ENVIRONMENTAL NOISE IMPACT STUDY

ADDITION, ALTERATIONS & RENOVATIONS
1160 BLAIR ROAD
CITY OF BURLINGTON, ON
REGIONAL MUNICIPALITY OF HALTON

Prepared for:

ARSM Coptic Community Centre
1160 Blair Road, Unit D1
Burlington, ON
L7M 1K9

Prepared By:



Frank Westaway
Owner/President

Reviewed and Sealed by:
Brendan Perusco, P.Eng.



August 2023
Our File No: 23-4079

dBA Acoustical Consultants Inc.
P.O Box 32059
1447 Upper Ottawa
Hamilton, ON
L8W 3K0

TABLE OF CONTENTS

1.0 INTRODUCTION..... Page 3

2.0 SITE DESCRIPTION..... Page 3

3.0 REGULATORY CONTEXT……. Page 3

4.0 ROAD NOISE…… Page 4

5.0 RECOMMENDATIONS – NOISE CONTROL…… Page 4
5.1 Outdoor Noise Levels…….. Page 4
5.2 Indoor Noise Levels……. Page 5

6.0 VIBRATION……..…. Page 5

7.0 NOISE MITIGATION RESULTS……. Page 5

8.0 SUMMARY OF RECOMMENDATIONS…….. Page 5

9.0 CONCLUSIONS…… Page 5

FIGURE 1 – Map Plan
FIGURE 2 – Site Plan

Appendix "A"
City of Burlington 2017 AADT
Floor Plans
Elevations
Building Sections
Site Statistics
Exterior Wall STC Ratings
Noise Letter 2017

1.0 INTRODUCTION

dBA Acoustical Consultants Inc. has been asked to provide a noise impact study on behalf of ARSM Coptic Community Centre for the proposed Addition, Alterations & Renovations located at 1160 Blair Road in Burlington, ON.

The purpose of the study is to determine, for Site Plan approval, the noise impact from area stationary noise sources. The applicant is proposing Additions, Alterations & Renovations to 1160 Blair Road.

dBA Acoustical Consultants provided a noise letter, dated August 25th, 2017, for the proposed Coptic Church Site Plan. It referenced the MECP D6 guidelines as well as Publication NPC-300, Stationary & Transportation Sources-Approval & Planning Guidelines. These MECP D6 guidelines still apply for the proposed Addition, Alterations & Renovations. See Appendix "A" for a copy of the letter.

This study will detail noise impact relative to the proposed site plan and recommend the noise control measures necessary (if applicable) to meet Ministry of Environment, Conservation and Parks (MECP) guidelines, while satisfying the planning requirements of the City of Burlington.

Rail noise was not considered in this report as there are no CN/GO rail lines within the immediate area. CN/GO Rail tracks are located approximately 675m east of the proposed development and Stamson Program 5.04 does not support noise calculations over 500m.

Aircraft noise was not considered in this report as the development is located outside the 25 NEF of any area airports. (See Attached Figure 1 Site Location).

2.0 SITE DESCRIPTION

The proposed development is in an area surrounded by commercial properties. Mainway is approximately 135m northwest and Blair Road is directly east of the proposed development. Mainway traffic noise has no acoustical impact on this proposed development due to extensive shielding from existing commercial businesses and distance separation. Blair Road will not have an acoustical impact on the proposed development due to low traffic volumes. See Figure 2 Site Plan.

The applicant is proposing to redevelop the property and expand the rear (western) portion of the building. The front (eastern) two-storey portion will remain. The new development will include an expanded Banquet Hall, a new Recreational Facility (Gym), an expanded Place of Worship, and new Office space. The proposed redevelopment will be two storeys in height with a portion of the second storey containing floor area and the remaining open to the roof. A total of 276 new parking spaces will be provided. Part of the new construction will be a Green Roof, and part of the original building will be used for solar panels. The expanded Place of Worship will be shifted to the rear of the building with a separate entrance. The existing Place of Worship will be converted into warehouse space.

The church is open Sundays from 8am – 11am for Worship, 11am – 2pm for Activities, Tuesdays from 6am – 8am for Worship and Saturdays from 7pm – 10 pm for Worship. The Daycare is open Monday – Friday from 830am – 430pm.

3.0 REGULATORY CONTEXT

The MECP Publication NPC-300, Stationary & Transportation Sources-Approval & Planning guidelines defines a point of reception/receptor as *"any point on the premises of a person where the sound or vibration originating from other than those premises are received."*

The points of reception are located on any of the following, but not limited to the following: residential homes, hospitals, nursing/retirement homes, daycare centres, theatres, places of worship, etc.

The area surrounding the proposed development is indicative of a "Class 1 Area" as defined in MECP Publication NPC-300, Stationary & Transportation Sources-Approval & Planning guidelines.

The applicable sound limits are the higher of:

- The existing ambient sound level; or
- The minimum values of Table 1.

TABLE 1 Minimum Sound Level Limits (Class 1 Area)	
Time Period	L_{eq} (dBA)
07:00 - 19:00	50
19:00 - 23:00	50
23:00 – 07:00	45

No restrictions apply to stationary sources if the one-hour equivalent sound exposure (Leq) is lower than the levels in the following Table 1.

4.0 ROAD NOISE

Predicted road traffic noise levels were calculated for Mainway, the major road noise source in the site area. Road traffic volumes were sourced supplied from the City of Burlington relative to the roadway. MECP computer program STAMSON version 5.04 was used to carry out prediction calculations (See Appendix "A" Attached). Traffic data is summarized in Table 4.

The daytime/nighttime volume ratio relative to Mainway is calculated using a 90/10 split. Mainway, percentage of annual growth was figured at 2% over 15 years until 2033. Traffic volumes were factored at 3% medium and 6% heavy of the total vehicle volumes.

TABLE 2 – Future Road Traffic Volumes (2033)			
Mainway	AADT 17017 Vehicles		
	Cars	Medium Trucks	Heavy Trucks
Day	13937	459	919
Night	1549	51	102

The following Table 5 summarizes the "free field" traffic noise prediction result for Mainway. (See Figure 3 Receptor Locations).

TABLE 3 – Predicted Free Field Future Traffic Noise (dBA)		
Location	07:00 – 23:00	23:00 – 07:00
R1 – North Façade	52 dBA (10m)	N/A

5.0 RECOMMENDATIONS - NOISE CONTROL

5.1 OUTDOOR NOISE LEVELS

Calculated road noise levels do not exceed the 55 dBA daytime criteria outlined in Table 1. The proposed development includes a Green Roof, located approximately 10m above ground on the southwest portion of the building, above the Gymnasium/office area. The Green Roof does not require noise mitigation, however a minimum 1.22m safety guard railing or equivalent is required pursuant to the Ontario Building Code (OBC).

5.2 INDOOR NOISE LEVELS

Calculated nighttime road noise levels at the Plane of Window (POW) do not exceed the 50 dBA criteria outlined in Table 1 for the indoor noise sensitive spaces.

TABLE 4 – Recommended Door, Wall and Window Construction			
LOCATION	Window STC	Exterior Walls STC	Interior Party Wall Construction STC
Whole Building All Floors & Exterior Walls	Example 34	Example 43	Example 56

6.0 VIBRATION

The City of Burlington Construction & Mobility Policy may require pre-condition surveys of area buildings within the area of influence (to be established), vibration protocol, and vibration monitoring during demolition and all heavy construction activities. Further information will be provided prior to the issuance of a building permit or as The City of Burlington staff require the documents for approval.

7.0 NOISE MITIGATION RESULTS

An onsite visit was conducted on August 8th, 2023 and as a result of the site inspection, dBA staff has determined that the noise levels in the general area, from stationary noise sources are minimal and are below MECP noise guidelines as noted in Table 1 above and therefore will have no acoustical impact on the proposed development, as long as the proposed development installs certain noise mitigation measures, which are noted below in Section 8.

8.0 SUMMARY OF RECOMMENDATIONS

The following noise control measures are required to satisfy the indoor and outdoor noise level criterion:

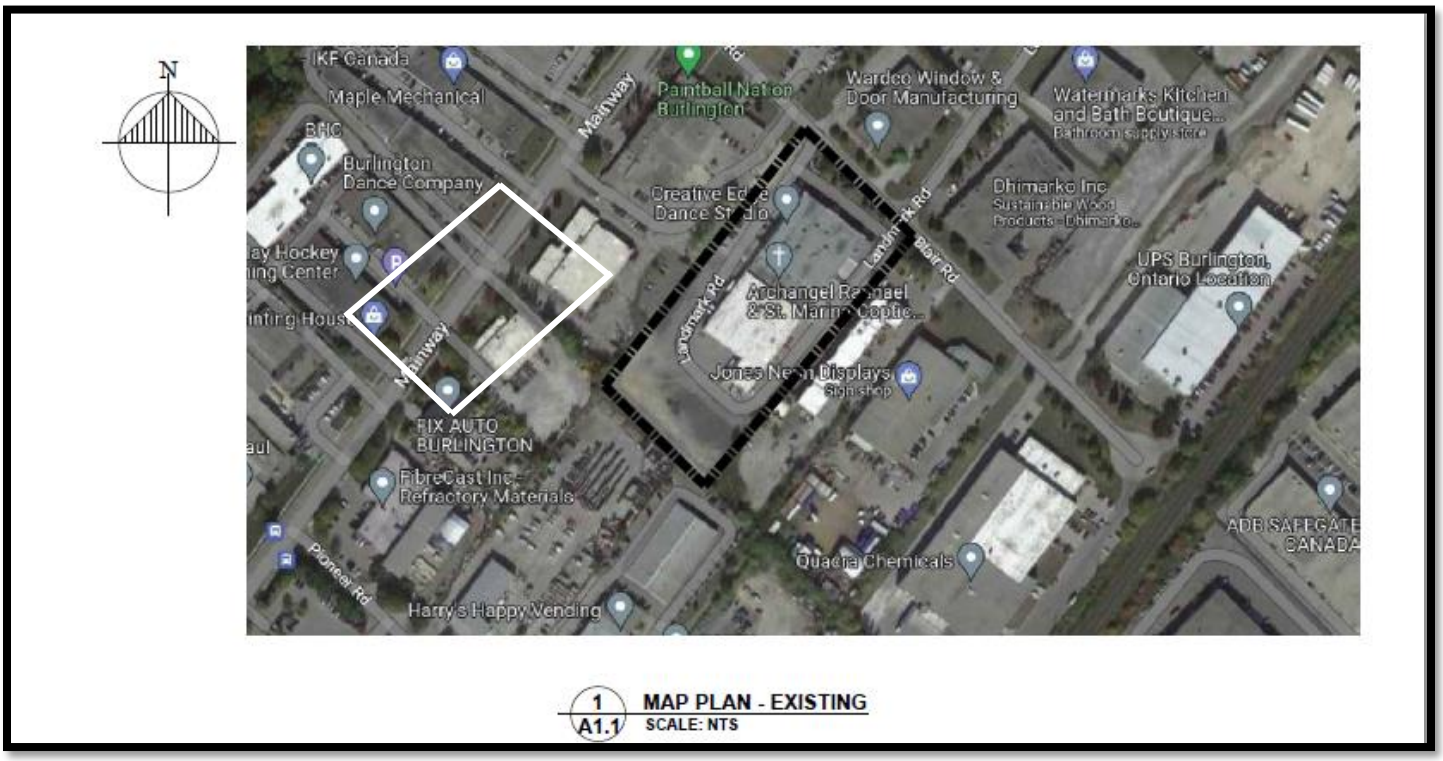
- Windows should be non-operational and have a minimum STC-34 rating.
- The exterior walls should have a minimum STC-43 rating. See Appendix "A"
- Interior Party Wall construction should have a minimum STC-56 rating.
- Central Air conditioning is required throughout the proposed development.
- The proposed Green Roof will require a minimum of 1.22m safety railing or equivalent as required by the Ontario Building Code (OBC).
- A Letter from the window supplier indicating the proposed windows STC-34 construction has been achieved.
- Qualified Acoustical Consultant certifies that the required noise control measures have been incorporated into the builder's plans prior to issuance of a building permit.
- Prior to issuance of an occupancy permit or equivalent, it is recommended the Qualified Acoustical Consultant certify that the approved noise control measures have been professionally installed.

9.0 CONCLUSIONS

dBA Acoustical Consultants Inc. has provided a noise impact study on behalf of ARSM Coptic Community Centre for the proposed Addition, Alterations & Renovations located at 1160 Blair Road in Burlington, ON.

