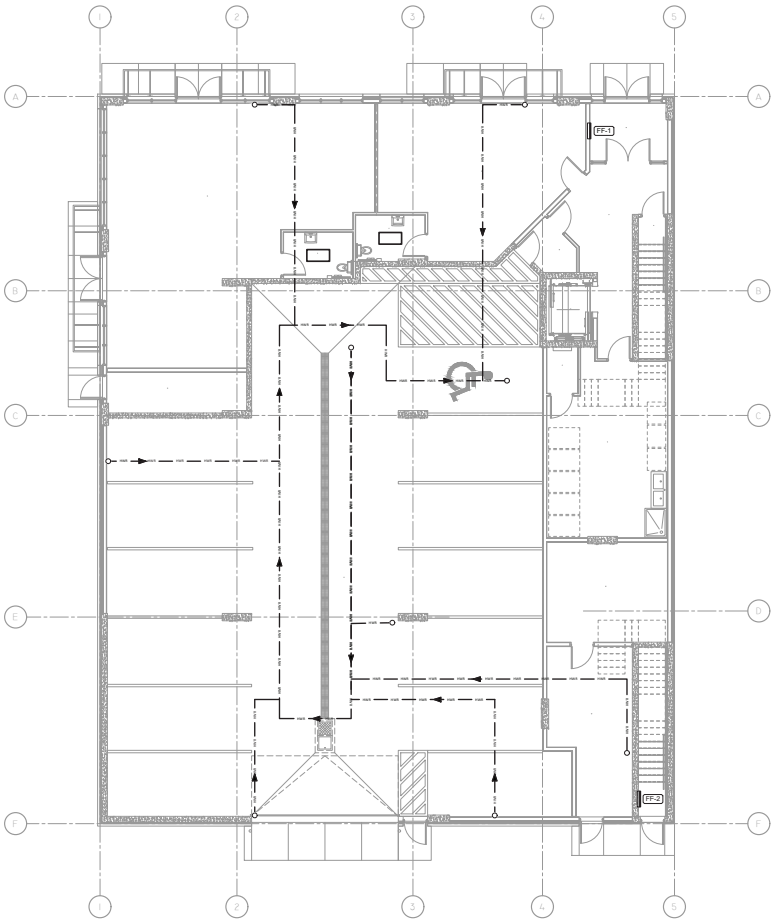
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
ROOF PLAN PLUMBING (DOMESTIC)

PROJECT: 24S-039	DRAWING NUMBER: M2.5
DATE : 01/20/2025	
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 M3.1 PARKADE PLAN HEATING
SCALE: 1/8" = 1'-0"

HEATING GENERAL NOTES

1. ALL EQUIPMENT TO BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
2. ALL MECHANICAL ITEMS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL ENERGY CODE, SMACNA STANDARDS, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND STANDARDS.
3. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES (IN PARTICULAR ELECTRICAL).
4. ANY MODIFICATIONS REQUIRED AS A RESULT OF THE INSTALLATION OF AN HVAC UNIT THAT DIFFERS FROM THE EQUIPMENT SCHEDULES IN THE CONTRACT DOCUMENTS IS TO BE COORDINATED ON SITE BETWEEN THE MECHANICAL CONTRACTOR AND OTHER TRADES. FAILURE TO DO SO WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESOLVE AT NO COST TO THE OWNER.
5. ALL TIMER SWITCHES, SPEED SWITCHES, STARTERS, ETC. TO BE BY ELECTRICAL. INTERLOCKS TO BE BY MECHANICAL CONTROLS SUBCONTRACTOR. COORDINATE ALL CONTROLS WORK BETWEEN MECHANICAL AND ELECTRICAL.
6. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
7. ALL HOT WATER SUPPLY AND RETURN PIPING TO MANIFOLDS TO BE RUN UP HIGH WITHIN CRAWLSPACE ALONG U/S OF MAIN FLOOR STRUCTURE. PIPING TO BE A REVERSE RETURN SYSTEM AS SHOWN.
8. ALL HEATING SYSTEM LOW POINT TO BE COMPLETE WITH VALVED 1/2" DRAINS.
9. ALL HEATING SYSTEM HIGH POINTS TO BE VENTED.
10. COMPLETE SYSTEM TO BE CLEANED, DEGREASED, AND TREATED AS PER SPEC.
11. SEAL AROUND ALL PIPING PASSING THROUGH FIRE RATED ASSEMBLIES WITH FIRE RATED CAULKING.
12. CONTRACTOR MUST CONTACT THE LOCAL INSPECTOR WITH THE BOILER AND PRESSURE VESSEL SAFETY DEPARTMENT AND SUBMIT A BOILER INSTALLATION PERMIT AS REQUIRED. CONTRACTOR TO BE RESPONSIBLE FOR ALL REGISTRATION AND INSPECTION FEES AS REQUIRED BY THE BOILER AND PRESSURE VESSEL SAFETY DEPARTMENT.
13. PROVIDE ISOLATION VALVES ON HOT WATER HEATING SUPPLY AND RETURN LINES TO ALL RADIATION CABINETS, HEATING COILS, EQUIPMENT, AND OTHER LOCATIONS NOTED ON DRAWINGS AND SCHEMATICS.

HEATING KEYNOTES

(#)
1

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DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

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PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 90% REVIEW

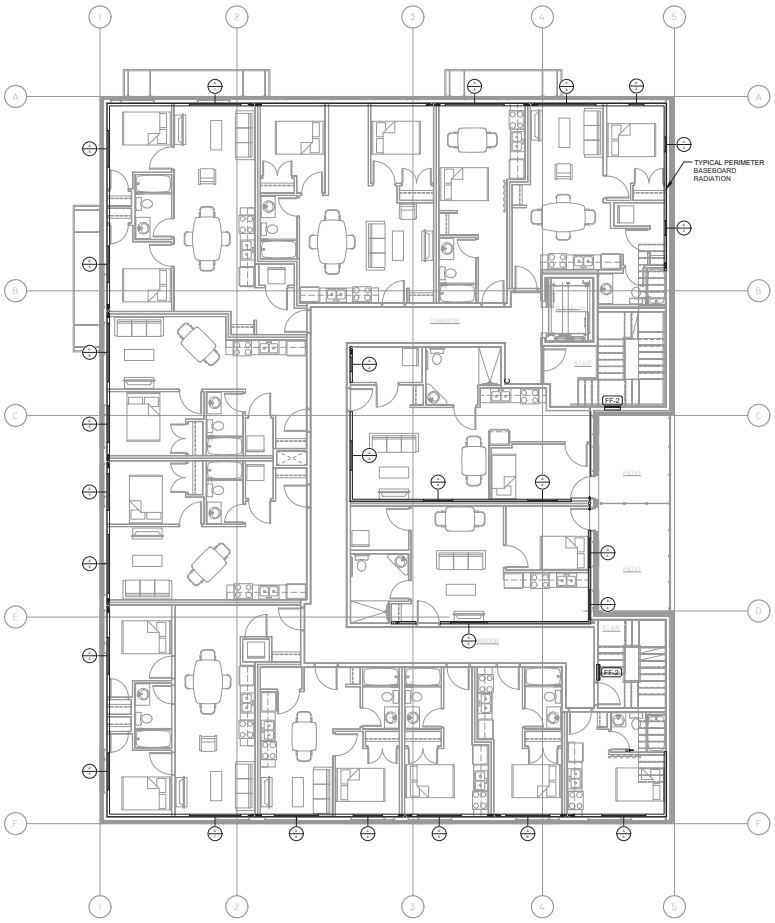
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
PARKADE PLAN HEATING

PROJECT :24S-039	DRAWING NUMBER:
DATE : 01/20/2025	M3.1
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 M3.2 SECOND FLOOR PLAN HEATING
SCALE: 1/8" = 1'-0"

HEATING GENERAL NOTES

1. ALL EQUIPMENT TO BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
2. ALL MECHANICAL ITEMS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL ENERGY CODE, SMACNA STANDARDS, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND STANDARDS.
3. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES (IN PARTICULAR ELECTRICAL).
4. ANY MODIFICATIONS REQUIRED AS A RESULT OF THE INSTALLATION OF AN HVAC UNIT THAT DIFFERS FROM THE EQUIPMENT SCHEDULES IN THE CONTRACT DOCUMENTS IS TO BE COORDINATED ON SITE BETWEEN THE MECHANICAL CONTRACTOR AND OTHER TRADES. FAILURE TO DO SO WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESOLVE AT NO COST TO THE OWNER.
5. ALL TIMER SWITCHES, SPEED SWITCHES, STARTERS, ETC. TO BE BY ELECTRICAL. INTERLOCKS TO BE BY MECHANICAL CONTROLS SUBCONTRACTOR. COORDINATE ALL CONTROLS WORK BETWEEN MECHANICAL AND ELECTRICAL.
6. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
7. ALL HOT WATER SUPPLY AND RETURN PIPING TO MANIFOLDS TO BE RUN UP HIGH WITHIN CRAWLSPACE ALONG U/S OF MAIN FLOOR STRUCTURE. PIPING TO BE A REVERSE RETURN SYSTEM AS SHOWN.
8. ALL HEATING SYSTEM LOW POINT TO BE COMPLETE WITH VALVED 1/2" DRAINS.
9. ALL HEATING SYSTEM HIGH POINTS TO BE VENTED.
10. COMPLETE SYSTEM TO BE CLEANED, DEGREASED, AND TREATED AS PER SPEC.
11. SEAL AROUND ALL PIPING PASSING THROUGH FIRE RATED ASSEMBLIES WITH FIRE RATED CAULKING.
12. CONTRACTOR MUST CONTACT THE LOCAL INSPECTOR WITH THE BOILER AND PRESSURE VESSEL SAFETY DEPARTMENT AND SUBMIT A BOILER INSTALLATION PERMIT AS REQUIRED. CONTRACTOR TO BE RESPONSIBLE FOR ALL REGISTRATION AND INSPECTION FEES AS REQUIRED BY THE BOILER AND PRESSURE VESSEL SAFETY DEPARTMENT.
13. PROVIDE ISOLATION VALVES ON HOT WATER HEATING SUPPLY AND RETURN LINES TO ALL RADIATION CABINETS, HEATING COILS, EQUIPMENT, AND OTHER LOCATIONS NOTED ON DRAWINGS AND SCHEMATICS.

HEATING KEYNOTES

(#)
1

THIS DRAWING IS NOT TO BE SCALED. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND OTHER DATA FROM THE PROJECT AND REPORT ANY DISCREPANCIES TO P.S. ENGINEERING BEFORE PROCEEDING WITH ANY WORK. ALL WORK TO COMPLY WITH ALL APPLICABLE CODES, STANDARDS AND REGULATIONS.

DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

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PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 95% REVIEW

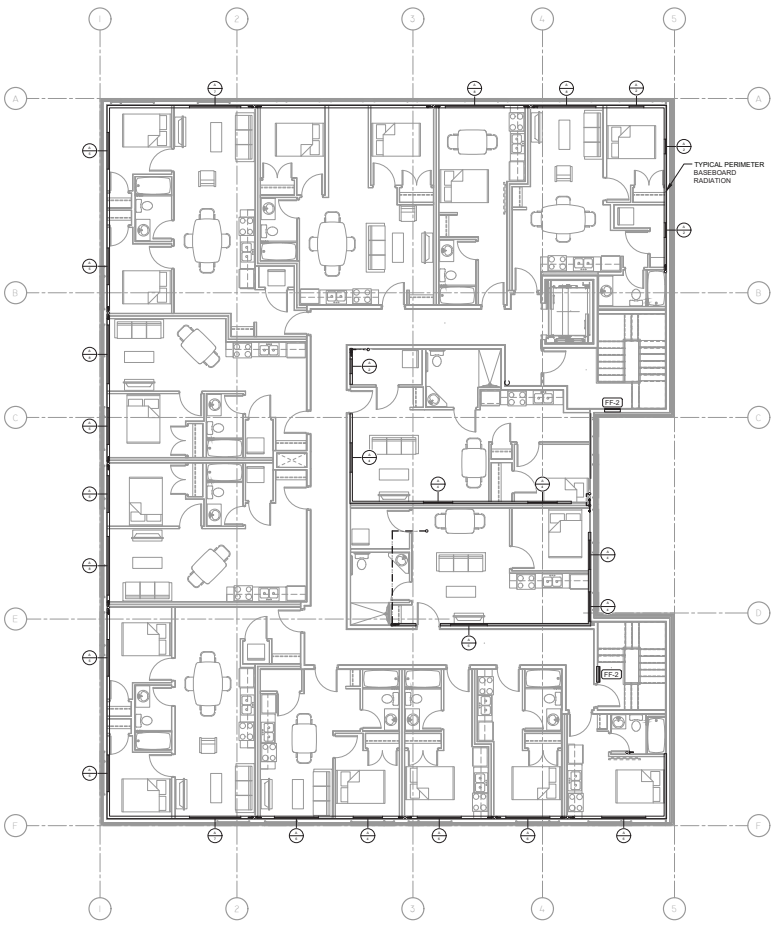
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
SECOND FLOOR PLAN HEATING

PROJECT :24S-039	DRAWING NUMBER:
DATE : 01/20/2025	M3.2
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 / M3.3 THIRD FLOOR PLAN HEATING
SCALE: 1/8" = 1'-0"

HEATING GENERAL NOTES

1. ALL EQUIPMENT TO BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
2. ALL MECHANICAL ITEMS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL ENERGY CODE, SMACNA STANDARDS, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND STANDARDS.
3. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES (IN PARTICULAR ELECTRICAL).
4. ANY MODIFICATIONS REQUIRED AS A RESULT OF THE INSTALLATION OF AN HVAC UNIT THAT DIFFERS FROM THE EQUIPMENT SCHEDULES IN THE CONTRACT DOCUMENTS IS TO BE COORDINATED ON SITE BETWEEN THE MECHANICAL CONTRACTOR AND OTHER TRADES. FAILURE TO DO SO WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESOLVE AT NO COST TO THE OWNER.
5. ALL TIMER SWITCHES, SPEED SWITCHES, STARTERS, ETC. TO BE BY ELECTRICAL. INTERLOCKS TO BE BY MECHANICAL CONTROLS SUBCONTRACTOR. COORDINATE ALL CONTROLS WORK BETWEEN MECHANICAL AND ELECTRICAL.
6. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
7. ALL HOT WATER SUPPLY AND RETURN PIPING TO MANIFOLDS TO BE RUN UP HIGH WITHIN CRAWLSPACE ALONG U/S OF MAIN FLOOR STRUCTURE. PIPING TO BE A REVERSE RETURN SYSTEM AS SHOWN.
8. ALL HEATING SYSTEM LOW POINT TO BE COMPLETE WITH VALVED 1/2" DRAINS.
9. ALL HEATING SYSTEM HIGH POINTS TO BE VENTED.
10. COMPLETE SYSTEM TO BE CLEANED, DEGREASED, AND TREATED AS PER SPEC.
11. SEAL AROUND ALL PIPING PASSING THROUGH FIRE RATED ASSEMBLIES WITH FIRE RATED CAULKING.
12. CONTRACTOR MUST CONTACT THE LOCAL INSPECTOR WITH THE BOILER AND PRESSURE VESSEL SAFETY DEPARTMENT AND SUBMIT A BOILER INSTALLATION PERMIT AS REQUIRED. CONTRACTOR TO BE RESPONSIBLE FOR ALL REGISTRATION AND INSPECTION FEES AS REQUIRED BY THE BOILER AND PRESSURE VESSEL SAFETY DEPARTMENT.
13. PROVIDE ISOLATION VALVES ON HOT WATER HEATING SUPPLY AND RETURN LINES TO ALL RADIATION CABINETS, HEATING COILS, EQUIPMENT, AND OTHER LOCATIONS NOTED ON DRAWINGS AND SCHEMATICS.

HEATING KEYNOTES

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DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

MECHANICAL CONSULTANT:
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Mechanical Consulting Engineers
306 Sauer Rise. Saskatoon, SK. S7W 0J9
Contact: Odhner
Phone : (306) 715-6788
Email : odhner@pseng.ca

PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 90% REVIEW

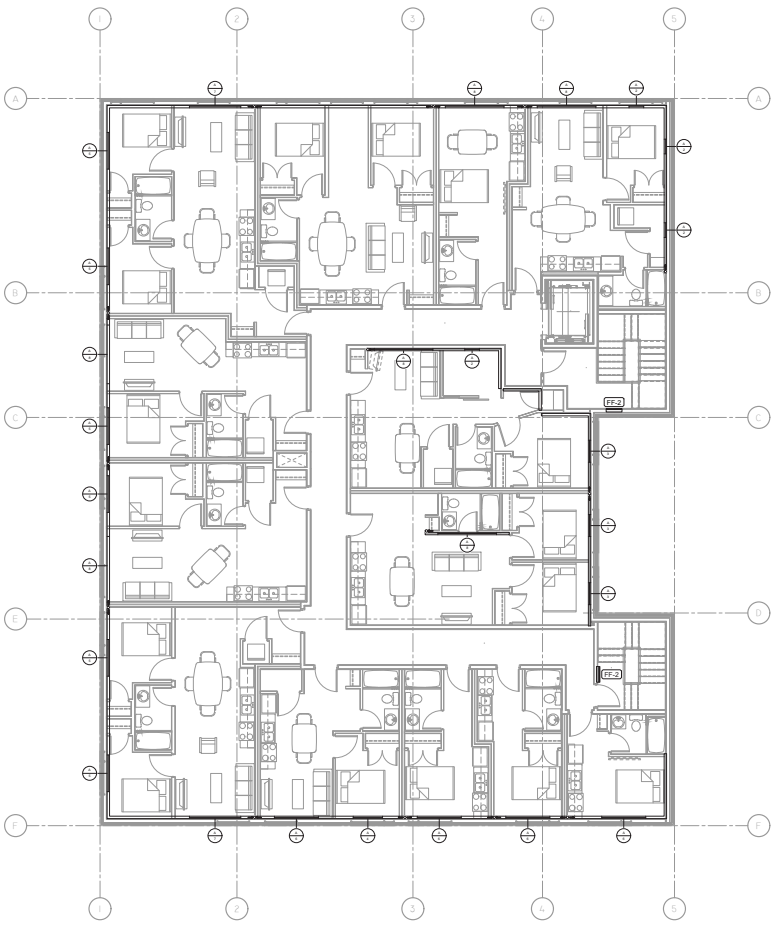
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
THIRD FLOOR PLAN HEATING

PROJECT :24S-039	DRAWING NUMBER:
DATE : 01/20/2025	M3.3
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 / M3.4 FOURTH AND FIFTH FLOOR PLAN HEATING
SCALE: 1/8" = 1'-0"

HEATING GENERAL NOTES

1. ALL EQUIPMENT TO BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
2. ALL MECHANICAL ITEMS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL ENERGY CODE, SMACNA STANDARDS, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND STANDARDS.
3. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES (IN PARTICULAR ELECTRICAL).
4. ANY MODIFICATIONS REQUIRED AS A RESULT OF THE INSTALLATION OF AN HVAC UNIT THAT DIFFERS FROM THE EQUIPMENT SCHEDULES IN THE CONTRACT DOCUMENTS IS TO BE COORDINATED ON SITE BETWEEN THE MECHANICAL CONTRACTOR AND OTHER TRADES. FAILURE TO DO SO WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESOLVE AT NO COST TO THE OWNER.
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6. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
7. ALL HOT WATER SUPPLY AND RETURN PIPING TO MANIFOLDS TO BE RUN UP HIGH WITHIN CRAWLSPACE ALONG U/S OF MAIN FLOOR STRUCTURE. PIPING TO BE A REVERSE RETURN SYSTEM AS SHOWN.
8. ALL HEATING SYSTEM LOW POINT TO BE COMPLETE WITH VALVED 1/2" DRAINS.
9. ALL HEATING SYSTEM HIGH POINTS TO BE VENTED.
10. COMPLETE SYSTEM TO BE CLEANED, DEGREASED, AND TREATED AS PER SPEC.
11. SEAL AROUND ALL PIPING PASSING THROUGH FIRE RATED ASSEMBLIES WITH FIRE RATED CAULKING.
12. CONTRACTOR MUST CONTACT THE LOCAL INSPECTOR WITH THE BOILER AND PRESSURE VESSEL SAFETY DEPARTMENT AND SUBMIT A BOILER INSTALLATION PERMIT AS REQUIRED. CONTRACTOR TO BE RESPONSIBLE FOR ALL REGISTRATION AND INSPECTION FEES AS REQUIRED BY THE BOILER AND PRESSURE VESSEL SAFETY DEPARTMENT.
13. PROVIDE ISOLATION VALVES ON HOT WATER HEATING SUPPLY AND RETURN LINES TO ALL RADIATION CABINETS, HEATING COILS, EQUIPMENT, AND OTHER LOCATIONS NOTED ON DRAWINGS AND SCHEMATICS.

HEATING KEYNOTES

(#)
1

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DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

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PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 95% REVIEW

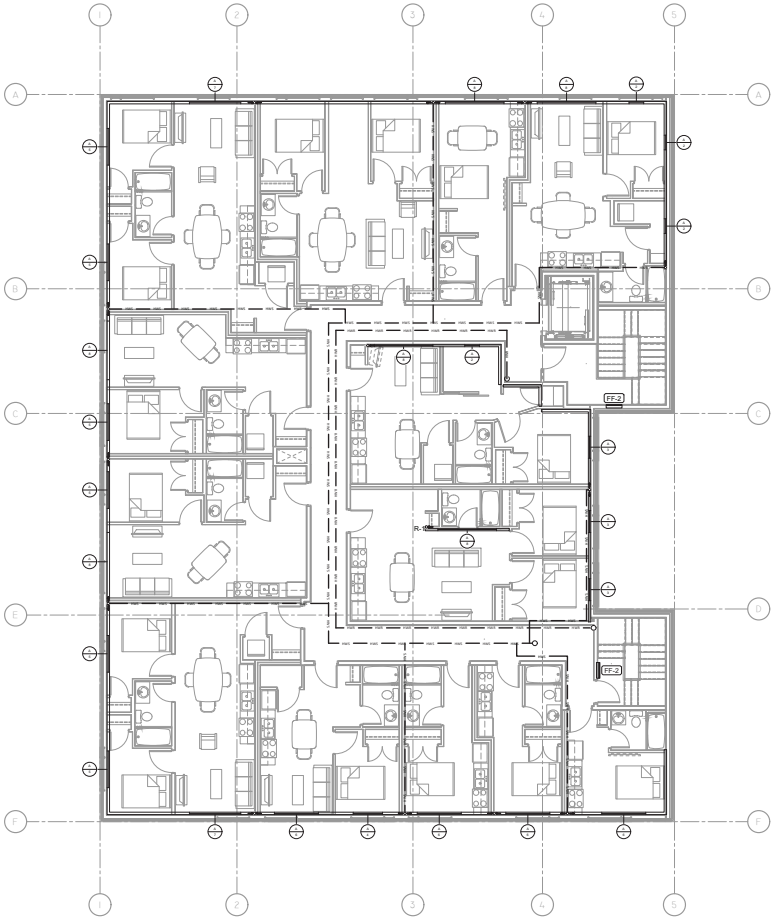
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
FOURTH & FIFTH FLOOR PLAN HEATING

PROJECT :24S-039	DRAWING NUMBER:
DATE : 01/20/2025	M3.4
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 M3.5 SCALE: 1/8" = 1'-0"

SIXTH FLOOR PLAN HEATING

HEATING GENERAL NOTES

1. ALL EQUIPMENT TO BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
2. ALL MECHANICAL ITEMS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL ENERGY CODE, SMACNA STANDARDS, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND STANDARDS.
3. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES (IN PARTICULAR ELECTRICAL).
4. ANY MODIFICATIONS REQUIRED AS A RESULT OF THE INSTALLATION OF AN HVAC UNIT THAT DIFFERS FROM THE EQUIPMENT SCHEDULES IN THE CONTRACT DOCUMENTS IS TO BE COORDINATED ON SITE BETWEEN THE MECHANICAL CONTRACTOR AND OTHER TRADES. FAILURE TO DO SO WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESOLVE AT NO COST TO THE OWNER.
5. ALL TIMER SWITCHES, SPEED SWITCHES, STARTERS, ETC. TO BE BY ELECTRICAL. INTERLOCKS TO BE BY MECHANICAL CONTROLS SUBCONTRACTOR. COORDINATE ALL CONTROLS WORK BETWEEN MECHANICAL AND ELECTRICAL.
6. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
7. ALL HOT WATER SUPPLY AND RETURN PIPING TO MANIFOLDS TO BE RUN UP HIGH WITHIN CRAWLSPACE ALONG U/S OF MAIN FLOOR STRUCTURE. PIPING TO BE A REVERSE RETURN SYSTEM AS SHOWN.
8. ALL HEATING SYSTEM LOW POINT TO BE COMPLETE WITH VALVED 1/2" DRAINS.
9. ALL HEATING SYSTEM HIGH POINTS TO BE VENTED.
10. COMPLETE SYSTEM TO BE CLEANED, DEGREASED, AND TREATED AS PER SPEC.
11. SEAL AROUND ALL PIPING PASSING THROUGH FIRE RATED ASSEMBLIES WITH FIRE RATED CAULKING.
12. CONTRACTOR MUST CONTACT THE LOCAL INSPECTOR WITH THE BOILER AND PRESSURE VESSEL SAFETY DEPARTMENT AND SUBMIT A BOILER INSTALLATION PERMIT AS REQUIRED. CONTRACTOR TO BE RESPONSIBLE FOR ALL REGISTRATION AND INSPECTION FEES AS REQUIRED BY THE BOILER AND PRESSURE VESSEL SAFETY DEPARTMENT.
13. PROVIDE ISOLATION VALVES ON HOT WATER HEATING SUPPLY AND RETURN LINES TO ALL RADIATION CABINETS, HEATING COILS, EQUIPMENT, AND OTHER LOCATIONS NOTED ON DRAWINGS AND SCHEMATICS.

HEATING KEYNOTES

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PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 90% REVIEW

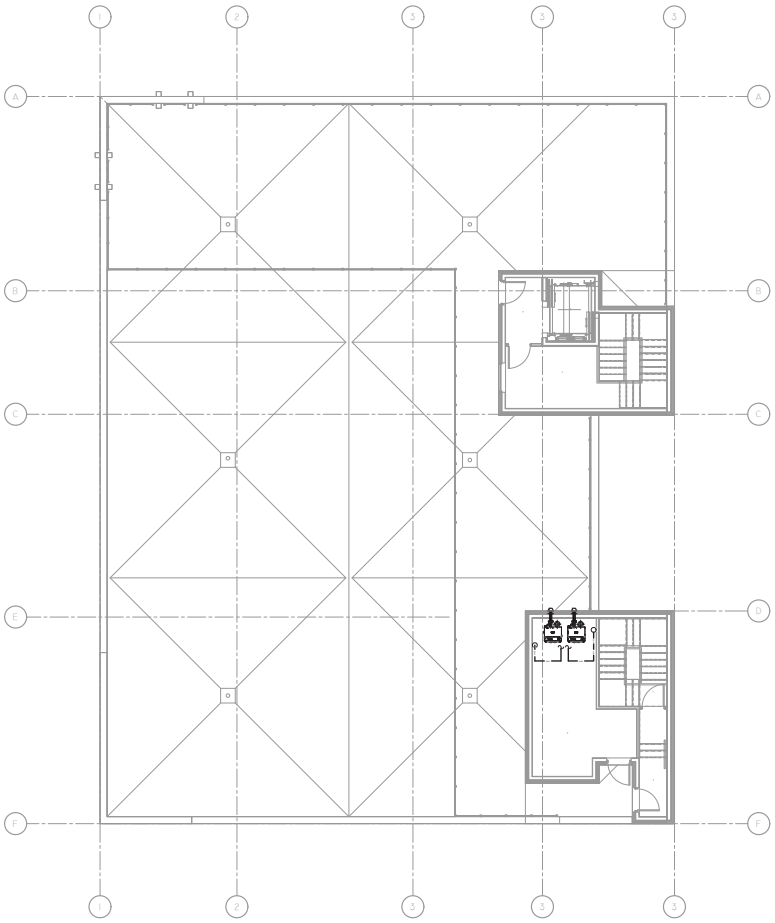
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
SIXTH FLOOR PLAN HEATING

PROJECT :24S-039	DRAWING NUMBER:
DATE : 01/20/2025	M3.5
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 M3.6 ROOF PLAN HEATING
SCALE: 1/8" = 1'-0"

HEATING GENERAL NOTES

1. ALL EQUIPMENT TO BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
2. ALL MECHANICAL ITEMS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL ENERGY CODE, SMACNA STANDARDS, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND STANDARDS.
3. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES (IN PARTICULAR ELECTRICAL).
4. ANY MODIFICATIONS REQUIRED AS A RESULT OF THE INSTALLATION OF AN HVAC UNIT THAT DIFFERS FROM THE EQUIPMENT SCHEDULES IN THE CONTRACT DOCUMENTS IS TO BE COORDINATED ON SITE BETWEEN THE MECHANICAL CONTRACTOR AND OTHER TRADES. FAILURE TO DO SO WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESOLVE AT NO COST TO THE OWNER.
5. ALL TIMER SWITCHES, SPEED SWITCHES, STARTERS, ETC. TO BE BY ELECTRICAL. INTERLOCKS TO BE BY MECHANICAL CONTROLS SUBCONTRACTOR. COORDINATE ALL CONTROLS WORK BETWEEN MECHANICAL AND ELECTRICAL.
6. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
7. ALL HOT WATER SUPPLY AND RETURN PIPING TO MANIFOLDS TO BE RUN UP HIGH WITHIN CRAWLSPACE ALONG U/S OF MAIN FLOOR STRUCTURE. PIPING TO BE A REVERSE RETURN SYSTEM AS SHOWN.
8. ALL HEATING SYSTEM LOW POINT TO BE COMPLETE WITH VALVED 1/2" DRAINS.
9. ALL HEATING SYSTEM HIGH POINTS TO BE VENTED.
10. COMPLETE SYSTEM TO BE CLEANED, DEGREASED, AND TREATED AS PER SPEC.
11. SEAL AROUND ALL PIPING PASSING THROUGH FIRE RATED ASSEMBLIES WITH FIRE RATED CAULKING.
12. CONTRACTOR MUST CONTACT THE LOCAL INSPECTOR WITH THE BOILER AND PRESSURE VESSEL SAFETY DEPARTMENT AND SUBMIT A BOILER INSTALLATION PERMIT AS REQUIRED. CONTRACTOR TO BE RESPONSIBLE FOR ALL REGISTRATION AND INSPECTION FEES AS REQUIRED BY THE BOILER AND PRESSURE VESSEL SAFETY DEPARTMENT.
13. PROVIDE ISOLATION VALVES ON HOT WATER HEATING SUPPLY AND RETURN LINES TO ALL RADIATION CABINETS, HEATING COILS, EQUIPMENT, AND OTHER LOCATIONS NOTED ON DRAWINGS AND SCHEMATICS.

HEATING KEYNOTES

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CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
ROOF PLAN HEATING

PROJECT :24S-039	DRAWING NUMBER:
DATE : 01/20/2025	M3.6
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0

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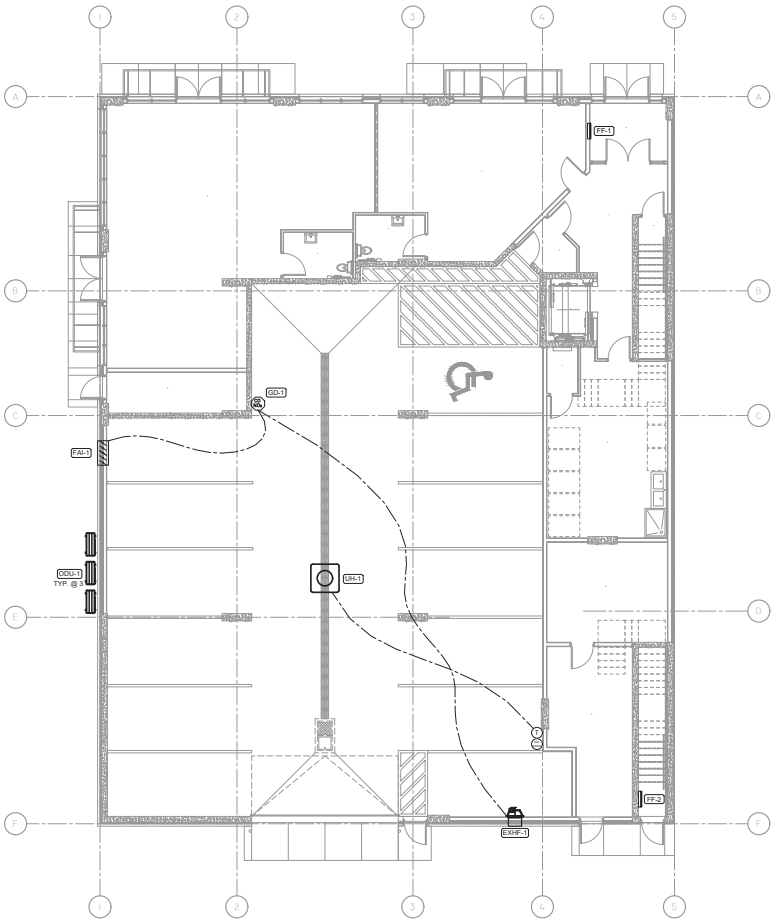
DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:



1 M4.1 PARKADE PLAN HVAC
SCALE: 1/8" = 1'-0"

HVAC GENERAL NOTES

1. ALL DUCTING SHOWN SCHEMATICALLY AND IS A GENERAL GUIDELINE. ANY MAJOR DEVIATIONS FROM WHAT IS SHOWN IS TO BE APPROVED BY PS ENGINEERING.
2. ALL DUCT SIZES ARE NET SIZES. INCREASE DUCT SIZE WITH INTERNAL INSULATION AS REQUIRED TO MAINTAIN INDICATED DIMENSIONS.
3. ALL DUCT TAKE-OFFS TO BE 45° CONICAL WITH BALANCING DAMPERS.
4. DUCTING TO BE CONNECTED TO ALL HVAC AND FAN UNITS WITH CANVAS CONNECTIONS.
5. ALL MAIN SUPPLY PLENUM ELBOWS TO BE MITERED WITH TURNING VANES. DUCT ELBOW RADII TO BE MINIMUM 1.5 TIMES THE TURNING DIMENSION UNLESS OTHERWISE NOTED.
6. COORDINATE ROUTING OF DUCTWORK IN CEILING WITH ELECTRICAL TO ENSURE ADEQUATE ACCESS TO ELECTRICAL SYSTEMS IS MAINTAINED AT THE HIGHEST POSSIBLE LEVEL.
7. INSULATE ALL DUCTWORK AS PER SPEC. INSULATION TO BE CANVAS WRAPPED IN FINISHED AREAS ONLY.
8. ENSURE ALL FLUE GAS AND EXHAUST OUTLETS ARE AT LEAST 3m (10ft) AWAY FROM THE NEAREST FRESH AIR INTAKE AND AT LEAST 1m (3ft) FROM BUILDING OPENINGS.
9. ALL EQUIPMENT TO BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
10. ALL MECHANICAL ITEMS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL ENERGY CODE, SMACNA STANDARDS, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND STANDARDS.
11. DUCTWORK WITHIN NEW HVAC UNIT SUPPLY AND RETURN PLENUMS SHALL BE LINED WITH 25mm (1") OF ACOUSTIC INSULATION. INCREASE DUCT SIZE TO MAINTAIN INDICATED DIMENSIONS.
12. ALL DUCTING TO BE FIRE DAMPERED AT ALL FIRE SEPARATIONS COMPLETE WITH QUICK CLOSE HINGED ACCESS DOORS FOR MAINTENANCE OF FUSIBLE LINK.
13. CONTRACTOR TO CHANGE ALL UNIT FILTERS ON BUILDING HANDOVER/COMPLETION AND PROVIDE 1 SET OF SPARE FILTERS FOR EACH PIECE OF EQUIPMENT TO OWNERS TO BE STORED ON SITE.
14. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES (IN PARTICULAR ELECTRICAL).
15. MECHANICAL CONTRACTOR SHALL COORDINATE EXACT DUCT ROUTING ON SITE WITH FINAL JOIST LAYOUT AND ADVISE PS ENGINEERING OF ANY ISSUES PRIOR TO HANGING DUCTWORK. ANY DUCTWORK REMOVAL/MODIFICATION REQUIRED WITHOUT PRIOR NOTIFICATION WILL BE COMPLETED AT NO COST TO THE OWNER.
16. ANY MODIFICATIONS REQUIRED AS A RESULT OF THE INSTALLATION OF AN HVAC UNIT THAT DIFFERS FROM THE EQUIPMENT SCHEDULES IN THE CONTRACT DOCUMENTS IS TO BE COORDINATED ON SITE BETWEEN THE MECHANICAL CONTRACTOR AND OTHER TRADES. FAILURE TO DO SO WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESOLVE AT NO COST TO THE OWNER.
17. PIPE ALL CONDENSATE DRAINS INDIRECTLY TO NEAREST FLOOR/PIPE DRAIN UNLESS OTHERWISE NOTED.
18. ALL DUCTING IN AREAS WITH FINISHED CEILINGS TO BE INSTALLED CONCEALED WITHIN CEILING SPACE IN A GOOD WORKMANSHIP LIKE MANNER AS PER SMACNA STANDARDS. ALL DUCTWORK IN AREAS WITH NO CEILINGS TO BE SPIRAL ROUND EXPOSED UNLESS OTHERWISE NOTED.
19. ALL INTERLOCKS, TIMER SWITCHES, SPEED SWITCHES, ETC. TO BE BY ELECTRICAL.
20. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
21. ALL EXTERIOR WALL / ROOF PENETRATIONS TO BE SEALED WEATHER / AIR TIGHT.

HVAC KEYNOTES

1

BRANCH DUCT SIZING

AIR FLOW (CFM)	BRANCH SIZE (INCH)
0-60	5 (125)
60-120	6 (150)
121-230	8 (200)
231-400	10 (250)

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PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 80% REVIEW

CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

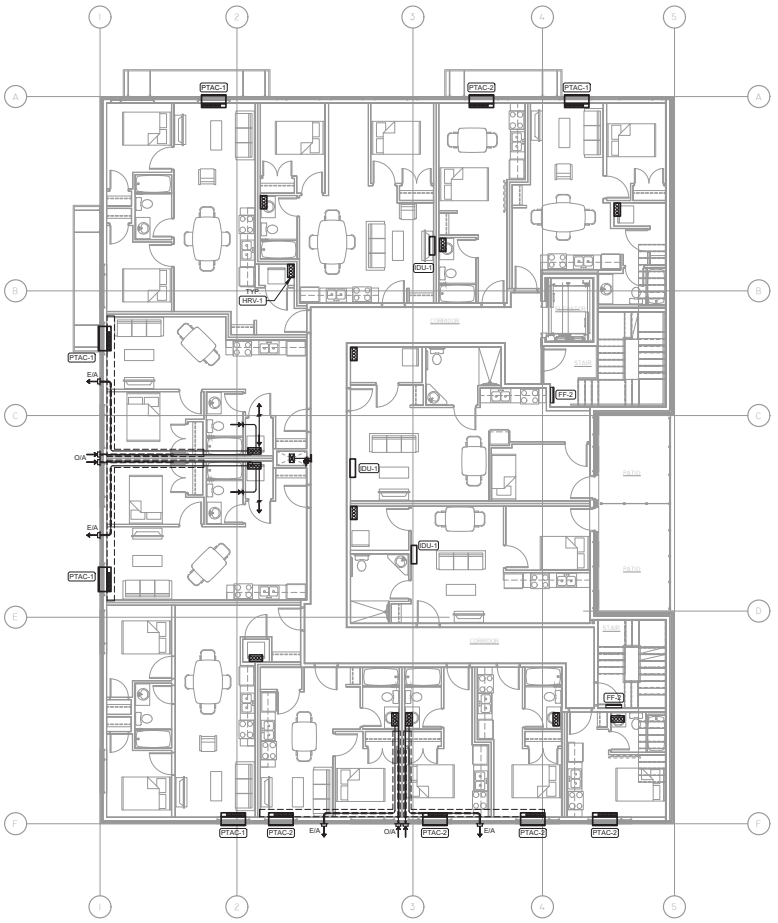
1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
PARKADE PLAN HVAC

PROJECT :24S-039
DATE : 01/20/2025
SCALE : AS NOTED
DRAWN : I.R.
CHECKED :O.O.

DRAWING NUMBER:
M4.1
REV:0

DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:



1 SECOND FLOOR PLAN HVAC
M4.2 SCALE: 1/8" = 1'-0"

HVAC GENERAL NOTES

1. ALL DUCTING SHOWN SCHEMATICALLY AND IS A GENERAL GUIDELINE. ANY MAJOR DEVIATIONS FROM WHAT IS SHOWN IS TO BE APPROVED BY PS ENGINEERING.
2. ALL DUCT SIZES ARE NET SIZES. INCREASE DUCT SIZE WITH INTERNAL INSULATION AS REQUIRED TO MAINTAIN INDICATED DIMENSIONS.
3. ALL DUCT TAKE-OFFS TO BE 45° CONICAL WITH BALANCING DAMPERS.
4. DUCTING TO BE CONNECTED TO ALL HVAC AND FAN UNITS WITH CANVAS CONNECTIONS.
5. ALL MAIN SUPPLY PLENUM ELBOWS TO BE MITERED WITH TURNING VANES. DUCT ELBOW RADII TO BE MINIMUM 1.5 TIMES THE TURNING DIMENSION UNLESS OTHERWISE NOTED.
6. COORDINATE ROUTING OF DUCTWORK IN CEILING WITH ELECTRICAL TO ENSURE ADEQUATE ACCESS TO ELECTRICAL SYSTEMS IS MAINTAINED AT THE HIGHEST POSSIBLE LEVEL.
7. INSULATE ALL DUCTWORK AS PER SPEC. INSULATION TO BE CANVAS WRAPPED IN FINISHED AREAS ONLY.
8. ENSURE ALL FLUE GAS AND EXHAUST OUTLETS ARE AT LEAST 3m (10ft) AWAY FROM THE NEAREST FRESH AIR INTAKE AND AT LEAST 1m (3ft) FROM BUILDING OPENINGS.
9. ALL EQUIPMENT TO BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
10. ALL MECHANICAL ITEMS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL ENERGY CODE, SMACNA STANDARDS, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND STANDARDS.
11. DUCTWORK WITHIN NEW HVAC UNIT SUPPLY AND RETURN PLENUMS SHALL BE LINED WITH 25mm (1") OF ACOUSTIC INSULATION. INCREASE DUCT SIZE TO MAINTAIN INDICATED DIMENSIONS.
12. ALL DUCTING TO BE FIRE DAMPERED AT ALL FIRE SEPARATIONS COMPLETE WITH QUICK CLOSE HINGED ACCESS DOORS FOR MAINTENANCE OF FUSIBLE LINK.
13. CONTRACTOR TO CHANGE ALL UNIT FILTERS ON BUILDING HANDOVER/COMPLETION AND PROVIDE 1 SET OF SPARE FILTERS FOR EACH PIECE OF EQUIPMENT TO OWNERS TO BE STORED ON SITE.
14. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES (IN PARTICULAR ELECTRICAL).
15. MECHANICAL CONTRACTOR SHALL COORDINATE EXACT DUCT ROUTING ON SITE WITH FINAL JOIST LAYOUT AND ADVISE PS ENGINEERING OF ANY ISSUES PRIOR TO HANGING DUCTWORK. ANY DUCTWORK REMOVAL/MODIFICATION REQUIRED WITHOUT PRIOR NOTIFICATION WILL BE COMPLETED AT NO COST TO THE OWNER.
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17. PIPE ALL CONDENSATE DRAINS INDIRECTLY TO NEAREST FLOOR/PIPE DRAIN UNLESS OTHERWISE NOTED.
18. ALL DUCTING IN AREAS WITH FINISHED CEILINGS TO BE INSTALLED CONCEALED WITHIN CEILING SPACE IN A GOOD WORKMANSHIP LIKE MANNER AS PER SMACNA STANDARDS. ALL DUCTWORK IN AREAS WITH NO CEILINGS TO BE SPIRAL ROUND EXPOSED UNLESS OTHERWISE NOTED.
19. ALL INTERLOCKS, TIMER SWITCHES, SPEED SWITCHES, ETC. TO BE BY ELECTRICAL.
20. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
21. ALL EXTERIOR WALL / ROOF PENETRATIONS TO BE SEALED WEATHER / AIR TIGHT.

BRANCH DUCT SIZING

AIR FLOW (CFM)	BRANCH SIZE (INCH)
0-60	5 (125)
60-120	6 (150)
121-230	8 (200)
231-400	10 (250)

HVAC KEYNOTES

(#)
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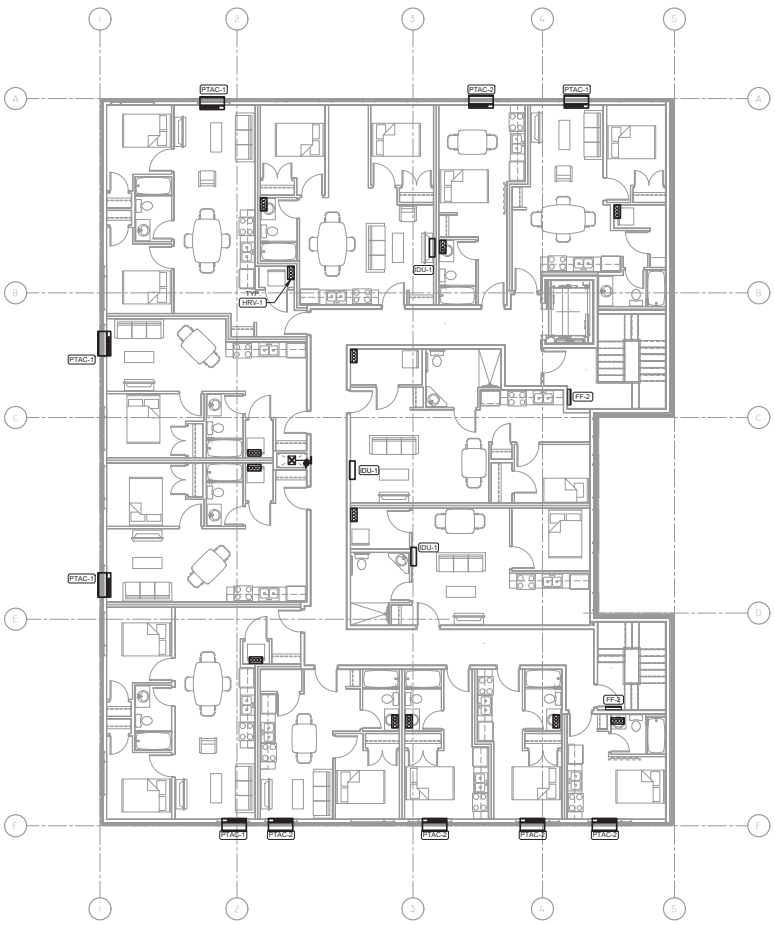
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
SECOND FLOOR PLAN HVAC

PROJECT: 24S-039	DRAWING NUMBER: M4.2
DATE : 01/20/2025	
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 THIRD FLOOR PLAN HVAC
M4.3 SCALE: 1/8" = 1'-0"

HVAC GENERAL NOTES

1. ALL DUCTING SHOWN SCHEMATICALLY AND IS A GENERAL GUIDELINE. ANY MAJOR DEVIATIONS FROM WHAT IS SHOWN IS TO BE APPROVED BY PS ENGINEERING.
2. ALL DUCT SIZES ARE NET SIZES. INCREASE DUCT SIZE WITH INTERNAL INSULATION AS REQUIRED TO MAINTAIN INDICATED DIMENSIONS.
3. ALL DUCT TAKE-OFFS TO BE 45° CONICAL WITH BALANCING DAMPERS.
4. DUCTING TO BE CONNECTED TO ALL HVAC AND FAN UNITS WITH CANVAS CONNECTIONS.
5. ALL MAIN SUPPLY PLENUM ELBOWS TO BE MITERED WITH TURNING VANES. DUCT ELBOW RADII TO BE MINIMUM 1.5 TIMES THE TURNING DIMENSION UNLESS OTHERWISE NOTED.
6. COORDINATE ROUTING OF DUCTWORK IN CEILING WITH ELECTRICAL TO ENSURE ADEQUATE ACCESS TO ELECTRICAL SYSTEMS IS MAINTAINED AT THE HIGHEST POSSIBLE LEVEL.
7. INSULATE ALL DUCTWORK AS PER SPEC. INSULATION TO BE CANVAS WRAPPED IN FINISHED AREAS ONLY.
8. ENSURE ALL FLUE GAS AND EXHAUST OUTLETS ARE AT LEAST 3m (10ft) AWAY FROM THE NEAREST FRESH AIR INTAKE AND AT LEAST 1m (3ft) FROM BUILDING OPENINGS.
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BRANCH DUCT SIZING

AIR FLOW (CFM)	BRANCH SIZE (INCH)
0-60	5 (125)
60-120	6 (150)
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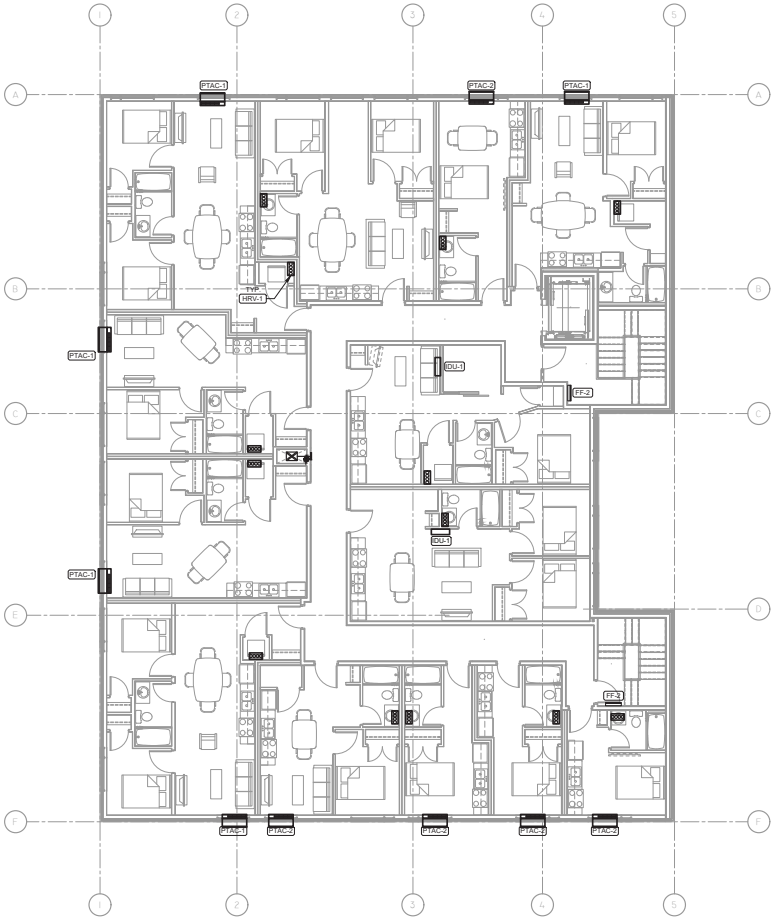
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
THIRD FLOOR PLAN HVAC

PROJECT :24S-039	DRAWING NUMBER: M4.3
DATE : 01/20/2025	
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 M4.4 FOURTH FLOOR PLAN HVAC
SCALE: 1/8" = 1'-0"

HVAC GENERAL NOTES

1. ALL DUCTING SHOWN SCHEMATICALLY AND IS A GENERAL GUIDELINE. ANY MAJOR DEVIATIONS FROM WHAT IS SHOWN IS TO BE APPROVED BY PS ENGINEERING.
2. ALL DUCT SIZES ARE NET SIZES. INCREASE DUCT SIZE WITH INTERNAL INSULATION AS REQUIRED TO MAINTAIN INDICATED DIMENSIONS.
3. ALL DUCT TAKE-OFFS TO BE 45° CONICAL WITH BALANCING DAMPERS.
4. DUCTING TO BE CONNECTED TO ALL HVAC AND FAN UNITS WITH CANVAS CONNECTIONS.
5. ALL MAIN SUPPLY PLENUM ELBOWS TO BE MITERED WITH TURNING VANES. DUCT ELBOW RADII TO BE MINIMUM 1.5 TIMES THE TURNING DIMENSION UNLESS OTHERWISE NOTED.
6. COORDINATE ROUTING OF DUCTWORK IN CEILING WITH ELECTRICAL TO ENSURE ADEQUATE ACCESS TO ELECTRICAL SYSTEMS IS MAINTAINED AT THE HIGHEST POSSIBLE LEVEL.
7. INSULATE ALL DUCTWORK AS PER SPEC. INSULATION TO BE CANVAS WRAPPED IN FINISHED AREAS ONLY.
8. ENSURE ALL FLUE GAS AND EXHAUST OUTLETS ARE AT LEAST 3m (10ft) AWAY FROM THE NEAREST FRESH AIR INTAKE AND AT LEAST 1m (3ft) FROM BUILDING OPENINGS.
9. ALL EQUIPMENT TO BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
10. ALL MECHANICAL ITEMS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSIONS OF THE NATIONAL BUILDING CODE, NATIONAL ENERGY CODE, SMACNA STANDARDS, LOCAL AUTHORITY CONSTRUCTION DESIGN STANDARDS, MUNICIPALITY BYLAWS, AND ALL OTHER APPLICABLE CODES AND STANDARDS.
11. DUCTWORK WITHIN NEW HVAC UNIT SUPPLY AND RETURN PLENUMS SHALL BE LINED WITH 25mm (1") OF ACOUSTIC INSULATION. INCREASE DUCT SIZE TO MAINTAIN INDICATED DIMENSIONS.
12. ALL DUCTING TO BE FIRE DAMPERED AT ALL FIRE SEPARATIONS COMPLETE WITH QUICK CLOSE HINGED ACCESS DOORS FOR MAINTENANCE OF FUSIBLE LINK.
13. CONTRACTOR TO CHANGE ALL UNIT FILTERS ON BUILDING HANDOVER/COMPLETION AND PROVIDE 1 SET OF SPARE FILTERS FOR EACH PIECE OF EQUIPMENT TO OWNERS TO BE STORED ON SITE.
14. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES (IN PARTICULAR ELECTRICAL).
15. MECHANICAL CONTRACTOR SHALL COORDINATE EXACT DUCT ROUTING ON SITE WITH FINAL JOIST LAYOUT AND ADVISE PS ENGINEERING OF ANY ISSUES PRIOR TO HANGING DUCTWORK. ANY DUCTWORK REMOVAL/MODIFICATION REQUIRED WITHOUT PRIOR NOTIFICATION WILL BE COMPLETED AT NO COST TO THE OWNER.
16. ANY MODIFICATIONS REQUIRED AS A RESULT OF THE INSTALLATION OF AN HVAC UNIT THAT DIFFERS FROM THE EQUIPMENT SCHEDULES IN THE CONTRACT DOCUMENTS IS TO BE COORDINATED ON SITE BETWEEN THE MECHANICAL CONTRACTOR AND OTHER TRADES. FAILURE TO DO SO WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESOLVE AT NO COST TO THE OWNER.
17. PIPE ALL CONDENSATE DRAINS INDIRECTLY TO NEAREST FLOOR/PIPE DRAIN UNLESS OTHERWISE NOTED.
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19. ALL INTERLOCKS, TIMER SWITCHES, SPEED SWITCHES, ETC. TO BE BY ELECTRICAL.
20. CONFIRM DETAILS OF ALL SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
21. ALL EXTERIOR WALL / ROOF PENETRATIONS TO BE SEALED WEATHER / AIR TIGHT.

