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Noise Control Detailed Study

Arcadia Stage 6



Noise Control Detailed Study

Arcadia Stage 6

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Noise Control Detailed Study

Arcadia Stage 6

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1.0 INTRODUCTION

J.L. Richards & Associates Limited (JLR) was retained by Minto Communities Inc. (Minto) to prepare a Noise Control Detailed Study for their residential development known as Arcadia Stage 6, located at 8415 Campeau Drive, within the City of Ottawa. The purpose of this study is to assess the potential environmental noise impact on the proposed development, due to vehicular traffic from Campeau Drive, Highway-417, and Light Rail Transit (LRT).

This report is prepared to satisfy the Ministry of the Environment, Conservation and Parks (MECP) Environmental Noise Guidelines NPC-300 and the City of Ottawa Environmental Noise Control Guidelines (approved by City Council January 2016) and in particular Part 4 Section 3.1 Noise Control Feasibility Study Requirements.

2.0 PROJECT DESCRIPTION

The subject property is located within the urban limits of the City of Ottawa. The subject parcel is ±5.6 ha that is bounded by Campeau Drive to the north, the LRT and Feedmill Creek to the south, Donum Lane to the east and Country Glen Way to the west, as shown on Figure 1 - Location Plan.

Minto's proposed residential development will consist of 11 Executive Towns, 80 Avenue Towns, 13 Rear Lane Towns, and 264 Infusion Terraces. In addition, the development will have two (2) outdoor amenity areas, and a public parkette as shown on the Concept Plan (revision date 2023-03-23) provided in Appendix 'A'.

3.0 TRANSPORTATION NOISE SOURCE

The transportation noise sources are Campeau Drive, Highway-417 and the LRT. Figure 1 (Location Plan) shows the location of the noise sources and existing roadways in relation to the proposed development.

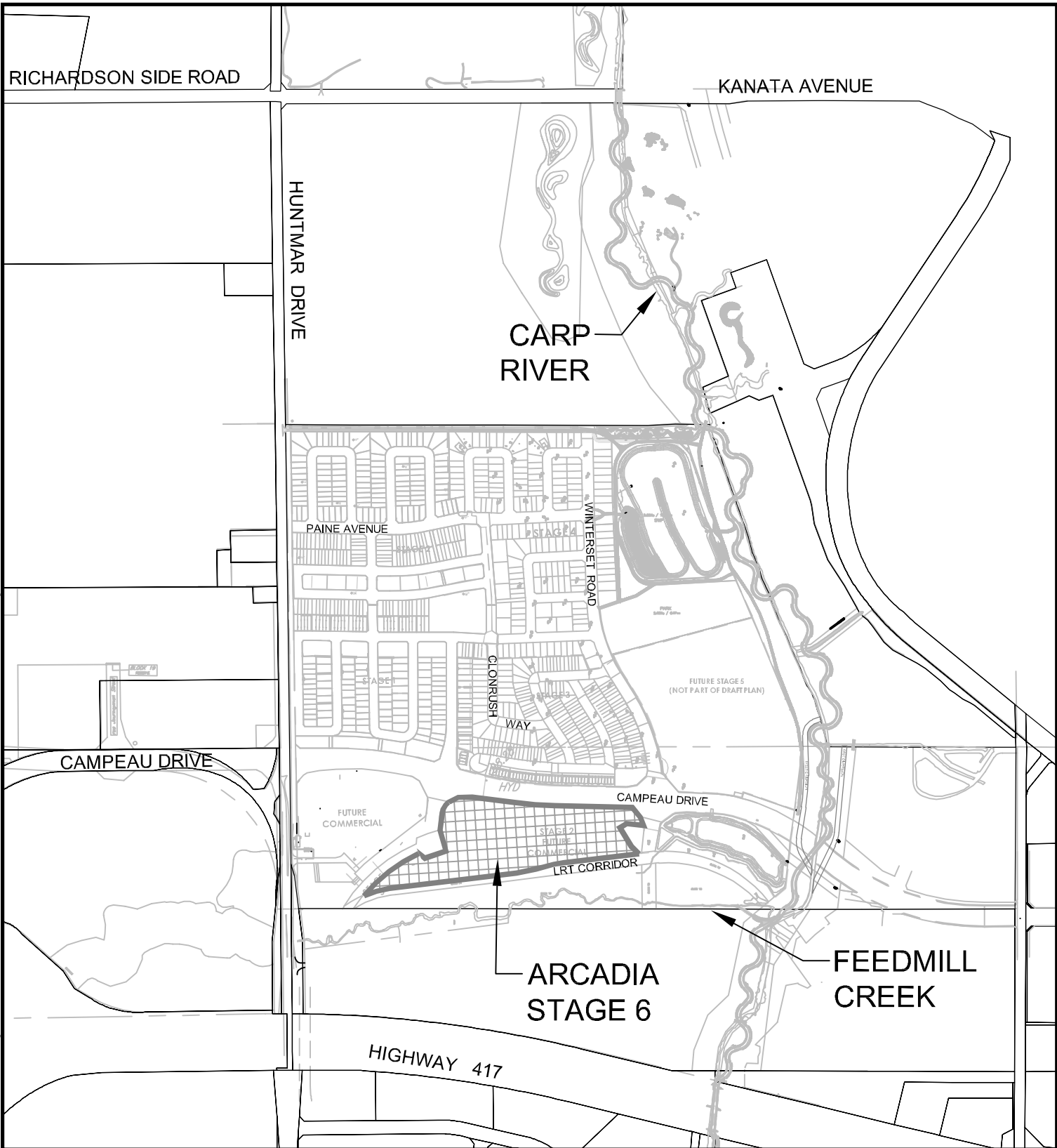
3.1 Transportation Sound Level Criteria

For the purpose of determining the predicted noise levels, and based on the sound level criteria established by the City of Ottawa Environmental Noise Control Guidelines (ENCG), the following will be used as the maximum acceptable sound levels (Leq) for residential development and other land uses, such as nursing homes, schools and daycare centres:

<u>Receiver Location</u>	<u>Criteria</u>	<u>Time Period</u>
Outdoor Living Area:	55 dBA	Daytime (0700 - 2300 hrs.)
Indoor Living/Dining Rooms (inside):	45 dBA	Daytime (0700 - 2300 hrs.)
General Office, Reception Area (inside):	50 dBA	Daytime (0700 - 2300 hrs.)
Sleeping Quarters (inside):	40 dBA	Nighttime (2300 - 0700 hrs.)

Outdoor Living Areas (OLA) are defined as that portion of the outdoor amenity area of a dwelling for the quiet enjoyment of the outdoor environment during the daytime period. Typically, the point of assessment in an OLA is 3.0 m from the building façade mid-point and 1.5 m above the ground

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PROJECT:

MINTO COMMUNITIES INC.
ARCADIA STAGE 6
450 HUNTMAR DRIVE

DRAWING:

LOCATION PLAN



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FIGURE 1

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within the designated OLA for each individual unit. OLAs commonly include backyards, balconies (with a minimum depth of 4 m as per NPC-300), common outdoor living areas, and passive recreational areas.

3.2 Transportation Noise Attenuation Requirements

When the sound levels are equal to or less than the specified criteria, per the City of Ottawa ENCG and/or MOE NPC-300, no noise attenuation (control) measures are required.

The following Table 1 and Table 2 outline indoor and outdoor noise attenuation measures, respectively, to achieve required dBA Leq for surface transportation noise, per the City of Ottawa ENCG.

Table 1: Outdoor Noise Control Measures for Surface Transportation Noise

Primary Mitigation Measure (in order of preference)	Secondary Mitigation Measures	
	Landscape Plantings and/or Non-acoustic Fence to Obscure Noise Source	Warning Clauses
Distance setback with soft ground	Recommended	
Insertion of Noise insensitive land uses between the source and receiver receptor		
Orientation of buildings to provide sheltered zones in rear yards	Required	Warning Clauses necessary and to include: <ul style="list-style-type: none"> - Reference to specific noise mitigation measures in the development. - Whether noise is expected to increase in the future. - That there is a need to maintain mitigation.
Shared outdoor amenity areas		
Earth berms (sound barriers)		
Acoustic barriers (acoustic barriers)		

Table 2: Indoor Noise Control Measures for Surface Transportation Noise

Primary Mitigation Measure (in order of preference)	Secondary Mitigation Measures	
	Landscape Plantings and/or Non-acoustic Fence to Obscure Noise Source	Warning Clauses
Distance setback with soft ground	Recommended	Not necessary
Insertion of Noise insensitive land uses between the source and receiver receptor		
Orientation of buildings to provide sheltered zones or modified interior spaces and amenity areas	Required	Warning Clauses necessary and to include: <ul style="list-style-type: none"> - Reference to specific noise mitigation measures in the development. - Whether noise is expected to increase in the future. - That there is a need to maintain mitigation.
Enhanced construction techniques and construction quality		
Earth berms (sound barriers)		
Indoor isolation – air conditioning and ventilation, enhanced dampening materials (indoor isolation)		

The following Table 3 and Table 4 outline the indoor and outdoor noise level limits, respectively, per the MOE NPC-300 and City of Ottawa ENCG.

Table 3: Outdoor Living Area (OLA) Noise Limit for Surface Transportation

Time Period	Leq (16 hr) (dBA)
16 hr., 07:00 am - 23:00	55

Table 4: Indoor Noise Limit for Surface Transportation

Type of Space	Time Period	Leq (dBA)	
		Road	Rail
Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	07:00-23:00	45	40
Living/dining, den areas of residences, hospitals, nursing homes, etc. (except schools or daycare centres)	23:00-07:00	45	40
Sleeping quarters	07:00-23:00	45	40
	23:00-07:00	40	35

In addition to the implementation of noise attenuation features, if required, and depending on the severity of the noise problem, warning clauses may be recommended to advise the prospective purchasers/tenants of affected units of the potential environmental noise. These warning clauses should be included in the Site Plan and Subdivision Agreements, in the Offers of Purchase and Sale, and should be registered on Title. Warning clauses may be included for any development, irrespective of whether it is considered a noise sensitive land use.

Where site measures are required to mitigate noise levels, the City of Ottawa requires that notices be placed on Title informing potential buyers and/or tenants of the site conditions.

3.3 Prediction of Noise Levels

3.3.1 Road Traffic Data

The following traffic data in Table 5 was used to predict noise levels:

Table 5: Road Traffic Data to Predict Noise Levels

	HWY-417	Campeau Drive
Total Traffic Volume (AADT)	18,333 per lane	35,000
Day/Night Split (%)	92/8	92,8
Medium Trucks (%)	7	7
Heavy Trucks (%)	5	5
Posted Speed (km/hr.)	100	60
Road Gradient (%)	1	1
Road Classification	Freeway, Queensway, Highway	4-Lane Urban Arterial Divided (4-UAD)

Schedule 'F' and Table 1 of Annex 1 of the City of Ottawa Official Plan (May 2003) were utilized to determine the road classification and protected right-of-way. These road classifications were compared to Map 6 of the City of Ottawa Transportation Master Plan (Road Network – Urban). All findings were then compared to Table B1 (Part 4, Appendix 'B') of the City of Ottawa Environmental Noise Control Guidelines in order to determine an appropriate AADT value.

3.3.2 Light Rail Transit Corridor Data

Drawing N1 shows the location of the Light Rail Transit (LRT) Corridor in relation to the proposed residential development. Note that the LRT Corridor is intended to be elevated by approximately 5 m in relation to the proposed subdivision. The following data in Table 6 was used to predict LRT noise levels:

Table 6: Light Rail Transit Corridor Data to Predict Noise Levels

	Light Rail Transit Corridor
Total Train Volume (AADT)	340
Day/Night Split (%)	92/8
No. of Locomotives/Train	2
No. of Cars/Train	4
Maximum Posted Speed (km/hr)	80

3.3.3 Noise Level Calculations (Transportation)

The noise levels for the daytime and nighttime periods were calculated for a number of representative receivers described in Table 7 and shown on Drawing N1, using the MOE Road Traffic Noise Computer program STAMSON, Version 5.03.

Computer printouts are included in Appendix 'B'.

Table 7: Predicted Noise Levels (Transportation)

Receiver No. and File Names	Receiver Description and Location	Noise Levels (dBA)	
		Daytime	Nighttime
R1 ARC6R1	Outdoor Living Area of Amenity Area 2 fronting on the western Feedmill parking lot the LRT, a distance of 278.2 m from the centerline of west bound HWY-417 and 323.9 m from the centerline of east bound HWY-417, 13.7 m from the centerline of the westbound LRT, and 58.2 m from the centerline of the eastbound LRT.	70.47	-
R2 ARC6R2	Plane of Window (side) of north side of Block MT-2 (also representing Block 16 and MT-1) fronting on Feedmill at a distance of 164.3 m from the centerline of west bound Campeau Drive and 156.8 m from the centerline of east bound Campeau Drive. Represents first level (daytime) and third level (nighttime).	56.53	50.06
R3 ARC6R3	Plane of Window (side) of south side of Block MT-2 (also representing Block MT-1 and Block 15) fronting on Feedmill at a distance of 307.5 m from the centerline of west bound HWY-417 and 350.8 m from the centerline of east bound HWY-417, 27.8 m from the centerline of the westbound LRT, and 32.3 m from the centerline of the eastbound LRT. Represents first level (daytime) and third level (nighttime).	67.98	61.46
R4 ARC6R4	Outdoor Living Area of Amenity Area 1 fronting on Country Glen Way at a distance of 148.4 m from the centerline of west bound Campeau Drive and 126.5 m from the centerline of east bound Campeau Drive.	56.31	-
R5 ARC6R5	Outdoor Living Area of Block 15 fronting on Feedmill at a distance of 311.3 m from the centerline of west bound HWY-417 and 353.0 m from the centerline of east bound HWY-417, 24.9 m from the centerline of the westbound LRT, and 29.4 m from the centerline of the eastbound LRT.	66.67	-
R6 ARC6R6	Outdoor Living Area of Block 16 fronting on Country Glen Way at a distance of 123.9 m from the centerline of west bound Campeau Drive and 93.4 m from the centerline of east bound Campeau Drive.	56.24	-
R7 ARC6R7	Plane of Window (side) of Block 25 (also representing Blocks 8, 14, and MT-3) fronting on Feedmill at a distance of 324.9 m from the centerline of west bound HWY-417 and 366.4 m from the centerline of east bound HWY-417, and 24.9 m from the centerline of the LRT. Represents first level (daytime) and third level (nighttime).	69.07	62.35
R8 ARC6R8	Plane of Window (front) of Block 18 (also representing Blocks 3 and 5) fronting on Campeau Drive at a distance of 30.1 m from the centerline of west bound Campeau Drive and 19.4 m from the centerline of east bound Campeau Drive. Represents first level (daytime) and third level (nighttime).	69.43	62.14

		Noise Levels (dBA)	
Receiver No. and File Names	Receiver Description and Location	Daytime	Nighttime
R9 ARC6R9	Plane of Window (side) of Block MT-9 (also representing Blocks MT-6, MT-7, MT-10, MT-13, and MT-14) fronting on Feedmill at a distance of 390.7 m from the centerline of west bound HWY-417 and 430.2 m from the centerline of east bound HWY-417, 19.1 m from the centerline of the westbound LRT, and 31.9 m from the centerline of the eastbound LRT. Represents first level (daytime) and third level (nighttime).	68.75	62.11
R10 ARC6R10	Plane of Window (front) of Block MT-8 (also representing Blocks MT-4, MT-5, MT-11, and MT-12) fronting on Campeau Drive at a distance of 35.0 m from the centerline of west bound Campeau Drive and 22.4 m from the centerline of east bound Campeau Drive. Represents first level (daytime) and third level (nighttime).	68.40	61.19
R11 ARC6R11	Plane of Window (front) of Block 152 fronting on Clearbath at a distance of 62.2 m from the centerline of west bound Campeau Drive and 49.7 m from the centerline of east bound Campeau Drive. Represents first level (daytime) and third level (nighttime).	60.09	53.06
R12 ARC6R12	Plane of Window (side) of Block 19 fronting on Campeau Drive at a distance of 39.0 m from the centerline of west bound Campeau Drive and 26.3 m from the centerline of east bound Campeau Drive. Represents first level (daytime) and third level (nighttime).	64.35	57.18
R13 ARC6R13	Plane of Window (side) of Block MT-8 fronting on Country Glen Way at a distance of 45.0 m from the centerline of west bound Campeau Drive and 32.5 m from the centerline of east bound Campeau Drive. Represents first level (daytime) and third level (nighttime).	62.35	55.20

3.4 Summary of Findings (Transportation)

A summary of the minimum noise requirements and required Warning Clauses is shown on Table 8. The units will require notices to be registered on Title, advising the occupants of the environmental noise problems and/or of the noise attenuation measures being implemented.

Table 8: Minimum Required Control Features/Warning Clauses (Transportation)

Receiver Location	Noise Attenuation Barrier	Central Air Conditioning	Forced Air Heating	Warning Clauses	Building Components Study
Outdoor Living Area – Amenity Area 2 and Block 15	Yes	n/a	n/a	Type A/B	n/a
Plane of Window – Block 16 (Unit F), MT-1 (Units MT-001 to MT-012), MT-2 (Units MT-025 to MT-028)	n/a	No	Yes	Type B	No

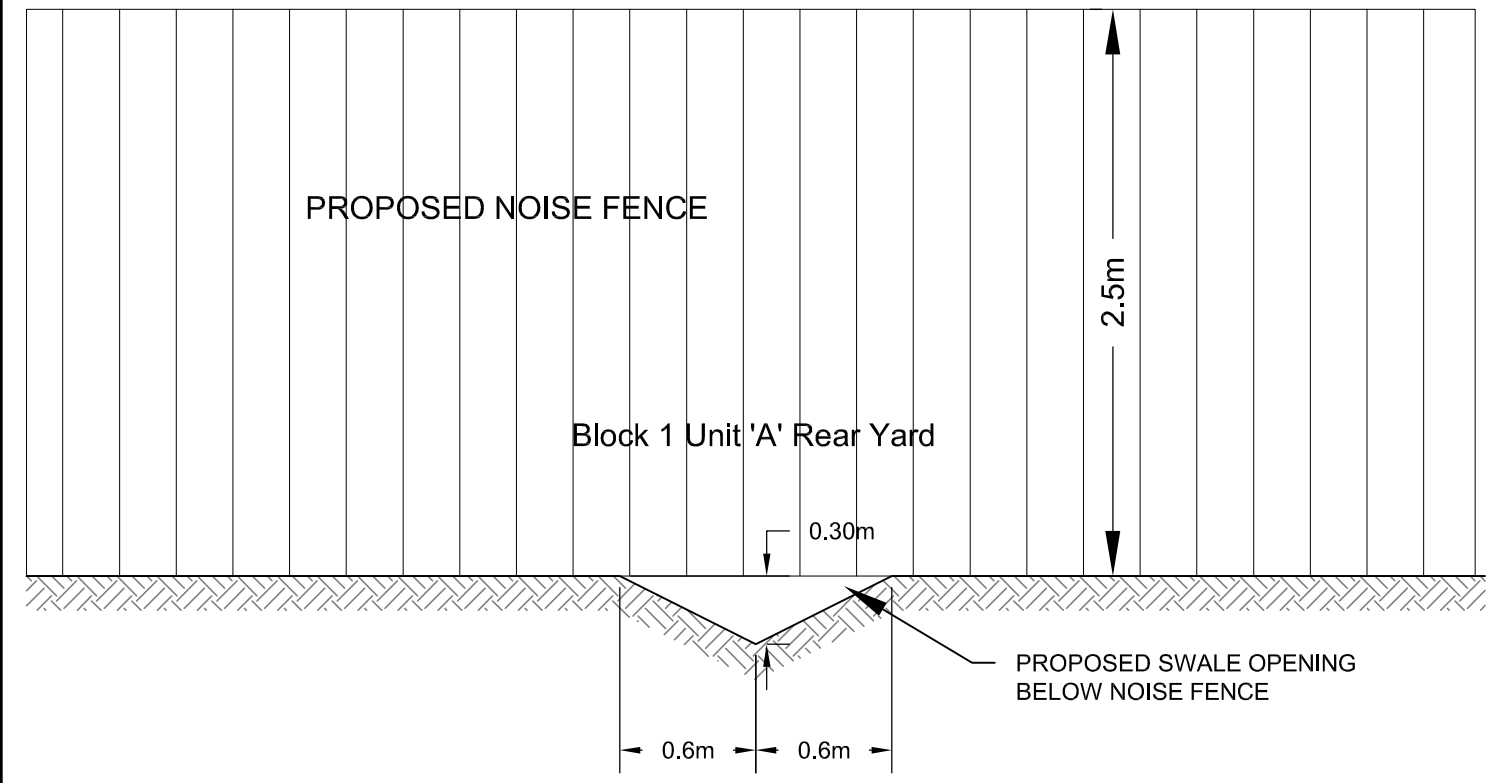
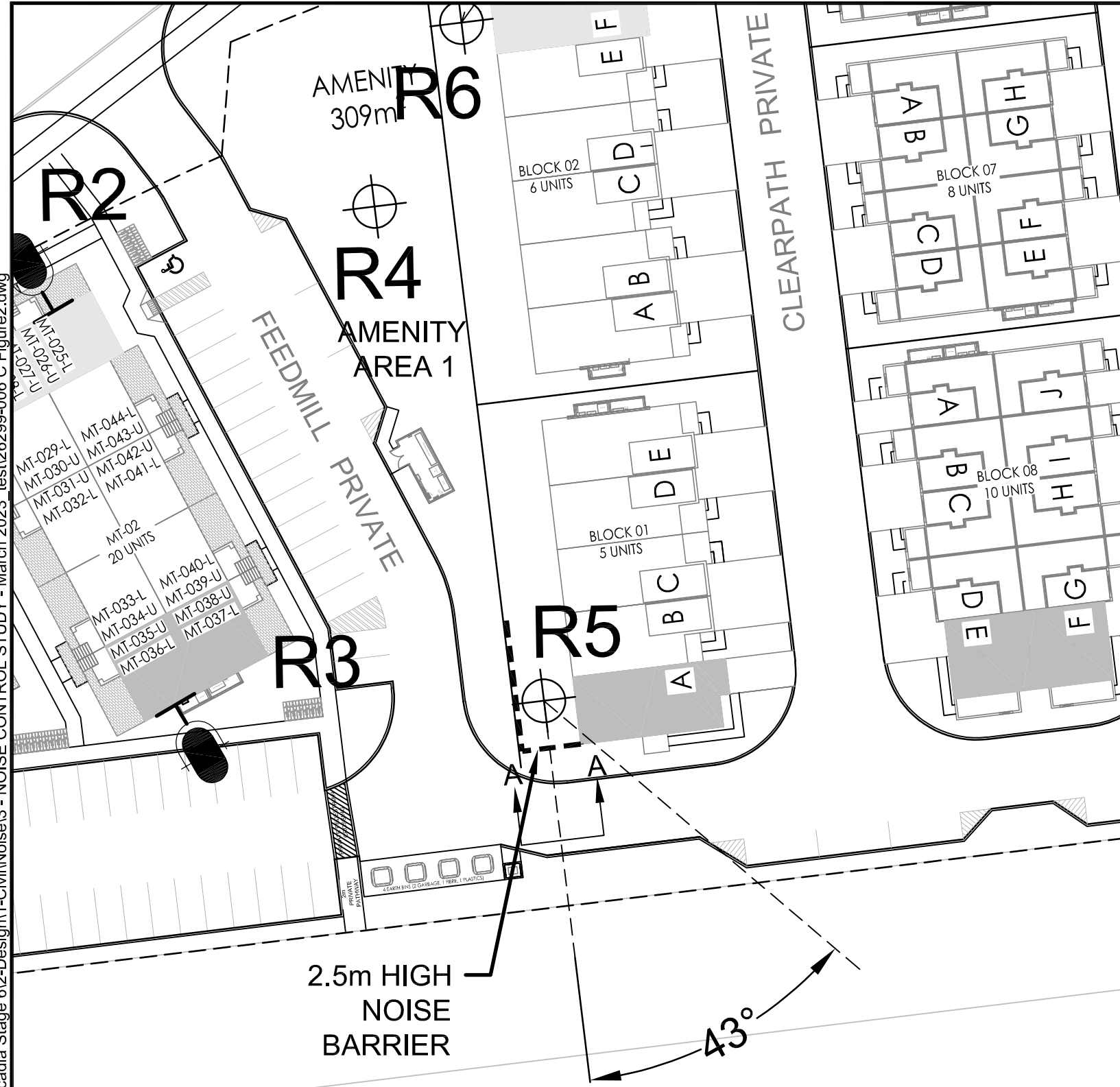
Receiver Location	Noise Attenuation Barrier	Central Air Conditioning	Forced Air Heating	Warning Clauses	Building Components Study
Plane of Window – Block 15 (Unit A), Block 17 (Units A-D), Block 18 (Units A-D), Block 19 (Units A-E), Block 22 (Units E-F), Block 25 (Units F-G), Block 28 (Units E-F), MT-1 (Units MT-013 to MT-024), MT-2 (Units MT-035 to MT-038), MT-3 (Units MT-055 to MT-064), MT-4 (Units MT-065, MT-066, MT-079, MT-080), MT-5 (Units MT-081, MT-082, MT-095, MT-096), MT-6 (Units MT-105 to MT-108), MT-7 (Units MT-125 to MT-128), MT-8 (Units MT-137 to MT-152), MT-9 (Units MT-179 to MT-182), MT-10 (Units MT-195 to MT-198), MT-11 (Units MT-209, MT-210, MT-223, MT-224), MT-12 (Units MT-225, MT-226, MT-239, MT-240), MT-13 (Units MT-245 to MT-248), MT-14 (Units MT-257 to MT-260)	n/a	Yes	Yes	Type C	Yes
Outdoor Living Area – Amenity Area 1	No	n/a	n/a	Type A	n/a

JLR calculated mitigated noise levels using typical 2.2 m and 2.5 m high noise barriers (no aps). A typical 2.2 m high noise barrier is anticipated to mitigate the OLA noise level of Block 15 to a predicted 66.28 dBA. While a typical 2.5 m high noise barrier is anticipated to mitigate the OLA noise level of Block 15 to a predicted 65.79 dBA. To achieve 60 dBA, a 4.5 m high noise barrier would be required.

The construction of such noise barriers would cross the rear yard overland flow route of Block 15 Unit A and upstream units, as shown on Figure 2. This overland flow route is proposed to convey stormwater from the rear yards during significant storm events (typically in excess of 1:5 year return period). The surrounding road grades and site configuration make the option of diverting the rear yard overland flows in other directions impractical. A slight opening, below the noise barrier (1.6 m wide x 0.30 m high), centered on the rear yard swale is thus being proposed to allow stormwater, not captured by rear-yard minor system, to be conveyed overland unobstructed to the catch basins along Feedmill Street. This strategy would eliminate the need to have public infrastructure (such as an oversized storm sewer designed to accommodate 1:100 year storm event) cross underneath private infrastructure (noise fence), which the City typically does not allow. Conveyance of the overland flow below the noise barrier via the opening would eliminate the need to capture the larger storm events within a pipe segment.

Further analysis was completed with a gap modelled within the noise barrier equivalent to the area required below the barrier to accommodate the overland flow swale, as shown on Figure 2. This scenario modelled assumes a 0.11 m (+/-4") wide gap for the full height of the barrier. However, following construction an opening would only be located below the noise barrier 1.6 m wide by 0.30 m high and no gaps would exist in the noise barrier. A 2.2 m high noise fence with a 0.11 m wide gap is anticipated to mitigate the noise level to a predicted 66.28 dBA and to

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1 CROSS SECTION 'A-A'
NTS

PROJECT: MINTO COMMUNITIES INC.
ARCADIA STAGE 6
450 HUNTMAR DRIVE

DRAWING: PROPOSED SWALE OPENING



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FIGURE 2

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65.79 dBA with a 2.5 m high noise barrier. These predictions indicate that a 2.5 m high noise barrier for the outdoor living area for Block 15 Unit A, with an opening below the barrier for overland flow, will satisfactorily mitigate noise levels.

All detailed calculations are included in Appendix 'C'. Table 9 summarizes the predicted freefield daytime noise levels at selected receivers and the mitigated noise levels resulting from the inclusion of the recommended noise attenuation barriers, as shown on Drawing N1. Calculations indicate that a 2.5 m high noise barrier for the outdoor living areas for Block 15 will satisfactorily mitigate noise levels.

Table 9: Potential Noise Attenuation Due to Barriers

Receiver Location	Daytime Noise Level (dBA) Freefield	Attenuation Leq 16 (dBA) with a 2.2 m High Barrier	Attenuation Leq 16 (dBA) with a 2.5 m High Barrier	Attenuation Leq 16 (dBA) with a 2.2 m High Barrier with a 1.6 m (wide) x 0.30 m (high) swale opening below Barrier	Attenuation Leq 16 (dBA) with a 2.5 m High Barrier with a 1.6 m (wide) x 0.30 m (high) swale opening below Barrier	Recommended Height of Barrier/Berm Combination (m)	Height of Barrier/Berm Combination (m) required for 60dBA
Block 15 (R5)	66.67	66.28	65.79	66.28	65.79	2.5	4.5
Amenity Space (R1)	70.47	70.19	70.16	n/a	n/a	n/a	6.5

A copy of the grading plan(s) has been included in Appendix 'A'. The grading plan(s) were used to determine the ground elevation for the noise receivers and barrier base.

The intent of the western Amenity Area is to be a shared inviting open space with landscaping where residents can gather to enjoy the outdoors and feel connected to the neighbourhood. Construction of a noise barrier will always interfere with this goal. However, in this instance, the construction of a noise barrier to achieve a 0.5 dBA noise reduction may be interpreted as an invasive treatment for nominal benefit. Rather than prescriptively recommending that a noise barrier be installed, a short discussion is presented identifying administrative and economic challenges of this solution.

1. Administrative Challenges –

Inconsistent Application of Interpretation: The Amenity area is a shared space exclusively for residents but is not a private rear yard and should not be treated as such. By definition, the Amenity Area more closely reflects a City park or school yard, rather than a private rear yard. Parks and school yards are generally not subject to the rigorous noise examination as private rear yards. In this case, the amenity space fits the model of a park/school yard rather than a private rear yard.

Arbitrary Size Limit: The City's Zoning By-Law defines an Amenity Area as "...the total passive or active recreational area provided on a lot for the personal, shared or communal use of the residents of a building or buildings, and includes balconies, patios, rooftop gardens and other similar features, but does not include indoor laundry or locker facilities." By this definition all landscaped/grassed areas, regardless of size are Amenity Areas. Therefore, the only reason the "labelled" Amenity Area requires a noise assessment is

due to its size. Each unit will have a private balcony or backyard which is anticipated to be the most used amenity space on the site and will add overall outdoor space for the residents as a private amenity space. From a zoning perspective the Amenity Area does not require any form of noise mitigation, however, strictly due to its size and location the proposed shared amenity area surpasses the area requirements of the Environmental Noise Control Guidelines (ENCG) triggering a noise assessment. The balconies do not require mitigation from transportation noise sources, due to their size.

Barrier will Partition the Site from the Community: Construction of a noise barrier would create a closed off area that would not be enjoyable to use by interfering with the movement and views of the residents and would separate the Amenity Area from the neighbourhood. Furthermore, a noise barrier would negatively contribute to the urban design of the site and neighbourhood.

2. Economic Challenges –

Additional Cost to Further Revise the Site Plan: Different building orientations have previously been explored by Minto. After integrating the City's pre-consultation recommendations, the current Site Plan provides the preferred building orientation for all parties. Revising the Site Plan would cause undue construction delay for Minto as well as exponentially increasing costs associated with redesign of the site. It is JLR's opinion that additional costs to review alternative Site Plan arrangements are an excessive attempt to result in a 0.5 dBA noise reduction in the amenity area.

Minor Variance: Minto could apply for a Minor Variance to remove the Amenity Area requirement. This process is predicted to be more affordable than constructing a noise barrier. Removing the Amenity Area is not Minto's preferred approach. Minto would rather keep the Amenity area for the enjoyment of the residents. The City's Minor Variance application fee is at least \$2,500 and is much less than the noise barrier installation.

Given the above challenges and nominal benefit of trying to achieve a minimal noise reduction, it is recommended that the noise barrier for the western Amenity Space (R1) be eliminated as a requirement for the site development.

3.5 Summary of Findings (Preliminary Building Component)

JLR completed preliminary building component analyses of a Minto Executive Town, Avenue Town, Rear Lane Town, and Metro Town to determine if sufficient acoustical insulation is provided with a 'typical' building construction to mitigate interior noise levels to MOECC and City of Ottawa criteria. The Acoustical Insulation Factor (AIF) Method, as described in the Ministry of the Environment Ontario, Ontario Publication, Environmental Noise Assessment in Land Use Planning (ENALUP) 1987 (Page 10-29), was used; to assess the building construction required to mitigate exterior noise to meet interior noise criteria. Exterior freefield noise levels at the plane of the windows were calculated for the first and top floors. Freefield noise levels of 69 & 70 dBA were conservatively utilized to determine wall and window construction.

Minto provided floor plan and building elevation drawings, for the Tahoe (Executive Town), Cambridge (Avenue Town), Bayview (Rear Lane Town), and Metro Town units. Floor and elevation drawings are included in Appendix 'D'. These units are considered representative units. Using Minto drawings, JLR calculated the window areas, floor areas and wall areas for each of the rooms within the units. This data was then used to calculate the window to floor area ratios and wall to floor area ratios. Design tables provided in ENALUP were then utilized to identify minimum window construction and wall construction requirements to mitigate the plane of window

noise levels. Table 10 in Appendix 'E' present the working calculations for the window and wall requirements necessary to acoustically insulate each of the noise sensitive rooms within each of the representative units. The following table presents a summary of the analysis with the minimum standard window and wall construction required per unit type.

Table 10: Minimum Window and Wall Construction Types

Unit Type	Representative Window Type Glass Thickness (Spacing) Glass Thickness	Representative Exterior Wall Type
Avenue Town (Block 22 Units E & F, Block 25 Units F & G, Block 28 Units E & F)	6(24)6 Double Pane	EW1 and EW2
Executive Town (Block 15 Unit A)	6(30)6 Double Pane	EW1 and EW4
Metro Town MT-1 (Units MT-013 to MT-024), MT-2 (Units MT-035 to MT-038), MT-3 (Units MT-055 to MT-064), MT-4 (Units MT-065, MT-066, MT- 079, MT-080), MT-5 (Units MT-081, MT-082, MT-095, MT-096), MT-6 (Units MT-105 to MT- 108), MT-7 (Units MT-125 to MT-128), MT-8 (Units MT-137 to MT-152), MT-9 (Units MT- 179 to MT-182), MT-10 (Units MT-195 to MT- 198), MT-11 (Units MT-209, MT-210, MT-223, MT-224), MT-12 (Units MT-225, MT-226, MT- 239, MT- 240), MT-13 (Units MT-245 to MT- 248), MT-14 (Units MT-257 to MT-260)	6(30)6 Double Pane	EW1 and EW3
Rear Lane Town (Block 17 Units A-D, Block 18 Units A-D, Block 19 Units A-E)	6(70)6 Double Pane	EW1 and EW4

For this analysis, sliding glass doors identified on the plans are treated as a window. The acoustic insulation factor methodology does not account for sliding glass doors as a door type. It is noted that no additional doors are identified with a connection to the noise sensitive interior rooms such as the living room, bedroom, or kitchen area.

A standard wall construction detail with a 38 x 89 mm wall construction complete with siding, sheathing, insulation, and 12.7 mm gypsum board will provide satisfactory acoustic insulation to achieve indoor noise requirements.

Exterior wall type construction notes:

- EW1 – Standard wall construction (noted above), with sheathing, wood or metal siding and fibre backer board.
- EW2 – Standard wall construction (noted above), with rigid insulation (25-30 mm), wood or metal siding, and fibre backer board.
- EW3 – Standard wall construction (noted above), with sheathing, 28 x 89 mm framing, sheathing and asphalt roofing material.
- EW4 – Standard wall construction (noted above), with sheathing and 20 mm stucco.

It should be noted that other types of window and wall construction could be chosen to achieve the same minimum noise mitigation. These details will be established during the detailed building component study in consultation with Minto.

Tables A2 and A3 from Canada Mortgage and Housing's (CMHC) publication, Airport Noise, revised 1981 were used to convert AIF values to the more widely recognized Sound Transmission Class (STC) values. Appendix 'F' presents these CMHC tables.

AIF and equivalent STC values are presented in Table 11 for the town unit bedroom with the highest AIF requirement. It is recommended that at the time of building permit application that the AIF/STC be confirmed to suit the specific unit proposed for the Block.