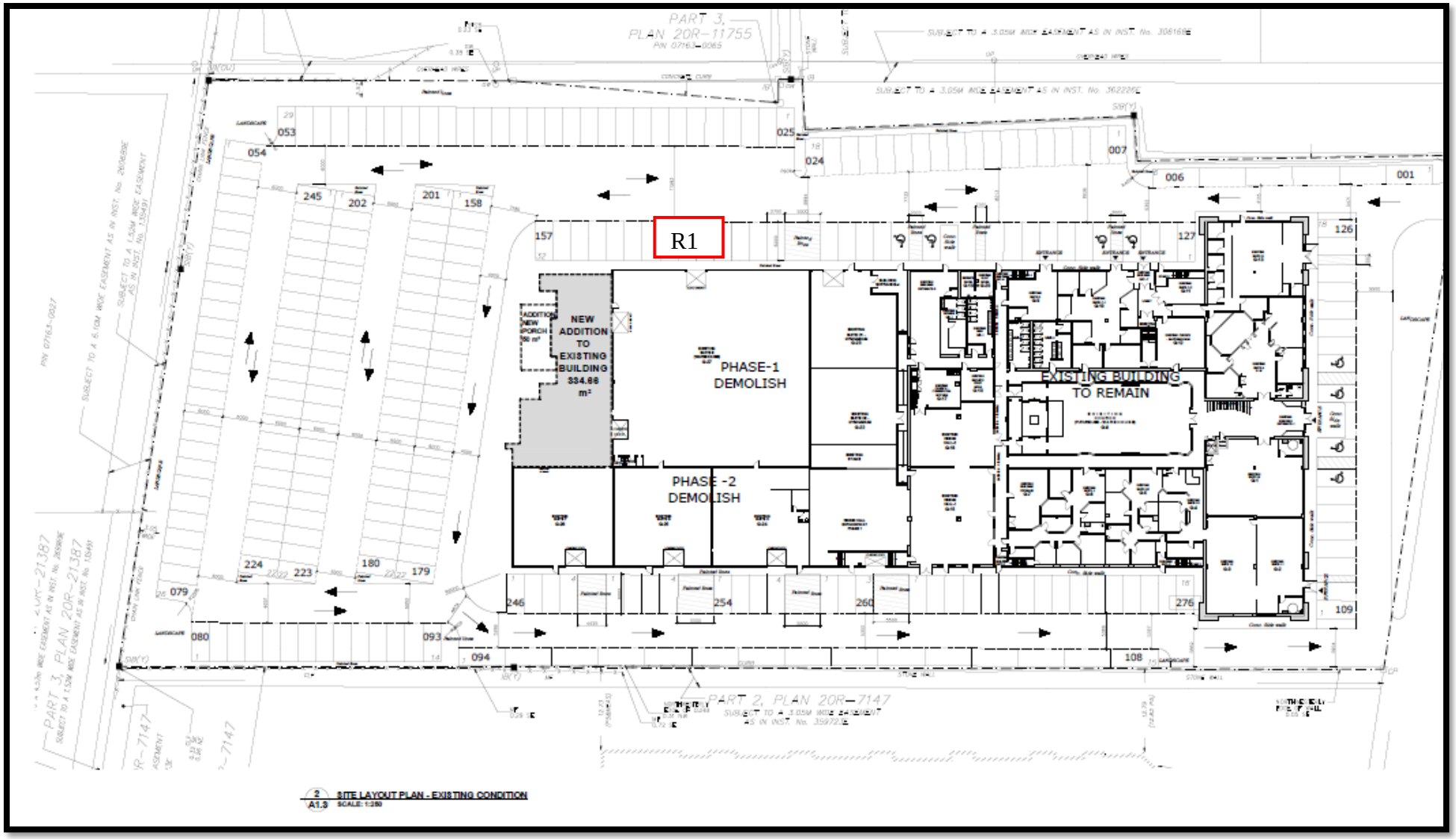
The study determined, for Site Plan approval, the noise impact from area stationary noise sources and recommend the noise control measures necessary to meet MECP noise guidelines, while satisfying the planning requirements of the City of Burlington.

FIGURE 1
MAP PLAN



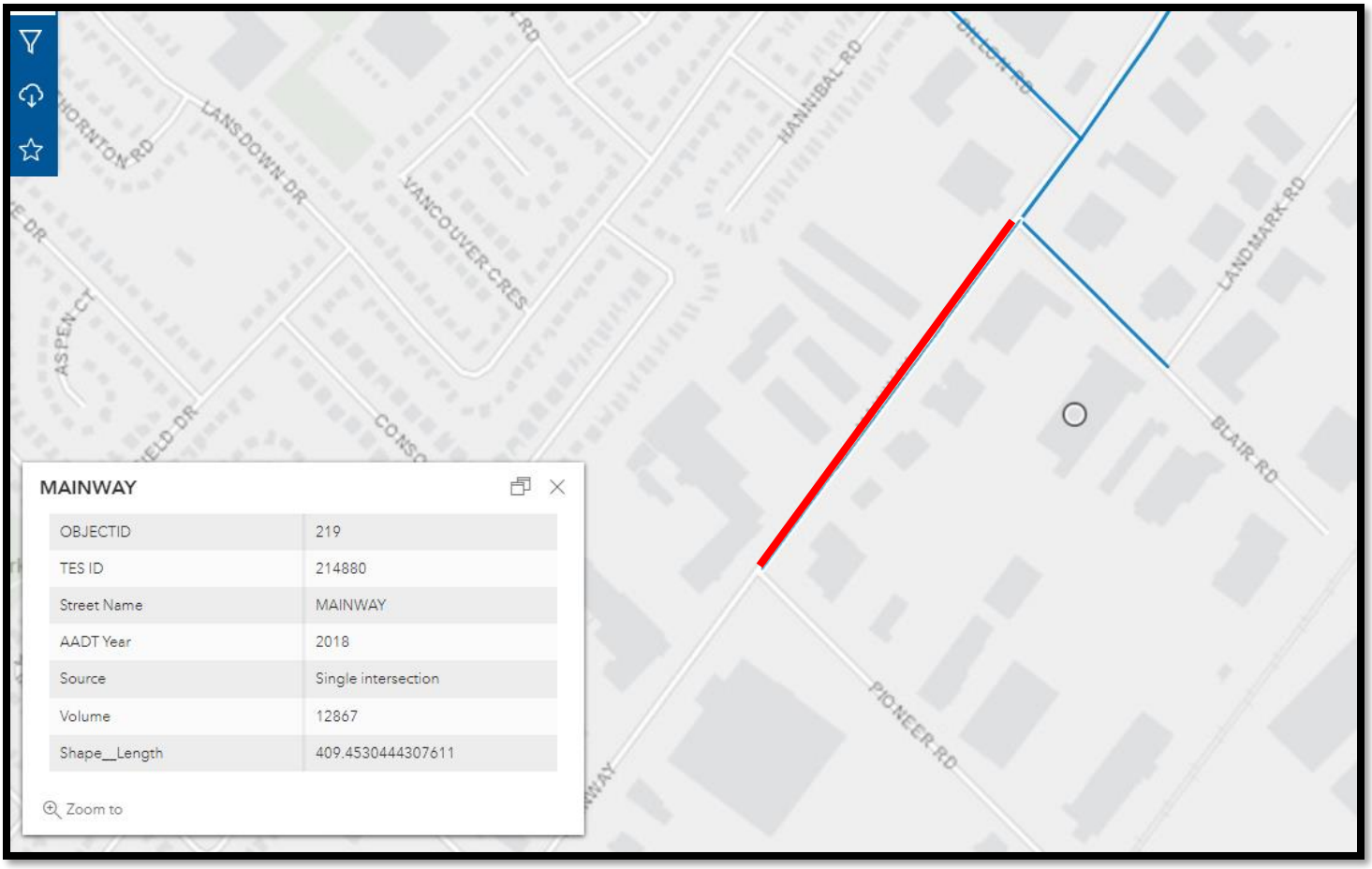
1 / A1.1 **MAP PLAN - EXISTING**
SCALE: NTS

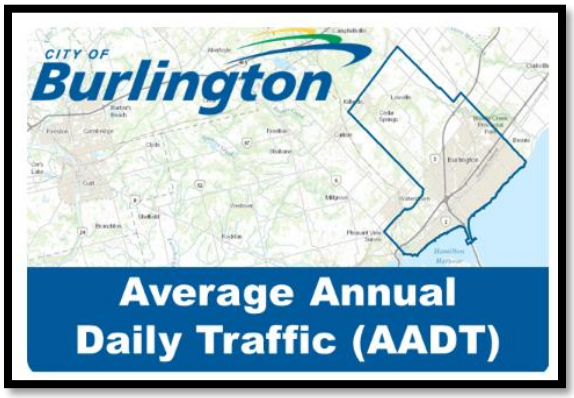
FIGURE 2
SITE PLAN



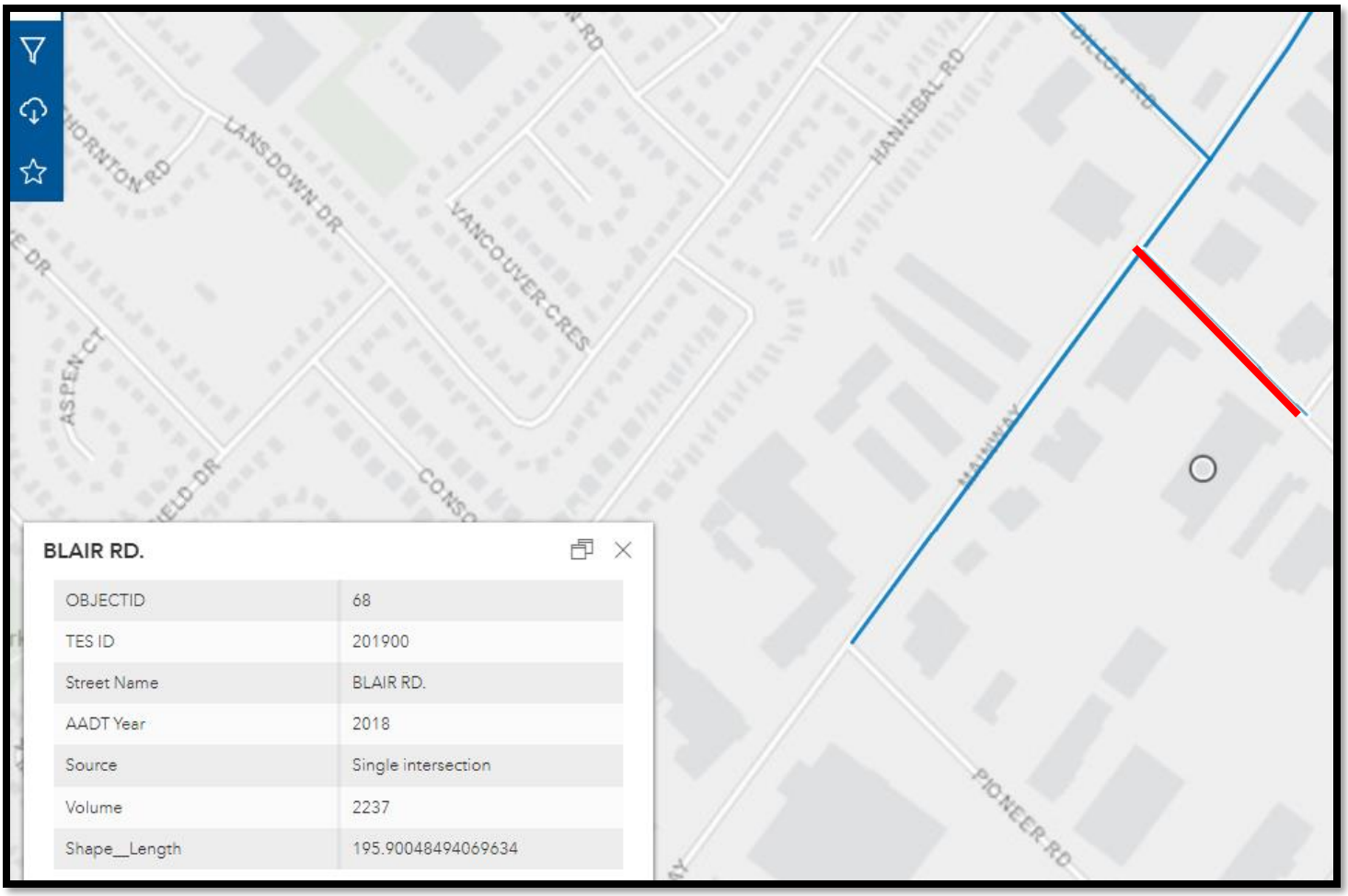
APPENDIX "A"

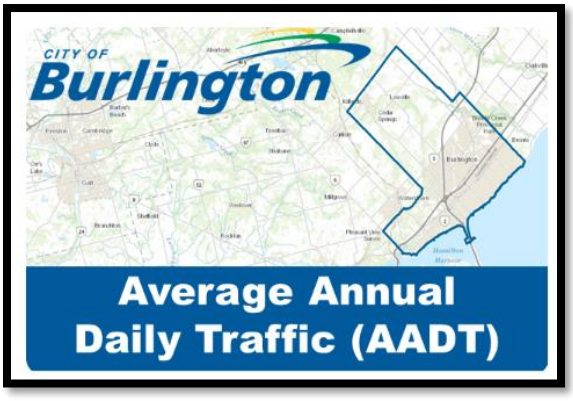
2017 AADT PLAINS ROAD EAST
CITY OF BURLINGTON