BRANCH DUCT SIZING

AIR FLOW (CFM)	BRANCH SIZE (INCH)
0-60	5 (125)
60-120	6 (150)
121-230	8 (200)
231-400	10 (250)

HVAC KEYNOTES

1

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PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 80% REVIEW

CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
FOURTH FLOOR PLAN HVAC

PROJECT :24S-039	DRAWING NUMBER: M4.4
DATE : 01/20/2025	
SCALE : AS NOTED	
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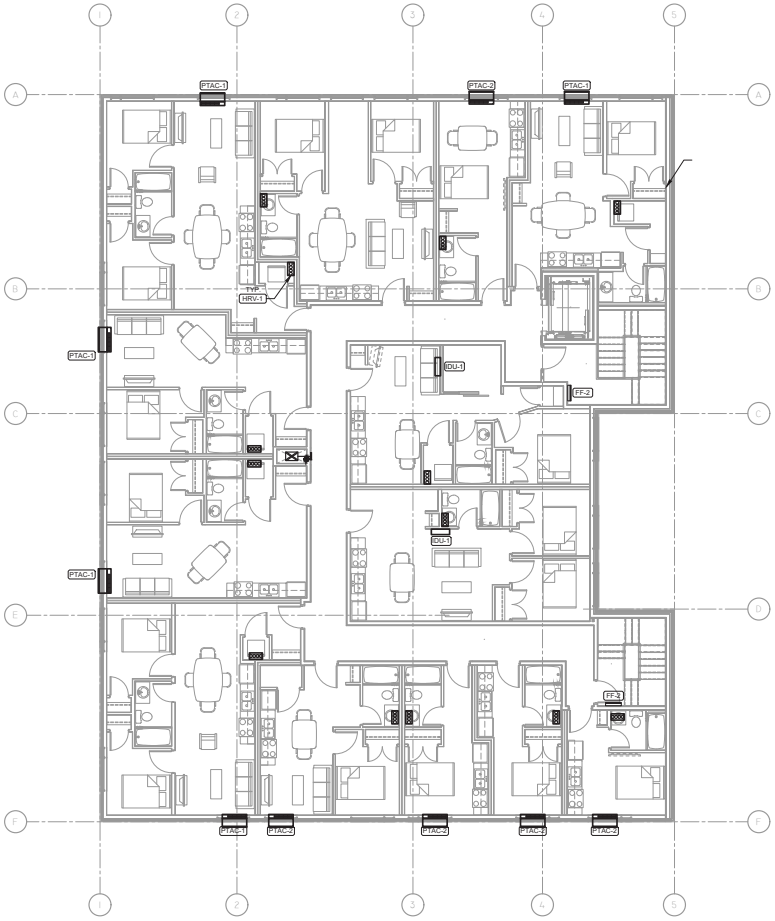
CHECKED :O.O.	REV:0



1 M4.5 FIFTH FLOOR PLAN HVAC
SCALE: 1/8" = 1'-0"

HVAC GENERAL NOTES

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PROJECT NO. 24S-039

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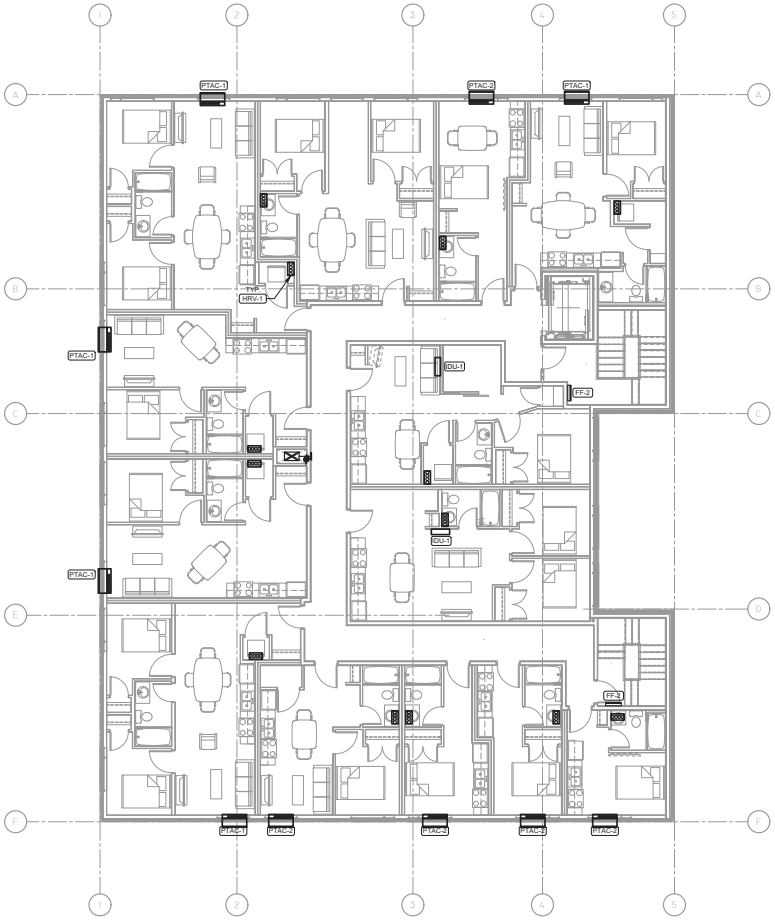
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
FIFTH FLOOR PLAN HVAC

PROJECT :24S-039	DRAWING NUMBER:
DATE : 01/20/2025	M4.5
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 SIXTH FLOOR PLAN HVAC
M4.6 SCALE: 1/8" = 1'-0"

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PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 95% REVIEW

CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
SIXTH FLOOR PLAN HVAC

PROJECT :24S-039	DRAWING NUMBER: M4.6
DATE : 01/20/2025	
SCALE : AS NOTED	
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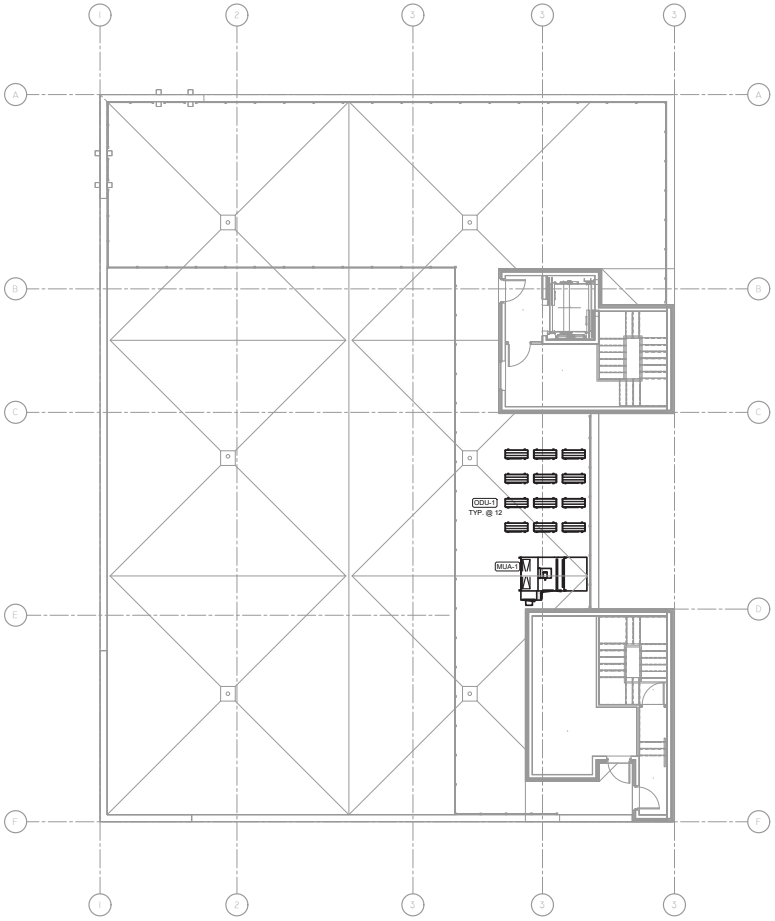
CHECKED :O.O.	REV:0



1 M4.7 SIXTH FLOOR PLAN HVAC
SCALE: 1/8" = 1'-0"

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SASKATOON, SASKATCHEWAN

DRAWING TITLE:
ROOF PLAN HVAC

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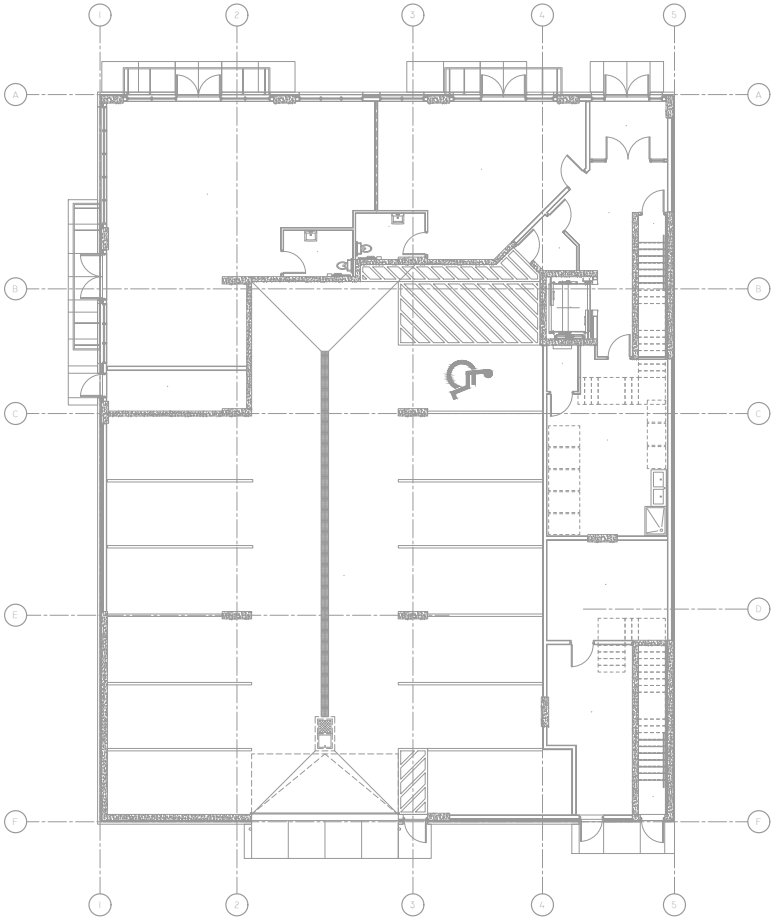

1 M5.1 PARKADE PLAN FIRE PROTECTION
SCALE: 1/8" = 1'-0"

FIRE PROTECTION GENERAL NOTES

1. SPRINKLER SYSTEM TO BE BASED ON NFPA#13R OCCUPANCY.
2. SPRINKLER CONTRACTOR IS RESPONSIBLE FOR A COMPLETE SYSTEM WITHIN THE BUILDING AND SHALL ADD ADDITIONAL HEADS WHERE PATTERN INTERFERES WITH LIGHTING, STRUCTURAL, AND MECHANICAL SYSTEM ARRANGEMENTS.
3. ALL EQUIPMENT TO BE UL LISTED AND SUPPLIED AND INSTALLED AS PER NFPA#13 & NFPA#13R.
4. CONTRACTOR SHALL QUOTE THE SUPPLY AND INSTALLATION OF A COMPLETE SYSTEM WHETHER OR NOT ALL OF THE HARDWARE IS DETAILED HEREON AND IN THE SPECIFICATIONS.
5. ALL PIPING AND SPRINKLER HEADS ARE SHOWN SCHEMATICALLY.
6. SPRINKLER CONTRACTOR TO PROVIDE AND SUBMIT HYDRAULIC CALCULATIONS AND SHOP DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER TO THE LOCAL AUTHORITY HAVING JURISDICTION AND OWNER'S INSURANCE UNDERWRITERS FOR REVIEW AND APPROVAL.
7. PIPING TO BE CPVC PLASTIC SDR 13 CONFORMING TO ASTM F443, UL, AND ULC LISTED. 3/4" TO 1-1/4" SCHEDULE 40 FITTINGS, 1-1/2" TO 3" SCHEDULE 80 FITTINGS. INSTALL AS PER NFPA#13, NFPA#13R, MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
8. PROVIDE FIRE STOPS AROUND ALL PIPING WHICH PASS THROUGH FIRE SEPARATIONS.
9. ALL HEADS SUBJECT TO DAMAGE TO HAVE WIRE GUARDS.
10. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL WIRING AND CONNECTIONS. SPRINKLER CONTRACTOR TO CO-ORDINATE. THE CORRECT ELECTRICAL OPERATION OF ALL SPRINKLER FLOW SWITCHES, TAMPER SWITCHES, AND PRESSURE SWITCHES SHALL BE CONFIRMED PRIOR TO THE FORMAL FIRE ALARM VERIFICATION.
11. CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL WIRING AND CONNECTIONS.
12. ALL PIPING TO BE EXPOSED AND PAINTED WITH LATEX BASED PAINT AS PER NFPA#13R AND AUTHORITY HAVING JURISDICTION.
13. EXISTING SPRINKLER HEAD LOCATIONS WERE OBTAINED FROM EXISTING SPRINKLER SHOP DRAWING. CONTRACTOR TO DETERMINE EXACT NUMBER AND LOCATION ON SITE.
14. PROVIDE SPRINKLER TEST CERTIFICATE ON COMPLETION.
15. THE SPRINKLER CONTRACTOR SHALL BE PRESENT AT THE FIRE ALARM VERIFICATION TO DEMONSTRATE THE OPERATION OF THESE DEVICES.
16. SPRINKLER CONTRACTOR TO SUPPLY FIRE EXTINGUISHER CABINETS AND FIRE EXTINGUISHERS AS INDICATED. UNITS TO BE LABELED AND INSTALLED AS PER NFPA#10. ALL INSTRUCTION FOR THE OPERATION AND MAINTENANCE OF FIRE EXTINGUISHERS TO BE PERMANENTLY AFFIXED TO EACH UNIT.
17. SPRINKLER HEADS NEAR HEAT PRODUCING EQUIPMENT SUCH AS UNIT HEATERS, ETC. TO BE HIGH TEMPERATURE RATED.

FIRE PROTECTION KEYNOTES

(#)

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PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 90% REVIEW

CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
PARKADE PLAN FIRE PROTECTION

PROJECT :24S-039	DRAWING NUMBER:
DATE : 01/20/2025	M5.1
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0

MECHANICAL SPECIFICATIONS

1. GENERAL

1.1. GENERAL PROVISIONS

1.1.1. THE INTENT OF THIS SPECIFICATION AND THE DRAWINGS IS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL MECHANICAL SYSTEM.

1.1.2. DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY TO EACH OTHER AND WHAT IS CALLED FOR IN ONE IS BINDING AS IF CALLED FOR BY BOTH. SHOULD ANY DISCREPANCIES AND/OR OMISSIONS BETWEEN DRAWINGS AND THE SPECIFICATIONS BE DISCOVERED, THEY SHALL BE REPORTED TO PS. ENGINEERING IMMEDIATELY AND PRIOR TO TENDER CLOSING FOR RECERTIFICATION BY ADDENDUM.

1.1.3. CONTRACT DOCUMENTS ARE DIAGRAMMATIC ONLY. THEY ARE TO ESTABLISH SCOPE, MATERIAL AND QUALITY. THEY ARE NOT DETAILED INSTALLATION DRAWINGS. MINOR DETAILS USUALLY NOT SHOWN OR SPECIFIED AND ANY INCIDENTAL ACCESSORIES REQUIRED FOR PROPER INSTALLATION OF THE SYSTEM ARE TO BE INCLUDED IN THE WORK.

1.1.4. EACH CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR LAYING OUT THEIR WORK AND FOR ANY DAMAGE CAUSED BY IMPROPER EXECUTION OF THEIR WORK. CONTRACTOR TO CARRY ALL NECESSARY INSURANCE COVERAGE.

1.1.5. REFER TO MECHANICAL SPECIFICATIONS WITHIN THE SPECIFICATION BOOKLET WHICH ALSO FORMS PART OF THE TENDER DOCUMENTS FOR MORE DETAIL.

1.1.6. THE MECHANICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO TENDER AND VERIFY EXISTING CONDITIONS. NEW PIPING, DUCTWORK AND INSULATION STANDARDS SHALL AT LEAST MATCH THE EXISTING INSTALLATION OR BE HIGHER IF SPECIFIED HEREIN.

1.1.7. THE MECHANICAL CONTRACTOR IS TO ENSURE THAT ALL INTENDED EQUIPMENT WILL FIT WITHIN GIVEN SPACES. MAKE REFERENCE TO THE ELECTRICAL, MECHANICAL, ARCHITECTURAL AND STRUCTURAL DRAWINGS, WHEN SETTING OUT WORK AND BEFORE ORDERING EQUIPMENT, CONTRACTOR MUST BE SATISFIED THAT THE WORK CAN BE CARRIED OUT AS SHOWN ON THESE PLANS WITHOUT CHANGES TO THE BUILDING. ANY ISSUES TO BE RELAYED TO P.S. ENGINEERING FOR ENGINEER'S REVIEW.

1.1.8. ALL WORK SHALL CONFORM TO CURRENTLY ACCEPTED EDITION OF NATIONAL, PROVINCIAL AND MUNICIPAL CODES, STANDARDS BYLAWS AND ACTS; AND WILL MEET THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. THE CODES IN EFFECT AT THE TIME OF BUILDING PERMIT APPLICATION ARE ANTICIPATED TO GOVERN THIS PROJECT. THE BELOW LIST OF REGULATORY AUTHORITIES IS INCLUDED FOR REFERENCE PURPOSES:
- 1.1.8.1. FIRE MARSHALL
- 1.1.8.2. CANADIAN ELECTRICAL CODE
- 1.1.8.3. LOCAL BUILDING BY-LAWS
- 1.1.8.4. WORKER'S COMPENSATION BOARD
- 1.1.8.5. CANADIAN STANDARDS ASSOCIATION
- 1.1.8.6. CANADIAN GAS CODE B-149.1
- 1.1.8.7. NATIONAL BUILDING CODE OF CANADA (N.B.C)
- 1.1.8.8. NATIONAL FIRE PROTECTION ASSOCIATION (N.F.P.A)
- 1.1.8.9. UNDERWRITERS' LABORATORIES (ULC) OF CANADA
- 1.1.8.10. NATIONAL ENERGY CODE FOR BUILDINGS (NECB)

1.1.9. DRAWINGS, AND SPECIFICATIONS ARE BASED ON BEST AVAILABLE AS-BUILT INFORMATION PROVIDED, THIS MAY OR MAY NOT BE 100% ACCURATE. ANY DISCREPANCIES BETWEEN WHAT IS SHOWN ON THESE DRAWINGS AND WHAT IS FOUND ON SITE MUST BE REPORTED TO PS. ENGINEERING IMMEDIATELY.

1.1.10. BEFORE COMMENCING THE WORK: EXAMINE THE WORK OF THE OTHER TRADES AND REPORT AT ONCE ANY DEFECT OR INTERFERENCE AFFECTING THE WORK, OR THE GUARANTEE OF THIS WORK. IN ADDITION, PRIOR TO STARTING ANY WORK, THE MECHANICAL CONTRACTOR IS TO REVIEW TYPE, SIZE, AND LOCATION OF ALL EXISTING MECHANICAL EQUIPMENT AND SERVICE CONNECTIONS ON SITE IN COMPARISON TO THAT SHOWN ON THE DRAWINGS AS EXISTING. REVIEW ANY DISCREPANCIES WITH THE P.S. ENGINEERING PRIOR TO STARTING ANY WORK.

1.2. WARRANTY

1.2.1. THE MECHANICAL CONTRACTOR AS A CONDITION PRECEDENT TO FINAL PAYMENT AFTER COMPLETION OF THIS WORK SHALL PROVIDE THE OWNER WITH A WRITTEN GUARANTEE WARRANTING ALL MATERIALS, LABOUR, AND EQUIPMENT FOR ONE (1) FULL YEAR FROM DATE OF ACCEPTANCE.

1.3. WORK, PRODUCTS, AND QUALITY

1.3.1. EQUIPMENT AND MATERIALS TO BE NEW AND FREE FROM DEFECTS AND HAVE DESIGN CHARACTERISTICS AS SPECIFIED.

1.3.2. ALL WORK AND MATERIALS SHALL BE INSTALLED AS SHOWN AND IN ACCORDANCE WITH THE NATIONAL BUILDING CODE AND ALL LOCAL CODES AND BUILDING REGULATIONS.

1.3.3. ALL EQUIPMENT SHALL BE C.S.A. APPROVED.

1.3.4. ALL MECHANICAL EQUIPMENT INSTALLATIONS SHALL BE IN ACCORDANCE WITH MANUFACTURERS' PRINTED INSTRUCTIONS.

1.3.5. ALL INSTALLATIONS ARE SUBJECT TO REVIEW AND APPROVAL BY PS. ENGINEERING PRIOR TO ACCEPTANCE.

1.3.6. COORDINATE WORK WITH THAT OF THE OTHER TRADES, IN PARTICULAR THAT OF THE ELECTRICAL TO ENSURE THE INTEGRITY OF THE WORK AND SITE. LEAVE THE CONSTRUCTION SITE IN A SAFE AND CLEAN MANNER AT ALL TIMES.

1.4. FEES AND PERMITS

1.4.1. THE MECHANICAL CONTRACTOR WILL OBTAIN AND PAY FEES FOR ALL PERMITS NECESSARY FOR COMPLETION OF THIS CONTRACT.

1.4.2. CONTRACTOR TO FURNISH ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK CONFORMS WITH STANDARDS AND REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.

1.4.3. THE MECHNICAL CONTRACTOR IS TO OBTAIN ALL NECESSARY PERMITS AND PAY ALL COSTS SO THAT THE WORK HERINAFTER SPECIFIED MAY BE CARRIED OUT.

1.5. TESTING

1.5.1. TEST ALL EQUIPMENT AND MATERIALS WHERE REQUIRED BY THE SPECIFICATIONS OR AUTHORITIES HAVING JURISDICTION TO DEMONSTRATE ITS PROPER OPERATION TO THE OWNER.
- 1.5.1.1. CARRY OUT ALL HYDRAULIC TESTS PRIOR TO COVERING PIPE IN ANY WAY.
- 1.5.1.1. TEST DOMESTIC WATER PIPING AT 700 kPA (100 PSI) PRESSURE FOR A PERIOD OF TWO (2) HOURS WITH NO APPRECIABLE PRESSURE DROP.
- 1.5.1.2. TEST DRAINAGE SYSTEMS BY FILLING SYSTEMS WITH WATER TO PRODUCE PRESSURE OF 3.0m (10FT) OF WATER COLUMN. KEEP SYSTEM FILLED WITH WATER FOR 15 MINUTES.
- 1.5.1.3. TEST GAS PIPING AS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.
- 1.5.1.4. TEST FIRE WATER PIPING AT 1400 kPA (200 PSI) PRESSURE FOR A PERIOD OF (2) HOURS WITH NO APPRECIABLE PRESSURE DROP.
- 1.5.1.5. TEST HOT WATER HEATING LINES AT 700 kPA (100 PSI) OR 1.5 TIMES OPERATING PRESSURE FOR A PERIOD OF TWO (2) HOURS WITH NO APPRECIABLE PRESSURE DROP.

1.5.2. TEST LOW VELOCITY DUCTWORK FOR TIGHTNESS AND LEAKAGE. ALL LEAKS SHALL BE REPAIRED BEFORE THE SYSTEM IS BALANCED.

1.6. EXCAVATION AND BACKFILLING

1.6.1. THE MECHANICAL CONTRACTOR SHALL DO ALL NECESSARY EXCAVATION. BACKFILL WITH SAND OR OTHER APPROVED MATERIAL TO A MINIMUM OF 300mm (12") OVER ALL PIPING OR AS NECESSARY TO PROTECT THEIR WORK AND THEN COMPACT WITH A MECHANICAL TAMPER. THE REMAINDER OF THE BACKFILL TO BE DONE BY THE MECHANICAL CONTRACTOR AS PER THE REQUIREMENTS OF THE GENERAL CONTRACTOR. COORDINATE ELEVATIONS AND LOCATION OF GAS, WATER, AND SEWER SERVICES AND PROVIDE 2.0m (79") OF SEPARATION FROM GAS, ELECTRICAL, AND TELEPHONE SERVICE BEFORE INSTALLING.

1.7. CUTTING AND PATCHING

1.7.1. THE MECHANICAL CONTRACTOR SHALL CONFER WITH THE GENERAL CONTRACTOR IN REGARDS TO THIS WORK AND SHALL GIVE LOCATIONS FOR ALL HOLES FOR PIPE AND DUCTS ETC. AND PROVIDE SLEEVES 200mm (8") DIAMETER AND SMALLER AS REQUIRED TO EXECUTE THE MECHANICAL INSTALLATION. PATCH IMPROPERLY LOCATED HOLES AND SLEEVES AT NO FURTHER COST. DRILL EXPANSION BOLTS, HANGER ROD, BRACKETS AND SUPPORT

1.7.2. THE MECHANICAL CONTRACTOR SHALL ACCURATELY LOCATE OPENINGS REQUIRED FOR HIS/HER WORK TO BE CARRIED OUT. ONCE THE LOCATIONS ARE LAID OUT THE MECHANICAL CONTRACTOR SHOULD OBTAIN APPROVAL IN WRITING FROM THE GENERAL CONTRACTOR PRIOR TO CUTTING OR DRILLING. ALL CUTTING, DRILLING AND PATCHING REQUIRED TO INSTALL THE MECHANICAL SYSTEMS, SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. ALL PATCHING SHALL MATCH EXISTING FINISHES. ALL OPENINGS THROUGH FIRE WALLS SHALL BE FILLED WITH APPROVED FIRE RESISTANT MATERIALS. SUBMIT APPROVAL LETTER ON MATERIAL FROM AUTHORITY HAVING JURISDICTION TO PS. ENGINEERING PRIOR TO COMMENCING WORK.

1.8. FLASHING AND COUNTERFLASHING

1.8.1. ALL MECHANICAL WORK PASSING THROUGH THE ROOF SHALL BE FLASHED BY THE MECHANICAL CONTRACTOR. COUNTERFLASHING TO BE DONE BY THE ROOFING CONTRACTOR.

1.9. APPROVALS

1.9.1. REQUEST FOR APPROVAL OF EQUIVALENT EQUIPMENT FROM MANUFACTURER'S NOT SPECIFIED ON DRAWINGS SHALL BE MADE IN WRITING SEVEN DAYS PRIOR TO TENDER CLOSING.

1.10. SHOP DRAWINGS

1.10.1. PRIOR TO THE FABRICATION OF ANY MATERIALS AND EQUIPMENT, SUBMIT A MINIMUM OF SEVEN (7) COMPLETE SETS OF SHOP DRAWINGS AND DATA SHEETS COVERING ALL ITEMS OF MECHANICAL EQUIPMENT UNDER THIS CONTRACT FOR REVIEW BY PS. ENGINEERING. ELECTRONIC SUBMISSIONS (PDF) ARE ACCEPTABLE.

1.10.2. SUBMIT COLOUR PDF's OF SHOP DRAWINGS TO PS. ENGINEERING FOR ALL EQUIPMENT SPECIFIED IN THE SPECIFICATION OR DRAWINGS FOR PS. ENGINEERING'S REVIEW. DO NOT ORDER EQUIPMENT OR MATERIALS UNTIL PS. ENGINEERING HAS REVIEWED SHOP DRAWINGS.

1.11. ELECTRIC MOTORS AND WIRING

1.11.1. SUPPLY ALL MECHANICAL EQUIPMENT WITH ELECTRIC MOTORS AS REQUIRED.

1.11.2. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO SUPPLY ALL MOTOR STARTERS AND DISCONNECT SWITCHES FOR ALL MOTORS FOR THIS PROJECT AND INSTALL LINE VOLTAGE WIRING TO STARTERS AND FROM STARTERS TO MOTORS, EXCEPT WHERE PRE-WIRED IN PACKAGED EQUIPMENT.

1.11.3. ELECTRICAL CONTROLS CONNECTED TO MECHANICAL EQUIPMENT SHALL BE SUPPLIED BY THE MECHANICAL CONTRACTOR AND SHALL BE INSTALLED, WIRED, AND CONNECTED BY THE MECHANICAL CONTROLS SUBCONTRACTOR.

1.11.4. MECHANICAL SHALL CONFIRM ALL EQUIPMENT ELECTRICAL RATINGS WITH ELECTRICAL DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO ORDERING EQUIPMENT.

1.12. MAINTENANCE MANUALS

1.12.1. FURNISH THREE (3) SETS OF OPERATION & MAINTENANCE MANUALS WITH INFORMATION OUTLINED BELOW TO PS. ENGINEERING PRIOR TO FINAL INSPECTION FOR APPROVAL.

1.12.2. MAINTENANCE MANUALS TO BE ASSEMBLED IN HARD COVER BINDERS. IDENTIFY FRONT COVER WITH PROJECT NAME & PROJECT LOCATION. PROVIDE INDEX AND INDEX LABELS. MANUALS SHALL CONTAIN THE FOLLOWING:
- 1.12.2.1. WARRANTY CERTIFICATE, BALANCING REPORTS
- 1.12.2.2. DESCRIPTION OF ALL SYSTEMS
- 1.12.2.3. DESCRIPTION OF COMPONENTS OF EACH PIECE OF EQUIPMENT
- 1.12.2.4. DESCRIPTION OF CONTROL SYSTEM
- 1.12.2.5. COMPLETE SET OF DRAWINGS
- 1.12.2.6. DETAILED MAINTENANCE AND LUBRICATION SCHEDULE
- 1.12.2.7. OPERATING AND MAINTENANCE INSTRUCTIONS FOR MAJOR EQUIPMENT
- 1.12.2.8. LIST OF EQUIPMENT SUPPLIERS AND MANUFACTURERS
- 1.12.2.9. LIST OF CONTRACTORS AND CONSULTANTS.

1.13. OPERATING INSTRUCTIONS

1.13.1. ARRANGE AND PAY FOR THE SERVICE OF FULLY QUALIFIED PERSONNEL INCLUDING MANUFACTURER'S REPRESENTATIVES TO INSTRUCT THE OWNER IN OPERATION AND PREVENTIVE MAINTENANCE OF EACH PIECE OF EQUIPMENT AND SYSTEM SUPPLIED AND INSTALLED.

1.14. SUPPORTS, ANCHORS, AND SLEEVES

1.14.1. INSTALL SUPPORTS OF STRENGTH AND RIGIDITY TO SUIT LOADING WITHOUT UNDULY STRESSING OF BUILDING. LOCATE ADJACENT TO EQUIPMENT TO PREVENT UNDUE STRESS IN PIPING AND EQUIPMENT.

1.14.2. PROVIDE CHROME PLATED FLOOR, CEILING, AND WALL ESCUTCHEONS AS REQUIRED FOR PIPING IN FINISHED AREAS.

1.14.3. SEISMIC RESTRAINTS SHALL BE PROVIDED AS REQUIRED BY LOCAL CODE. WHEN LOCAL CODE HAS NO STANDARDS, SEISMIC RESTRAINTS SHALL BE PROVIDED AND INSTALLED PER SMACNA STANDARDS.

1.15. IDENTIFICATION

1.15.1. THE MECHANICAL CONTRACTOR SHALL SUPPLY AND PERMANENTLY INSTALL LAMACOIDS TO PROVIDE IDENTIFICATION OF ALL INSTALLED EQUIPMENT LIKE FANS, WATER HEATERS, AND THEIR SWITCHES.

1.15.2. IDENTIFY ALL PIPING BY MEANS OF COLORED, SELF-ADHESIVE LABELS AND DIRECTIONAL ARROWS USING 19mm (3/4") HIGH LETTERING.

1.15.3. LABEL ALL VALVES LARGER THAN 25mm (1").

1.16. RECORD DRAWINGS

1.16.1. THE MECHANICAL CONTRACTOR SHALL KEEP ON SITE EXTRA SETS OF PRINTS AND SPECIFICATIONS ON WHICH ALL CHANGES AND DEVIATIONS FROM THE ORIGINAL DESIGN SHALL BE RECORDED DAILY. THESE CHANGES MUST BE NEATLY ADDED TO A CLEAN SET OF DRAWINGS AND GIVEN TO THE OWNERS MARKED "AS-BUILT".

1.17. EQUIPMENT AND MATERIALS CLEANUP

1.17.1. PIPING, FIXTURES, DUCTS, AND EQUIPMENT SHALL BE THOROUGHLY CLEANED OF DIRT, GREASE, ADHESIVE LABELS, AND FOREIGN MATERIALS.

1.17.2. ALL DUCTWORK TO BE CLEANED AS PER NADCA STANDARDS.

2. PLUMBING

2.1. GENERAL

2.1.1. SUPPLY AND INSTALL THE PLUMBING SYSTEM AS SHOWN ON THE DRAWINGS WITH THE HIGHEST QUALITY OF WORKMANSHIP AND USING CSA APPROVED MATERIALS IN ACCORDANCE TO THE LATEST EDITIONS OF THE NATIONAL/PROVINCIAL PLUMBING CODE.

2.1.2. SUPPLY AND INSTALL COMPLETE DOMESTIC WATER, DRAINAGE, AND VENT PIPING SERVING ALL NEW PLUMBING FIXTURES. ALL WATER AND SEWER PIPING SHALL EXTEND TO THE NEW BUILDING SERVICES. ENSURE THAT SEWER SERVICES ARE RUN WITH SUFFICIENT SLOPE FOR DRAINAGE WITH ADEQUATE COVER TO PREVENT FREEZING.

2.1.3. ENSURE ALL ROOF PENETRATIONS FOR PLUMBING VENTS ARE A MINIMUM 3M (10FT) AWAY MEASURED HORIZONTALLY AND 1M (3,3FT) AWAY MEASURED VERTICALLY FROM ANY VENTILATION AIR INTAKE OR OPERABLE WINDOW.

2.1.4. COORDINATE ALL PLUMBING ROUGH IN LOCATIONS WITH ARCHITECTURAL PLANS PRIOR TO COMMENCING WORK. ADJUST LOCATIONS WHERE REQUIRED.

2.1.5. CONFIRM ALL LOCATIONS AND SIZING OF EXISTING SITE SERVICES PRIOR TO COMMENCING WORK.

2.1.6. ALL PLUMBING FIXTURES IN THE EQUIPMENT SCHEDULE SHALL BE CONSIDERED AS A BASE MODEL ONLY, ANY OTHER EQUIPMENT CAN BE USED IF APPROVED BY PS. ENGINEERING.

2.1.7. SUPPLY AND INSTALL ALL REQUIRED FITTINGS, HANGERS, RODS AND/OR FASTENERS NEEDED TO COMPLETE THE INSTALLATION. ALL TO LOCAL INDUSTRY STANDARDS, AND TO BE APPROVED BY THE AUTHORITIES HAVING JURISDICTION.

2.1.8. CLEANOUTS:SUPPLY AND INSTALL CLEAN OUTS AT THE BASE OF EACH VERTICAL WASTE STACK AND AT THE BUILDING FOUNDATION AT THE POINT OF EXIT. CLEANOUTS SAME SIZE AS THE PIPE UP TO 4"Ø (100mm) BUT NOT LESS THAN 4"Ø (100mm) FOR LARGER PIPE. CLEANOUTS SHOULD BE EASILY ACCESSIBLE AND SHOULD BE GAS TIGHT AND WATER TIGHT. PROVIDE A MIN CLEARANCE OF 24" (600mm) FOR RODDING. PROVIDE AND SET CLEANOUTS FOR DRAINS A MAXIMUM OF 15m (50') APART FOR PIPE SIZES BELOW 150mm (6") DIAMETER, AND A MAXIMUM OF 30m (100') APART FOR PIPE SIZES IN EXCESS OF 100mm (4") DIAMETER. INSTALL IN ALL STRAIGHT RUNS OF STORM AND SANITARY SEWERS, AT LOCATIONS AS DIRECTED BY PS. ENGINEERING.

2.1.9. PROVIDE MANUFACTURED SHOCK ABSORBERS ANCON MODEL SG OR AIR CHAMBERS TO PREVENT WATER HAMMER. INSTALL ON ALL HOT AND COLD WATER SUPPLIES TO EACH FIXTURE OR EACH GROUP OF FIXTURES. AIR CHAMBERS SHALL BE A MINIMUM OF 19mm (3/4") DIAMETER AND 450mm (18") LONG.

2.1.10. INSTALL OVERSIZED CLAMPS AND 13mm (1/2") "ARMAFLEX" FOAM RUBBER INSULATION, 75mm (3") LONG AROUND EACH PLUMBING DRAINAGE STACK AND EACH DOMESTIC WATER PIPE AT EACH SUPPORT POINT THROUGH WOODEN STRUCTURE.

2.1.11. PROVIDE VACUUM BREAKERS ON LINES SERVING EQUIPMENT OR FIXTURES WHERE CONTAMINATION OF DOMESTIC WATER MAY OCCUR.

2.1.12. INSTALL WATTS SERIES 900 BACKFLOW PREVENTER OR APPROVED EQUAL ON ALL POTABLE WATER WHERE BACKFLOW AND CROSS CONNECTION MAY OCCUR.

2.1.13. INSTALL AUTOMATIC TRAP SEAL PRIMERS ANCON MS-810 COMPLETE WITH INTEGRAL VACUUM BREAKER FOR FLOOR DRAINS AS REQUIRED BY PLUMBING CODE OR PLUMBING INSPECTOR.

2.1.14. PROVIDE ALL VALVES AS SHOWN ON THE DRAWINGS OR AS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. INSTALL ISOLATION VALVES AT ALL CONNECTIONS TO EQUIPMENT, AND IN ALL BRANCHES, FIXTURES, OR GROUPS OF FIXTURES.

2.1.15. ISOLATE EACH PLUMBING FIXTURE WITH SHUT-OFF VALVES. USE QUICK OPENING "HENDERSON NEWMAN SUPERBALL" VALVES FOR WATER AND GAS.

2.1.16. PLUMBING FIXTURES SHALL BE AS SPECIFIED, OR APPROVED EQUAL.

2.1.17. STERILIZE WATER SERVICE WITH CHLORINE AS PER CITY AND PROVINCIAL PLUMBING CODE STANDARDS AND PROVIDE A WRITTEN REPORT FLUSH SYSTEM AND HAVE BACTERIOLOGICAL TESTS COMPLETED AT A RECOGNIZED CERTIFIED LABORATORY.

2.2. PIPE AND FITTINGS

2.2.1. ALL PIPING SHALL MEET THE REQUIREMENTS OF THE PROVINCIAL PLUMBING CODE AND NATIONAL BUILDING CODE. PVC OR ABS PIPING IS NOT PERMITTED THROUGH A FIRE SEPARATION.

2.2.2. DOMESTIC WATER ABOVE GROUND: TYPE K OR TYPE L, HARD COPPER, 95/5 SOLDER JOINTS, WROUGHT COPPER OR BRONZE FITTINGS. OVER 75mm (3"): GALVANIZED STEEL, SCREWED JOINTS. AQUAPEX PIPING IS ALSO ACCEPTABLE.

2.2.3. DOMESTIC WATER BELOW GRADE: TYPE K SOFT COPPER, FLARED JOINTS. OVER 50mm (2"): CAST IRON PIPE, CAST IRON FITTINGS, MECHANICAL JOINTS. PVC AND HDPE IS ALSO ACCEPTABLE.

2.2.4. WASTE AND VENT PIPING ABOVE GROUND: TYPE DWV OR HARD DRAWN DRAINAGE TUBE, CAST BRASS FITTINGS, 50/50 SOLDER JOINTS. CAST IRON SOIL PIPE AND FITTINGS, MECHANICAL JOINTS. PVC PIPING IS ALSO ACCEPTABLE.

2.2.5. WASTE AND VENT PIPING BELOW GRADE: 150mm (6") AND SMALLER, CAST IRON PIPE, CAST IRON FITTINGS, MECHANICAL JOINTS. PVC PIPING IS ALSO ACCEPTABLE.

2.2.6. WASTE, STORM, AND VENT PIPING: PVC PIPING TO BE XFR RATED IN RETURN AIR PLENUM.

2.3. VALVES

2.3.1. VALVES ON COLD, HOT, AND/OR RECIRCULATING WATER PIPING SHALL BE AS FOLLOWS:
- 2.3.1.1. GATE VALVES 50mm (2") AND SMALLER: CRANE No. 1320C
- 2.3.1.2. GATE VALVES 65mm (2 1/2") AND LARGER: CRANE No. 465 1/2C
- 2.3.1.3. GLOBE VALVES 50mm (2") AND SMALLER: CRANE No. 1310
- 2.3.1.4. GLOBE VALVES 65mm (2 1/2") AND LARGER: CRANE No. 351
- 2.3.1.5. CHECK VALVES 50mm (2") AND SMALLER: CRANE No. 1342
- 2.3.1.6. CHECK VALVES 65mm (2 1/2") AND LARGER: CRANE No. 373
- 2.3.1.7. BALL VALVES 6mm (1/4") THRU 50mm (2"): GRINNELL FIG. 1550

2.4. GAS

2.4.1. MECHANICAL CONTRACTOR SHALL INSTALL GAS SERVICE FROM NEW / RELOCATED BUILDING GAS SERVICE TO ALL GAS-FIRED EQUIPMENT COMPLETE WITH ALUMINIZED PAINT COATING ON PIPE WHERE EXPOSED TO OUTDOORS. LINES CONCEALED SHALL BE BRAZED SEAMLESS COPPER K OR L UP TO 32mm (1¼") OR SCHEDULE 40 BLACK STEEL THREADED UP TO 50mm (2½").

2.4.2. ALL GAS PIPING FITTINGS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH CSA STANDARD B-149 INSTALLATION CODE.

2.4.3. CONTRACTOR TO COORDINATE APPLICATION AND INSTALLATION OF NEW / REVISED GAS SERVICE WITH GAS UTILITY AND OWNER.

3. HYDRONIC HEATING

3.3. GENERAL

3.3.2. FURNISH AND INSTALL THE COMPLETE RADIANT FLOOR HEATING SYSTEM INCLUDING: BOILER, BOILER SYSTEM, EXPANSION TANK, PUMPS, AIR SEPARATOR, PIPING, PIPE INSULATION, VALVES, FITTINGS, CHEMICAL TREATMENT, IN FLOOR TUBING, DISTRIBUTION MANIFOLDS, VENTING/PURGE AIR VALVES, MANIFOLD TO TUBING FITTINGS, CIRCUIT ISOLATION, BALANCING VALVES, CIRCUIT CONTROLS, INSTALLATION SPECIALTIES, ETC.

3.3.3. REFER TO HEATING DRAWINGS FOR RADIANT FLOOR SLAB LAYOUT AND EQUIPMENT SPECIFICATIONS.

3.3.4. OPERATE SYSTEM WITH A FLOOR HOT WATER HEATING SUPPLY TEMPERATURE OF NO GREATER THAN 110 DEGREES F.

3.4. REGULATORY REQUIREMENTS

3.4.1. TUBING SHALL CONFORM TO CAN/CSA B-137.5 AND MANUFACTURED USING THEIR T. ENGLE PROCESS. TUBING OXYGEN PERMEATION BARRIER SHALL CONFORM TO DIN4726.

3.4.2. INSTALLERS QUALIFICATIONS: INSTALLER SHALL BE QUALIFIED IN WRITING AS EITHER BEING CERTIFIED OR CERTIFIABLE PRIOR TO THE COMMENCEMENT OF THE INSTALLATION.

3.5. REFERENCES

3.5.1. ASTM F876 STANDARD SPECIFICATION FOR CROSS-LINKED POLYETHYLENE (PEX) TUBING.

3.5.2. ASTM F877 CROSS-LINKED POLYETHYLENE (PEX) PLASTIC HOT AND COLD WATER DISTRIBUTION SYSTEMS.

3.5.3. CAN/CSA-B137.5 CROSS-LINKED POLYETHYLENE (PEX) TUBING SYSTEMS FOR PRESSURE APPLICATIONS.

3.5.4. DIN4726 GERMAN STANDARD FOR PLASTIC PIPING USED IN WARM WATER FLOOR HEATING SYSTEMS.

3.6. SUBMITTALS

3.6.1. PROVIDE SUBMITTALS AND SHOP DRAWINGS IN ACCORDANCE WITH THE GENERAL REQUIREMENTS AND AS SPECIFIED HEREIN. SUBMIT SHOP DRAWINGS INDICATING SCHEMATIC LAYOUT OF SYSTEM, INCLUDING EQUIPMENT, CRITICAL DIMENSIONS AND TUBING/SLAB PENETRATION DETAILS FOR PROTECTED EXPOSED PEX TUBING.

3.6.2. SUBMIT MANUFACTURER'S TECHNICAL INSTRUCTIONS.

3.6.3. SUBMIT INSTALLERS CERTIFICATIONS OF TRAINING FOR INSTALLATION OF PEX FLOOR HEATING SYSTEMS.

3.6.4. SUBMIT DATA INDICATING TUBE SIZING AND PANEL PERFORMANCE AT TUBE SPACING AND WATER TEMPERATURES SELECTED.

3.6.5. SUBMIT INDEPENDENT CERTIFICATION RESULTS FOR THE RUBING SYSTEMS FROM A RECOGNIZED TESTING LABORATORY.

3.6.6. SUBMIT CATALOG DATA ON ALL SUPPORTS, TUBE GUIDES, SPACERS, AND ASSOCIATED ITEMS NECESSARY FOR THE INSTALLATION OF THE TUBING AND MANIFOLDS.

3.7. DELIVERY, STORAGE, AND HANDLING

3.7.1. DELIVER AND STORE TUBING AND SPECIALTIES IN SHIPPING CONTAINERS WITH LABELING IN PLACE. DO NOT EXPOSE TO ULTRA VIOLET LIGHT FOR MORE THAN 90 DAYS.

3.7.2. PROTECT TUBING AND SPECIALTIES FROM ENTRY OF CONTAMINATING MATERIAL BY INSTALLING TAPE OR PLUGS IN ALL OPEN TUBE ENDS UNTIL INSTALLATION AND/OR MAINTAIN TUBING IN THE ORIGINAL SHIPPING BOXES OR PACKAGING UNTIL USAGE.

3.7.3. UNPROTECTED TUBES SHALL NOT BE DRAGGED ACROSS THE GROUND OR CONCRETE SURFACES, AND SHALL BE STORED ON A FLAT SURFACE WITH NO SHARP EDGES.

3.7.4. TUBE SHALL BE PROTECTED FROM OIL, GREASE, DIRECT SUNLIGHT, AND OTHER ELEMENTS AS RECOMMENDED BY MANUFACTURER.

3.8. WARRANTY

3.8.1. THE RADIANT FLOOR SYSTEM COMPONENT MANUFACTURER SHALL WARRANT THE CROSS-LINKED POLYETHYLENE TUBING TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF TWENTY-FIVE (25) YEARS.

3.8.2. ALL CONTROLS SHALL BE WARRANTED FOR A PERIOD OF 18 MONTHS AND/OR 2 HEATING SEASONS.

3.9. TUBING

3.9.1. MATERIAL: ALL RADIANT FLOOR HEATING TUBING SHALL BE HIGH DENSITY CROSS-LINKED POLYETHYLENE MANUFACTURED IN ACCORDANCE WITH ASTM F877 AS CERTIFIED BY NSF OR THE CSA OF EQUIVALENT TESTING ORGANIZATION AND WITH AN APPROVED CELL IN ACCORDANCE WITH ASTM D3350.

3.9.2. ALL TUBING SHALL BE FULLY CROSS-LINKED TO THE SPECIFIED STANDARD PRIOR TO SHIPMENT FROM THE MANUFACTURING AGENT.

3.9.3. TEMPERATURE AND PRESSURE RATING: TUBING SHALL BE RATED FOR NOT LESS THAN 180 DEGREES F WORKING TEMPERATURE AND 100 PSIG WORKING PRESSURE.

3.9.4. OXYGEN DIFFUSION BARRIER: TUBING SHALL HAVE A CO-EXTRUDED OXYGEN DIFFUSION BARRIER CAPABLE OF LIMITING OXYGEN DIFFUSION THROUGH THE TUBE TO NO GREATER THAN 0.10 G/CUBIC METER PER DAY AT 104 DEGREES F WATER TEMPERATURE IN ACCORDANCE WITH DIN 4726.

3.9.5. BEND RADIUS: THE MINIMUM BEND RADIUS FOR COLD BENDING OF THE TUBE SHALL NOT BE LESS THAN FIVE (5) TIMES THE OUTSIDE DIAMETER. BENDS WITH A RADIUS LESS THAN STATED SHALL REQUIRE THE USE OF A BENDING TEMPLATE SUPPLIED BY THE TUBE MANUFACTURER.

3.10. FITTINGS

3.10.1. FITTINGS SHALL BE MANUFACTURED OF BRASS AND SHALL BE SUPPLIED BY THE TUBING MANUFACTURER AS PART OF A PROVEN CATALOGED SYSTEM.

3.11. MANIFOLDS

3.11.1. MATERIAL: DISTRIBUTION MANIFOLDS SHALL BE A PROVEN CATALOGED PART OF THE MANUFACTURER'S SYSTEM.

3.11.2. BALANCING MANIFOLDS: ALL MANIFOLDS SHALL BE EQUIPPED WITH BALANCING AND ISOLATION VALVES FOR EACH CIRCUIT.

3.12. CONTROLS

3.12.1. PROVIDE A THERMOSTAT TO CONTROL A SOLENOID ACTUATED VALVE ON THE SUPPLY TO EACH IN-FLOOR LOOP AS SPECIFIED.

3.13. PREPARATION

3.13.1. CONCRETE SUBFLOOR: SUBFLOOR MUST BE CLEAN AND FREE FROM ALL CONSTRUCTION DEBRIS WHICH COULD POTENTIALLY DAMAGE THE TUBE.

3.13.2. PREPARING TEH WALL CAVITY FOR MANIFOLD INSTALLATION: SEE DRAWINGS TO DETERMINE THE WIDTH OF THE WALL CABINET AND REQUIRED WALL OPENING DIMENSIONS. MOUNT MANIFOLD CABINET ALLOWING SPACE FOR THE SCREED TO FILL UP THE FRONT OF THE TUBE OPENING.

3.14. INSTALLATION

3.14.1. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED TECHNICAL MANUAL.

3.14.2. ROUTE TUBING IN AN ORDERLY MANNER, ACCORDING TO LAYOUT AND SPACING SHOWN ON THE APPROVED SUBMITTAL DRAWINGS. ALL NOTES ON DRAWINGS SHALL BE FOLLOWED.

3.14.3. ALL JOINTS AND FITTINGS: SQUARE AND CLEAN END OF TUBE, USING A PLASTIC TUBE CUTTER, AND JOIN IMMEDIATELY OR CAP WITH TAPE TO SEAL FROM CONTAMINANTS. WHERE FITTINGS ARE INSTALLED WITHIN THE THERMAL MASS THEY SHALL BE WRAPPED IN CHLORIDE-FREE TAPE.

3.14.4. REMOVE ALL TWISTS PRIOR TO SECURING TUBE. FASTEN TUBE AT NO MORE THAN 3 FOOT INTERVALS, BEING CAREFUL NOT TO TWIST THE TUBE. IN THIN CONCRETE SLABS IT MAY BE NECESSARY TO SECURE TUBING EVERY 2 FEET.

3.14.5. TUBING THAT MUST PASS THROUGH EXPANSION JOINTS SHALL BE SLEEVED 10" ON EACH SIDE OF JOINT.

3.14.6. WHERE TUBING EXITS THE FLOOR, A SLEEVE SHALL BE PLACED AROUND THE TUBE, WITH THE SLEEVE EXTENDING A MINIMUM OF 10" INTO THE FLOOR AND EXISTING BY A MINIMUM OF 10".

3.14.7. AFTER LAYING EACH CIRCUIT, CAP THE END OF THE TUBE WITH TAPE AND LABEL THE TUBE'S CIRCUIT NUMBERS (SUPPLY AND RETURN), OR CONNECT TO ASSOCIATED MANIFOLD AND LABEL TUBE LENGTH FOR BALANCING.

3.14.8. THE FOLLOWING PRECAUTIONS SHALL BE TAKEN IN AREAS INTENDED FOR CARPET: NOTIFY THE CARPET LAYER THAT HYDRONIC FLOOR HEATING HAS BEEN INSTALLED AND INSTALL METAL GUARDS WHERE CARPET TACK STRIPS WILL BE INSTALLED.

3.14.9. THE HEATING SYSTEM SHALL BE PUT INTO OPERATION AFTER THE POURED CONCRETE THERMAL MASS HAS CURED A MINIMUM OF 28 DAYS. IF IT IS NECESSARY TO OPERATE THE HEATING SYSTEM TO PREVENT FREEZING, A MAXIMUM FLOW TEMPERATURE OF 59 DEGREES F MUST NOT BE EXCEEDED WHILE THE THERMAL MASS IS CURING. GRADUALLY INCREASE THE FLOOR TEMPERATURE BY 10 DEGREES F EACH DAY UNTIL IT REACHES THE MAXIMUM OPERATING TEMPERATURE.

3.15. FIELD QUALITY CONTROL

3.15.1. FILLING, TESTING, AND BALANCING: TESTS OF HYDRONIC HEATING SYSTEMS SHALL COMPLY WITH THE LOCAL CODES, AND WHERE REQUIRED, SHOULD BE WITNESSED BY THE BUILDING OFFICIAL (REFERENCE BOCA, IAPMC, OR THE ACCEPTABLE CODE BODY FOR THE GEOGRAPHIC AREA).

3.15.2. PRESSURE GAUGES USED FOR TESTING SHALL HAVE INCREMENTS OF 1 PSIG AND SHOULD BE LOCATED AT OR NEAR THE LOWEST POINTS IN THE DISTRIBUTION SYSTEM.

3.15.3. AIR TEST: CHARGE THE COMPLETED, YET UNCONCEALED TUBES WITH AIR. DO NOT EXCEED 100 PSIG.

3.15.4. USE A LIQUID GAS DETECTOR OR SOAP TO CHECK FOR LEAKAGE AT MANIFOLD CONNECTIONS. RELIEVE AIR PRESSURE.

3.15.5. WATER TEST: CHARGE THE COMPLETED, YET UNCONCEALED TUBES WITH WATER. PURGE ALL AIR FROM TUBES. CHECK THE SYSTEM FOR LEAKAGE, ESPECIALLY AT ALL TUBE JOINTS. TAKE NECESSARY PRECAUTIONS TO PREVENT WATER FROM FREEZING.

3.15.6. PERFORM A PRELIMINARY PRESSURE TEST PRESSURIZING THE SYSTEM TO 1.5 TIMES THE MAXIMUM OPERATING PRESSURE, OR 100 PSIG, WHICHEVER IS GREATER FOR 30 MINUTES. AS THE TUBING EXPANDS, RESTORE PRESSURE, FIRST AT 10 MINUTES INTO THE TEST AND AGAIN AT 20 MINUTES. AT THE END OF THE 30 MINUTE PRELIMINARY TEST, PRESSURE MUST NOT FALL BY MORE THAN 8 PSIG FROM THE MAXIMUM, AND THERE SHALL BE NO LEAKAGE.

3.15.7. AFTER PERFORMING THE PRELIMINARY TEST, PERFORM THE MAIN PRESSURE TEST IMMEDIATELY. THE MAIN PRESSURE TEST SHALL LAST FOR 2 HOURS. THE TEST PRESSURE SHOULD BE RESTORED AND MUST NOT FALL MORE THAN 3 PSIG AFTER 2 HOURS. NO LEAKAGE SHALL BE DETECTED.

3.15.8. PRESSURE SHALL BE MAINTAINED DURING INSTALLATION OF THERMAL MASS.

3.15.9. COMPLETE ALL INSPECTION AND TEST REPORTS AS SUPPLIED BY THE MANUFACTURER OF THE SYSTEM.

3.16. LABELING

3.16.1. LABEL EACH LOOP ON PIPING AS PER LAYOUT DRAWING. USE SELF-ADHESIVE TYPE LABELS TO ASSIST IN BALANCING THE SYSTEM.

3.17. SUPPLY AND RETURN PIPE MAINS TO MANIFOLDS

3.17.1. HOT WATER PIPING: BLACK STEEL SCHEDULE 40, THREADED SCHEDULE 40 FITTINGS, SCREWED JOINTS. WELDED JOINTS FOR SIZES 63mm (2½") AND LARGER. COPPER PIPING: 95/5 SOLDERED JOINTS ALSO ACCEPTABLE.

3.17.2. INSULATE PIPING AS PER INSULATION SECTION.

3.17.3. PROVIDE PIPING EXPANSION COMPENSATION BY MEANS OF EXPANSION LOOPS AND OFFSETTING OF PIPES.

3.17.4. BRANCH TAKE-OFFS OFF HEATING PIPES SHALL BE OFF THE TOP HALF OF MAINS.

3.18. VALVES

3.18.1. RED AND WHITE, RISING STEM, 125 PSIG RATING.

3.19. VENTS

3.19.1. INSTALL MAID-O-MIST NO. 71 AUTOMATIC VENTS AT ALL HIGH POINTS.

3.20. THERMOMETERS

3.20.1. LIQUID IN GLASS GAUGE THERMOMETERS TO BE ASHCRAFT INC, MARSH BELLOFRAM, WEISS INSTRUMENT INC. OR EQUAL.

3.20.2. THERMOMETER TO BE DIECAST AND ALUMINUM FINISHED IN BAKED EPOXING ENAMEL, GLASS FRONT, SPRING SECURED, 9" LONG.

3.20.3. ADJUSTABLE JOINT WITH FINISH TO MATCH CASE, 180 DEGREE ADJUSTABLE IN VERTICAL PLANE, 360 DEGREE ADJUSTMENT IN HORIZONTAL PLANE WITH LOCKING DEVICE.

3.20.4. TUBE RED OR BLUE READING, MERCURY FILLED WITH MAGNIFYING LENS.

3.20.5. SCALE: SATIN FACED NON REFLECTING ALUMINUM WITH PERMANENTLY ETCHED MARKINGS.

3.20.6. STEM: BRASS FOR SEPARATE SOCKET OF LENGTH TO SUIT INSTALLATION.

3.20.7. SCALE RANGE 30 TO 240 DEGREE F WITH 2 DEGREE SCALE DIVISION AND ACCURACY OF PLUS OR MINUS 1 PERCENT OF RANGE SPAN.

3.21. PRESSURE GAUGES

3.21.1. ASME B40.100, PHOSPHOR BRONZE BOURDON-TUBE TYPE WITH BOTTOM CONNECTION, LIQUID FILLED CASE TYPE.

3.21.2. DRAWN STEEL, BRASS, OR ALUMINUM CASE WITH 4½" DIAMETER GLASS LENS.

3.21.3. CONNECTOR: BRASS NPS ¼ (DN8).

3.21.4. SCALE: WHITE COATED ALUMINUM WITH PERMANENTLY ETCHED MARKINGS.

3.21.5. RANGE: TWO TIMES OPERATING PRESSURE OR 0 TO 100 PSI WITH GRADE A ACCURACY PLUS OR MINUS 1 PERCENT OF MIDDLE 50 PERCENT OF SCALE.

3.21.6. PRESSURE GAUGE FITTINGS TO INCLUDE VALVES NPS ¼ (DN8) BRASS NEEDLE TYPE WITH ROUND KNURLED HANDLE AND SNUBBERS TO ASME B40.5 NPS ¼ (DN8) EXTENDED STEM BRASS BUSHING WITH CORROSION RESISTANT POROUS METAL DISK OF MATERIAL SUITABLE FOR SYSTEM FLUID AND WORKING PRESSURE.

3.22. SYSTEM CLEANING AND CHEMICAL TREATMENT

3.22.1. SYSTEM CLEANING AND CHEMICAL TREATMENT TO BE PERFORMED BY A QUALIFIED CHEMICAL TREATMENT CONTRACTOR.

3.22.2. CLEAN AND DEGREASE THE SYSTEM BY FLUSHING SYSTEM FOR EIGHT (8) HOURS WITH 3% NON FOAMING, PHOSPHATE FREE DETERGENT.

3.22.3. CHARGE BOILER SYSTEM WITH A SOLUTION OF 10% ALUMINUM COMPATIBLE PROPYLENE GLYCOL (COMPATIBLE WITH HEATING EQUIPMENT) AND WATER. CHARGE SOLAR SYSTEM WITH A SOLUTION OF 50% SOLAR PROPYLENE GLYCOL AND WATER. CHARGE SNOW MELT SYSTEM WITH A SOLUTION OF 30% PROPYLENE GLYCOL AND WATER.

3.22.4. TREAT WATER WITH PH ADJUSTMENT AND CORROSION INHIBITOR CHEMICALS.

3.23. EXPANSION JOINTS

3.23.1. INNER HOSE STAINLESS STEEL CORRUGATE, BRAIDED WIRE MESH OUTER JACKET, LENGTH AS PER MANUFACTURER'S RECOMMENDATIONS.

3.23.2. THREE FLEXIBLE GROOVE COUPLING PLACED IN CLOSE PROXIMATE TO VIBRATION SOURCE FOR VIBRATION ATTENTION RELIEF.

3.23.3. PIPE ALL DRAIN LINES TO DRAINS.

3.23.4. PROVIDE GUARDS FOR ALL EXPOSED DRIVES.

3.24. SUPPORTS

3.24.1. MECHANICAL ROOM PIPING SHALL BE SUPPORTED WITH CLEVIS HANGERS TO PREVENT EXCESSIVE STRESS ON BOILERS AND CIRCULATING PUMPS.

4. HEATING/VENTILATION

4.1. GENERAL

4.1.1. DUCTWORK SHALL BE GALVANIZED STEEL AND LOCK FORMING QUALITY. ALL DUCTWORK SHALL BE CONSTRUCTED BRACED, CONNECTED, JOINTED, AND INSTALLED IN ACCORDANCE WITH THE LATEST ISSUE OF ASHRAE GUIDE AND DUCT CONSTRUCTION STANDARDS ISSUED BY SMACNA, NFPA 90 AND 90A, PROVINCIAL CODE, AND LOCAL REGULATIONS. INSTALL ALL SUPPLY, RETURN, AND EXHAUST DUCTS COMPLETE WITH GRILLES AND DIFFUSERS AS SHOWN ON THE DRAWINGS.

4.1.2. FIRE DAMPERS AND FIRE STOPS SHALL BE ULC LABELED. INSTALL WHERE SHOWN AND/OR REQUIRED BY AUTHORITIES HAVING JURISDICTION. PROVIDE ACCESS FOR SERVICING AND INSPECTION. FIRE DAMPERS SHALL BE TYPE 'B' WITH DAMPER BLADES FULLY CLEAR OF THE AIR STREAM, SEAL WITH DOW CORNING RTV SILICONE FOAM.

4.1.3. BALANCING DAMPERS SHALL BE INSTALLED IN ALL BRANCHES AS REQUIRED.

4.1.4. ALL EQUIPMENT SHALL BE AS SPECIFIED OR APPROVED EQUAL.

4.1.5. ALL EXPOSED DUCTWORK TO BE SPIRAL ROUND UNLESS OTHERWISE NOTED.

4.1.6. PROVIDE SHEET METAL FIRE STOPS TIGHT AROUND DUCTS PASSING THROUGH FIRE SEPARATIONS AND CEILINGS.

4.1.7. ALL DUCTWORK & ALL FITTINGS TO MEET SMACNA DESIGN STANDARDS.

4.1.8. PROVIDE FLEX CONNECTIONS, 6mm (1/4") DURODYNE CONFLEX PCV COATED POLYESTER AT INLET AND OUTLETS OF ALL HVAC AND FAN UNITS.

4.1.9. CLEAN ALL EQUIPMENT AND CHANGE ALL FILTERS PRIOR TO OCCUPANCY. PROVIDE 1 SET OF SPARE FILTERS ON SITE FOR OWNER.\

4.2. BALANCING

4.2.1. BALANCING OF ALL VENTILATION AND HYDRONIC SYSTEMS AS INDICATED SHALL BE DONE BY THE MECHANICAL CONTRACTOR WHEN ALL EQUIPMENT IS OPERATING UNDER FULL LOAD. THE CONTRACTOR SHALL ALLOW SUFFICIENT FUNDS TO CHANGE THE PULLEYS ON MOTORS OR FANS TO PROPERLY BALANCE THE SYSTEM AT THE LOWEST FAN RPM.