Table 11: AIF Value Conversion to STC Value

Type of Unit	AIF Req.	Windows			Walls		
		Window/ Floor Area Ratio	AIF Conversion Formula	STC	Wall/Floor Area Ratio	AIF Conversion Formula	STC
Avenue Town (Block 22 Units E & F, Block 25 Units F & G, Block 28 Units E & F)	37	23%	STC	37	38%	STC – 3	40
Executive Town (Block 15 Unit A)	36	29%	STC-1	37	139	STC-9	45
Metro Town (MT-1 (Units MT-013 to MT-024), MT-2 (Units MT-035 to MT-038), MT-3 (Units MT-055 to MT-064), MT-4 (Units MT-065, MT-066, MT-079, MT-080), MT-5 (Units MT-081, MT-082, MT-095, MT-096), MT-6 (Units MT-105 to MT-108), MT-7 (Units MT-125 to MT-128), MT-8 (Units MT-137 to MT-152), MT-9 (Units MT-179 to MT-182), MT-10 (Units MT-195 to MT-198), MT-11 (Units MT-209, MT-210, MT-223, MT-224), MT-12 (Units MT-225, MT-226, MT-239, MT-240), MT-13 (Units MT-245 to MT-248), MT-14 (Units MT-257 to MT-260))	37	29%	STC-1	38	58%	STC-5	42
Rear Lane Town Block 17 (Units A-D), Block 18 (Units A-D), Block 19 (Units A-E)	38	38%	STC-2	40	111%	STC-8	46

4.0 OPINION OF PROBABLE COSTS (OPC) FOR MITIGATION MEASURES

Based on consultation with Minto, the following Table 12 summarizes our opinion of probable costs for the mitigation measures identified in this report.

Table 12: Opinion of Probable Costs for Mitigation Measures

No.	Item	Cost per Unit	Estimated Quantity	Estimated Sub-Total
1	Central Air Conditioning (where required)	\$4,000/unit	101	\$404,000
2	Windows with STC Rating 40	\$2,250/unit	600	\$1,350,000
Estimated Total				\$1,754,000

Note that the cost per unit for Item No. 2 is the cost differential between a standard window (STC rating 31) and a Window with STC Rating 40.

5.0 CONCLUSION AND RECOMMENDATIONS

Predicted noise levels are expected to exceed the City of Ottawa ENCG and MOECC criteria for daytime outdoor living areas for the proposed units adjacent to the LRT. To address these exceedances, Minto has revised the subdivision plan to reduce the reliance of noise barriers as the primary noise mitigation tool. Building orientation and increased separation to the transportation noise source have been used to reduce noise levels for residential units in close proximity to a significant transportation noise source. Noise barriers will still be required to protect outdoor living areas. Refer to Drawing N1 for noise barrier locations. Although a 2.5 m high noise barrier with an opening below the barrier for overland flow will help mitigate noise levels for Block 15 the noise level will remain over 60 dBA. Further calculations were performed to determine the height of barrier required to achieve 60 dBA (refer to Table 9 for results).

5.1 Outdoor Features

5.1.1 Noise Barrier (2.5 m)

The following townhouse blocks shall include a 2.5 m high noise barrier offset 0.3m from the rear and/or side property line (refer to Drawing N1):

- Block 15 (Unit A & B).

5.2 Indoor Noise Control Features

5.2.1 Heating System

The following Units/Lots shall be fitted with a forced air heating system or equivalent system:

Block 15 (Unit A), Block 17 (Units A-D), Block 18 (Units A-D), Block 19 (Units A-E), Block 22 (Units E-F), Block 25 (Units F-G), Block 28 (Units E-F), MT-1 (Units MT-013 to MT-024), MT-2 (Units MT-035 to MT-038), MT-3 (Units MT-055 to MT-064), MT-4 (Units MT-065, MT-066, MT-079, MT-080), MT-5 (Units MT-081, MT-082, MT-095, MT-096), MT-6 (Units MT-105 to MT-108), MT-7 (Units MT-125 to MT-128), MT-8 (Units MT-137 to MT-152), MT-9 (Units MT-179 to MT-182), MT-10 (Units MT-195 to MT-198), MT-11 (Units MT-209, MT-210, MT-223, MT-224), MT-12 (Units MT-225, MT-226, MT-

239, MT- 240), MT-13 (Units MT-245 to MT-248), MT-14 (Units MT-257 to MT-260).

5.2.2 Cooling System

The following Units/Lots shall be fitted with central air conditioning or equivalent system:

Block 15 (Unit A), Block 17 (Units A-D), Block 18 (Units A-D), Block 19 (Units A-E), Block 22 (Units E-F), Block 25 (Units F-G), Block 28 (Units E-F), MT-1 (Units MT-013 to MT-024), MT-2 (Units MT-035 to MT-038), MT-3 (Units MT-055 to MT-064), MT-4 (Units MT-065, MT-066, MT-079, MT-080), MT-5 (Units MT-081, MT-082, MT-095, MT-096), MT-6 (Units MT-105 to MT-108), MT-7 (Units MT-125 to MT-128), MT-8 (Units MT-137 to MT-152), MT-9 (Units MT-179 to MT-182), MT-10 (Units MT-195 to MT-198), MT-11 (Units MT-209, MT-210, MT-223, MT-224), MT-12 (Units MT-225, MT-226, MT-239, MT- 240), MT-13 (Units MT-245 to MT-248), MT-14 (Units MT-257 to MT-260).

5.3 Warning Clauses

5.3.1 Warning Clause Type A

Clause A is to be registered on Title for Block 15:

“Purchasers/tenants are advised that despite the inclusion of noise control features in the development, sound levels due to increasing road/transitway/rail/light rail traffic may, on occasion, interfere with some outdoor activities as the sound levels exceed the sound level limits of the City and the Ministry of the Environment.

To help address the need for sound attenuation this development includes:

- *a setback of buildings from the noise source; and*
- *an acoustic barrier.*

To ensure that provincial sound level limits are not exceeded, it is important to maintain these sound attenuation features.

The acoustic barrier shall be maintained and kept in good repair by the property owner. Any maintenance, repair or replacement is the responsibility of the Owner and shall be with the same material or to the same standards, having the same colour, appearance and function of the original.

Additionally this development includes trees and shrubs to screen the source of noise from occupants.”

5.3.2 Warning Clause Type B

Clause B is to be registered on Title for Block 16 (Unit F), MT-1 (Units MT-001 to MT-012), MT-2 (Units MT-025 to MT-028):

“Purchasers/tenants are advised that despite the inclusion of noise control features within the building units, sound levels due to increasing road/transitway/rail/light

rail traffic may, on occasion, interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the City and the Ministry of the Environment.

To help address the need for sound attenuation this dwelling unit includes:

- *single/multi-pane glass windows;*
- *provision for central air conditioning.*

To ensure that provincial sound level limits are not exceeded it is important to maintain these sound attenuation features.

This dwelling unit has also been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the City and the Ministry of the Environment."

5.3.3 Warning Clause Type C

Clause C is to be registered on Title for Block 15 (Unit A), Block 17 (Units A-D), Block 18 (Units A-D), Block 19 (Units A-E), Block 22 (Units E-F), Block 25 (Units F-G), Block 28 (Units E-F), MT-1 (Units MT-013 to MT-024), MT-2 (Units MT-035 to MT-038), MT-3 (Units MT-055 to MT-064), MT-4 (Units MT-065, MT-066, MT-079, MT-080), MT-5 (Units MT-081, MT-082, MT-095, MT-096), MT-6 (Units MT-105 to MT-108), MT-7 (Units MT-125 to MT-128), MT-8 (Units MT-137 to MT-152), MT-9 (Units MT-179 to MT-182), MT-10 (Units MT-195 to MT-198), MT-11 (Units MT-209, MT-210, MT-223, MT-224), MT-12 (Units MT-225, MT-226, MT-239, MT-240), MT-13 (Units MT-245 to MT-248), MT-14 (Units MT-257 to MT-260):

"Purchasers/tenants are advised that despite the inclusion of noise control features within the building units, sound levels due to increasing road/transitway/rail/light rail traffic may, on occasion, interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the City and the Ministry of the Environment.

To help address the need for sound attenuation this dwelling unit includes:

- *single/multi-pane glass windows;*
- *Central air conditioning.*

To ensure that provincial sound level limits are not exceeded it is important to maintain these sound attenuation features.

This dwelling unit has been supplied with a central air conditioning system and other measures which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the City and the Ministry of the Environment."

5.4 Site Plan Agreement and Notices on Title

It is recommended that the previous recommendations and Warning Clauses are to be included in the Site Plan Agreement and in the Offers of Purchase and Sale and/or lease of the affected units and be registered on Title.

5.5 Building Permit Requirements

A report prepared and stamped by a Professional Engineer / Acoustical Consultant detailing building components (e.g., glazing/window, wall sections) to provide acoustical insulation to satisfy the City of Ottawa Environmental Noise Control Guidelines for indoor noise levels is required prior to the issuance of a Building Permit for the following units subject to this Report:

- Block 15 (Unit A)
- Block 17 (Units A-D), Block 18 (Units A-D), Block 19 (Units A-E)
- Block 22 (Units E-F), Block 25 (Units F-G), Block 28 (Units E-F)
- MT-1 (Units MT-013 to MT-024), MT-2 (Units MT-035 to MT-038), MT-3 (Units MT-055 to MT-064), MT-4 (Units MT-065, MT-066, MT-079, MT-080), MT-5 (Units MT-081, MT-082, MT-095, MT-096), MT-6 (Units MT-105 to MT-108), MT-7 (Units MT-125 to MT-128), MT-8 (Units MT-137 to MT-152), MT-9 (Units MT-179 to MT-182), MT-10 (Units MT-195 to MT-198), MT-11 (Units MT-209, MT-210, MT-223, MT-224), MT-12 (Units MT-225, MT-226, MT-239, MT- 240), MT-13 (Units MT-245 to MT-248), MT-14 (Units MT-257 to MT-260)

This report has been prepared for the exclusive use of Minto Communities Inc., for the stated purpose, for the named facility. Its discussions and conclusions are summary in nature and cannot be properly used, interpreted, or extended to other purposes without a detailed understanding and discussions with the client as to its mandated purpose, scope and limitations. This report was prepared for the sole benefit and use of Minto Communities Inc. and may not be used or relied on by any other party without the express written consent of J.L. Richards & Associates Limited.

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J.L. RICHARDS & ASSOCIATES LIMITED

Prepared by:

Reviewed by:

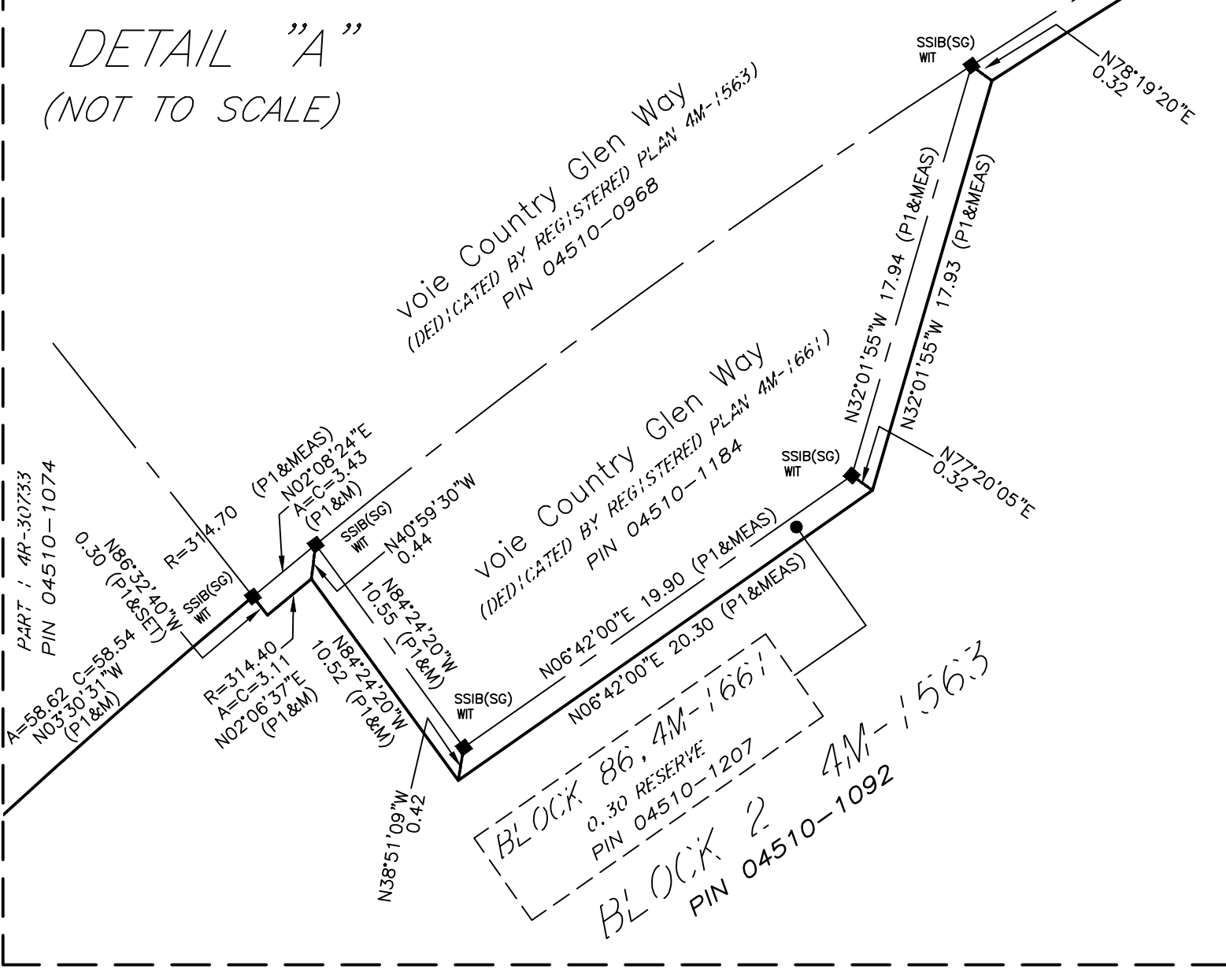
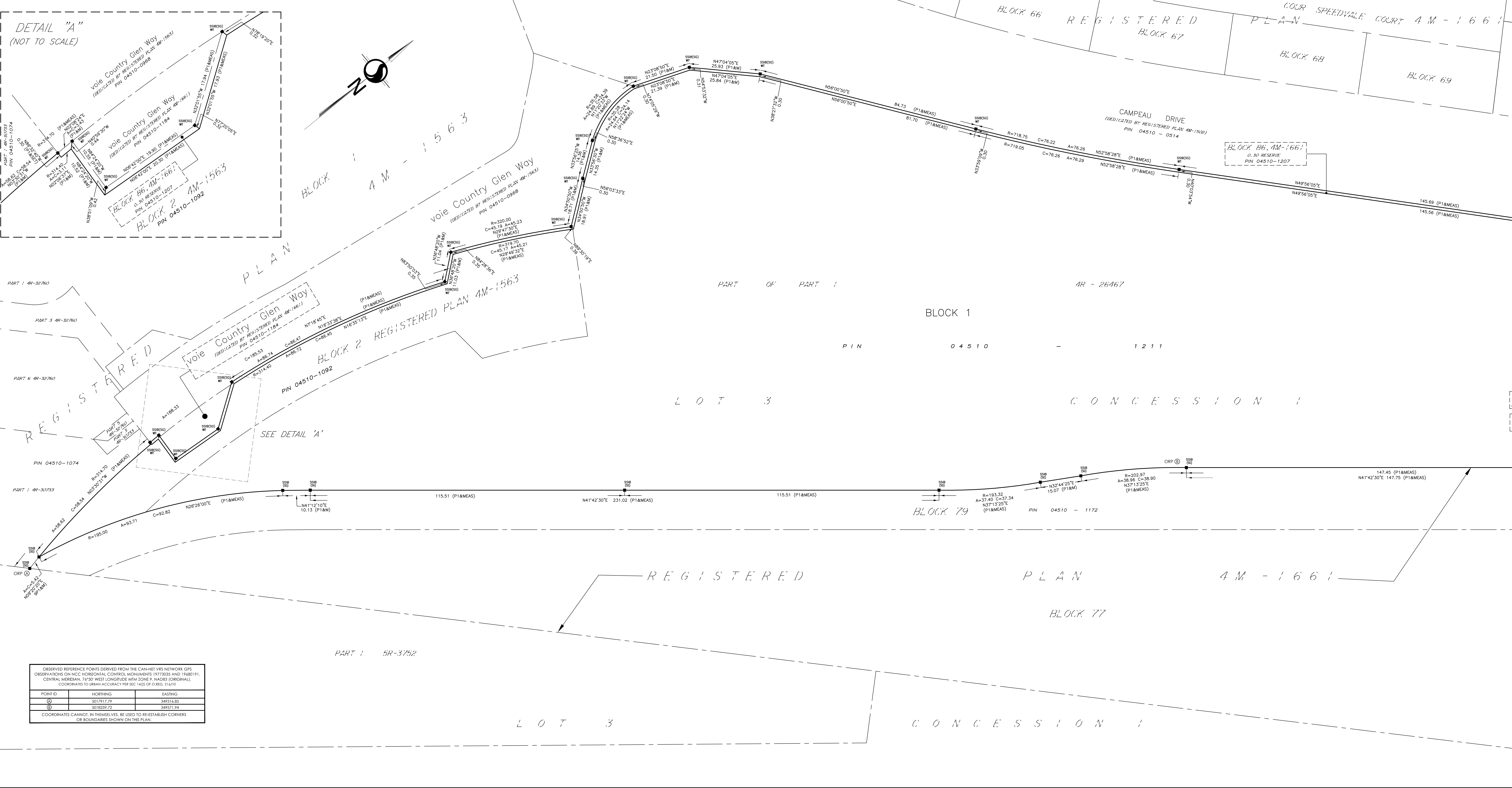


Rani Nahas, P.Eng.
Civil Engineer

Lee Jablonski, P.Eng.
Associate
Senior Civil Engineer

Appendix A

Drawings



OBSERVED REFERENCE POINTS DERIVED FROM THE CAN-NET VRS NETWORK GPS OBSERVATIONS ON MCC HORIZONTAL CONTROL MONUMENTS 19772035 AND 19680191. CENTRAL MERIDIAN, 76°30' WEST LONGITUDE MTM ZONE 9, NAD83 (ORIGINAL). COORDINATES TO URBAN ACCURACY PER SEC 14(2) OF O. REG. 216/10

POINT ID	NORTHING	EASTING
①	5017917.79	349316.85
②	5018259.72	349571.94

COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

APPROVED UNDER SECTION 51 OF THE PLANNING ACT BY THE CITY OF OTTAWA.

THIS _____ DAY OF _____ 2022.

STEPHEN WILLIS, M.C.P., R.P.P., GENERAL MANAGER PLANNING, REAL ESTATE AND ECONOMIC DEVELOPMENT DEPARTMENT, CITY OF OTTAWA.

PLAN 4M-

I HEREBY CERTIFY THAT THIS PLAN 4M-_____ IS REGISTERED IN THE LAND REGISTRY OFFICE FOR THE LAND TITLES DIVISION OF OTTAWA-CARLETON (NO. 4) AT _____ O'CLOCK ON THE _____ DAY OF _____ 2022 AND ENTERED IN THE REGISTER FOR P.I.N. _____ AND THE REQUIRED CONSENTS ARE REGISTERED AS PLAN DOCUMENT NUMBER OC-_____.

REPRESENTATIVE FOR LAND REGISTRAR

THIS PLAN COMPRISES ALL OF PINS 04510-1211, 04510-1092, 04510-1209 AND 04510-1210. PART OF BLOCK 1 IS SUBJECT TO EASEMENT AS IN INSTRUMENT OC2248967.

PLAN OF SUBDIVISION OF
**PART OF BLOCK 2,
 REGISTERED PLAN 4M-1563 AND
 PART OF LOT 3
 CONCESSION 1**
 (GEOGRAPHIC TOWNSHIP OF MARCH)
 CITY OF OTTAWA

Scale 1:500

METRIC CONVERSION
 DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

GRID SCALE CONVERSION
 DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.99914.

BEARING NOTE
 BEARINGS ARE GRID, DERIVED FROM THE CAN-NET VRS NETWORK OBSERVATIONS ON MCC HORIZONTAL CONTROL MONUMENTS 19772035 AND 19680191. CENTRAL MERIDIAN, 76°30' WEST LONGITUDE MTM ZONE 9, NAD83 (ORIGINAL).

19772035 N:5006040.42 E:324888.04
 19680191 N:5003564.26 E:38804.94

- LEGEND**
- DENOTES FOUND MONUMENTS (STANTEC)
 - SET MONUMENTS (IB)
 - IB IRON BAR UNLESS OTHERWISE STATED
 - IBB IRON BAR
 - SIB ROUND IRON BAR
 - SSB STANDARD IRON BAR
 - SCB SHORT STANDARD IRON BAR
 - CC CUT CROSS
 - CP CONCRETE PIN
 - WIT WITNESS
 - PROF PROPERTY IDENTIFICATION NUMBER
 - M/MEAS MEASURED
 - PROP PROPORTIONED
 - OU ORIGIN UNKNOWN
 - STANTEC STANTEC GEOMATICS LTD.
 - P1 REGISTERED PLAN 4M-1661

OWNER'S CERTIFICATE
 THIS IS TO CERTIFY THAT:
 1. BLOCK 1 HAS BEEN LAID OUT IN ACCORDANCE WITH OUR INSTRUCTIONS.

DATE _____

 VICE-PRESIDENT, LAND DEVELOPMENT
 MINTO COMMUNITIES INC.
 I HAVE THE AUTHORITY TO BIND THE CORPORATION

DATE _____

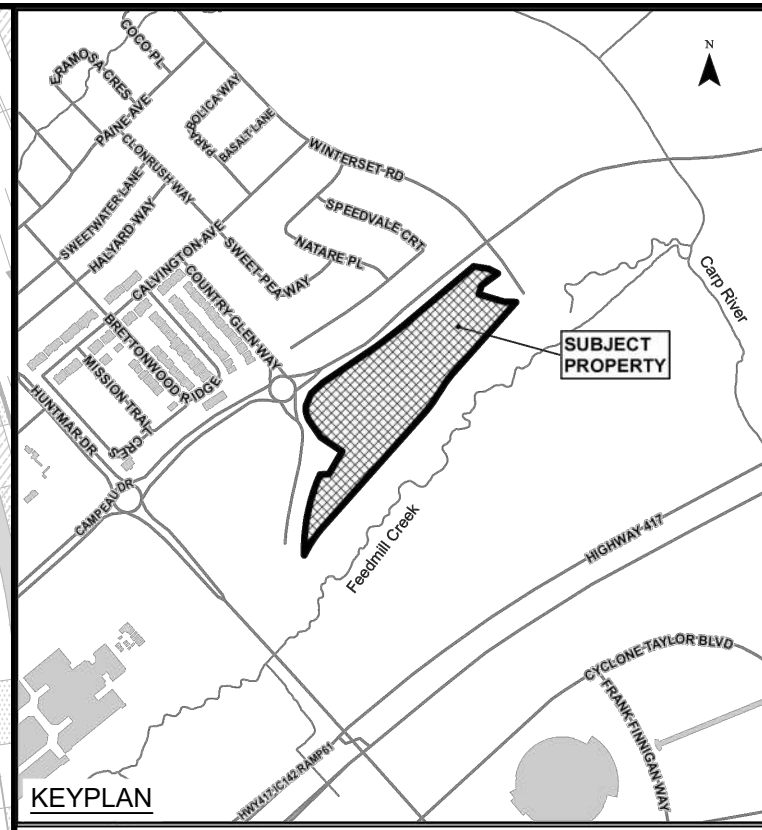
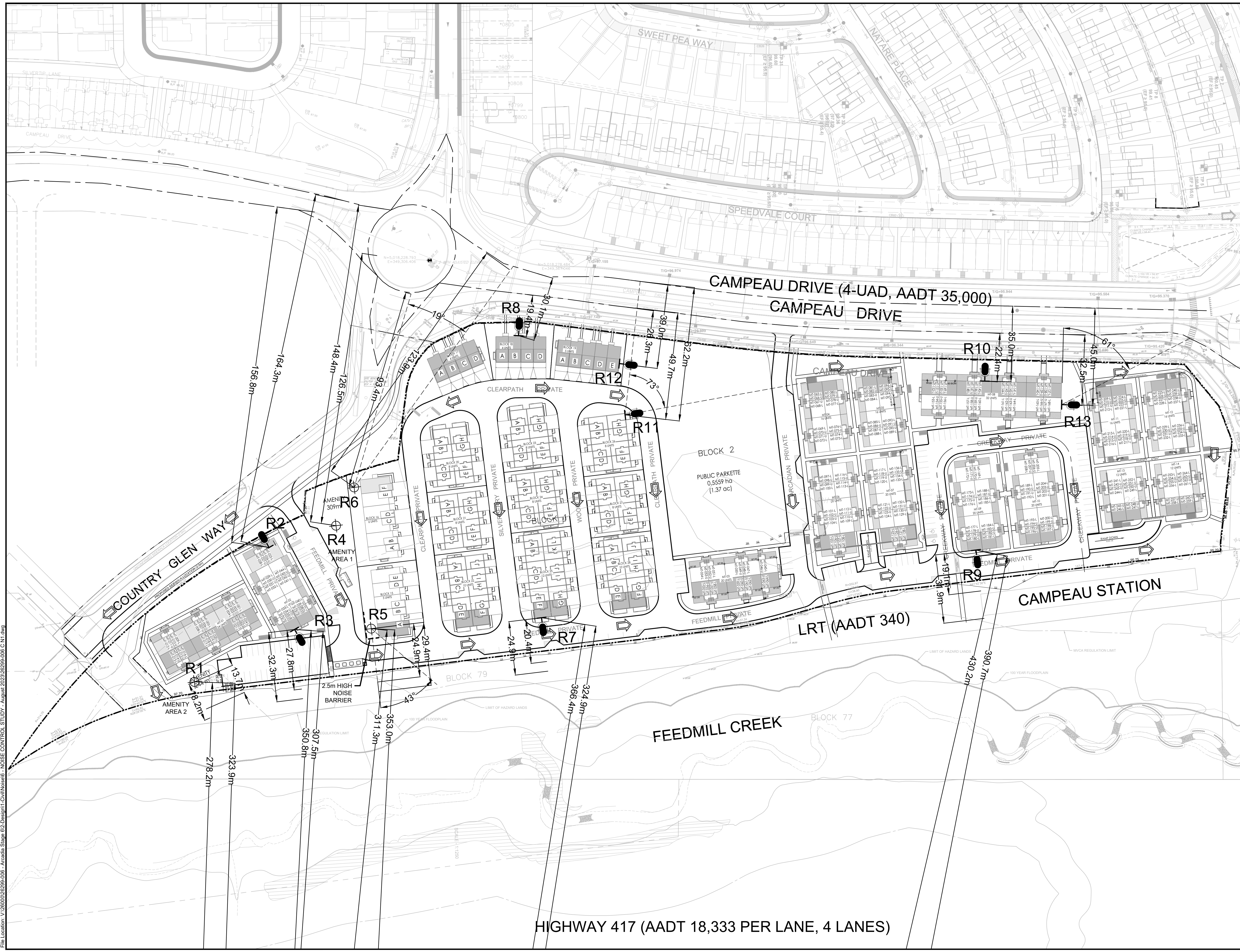
 MINTO COMMUNITIES INC.
 I HAVE THE AUTHORITY TO BIND THE CORPORATION

SURVEYOR'S CERTIFICATE
 I CERTIFY THAT:
 1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM.
 2. THE SURVEY WAS COMPLETED ON THE DAY OF _____, 2022.

DATE _____
 FRANCIS LAU
 ONTARIO LAND SURVEYOR

Stantec Geomatics Ltd.
 CANADA LANDS SURVEYORS
 ONTARIO LAND SURVEYORS
 1331 CYDIE AVENUE, SUITE 300
 OTTAWA, ONTARIO, K1G 3G4
 TEL: 613.722.4400
 stantec.com

DRAWN: ME PWA * CHECKED: * FIELD: * PROJECT No.: 161614463-132A



- LEGEND:**
- OUTDOOR RECEIVER
 - PLANE OF WINDOW RECEIVER
 - ANGLE OF NOISE SOURCE TO RECEIVER
 - 45°
 - NOISE BARRIER (2.5m)
 - FORCED AIR HEATING SYSTEM REQUIRED.
 - CENTRAL AIR CONDITIONING SYSTEM AND FORCED AIR HEATING SYSTEM REQUIRED. DETAILED BUILDING COMPONENT STUDY REQUIRED.

06	ISSUED TO CITY FOR REVIEW FOURTH ENGINEERING SUBMISSION	30/06/23
05	ISSUED TO CITY FOR REVIEW THIRD ENGINEERING SUBMISSION	27/04/23
04	ISSUED FOR TENDER - ADDENDUM No. 2	05/04/23
03	ISSUED FOR TENDER	14/03/23
02	ISSUED TO CITY FOR REVIEW SECOND ENGINEERING SUBMISSION	02/02/23
No.	ISSUE / REVISION	DDMMYY

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VERIFY SHEET SIZE AND SCALES. BAR TO THE RIGHT IS 25mm IF THIS IS A FULL SIZE DRAWING.

SCALE: 1:750

CLIENT:

CONSULTANT:

J.L. Richards
ENGINEERS - ARCHITECTS - PLANNERS

CONSULTANT:

PROFESSIONAL STAMP

PROJECT NORTH

PROJECT:

ARCADIA STAGE 6

450 HUNTMAR DRIVE

DRAWING:

NOISE CONTROL DETAILED STUDY
NOISE RECEIVER LOCATIONS

DESIGN:	MM	DRAWING #:	N1
DRAWN:	KC		
CHECKED:	LD		
JLR #:	26299-006		

File Location: V:\26299\006\26299-006 - Arcadia Stage 02-Design1-Civil\Noise6 - Noise Control Study - August 2023\26299-006 C.N1.dwg

PLOT DATE: August 1, 2023 11:54:33 AM
CITY FILE No. D07-12-22-0111
CITY PLAN No. 18829

Appendix B

Transportation Noise Source
Predictions

Filename: arc6r1.te Time Period: Day/Night 16/8 hours
Description: Arcadia Stage 6 - R1 OLA, Amenity Area 2

Rail data, segment # 1: LRT EB (day/night)

Train Type	! Trains	! Speed (km/h)	!# loc /Train!	!# Cars /Train!	Eng type	!Cont weld
1. Electric	! 155.0/15.0	! 80.0	! 2.0	! 4.0	! Elec	! No

Data for Segment # 1: LRT EB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 18.20 / 18.20 m
Receiver height : 1.50 / 1.50 m
Topography : 3 (Elevated; no barrier)
No Whistle
Elevation : 5.00 m
Reference angle : 0.00

↑
Rail data, segment # 2: LRT WB (day/night)

Train Type	! Trains	! Speed (km/h)	!# loc /Train!	!# Cars /Train!	Eng type	!Cont weld
1. Electric	! 155.0/15.0	! 80.0	! 2.0	! 4.0	! Elec	! No

Data for Segment # 2: LRT WB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 15.00 / 15.00 m
Receiver height : 1.50 / 1.50 m
Topography : 3 (Elevated; no barrier)
No Whistle
Elevation : 5.00 m
Reference angle : 0.00

↑
Results segment # 1: LRT EB (day)

LOCOMOTIVE (0.00 + 60.40 + 0.00) = 60.40 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.44	62.65	-1.21	-1.05	0.00	0.00	0.00	60.40
-----	----	------	-------	-------	-------	------	------	------	-------

WHEEL (0.00 + 64.88 + 0.00) = 64.88 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.54	67.42	-1.29	-1.25	0.00	0.00	0.00	64.88
-----	----	------	-------	-------	-------	------	------	------	-------

Segment Leq : 66.20 dBA

↑

Results segment # 2: LRT WB (day)

LOCOMOTIVE (0.00 + 61.60 + 0.00) = 61.60 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.44	62.65	0.00	-1.05	0.00	0.00	0.00	61.60
-----	----	------	-------	------	-------	------	------	------	-------

WHEEL (0.00 + 66.18 + 0.00) = 66.18 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.54	67.42	0.00	-1.25	0.00	0.00	0.00	66.18
-----	----	------	-------	------	-------	------	------	------	-------

Segment Leq : 67.48 dBA

Total Leq All Segments: 69.90 dBA

↑

Results segment # 1: LRT EB (night)

LOCOMOTIVE (0.00 + 53.27 + 0.00) = 53.27 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.44	55.52	-1.21	-1.05	0.00	0.00	0.00	53.27
-----	----	------	-------	-------	-------	------	------	------	-------

WHEEL (0.00 + 57.75 + 0.00) = 57.75 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.54	60.29	-1.29	-1.25	0.00	0.00	0.00	57.75
-----	----	------	-------	-------	-------	------	------	------	-------

Segment Leq : 59.07 dBA

↑
Results segment # 2: LRT WB (night)

LOCOMOTIVE (0.00 + 54.47 + 0.00) = 54.47 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.44 55.52 0.00 -1.05 0.00 0.00 0.00 54.47

WHEEL (0.00 + 59.04 + 0.00) = 59.04 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.54 60.29 0.00 -1.25 0.00 0.00 0.00 59.04

Segment Leq : 60.34 dBA

Total Leq All Segments: 62.76 dBA

↑
Road data, segment # 1: HWY 417 EB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: HWY 417 EB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 323.90 / 323.90 m

Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY 417 WB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: HWY 417 WB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 278.20 / 278.20 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: HWY 417 EB (day)

Source height = 1.50 m

ROAD (0.00 + 57.79 + 0.00) = 57.79 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	81.40	0.00	-22.15	-1.46	0.00	0.00	0.00	57.79

Segment Leq : 57.79 dBA

↑
Results segment # 2: HWY 417 WB (day)

Source height = 1.50 m

ROAD (0.00 + 58.89 + 0.00) = 58.89 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	81.40	0.00	-21.05	-1.46	0.00	0.00	0.00	58.89

Segment Leq : 58.89 dBA

Total Leq All Segments: 61.39 dBA

↑

Results segment # 1: HWY 417 EB (night)

Source height = 1.49 m

ROAD (0.00 + 50.19 + 0.00) = 50.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	73.80	0.00	-22.15	-1.46	0.00	0.00	0.00	50.19

Segment Leq : 50.19 dBA

↑

Results segment # 2: HWY 417 WB (night)

Source height = 1.49 m

ROAD (0.00 + 51.29 + 0.00) = 51.29 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	73.80	0.00	-21.05	-1.46	0.00	0.00	0.00	51.29

Segment Leq : 51.29 dBA

Total Leq All Segments: 53.79 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 70.47
(NIGHT): 63.28



Filename: arc6r2.te Time Period: Day/Night 16/8 hours
Description: Arcadia Stage 6 - R2 POW, MT-02, north side

Road data, segment # 1: Campeau East (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau East (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 156.80 / 156.80 m
Receiver height : 5.36 / 8.46 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Campeau West (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Campeau West (day/night)

 Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 164.30 / 164.30 m
 Receiver height : 5.36 / 8.46 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: Campeau East (day)

Source height = 1.50 m

ROAD (0.00 + 53.67 + 0.00) = 53.67 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.54	70.67	0.00	-15.74	-1.26	0.00	0.00	0.00	53.67

Segment Leq : 53.67 dBA

↑
 Results segment # 2: Campeau West (day)

Source height = 1.50 m

ROAD (0.00 + 53.36 + 0.00) = 53.36 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.54	70.67	0.00	-16.05	-1.26	0.00	0.00	0.00	53.36

Segment Leq : 53.36 dBA

Total Leq All Segments: 56.53 dBA

↑
 Results segment # 1: Campeau East (night)

Source height = 1.50 m

ROAD (0.00 + 47.19 + 0.00) = 47.19 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.45	63.07	0.00	-14.79	-1.08	0.00	0.00	0.00	47.19

Segment Leq : 47.19 dBA

↑

Results segment # 2: Campeau West (night)

Source height = 1.50 m

ROAD (0.00 + 46.90 + 0.00) = 46.90 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.45	63.07	0.00	-15.09	-1.08	0.00	0.00	0.00	46.90

Segment Leq : 46.90 dBA

Total Leq All Segments: 50.06 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 56.53
(NIGHT): 50.06

↑

↑

Filename: arc6r3.te Time Period: Day/Night 16/8 hours
 Description: Arcadia Stage 6 - R3 POW, MT-02, south side

Rail data, segment # 1: LRT EB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 1: LRT EB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg   90.00 deg
Wood depth      :           0   (No woods.)
No of house rows :           0 / 0
Surface         :           1   (Absorptive ground surface)
Receiver source distance : 32.30 / 32.30 m
Receiver height :   5.36 / 8.46 m
Topography      :           3   (Elevated; no barrier)
No Whistle
Elevation       :   5.00 m
Reference angle :   0.00
  
```

↑
 Rail data, segment # 2: LRT WB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 2: LRT WB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg   90.00 deg
Wood depth      :           0   (No woods.)
No of house rows :           0 / 0
Surface         :           1   (Absorptive ground surface)
Receiver source distance : 27.80 / 27.80 m
Receiver height :   5.36 / 8.46 m
Topography      :           3   (Elevated; no barrier)
No Whistle
Elevation       :   5.00 m
Reference angle :   0.00
  