2017 AADT PLAINS ROAD EAST
CITY OF BURLINGTON





STAMSON CALCULATIONS

```
STAMSON 5.04        SUMMARY REPORT        Date: 10-08-2023 12:06:30
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: R1Blair.te           Time Period: Day/Night 16/8 hours
Description: R1- North Property Line 10m Height
                 TOTAL Leq FROM ALL SOURCES              (DAY): 51.96

Road data, segment # 1:  (day/night)
-----------------------------------
Car traffic volume  : 13937/1549  veh/TimePeriod  *
Medium truck volume :   459/51    veh/TimePeriod  *
Heavy truck volume  :   919/102   veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

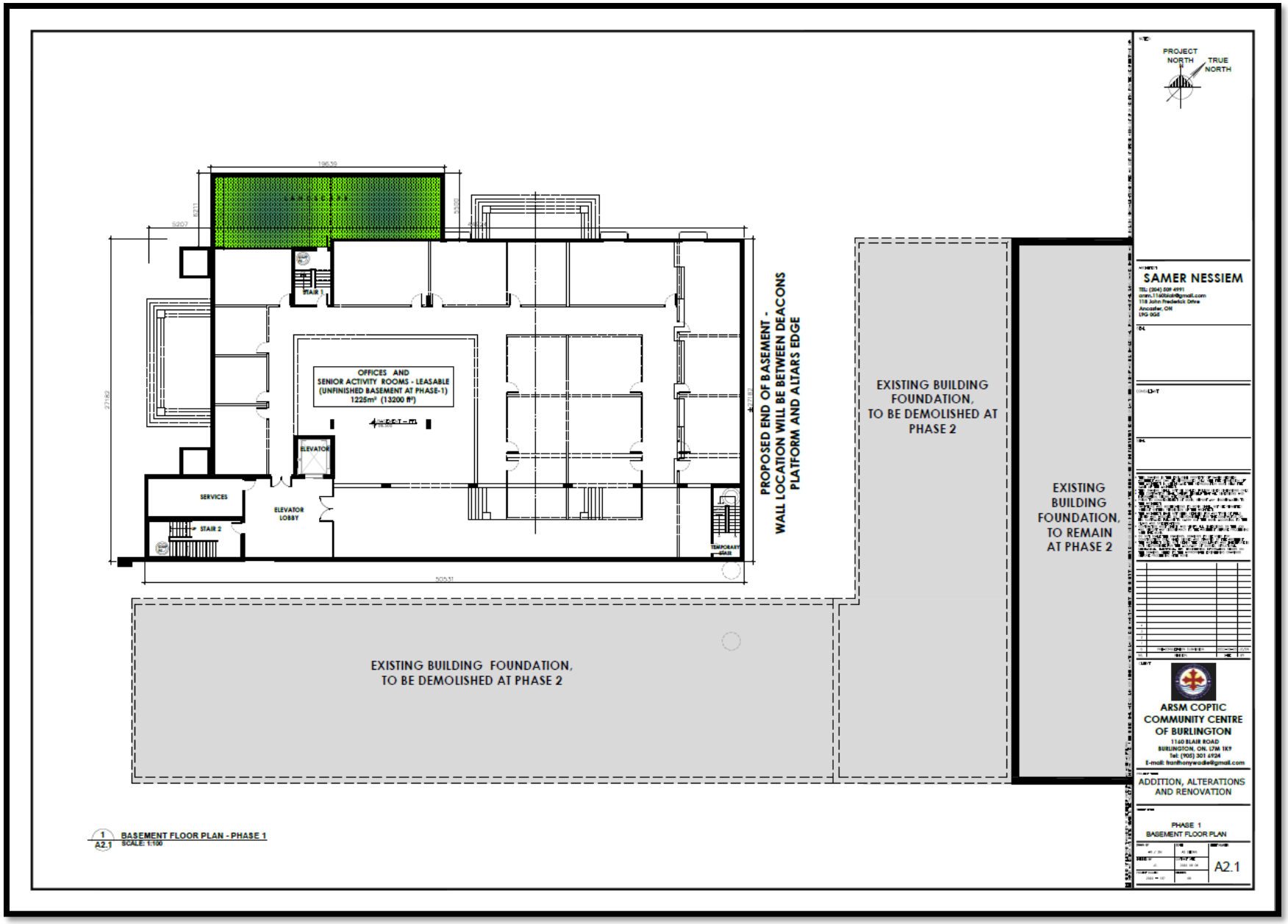
* Refers to calculated road volumes based on the following input:

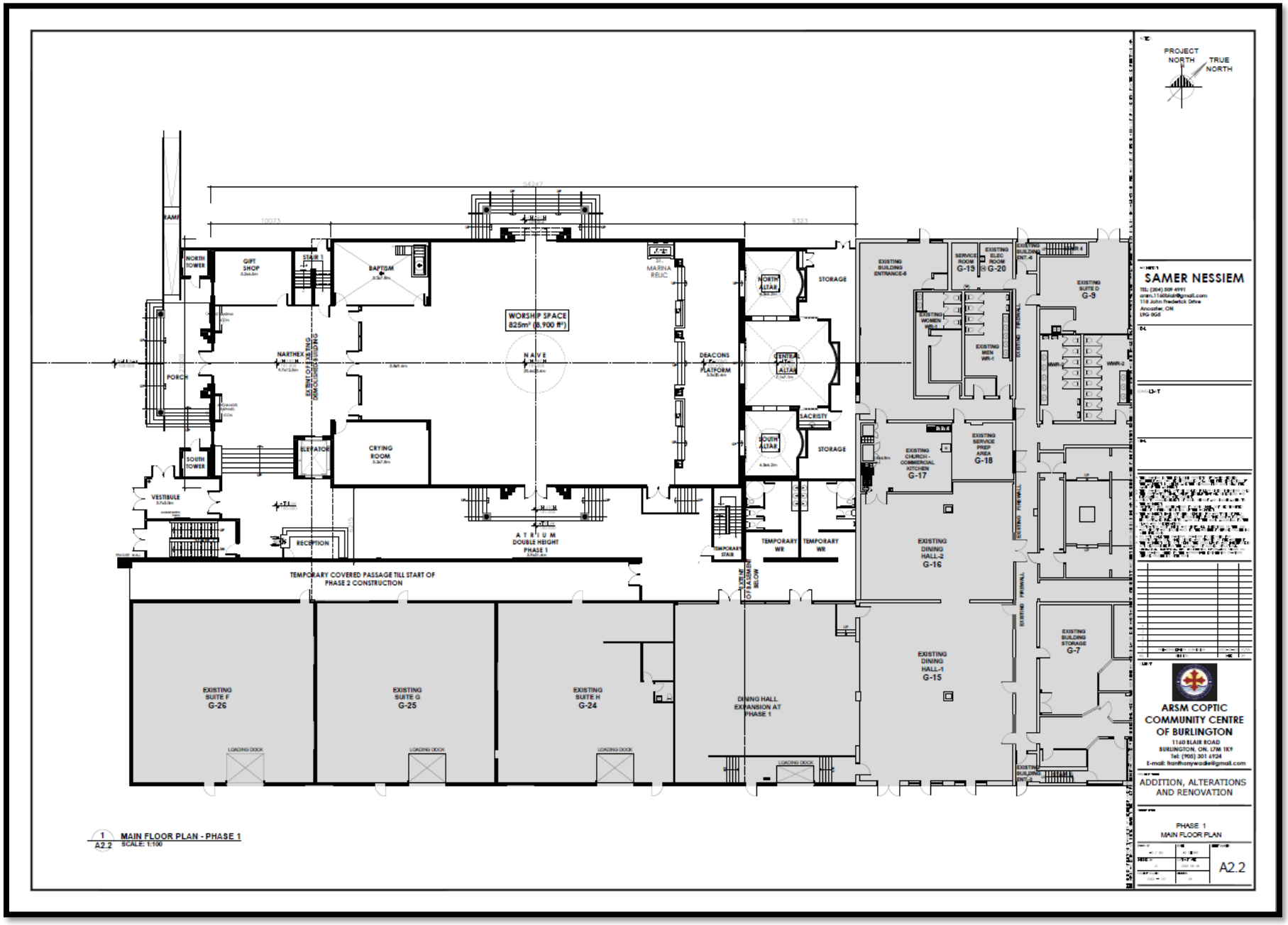
    24 hr Traffic Volume (AADT or SADT):  12867
    Percentage of Annual Growth        :  15.00
    Number of Years of Growth          :   2.00
    Medium Truck % of Total Volume     :   3.00
    Heavy Truck  % of Total Volume     :   6.00
    Day (16 hrs) % of Total Volume     :  90.00

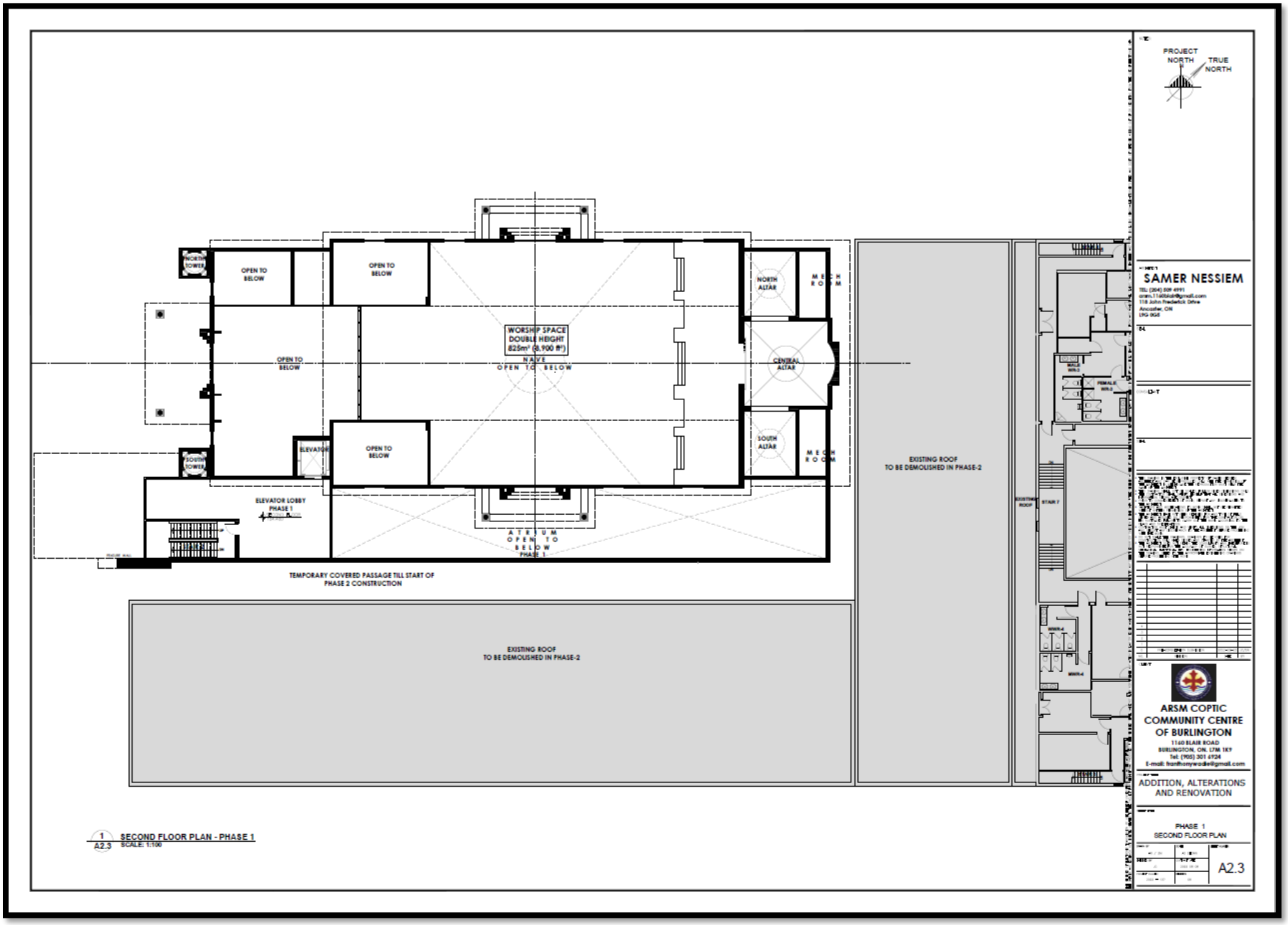
Data for Segment # 1:  (day/night)
-----------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      2 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 135.00 /
Receiver height           :  10.00 /
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

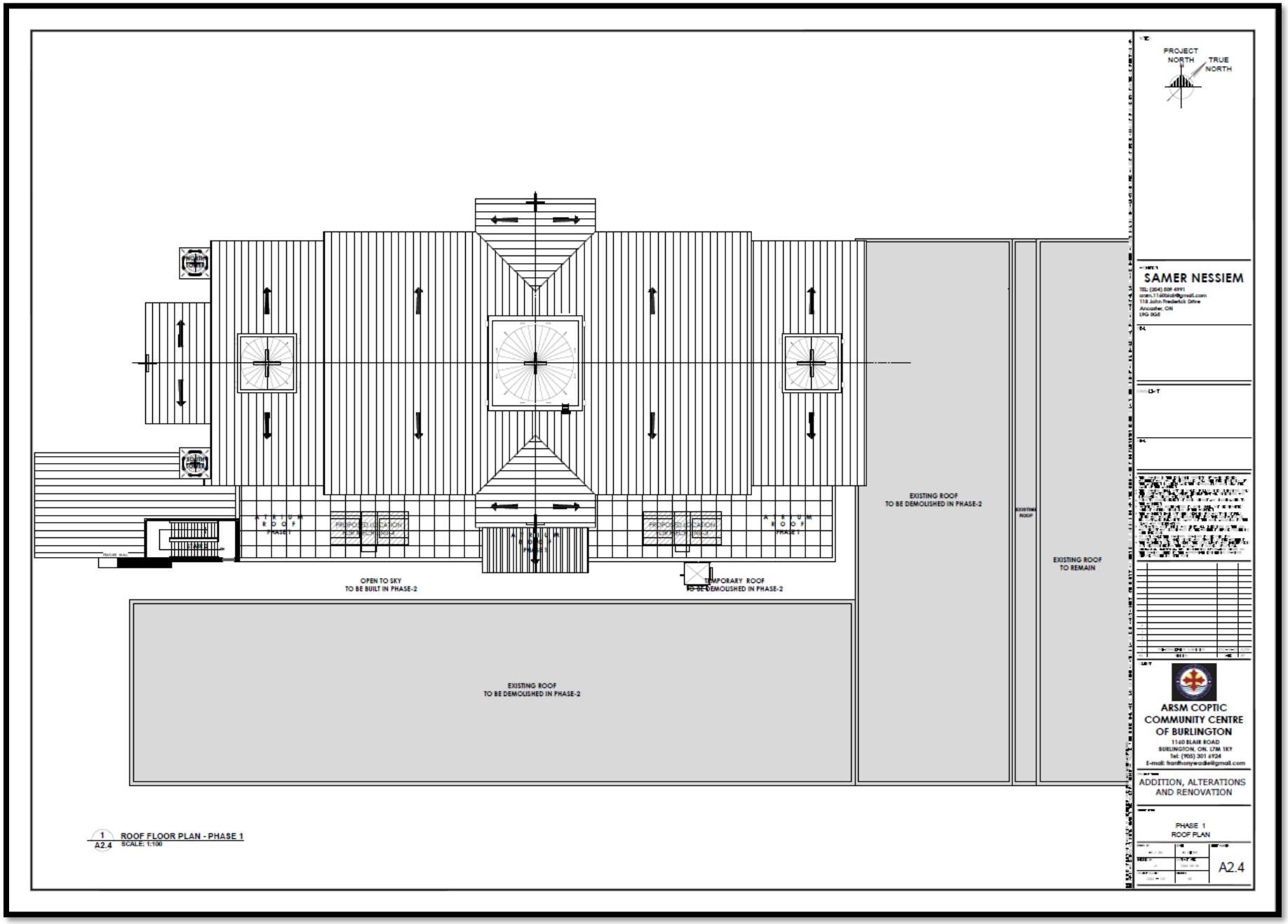
Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.                 !     1.57 !    51.96 !    51.96
--------------------+---------+---------+---------
                      Total                  51.96 dBA
```