4.2.2. BALANCING CONTRACTOR SHALL BALANCE ALL AIR OUTLETS AND EQUIPMENT VOLUMES TO WITHIN 5% OF DESIGNED VALUES.

4.2.3. BALANCING CONTRACTOR SHALL SUBMIT FOR REVIEW THREE (3) COPIES OF THE REPORT CONTAINING THE FOLLOWING:
- 4.2.3.1. SUPPLY AND RETURN AIR VOLUMES, SUCTION, DISCHARGE, AIR PRESSURE, RPM, AND AMPS OF ALL SUPPLY, RETURN, AND/OR EXHAUST FANS.
- 4.2.3.2. SUPPLY, RETURN, AND/OR EXHAUST AIR VOLUMES OF ALL GRILLES AND DIFFUSERS.
- 4.2.3.3. SKETCH LAYOUT OF DUCT SYSTEMS SHOWING DETAIL OF BALANCE.
- 4.2.3.4. FLOWS OF ALL MANIFOLDS, LOOPS, PUMPS, AND AMPS OF ALL PUMP MOTORS.

5. INSULATION

5.1. GENERAL

5.1.1. ALL INSULATION AND MATERIALS ASSOCIATED WITH INSULATION SHALL HAVE A FLAME SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE DEVELOPED CLASSIFICATION OF NOT MORE THAN 50.

5.1.2. ALL PIPING INSULATION SHALL BE FIBROUS GLASS WITH K VALUE MAXIMUM 0.3 W/m DEGREES CELSIUS AT 24 DEGREES CELSIUS WITH FACTORY APPLIED JACKET - MANSON AK PIPE INSULATION OR APPROVED EQUAL. APPLY PAINTABLE PVC JACKET ON ALL EXPOSED PIPING IN FINISHED AREAS.

5.1.3. RECOVERING JACKET ON DUCTWORK SHALL BE ULC LISTED "THERMO CANVAS" TREATED COTTON FABRIC, SUITABLE FOR PAINTING. PROVIDE RECOVERING JACKET ON ALL EXPOSED INSULATION THROUGHOUT, INCLUDING EQUIPMENT ROOM. INSULATION LOCATED IN PIPE SHAFTS AND SUSPENDED CEILING SPACES IS NOT CONSIDERED EXPOSED.

5.1.4. ENSURE INSULATION IS CONTINUOUS THROUGH INSIDE WALLS. PACK AROUND PIPES WITH FIRE-PROOF, SELF SUPPORTING INSULATION MATERIALS.

5.1.5. INSULATE DUCTWORK WITH MANSON ALLEY WRAP INSULATION OR EQUIVALENT FACED WITH FSK FOR AN EFFECTIVE VAPOUR BARRIER.

5.1.6. LINE DUCTWORK WITH MANSON ACOUSTI-LINER, 0.68 kg (1.5 lbs.) DENSITY COATED SURFACE SHALL FACE AIR STREAM. ALL DUCTWORK IN SUPPLY AND RETURN AIR PLENUMS SHALL BE INSULATED. DUCT SIZES SHOWN ARE CLEAR INSIDE.
- 5.1.6.1. INSULATION SCHEDULE:
- 5.1.6.2. HOT, COLD, AND HOT WATER RECIRC WATER LINES - 25mm (1")
- 5.1.6.3. PLUMBING VENTS WITHIN 3.0m (10'-0") OF ATTIC OR COLD ROOF OR COLD WALL COMPLETE WITH FOIL FACED VAPOUR BARRIER - 38mm (1½")
- 5.1.6.4. ROOF DRAINS, HOPPERS AND PIPING WITHIN 5m (16'-0") OF ROOF DRAIN OR COLD WALL - 38mm (1½")
- 5.1.6.5. EXHAUST DUCTS FROM CEILING MOUNTED FANS TO ROOF OR WALL DISCHARGE - EXTERNAL 38mm (1½")
- 5.1.6.6. EXHAUST DUCTS WITHIN 3.0m (10'-0") OF ATTIC OR COLD ROOF OR COLD WALL COMPLETE WITH FOIL FACED VAPOUR BARRIER - 38mm (1½")
- 5.1.6.7. SUPPLY AND RETURN AIR PLENUMS OF HVAC UNITS - INTERNAL - 25mm (1")
- 5.1.6.8. SUPPLY AIR DUCTS CONCEALED WITHIN CEILING SPACES - 38mm (1½")
- 5.1.6.9. OUTDOOR AIR INTAKES - 50mm (2")
- 5.1.6.10. EXTERIOR SUPPLY AIR DUCTS - EXTERNAL - 75mm (3") RIGID FIBREGLASS DUCT INSULATION WITH STUCCO EMBOSSED ALUMINUM JACKET
- 5.1.6.11. REFRIGERANT PIPING - ARMAFLEX AS PER MANUFACTURER'S SPECIFICATIONS AND REQUIREMENTS
- 5.1.6.12. HYDRONIC HEATING AND/OR COOLING SUPPLY AND RETURN PIPING - 25mm (1")

6. FIRE PROTECTION

6.1. FIRE EXTINGUISHERS

6.1.1. FIRE EXTINGUISHERS: FIRE PROTECTION CONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS AS PER PLAN, IN ACCORDANCE WITH NFPA #10 ON WALL HANGERS AND/OR WITHIN CABINETS AS PER PLANS.

6.2. AUTOMATIC SPRINKLER SYSTEM

6.2.1. SPRINKLER SYSTEM IS A WET PIPE TYPE, DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA STANDARD #13.

6.2.2. SPRINKLERS SHALL BE PROTECTED AGAINST MECHANICAL INJURY BY STANDARD GUARDS, WHERE NECESSARY.

6.2.3. SPRINKLERS HEADS, IN AREAS WITH NO CEILINGS, SHALL BE OF UPRIGHT TYPE, OF CAST BRASS CONSTRUCTION.

6.2.4. SPRINKLERS HEADS, IN AREAS WITH CEILINGS, SHALL BE OF PENDANT TYPE, OF CHROME PLATED BRASS CONSTRUCTION WITH FLUSH ESCUTCHEON PLATES.

6.2.5. PROVIDE DOUBLE CHECK VALVE BACKFLOW PREVENTER ASSEMBLY, WATTS OR EQUAL, ON WATER SERVICE CONNECTION ON INLET SIDE OF SPRINKLER TREE AS PER LOCAL REQUIREMENTS. SEE PLANS.

6.2.6. PROVIDE FIRE DEPARTMENT CONNECTION AND ALARM BELL (IF REQUIRED) AS SHOWN ON FIRE PROTECTION DRAWINGS AS PER NFPA #13.

6.2.7. PROVIDE HIGH TEMPERATURE RATED HEADS ADJACENT TO ALL HEAT PRODUCING EQUIPMENT SUCH AS UNIT HEATERS, ETC.

7. CONTROLS

7.1. GENERAL

7.1.1. ALL THERMOSTATS, THERMOMETERS, AND CONTROLLERS UNLESS OTHERWISE STATED SHALL BE PROGRAMMABLE, RATED IN CELSIUS DEGREES, SHALL BE ACCURATE TO WITHIN ±1°C, AND MOUNTED BETWEEN 1400mm AND 1500mm ABOVE THE FINISHED FLOOR LEVEL.

7.1.2. ALL THERMOSTATS, THERMOMETERS, AND CONTROLLERS SHALL BE SUPPLIED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTROLS SUB CONTRACTOR.

7.1.3. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR POWER TO MECHANICAL EQUIPMENT BY THE ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL LINE VOLTAGE WIRING. MECHANICAL/CONTROLS CONTRACTOR IS RESPONSIBLE FOR ALL LOW VOLTAGE WIRING.

7.1.4. PROVIDE BOILER CONTROLS AS SPECIFIED ON HEATING DRAWINGS AND BOILER SCHEMATIC.

7.1.5. PROVIDE THERMOSTATS AND ELECTRIC ACTUATORS FOR IN-FLOOR RADIANT HEATING SYSTEM.

NOTE: ALL MAY NOT BE USED IN THESE DRAWINGS.

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DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

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PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 80% REVIEW

CLIENT:
JAMES ZIMMER ARCHITECT

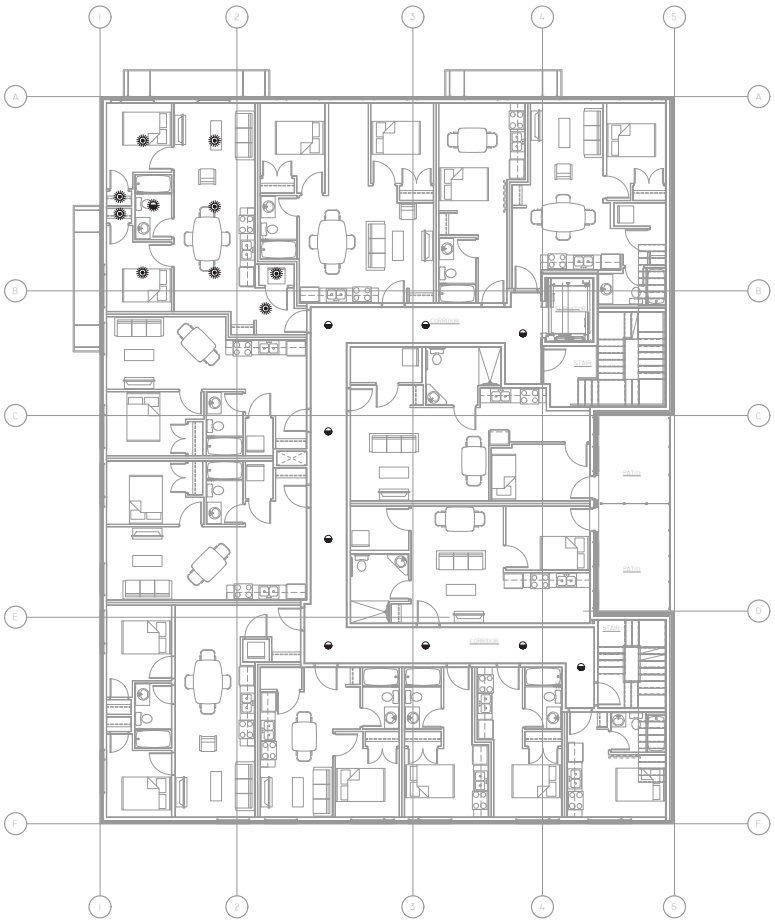
PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
MECHANICAL SPECIFICATIONS

PROJECT :24S-039
DATE : 01/20/2025
SCALE : AS NOTED
DRAWN : I.R.
CHECKED :O.O.

DRAWING NUMBER:
M6.6
REV:0



1 M5.2 SECOND & THIRD FLOOR PLAN FIRE PROTECTION
SCALE: 1/8" = 1'-0"

FIRE PROTECTION GENERAL NOTES

1. SPRINKLER SYSTEM TO BE BASED ON NFPA#13R OCCUPANCY.
2. SPRINKLER CONTRACTOR IS RESPONSIBLE FOR A COMPLETE SYSTEM WITHIN THE BUILDING AND SHALL ADD ADDITIONAL HEADS WHERE PATTERN INTERFERES WITH LIGHTING, STRUCTURAL, AND MECHANICAL SYSTEM ARRANGEMENTS.
3. ALL EQUIPMENT TO BE UL LISTED AND SUPPLIED AND INSTALLED AS PER NFPA#13 & NFPA#13R.
4. CONTRACTOR SHALL QUOTE THE SUPPLY AND INSTALLATION OF A COMPLETE SYSTEM WHETHER OR NOT ALL OF THE HARDWARE IS DETAILED HEREON AND IN THE SPECIFICATIONS.
5. ALL PIPING AND SPRINKLER HEADS ARE SHOWN SCHEMATICALLY.
6. SPRINKLER CONTRACTOR TO PROVIDE AND SUBMIT HYDRAULIC CALCULATIONS AND SHOP DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER TO THE LOCAL AUTHORITY HAVING JURISDICTION AND OWNER'S INSURANCE UNDERWRITERS FOR REVIEW AND APPROVAL.
7. PIPING TO BE CPVC PLASTIC SDR 13 CONFORMING TO ASTM F443, UL, AND ULC LISTED. 3/4" TO 1-1/4" SCHEDULE 40 FITTINGS, 1-1/2" TO 3" SCHEDULE 80 FITTINGS. INSTALL AS PER NFPA#13, NFPA#13R, MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
8. PROVIDE FIRE STOPS AROUND ALL PIPING WHICH PASS THROUGH FIRE SEPARATIONS.
9. ALL HEADS SUBJECT TO DAMAGE TO HAVE WIRE GUARDS.
10. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL WIRING AND CONNECTIONS. SPRINKLER CONTRACTOR TO CO-ORDINATE. THE CORRECT ELECTRICAL OPERATION OF ALL SPRINKLER FLOW SWITCHES, TAMPER SWITCHES, AND PRESSURE SWITCHES SHALL BE CONFIRMED PRIOR TO THE FORMAL FIRE ALARM VERIFICATION.
11. CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL WIRING AND CONNECTIONS.
12. ALL PIPING TO BE EXPOSED AND PAINTED WITH LATEX BASED PAINT AS PER NFPA#13R AND AUTHORITY HAVING JURISDICTION.
13. EXISTING SPRINKLER HEAD LOCATIONS WERE OBTAINED FROM EXISTING SPRINKLER SHOP DRAWING. CONTRACTOR TO DETERMINE EXACT NUMBER AND LOCATION ON SITE.
14. PROVIDE SPRINKLER TEST CERTIFICATE ON COMPLETION.
15. THE SPRINKLER CONTRACTOR SHALL BE PRESENT AT THE FIRE ALARM VERIFICATION TO DEMONSTRATE THE OPERATION OF THESE DEVICES.
16. SPRINKLER CONTRACTOR TO SUPPLY FIRE EXTINGUISHER CABINETS AND FIRE EXTINGUISHERS AS INDICATED. UNITS TO BE LABELED AND INSTALLED AS PER NFPA#10. ALL INSTRUCTION FOR THE OPERATION AND MAINTENANCE OF FIRE EXTINGUISHERS TO BE PERMANENTLY AFFIXED TO EACH UNIT.
17. SPRINKLER HEADS NEAR HEAT PRODUCING EQUIPMENT SUCH AS UNIT HEATERS, ETC. TO BE HIGH TEMPERATURE RATED.

FIRE PROTECTION KEYNOTES

1

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DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

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PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 80% REVIEW

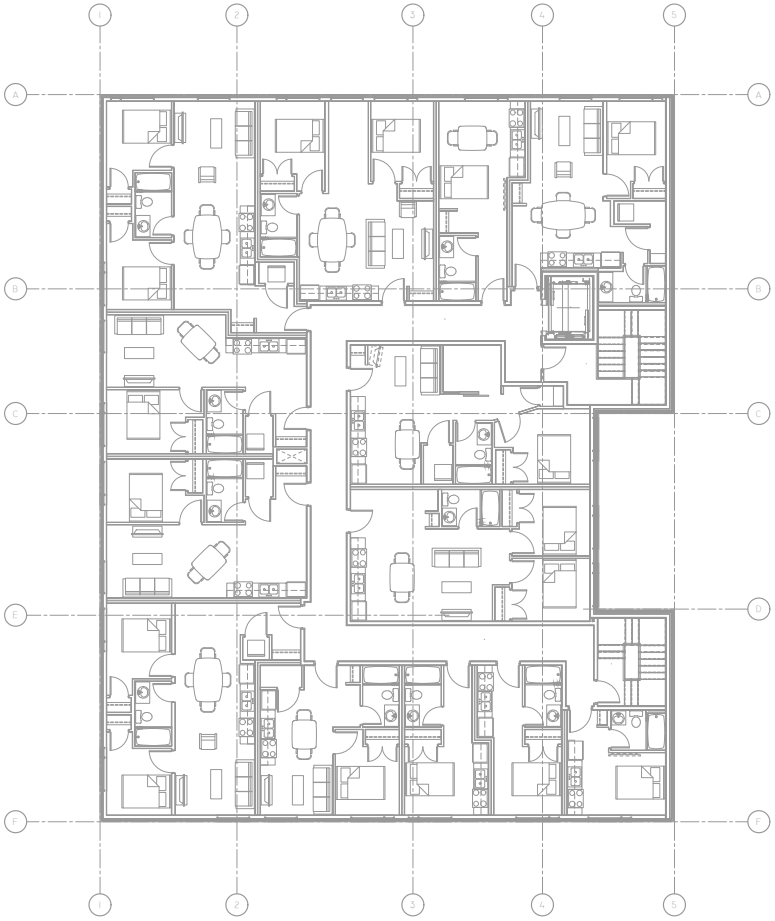
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
SECOND & THIRD FLOOR PLAN FIRE PROTECTION

PROJECT :24S-039	DRAWING NUMBER:
DATE : 01/20/2025	M5.2
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 M5.3 FOURTH, FIFTH, AND SIXTH FLOOR PLAN FIRE PROTECTION
SCALE: 1/8" = 1'-0"

FIRE PROTECTION GENERAL NOTES

1. SPRINKLER SYSTEM TO BE BASED ON NFPA#13R OCCUPANCY.
2. SPRINKLER CONTRACTOR IS RESPONSIBLE FOR A COMPLETE SYSTEM WITHIN THE BUILDING AND SHALL ADD ADDITIONAL HEADS WHERE PATTERN INTERFERES WITH LIGHTING, STRUCTURAL, AND MECHANICAL SYSTEM ARRANGEMENTS.
3. ALL EQUIPMENT TO BE UL LISTED AND SUPPLIED AND INSTALLED AS PER NFPA#13 & NFPA#13R.
4. CONTRACTOR SHALL QUOTE THE SUPPLY AND INSTALLATION OF A COMPLETE SYSTEM WHETHER OR NOT ALL OF THE HARDWARE IS DETAILED HEREON AND IN THE SPECIFICATIONS.
5. ALL PIPING AND SPRINKLER HEADS ARE SHOWN SCHEMATICALLY.
6. SPRINKLER CONTRACTOR TO PROVIDE AND SUBMIT HYDRAULIC CALCULATIONS AND SHOP DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER TO THE LOCAL AUTHORITY HAVING JURISDICTION AND OWNER'S INSURANCE UNDERWRITERS FOR REVIEW AND APPROVAL.
7. PIPING TO BE CPVC PLASTIC SDR 13 CONFORMING TO ASTM F443, UL, AND ULC LISTED. 3/4" TO 1-1/4" SCHEDULE 40 FITTINGS, 1-1/2" TO 3" SCHEDULE 80 FITTINGS. INSTALL AS PER NFPA#13, NFPA#13R, MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
8. PROVIDE FIRE STOPS AROUND ALL PIPING WHICH PASS THROUGH FIRE SEPARATIONS.
9. ALL HEADS SUBJECT TO DAMAGE TO HAVE WIRE GUARDS.
10. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL WIRING AND CONNECTIONS. SPRINKLER CONTRACTOR TO CO-ORDINATE. THE CORRECT ELECTRICAL OPERATION OF ALL SPRINKLER FLOW SWITCHES, TAMPER SWITCHES, AND PRESSURE SWITCHES SHALL BE CONFIRMED PRIOR TO THE FORMAL FIRE ALARM VERIFICATION.
11. CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL WIRING AND CONNECTIONS.
12. ALL PIPING TO BE EXPOSED AND PAINTED WITH LATEX BASED PAINT AS PER NFPA#13R AND AUTHORITY HAVING JURISDICTION.
13. EXISTING SPRINKLER HEAD LOCATIONS WERE OBTAINED FROM EXISTING SPRINKLER SHOP DRAWING. CONTRACTOR TO DETERMINE EXACT NUMBER AND LOCATION ON SITE.
14. PROVIDE SPRINKLER TEST CERTIFICATE ON COMPLETION.
15. THE SPRINKLER CONTRACTOR SHALL BE PRESENT AT THE FIRE ALARM VERIFICATION TO DEMONSTRATE THE OPERATION OF THESE DEVICES.
16. SPRINKLER CONTRACTOR TO SUPPLY FIRE EXTINGUISHER CABINETS AND FIRE EXTINGUISHERS AS INDICATED. UNITS TO BE LABELED AND INSTALLED AS PER NFPA#10. ALL INSTRUCTION FOR THE OPERATION AND MAINTENANCE OF FIRE EXTINGUISHERS TO BE PERMANENTLY AFFIXED TO EACH UNIT.
17. SPRINKLER HEADS NEAR HEAT PRODUCING EQUIPMENT SUCH AS UNIT HEATERS, ETC. TO BE HIGH TEMPERATURE RATED.

FIRE PROTECTION KEYNOTES

(#)

1

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DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

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PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 80% REVIEW

CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
FOURTH, FIFTH, & SIXTH FLOOR PLAN FIRE PROTECTION

PROJECT :24S-039	DRAWING NUMBER: M5.3
DATE : 01/20/2025	
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0

PIPING SYMBOL LEGEND

ITEM	DESCRIPTION
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	REDUCED PRESSURE PRINCIPLE BACK-FLOW PREVENTOR
	DOUBLE CHECK VALVE
	GLOBE VALVE
	LOCKSHIELD BALANCING VALVE
	CONTROL VALVES
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	CIRCUIT BALANCING VALVE
	AUTOMATIC FLOW CONTROL DEVICE
	AUTOMATIC FLOW CONTROL DEVICE WITH INTEGRAL VALVE AND STRAINER
	PRESSURE INDEPENDENT AUTOMATIC FLOW CONTROL VALVE WITH DDC CONTROL MOTOR
	O S & Y VALVE
	GAS COCK
	FLEXIBLE PIPE CONNECTION
	STRAINER
	UNION
	PIPE ANCHOR AND GUIDES
	EXPANSION JOINT
	DIRECTION OF FLOW
	PIPE CAP
	TRIPLE DUTY VALVE - SUCTION DIFFUSER
	AIR VENTS - MANUAL AND AUTOMATIC
	STEAM TRAP - FLOAT AND THERMOSTATIC
	STEAM TRAP - BUCKET
	STEAM TRAP - THERMOSTATIC
	HOSE BIBB
	NON FREEZE HOSE BIBB
	TRAP
	FLOOR DRAIN & FUNNEL FLOOR DRAIN
	CONNECT NEW PIPE TO EXISTING
	CLEAN-OUT
	PIPE DROP
	PIPE RISE
	PIPE TEE
	PIPE ELBOW
	PIPE CONTINUATION
TO DRAIN	CONNECT TO DRAIN - INDIRECT
1% SLOPE	PIPE SLOPE
	TEMPERATURE GAUGE
	PRESSURE GAUGE
	P & T PLUG

NOTE: ALL MAY NOT BE USED IN THESE DRAWINGS.

DUCT LEGEND

ITEM	DESCRIPTION
	DIRECTION OF FLOW
	FIRE DAMPER
	FIRE/SMOKE DAMPER
	FIRE STOP FLAP
	METAL WALL CAP
	DUCT CONTINUATION - RECTANGULAR
	DUCT CONTINUATION - ROUND
	EXISTING DUCT-WORK TO REMAIN
	EXISTING DUCT-WORK TO BE REMOVED
	NEW DUCT-WORK
	DUCTWORK WITH INTERNAL INSULATION
	BALANCING DAMPER / VOLUME EXTRACTOR
	SUPPLY DUCTWORK - UP & DOWN
	OUTDOOR DUCTWORK - UP & DOWN
	RETURN AIR DUCTWORK - UP & DOWN
	EXHAUST DUCTWORK - UP & DOWN
	ROUND DUCTWORK - UP & DOWN
	FLEXIBLE DUCTWORK (1200mm MAXIMUM LENGTH)
	DUCTWORK CONICAL T's
	DUCTWORK ELBOW WITH TURNING VANES
	MOTORIZED DAMPER

NOTE: ALL MAY NOT BE USED IN THESE DRAWINGS.

FIRE PROTECTION

ITEM	DESCRIPTION
	SPRINKLER HEAD - PENDANT
	SPRINKLER HEAD - UPRIGHT
	SPRINKLER HEAD - PENDANT SEMI-RECESSED
	SPRINKLER HEAD - PENDANT - CONCEALED
	SPRINKLER HEAD - SIDEWALL
	SPRINKLER HEAD - INSTITUTIONAL (QUICK RESPONSE)
	REMOVE EXISTING SPRINKLER HEAD
	SPRINKLER HEADS - EXTENDED COVERAGE
	SPRINKLER HEADS - QUICK RESPONSE
	SPRINKLER HEADS - DRY TYPE
	SPRINKLER HEADS - HIGH TEMPERATURE
	FIRE PROTECTION VALVE - WITH SWITCH FOR FIRE ALARM SYSTEM
	CHECK VALVE WITH BALL DRIP
	FIRE HOSE CABINET
	FIRE EXTINGUISHER
	FIRE EXTINGUISHER C/W SEMI-RECESSED CABINET
	FIRE EXTINGUISHER C/W FULL RECESSED CABINET
	FIRE DEPARTMENT CONNECTION
	FIRE HYDRANT
	FIRE PROTECTION SYSTEM GONG

NOTE: ALL MAY NOT BE USED IN THESE DRAWINGS.

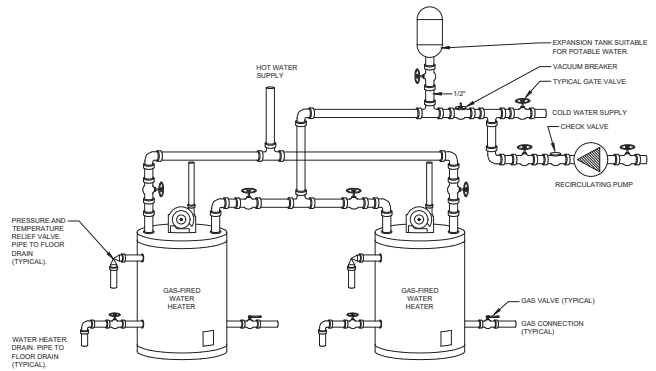
CONTROLS LEGEND

ITEM	DESCRIPTION
T H	THERMOSTAT / HUMIDISTAT
T	THERMOSTAT c/w GUARD
S	FAN SPEED CONTROL
CO2	CO2 SENSOR
	CONTROL CONNECTIONS
TS	TEMPERATURE SENSOR
T	TEMPERATURE SENSOR
F	FLOW SENSOR
	TEMPERATURE GAUGE
	PRESSURE GAUGE

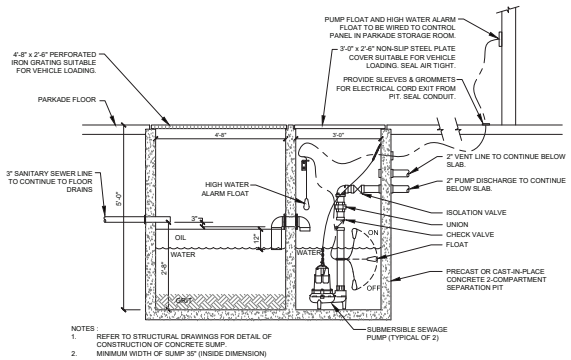
BASEBOARD RADIATION SCHEDULE

LENGTH (mm)

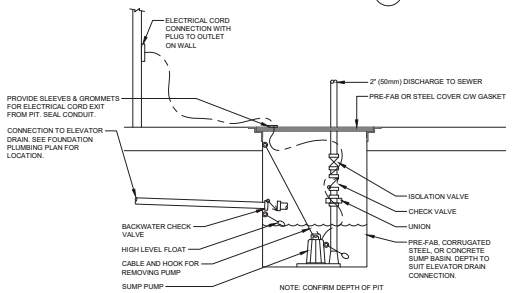
NOTE: ALL MAY NOT BE USED IN THESE DRAWINGS.



4 M6.1 WATER HEATER PIPING SCHEMATIC
SCALE: N.T.S.

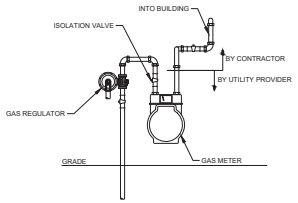


1 M6.1 SEPARATION PIT PIPING DETAIL
SCALE: N.T.S.



2 M6.1 ELEVATOR SUMP PUMP/PIT DETAIL
SCALE: N.T.S.

GAS PIPING SIZED OFF 250FT OF PIPING @ 5 LBS GAS PRESSURE FROM METER. MECH CONTRACTOR TO CONFIRM ALL DISTANCES ON SITE AND SUBMIT GAS PIPING SCHEMATIC & SIZING TO P.S.ENGINEERING FOR REVIEW PRIOR TO INSTALL.



3 M6.1 GAS METER DETAIL
SCALE: N.T.S.

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PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 80% REVIEW

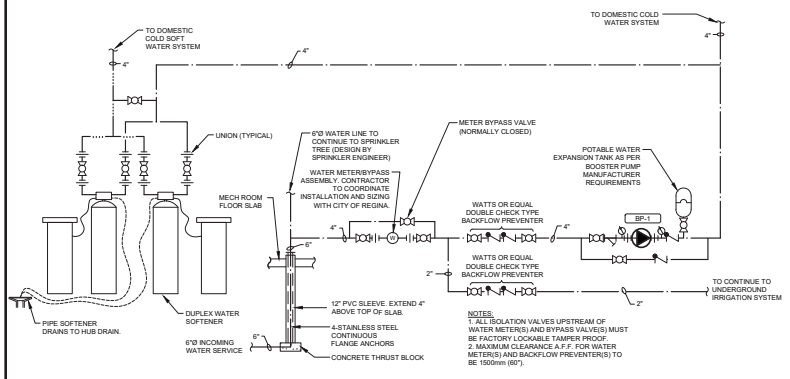
CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

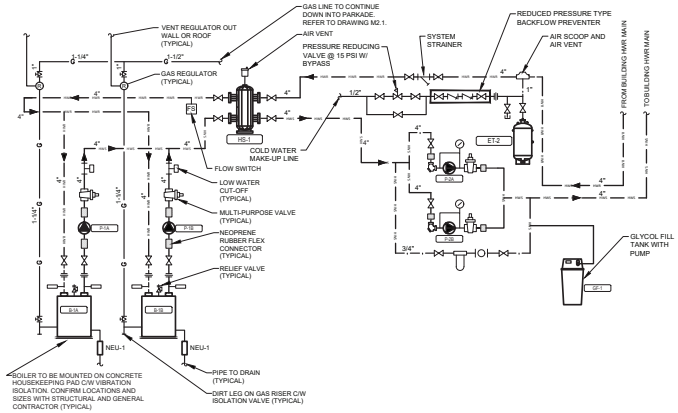
1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
MECHANICAL LEGENDS & DETAILS

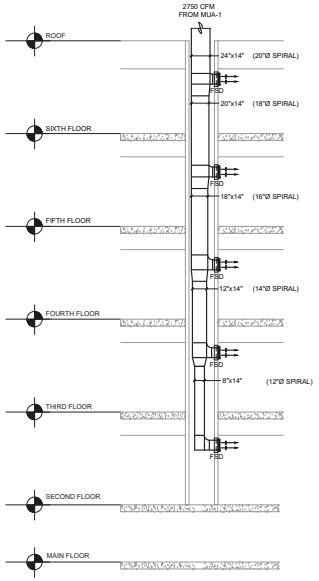
PROJECT :24S-039	DRAWING NUMBER:
DATE : 01/20/2025	M6.1
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



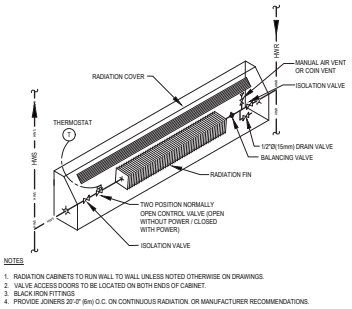
1 M6.2 WATER SERVICE PIPING SCHEMATIC
SCALE: N.T.S.



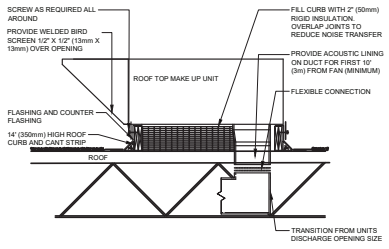
2 M6.2 HEATING SYSTEM SCHEMATIC
SCALE: N.T.S



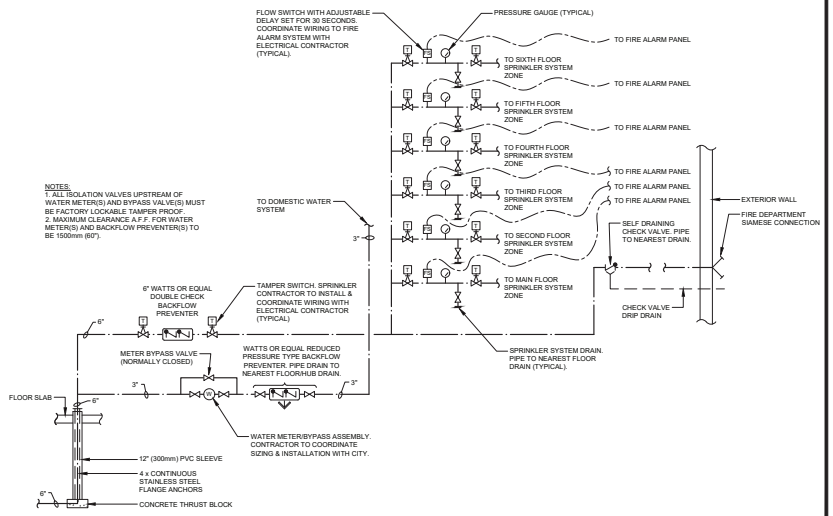
4 M6.2 CORRIDOR PRESSURIZATION RISER SCHEMATIC
SCALE: N.T.S



3 M6.2 BASEBOARD HEATER DETAIL
SCALE: N.T.S



5 M6.2 ROOFTOP MAKE UP AIR UNIT INSTALL DETAIL
SCALE: N.T.S



6 M6.2 INCOMING DOMESTIC WATER SCHEMATIC
SCALE: N.T.S

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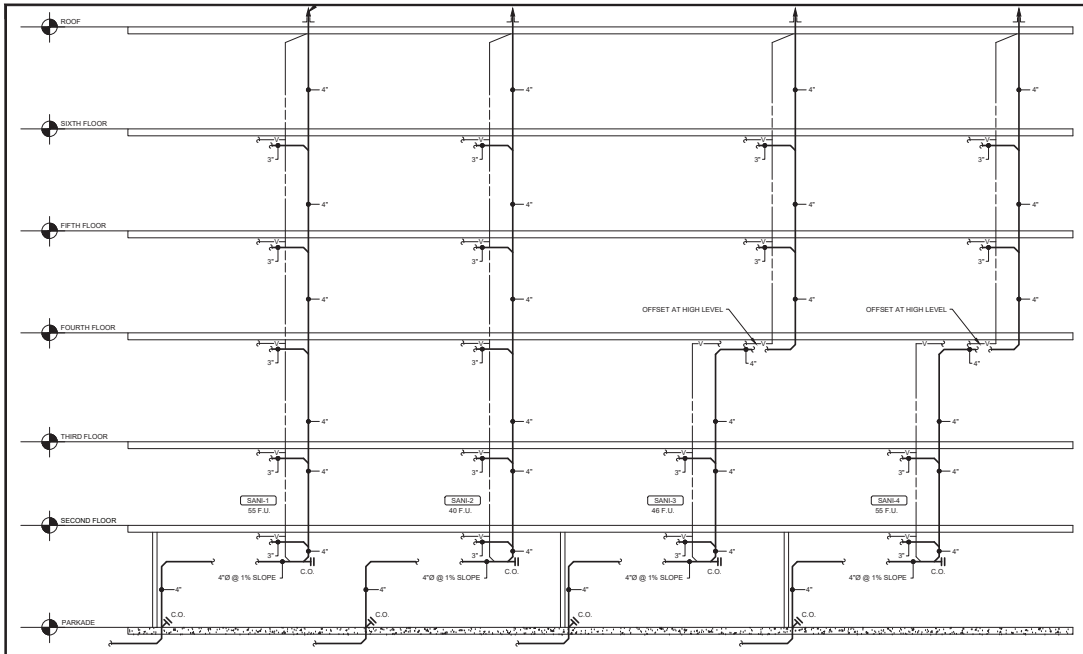
PROPOSED SIX STORY APARTMENT WITH RETAIL

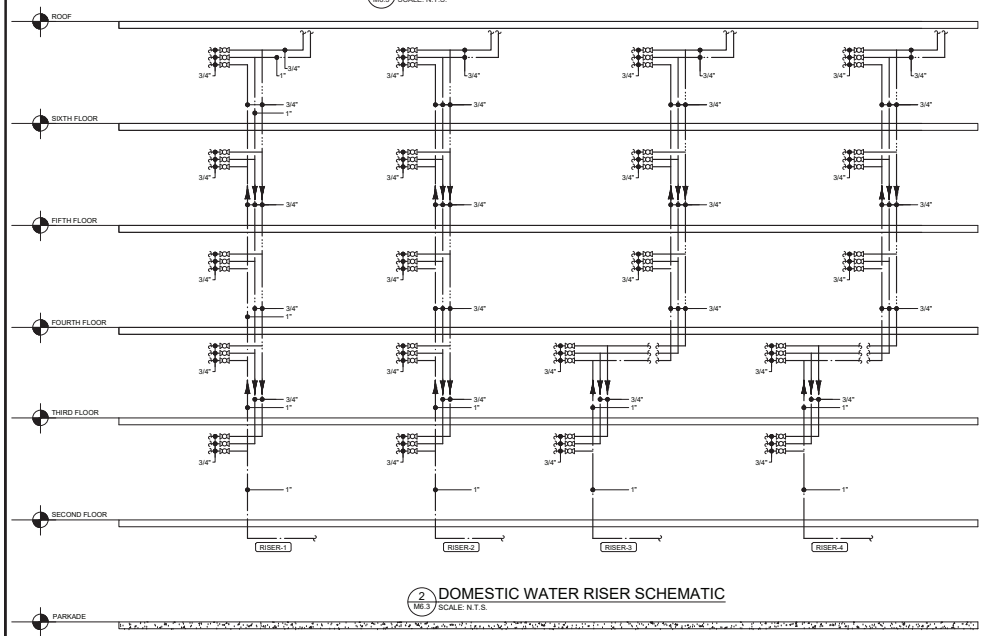
1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
MECHANICAL DETAILS CONT'D

PROJECT: 24S-039	DRAWING NUMBER: M6.2
DATE : 01/20/2025	
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 M6.3 SANITARY DRAINAGE AND VENT RISER SCHEMATIC
SCALE: N.T.S.



2 M6.3 DOMESTIC WATER RISER SCHEMATIC
SCALE: N.T.S.

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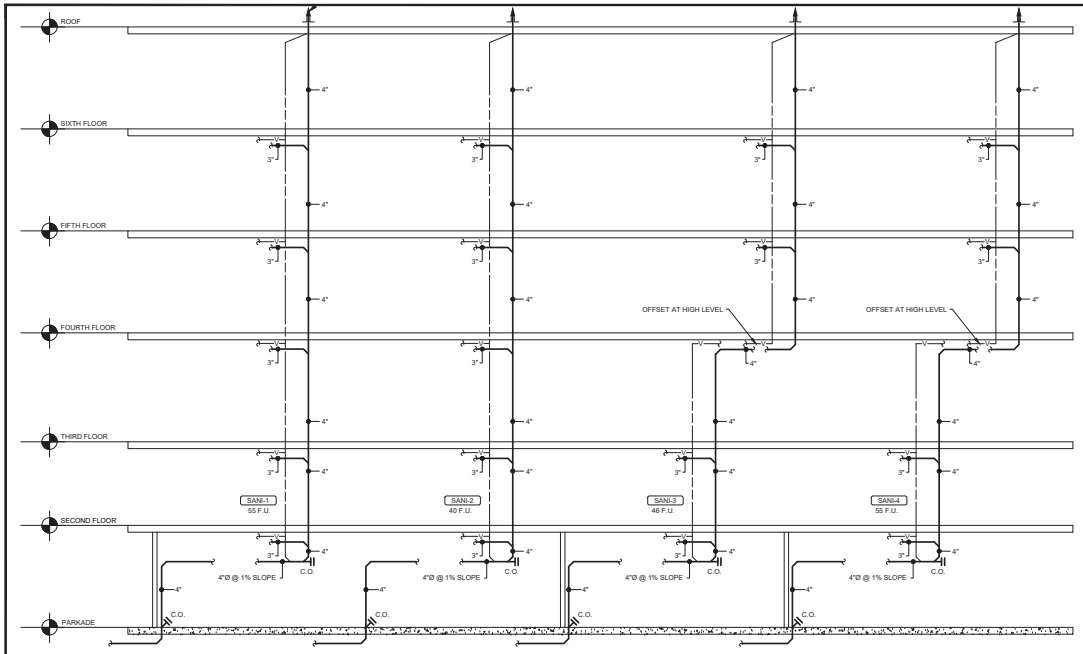
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

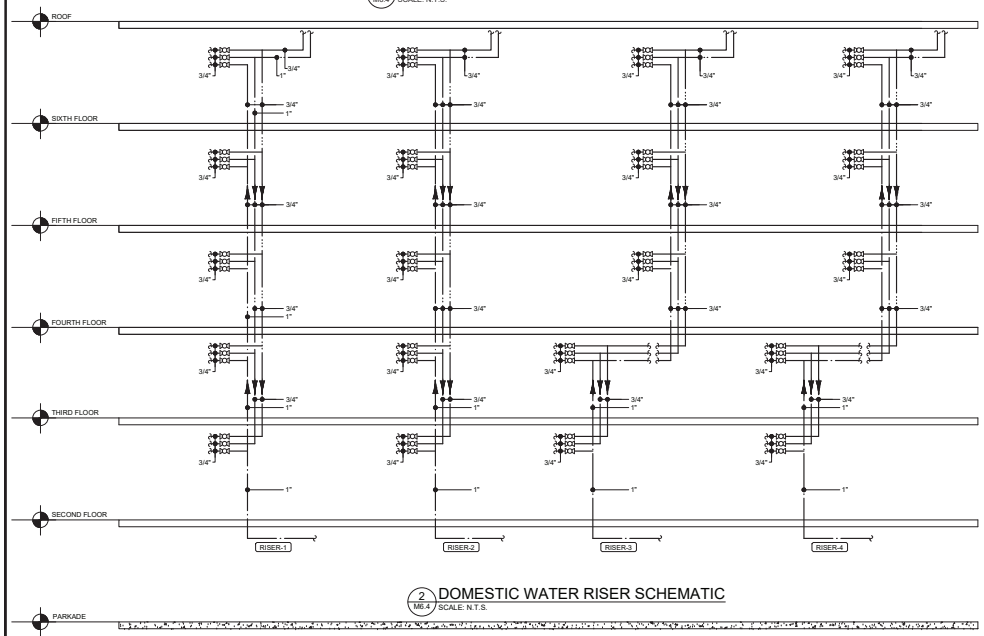
1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
SANITARY & DOMESTIC WATER RISER SCHEMATICS

PROJECT: 24S-039	DRAWING NUMBER: M6.3
DATE : 01/20/2025	
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0



1 M6.4 SANITARY DRAINAGE AND VENT RISER SCHEMATIC
SCALE: N.T.S.



2 M6.4 DOMESTIC WATER RISER SCHEMATIC
SCALE: N.T.S.

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CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY
APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
HEATING RISER SCHEMATICS

PROJECT :24S-039	DRAWING NUMBER:
DATE : 01/20/2025	M6.4
SCALE : AS NOTED	
DRAWN : I.R.	
CHECKED :O.O.	REV:0

PLUMBING FIXTURE SCHEDULE

TAG	MAKE / MODEL	FUNCTION	DESCRIPTION
WC-1	GERBER / GWS31818	WATER CLOSET - TANK TYPE - BARRIER FREE	ELONGATED 419mm (16-1/2") HIGH TOILET, WHITE VITREOUS CHINA, FLOOR MOUNTED, 4.8 L (1.28 US GAL) PER FLUSH, FULLY GLAZED TRAPWAY, BOLT CAPS, 12" ROUGH-IN, AND INSULATED TANK. PROVIDE CENTOCO #8205TSS HEAVY DUTY TOILET SEAT, WHITE SOLID PLASTIC, STAINLESS STEEL POSTS AND SELF-SUSTAINING CHECK HINGES, OPEN FRONT COVER.
WC-2	GERBER / GWS31818	WATER CLOSET - TANK TYPE	ELONGATED 419mm (16-1/2") HIGH TOILET, WHITE VITREOUS CHINA, FLOOR MOUNTED, 4.8 L (1.28 US GAL) PER FLUSH, FULLY GLAZED TRAPWAY, BOLT CAPS, 12" ROUGH-IN, AND INSULATED TANK. PROVIDE CENTOCO #8205TSS HEAVY DUTY TOILET SEAT, WHITE SOLID PLASTIC, STAINLESS STEEL POSTS AND SELF-SUSTAINING CHECK HINGES, OPEN FRONT COVER.
LAV-1	GERBER / G0012834CH	LAVATORY - COUNTER MOUNTED - BARRIER FREE	VITREOUS CHINA COUNTER MOUNTED LAVATORY. PROVIDE KOHLER #K-15182 SINGLE LEVER HANDLE 4" CENTERSET FAUCET C/W TECK #337311 CAST BRASS 32mm (1-1/4") P-TRAP, TECK #337290 BRASS 32mm (1-1/4") OFFSET OPEN GRID WASTE, AND RIGID/FLEX SUPPLIES WITH LOCKSHIELD STOPS AND FLEXIBLE RISERS. PROVIDE TRUEBRO #103 WHITE VINYL PIPE COVER OVER DRAIN AND SUPPLIES.
LAV-2	GERBER / G0012834CH	LAVATORY - COUNTER MOUNTED	VITREOUS CHINA COUNTER MOUNTED LAVATORY. PROVIDE KOHLER #K-15182 SINGLE LEVER HANDLE 4" CENTERSET FAUCET C/W TECK #337301 CAST BRASS 32mm (1-1/4") P-TRAP, TECK #337260 BRASS 32mm (1-1/4") OPEN GRID WASTE, AND RIGID/FLEX SUPPLIES WITH LOCKSHIELD STOPS AND FLEXIBLE RISERS.
SK-1	MAINLINE / ML3322-R20-D-1H	DOUBLE COMPARTMENT COUNTER MOUNTED SINK	DOUBLE BOWL, STAINLESS STEEL, DROP-IN SINK C/W SINGLE HOLE DRILLING AND EASY SEAL CRUMB CUP BASKET STRAINER PROVIDE KOHLER #K-596 SINGLE HANDLE PULL-DOWN CHROME PLATED DECK DAUCET, RIGID/FLEX SUPPLIES WITH LOCKSHIELD STOPS AND FLEXIBLE RISERS, AND CAST BRASS P-TRAP WITH BOTTOM CLEANOUT.
BATH-1	MIROLIN / PT516L/R	BATHTUB / SHOWER - BARRIER FREE	FIBREGLASS REINFORCED ACRYLIC TUB/SHOWER C/W CURTAIN ROD, CURTAIN HOOKS, WHITE CURTAIN, PATTERNED TUB BOTTOM, 4 LARGE TOILETRY SHELVES, 16" THRESHOLD HEIGHT, AND POWDER COATED WHITE STAINLESS STEEL GRAB BAR. GENERAL CONTRACTOR TO PROVIDE GRAB BARS AS PER ACCESSIBILITY REQUIREMENTS. REFER TO ARCH DRAWINGS. PROVIDE TECK #R1070-OUNS ROUGH-IN VALVE AND TECK #T13H993 TRAM C/W TUB SPOUT, DIVERTER, SHOWER, HAND SHOWER, COMBINATION STAINLESS STEEL SLIDE AND GRAB BAR, PRESSURE BALANCING CARTRIDGE, ADJUSTABLE SHOWER HEAD, ARM, FLANGE, AND LEVER BLADE HANDLE. PROVIDE P-TRAP AND PUSH & LOCK DRAIN WITH OVERFLOW.
BATH-2	MIROLIN / PT516L/R	BATHTUB / SHOWER	FIBREGLASS REINFORCED ACRYLIC TUB/SHOWER C/W CURTAIN ROD, CURTAIN HOOKS, WHITE CURTAIN, PATTERNED TUB BOTTOM, 4 LARGE TOILETRY SHELVES, 16" THRESHOLD HEIGHT, AND POWDER COATED WHITE STAINLESS STEEL GRAB BAR. PROVIDE TECK #R1070-OUNS ROUGH-IN VALVE AND TECK #T13H993 TRAM C/W TUB SPOUT, DIVERTER, SHOWER, HAND SHOWER, COMBINATION STAINLESS STEEL SLIDE AND GRAB BAR, PRESSURE BALANCING CARTRIDGE, ADJUSTABLE SHOWER HEAD, ARM, FLANGE, AND LEVER BLADE HANDLE. PROVIDE P-TRAP AND PUSH & LOCK DRAIN WITH OVERFLOW.
FD-1	WATTS / FD-100-A	FLOOR DRAIN	DURA COATED CAST IRON BODY, BOTTOM OUTLET, HEAVY DUTY POLISHED NICKEL BRONZE ROUND STRAINER.
CO	--	PIPE CLEANOUT	CLEANOUT C/W PLUG SUITABLE FOR EXPOSED DWV PIPING. CLEANOUT TO MATCH DWV PIPE MATERIAL.
LNDRY-1	OATEY / CENTRO II	LAUNDRY BOX	CLOTHES WASHING MACHINE BOX C/W HOSE BIBS WITH VACUUM BREAKERS AND 2" STANDPIPE CONNECTION. UNIT TO BE WALL RECESSED.
RD-1	ZURN / Z105	CONTROLLED FLOW ROOF DRAIN	15"Ø CONTROL-FLO ROOF DRAIN C/W DURA-COATED CAST IRON BODY.

DOMESTIC WATER HEATER SCHEDULE

TAG	MAKE	MODEL	LOCATION	HEATING CAPACITY (MBH)	STORAGE CAPACITY (GAL)	ELECTRICAL (V/Ph/Hz)	NOTES
WH-1A/B	BRADFORD WHITE	EF-120T-500-3N(A)	ROOF MECH ROOM	499	120	115/1/60	1

NOTES:
1. PROVIDE T&P RELIEF VALVE, DRAIN LINE, 568 GALLON/HR RECOVERY @ 100°F TEMP RISE, POWER VENT, DIRECT COMBUSTION AIR INTAKE, AND PROTECTIVE ANODE ROD. (WEIGHT: 1135 LBS)

FIRE EXTINGUISHER SCHEDULE

TAG	LOCATION	TYPE	RATING	CABINET	NOTES
FEX-1	GENERAL AREAS	ABC	5 LB, 3-A : 40-B:C	-	1

NOTES:
1. MECHANICAL CONTRACTOR TO PROVIDE FIRE EXTINGUISHERS AS PER PLANS AND NFPA #10.

EXPANSION TANK SCHEDULE

TAG	MAKE	MODEL	FUNCTION	LOCATION	TANK VOLUME (GALLON)	ACCEPTANCE VOLUME (GALLON)	SIZE		NOTES
							DIAMETER (in)	HEIGHT (in)	
ET-1	TACO	CA215-125	BOILER SYSTEM	ROOF MECH ROOM	57	57	16	58.9	1
ET-2	WATTS	PLT-35	WH-1 EXPANSION	ROOF MECH ROOM	14	9.17	16	21.7	2

NOTES:
1. SEE HEATING SYSTEM SCHEMATIC 7/M5.1.
2. FOR USE WITH POTABLE WATER.

PTAC UNIT SCHEDULE

TAG	MAKE	MODEL	LOCATION	HEATING CAPACITY (kW)	COOLING CAPACITY (TONS)	AIR FLOW (CFM)	WEIGHT (LBS)	ELECTRICAL (V/Ph/Hz)	MCA	MOP	NOTES
PTAC-1	ISLANDAIRE	COOLING ONLY	SEE PLANS	-	1	340	116	208/1/60	12	20	1
PTAC-2	ISLANDAIRE	COOLING ONLY	SEE PLANS	-	0.75	340	116	208/1/60	12	20	1

NOTES:
1. C/W WALL SLEEVE WITH ARCHITECTURAL LOUVRE, DUAL FAN MOTORS, WASHABLE FILTER, COMPRESSOR FREEZE PROTECTION, MOTORIZED OUTDOOR AIR DAMPER, CONDENSATE REMOVAL KIT, WIRED REMOTE PROGRAMMABLE THERMOSTAT, AND R-410A REFRIGERANT CHARGE.

MINI-SPLIT SCHEDULE

TAG	MAKE	MODEL	LOCATION	COOLING CAPACITY (MBH)	AIR FLOW (CFM)	EER	ELECTRICAL (V/Ph/Hz)	MCA	MOP	NOTES
IDU-1	MITSUBISHI ELECTRIC	MSZ-GS12NA	INTERIOR SUITES	12	400	16.0	208/1/60	1.0	-	2
ODU-1	MITSUBISHI ELECTRIC	MXZ-2C20NAHZ2	ROOF/GRADE	20	-	16	208/1/60	29.5	40.0	1,2

NOTES:
1. PROVIDE WIND GUARDS AND LOW AMBIENT KIT.
2. INSULATE REFRIGERANT LINES.

MAKE-UP AIR UNIT SCHEDULE

TAG	MAKE	MODEL	HEATING INPUT (MBH)	HEATING OUTPUT (MBH)	FAN E.S.P. (in w.c.)	SUPPLY FAN MOTOR (HP)	SUPPLY AIR (CFM)	SYSTEM MOCP	SYSTEM MCA	ELECTRICAL (V/Ph/Hz)	WEIGHT (LBS)	NOTES
MUA-1	ENGINEERED AIR	DJS40/D	400	324	1.65	1.5	2750	15	8.0	208/3/60	1800	1

NOTES:
1. UNIT TO BE MOUNTED ON ROOF. SEE DETAIL 5/6.2.

HYDRONIC HEATING SCHEDULE

TAG	MAKE	MODEL	HEATING CAPACITY	FLOW RATE (GPM)	WORKING FLUID	AIR FLOW (CFM)	EWT (°F)	LWT (°F)	ELECTRICAL (V/Ph/Hz)	LOCATION	NOTES
A	ENGINEERED AIR	P-10	850 BTU/HR/FT	VARIES	30% P.G.	-	180	160	-	SUITES	1
UH-1	SIGMA	300V	207.3 MBH	19.3	30% P.G.	6360	180	160	120/1/60	PARKADE	2
FF-1	ENGINEERED AIR	CUH-1	30 MBH	3.0	30% P.G.	485	180	160	120/1/60	MAIN ENTRY	3
FF-2	ENGINEERED AIR	CUH-1	16 MBH	1.6	30% P.G.	185	180	160	120/1/60	SIDE STAIRWELLS	3

NOTES:
1. BASEBOARD RADIATION C/W 10" HIGH CABINET, FINNED COPPER TUBE WITH 2.5"x3.25" ALUMINUM FINS, SINGLE ROW, HANGERS AND MOUNTING ACCESSORIES, END CAPS, AND/OR ELBOWS AS REQUIRED.
2. HORIZONTAL UNIT HEATER C/W PAINTED STEEL CABINET, SEAMLESS COPPER TUBING HEATING ELEMENT WITH ALUMINUM FINS, TEFC MOTOR, FAN GUARD, AIR DEFLECTION LOUVRE, AND PROGRAMMABLE THERMOSTAT SET TO MAXIMUM 60°F SETPOINT.
3. WALL MOUNTED CABINET FORCE FLOW HEATER C/W PAINTED STEEL CABINET, TOP ACCESS DOORS FOR PLUMBING AND ELECTRICAL, REUSABLE ALUMINUM FILTERS, CENTRIFUGAL FORWARD CURVED FAN, COPPER HEATING ELEMENT WITH ALUMINUM FINS, ECM MOTOR, AND MOUNTING HARDWARE. UNIT FAN TO BE CONTROLLED BY PROGRAMMABLE WALL THERMOSTAT SET TO MAXIMUM 60°F SETPOINT.

HRV SCHEDULE

TAG	MAKE	MODEL	LOCATION	SUPPLY AIR FLOW (CFM)	EXHAUST AIR FLOW (CFM)	ESP (in w.c.)	WINTER SENSIBLE EFFICIENCY	ELECTRICAL (V/Ph/Hz)	WEIGHT (LBS)	CONTROL	NOTES
HRV-1	FANTECH	VHR70R	SUITES	70	70	0.1	65%	120/1/60	33	WALL CONTROLLER	1

NOTES:
1. INDIVIDUAL HRV TO BE INSTALLED IN SUITE LAUNDRY ROOMS/ABOVE WASHROOMS.

BOILER SCHEDULE

TAG	MAKE	MODEL	LOCATION	MAX FLOW (GPM)	EFFICIENCY	WEIGHT (LBS)	HEAT INPUT (MBH)	HEAT OUTPUT (MBH)	EWT (°F)	LWT (°F)	ELECTRICAL (V/Ph/Hz)	MOP (AMPS)	NOTES
B-1A/B	AERCO	BMK-2000	ROOF MECH ROOM	128	96%	817	2000	1920	180	160	120/1/60	15	1,2

NOTES:
1. SEE HEATING SYSTEM SCHEMATIC 2/M6.2.

PUMP SCHEDULE

TAG	MAKE	MODEL	FUNCTION	LOCATION	FLUID	FLOW RATE (GPM)	HEAD (FT)	MOTOR (HP)	ELECTRICAL (V/Ph/Hz)	NOTES
P-1/A/B	TACO	KC2009D	BOILER CIRC	ROOF MECH ROOM	30% P. GLYCOL	128	50	5	208/3/60	1
P-2A/B	TACO	KS3009D	HEATING CIRC	ROOF MECH ROOM	30% P. GLYCOL	150	65	5	208/3/60	1

NOTES:
1. SEE HEATING SYSTEM SCHEMATIC 2/M6.2.

GLYCOL FEED SYSTEM SCHEDULE

TAG	MAKE	MODEL	LOCATION	FLUID				ELECTRICAL	PHYSICAL		NOTES
				WORKING FLUID	TOTAL VOLUME (GAL)	STATIC FILL PRESSURE (PSIG)	PRESSURE RATING (PSIG)	VOLTAGE/Ph/Hz	LENGTH / WIDTH / HEIGHT (IN)	NPT FITTING (IN)	
GF-1	AXIOM	SF100	ROOF MECH ROOM	30% P. GLY	55	12.7	125.0	120/1/60	24/24/49	0.5	1

NOTES:
1. SEE HEATING SYSTEM SCHEMATIC 2/M6.2.

HYDRAULIC SEPARATOR SCHEDULE

TAG	MAKE	MODEL	LOCATION	TYPE	FLUID				PHYSICAL	NOTES
					WORKING FLUID	MAX FLOW (GPM)	CAPACITY (GALLONS)	MAX PRESSURE (PSIG)	DIAMETER / HEIGHT (IN)	
HS-1	CALEFFI	-	ROOF MECH ROOF	TANK - HIGH EFF (AIR/DIRT)	30% P. GLY	-	-	-	-	1

NOTES:
1. SIZE TO MATCH SYSTEM FLOW/REQUIREMENTS.
2. SEE HEATING SYSTEM SCHEMATIC 2/M6.2.

MISCELLANEOUS MECHANICAL EQUIPMENT SCHEDULE

TAG	MAKE / MODEL	FUNCTION	DESCRIPTION
SSF	AXIOM	SIDE STREAM FILTER	10" SIDE STREAM SINGLE CARTRIDGE FILTER HOUSING C/W ¾" NPT INLET AND OUTLET FITTINGS. PROVIDE CASE OF 30-20 MICRON FILTERS.
AV	TACO / HY-VENT	AUTOMATIC AIR VENTS	INSTALL AT HIGH POINTS AND WHERE IDENTIFIED ON PLANS.
FS	TACO / 1FS01BF-1	FLOW SWITCH	WIRED TO SHUT DOWN BOILER OPERATION IF FLOW STOPS.

FRESH AIR INTAKE SCHEDULE

TAG	MAKE	MODEL	LOCATION	WIDTH (in)	HEIGHT (in)	ELECTRICAL (V/Ph/Hz)	NOTES
FAI-1	WESTVENT	635V	PARKADE	40"	36"	115/1/60	1,2

NOTES:
1. FRESH AIR INTAKE LOUVRE C/W, MOTORIZED DAMPER, WELDED CONTINUOUS BLADES, FLANGE FRAME AND SCREEN. MOTORIZED DAMPERS - ALL MOTORIZED DAMPERS TO BE WESTVENT OPPOSED BLADE DAMPER CBX-4H6, C/W BELIMO LF120 US- DAMPER ACTUATOR 120VAC.
2. UNIT TO BE INTERLOCKED WITH EXHAUST FAN EXHF-1 TO OPERATE VIA SIGNAL FROM PARKADE GAS DETECTION SYSTEM GD-1.