```

↑
 Results segment # 1: LRT EB (day)

LOCOMOTIVE (0.00 + 57.45 + 0.00) = 57.45 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.32	62.65	-4.39	-0.81	0.00	0.00	0.00	57.45
-----	----	------	-------	-------	-------	------	------	------	-------

WHEEL (0.00 + 61.65 + 0.00) = 61.65 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.42	67.42	-4.74	-1.03	0.00	0.00	0.00	61.65
-----	----	------	-------	-------	-------	------	------	------	-------

Segment Leq : 63.05 dBA

↑

Results segment # 2: LRT WB (day)

LOCOMOTIVE (0.00 + 58.31 + 0.00) = 58.31 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.32	62.65	-3.53	-0.81	0.00	0.00	0.00	58.31
-----	----	------	-------	-------	-------	------	------	------	-------

WHEEL (0.00 + 62.58 + 0.00) = 62.58 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.42	67.42	-3.82	-1.03	0.00	0.00	0.00	62.58
-----	----	------	-------	-------	-------	------	------	------	-------

Segment Leq : 63.96 dBA

Total Leq All Segments: 66.54 dBA

↑

Results segment # 1: LRT EB (night)

LOCOMOTIVE (0.00 + 50.84 + 0.00) = 50.84 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.23	55.52	-4.08	-0.60	0.00	0.00	0.00	50.84
-----	----	------	-------	-------	-------	------	------	------	-------

WHEEL (0.00 + 55.02 + 0.00) = 55.02 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.33	60.29	-4.43	-0.84	0.00	0.00	0.00	55.02
-----	----	------	-------	-------	-------	------	------	------	-------

Segment Leq : 56.42 dBA

↑
Results segment # 2: LRT WB (night)

LOCOMOTIVE (0.00 + 51.64 + 0.00) = 51.64 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.23 55.52 -3.29 -0.60 0.00 0.00 0.00 51.64

WHEEL (0.00 + 55.89 + 0.00) = 55.89 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.33 60.29 -3.57 -0.84 0.00 0.00 0.00 55.89

Segment Leq : 57.28 dBA

Total Leq All Segments: 59.88 dBA

↑
Road data, segment # 1: HWY 417 EB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: HWY 417 EB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 350.80 / 350.80 m

Receiver height : 5.36 / 8.46 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Road data, segment # 2: HWY 417 WB (day/night)

 Car traffic volume : 59370/5163 veh/TimePeriod *
 Medium truck volume : 4723/411 veh/TimePeriod *
 Heavy truck volume : 3373/293 veh/TimePeriod *
 Posted speed limit : 100 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): 73332
 Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: HWY 417 WB (day/night)

 Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 307.50 / 307.50 m
 Receiver height : 5.36 / 8.46 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: HWY 417 EB (day)

 Source height = 1.50 m

ROAD (0.00 + 59.00 + 0.00) = 59.00 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.54	81.40	0.00	-21.14	-1.26	0.00	0.00	0.00	59.00

Segment Leq : 59.00 dBA

↑
 Results segment # 2: HWY 417 WB (day)

Source height = 1.50 m

ROAD (0.00 + 59.88 + 0.00) = 59.88 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.54	81.40	0.00	-20.26	-1.26	0.00	0.00	0.00	59.88

Segment Leq : 59.88 dBA

Total Leq All Segments: 62.47 dBA

↑

Results segment # 1: HWY 417 EB (night)

Source height = 1.49 m

ROAD (0.00 + 52.85 + 0.00) = 52.85 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.45	73.80	0.00	-19.87	-1.08	0.00	0.00	0.00	52.85

Segment Leq : 52.85 dBA

↑

Results segment # 2: HWY 417 WB (night)

Source height = 1.49 m

ROAD (0.00 + 53.68 + 0.00) = 53.68 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.45	73.80	0.00	-19.04	-1.08	0.00	0.00	0.00	53.68

Segment Leq : 53.68 dBA

Total Leq All Segments: 56.30 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 67.98
(NIGHT): 61.46



Filename: arc6r4.te Time Period: Day/Night 16/8 hours
Description: Arcadia Stage 6 - R4 OLA, Amenity Space 1

Road data, segment # 1: Campeau East (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau East (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 126.50 / 126.50 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Campeau West (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Campeau West (day/night)

 Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 148.40 / 148.40 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: Campeau East (day)

Source height = 1.50 m

ROAD (0.00 + 53.84 + 0.00) = 53.84 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	70.67	0.00	-15.37	-1.46	0.00	0.00	0.00	53.84

Segment Leq : 53.84 dBA

↑
 Results segment # 2: Campeau West (day)

Source height = 1.50 m

ROAD (0.00 + 52.69 + 0.00) = 52.69 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	70.67	0.00	-16.52	-1.46	0.00	0.00	0.00	52.69

Segment Leq : 52.69 dBA

Total Leq All Segments: 56.31 dBA

↑
 Results segment # 1: Campeau East (night)

Source height = 1.50 m

ROAD (0.00 + 46.24 + 0.00) = 46.24 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	63.07	0.00	-15.37	-1.46	0.00	0.00	0.00	46.24

Segment Leq : 46.24 dBA

↑

Results segment # 2: Campeau West (night)

Source height = 1.50 m

ROAD (0.00 + 45.09 + 0.00) = 45.09 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.66	63.07	0.00	-16.52	-1.46	0.00	0.00	0.00	45.09

Segment Leq : 45.09 dBA

Total Leq All Segments: 48.71 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 56.31
(NIGHT): 48.71

↑

↑

Filename: arc6r5.te Time Period: Day/Night 16/8 hours
Description: Arcadia Stage 6 - R5 OLA, Block 1 Executive Towns

Rail data, segment # 1: LRT EB (day/night)

Train Type	! Trains	! Speed (km/h)	!# loc /Train!	!# Cars /Train!	Eng type	!Cont weld
1. Electric	! 155.0/15.0	! 80.0	! 2.0	! 4.0	! Elec	! No

Data for Segment # 1: LRT EB (day/night)

Angle1 Angle2 : -90.00 deg 43.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 29.40 / 29.40 m
Receiver height : 1.50 / 1.50 m
Topography : 3 (Elevated; no barrier)
No Whistle
Elevation : 5.00 m
Reference angle : 0.00

↑
Rail data, segment # 2: LRT WB (day/night)

Train Type	! Trains	! Speed (km/h)	!# loc /Train!	!# Cars /Train!	Eng type	!Cont weld
1. Electric	! 155.0/15.0	! 80.0	! 2.0	! 4.0	! Elec	! No

Data for Segment # 2: LRT WB (day/night)

Angle1 Angle2 : -90.00 deg 43.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 24.90 / 24.90 m
Receiver height : 1.50 / 1.50 m
Topography : 3 (Elevated; no barrier)
No Whistle
Elevation : 5.00 m
Reference angle : 0.00

↑
Results segment # 1: LRT EB (day)

LOCOMOTIVE (0.00 + 56.39 + 0.00) = 56.39 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	43	0.44	62.65	-4.19	-2.07	0.00	0.00	0.00	56.39
-----	----	------	-------	-------	-------	------	------	------	-------

WHEEL (0.00 + 60.72 + 0.00) = 60.72 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	43	0.54	67.42	-4.50	-2.21	0.00	0.00	0.00	60.72
-----	----	------	-------	-------	-------	------	------	------	-------

Segment Leq : 62.08 dBA

↑

Results segment # 2: LRT WB (day)

LOCOMOTIVE (0.00 + 57.43 + 0.00) = 57.43 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	43	0.44	62.65	-3.16	-2.07	0.00	0.00	0.00	57.43
-----	----	------	-------	-------	-------	------	------	------	-------

WHEEL (0.00 + 61.83 + 0.00) = 61.83 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	43	0.54	67.42	-3.39	-2.21	0.00	0.00	0.00	61.83
-----	----	------	-------	-------	-------	------	------	------	-------

Segment Leq : 63.18 dBA

Total Leq All Segments: 65.68 dBA

↑

Results segment # 1: LRT EB (night)

LOCOMOTIVE (0.00 + 49.26 + 0.00) = 49.26 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	43	0.44	55.52	-4.19	-2.07	0.00	0.00	0.00	49.26
-----	----	------	-------	-------	-------	------	------	------	-------

WHEEL (0.00 + 53.58 + 0.00) = 53.58 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	43	0.54	60.29	-4.50	-2.21	0.00	0.00	0.00	53.58
-----	----	------	-------	-------	-------	------	------	------	-------

Segment Leq : 54.95 dBA

↑
Results segment # 2: LRT WB (night)

LOCOMOTIVE (0.00 + 50.30 + 0.00) = 50.30 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 43 0.44 55.52 -3.16 -2.07 0.00 0.00 0.00 50.30

WHEEL (0.00 + 54.70 + 0.00) = 54.70 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 43 0.54 60.29 -3.39 -2.21 0.00 0.00 0.00 54.70

Segment Leq : 56.05 dBA

Total Leq All Segments: 58.55 dBA

↑
Road data, segment # 1: HWY 417 EB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: HWY 417 EB (day/night)

Angle1 Angle2 : -90.00 deg 43.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 353.00 / 353.00 m

Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY 417 WB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: HWY 417 WB (day/night)

Angle1 Angle2 : -90.00 deg 43.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 311.30 / 311.30 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: HWY 417 EB (day)

Source height = 1.50 m

ROAD (0.00 + 56.27 + 0.00) = 56.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.66	81.40	0.00	-22.77	-2.35	0.00	0.00	0.00	56.27

Segment Leq : 56.27 dBA

↑
Results segment # 2: HWY 417 WB (day)

Source height = 1.50 m

ROAD (0.00 + 57.18 + 0.00) = 57.18 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.66	81.40	0.00	-21.86	-2.35	0.00	0.00	0.00	57.18

Segment Leq : 57.18 dBA

Total Leq All Segments: 59.76 dBA

↑

Results segment # 1: HWY 417 EB (night)

Source height = 1.49 m

ROAD (0.00 + 48.68 + 0.00) = 48.68 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.66	73.80	0.00	-22.77	-2.35	0.00	0.00	0.00	48.68

Segment Leq : 48.68 dBA

↑

Results segment # 2: HWY 417 WB (night)

Source height = 1.49 m

ROAD (0.00 + 49.58 + 0.00) = 49.58 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.66	73.80	0.00	-21.86	-2.35	0.00	0.00	0.00	49.58

Segment Leq : 49.58 dBA

Total Leq All Segments: 52.16 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 66.67
(NIGHT): 59.44



Filename: arc6r6.te Time Period: Day/Night 16/8 hours
Description: Arcadia Stage 6 - R6 OLA, Block 2 Executive Towns

Road data, segment # 1: Campeau East (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau East (day/night)

Angle1 Angle2 : -90.00 deg 19.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 93.40 / 93.40 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Campeau West (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Campeau West (day/night)

 Angle1 Angle2 : -90.00 deg 19.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 123.90 / 123.90 m
 Receiver height : 1.50 / 1.50 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: Campeau East (day)

Source height = 1.50 m

ROAD (0.00 + 54.13 + 0.00) = 54.13 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	19	0.66	70.67	0.00	-13.18	-3.36	0.00	0.00	0.00	54.13

Segment Leq : 54.13 dBA

↑
 Results segment # 2: Campeau West (day)

Source height = 1.50 m

ROAD (0.00 + 52.09 + 0.00) = 52.09 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	19	0.66	70.67	0.00	-15.22	-3.36	0.00	0.00	0.00	52.09

Segment Leq : 52.09 dBA

Total Leq All Segments: 56.24 dBA

↑
 Results segment # 1: Campeau East (night)

Source height = 1.50 m

ROAD (0.00 + 46.53 + 0.00) = 46.53 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	19	0.66	63.07	0.00	-13.18	-3.36	0.00	0.00	0.00	46.53

Segment Leq : 46.53 dBA

↑

Results segment # 2: Campeau West (night)

Source height = 1.50 m

ROAD (0.00 + 44.49 + 0.00) = 44.49 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	19	0.66	63.07	0.00	-15.22	-3.36	0.00	0.00	0.00	44.49

Segment Leq : 44.49 dBA

Total Leq All Segments: 48.64 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 56.24
(NIGHT): 48.64

↑

↑

Filename: arc6r7.te Time Period: Day/Night 16/8 hours
 Description: Arcadia Stage 6 - R7 POW, Block 13 Executive Towns

Rail data, segment # 1: LRT EB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 1: LRT EB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg   90.00 deg
Wood depth      :           0   (No woods.)
No of house rows :           0 / 0
Surface         :           1   (Absorptive ground surface)
Receiver source distance : 24.90 / 24.90 m
Receiver height :  4.48 / 7.24 m
Topography      :           3   (Elevated; no barrier)
No Whistle
Elevation       :  5.00 m
Reference angle :  0.00
  
```

↑
 Rail data, segment # 2: LRT WB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 2: LRT WB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg   90.00 deg
Wood depth      :           0   (No woods.)
No of house rows :           0 / 0
Surface         :           1   (Absorptive ground surface)
Receiver source distance : 20.40 / 20.40 m
Receiver height :  4.48 / 7.24 m
Topography      :           3   (Elevated; no barrier)
No Whistle
Elevation       :  5.00 m
Reference angle :  0.00
  
```

↑
 Results segment # 1: LRT EB (day)

LOCOMOTIVE (0.00 + 58.82 + 0.00) = 58.82 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.35	62.65	-2.96	-0.87	0.00	0.00	0.00	58.82
-----	----	------	-------	-------	-------	------	------	------	-------

WHEEL (0.00 + 63.15 + 0.00) = 63.15 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.45	67.42	-3.19	-1.08	0.00	0.00	0.00	63.15
-----	----	------	-------	-------	-------	------	------	------	-------

Segment Leq : 64.51 dBA

↑

Results segment # 2: LRT WB (day)

LOCOMOTIVE (0.00 + 59.99 + 0.00) = 59.99 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.35	62.65	-1.80	-0.87	0.00	0.00	0.00	59.99
-----	----	------	-------	-------	-------	------	------	------	-------

WHEEL (0.00 + 64.41 + 0.00) = 64.41 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.45	67.42	-1.94	-1.08	0.00	0.00	0.00	64.41
-----	----	------	-------	-------	-------	------	------	------	-------

Segment Leq : 65.75 dBA

Total Leq All Segments: 68.18 dBA

↑

Results segment # 1: LRT EB (night)

LOCOMOTIVE (0.00 + 52.06 + 0.00) = 52.06 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.26	55.52	-2.78	-0.68	0.00	0.00	0.00	52.06
-----	----	------	-------	-------	-------	------	------	------	-------

WHEEL (0.00 + 56.37 + 0.00) = 56.37 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.37	60.29	-3.01	-0.91	0.00	0.00	0.00	56.37
-----	----	------	-------	-------	-------	------	------	------	-------

Segment Leq : 57.74 dBA

↑
Results segment # 2: LRT WB (night)

LOCOMOTIVE (0.00 + 53.15 + 0.00) = 53.15 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.26 55.52 -1.69 -0.68 0.00 0.00 0.00 53.15

WHEEL (0.00 + 57.55 + 0.00) = 57.55 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.37 60.29 -1.83 -0.91 0.00 0.00 0.00 57.55

Segment Leq : 58.90 dBA

Total Leq All Segments: 61.37 dBA

↑
Road data, segment # 1: HWY 417 EB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: HWY 417 EB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 366.40 / 366.40 m

Receiver height : 4.48 / 7.24 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: HWY 417 WB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: HWY 417 WB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 324.90 / 324.90 m
Receiver height : 4.48 / 7.24 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Results segment # 1: HWY 417 EB (day)

Source height = 1.50 m

ROAD (0.00 + 58.29 + 0.00) = 58.29 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.57	81.40	0.00	-21.80	-1.30	0.00	0.00	0.00	58.29

Segment Leq : 58.29 dBA

↑
Results segment # 2: HWY 417 WB (day)

Source height = 1.50 m

ROAD (0.00 + 59.11 + 0.00) = 59.11 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.57	81.40	0.00	-20.98	-1.30	0.00	0.00	0.00	59.11

Segment Leq : 59.11 dBA

Total Leq All Segments: 61.73 dBA

↑
Results segment # 1: HWY 417 EB (night)

Source height = 1.49 m

ROAD (0.00 + 52.00 + 0.00) = 52.00 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.49	73.80	0.00	-20.65	-1.15	0.00	0.00	0.00	52.00

Segment Leq : 52.00 dBA

↑
Results segment # 2: HWY 417 WB (night)

Source height = 1.49 m

ROAD (0.00 + 52.77 + 0.00) = 52.77 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.49	73.80	0.00	-19.87	-1.15	0.00	0.00	0.00	52.77

Segment Leq : 52.77 dBA

Total Leq All Segments: 55.41 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 69.07
(NIGHT): 62.35



Filename: arc6r8.te Time Period: Day/Night 16/8 hours
Description: Arcadia Stage 6 - R8 POW, Block 4, north side

Road data, segment # 1: Campeau East (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau East (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 19.04 / 19.04 m
Receiver height : 4.17 / 7.11 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Campeau West (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Campeau West (day/night)

 Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 30.10 / 30.10 m
 Receiver height : 4.17 / 7.11 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: Campeau East (day)

Source height = 1.50 m

ROAD (0.00 + 67.71 + 0.00) = 67.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.58	70.67	0.00	-1.64	-1.32	0.00	0.00	0.00	67.71

Segment Leq : 67.71 dBA

↑
 Results segment # 2: Campeau West (day)

Source height = 1.50 m

ROAD (0.00 + 64.57 + 0.00) = 64.57 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.58	70.67	0.00	-4.78	-1.32	0.00	0.00	0.00	64.57

Segment Leq : 64.57 dBA

Total Leq All Segments: 69.43 dBA

↑
 Results segment # 1: Campeau East (night)

Source height = 1.50 m

ROAD (0.00 + 60.36 + 0.00) = 60.36 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.49	63.07	0.00	-1.55	-1.16	0.00	0.00	0.00	60.36

Segment Leq : 60.36 dBA

↑

Results segment # 2: Campeau West (night)

Source height = 1.50 m

ROAD (0.00 + 57.40 + 0.00) = 57.40 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.49	63.07	0.00	-4.51	-1.16	0.00	0.00	0.00	57.40

Segment Leq : 57.40 dBA

Total Leq All Segments: 62.14 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 69.43
(NIGHT): 62.14

↑

↑

Filename: arc6r9.te Time Period: Day/Night 16/8 hours
Description: Arcadia Stage 6 - R9 POW, TE-9 Stacked Towns

Rail data, segment # 1: LRT EB (day/night)

Train Type	! Trains	! Speed (km/h)	!# loc /!Train	!# Cars /!Train	! Eng type	!Cont weld
1. Electric	! 155.0/15.0	! 80.0	! 2.0	! 4.0	! Elec	! No

Data for Segment # 1: LRT EB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 31.90 / 31.90 m
Receiver height : 5.36 / 8.46 m
Topography : 3 (Elevated; no barrier)
No Whistle
Elevation : 5.00 m
Reference angle : 0.00

↑
Rail data, segment # 2: LRT WB (day/night)

Train Type	! Trains	! Speed (km/h)	!# loc /!Train	!# Cars /!Train	! Eng type	!Cont weld
1. Electric	! 155.0/15.0	! 80.0	! 2.0	! 4.0	! Elec	! No

Data for Segment # 2: LRT WB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 19.10 / 19.10 m
Receiver height : 5.36 / 8.46 m
Topography : 3 (Elevated; no barrier)
No Whistle
Elevation : 5.00 m
Reference angle : 0.00

↑
Results segment # 1: LRT EB (day)

LOCOMOTIVE (0.00 + 57.52 + 0.00) = 57.52 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.32	62.65	-4.32	-0.81	0.00	0.00	0.00	57.52
-----	----	------	-------	-------	-------	------	------	------	-------

WHEEL (0.00 + 61.73 + 0.00) = 61.73 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.42	67.42	-4.67	-1.03	0.00	0.00	0.00	61.73
-----	----	------	-------	-------	-------	------	------	------	-------

Segment Leq : 63.13 dBA

↑

Results segment # 2: LRT WB (day)

LOCOMOTIVE (0.00 + 60.46 + 0.00) = 60.46 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.32	62.65	-1.38	-0.81	0.00	0.00	0.00	60.46
-----	----	------	-------	-------	-------	------	------	------	-------

WHEEL (0.00 + 64.90 + 0.00) = 64.90 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.42	67.42	-1.49	-1.03	0.00	0.00	0.00	64.90
-----	----	------	-------	-------	-------	------	------	------	-------

Segment Leq : 66.23 dBA

Total Leq All Segments: 67.96 dBA

↑

Results segment # 1: LRT EB (night)

LOCOMOTIVE (0.00 + 50.90 + 0.00) = 50.90 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.23	55.52	-4.02	-0.60	0.00	0.00	0.00	50.90
-----	----	------	-------	-------	-------	------	------	------	-------

WHEEL (0.00 + 55.09 + 0.00) = 55.09 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.33	60.29	-4.36	-0.84	0.00	0.00	0.00	55.09
-----	----	------	-------	-------	-------	------	------	------	-------

Segment Leq : 56.49 dBA

↑
Results segment # 2: LRT WB (night)

LOCOMOTIVE (0.00 + 53.63 + 0.00) = 53.63 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.23 55.52 -1.29 -0.60 0.00 0.00 0.00 53.63

WHEEL (0.00 + 58.06 + 0.00) = 58.06 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90 90 0.33 60.29 -1.40 -0.84 0.00 0.00 0.00 58.06

Segment Leq : 59.40 dBA

Total Leq All Segments: 61.19 dBA

↑
Road data, segment # 1: HWY 417 EB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: HWY 417 EB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 430.20 / 430.20 m

Receiver height : 5.36 / 8.46 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Road data, segment # 2: HWY 417 WB (day/night)

 Car traffic volume : 59370/5163 veh/TimePeriod *
 Medium truck volume : 4723/411 veh/TimePeriod *
 Heavy truck volume : 3373/293 veh/TimePeriod *
 Posted speed limit : 100 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): 73332
 Percentage of Annual Growth : 0.00
 Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: HWY 417 WB (day/night)

 Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 390.70 / 390.70 m
 Receiver height : 5.36 / 8.46 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: HWY 417 EB (day)

 Source height = 1.50 m

ROAD (0.00 + 57.63 + 0.00) = 57.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.54	81.40	0.00	-22.51	-1.26	0.00	0.00	0.00	57.63

Segment Leq : 57.63 dBA

↑
 Results segment # 2: HWY 417 WB (day)

Source height = 1.50 m

ROAD (0.00 + 58.28 + 0.00) = 58.28 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.54	81.40	0.00	-21.86	-1.26	0.00	0.00	0.00	58.28

Segment Leq : 58.28 dBA

Total Leq All Segments: 60.98 dBA

↑

Results segment # 1: HWY 417 EB (night)

Source height = 1.49 m

ROAD (0.00 + 51.56 + 0.00) = 51.56 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.45	73.80	0.00	-21.15	-1.08	0.00	0.00	0.00	51.56

Segment Leq : 51.56 dBA

↑

Results segment # 2: HWY 417 WB (night)

Source height = 1.49 m

ROAD (0.00 + 52.17 + 0.00) = 52.17 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.45	73.80	0.00	-20.55	-1.08	0.00	0.00	0.00	52.17

Segment Leq : 52.17 dBA

Total Leq All Segments: 54.89 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 68.75
(NIGHT): 62.11



Filename: arc6r10.te Time Period: Day/Night 16/8 hours
Description: Arcadia Stage 6, R10 POW, TE-8 Stacked Towns

Road data, segment # 1: Campeau East (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau East (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 22.40 / 22.40 m
Receiver height : 4.17 / 7.11 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Campeau West (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Campeau West (day/night)

 Angle1 Angle2 : -90.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 35.00 / 35.00 m
 Receiver height : 5.36 / 8.46 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: Campeau East (day)

Source height = 1.50 m

ROAD (0.00 + 66.59 + 0.00) = 66.59 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.58	70.67	0.00	-2.75	-1.32	0.00	0.00	0.00	66.59

Segment Leq : 66.59 dBA

↑
 Results segment # 2: Campeau West (day)

Source height = 1.50 m

ROAD (0.00 + 63.73 + 0.00) = 63.73 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.54	70.67	0.00	-5.68	-1.26	0.00	0.00	0.00	63.73

Segment Leq : 63.73 dBA

Total Leq All Segments: 68.40 dBA

↑
 Results segment # 1: Campeau East (night)

Source height = 1.50 m

ROAD (0.00 + 59.31 + 0.00) = 59.31 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.49	63.07	0.00	-2.60	-1.16	0.00	0.00	0.00	59.31

Segment Leq : 59.31 dBA

↑

Results segment # 2: Campeau West (night)

Source height = 1.50 m

ROAD (0.00 + 56.65 + 0.00) = 56.65 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.45	63.07	0.00	-5.34	-1.08	0.00	0.00	0.00	56.65

Segment Leq : 56.65 dBA

Total Leq All Segments: 61.19 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 68.40
(NIGHT): 61.19

↑

↑

Filename: arc6r11.te Time Period: Day/Night 16/8 hours
Description: Arcadia Stage 6 - R11 POW, Block 12, east side

Road data, segment # 1: Campeau East (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau East (day/night)

Angle1 Angle2 : 0.00 deg 72.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 49.70 / 49.70 m
Receiver height : 4.48 / 7.24 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Campeau West (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Campeau West (day/night)

 Angle1 Angle2 : 0.00 deg 72.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 62.20 / 62.20 m
 Receiver height : 4.48 / 7.24 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: Campeau East (day)

Source height = 1.50 m

ROAD (0.00 + 57.78 + 0.00) = 57.78 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	72	0.57	70.67	0.00	-8.17	-4.72	0.00	0.00	0.00	57.78

Segment Leq : 57.78 dBA

↑
 Results segment # 2: Campeau West (day)

Source height = 1.50 m

ROAD (0.00 + 56.25 + 0.00) = 56.25 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	72	0.57	70.67	0.00	-9.70	-4.72	0.00	0.00	0.00	56.25

Segment Leq : 56.25 dBA

Total Leq All Segments: 60.09 dBA

↑
 Results segment # 1: Campeau East (night)

Source height = 1.50 m

ROAD (0.00 + 50.71 + 0.00) = 50.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	72	0.49	63.07	0.00	-7.74	-4.62	0.00	0.00	0.00	50.71

Segment Leq : 50.71 dBA

↑

Results segment # 2: Campeau West (night)

Source height = 1.50 m

ROAD (0.00 + 49.26 + 0.00) = 49.26 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	72	0.49	63.07	0.00	-9.19	-4.62	0.00	0.00	0.00	49.26

Segment Leq : 49.26 dBA

Total Leq All Segments: 53.06 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 60.09
(NIGHT): 53.06

↑

↑

Filename: arc6r12.te Time Period: Day/Night 16/8 hours
Description: Arcadia Stage 6 - R12 POW, Blk 5 Rear Lane Towns

Road data, segment # 1: Campeau East (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau East (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 26.30 / 26.30 m
Receiver height : 4.17 / 7.11 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Campeau West (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Campeau West (day/night)

 Angle1 Angle2 : 0.00 deg 90.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 39.00 / 39.00 m
 Receiver height : 4.17 / 7.11 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: Campeau East (day)

Source height = 1.50 m

ROAD (0.00 + 62.48 + 0.00) = 62.48 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.58	70.67	0.00	-3.85	-4.33	0.00	0.00	0.00	62.48

Segment Leq : 62.48 dBA

↑
 Results segment # 2: Campeau West (day)

Source height = 1.50 m

ROAD (0.00 + 59.78 + 0.00) = 59.78 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.58	70.67	0.00	-6.56	-4.33	0.00	0.00	0.00	59.78

Segment Leq : 59.78 dBA

Total Leq All Segments: 64.35 dBA

↑
 Results segment # 1: Campeau East (night)

Source height = 1.50 m

ROAD (0.00 + 55.26 + 0.00) = 55.26 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.49	63.07	0.00	-3.64	-4.17	0.00	0.00	0.00	55.26

Segment Leq : 55.26 dBA

↑

Results segment # 2: Campeau West (night)

Source height = 1.50 m

ROAD (0.00 + 52.71 + 0.00) = 52.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.49	63.07	0.00	-6.19	-4.17	0.00	0.00	0.00	52.71

Segment Leq : 52.71 dBA

Total Leq All Segments: 57.18 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 64.35
(NIGHT): 57.18

↑

↑

Filename: arc6r13.te Time Period: Day/Night 16/8 hours
Description: Arcadia Stage 6 - R13 POW, TE-8 Stacked Towns

Road data, segment # 1: Campeau East (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau East (day/night)

Angle1 Angle2 : 0.00 deg 61.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 32.50 / 32.50 m
Receiver height : 5.36 / 8.46 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑

Road data, segment # 2: Campeau West (day/night)

Car traffic volume : 14168/1232 veh/TimePeriod *
Medium truck volume : 1127/98 veh/TimePeriod *
Heavy truck volume : 805/70 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 17500
Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00
 Medium Truck % of Total Volume : 7.00
 Heavy Truck % of Total Volume : 5.00
 Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Campeau West (day/night)

 Angle1 Angle2 : 0.00 deg 61.00 deg
 Wood depth : 0 (No woods.)
 No of house rows : 0 / 0
 Surface : 1 (Absorptive ground surface)
 Receiver source distance : 45.00 / 45.00 m
 Receiver height : 5.36 / 8.46 m
 Topography : 1 (Flat/gentle slope; no barrier)
 Reference angle : 0.00

↑
 Results segment # 1: Campeau East (day)

Source height = 1.50 m

ROAD (0.00 + 60.29 + 0.00) = 60.29 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	61	0.54	70.67	0.00	-5.19	-5.19	0.00	0.00	0.00	60.29

Segment Leq : 60.29 dBA

↑
 Results segment # 2: Campeau West (day)

Source height = 1.50 m

ROAD (0.00 + 58.11 + 0.00) = 58.11 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	61	0.54	70.67	0.00	-7.37	-5.19	0.00	0.00	0.00	58.11

Segment Leq : 58.11 dBA

Total Leq All Segments: 62.35 dBA

↑
 Results segment # 1: Campeau East (night)

Source height = 1.50 m

ROAD (0.00 + 53.09 + 0.00) = 53.09 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	61	0.45	63.07	0.00	-4.87	-5.11	0.00	0.00	0.00	53.09

Segment Leq : 53.09 dBA

↑

Results segment # 2: Campeau West (night)

Source height = 1.50 m

ROAD (0.00 + 51.04 + 0.00) = 51.04 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	61	0.45	63.07	0.00	-6.92	-5.11	0.00	0.00	0.00	51.04

Segment Leq : 51.04 dBA

Total Leq All Segments: 55.20 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 62.35
(NIGHT): 55.20

↑

↑

Appendix C

Transportation Mitigated
Noise Source Predictions

Filename: arc6r122.te Time Period: Day/Night 16/8 hours
 Description: Arcadia 6 - R1 OLA Amenity 2.2m Barrier

Rail data, segment # 1: LRT EB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 1: LRT EB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg   90.00 deg
Wood depth      :           0   (No woods.)
No of house rows :           0 / 0
Surface         :           1   (Absorptive ground surface)
Receiver source distance : 18.20 / 18.20 m
Receiver height : 1.50 / 1.50 m
Topography      :           4   (Elevated; with barrier)
No Whistle
Barrier angle1  : -90.00 deg   Angle2 : 90.00 deg
Barrier height  : 2.20 m
Elevation       : 6.37 m
Barrier receiver distance : 5.80 / 5.80 m
Source elevation : 104.00 m
Receiver elevation : 97.63 m
Barrier elevation : 97.78 m
Reference angle : 0.00
  
```

↑
 Rail data, segment # 2: LRT WB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 2: LRT WB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg   90.00 deg
Wood depth      :           0   (No woods.)
No of house rows :           0 / 0
Surface         :           1   (Absorptive ground surface)
Receiver source distance : 15.00 / 15.00 m
Receiver height : 1.50 / 1.50 m
Topography      :           4   (Elevated; with barrier)
  
```

No Whistle

Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
 Barrier height : 2.20 m
 Elevation : 6.37 m
 Barrier receiver distance : 5.80 / 5.80 m
 Source elevation : 104.00 m
 Receiver elevation : 97.63 m
 Barrier elevation : 97.78 m
 Reference angle : 0.00

↑

Results segment # 1: LRT EB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	4.18 !	101.96
0.50 !	1.50 !	3.06 !	100.84

LOCOMOTIVE (0.00 + 60.51 + 0.00) = 60.51 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.26	62.65	-1.06	-0.68	0.00	0.00	-0.22	60.69*
-90	90	0.39	62.65	-1.17	-0.97	0.00	0.00	0.00	60.51

* Bright Zone !

WHEEL (0.00 + 64.99 + 0.00) = 64.99 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.37	67.42	-1.15	-0.91	0.00	0.00	-1.19	64.17*
-90	90	0.50	67.42	-1.26	-1.17	0.00	0.00	0.00	64.99

* Bright Zone !

Segment Leq : 66.31 dBA

↑

Results segment # 2: LRT WB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
-------------------	---------------------	--------------------	------------------------------

```

-----+-----+-----+-----
      4.00 !      1.50 !      4.78 !      102.56
      0.50 !      1.50 !      3.43 !      101.21

```

LOCOMOTIVE (0.00 + 61.69 + 0.00) = 61.69 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.26	62.65	0.00	-0.68	0.00	0.00	-0.13	61.84*
-90	90	0.39	62.65	0.00	-0.97	0.00	0.00	0.00	61.69

* Bright Zone !

WHEEL (0.00 + 66.25 + 0.00) = 66.25 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.37	67.42	0.00	-0.91	0.00	0.00	-0.48	66.03*
-90	90	0.50	67.42	0.00	-1.17	0.00	0.00	0.00	66.25

* Bright Zone !

Segment Leq : 67.55 dBA

Total Leq All Segments: 69.98 dBA

↑
Results segment # 1: LRT EB (night)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	4.18 !	101.96
0.50 !	1.50 !	3.06 !	100.84

LOCOMOTIVE (0.00 + 53.38 + 0.00) = 53.38 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.26	55.52	-1.06	-0.68	0.00	0.00	-0.22	53.56*
-90	90	0.39	55.52	-1.17	-0.97	0.00	0.00	0.00	53.38

* Bright Zone !

WHEEL (0.00 + 57.86 + 0.00) = 57.86 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.37	60.29	-1.15	-0.91	0.00	0.00	-1.19	57.04*
-90	90	0.50	60.29	-1.26	-1.17	0.00	0.00	0.00	57.86

* Bright Zone !

Segment Leq : 59.18 dBA

↑
Results segment # 2: LRT WB (night)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	4.78 !	102.56
0.50 !	1.50 !	3.43 !	101.21

LOCOMOTIVE (0.00 + 54.55 + 0.00) = 54.55 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.26	55.52	0.00	-0.68	0.00	0.00	-0.13	54.71*
-90	90	0.39	55.52	0.00	-0.97	0.00	0.00	0.00	54.55

* Bright Zone !

WHEEL (0.00 + 59.12 + 0.00) = 59.12 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.37	60.29	0.00	-0.91	0.00	0.00	-0.48	58.90*
-90	90	0.50	60.29	0.00	-1.17	0.00	0.00	0.00	59.12

* Bright Zone !