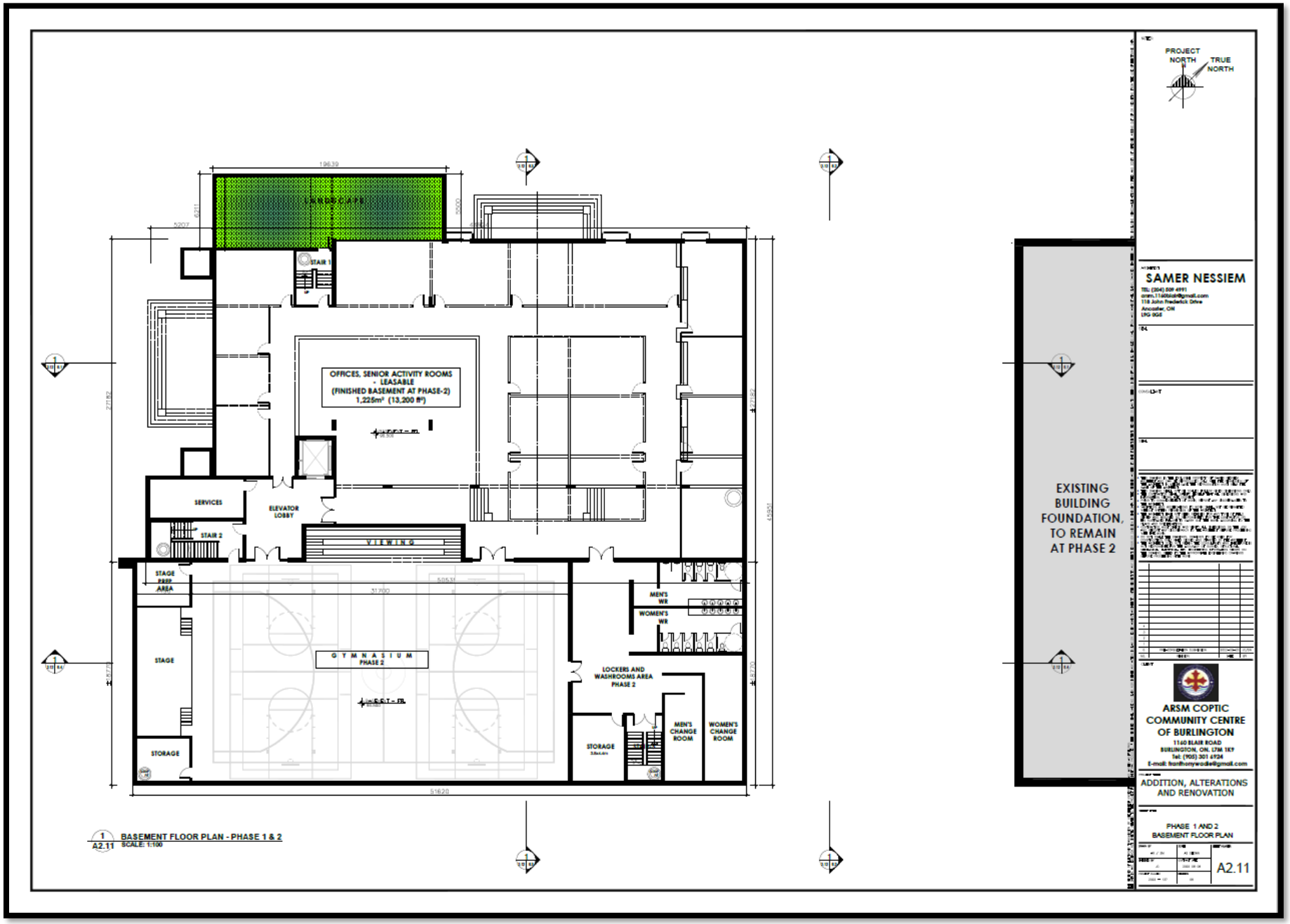
FLOOR PLANS

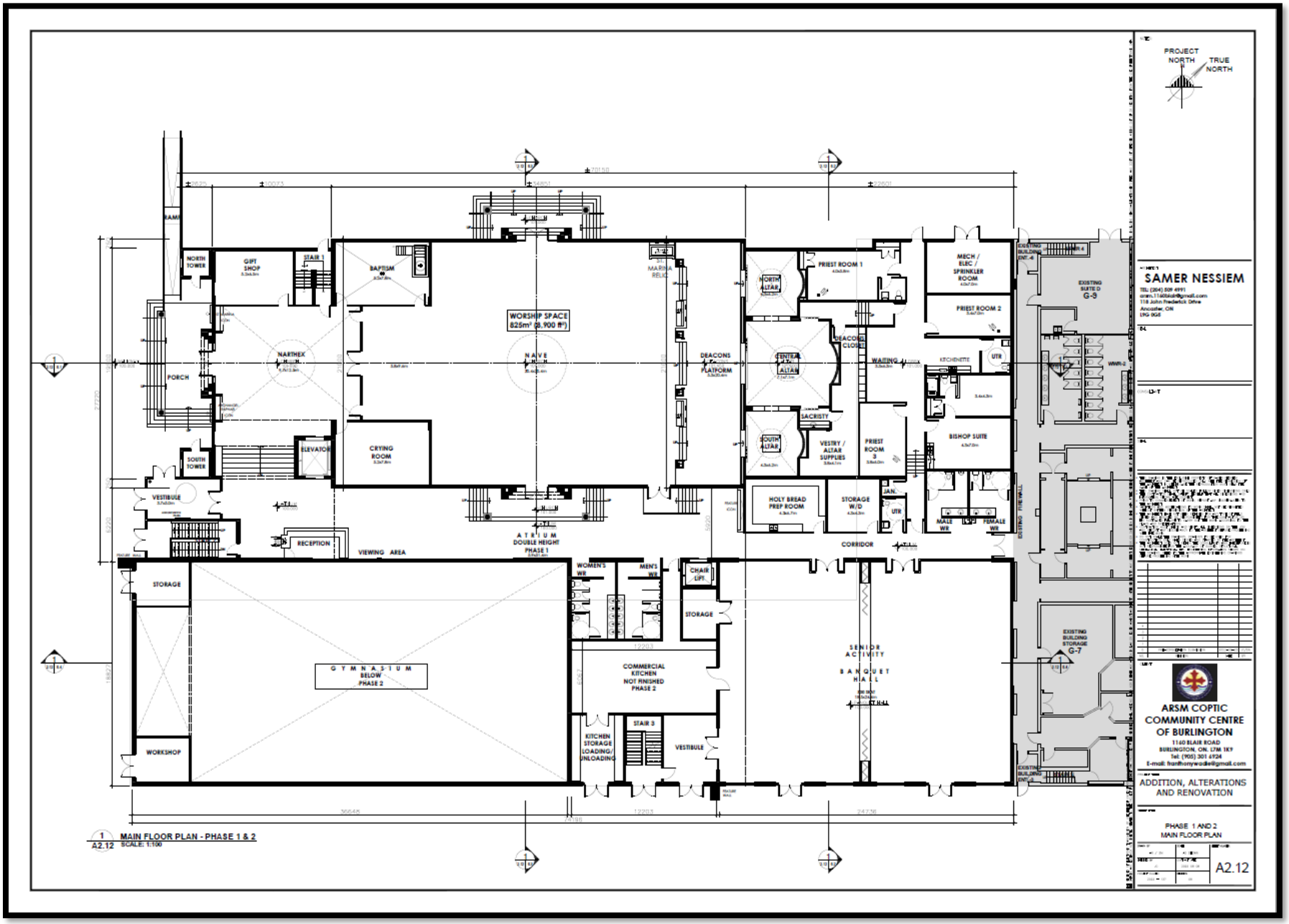

PROJECT NORTH
TRUE NORTH
OFFICES AND
SENIOR ACTIVITY ROOMS - LEASABLE
(UNFINISHED BASEMENT AT PHASE-1)
1225m² (13200 ft²)
STAIR 1
ELEVATOR
SERVICES
ELEVATOR LOBBY
STAIR 2
TEMPORARY STAIR
PROPOSED END OF BASEMENT - WALL LOCATION WILL BE BETWEEN DEACONS PLATFORM AND ALTAR'S EDGE
EXISTING BUILDING FOUNDATION, TO BE DEMOLISHED AT PHASE 2
EXISTING BUILDING FOUNDATION, TO REMAIN AT PHASE 2
EXISTING BUILDING FOUNDATION, TO BE DEMOLISHED AT PHASE 2
1 A2.1 BASEMENT FLOOR PLAN - PHASE 1
SCALE: 1:100
SAMER NESSIEM
ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON, L7M 1K9
ADDITION, ALTERATIONS AND RENOVATION
PHASE 1
BASEMENT FLOOR PLAN
A2.1