FAN SCHEDULE

TAG	MAKE	MODEL	LOCATION	TYPE	FUNCTION	AIR CAPACITY (CFM)	E.S.P. (in w.c.)	MOTOR (HP)	DRIVE	WEIGHT (LBS)	ELECTRICAL (V/Ph/Hz)	NOTES
EXHF-1	PENNBARRY	BLL24	PARKADE	SIDEWALL PROP	EXHAUST	4100	0.1	1/2	BELT	95	120/1/60	1,2

NOTES:
1. C/W VIBRATION ISOLATION, FULLY ENCLOSED MOTOR, AND MOTORIZED BACKDRAFT DAMPER.
2. INTERLOCKED WITH FAI-1 TO OPERATE VIA GAS MONITORING SYSTEM GD-1.

GAS DETECTION SYSTEM SCHEDULE

TAG	MAKE	MODEL	LOCATION	ELECTRICAL	CONTROL	NOTES
GD-1	QEL	Q4C-X-RT4	PARKADE	CONTROLLER: 120/1/60 SENSORS: 24V AC/DC	GAS DETECTION SYSTEM	1,2,3

NOTES:
1. C/W Q6-CO-250P-O-X REMOTE GAS SENSORS LOCATED AS PER MANUFACTURER RECOMMENDATIONS PLAN, LCD DISPLAY WITH LED INDICATORS, RS-485 COMMUNICATION, AUDIBLE ALARM BUZZER, AND MANUAL SHUT-OFF SWITCH.
2. EXHAUST FAN AND MOTORIZED DAMPER TO OPERATE WHEN CO CONCENTRATION EXCEEDS 25 PPM AND/OR WHEN NO2 CONCENTRATION EXCEEDS 3 PPM. UNIT TO INDICATE VISUAL AND AUDIBLE ALARM ON HIGH ALARM CONDITION WHEN CO CONCENTRATION EXCEEDS 190 PPM AND/OR NO2 CONCENTRATION EXCEEDS 5 PPM.
3. REMOTE SENSORS TO MONITOR CO/NO2 LEVELS. SENSORS TO BE MOUNTED AS PER MANUFACTURER RECOMMENDATIONS. EACH SENSOR TO BE C/W WATERDUST TIGHT ENCLOSURE, LCD DISPLAY, INTERNAL AUDIBLE ALARM, AND RS-485 ANALOG INPUT.

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
ACH	AIR CHANGES PER HOUR
AD	AREA DRAIN
AAV	AUTOMATIC AIR VENT
ACU	AIR CONDITIONING UNIT
AHU	AIR-HANDLING UNIT
ASHP	AIR-SOURCE HEAT PUMP
B	BOILER
B.B.	BASE BOARD
BATH	BATHTUB
BF	BOOSTER FAN
BFP	BACKFLOW PREVENTOR
BHP	BRAKE HORSEPOWER
BP	BOILER PUMP
Btu	BRITISH THERMAL UNIT
C/A	COMBUSTION AIR
CBV	CIRCUIT BALANCING VALVE
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CHW	CHILLED WATER
COP	COEFFICIENT OF PERFORMANCE
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
C/W	COMPLETE WITH
CW	CLOTHES WASHER
DCW	DOMESTIC COLD WATER
DD	DECK DRAIN
DH	DUCT HEATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RETURN
DR	DRYER
DW	DISHWASHER
DWH	DOMESTIC WATER HEATER
DWR	DOMESTIC WATER RISER
DWST	DOMESTIC WATER STORAGE TANK
E/A	EXHAUST AIR
EAT	ENTERING AIR TEMP.
EER	ENERGY EFFICIENCY RATIO
EFT	ELECTRIC FAN TIMER
ET	EXPANSION TANK
EUI	ENERGY USE INTENSITY
EWT	ENTERING WATER TEMP.
EXHF	EXHAUST FAN
F/A	FROM ABOVE
F/B	FROM BELOW
FCU	FAN COIL UNIT
FEX	FIRE EXTINGUISHER
FEX-C	FIRE EXTINGUISHER CABINET
FD	FLOOR DRAIN
FF	FORCE FLOW
FFD	FUNNEL FLOOR DRAIN
FSD/IFD	FIRE SMOKE DAMPERS/FIRE DAMPERS
FU	FIXTURE UNITS
FUR	FURNACE
G.C.	GENERAL CONTRACTOR
GI	GREASE INTERCEPTOR
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HC	HEATING COIL
HD	HUB DRAIN
HHW	HEATING HOT WATER
HP	HORSEPOWER
IDWH	INSTANTANEOUS DOMESTIC WATER HEATER
JS	JANITOR SINK
KEF	KITCHEN EXHAUST FAN
LAV	LAVATORY
LAT	LEAVING AIR TEMP.
LWCO	LOW WATER CUT OFF
LWT	LEAVING WATER TEMP.
MA	MIXED AIR
MAT	MIXED AIR TEMP.
MAV	MANUAL AIR VENT
MBH	THOUSAND Btu PER HOUR
MUA	MAKE UP AIR UNIT
N.C.	NORMALLY CLOSED
N.I.C.	NOT IN CONTRACT
N.O.	NORMALLY OPEN
N.T.S.	NOT TO SCALE
NFHB	NON FREEZE HOSE BIBB
O/A	OUTSIDE AIR
O&M	OPERATION AND MAINTENANCE
P	PUMP
PIBV	PRESSURE INDEPENDENT BALANCING VALVE
PR	PLUMBING RISER
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
R/A	RETURN AIR
RAT	REVERSE ACTING THERMOSTAT
RD	ROOF DRAIN
RH	RADIANT HEATER
RPBP	REDUCING PRESSURE BACKFLOW PREVENTOR
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
RWL	RAINWATER LEADER
S/A	SUPPLY AIR
SAR	SUPPLY AIR RISER
SC	SHADING COEFFICIENT
SF	SUPPLY FAN
SH	SHOWER
SHGC	SOLAR HEAT GAIN COEFFICIENT
SK	SINK
SP	SUMP PUMP
SS	SLAB SENSOR
T/A	TO ABOVE
T/B	TO BELOW
TD	TRENCH DRAIN
TDH	TOTAL DESIGN HEAD
TF	TRANSFER FAN
TK	TANK
TP	TRAP PRIMER
TS	TAMPER SWITCH
TSP	TOTAL STATIC PRESSURE
TYP.	TYPICAL
U/C	UNDERCUT DOOR
UH	UNIT HEATER
U/S	UNDERSIDE
URI	URINAL
UTR	UP THROUGH ROOF
VAV	VARIABLE AIR VOLUME
VR	VENT RISER
VRF	VARIABLE REFRIGERANT FLOW
VTR	VENT THROUGH ROOF
VFD	VARIABLE FREQUENCY DRIVE
WC	WATER CLOSET
WSHP	WATER-SOURCE HEAT PUMP
WV	WET VENT

NOTE: NOT ALL USED ON THESE DRAWINGS

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PROJECT NO. 24S-039

PROFESSIONAL SEAL:

PRELIMINARY
ISSUED FOR 80% REVIEW

CLIENT:
JAMES ZIMMER ARCHITECT

PROJECT:
PROPOSED SIX STORY APARTMENT WITH RETAIL

1202 COLLEGE DRIVE,
SASKATOON, SASKATCHEWAN

DRAWING TITLE:
MECHANICAL SCHEDULE

PROJECT: 24S-039
DATE : 01/20/2025
SCALE : AS NOTED
DRAWN : I.R.
CHECKED :O.O.

DRAWING NUMBER:
M6.5
REV:0

THIS DRAWING IS NOT TO BE SCALED. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND OTHER DATA FROM THE PROJECT AND REPORT ANY DISCREPANCIES TO P.S. ENGINEERING BEFORE PROCEEDING WITH ANY WORK. ALL WORK TO COMPLY WITH ALL APPLICABLE CODES, STANDARDS AND REGULATIONS.

DWG REVISIONS:	NO: 0	DATE: 01/20/2025	ENGINEER: O.O.	DESCRIPTION:

SHOP DRAWINGS

1. AS PART OF OUR CONSTRUCTION PHASE SERVICES, RJC WILL REVIEW SHOP DRAWINGS PERTAINING TO WORK SHOWN ON RJC'S DRAWINGS BY MEANS OF APPROPRIATE RATIONAL SAMPLING PROCEDURES AND COMMENT ON THE ACCURACY WITH WHICH THE CONTRACTOR PREPARED THE DRAWINGS.
2. REVIEW OF SHOP DRAWINGS IS FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT AND IS NOT AN APPROVAL OF THE DETAILED DESIGN INHERENT IN THE SHOP DRAWINGS, RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR SUBMITTING THEM. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWINGS AND FOR MEETING ALL REQUIREMENTS OF THE CONTRACT DRAWINGS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INFORMATION PERTAINING TO THE FABRICATION PROCESS, TECHNIQUES FOR CONSTRUCTION AND INSTALLATION, AND FOR CO-ORDINATION OF THE WORK OF ALL SUB-TRADES.
3. FOR SPECIFIC SHOP DRAWING SUBMITTAL REQUIREMENTS, SEE APPROPRIATE MATERIAL SECTIONS AND THE SPECIFICATIONS.
4. SHOP DRAWINGS SHALL BE COMPLETE AND INCLUDE ANY REQUIRED SEALS FROM A PROFESSIONAL ENGINEER REGISTERED IN THE JURISDICTION WHERE THE PROJECT IS LOCATED PRIOR TO SUBMISSION.
5. ALL SHOP DRAWINGS COMPRISING A REVISED SUBMISSION SHALL INDICATE THE REVISED CONTENT BY MEANS OF CLOUDING OR OTHER SUITABLE MARKINGS.

DELEGATED DESIGN OF PRIMARY STRUCTURE COMPONENTS

1. THE CONTRACTOR SHALL ENGAGE A SPECIALTY ENGINEER FOR THE DESIGN OF REQUIRED STRUCTURAL ELEMENTS AND REQUIRED STRUCTURAL CONNECTIONS NOT INDICATED IN THE DRAWINGS.
2. STRUCTURAL COMPONENTS REQUIRING DESIGN COMPLETED BY THE CONTRACTOR'S SPECIALTY ENGINEER INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   - A. COLD FORMED LIGHTWEIGHT STEEL FRAMING
   - B. MISCELLANEOUS STEEL
   - C. MORTAR, GROUT AND CONCRETE MIX DESIGNS
   - D. GLUE-LAMINATED AND STRUCTURAL COMPOSITE LUMBER MEMBERS INCLUDING WOOD-TO-WOOD CONNECTIONS
3. DESIGNS PRODUCED BY THE SPECIALTY ENGINEER SHALL CONSIDER STRENGTH, STABILITY, SERVICEABILITY AND INTEGRITY REQUIREMENTS UNDER GRAVITY AND SEISMIC LOADING AND THE DURABILITY FOR PREVAILING ENVIRONMENTAL AND EXPOSURE CONDITIONS. ALL DESIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF APPLICABLE DESIGN CODES AND ALL OTHER DESIGN REQUIREMENTS INDICATED IN THE DRAWINGS AND SPECIFICATIONS. DESIGNS SHALL INCLUDE SUITABLE LETTERS OF ASSURANCE.
4. DESIGN OF COMPONENTS AND CONNECTIONS THAT RELY ON SUPPORT BY THE PRIMARY STRUCTURE DESIGNED BY RJC OR COMPONENTS DESIGNED BY OTHER SPECIALTY ENGINEERS MUST CLEARLY INDICATE THE MEANS AND METHOD OF ATTACHMENT AND THE MAGNITUDE OF ALL FORCES (SPECIFIED AND FACTORED) THAT THE PRIMARY STRUCTURE MUST WITHSTAND. REVIEW BY THE STRUCTURAL ENGINEER OF RECORD MAY REQUIRE REVISION TO THE METHOD OF CONNECTION WITH REDESIGN BY THE SPECIALTY ENGINEER.
5. SPECIALTY ENGINEERS ENGAGED BY THE CONTRACTOR SHALL BE REGISTERED AS PROFESSIONAL ENGINEERS IN THE PROVINCE OF SASKATCHEWAN AND ALL SUBMITTALS OR SHOP DRAWINGS PREPARED BY OR UNDER THE SUPERVISION OF THIS ENGINEER SHALL BE SIGNED. UNSEALED PROGRESS DOCUMENTS WILL BE REJECTED BY RJC WITHOUT REVIEW UNLESS PRIOR AGREEMENT IS OBTAINED.
6. WHERE STRUCTURAL COMPONENTS OR CONNECTIONS DESIGNED BY THE SPECIALTY ENGINEER ARE TO BE FABRICATED IN A DIFFERENT JURISDICTION, THE SPECIALTY ENGINEER SHALL SUBMIT A SEALED LETTER CONFIRMING PROOF OF PROFESSIONAL REGISTRATION IN THE JURISDICTION OF FABRICATION.
7. REFER TO THE DRAWINGS AND SPECIFICATIONS FOR OTHER REQUIREMENTS.

ABBREVIATIONS

ACCOM. --- ACCOMMODATE
AESS ------ ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
Af ---------- FACTORED AXIAL FORCE
ALT. ------- ALTERNATE
ALUM. ----- ALUMINUM
ANC. ------- ANCHOR ROD
ARCH. ----- ARCHITECTURAL
B.C.E. ----- BOTTOM CHORD EXTENSION
B.E.W. ---- BOTTOM EACH WAY
B.L.L. ----- BOTTOM LOWER LAYER
B.L.W. ---- BOTTOM LONG WAY
BM. -------- BEAM
BOT. ------- BOTTOM
B.P.T. ----- BUCKLING PREVENTION TIE
B.S.W. ---- BOTTOM SHORT WAY
B.U.L. ----- BOTTOM UPPER LAYER
B.W. ------- BOTH WAYS
C.A. -------- COLUMN ABOVE
CANT. ------ CANTILEVER
C.B. -------- COLUMN BELOW
CBM ------- COUPLING BEAM
C.CPL ------ COMPRESSION COUPLER
Cf ---------- FACTORED AXIAL COMPRESSION FORCE
C.I.P. ------ CAST IN PLACE
C.J. -------- CONTROL JOINT
CL. -------- CENTER LINE
CLR. ------- CLEAR
COL. ------- COLUMN
COMP. ----- COMPRESSION
CONC. ----- CONCRETE
CONT. ----- CONTINUOUS
C.P. -------- COMPLETE PENETRATION
C.S. -------- COMPRESSION SPLICE
CTRS. ------ CENTERS
C/W -------- COMPLETE WITH
DBM ------- DIVIDER BEAM
DET. ------- DETAIL
D.L. -------- DEAD LOAD
D.O. -------- DO OVER - (DITTO)
DP. -------- DEEP (E.G. DEPTH OF BEAM)
D.T.S. ----- DEPTH TO SUIT
DWG. ------ DRAWING
DWLS. ----- DOWELS
EA. -------- EACH
E.E. -------- EACH END
E.F. -------- EACH FACE
EL. -------- ELEVATION
ELEV. ------ ELEVATOR
ELEC. ------ ELECTRICAL
EQ. -------- EQUAL
E.S. -------- EACH SIDE
E.W. ------- EACH WAY
EXIST. ----- EXISTING
EXP. JT. --- EXPANSION JOINT
EXT. ------- EXTERIOR
F.D. -------- FLOOR DRAIN
F.F. -------- FAR FACE
F.S. -------- FAR SIDE
FTG. ------- FOOTING
GA. -------- GAUGE
GALV. ------ GALVANIZED
G.L. -------- GRID LINE
GR. BM ---- GRADE BEAM
G.W.B. ---- GYPSUM WALL BOARD
H., HORIZ.- HORIZONTAL
H.1.E. ----- HOOK ONE END
H.2.E. ----- HOOK TWO ENDS
H&V -------- HORIZONTAL AND VERTICAL
H.D.G. ----- HOT-DIP GALVANIZED
Hf ---------- FACTORED HORIZONTAL FORCE
H.P. -------- HIGH POINT
H.S.C. ------ HORIZONTALLY SLOTTED CONNECTION
HT. --------- HEIGHT
I.F. -------- INSIDE FACE
INT. -------- INTERIOR
JT. --------- JOINT
LG. -------- LONG
L.L. -------- LIVE LOAD
L.L.B.B. ---- LONG LEGS BACK TO BACK
L.L.H. ------ LONG LEG HORIZONTAL
L.L.V. ------ LONG LEG VERTICAL
L.P. -------- LOW POINT
L.S.H. ------ LONG SIDE HORIZONTAL
L.S.V. ------ LONG SIDE VERTICAL
L.T.S. ------ LENGTH TO SUIT
L.V. -------- LENGTH VARIES
L.W. -------- LONG WAY
MANUF. ---- MANUFACTURED
MAX. ------- MAXIMUM
MECH. ----- MECHANICAL
Mf ---------- FACTORED MOMENT
Mfx --------- STRONG AXIS BENDING MOMENT
Mfy --------- WEAK AXIS BENDING MOMENT
MIN. -------- MINIMUM
Mtf --------- FACTORED TORSION
N.F. -------- NEAR FACE
N.I.C. ------ NOT IN CONTRACT
N.S. -------- NEAR SIDE
N.T.S. ------ NOT TO SCALE
O.C. -------- ON CENTER
O/C -------- ON CENTER
O.F. -------- OUTSIDE FACE
OPP. ------- OPPOSITE
O.W.S.J. --- OPEN WEB STEEL JOIST
Pf ---------- FACTORED POINT LOAD
P.P. -------- PARTIAL PENETRATION
P/T -------- POST-TENSIONING
R.D. -------- ROOF DRAIN
REQ'D ------ REQUIRED
R.O. -------- ROUGH OPENING
RTN. ------- RETURN
R/W -------- REINFORCED WITH
R.W.L. ----- RAIN WATER LEADER
S.A.M. ----- SELF-ADHERED MEMBRANE
S.D.F. ----- STEP DOWN FOOTING
S.D.L. ----- SUPERIMPOSED DEAD LOAD
SIM. -------- SIMILAR
S.L. -------- SNOW LOAD
S.L.B.B. --- SHORT LEGS BACK TO BACK
SLS --------- SERVICEABILITY LIMIT STATE
S.O.G. ----- SLAB ON GRADE
SPEC. ------ SPECIFICATIONS
SR ---------- HEADED STUD ASSEMBLY
S.S. -------- STAINLESS STEEL
S.S.T. ------ SIMPSON STRONG-TIE
ST. --------- STAGGER
STAG. ------ STAGGER
STIR. ------ STIRRUP
STL. -------- STEEL
S.W. -------- SHORT WAY
SYM. ------- SYMMETRICAL
T&B --------- TOP AND BOTTOM
T&C --------- TENSION AND COMPRESSION
T&G --------- TONGUE AND GROOVE
T.D.C. ------ TRAFFIC DECK COATING
TENS. ------ TENSION
T.CPL ------- TENSION COUPLER
T.E.W. ----- TOP EACH WAY
Tf ---------- FACTORED AXIAL TENSION FORCE
THK. -------- THICK
THRU ------ THROUGH
T.J. -------- TIE JOIST
T.L.L. ------ TOP LOWER LAYER
T.O. -------- TOP OF
T.O.C. ------ TOP OF CONCRETE
T.O.F. ------ TOP OF FOUNDATION
T.O.S. ------ TOP OF SLAB
T.O.S.S. --- TOP OF STRUCTURAL STEEL
T.O.W. ----- TOP OF WALL
TR. --------- TRANSFER
T.S. -------- TENSION SPLICE
T.U.L. ------ TOP UPPER LAYER
TYP. ------- TYPICAL
ULS -------- ULTIMATE LIMIT STATE
U.N.O. ----- UNLESS NOTED OTHERWISE
U/S --------- UNDERSIDE
V., VERT. - VERTICAL
Vf ---------- FACTORED SHEAR FORCE
V.S.C. ------ VERTICALLY SLOTTED CONNECTION
W/ ---------- WITH
W.A. -------- WALL ABOVE
W.B. -------- WALL BELOW
W.P. -------- WORK POINT
WT. -------- WEIGHT
VXB --------- VERTICAL BRACING, VERTICAL CROSS BRACING

FIELD REVIEW BY READ JONES CHRISTOFFERSEN (RJC)

1. READ JONES CHRISTOFFERSEN PROVIDES FIELD REVIEW ONLY FOR THE WORK SHOWN ON THESE STRUCTURAL DRAWINGS. THIS REVIEW IS NOT A "FULL TIME" REVIEW BUT IS CONDUCTED WITH SUCH FREQUENCY AS RJC DEEMS APPROPRIATE TO OBSERVE VARIOUS STAGES OF THE WORK AND TO ASCERTAIN THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE PLANS AND SUPPORTING DOCUMENTS PREPARED BY READ JONES CHRISTOFFERSEN. FIELD REVIEW BY READ JONES CHRISTOFFERSEN IS NOT CARRIED OUT FOR THE CONTRACTOR'S BENEFIT, NOR DOES IT MAKE READ JONES CHRISTOFFERSEN GUARANTORS OF THE CONTRACTOR'S WORK. IT REMAINS THE CONTRACTOR'S RESPONSIBILITY TO BUILD THE WORK IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. RJC SHALL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB-CONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. PROVIDE 24 HOURS ADVANCE NOTICE OF EACH REQUIRED FIELD REVIEW. FIELD REVIEWS SHALL BE SCHEDULED TO BE CARRIED OUT DURING NORMAL BUSINESS HOURS UNLESS SPECIAL ARRANGEMENTS ARE MADE WITH RJC.
3. THE WORK TO BE REVIEWED SHALL BE GENERALLY COMPLETE.

GENERAL

1. SECTION MARK SHOWN THUS 4 / S-3 MEANS SECTION #4 ON DRAWING S-3.
2. SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR SLEEVES, NAILERS, INSERTS, ETC., TO BE ENCASED IN CONCRETE.
3. SEE ARCHITECTURAL DRAWINGS FOR FLOOR AND ROOF ELEVATIONS, RECESSES, DRAINAGE SLOPES, ETC.
4. THE GENERAL CONTRACTOR SHALL REVIEW ALL THE DRAWINGS AND CHECK DIMENSIONS BEFORE CONSTRUCTION. REPORT DISCREPANCIES BETWEEN STRUCTURAL AND OTHER DISCIPLINES DRAWINGS FOR CLARIFICATION.
5. CONCRETE WORK
   SHALL CONFORM TO CSA A23.1, CSA A23.2, CSA A23.3 AND REFERENCED DOCUMENTS.
6. STRUCTURAL STEEL WORK
   SHALL CONFORM TO CSA S16 AND REFERENCED DOCUMENTS.
7. FIRE RESISTANCE RATINGS
   SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PRECISE LOCATION OF REQUIRED FIRE RESISTANCE RATINGS.
8. DO NOT CUT OR DRILL ANY OPENINGS IN STRUCTURAL MEMBERS WITHOUT WRITTEN PERMISSION OF RJC.
9. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND LANDSCAPE DRAWINGS FOR LOCATIONS, CONFIGURATIONS, EXTENT, AND SIZES OF ALL CURBS, UPSTANDS, DOWNTURNS; AND FOR OPENINGS THROUGH FLOORS AND WALLS FOR DUCTS, CONDUIT AND PIPING. PROVIDE FOR SAME.
10. DEFINITIONS:
    - A. RJC: READ JONES CHRISTOFFERSEN OR ITS REPRESENTATIVE.
    - B. SPECIALTY STRUCTURAL ENGINEER: A STRUCTURAL ENGINEER REGISTERED AND LICENSED TO PRACTICE BY THE PROFESSIONAL ENGINEERING ASSOCIATION HAVING JURISDICTION IN THE AREA WHERE THE STRUCTURE IS TO BE BUILT AND WHO IS RESPONSIBLE FOR THE DESIGN AND FIELD REVIEW OF:
      - STRUCTURAL ELEMENTS DESIGNED BY THE CONTRACTOR OR SUBCONTRACTORS, SUCH AS OPEN WEB STEEL JOISTS, PRECAST DOUBLE TEES, PRECAST PLANKS, STRUCTURAL STEEL CONNECTIONS, LIGHT WOOD FRAME ROOF TRUSSES, ETC.
      - SECONDARY STRUCTURAL ELEMENTS AND NON-STRUCTURAL ELEMENTS. SEE ALSO "NON-STRUCTURAL ELEMENTS" GENERAL NOTES.
    - C. CONTINUOUS: FULL TENSION SPLICE AND TENSION DEVELOPMENT LENGTH.
    - D. EMBEDMENT: UNLESS NOTED OTHERWISE COMPRESSION EMBEDMENT MEANS A COMPRESSION DEVELOPMENT LENGTH AND TENSION EMBEDMENT MEANS A TENSION DEVELOPMENT LENGTH AS PER CAN/CSA-A23.3 AND AS SHOWN ON THESE GENERAL NOTES DRAWINGS.
    - E. GENERAL CONTRACTOR: FOR THE PURPOSES OF THESE DRAWINGS, THE USE OF THE TERM "CONTRACTOR" OR "GENERAL CONTRACTOR" SHALL REFER TO THE PRIME PERSON OR COMPANY RESPONSIBLE FOR CONSTRUCTION OF THE PROJECT AND THE COORDINATION OF TRADES AND SUBCONTRACTORS. THIS MAY BE THE GENERAL CONTRACTOR, OR A CONSTRUCTION MANAGER.

DESIGN LOADS

1. SPECIFIED UNIFORM LOADS - PSF (SEE ALSO PLANS)

	LIVE LOAD	SUPERIMPOSED DEAD LOAD (S.D.L.)
A. ROOF - BASED ON A GROUND SNOW LOAD OF	35.4	25
PLUS A RAIN LOAD OF	2.1	
AND AN IMPORTANCE FACTOR OF Is = 1.0 ULS, 0.9 SLS		
B. RESIDENTIAL FLOORS	40	20
C. ROOF TERRACES	100	75
D. MECHANICAL ROOM	75	50
E. LOBBY LEVEL INTERIOR	100	50
F. PARKING LEVELS	50	5
G. STAIRS AND CORRIDORS	100	-

CONTRACTORS CONSTRUCTION LOADS MUST NOT EXCEED THE ABOVE DESIGN LOADS. DESIGN LOADS MAY ONLY BE APPLIED AFTER CONCRETE REACHES ITS DESIGN STRENGTH.

SUPERIMPOSED DEAD LOADS (S.D.L.) ARE NON-STRUCTURE DEAD LOADS DUE TO ARCHITECTURAL TOPPINGS, FINISHES, PARTITIONS, ROOFING MATERIALS, PAVERS, SOIL, ETC.

STRUCTURAL DEAD LOADS (D.L.) ARE DUE TO THE WEIGHT OF THE STRUCTURE ITSELF. THEY VARY WITH THE STRUCTURAL SYSTEM AND INCLUDE CONCRETE TOPPINGS ON STEEL DECK.

LIVE LOADS HAVE BEEN REDUCED FOLLOWING THE PROVISIONS SET FORTH IN THE NATIONAL BUILDING CODE OF CANADA 2020 FOR THE PURPOSE OF DESIGNING COLUMNS, WALLS, TRANSFER BEAMS, TRANSFER SLABS, AND FOUNDATIONS.

2. UNLESS NOTED OTHERWISE, SPECIFIED CONCENTRATED LOADS ARE:
   - A. ROOFS ---------- 0.3 KIPS
3. RAIN PONDING LOADS ON ROOFS ARE BASED ON ROOF SLOPES, PARAPET HEIGHTS AND SCUPPER LOCATIONS SHOWN ON ARCHITECTURAL DRAWINGS. DEPTH OF PONDING ASSUMES THAT ALL ROOF DRAINS ARE ACCIDENTALLY PLUGGED FOR A MAXIMUM PERIOD OF 24 HOURS, UNLESS NOTED OTHERWISE.

   ONE DAY RAIN, (1/50) = 3 3/8"
4. WIND UPLIFT LOADS ON STEEL OR WOOD ROOFS SHALL BE 20 PSF NET FACTORED UNLESS NOTED OTHERWISE.
5. THIS PROJECT IS CLASSIFIED AS A NORMAL IMPORTANCE STRUCTURE.
6. SEISMIC AND WIND DESIGN:

   THE LATERAL SYSTEM FOR THIS PROJECT CONSISTS OF SHEAR WALLS AND IS DESIGNED FOR THE FOLLOWING EARTHQUAKE FACTORS:

   Sa (0.2) = 0.094

   SITE CLASSIFICATION: SITE CLASS D

		WOOD FRAME	CONCRETE
Sa (0.5) = 0.064	Ie =	1.0	1.0
Sa (1.0) = 0.034	Rd =	3.0	1.5
Sa (2.0) = 0.015	Ro =	1.7	1.3
Sa (5.0) = 0.003	PGA = 0.043		
Sa (10.0) = 0.001			

   AND THE FOLLOWING CLIMATIC DATA:

   HOURLY WIND PRESSURE, (1/50) = 9.58 PSF
   Iw = 1.0 ULS, 0.75 SLS.

LIST OF STRUCTURAL DRAWINGS

DRAWINGS

1. THIS SET OF DRAWINGS SHOWS THE COMPLETED PROJECT. THE DRAWINGS DO NOT SHOW COMPONENTS THAT MAY BE NECESSARY FOR CONSTRUCTION SAFETY. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR SAFETY IN AND ABOUT THE JOB SITE DURING CONSTRUCTION, AND THE DESIGN AND ERECTION OF ALL TEMPORARY STRUCTURES, FORMWORK, FALSE WORK, SHORING, ETC. REQUIRED TO COMPLETE THE WORK.
2. THE USE OF THESE DRAWINGS IS LIMITED TO THAT IDENTIFIED IN THE REVISIONS COLUMN. DO NOT CONSTRUCT FROM THESE DRAWINGS UNLESS MARKED "ISSUED FOR CONSTRUCTION" IN THE REVISIONS COLUMN, BY READ JONES CHRISTOFFERSEN LTD. THE DRAWINGS SHALL NOT BE USED FOR PRICING, COSTING, OR TENDER UNLESS SO INDICATED IN THE REVISION COLUMN. PRICING OR COSTING DRAWINGS ARE NOT COMPLETE AND ANY PRICES BASED ON PRICING OR COSTING DRAWINGS MUST INCLUDE ALLOWANCES FOR THIS.
3. THE INFORMATION ON THESE DRAWINGS SHALL NOT BE USED FOR ANY OTHER PROJECT OR WORKS. THE INFORMATION ON THESE DRAWINGS APPLIES SOLELY TO THIS PROJECT.
4. GENERAL NOTES SHALL BE READ IN CONJUNCTION WITH THE TYPICAL DETAILS AND PROJECT SPECIFICATIONS.

DRAWING SET COORDINATION

1. THE STRUCTURAL DRAWINGS ARE BASED ON COORDINATED ARCHITECTURAL DRAWINGS.
   - A. COORDINATION DATE: 2024-12-02

DESIGN CODE

1. THE COMPLETED BASE BUILDING STRUCTURE SHOWN ON THE STRUCTURAL DRAWINGS HAS BEEN DESIGNED IN SUBSTANTIAL ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA 2020.

rjc Creative Thinking Practical Results

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No.	Revision	Date	By
1	ISSUED FOR 50% REVIEW	2024.12.20	KML

Drawing Notes

1. All drawings, plans, models, designs, specifications and other documents prepared by Read Jones Christoffersen Ltd. ("RJC") and used in connection with this project are instruments of service for the work shown in them (the "Work") and as such are and remain the property of RJC whether the Work is executed or not, and RJC reserves the copyright in them and in the Work executed from them, and they shall not be used for any other work or project.
2. These drawings are "design drawings" only. They may not be suitable for use as shop drawings. Use of these drawings as base drawings for "shop drawings" is not permitted unless written permission containing certain conditions and limitations is obtained from RJC. The work "as constructed" may vary from what is shown on these drawings.
3. Use of these drawings is limited to that identified in the Issued/Revision column. Do not construct from these drawings unless marked "Issued for Construction" by RJC in the Issued/Revision column, and then only for the parts noted. The drawings shall not be used for "pricing" / "costing" or "tender" unless so indicated in the Issued/Revisions column. "Pricing" or "Costing" drawings are not complete and any prices based on such drawings must allow for this.

Seal

NOT FOR CONSTRUCTION

Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

GENERAL NOTES

Drawn By	KML	Scale	As indicated
Designed By	PWM	Date	2024.12.20
RJC Project Number		SAS.138936.0001	

Sheet Number: **S 1.1**
Revision: **1**

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CONCRETE - STRENGTH AND EXPOSURE

GENERAL (AREAS NOT INCLUDING PARKING)

ELEMENT	COMPRESSIVE STRENGTH (MPa) 28 DAY U.N.O.	EXPOSURE CLASS	COMMENTS
SLAB ON GRADE (INTERIOR)	25 MPa	N	-
SLAB ON GRADE (EXTERIOR)	32 MPa	C-2	-
RETAINING WALLS / FOUNDATION WALLS	25 MPa	F-2	19mm AGGREGATE
SHEAR WALLS	SEE SCHEDULE (56 DAY)	N/F-2	-
OTHER WALLS	25 MPa	N/F-2	-
COLUMNS	SEE SCHEDULE (56 DAY)	N/F-2	-
MECHANICAL HOUSEKEEPING PADS	20 MPa	N	-
SLABS AND BEAMS	25 MPa (28 DAY)	N	-
EXTERIOR EXPOSED BALCONIES AND EYEBROWS	35 MPa	F-1	SEE PLANS AND ARCH. DWGS.

NOTES:

1. WHERE EXPOSURE CLASS LISTED AS N/F-1/F-2:
   - A. USE N EXPOSURE FOR INTERIOR CONCRETE LOCATED WITHIN AN INSULATED BUILDING ENVELOPE (E.G. DRY AND NOT SUBJECTED TO FREEZING AND THAWING).
   - B. USE F-1 EXPOSURE FOR HORIZONTAL AND SLOPED CONCRETE MEMBERS EXTERIOR TO THE BUILDING INSULATION AND NOT PROTECTED BY A MEMBRANE AND DRIP EDGE (E.G. WET AND SUBJECT TO FREEZING AND THAWING).
   - C. USE F-2 EXPOSURE FOR HORIZONTAL AND SLOPED CONCRETE MEMBERS EXTERIOR TO THE BUILDING INSULATION AND PROTECTED BY A MEMBRANE AND DRIP EDGE (E.G. DRY AND SUBJECT TO FREEZING AND THAWING).
   - D. USE F-2 FOR VERTICAL CONCRETE MEMBERS EXTERIOR TO THE BUILDING INSULATION.
2. CONCRETE STRENGTH AND EXPOSURE CLASS OF STAIRS AND RAMPS SHALL MEET THE MOST STRINGENT CRITERIA OF THE ADJOINING SLABS AND BEAMS UNLESS NOTED OTHERWISE.

PARKING AREAS

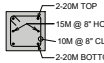
ELEMENT	COMPRESSIVE STRENGTH (MPa) 28 DAY U.N.O.	EXPOSURE CLASS	COMMENTS
REINFORCED SLAB ON GRADE	35 MPa	C-1	-
ALL OTHER INTERIOR CONCRETE (SLABS, BEAMS, WALLS, COLUMNS, AND STAIRS	SEE SCHEDULES (35 MPa MIN.)	C-1	-

CONCRETE - SUPPLY, TESTING AND SUBMITTALS

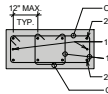
1. CONCRETE IS SPECIFIED AS PER THE "PERFORMANCE" ALTERNATE AS OUTLINED IN CSA A23.1.
2. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR WORKING WITH THE CONCRETE SUPPLIER TO ENSURE THAT THE PLASTIC AND HARDENED MIX PROPERTIES MEET SITE REQUIREMENTS FOR PLACING, FINISHING, AND THE OWNERS' SPECIFIED PERFORMANCE REQUIREMENTS. THE GENERAL CONTRACTOR SHALL MEET THE DOCUMENTATION AND QUALITY CONTROL REQUIREMENTS OUTLINED UNDER THE "PERFORMANCE" ALTERNATE OF CSA A23.1.
3. THE SUPPLIER SHALL MEET ALL CERTIFICATION AND DOCUMENTATION REQUIREMENTS AS OUTLINED UNDER THE "PERFORMANCE" ALTERNATIVE OF CSA A23.1.
4. SUBMIT A MIX DESIGN REVIEW LETTER SIGNED AND SEALED BY A PROFESSIONAL ENGINEER CONFIRMING THAT THE PROPOSED MIX DESIGNS WILL ACHIEVE THE REQUIRED STRENGTH, DURABILITY, AND PERFORMANCE REQUIREMENTS INDICATED UNDER SUPPLIER RESPONSIBILITY - ITEM (g) OF TABLE 5 (ALTERNATIVE 1) OF CSA A23.1.
5. AT THE REQUEST OF THE OWNER, THE SUPPLIER WILL FURNISH TEST DATA RESULTS (LESS THAN 3 MONTHS OLD) FOR EACH PROPOSED MIX DESIGN DEMONSTRATING THAT THEY MEET THE STRENGTH, DURABILITY, AND SHRINKAGE REQUIREMENTS SPECIFIED.
6. THE CONCRETE SUPPLIER SHALL BE CERTIFIED BY THE READY MIXED CONCRETE ASSOCIATION OF SASKATCHEWAN.

GRADE BEAM REINFORCEMENT

1. UNLESS OTHERWISE NOTED ALL GRADE BEAM REINFORCEMENT SHALL CONSIST OF THE FOLLOWING:
   - A. UP TO 16" WIDE:



   - B. OVER 16" WIDE:



2. HOOK HORIZONTAL BEAM REINFORCING OR PROVIDE CORNER BARS AT ALL BEAM INTERSECTIONS AND CORNERS PER DETAILS CF130 & CF131.
3. UNLESS NOTED OTHERWISE BEAM REINFORCEMENT SHALL BE CONTINUOUS:
   - A. TOP REINFORCEMENT SHALL BE SPLICED AT MIDSPAN AND SHALL HAVE LAPS OF 39". HOOK TOP REINFORCEMENT AT END SUPPORTS AND PROVIDE ADDITIONAL TOP BARS WHERE REINFORCEMENT IS INTERRUPTED BY RECESSED COLUMN OR BASEPLATE DETAILS.
   - B. BOTTOM REINFORCEMENT SHALL BE SPLICED AT PILE, OR FOUNDATION LOCATIONS AND SHALL HAVE LAPS OF 30".
   - C. ALL REINFORCEMENT TO BE CONTINUOUS THROUGH PILE CAPS, FOUNDATIONS, OR INTERSECTING GRADE BEAMS.
4. UNLESS OTHERWISE NOTED MAXIMUM LENGTH OF POUR SHALL NOT EXCEED 100'-0". LOCATIONS AND DETAILS OF CONSTRUCTION JOINTS SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW PRIOR TO CONSTRUCTION.
5. REFER TO STRUCTURAL DRAWINGS FOR DETAILS OF GRADE BEAM CONSTRUCTION JOINTS AND CONTROL JOINTS PER DETAIL CF132.
6. TOP OF GRADE BEAM TO BE FLUSH WITH TOP OF END SUPPORT U.N.O.

CONCRETE - GENERAL

1. UNLESS NOTED OTHERWISE, ALL CONCRETE IS TO BE CAST-IN-PLACE.
2. THE USE OF SHOTCRETE REQUIRES APPROVAL BY THE STRUCTURAL ENGINEER. ANY COSTS ASSOCIATED WITH REDESIGN, CHANGES TO THE CONTRACT DOCUMENTS AND ANY ADDITIONAL TESTING AND CONTRACT ADMINISTRATION COSTS TO ACCOMMODATE SHOTCRETE IS TO BE PAID FOR BY THE CONTRACTOR.
3. PORTLAND CEMENT SHALL BE TYPE GU OR GUL UNLESS NOTED OTHERWISE. ALL CONCRETE MIX SUBMITTALS MUST CLEARLY INDICATE THE SPECIFIC CEMENT TYPE TO BE UTILIZED, OR THE PROPORTIONS WHEN MULTIPLE CEMENT TYPES ARE UTILIZED IN THE SAME MIX.
4. CEMENT TYPE AND SUPPLEMENTARY CEMENTING MATERIALS FOR EXPOSURE CLASSES S-1, S-2, AND S-3 SHALL BE AS OUTLINED IN CSA A23.1.
5. CONCRETE SHALL HAVE A UNIT WEIGHT OF 23±1 kN/m³ (145±5 PCF) UNLESS NOTED OTHERWISE.
6. THE CONCRETE PROPERTIES USED IN DESIGN ARE BASED ON A NOMINAL COARSE AGGREGATE SIZE OF 20 mm (3/4") ACCORDING TO TABLE 11 OF CSA A23.1, UNLESS NOTED OTHERWISE. ALL LOCATIONS PROPOSED BY THE CONTRACTOR FOR USE OF CONCRETE MIX DESIGNS WITH A NOMINAL COARSE AGGREGATE SIZE DIFFERENT THAN 20 mm (3/4") SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. ANY INCREASE IN REQUIRED CONCRETE STRENGTH OR INCREASE IN QUANTITY OF REINFORCEMENT DUE TO PROPOSED USE OF CONCRETE MIX WITH DIFFERENT NOMINAL COARSE AGGREGATE SIZE TO BE PAID FOR BY THE CONTRACTOR.
7. RECYCLED AGGREGATE IS NOT TO BE USED WITHOUT WRITTEN APPROVAL BY THE STRUCTURAL ENGINEER.
8. SLUMP AND AGGREGATE SIZE TO BE DETERMINED BY THE GENERAL CONTRACTOR AND SUPPLIER TO MEET PLACEMENT, AND FINISHING REQUIREMENTS WITHOUT SEGREGATION WHILE MEETING ALL OWNER SPECIFICATIONS.
9. MAXIMUM WATER/CEMENT RATIO AND AIR CONTENT TO MEET THE REQUIREMENTS FOR THE EXPOSURE CLASS AS OUTLINED IN CSA A23.1. REQUIRED AIR CONTENT FOR EXPOSURE CLASSES F-1, F-2, C-1, C-2, AND C-XL SHALL BE BASED ON CONCRETE EXPOSED TO FREEZE-THAW CYCLES UNLESS NOTED OTHERWISE.
10. CHLORIDE ION PENETRABILITY FOR EXPOSURE CLASS C-1 AND C-XL SHALL MEET THE REQUIREMENTS OF CSA A23.1.

HELICAL SCREW PILE FOUNDATIONS

1. PILING SHALL BE PERFORMED BY FIRMS SPECIALIZING IN THE DESIGN AND INSTALLATION OF HELICAL SCREW PILE FOUNDATIONS. PROVIDE CERTIFICATION DOCUMENTS TO THE OWNER OR THEIR REPRESENTATIVE.
2. PILING AND PILE DESIGN SHALL CONFORM TO THE NATIONAL BUILDING CODE OF CANADA 2020 AND TO COMMENTARY K OF THE "USERS GUIDE-NBC 2020 STRUCTURAL COMMENTARIES (PART 4 - DIVISION B)". REFER TO PLANS FOR FACTORED PILE DESIGN LOADING REQUIREMENTS.
3. UNDER SPECIFIED LOADS, HELICAL SCREW PILES SHALL NOT SETTLE MORE THAN 5 mm. THIS REQUIREMENT SHALL BE CONFIRMED BY PILE TESTING AS OUTLINED BELOW:
   - A. LOAD TESTS SHALL BE PERFORMED TO VERIFY THE SUITABILITY AND CAPACITY OF THE PROPOSED SCREW PILE AND THE PROPOSED INSTALLATION PROCEDURES PRIOR TO INSTALLATION OF PRODUCTION PILES. TESTING SHALL CONFORM TO ASTM STANDARD D1143.
   - B. A MINIMUM OF ONE SACRIFICIAL TEST PILE WITH REACTION ANCHORS SHALL BE CONSTRUCTED PRIOR TO THE START OF WORK AT LOCATION AS DIRECTED BY THE OWNER.
   - C. TESTING SHALL BE USED TO VERIFY THE SCREW PILE DESIGN AND CONFIRM THAT PILE SETTLEMENT UNDER SPECIFIED LOADS DOES NOT EXCEED 5 mm.
   - D. PROVIDE THE OWNER COPIES OF FIELD TESTING REPORTS WITHIN 24 HOURS AFTER THE COMPLETION OF THE LOAD TEST. THIS WRITTEN DOCUMENT WILL EITHER CONFIRM THE LOAD CAPACITY AS REQUIRED ON THE DRAWINGS OR PROPOSE CHANGES BASED UPON THE RESULTS OF THE LOAD TEST.
4. ALL MATERIALS FORMING PART OF THE SCREW PILE ASSEMBLY SHALL STRICTLY ADHERE TO MANUFACTURER'S REQUIREMENTS.
5. HELICAL BEARING PLATE, CENTRAL SHAFT (HEAD AND EXTENSION SECTIONS) AND ALL OTHER COMPONENTS IN CONTACT WITH THE SOIL SHALL BE HOT-DIPPED GALVANIZED.
6. SCREW PILES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION PROCEDURES.
7. SCREW PILES SHALL BE DRIVEN VERTICALLY WITH A VARIATION OF NOT MORE THAN 10 mm PER METRE. ALL HEADS SHALL BE WITHIN 75 mm OF THEIR SHOWN LOCATIONS. MINIMUM INSTALLATION TORQUE AND MINIMUM OVERALL LENGTH CRITERIA AS SHOWN ON THE WORKING DRAWINGS SHALL BE SATISFIED PRIOR TO TERMINATING THE SCREW PILE. IF THE SCREW PILE IS REFUSED OR DEFLECTED BY A SUBSURFACE OBSTRUCTION, THE INSTALLATION SHALL BE TERMINATED AND THE PILE REMOVED. THE OBSTRUCTION SHALL BE REMOVED AND THE SCREW PILE RE-INSTALLED. IF THE OBSTRUCTION CANNOT BE REMOVED, THE SCREW PILE SHALL BE INSTALLED AT AM ADJACENT LOCATION SUBJECT TO REVIEW AND ACCEPTANCE BY THE OWNER.
8. SCREW PILE CUT-OFF SHALL BE TRUE AND LEVEL WITHIN 25 mm OF THE SPECIFIED CUT-OFF ELEVATIONS.
9. SUBMIT SHOP DRAWINGS FOR ALL SCREW PILE COMPONENTS, INCLUDING CASING COMPONENTS AND PILE TOP ATTACHMENT. THIS INCLUDES SCREW PILE LEAD AND EXTENSION SECTION IDENTIFICATION. ALL SUBMITTALS SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ALBERTA.
10. THE CONTRACTOR SHALL SUBMIT RECORD DRAWINGS SHOWING THE ACCURATE LOCATIONS AND DETAILS OF AS-BUILT PILES AND PROVIDE WRITTEN CONFIRMATION THAT AS-BUILT PILES HAVE BEEN INSTALLED IN CONFORMANCE WITH ENGINEERED SHOP DRAWINGS.

CONCRETE - FINISHING AND ADMIXTURES

1. CURING OF CONCRETE TO MEET THE REQUIREMENTS FOR THE EXPOSURE CLASS AS OUTLINED IN CSA A23.1. CURING COMPOUNDS ARE NOT PERMITTED FOR SUSPENDED PARKING SLABS OR EXPOSURE CLASS C-XL CONCRETE. PARKING SLABS AND REINFORCED SLAB ON GRADES IN PARKING AREAS ARE TO BE CURED FOR MINIMUM 7 DAYS.
2. CORROSION INHIBITORS ARE TO BE USED IN CONCRETE IN AREAS NOTED ON THE STRUCTURAL DRAWINGS, AS WELL AS IN STAIRS AND STAIR LANDINGS WITHIN PARKADES. USE 10 L/m³ OF "DCI S" BY GRACE CONSTRUCTION PRODUCTS OR "MASTERLIFE CI 30" BY BASF CONSTRUCTION CHEMICALS. ALTERNATIVELY, USE C-XL CONCRETE WITH CURING TYPE 3 (EXTENDED) PER CSA A23.1.
3. ALL BOTTOM EDGES OF EXPOSED SLABS AND BEAMS, AS WELL AS EDGES OF WALLS AND COLUMNS, TO BE CHAMFERED 3/4" X 3/4". ALL TOP EDGES OF EXPOSED SLABS, BEAMS, UPSTANDS AND STAIRS TO BE TOOLED UNLESS NOTED OTHERWISE. SEE ALSO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR OTHER FINISH REQUIREMENTS.
4. NO CALCIUM CHLORIDE IS PERMITTED, IN ANY FORM, IN ANY CONCRETE MIX WITHOUT THE EXPRESS WRITTEN CONSENT OF READ JONES CHRISTOFFERSEN LTD.
5. CURING AND PROTECTION OF CONCRETE FOR HOT, COLD OR DRY WEATHER IS TO BE AS PER CSA A23.1 AS A MINIMUM. SEE ALSO "CONCRETE COLD WEATHER REQUIREMENTS" IN THE STRUCTURAL DRAWINGS.

NON-STRUCTURAL ELEMENTS

1. "NON-STRUCTURAL" OR "SECONDARY STRUCTURAL" ELEMENTS ARE NOT PART OF THE STRUCTURAL DESIGN SHOWN ON THESE DRAWINGS. SUCH ELEMENTS ARE DESIGNED, DETAILED AND REVIEWED IN THE FIELD BY OTHERS. THEY APPEAR ON DRAWINGS OTHER THAN THESE DRAWINGS OF READ JONES CHRISTOFFERSEN LTD. WHERE STRUCTURAL ENGINEERING RESPONSIBILITY IS REQUIRED FOR THESE ELEMENTS, THIS SHALL BE PROVIDED BY SPECIALTY STRUCTURAL ENGINEERS, WHO SHALL PREPARE ALL SUBMITTALS UNDER THEIR SEAL AND SIGNATURE AND ALSO PROVIDE ANY LETTERS REQUIRED BY BUILDING PERMIT AUTHORITIES.
2. EXAMPLES OF NON-STRUCTURAL ELEMENTS INCLUDE, BUT ARE NOT LIMITED TO:
   - A. ARCHITECTURAL COMPONENTS SUCH AS GUARDRAILS, HANDRAILS, FLAG POSTS, CANOPIES, CEILINGS, MILLWORK, ETC.
   - B. LANDSCAPE ELEMENTS SUCH AS BENCHES, LIGHT POSTS, PLANTERS, PAVERS, SUPPORT PEDESTALS, ETC.
   - C. CLADDING, GLAZING, WINDOW MULLIONS, INTERIOR STUD WALLS AND EXTERIOR STUD WALLS.
   - D. ARCHITECTURAL PRECAST, PRECAST CLADDING.
   - E. SKYLIGHTS.
   - F. MECHANICAL AND ELECTRICAL EQUIPMENT, COMPONENTS, AND THEIR ATTACHMENT DETAILS.
   - G. WINDOW WASHING EQUIPMENT AND ITS ATTACHMENTS.
   - H. FALL PROTECTION AND FALL ARREST SYSTEMS AND THEIR ATTACHMENTS.
   - I. ESCALATORS, ELEVATORS, AND CONVEYING SYSTEMS.
   - J. GLASS BLOCK AND ITS ATTACHMENTS.
   - K. BRICK OR BLOCK VENEERS AND THEIR ATTACHMENTS.
   - L. DESIGN AND FIELD REVIEW OF SEISMIC RESTRAINT FOR SECONDARY STRUCTURAL ELEMENTS AND OPERATIONAL AND FUNCTIONAL COMPONENTS INCLUDING MECHANICAL AND ELECTRICAL EQUIPMENT.
   - M. NON-STRUCTURAL CONCRETE TOPPINGS.
   - N. DESIGN AND FIELD REVIEW OF NON-LOAD BEARING MASONRY.
3. DESIGNS PRODUCED BY THE SPECIALTY ENGINEER SHALL CONSIDER STRENGTH, STABILITY, SERVICEABILITY AND INTEGRITY REQUIREMENTS UNDER GRAVITY AND SEISMIC LOADING IN ACCORDANCE WITH THE CURRENT EDITION OF APPLICABLE DESIGN CODES AND ALL OTHER DESIGN REQUIREMENTS INDICATED IN THE DRAWINGS AND SPECIFICATIONS.
4. CONTRACTOR SHALL COORDINATE THE DESIGN OF ALL NON-STRUCTURAL ELEMENTS DESIGNED BY ONE OR MORE SPECIALTY ENGINEERS AND CONNECTING TO ELEMENTS DESIGNED BY OTHER SPECIALTY ENGINEERS TO ENSURE THE STRENGTH, STABILITY, SERVICEABILITY AND INTEGRITY OF THE FINAL CONSTRUCTION.
5. SHOP DRAWINGS FOR NON-STRUCTURAL ELEMENTS WHICH MAY AFFECT THE PRIMARY STRUCTURAL SYSTEM SHALL BE SUBMITTED TO READ JONES CHRISTOFFERSEN LTD. INDICATE CLEARLY THE METHOD OF ATTACHMENT AND MAGNITUDE OF ALL FORCES (SPECIFIED AND FACTORED) THAT THE STRUCTURE MUST WITHSTAND. THESE DRAWINGS WILL BE REVIEWED ONLY FOR THE EFFECT OF THE ELEMENT ON THE PRIMARY STRUCTURAL SYSTEM.

STRUCTURAL MOVEMENTS

THIS STRUCTURE WILL UNDERGO NORMAL TYPES OF MOVEMENT AND DEFLECTION, AND THE FOLLOWING ARE ESTIMATES FOR THIS STRUCTURE. NON-STRUCTURAL COMPONENTS MUST BE DETAILED TO ACCOMMODATE THIS. DESIGN, DETAILING, AND FIELD REVIEW OF THESE NON-STRUCTURAL ELEMENTS IS BY OTHERS, AND NOT READ JONES CHRISTOFFERSEN LTD.

1. DIFFERENTIAL VERTICAL MOVEMENTS BETWEEN ADJACENT COLUMNS AND BETWEEN ADJACENT COLUMNS AND WALLS = APPROXIMATELY 3/4".
2. VERTICAL DEFLECTION OF COLUMNS AND WALLS DUE TO SHRINKAGE AND CREEP = APROXIMATELY 0.15" PER 12'-0" OF HEIGHT.
3. VERTICAL DEFLECTIONS OF EDGE BEAMS AND EDGES OF SLABS = APPROXIMATELY 1". DIFFERENTIAL DEFLECTIONS OF EDGE BEAMS AND EDGES OF SLABS = ± 5/8".
4. VERTICAL DEFLECTIONS AT INTERIOR OF FLOORS = APPROXIMATELY 1". DIFFERENTIAL DEFLECTIONS AT INTERIOR OF FLOORS = ± 5/8".
5. HORIZONTAL DRIFT DURING WIND AND EARTHQUAKE BETWEEN FLOORS:
   - A. ± 1/2" DRIFT WITHOUT DAMAGE TO NON-STRUCTURAL COMPONENTS.
   - B. ± 2" DRIFT WITHOUT COLLAPSE OF NON-STRUCTURAL COMPONENTS.

ALL STRUCTURES ARE ALSO SUBJECT TO CONSTRUCTION TOLERANCES. THIS SHOULD BE ALLOWED FOR IN DETAILING NON-STRUCTURAL COMPONENTS IN ADDITION TO THE ABOVE MOVEMENTS.

EXCAVATIONS & SHORING

1. DESIGN AND FIELD REVIEW OF EXCAVATION, SHORING, AND BACKFILL IS NOT WITHIN THE SCOPE OF READ JONES CHRISTOFFERSEN'S WORK.

SUB-GRADE NOTES

1. REFER TO GEOTECHNICAL REPORT FOR OTHER SPECIFIC DESIGN REQUIREMENTS FOR FOUNDATIONS, SOIL SLOPES, FROST PROTECTION, MINIMUM COVER, ETC.
2. FOR GROUND ELEVATIONS AND DRAINAGE SLOPES, SEE ARCHITECTURAL & CIVIL DRAWINGS.
3. REMOVE ALL ORGANIC MATERIAL FROM THE BUILDING AREA AS OUTLINED IN THE GEOTECHNICAL REPORT.
4. REMOVE ALL LOOSE OR SATURATED MATERIAL AND GROUNDWATER FROM THE BASE OF FOOTING EXCAVATION BY APPROVED METHODS PRIOR TO PLACING FOUNDATIONS.
5. BEARING SURFACES MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER IMMEDIATELY BEFORE CASTING OF CONCRETE FOR FOUNDATIONS OR SLAB ON GRADE. RJC IS NOT RESPONSIBLE FOR CONFIRMING BEARING CAPACITIES OF SOILS.
6. PROTECT EXCAVATIONS FOR FOOTINGS FROM RAIN, SNOW, FREEZING TEMPERATURES, STANDING WATER, LOSS OF MOISTURE AND DEGRADATION BY APPROVED METHODS.
7. SHOULD WATER OR FROST, ENTER A FOOTING EXCAVATION AFTER SUB-GRADE APPROVAL, THE SUB-GRADE SHALL BE RE-INSPECTED BY THE GEOTECHNICAL ENGINEER AFTER REMOVAL OF THE WATER OR FROST.

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No.	Revision	Date	By
1	ISSUED FOR 50% REVIEW	2024.12.20	KML

Drawing Notes

1. All drawings, plans, models, designs, specifications and other documents prepared by Read Jones Christoffersen Ltd. ("RJC") and used in connection with this project are instruments of service for the work shown in them (the "Work") and as such are and remain the property of RJC whether the Work is executed or not, and RJC reserves the copyright in them and in the Work executed from them, and they shall not be used for any other work or project.
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3. Use of these drawings is limited to that identified in the Issued/Revision column. Do not construct from these drawings unless marked "Issued for Construction" by RJC in the Issued/Revision column, and then only for the parts noted. The drawings shall not be used for "pricing" / "costing" or "tender" unless so indicated in the Issued/Revisions column. "Pricing" or "Costing" drawings are not complete and any prices based on such drawings must allow for this.

Seal

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Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

GENERAL NOTES

Drawn By	KML	Scale	As indicated
Designed By	PWM	Date	2024.12.20
RJC Project Number	SAS.138936.0001		

Sheet Number: **S 1.2**
Revision: **1**

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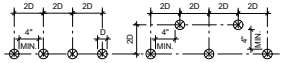
CONCRETE FORMWORK STRIPPING AND SHORING

1. THE DESIGN AND FIELD REVIEW OF FORMWORK, SHORING AND RESHORING IS THE RESPONSIBILITY OF THE CONTRACTOR. RESHORING DRAWINGS SHALL BE SUBMITTED TO RJC FOR THE EFFECT ON THE BASE BUILDING STRUCTURE ONLY.
2. NO COLUMN OR WALL FORMS SHALL BE REMOVED BEFORE CONCRETE HAS REACHED 10 MPa FOR ARCHITECTURAL CONCRETE OR 8 MPa FOR OTHER COLUMNS OR WALLS.
3. NO SLABFORMS OR BEAMFORMS SHALL BE REMOVED BEFORE CONCRETE HAS REACHED 75% OF THE 28 DAY STRENGTH BEFORE STRIPPING AND RESHORING.
4. STRENGTH OF CONCRETE FOR STRIPPING TO BE DETERMINED USING CYLINDERS STORED ON SITE IN A PROTECTED ENCLOSURE THAT MAINTAINS A SIMILAR TEMPERATURE AND HUMIDITY AS THE STRUCTURAL ELEMENTS REPRESENTED. ALTERNATE METHODS, IF ACCEPTABLE TO RJC, MAY BE USED.
5. ALL SLABS, BEAMS, GIRDERS ETC. TO BE SHORED OR RESHORED UNTIL CONCRETE REACHES DESIGN STRENGTH BUT NOT LESS THAN 21 DAYS.
6. NO CONCRETE MAY BE REMOVED WITH PERCUSSIVE METHODS SUCH AS CHIPPING OR JACK-HAMMERING WITHOUT PRIOR APPROVAL BY RJC.
7. THE DESIGN OF THE SLABS / FLOORS TO SATISFY THE "STRUCTURAL MOVEMENT" NOTE ASSUMES THE FOLLOWING TYPICAL PRACTICE FOR SHORING AND RESHORING U.N.O.:
   - A. COMMON / TYPICAL CONSTRUCTION PRACTICE TO SHORE THE FRESH WEIGHT OF FLOORS HAS BEEN ASSUMED.
   - B. LOADING APPLIES TO COMPONENTS OF THE BASE BUILDING STRUCTURE (SLABS, COLUMNS, ETC.) BY THE FORMWORK, SHORES, OR RESHORES SHALL NOT EXCEED THE DESIGN LOAD FOR THOSE BASE BUILDING COMPONENTS. WHEN THIS LOADING IS APPLIED BEFORE THE CONCRETE STRENGTH IN THE BASE BUILDING COMPONENTS HAS REACHED THE SPECIFIED COMPRESSIVE STRENGTH, PRORATE THE COMPONENT CAPACITY BY THE RATIO OF ACTUAL CONCRETE STRENGTH TO SPECIFIED CONCRETE STRENGTH.
   - C. AT NO TIME SHALL THE FACTORED CONSTRUCTION LOAD EXCEED THE FACTORED DESIGN LOAD ON FLOORS.
   - D. VERIFICATION OF ALL SUBGRADE MATERIALS WHICH PROVIDE SUPPORT TO TEMPORARY WORKS, INCLUDING SHORING, AND DESIGN OF ANY ASSOCIATED GROUND IMPROVEMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR'S SPECIALTY GEOTECHNICAL ENGINEER.
8. USE OF ALTERNATE SHORING AND RESHORING METHODS FOR SLABS/ FLOORS PROPOSED BY THE CONTRACTOR'S SPECIALTY ENGINEER TO BE SUBMITTED TO RJC FOR REVIEW AGAINST THE BASE BUILDING DESIGN ASSUMPTIONS. SUCH REVIEW BY RJC DOES NOT RELIEVE THE CONTRACTOR OR THE CONTRACTOR'S SPECIALTY ENGINEER OF THEIR RESPONSIBILITY TO ESTABLISH THE MEANS AND METHODS OF CONSTRUCTION THAT SATISFIES ALL REQUIREMENTS OF STRENGTH, STABILITY, SERVICEABILITY AND CONSTRUCTION SAFETY.