Segment Leq : 60.42 dBA

Total Leq All Segments: 62.85 dBA

↑
Road data, segment # 1: HWY 417 EB (day/night)

Car traffic volume	: 59370/5163	veh/TimePeriod	*
Medium truck volume	: 4723/411	veh/TimePeriod	*
Heavy truck volume	: 3373/293	veh/TimePeriod	*
Posted speed limit	: 100	km/h	
Road gradient	: 1	%	

Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: HWY 417 EB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 310.60 / 310.60 m
Receiver height : 1.50 / 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 2.20 m
Barrier receiver distance : 5.80 / 5.80 m
Source elevation : 97.49 m
Receiver elevation : 97.63 m
Barrier elevation : 97.78 m
Reference angle : 0.00

↑

Road data, segment # 2: HWY 417 WB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: HWY 417 WB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg

```

Wood depth           :      0      (No woods.)
No of house rows    :      0 / 0
Surface             :      1      (Absorptive ground surface)
Receiver source distance : 264.90 / 264.90 m
Receiver height     :      1.50 / 1.50 m
Topography          :      2      (Flat/gentle slope; with barrier)
Barrier angle1      : -90.00 deg   Angle2 : 90.00 deg
Barrier height      :      2.20 m
Barrier receiver distance : 5.80 / 5.80 m
Source elevation    :      97.49 m
Receiver elevation  :      97.63 m
Barrier elevation   :      97.78 m
Reference angle     :      0.00

```

↑
Results segment # 1: HWY 417 EB (day)

Source height = 1.50 m

Barrier height for grazing incidence

```

-----
Source      ! Receiver  ! Barrier    ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
          1.50 !      1.50 !      1.35 !      99.13

```

ROAD (0.00 + 53.35 + 0.00) = 53.35 dBA

```

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
-----
  -90    90    0.53  81.40  0.00 -20.11 -1.23  0.00  0.00 -6.71  53.35
-----

```

Segment Leq : 53.35 dBA

↑
Results segment # 2: HWY 417 WB (day)

Source height = 1.50 m

Barrier height for grazing incidence

```

-----
Source      ! Receiver  ! Barrier    ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
          1.50 !      1.50 !      1.35 !      99.13

```

ROAD (0.00 + 54.40 + 0.00) = 54.40 dBA

```

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
-----

```

-90 90 0.53 81.40 0.00 -19.06 -1.23 0.00 0.00 -6.72 54.40

Segment Leq : 54.40 dBA

Total Leq All Segments: 56.92 dBA

↑
Results segment # 1: HWY 417 EB (night)

Source height = 1.49 m

Barrier height for grazing incidence

Source Height (m)	! Receiver ! Height (m)	! Barrier ! Height (m)	! Elevation of ! Barrier Top (m)
1.49 !	1.50 !	1.35 !	99.13

ROAD (0.00 + 45.75 + 0.00) = 45.75 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.53	73.80	0.00	-20.11	-1.23	0.00	0.00	-6.71	45.75

Segment Leq : 45.75 dBA

↑
Results segment # 2: HWY 417 WB (night)

Source height = 1.49 m

Barrier height for grazing incidence

Source Height (m)	! Receiver ! Height (m)	! Barrier ! Height (m)	! Elevation of ! Barrier Top (m)
1.49 !	1.50 !	1.35 !	99.13

ROAD (0.00 + 46.80 + 0.00) = 46.80 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.53	73.80	0.00	-19.06	-1.23	0.00	0.00	-6.72	46.80

Segment Leq : 46.80 dBA

Total Leq All Segments: 49.32 dBA



TOTAL Leq FROM ALL SOURCES (DAY): 70.19
(NIGHT): 63.04



Filename: arc6r125.te Time Period: Day/Night 16/8 hours
 Description: Arcadia 6 - R1 OLA Amenity 2.5m Barrier

Rail data, segment # 1: LRT EB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type           !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 1: LRT EB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg   90.00 deg
Wood depth      :           0   (No woods.)
No of house rows :           0 / 0
Surface         :           1   (Absorptive ground surface)
Receiver source distance : 18.20 / 18.20 m
Receiver height : 1.50 / 1.50 m
Topography      :           4   (Elevated; with barrier)
No Whistle
Barrier angle1  : -90.00 deg   Angle2 : 90.00 deg
Barrier height  : 2.50 m
Elevation       : 6.37 m
Barrier receiver distance : 5.80 / 5.80 m
Source elevation : 104.00 m
Receiver elevation : 97.63 m
Barrier elevation : 97.78 m
Reference angle : 0.00
  
```

↑
 Rail data, segment # 2: LRT WB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type           !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 2: LRT WB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg   90.00 deg
Wood depth      :           0   (No woods.)
No of house rows :           0 / 0
Surface         :           1   (Absorptive ground surface)
Receiver source distance : 15.00 / 15.00 m
Receiver height : 1.50 / 1.50 m
Topography      :           4   (Elevated; with barrier)
  
```

No Whistle

Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
 Barrier height : 2.50 m
 Elevation : 6.37 m
 Barrier receiver distance : 5.80 / 5.80 m
 Source elevation : 104.00 m
 Receiver elevation : 97.63 m
 Barrier elevation : 97.78 m
 Reference angle : 0.00

↑

Results segment # 1: LRT EB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00	1.50	4.18	101.96
0.50	1.50	3.06	100.84

LOCOMOTIVE (0.00 + 60.51 + 0.00) = 60.51 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.24	62.65	-1.04	-0.64	0.00	0.00	-0.31	60.66*
-90	90	0.39	62.65	-1.17	-0.97	0.00	0.00	0.00	60.51

* Bright Zone !

WHEEL (0.00 + 64.99 + 0.00) = 64.99 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.35	67.42	-1.13	-0.87	0.00	0.00	-3.57	61.85*
-90	90	0.50	67.42	-1.26	-1.17	0.00	0.00	0.00	64.99

* Bright Zone !

Segment Leq : 66.31 dBA

↑

Results segment # 2: LRT WB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
-------------------	---------------------	--------------------	------------------------------

```

-----+-----+-----+-----
      4.00 !      1.50 !      4.78 !      102.56
      0.50 !      1.50 !      3.43 !      101.21

```

LOCOMOTIVE (0.00 + 61.69 + 0.00) = 61.69 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.24	62.65	0.00	-0.64	0.00	0.00	-0.17	61.84*
-90	90	0.39	62.65	0.00	-0.97	0.00	0.00	0.00	61.69

* Bright Zone !

WHEEL (0.00 + 66.25 + 0.00) = 66.25 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.35	67.42	0.00	-0.87	0.00	0.00	-0.93	65.62*
-90	90	0.50	67.42	0.00	-1.17	0.00	0.00	0.00	66.25

* Bright Zone !

Segment Leq : 67.55 dBA

Total Leq All Segments: 69.98 dBA

↑
Results segment # 1: LRT EB (night)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	4.18 !	101.96
0.50 !	1.50 !	3.06 !	100.84

LOCOMOTIVE (0.00 + 53.38 + 0.00) = 53.38 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.24	55.52	-1.04	-0.64	0.00	0.00	-0.31	53.53*
-90	90	0.39	55.52	-1.17	-0.97	0.00	0.00	0.00	53.38

* Bright Zone !

WHEEL (0.00 + 57.86 + 0.00) = 57.86 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.35	60.29	-1.13	-0.87	0.00	0.00	-3.57	54.71*
-90	90	0.50	60.29	-1.26	-1.17	0.00	0.00	0.00	57.86

* Bright Zone !

Segment Leq : 59.18 dBA

↑
Results segment # 2: LRT WB (night)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	4.78 !	102.56
0.50 !	1.50 !	3.43 !	101.21

LOCOMOTIVE (0.00 + 54.55 + 0.00) = 54.55 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.24	55.52	0.00	-0.64	0.00	0.00	-0.17	54.71*
-90	90	0.39	55.52	0.00	-0.97	0.00	0.00	0.00	54.55

* Bright Zone !

WHEEL (0.00 + 59.12 + 0.00) = 59.12 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.35	60.29	0.00	-0.87	0.00	0.00	-0.93	58.49*
-90	90	0.50	60.29	0.00	-1.17	0.00	0.00	0.00	59.12

* Bright Zone !

Segment Leq : 60.42 dBA

Total Leq All Segments: 62.85 dBA

↑
Road data, segment # 1: HWY 417 EB (day/night)

Car traffic volume	: 59370/5163	veh/TimePeriod	*
Medium truck volume	: 4723/411	veh/TimePeriod	*
Heavy truck volume	: 3373/293	veh/TimePeriod	*
Posted speed limit	: 100	km/h	
Road gradient	: 1	%	

Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: HWY 417 EB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 310.60 / 310.60 m
Receiver height : 1.50 / 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 2.50 m
Barrier receiver distance : 5.80 / 5.80 m
Source elevation : 97.49 m
Receiver elevation : 97.63 m
Barrier elevation : 97.78 m
Reference angle : 0.00

↑

Road data, segment # 2: HWY 417 WB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: HWY 417 WB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg

```

Wood depth           :      0      (No woods.)
No of house rows    :      0 / 0
Surface              :      1      (Absorptive ground surface)
Receiver source distance : 264.90 / 264.90 m
Receiver height      :   1.50 / 1.50  m
Topography           :      2      (Flat/gentle slope; with barrier)
Barrier angle1      :  -90.00 deg   Angle2 : 90.00 deg
Barrier height       :   2.50 m
Barrier receiver distance : 5.80 / 5.80  m
Source elevation     :   97.49 m
Receiver elevation   :   97.63 m
Barrier elevation    :   97.78 m
Reference angle      :   0.00

```

↑
Results segment # 1: HWY 417 EB (day)

Source height = 1.50 m

Barrier height for grazing incidence

```

-----
Source      ! Receiver  ! Barrier    ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
          1.50 !      1.50 !      1.35 !      99.13

```

ROAD (0.00 + 52.63 + 0.00) = 52.63 dBA

```

Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-----
  -90    90    0.51  81.40   0.00 -19.88  -1.19   0.00   0.00  -7.70  52.63
-----

```

Segment Leq : 52.63 dBA

↑
Results segment # 2: HWY 417 WB (day)

Source height = 1.50 m

Barrier height for grazing incidence

```

-----
Source      ! Receiver  ! Barrier    ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
          1.50 !      1.50 !      1.35 !      99.13

```

ROAD (0.00 + 53.67 + 0.00) = 53.67 dBA

```

Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-----

```

-90 90 0.51 81.40 0.00 -18.83 -1.19 0.00 0.00 -7.70 53.67

Segment Leq : 53.67 dBA

Total Leq All Segments: 56.19 dBA

↑
Results segment # 1: HWY 417 EB (night)

Source height = 1.49 m

Barrier height for grazing incidence

Source Height (m)	! Receiver ! Height (m)	! Barrier ! Height (m)	! Elevation of ! Barrier Top (m)
1.49 !	1.50 !	1.35 !	99.13

ROAD (0.00 + 45.03 + 0.00) = 45.03 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.51	73.80	0.00	-19.88	-1.19	0.00	0.00	-7.70	45.03

Segment Leq : 45.03 dBA

↑
Results segment # 2: HWY 417 WB (night)

Source height = 1.49 m

Barrier height for grazing incidence

Source Height (m)	! Receiver ! Height (m)	! Barrier ! Height (m)	! Elevation of ! Barrier Top (m)
1.49 !	1.50 !	1.35 !	99.13

ROAD (0.00 + 46.07 + 0.00) = 46.07 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.51	73.80	0.00	-18.83	-1.19	0.00	0.00	-7.70	46.07

Segment Leq : 46.07 dBA

Total Leq All Segments: 48.59 dBA



TOTAL Leq FROM ALL SOURCES (DAY): 70.16
(NIGHT): 63.01



Filename: arc6r165.te Time Period: Day/Night 16/8 hours
 Description: Arcadia 6 - R1 OLA Amenity 6.5m Barrier

Rail data, segment # 1: LRT EB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 1: LRT EB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg   90.00 deg
Wood depth      :           0   (No woods.)
No of house rows :           0 / 0
Surface         :           1   (Absorptive ground surface)
Receiver source distance : 18.20 / 18.20 m
Receiver height : 1.50 / 1.50 m
Topography     :           4   (Elevated; with barrier)
No Whistle
Barrier angle1 : -90.00 deg   Angle2 : 90.00 deg
Barrier height : 6.50 m
Elevation     : 6.37 m
Barrier receiver distance : 5.80 / 5.80 m
Source elevation : 104.00 m
Receiver elevation : 97.63 m
Barrier elevation : 97.78 m
Reference angle : 0.00
  
```

↑
 Rail data, segment # 2: LRT WB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 2: LRT WB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg   90.00 deg
Wood depth      :           0   (No woods.)
No of house rows :           0 / 0
Surface         :           1   (Absorptive ground surface)
Receiver source distance : 15.00 / 15.00 m
Receiver height : 1.50 / 1.50 m
Topography     :           4   (Elevated; with barrier)
  
```

No Whistle

Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
 Barrier height : 6.50 m
 Elevation : 6.37 m
 Barrier receiver distance : 5.80 / 5.80 m
 Source elevation : 104.00 m
 Receiver elevation : 97.63 m
 Barrier elevation : 97.78 m
 Reference angle : 0.00

↑

Results segment # 1: LRT EB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00	1.50	4.18	101.96
0.50	1.50	3.06	100.84

LOCOMOTIVE (0.00 + 50.69 + 0.00) = 50.69 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	62.65	-0.84	-0.01	0.00	0.00	-11.11	50.69

WHEEL (0.00 + 52.03 + 0.00) = 52.03 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.11	67.42	-0.93	-0.31	0.00	0.00	-14.16	52.03

Segment Leq : 54.42 dBA

↑

Results segment # 2: LRT WB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00	1.50	4.78	102.56
0.50	1.50	3.43	101.21

LOCOMOTIVE (0.00 + 53.16 + 0.00) = 53.16 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

 -90 90 0.00 62.65 0.00 -0.01 0.00 0.00 -9.48 53.16

WHEEL (0.00 + 53.44 + 0.00) = 53.44 dBA

Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

 -90 90 0.11 67.42 0.00 -0.31 0.00 0.00 -13.68 53.44

Segment Leq : 56.31 dBA

Total Leq All Segments: 58.48 dBA

↑

Results segment # 1: LRT EB (night)

 Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	4.18 !	101.96
0.50 !	1.50 !	3.06 !	100.84

LOCOMOTIVE (0.00 + 43.56 + 0.00) = 43.56 dBA

Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

 -90 90 0.00 55.52 -0.84 -0.01 0.00 0.00 -11.11 43.56

WHEEL (0.00 + 44.90 + 0.00) = 44.90 dBA

Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

 -90 90 0.11 60.29 -0.93 -0.31 0.00 0.00 -14.16 44.90

Segment Leq : 47.29 dBA

↑

Results segment # 2: LRT WB (night)

 Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	4.78 !	102.56

0.50 ! 1.50 ! 3.43 ! 101.21

LOCOMOTIVE (0.00 + 46.03 + 0.00) = 46.03 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.00	55.52	0.00	-0.01	0.00	0.00	-9.48	46.03
-----	----	------	-------	------	-------	------	------	-------	-------

WHEEL (0.00 + 46.31 + 0.00) = 46.31 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	90	0.11	60.29	0.00	-0.31	0.00	0.00	-13.68	46.31
-----	----	------	-------	------	-------	------	------	--------	-------

Segment Leq : 49.18 dBA

Total Leq All Segments: 51.35 dBA

↑

Road data, segment # 1: HWY 417 EB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *

Medium truck volume : 4723/411 veh/TimePeriod *

Heavy truck volume : 3373/293 veh/TimePeriod *

Posted speed limit : 100 km/h

Road gradient : 1 %

Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 73332

Percentage of Annual Growth : 0.00

Number of Years of Growth : 0.00

Medium Truck % of Total Volume : 7.00

Heavy Truck % of Total Volume : 5.00

Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: HWY 417 EB (day/night)

Angle1	Angle2	: -90.00 deg	90.00 deg
Wood depth	:	0	(No woods.)
No of house rows	:	0 / 0	
Surface	:	1	(Absorptive ground surface)
Receiver source distance	:	310.60 / 310.60 m	
Receiver height	:	1.50 / 1.50 m	
Topography	:	2	(Flat/gentle slope; with barrier)
Barrier angle1	:	-90.00 deg	Angle2 : 90.00 deg
Barrier height	:	6.50 m	
Barrier receiver distance	:	5.80 / 5.80 m	
Source elevation	:	97.49 m	

Receiver elevation : 97.63 m
Barrier elevation : 97.78 m
Reference angle : 0.00

↑
Road data, segment # 2: HWY 417 WB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: HWY 417 WB (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 264.90 / 264.90 m
Receiver height : 1.50 / 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 6.50 m
Barrier receiver distance : 5.80 / 5.80 m
Source elevation : 97.49 m
Receiver elevation : 97.63 m
Barrier elevation : 97.78 m
Reference angle : 0.00

↑
Results segment # 1: HWY 417 EB (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)

```

-----+-----+-----+-----
          1.50 !          1.50 !          1.35 !          99.13

```

ROAD (0.00 + 48.15 + 0.00) = 48.15 dBA

```

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
-90     90     0.27 81.40  0.00 -16.72 -0.70  0.00  0.00 -15.83 48.15
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----

```

Segment Leq : 48.15 dBA

↑
Results segment # 2: HWY 417 WB (day)

Source height = 1.50 m

Barrier height for grazing incidence

```

-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
Source      ! Receiver      ! Barrier      ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
          1.50 !          1.50 !          1.35 !          99.13

```

ROAD (0.00 + 49.02 + 0.00) = 49.02 dBA

```

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
-90     90     0.27 81.40  0.00 -15.84 -0.70  0.00  0.00 -15.84 49.02
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----

```

Segment Leq : 49.02 dBA

Total Leq All Segments: 51.62 dBA

↑
Results segment # 1: HWY 417 EB (night)

Source height = 1.49 m

Barrier height for grazing incidence

```

-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
Source      ! Receiver      ! Barrier      ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
          1.49 !          1.50 !          1.35 !          99.13

```

ROAD (0.00 + 40.55 + 0.00) = 40.55 dBA

```

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----

```

-90 90 0.27 73.80 0.00 -16.72 -0.70 0.00 0.00 -15.83 40.55

Segment Leq : 40.55 dBA

↑

Results segment # 2: HWY 417 WB (night)

Source height = 1.49 m

Barrier height for grazing incidence

Source Height (m)	! Receiver ! Height (m)	! Barrier ! Height (m)	! Elevation of ! Barrier Top (m)			
1.49	!	1.50	!	1.35	!	99.13

ROAD (0.00 + 41.42 + 0.00) = 41.42 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.27	73.80	0.00	-15.84	-0.70	0.00	0.00	-15.84	41.42

Segment Leq : 41.42 dBA

Total Leq All Segments: 44.02 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 59.29
(NIGHT): 52.08

↑

↑

Filename: arc6r522.te Time Period: Day/Night 16/8 hours
 Description: Arcadia Stage 6 - R5 OLA Block 1 2.2m Barrier

Rail data, segment # 1: LRT EB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type           !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 1: LRT EB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg  43.00 deg
Wood depth      :          0   (No woods.)
No of house rows :          0 / 0
Surface         :          1   (Absorptive ground surface)
Receiver source distance : 29.40 / 29.40 m
Receiver height :  1.50 / 1.50 m
Topography     :          2   (Flat/gentle slope; with barrier)
No Whistle
Barrier angle1 : -90.00 deg  Angle2 : 43.00 deg
Barrier height :  2.20 m
Barrier receiver distance :  7.00 / 7.00 m
Source elevation : 103.00 m
Receiver elevation :  97.49 m
Barrier elevation :  97.10 m
Reference angle :  0.00
  
```

↑
 Rail data, segment # 2: LRT WB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type           !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 2: LRT WB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg  43.00 deg
Wood depth      :          0   (No woods.)
No of house rows :          0 / 0
Surface         :          1   (Absorptive ground surface)
Receiver source distance : 24.90 / 24.90 m
Receiver height :  1.50 / 1.50 m
Topography     :          2   (Flat/gentle slope; with barrier)
No Whistle
  
```


Barrier angle1 : -90.00 deg Angle2 : 43.00 deg
 Barrier height : 2.20 m
 Barrier receiver distance : 7.00 / 7.00 m
 Source elevation : 103.00 m
 Receiver elevation : 97.49 m
 Barrier elevation : 97.10 m
 Reference angle : 0.00

↑
 Results segment # 1: LRT EB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00	1.50	3.80	100.90
0.50	1.50	2.96	100.06

LOCOMOTIVE (0.00 + 55.76 + 0.00) = 55.76 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.45	62.65	-4.25	-2.09	0.00	0.00	-0.26	56.06*
-90	43	0.58	62.65	-4.63	-2.26	0.00	0.00	0.00	55.76

* Bright Zone !

WHEEL (0.00 + 60.22 + 0.00) = 60.22 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.56	67.42	-4.55	-2.23	0.00	0.00	-2.30	58.34*
-90	43	0.66	67.42	-4.85	-2.35	0.00	0.00	0.00	60.22

* Bright Zone !

Segment Leq : 61.55 dBA

↑
 Results segment # 2: LRT WB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00	1.50	4.14	101.24

0.50 ! 1.50 ! 3.16 ! 100.26

LOCOMOTIVE (0.00 + 56.90 + 0.00) = 56.90 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.45	62.65	-3.20	-2.09	0.00	0.00	-0.17	57.20*
-90	43	0.58	62.65	-3.49	-2.26	0.00	0.00	0.00	56.90

* Bright Zone !

WHEEL (0.00 + 61.42 + 0.00) = 61.42 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.56	67.42	-3.43	-2.23	0.00	0.00	-0.73	61.03*
-90	43	0.66	67.42	-3.65	-2.35	0.00	0.00	0.00	61.42

* Bright Zone !

Segment Leq : 62.73 dBA

Total Leq All Segments: 65.19 dBA

↑

Results segment # 1: LRT EB (night)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	3.80 !	100.90
0.50 !	1.50 !	2.96 !	100.06

LOCOMOTIVE (0.00 + 48.63 + 0.00) = 48.63 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.45	55.52	-4.25	-2.09	0.00	0.00	-0.26	48.93*
-90	43	0.58	55.52	-4.63	-2.26	0.00	0.00	0.00	48.63

* Bright Zone !

WHEEL (0.00 + 53.09 + 0.00) = 53.09 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.56	60.29	-4.55	-2.23	0.00	0.00	-2.30	51.21*
-90	43	0.66	60.29	-4.85	-2.35	0.00	0.00	0.00	53.09

* Bright Zone !

Segment Leq : 54.42 dBA

↑
Results segment # 2: LRT WB (night)

Barrier height for grazing incidence

Source Height (m)	! Receiver ! Height (m)	! Barrier ! Height (m)	! Elevation of ! Barrier Top (m)
4.00 !	1.50 !	4.14 !	101.24
0.50 !	1.50 !	3.16 !	100.26

LOCOMOTIVE (0.00 + 49.77 + 0.00) = 49.77 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.45	55.52	-3.20	-2.09	0.00	0.00	-0.17	50.06*
-90	43	0.58	55.52	-3.49	-2.26	0.00	0.00	0.00	49.77

* Bright Zone !

WHEEL (0.00 + 54.28 + 0.00) = 54.28 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.56	60.29	-3.43	-2.23	0.00	0.00	-0.73	53.90*
-90	43	0.66	60.29	-3.65	-2.35	0.00	0.00	0.00	54.28

* Bright Zone !

Segment Leq : 55.60 dBA

Total Leq All Segments: 58.06 dBA

↑
Road data, segment # 1: HWY 417 EB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: HWY 417 EB (day/night)

Angle1 Angle2 : -90.00 deg 43.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 353.00 / 353.00 m
Receiver height : 1.50 / 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : 43.00 deg
Barrier height : 2.20 m
Barrier receiver distance : 7.00 / 7.00 m
Source elevation : 97.49 m
Receiver elevation : 98.00 m
Barrier elevation : 97.10 m
Reference angle : 0.00

↑

Road data, segment # 2: HWY 417 WB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: HWY 417 WB (day/night)

Angle1 Angle2 : -90.00 deg 43.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0

```

Surface                :      1      (Absorptive ground surface)
Receiver source distance : 311.30 / 311.30 m
Receiver height         :   1.50 / 1.50 m
Topography              :      2      (Flat/gentle slope; with barrier)
Barrier angle1          : -90.00 deg   Angle2 : 43.00 deg
Barrier height          :   2.20 m
Barrier receiver distance : 7.00 / 7.00 m
Source elevation        :   97.49 m
Receiver elevation      :   98.00 m
Barrier elevation       :   97.10 m
Reference angle         :    0.00

```

↑
Results segment # 1: HWY 417 EB (day)

Source height = 1.50 m

Barrier height for grazing incidence

```

-----
Source      ! Receiver  ! Barrier    ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
          1.50 !         1.50 !         2.39 !         99.49

```

ROAD (0.00 + 56.27 + 0.00) = 56.27 dBA

```

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
-----
  -90   43   0.53  81.40   0.00 -20.96 -2.19  0.00  0.00 -4.90  53.35*
  -90   43   0.66  81.40   0.00 -22.77 -2.35  0.00  0.00  0.00  56.27
-----

```

* Bright Zone !

Segment Leq : 56.27 dBA

↑
Results segment # 2: HWY 417 WB (day)

Source height = 1.50 m

Barrier height for grazing incidence

```

-----
Source      ! Receiver  ! Barrier    ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
          1.50 !         1.50 !         2.39 !         99.49

```

ROAD (0.00 + 57.18 + 0.00) = 57.18 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.53	81.40	0.00	-20.13	-2.19	0.00	0.00	-4.90	54.18*
-90	43	0.66	81.40	0.00	-21.86	-2.35	0.00	0.00	0.00	57.18

* Bright Zone !

Segment Leq : 57.18 dBA

Total Leq All Segments: 59.76 dBA

↑

Results segment # 1: HWY 417 EB (night)

Source height = 1.49 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.49	1.50	2.39	99.49

ROAD (0.00 + 48.68 + 0.00) = 48.68 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.53	73.80	0.00	-20.96	-2.19	0.00	0.00	-4.90	45.75*
-90	43	0.66	73.80	0.00	-22.77	-2.35	0.00	0.00	0.00	48.68

* Bright Zone !

Segment Leq : 48.68 dBA

↑

Results segment # 2: HWY 417 WB (night)

Source height = 1.49 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.49	1.50	2.39	99.49

ROAD (0.00 + 49.58 + 0.00) = 49.58 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.53	73.80	0.00	-20.13	-2.19	0.00	0.00	-4.90	46.58*
-90	43	0.66	73.80	0.00	-21.86	-2.35	0.00	0.00	0.00	49.58

* Bright Zone !

Segment Leq : 49.58 dBA

Total Leq All Segments: 52.16 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 66.28
(NIGHT): 59.05

↑

↑

Filename: arc6r525.te Time Period: Day/Night 16/8 hours
 Description: Arcadia Stage 6 - R5 OLA Block 1 2.5m Barrier

Rail data, segment # 1: LRT EB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 1: LRT EB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg  43.00 deg
Wood depth      :          0   (No woods.)
No of house rows :          0 / 0
Surface         :          1   (Absorptive ground surface)
Receiver source distance : 29.40 / 29.40 m
Receiver height :  1.50 / 1.50 m
Topography      :          2   (Flat/gentle slope; with barrier)
No Whistle
Barrier angle1  : -90.00 deg  Angle2 : 43.00 deg
Barrier height  :    2.50 m
Barrier receiver distance :  7.00 / 7.00 m
Source elevation : 103.00 m
Receiver elevation :  97.49 m
Barrier elevation :  97.10 m
Reference angle :    0.00
  
```

↑
 Rail data, segment # 2: LRT WB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 2: LRT WB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg  43.00 deg
Wood depth      :          0   (No woods.)
No of house rows :          0 / 0
Surface         :          1   (Absorptive ground surface)
Receiver source distance : 24.90 / 24.90 m
Receiver height :  1.50 / 1.50 m
Topography      :          2   (Flat/gentle slope; with barrier)
No Whistle
  
```


Barrier angle1 : -90.00 deg Angle2 : 43.00 deg
 Barrier height : 2.50 m
 Barrier receiver distance : 7.00 / 7.00 m
 Source elevation : 103.00 m
 Receiver elevation : 97.49 m
 Barrier elevation : 97.10 m
 Reference angle : 0.00

↑
 Results segment # 1: LRT EB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00	1.50	3.80	100.90
0.50	1.50	2.96	100.06

LOCOMOTIVE (0.00 + 55.76 + 0.00) = 55.76 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.44	62.65	-4.19	-2.07	0.00	0.00	-0.40	55.99*
-90	43	0.58	62.65	-4.63	-2.26	0.00	0.00	0.00	55.76

* Bright Zone !

WHEEL (0.00 + 60.22 + 0.00) = 60.22 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.54	67.42	-4.50	-2.21	0.00	0.00	-4.18	56.54*
-90	43	0.66	67.42	-4.85	-2.35	0.00	0.00	0.00	60.22

* Bright Zone !

Segment Leq : 61.55 dBA

↑
 Results segment # 2: LRT WB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00	1.50	4.14	101.24

0.50 ! 1.50 ! 3.16 ! 100.26

LOCOMOTIVE (0.00 + 56.90 + 0.00) = 56.90 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.44	62.65	-3.16	-2.07	0.00	0.00	-0.24	57.19*
-90	43	0.58	62.65	-3.49	-2.26	0.00	0.00	0.00	56.90

* Bright Zone !

WHEEL (0.00 + 61.42 + 0.00) = 61.42 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.54	67.42	-3.39	-2.21	0.00	0.00	-3.05	58.78*
-90	43	0.66	67.42	-3.65	-2.35	0.00	0.00	0.00	61.42

* Bright Zone !

Segment Leq : 62.73 dBA

Total Leq All Segments: 65.19 dBA

↑

Results segment # 1: LRT EB (night)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	3.80 !	100.90
0.50 !	1.50 !	2.96 !	100.06

LOCOMOTIVE (0.00 + 48.63 + 0.00) = 48.63 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.44	55.52	-4.19	-2.07	0.00	0.00	-0.40	48.86*
-90	43	0.58	55.52	-4.63	-2.26	0.00	0.00	0.00	48.63

* Bright Zone !

WHEEL (0.00 + 53.09 + 0.00) = 53.09 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.54	60.29	-4.50	-2.21	0.00	0.00	-4.18	49.41*
-90	43	0.66	60.29	-4.85	-2.35	0.00	0.00	0.00	53.09

* Bright Zone !

Segment Leq : 54.42 dBA

↑
Results segment # 2: LRT WB (night)

Barrier height for grazing incidence

Source Height (m)	! Receiver ! Height (m)	! Barrier ! Height (m)	! Elevation of ! Barrier Top (m)
4.00 !	1.50 !	4.14 !	101.24
0.50 !	1.50 !	3.16 !	100.26

LOCOMOTIVE (0.00 + 49.77 + 0.00) = 49.77 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.44	55.52	-3.16	-2.07	0.00	0.00	-0.24	50.06*
-90	43	0.58	55.52	-3.49	-2.26	0.00	0.00	0.00	49.77

* Bright Zone !

WHEEL (0.00 + 54.28 + 0.00) = 54.28 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.54	60.29	-3.39	-2.21	0.00	0.00	-3.05	51.64*
-90	43	0.66	60.29	-3.65	-2.35	0.00	0.00	0.00	54.28

* Bright Zone !

Segment Leq : 55.60 dBA

Total Leq All Segments: 58.06 dBA

↑
Road data, segment # 1: HWY 417 EB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: HWY 417 EB (day/night)

Angle1 Angle2 : -90.00 deg 43.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 353.00 / 353.00 m
Receiver height : 1.50 / 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : 43.00 deg
Barrier height : 2.50 m
Barrier receiver distance : 7.00 / 7.00 m
Source elevation : 97.49 m
Receiver elevation : 98.00 m
Barrier elevation : 97.10 m
Reference angle : 0.00

↑

Road data, segment # 2: HWY 417 WB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: HWY 417 WB (day/night)

Angle1 Angle2 : -90.00 deg 43.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0

```

Surface          :      1      (Absorptive ground surface)
Receiver source distance : 311.30 / 311.30 m
Receiver height   :   1.50 / 1.50 m
Topography       :      2      (Flat/gentle slope; with barrier)
Barrier angle1   : -90.00 deg   Angle2 : 43.00 deg
Barrier height   :   2.50 m
Barrier receiver distance : 7.00 / 7.00 m
Source elevation  :   97.49 m
Receiver elevation :   98.00 m
Barrier elevation :   97.10 m
Reference angle   :    0.00

```

↑
Results segment # 1: HWY 417 EB (day)

Source height = 1.50 m

Barrier height for grazing incidence

```

-----
Source      ! Receiver  ! Barrier    ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
          1.50 !         1.50 !         2.39 !         99.49

```

ROAD (0.00 + 53.48 + 0.00) = 53.48 dBA

```

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
-----
  -90    43   0.51  81.40   0.00 -20.71 -2.17  0.00  0.00 -5.03  53.48
-----

```

Segment Leq : 53.48 dBA

↑
Results segment # 2: HWY 417 WB (day)

Source height = 1.50 m

Barrier height for grazing incidence

```

-----
Source      ! Receiver  ! Barrier    ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
          1.50 !         1.50 !         2.39 !         99.49

```

ROAD (0.00 + 54.30 + 0.00) = 54.30 dBA

```

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq
-----
  -90    43   0.51  81.40   0.00 -19.89 -2.17  0.00  0.00 -5.03  54.30
-----

```

Segment Leq : 54.30 dBA

Total Leq All Segments: 56.92 dBA

↑
Results segment # 1: HWY 417 EB (night)

Source height = 1.49 m

Barrier height for grazing incidence

Source Height (m)	! Receiver ! Height (m)	! Barrier ! Height (m)	! Elevation of ! Barrier Top (m)
1.49 !	1.50 !	2.39 !	99.49

ROAD (0.00 + 45.88 + 0.00) = 45.88 dBA										
Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.51	73.80	0.00	-20.71	-2.17	0.00	0.00	-5.03	45.88

Segment Leq : 45.88 dBA

↑
Results segment # 2: HWY 417 WB (night)

Source height = 1.49 m

Barrier height for grazing incidence

Source Height (m)	! Receiver ! Height (m)	! Barrier ! Height (m)	! Elevation of ! Barrier Top (m)
1.49 !	1.50 !	2.39 !	99.49

ROAD (0.00 + 46.71 + 0.00) = 46.71 dBA										
Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.51	73.80	0.00	-19.89	-2.17	0.00	0.00	-5.03	46.71

Segment Leq : 46.71 dBA

Total Leq All Segments: 49.33 dBA



TOTAL Leq FROM ALL SOURCES (DAY): 65.79
(NIGHT): 58.61



Filename: arc6r52x.te Time Period: Day/Night 16/8 hours
 Description: Arcadia Stage 6 - R5 OLA Block 1 4.5m Barrier

Rail data, segment # 1: LRT EB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 1: LRT EB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg  43.00 deg
Wood depth      :          0   (No woods.)
No of house rows :          0 / 0
Surface         :          1   (Absorptive ground surface)
Receiver source distance : 29.40 / 29.40 m
Receiver height :  1.50 / 1.50 m
Topography     :          2   (Flat/gentle slope; with barrier)
No Whistle
Barrier angle1 : -90.00 deg  Angle2 : 43.00 deg
Barrier height :    4.50 m
Barrier receiver distance :  7.00 / 7.00 m
Source elevation : 103.00 m
Receiver elevation :  97.49 m
Barrier elevation :  97.10 m
Reference angle :    0.00
  
```

↑
 Rail data, segment # 2: LRT WB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 2: LRT WB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg  43.00 deg
Wood depth      :          0   (No woods.)
No of house rows :          0 / 0
Surface         :          1   (Absorptive ground surface)
Receiver source distance : 24.90 / 24.90 m
Receiver height :  1.50 / 1.50 m
Topography     :          2   (Flat/gentle slope; with barrier)
No Whistle
  
```


Barrier angle1 : -90.00 deg Angle2 : 43.00 deg
 Barrier height : 4.50 m
 Barrier receiver distance : 7.00 / 7.00 m
 Source elevation : 103.00 m
 Receiver elevation : 97.49 m
 Barrier elevation : 97.10 m
 Reference angle : 0.00

↑
 Results segment # 1: LRT EB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00	1.50	3.80	100.90
0.50	1.50	2.96	100.06

LOCOMOTIVE (0.00 + 50.58 + 0.00) = 50.58 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.31	62.65	-3.84	-1.89	0.00	0.00	-6.34	50.58

WHEEL (0.00 + 51.75 + 0.00) = 51.75 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.42	67.42	-4.15	-2.04	0.00	0.00	-9.48	51.75

Segment Leq : 54.21 dBA

↑
 Results segment # 2: LRT WB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00	1.50	4.14	101.24
0.50	1.50	3.16	100.26

LOCOMOTIVE (0.00 + 52.47 + 0.00) = 52.47 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.31	62.65	-2.89	-1.89	0.00	0.00	-5.40	52.47

WHEEL (0.00 + 53.35 + 0.00) = 53.35 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	43	0.42	67.42	-3.13	-2.04	0.00	0.00	-8.90	53.35
-----	----	------	-------	-------	-------	------	------	-------	-------

Segment Leq : 55.94 dBA

Total Leq All Segments: 58.17 dBA

↑

Results segment # 1: LRT EB (night)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	3.80 !	100.90
0.50 !	1.50 !	2.96 !	100.06

LOCOMOTIVE (0.00 + 43.45 + 0.00) = 43.45 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	43	0.31	55.52	-3.84	-1.89	0.00	0.00	-6.34	43.45
-----	----	------	-------	-------	-------	------	------	-------	-------

WHEEL (0.00 + 44.62 + 0.00) = 44.62 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
--------	--------	-------	--------	-------	-------	-------	-------	-------	--------

-90	43	0.42	60.29	-4.15	-2.04	0.00	0.00	-9.48	44.62
-----	----	------	-------	-------	-------	------	------	-------	-------

Segment Leq : 47.08 dBA

↑

Results segment # 2: LRT WB (night)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	4.14 !	101.24
0.50 !	1.50 !	3.16 !	100.26

LOCOMOTIVE (0.00 + 45.34 + 0.00) = 45.34 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.31	55.52	-2.89	-1.89	0.00	0.00	-5.40	45.34

WHEEL (0.00 + 46.22 + 0.00) = 46.22 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.42	60.29	-3.13	-2.04	0.00	0.00	-8.90	46.22

Segment Leq : 48.81 dBA

Total Leq All Segments: 51.04 dBA

↑

Road data, segment # 1: HWY 417 EB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: HWY 417 EB (day/night)

Angle1 Angle2 : -90.00 deg 43.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 353.00 / 353.00 m
Receiver height : 1.50 / 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : 43.00 deg
Barrier height : 4.50 m
Barrier receiver distance : 7.00 / 7.00 m
Source elevation : 97.49 m
Receiver elevation : 98.00 m
Barrier elevation : 97.10 m

Reference angle : 0.00

↑

Road data, segment # 2: HWY 417 WB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: HWY 417 WB (day/night)

Angle1 Angle2 : -90.00 deg 43.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 311.30 / 311.30 m
Receiver height : 1.50 / 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : 43.00 deg
Barrier height : 4.50 m
Barrier receiver distance : 7.00 / 7.00 m
Source elevation : 97.49 m
Receiver elevation : 98.00 m
Barrier elevation : 97.10 m
Reference angle : 0.00

↑

Results segment # 1: HWY 417 EB (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
1.50 ! 1.50 ! 2.39 ! 99.49

ROAD (0.00 + 49.63 + 0.00) = 49.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.39	81.40	0.00	-19.07	-2.00	0.00	0.00	-10.70	49.63

Segment Leq : 49.63 dBA

↑
Results segment # 2: HWY 417 WB (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	1.50	2.39	99.49

ROAD (0.00 + 50.37 + 0.00) = 50.37 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.39	81.40	0.00	-18.31	-2.00	0.00	0.00	-10.71	50.37

Segment Leq : 50.37 dBA

Total Leq All Segments: 53.03 dBA

↑
Results segment # 1: HWY 417 EB (night)

Source height = 1.49 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.49	1.50	2.39	99.49

ROAD (0.00 + 42.03 + 0.00) = 42.03 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.39	73.80	0.00	-19.07	-2.00	0.00	0.00	-10.70	42.03

Segment Leq : 42.03 dBA

↑

Results segment # 2: HWY 417 WB (night)

Source height = 1.49 m

Barrier height for grazing incidence

Source	! Receiver	! Barrier	! Elevation of			
Height (m)	! Height (m)	! Height (m)	! Barrier Top (m)			
1.49	!	1.50	!	2.39	!	99.49

ROAD (0.00 + 42.78 + 0.00) = 42.78 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.39	73.80	0.00	-18.31	-2.00	0.00	0.00	-10.71	42.78

Segment Leq : 42.78 dBA

Total Leq All Segments: 45.43 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 59.33
(NIGHT): 52.10

↑

↑

Filename: a6r522g.te Time Period: Day/Night 16/8 hours
 Description: Arcadia 6 - R5 OLA Block 1 2.2m Barrier + gap

Rail data, segment # 1: LRT EB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 1: LRT EB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg  43.00 deg
Wood depth      :          0   (No woods.)
No of house rows :          0 / 0
Surface         :          1   (Absorptive ground surface)
Receiver source distance : 29.40 / 29.40 m
Receiver height :  1.50 / 1.50 m
Topography      :          2   (Flat/gentle slope; with barrier)
No Whistle
Barrier angle1  : -90.00 deg  Angle2 : 43.00 deg
Barrier height  :    2.20 m
Barrier receiver distance :  7.00 / 7.00 m
Source elevation : 103.00 m
Receiver elevation :  97.49 m
Barrier elevation :  97.10 m
Reference angle :    0.00
  
```

↑
 Rail data, segment # 2: LRT WB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 2: LRT WB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg  43.00 deg
Wood depth      :          0   (No woods.)
No of house rows :          0 / 0
Surface         :          1   (Absorptive ground surface)
Receiver source distance : 24.90 / 24.90 m
Receiver height :  1.50 / 1.50 m
Topography      :          2   (Flat/gentle slope; with barrier)
No Whistle
  
```

Barrier angle1 : -90.00 deg Angle2 : 43.00 deg
 Barrier height : 2.20 m
 Barrier receiver distance : 7.00 / 7.00 m
 Source elevation : 103.00 m
 Receiver elevation : 97.49 m
 Barrier elevation : 97.10 m
 Reference angle : 0.00

↑
 Results segment # 1: LRT EB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00	1.50	3.80	100.90
0.50	1.50	2.96	100.06

LOCOMOTIVE (0.00 + 55.76 + 0.00) = 55.76 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.45	62.65	-4.25	-2.09	0.00	0.00	-0.26	56.06*
-90	43	0.58	62.65	-4.63	-2.26	0.00	0.00	0.00	55.76

* Bright Zone !