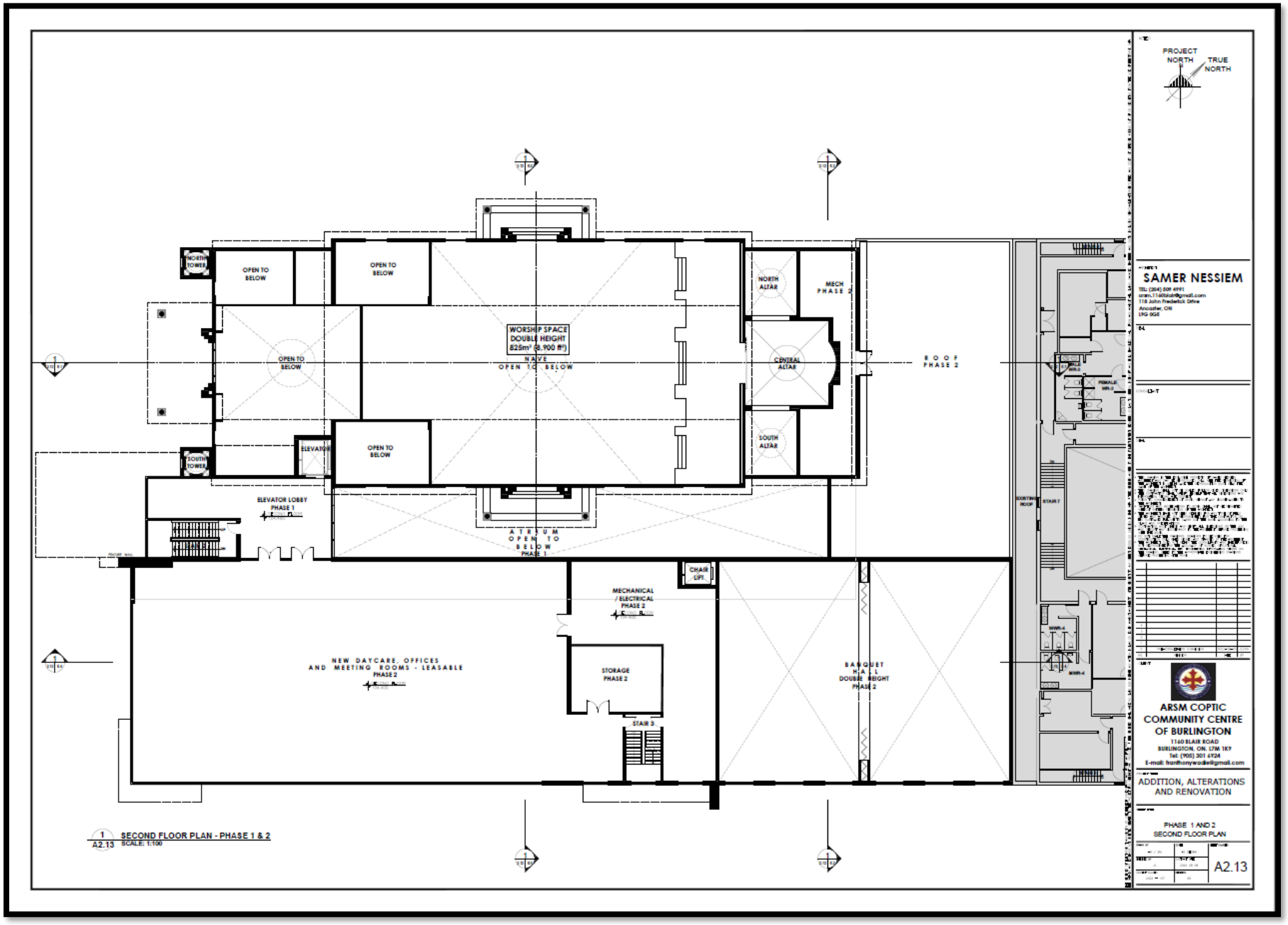

PROJECT NORTH
TRUE NORTH
WORSHIP SPACE
825m² (8,900 ft²)
NAVE
NARTHEX
PORCH
GIFT SHOP
BAPTISM
NORTH TOWER
SOUTH TOWER
ELEVATOR
CRYING ROOM
VESTIBULE
RECEPTION
ATRIUM DOUBLE HEIGHT PHASE 1
DEACONS PLATFORM
NORTH ALTAR
CENTRAL ALTAR
SOUTH ALTAR
SACRISTY
STORAGE
TEMPORARY WR
TEMPORARY WR
TEMPORARY COVERED PASSAGE TILL START OF PHASE 2 CONSTRUCTION
EXISTING SUITE F G-26
EXISTING SUITE G G-25
EXISTING SUITE H G-24
DINING HALL EXPANSION AT PHASE 1
EXISTING DINING HALL-1 G-15
EXISTING DINING HALL-2 G-16
EXISTING CHURCH - COMMERCIAL KITCHEN G-17
EXISTING SERVICE PREP AREA G-18
EXISTING SERVICE ROOM G-19
EXISTING ELEC ROOM G-20
EXISTING SUITE D G-9
EXISTING BUILDING STORAGE G-7
EXISTING BUILDING ENTRANCE-6
EXISTING WOMEN WR-1
EXISTING MEN WR-1
SAMER NESSIEM
ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON, L7M 1K9
ADDITION, ALTERATIONS AND RENOVATION
PHASE 1
MAIN FLOOR PLAN
A2.2
1 A2.2 MAIN FLOOR PLAN - PHASE 1
SCALE: 1:100

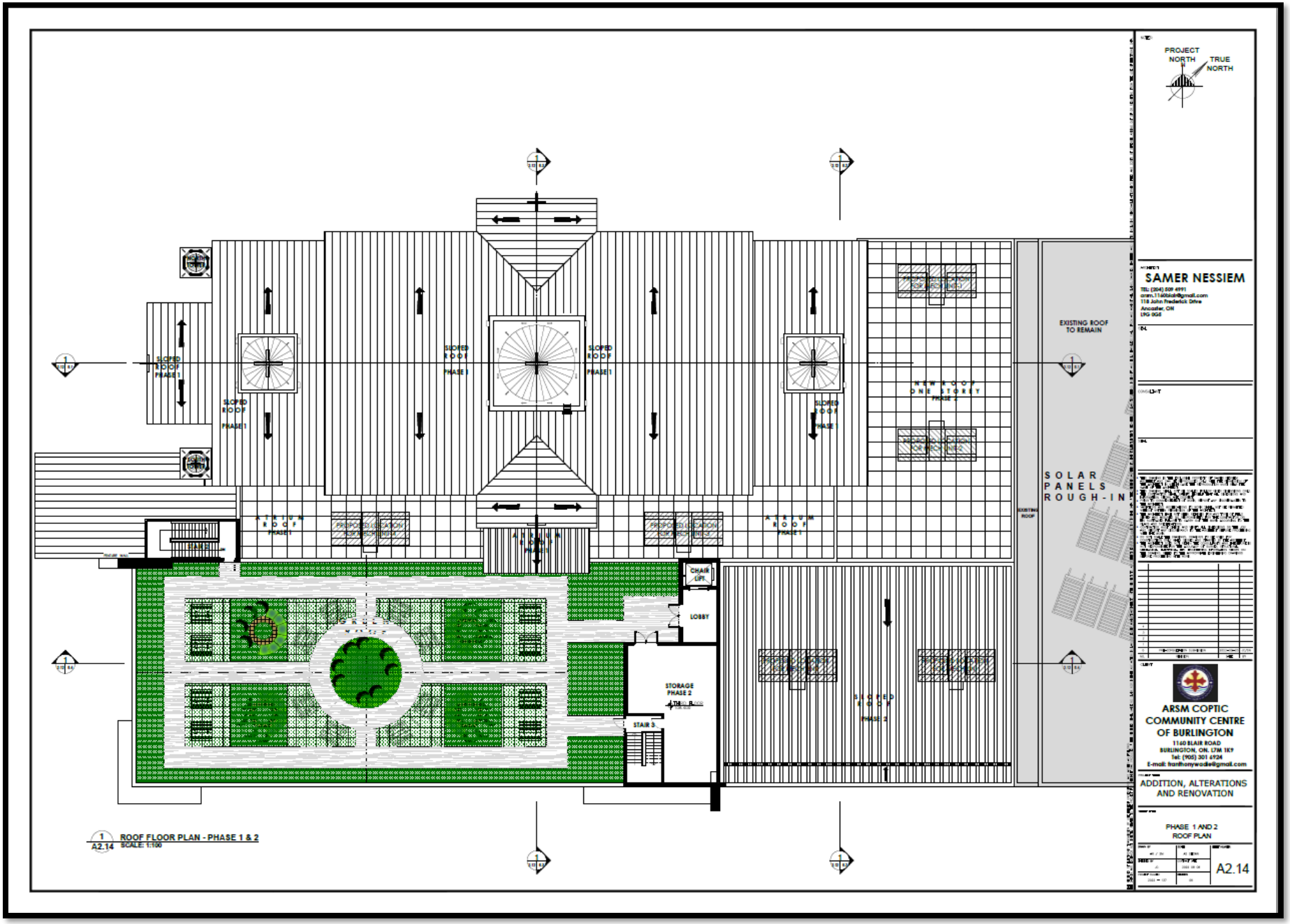

PROJECT NORTH
TRUE NORTH
NORTH TOWER
SOUTH TOWER
OPEN TO BELOW
WORSHIP SPACE
DOUBLE HEIGHT
825m² (8,900 ft²)
NAVE
OPEN TO BELOW
NORTH ALTAR
CENTRAL ALTAR
SOUTH ALTAR
MECH ROOM
ELEVATOR
ELEVATOR LOBBY
PHASE 1
ATRIUM
OPEN TO
BELOW
PHASE 1
TEMPORARY COVERED PASSAGE TILL START OF
PHASE 2 CONSTRUCTION
EXISTING ROOF
TO BE DEMOLISHED IN PHASE-2
EXISTING ROOF
TO BE DEMOLISHED IN PHASE-2
STAIR 7
SAMER NESSIEM
ARSM COPTIC
COMMUNITY CENTRE
OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON. L7M 1K9
ADDITION, ALTERATIONS
AND RENOVATION
PHASE 1
SECOND FLOOR PLAN
A2.3
1
A2.3
SECOND FLOOR PLAN - PHASE 1
SCALE: 1:100


PROJECT NORTH
TRUE NORTH
SAMER NESSIEM
EXISTING ROOF TO BE DEMOLISHED IN PHASE-2
EXISTING ROOF TO REMAIN
OPEN TO SKY TO BE BUILT IN PHASE-2
TEMPORARY ROOF TO BE DEMOLISHED IN PHASE-2
EXISTING ROOF TO BE DEMOLISHED IN PHASE-2
ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON. L7M 1K9
ADDITION, ALTERATIONS AND RENOVATION
PHASE 1 ROOF PLAN
A2.4
1 A2.4 ROOF FLOOR PLAN - PHASE 1
SCALE: 1:100

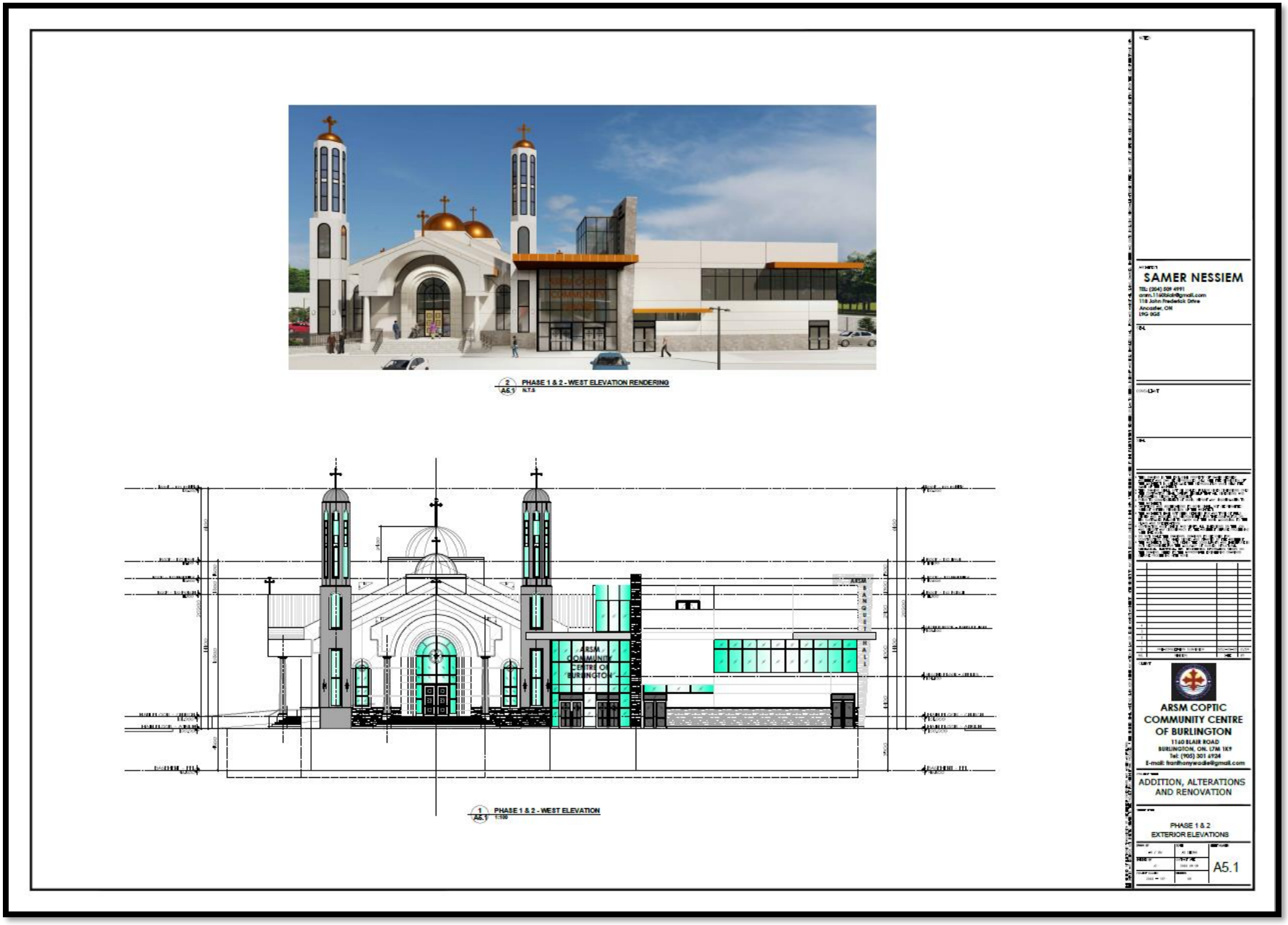

LANDSCAPE
STAIR 1
OFFICES, SENIOR ACTIVITY ROOMS - LEASABLE
(FINISHED BASEMENT AT PHASE-2)
1,225m² (13,200 ft²)
SERVICES
ELEVATOR LOBBY
STAIR 2
VIEWING
STAGE PREP AREA
STAGE
STORAGE
GYMNASIUM PHASE 2
MEN'S WR
WOMEN'S WR
LOCKERS AND WASHROOMS AREA PHASE 2
STORAGE
MEN'S CHANGE ROOM
WOMEN'S CHANGE ROOM
EXISTING BUILDING FOUNDATION, TO REMAIN AT PHASE 2
PROJECT NORTH
TRUE NORTH
SAMER NESSIEM
ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON. L7M 1K9
ADDITION, ALTERATIONS AND RENOVATION
PHASE 1 AND 2
BASEMENT FLOOR PLAN
A2.11
1 A2.11 BASEMENT FLOOR PLAN - PHASE 1 & 2
SCALE: 1:100