CONDUITS, PIPES, AND SLEEVES EMBEDDED IN CONCRETE - SLABS

REFER TO CONDUITS, PIPES, AND SLEEVES EMBEDDED IN CONCRETE - GENERAL FOR ADDITIONAL REQUIREMENTS

1. SUSPENDED SLABS:
   - A. GUIDELINES FOR CONDUIT SPACING REQUIREMENTS PARALLEL TO THE PLANE OF THE SLAB:
     - i. LOCATE CONDUIT BETWEEN TOP AND BOTTOM REINFORCING.
     - ii. CONDUIT DIAMETER IN ONE LAYER SHALL NOT EXCEED 1/4 CONCRETE SLAB THICKNESS.
     - iii. THREE LAYERS OR MORE CROSSING WILL NOT BE PERMITTED.
     - iv. CENTERLINE SPACING OF CONDUITS AND PIPES TO BE NOT LESS THAN 3 DIAMETERS (4" CLEAR MINIMUM), UNLESS NOTED OTHERWISE.
     - v. CENTERLINE SPACING BETWEEN PARALLEL CONDUIT AND REINFORCING BARS TO BE 3 BAR DIAMETERS (2" CLEAR MINIMUM), UNLESS NOTED OTHERWISE.
   - B. GUIDELINES FOR IN-SLAB CONDUIT SPACING IN RELATION TO COLUMNS, WALLS, BEAMS, ETC.:
     - i. NO IN-SLAB CONDUIT OR PIPES WITHIN 2'-0" OR 3 X SLAB THICKNESS OF HEADED STUD ASSEMBLY UNLESS APPROVED IN WRITING BY RJC. WHERE SUCH APPROVAL IS GIVEN, IN-SLAB CONDUIT OR PIPES SHALL NOT BE ADJACENT TO STUD SHAFT AND SHALL NOT BE WITHIN 2 DIAMETERS CLEAR (1" MINIMUM) OF ANY STUD HEAD.
     - ii. NO IN-SLAB CONDUIT OR PIPES CLOSER THAN 3 X SLAB THICKNESS (2'-8" MINIMUM) FROM ANY FACE OF SHEAR WALLS AND END FACE OR TIED ZONES IN NON-SHEAR WALLS.
     - iii. NO IN-SLAB CONDUIT OR PIPES CLOSER THAN BEAM DEPTH (2'-8" MINIMUM) FROM COLUMN FACE AT BEAMS.
   - C. GUIDELINES FOR EMBEDDED BOXES AND SLEEVES PERPENDICULAR TO THE PLANE OF THE SLAB:
     - i. SPACING OF SLEEVES AND EMBEDDED BOXES TO BE NOT LESS THAN THE FOLLOWING:



     - ii. WHERE TOP SLAB BARS GO BETWEEN SLEEVES, ADD 1-15M TOP EACH SIDE OF SLEEVES IN PERPENDICULAR DIRECTIONS. EXTEND 1'-8" MINIMUM PAST SLEEVES.
     - iii. SLEEVES AND EMBEDDED BOXES IN FLAT SLABS AND FLAT PLATES NOT TO BE LOCATED NEXT TO COLUMNS UNLESS APPROVED BY RJC IN WRITING.
     - iv. CLEAR DIMENSION FOR SLEEVES AND EMBEDDED BOXES TO COLUMNS TO BE 4'-0" MINIMUM UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS.
     - v. CLEAR DIMENSION OF ALL SLEEVES AND EMBEDDED BOXES TO ANY HEADED STUD ASSEMBLY SHALL NOT BE LESS THAN 2 X SLAB THICKNESS (12" MINIMUM) UNLESS NOTED OTHERWISE.

CONCRETE COLD WEATHER REQUIREMENTS (CAST-IN-PLACE AND SHOTCRETE)

(SEE ALSO CSA A23.1, EXCEPT THE FOLLOWING MINIMUM REQUIREMENTS MUST ALSO BE MET)

1. FORECASTED AIR TEMPERATURE AT OR BELOW 5°C
   - A. THE AGGREGATE OR MIXING WATER SHALL BE HEATED TO MAINTAIN A MINIMUM CONCRETE TEMPERATURE OF 10°C AT POINT OF POUR.
   - B. CONCRETE SHALL NOT BE PLACED ON OR AGAINST ANY SURFACE WHICH IS AT A TEMPERATURE LESS THAN 5°C.
   - C. CONTRACTOR SHALL BE PREPARED TO COVER SLABS IF UNEXPECTED DROP IN AIR TEMPERATURE SHOULD OCCUR.
   - D. CONCRETE EXPOSURE CLASSES REQUIRING CURING TYPE 1 (BASIC) IN ACCORDANCE WITH CSA A23.1 SHALL HAVE THE THE CONCRETE TEMPERATURE MAINTAINED ABOVE 10°C FOR AT LEAST 7 DAYS OR UNTIL THE CONCRETE REACHES 70% OF SPECIFIED STRENGTH.
   - E. CONCRETE EXPOSURE CLASSES REQUIRING CURING TYPE 2 (ADDITIONAL CURING) OR CURING TYPE 3 (EXTENDED WET CURING) IN ACCORDANCE WITH CSA A23.1 SHALL HAVE THE THE CONCRETE TEMPERATURE MAINTAINED ABOVE 10°C FOR AT LEAST THE DURATION INDICATED IN THE STANDARD.
2. FORECASTED AIR TEMPERATURE BELOW 2°C BUT NOT BELOW -4°C

   (NOTE - FOR THESE CONDITIONS STRUCTURAL CONCRETE TOPPINGS ON METAL DECK SHALL SATISFY THE REQUIREMENTS OF NOTE 3).

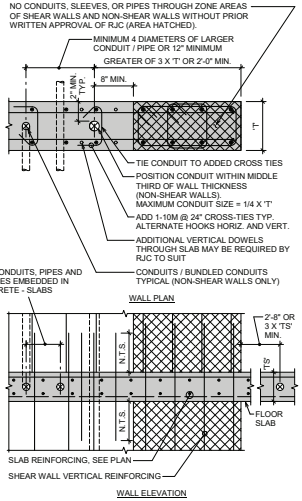
   FOLLOW REQUIREMENTS OF NOTES 1A, 1B, 1D, 1E, AND:
   - A. FORMS AND STEEL SHALL BE FREE FROM ICE AND SNOW.
   - B. SLABS SHALL BE COVERED WITH CANVAS OR SIMILAR, KEPT A FEW INCHES CLEAR OF SURFACE.
   - C. IN WINDY WEATHER, STOREY BELOW SLAB SHALL BE ENCLOSED.
   - D. PROTECTION SHALL BE MAINTAINED FOR AT LEAST THE SPECIFIED CURING PERIOD.
3. FORECASTED AIR TEMPERATURE BELOW -4°C

   FOLLOW REQUIREMENTS OF NOTES 1A, 1B, 2A, 2B. AND:
   - A. STOREY BELOW SHALL BE ENCLOSED AND ARTIFICIAL HEAT PROVIDED. HEATING TO BE STARTED AT LEAST ONE HOUR AHEAD OF POURING AND MAINTAINED FOR A MINIMUM OF THE SPECIFIED CURING PERIOD.
   - B. TEMPERATURE OF THE CONCRETE AT ALL SURFACES SHALL BE KEPT AT A MINIMUM OF 20°C FOR 3 DAYS, OR 10°C FOR 7 DAYS. CONCRETE SHALL BE KEPT ABOVE FREEZING TEMPERATURES UNTIL IT REACHES 70% OF ITS SPECIFIED STRENGTH.
   - C. ENCLOSURE MUST BE CONSTRUCTED SO THAT AIR CAN CIRCULATE OUTSIDE THE OUTER EDGES AND MEMBERS.
   - D. REINFORCING TO BE COVERED AND WARMED TO MAINTAIN ITS TEMPERATURE AT 0°C OR HIGHER AT THE TIME OF CONCRETE PLACEMENT.

CONDUITS, PIPES, AND SLEEVES EMBEDDED IN CONCRETE - WALLS

REFER TO CONDUITS, PIPES, AND SLEEVES EMBEDDED IN CONCRETE - GENERAL FOR ADDITIONAL REQUIREMENTS

1. WALLS AND SHEAR WALLS:
   - A. BOXES, CONDUIT, SLEEVES OR EMBEDDED PIPES ARE NOT ALLOWED WITHOUT THE WRITTEN APPROVAL OF RJC.
   - B. CONTRACTOR MUST SUBMIT SHOP DRAWINGS SHOWING PROPOSED DETAILS OF ALL EMBEDMENTS (CONDUIT, BOXES, ETC.) AND OPENINGS IN SHEAR WALLS AND NON-SHEAR WALLS FOR REVIEW A MINIMUM OF 21 DAYS BEFORE START OF WALL CONSTRUCTION AT ANY LEVEL. SHOP DRAWINGS TO INCLUDE PROPOSED CONDUIT O.D., QUANTITY, LOCATION AND REQUIRED BOX-OUTS, STRAIN RELIEF LOOPS, ETC. FOR PRICING AND TENDER PURPOSES, THE CONTRACTOR SHALL NOT ASSUME THAT VERTICAL WALL RUNS WILL BE PERMITTED OR THAT ANY STRUCTURAL PROVISIONS TO ACCOMMODATE VERTICAL WALL RUNS HAVE BEEN MADE.
   - C. GUIDELINES FOR CONDUIT, SLEEVES, OR EMBEDDED PIPES IN NON-SHEAR WALLS:
     - i. MAXIMUM DIAMETER = 1/4 WALL THICKNESS.
     - ii. NO HORIZONTAL RUNS PERMITTED UNLESS NOTED OTHERWISE ON WALL ELEVATIONS OR DETAILS.
     - iii. VERTICAL RUNS TO HAVE MINIMUM 2" CONCRETE COVER.
     - iv. VERTICAL RUNS SHALL HAVE MINIMUM SPACING IN PLANE OF WALL OR PERPENDICULAR TO PLANE OF WALL OF 4 DIAMETERS (12" MINIMUM).



CONCRETE REINFORCEMENT

1. REINFORCEMENT SHALL CONFORM TO THE FOLLOWING STANDARDS:
   - A. 10M AND LARGER (U.N.O.) - CSA G30.18 GRADE 400R
   - B. WELDED WIRE REINFORCEMENT - ASTM A1064
   - C. ALL REINFORCING THAT WILL BE WELDED - CSA G30.18 GRADE 400W

   (NOTE: CSA G30.18 W GRADES MAY BE SUBSTITUTED FOR CSA G30.18 R GRADES)
2. DO NOT SUBSTITUTE DEFORMED WIRE FOR REINFORCING BARS WITHOUT PRIOR APPROVAL OF THE RJC.
3. SUPPORT REINFORCING WITH CHAIRS, ACCESSORIES, OR REINFORCING BARS AS REQUIRED. BARS USED AS SUPPORT BARS SHALL BE CONSIDERED AS ACCESSORIES.
4. PROVIDE SUFFICIENT SUPPORTS TO MAINTAIN CONCRETE COVER AS SPECIFIED. ALL SUPPORTS AND BARS MUST BE TIED TOGETHER TO MAINTAIN REINFORCING STEEL SECURELY IN PLACE DURING CONCRETE PLACEMENT.
5. SEE STRUCTURAL DRAWINGS FOR EXTENT OF EPOXY COATED REBAR.
6. TESTING OF REINFORCING STEEL SHALL CONFORM TO THE SPECIFICATIONS.

CONDUITS, PIPES, AND SLEEVES EMBEDDED IN CONCRETE - GENERAL

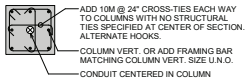
EXCEPT WHEN APPROVED BY RJC, PIPES, CONDUITS, AND SLEEVES EMBEDDED IN CONCRETE SHALL BE INSTALLED IN ACCORDANCE WITH CSA A23.1 CLAUSE 6.7.5 AND THE FOLLOWING GUIDELINES:

1. GENERAL:
   - A. **SLEEVING DRAWINGS FOR THE FOLLOWING ELEMENTS AND THOSE NOTED ON PLANS AND SECTIONS SHALL BE SUBMITTED TO RJC FOR REVIEW PRIOR TO CONSTRUCTION:**
     - i. ALL ELEMENTS
     - ii. SLABS AND SLAB BANDS
     - iii. BEAMS AND GRADE BEAMS
     - iv. WALLS AND SHEAR WALLS
   - B. NOT WITHSTANDING THE SATISFYING OF THESE GUIDELINES, THE CONDUITS, SLEEVES, PIPES, ETC. SHALL MEET THE RJC SPACING REQUIREMENTS NOTED AND SHALL NOT REDUCE THE STRUCTURAL CAPACITY.
   - C. CONTRACTOR SHALL MINIMIZE QUANTITY AND SIZE OF IN-SLAB CONDUITS AND EMBEDDED BOXES TO LEAST AMOUNT POSSIBLE, INCLUDING COMBINING DATA AND TELECOM CABLES IN COMMON CONDUITS WHERE PERMITTED BY CODES AND APPROVED BY THE ELECTRICAL ENGINEER.
   - D. THE CONSULTANT RESERVES THE RIGHT, AT NO EXTRA COST TO THE OWNER TO:
     - i. HIGHLIGHT ITEMS NOT MEETING THE SPACING REQUIREMENTS WHICH MUST BE CORRECTED PRIOR TO PROCEEDING WITH PLACEMENT OF CONCRETE.
     - ii. ADD REINFORCING AT POINTS OF CONGESTION
     - iii. LOCALLY INCREASE THE THICKNESS OF THE SLAB OR INCREASE THE SPECIFIED CONCRETE STRENGTH AS REQUIRED.
     - iv. REQUEST THE USE OF 10mm AGGREGATE (PEA GRAVEL) TO ACHIEVE PROPER CONSOLIDATION.

CONDUITS, PIPES, AND SLEEVES EMBEDDED IN CONCRETE - COLUMNS AND BEAMS

REFER TO CONDUITS, PIPES, AND SLEEVES EMBEDDED IN CONCRETE - GENERAL FOR ADDITIONAL REQUIREMENTS

1. COLUMNS:
   - A. BOXES, CONDUIT, SLEEVES OR EMBEDDED PIPES ARE NOT ALLOWED WITHOUT THE WRITTEN APPROVAL OF RJC.
   - B. WHERE ACCEPTED BY RJC, THE TOTAL AREA OF EMBEDDED CONDUITS OR FITTINGS SHALL NOT EXCEED 1% OF GROSS COLUMN AREA. SECURE CONDUITS TO COLUMN TIES. LOCATE AS CLOSE TO CENTER OF SECTION AS POSSIBLE. DO NOT TIE ALONG VERTICAL BAR.



2. BEAMS:
   - A. THE TOTAL MAXIMUM SIZE OF HORIZONTAL CONDUIT OR PIPES PARALLEL TO THE BEAM NOT TO EXCEED 4% OF THE AREA.
   - B. NO SLEEVES OR EMBEDDED BOXES ALLOWED IN ANY BEAMS OR SLAB BANDS UNLESS APPROVED IN WRITING BY RJC.

CONCRETE CONSTRUCTION TOLERANCES

(TOLERANCES AS PER CSA A23.1, EXCEPT AS NOTED BELOW)

CLOSER TOLERANCES SHALL BE MAINTAINED WHERE ARCHITECTURAL DETAILS OR OTHERS REQUIRE.

WHERE ANY DEVIATION OCCURS, AND IT IS ACCEPTABLE TO THE ENGINEER AND ARCHITECT, THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTMENT OF OTHER BUILDING ELEMENTS TO ACCOMMODATE SUCH DEVIATION. COSTS FOR REMEDIAL WORK FOR DEVIATIONS NOT ACCEPTED SHALL BE BORNE BY THE CONTRACTOR.

1. VARIATION FROM THE PLUMB.
   - A. IN THE LINES AND SURFACES OF COLUMNS, PIERS, WALLS AND IN ARRISES: 0.25% OF HEIGHT (1 IN 400), MAXIMUM 1 1/2" OVER THE ENTIRE HEIGHT OF THE STRUCTURE.

     ONLY ONE CURVATURE ALLOWED PER 10'-0".

     THE TOLERANCE GIVEN IS THE MAXIMUM VARIATION FROM A PLUMB LINE.

     ALL MEASUREMENTS SHALL BE TO THE SAME SIDE OF THE PLUMB LINE.
   - B. UNLESS SPECIFIED ELSEWHERE IN THE CONSTRUCTION DOCUMENTS - THE TOLERANCES FOR EXPOSED CORNER COLUMNS, CONTROL JOINT GROOVES, AND OTHER CONSPICUOUS LINES SHALL BE: (SEE ALSO ELEVATOR SHOP DRAWINGS, ETC.)

     0.125% OF HEIGHT (1 IN 800), MAXIMUM 3/4".

     ONLY ONE CURVATURE ALLOWED PER 20'-0".

     MAXIMUM VARIATION IN WINDOW BAYS 0.2% OF OPENING.
2. UNLESS SPECIFIED ELSEWHERE, FLOOR FINISHES SHALL BE CLASS A "CONVENTIONAL SLAB ON GRADE AND ELEVATED FLOORS" WITH AN OVERALL F-NUMBER OF F_F=20 & F_L=15.

   CLOSER TOLERANCES MAY BE REQUIRED TO GIVE THE QUALITY OF FINISH FLOOR SURFACES CALLED FOR ELSEWHERE IN THE CONTRACT DOCUMENTS.
3. VARIATIONS OF STRUCTURAL CONCRETE ELEMENTS RELATED TO EACH OTHER AND RELATIVE TO A REFERENCED GRID SYSTEM FOR PLAN DIMENSIONS TO MEET CSA A23.1.
4. VARIATION IN CROSS-SECTIONAL DIMENSIONS OF COLUMNS AND BEAMS AND IN THE THICKNESS OF SLABS AND WALLS: AS IN CSA A23.1.

   ONLY ONE CURVATURE ALLOWED PER 10'-0".
5. THE ABOVE REQUIREMENTS DO NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY OF MEETING MORE RIGID REQUIREMENTS SPECIFIED ELSEWHERE IN THE CONSTRUCTION DOCUMENTS OR AS REQUIRED BY EQUIPMENT SHOP DRAWINGS OR SPECIFICATIONS SUCH AS THOSE FOR ELEVATORS, ETC.

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1	ISSUED FOR 50% REVIEW	2024.12.20	KML

Drawing Notes

Seal

NOT FOR CONSTRUCTION

Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

GENERAL NOTES

Drawn By	KML	Scale	As indicated
Designed By	PWM	Date	2024.12.20
RJC Project Number		SAS.138936.0001	

Sheet Number: **S 1.3**
Revision: **1**

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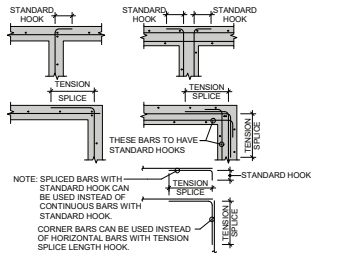
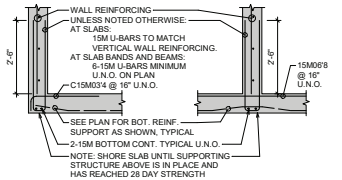
WALLS - CORNER DETAILS

1. DETAILS OF HORIZONTAL REINFORCEMENT AT CORNERS (SEE ALSO ZONE REINFORCING DETAILS):

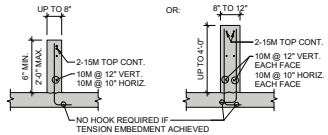


WALLS - MISC. DETAILS

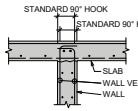
1. UNLESS NOTED OTHERWISE, PROVIDE U-BARS AS SHOWN WHERE NO WALLS OR COLUMNS EXTEND BELOW SLAB FOR SUPPORT.



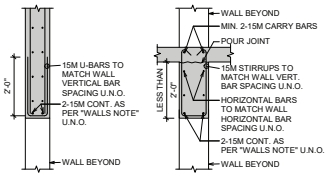
2. SEE ARCHITECTURAL DRAWINGS FOR EXTENT, THICKNESS, AND LOCATION OF CONCRETE UPSTAND WALLS, PLANTER WALLS AND CURBS. BELOW ARE TYPICAL DETAILS WHERE NOT INDICATED ON PLAN:



3. TOP OF WALL TRANSITION UNLESS NOTED OTHERWISE:



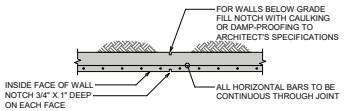
4. NOMINAL U-BARS / STIRRUPS ABOVE WALL OPENINGS UP TO 4'-0" WIDE UNLESS NOTED OTHERWISE:



WALL CONTROL JOINT

UNLESS NOTED OTHERWISE FOR EXTERIOR WALLS BELOW GRADE AND EXTERIOR WALLS EXPOSED TO WEATHER ABOVE GRADE.

SPACE AT 20'-0" CENTERS MAXIMUM UNLESS OTHERWISE NOTED ON PLAN.



PLAN

EMBEDMENT / DEVELOPMENT LENGTHS AND SPLICE LENGTHS

CASE 2 TENSION EMBEDMENT AND SPLICE CONDITIONS

TENSION EMBEDMENT AND SPLICE LENGTHS CONFORMING TO CSA A23.3 TABLE 12.1 ($0.6k_1k_2k_3k_4k_5d_b$ / $\sqrt{f'_c}$) ARE TO BE AS PER THE FOLLOWING TABLE FOR MEMBERS NOT SATISFYING CASE 1 CONDITIONS AS SET OUT ABOVE. FOR EXAMPLE:

A. ONE WAY SLAB TOP BARS (SEE TOP BAR NOTE).
B. BARS (EXCLUDING THE SPLICE) SPACED CLOSER TOGETHER THAN 2 BAR DIAMETERS IN SAME LAYER AND BETWEEN LAYERS.
C. STIRRUPS IN BEAMS AND GIRDERS.
D. SEE ALSO NOTES ON TOP BARS.

CONCRETE STRENGTH	FUNCTION	REBAR DESIGNATION (GRADE 400 LENGTHS)					
		10M	15M	20M	25M	30M	35M
20 MPa	EMBEDMENT	17"	26"	34"	53"	64"	74"
	(SPLICE)	(22")	(33")	(44")	(69")	(83")	(97")
25 MPa	EMBEDMENT	16"	23"	31"	48"	57"	67"
	(SPLICE)	(20")	(30")	(40")	(62")	(74")	(86")
30 MPa	EMBEDMENT	14"	21"	28"	44"	52"	61"
	(SPLICE)	(18")	(27")	(36")	(57")	(68")	(79")
35 MPa & GREATER	EMBEDMENT	13"	20"	26"	40"	48"	56"
	(SPLICE)	(17")	(25")	(34")	(52")	(63")	(73")

NOTES:
1. "TOP BAR" VALUES ARE 1.3 TIMES THE ABOVE LENGTHS. "TOP BAR" APPLIES TO HORIZONTAL REINFORCEMENT CAST WITH 12" OR MORE OF CONCRETE BELOW THE BAR.
2. INCREASE THESE TABLE LENGTHS BY 1.15 TIMES WHEN SPACING BETWEEN LAYERS OF REBAR IS $1.0d_b$.
3. WHERE A TENSION SPLICE IS SPECIFIED BETWEEN TWO BARS OF DIFFERENT DIAMETERS, THE MINIMUM SPLICE LENGTH SHALL BE THE GREATER OF THE SPLICE LENGTH FOR THE SMALLER DIAMETER BAR AND THE EMBEDMENT LENGTH OF THE LARGER DIAMETER BAR.

WALLS

1. THESE NOTES APPLY SPECIFICALLY TO CONCRETE WALLS NOT CLASSIFIED AS SHEAR WALLS. SEE ALSO CONCRETE SHEAR WALL NOTES.

   UNLESS NOTED OTHERWISE, WALLS SHALL BE REINFORCED AS FOLLOWS:

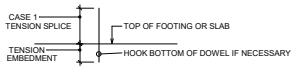
WALL THICKNESS	FIRE EXPOSURE	VERTICAL REINFORCING	HORIZONTAL REINFORCING
6"	1 SIDE	10M @ 18" CENTERED	10M @ 13" CENTERED
	2 SIDES	10M @ 18" E.F. STAG.	10M @ 18" E.F. STAG.
8"	1 SIDE	10M @ 13" CENTERED	10M @ 10" OR 15M @ 20" CENTERED
	2 SIDES	10M @ 20" E.F. STAG.	10M @ 20" E.F. STAG.
10"	1 OR 2 SIDES	10M @ 20" E.F. STAG.	10M @ 16" E.F STAG.
12"	1 OR 2 SIDES	10M @ 17" E.F.	10M @ 13" E.F.

   FOR OTHER THICKNESSES, REINFORCEMENT TO BE PROPORTIONAL TO ABOVE.

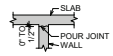
   15M @ 20" MAY BE SUBSTITUTED FOR 10M @ 13" ONLY WITH THE APPROVAL OF RJC. FOR WALLS WITH A SINGLE LAYER OF STEEL, THE WALL REINFORCING SHALL BE PLACED IN THE CENTER OF THE WALL U.N.O.

   REFER TO THE "CONCRETE REINFORCEMENT" NOTE AND THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRE EXPOSURE REQUIREMENTS. ALL WALLS DESIGNED FOR FIRE EXPOSURE ONE SIDE U.N.O. ON STRUCTURAL DRAWINGS.

2. PLACE VERTICAL REINFORCEMENT IN OUTER LAYERS OF THE CURTAINS AND HORIZONTAL REINFORCEMENT IN INNER LAYERS (BEHIND VERTICALS), UNLESS NOTED OTHERWISE.
3. ALL WALL REINFORCING SHALL BE CONTINUOUS, WITH HOOKS OR CORNER BARS USED AT ALL WALL JUNCTIONS. EXTEND HOOKS TO FAR FACE OF WALL. CORNER BARS TO BE LOCATED ON OUTSIDE FACE OR CENTER OF WALL.
4. HORIZONTAL AND VERTICAL SPLICES SHALL BE TENSION SPLICES. U.N.O.
5. ENDS OF ALL WALLS AND ALL WALL INTERSECTIONS SHALL HAVE 2-15M VERTICAL MINIMUM UNLESS NOTED OTHERWISE ON DRAWINGS.
6. ADD 2-15M PARALLEL TO ALL EDGES AND EXTENDING 25" BEYOND CORNERS AT OPENINGS IN WALLS.
7. UNLESS NOTED OTHERWISE, PROVIDE DOWELS AT BOTTOM OF WALLS (E.G. AT FOOTINGS OR WHEREVER WALL BEGINS) AS SHOWN BELOW. DOWELS TO MATCH VERTICAL REINFORCEMENT.



8. UNLESS NOTED OTHERWISE, ALL RETAINING WALLS BELOW GRADE AND ALL EXTERIOR WALLS EXPOSED TO THE WEATHER ABOVE GRADE SHALL HAVE CONTROL JOINTS. SEE CONTROL JOINT DETAIL. CONSTRUCTION JOINT MAY REPLACE CONTROL JOINT WHERE REQUIRED. THE LOCATION OF CONTROL JOINTS IN EXPOSED CONCRETE WALLS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW.
9. UNLESS NOTED OTHERWISE, PLACE TOP OF WALLS 0" TO 1/2" BELOW SOFFIT OF SUPPORTED CONCRETE STRUCTURE. IF TOP OF WALL PLACED ABOVE SOFFIT, CAREFULLY CHIP DOWN MINIMUM 3 DAYS AFTER ELEMENT POURED AND AS REQUIRED BY RJC.



EMBEDMENT / DEVELOPMENT LENGTHS AND SPLICE LENGTHS

1. BASED ON CSA A23.3
2. WHERE EMBEDMENT OR SPLICES ARE DIMENSIONED ON THE DRAWINGS, SUCH DIMENSION SHALL APPLY.
3. WHERE THE DRAWINGS INDICATE A COMPRESSION EMBEDMENT, IT IS A COMPRESSION EMBEDMENT LENGTH AND IT SHALL BE AS NOTED BELOW.
4. WHERE THE DRAWINGS INDICATE A TENSION EMBEDMENT, IT IS A TENSION EMBEDMENT LENGTH AND SHALL BE AS NOTED BELOW.
5. WHERE NO EMBEDMENT OR EMBEDMENT TYPE IS CALLED FOR ON THESE DRAWINGS, IT SHALL BE A TENSION EMBEDMENT, EXCEPT FOR COLUMNS WHICH SHALL BE A COMPRESSION EMBEDMENT.
6. WHERE NO SPLICE OR SPLICE TYPE IS CALLED FOR ON THESE DRAWINGS, IT SHALL BE A TENSION SPLICE, EXCEPT FOR COLUMNS WHICH SHALL BE A COMPRESSION SPLICE.
7. IN TABLES BELOW, EMBEDMENT LENGTHS ARE SHOWN WITHOUT BRACKETS, AND SPLICE LENGTHS ARE SHOWN IN BRACKETS.
8. ALL TENSION SPLICE LENGTHS ARE CLASS "B" (1.3 ℓ_d).
9. WHERE MORE THAN ONE FACTOR APPLIES FOR INCREASING THE LENGTHS IN THESE TABLES, MULTIPLY ALL FACTORS TOGETHER.

COMPRESSION EMBEDMENT AND SPLICE LENGTHS

10. COMPRESSION EMBEDMENT REFERS TO THE LENGTH REQUIRED TO PROVIDE THE "COMPRESSION DEVELOPMENT LENGTH" AS DEFINED IN CSA A23.3 CLAUSE 12.3.2.
11. SPLICE LENGTH REFERS TO THE MINIMUM LAP LENGTH REQUIRED FOR A COMPRESSION SPLICE AS DEFINED IN CSA A23.3 CLAUSE 12.16.1.

CONCRETE STRENGTH	FUNCTION	REBAR DESIGNATION (GRADE 400 LENGTHS)					
		10M	15M	20M	25M	30M	35M
20 MPa	EMBEDMENT	9"	13"	17"	22"	26"	30"
	(SPLICE)	(12")	(18")	(23")	(29")	(35")	(41")
25 MPa	EMBEDMENT	8"	12"	16"	19"	23"	27"
	(SPLICE)	(12")	(18")	(23")	(29")	(35")	(41")
30 MPa & GREATER	EMBEDMENT	8"	11"	14"	18"	21"	25"
	(SPLICE)	(12")	(18")	(23")	(29")	(35")	(41")

NOTES:
1. TABLE SHOWS LENGTHS FOR GRADE 400 REINFORCEMENT. MULTIPLY VALUES BY 1.46 FOR GRADE 500 REINFORCEMENT.
2. WHERE A COMPRESSION SPLICE IS SPECIFIED BETWEEN TWO BARS OF DIFFERENT DIAMETERS, THE MINIMUM SPLICE LENGTH SHALL BE THE GREATER OF THE SPLICE LENGTH FOR THE SMALLER DIAMETER BAR AND THE EMBEDMENT LENGTH OF THE LARGER DIAMETER BAR.

TENSION EMBEDMENT AND SPLICE LENGTHS

12. TENSION EMBEDMENT REFERS TO THE LENGTH REQUIRED TO PROVIDE A "TENSION DEVELOPMENT LENGTH" AS DEFINED IN CAN/CSA-A23.3 CLAUSE 12.2.
13. SPLICE LENGTH REFERS TO THE MINIMUM LAP LENGTH REQUIRED FOR A CLASS 'B' TENSION SPLICE (1.3ℓ_d) AS PER CAN/CSA-A23.3 CLAUSE 12.15.

CASE 1 TENSION EMBEDMENT AND SPLICE CONDITIONS

TENSION EMBEDMENT AND SPLICE LENGTHS CONFORMING TO CSA A23.3 TABLE 12.1 ($0.45\ k_1k_2k_3k_4k_5d_b$ / $\sqrt{f'_c}$) ARE TO BE AS PER THE FOLLOWING TABLE FOR:

A. COLUMNS VERTS REQUIRING TENSION SPLICES.
B. BEAM AND GIRDER TOP AND BOTTOM BARS.
C. TWO WAY SLAB TOP AND BOTTOM BARS.
D. ONE WAY SLAB BOTTOM BARS.
E. WALL HORIZONTAL AND VERTICAL DISTRIBUTED REINFORCING.
F. SEE ALSO NOTES ON TOP BARS.
G. MEMBERS WHICH DO NOT SATISFY THE ABOVE CONDITIONS SHALL HAVE TENSION EMBEDMENTS AND SPLICES AS PER CASE 2 TABLE BELOW.

CONCRETE STRENGTH	FUNCTION	REBAR DESIGNATION (GRADE 400 LENGTHS)					
		10M	15M	20M	25M	30M	35M
20 MPa	EMBEDMENT	13"	20"	26"	40"	48"	56"
	(SPLICE)	(17")	(25")	(33")	(52")	(62")	(73")
25 MPa	EMBEDMENT	12"	18"	23"	36"	43"	50"
	(SPLICE)	(16")	(23")	(30")	(47")	(56")	(65")
30 MPa	EMBEDMENT	12"	16"	21"	33"	39"	46"
	(SPLICE)	(16")	(21")	(27")	(43")	(51")	(59")
35 MPa & GREATER	EMBEDMENT	12"	15"	20"	30"	36"	42"
	(SPLICE)	(16")	(19")	(25")	(39")	(47")	(55")

NOTES:
1. "TOP BAR" VALUES ARE 1.3 TIMES THE ABOVE LENGTHS. "TOP BAR" APPLIES TO HORIZONTAL REINFORCEMENT CAST WITH 12" OR MORE OF CONCRETE BELOW THE BAR.
2. "TOP BAR" FACTOR DOES NOT APPLY TO HORIZONTAL WALL REINFORCEMENT IN WALLS THAT ARE NOT VIBRATED.
3. WHERE A TENSION SPLICE IS SPECIFIED BETWEEN TWO BARS OF DIFFERENT DIAMETERS, THE MINIMUM SPLICE LENGTH SHALL BE THE GREATER OF THE SPLICE LENGTH FOR THE SMALLER DIAMETER BAR AND THE EMBEDMENT LENGTH OF THE LARGER DIAMETER BAR.

CONCRETE COVER

1. UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS, PROVIDE 2 HOUR FIRE RATING FOR ALL REINFORCED CONCRETE.
2. **UNLESS OTHERWISE NOTED CONCRETE COVER TO REINFORCEMENT SHALL BE THE LARGEST OF A THROUGH H:**

   A. FOR FIRE RATINGS:

GENERAL (AREAS NOT INCLUDING PARKING)			
ELEMENT		FIRE RATINGS	
		0-2 HOURS	3 HOURS
WALLS - NON-RETAINING AND EXPOSED TO FIRE ON 2 SIDES AND IDENTIFIED ON PLAN		1 5/8" MIN., 2" MIN. TO VERTS.	
WALLS - NON-RETAINING AND EXPOSED TO FIRE ON 1 SIDE		GREATER OF 3/4" AND $1.0d_b$ TO ZONE TIES / OUTER CURTAIN LAYER	
BEAMS	TO STIRRUPS	1 5/8"	
	NO STIRRUPS	2"	
SLABS		GREATER OF 1" AND $1.0d_b$	1 3/8"
RETAINING / FOUNDATION WALLS (F-2 EXPOSURE)	INSIDE FACE	GREATER OF 1 5/8" AND $1.5d_b$	N/A
	GROUND OR EARTH SIDE	GREATER OF 1 5/8" AND $1.5d_b$	N/A

PARKING AREAS			
ELEMENT		FIRE RATINGS	
		0-2 HOURS	3 HOURS
COLUMNS AND FORMED PILES	TO TIES	1 5/8"	1 5/8"
	TO VERTS	2"	2"
WALLS - NON-RETAINING AND EXPOSED TO FIRE ON 2 SIDES AND IDENTIFIED ON PLAN		1 5/8" MIN., 2" MIN. TO VERTS.	
WALLS - NON-RETAINING AND EXPOSED TO FIRE ON 1 SIDE		1 5/8" TO ZONE TIES / OUTER CURTAIN LAYER	
BEAMS, GIRDERS & TRANSFER SLABS WITH MEMBRANE	TO STIRRUPS	1 5/8"	
	NO STIRRUPS	2"	
SLABS AND SLAB BANDS, STIRRUPS IN SLAB BANDS WITH MEMBRANE	TOP COVER	GREATER OF 1 5/8" OR $1.5d_b$	
	BOT. COVER	GREATER OF 1 1/4" AND $1.5d_b$	GREATER OF 1 3/8" AND $1.5d_b$
STRUCTURAL SLAB ON GRADE TOP AND BOTTOM COVER		2 1/4"	N/A
RETAINING / FOUNDATION WALLS COVER BOTH FACES (C-1 EXPOSURE)		GREATER OF 1 5/8" AND $1.5d_b$	N/A

   B. UNLESS NOTED OTHERWISE IN NOTES C THROUGH H, MINIMUM CONCRETE COVER BASED ON REINFORCEMENT SIZE (db) AND COARSE AGGREGATE SIZE (ag) ---------- $1.0d_b$ OR 1.4ag (WHICHEVER IS GREATER)
   C. CONCRETE CAST AGAINST EARTH OR GROUND ---------- 3"
   D. CONCRETE WITH NO MEMBRANE (NON-PARKING) AND EXPOSED TO CHLORIDES - EXPOSURE CLASS C-XL, C1, AND C3. ---------- 2 3/8" OR $2.0d_b$ (WHICHEVER IS GREATER)
   E. FORMED FINISHED CONCRETE EXPOSED TO WEATHER - EXPOSURE CLASS F1, F2, S1, S2, OR EARTH ---------- 1 5/8" OR $1.5d_b$ (WHICHEVER IS GREATER)
   F. CONCRETE IN PARKING AREAS, BOTTOM BARS ---------- 1 1/4" OR $1.5d_b$ (WHICHEVER IS GREATER)

   NOTES:

   SEE ARCHITECTURAL DRAWINGS AND STRUCTURAL DRAWINGS FOR AREAS WHICH MAY REQUIRE 3 OR 4 HOUR RATINGS.

   SEE STRUCTURAL DRAWINGS FOR AREAS CLASSIFIED AS (D) or (E) ABOVE FOR WEATHER EXPOSURE.

DESIGNATION OF REINFORCING BARS

1. BARS SHOWN THUS ——— ——— ——— IN BOTTOM OF BEAMS OR SLABS OR IN FAR FACE OF WALL
2. BARS SHOWN THUS ——————— IN TOP OF BEAMS OR SLABS OR IN NEAR FACE OF WALL
3. STRAIGHT BARS:

   6-10M13'9 MEANS 6-10M BARS 13'-9" LONG. ———————

   15M12'6 + 15M9'10 ALT. @ 8" MEANS 1-15M 12'-6" LONG BAR THEN 1-15M 9'-10" LONG BAR SPACED 8" O/C AWAY. ——— ———

   20M13'1 @ 12" STAG. 2'-0" MEANS 2'-0" OFFSET FOR EACH 20M 13'-1" BAR SPACED AT 12" O/C. IF STAGGER NOT SPECIFIED SEE GENERAL NOTES AND TYPICAL DETAILS FOR DIMENSION. ——— 2'-0"

4. BENT BARS:

   6-C15M04'11 @ 12" MEANS 6-15M BARS 4'-11" LONG (LENGTH INCLUDES HOOK LENGTH) HOOKED ONE END WITH 90° STANDARD HOOK AND SPACED AT 12" O/C.

   8-A15M09'10 @ 12" MEANS 8-15M BARS 9'-10" LONG (LENGTH INCLUDES HOOK LENGTH) HOOKED ONE END WITH 180° STANDARD HOOK AND SPACED AT 12" O/C.

   15M @ 12" H.2.E. MEANS 15M BARS HOOKED BOTH ENDS WITH 90° STANDARD HOOK AND SPACED AT 12" O/C.

DEVELOPMENT OF STANDARD HOOKS IN TENSION

BASED ON CSA A23.3.

CONCRETE STRENGTH	REBAR DESIGNATION (GRADE 400 LENGTHS)					
	10M	15M	20M	25M	30M	35M
20 MPa	9"	14"	18"	23"	27"	31"
25 MPa	8"	12"	16"	20"	24"	28"
30 MPa	8"	11"	15"	18"	22"	26"
35 MPa & GREATER	7"	10"	14"	17"	20"	24"

rjc Creative Thinking Practical Results

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No.	Revision	Date	By
1	ISSUED FOR 50% REVIEW	2024.12.20	KML

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3. Use of these drawings is limited to that identified in the Issued/Revision column. Do not construct from these drawings unless marked "Issued for Construction" by RJC in the Issued/Revision column, and then only for the parts noted. The drawings shall not be used for "pricing" / "costing" or "tender" unless so indicated in the Issued/Revisions column. "Pricing" or "Costing" drawings are not complete and any prices based on such drawings must allow for this.

Seal

NOT FOR CONSTRUCTION

Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

GENERAL NOTES

Drawn By	KML	Scale	As indicated
Designed By	PWM	Date	2024.12.20
RJC Project Number	SAS.138936.0001		

Sheet Number: **S 1.4**
Revision: **1**

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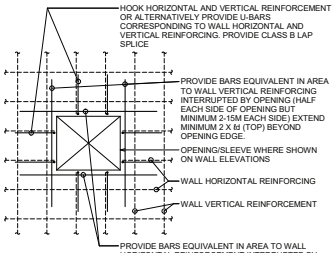
TYPICAL ADDITIONAL REINFORCEMENT FOR WALL OPENINGS UP TO 2'-6" X 2'-6" MAXIMUM SIZE



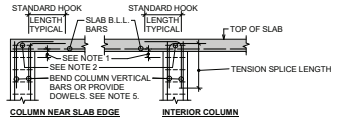
NOTE: FOR LARGER OPENINGS SEE REINFORCEMENT ON WALL ELEVATIONS.

COLUMNS

1. UNLESS NOTED OTHERWISE, CONCRETE STRENGTH IN COLUMNS IS INDICATED IN COLUMN SCHEDULE.
2. TIE COLUMN CAGES TO FORMS AND SQUARE BEFORE PLACING CONCRETE.
3. CONDUITS, BOXES OR OTHER INSERTS MAY NOT BE PLACED IN COLUMNS UNLESS APPROVED IN WRITING BY RJC.
4. UNLESS OTHERWISE NOTED ON COLUMN SCHEDULE, ALL COLUMN SPLICES SHALL BE AS PER TYPICAL DETAILS SHOWN ON THE STRUCTURAL DRAWINGS.
5. ALL EXPOSED CORNERS OF COLUMNS SHALL BE CHAMFERED 3/4" X 3/4" UNLESS NOTED OTHERWISE BY ARCHITECT.
6. UNLESS NOTED OTHERWISE, ALL COLUMN SPLICES SHALL BE COMPRESSION SPLICES.
7. UNLESS NOTED OTHERWISE, COLUMNS SHOULD BE CENTERED ON COLUMNS BELOW.
8. UNLESS NOTED OTHERWISE, COLUMNS SHALL BE CENTERED ON GRID LINES.
9. UNLESS NOTED OTHERWISE, PLACE TOP OF COLUMNS 0" TO 1/2" BELOW SOFFIT OF SUPPORTED CONCRETE STRUCTURE. IF TOP OF COLUMN PLACED ABOVE SOFFIT, CAREFULLY CHIP DOWN MINIMUM 3 DAYS AFTER ELEMENT POURED AND AS REQUIRED BY RJC.

10. WHERE COLUMN VERTICALS DO NOT EXTEND OVER, REFER TO "COLUMN SPLICE AND DOWEL DETAILS" NOTE.

COLUMN SPLICE AND DOWEL DETAILS



DETAIL A: TYPICAL TOP OF CONCRETE COLUMN

NOTES:

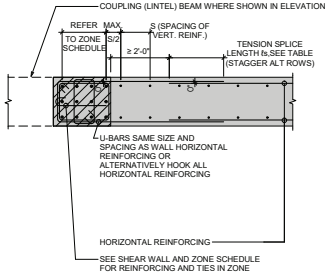
1. ADD ADDITIONAL SETS OF TIES AT 1/2 TIE SPACING MAXIMUM IF THIS DISTANCE IS MORE THAN 1/2 TIE SPACE.
2. WHERE COLUMN VERTICALS DO NOT EXTEND INTO A COLUMN ABOVE, EXTEND VERTICAL REINFORCING 24" MINIMUM INTO UNDERSIDE OF BEAMS OR TO WITHIN 1" OF TOP OF SLABS UNLESS CLEAR COVER REQUIREMENTS ARE GREATER.
3. WHERE COLUMN VERTICALS WITH NO HOOK OR WITH STANDARD HOOK DO NOT HAVE FULL TENSION EMBEDMENT INTO MEMBER ABOVE, PROVIDE HOOKED DOWELS SAME SIZE AND NUMBER AS VERTICAL COLUMN REINFORCEMENT UNLESS NOTED OTHERWISE IN COLUMN SCHEDULE.
   A. WHERE BARS WITH NO HOOK PERMITTED, EXTEND BAR TO TOP OF SLAB LESS TOP COVER REQUIREMENT.
   B. ALL HOOKS AT EACH COLUMN FACE ORIENTED TO CROSS OVER FAR COLUMN FACE EXCEPT FOR HOOKS FROM INTERIOR FACE PARALLEL TO SLAB EDGE.
   C. HOOKS TO EXTEND TO TOP OF SLAB AND PLACED IN THE SAME LAYER AS AND PARALLEL TO SLAB REINFORCING IN TOP UPPER LAYER U.N.O.

SHEAR WALL SPLICE LENGTHS

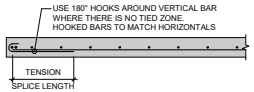
SHEAR WALL HORIZONTAL SPLICE LENGTHS - ℓs

CONCRETE STRENGTH	REBAR SIZE					
	10M	15M	20M	25M	30M	35M
25 MPa	20"	29"	39"	60"	72"	84"
30 MPa	18"	27"	35"	55"	66"	77"
35 MPa	17"	25"	33"	51"	61"	71"
40 MPa	16"	23"	31"	48"	57"	67"
50 MPa	16"	21"	28"	43"	51"	60"
60 MPa	16"	19"	25"	39"	47"	55"

TYPICAL END OF WALL ZONE DETAILS

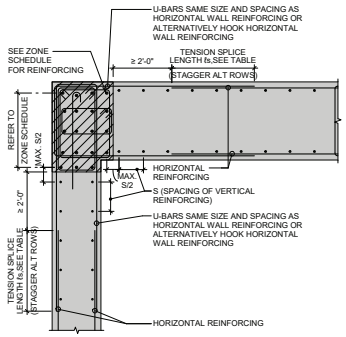


PLAN VIEW - TWO OR MORE CURTAINS OF REBAR



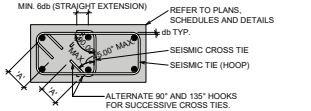
PLAN VIEW - SINGLE CENTERED CURTAIN OF REBAR

TYPICAL SHEAR WALL ZONE AT CORNER

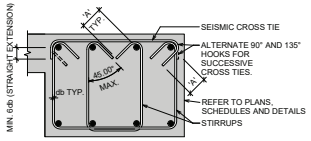


SEISMIC TIES (HOOPS), SEISMIC CROSS TIES, AND BUCKLING PREVENTION TIES

1. SEISMIC TIES (HOOPS) AND SEISMIC CROSS TIES ARE REQUIRED FOR THE FOLLOWING ELEMENTS:
   A. COLUMN TIES WHERE NOTED ON DRAWINGS AND COLUMN TIES WHERE TIE SPACING IS 4" O/C OR LESS.
   B. ZONE TIES FOR ALL SHEAR WALLS, U.N.O. PLUS WALL TIES WHERE NOTED ON DRAWINGS AND SCHEDULE.
   C. OTHER TIES AND STIRRUPS WHERE NOTED ON DRAWINGS.
2. BUCKLING PREVENTION TIES ARE REQUIRED FOR THE FOLLOWING ELEMENTS:
   A. WALL ZONE TIES IN PLASTIC HINGE REGION.
   B. TIES FOR DIAGONAL REINFORCEMENT IN COUPLING BEAM BETWEEN WALLS.
   C. OTHER TIES AND STIRRUPS WHERE NOTED ON DRAWINGS.
3. TYPICAL "HOOP" TIE DIMENSIONS AS FOLLOWS:



4. TYPICAL STIRRUP "SEISMIC HOOPS":



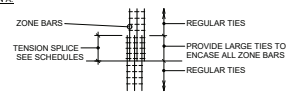
5. SEISMIC CROSS-TIE / HOOP HOOK STRAIGHT EXTENSION LENGTH 'A' TABLE:

SEISMIC TIE / HOOP BAR, db	10M	15M	20M
'A' (MIN.)	4"	4"	5"

ZONE TIES

1. ALL ZONE TIES 10M BARS UNLESS NOTED OTHERWISE.
2. TIE SPACINGS ARE ON CENTER UNLESS NOTED OTHERWISE.
3. SEE "SEISMIC TIES (HOOPS) AND SEISMIC CROSS TIES" FOR ADDITIONAL TIE REQUIREMENTS.
4. FOR ZONE TIE SPACING SEE ZONE SCHEDULE AND "ZONE TIE SPACING" TABLES. FIRST TIE TO BE POSITIONED AT 1/2 TIE SPACING ABOVE FOUNDATION.
5. ZONE TIES AT ZONE SPLICES TO BE AS FOLLOWS:

OPTION A:



NOTE: ZONE VERTICAL MAY BE CRANKED.

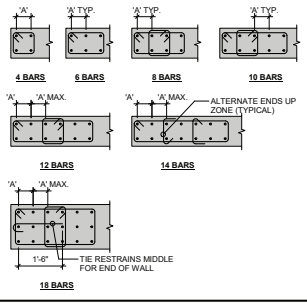
OPTION B:

ZONE BARS MAY BE SPLICED WITH BENT BAR OFFSETS. IF THIS OPTION IS SELECTED SPLICE DETAILS ARE TO FOLLOW THOSE FOR "COLUMN SPLICE DETAILS". WITH CLASS 'B' TENSION LAP SPLICES THROUGHOUT, AND INCLUDING ADDITIONAL SETS OF TIES AT BAR CRANK LOCATION.

6. AT WALL THICKNESS TRANSITIONS, ZONE BAR OFFSETS DETAILS ARE TO FOLLOW THOSE FOR "COLUMN SPLICE DETAILS", WITH CLASS 'B' TENSION LAP SPLICES THROUGHOUT, AND INCLUDING ADDITIONAL SETS OF TIES AT BAR CRANK LOCATION, IF APPLICABLE.
7. TYPICAL ZONE TIE ARRANGEMENTS:

SEISMIC CROSS TIES ALTERNATING END FOR END UP THE ZONE MAY BE SUBSTITUTED FOR EACH LEG OF A CLOSED INTERIOR TIE (TYPICAL U.N.O.)

'A' = 6" UNLESS NOTED OTHERWISE ON DETAILS.



CONCRETE SHEAR WALLS

1. THESE NOTES APPLY TO WALLS SHOWN ON THE SHEAR WALL SCHEDULE OR OTHERWISE INDICATED AS "SHEAR WALLS" ON THE DRAWINGS. PROVIDE REINFORCING AS DEFINED ON WALL ELEVATIONS OR SHEAR WALL SCHEDULES, SHEAR WALL DETAILS, "MINIMUM SHEAR WALL DISTRIBUTED REINFORCING" TABLE, AND "ZONE TIE SPACING" TABLES.
2. SHEAR WALL ELEVATIONS SERVE THE PURPOSE OF DEFINING THE ZONES, WALL DISTRIBUTED AND COUPLING BEAM REINFORCING, SIZE OF SHEAR WALLS, COUPLING BEAMS (THICKNESS, DEPTH, ETC.) AND CONCRETE STRENGTH. SHEAR WALL ELEVATIONS SHOULD BE READ IN CONJUNCTION WITH SCHEDULES AND TYPICAL SHEAR WALL DETAILS. THE GRAVITY ELEMENTS (SLAB, BEAMS, FOUNDATION SYSTEMS, ETC.) ARE SHOWN CONCEPTUALLY FOR CLARIFICATION ONLY. FOR SIZE, GEOMETRY, STEPS, ETC. OF THE GRAVITY ELEMENTS REFER TO PLANS, DETAILS AND SCHEDULES.
3. UNLESS OTHERWISE NOTED ON THESE DRAWINGS, ALL HORIZONTAL AND VERTICAL LAP SPLICE LENGTHS SHALL BE CLASS 'B' TENSION LAP SPLICES. SPLICE LENGTH AND DEVELOPMENT (EMBEDMENT) LENGTHS SHALL BE AS PER TABLE FOR "CASE 1 CONDITION".
4. UNLESS NOTED OTHERWISE, REFER TO ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR EXACT DIMENSIONS AND LOCATIONS OF WALL OPENINGS.
5. ANY OPENINGS NOT SHOWN ON THE STRUCTURAL SHEAR WALL ELEVATIONS CAN NOT BE ADDED WITHOUT WRITTEN APPROVAL BY RJC.
6. SEE ALSO WALL NOTES.

CONCRETE SHEAR WALLS - DISTRIBUTED REINFORCEMENT

1. WHERE NO DISTRIBUTED WALL REINFORCING IS INDICATED ON WALL ELEVATIONS OR SCHEDULE, PROVIDE MINIMUM WALL REINFORCING AS PER "MINIMUM SHEAR WALL DISTRIBUTED REINFORCING" TABLE.
2. PLACE HORIZONTAL REINFORCEMENT IN OUTER LAYERS OF THE CURTAINS AND VERTICAL REINFORCEMENT IN INNER LAYERS (BEHIND HORIZONTALS), UNLESS NOTED OTHERWISE.
3. VERTICAL SPLICES SHALL TYPICALLY OCCUR AT FLOOR LEVELS. OTHER SPLICES OF HORIZONTAL AND VERTICAL REINFORCEMENT ARE NOT ALLOWED EXCEPT WHERE NECESSARY. THESE CASES MUST BE REVIEWED AND APPROVED BY RJC BEFORE USE AND, IF APPROVED, THE SPLICES MUST BE STAGGERED WITHIN EACH CURTAIN. DO NOT CRANK VERTICAL BARS ANYWHERE.
4. FOOTING DOWELS ARE TO MATCH VERTICAL WALL REINFORCEMENT. EMBEDMENT SHALL BE AS PER TABLE "CASE 1 CONDITION". IF FOUNDATION THICKNESS IS LESS THAN EMBEDMENT LENGTH, EXTEND DOWELS TO BOTTOM OF FOOTING AND PROVIDE STANDARD 90° HOOK. SEE ALSO OTHER NOTES AND DETAILS ON THESE DRAWINGS.
5. WHERE VERTICAL REINFORCEMENT IS INTERRUPTED BY AN OPENING, PROVIDE U-BARS TO MATCH SPACING OF THE VERTICAL REINFORCMENT. LAP U-BARS WITH VERTICAL REINFORCMENT WITH TENSION SPLICE PER TABLE "CASE 1 CONDITION".

CONCRETE SHEAR WALLS - ZONE REINFORCEMENT

1. ZONE REINFORCING IS CALLED UP IN ZONE REINFORCING SCHEDULE OR ON SHEAR WALL ELEVATIONS.
2. ZONE DOWELS TO MATCH SIZE AND NUMBER OF VERTICAL BARS IN ZONE. UNLESS NOTED OTHERWISE, EXTEND DOWELS TO BOTTOM OF FOUNDATION AND PROVIDE STANDARD 90° HOOK.

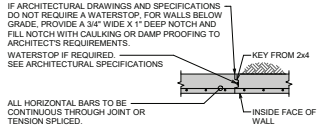
TIES FOR ZONE REINFORCEMENT

30. PROVIDE TIES FOR WALL ZONE REINFORCING AS PER "ZONE TIE SPACING" TABLES UNLESS NOTED OTHERWISE ON WALL ELEVATIONS OR SHEAR WALL SCHEDULE.

WALL CONSTRUCTION JOINT

(CONSTRUCTION JOINT CAN REPLACE CONTROL JOINT)

IF ARCHITECTURAL DRAWINGS AND SPECIFICATIONS DO NOT REQUIRE A WATERSTOP, FOR WALLS BELOW GRADE, PROVIDE A 3/4" WIDE X 1" DEEP NOTCH AND FILL NOTCH WITH CAULKING OR DAMP PROOFING TO ARCHITECT'S REQUIREMENTS.



PLAN

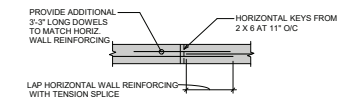
CONCRETE SHEAR WALLS - CONSTRUCTION JOINTS

HORIZONTAL CONSTRUCTION JOINTS

40. THE TOP OF THE WALL SHALL BE LEFT ROUGH (OR SHALL BE ROUGHENED) AND SHALL BE CLEANED OF LAITANCE AND LOOSE MATERIAL BY SUITABLE METHODS BEFORE THE SLAB OR WALL OVER IS PLACED.
41. SLABS WHERE WALLS ARE TO BE PLACED SHALL BE LEFT ROUGH AND CLEAN AND FREE OF LAITANCE. WHERE THIS IS NOT THE CASE, THE SLAB SURFACE SHALL BE CLEANED TO SOUND, ROUGH CONCRETE BY SUITABLE METHODS.
42. SUITABLE METHODS OF CLEANING SHALL BE HIGH PRESSURE WATER BLAST, SAND BLASTING, ETC.

VERTICAL CONSTRUCTION JOINTS

45. LOCATION OF VERTICAL CONSTRUCTION JOINTS MUST BE APPROVED BY THE STRUCTURAL ENGINEER. USE THE FOLLOWING DETAIL UNLESS NOTED OTHERWISE.