WHEEL (0.00 + 60.22 + 0.00) = 60.22 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.56	67.42	-4.55	-2.23	0.00	0.00	-2.30	58.34*
-90	43	0.66	67.42	-4.85	-2.35	0.00	0.00	0.00	60.22

* Bright Zone !

Segment Leq : 61.55 dBA

↑
 Results segment # 2: LRT WB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00	1.50	4.14	101.24

0.50 ! 1.50 ! 3.16 ! 100.26

LOCOMOTIVE (0.00 + 56.90 + 0.00) = 56.90 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.45	62.65	-3.20	-2.09	0.00	0.00	-0.17	57.20*
-90	43	0.58	62.65	-3.49	-2.26	0.00	0.00	0.00	56.90

* Bright Zone !

WHEEL (0.00 + 61.42 + 0.00) = 61.42 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.56	67.42	-3.43	-2.23	0.00	0.00	-0.73	61.03*
-90	43	0.66	67.42	-3.65	-2.35	0.00	0.00	0.00	61.42

* Bright Zone !

Segment Leq : 62.73 dBA

Total Leq All Segments: 65.19 dBA

↑

Results segment # 1: LRT EB (night)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	3.80 !	100.90
0.50 !	1.50 !	2.96 !	100.06

LOCOMOTIVE (0.00 + 48.63 + 0.00) = 48.63 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.45	55.52	-4.25	-2.09	0.00	0.00	-0.26	48.93*
-90	43	0.58	55.52	-4.63	-2.26	0.00	0.00	0.00	48.63

* Bright Zone !

WHEEL (0.00 + 53.09 + 0.00) = 53.09 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.56	60.29	-4.55	-2.23	0.00	0.00	-2.30	51.21*
-90	43	0.66	60.29	-4.85	-2.35	0.00	0.00	0.00	53.09

* Bright Zone !

Segment Leq : 54.42 dBA

↑
Results segment # 2: LRT WB (night)

Barrier height for grazing incidence

Source Height (m)	! Receiver ! Height (m)	! Barrier ! Height (m)	! Elevation of ! Barrier Top (m)
4.00 !	1.50 !	4.14 !	101.24
0.50 !	1.50 !	3.16 !	100.26

LOCOMOTIVE (0.00 + 49.77 + 0.00) = 49.77 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.45	55.52	-3.20	-2.09	0.00	0.00	-0.17	50.06*
-90	43	0.58	55.52	-3.49	-2.26	0.00	0.00	0.00	49.77

* Bright Zone !

WHEEL (0.00 + 54.28 + 0.00) = 54.28 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.56	60.29	-3.43	-2.23	0.00	0.00	-0.73	53.90*
-90	43	0.66	60.29	-3.65	-2.35	0.00	0.00	0.00	54.28

* Bright Zone !

Segment Leq : 55.60 dBA

Total Leq All Segments: 58.06 dBA

↑
Road data, segment # 1: HWY 417 EB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: HWY 417 EB (day/night)

Angle1 Angle2 : -90.00 deg 43.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 353.00 / 353.00 m
Receiver height : 1.50 / 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : 42.00 deg
Barrier height : 2.20 m
Barrier receiver distance : 7.00 / 7.00 m
Source elevation : 97.49 m
Receiver elevation : 98.00 m
Barrier elevation : 97.10 m
Reference angle : 0.00

↑

Road data, segment # 2: HWY 417 WB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: HWY 417 WB (day/night)

Angle1 Angle2 : -90.00 deg 43.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0

```

Surface                :      1      (Absorptive ground surface)
Receiver source distance : 311.30 / 311.30 m
Receiver height        :   1.50 / 1.50  m
Topography             :      2      (Flat/gentle slope; with barrier)
Barrier angle1         : -90.00 deg   Angle2 : 43.00 deg
Barrier height         :   2.20 m
Barrier receiver distance : 7.00 / 7.00  m
Source elevation       :   97.49 m
Receiver elevation     :   98.00 m
Barrier elevation      :   97.10 m
Reference angle        :    0.00

```

↑
Results segment # 1: HWY 417 EB (day)

Source height = 1.50 m

Barrier height for grazing incidence

```

-----
Source      ! Receiver  ! Barrier    ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
          1.50 !         1.50 !         2.39 !         99.49

```

ROAD (0.00 + 56.24 + 35.20) = 56.27 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	42	0.53	81.40	0.00	-20.96	-2.23	0.00	0.00	-4.90	53.31*
-90	42	0.66	81.40	0.00	-22.77	-2.39	0.00	0.00	0.00	56.24
42	43	0.66	81.40	0.00	-22.77	-23.43	0.00	0.00	0.00	35.20

* Bright Zone !

Segment Leq : 56.27 dBA

↑
Results segment # 2: HWY 417 WB (day)

Source height = 1.50 m

Barrier height for grazing incidence

```

-----
Source      ! Receiver  ! Barrier    ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m)
-----+-----+-----+-----
          1.50 !         1.50 !         2.39 !         99.49

```

ROAD (0.00 + 57.18 + 0.00) = 57.18 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90	43	0.53	81.40	0.00	-20.13	-2.19	0.00	0.00	-4.90	54.18*
-90	43	0.66	81.40	0.00	-21.86	-2.35	0.00	0.00	0.00	57.18

* Bright Zone !

Segment Leq : 57.18 dBA

Total Leq All Segments: 59.76 dBA

↑

Results segment # 1: HWY 417 EB (night)

Source height = 1.49 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.49	1.50	2.39	99.49

ROAD (0.00 + 48.64 + 27.60) = 48.68 dBA

Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq

-90	42	0.53	73.80	0.00	-20.96	-2.23	0.00	0.00	-4.90	45.72*
-90	42	0.66	73.80	0.00	-22.77	-2.39	0.00	0.00	0.00	48.64
42	43	0.66	73.80	0.00	-22.77	-23.43	0.00	0.00	0.00	27.60

* Bright Zone !

Segment Leq : 48.68 dBA

↑

Results segment # 2: HWY 417 WB (night)

Source height = 1.49 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
-------------------	---------------------	--------------------	------------------------------

-----+-----+-----+-----
1.49 ! 1.50 ! 2.39 ! 99.49

ROAD (0.00 + 49.58 + 0.00) = 49.58 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.53	73.80	0.00	-20.13	-2.19	0.00	0.00	-4.90	46.58*
-90	43	0.66	73.80	0.00	-21.86	-2.35	0.00	0.00	0.00	49.58

* Bright Zone !

Segment Leq : 49.58 dBA

Total Leq All Segments: 52.16 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 66.28
(NIGHT): 59.05

↑

↑

Filename: a6r525g.te Time Period: Day/Night 16/8 hours
 Description: Arcadia 6 - R5 OLA Block 1 2.5m Barrier + gap

Rail data, segment # 1: LRT EB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng  !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 1: LRT EB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg  43.00 deg
Wood depth      :          0   (No woods.)
No of house rows :          0 / 0
Surface         :          1   (Absorptive ground surface)
Receiver source distance : 29.40 / 29.40 m
Receiver height :  1.50 / 1.50 m
Topography      :          2   (Flat/gentle slope; with barrier)
No Whistle
Barrier angle1  : -90.00 deg  Angle2 : 43.00 deg
Barrier height  :    2.50 m
Barrier receiver distance :  7.00 / 7.00 m
Source elevation : 103.00 m
Receiver elevation :  97.49 m
Barrier elevation :  97.10 m
Reference angle :    0.00
  
```

↑
 Rail data, segment # 2: LRT WB (day/night)

```

-----
Train          ! Trains      ! Speed !# loc !# Cars! Eng  !Cont
Type          !             ! (km/h) !/Train!/Train! type !weld
-----+-----+-----+-----+-----+-----
  1. Electric  ! 155.0/15.0 !  80.0 !  2.0 !  4.0 ! Elec! No
  
```

Data for Segment # 2: LRT WB (day/night)