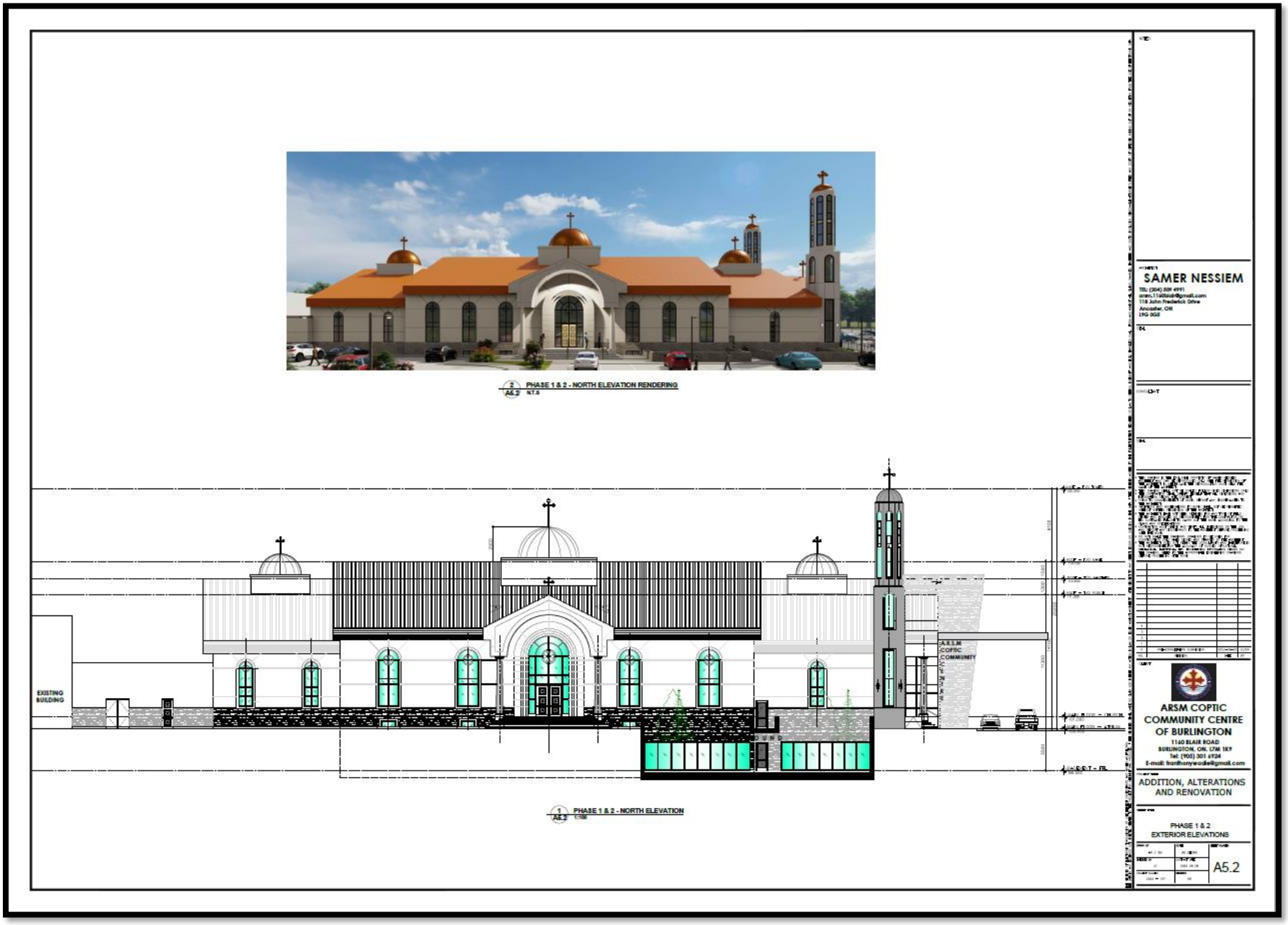

PROJECT NORTH
TRUE NORTH
WORSHIP SPACE 825m² (8,900 ft²)
NAVE
NARTHEX
PORCH
GIFT SHOP
BAPTISM
CRYING ROOM
ELEVATOR
RECEPTION
VIEWING AREA
ATRIUM DOUBLE HEIGHT PHASE 1
DEACONS PLATFORM
NORTH ALTAR
CENTRAL ALTAR
SOUTH ALTAR
SACRISTY
VESTRY / ALTAR SUPPLIES
PRIEST ROOM 1
PRIEST ROOM 2
PRIEST ROOM 3
DEACONS CLOSET
WAITING
KITCHENETTE
BISHOP SUITE
MECH / ELEC / SPRINKLER ROOM
HOLY BREAD PREP ROOM
STORAGE W/D
JAN.
CORRIDOR
MALE WR
FEMALE WR
WOMEN'S WR
MEN'S WR
CHAIR LIFT
STORAGE
GYMNASIUM BELOW PHASE 2
COMMERCIAL KITCHEN NOT FINISHED PHASE 2
KITCHEN STORAGE LOADING/ UNLOADING
STAIR 3
VESTIBULE
SENIOR ACTIVITY BANQUET HALL
WORKSHOP
EXISTING BUILDING UNIT 4
EXISTING SUITE D G-9
EXISTING BUILDING STORAGE G-7
EXISTING FIREWALL
SAMER NESSIEM
ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON. L7M 1K9
ADDITION, ALTERATIONS AND RENOVATION
PHASE 1 AND 2 MAIN FLOOR PLAN
A2.12
1 A2.12 MAIN FLOOR PLAN - PHASE 1 & 2
SCALE: 1:100

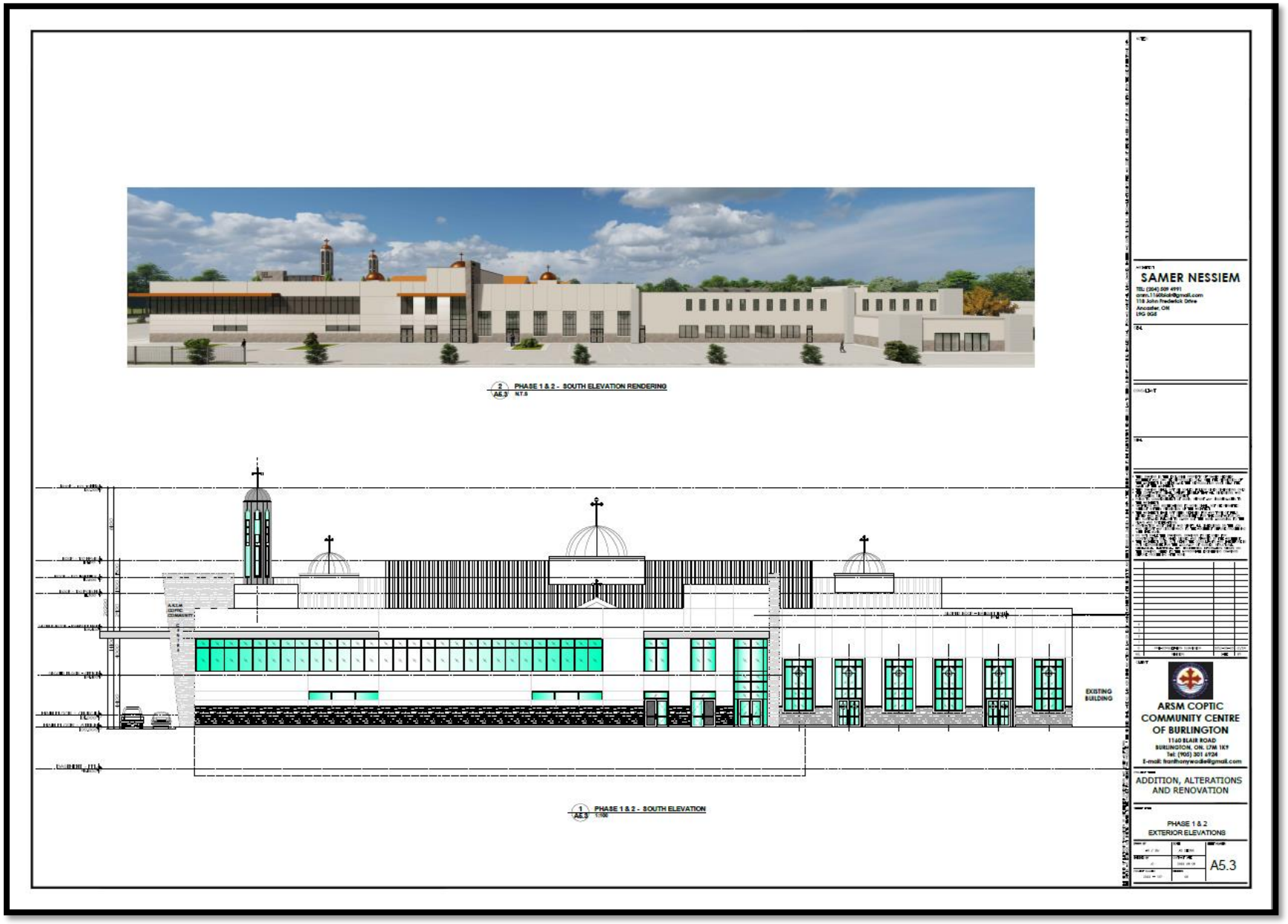

PROJECT NORTH
TRUE NORTH
OPEN TO BELOW
WORSHIP SPACE DOUBLE HEIGHT 825m² (8,900 ft²)
NAVE OPEN TO BELOW
NORTH ALTAR
MECH PHASE 2
CENTRAL ALTAR
SOUTH ALTAR
ROOF PHASE 2
ELEVATOR
ELEVATOR LOBBY PHASE 1
ATRIUM OPEN TO BELOW PHASE 1
CHAIR LIFT
MECHANICAL / ELECTRICAL PHASE 2
NEW DAYCARE, OFFICES AND MEETING ROOMS - LEASABLE PHASE 2
STORAGE PHASE 2
STAIR 3
BANQUET HALL DOUBLE HEIGHT PHASE 2
1 A2.13 SECOND FLOOR PLAN - PHASE 1 & 2 SCALE: 1:100
SAMER NESSIEM
ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON. L7M 1K9
ADDITION, ALTERATIONS AND RENOVATION
PHASE 1 AND 2
SECOND FLOOR PLAN
A2.13


PROJECT NORTH
TRUE NORTH
SAMER NESSIEM
EXISTING ROOF TO REMAIN
SOLAR PANELS ROUGH-IN
SLOPED ROOF PHASE 1
NEW ROOF ONE STOREY PHASE 2
ATRIUM ROOF PHASE 1
PROPOSED SKYLIGHT
CHAIR LIFT
LOBBY
STORAGE PHASE 2
STAIR 3
SLOPED ROOF PHASE 2
ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON. L7M 1K9
ADDITION, ALTERATIONS AND RENOVATION
PHASE 1 AND 2 ROOF PLAN
A2.14
1 A2.14 ROOF FLOOR PLAN - PHASE 1 & 2
SCALE: 1:100

ELEVATIONS


2 A6.1 PHASE 1 & 2 - WEST ELEVATION RENDERING N.T.S
1 A6.1 PHASE 1 & 2 - WEST ELEVATION 1:100
ARSM COMMUNITY CENTRE OF BURLINGTON
ARSM BANQUET HALL
SAMER NESSIEM
ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON. L7M 1K9
ADDITION, ALTERATIONS AND RENOVATION
PHASE 1 & 2
EXTERIOR ELEVATIONS
A5.1