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No.	Revision	Date	By
1	ISSUED FOR 50% REVIEW	2024.12.20	KML

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Seal

NOT FOR CONSTRUCTION

Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

GENERAL NOTES

Drawn By	KML	Scale	As indicated
Designed By	PWM	Date	2024.12.20
RJC Project Number	SAS.138936.0001		

Sheet Number **S 1.5**
Revision **1**

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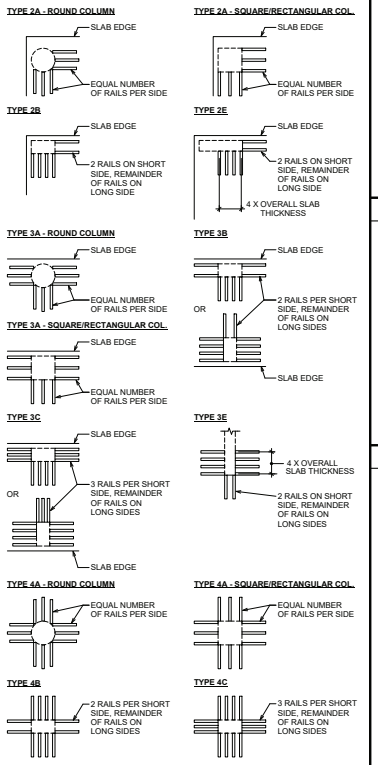
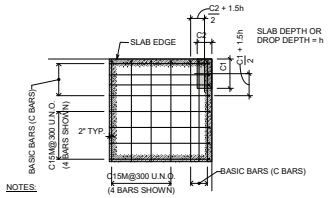
HEADED STUD ASSEMBLY CONFIGURATIONS

ALSO SEE "HEADED STUD ASSEMBLIES" NOTES.



TYPICAL CORNER MAT LAYOUT FLAT SLAB

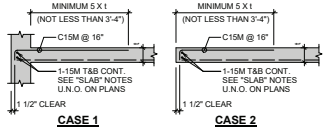


NOTES:

1. MAX ONE CARRY BAR AND ONE CONCENTRATED BAR IN T.U.L. DIRECTION MAY BE DROPPED TO T.L.L.

TYPICAL SLAB EDGE HOOK BARS

1. ALL SLAB EDGES TO HAVE HOOKED TOP BARS. IF HOOK BARS NOT INDICATED ON PLANS OR DETAILS, PROVIDE HOOK BAR SIZE, LENGTH AND SPACING AS INDICATED FOR CASE 1 OR CASE 2.



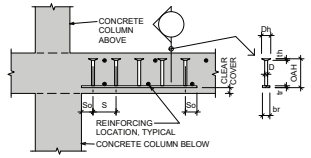
CASE 1
AT SUPPORTS (WALL, COLUMN, ETC)

CASE 2
AT FREE EDGE INCLUDING OPENINGS GREATER THAN 24"

2. FOR THINNER SLABS, STANDARD 90° HOOK TO BE ANGLED TO FIT WITHIN SLAB THICKNESS. HOOK LENGTH NOT TO BE CUT.

HEADED STUD ASSEMBLIES

1. TYPICAL HEADED STUD ASSEMBLY DETAIL:



S = STUD SPACING. SEE HEADED STUD ASSEMBLY SCHEDULE.
So = END STUD SPACING, TYPICALLY HALF OF STUD SPACING UNLESS NOTED OTHERWISE IN HEADED STUD ASSEMBLY SCHEDULE.
OAH = OVERALL HEIGHT OF HEADED STUD ASSEMBLY. SEE HEADED STUD ASSEMBLY SCHEDULE.

D	CROSS-SECTION AREA OF STUD	Dh	th	br	tr
3/8"	0.110 SQ. INCHES	1.19"	0.21"	1"	3/16"
1/2"	0.196 SQ. INCHES	1.58"	0.28"	1 1/4"	1/4"
5/8"	0.307 SQ. INCHES	1.98"	0.35"	1 3/4"	5/16"
3/4"	0.442 SQ. INCHES	2.37"	0.42"	2"	3/8"

2. MATERIALS AND MANUFACTURING SHALL BE IN ACCORDANCE WITH THE LATEST UPDATE OF ASTM A1044.
3. HEADED STUDS SHALL CONFORM TO ASTM A29 GRADES 1010 THROUGH 1020 AND THE FOLLOWING TENSILE PROPERTIES:

TENSILE STRENGTH = 450 MPa (65000 PSI) MINIMUM
YIELD STRENGTH = 345 MPa (50000 PSI) MINIMUM
ELONGATION IN 2" = 20% MINIMUM
REDUCTION OF AREA = 50% MINIMUM

4. BASE RAILS SHALL CONFORM TO ASTM A36 AND THE FOLLOWING TENSILE PROPERTIES:

TENSILE STRENGTH = 450 MPa (65000 PSI) MINIMUM
YIELD STRENGTH = 300 MPa (44000 PSI) MINIMUM
ELONGATION IN 2" = 20% MINIMUM

5. STUD WELDING SHALL CONFORM TO CSA W59, INCLUDING THE PROVISIONS FOR PRODUCTION CONTROL, FABRICATION, AND VERIFICATION REQUIREMENTS.
6. TESTING AND INSPECTION OF HEADED STUD ASSEMBLIES SHALL BE IN ACCORDANCE WITH THE STRUCTURAL SPECIFICATIONS.
7. COVER OF THE HEADED STUD ASSEMBLY TO THE TOP AND BOTTOM SLAB SURFACES ARE AS PER THE CONCRETE REINFORCEMENT NOTES.
8. ALL HEADED STUD ASSEMBLIES TO BE INSTALLED WITH THE RAIL LOCATED BELOW THE LOWEST LAYER OF REINFORCEMENT UNLESS NOTED OTHERWISE ON DRAWINGS OR APPROVED IN WRITING BY RJC.
9. ALLOW MINIMUM 2" CLEAR COVER FROM THE HEADED STUD ASSEMBLY TO SLAB EDGES UNLESS NOTED OTHERWISE ON DRAWINGS.
10. TIE ALL HEADED STUD ASSEMBLIES TO REINFORCING BARS AND USE ADEQUATE CHAIRS TO PREVENT MOVEMENT OF THE HEADED STUD ASSEMBLIES DURING CASTING.
11. NO IN-SLAB DUCTS PERMITTED IN THE REGION CONTAINING HEADED STUD ASSEMBLIES UNLESS APPROVED IN WRITING BY RJC.
12. NO SLEEVES OR CONDUIT PERMITTED WITHIN THE REGION CONTAINING HEADED STUD ASSEMBLIES UNLESS APPROVED IN WRITING BY RJC.

SLAB TEMPERATURE REINFORCING

1. MINIMUM BOTTOM (UNLESS NOTED OTHERWISE):

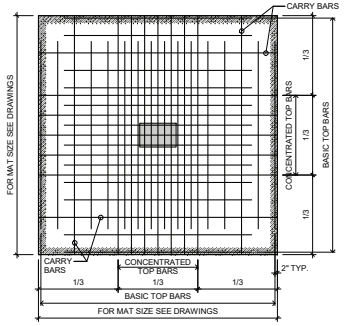
SLAB THICKNESS	TEMPERATURE REINFORCING	SLAB THICKNESS	TEMPERATURE REINFORCING
5"	10M @ 16"	8"	15M @ 19"
5 1/2"	10M @ 14"	8 1/2"	15M @ 18"
6"	10M @ 13"	9"	15M @ 17"
6 1/2"	10M @ 12"	10"	15M @ 16"
7"	10M @ 11"	11"	15M @ 14"
7 1/2"	15M @ 20"	12"	15M @ 13"

2. FOR OTHER THICKNESSES REINFORCEMENT TO BE PROPORTIONAL TO ABOVE.
3. BASED ON CAN/CSA-A23.3: 0.002 X AREA.
4. 15M BOTTOM BARS MAY BE REPLACED WITH 10M BARS AT CLOSER SPACING SATISFYING 0.002 x AREA. (EG. REPLACE 15M @ 20" WITH 10M @ 10"). DO NOT INCREASE BAR SPACING UNLESS APPROVED BY RJC.

INTEGRITY REINFORCEMENT

1. PROVIDE INTEGRITY REINFORCEMENT IN ALL FLAT PLATES, FLAT SLABS WITH DROPS, AND SLABS WITH SLAB BANDS AS PER THE [NOTE] [SCHEDULE] SHOWN ON THE PLAN SHEETS UNLESS NOTED OTHERWISE ON PLAN.
2. SEE S 3.1 FOR TYPICAL DETAILS OF INTEGRITY REINFORCEMENT PLACEMENT.
3. ALL INTEGRITY REINFORCEMENT TO BE CONTINUOUS BARS WITHOUT SPLICES AND ALL BARS MUST PASS THROUGH THE COLUMN CORE. ADJUST SLEEVE LOCATIONS TO SUIT INTEGRITY REINFORCEMENT LAYOUT.
4. CENTER ALL INTEGRITY BARS ABOUT COLUMN CENTERLINE. WHERE SLAB EDGE OR EDGE OF OPENING IS LOCATED LESS THAN ONE-HALF OF THE INTEGRITY BAR LENGTH FROM COLUMN CENTERLINE OR LESS THAN 'E' WHERE APPLICABLE, EXTEND THE INTEGRITY REINFOREMNT TO SLAB EDGE LESS COVER AND PROVIDE STANDARD HOOK OR BAR TERMINATOR (5 x A_b HEAD).

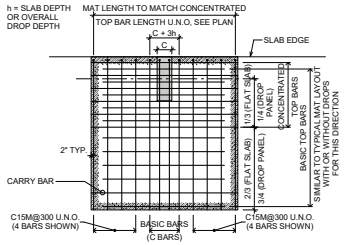
TYPICAL MAT LAYOUT WITHOUT DROP PANEL



NOTES:

1. CONCENTRATE EXTRA TOP BARS IN MIDDLE 1/3 OF MAT
2. MAX TWO CARRY BARS + ONE CONCENTRATED BAR IN T.U.L. DIRECTION MAY BE DROPPED TO T.L.L.

TYPICAL EDGE MAT LAYOUT FLAT SLAB

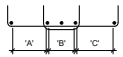


NOTES:

1. WHERE TUL PARALLEL TO SLAB EDGE, MAX ONE CARRY BAR AND ONE CONCENTRATED BAR IN TUL DIRECTION MAY BE DROPPED TO T.L.L.
2. WHERE TUL PERPENDICULAR TO SLAB EDGE, MAX ONE TUL BAR EACH SIDE OF COLUMN MAY BE DROPPED TO TLL. DO NOT DROP BASIC BARS PERPENDICULAR TO SLAB EDGE U.N.O.

COLUMN TIE ARRANGEMENTS

TYPE	4 BAR COL.	6 BAR COL.	8 BAR COL.	10 BAR COL.	12 BAR COL.
TYPE 1					
TYPE 2					
TYPE 3					
TYPE 4					



'A', 'C' = 20" MAX.
'B' = 12" MAX.
TYPICAL AT ALL TIES - ANY SIDE OF COLUMN

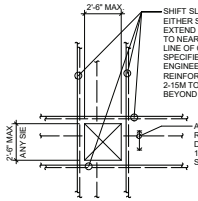
TYPICAL ROUND OR OCTAGONAL COLUMN TIES

NOTES:

1. MAXIMUM CLEAR DISTANCE BETWEEN VERTICAL BARS ENCLOSED BY THE CORNER OF A TIE, AND WITHOUT AN INTERMEDIATE BAR, IS 20".
2. MAXIMUM ONE BAR MAY BE PLACED BETWEEN TIED BARS. MAXIMUM CLEAR DISTANCE BETWEEN TIED VERTICAL BARS FOR THIS CASE IS 12".
3. ALL TIES TO HAVE 135° HOOKS AND BE BUCKLING PREVENTION TIES DETAILED AS HOOPS WITH SEISMIC HOOKS UNLESS NOTED OTHERWISE.
4. CLOSED TIES MAY ALWAYS BE SUBSTITUTED FOR CROSS-TIES.
5. ROUND OR OCTAGONAL COLUMNS TO HAVE 6 VERTICAL BARS MINIMUM. OFFSET LOCATION OF TIE HOOKS OVER HEIGHT OF COLUMN.

SLABS

1. UNLESS NOTED OTHERWISE, THE MINIMUM BOTTOM REINFORCING IN BOTH DIRECTIONS IN SLABS SHALL BE AS SHOWN ON SLAB TEMPERATURE REINFORCING NOTES.
2. UNLESS NOTED OTHERWISE, EDGES OF ALL SLABS SHALL HAVE 1-15M TOP + 1-15M BOTTOM CONTINUOUS LAPPED 25". AT RE-ENTRANT CORNER EXTEND 2'-1" BEYOND THE CORNER. STAGGER TOP AND BOTTOM BAR LAPS MINIMUM 4'-0".
3. CAMBERS: FOR SLABS, BEAMS, GIRDERS
   A. CIRCLED NUMBERS, E.G. (5/8") INDICATES POSITION AND MAGNITUDE OF POINTS WHERE SLABS SHALL BE CAMBERED 5/8".
   B. FOR SPANS OVER 23'-0" WHEN CAMBERS ARE NOT INDICATED ON DRAWINGS, SPANS SHALL BE CAMBERED 0.002 OF SPAN.
   C. UNLESS NOTED OTHERWISE, POST-TENSIONED SLABS AND BEAMS NEED NOT BE CAMBERED.
4. LOCATIONS AND DETAILS OF CONSTRUCTION JOINTS TO BE SUBMITTED TO RJC FOR REVIEW AND APPROVAL, PRIOR TO CONSTRUCTION.
5. UNLESS NOTED OTHERWISE, SLAB TEMPERATURE REINFORCING SHALL BE TENSION SPLICED. SEE "EMBEDMENT / DEVELOPMENT LENGTHS AND SPLICE LENGTHS" NOTE.
6. WHERE NOTED ON PLAN SLAB RECESSES TO HAVE SLAB THICKNESS LOCALLY REDUCED.
7. OPENINGS IN SLABS:
   A. UNLESS NOTED OTHERWISE, SLAB REINFORCING SHALL NOT BE CUT AT OPENINGS INCLUDING SLEEVES, PLUMBING BLOCK OUTS AND EMBEDDED ELECTRICAL BOXES.
   B. AT OPENINGS UP TO 12" X 12", SPREAD REINFORCING AROUND THE OPENING.
   C. AT OPENINGS UP TO 2'-6" X 2'-6", DISPLACE SLAB REINFORCEMENT AROUND OPENING AND PROVIDE EXTRA REINFORCEMENT AS SHOWN UNLESS NOTED OTHERWISE ON PLANS AND DETAILS.



   D. AT OPENINGS GREATER THAN 2'-6", SEE PLANS AND DETAILS FOR REINFORCEMENT.
   E. NO OPENINGS PERMITTED WITHIN TWICE THE SLAB DEPTH FROM THE FACE OF COLUMN OR EDGE OF CAPITAL EXCEPT AS NOTED ON THE STRUCTURAL DRAWINGS.
   F. ALSO SEE "CONDUITS, PIPES, AND SLEEVES EMBEDDED IN CONCRETE" NOTE AND THE SPECIFICATIONS.

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No.	Revision	Date	By
1	ISSUED FOR 50% REVIEW	2024.12.20	KML

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Seal

NOT FOR CONSTRUCTION

Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

GENERAL NOTES

Drawn By	KML	Scale	As indicated
Designed By	PWM	Date	2024.12.20
RJC Project Number	SAS.138936.0001		

Sheet Number **S 1.6**
Revision **1**

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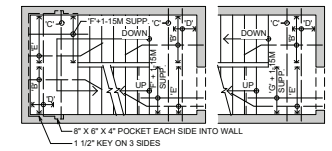
MASONRY NOTES

READ IN CONJUNCTION WITH THE MASONRY SPECIFICATIONS AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

1. ALL MASONRY WORK SHALL CONFORM TO CAN/CSA S304.1 AND ITS REFERENCED DOCUMENTS, INCLUDING BUT NOT LIMITED TO:
   - A. CONCRETE BLOCK TO CAN/CSA-A165.1 TYPE H/15/A/M UNLESS NOTED OTHERWISE (BASED ON NET AREA).
   - B. MASONRY WIRE REINFORCING TO CSA-A371 AND ASTM 1064-GRADE 485
   - C. REINFORCING BARS TO CSA-A371 AND CSA G30.18 - GRADE 400W.
   - D. GROUT PREPARED ON OR OFF SITE SHALL BE IN ACCORDANCE WITH CAN/CSA-A179 AND SUPPLIER RECOMMENDATIONS
     - i. MINIMUM 28 DAY COMPRESSIVE STRENGTH – 12.5 MPa
     - ii. SLUMP 8" (MIN) TO 10" (MAX).
     - iii. FINE AGGREGATE SHALL BE USED WHERE SPACES TO BE GROUTED HAVE DIMENSIONS LESS THAN 2"
   - E. CONNECTORS FOR MASONRY TO CAN/CSA-A370.
   - F. MORTAR SHALL BE TYPE S PREPARED IN ACCORDANCE WITH CAN/CSA-A179.
   - G. CONNECTIONS TO CAN/CSA-A370.
   - H. PRACTICE TO CAN/CSA-A371.
2. THE MASONRY CONTRACTOR SHALL BE A MEMBER OF THE CANADIAN MASONRY CONTRACTORS ASSOCIATION.
3. NO MASONRY CONSTRUCTION SHALL BE PERMITTED WITHOUT THE CONTRACTOR ENSURING ALL NECESSARY PROTECTION AND CONSTRUCTION METHODS CAN BE READILY IMPLEMENTED IN ACCORDANCE WITH CAN/CSA-A371 PRIOR TO TEMPERATURES AND WEATHER CONDITIONS REACHING THE FOLLOWING:
   - A. HOT WEATHER – TEMPERATURE ABOVE +30°C
   - B. COLD WEATHER – TEMPERATURE BELOW +5°C
   - C. WET WEATHER OR SNOW PROTECTION (STORAGE AND CONSTRUCTION)
   - D. HIGH WIND CONSTRUCTION
4. ALL WALLS SHALL BE BUILT USING RUNNING BOND. STACK BOND SHALL NOT BE USED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
5. MORTAR MAY NOT BE SUBSTITUTED FOR GROUT.
6. ALL MORTAR JOINTS IN CONCRETE BLOCK WORK SHALL BE TOOLED CONCAVE UNLESS NOTED OTHERWISE IN THE ARCHITECTURAL DRAWINGS.
7. FILL BOND BEAMS AND CELLS CONTAINING VERTICAL REINFORCEMENT OR BOLTS WITH GROUT, VIBRATE OR PUDDLE TO COMPLETELY FILL CELLS.
8. UNLESS MASONRY WALLS ARE NOTED AS "FULLY GROUTED" OR "GROUT SOLID", GROUT ONLY CELLS CONTAINING VERTICAL OR HORIZONTAL REINFORCEMENT, ANCHOR RODS, BOLTS OR OTHER SPECIFICALLY NOTED AREAS. VIBRATE OR PUDDLE TO ENSURE CELLS ARE FILLED COMPLETELY AND PROPERLY CONSOLIDATED.
9. GROUTING OF WALLS SHALL BE CARRIED OUT FOLLOWING ONE OF THE TWO METHODS BELOW. THE METHOD OF GROUTING SHALL BE INDICATED IN THE SHOP DRAWINGS.
   - A. LOW LIFT GROUTING
     - i. LIFTS SHALL NOT EXCEED 4'-8" IN HEIGHT.
     - ii. TERMINATE EACH LIFT 1 1/2" BELOW THE TOP OF EACH MASONRY UNIT.
   - B. HIGH LIFT GROUTING
     - i. LIFTS SHALL NOT EXCEED 8'-0" IN HEIGHT.
     - ii. THE MASONRY MUST BE ALLOWED TO CURE FOR AT LEAST 4 HOURS PRIOR TO PLACING GROUT.
     - iii. GROUT SLUMP MUST BE MAINTAINED AT 10".
     - iv. THE WALL SHALL NOT INCLUDE ANY INTERMEDIATE BOND BEAMS BETWEEN THE TOP AND BOTTOM OF THE LIFT.
     - v. CLEANOUTS SHALL BE PROVIDED FOR ALL CELLS TO BE REINFORCED AND FILLED WITH GROUT. REPEAT CLEANOUTS ABOVE BOND BEAMS. THESE CELLS ARE TO BE KEPT CLEAR AND CLEAN OF MORTAR.
10. GROUT NOT PLACED WITHIN 1.5 HOURS AFTER WATER IS FIRST ADDED TO THE BATCH SHALL BE DISCARDED.
11. REINFORCEMENT SHALL HAVE SPLICES IN ACCORDANCE WITH THE EMBEDMENT / DEVELOPMENT LENGTHS AND SPLICE LENGTHS NOTE.
12. COVER FOR VERTICAL REINFORCEMENT EXPOSED TO WEATHER OR EARTH SHALL BE INCREASED TO 2".
13. REINFORCING BAR POSITIONERS SHALL BE PROVIDED AS PER THE TYPICAL DETAIL MW03 TO ENSURE BARS REMAIN WITHIN TOLERANCE DURING PLACEMENT OF GROUT OR MORTAR.
14. HORIZONTAL JOINT REINFORCEMENT AND CONNECTIONS TO BASE BUILDING STRUCTURE SHALL HAVE THE FOLLOWING FINISH BASED ON LOCATION:
   - A. EXTERIOR WALLS EXPOSED TO EARTH OR WEATHER OR INTERIOR WALLS EXPOSED TO HUMIDITY > 75% MUST BE HOT-DIP GALVANIZED, EPOXY COATED (REQUIRING INCREASED EMBED & SPLICE LENGTHS), OR STAINLESS STEEL.
   - B. INTERIOR WALLS IN DRY CONDITIONS SHALL BE MILL OR HOT-DIP GALVANIZED.
15. PROVIDE LADDER STYLE HORIZONTAL REINFORCEMENT FOR ALL REINFORCED WALLS AND TRUSS STYLE REINFORCEMENT FOR UNREINFORCED WALLS UNLESS NOTED OTHERWISE.
16. PROVIDE PRE-FABRICATED CORNER AND TEE SECTIONS FOR JOINT REINFORCEMENT.
17. PROVIDE DOWELS INTO FOUNDATION WALLS, CONCRETE FOOTINGS SUSPENDED SLABS, OR SLAB-ON-GRADE:
   - A. TO MATCH VERTICAL REINFORCEMENT DETAILED FOR WALLS.
   - B. AT MINIMUM PROVIDE 15M@4'-0" STARTER DOWELS WITH STANDARD HOOK DEVELOPMENT AND 4'-0" PROJECTION INTO MASONRY ABOVE.
18. FOR DOWELS IN CONCRETE ON DECK PROVIDE DROP IN ANCHORS.
19. PROVIDE LINTELS OVER ALL OPENINGS IN WALLS. SEE LINTEL SCHEDULE, UNLESS NOTED OTHERWISE ON PLAN.
20. CONTROL JOINTS SHALL BE PROVIDED IN ACCORDANCE WITH TYPICAL DETAIL MW102 UNLESS NOTED OTHERWISE
   - A. REFER TO CONTROL JOINT DETAIL FOR REINFORCEMENT THAT SHALL BE CARRIED THROUGH AT BOND BEAMS UNLESS NOTED OTHERWISE.
   - B. LOCATIONS OF CONTROL JOINTS SHALL BE LAID OUT TO ENSURE NO FREE STANDING WIDTHS OF WALL LESS THAN 13'-0" ARE CREATED.
   - C. CONTRACTOR TO SUBMIT A SHOP DRAWING SHOWING COORDINATED CONTROL JOINTS WITH STRUCTURAL NOTES, OPENINGS AND ARCHITECTURAL DRAWINGS.
21. PROVIDE CONTROL JOINTS (WITH VERTICAL MOVEMENT ALLOWANCE) BETWEEN ALL LOAD-BEARING AND NON LOAD-BEARING WALLS.
22. OUTSIDE FACES OF EXTERIOR WALLS SHALL BE WATERPROOFED AS PER ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

TYPICAL CAST INSITU STAIRS HALF FLIGHT AND LANDING

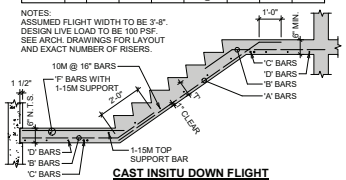


SEE ARCHITECTURAL DRAWINGS FOR STAIR DIMENSIONS, ETC.
FOR PRECAST STAIRS MODIFY 'B' AND 'E' BARS AS SHOWN ON PRECAST DETAILS.

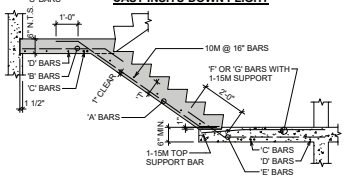
TYPICAL PLAN (EVEN RISERS) — **PART PLAN** (STAGGERED RISERS)

RISERS	'T'	'A'	'B'	'C'	'D'	'E'	'F'	'G'
7 TO 8	5"	4-15M	5-10M	2-20M	10M @ 12"	5-10M	3-15M	4-15M
9 TO 11	6"	5-15M	5-10M	3-20M	10M @ 12"	5-10M	4-15M	5-15M
12 TO 13	6"	6-15M	5-10M	3-20M	10M @ 12"	5-10M	4-15M	6-15M

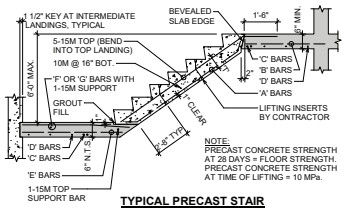
NOTES:
ASSUMED FLIGHT WIDTH TO BE 3'-8".
DESIGN LIVE LOAD TO BE 100 PSF.
SEE ARCH. DRAWINGS FOR LAYOUT AND EXACT NUMBER OF RISERS.



CAST INSITU DOWN FLIGHT



CAST INSITU UP FLIGHT

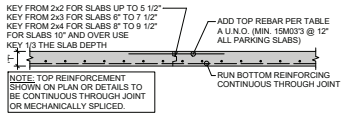


NOTE:
PRECAST CONCRETE STRENGTH AT 28 DAYS = FLOOR STRENGTH.
PRECAST CONCRETE STRENGTH AT TIME OF LIFTING = 10 MPa.

TYPICAL PRECAST STAIR

CONSTRUCTION JOINTS THROUGH SLABS, SLAB BANDS, AND BEAMS

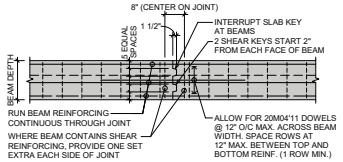
LOCATIONS TO BE APPROVED BY RJC



THROUGH SLABS

TABLE A

SLAB / SLAB BAND THICKNESS	CONCRETE DESIGN STRENGTH f'_c	
	35 MPa OR LESS	GREATER THAN 35 MPa
"T" ≤ 12"	15M03'3 @ 12"	20M03'11 @ 12"
12" < "T" ≤ 24"	20M03'11 @ 12"	25M04'11 @ 12"
SLAB BAND	20M03'11 @ 12"	25M04'11 @ 12"



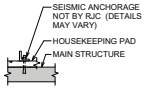
THROUGH BEAMS

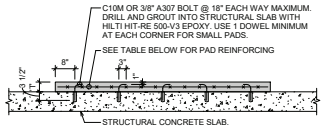
NOTES:

1. THESE DETAILS ARE TO ASSIST THE CONTRACTOR IN LOCATING POTENTIAL CONSTRUCTION JOINTS. FINAL CONSTRUCTION JOINT LOCATIONS ARE TO BE APPROVED BY RJC.
2. CONTRACTOR TO SUBMIT ALL PROPOSED CONSTRUCTION JOINT LOCATIONS TO RJC FOR REVIEW MINIMUM 14 DAYS BEFORE START OF FORMWORK AND REINFORCEMENT FOR LEVEL CONTAINING PROPOSED JOINT.
3. REQUIREMENTS FOR KEYS, ROUGHENED SURFACES AND DOWELS AT CONSTRUCTION JOINTS PROVIDED IN THESE DETAILS ARE FOR TYPICAL CONDITIONS AND ARE FOR PRICING AND PLANNING PURPOSES ONLY. A FINAL DESIGN OF THE CONSTRUCTION JOINT DETAILS IS TO BE COMPLETED BY RJC [AT CONTRACTOR'S COST] AFTER THE CONSTRUCTION JOINT LOCATIONS ARE APPROVED.
4. NO STAYFORM PERMITTED IN CONSTRUCTION JOINTS IN PARKING AREAS UNLESS APPROVED IN WRITING BY RJC.

TYPICAL MECHANICAL / ELECTRICAL HOUSEKEEPING PAD DETAIL

1. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION, EXTENT, AND THICKNESS OF HOUSEKEEPING PADS.
2. THIS DETAIL PROVIDES RESISTANCE TO HORIZONTAL (SLIDING) FORCES ONLY FROM EARTHQUAKE LOADING ON PAD AND EQUIPMENT. ADDITIONAL CONNECTIONS FOR UPLIFT FORCES FROM EQUIPMENT TO BE DESIGNED AND DETAILED BY SPECIALTY ENGINEER AND WILL REQUIRE ANCHORING THROUGH THE PAD AND INTO OR THROUGH THE STRUCTURAL SLAB. IN POST-TENSIONED FLOORS, LOCATE TENDONS BEFORE DRILLING HOLES.





'T' (PAD THICKNESS)	REINFORCING
UP TO 4"	1 SHEET OF WWR 6 X 6 - W2.9 X W2.9 LAP 12" AT MID-DEPTH
4 1/2" TO 6"	10M @ 16" EACH WAY AT MID-DEPTH
6 1/2" TO 8"	10M @ 12" EACH WAY AT MID-DEPTH

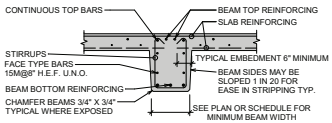
SLAB ON GRADE REINFORCING AND CONTROL JOINTS

1. SLAB ON GRADE SHALL BE PLACED ON SOIL CAPABLE OF SUSTAINING 520 PSF MINIMUM WITHOUT SETTLEMENT RELATIVE TO THE BUILDING FOUNDATIONS. IN AREAS WHERE S.O.G. IS USED TO SUPPORT TEMPORARY SHORING LOADS, LARGER SUBGRADE CAPACITIES MAY BE REQUIRED PER LOADS SUPPLIED BY TEMPORARY WORKS ENGINEER.
2. REFER TO THE SUB-BASE NOTE AND GEOTECHNICAL REPORT FOR ALL SUB-BASE DESIGN AND COMPACTION REQUIREMENTS
3. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING THE SLAB ON GRADE AND ANY SPECIAL SUBBASE PREPARATIONS REQUIRED TO SUPPORT TEMPORARY SHORING OR ANY OTHER TEMPORARY CONSTRUCTION LOADS.
4. FOR UNREINFORCED SLABS PROVIDE A 1 1/2" DEEP CONTINUOUS SHEAR KEY IN THE SLAB ON GRADE FACE.
5. UNLESS NOTED OTHERWISE ON PLAN PROVIDE SLAB ON GRADE REINFORCEMENT AS SHOWN IN THE TABLE BELOW, MID-DEPTH IN THE SLAB WITH PROPER CHAIRS.

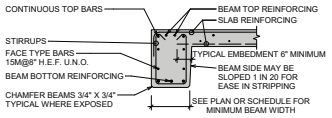
SLAB ON GRADE THICKNESS	MINIMUM REINFORCING UNLESS NOTED OTHERWISE ON PLAN
LESS THAN 4 1/2"	WWR 6 X 6 - W2.9 X W2.9 (LAP 12")
4 1/2" TO 7"	10M @ 16" EACH WAY
GREATER THAN 7"	15M @ 16" EACH WAY

6. COORDINATE REBAR PLACEMENT TO AVOID DAMAGING OR SHIFTING BARS DURING SAWCUTING AND TO ACCOUNT FOR CONCRETE EXPOSURE CLASS.
7. CONSTRUCTION JOINTS SHOULD BE LOCATED TO PROVIDE SQUARE POURS AND MEET THE POUR SIZE LIMITATIONS PER THE SPECIFICATIONS.
8. CONTROL JOINTS / SAWCUTS SHALL BE LOCATED AT A MAXIMUM SPACING OF THE SLAB THICKNESS AND SHALL NOT EXCEED 14'-9" , OR AS NOTED IN DRAWINGS. SAWCUT LAYOUT TO BE SQUARE GRIDS WHEREVER POSSIBLE.
9. SAWCUT JOINTS SHALL BE 5/32" WIDE WITH A DEPTH OF 1/3 THE SLAB DEPTH BUT NOT LESS THAN 1 1/2".
10. COORDINATE THE SAWCUT PATTERN TO SUIT ARCHITECTURAL FLOOR FINISHES, CHANGES IN SLAB THICKNESS, AND POINTS OF SUPPORT. THE CONSULTANT MAY REQUEST A COORDINATION MEETING TO REVIEW THE SLAB LAYOUT AND METHODOLOGY PRIOR TO COMMENCING CONSTRUCTION.
11. REFER TO THE SPECIFICATIONS FOR ADDITIONAL SLAB ON GRADE CONSTRUCTION, FINISHING, AND TOLERANCE REQUIREMENTS.
12. UNLESS NOTED OTHERWISE, PROVIDE CONTROL JOINTS AROUND ALL COLUMNS PER THE TYPICAL DETAILS.
13. PROVIDE ADDITIONAL REINFORCEMENT AT ALL DISCONTINUOUS SAW CUTS, RE-ENTRANT CORNERS AND STEPS IN SLAB PER TYPICAL DETAILS.
14. APPROVAL OF ARCHITECT IS REQUIRED TO SUBSTITUTE "ZIP-STRIPS" FOR SAWCUTS.

CONCRETE BEAMS



INTERIOR



EXTERIOR

NOTES:

1. CAMBERS AS PER SLAB NOTES.
2. ADDITIONAL STIRRUPS MAY BE REQUIRED SHOULD HORIZONTAL POUR BREAK BE INTRODUCED. ALL POUR BREAKS PROPOSED BY CONTRACTOR TO BE REVIEWED BY RJC PRIOR TO CONSTRUCTION.

MASONRY - INSPECTION & TESTING

1. AN INDEPENDENT TESTING AGENCY SHALL BE RETAINED TO PROVIDE AN ON-GOING SERVICE OF ON-SITE QUALITY CONTROL REVIEWS FOR THE MASONRY WORKS.
2. A TESTING AND INSPECTION PROGRAM SHALL BE DEVELOPED IN ACCORDANCE WITH THE STANDARDS IN THE MASONRY NOTES, THE DRAWINGS, SPECIFICATIONS AND TMS 402/602-16 BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES **LEVEL A QUALITY ASSURANCE**.
3. THE CONTRACTOR SHALL CONTACT THE STRUCTURAL CONSULTANT FOR SITE VISITS 24 HOURS PRIOR TO POURING GROUT.

Creative Thinking Practical Results

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No.	Revision	Date	By
1	ISSUED FOR 50% REVIEW	2024.12.20	KML

Drawing Notes

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Seal

NOT FOR CONSTRUCTION

Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

GENERAL NOTES

Drawn By	KML	Scale	As indicated
Designed By	PWM	Date	2024.12.20
RJC Project Number	SAS.138936.0001		

Sheet Number **S 1.7** Revision **1**

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WOOD MOVEMENT DUE TO SHRINKAGE

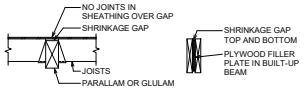
1. THE WOOD FRAME STRUCTURE WILL UNDERGO MOVEMENT DUE TO SHRINKAGE. SHRINKAGE OCCURS AS THE MOISTURE CONTENT IN WOOD DROPS AS IT IS DRIED. IN SERVICE, THE MOISTURE CONTENT SHOULD REACH AROUND 6% AND IS CONSIDERED THE EQUILIBRIUM MOISTURE (EMC) CONTENT FOR THE PROJECT.
2. KILN DRIED WOOD IS INITIALLY DRIED TO AN AVERAGE MOISTURE CONTENT OF 15% WITH NO PIECE EXCEEDING 19%.
3. WOOD MAY TAKE ON MOISTURE DURING CONSTRUCTION DUE TO WEATHER AND EXCEED THE INITIAL FABRICATION MOISTURE CONTENT.
4. THE CONTRACTOR IS TO TAKE ALL REASONABLE MEASURES TO PROTECT WOOD FROM MOISTURE WHILE IT IS STORED ON SITE. THIS INCLUDES STORING LEVEL ON THE SITE, RAISED OFF THE GROUND, STACKED USING SEPARATING SPACERS, AND STORED IN A DRY AREA OR PROTECTED WITH A MOISTURE RESISTANT COVER. THE CONTRACTORS SHOULD ALSO TAKE REASONABLE MEASURES TO CLOSE IN THE STRUCTURE AS QUICKLY AS POSSIBLE, REDUCING THE EXPOSURE OF WOOD TO MOISTURE DURING CONSTRUCTION. WOOD ELEMENTS ALONG THE PERIMETER OF THE BUILDING SHOULD BE COVERED TO PROTECT THEM FROM RAIN. IN THE EVENT THAT THERE IS POOLED WATER FROM RAINFALL ON STRUCTURE, MEASURES SHOULD BE TAKEN TO REMOVE THE WATER PROPERLY TO AVOID SATURATION OF THE WOOD.
5. FOR THE PROJECT, GLULAM BEAMS AND WALL PLATES ARE SPECIFIED TO HAVE A MAXIMUM MOISTURE CONTENT OF 15% AT TIME OF FABRICATION. CLT PANELS TO MEET PRG 320 REQUIREMENTS AND WILL BE LESS THAN 15%, BUT HAVE BEEN ASSUMED 15% FOR PURPOSES OF CALCULATING SHRINKAGE.
6. THE CONTRACTOR IS TO TAKE ALL REASONABLE MEANS TO KEEP THE BUILDING MOISTURE CONTENT OF THE WOOD STRUCTURE TO 15% MAXIMUM DURING CONSTRUCTION. THIS INCLUDES CONSTRUCTING IN THE DRY SEASON, TARPING WHEN POSSIBLE, REMOVING STANDING AND OR TRAPPED WATER, OR OTHER REASONABLE MEASURES.
7. PRIOR TO ENCLOSING THE STRUCTURE WITH THE BUILDING ENVELOPE, THE CONTRACTOR IS TO DRY THE WOOD TO A MAXIMUM MOISTURE CONTENT OF 15%. THIS INCLUDES ALL WOOD IN THE STRUCTURE (NOT JUST THE EXTERIOR WALL).
8. THE CONTRACTOR IS TO ENGAGE A BUILDING ENVELOPE SPECIALIST TO MONITOR REPRESENTATIVE VALUES OF WOOD WITHIN THE BUILDING TO ENSURE MAXIMUM MOISTURE OF 15% IS NOT EXCEEDED, AFTER WHICH TIME BUILDING FINISHES CAN BE PLACED.
9. THE BUILDING WILL SEE TWO INITIAL STAGES OF CHANGE IN MOISTURE CONTENT IN THE WOOD. THE FIRST BEING THE CHANGE IN MOISTURE CONTENT UNTIL WHICH TIME THE STRUCTURE IS DRIED TO 15%, SHOULD IT TAKE ON MOISTURE DURING CONSTRUCTION. IT IS ASSUMED INITIALLY THE WOOD MAY BE AT 24% MOISTURE CONTENT AS AN UPPER LIMIT. THE SECOND BEING THE CHANGE FROM 15% MOISTURE CONTENT TO THE EQUILIBRIUM MOISTURE CONTENT OF 6% WHICH IS THE ANTICIPATED FINAL MOISTURE CONTENT EXPECTED.
10. THE NATURAL MECHANICAL CONDITIONING STRATEGY FOR THE PROJECT WILL RESULT IN VARIABLE LEVELS OF RELATIVE HUMIDITY (RH) THROUGH THE SERVICE LIFE OF THE BUILDING, WITH RANGES ANTICIPATED IN WINTER BETWEEN 12% AND 15%, AND IN SUMMER BETWEEN 50% AND 80%. THE WOOD STRUCTURE WILL FUNCTION AS A PASSIVE CONDITIONING AGENT OVER TIME, TAKING IN MOISTURE AS THE RH INCREASES AND RELEASING IT AS THE RH DECREASES. THE ANTICIPATED RANGES OF RH IN COMBINATION WITH TEMPERATURE EQUATE TO PROBABLE CHANGES IN EQUILIBRIUM MOISTURE CONTENT (EMC) OF 2% TO 20% s WHICH MAY RESULT IN CHECKING AND SURFACE CRACKS. REGULAR MONITORING OF THE BUILDING RH, ELEMENT EMC, AND ANY VISUAL DISTRESSES IS IMPORTANT AND RECOMMENDED.
11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL TRADES ARE AWARE OF THE POTENTIAL PER FLOOR SHRINKAGE AND CUMULATIVE SHRINKAGE THAT MAY OCCUR IN THE BUILDING AT VARIOUS STAGES OF CONSTRUCTION AND HOW MUCH THEY NEED TO ACCOMMODATE FOR IN THEIR DETAILS AND CONNECTIONS. THE CONTRACTORS SHOULD ALSO BE AWARE OF THE GENERAL MOISTURE CONTENT OF PLATES, CLT PANELS, AND BEAMS SHOULD THEY BE SUBJECT TO SIGNIFICANT MOISTURE DURING CONSTRUCTION.
12. FOR SYSTEMS OR COMPONENTS THAT ARE INSTALLED BEFORE THE BUILDING HAS BEEN DRIED TO 15%, ALLOW FOR THE FULL SHRINKAGE FROM 24% TO 6%. FOR SYSTEMS OR COMPONENTS THAT ARE ADDED AFTER THE BUILDING HAS BEEN DRIED TO 15%, ALLOW FOR THE SHRINKAGE BETWEEN 15% AND 6%. IF THE MOISTURE CONTENT SHOULD BE FOUND TO BE GREATER THAN 24% DURING CONSTRUCTION, CONTACT RJC FOR REVISED SHRINKAGE VALUES FOR COMPONENTS THAT MAY BE AFFECTED.
13. ALL VERTICAL WOOD FRAMING IS CONSIDERED BALLOON FRAMING RESULTING IN NEGLIGABLE CUMULATIVE SHRINKAGE THROUGH HEIGHT OF BUILDING. SHRINKAGE WILL OCCUR WITHIN FLOOR ASSEMBLY ITSELF.
14. THE SHRINKAGE OR SWELLING OF A WOOD MEMBER BETWEEN THE INITIAL AND FINAL MOISTURE CONTENT MAY BE ESTIMATED BY USING THE EQUATION OUTLINED IN CSA O86 A5.4.6.

WOOD FRAMING - MATERIALS

1. STUDS AND BUILT-UP POSTS TO BE S-P-F NO.1/NO.2 GRADE OR BETTER. STUDS MAY BE FINGER-JOINTED (MAXIMUM 3 JOINTS PER STUD) EXCEPT IN SHEAR WALLS. REFER TO WOOD SHEAR WALL NOTES FOR ADDITIONAL REQUIREMENTS. FINGER JOINTED STUDS IN FIRE SEPARATIONS SHALL HAVE HEAT RESISTANT ADHESIVE (HSA).
2. BUILT-UP BEAMS AND HEADERS TO BE S-P-F NO.1/NO.2 GRADE OR BETTER.
3. WALL PLATES TO BE S-P-F NO.1/NO.2 GRADE OR BETTER. REFER TO WOOD SHEAR WALL NOTES FOR ADDITIONAL REQUIREMENTS. WALL PLATES SHALL BE KILN-DRIED AND MAY BE FINGER JOINTED EXCEPT IN SHEAR WALLS.
4. POSTS AND BEAMS TO BE S-P-F NO.2 GRADE OR BETTER.
5. CLT - CROSS-LAMINATED TIMBER PANELS PER CLT NOTES.
6. ALL DIMENSION LUMBER TO BE SURFACED FOUR SIDES ("S4S").
7. PLYWOOD TO BE DOUGLAS FIR PLYWOOD (DFP): REGULAR GRADES OF UNSANDED. CANADIAN SOFTWOOD PLYWOOD (CSP): REGULAR GRADES OF UNSANDED.
8. O.S.B. TO CONFORM TO CSA O325.
9. TIMBER CONNECTION HARDWARE TO BE SIMPSON STRONG-TIE, OR EQUIVALENT APPROVED BY RJC. COMPLETE WITH NAILS SUPPLIED BY MANUFACTURER. DO NOT USE P NAILS.
10. NAILS - SEE "WOOD FRAMING - NAILING".
11. MISCELLANEOUS STEEL TO BE CSA G40.21 OR APPROVED EQUIVALENT.
12. ANCHOR RODS SHALL BE ASTM F1554 GRADE 36 OR APPROVED EQUIVALENT. ANCHOR RODS SHALL BE DEFORMED, THREADED ALONG THEIR FULL LENGTH OR HOOKED 1 1/2" AT THE BOTTOM.
13. BOLTS SHALL BE ASTM A307 OR APPROVED EQUIVALENT, USED WITH STANDARD CUT STEEL WASHERS UNLESS NOTED OTHERWISE ON DRAWINGS.
14. MOISTURE CONTENT OF ALL TIMBER ELEMENTS SHALL NOT EXCEED 19% AT THE TIME OF CONSTRUCTION OR FABRICATION.
15. ALL FASTENERS AND CONNECTION HARDWARE THROUGH PRESERVATIVE TREATED MATERIALS OR OUTSIDE OF THE MOISTURE BARRIER TO BE HOT DIPPED GALVANIZED OR STAINLESS STEEL AS SPECIFIED.

WOOD FRAMING - SHRINKAGE

1. THE WOOD FRAME STRUCTURE WILL UNDERGO MOVEMENT DUE TO SHRINKAGE. SHRINKAGE OCCURS AS THE MOISTURE CONTENT IN WOOD DECREASES AS IT DRIES.
2. KILN DRIED WOOD IS INITIALLY DRIED TO A MOISTURE CONTENT OF 19%. WOOD MAY TAKE ON MOISTURE DURING CONSTRUCTION DUE TO WEATHER.
3. THE CONTRACTOR IS TO TAKE ALL REASONABLE MEASURES TO PROTECT WOOD FROM MOISTURE WHILE IT IS STORED ON SITE. THIS INCLUDES KEEPING WOOD STORED IN A DRY AREA OR PROTECTED WITH A MOISTURE RESISTANT COVER. THE CONTRACTOR SHOULD ALSO TAKE REASONABLE MEASURES TO CLOSE IN THE STRUCTURE AS QUICKLY AS POSSIBLE TO REDUCE THE EXPOSURE OF WOOD TO MOISTURE DURING CONSTRUCTION. BEAMS IN BALCONIES SHOULD ALSO BE COVERED AS LONG AS POSSIBLE.
4. THE BUILDING WILL SEE TWO STAGES OF CHANGE IN MOISTURE CONTENT IN THE WOOD. THE FIRST BEING THE CHANGE IN MOISTURE CONTENT UNTIL WHICH TIME THE STRUCTURE IS DRIED TO 19%, IT IS ASSUMED INITIALLY THE WOOD MAY BE AT 30% MOISTURE CONTENT. THE SECOND BEING THE CHANGE FROM 19% MOISTURE CONTENT TO THE EQUILIBRIUM MOISTURE CONTENT OF 8% WHICH IS THE ANTICIPATED FINAL MOISTURE CONTENT EXPECTED DURING THE SERVICE OF THE BUILDING.
5. THE TOTAL PER FLOOR SHRINKAGE TO BE TAKEN AS 1/2" BASED ON SHRINKAGE FROM 30% TO 8%.
6. THE TOTAL PER FLOOR SHRINKAGE TO BE TAKEN AS 1/4" BASED ON SHRINKAGE FROM 19% TO 8%.
7. FOR SYSTEMS OR COMPONENTS THAT ARE INSTALLED EARLY ON BEFORE THE BUILDING HAS BEEN DRIED TO 19%, ALLOW FOR THE FULL SHRINKAGE FROM 30% TO 8%. FOR SYSTEMS OR COMPONENTS THAT ARE ADDED AFTER THE BUILDING HAS BEEN DRIED TO 19%, ALLOW FOR THE SHRINKAGE BETWEEN 19% AND 8%.
8. MOST OF THE SHRINKAGE OCCURS PERPENDICULAR TO THE GRAIN OF THE LUMBER OR CROSS GRAIN. THUS MOST OF THE SHRINKAGE OCCURS IN THE WALL PLATES AND FLOOR SYSTEM ITSELF WHERE THE WOOD IS STACKED IN PERPENDICULAR TO GRAIN LOADING. THE STRUCTURE SHRINKS VERY LITTLE OVER THE HEIGHT OF THE STUDS.
9. FRAMING DETAILS SHALL ENSURE UNIFORM VERTICAL SHRINKAGE. ADJACENT PORTIONS OF STRUCTURE SHALL BE SUPPORTED ON ROUGHLY EQUIVALENT AMOUNTS OF HORIZONTAL TIMBER (JOISTS AND SILL PLATES). DO NOT MIX KILN-DRIED AND NON-KILN DRIED JOISTS IN ANY GIVEN FLOOR.
10. FRAMING DETAILS AROUND NON-SHRINKING STRUCTURAL ELEMENTS (CONCRETE, STEEL, PARALLAMS, GLULAMS, MICROLLAMS, PLYWOOD ETC.) SHALL TAKE INTO ACCOUNT THE SHRINKAGE OF THE TIMBER. EXAMPLES:



11. THE TOTAL BUILDING SHORTENING DUE TO SHRINKAGE TO BE TAKEN AS FOLLOWS:

FLOOR LEVEL (I) ABOVE CONC. BASE STRUCTURE	ESTIMATED SHRINKAGE AT FLOOR LEVEL (i)	
	19% MOISTURE CONTENT TO 8% MOISTURE CONTENT	30% MOISTURE CONTENT TO 8% MOISTURE CONTENT
5	1 11/16"	3 5/16"
4	1 5/16"	2 11/16"
3	1"	2"
2	11/16"	1 5/16"
1	5/16"	11/16"

WOOD FRAMING - GENERAL

1. ALL LOADS AND DESIGN SHALL CONFORM TO PART 4 OF THE NATIONAL BUILDING CODE OF CANADA. SEE "DESIGN LOADS" NOTE. ALL DETAILS, MATERIALS, NAILING, AND CONSTRUCTION PROCEDURES SHALL CONFORM TO PART 9 AS A MININUM.
2. ALL LOADS, DESIGN, DETAILS, MATERIALS, NAILING, AND CONSTRUCTION PROCEDURES SHALL CONFORM TO PART 9 OF THE NATIONAL BUILDING CODE OF CANADA. SEE "DESIGN LOADS" NOTE.
3. ALL DESIGN, DETAILS, MATERIALS AND CONSTRUCTION PROCEDURES SHALL ALSO CONFORM TO CURRENT EDITIONS OF THE FOLLOWING AS A MINIMUM:

   -CSA O86 - ENGINEERING DESIGN IN WOOD
   -CSA O121 - DOUGLAS FIR PLYWOOD
   -CSA O151 - CANADIAN SOFTWOOD PLYWOOD
   -CAN/CSA-O122 - STRUCTURAL GLUED-LAMINATED TIMBER
   -CSA O177 - QUALIFICATION CODE FOR MANUFACTURERS OF STRUCTURAL GLUED-LAMINATED TIMBER
   -CSA O437 SERIES - STANDARDS FOR OSB AND WAFERBOARD
   -CSA B111 - WIRE NAILS, SPIKES AND STAPLES
   -ASTM D5456 - STANDARD SPECIFICATION FOR EVALUATION OF STRUCTURAL COMPOSITE LUMBER PRODUCTS
   -CANADIAN WOOD-FRAME HOUSE CONSTRUCTION-CMHC
   -"WOOD DESIGN MANUAL" - CANADIAN WOOD COUNCIL
   -"WOOD BUILDING TECHNOLOGY" - CANADIAN WOOD COUNCIL
4. ANY CHANGES TO THE FRAMING SHOWN ON THESE DRAWINGS SHALL HAVE PRIOR WRITTEN APPROVAL OF RJC. FRAMING CHANGES WHICH HAVE NOT BEEN SO APPROVED WILL BE REJECTED.
5. CONFIRM ALL DIMENSIONS AND OUTLINES WITH THE ARCHITECTURAL DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DIMENSIONS, ELEVATIONS AND DETAILS.
6. ANY TIMBER NOT GRADE MARKED WILL BE REJECTED.
7. FINISHES SHALL BE DETAILED TO ACCOMMODATE SHRINKAGE OF THE TIMBER OVER TIME.
8. DO NOT COVER WOOD FRAMING WITH FINISHES UNTIL RJC'S FRAMING REVIEW IS COMPLETED. PROVIDE 24 HOURS ADVANCE NOTIFICATION WHEN FRAMING REVIEWS ARE REQUIRED.
9. NOTCHING AND DRILLING OF STRUCTURAL ELEMENTS SHALL FOLLOW THE GUIDELINES SET FORTH IN THE BUILDING CODE PART 9, UNLESS OTHERWISE APPROVED IN WRITING BY RJC.
10. ALL TIMBER ELEMENTS ARE DESIGNED FOR DRY-SERVICE CONDITIONS UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL DRAWINGS FOR WATERPROOFING AND VENTILATION DETAILS.
11. ALL WOOD FRAME CONSTRUCTION SHALL SATISFY THE FOLLOWING CONSTRUCTION TOLERANCES AS A MINIMUM. REFER TO ARCHITECTURAL AND WARRANTY REQUIREMENTS FOR ADDITIONAL TOLERANCE SPECIFICATIONS.

    A. FLOORS - NOT MORE THAN 1/4" IN 10'-0" OUT OF LEVEL.

    B. WALLS - NOT MORE THAN 1/4" IN 8'-0" OUT OF PLUMB.
       - NOT MORE THAN 1/4" IN 10'-0" FOR ANY BOWING.

    C. OVERALL - BUILDING WALLS AND FLOORS SHALL NOT BE MORE THAN 3/8" DIFFERENCE IN MEASUREMENT FROM DIMENSIONS SHOWN ON CONTRACT DOCUMENTS.

WOOD FRAMING - CONTRACTOR REQUIREMENTS

1. PRIOR TO INSTALLING ANY WOOD FRAME, THE CONTRACTOR IS TO SURVEY THE SUPPORTING CONCRETE SLAB FOR LEVELNESS. WHERE THE FLOOR IS OUT OF LEVEL BY MORE THAN 1/2" FROM A HORIZONTAL DATUM BETWEEN ADJACENT HIGH POINTS, CONTRACTOR IS TO EITHER LEVEL THE SLAB WITH A SELF LEVELING COMPOUND OR POUR LEVELING CURBS UNDER ALL BEARING WALLS.
2. THE CONTRACTOR IS TO ENSURE THAT SHOP DRAWINGS FOR ALL SYSTEMS AND COMPONENTS THAT ARE DESIGNED BY OTHERS ARE PREPARED AHEAD AND SUBMITTED FOR REVIEW BY RJC AND THE ARCHITECT PRIOR TO INSTALLATION. THIS INCLUDES ENGINEERED WOOD SHOP DRAWINGS, ROOF ANCHORS, ROOF TOP MECHANICAL UNITS, OR OTHER ELEMENTS DESIGNED BY THE CONTRACTOR'S TRADES WHICH MAY AFFECT THE WOOD FRAME.
3. THE CONTRACTOR IS TO COORDINATE A MEETING WITH THEIR TRADES AND RJC TO REVIEW THE ANTICIPATED BUILDING MOVEMENTS WHICH CAN OCCUR DURING CONSTRUCTION AND CONTINUE AFTER THE BUILDING IS IN SERVICE DUE TO WOOD SHRINKAGE. THE CONTRACTOR IS TO ENSURE THAT ALL TRADES ARE AWARE OF THE POTENTIAL BUILDING MOVEMENT AND HOW MUCH THEY NEED TO ACCOMMODATE FOR IN THEIR DETAILS AND CONNECTIONS. SEE SHRINKAGE NOTES.
4. ALL FRAMING INCLUDING BACK FRAMING AND THE REMEDIATION OF ALL DEFICIENCIES IS TO BE SIGNED OFF BY RJC PRIOR TO INSTALLING ANY GYPCRETE OR CONCRETE TOPPING.
5. THE CONTRACTOR IS TO ENGAGE THE BUILDING ENVELOPE CONSULTANT TO MONITOR THE GENERAL MOISTURE CONTENT OF THE WOOD STRUCTURE DURING CONSTRUCTION INCLUDING BOTH THE INTERIOR FRAMING AND EXTERIOR WALLS. THE WOOD STRUCTURE IS TO BE DRIED SUCH THAT THE MAXIMUM MOISTURE CONTENT IS BELOW 19% FOR ALL WOOD ELEMENTS PRIOR TO APPLYING FINISHES OR CLOSING IN ANY OF THE WOOD COMPONENTS. THE WOOD SHOULD BE LEFT TO DRY WITH AT LEAST ONE EXPOSED FACE UNTIL THE BUILDING ENVELOPE CONSULTANT HAS PROVIDED APPROVAL.

FIRE PROTECTION OF EXPOSED WOOD MEMBERS

1. FIRE RATINGS PER ARCHITECTURAL DRAWINGS. ALL ELEMENTS DESIGNED FOR 1 HOUR RATING EXCEPT FOR ROOF.
2. MASS WOOD ELEMENTS LISTED BELOW ARE EXPOSED AND ARE DESIGNED USING A RATIONAL DESIGN METHOD BASED ON ANNEX B OF CSA O86.

   A. THE UNDERSIDE OF ALL PANELS FOR BOTH FLOORS, AND ROOFS.

3. CLT FLOOR AND ROOF PANELS DESIGNED FOR THE RARE CASE FOR FIRE WITH ULS DESIGN CASE 1.0 D + 1.0 L OR 1.0 D + 1.0 S. MEMBER SECTIONS REDUCED BASED ON A NOMINAL CHAR RATE OF 1/32" (0.8 mm) / MINUTE + 9/32" (7 mm) FOR A HEAT AFFECTED ZONE. REDUCTION APPLIES TO BOTTOM FACE ONLY. FACTORED RESISTANCES USING THE REDUCED DEPTH MODIFIED PER ANNEX B USING Ø = 1.0, K_S = 1.15, Kfi = 1.25 for E1 STRESS GRADE CLT, AND Kfi = 1.5 FOR V2 STRESS GRADE CLT IN ACCORDANCE WITH CSA O86.
4. SEE ALSO SPECIFICATIONS AND DETAILS ON ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR AREAS OF EXPOSED STEEL ELEMENTS WHERE INTUMESCENT PAINT REQUIRED.

NON-LOAD BEARING MASONRY DELEGATED DESIGN

1. UNLESS NOTED OTHERWISE ALL NON-LOAD BEARING MASONRY TO BE DESIGNED BY SPECIALTY ENGINEER IN ACCORDANCE WITH THE SPECIFICATIONS.
2. [SUBMIT SCHEDULES S-8 AND S-C FOR DESIGN OF ALL MASONRY TO THE ARCHITECT]
3. THE FOLLOWING NOTES FOR NON-LOAD BEARING MASONRY ARE PROVIDED FOR INITIAL PRICE ESTIMATING PURPOSES AND AS AN OUTLINE SPECIFICATION FOR TENDERING OF THE MASONRY PACKAGE. THESE NOTES SHALL NOT BE CONSIDERED PART OF THE CONSTRUCTION DOCUMENTS.
4. UNDER AWARD OF THE MASONRY CONTRACT THE SUCCESSFUL CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE ENGINEERING DESIGN OF THE NON-LOAD BEARING MASONRY AS DEPICTED ON THE ARCHITECTURAL DRAWINGS AND SHALL ALSO COORDINATE THE DESIGN OF THE MASONRY WITH MECHANICAL AND ELECTRICAL TRADES FOR WALL OPENINGS.
5. NON-LOAD BEARING PARTITIONS SHALL HAVE A CLEAR HEIGHT NOT EXCEEDING 30 TIMES THE WALL THICKNESS UNLESS SPECIFIED OTHERWISE BY THE CONTRACTOR'S SPECIALTY ENGINEER.
6. NON-LOAD BEARING PARTITIONS SHALL NOT BE CONNECTED TO THE BASE BUILDING STRUCTURE IN A WAY THAT WOULD ALTER THE LATERAL STIFFNESS OF THE PRIMARY STRUCTURAL SYSTEM OR THE GRAVITY LOAD PATH.
7. ANY CONNECTIONS OTHER THAN THOSE PROVIDING LATERAL SUPPORT OF THE WALL MUST BE SUBMITTED TO RJC FOR REVIEW AND COMMENT PRIOR TO COMMENCING CONSTRUCTION. THE SUBMISSION SHALL BE SIGNED AND SEALED BY THE SPECIALTY ENGINEER AND SHALL INDICATE ALL FACTORED FORCES IMPOSED ON THE PRIMARY STRUCTURAL SYSTEM.
8. THE SPECIALTY ENGINEER SHALL ENSURE

   A. PROVIDE DEFLECTION GAPS BETWEEN NON-LOAD BEARING MASONRY AND ADJACENT COLUMNS AND WALLS EQUAL TO THE MAXIMUM SEISMIC DRIFT AT THAT LOCATION INDICATED ON THE "STRUCTURAL MOVEMENT" NOTES OR AS PROVIDED ON DETAILS, BUT IN NO CASE LESS THAN 1".