```

-----
Angle1  Angle2      : -90.00 deg  43.00 deg
Wood depth      :          0   (No woods.)
No of house rows :          0 / 0
Surface         :          1   (Absorptive ground surface)
Receiver source distance : 24.90 / 24.90 m
Receiver height :  1.50 / 1.50 m
Topography      :          2   (Flat/gentle slope; with barrier)
No Whistle
  
```

Barrier angle1 : -90.00 deg Angle2 : 43.00 deg
 Barrier height : 2.50 m
 Barrier receiver distance : 7.00 / 7.00 m
 Source elevation : 103.00 m
 Receiver elevation : 97.49 m
 Barrier elevation : 97.10 m
 Reference angle : 0.00

↑
 Results segment # 1: LRT EB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00	1.50	3.80	100.90
0.50	1.50	2.96	100.06

LOCOMOTIVE (0.00 + 55.76 + 0.00) = 55.76 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.44	62.65	-4.19	-2.07	0.00	0.00	-0.40	55.99*
-90	43	0.58	62.65	-4.63	-2.26	0.00	0.00	0.00	55.76

* Bright Zone !

WHEEL (0.00 + 60.22 + 0.00) = 60.22 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.54	67.42	-4.50	-2.21	0.00	0.00	-4.18	56.54*
-90	43	0.66	67.42	-4.85	-2.35	0.00	0.00	0.00	60.22

* Bright Zone !

Segment Leq : 61.55 dBA

↑
 Results segment # 2: LRT WB (day)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00	1.50	4.14	101.24

0.50 ! 1.50 ! 3.16 ! 100.26

LOCOMOTIVE (0.00 + 56.90 + 0.00) = 56.90 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.44	62.65	-3.16	-2.07	0.00	0.00	-0.24	57.19*
-90	43	0.58	62.65	-3.49	-2.26	0.00	0.00	0.00	56.90

* Bright Zone !

WHEEL (0.00 + 61.42 + 0.00) = 61.42 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.54	67.42	-3.39	-2.21	0.00	0.00	-3.05	58.78*
-90	43	0.66	67.42	-3.65	-2.35	0.00	0.00	0.00	61.42

* Bright Zone !

Segment Leq : 62.73 dBA

Total Leq All Segments: 65.19 dBA

↑

Results segment # 1: LRT EB (night)

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
4.00 !	1.50 !	3.80 !	100.90
0.50 !	1.50 !	2.96 !	100.06

LOCOMOTIVE (0.00 + 48.63 + 0.00) = 48.63 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.44	55.52	-4.19	-2.07	0.00	0.00	-0.40	48.86*
-90	43	0.58	55.52	-4.63	-2.26	0.00	0.00	0.00	48.63

* Bright Zone !

WHEEL (0.00 + 53.09 + 0.00) = 53.09 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.54	60.29	-4.50	-2.21	0.00	0.00	-4.18	49.41*
-90	43	0.66	60.29	-4.85	-2.35	0.00	0.00	0.00	53.09

* Bright Zone !

Segment Leq : 54.42 dBA

↑
Results segment # 2: LRT WB (night)

Barrier height for grazing incidence

Source Height (m)	! Receiver ! Height (m)	! Barrier ! Height (m)	! Elevation of ! Barrier Top (m)
4.00 !	1.50 !	4.14 !	101.24
0.50 !	1.50 !	3.16 !	100.26

LOCOMOTIVE (0.00 + 49.77 + 0.00) = 49.77 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.44	55.52	-3.16	-2.07	0.00	0.00	-0.24	50.06*
-90	43	0.58	55.52	-3.49	-2.26	0.00	0.00	0.00	49.77

* Bright Zone !

WHEEL (0.00 + 54.28 + 0.00) = 54.28 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.54	60.29	-3.39	-2.21	0.00	0.00	-3.05	51.64*
-90	43	0.66	60.29	-3.65	-2.35	0.00	0.00	0.00	54.28

* Bright Zone !

Segment Leq : 55.60 dBA

Total Leq All Segments: 58.06 dBA

↑
Road data, segment # 1: HWY 417 EB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 1 %
Road pavement : 1 (Typical asphalt or concrete)

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

24 hr Traffic Volume (AADT or SADT): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: HWY 417 EB (day/night)

Angle1 Angle2 : -90.00 deg 43.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 353.00 / 353.00 m
Receiver height : 1.50 / 1.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : 42.00 deg
Barrier height : 2.50 m
Barrier receiver distance : 7.00 / 7.00 m
Source elevation : 97.49 m
Receiver elevation : 98.00 m
Barrier elevation : 97.10 m
Reference angle : 0.00

↑

Road data, segment # 2: HWY 417 WB (day/night)

Car traffic volume : 59370/5163 veh/TimePeriod *
Medium truck volume : 4723/411 veh/TimePeriod *
Heavy truck volume : 3373/293 veh/TimePeriod *
Posted speed limit : 100 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): 73332
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: HWY 417 WB (day/night)

Angle1 Angle2 : -90.00 deg 43.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0

-90 43 0.51 81.40 0.00 -19.89 -2.17 0.00 0.00 -5.03 54.30

Segment Leq : 54.30 dBA

Total Leq All Segments: 56.93 dBA

↑
Results segment # 1: HWY 417 EB (night)

Source height = 1.49 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.49	1.50	2.39	99.49

ROAD (0.00 + 45.85 + 27.60) = 45.91 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	42	0.51	73.80	0.00	-20.71	-2.20	0.00	0.00	-5.03	45.85
42	43	0.66	73.80	0.00	-22.77	-23.43	0.00	0.00	0.00	27.60

Segment Leq : 45.91 dBA

↑
Results segment # 2: HWY 417 WB (night)

Source height = 1.49 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.49	1.50	2.39	99.49

ROAD (0.00 + 46.71 + 0.00) = 46.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	43	0.51	73.80	0.00	-19.89	-2.17	0.00	0.00	-5.03	46.71

Segment Leq : 46.71 dBA

Total Leq All Segments: 49.34 dBA

↑

TOTAL Leq FROM ALL SOURCES (DAY): 65.79
(NIGHT): 58.61

↑

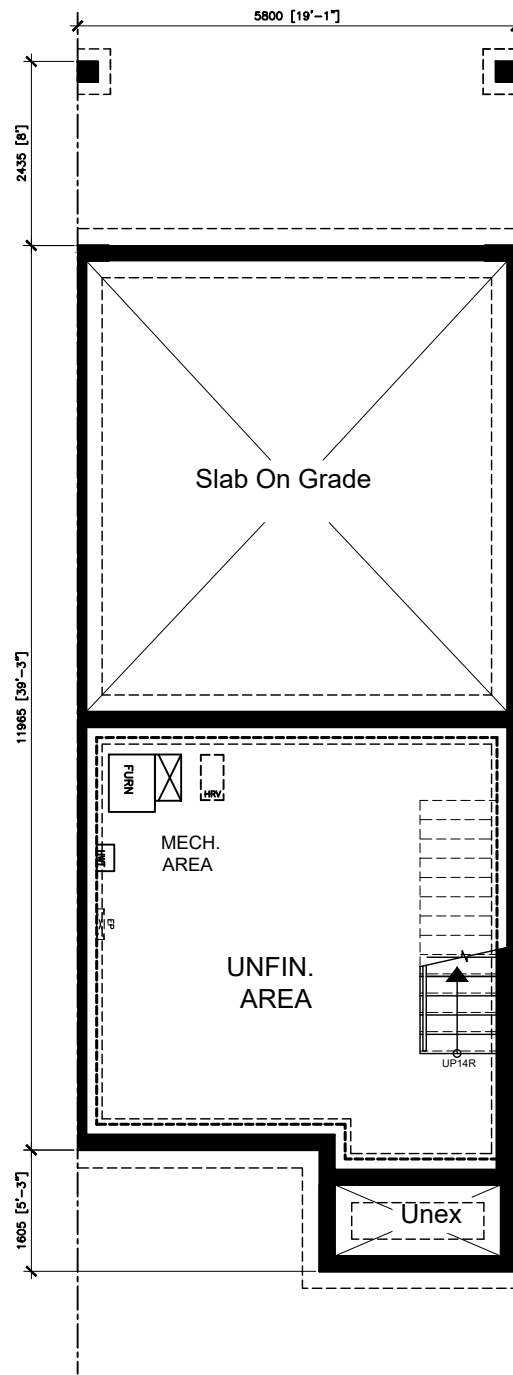
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Appendix D

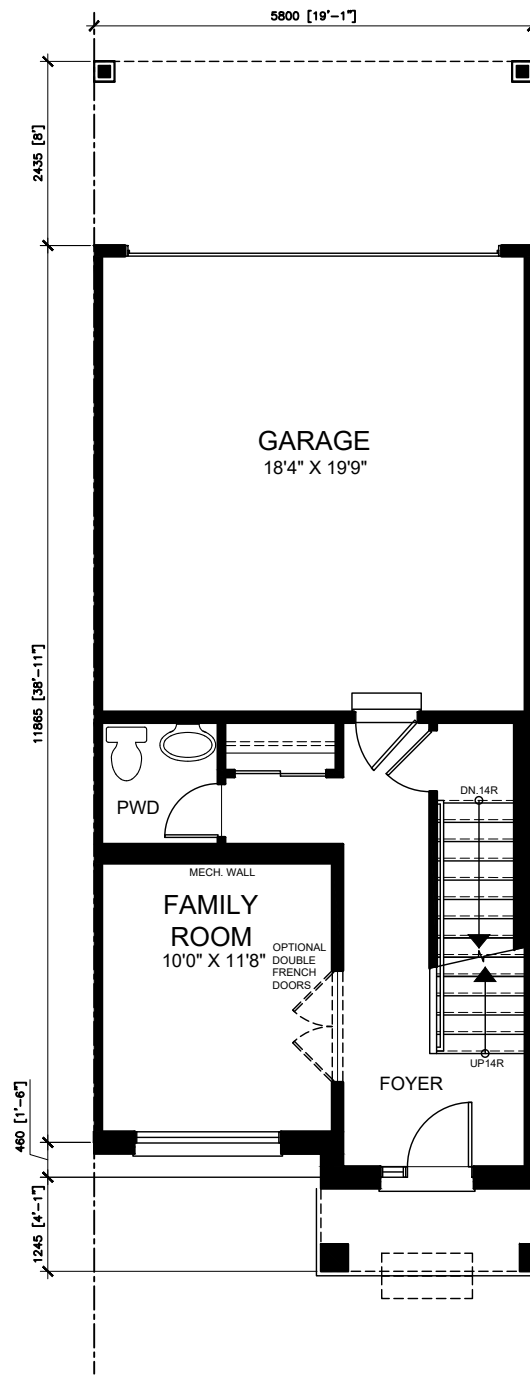
Floor Plan & Building
Elevation Drawings

WINDOW SIZES AND LOCATION MAY VARY

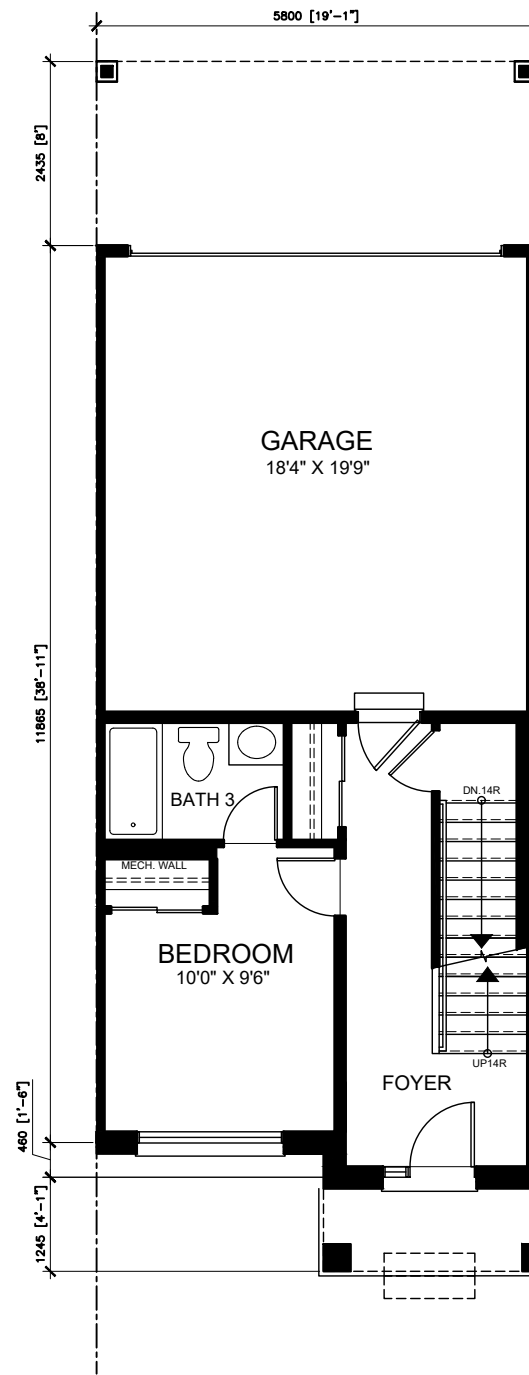
1906sf



INT. BASEMENT PLAN ELEVATION 'A' & 'B' BAYVIEW & GRANVILLE



INT. GROUND FLOOR PLAN ELEVATION 'A' & 'B' BAYVIEW & GRANVILLE 378sf (35.19sm)



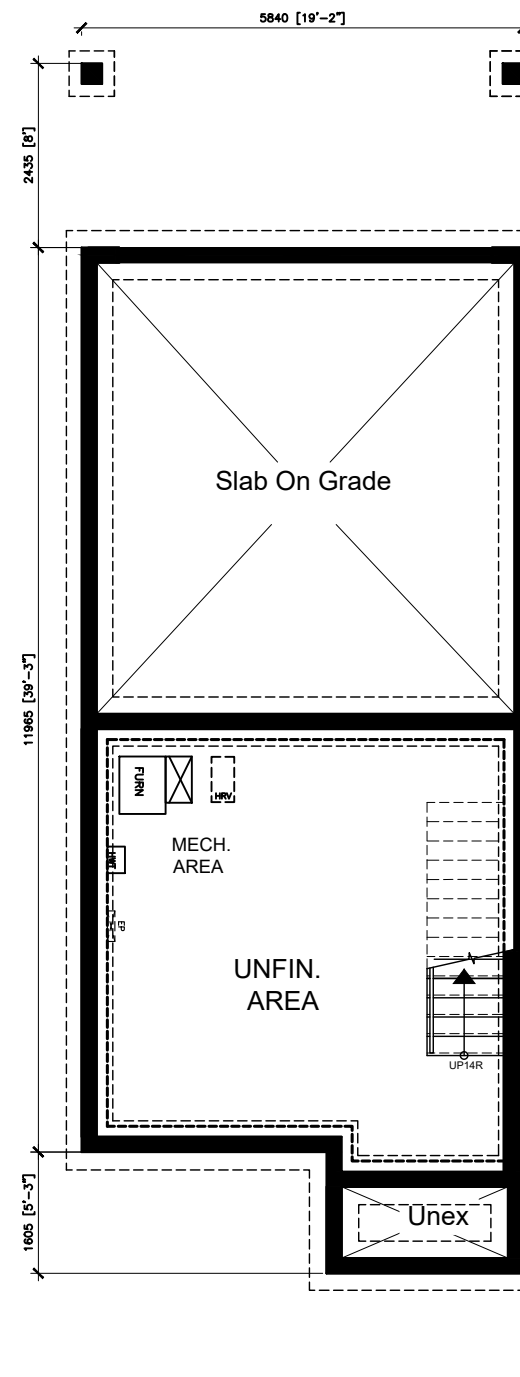
INT. ALT. GROUND FLOOR PLAN ELEVATION 'A' & 'B' BAYVIEW & GRANVILLE 378sf (35.19sm)

No.	Description	Date	Rev.
1	ISSUED FOR RENDERING	APR. 12/22	SST

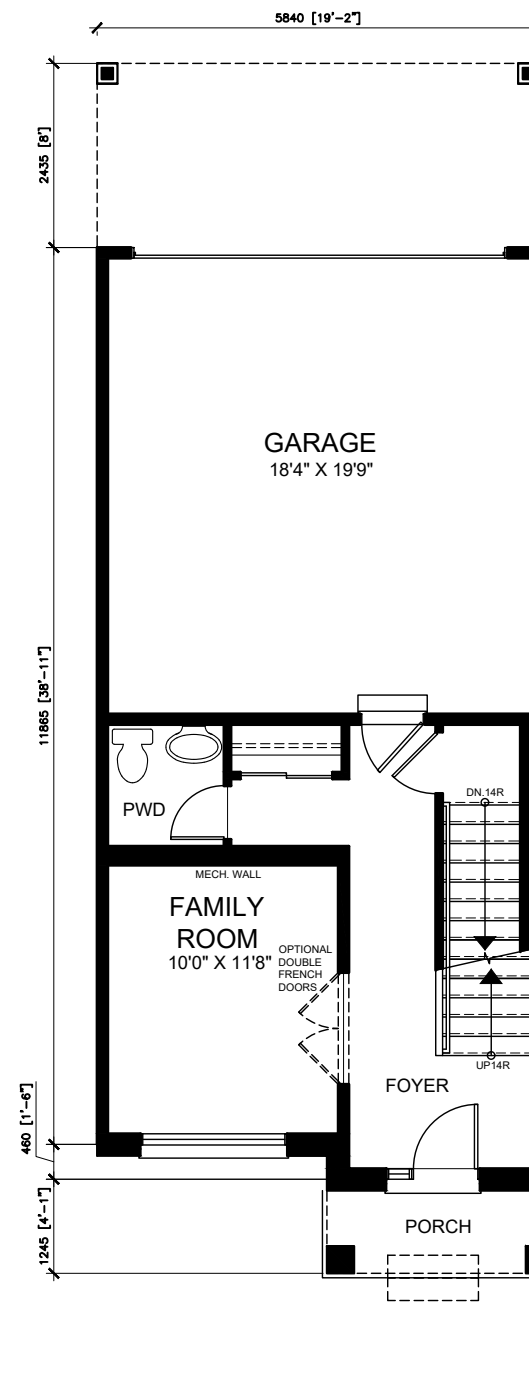
Cassidy + Company	
Residential Design Consultants	
Client	MINTO COMMUNITIES
Project Name	URBAN TOWNS
	CITY OF OTTAWA
Sheet Title	INT. BASEMENT & INT. GROUND FLOOR PLAN ELEVATION 'A' & 'B'
Drawn by:	SST
Checked by:	SST
Date:	May. 10, 22
Scale	1:100
Project No.	2022-16
Drawing No.	1

WINDOW SIZES AND
LOCATION MAY VARY

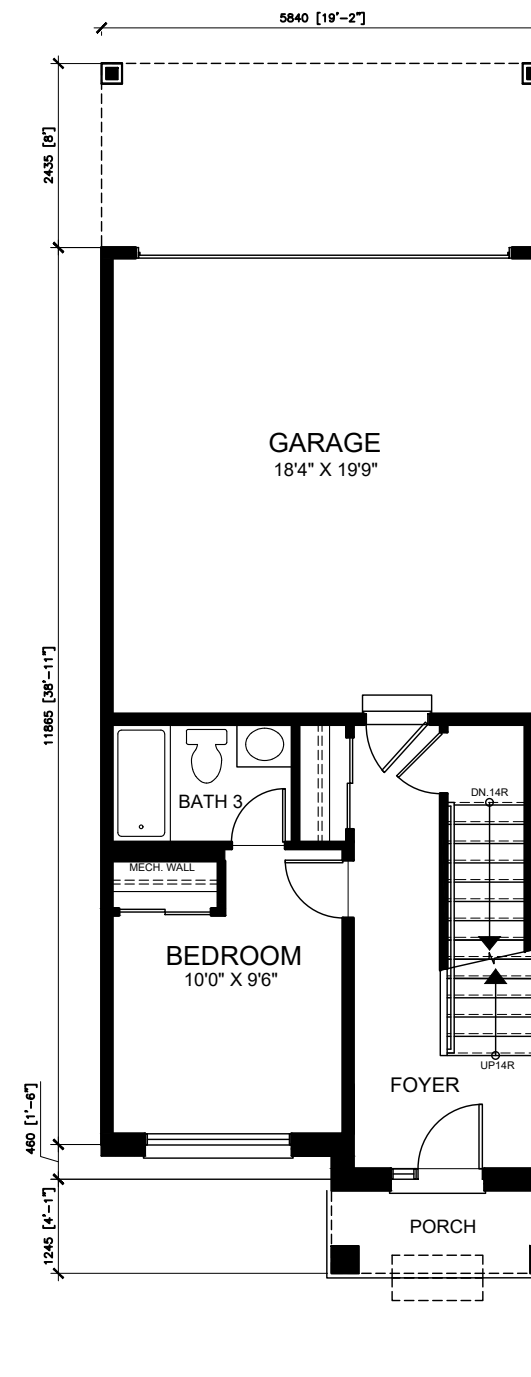
1919sf



END BASEMENT PLAN
ELEVATION 'A' & 'B'
BAYVIEW & GRANVILLE



END GROUND FLOOR PLAN
ELEVATION 'A' & 'B'
BAYVIEW & GRANVILLE
381sf (35.42sm)



END ALT. GROUND FLOOR PLAN
ELEVATION 'A' & 'B'
BAYVIEW & GRANVILLE
381sf (35.42sm)

1	ISSUED FOR RENDERING	APR. 12/22	SST
No.	Description	Date	Rev.

Cassidy + Company
Residential Design Consultants

Client
MINTO COMMUNITIES

Project Name
URBAN TOWNS

CITY OF OTTAWA

Sheet Title
END BASEMENT &
END GROUND FLOOR PLAN
ELEVATION 'A' & 'B'

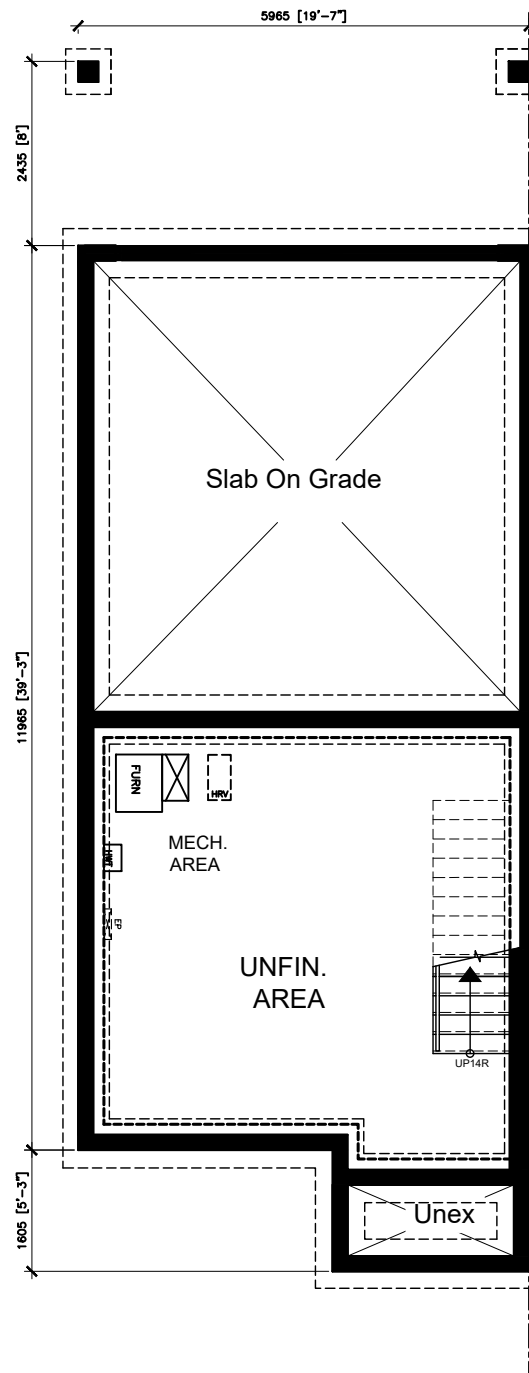
Drawn by: SST
Checked by: SST
Date: May. 10, 22

Scale
1:100
Drawing No.
3

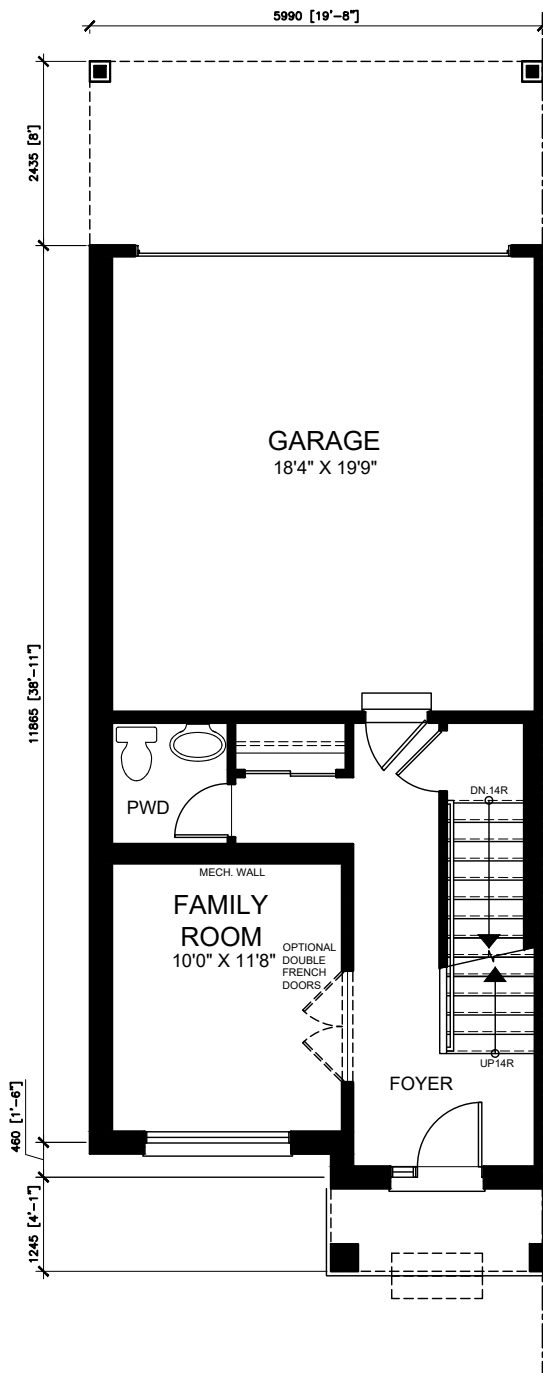
Project No.
2022-16

WINDOW SIZES AND
LOCATION MAY VARY

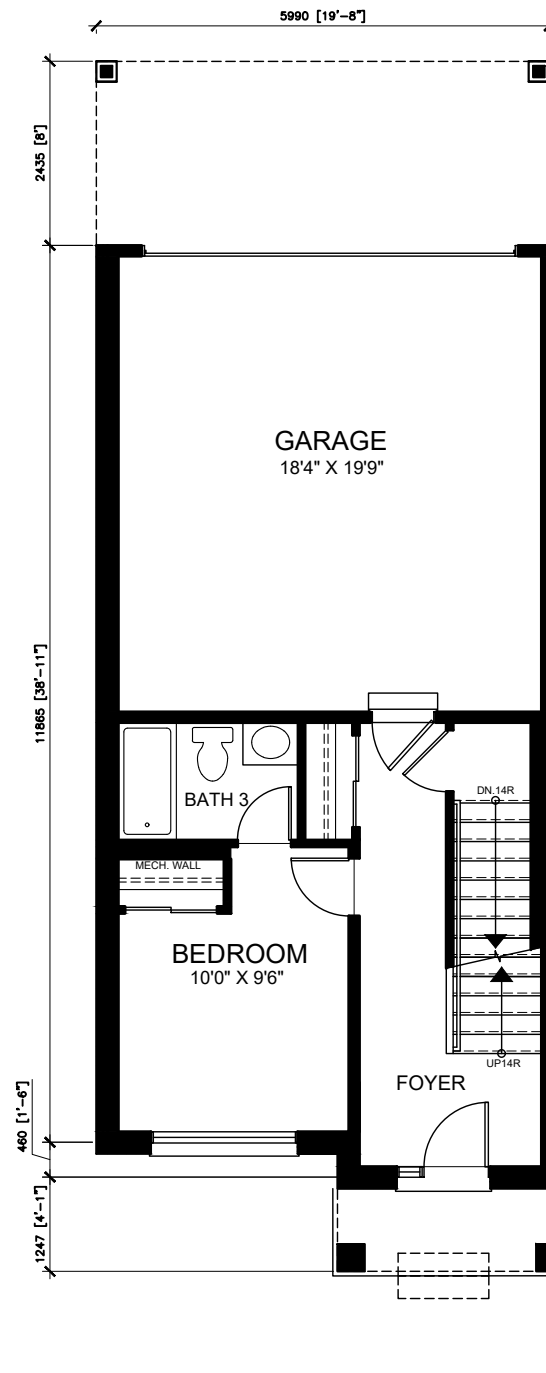
1937sf



COR. BASEMENT PLAN
ELEVATION 'A' & 'B'
BAYVIEW & GRANVILLE



COR. GROUND FLOOR PLAN
ELEVATION 'A' & 'B'
BAYVIEW & GRANVILLE
390sf (39.07sm)

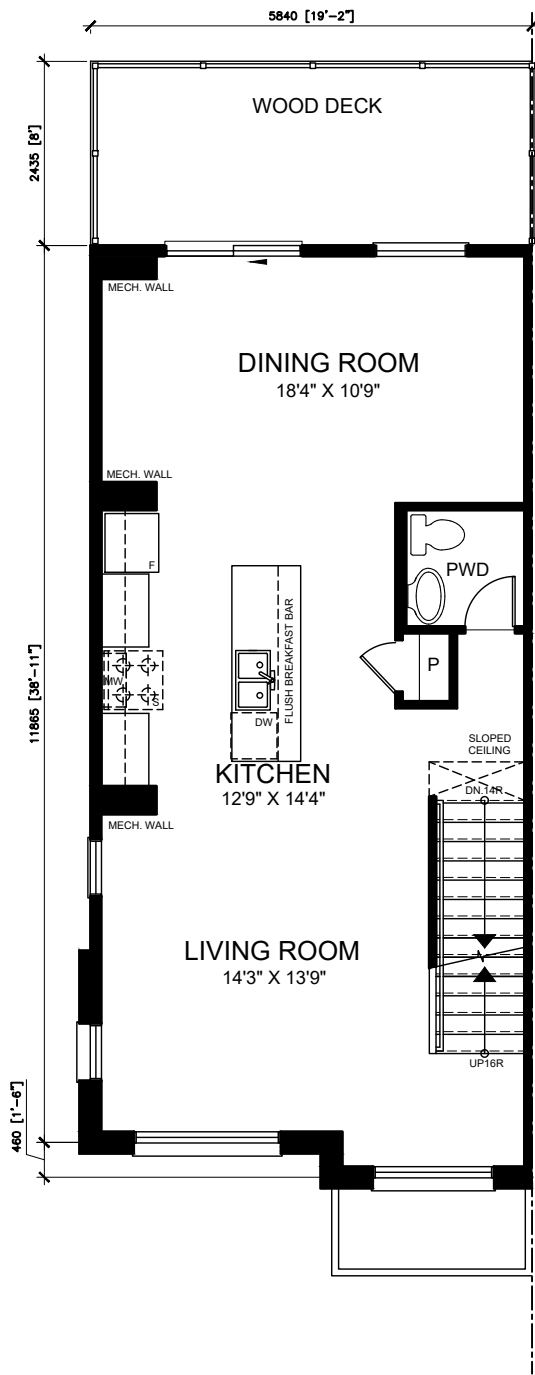


COR. ALT. GROUND FLOOR PLAN
ELEVATION 'A' & 'B'
BAYVIEW & GRANVILLE
390sf (39.07sm)

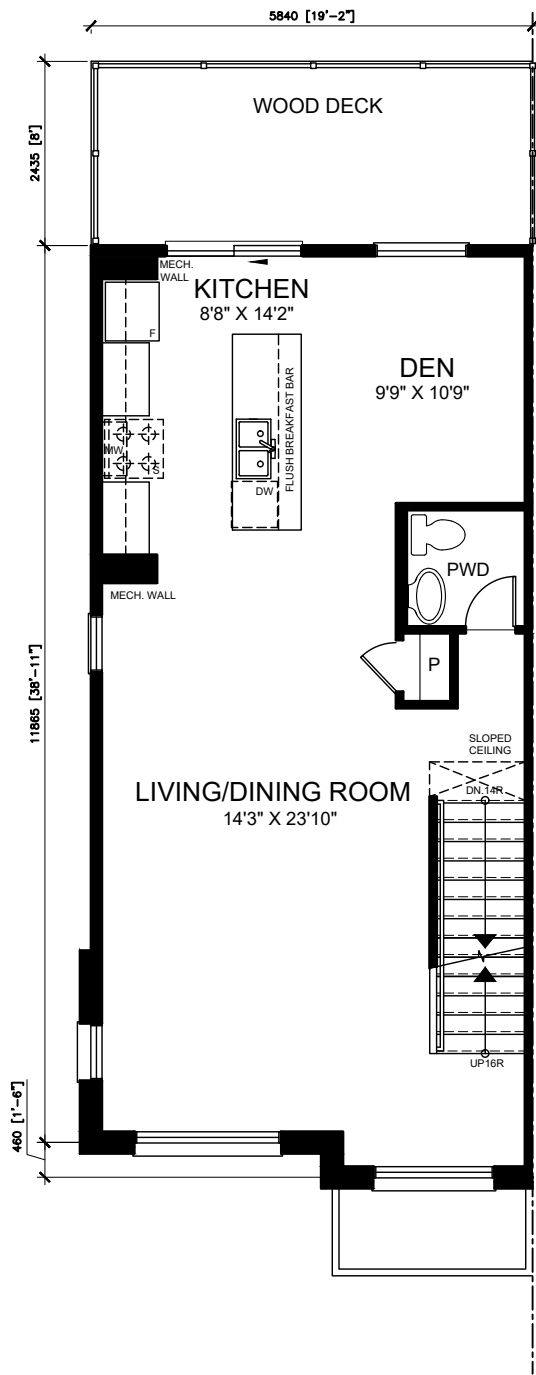
1 ISSUED FOR RENDERING			APR. 12/22	SST
No.	Description	Date	Rev.	
Cassidy + Company				
Residential Design Consultants				
Client	MINTO COMMUNITIES			
Project Name	URBAN TOWNS			
	CITY OF OTTAWA			
Sheet Title	COR. BASEMENT & COR. GROUND FLOOR PLAN ELEVATION 'A' & 'B'			
Drawn by:	Checked by:	Date:		
SST	SST	May. 10, 22		
Scale	1:100	Drawing No.		
Project No.	2022-16	5		

WINDOW SIZES AND
LOCATION MAY VARY

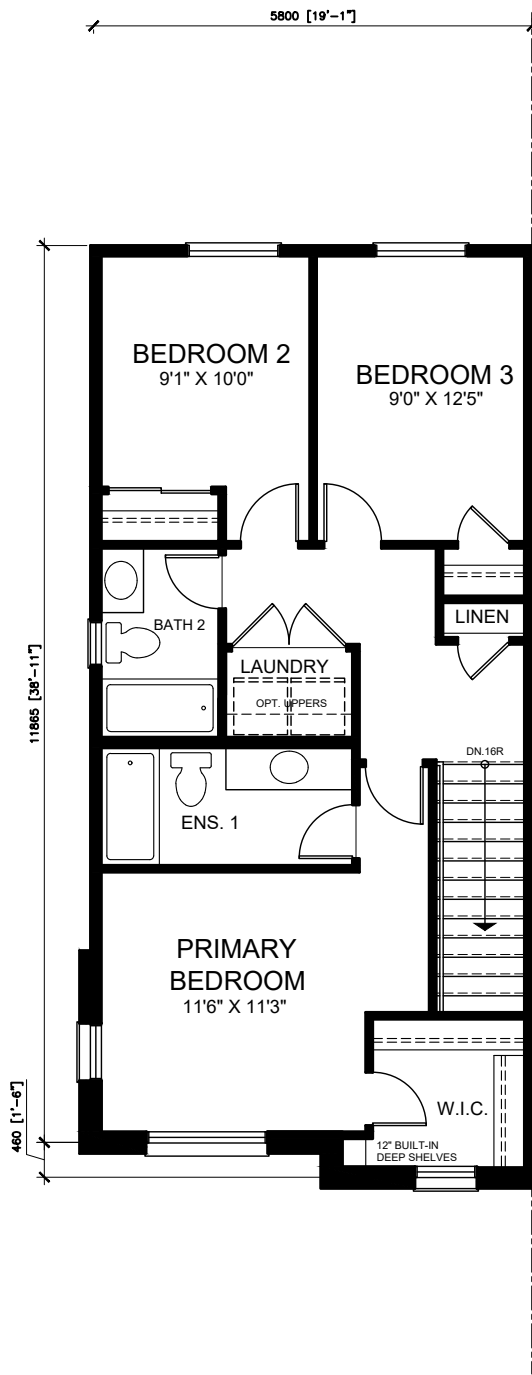
1937sf



COR. SECOND FLOOR PLAN
ELEVATION 'A' & 'B'
GRANVILLE
773sf (71.86sm)



COR. SECOND FLOOR PLAN
ELEVATION 'A' & 'B'
BAYVIEW
773sf (71.86sm)



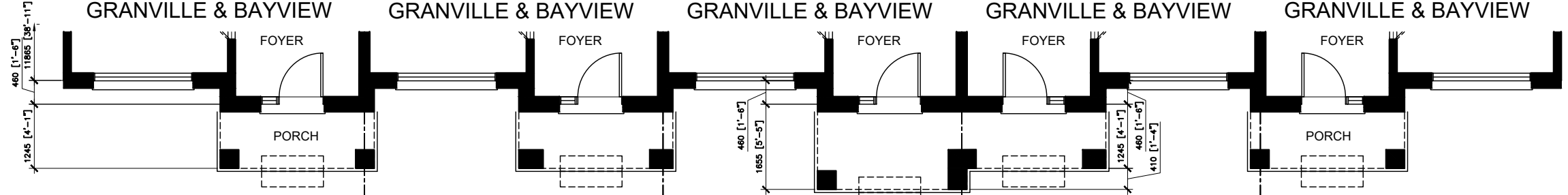
COR. THIRD FLOOR PLAN
ELEVATION 'A' & 'B'
BAYVIEW & GRANVILLE
773sf (71.86sm)

1 ISSUED FOR RENDERING		APR. 12/22	SST
No.	Description	Date	Rev.

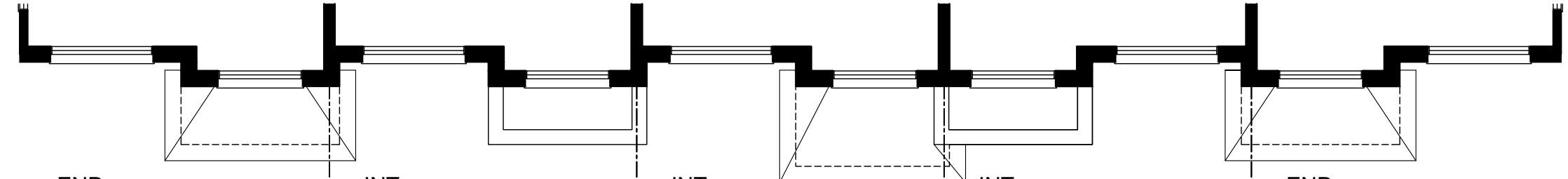
Cassidy + Company		
Residential Design Consultants		
Client	MINTO COMMUNITIES	
Project Name	URBAN TOWNS	
	CITY OF OTTAWA	
Sheet Title	COR. SECOND & COR. THIRD FLOOR PLAN ELEVATION 'A' & 'B'	
Drawn by:	Checked by:	Date:
SST	SST	May. 10, 22
Scale	1:100	Drawing No. 6
Project No.	2022-16	



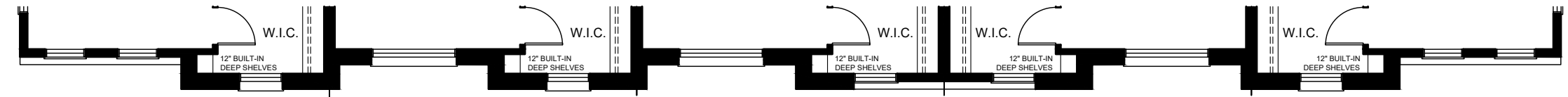
FRONT ELEVATION 'B' END UNIT GRANVILLE & BAYVIEW
 FRONT ELEVATION 'B1' INTERIOR UNIT GRANVILLE & BAYVIEW
 FRONT ELEVATION 'B' INTERIOR UNIT GRANVILLE & BAYVIEW
 FRONT ELEVATION 'B' INTERIOR UNIT REV. GRANVILLE & BAYVIEW
 FRONT ELEVATION 'B' END UNIT REV. GRANVILLE & BAYVIEW



END GROUND FLOOR PLAN
 INT. GROUND FLOOR PLAN
 INT. GROUND FLOOR PLAN
 INT. GROUND FLOOR PLAN
 END GROUND FLOOR PLAN



END SECOND FLOOR PLAN
 INT. SECOND FLOOR PLAN
 INT. SECOND FLOOR PLAN
 INT. SECOND FLOOR PLAN
 END SECOND FLOOR PLAN



END THIRD FLOOR PLAN
 INT. THIRD FLOOR PLAN
 INT. THIRD FLOOR PLAN
 INT. THIRD FLOOR PLAN
 END THIRD FLOOR PLAN

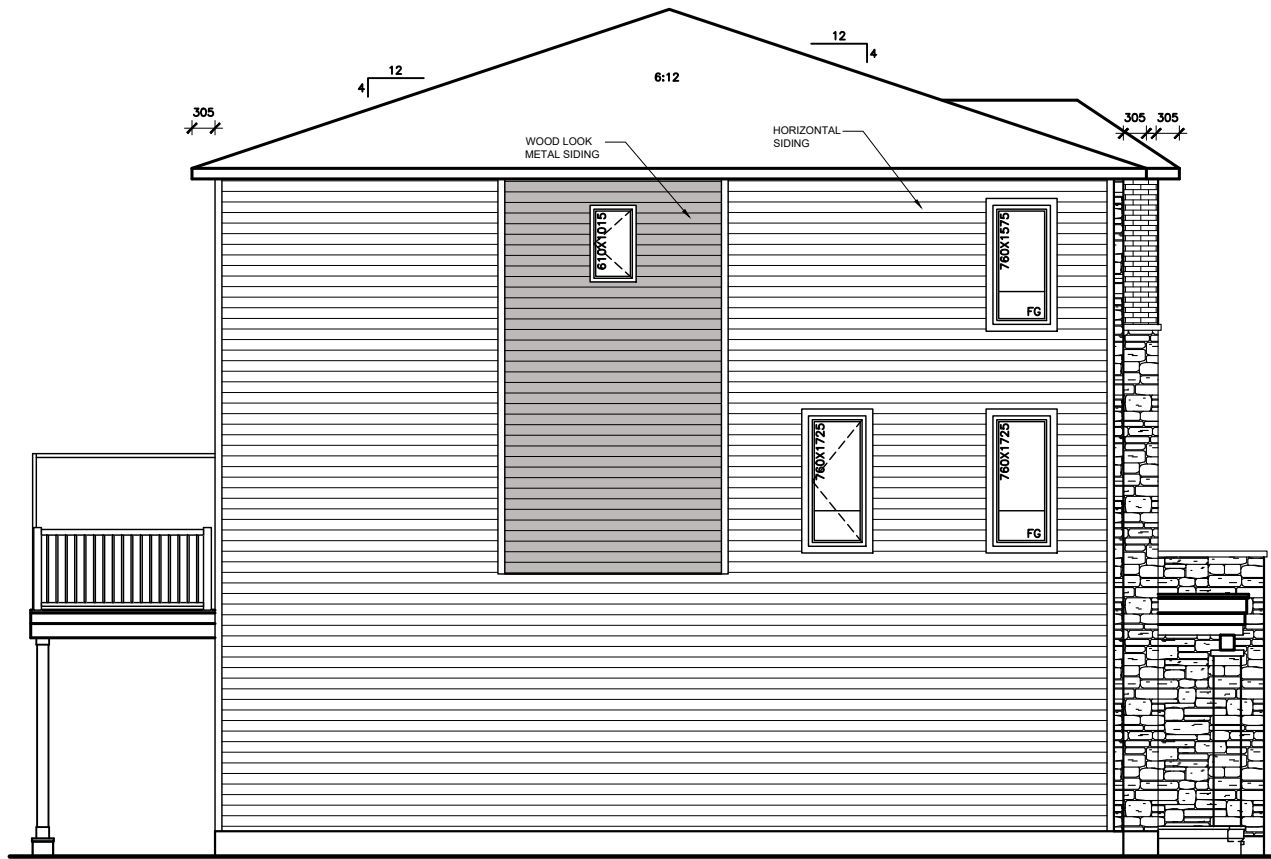
No.	Description	Date	Rev.
1	ISSUED FOR RENDERING	APR. 12/22	SST

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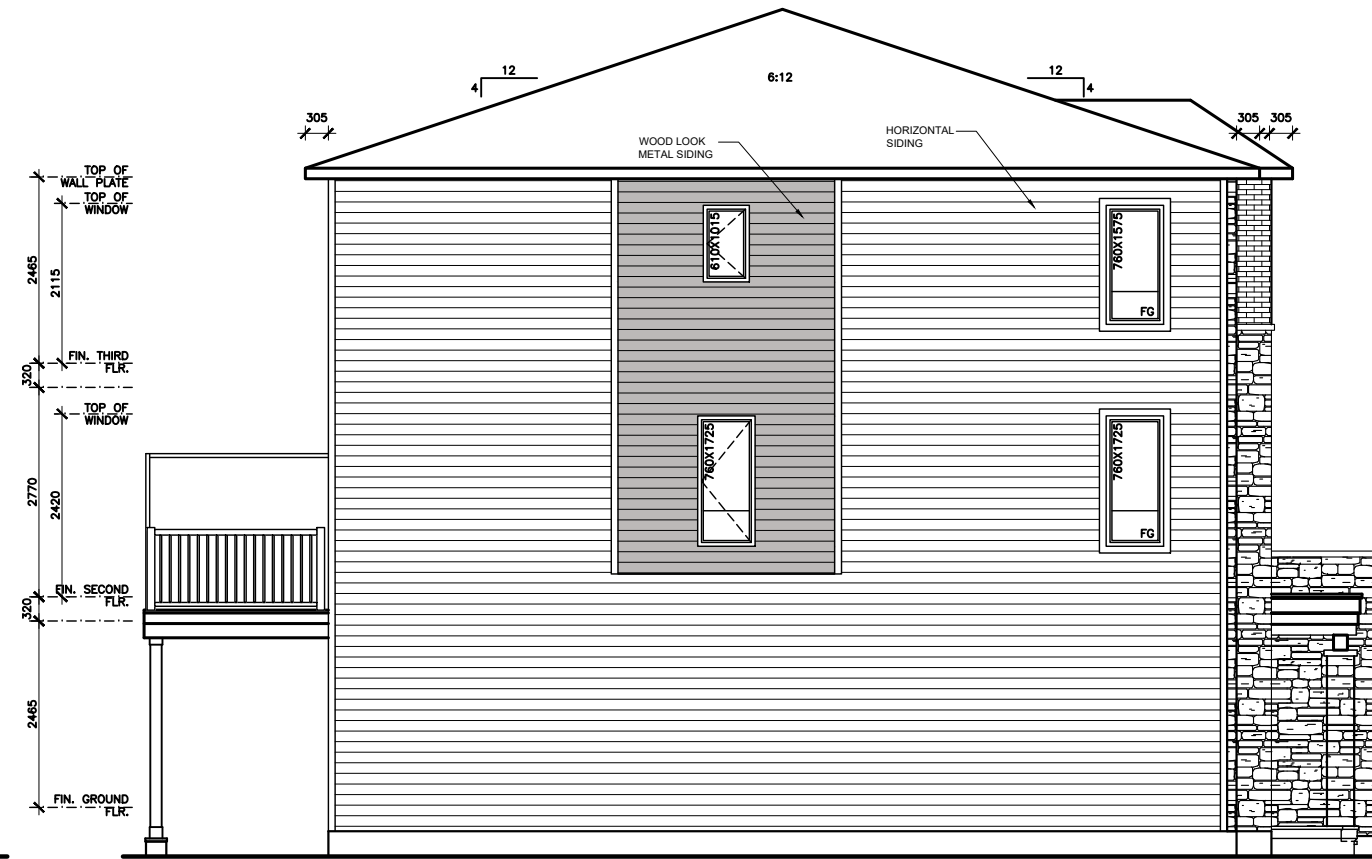
Client: MINTO COMMUNITIES
 Project Name: URBAN TOWNS
 CITY OF OTTAWA

Sheet Title: FRONT ELEVATION ELEVATION 'B'

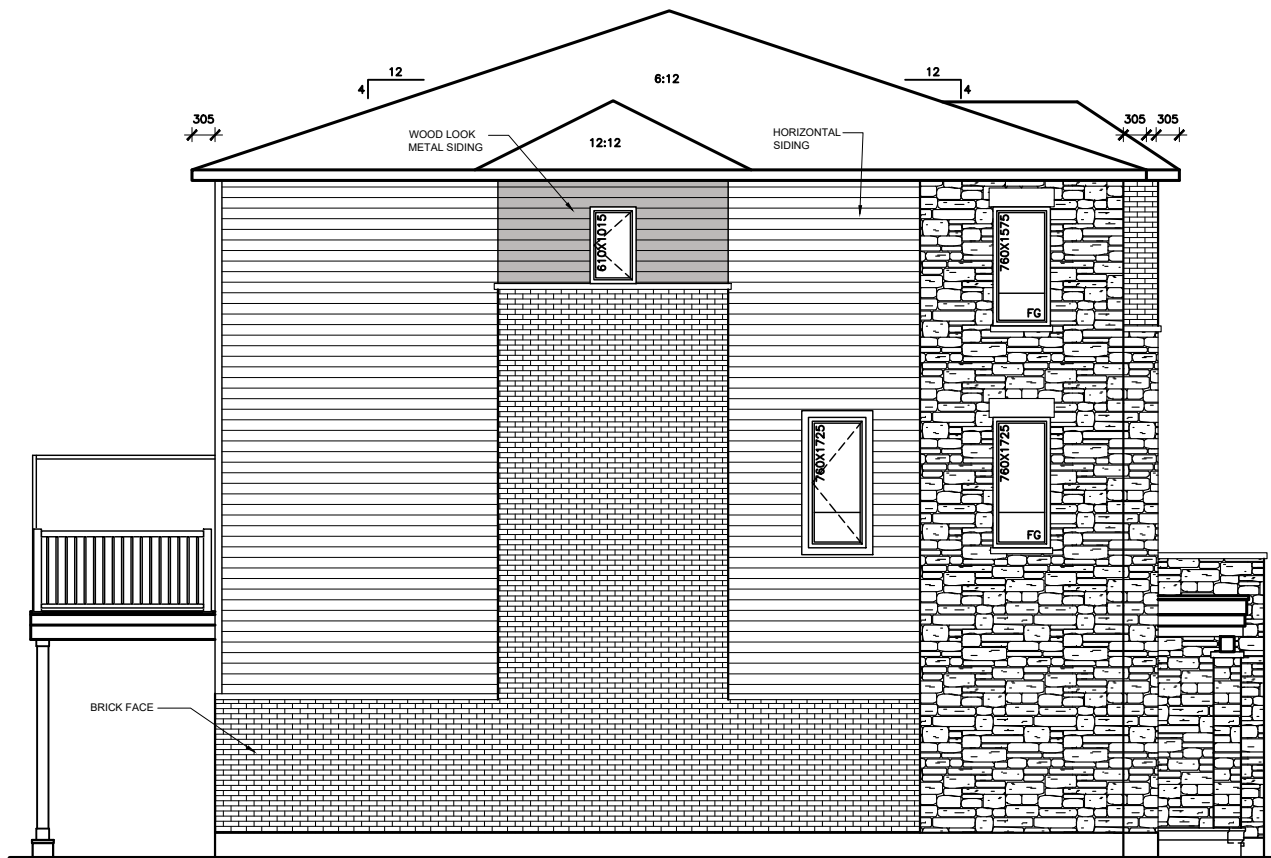
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 Scale: 1:100 | Drawing No.: 8
 Project No.: 2022-16



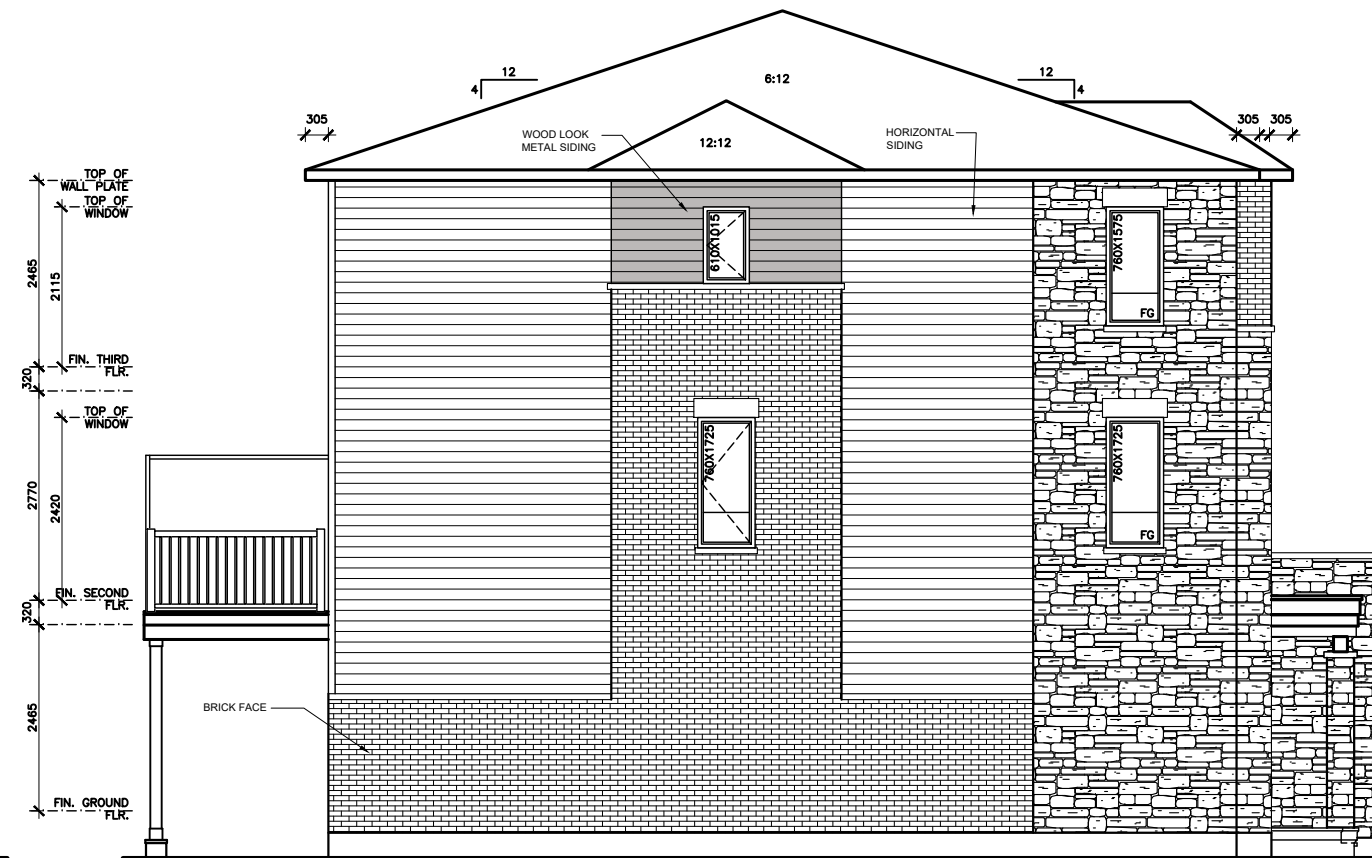
SIDE ELEVATION 'A' GRANVILLE



SIDE ELEVATION 'A' BAYVIEW



UPGRADED SIDE ELEVATION 'A' GRANVILLE



UPGRADED SIDE ELEVATION 'A' BAYVIEW

No.	Description	Date	Rev.
1	ISSUED FOR RENDERING	APR. 12/22	SST

Cassidy + Company

Residential Design Consultants

Client: MINTO COMMUNITIES

Project Name: URBAN TOWNS

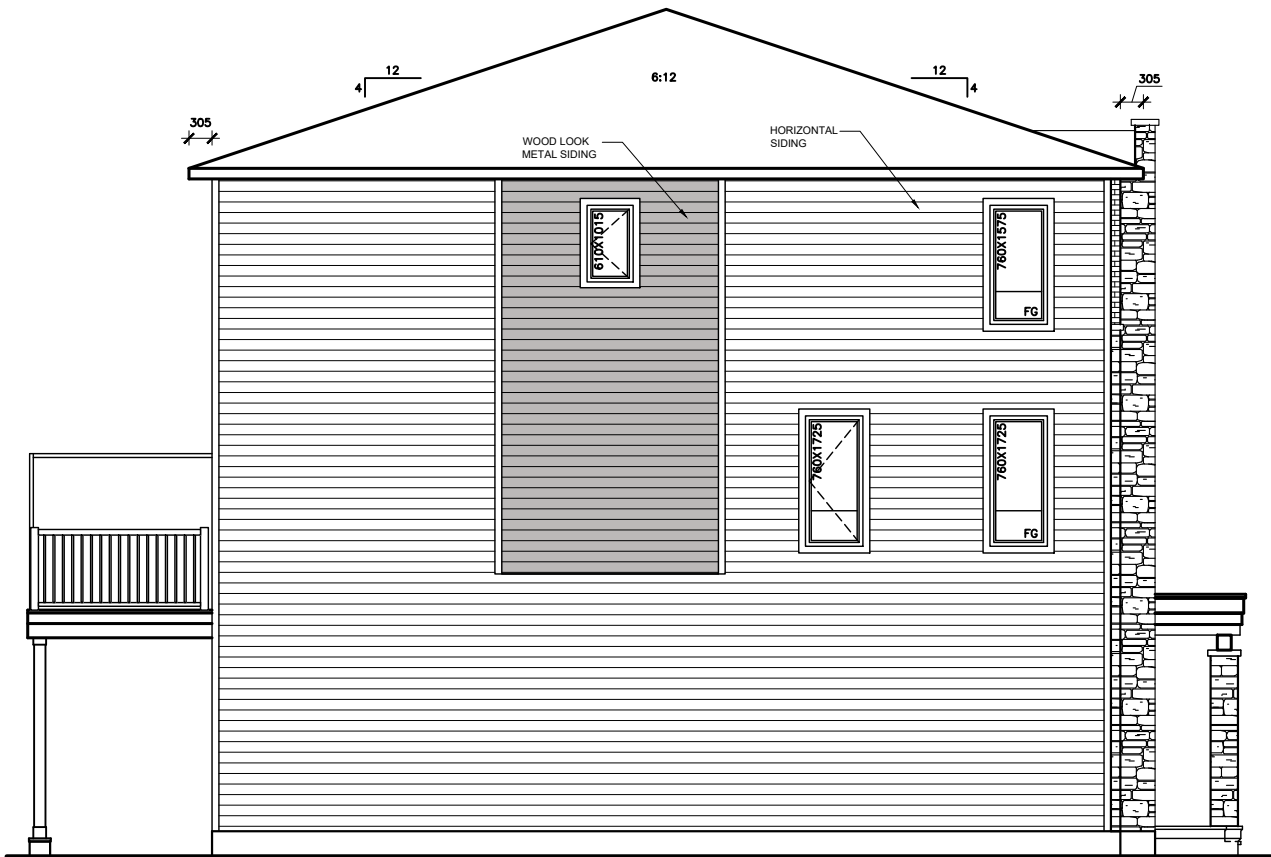
CITY OF OTTAWA

Sheet Title: END AND UPGRADE SIDE ELEVATION 'A'

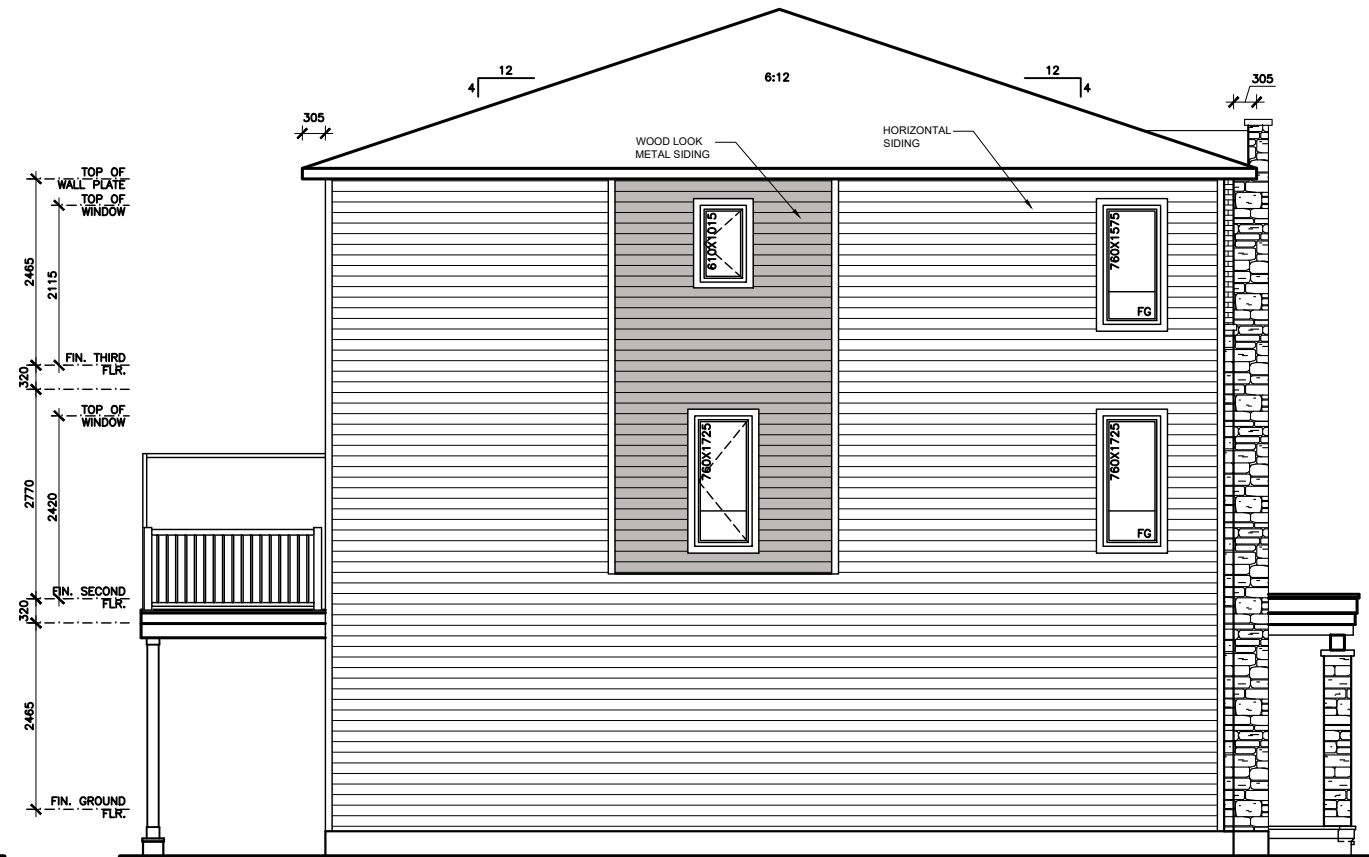
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Scale: 1:100 Drawing No. 9

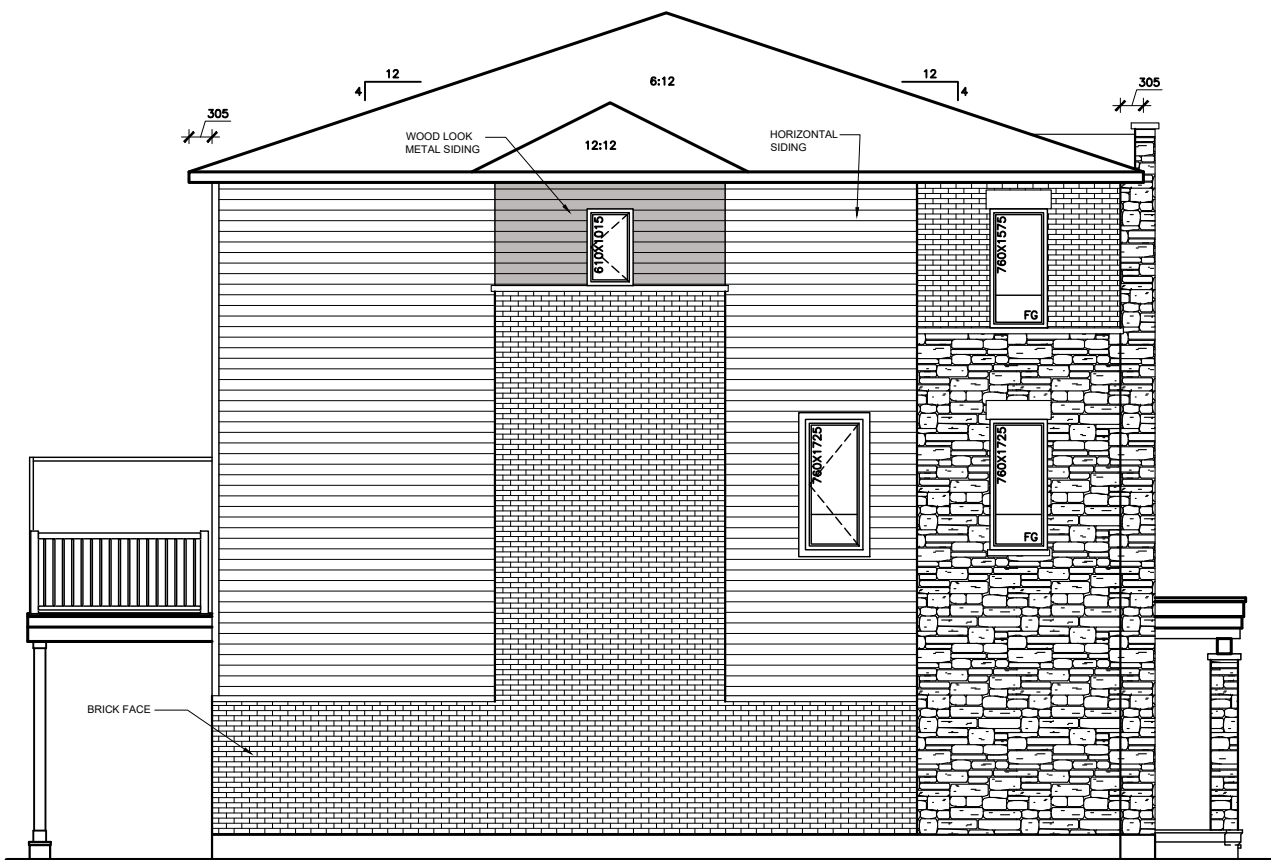
Project No. 2022-16



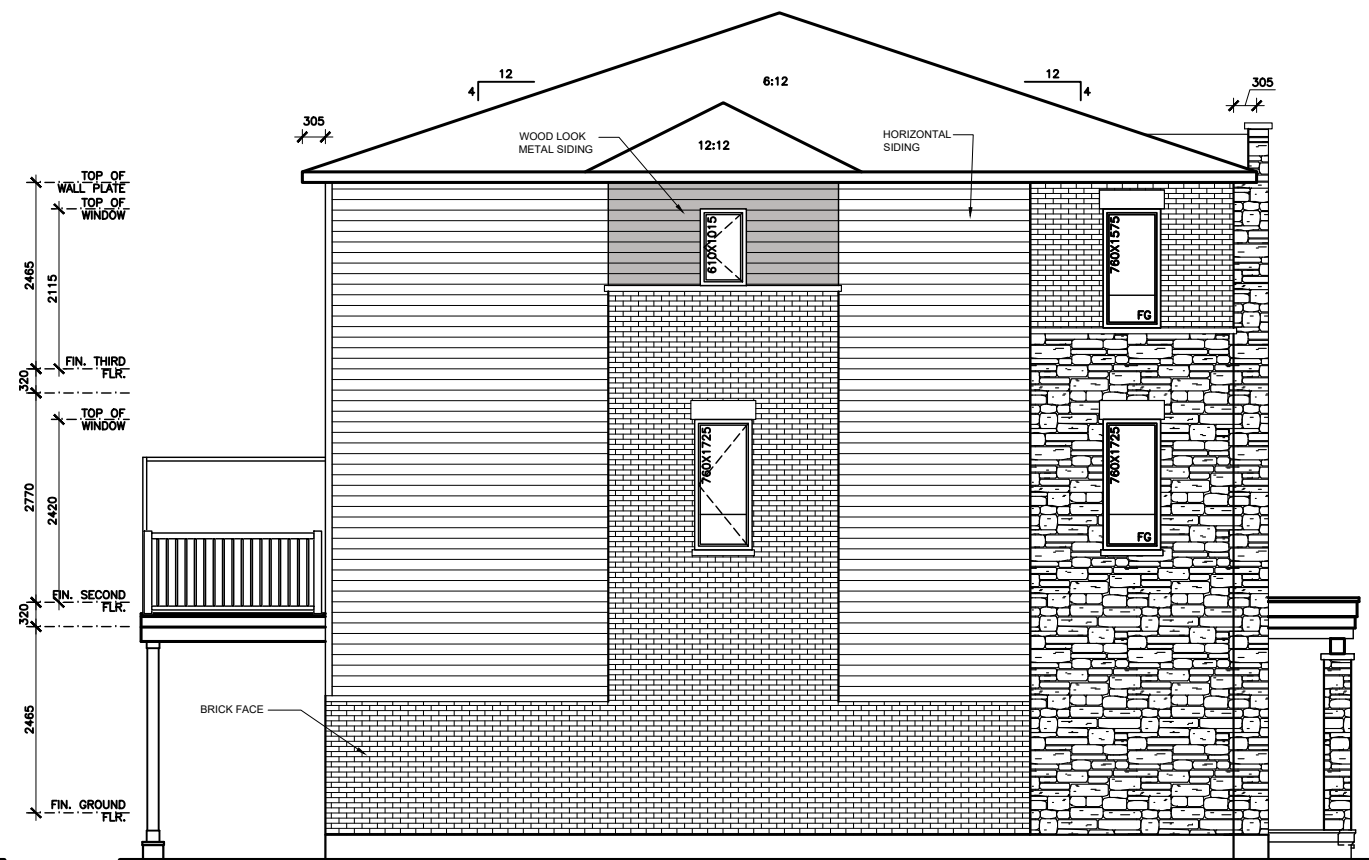
SIDE ELEVATION 'A1' GRANVILLE



SIDE ELEVATION 'A1' BAYVIEW



UPGRADED SIDE ELEVATION 'A1' GRANVILLE



UPGRADED SIDE ELEVATION 'A1' BAYVIEW

1	ISSUED FOR RENDERING	APR. 12/22	SST
No.	Description	Date	Rev.

Cassidy + Company