2 A5.2 PHASE 1 & 2 - NORTH ELEVATION RENDERING
N.T.S
1 A5.2 PHASE 1 & 2 - NORTH ELEVATION
1:100
EXISTING BUILDING
SAMER NESSIEM
ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON. L7M 1K9
ADDITION, ALTERATIONS AND RENOVATION
PHASE 1 & 2
EXTERIOR ELEVATIONS
A5.2


2 PHASE 1 & 2 - SOUTH ELEVATION RENDERING
A5.3
1 PHASE 1 & 2 - SOUTH ELEVATION
A5.3
EXISTING BUILDING
SAMER NESSIEM
ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON. L7M 1K9
ADDITION, ALTERATIONS AND RENOVATION
PHASE 1 & 2
EXTERIOR ELEVATIONS
A5.3



2 A5.4 EAST ELEVATION RENDERING - EXISTING
N.T.S



1 A5.4 EAST ELEVATION RENDERING - EXISTING
N.T.S

SAMER NESSIEM

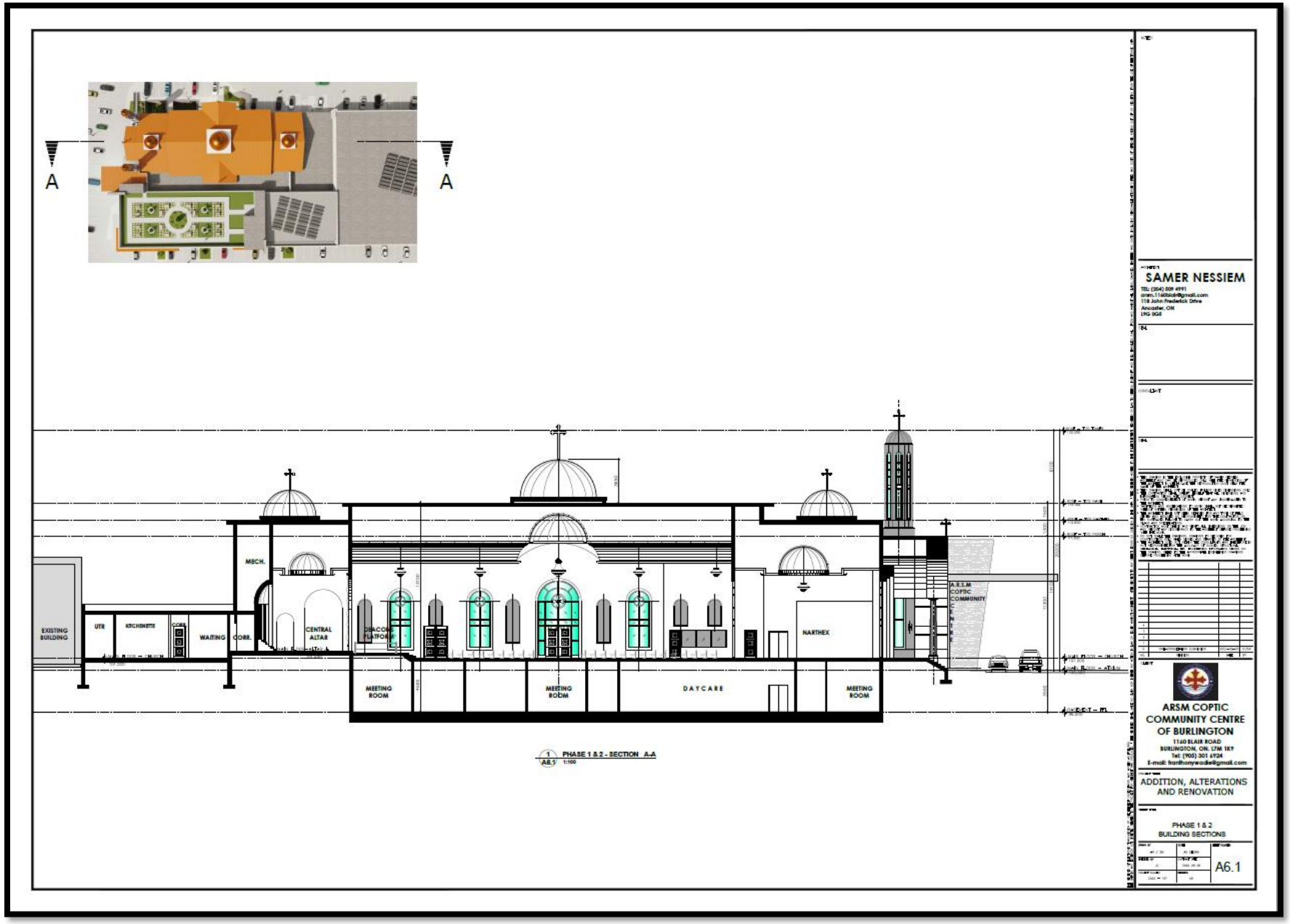
ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON. L7M 1K9