   B. MASONRY UNITS OF NON-LOAD BEARING WALLS BELOW OR ADJACENT TO GRAVITY STRUCTURE SHALL BE DESIGNED AND CONSTRUCTED TO ALLOW FOR THE FOLLOWING DEFLECTIONS:
      i. FLOOR FRAMING - L/300 OR 1" (MIN.)
      ii. ROOF FRAMING - L/180 OR 1" (MIN.)

   C. DEFLECTION GAPS MAY BE FILLED WITH COMPRESSIBLE MATERIAL IF REQUIRED BUT THIS MATERIAL SHALL NOT IMPEDE THE OPEINING OR CLOSING OF THE GAP DURING AN EARTHQUAKE.

9. FIELD REVIEW OF NON-LOAD BEARING MASONRY IS NOT PART OF RJC's SCOPE AS REVIEWER OF THE PRIMARY STRUCTURAL SYSTEM.
10. THE SPECIALTY ENGINEER OR THEIR REPRESENTATIVE SHALL ENSURE QUALITY ASSURANCE OF THE WORK ON SITE BY PERFORMING ALL NECESSARY FIELD REVIEWS INCLUDING REVIEW OF THE PROVIDED DEFLECTION GAPS.
11. UNLESS NOTED OTHERWISE, CONNECTION TO BASE BUILDING SHALL INCLUDE THE FOLLOWING:

    A. ALL VERTS TO HAVE MATCHING DOWELS FROM SLAB OR FOUNDATION BELOW.

    B. PROVIDE LATERAL RESTRAINT AT TOP PER DETAILS MW301, MW302 OR MW303 AS APPLICABLE, OR DETAILS PROVIDING EQUIVALENT OR BETTER RESTRAINT. IMPOSED RESTRAINT FORCES ON THE BASE BUILDING STRUCTURE TO BE INDICATED ON THE SHOP DRAWINGS.

ARCHITECTURAL BRICK VENEER LEDGER ANGLES

1. SEE AND COORDINATE WITH ARCHITECTURAL DRAWINGS FOR BRICK VENEERS. UNLESS NOTED OTHERWISE, 4" (90 mm) BRICK VENEERS SHALL BE SUPPORTED AT BOTTOM BY DIRECT BEARING ON CONCRETE SLAB OR CORBEL (IF SHOWN ON STRUCTURAL DRAWINGS) OR ON A STEEL LEDGER ANGLE.
2. SEE ARCHITECTURAL DRAWINGS FOR BRICK SUPPORTS IN CASES DIFFERENT THAN SHOWN IN "ARCHITECTURAL BRICK VENEER LEDGER ANGLE" DETAILS.
3. SEE ARCHITECTURAL DRAWINGS FOR LATERAL SUPPORT OF BRICK VENEER TO WALL BEHIND (CONCRETE, CONCRETE BLOCK, STEEL STUD, WOOD STUD, ETC.).
4. CORROSION PROTECTION OF LEDGER ANGLES SHALL BE HOT-DIP GALVANIZING AFTER ALL SHOP FABRICATION. GRIND SMOOTH ALL WELDS. AFTER WELDING OR BOLTING THE ANGLE IN PLACE, COAT ALL NON-GALVANIZED STEEL (EXPOSED PORTION OF EMBED PLATES, WELDS, AND BOLT HEADS) WITH GALVACON OR EQUIVALENT ZINC RICH PAINT.
5. PROVIDE LEDGER ANGLE AT EVERY FLOOR, UNLESS NOTED OTHERWISE.
6. BRICK LEDGER ANGLES SHOULD BE INSTALLED WITH MINIMUM 6" CLEARANCE ABOVE SOIL AND 2" CLEARANCE ABOVE CONCRETE. SEE ARCHITECTURAL DRAWINGS FOR UNDERSIDE OF BRICK LEDGER ANGLE ELEVATIONS.
7. SHOP DRAWINGS SHOWING ALL STEEL SUPPORTS FOR BRICK VENEER SHALL BE SUBMITTED FOR REVIEW. SHOP DRAWINGS SHALL INCLUDE ELEVATION DRAWINGS SHOWING DIMENSIONED LOCATIONS FOR ALL EMBEDS IN CONCRETE.
8. U.N.O. BRICK LEDGER ANGLES SHOWN IN "ARCHITECTURAL BRICK VENEER LEDGER ANGLE" DETAILS MAY BE FLIPPED ON HORIZONTAL AXIS IF REQUIRED FOR ARCHITECTURAL ELEVATIONS.

WOOD FRAMING - MOISTURE BARRIERS

1. PROVIDE A MOISTURE BARRIER BETWEEN WOOD ELEMENTS AND ALL CONCRETE OR MASONRY. THIS CAN BE A SHEET OF LIGHT-GAUGE (24 GAUGE MINIMUM) GALVANIZED METAL, ASPHALT IMPREGNATED BUILDING PAPER (15 POUNDS PER 100 SQUARE FEET), CLOSED-CELL FOAM GASKET MATERIAL, TYPE S ROLL ROOFING. SHEET POLYETHYLENE NOT PERMITTED. ALL JUNCTIONS AND TERMINATIONS TO BE LAPPED (2" MINIMUM) AND SEALED. BUTT JOINTS IN MOISTURE BARRIERS NOT PERMITTED.

Creative Thinking Practical Results

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No.	Revision	Date	By
1	ISSUED FOR 50% REVIEW	2024.12.20	KML

Drawing Notes

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Seal

NOT FOR CONSTRUCTION

Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

GENERAL NOTES

Drawn By	KML	Scale	As indicated
Designed By	PWM	Date	2024.12.20
RJC Project Number	SAS.138936.0001		

Sheet Number: **S 1.8**
Revision: **1**

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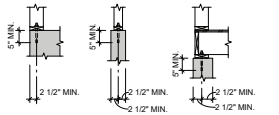
WOOD FRAMING - WALL ANCHORAGE

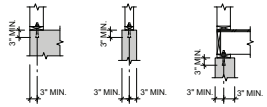
9. FASTEN LOAD BEARING WALLS AT BASE BY BOLTING THE BOTTOM PLATE (SILL PLATE) TO THE CONCRETE WITH 1/2" Ø ANCHORS AT 4'-0" O/C UNLESS NOTED OTHERWISE. ANCHORING OPTIONS ARE AS FOLLOWS:

   A. ANCHOR RODS CAST IN PLACE OR EPOXIED INTO PRE-DRILLED HOLES WITH THE HILTI [HIT-HY 200][HIT-RE 500-V3] ADHESIVE ANCHORING SYSTEM. ANCHOR RODS SHALL HAVE A MINIMUM 5" EMBEDMENT, MINIMUM 3" PROJECTION ABOVE THE CONCRETE, AND 2 1/2" OR GREATER EDGE DISTANCE.



   NOTE: ANCHOR RODS MUST BE HOOKED 1 1/2" AT THE BOTTOM IF THEY ARE NOT DEFORMED OR THREADED ALONG THEIR ENTIRE LENGTH. 1 1/2"

   B. HILTI [KWIK BOLT 1][KWIK BOLT TZ2] MECHANICAL ANCHORS WITH A MINIMUM 3" EMBEDMENT, MINIMUM 3" PROJECTION ABOVE THE CONCRETE, AND 3" OR GREATER EDGE DISTANCE.



   C. SEE SHEAR WALL SCHEDULE AND TYPICAL DETAILS FOR ALL ANCHORING REQUIREMENTS OF SHEAR WALLS.

10. NON-LOAD BEARING WALLS MAY BE FASTENED WITH 1/8" Ø POWER DRIVEN FASTENERS AT 16" O/C (MINIMUM 3/4" PENETRATION INTO CONCRETE).

11. SILL PLATES SHALL BEAR ON A LEVEL SURFACE; PROVIDE A LEVELLING BED OF MORTAR IF REQUIRED. PROVIDE A SILL GASKET UNDER SILL PLATES BEARING ON CONCRETE. SEE NOTES ON "MOISTURE BARRIERS" FOR SILL GASKET REQUIREMENTS.

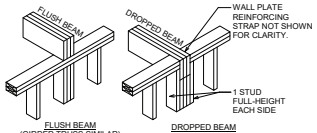
WOOD FRAMING - WALLS

1. LOAD BEARING WALLS: DENOTED ON PLAN THUS.

   ALL EXTERIOR WALLS ARE LOAD BEARING.

2. SEE TYPICAL DETAILS FOR LOAD BEARING WALL CONNECTIONS BETWEEN FLOORS UNLESS NOTED OTHERWISE.

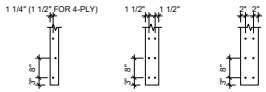
3. UNLESS NOTED OTHERWISE, PROVIDE A BUILT-UP STUD POST AT THE ENDS OF ALL BEAMS AND GIRDER TRUSSES FRAMING INTO A WALL. THE BUILT-UP STUD POST SHALL MATCH THE WIDTH OF THE BEAM, AND THE STUD SIZE SHALL MATCH THOSE IN THE WALL U.N.O. ON PLAN.



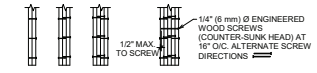
4. NAILING OF BUILT-UP STUD POSTS SHALL CONFORM TO THE FOLLOWING SCHEDULE. EACH STUD OF BUILT-UP POST SHALL BE NAILED.

STUD	NAILING
2 X 4	3" NAILS @ 8" O/C STAGGERED
2 X 6	2 ROWS OF 3" NAILS @ 8" O/C
2 X 8	2 ROWS OF 3" NAILS @ 8" O/C

BUILT-UP STUD POST NAILING PATTERNS (BY STUD SIZE):

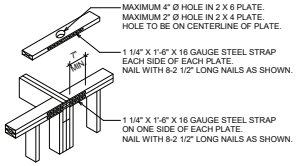


BUILT-UP STUD POST NAILING PATTERNS (BY NUMBER OF PLYS):



5. ALL POSTS AND BUILT-UP STUD POSTS SHOWN ON ANY LEVEL SHALL BE CARRIED DOWN TO THE CONCRETE UNLESS NOTED OTHERWISE. PROVIDE SOLID BLOCKING BETWEEN JOISTS UNDER ALL POSTS AND BUILT-UP POSTS

6. ALL LOAD BEARING WALLS SHALL HAVE 2 CONTINUOUS TOP PLATES AND 1 CONTINUOUS BOTTOM PLATE. BEAMS OR HEADERS OVER OPENINGS IN WALLS SHALL BE DROPPED TO ALLOW THE TOP PLATES TO BE CONTINUOUS. WHERE 1 1/2" GYPCRETE OR CONCRETE TOPPING IS USED ON THE FLOORS, PROVIDE 2 CONTINUOUS BOTTOM PLATES. DOUBLE PLATES SHALL BE SPLICED WITH A MINIMUM 2'-0" STAGGER AND LAPPED AT CORNERS. TOP AND BOTTOM PLATES WHICH HAVE BEEN CORED OR WHICH ARE DISCONTINUOUS SHALL BE REINFORCED AS FOLLOWS:



7. WHERE PERMANENT SHEATHING IS NOT APPLIED TO STUDS PROVIDE BLOCKING AT 3'-4" O/C FOR 2 X 4 WALLS AND 2'-0" O/C FOR 2 X 6 WALLS.

8. ALL BEARING WALLS WITHOUT PLYWOOD SHEATHING BUT CLAD IN GYPSUM WALL BOARD TO HAVE STUD BLOCKING PER THE FOLLOWING TABLE. BLOCKING TO BE INSTALLED PRIOR TO PLACEMENT OF GYPCRETE OR CONCRETE TOPPING.

STUD HEIGHT	BLOCKING REQUIREMENT
LESS THAN 4'-0"	NONE
4'-0" TO 8'-10"	1-ROW (MID HEIGHT)
8'-10" TO 11'-10"	2-ROWS (THIRD POINTS)

9. EXTERIOR WALL OPENINGS LESS THAN 1200 mm WIDE TO HAVE AT LEAST ONE SILL PLATE, AT TOP OF DOOR OPENINGS, AND AT TOP AND BOTTOM OF WINDOW OPENINGS. EXTERIOR WALL OPENINGS GREATER THAN 1200 mm WIDE TO HAVE AT LEAST TWO SILL PLATES, AT TOP OF DOOR OPENINGS, AND AT TOP AND BOTTOM OF WINDOW OPENINGS.

10. NON-LOAD BEARING WALLS SHALL BE DETAILED TO ALLOW FOR DEFLECTION OF THE STRUCTURE TO PREVENT LOAD TRANSFER TO UNINTENDED ELEMENTS.

11. WHERE A RIM BOARD IS NOT BRACED BY A FLOOR SYSTEM, SUCH AS AT A STAIR SHAFT, EITHER THE RIM BOARD SHALL BE FULL WIDTH OF THE WALL OR ALL WALL STUDS SHALL BE FULLY BLOCKED BESIDE THE RIM BOARD.

ENGINEERED WOOD SCREWS

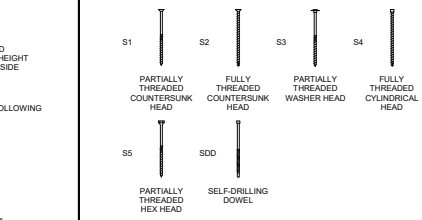
1. ENGINEERED WOOD SCREWS SPECIFIED IN THE DRAWINGS ARE ASSY SCREWS AS MANUFACTURED BY SWG AND PROVIDED BY MTC SOLUTIONS.

2. ALTERNATIVES WITH CANADIAN CONSTRUCTION MATERIALS CENTRE REPORTS (CCMC) APPROVAL ARE TO BE PREAPPROVED BY RJC.

3. SCREW DESIGNATIONS: SX-XX-XXX
   TYPE — LENGTH (mm)
   DIAMETER (mm)

4. SCREW TYPES ARE AS FOLLOWS:

   S1: SWG ASSY ECOFAST
   S2: SWG ASSY VG CSK
   S3: SWG ASSY SK
   S4: SWG ASSY VG CYL
   S5: SWG ASSY KOMBI
   SDD: SELF-DRILLING DOWEL



5. PROVIDE TAPERED HOLES IN STEEL SECTIONS TO SUIT FLUSH SCREW HEAD INSTALLATION.

6. PREDRILL HOLES AS RECOMMENDED BY SCREW MANUFACTURER.

7. SOME SAMPLE DETAILS ALSO REFERENCE USE OF SIMPSON STRONG TIE (SST) SDS SCREWS. ALTERNATIVES TO ALSO BE PREAPPROVED BY RJC.

ENGINEERED WOOD PRODUCTS (E.W.P.) GENERAL

1. ENGINEERED WOOD PRODUCTS INCLUDE ALL PRE-MANUFACTURED BEAMS, COLUMNS, AND I-JOISTS BY WEYERHAEUSER TRUS JOIST AS SHOWN ON PLAN.

2. BEAMS EXPOSED TO VIEW IN FINISHED BUILDING SHALL BE SANDED APPEARANCE GRADE WITH STAMPS IN COVERED LOCATIONS.

3. ALL MANUFACTURED BEAMS, COLUMNS, AND I-JOISTS SHALL HAVE A MOISTURE CONTENT OF LESS THAN 12%. ALL WOOD SHALL BE WRAPPED AND PROTECTED FROM MOISTURE UNTIL IT IS INSTALLED.

4. SIZES OF BEAMS AND POSTS SHALL BE AS SPECIFIED ON PLAN.

5. BEAMS: MINIMUM STRENGTHS OF BEAMS AS SPECIFIED ON PLAN.

TRUS JOIST DESIGNATION	MODULUS OF ELASTICITY	SHEAR RESISTANCE (F_v)	BENDING RESISTANCE (F_b)	BEARING RESISTANCE (F_{cp})
LSL	1.55E (1550 KSI)	575 PSI	4295 PSI	1635 PSI
LVL	2.0E (2000 KSI)	530 PSI	4805 PSI	1365 PSI
PSL	2.2E (2200 KSI)	540 PSI	5360 PSI	1135 PSI

BEAM DEFLECTIONS SHALL BE LIMITED TO SPAN/360 FOR LIVE LOAD AND SPAN/240 FOR TOTAL LOAD.

LSL - LAMINATED STRAND LUMBER (TRUS JOIST TIMBERSTRAND)
LVL - LAMINATED VENEER LUMBER (TRUS JOIST MICROLLAM)
PSL - PARALLEL STRAND LUMBER (TRUS JOIST PARALLAM)

6. COLUMNS: COLUMNS SHALL BE PSL 1.8E BY WEYERHAEUSER TRUS JOIST OR PRE-APPROVED EQUIVALENT.

7. UNLESS NOTED OTHERWISE ON PLAN STEEL CONNECTING HARDWARE FOR LSL, LVL, AND PSL BEAMS SHALL BE CAPABLE OF DEVELOPING 100% OF THE BEAM SHEAR CAPACITY.

8. PRODUCT SUBSTITUTIONS MUST BE PRE-APPROVED.

9. DO NOT SUBSTITUTE BUILT-UP MEMBERS OF SAWN TIMBER FOR ENGINEERED WOOD PRODUCTS.

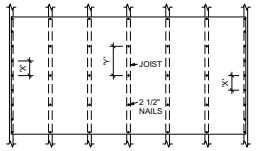
10. PSL USED IN EXTERIOR APPLICATION SHALL MEET THE EXPOSURE REQUIREMENTS SPECIFIED BY THE MANUFACTURER. DO NOT USE LSL OR LVL FOR EXTERIOR APPLICATIONS.

11. ALL ENGINEERED WOOD PRODUCTS SHALL BE KEPT DRY AND PROTECTED FROM THE ENVIRONMENT DURING STORAGE ON OR OFF THE PROJECT SITE AS PER THE MANUFACTURER'S REQUIREMENTS. STORE MATERIAL ELEVATED FROM GROUND AND WRAPPED TO SHED MOISTURE.

WOOD FRAMING - NAILING

1. NAILING SHALL CONFORM TO THE BUILDING CODE PART 9, AND "WOOD BUILDING TECHNOLOGY" PUBLISHED BY THE CANADIAN WOOD COUNCIL. NAILING CALLED UP ON THESE DRAWINGS (E.G. FOR SHEATHING) IS BASED ON COMMON NAILS.

2. UNLESS NOTED OTHERWISE NAIL ALL WALL, FLOOR, AND ROOF SHEATHING TO FRAMING MEMBERS WITH 2 1/2" NAILS. SPACE NAILS AT 6" O/C AT ALL SUPPORTED EDGES OF SHEATHING SHEETS AND AT 12" O/C AT ALL INTERMEDIATE SUPPORTS. FLOOR SHEATHING SHALL BE GLUED TO THE JOISTS IN ADDITION TO NAILING. SEE SHEAR WALL SCHEDULE OR DIAPHRAGM NAILING SCHEDULE FOR ADDITIONAL REQUIREMENTS.



'X' = 6" O/C (WALLS, FLOORS, AND ROOF)
'Y' = 12" O/C (WALLS, FLOORS, AND ROOF)

SHEATHING NAILING PATTERN

3. DO NOT OVERDRIVE NAILS. NAILS OVERDRIVEN BY MORE THAN 10% OF PANEL THICKNESS MAY BE REJECTED.

4. ALL PNEUMATICALLY DRIVEN NAILS ARE TO HAVE FULL ROUND HEADS. PNEUMATIC NAILS THAT HAVE CLIPPED OR MOON SHAPED HEADS ARE NOT PERMITTED. MOST STRIP STYLE NAILERS USE CLIPPED OR MOON SHAPED HEADS. THEREFORE, ONLY COIL STYLE NAILERS THAT USE NAILS WITH FULL ROUND HEADS SHALL BE USED.

5. NAILS FOR JOIST HANGERS AND CONNECTION HARDWARE SHOULD BE AS SPECIFIED OR SUPPLIED BY THE MANUFACTURER.

6. NAILS SHALL BE COMMON ROUND STEEL WIRE NAILS OR PNEUMATIC NAILS (P NAILS) WITH MINIMUM DIAMETERS PER THE FOLLOWING TABLE. NAILS ARE CALLED UP BY LENGTH AND SHALL CONFORM TO THE FOLLOWING TABLE:

LENGTH	PENNY WEIGHT	NAIL DIAMETER
2"	6d	0.113"
2 1/2"	8d	0.131"
3"	10d	0.148"
3 1/4"	12d	0.148"
3 1/2"	16d	0.162"
4"	20d	0.192"
4 1/2"	30d	0.207"
5"	40d	0.226"

NOTE: 3" X 0.131" NAILS MAY BE SUBSTITUTED FOR 3" X 0.148" NAILS PROVIDED ADDITIONAL NAILS ARE USED OR THE SPECIFIED NAIL SPACING IS REDUCED PER THE FOLLOWING TABLE:

3" X 0.148" NAIL SPACING SPECIFIED ON DRAWINGS	3" X 0.131" NAIL SPACING (20% MORE NAILS REQUIRED)
12"	10"
10"	8"
8"	6"
6"	5"
4"	3"
3"	2 1/2"
2"	NOT APPLICABLE

rjc Creative Thinking Practical Results

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No.	Revision	Date	By
1	ISSUED FOR 50% REVIEW	2024.12.20	KML

Drawing Notes

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Seal

NOT FOR CONSTRUCTION

Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

GENERAL NOTES

Drawn By	KML	Scale	As indicated
Designed By	PWM	Date	2024.12.20
RJC Project Number	SAS.138936.0001		

Sheet Number **S 1.9** Revision **1**

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CROSS-LAMINATED TIMBER (CLT)

1. ALL DESIGN, DETAILS, MATERIALS AND CONSTRUCTION PROCEDURES SHALL CONFORM TO CURRENT EDITIONS OF:

   A. CAN/CSA-O86 AND REFERENCED DOCUMENTS
   B. CSA B111 – WIRE NAILS, SPIKES AND STAPLES
   C. CLT HANDBOOK 2011 EDITION – FP INNOVATIONS
   D. PRG 320
   E. ANNEX B OF CSA-O86

   IF EUROPEAN PANELS ARE PROPOSED, THE SUPPLIER MUST SUPPLY AN EQUIVALENCY REPORT FROM AN ENGINEER STATING THAT THE PANELS MEET ALL THE REQUIREMENTS OF CSA AND PRG IN COMPARISON TO THE CANADIAN SPECIFICATION AND THAT TESTING MEETS THE REQUIREMENTS OF PRG 320.

2. CLT MEMBERS SHALL BE MANUFACTURED BY CSA APPROVED PLANT MEETING THE REQUIREMENTS OF ANSI/APA PRG 320.

3. CLT PANELS CONSIST OF DIMENSIONAL LUMBER, CROSSWISE STACKED AND GLUED TOGETHER, MINIMUM OF 3 LAYERS. MINIMUM THICKNESS TO BE 4 1/8" (105 mm).

4. WHERE CLT PANELS UTILIZED AT STAIR AND ELEVATOR CORES THEY ARE CONSIDERED BALLOON FRAMED TO MINIMIZE SHRINKAGE WITH LOADS, REACTIONS, AND PROPOSED CONNECTIONS INDICATED ON WALL ELEVATIONS, PLANS, AND SECTIONS TO FACILITATE PERFORMANCE BASED DESIGN BY SUPPLIER'S ENGINEER.

5. ANY CHANGES TO THE CLT FRAMING SHOWN ON THIS SET OF DRAWINGS SHALL HAVE PRIOR WRITTEN APPROVAL OF RJC. CHANGES WHICH HAVE NOT BEEN SO APPROVED WILL BE REJECTED.

6. CLT SIZES ON STRUCTURAL DRAWINGS MAY BE REVISED BY SUPPLIER IF SPECIALTY ENGINEER DESIGNS VARIANCES TO MEET ALL STRUCTURAL, ARCHITECTURAL, ACOUSTIC, AND FIRE REQUIREMENTS TO THE SATISFACTION OF RJC AND THE ARCHITECT.

7. CONFIRM ALL CLT DIMENSIONS AND OUTLINES WITH THE ARCHITECTURAL DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DIMENSIONS, ELEVATIONS AND DETAILS.

8. THE SUPPLIER SHALL SUBMIT ADEQUATE PRODUCT CERTIFICATES TO RJC PRIOR TO COMMENCEMENT OF FABRICATION.

9. COORDINATE PENETRATIONS THROUGH CLT PANELS WITH ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS. ALL PENETRATIONS AND OPENINGS TO BE SHOWN ON SHOP DRAWINGS AND TO BE APPROVED BY RJC PRIOR TO FABRICATION.

10. AT JOINT LOCATIONS BETWEEN WALL TO FLOOR / ROOF PANELS AS WELL AS FLOOR / ROOF TO FLOOR / ROOF PANELS, USE JOINT SEALANT FOR IMPROVED ACOUSTIC PERFORMANCE. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.

11. ALL EXPOSED CLT CONNECTIONS SUPPORTING OR WITHIN FIRE RATED ASSEMBLIES TO MEET FIRE RESISTANCE RATING REQUIREMENTS. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.

12. ALL EXPOSED SURFACES TO BE VISUAL GRADE S-P-F L3. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL FINISH REQUIREMENTS.

13. ERECTOR / CONTRACTOR TO TAKE MEASURES TO ENSURE ALL CLT PANELS ARE KEPT DRY AND PROTECTED FROM THE ENVIRONMENT DURING STORAGE, TRANSPORTATION, AND HANDLING ON OR OFF THE PROJECT SITE TO MAINTAIN SPECIFIED MOISTURE CONTENT. STORE MATERIAL ELEVATED FROM GROUND AND WRAPPED TO SHED MOISTURE. PROVIDE PREAPPLIED MEMBRANE TO TOP AND SIDE SURFACES IN PLANT. WAX SEAL TO BE APPLIED TO CLT END GRAINS.

14. CLT MEMBERS SHALL BE KEPT DRY AND PROTECTED FROM WEATHER. A SHOP APPLIED WATERPROOFING ADHESIVE MEMBRANE OR OTHER APPROVED EQUIVALENT SHALL BE USED AS A MINIMUM.

15. CLT MOISTURE CONTENT 12% AVERAGE, WITH NO PIECE EXCEEDING 15%.

16. FLOOR VIBRATION TO ACHIEVE PEAK ACCELERATION THRESHOLD FOR RESIDENTIAL AND OFFICE SPACE OF 0.5%g DUE TO WALKING EXCITATION AS DEFINED IN AISC GUIDE 11.

17. ALTERNATE PRICE FOR NLT FLOOR + PLYWOOD SHEATHING SUBSTITUTION (OR OTHER ONE WAY SYSTEM) HAS NOT BEEN STUDIED BY RJC AS PART OF THESE CURRENT DOCUMENTS AND IF PROVIDED AS PART OF THE BID AT THE SOLE DISCRETION OF THE SUPPLIER). PERFORMANCE OF THE ALTERNATE MUST BE EQUIVALENT OR BETTER THAN THE SPECIFIED SYSTEM.

18. SEE ARCHITECTURAL FOR FINISHING REQUIREMENTS.

19. SEE "FIRE PROTECTION OF EXPOSED WOOD MEMBERS" NOTE.

20. SEE "MASS TIMBER CONNECTIONS" NOTE.

21. REFER TO CLT SPECIFICATION FOR OTHER REQUIREMENTS.

ELEVATORS - WOOD

1. SEE ELEVATOR SHOP DRAWINGS FOR ELEVATOR REQUIREMENTS, IN PARTICULAR:

   - CONFIRM SHAFT DIMENSIONS
   - CONFIRM PIT DEPTH
   - CONFIRM LOCATION OF DIVIDER BEAMS
   - CONFIRM ROUGH OPENING SIZE FOR DOORS

2. STEEL BEAMS PROVIDING PERMANENT SUPPORT FOR ELEVATOR MACHINERY AND EQUIPMENT ARE NOT SHOWN ON THESE DRAWINGS. THEY SHALL BE DESIGNED AND DETAILED BY THE ELEVATOR SUB-CONTRACTOR. SHOP DRAWINGS SHOWING THESE BEAMS SHALL BE REVIEWED BY RJC FOR THEIR EFFECT ON THE BASE BUILDING STRUCTURE. THE CONCRETE INFILL SLAB AT THE TOP OF THE ELEVATOR SHAFT IS NOT DESIGNED TO SUPPORT THE ELEVATOR MACHINERY AND EQUIPMENT, UNLESS NOTED OTHERWISE. IF THE ELEVATOR MANUFACTURER NEEDS THE SLAB TO SUPPORT THE ELEVATOR MACHINERY AND EQUIPMENT, THEN THE ELEVATOR MANUFACTURER SHALL ADVISE RJC AND SHALL PROVIDE LOAD INFORMATION AS REFERENCED IN NOTE 3.

3. THE ELEVATOR MANUFACTURER SHALL PROVIDE RJC WITH LOADING DATA IN ACCORDANCE WITH NATIONAL BUILDING CODE OF CANADA REQUIREMENTS FOR ALL FORCES BEING IMPOSED ON THE STRUCTURE. ALL FORCES SHALL BE CLEARLY INDICATED IN THE REQUIRED LOCATIONS WITH APPLICABLE DIRECTIONS. ULTIMATE STRENGTH DESIGN FORCES SHALL BE PROVIDED. DEFLECTION DESIGN FORCES SHALL BE PROVIDED WITH ASSOCIATED DEFLECTION LIMITS, WHERE DEFLECTIONS ARE CRITICAL.

4. PROVIDE A W10x19 HOIST BEAM IN THE CEILING OF THE ELEVATOR MACHINE ROOM, SPANNING OVER THE ELEVATOR SHAFT. THE HOIST BEAM SHALL BE SUPPORTED ON EACH END AS PER WOOD ELEVATOR DETAILS ON S___

MAXIMUM SERVICE LOAD = 10 KIPS

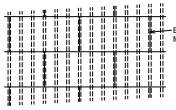
WOOD FRAMING - SHEATHING

1. A. ROOF SHEATHING — FLAT ROOF (SLOPE 15% MAXIMUM) 5/8" TONGUE AND GROOVE PLYWOOD.

   B. EXTERIOR WALL SHEATHING — 3/8" OSB ON EXTERIOR SIDE TYPICAL. SEE ALSO ARCHITECTURAL FOR ADDITIONAL SHEATHING REQUIREMENTS.

   D. SHEAR WALL SHEATHING — SEE SHEAR WALL SCHEDULE FOR SHEATHING REQUIREMENTS AT SHEAR WALL LOCATIONS.

2. LAY FLOOR AND ROOF SHEATHING WITH THE SURFACE GRAIN AT RIGHT ANGLES TO THE JOISTS. STAGGER THE JOINTS PARALLEL TO THE JOISTS.



3. DRYWALL OR SHEATHING ON LOAD BEARING WALLS OR SHEAR WALLS SHALL BE FASTENED DIRECTLY TO THE STUDS, WITHOUT THE USE OF RESILIENT METAL CHANNELS.

STAIR CONSTRUCTION

1. TREADS: STAIR TREADS SHALL CONFORM TO BUILDING CODE SECTION 9.8.9.5 AND SHALL BE CLOSED RISERS.

2. STRINGERS: STAIR STRINGERS SHALL BE SELECT STRUCTURAL D.FIR U.N.O.

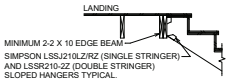
   A. EXIT STAIRS WITH HALF HEIGHT LANDINGS:
   MAXIMUM 10'-0" FLOOR TO FLOOR, MAXIMUM 3'-8" WIDE.

   - STAIR STRINGERS SHALL BE SPACED AT MAXIMUM 2'-0" APART.
   - INTERIOR STRINGERS SHALL BE MINIMUM 2-2 X 12 NOTCHED
   - EDGE STRINGERS SHALL BE MINIMUM 1-2 X 12 NOTCHED
   - NO OVER CUTTING OF STRINGERS ALLOWED, MINIMUM 5 1/2" THROAT REQUIRED.

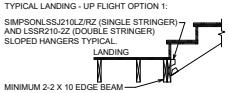
   B. EXIT STAIRS WITHOUT HALF HEIGHT LANDINGS:
   MAXIMUM 10'-0" FLOOR TO FLOOR, MAXIMUM 3'-8" WIDE.

   - STAIR STRINGERS SHALL HAVE MIN. 2-2 X 12 EACH SIDE OF STAIRS, NO CENTER STRINGER.
   - NO NOTCHING OF STRINGERS ALLOWED.
   - TREADS SHALL BE MINIMUM 1 1/2" THICK AND SUPPORTED AT TOE AND HEEL OF TREAD BETWEEN STRINGERS.

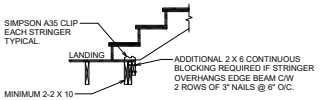
3. TYPICAL LANDING - DOWN FLIGHT:



4. TYPICAL LANDING - UP FLIGHT OPTION 1:



5. TYPICAL LANDING - UP FLIGHT OPTION 2:



WOOD FRAMING - BEAMS

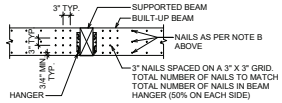
1. BUILT-UP SAWN LUMBER BEAMS (E.G. 3-2 X 10) SHALL HAVE EACH PLY NAILED TOGETHER WITH COMMON NAILS AS FOLLOWS:

   A. FOR TOP LOADED BEAMS: 2 ROWS OF 3" NAILS AT 12" O/C.

   B. FOR BEAMS SIDE LOADED WITH UNIFORM JOISTS:

   - BEAM DEPTH < 9 1/4": 2 ROWS OF 3" NAILS AT 6" O/C.
   - BEAM DEPTH ≥ 9 1/4": 3 ROWS OF 3" NAILS AT 6" O/C.

   C. FOR BEAMS SIDE LOADED WITH A BEAM (POINT LOAD):



   INDIVIDUAL MEMBERS MAY NOT BE SPLICED BETWEEN SUPPORTS.

2. FOR ENGINEERED PRODUCTS, NAILING REQUIREMENTS OF LAMINATES SHALL BE SPECIFIED ON ENGINEERED SHOP DRAWINGS PROVIDED BY BEAM SUPPLIER.

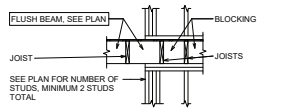
3. FLUSH BEAMS:

4. DROPPED BEAMS:

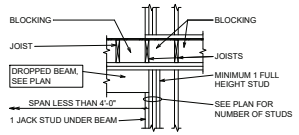
5. UNLESS NOTED OTHERWISE ALL EXTERIOR WALL BEAMS, INTERIOR WALL BEAMS, AND DOOR HEADER BEAMS ARE DROPPED. UNLESS NOTED OTHERWISE ALL OTHER INTERIOR BEAMS ARE FLUSH.

6. USE 2-2 X 10 BEAMS OVER ALL OPENINGS IN BEARING WALLS UNLESS NOTED OTHERWISE. BEAMS SHALL BE SUPPORTED AT EACH END AS SHOWN BELOW UNLESS NOTED OTHERWISE.

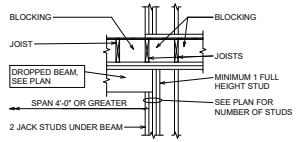
   A. CASE 1 - FLUSH BEAM:



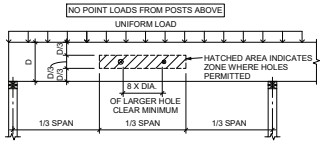
   B. CASE 2 - DROPPED BEAM - OPENING LESS THAN 4'-0":



   C. CASE 2 - DROPPED BEAM - OPENING 4'-0" OR GREATER:



7. HOLES IN BEAMS:



NOTES:

1. MAXIMUM 3 HOLES PER SPAN.
2. CONTACT RJC FOR OTHER CONDITONS.

BEAM DEPTH	MAXIMUM HOLE DIAMETER
3 1/2"	3/4"
5 1/2"	1 1/8"
7 1/4"	1 1/2"
> 7 1/4"	2"

Creative Thinking Practical Results

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No.	Revision	Date	By
1	ISSUED FOR 50% REVIEW	2024.12.20	KML

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Seal

NOT FOR CONSTRUCTION

Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

GENERAL NOTES

Drawn By	KML	Scale	As indicated
Designed By	PWM	Date	2024.12.20
RJC Project Number		SAS.138936.0001	

Sheet Number: **S 1.10**
Revision: **1**

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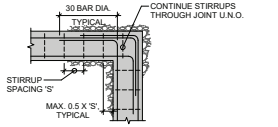
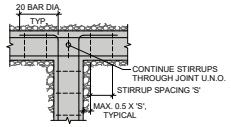
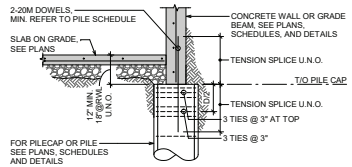


GRADE BEAM CORNER INTERSECTION (PLAN VIEW)
CF131 S 2.1 1/2" = 1'-0"

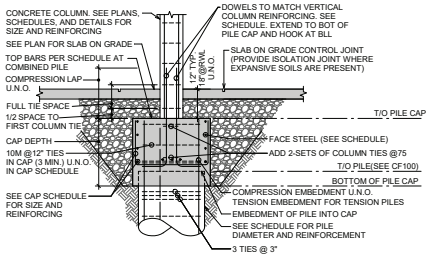


GRADE BEAM TEE INTERSECTION (PLAN VIEW)
CF130 S 2.1 1/2" = 1'-0"



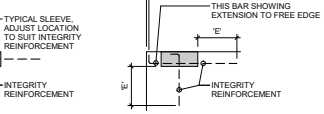
NOTE: WALL PLACED BEFORE SLAB POURED

CONCRETE WALL / BEAM ON CONCRETE PILE
CF105 S 2.1 1/2" = 1'-0"



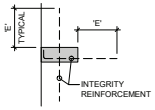
NOTES:
1. COLUMN PLACED BEFORE SLAB POURED. IF SLAB ON GRADE IS POURED WITH INTEGRAL PEDESTAL TO TOP OF PILE CAP, LAP OF DOWELS TO COLUMN VERTICAL BARS TO BE MEASURED FROM TOP OF SLAB ON GRADE.
2. DETAIL ONLY FOR CAPS CONCENTRICALLY LOCATED ON SINGLE PILES.
3. FOR UNREINFORCED DRILLED PILES ADD DOWELS FROM PILE INTO CAP EQUIVALENT TO 1% OF PILE CROSS-SECTIONAL AREA (6-20M BARS MIN) WITH COMPRESSION DEVELOPMENT LENGTHS EACH END MIN.

INTERIOR CONCRETE COLUMN ON PILE CAP
CF102 S 2.1 1/2" = 1'-0"

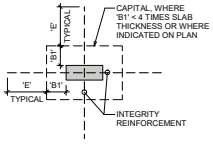


CASE A: INTERIOR COLUMN

CASE B: CORNER COLUMN



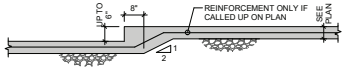
CASE C: EDGE COLUMN



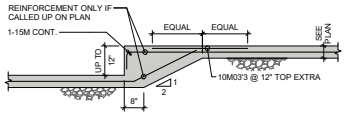
CASE D: INTERIOR COLUMN WITH CAPITAL (CORNER AND EDGE COLUMNS SIMILAR)

NOTE: DISTANCE 'E' SHALL BE OVERLAP WITH BOTTOM REINFORCEMENT OF TWO TIMES THE CASE 1 EMBEDMENT LENGTH OF THE INTEGRITY REINFORCEMENT BAR.

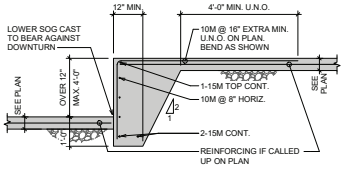
TYPICAL INTEGRITY REINFORCEMENT CONFIGURATION, FLAT PLATES WITH CONTINUOUS BOTTOM REINFORCEMENT
CS001 S 2.1 1/4" = 1'-0"



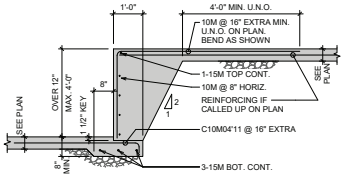
6" MAXIMUM STEP



12" MAXIMUM STEP

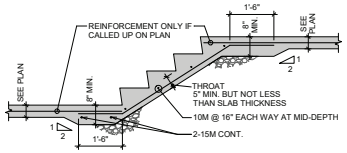


4'-0" MAXIMUM STEP



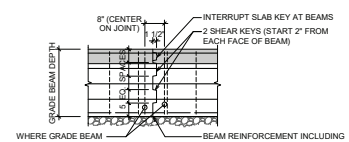
4'-0" MAXIMUM STEP - ALTERNATE

SLAB ON GRADE STEP DETAILS
CG001 S 2.1 1/2" = 1'-0"



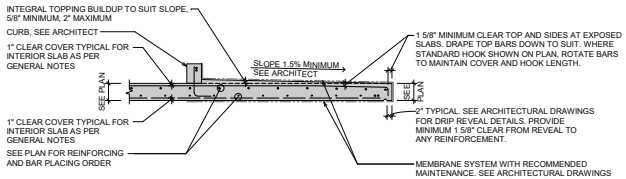
STAIRS (MAXIMUM 12 RISERS)

SLAB ON GRADE STAIRS
CG002 S 2.1 1/2" = 1'-0"

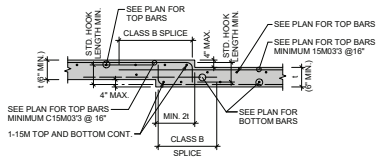


NOTE: LOCATIONS OF CONSTRUCTION JOINTS TO BE PRE-APPROVED BY THE STRUCTURAL ENGINEER.

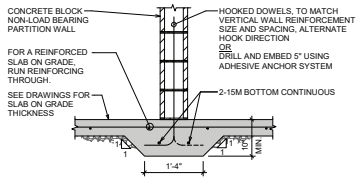
GRADE BEAM CONSTRUCTION JOINT (ELEV VIEW)
CF132 S 2.1 1/2" = 1'-0"



TYPICAL BALCONY OR EYEBROW WITH CURB SECTION
CS130 S 2.1 1/2" = 1'-0"



4" MAXIMUM SUSPENDED SLAB STEP SOFFIT STEP
CS103 S 2.1 1/2" = 1'-0"



TYPICAL SLAB ON GRADE THICKENING UNDER NON-LOAD BEARING BLOCK PARTITION
CG003 S 2.1 3/4" = 1'-0"

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Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

TYPICAL DETAILS

Drawn By	KML	Scale	As indicated
Designed By	PWM	Date	2024.12.20
RJC Project Number	SAS.138936.0001		

Sheet Number **S 2.1** Revision **1**

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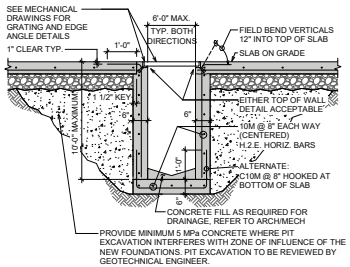
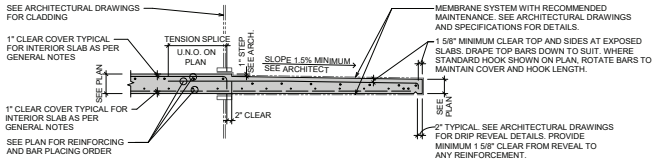


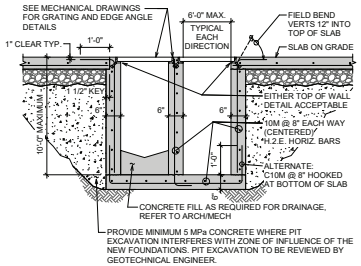
NOTES:

1. SEE MECHANICAL AND ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR SIZE, LOCATION AND WATERPROOFING REQUIREMENTS.
2. PRECAST ALTERNATIVE MAY BE PROPOSED BY CONTRACTOR IF ACCEPTABLE TO ARCHITECT AND MECHANICAL CONSULTANT. STRUCTURAL DESIGN OF PRECAST ALTERNATIVE NOT BY RJC. SUBMIT SHOP DRAWINGS AND RELATED SCHEDULES FOR PRECAST ALTERNATIVE SIGNED AND SEALED BY LICENSED SPECIALTY ENGINEER FOR REVIEW.

CF901 SUMP / ACCESS PIT (S 2.2) 1/2" = 1'-0"



CS131 TYPICAL BALCONY OR EYEBROW WITH STEP DOWN SECTION (S 2.2) 1/2" = 1'-0"



NOTES:

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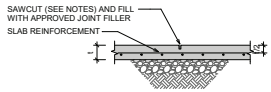
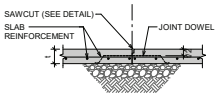
CF902 DOUBLE SUMP / ACCESS PIT (S 2.2) 1/2" = 1'-0"



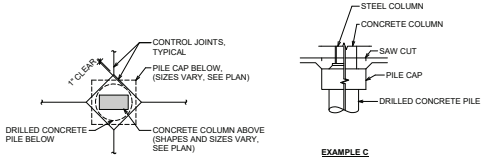
CG104 SINGLE LAYER OF REINFORCEMENT (S 2.2) 1/2" = 1'-0"



CG133 C: MEDIUM DUTY (S 2.2) 1/2" = 1'-0"

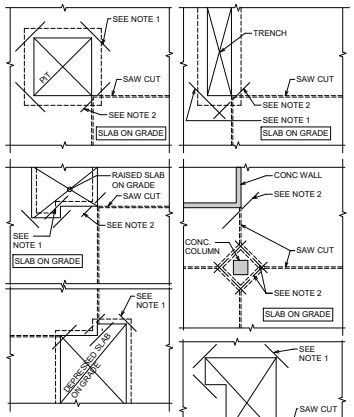
SAWCUT TABLE	
SLAB THICKNESS 't' (in)	REQUIRED SAWCUT DEPTH
t < 5"	t/3 BUT NOT LESS THAN 1.5"
5" ≤ t ≤ 6"	
6" ≤ t ≤ 7"	t/3 BUT NOT LESS THAN 2"
7" ≤ t ≤ 8"	
8" ≤ t ≤ 10"	
10" ≤ t ≤ 12"	

CG108 SAWCUT TABLE (S 2.2) 1 : 20



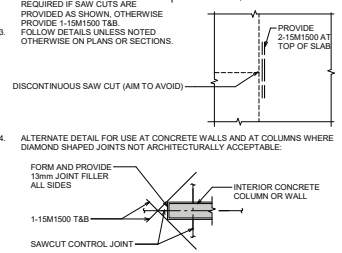
CG109 INTERIOR COLUMN ON CONCRETE PILES (WITH PILE CAP) (S 2.2) 1/4" = 1'-0"

ADDITIONAL SLAB BARS AT RE-ENTRANT CORNERS



NOTES:

1. 1-15M1500 T&B AT EACH CORNER TYP U.N.O.
2. WHERE CORNER TRIM BARS ARE SHOWN DASHED, THEY ARE NOT REQUIRED IF SAW CUTS ARE PROVIDED AS SHOWN, OTHERWISE PROVIDE 1-15M1500 T&B.
3. FOLLOW DETAILS UNLESS NOTED OTHERWISE ON PLANS OR SECTIONS.



4. ALTERNATE DETAIL FOR USE AT CONCRETE WALLS AND AT COLUMNS WHERE DIAMOND SHAPED JOINTS NOT ARCHITECTURALLY ACCEPTABLE:

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Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

TYPICAL DETAILS

Drawn By	KML	Scale	As indicated
Designed By	PWM	Date	2024.12.20
RJC Project Number	SAS.138936.0001		

Sheet Number **S 2.2** Revision **1**

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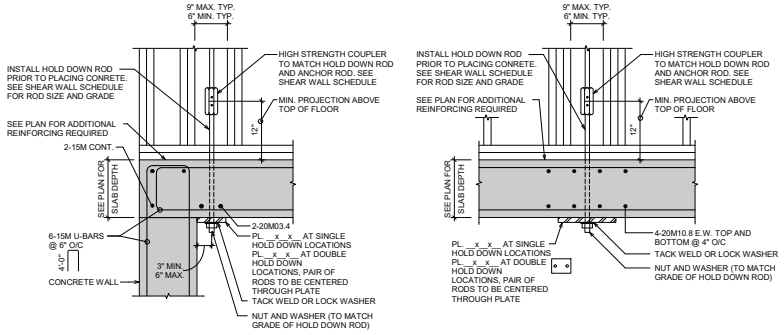
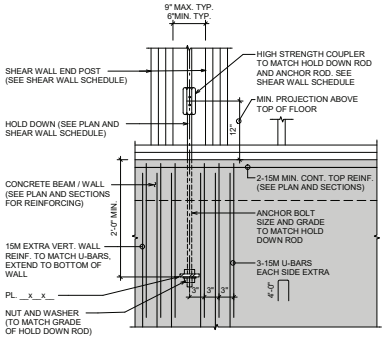
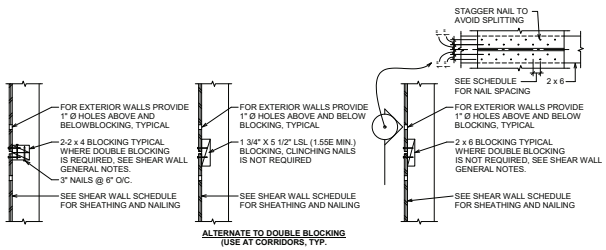


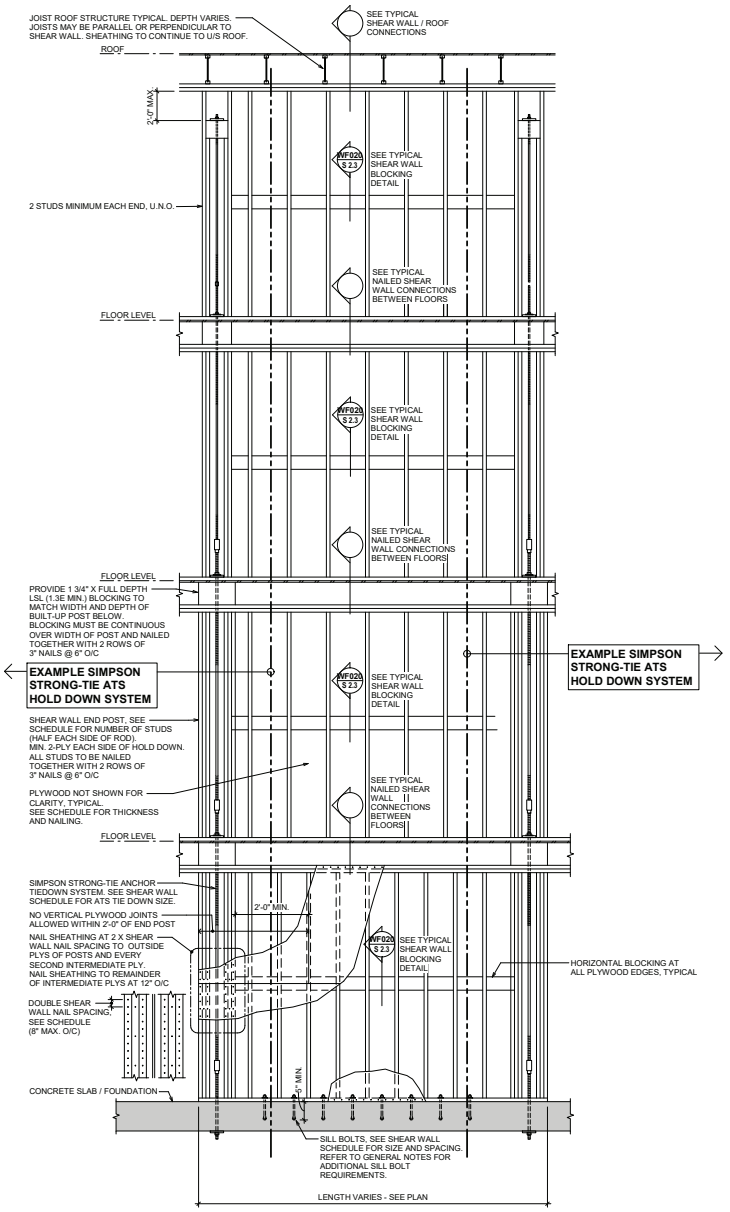
WF004 S 2.3 HOLD DOWN CONNECTION TO CONCRETE SLAB 1" = 1'-0"



WF006 S 2.3 TYPICAL HOLD DOWN CONNECTION TO CONCRETE WALL 1" = 1'-0"



WF020 S 2.3 TYPICAL SHEAR WALL BLOCKING DETAIL 1" = 1'-0"



WF001 S 2.3 EXAMPLE 4 STOREY WOOD FRAME SHEAR WALL ELEVATION 1/2" = 1'-0"

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Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE SASKATOON, SK

Sheet Title

TYPICAL DETAILS

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RJC Project Number		SAS.138936.0001	

Sheet Number **S 2.3** Revision **1**

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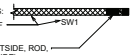
WOOD FRAME SHEAR WALL SCHEDULE

NOTES

1. SHEAR WALLS SHOWN ON PLAN AS THUS:



SW TAG SHOWN ON PREFERRED SIDE OF WALL TO ATTACH SHEATHING

SHEAR WALL END POST (3 STUDS ON OUTSIDE, ROD, THEN REMAINDER OF STUDS ON THE INSIDE)

2. NAILS SHALL BE COMMON WIRE NAILS OR PNEUMATIC NAILS THAT ARE EQUIVALENT TO THE COMMON NAIL SIZES BELOW:

LENGTH	DIAMETER	PENNY WEIGHT
2 1/2"	0.131"	8d
3"	0.148"	10d
3 1/2"	0.162"	16d

3. ABBREVIATIONS USED IN THE SCHEDULE:

B.S. ---------- BOTH SIDES OF STUD
E.F.S. ------- EACH FACE STAGGERED
S.S.T. ------- SIMPSON STRONG-TIE
T.O.W. ------ TOP OF WALL

4. NAILING SHOWN ON SCHEDULE APPLIES TO ALL FREE EDGES OF SHEATHING PANELS. PROVIDE NAILS AT 12" O/C ALONG INTERMEDIATE SUPPORTS.

5. BLOCK ALL UNSUPPORTED EDGES WITH 2x BLOCKING, SEE GENERAL NOTES, TYPICAL SHEAR WALL BLOCKING DETAIL. DOUBLE STUDS AND DOUBLE BLOCKING ARE REQUIRED AT PANEL EDGES WHERE SHEAR WALL NAIL SPACING IS LESS THAN 3" O/C OR NAIL LENGTH IS GREATER THAN 2 1/2". NAIL DOUBLE STUDS / BLOCKING TOGETHER WITH TWO ROWS OF 3" NAILS AT 4" O/C.

6. DOUBLE RIM BOARD OR DOUBLE BLOCKING IS REQUIRED WHERE TWO ROWS OF SILL NAILS "B" ARE NOTED IN THE SHEAR WALL SCHEDULE. REFER TO TYPICAL DEAILS FOR ADDITIONAL REQUIREMENTS.

7. PROVIDE DOUBLE BOTTOM SILL PLATES FOR SHEAR WALLS SHEATHED BOTH SIDES OR FOR FLOORS WITH CONCRETE TOPPING. ALL STUDS IN SHEAR WALLS SHALL BE KILN DRIED D.FIR NO.1/NO.2 GRADE OR BETTER.

8. DO NOT LOCATE VERTICAL BUTT JOINTS IN SHEAR WALL SHEATHING WITHIN 24" OF END POST.

9. REQUIREMENTS OF WOOD FRAME LOAD BEARING WALLS APPLY TO ALL SHEAR WALLS.

10. PROVIDE HOLD DOWN ANCHORS AS MANUFACTURED BY MITEK ONLY, UNLESS ALTERNATES ARE PRE-APPROVED BY RJC IN WRITING.

11. STUDS WITH OVERSIZED HOLES WILL BE REJECTED AND ARE TO BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

12. NO OPENINGS GREATER THAN 8" Ø ALLOWED THROUGH SHEAR WALL SHEATHING UNLESS PRE-AUTHORIZED BY ENGINEER OF RECORD.

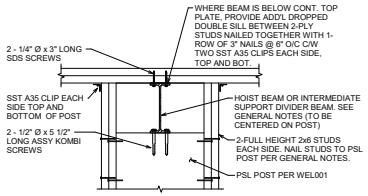
13. FOR SILL NAIL TYPES 'A' AND 'B' ARRANGEMENTS SEE TYPICAL WOOD FRAME DETAILS IN GENERAL NOTES.

14. WHERE PANELS ARE APPLIED ON BOTH SIDES OF A WALL AND NAIL SPACING IS LESS THAN 6" O/C ON EITHER SIDE, PANEL JOISTS MUST BE OFFSET TO FALL ON DIFFERENT MEMBERS.