Residential Design Consultants

Client: MINTO COMMUNITIES

Project Name: URBAN TOWNS

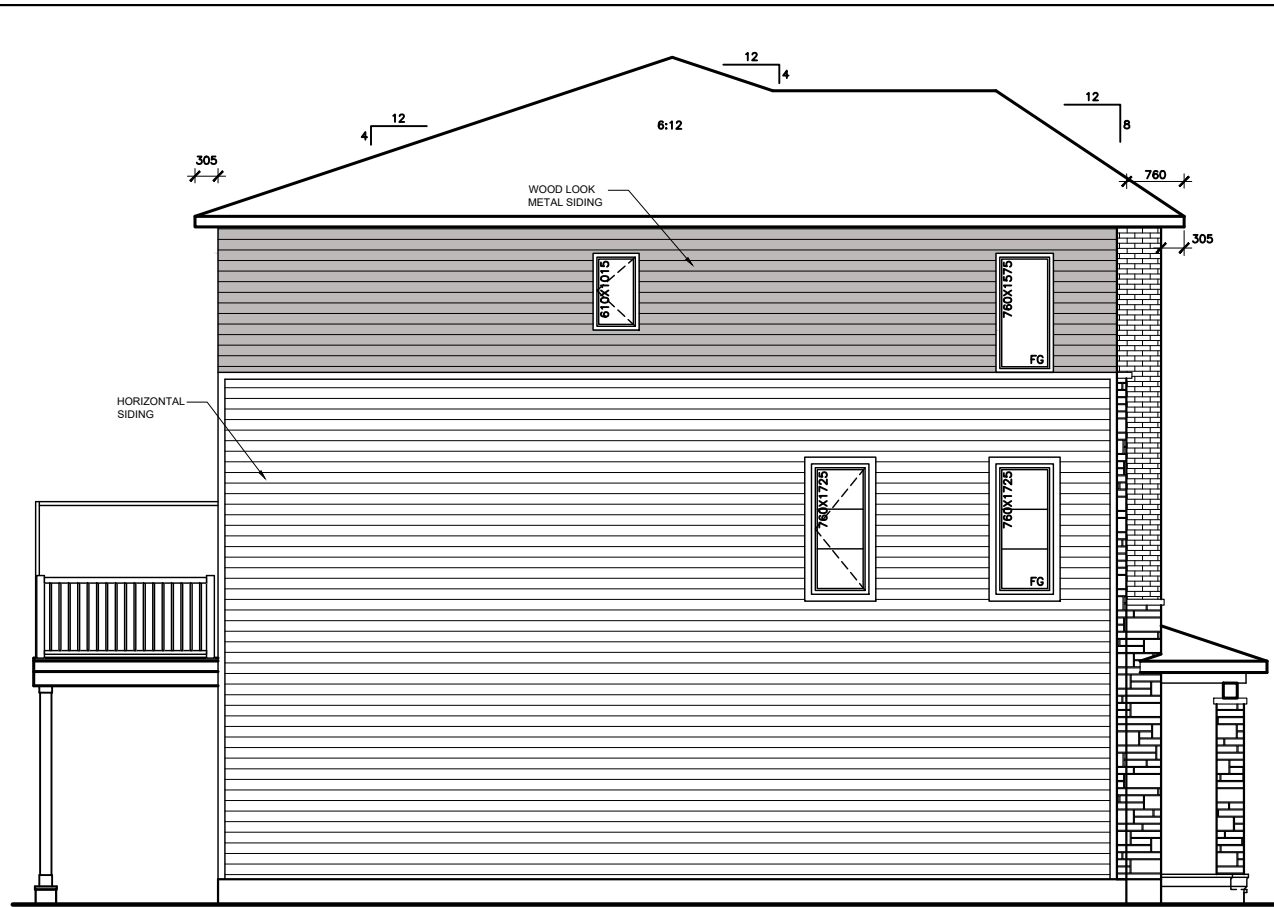
CITY OF OTTAWA

Sheet Title: END AND UPGRADE SIDE ELEVATION 'A1'

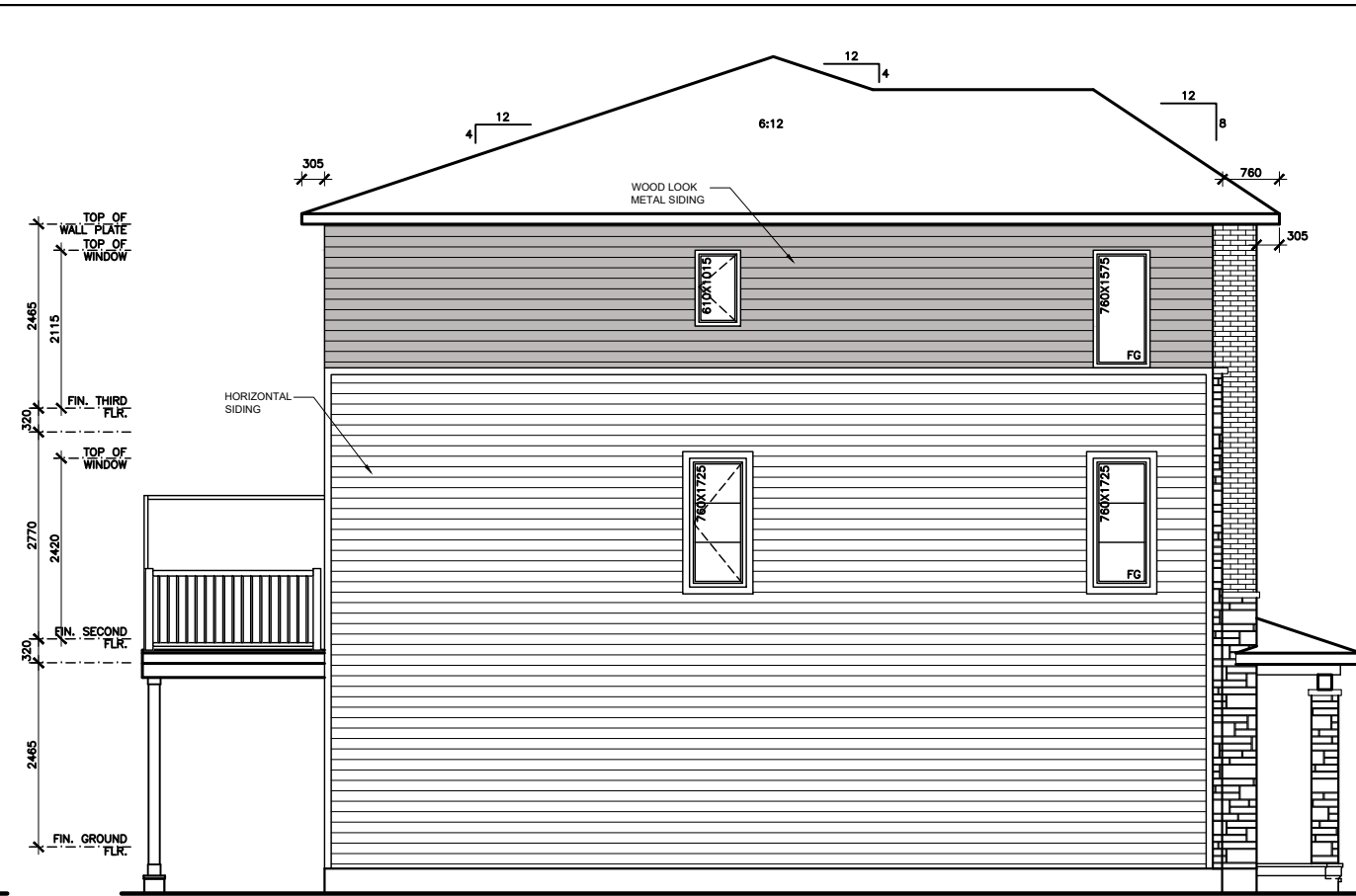
Drawn by: SST Checked by: SST Date: May. 10, 22

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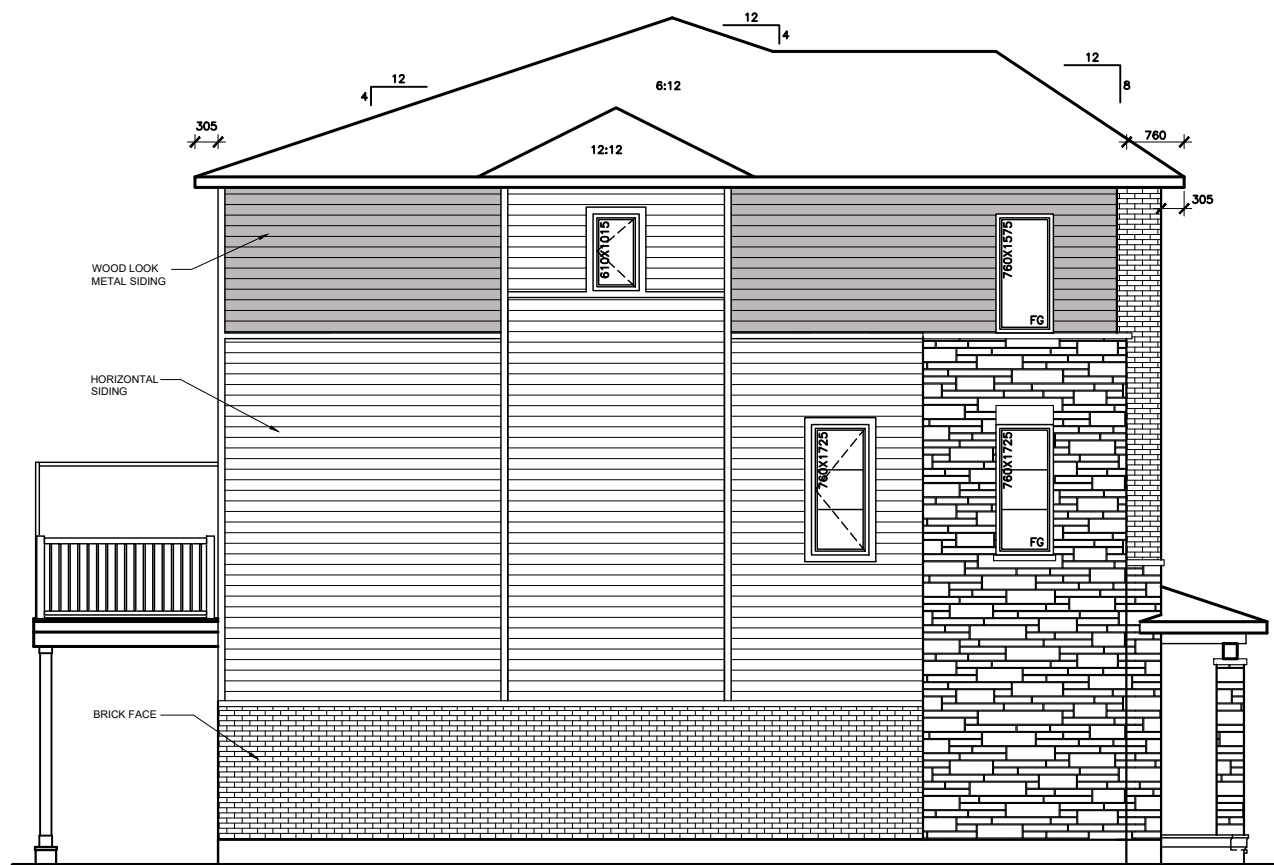
Project No.: 2022-16



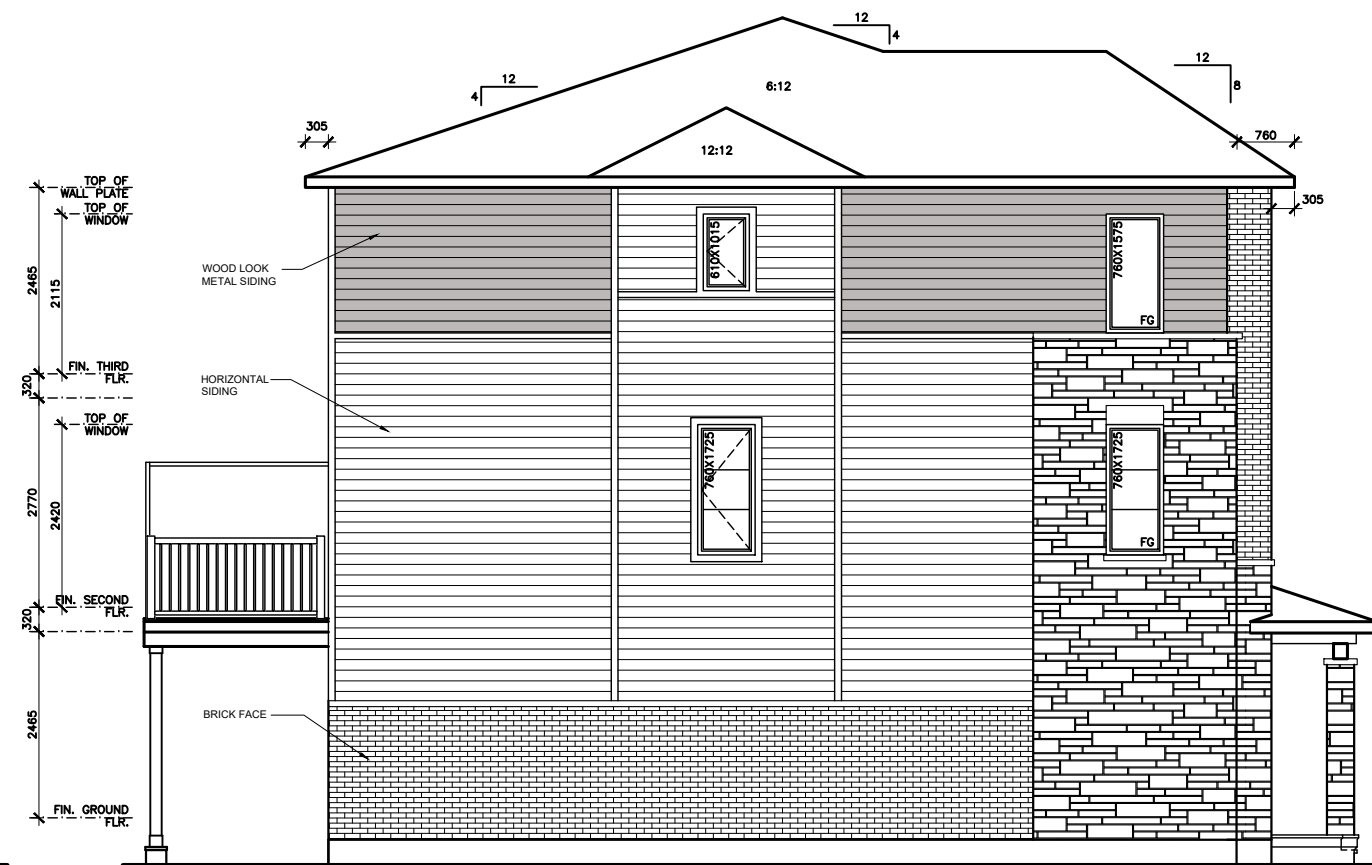
SIDE ELEVATION 'B' GRANVILLE



SIDE ELEVATION 'B' BAYVIEW



UPGRADED SIDE ELEVATION 'B' GRANVILLE



UPGRADED SIDE ELEVATION 'B' BAYVIEW

No.	Description	Date	Rev.
1	ISSUED FOR RENDERING	APR. 12/22	SST

No.	Description	Date	Rev.
1	ISSUED FOR RENDERING	APR. 12/22	SST

Cassidy + Company
Residential Design Consultants

Client: MINTO COMMUNITIES

Project Name: URBAN TOWNS

CITY OF OTTAWA

Sheet Title: END AND UPGRADE SIDE ELEVATION 'B'

Drawn by: SST
Checked by: SST
Date: May. 10, 22

Scale: 1:100
Drawing No.: 11

Project No.: 2022-16



TAHOE 4 2022

ARCHITECTURAL LEGEND

	Attic Access 1'-8" x 700 min. (Insulated & weatherstripped)
	Medicine Cabinet
	Change between floor finishes
	Door schedule key (numbered)
	Window schedule key (lettered)
	Dropped Ceiling Bulkhead 240 unless noted otherwise
	Deep
	Hardwood
	Laundry Tub
	Microwave
	Optional
	Paper Holder
	Rod & Shelf
	Rough Opening Height
	Rough Opening Width
	Resilient Vinyl Flooring
	Roof Vent
	Towel Bar
	Towel Ring
	Typical
	Unless noted otherwise

MECHANICAL LEGEND

	Cold air return grill
	Cold air return duct in wall
	Warm air duct
	Warm air diffuser
	Warm air supply in cabinet toe kick or wall
	Warm air diffuser in ceiling
	Dust Pan Inlet
	Fireplace chimney
	Furnace
	Exhaust vent
	Gas meter
	Water meter
	Service entry
	Floor drain
	Soil stack
	Drain water heat recovery pipe installed on soil stack.
	Hot Water Tank
	Hose bib (FROST FREE)
	Shower head
	Air Conditioning
	Barbeque Gas Line
	Heat Recovery Ventilator
	Tankless Hot Water Tank c/w Drain Pan
	Mechanical vent

ELECTRICAL LEGEND

	Duplex Outlet (G.F.I. in all bathrooms)
	Split Duplex Outlet
	Duplex outlet upper 1/2 switched
	Weather proof duplex outlet
	220 V outlet
	Electric vehicle charging rough-in c/w 27 conduit to 200amp panel
	Central vacuum outlet
	Single pole switch
	3 way switch
	4 way switch
	Furnace switch
	Double gang switch
	Triple gang switch
	Ceiling light fixture
	Standard potlight 4" (clg. mtd)
	Directional potlight (clg. mtd)
	Pucklight
	Wall mounted light fixture
	Photocell
	Interconnected smoke detector on each floor and in each bedroom with visual signal. Carbon monoxide detector on each floor containing bedrooms
	Electrical panel
	Hydro meter
	Range
	Refrigerator
	Dishwasher
	Dryer
	Washer
	Door chime/buzzer
	Door bell
	Thermostat

STRUCTURAL LEGEND

	Anchor
	Bottom chord
	Blocking
	Beam pocket
	Both Sides
	Control Joint
	Continuous
	Coon Wire Nails
	Double joist
	Dropped beam
	Each end
	Each way
	Flush beam
	Footing
	Horizontal
	Inside face
	Long leg vertical
	Micro laminated
	Metal hangers
	Nuts and Bolts
	Outside face
	On center
	Plate
	Similar
	Steel Beam
	Stiffner Plate
	Top and Bottom
	Tongue & Groove
	Triple joist
	Wood lintel
	Masonry lintel

INTERIOR DOOR SCHEDULE

5 DOOR 815 X 2030	14 DOOR 710 X 2030
6 DOOR 760 X 2030	18 DOOR 460 X 2030
7 DOOR 610 X 2030	19 DOOR 865 X 2030
8 DOOR 405 X 2030	20 DOOR 915 X 2030
13 DOOR 660 X 2030	22 DOOR 360 X 2030
* FRENCH DOOR	

INTERIOR DOORS ROUGH OPENINGS HEIGHTS

DOOR TYPE	ROUGH OPENING HEIGHT (R.O.H.)
2030 Dr. Height (80")	
SWINGING	2108
SLIDING	2145
2440 Dr. Height (96")	
SWINGING	2490
SLIDING	2555

FOOTING SCHEDULE

F1 - 2'-0" x 2'-0" x 200 DP.
3-15M (B) x 450 lg. E/W

ALL FOOTINGS TO BE 22"x8"dp. UNO

*FOOTING WIDTHS ALONG SHARED WALLS ASSUMING ADJACENT UNIT IS 'MIRROR IMAGE'.

STRUCTURAL FRAMING SCHEDULE

For Steel Framing Layout, Beam/Column/Plate Connection Details, see Structural DwgS ST- * (Also Specs SP-1 & SP-4).

STEEL LINTEL	POSTS
S1 - L 90x90x6	P1(8) - 75 ø STEEL TELEPOST (8 Feet Max)
S2 - L 90x90x8	P1(9) - 75 ø STEEL TELEPOST (9 Feet Max)
S3 - L 100x90x6	P2 - 2-38x89 or 2-38x140
S4 - L 125x90x8	P3 - 3-38x89 or 3-38x140
S5 - L 125x90x10	P4 - 4-38x89 or 4-38x140
S6 - L 200x100x12	P5 - 5-38x89 or 5-38x140
S7 - L 150x100x10 (L.L.V.) 200 BEARING	P6 - 6-38x89 or 6-38x140
S8 - L 100x90x8	P11 - HEAVY DUTY STEEL POST, CAPACITY = 55 KN
WOOD LINTEL	P12 - ADJUSTABLE HSS, CAPACITY 100 KN
L1 - 2-38x235 w/ 12.7 PLYWOOD SPACER	HSS 73 OD - HSS 73 O.D. X 4.8 + 12 PLATE TOP & BOTT.
L2 - 2-38x235	HSS 89 OD - HSS 89 O.D. X 4.8 + 12 PLATE TOP & BOTT.
L3 - 3-38x235	HSS 76 - HSS 76.2 X 76.2 X 4.8 + 12 PLATE TOP & BOTT.
L4 - 3-38x235 c/w 2-12.7 PLYWOOD SPACERS & 2 ROWS OF 90 C.W.N. @ 200 c/c B/S	HSS 89 - HSS 89 X 89 X 4.8 + 12 PLATE TOP & BOTT.
L5 - 3-38x286 c/w 2-12.7 PLYWOOD SPACERS & 2 ROWS OF 90 C.W.N. @ 200 c/c B/S	HSS 102 - HSS 102 X 102 X 4.8 + 12 PLATE TOP & BOTT.
L6 - 2-45x240 M.L.	
L7 - 3-45x240 M.L.	
L8 - 2-38x286	
L9 - 3-38x286	
L10 - 2-38x185	
PROVIDE 'P2' POST BOTH ENDS OF LINTEL UNLESS NOTED OTHERWISE	ANCHOR POST TO FOUNDATION W/ 2-12ø WEDGE ANCHORS PROVIDE 'P2' UNDER ALL DOUBLE JOISTS & TRUSSES U.N.O. FOOTINGS ALL FOOTINGS DESIGNED FOR ALLOWABLE SOIL CAP.= 100kpa

Dwg Sheet Set:	
Floor Plans	A0a CONSTRUCTION NOTES
	A1 BASEMENT FLOOR PLAN
	A2 GROUND FLOOR PLAN ELEV. 'BA' & 'CA' / EXTRA BRICK
	A2a GROUND FLOOR PLAN ELEV. 'DA' / EXTRA BRICK
	A3a SECOND FLOOR PLANS ELEV. 'BA', 'CA' & 'DA'
Polylight / Flex Opt	FX1 FLEX OPTIONS
	AC1 CEILING/POTLIGHTS LAYOUTS
Elevations	A4a FRONT ELEVATION ELEV. 'BA', 'CA' & 'DA'
	A5a SIDE ELEVATION & ROOF PLAN ELEV. 'BA' / EXTRA BRICK
	A5b SIDE ELEVATION & ROOF PLAN ELEV. 'CA' / EXTRA BRICK
	A5c SIDE ELEVATION & ROOF PLAN ELEV. 'DA' / EXTRA BRICK
	A6a REAR ELEVATIONS ELEV. 'BA', 'CA' & 'DA'
	A6a REAR ELEVATIONS ELEV. 'BA', 'CA' & 'DA'
Sections	A7a CROSS SECTIONS - STAIRS ELEV. 'BA', 'CA' & 'DA'
	A7b CROSS SECTIONS - GARAGE ELEV. 'BA', 'CA' & 'DA'
Special Conditions (Look Out/Walk-Out/Riser)	A1b,c PARTIAL FOUNDATION PLANS RISERS
	A1d,e PARTIAL GROUND FLOOR PLANS RISERS
	A1g PARTIAL PLANS LOOK OUT DECK
	A1f FOUNDATION PLAN WALKOUT BASEMENT
	A1h BASEMENT PLAN WALKOUT BASEMENT
	A4b FRONT ELEVATION ELEV. 'BA', 'CA' & 'DA' (4 RISER)
	A4c FRONT ELEVATION ELEV. 'BA', 'CA' & 'DA' (5 RISER)
	A4d FRONT ELEVATION ELEV. 'BA', 'CA' & 'DA' (6 RISER)
	A5d REAR & SIDE ELEVATIONS LOOK OUT DECK
	A5e SIDE ELEVATIONS WALK-OUT BASEMENT
A5f REAR ELEVATIONS WALK-OUT BASEMENT	

No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	

SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE TYPICAL UNIT
NOMENCLATURE

FILENAME: ETH060-TAHOE 4-ALL-2022.DWG

MODEL (EXECUTIVE TOWNHOMES)

TAHOE 4 2022
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

Scale N.T.S.

dwg #

A-0

CONSTRUCTION NOTES

UNLESS OTHERWISE NOTED
2012 OBC O. REG. 332/12

ALL CONSTRUCTION PRACTICES TO COMPLY WITH ONTARIO BUILDING CODE (O.B.C.) REGULATIONS
ALL DIMENSIONS GIVEN FIRST IN METRIC (mm)


- ① **ROOF CONSTRUCTION (SEE SP2 & 7/SP4)**
ASPHALT SHINGLES
APPROVED EAVES PROTECTION TO EXTEND MIN. 900mm (2'-11") UP ROOF SURFACE TO LINE NOT LESS THAN 300mm (12") BEYOND INNER FACE OF EXTERIOR WALL FOR ROOF SLOPES LESS THAN 8:12. (OBC 9.26.5)
11.1 (7/16") OSB SHEATHING W/ 'H' CLIP EDGE SUPPORT
PRE-ENGINEERED TRUSSES BRACED AS PER MANUFACTURES SPECIFICATIONS & DETAIL 7/SP4
RSI 10.56 (R60) ROOF INSULATION
19 x 65 (1x3) STRAPPING @405 O/C
6 mil. AIR/VAPOUR BARRIER
12.7mm (1/2") INT. DRYWALL FINISH
-PRE-FINISHED ALUM. VENTED SOFFIT & PREFINISHED ALUM. FASCIA.
ATTIC VENTILATION 1:300 OF INSULATED CEILING AREA UNIFORMLY DISTRIBUTED ON OPPOSITE SIDES OF THE BUILDING WITH NO LESS THAN 25% AT EAVES AND 25% THE SOFFIT (OBC 9.19.1.2)
- ② **EXTERIOR WALL CONSTRUCTION (VINYL SIDING)**
VINYL SIDING AS PER ELEVATIONS (SEE SP2)
EXTERIOR AIR BARRIER (TYVEK)
EXTERIOR OSB SHEATHING 11.1mm (7/16")
38mm x140mm (2x6) STUDS @ 405 (16") O.C. U.N.O.
RSI 3.87 (R22) BATT. INSULATION
6 mil. VAPOUR BARRIER
12.7mm (1/2) INT. DRYWALL FINISH
- ②A **EXTERIOR WALL CONSTRUCTION (COMPOSITE SIDING)** (SEE SP2)
COMPOSITE SIDING AS PER ELEVATIONS
38x65 (2x3) STRAPPING AS PER MANUF. SPECS
EXTERIOR AIR BARRIER (TYVEK)
EXTERIOR OSB SHEATHING 11.1mm (7/16") (20mm OSB FOR VERT. SIDING)
38mm x140mm (2x6) STUDS @ 405 (16") O.C. U.N.O.
RSI 3.87 (R22) BATT. INSULATION
6 mil. VAPOUR BARRIER
12.7mm (1/2) INT. DRYWALL FINISH
- ③ **EXTERIOR WALL CONSTRUCTION (MASONRY)** (SEE SP2)
MASONRY VENEER , 22 x 180 x 0.76mm (7/8" x 7" x 22 ga) GALV. METAL TIES @ 400mm (15 3/4") PROVIDE WEEPHOLES @ 800mm (30") O.C. HORIZ. @ BOTTOM COURSE ONLY & OVER OPENINGS PROVIDE BASE FLASHING UP MIN. 150mm (6") BEHIND AIR BARRIER. MIN. 150mm (6") CLEARANCE BETWEEN MASONRY AND GRADE. (9.20.6.4, 9.20.9.5, 9.20.13.5,9.20.13.6)
25mm AIR SPACE
EXTERIOR AIR BARRIER (TYVEK)
EXTERIOR OSB SHEATHING 11.1mm (7/16")
38mm x140mm (2x6) STUDS @ 405 (16") O.C. U.N.O.
RSI 3.87 (R22) BATT. INSULATION
6 mil. VAPOUR BARRIER
12.7mm (1/2) INT. DRYWALL FINISH
- ④ **INTERIOR STUD PARTITIONS**
12.7mm (1/2") INT. DRYWALL ON BOTH SIDES (FOR FIN. AREAS)
2 TOP PLATES & 1 BOTTOM PLATE TO MATCH STUD WIDTH.
LOAD BEARING WALLS
38mm x 89mm (2 x 4) OR 38mm x 140mm (2 x 6) @ 406mm (16") O.C.
NON-LOAD BEARING WALLS
38mm x 89mm (2 x 4) OR 38mm x 140mm (2 x 6) @ 610mm (2'-0") O.C. (405 (16") IN BATHROOMS)
- ⑤ **FOUNDATION WALL (SOIL BEARING CAPACITY 100 kPa)**
DRAINAGE LAYER TO RETURN AND COVER FOOTING (SEE SP2+SP2.1)
BITUMINOUS DAMPPROOFING,
200mm (8") POURED CONC. FOUNDATION WALL WITH 20 MPa(2900 Psi)
CONC. STRG.
550 x200mm (22" x 8") U.N.O. CONCRETE KEYED FOOTINGS W/ CAPILLARY BREAK
BACKFILL WITH NON-FROST SUSCEPTIBLE SOIL.
- ⑤A **FOUNDATION INT. WALL FINISH (UN.FINISH AREA)** (SEE SP2.1)
50mm XPS FOAM R10 ci.(DOWN TO FOOTING)
ROXUL COMFORTBOARD 80(R12),
OR APPROVED EQUIVALENT MATERIAL
6 mil. VAPOUR BARRIER
- ⑤B **FOUNDATION INT. WALL FINISH (FINISH AREA)** (SEE SP2.1)
50mm XPS FOAM R10 ci.(DOWN TO FOOTING)
38mm x 89mm (2x4) STUDS @ 610mm (24") O/C
RSI 2.1 (R12) BATT. INSULATION
12.7 mm DRYWALL FINISHED
- ⑤C **FOUNDATION INT. WALL FINISH @ STAIR (SEE SP2.1)**
50mm XPS FOAM R10 ci.(DOWN TO FOOTING)
38mm x 89mm (2x4) STUDS @ 610mm (24") O/C
RSI 2.1 (R12) BATT. INSULATION
12.7 mm DRYWALL FINISHED
- ⑤D **FOUNDATION SLAB ON GRADE (SEE SP2.1)**
RSI 1.75 ci (R10 ci) 50mm RIGID INSULATION
POURED CONCRETE FOUNDATION WALL SEE PLAN FOR THICKNESS