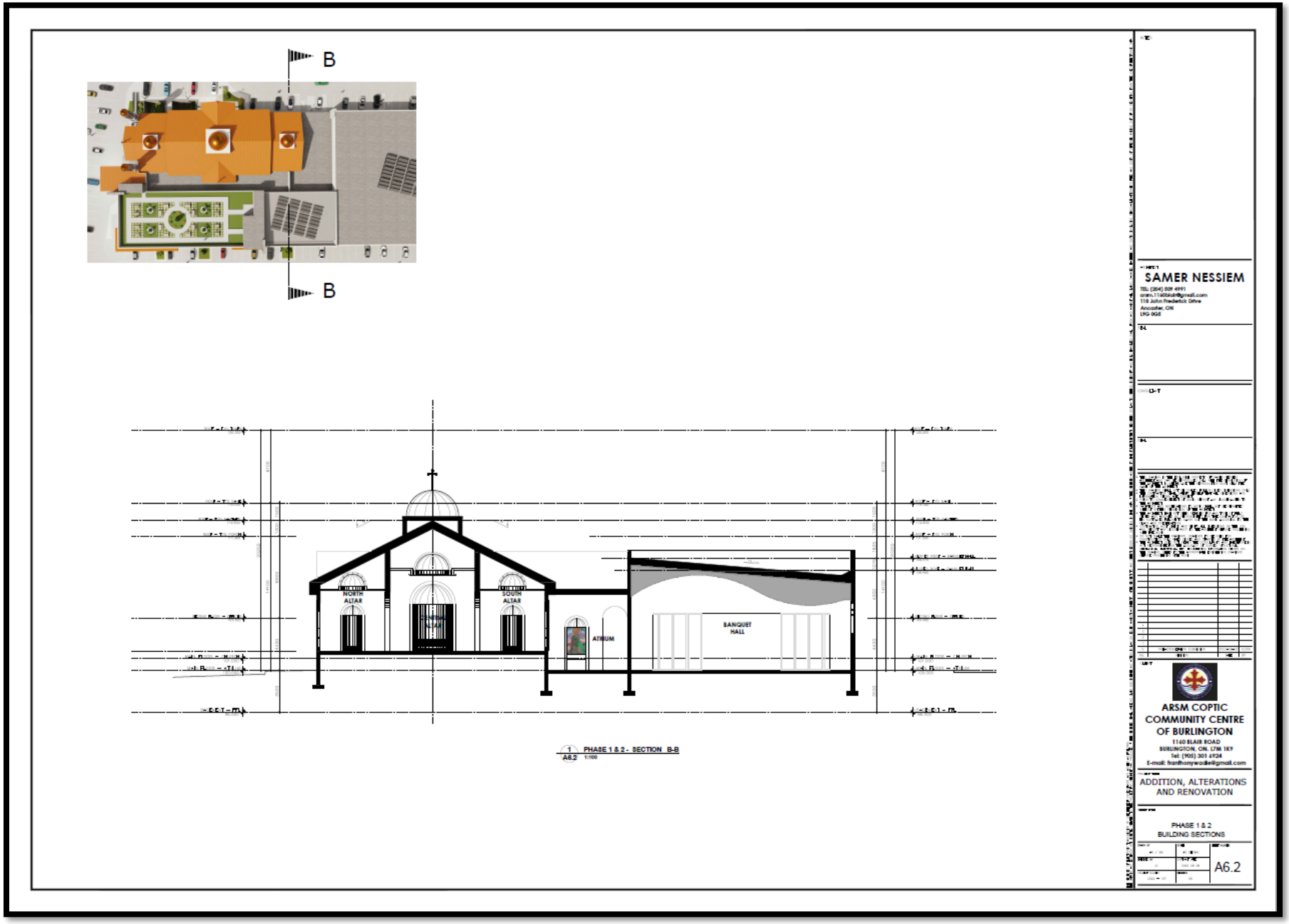
ADDITION, ALTERATIONS AND RENOVATION

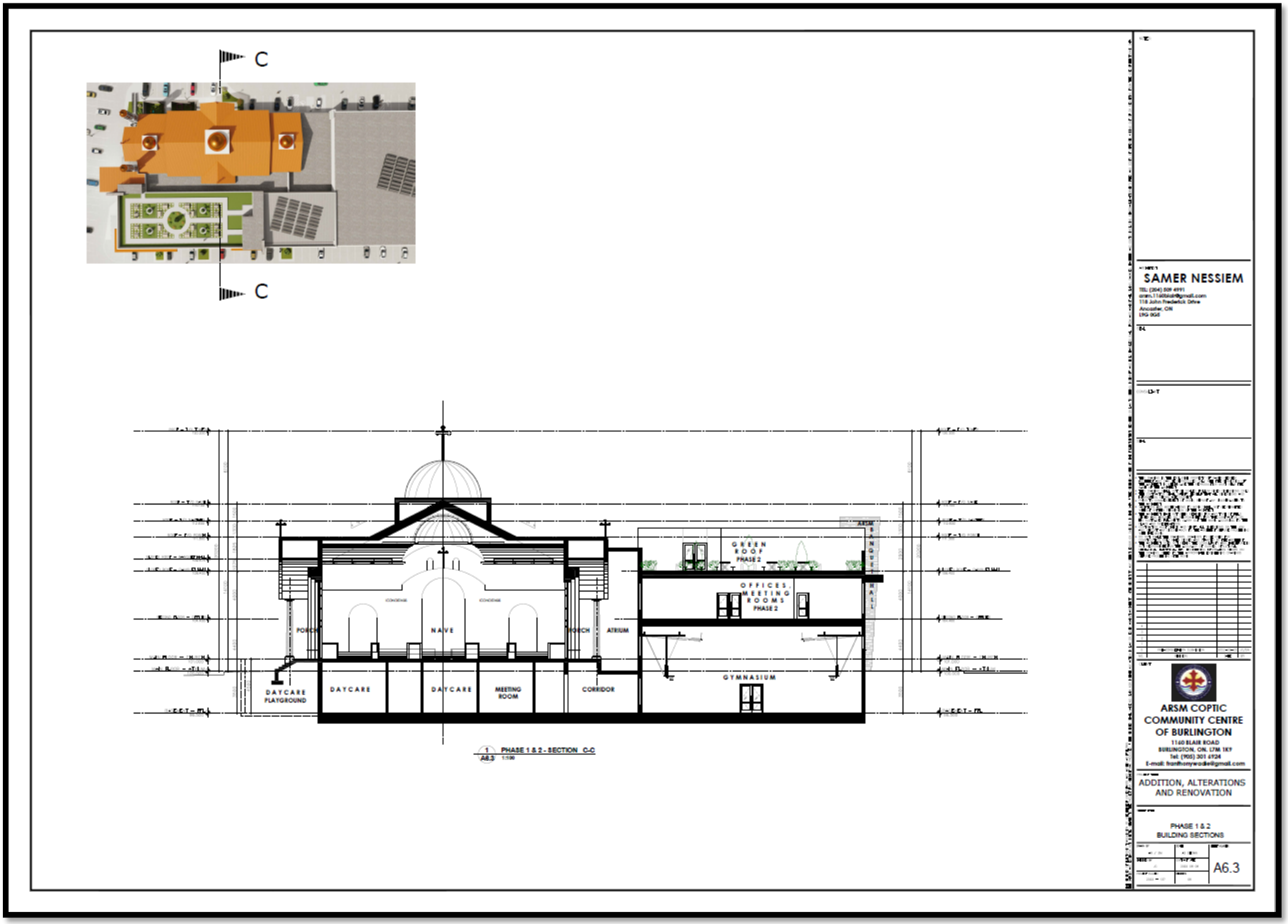
EXISTING EXTERIOR ELEVATIONS

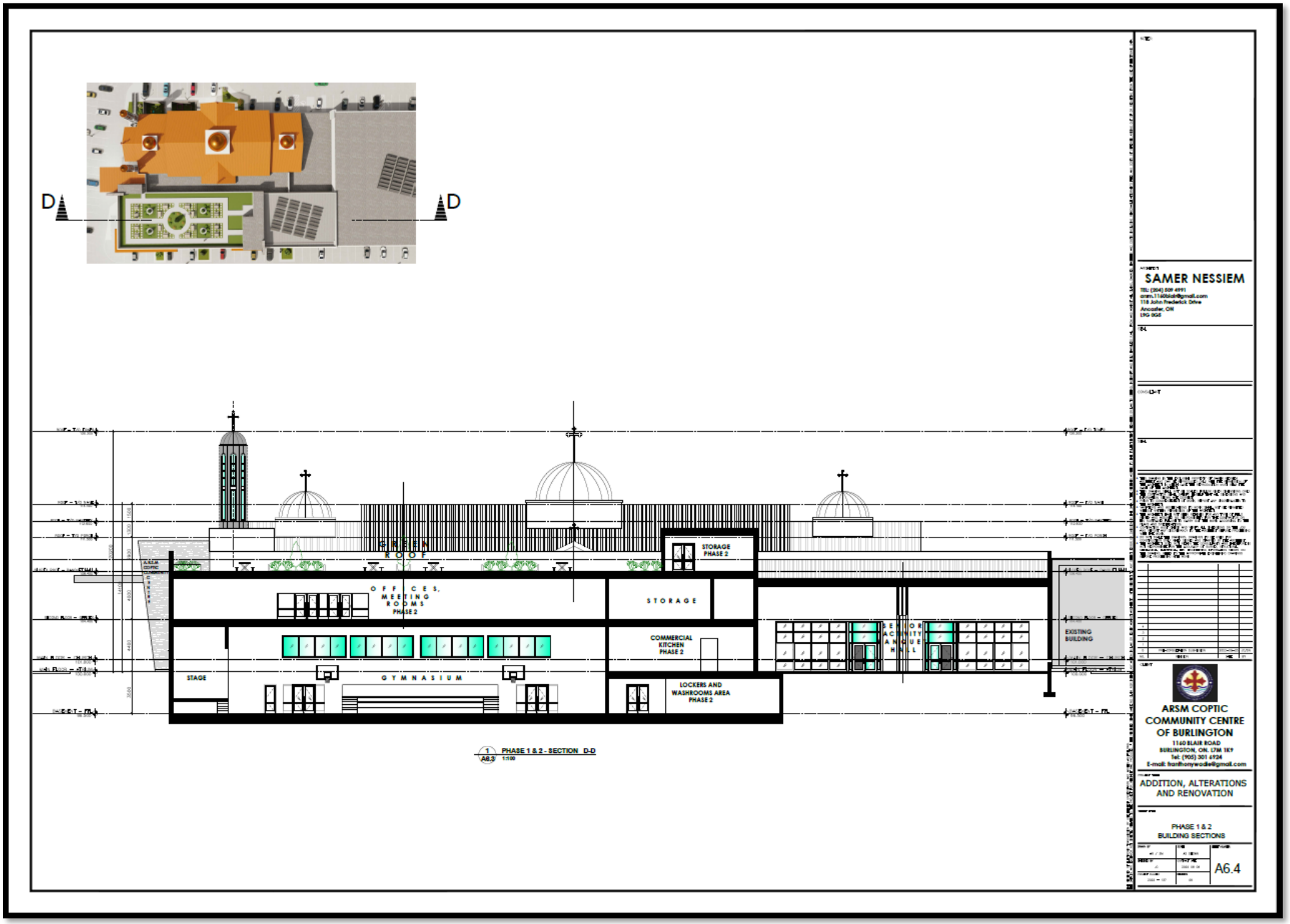
A5.4

BUILDING SECTIONS


A
A
EXISTING BUILDING
UTR
KITCHENETTE
WAITING
CORR.
MECH.
CENTRAL ALTAR
DEACONS PLATFORM
NARTHEX
A.R.S.M COPTIC COMMUNITY
MEETING ROOM
MEETING ROOM
DAYCARE
MEETING ROOM
1 PHASE 1 & 2 - SECTION A-A
A6.1 1:100
SAMER NESSIEM
ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON. L7M 1K9
ADDITION, ALTERATIONS AND RENOVATION
PHASE 1 & 2
BUILDING SECTIONS
A6.1


B
B
NORTH ALTAR
SOUTH ALTAR
ATRIUM
BANQUET HALL
1 PHASE 1 & 2 - SECTION B-B
A6.2 1:100
SAMER NESSIEM
ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON. L7M 1K9
ADDITION, ALTERATIONS AND RENOVATION
PHASE 1 & 2
BUILDING SECTIONS
A6.2


C
C
GREEN ROOF PHASE 2
OFFICES MEETING ROOMS PHASE 2
ARSM SQUARE
HALL
PORCH
NAVE
PORCH
ATRIUM
GYMNASIUM
DAYCARE PLAYGROUND
DAYCARE
DAYCARE
MEETING ROOM
CORRIDOR
1 PHASE 1 & 2 - SECTION C-C
A6.3 1:100
SAMER NESSIEM
ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON. L7M 1K9
ADDITION, ALTERATIONS AND RENOVATION
PHASE 1 & 2
BUILDING SECTIONS
A6.3


D
D
OFFICES, MEETING ROOMS PHASE 2
STORAGE PHASE 2
STORAGE
COMMERCIAL KITCHEN PHASE 2
LOCKERS AND WASHROOMS AREA PHASE 2
GYMNASIUM
STAGE
EXISTING BUILDING
PHASE 1 & 2 - SECTION D-D
SAMER NESSIEM
ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON. L7M 1K9
ADDITION, ALTERATIONS AND RENOVATION
PHASE 1 & 2 BUILDING SECTIONS
A6.4

SITE STATISTICS

	1160 Blair Road, Burlington, ON		Rev-2
	Burlington, ON.		DEC-18-2022
	SITE STATISTICS		
	LEGAL DISCRIPTION: PART OF LOT 12, CONCESSION 2, SOUTH OF DUNDAS STREET, CITY OF BURLINGTON, REGINAL MANICIPALITY OF HALTON		
	NOTE: DATA FOR EXISTING AREAS AS PROVIDED BY OWNER (EXTREME MEASURES)		

#	ITEM	PROVIDED	NOTES
01	LOT WIDTH	80.26 m	
02	LOT AREA (m^2)	16,680.00	1.67 Hectares
03	FRONT SETBACK	12.58 m	
04	SIDE SETBACK	7.48 m	
05	SIDE SETBACK	8.84 m	
06	REAR SETBACK	54.97 m	
07	BUILDING HEIGHT	20.20 m	
08	BASEMENT FLOOR AREA - EXISTING (m^2)	0.00	
09	BASEMENT FLOOR AREA - NEW CONSTRUCTION (m^2)	2,250.00	
10	TOTAL BASEMENT FLOOR AREA (EXISTING AND NEW CONSTRUCTION) m^2	2,250.00	
11	MAIN FLOOR AREA - EXISTING (m^2)	5,427.00	
12	MAIN FLOOR AREA - ADDITION NEW CONSTRUCTION (m^2)	333.00	
13	TOTAL MAIN FLOOR AREA (EXISTING AND NEW CONSTRUCTION) (m^2)	5,760.00	
14	SECOND FLOOR AREA - EXISTING (m^2)	2,119.00	
15	SECOND FLOOR AREA - NEW CONSTRUCTION (m^2)	1,101.00	
16	TOTAL SECOND FLOOR AREA (EXISTING AND NEW CONSTRUCTION) (m^2)	3,220.00	
17	ABOVE GRADE TOTAL FLOOR AREA (MAIN & SECOND) (m^2)	8,980.00	
18	ALL FLOORS AREA, GROSS BUILDING (BASEMENT + MAIN + 2ND) (m^2)	11,230.00	
19	NEW PORCH AREA (m^2)	50.00	
20	FLOOR AREA RATIO (#18/#02)	0.67	
21	LANDSCAPE AREA (m^2)	1,100.00	

1 / A0.1 **SITE STATISTICS**
N.T.S

EXTERIOR WALL STC RATINGS

EXTERIOR WALL STC RATINGS

Wall Configuration	EW1	EW2	EW3	EW4	EW1R	EW2R	EW3R	EW5	EW4R	EW6	EW7 EW5R	EW8
STC Rating	**38**	**40**	**43**	**46**	**47**	**48**	**49**	**54**	**55**	**57**	**58**	**62**

Source: National Research Council, Division of Building Research

NOTES:

1 The common structure of walls EW1 to EW5 is composed of 12.7mm gypsum board, vapour barrier and 38x89 mm studs with 50 mm (or thicker) mineral wool or glass fibre batts in inter-stud cavities.

- EW1 denotes the common structure, plus sheathing, plus wood siding or metal siding and fibre backer board
- EW2 denotes the common structure, plus rigid insulation (25 to 30 mm), and wood siding or metal siding and fibre backer board.
- EW3 denotes simulated mansard with the common structure, plus sheathing, 28 X89 mm framing, sheathing and asphalt roofing material
- EW4 denotes the common structure, plus sheathing and 20 mm stucco.
- EW5 denotes the common structure, plus sheathing, 25 mm air space, 100mm brick veneer.
- EW6 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25 to 50 mm), 100 mm back-up block 100 mm face brick.
- EW7 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25 to 50 mm), 140mm back-up block, 100 mm face brick.
- EW8 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25 to 50 mm), 200 mm concrete.

2 R signifies the mounting of the interior gypsum board on resilient clips.

3 An exterior wall conforming to rainscreen design principles and composed of 12.7 mm gypsum board, 100 mm concrete block, rigid insulation (25 to 50 mm), 25 mm air space, and 100 mm brick veneer has the same STC as EW6.

4 An exterior wall described in EW1 with the addition of rigid insulation (25 to 50 mm) between the sheathing and the external finish has the same STC as EW2.

NOISE LETTER 2017

Acoustical Consultants Inc.
Our Business is Best Kept Quiet

76 Chamomile Dr
Hamilton ON
L8W 0C1

August 25, 2017

Millington & Associates,
3380 South Service Road
Burlington, ON
L7N 3J5

Our File NO: 2017-1068

Attn: Greg Poole

RE: Coptic Church,1160 Blair Rd Burlington ON. Part of Lot 12, Concession 2, South of Dundas Street, City of Burlington.

dBA Acoustical Consulting Inc., has reviewed the proposed Coptic Church site plan as well as on-site visit on July 24, and August 23, 2017 to ensure that the proposed Church location meets MOE D6 guidelines as well as MOE Publication 300, Stationary & Transportation Sources-Approval & Planning guidelines Table C-9.

Table C-9
Supplementary Indoor Sound Level Limits
Road and Rail

Living/dining areas of residences, hospitals, schools, nursing/retirement homes, daycare centres, theatres, places of worship, etc.	**16 hours between 07:00 – 23:00**	**Road 45 dBA**	**Rail 40 dBA**

As the building is constructed with a masonry cement exterior construction and all exterior windows are ¼" commercial grade non-operable windows, the traffic noise and area light industrial operations has no noise impact on the Coptic Church proposal due to extensive shielding from area commercial buildings, separation distance from Mainway, and Blair Rd low traffic volumes.

Noise monitoring was conducted in areas of the exterior of 1160 Blair Rd to ensure interior noise levels from the area commercial businesses did not impact the church. It should be noted that the church services are held on Sundays and area businesses are closed. Noise monitoring was conducted on the north, south, east, and west. The church is proposed in the centre of the building and has exterior hallways and offices abutting the church area. Noise levels acquired on August 23, 2017 during the daytime from inside the church area while businesses in operation was monitored at 30dBA. Clearly well below MOE noise criteria. The noise levels included all area businesses and the area road traffic.

Noise levels acquired at the exterior of the building was recorded at 50dba south side, 52dba west side, 54 east side and 53 north side.

The following are the D6 guidelines that are considered for this site.

D6 Guidelines

Definitions (2.0) (area commercial businesses)

Note: Definitions in addition to those below are provided in Procedure D-1-3, "Land Use Compatibility: Definitions".

Noise Sensitive Area

An outdoor space or facility that is used for the enjoyment of persons utilizing any building(s) on the premises.

Class I Industrial Facility

A place of business for a small scale, self-contained plant or building which produces/stores a product which is contained in a package and has low probability of fugitive emissions. Outputs are infrequent, and could be point source or fugitive emissions for any of the following: noise, odour, dust and/or vibration. There are daytime operations only, with infrequent movement of products.

As this site is classified as a Class I Industrial Facility the following set back requirements are necessary to meet the D6 criteria.

Recommended minimum separation distances (4.3)

No incompatible development other than that identified in Section 4.10, "Redevelopment, Infilling and Mixed-Use Areas" should occur in the areas identified below, even if additional mitigation for adverse effects, as discussed in Section 4.2 of Procedure D-1-1, "Types of Buffers", is provided:

Class I - 20 metres minimum separation distance
Class II - 70 metres minimum separation distance
Class III - 300 metres minimum separation distance

It is confirmed that the proposed church will not have any noise impact from any area businesses or traffic. The building envelope is structurally sound for existing office operations within the building on the first floor. The separation from the exterior wall to the interior wall of the church is approximately 10m with offices and hallways separating them. The area business where noise monitoring was considered included 1150, 1157, and 1182 Blair Rd.

Respectfully submitted,

F Westaway

Frank Westaway, Owner