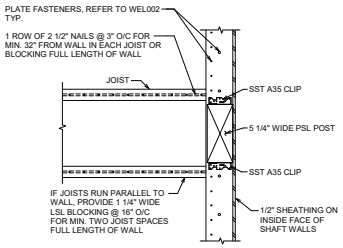
SYMBOL LEGEND:

†	DOUBLE STUDS/DOUBLE BLOCKING (SEE NOTE 5)
#	DOUBLE RIM BOARD/DOUBLE BLOCKING (SEE NOTE 6)
◇	SHEAR WALL CLIPS ON BOTH SIDES OF WALL AT STATED SPACING

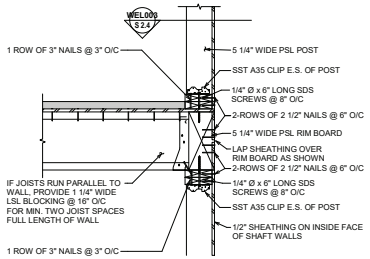
SW4	SW3	SW2	SW1	LEGEND	LEVEL
1 ROW @ 4" O/C	1 ROW @ 4" O/C	1 ROW @ 6" O/C	1 ROW @ 6" O/C	NAILING TO BLOCKING / TRUSS	ROOF
16" O/C 7/16" OSB 1 SIDE 2 1/2" @ 4" O/C 4-2x6 MQC5-1 1/2 1 ROW @ 4" O/C 1 ROW @ 3" O/C	16" O/C 7/16" OSB 1 SIDE 2 1/2" @ 4" O/C 4-2x4 MQC5-1 1/2 1 ROW @ 4" O/C 1 ROW @ 3" O/C	24" O/C 7/16" OSB 1 SIDE 2 1/2" @ 6" O/C 4-2x6 MQC5-1 1/4 1 ROW @ 6" O/C 1 ROW @ 5" O/C	24" O/C 7/16" OSB 1 SIDE 2 1/2" @ 6" O/C 4-2x4 MQC5-1 1/4 1 ROW @ 6" O/C 1 ROW @ 5" O/C	SHEAR CLIPS T.O.W. SHEATHING NAILING END POSTS HOLD DOWN (EACH END) SILL NAILS TYPE 'A' SILL NAILS TYPE 'B'	SIXTH FLOOR
10" O/C 7/16" OSB 1 SIDE 2 1/2" @ 2" O/C † 6-2x6 MQC5-1 1/2 2 ROWS @ 5" O/C # 2 ROWS @ 5" O/C #	10" O/C 7/16" OSB 1 SIDE 2 1/2" @ 2" O/C † 8-2x4 MQC5-1 1/2 2 ROWS @ 5" O/C # 2 ROWS @ 5" O/C #	16" O/C 7/16" OSB 1 SIDE 2 1/2" @ 4" O/C 6-2x6 MQC5-1 1/4 1 ROW @ 4" O/C 1 ROW @ 4" O/C	16" O/C 7/16" OSB 1 SIDE 2 1/2" @ 4" O/C 8-2x4 MQC5-1 1/4 1 ROW @ 4" O/C 1 ROW @ 4" O/C	SHEAR CLIPS T.O.W. SHEATHING NAILING END POSTS HOLD DOWN (EACH END) SILL NAILS TYPE 'A' SILL NAILS TYPE 'B'	FIFTH FLOOR
8" O/C 7/16" OSB 2 SIDES 2 1/2" @ 4" O/C 8-2x6 MQC5-1 1/2 2 ROWS @ 4" O/C # 2 ROWS @ 4" O/C #	8" O/C 7/16" OSB 2 SIDES 2 1/2" @ 4" O/C 8-2x4 MQC5-1 1/2 2 ROWS @ 4" O/C # 2 ROWS @ 4" O/C #	12" O/C 7/16" OSB 1 SIDE 2 1/2" @ 3" O/C 6-2x6 MQC5-1 1/4 1 ROW @ 3" O/C 1 ROW @ 3" O/C	12" O/C 7/16" OSB 1 SIDE 2 1/2" @ 3" O/C 8-2x4 MQC5-1 1/4 1 ROW @ 3" O/C 1 ROW @ 3" O/C	SHEAR CLIPS T.O.W. SHEATHING NAILING END POSTS HOLD DOWN (EACH END) SILL NAILS TYPE 'A' SILL NAILS TYPE 'B'	FOURTH FLOOR
12" O/C 2 SIDES ◇ 7/16" OSB 2 SIDES 2 1/2" @ 3" O/C † 10-2x6 MQC5-1 1/2 2 ROWS @ 3" O/C # 2 ROWS @ 4" O/C #	12" O/C 2 SIDES ◇ 7/16" OSB 2 SIDES 2 1/2" @ 3" O/C † 10-2x4 MQC5-1 1/2 2 ROWS @ 3" O/C # 2 ROWS @ 4" O/C #	10" O/C 7/16" OSB 1 SIDE 2 1/2" @ 2" O/C † 6-2x6 MQC5-1 1/4 1 ROW @ 3" O/C 1 ROW @ 3" O/C	10" O/C 7/16" OSB 1 SIDE 2 1/2" @ 2" O/C † 810-2x4 MQC5-1 1/4 2 ROWS @ 3" O/C 2 ROWS @ 3" O/C	SHEAR CLIPS T.O.W. SHEATHING NAILING END POSTS HOLD DOWN (EACH END) SILL NAILS TYPE 'A' SILL NAILS TYPE 'B'	THIRD FLOOR
12" O/C 2 SIDES ◇ 7/16" OSB 2 SIDES 2 1/2" @ 3" O/C † 10-2x6 MQC5-1 1/2 3/4" ø @ 16" O/C	12" O/C 2 SIDES ◇ 7/16" OSB 2 SIDES 2 1/2" @ 3" O/C † 12-2x4 MQC5-1 1/2 3/4" ø @ 16" O/C	10" O/C 7/16" OSB 1 SIDE 2 1/2" @ 2" O/C † 6-2x6 MQC5-1 1/4 3/4" ø @ 16" O/C	10" O/C 7/16" OSB 1 SIDE 2 1/2" @ 2" O/C † 10-2x4 MQC5-1 1/4 3/4" ø @ 16" O/C	SHEAR CLIPS T.O.W. SHEATHING NAILING END POSTS HOLD DOWN (EACH END) SILL BOLTS	SECOND FLOOR



WEL004 HOIST BEAM AND INTERMEDIATE SUPPORT DIVIDER BEAM TO PSL POST
S 2.4 1" = 1'-0"



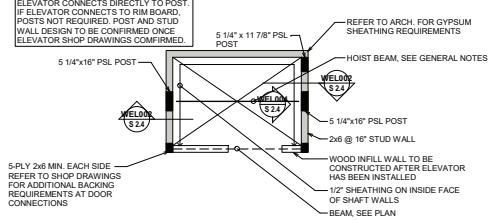
WEL003 ELEVATOR WALL PLAN DETAIL
S 2.4 1" = 1'-0"



ELEVATOR GUIDE RAIL BRACKETS TO CONNECT DIRECTLY TO RIM BOARD AT ALL WOOD FLOOR LEVELS BELOW THE ROOF.

WEL002 JOISTS TO ELEVATOR WALL CONNECTION
S 2.4 1" = 1'-0"

PSL POSTS ARE ONLY REQUIRED WHERE ELEVATOR CONNECTS DIRECTLY TO POST. IF ELEVATOR CONNECTS TO RIM BOARD, POSTS NOT REQUIRED. POST AND STUD WALL DESIGN TO BE CONFIRMED ONCE ELEVATOR SHOP DRAWINGS COMFIRMED.



SINGLE ELEVATOR PLAN DETAIL

NOTES:
1. REFER TO ELEVATOR SHOP DRAWINGS FOR LOCATION OF POSTS.
2. CONT. PSL POSTS ARE REQUIRED FROM LAST OCCUPIED LEVEL TO FORM ELEVATOR OVERRUN AND SUPPORT HOIST BEAM, TYPICAL 2 LOCATIONS (4 LOCATIONS FOR DOUBLE ELEVATOR). REFER TO WEL004.

WEL001 ELEVATOR PARTIAL PLAN
S 2.4 1/4" = 1'-0"

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No.	Revision	Date	By
1	ISSUED FOR 50% REVIEW	2024.12.20	KML

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Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

TYPICAL DETAILS

Drawn By	KML	Scale	As indicated
Designed By	PWM	Date	2024.12.20
RJC Project Number	SAS.138936.0001		

Sheet Number **S 2.4**
Revision **1**

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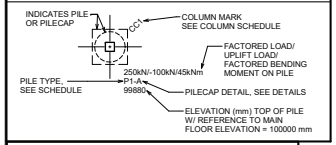
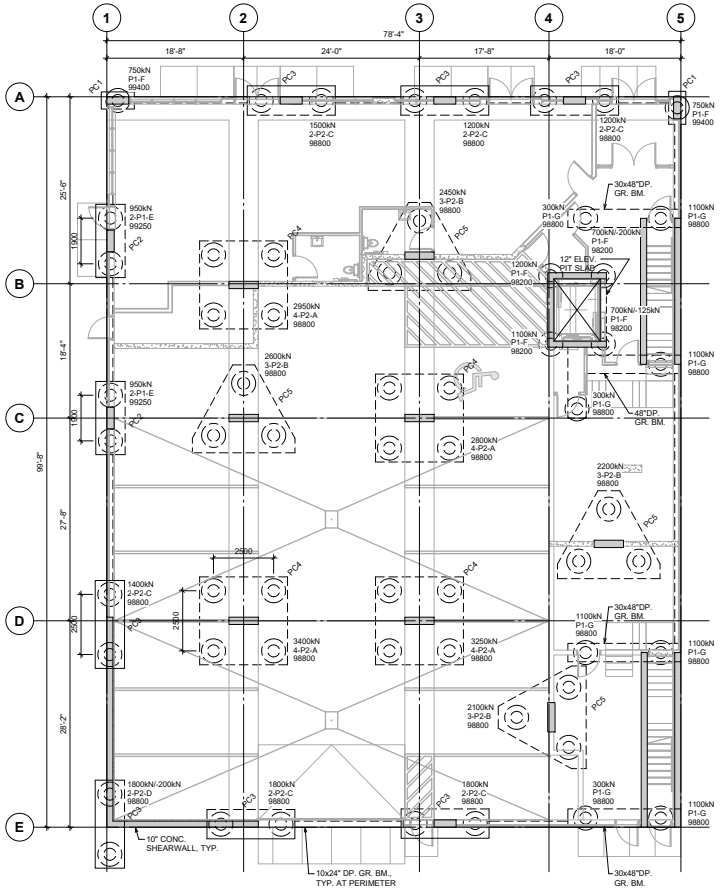
COLUMN AND PILECAP LEGEND



PILE CAP SCHEDULE

MARK	SIZE
PC1	4'-6" X 2'-4" X 2'-0" DP.
PC2	10'-0" X 4'-0" X 2'-6" DP.
PC3	12'-0" X 4'-0" X 4'-0" DP.
PC4	12'-0" X 12'-0" X 4'-0" DP.
PC5	14'-0" X 12'-0" X 4'-0 DP.



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

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1	ISSUED FOR 50% REVIEW	2024.12.20	KML

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Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE SASKATOON, SK

Sheet Title

FOUNDATION PLAN

Drawn By	**Author**	Scale	**As indicated**
Designed By	**Designer**	Date	**2024.12.20**
RJC Project Number		**SAS.138936.0001**	

Sheet Number: **S 3.1**
Revision: **1**

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CONCRETE COLUMN SCHEDULE

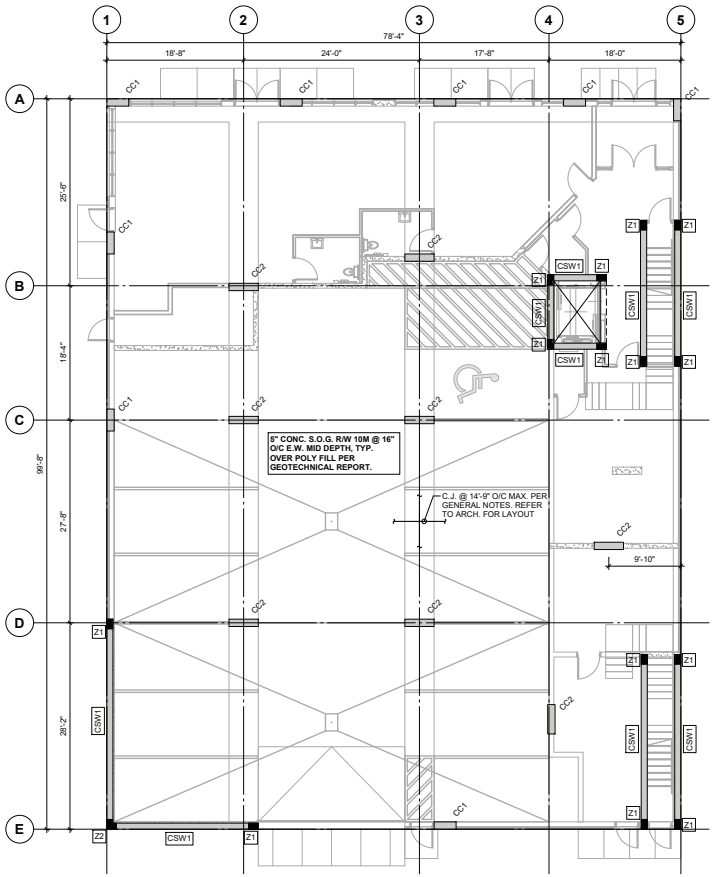
MARK	SIZE	REINFORCING
CC1	12" X 36"	10-20M VERTS, 10M TIES @ 12" O/C
CC2	12" X 48"	10-25M VERTS, 10M TIES @ 12" O/C

ZONE SCHEDULE

	Z2	Z1	ELEMENT / LEVEL
	8-15M VERT. 10M TIES @ 10" O/C	4-15M VERT. 10M TIES @ 10" O/C	LEVEL 1

CONC. SHEAR WALL SCHEDULE

	CSW1	CONCRETE STRENGTH	ELEMENT / LEVEL
	10" WALL R/W 10M @ 10" E.W. E.F.	35 MPa U.N.O.	LEVEL 1



MAIN FLOOR PLAN
1/8" = 1'-0"

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Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

MAIN FLOOR PLAN

Drawn By	**Author**	Scale	**As indicated**
Designed By	**Designer**	Date	**2024.12.20**
RJC Project Number		**SAS.138936.0001**	

Sheet Number: **S 3.2**
Revision: **1**

2024-12-20 18:56:25

SLAB STRUCTURE

1. BASIC BOTTOM REINFORCING MAT

   18" DEEP SLAB R/W 20M @ 8" EACH WAY BOTTOM

   PLUS EXTRA BOTTOM BARS AS SHOWN ON THE PLAN.
   CENTER EXTRA BOTTOM BARS ALONG COLUMN CENTER LINES AND SPACE AT 4" O/C UNLESS NOTED OTHERWISE ON THE PLAN. ALL BOTTOM REINFORCING TO BE TENSION SPLICED

2. BAR PLACING ORDER:

   4. TOP UPPER LAYER (T.U.L.)
   3. TOP LOWER LAYER (T.L.L.)
   2. BOTTOM UPPER LAYER (B.U.L.)
   1. BOTTOM LOWER LAYER (B.L.L.)

CONCRETE OUTLINE LEGEND

SLOPE SLAB OR SLAB BAND SOFFIT DOWN

CONCRETE BUILD-UP USED TO FORM SLOPE. REFER TO ARCH. SLAB DEPTHS NOTED ON PLAN DO NOT INCLUDE CONCRETE BUILD-UP.

DENOTES MECHANICAL PENETRATION THROUGH SLAB. SEE MECHANICAL DRAWINGS.

SHEARWALL HOLD-DOWN REINFORCING

DENOTES SHEAR WALL HOLD-DOWN LOCATION

U.N.O. CENTER EXTRA REINFORCING AROUND HOLD-DOWN LOCATIONS, SPACE @ 4" O/C. U.N.O.

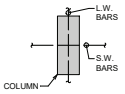
REFER TO TYPICAL SHEAR WALL HOLD-DOWN DETAILS FOR ADDITIONAL REQUIREMENTS.

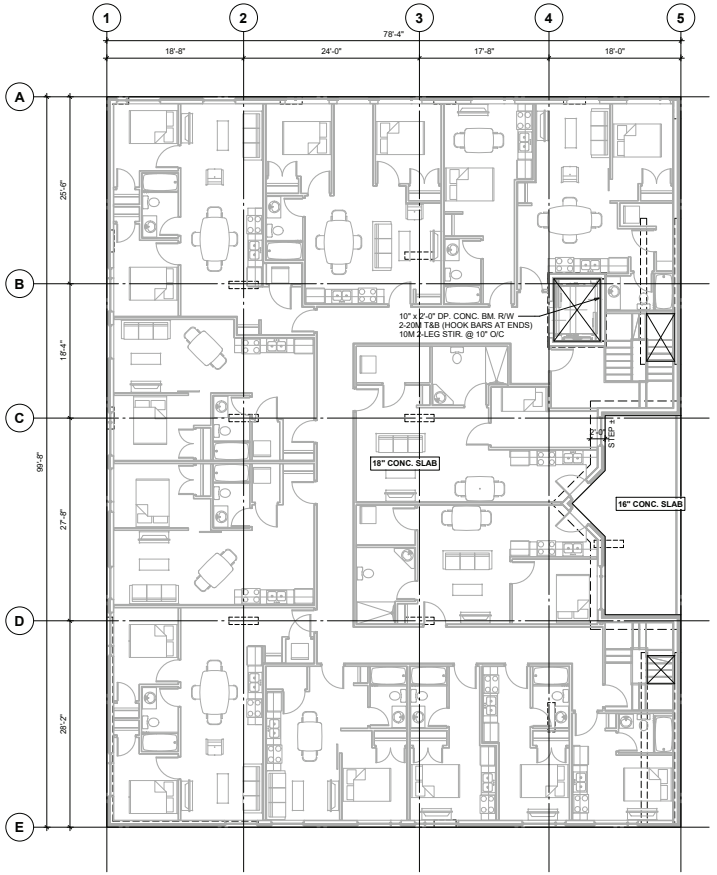
CONTRACTOR TO LOCATE EXACT POSITION OF HOLD-DOWNS PRIOR TO PLACEMENT OF REINFORCING IN WALLS AND SLABS. SEE DETAILS / SECTIONS ON IF DRILLING HOLES THROUGH CURED SLAB, ENSURE REINFORCING WILL NOT BE INTERFERING WITH THE HOLD-DOWN BOLT LOCATION.

INTEGRITY REINFORCING

1. UNLESS NOTED OTHERWISE ON PLAN, ALL FLAT PLATE SLABS TO HAVE THE FOLLOWING INTEGRITY REINFORCEMENT:

MARK	SLAB THICKNESS	REINFORCING
IR1	14"	3-25M E.W.
IR2	16"	4-25M S.W. + 3-35M L.W.





SECOND FLOOR PLAN
1/8" = 1'-0"

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Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

SECOND FLOOR PLAN

Drawn By	Author	Scale	As indicated
Designed By	Designer	Date	2024.12.20
RJC Project Number	SAS.138936.0001		

Sheet Number: **S 3.3**
Revision: **1**

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WOOD WALL LEGEND

DENOTES SHEAR WALL.

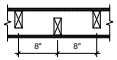
DENOTES LOAD BEARING WALL.

WOOD WALL SCHEDULE

FLOOR	EXTERIOR WALLS (2 x 6)	INTERIOR WALLS (2 x 4)	INTERIOR WALLS (2 x 6)	DOUBLE PARTY WALLS	STAGGERED STUD CORRIDOR WALLS
SIXTH TO ROOF	2 x 6 @ 16"	2 x 4 @ 16"	2 x 6 @ 16"	2 x 4 @ 16" (TWO WALLS)	2 x 4 @ 8"
FIFTH TO SIXTH	2 x 6 @ 16"	2 x 4 @ 12"	2 x 6 @ 16"	2 x 4 @ 16" (TWO WALLS)	2 x 4 @ 8"
FOURTH TO FIFTH	2 x 6 @ 16"	2-2 x 4 @ 16"	2 x 6 @ 12"	2 x 4 @ 10" (TWO WALLS)	2-2 x 4 @ 8"
THIRD TO FOURTH	2 x 6 @ 16"	2-2 x 4 @ 12"	2 x 6 @ 10" *	2 x 4 @ 8" (TWO WALLS)	2-2 x 4 @ 8" *
SECOND TO THIRD	2 x 6 @ 12" *	2-2 x 4 @ 10" *	2-2 x 6 @ 16" *	2 - 2 x 4 @ 12" (TWO WALLS) *	2-2 x 4 @ 8" *

NOTES:

1. * DENOTES DOUBLE RIM BOARD OR DOUBLE BLOCKING IS REQUIRED IN FLOOR LEVEL ABOVE WALL (I.E. MIN. 2 - 1 1/4" WIDE LSL RIM BOARD / BLOCKING). REFER TO GENERAL NOTES AND TYPICAL DETAILS FOR ADDITIONAL REQUIREMENTS.
2. REFER TO "WOOD FRAMING" GENERAL NOTES AND WOOD SHEAR WALL SCHEDULE FOR ADDITIONAL REQUIREMENTS.
3. ALL STUDS TO BE S-P-F NO.1/NO.2 GRADE OR BETTER.
4. FOR STAGGERED STUD CORRIDOR WALLS:



WOOD FRAME SCHEDULE

WOOD JOIST SCHEDULE

DIMENSIONAL LUMBER JOISTS

MARK	SIZE	TYPE	SPACING
J1	2 x 6	SL	SEE PLAN
J2	2 x 8	SL	SEE PLAN
J3	2 x 10	SL	SEE PLAN
J4	2 x 12	SL	SEE PLAN

WOOD BEAM SCHEDULE

MARK	SIZE	TYPE	MARK	SIZE	TYPE
B1	2 x 6	SL	B6	1 3/4" x XX X/X"	LSL 1.55E
B2	2 x 8	SL	B7	1 3/4" x XX X/X"	LVL 2.0E
B3	2 x 10	SL	B8	3 1/2" x XX X/X"	PSL 2.2E
B4	2 x 12	SL	B9	5 1/4" x XX X/X"	PSL 2.2E
B5	1 3/4" x 9 1/4"	LVL 2.0E	B10	7" x XX X/X"	PSL 2.2E

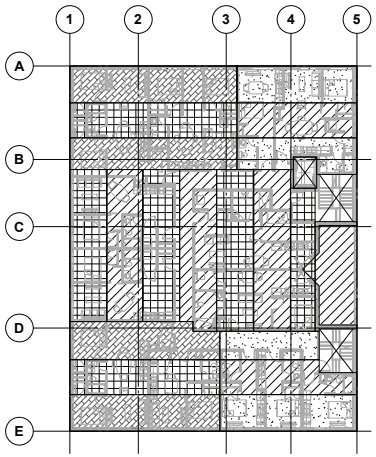
WOOD POST SCHEDULE

MARK	SIZE	TYPE	MARK	SIZE	TYPE
P1	2 x 4	SL	P5		
P2	2 x 6	SL			
P3	4 x 4	SL			
P4	6 x 6	SL			

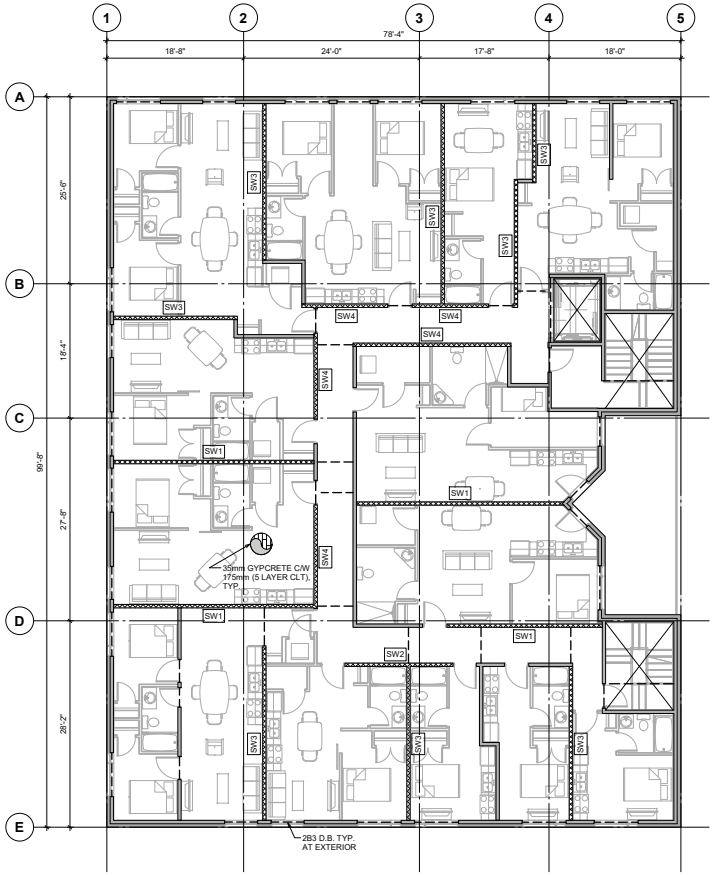
NOTES:

1. FLOOR AND ROOF FRAMING SHOWN ON THIS PLAN IS FOR THE LEVEL ABOVE. DOOR AND WINDOW HEADERS SHOWN ARE OVER THE DOOR AND WINDOW AT THIS LEVEL.
2. SEE PLAN FOR NUMBER OF LAMINATIONS REQUIRED. EXAMPLE: 3B1 = 3 - 2x6 MEMBERS
3. PROVIDE NUMBER OF JACK STUDS PER GENERAL NOTES UNLESS NOTED OTHERWISE ON PLAN. WHERE ADDITIONAL JACK STUDS ARE REQUIRED THE FOLLOWING CONVENTION WILL BE USED: 4P1-3J DENOTES 4 STUDS TOTAL, 3 OF WHICH ARE JACK STUDS.
4. ABBREVIATIONS:
   SL ----------SAWN LUMBER LSL ------- LAMINATED STRAND LUMBER
   PSL ---------PARALLEL STRAND LUMBER LVL ------ LAMINATED VENEER LUMBER
5. I-JOIST HANGERS TO HAVE A MINIMUM CAPACITY OF Vf = 7.5 kN U.N.O. ON PLAN.
6. UNLESS NOTED OTHERWISE, BEAM HANGERS TO BE AS FOLLOWS. ALTERNATE HANGERS TO BE PRE-APPROVED BY RJC AND MUST PROVIDE EQUIVALENT OR GREATER CAPACITY.

   1 3/4" WIDE MEMBER - SIMPSON STRONG TIE HU9 Vf = 25 kN (5,685 LBS)
   3 1/2" WIDE MEMBER - SIMPSON STRONG TIE HGUS410 Vf = 62 kN (14,015 LBS)
   5 1/4" WIDE MEMBER - SIMPSON STRONG TIE HGUS5.50/10 Vf = 65 kN (14,645 LBS)
   7" WIDE MEMBER - SIMPSON STRONG TIE HGUS7.25/10 Vf = 70 kN (15,760 LBS)



CLT PANEL LAYOUT
1/16" = 1'-0"



SECOND FLOOR PLAN SHOWING THIRD FLOOR FRAMING OVER
1/8" = 1'-0"

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Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

Sheet Title

SECOND FLOOR PLAN SHOWING THIRD FLOOR FRAMING OVER

Drawn By	**Author**	Scale	**As indicated**
Designed By	**Designer**	Date	**2024.12.20**
RJC Project Number		**SAS.138936.0001**	

Sheet Number **S 3.4** Revision **1**

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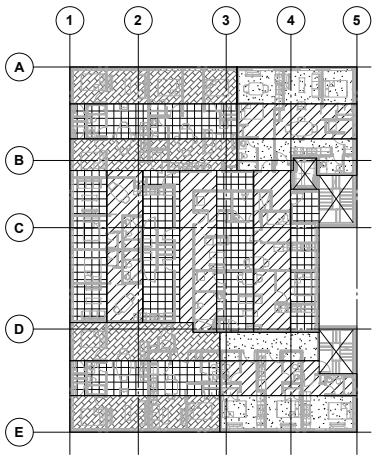
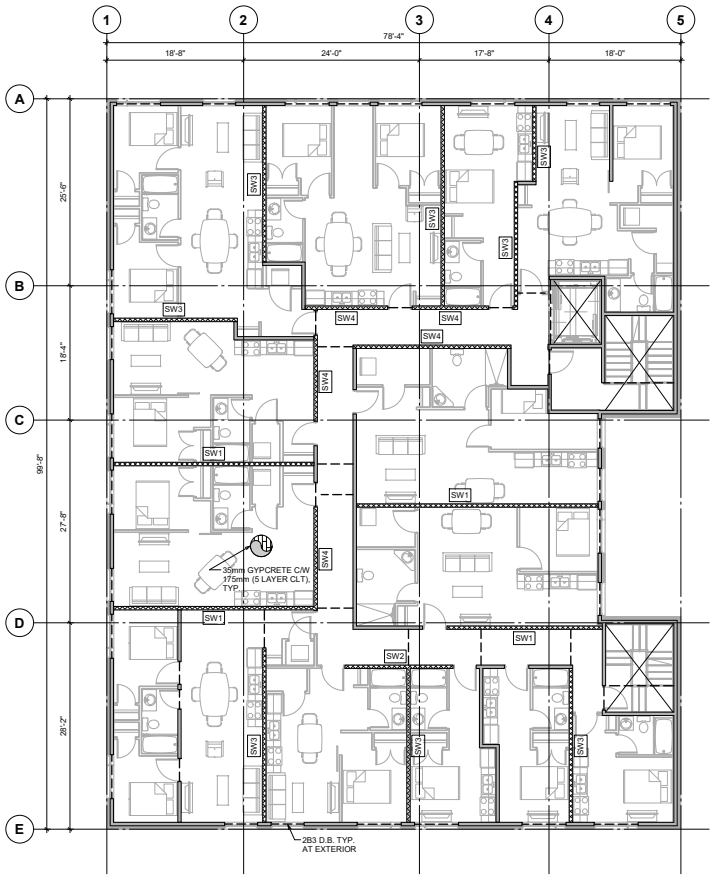
WOOD WALL LEGEND

DENOTES SHEAR WALL.

DENOTES LOAD BEARING WALL.



CLT PANEL LAYOUT
1/16" = 1'-0"



THIRD FLOOR PLAN SHOWING FOURTH FLOOR FRAMING OVER
1/8" = 1'-0"

rjc Creative Thinking Practical Results

Read Jones Christoffersen Ltd.
Engineers
rjc.ca

220 20th Street West, Suite 112
Saskatoon, SK S7M 0W9 Canada
tel 306-808-2550

No.	Revision	Date	By
1	ISSUED FOR 50% REVIEW	2024.12.20	KML

Drawing Notes

1. All drawings, plans, models, designs, specifications and other documents prepared by Read Jones Christoffersen Ltd. ("RJC") and used in connection with this project are instruments of service for the work shown in them (the "Work") and as such are and remain the property of RJC whether the Work is executed or not, and RJC reserves the copyright in them and in the Work executed from them, and they shall not be used for any other work or project.
2. These drawings are "design drawings" only. They may not be suitable for use as shop drawings. Use of these drawings as base drawings for "shop drawings" is not permitted unless written permission containing certain conditions and limitations is obtained from RJC. The work "as constructed" may vary from what is shown on these drawings.
3. Use of these drawings is limited to that identified in the Issued/Revision column. Do not construct from these drawings unless marked "Issued for Construction" by RJC in the Issued/Revision column, and then only for the parts noted. The drawings shall not be used for "pricing" / "costing" or "tender" unless so indicated in the Issued/Revisions column. "Pricing" or "Costing" drawings are not complete and any prices based on such drawings must allow for this.

Seal

NOT FOR CONSTRUCTION

Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE SASKATOON, SK

Sheet Title

THIRD FLOOR PLAN SHOWING FOURTH FLOOR FRAMING OVER

Drawn By	**Author**	Scale	**As indicated**
Designed By	**Designer**	Date	**2024.12.20**
RJC Project Number	**SAS.138936.0001**		

Sheet Number **S 3.5**

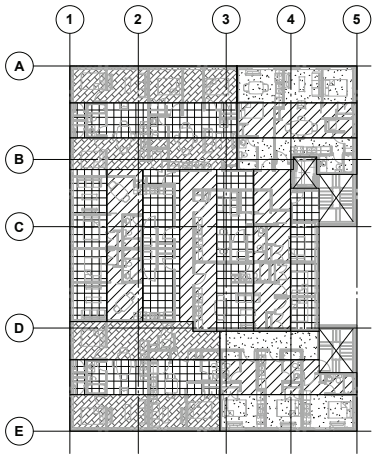
Revision **1**

2024-12-20 18:56:26

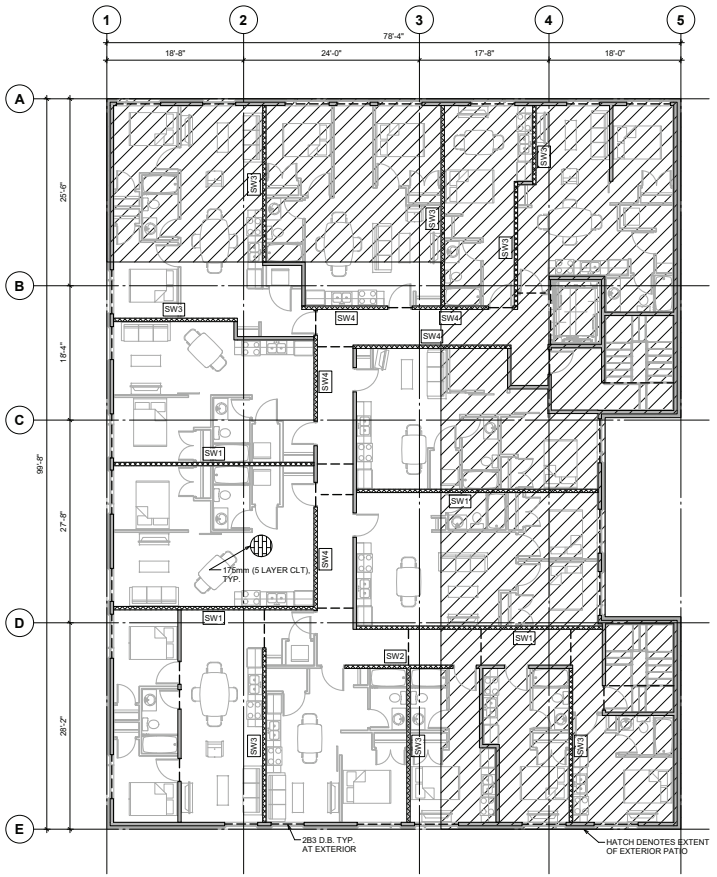
WOOD WALL LEGEND

DENOTES SHEAR WALL.

DENOTES LOAD BEARING WALL.



CLT PANEL LAYOUT
1/16" = 1'-0"



FOURTH FLOOR PLAN SHOWING ROOF FRAMING OVER
1/8" = 1'-0"

rjc Creative Thinking Practical Results

Read Jones Christoffersen Ltd.
Engineers
rjc.ca

220 20th Street West, Suite 112
Saskatoon, SK S7M 0W9 Canada
tel 306-808-2550

No.	Revision	Date	By
1	ISSUED FOR 50% REVIEW	2024.12.20	KML

Drawing Notes

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Seal

NOT FOR CONSTRUCTION

Project Name

PROPOSED COLLEGE DRIVE APARTMENTS

1202 COLLEGE DRIVE
SASKATOON, SK

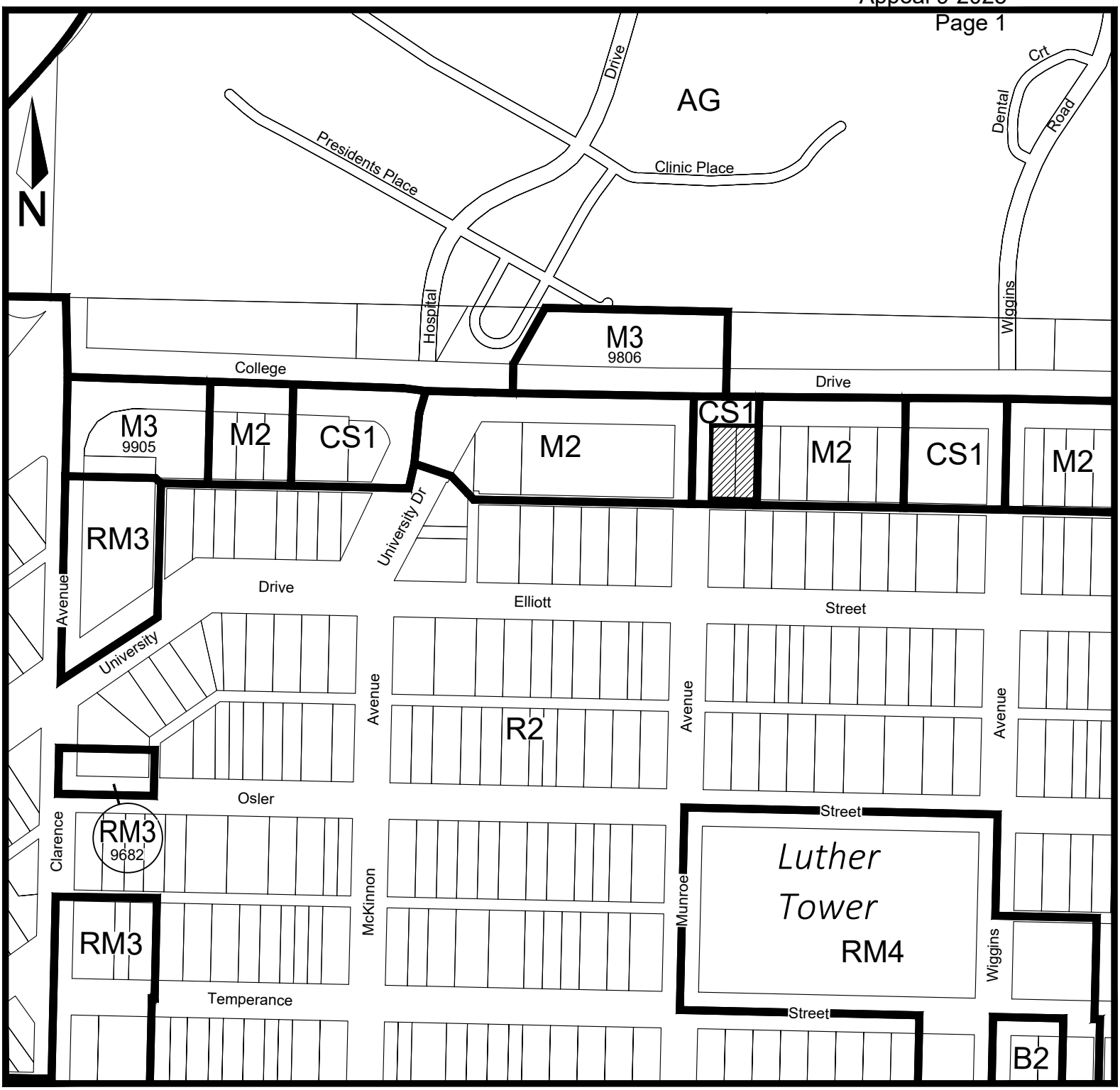
Sheet Title

FOURTH FLOOR PLAN SHOWING ROOF FRAMING OVER

Drawn By	**Author**	Scale	**As indicated**
Designed By	**Designer**	Date	**2024.12.20**
RJC Project Number	**SAS.138936.0001**		

Sheet Number **S 3.6**
Revision **1**

2024-12-20 18:56:26



DEVELOPMENT APPEAL - LOCATION PLAN

ADDRESS: 1202/1204 College Drive

R.8

LOT: 21, 22, 23, 35, 43, & 44

BLOCK: 35

PLAN: F5527 & 101356253

Received
City Clerk's Office
March 24, 2025

N:\Planning\MAPPING\Appeals\2025\DA09L-25.dwg

City of Saskatoon

Requirement: Section 10.4.4(2)(b) states for multiple unit dwellings or where dwelling units are erected above commercial, office or institutional, an interior side yard shall be provided for the part of the building containing such dwelling units of 1.5 metres, up to a height of 12 metres and 3 metres or that portion of the building in excess of 12 metres in height. No such side yard shall be required when no window, door or other opening is provided in the wall facing the adjacent property.

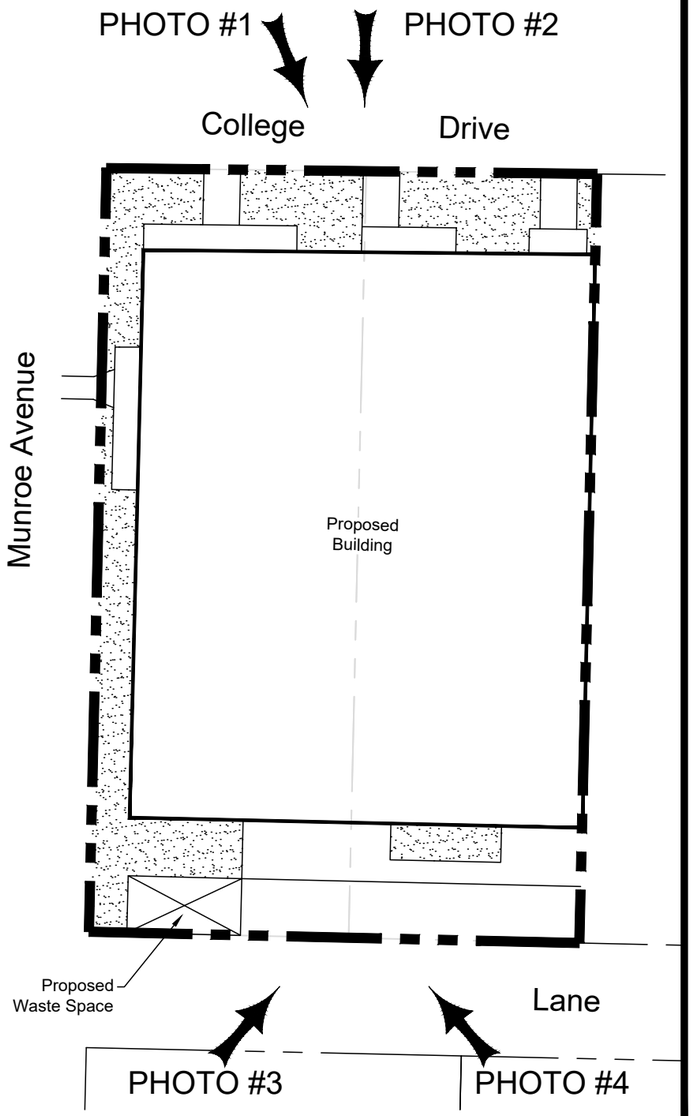
Proposed: Based on the information submitted dwelling units are provided on the 2nd to 6th floors, with windows and doors along the East wall facing the adjacent property. A 0-metre interior side yard setback is proposed from the East portion of the building containing dwellings, to the East property line.

Deficiency: This results in an East interior side yard deficiency of 1.5 metres for the first 12 metres of the building containing dwelling units, and a 3 metre East side yard for the portion of the building in excess of 12 metres in height. No such side yard shall be required when no window, door or other opening is provided in the wall facing the adjacent property.

Requirement: Section 5.2.6(2)(a) states waste spaces must be not less than 3 metres by 7.5 metres.

Proposed: Based on the information provided the waste space is 3 metres by 6 metres.

Deficiency: This results in a waste space deficiency of 1.5 metres in length.



DEVELOPMENT APPEAL - SITE PLAN

ADDRESS: 1202/1204 College Drive

LOT: 21, 22, 23, 35, 43, & 44

BLOCK: 35

PLAN: F5527 & 101356253

N:\Planning\MAPPING\Appeals\2025\DA09S-25.dwg

City of Saskatoon

PHOTO 1

PHOTO 2

PHOTO 3

PHOTO 4

2023 AERIAL PHOTOGRAPHY

City of Saskatoon

Development Appeals Board
c/o Office of the City Clerk
222 – 3rd Avenue North
Saskatoon SK S7K 0J5

www.saskatoon.ca
tel (306) 975-3240

March 5, 2025

«RGSTR_OWNER»
«MAILING_ADDR_DELIV_ADDR1»
«MAILING_ADDR_CITY»
«MAILING_ADDR_PROV_CODE»
«MAILING_ADDR_POSTAL_CODE»

NEIGHBOUR NOTIFICATION

Reference: **Development Permit Denial – Appeal No. 9-2025**
Site: **1202/1204 College Drive**
Proposal: **Shopping Centre with Multiple Unit Dwelling (65 dwelling units)**

The above-noted appeal has been filed by **James Zimmer, James D Zimmer Architect on behalf of 101088347 Saskatchewan Ltd.** under Subsection 219(1)(b) of *The Planning and Development Act, 2007*. This letter has been sent to you as the registered owner or property manager of a property that has been deemed as neighbouring the subject site. The Board is required by law to send a notice in order to give the neighbouring property owners opportunity to submit comments in writing regarding the appeal.

The property is zoned **CS1** under *Zoning Bylaw No. 9900,* and the development permit was denied due to the following deficiencies:

1. Requirement: Section 10.4.4(2)(b) states for multiple unit dwellings or where dwelling units are erected above commercial, office or institutional, an interior side yard shall be provided for the part of the building containing such dwelling units of 1.5 metres, up to a height of 12 metres and 3 metres or that portion of the building in excess of 12 metres in height. No such side yard shall be required when no window, door or other opening is provided in the wall facing the adjacent property.

   Proposed: Based on the information submitted dwelling units are provided on the 2nd to 6th floors, with windows and doors along the East wall facing the adjacent property. A 0-metre interior side yard setback is proposed from the East portion of the building containing dwellings, to the East property line.

   Deficiency: This results in an East interior side yard deficiency of 1.5 metres for the first 12 metres of the building containing dwelling units, and a 3 metre East side yard for the portion of the building in excess of 12 metres in height that contain dwelling units.

2. Requirement: Section 5.2.6(2)(a) states waste spaces must be not less than 3 metres by 7.5 metres.

   Proposed: Based on the information provided the waste space is 3 metres by 6 metres.

   Deficiency: This results in a waste space deficiency of 1.5 metres in length.

Development Appeals Board
Appeal 2025 - 9

The Development Appeals Board will hear the appeal: Tuesday, April 1, 2025, at 4:00 p.m. in Committee Room E. Appeal hearings are open to the public.

For additional information please refer to the website at **www.saskatoon.ca** (select City Hall, City Council, Boards & Committees, Agendas, Minutes & Video, Development Appeals Board) or contact the Secretary at (306) 975-3240.

If you wish to provide written comments regarding this matter you are required to submit a letter including your name and full address to the Secretary, Development Appeals Board, City Clerk's Office, City Hall, Saskatoon, Saskatchewan, S7K 0J5 or email **development.appeals.board@saskatoon.ca**. **Submissions providing comments and/or requests to speak must be received in the City Clerk's Office by noon the day of the hearing**. Please note that your letter and written comments are a public document and will be provided to the parties of the appeal in advance of the hearing.

Debby Sackmann, Secretary
Development Appeals Board

RECEIVED
CITY CLERK'S OFFICE

March 6, 2025

A.1

City of Saskatoon Development Appeal Application- page 2

THIS PAGE WILL FORM PART OF THE PUBLIC RECORD FOR THE APPEAL

Applicant Name: Terry Deneiko

Registered Property Owner(s):
(if different from above):

Location of Subject Property

Legal Description

Lot (s) _____ Block _____ Plan No. _____

Civic Address: 633 Guelph Cres.

Present Status of Building or Structure Under Appeal:

(•) Construction not yet begun ( ) Under Construction ( ) Completed

Type of Construction:

(•) Residential ( ) Commercial ( ) Industrial ( ) Other (specify) Residential

Description of Development Appeal: (example: side yard deficiency, parking deficiency, etc.)

I would like to build a new detached garage and the size I want to build exceeds the max that the bylaw states. I will meet all the other requirements needed to build it.

Reason for Development Appeal: (as per *The Planning and Development Act, 2007*, applicants have 5 days prior to the appeal hearing date to submit drawings and written materials)

I can't see the little amount that I am asking for should make any difference.

BOTH SIDES OF THIS FORM MUST BE COMPLETED

City of Saskatoon

Planning and Development
222 3rd Avenue North
Saskatoon SK S7K 0J5

www.saskatoon.ca
tel (306) 975-2645
fax (306) 975-7712

R.1

Appeal 10-2025

March 6, 2025

Terry Deneiko
[redacted]
Saskatoon, SK [redacted]

SENT VIA EMAIL

Re: Development Permit Denial: ACC-2025-01224
Proposal: Accessory Building (Detached Garage)
Site Address: 633 Guelf Cres
Zoning District: R2 – Low Density Residential District 2

The Planning and Development Division has reviewed your Building and Development Permit application for an Accessory Building. After review, the following deficiency has been noted with the City of Saskatoon's Zoning Bylaw 9990:

1. Requirement: Section 5.1.2(4)(c) states:
"(4) In calculating the total floor area of detached accessory buildings, the following shall be considered:

(c) it shall not have a total floor area greater than the floor area of the principal building exclusive of an attached garage or carport or 54 square metres, whichever is greater. In no circumstance shall a detached building accessory to a OUD have a total floor area greater than 87 square metres."

Proposed: The proposed garage has an area of 93.6 square meters.

Deficiency: This proposed garage exceeds the maximum allowable floor area of 87 square meters, by 6.6 square meters (or 71 square feet).

As consequence, the Planning and Development Division cannot approve your plans for a Development Permit.

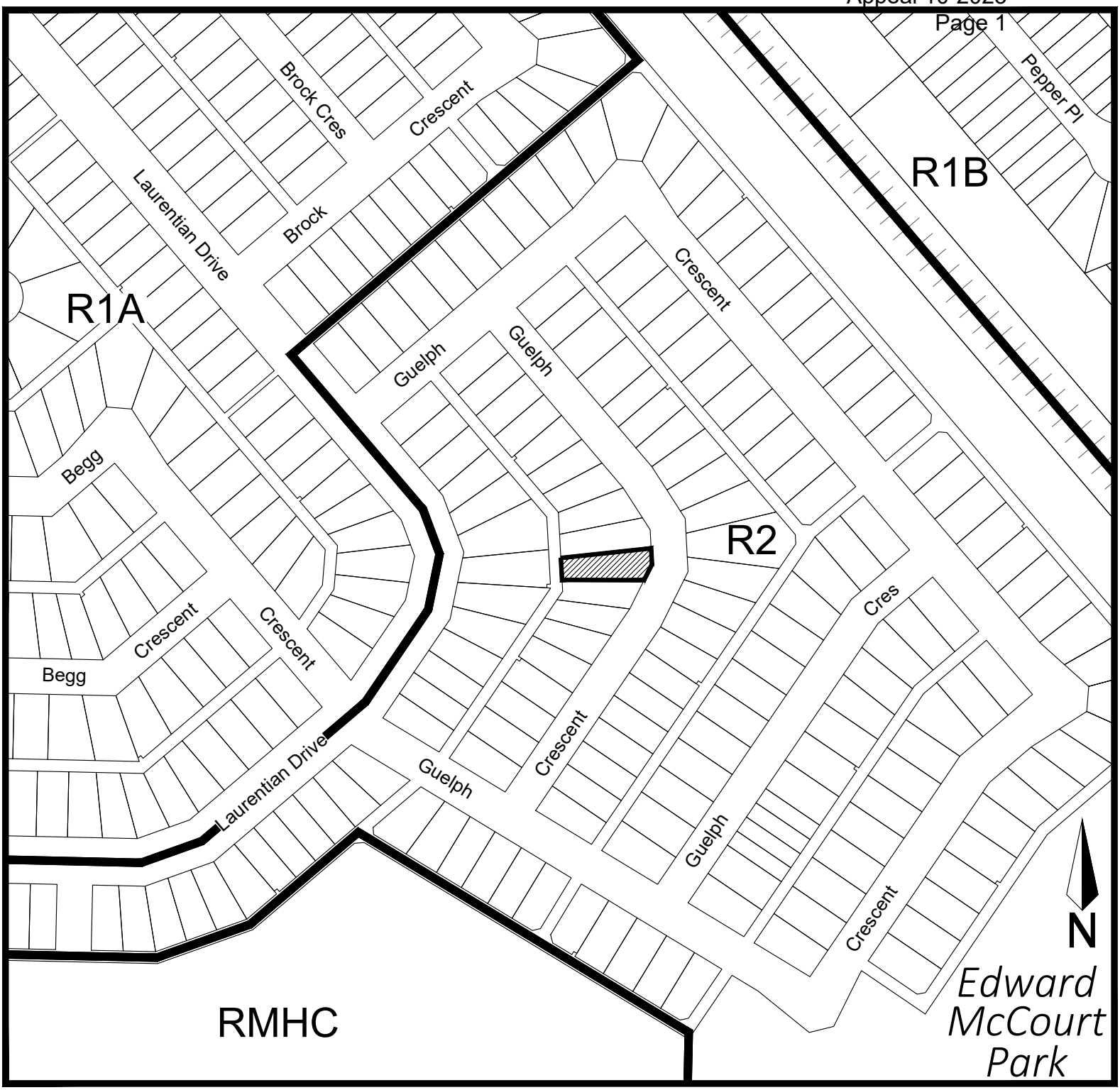
I understand you wish to appeal this decision to the Development Appeal Board. To proceed with a appeal request please fill out the online Development Appeal application form available through the following link: https://capps.saskatoon.ca/development-appeals/ within 30 days of the date of this letter. Note there is a application fee of $50 for this process. Attached to this email is general information about the Development Appeal process, as well as a extract from the Planning and Development Act 2007.

If you have any questions about this information, please let me know.

Sincerely,

Wes Holowachuk
Planning and Development Division (306-975-2659)
vanessa.champagne@saskatoon.ca

cc: Brent McAdam, Planning and Development
Development Appeal Board Secretary, City Clerks



DEVELOPMENT APPEAL - LOCATION PLAN

ADDRESS: 633 Guelph Crescent

R.2

LOT: 22

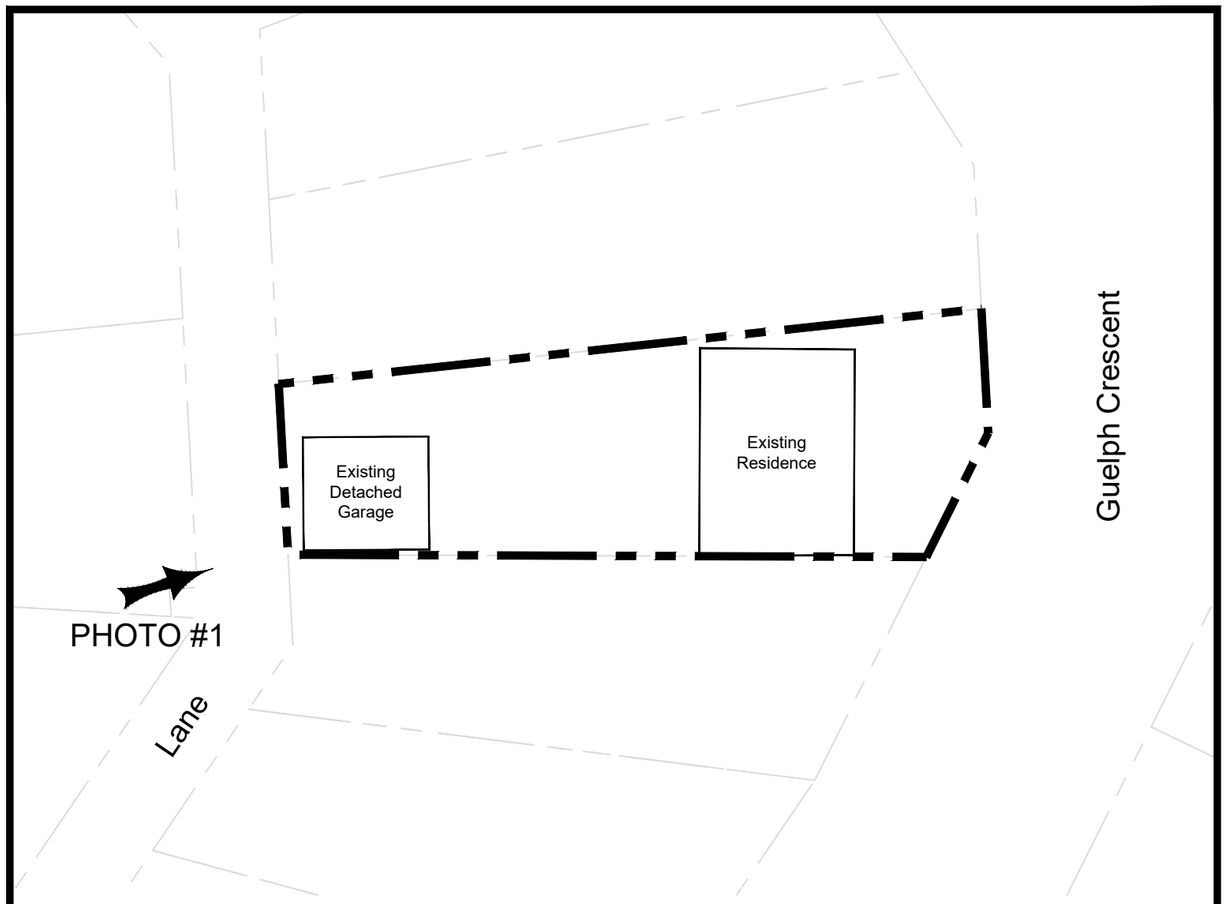
BLOCK: 760

PLAN: 74S15354

Received
City Clerk's Office
March 24, 2025

N:\Planning\MAPPING\Appeals\2025\DA10L-25.dwg

City of Saskatoon



Requirement: Section 5.1.2(4)(c) states:
"(4) In calculating the total floor area of detached accessory buildings, the following shall be considered:

(c) it shall not have a total floor area greater than the floor area of the principal building exclusive of an attached garage or carport or 54 square metres, whichever is greater. In no circumstance shall a detached building accessory to a OUD have a total floor area greater than 87 square metres."

Proposed: The proposed garage has an area of 93.6 square metres.

Deficiency: The proposed garage exceeds the maximum allowable floor area of 87 square metres, by 6.6 square metres (or 71 square feet).

DEVELOPMENT APPEAL - SITE PLAN

ADDRESS: 633 Guelph Crescent

LOT: 22

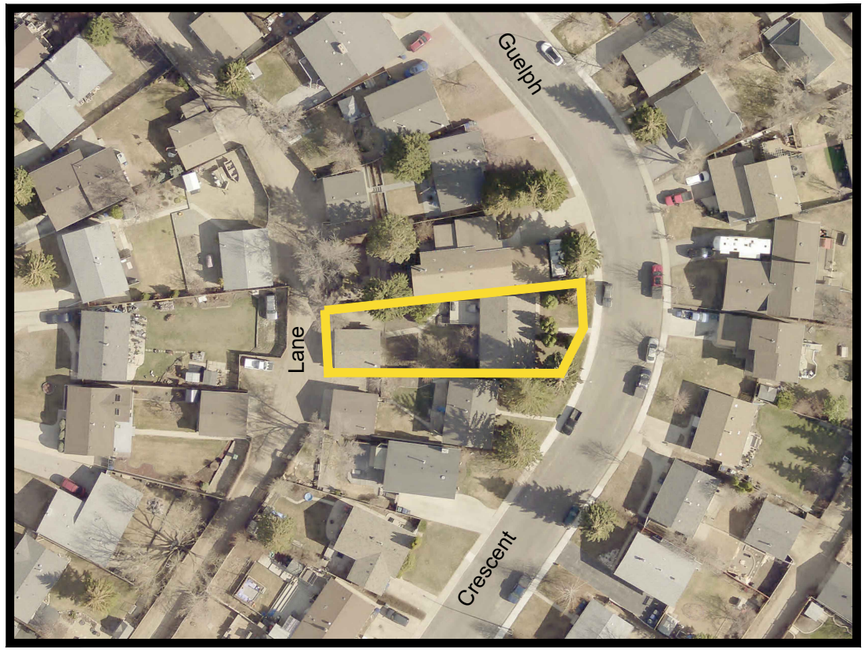
BLOCK: 760

PLAN: 74S15354

N:\Planning\MAPPING\Appeals\2025\DA10S-25.dwg

City of Saskatoon

PHOTO 1



2023 AERIAL PHOTOGRAPHY

City of Saskatoon

Development Appeals Board
c/o Office of the City Clerk
222 – 3rd Avenue North
Saskatoon SK S7K 0J5

www.saskatoon.ca
tel (306) 975-3240

March 12, 2025

«RGSTR_OWNER»
«MAILING_ADDR_DELIV_ADDR1»
«MAILING_ADDR_CITY»
«MAILING_ADDR_PROV_CODE»
«MAILING_ADDR_POSTAL_CODE»

NEIGHBOUR NOTIFICATION

Reference: **Development Permit Denial – Appeal No. 10-2025**
Site: **633 Guelph Crescent**
Proposal: **Accessory Building (Detached Garage)**

The above-noted appeal has been filed by **Terry Deneiko** under Subsection 219(1)(b) of *The Planning and Development Act, 2007*. This letter has been sent to you as the registered owner or property manager of a property that has been deemed as neighbouring the subject site. The Board is required by law to send a Notice in order to give the neighbouring property owners opportunity to submit comments in writing regarding the appeal.

The property is zoned **R2** under *Zoning Bylaw No. 9900,* and the development permit was denied due to the following deficiency:

Requirement:	Requirement: Section 5.1.2(4)(c) states: "(4) In calculating the total floor area of detached accessory buildings, the following shall be considered: (c)it shall not have a total floor area greater than the floor area of the principal building exclusive of an attached garage or carport or 54 square metres, whichever is greater. In no circumstance shall a detached building accessory to an OUD (one-unit dwelling) have a total floor area greater than 87 square metres.
Proposed:	Based on the information provided the proposed garage has an area of 93.6 square meters.
Deficiency:	This results in the proposed garage exceeding the maximum allowable floor area of 87 square meters, by 6.6 square meters (or 71 square feet).

The Development Appeals Board will hear the appeal: Tuesday, April 1, 2025, at 4:00 p.m. in Committee Room E. Appeal hearings are open to the public.

For additional information please refer to the website at **www.saskatoon.ca** (select City Hall, City Council, Boards & Committees, Agendas, Minutes & Video, Development Appeals Board) or contact the Secretary at (306) 975-3240.

If you wish to provide written comments regarding this matter you are required to submit a letter including your name and full address to the Secretary, Development Appeals Board, City Clerk's Office, City Hall, Saskatoon, Saskatchewan, S7K 0J5 or email **development.appeals.board@saskatoon.ca**. **Submissions providing comments and/or requests to speak must be received in the City Clerk's Office by noon the day of the hearing**. Please note that your letter and written comments are a public document and will be provided to the parties of the appeal in advance of the hearing.

Debby Sackmann, Secretary
Development Appeals Board

Received
City Clerk's Office
March 13, 2025

From: Dave & Irene Blum
To: Web E-mail - Development Appeals Board
Subject: Appeal No. 10-2025
Date: Thursday, March 13, 2025 4:24:31 PM

[You don't often get email [redacted]. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification]

[Warning: This email originated outside our email system. Do not click links or open attachments unless you recognize the sender and know the content is safe.]

I am sending this email in regards to the above appeal. I live at [redacted] Guelph Crescent and I just wanted to let you know that I don't have any issues with the permit to allow a larger floor plan for the garage for Terry Deneiko. If you require anything further, please don't hesitate to contact me.
Irene Blum