- ⑥ **WEEPING TILE (SEE SP2 & OBC 9.14.3)**
100mm (4") DIA. WEEPING TILE, min.150mm (6") CRUSHED STONE OVER AND BESIDE WEEPING TILES (CRUSH STONE TO COVER 50mm (2") OF FOOTING)
- ⑦ **GARAGE EXTERIOR WALL (SIDING)**
SIDING AS PER ELEVATIONS
AIR BARRIER ON EXTERIOR
11.1mm (7/16") OSB SHEATHING
38mm x 89mm (2 x 4) OR 38mm x 140mm (2x6) STUDS @ 405 O/C AS PER PLAN

- ⑧ **GARAGE EXTERIOR WALL (MASONRY)**
MASONRY VENEER, 22 x 180 x 0.76mm (7/8" x 7" x 22 ga) GALV. METAL TIES @ 400mm (15 3/4") PROVIDE WEEPHOLES @ 800mm (30") O.C. HORIZ. @ BOTTOM COURSE ONLY & OVER OPENINGS PROVIDE BASE FLASHING UP MIN. 150mm (6") BEHIND AIR BARRIER. MIN. 150mm (6") CLEARANCE BETWEEN MASONRY AND GRADE. (9.20.6.4, 9.20.9.5, 9.20.13.5,9.20.13.6)
25mm AIR SPACE
EXTERIOR AIR BARRIER (TYVEK)
EXTERIOR OSB SHEATHING 11.1mm (7/16")
38mmX 89mm or 38mm x140mm (2x6) STUDS AS PER PLAN @ 405 (16") O.C. U.N.O.
12.7mm (1/2) INT. DRYWALL TAPED
- ⑨ **GARAGE TO HOUSE WALL (OBC 9.10.9.16)**
12.7mm (1/2") GYPSUM BD.
6 mil. VAPOUR / AIR BARRIER (WARM SIDE),
3.87 (R22) BATT INSULATION IN WALL,
12.7mm (1/2") GYPSUM BD.
TAPED AND SEAL ALL JOINTS GAS TIGHT & VAPOURPROOF,
- ⑩ **2 STOREY WALLS -**
38mm x 140mm (2 x 6) SPF. # 2 FULL HEIGHT STUDS @ 405mm (16") O.C. C/W HORIZONTAL SOLID BLOCKING @ 1200mm (3'-11") O.C. VERTICALLY. WALL CONSTRUCTION SHALL CONFORM TO OBC 9.23.10.1(2)
- ⑩A **2 STOREY WALLS -**
DOUBLE 38mm x 140mm (2 x 6) SPF. # 1/2 FULL HEIGHT STUDS @ 405mm (16") O.C. C/W HORIZONTAL SOLID BLOCKING @ 1200mm (3'-11") O.C. VERTICALLY. WALL CONSTRUCTION SHALL CONFORM TO OBC 9.23.10.1(2)
- ⑩B **2 STOREY WALLS -**
38mm x 185mm (2 x 8) SPF. # 1/2 FULL HEIGHT STUDS @ 405mm (16") O.C. C/W HORIZONTAL SOLID BLOCKING @ 1/4 POINTS O.C. WALL CONSTRUCTION SHALL CONFORM TO OBC 9.23.10.1(2)
- ⑪ **BEARING STUD PARTITION**
38mm x 89mm (2 x 4) OR 38mm x 140mm (2 x 6) STUDS @ 406mm (16") O.C., (AS PER WORKING DRAWINGS)WITH 2 TOP PLATES AND SINGLE SILL PLATE TO MATCH STUD WIDTH
SILL PLATE RAMSET TO SLAB @ 1800mm (6'-0") O.C.
DAMPPROOFING MATERIAL BELOW PLATE (6mil. v.b)
BASEMENT SLAB 75mm (3") 25MPa (3600 psi) CONC. SLAB CONCRETE FOOTING AS PER PLAN
- ⑫ **EXTERIOR WALL LESS THAN 1.2 M TO PROPERTY LINE (45 MINUTE F.R.R.)**
EXTERIOR FINISH AS PER ELEVATION (OSB EW1a)
EXTERIOR AIR BARRIER (TYVEK)
EXTERIOR OSB SHEATHING 11.1mm (7/16")
38mm x140mm (2x6) OR 38mm X 89MM (2X4)STUDS AS PER PLAN @ 405 (16") O.C. U.N.O.
BATT. INSULATION AS PER PLANS
6 mil. VAPOUR BARRIER (HEATED SPACE ONLY)
15.8mm (5/8") TYPE 'X' INT. DRYWALL FINISH (TAPED IN GARAGE)
- ⑬ **EXTERIOR NON-COMBUSTIBLE CLAD WALL LESS THAN 0.6M TO PROPERTY LINE (45 MINUTE F.R.R.)**
EXTERIOR FINISH AS PER ELEVATION
12.7 EXTERIOR GRADE DRYWALL (FOR SIDING ONLY)
EXTERIOR AIR BARRIER (TYVEK)
12.7mm (1/2") EXTERIOR GRADE
EXTERIOR OSB SHEATHING 11.1mm (7/16")
38mm x140mm (2x6) OR 38mm X 89MM (2X4)STUDS AS PER PLAN @ 405 (16") O.C. U.N.O.
RSI 3.87 (R22) or RSI 2.1 (R12) BATT. INSULATION CONFORMING TO CAN/ULC -S702 AND HAVING A MASS OF 4.8 kg/m2 FOR 150mm THICKNESS & 2.8 kg/m2 FOR 89mm THICKNESS
6 mil. VAPOUR BARRIER (HEATED SPACE ONLY)
15.8mm (5/8") TYPE 'X' INT. DRYWALL FINISH (TAPED IN GARAGE)
- ⑭ **CONVENTIONAL ROOF FRAMING**
38 mm X 140 mm (2" X 6") SPR. RAFTERS @406 mm (16") O.C.,
38 mm X 184 mm (2" X 8") RIDGE BD., HIP & VALLEY RAFTERS
38 mm X 89 mm (2" X 4") COLLAR TIES @ MIDSPAN. CEILING JOISTS TO BE 38 mm X 89 mm (2" X 4") @ 406 mm (16") O.C. FOR A MAX. 2430 mm (8'-0") SPAN & 38 mm X 140 mm (2" X 6") @ 406 mm (16") O.C. FOR A MAX. 4450 mm (14'-7") SPAN. RAFTERS FOR BUILT-UP ROOF TO BE 38 mm X 89 mm (2" X 4") @ 610 mm (24") O.C. W/ A 38 mm X 89 mm (2" X 4") COLLAR TIES AS REQUIRED FOR STABILITY.
- ⑮ **EXPOSED FLOOR (CANTILEVERED)**
19 mm (3/4") SHEATHING (DET. 4/SP5)
FILL CAVITY WITH FOAM INSULATION (min. R-31)
11.1 (7/17") OSB
AIR BARRIER SEALED TO PREP AT PLATE
ALUM. FLAT STOCK
- ⑯ **PROTECTION FROM DAMPNES (OBC 9.23.2.3)**
WOOD FRAMING MEMBERS THAT ARE NOT PRESSURE TREATED AND ARE IN CONTACT WITH CONCRETE THAT IS LESS THAN 150mm (6") ABOVE GROUND OR SLAB, PROVIDE 6 mil. POLYETHYLENE FILM OR No. 50 (45lb) ROLL ROOFING DAMPPROOFING BETWEEN WOOD AND CONCRETE.
- ⑰ **PORCH WOOD POST (SEE SP8/SP4)**
3- 38mm x 140mm (2 x 6) PRESSURE TREATED WOOD POST WITH 2- SIMPSON STRONG TIE A23 METAL CLIPS , ANCHORED TO BEAM AND POST W/ 4-10DIA.x40mm NAILS EACH SIDE, ANCHORED TO SLAB W/ 2-HILTI PINS DIA 0.138x32mm lg. EACH SIDE . PROVIDE MOISTURE BREAK (ROOF SHINGLE OR OTHER) BETWEEN POST & PORCH
- ⑱ **SILL PLATE @ FOUNDATION (SEE SP2.1)**
38mm x 140mm (2 x 6) SILL PLATE (SIDING) 38mm X 89 (2x4)(BRICK) WITH 12.7 mm (1/2") DIA. ANCHOR BOLTS, 300mm (12") LONG, MIN. 100mm IN CONC. @ 1830mm (6'-0") O.C. , PLATE SITTING ON SILL GASKET , AIR BARRIER AND CONCRETE WALL.
- ⑲ **ALL STAIRS (EXTERIOR & INTERIOR)**
MIN. RISE = 125mm (4 7/8") MAX. RISE = 200mm (7 7/8")
MIN. RUN = 255mm (10") MAX. RUN = 355mm (14")
CIRCULAR STAIRS
MIN. TREAD = 255mm (10") min.. TREAD MEASURED 300mm FROM CENTER LINE OF INSIDE HANDRAIL
MIN. RUN = 150mm (5 7/8") AT THE NARROW END OF THE TREAD

MIN. HEADROOM = 1950mm (6'-5")
MIN. WIDTH = 860mm (2'-10")
NOSING (Max. curved or beveled edge) = 25mm (1")

- ⑳ **GUARDS/HANDRAILS**
ALL GUARDS AND HANDRAILS ARE TO COMPLY WITH THE REQUIREMENTS OF THE O.B.C SUBSECTION 9.8.7 AND 9.8.8
GUARD @ INT. LANDING/STAIR OR FLOORS = 900mm (2'-11")
HANDRAIL @ INT. STAIR...MIN = 865 (2'-10") MAX = 965mm (3'-2")
GUARD/HANDRAIL @ EXT. LANDING/BALCONY (Greater than 1800mm above finish grade) = 1070mm (3'-6")
GUARD/HANDRAIL @ EXT. LANDING/STAIR = 900mm (2'-11")
HANDRAIL @ EXT. STAIR...MIN = 865 (2'-10") MAX = 965mm (3'-2")
PICKETS MAX. 100mm (4") BETWEEN
- ㉑ **BLOCK VENEER WALL (INTERIOR)**
100mm (4") CONCRETE BLOCK TO SUPPORT BRICK ABOVE. AIR SPACE, METAL TIES, BLDG. PAPER ETC... AS PER NOTE ③ EXCEPT NO WEEP HOLES OR FLASHING.
- ㉒ **PORCH SLAB (SEE SP-2F)**
130mm (5") POURED CONC. 32MPa (4650 psi) @ 28 DAYS
PORCH SLAB WITH 6% AIR CONTENT +/- 1%, CLASS 2 EXPOSURE W/C RATIO =0.45 WITH 10M REBAR @ 400 O/C (16") EACH WAY WITH MIN. 50mm (2") CONCRETE COVER BOTTOM FROM THE BOTTOM OF THE SLAB TO THE FIRST LAYER OF BARS AND THE SECOND LAYER OF BARS LAID DIRECTLY ON TOP OF THE LOWER LAYER IN THE OPPOSITE DIRECTION, 75mm (3") MIN. SLAB BEARING, 10 M DOWELS 600mm x 600mm (23 5/8" x 23 5/8") @ 400mm (16") O.C. AROUND PERIMETER. REINFORCING STEEL GRADE 400 - CAN/CSA-G30.18-M
- ㉓ **GARAGE SLAB (OBC 9.16.2.2.)**
100mm (4") CONC. SLOPED BACK TO FRONT. AS PER PLAN ,CONC. STRG 32 MPa (4650 psi) @ 28 DAYS WITH 6% ±15 AIR CONTENT , MAX W/C RATIO 0.04, MAX. SLUMP - 75mm, CLASS 'C2' EXPOSURE
COMPACTED NON FROST SUSCEPTIBLE FILL
- ㉔ **BASEMENT SLAB (OBC 9.16.2.2. & SP2)**
75 mm (3") CONCRETE SLAB,CONC. STRG 25 MPa (3625 psi) @ 28 DAYS
ON MIN. 100 mm (4") OF COARSE GRANULAR
- ㉕ **STEP FOOTINGS (OBC 9.15.3.9)**
HORIZONTAL STEP = 600mm (23 5/8") MIN.
VERTICAL STEP = 600mm (23 5/8") MAX.
- ㉖ **COLD CELLAR**
FULL HEIGHT INSULATION ON INTERIOR SIDE OF FOUNDATION WALLS SEPARATING HEATED SPACE FROM COLD CELLAR. INSULATED DOOR WITH WEATHER STRIPPING. C/W VENT W/ PAINTED INSECT SCREEN, LIGHT FIXTURES AND FLOOR DRAIN.
- ㉗ **FRAMED FLOORS (OBC 9.30.6.1 , 9.23.13.3,4,5)**
FLOOR FINISHING (ON MIN. 15.9mm (5/8") PANEL TYPE UNDERLAY FOR CERAMIC TILE)
19mm (3/4") T&G SUBFLOOR
PRE- ENGINEERED FLOOR JOIST SPACING AS PER MANUFACTURERS DRAWINGS
19mm x 65 mm (1x3) STRAPPING @ 405mm (16") O/C
12.7mm (1/2") DRYWALL (FINISH AS PER SPECIFICATIONS)
- ㉘ **PROVIDE 38 X 89 SOLID BLOCKING AT 1200mm (3'-11 1/4") O.C. BELOW WALLS RUNNING PARALLEL TO JOISTS. (OBC 9.23.9.8)**
- ㉙ **GRABS BARS (OBC 9.5.2.3 , SEE SP-10D)**
ADD GRAB BAR REINFORCEMENT IN STUD WALL FOR MAIN BATHROOM
- ㉚ **ATTIC ACCESS (OBC 9.19.2)**
ATTIC ACCESS HATCH 500mm x 700mm (19 3/4" x 27") WITH WEATHER STRIPPING AND INSULATED.
- ㉛ **DROP IN TUB AS PER PLANS (OBC 9.29.2.1)**
CERAMIC TILE DECK W/ 2 ROWS OF TILE
ON WALL AROUND DECK MINIMUM 400mm (1'-4") HIGH
- ㉜ **FREE STANDING TUB AS PER PLANS**
PROVIDE TILE FROM FLOOR TO 400mm (16") ABOVE TUB RIM FOR TUBS 400mm (16")OR LESS FROM WALL
- ㉝ **CAPPED DRYER, INTAKE OR EXHAUST VENT. MAX. UNPROTECTED OPENING AREA OF 130 cm2 (20 sq. in.) (OBC 9.10.15.4(5))**
- ㉞ **LINEN CLOSET 5 SHELVES MIN. 350mm (1'-2") DEEP.**
- ㉟ **19mm x 89mm (1 x 4) BOTH SIDES OF STEEL BEAM.**
- ㊀ **GARAGE DOORS SHALL BE EXTERIOR TYPE SELF CLOSING DOORS AND WEATHERSTRIPPED. PROVISIONS RESISTANCE TO FORCED ENTRY SHALL BE PROVIDE AS PER O.B.C 9.7**
- ㊁ **WOOD PLATES ON STEEL BEAMS TO BE RAMSET , SCREWED OR BOLTED @ 405mm (16") O/C**
- ㊂ **TYPICAL PARTY WALL (OBC ASSEMBLY W15d) (SP3a -1)**
2-15.9mm TYPE 'X' GYPSUM BOARD
FRAMING (STUD SIZE AS PER PLAN) @ 405 O.C.
90mm SOUND BATTS.
25mm AIR SPACE
38x90 STAGGERED FRAMING @ 405 O.C. 2-15.9mm TYPE 'X' GYPSUM BOARD

2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	
No	Revision	Date	By



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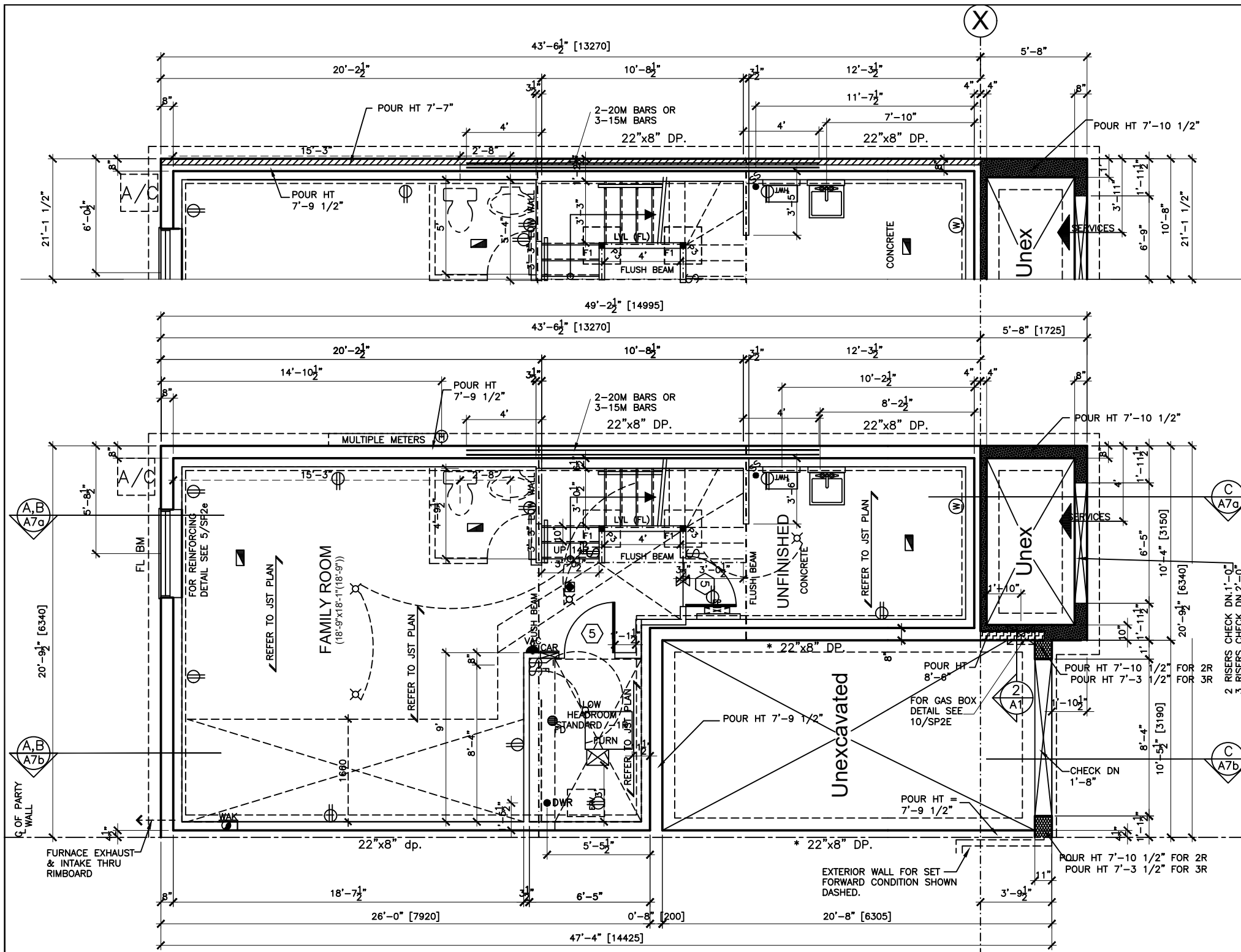
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SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE TYPICAL UNIT
NOMENCLATURE

FILENAME:
ETH060-TAHOE 4-ALL-2022.DWG

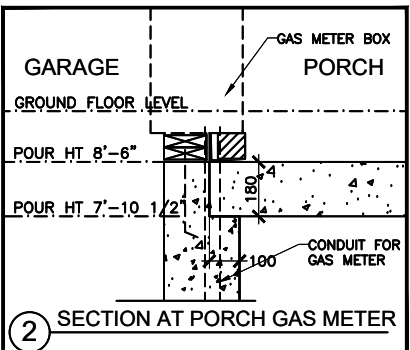
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ELEV.- BA, CA, DA	SP-0
(2022 STANDARD DRAWING)	



**BASEMENT PLAN
EXTRA BRICK**

**BASEMENT PLAN
2 & 3 RISER**

**** REFER TO JST PLAN FOR LVL SIZE & QUANTITY****



No	Revision	Date	By
3	FOUNDATION REINFORCING ADDED	MAY 18/22	MC
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	



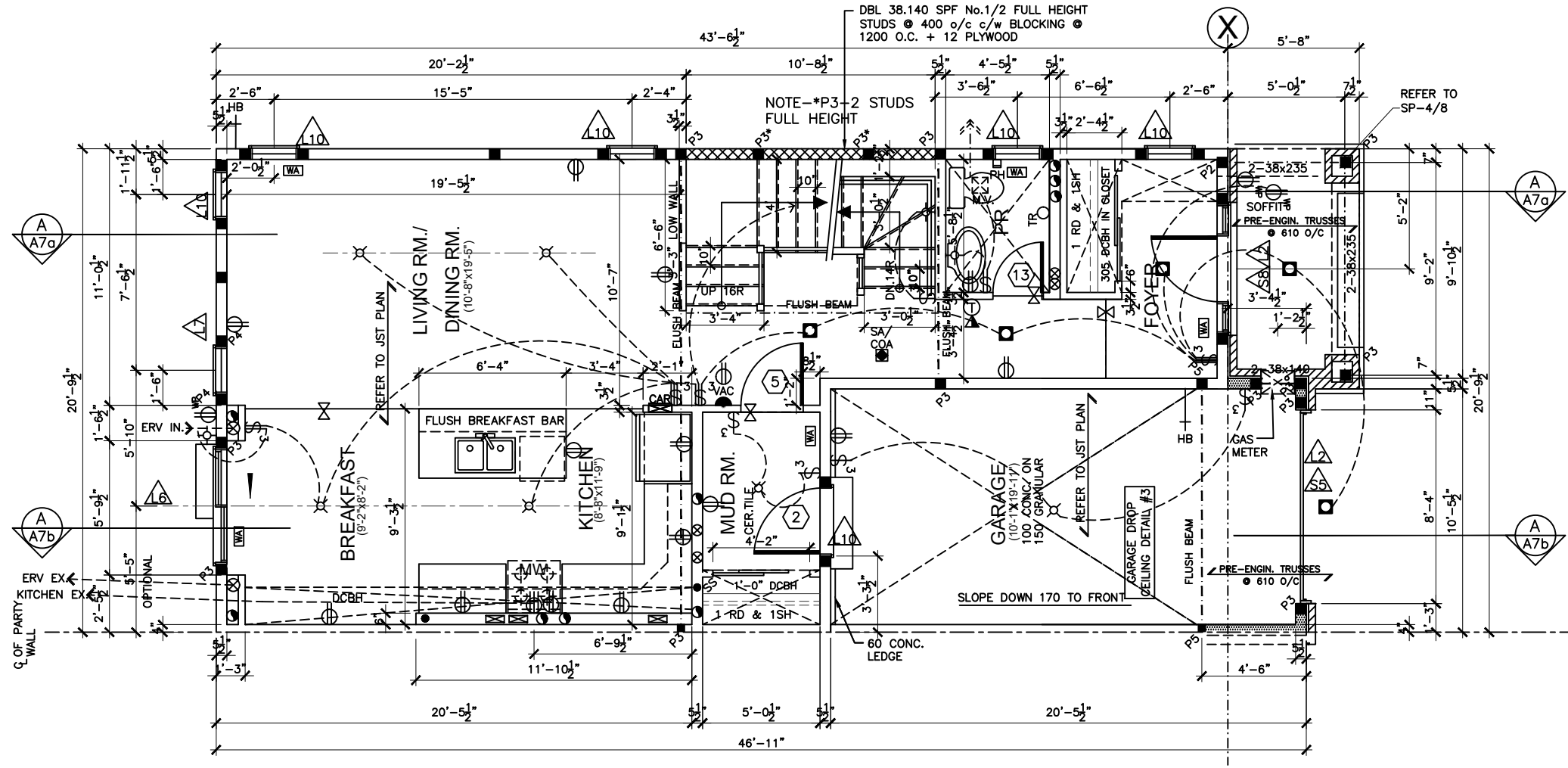
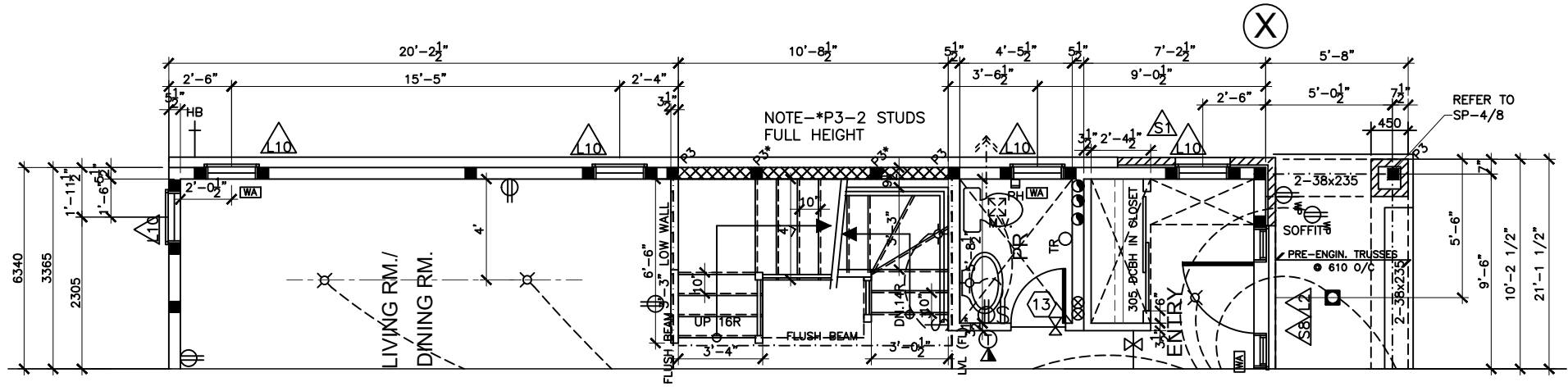
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SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE: BASEMENT FLOOR PLAN

FILENAME: ETH060-TAHOE 4-ALL-2022.DWG
MODEL (EXECUTIVE TOWNHOMES)
TAHOE 4 2022
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

Scale 1:75
dwg # **A-1**



**** REFER TO JST PLAN FOR LVL SIZE & QUANTITY ****

**STUD WALL FRAMING NOTE:
GROUND FLOOR 38X89 STUD WALLS
ALONG PARTY WALLS TO HAVE
38X89 BLOCKING AT MID HEIGHT**

No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	



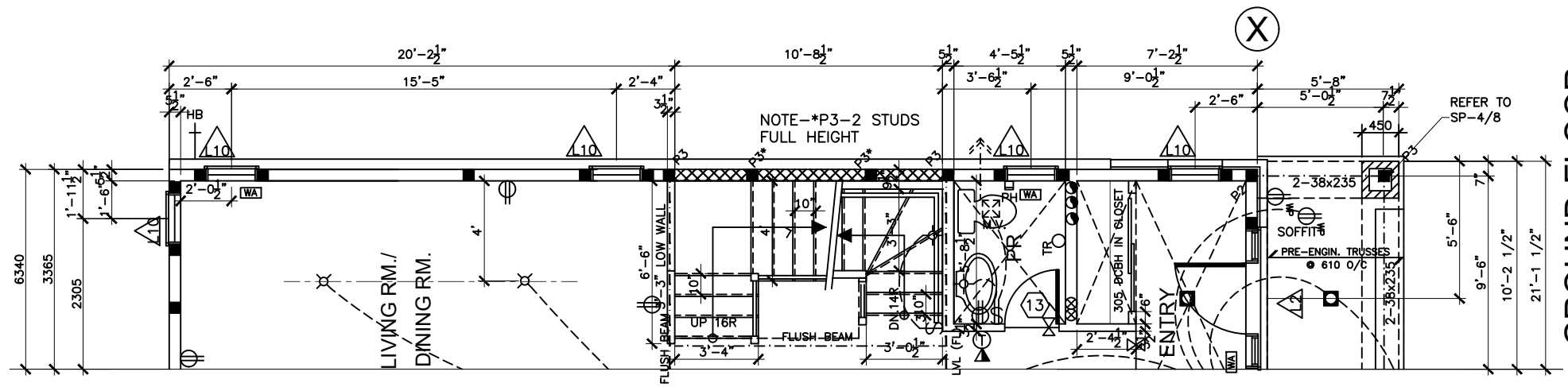
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SITE: VISTA STAGE 1
BROOKLINE STAGE 1

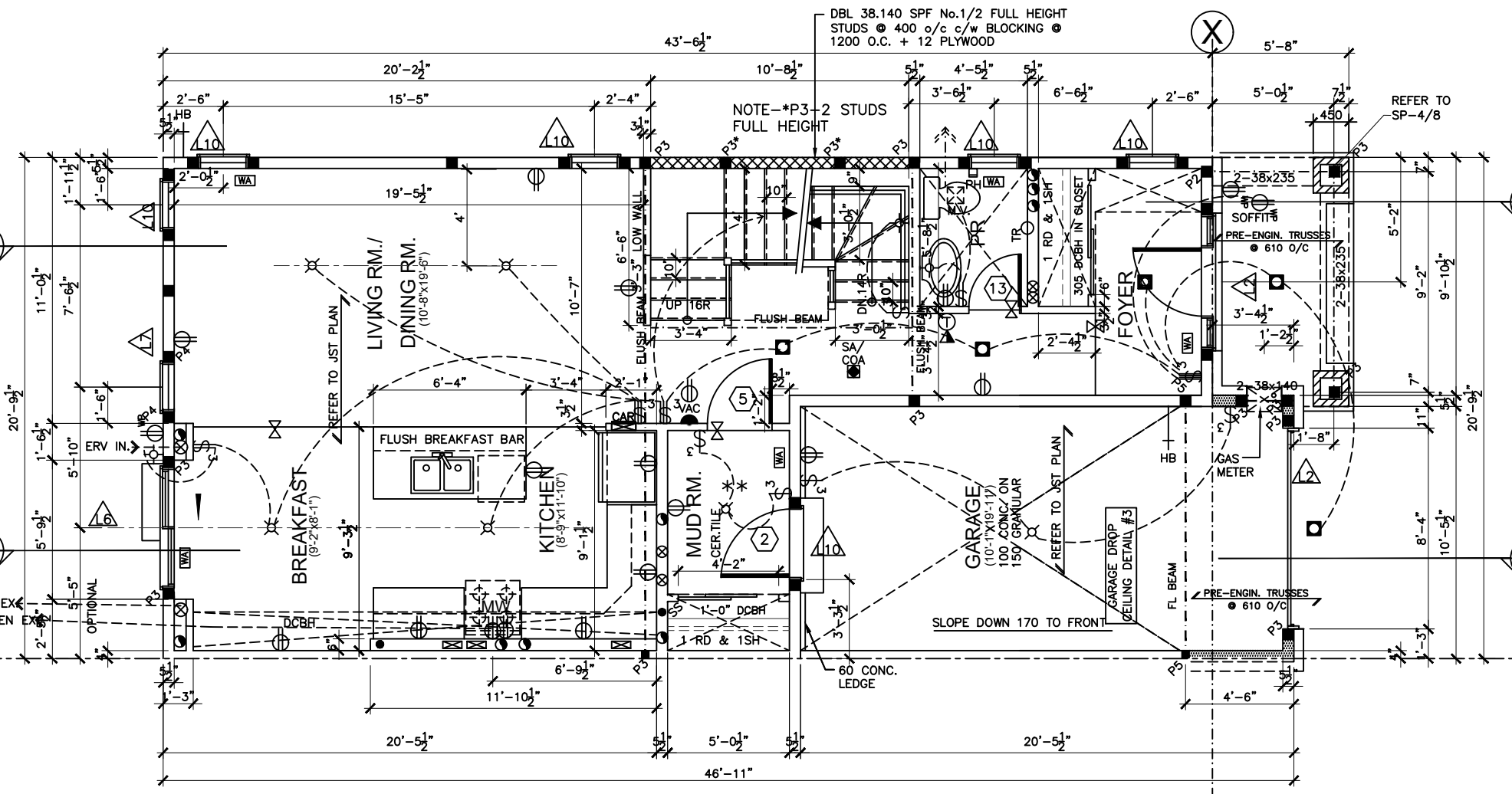
TITLE: GROUND FLOOR PLAN
ELEV. 'BA' & 'CA' / EXTRA BRICK

FILENAME:
ETH060-TAHOE 4-ALL-2022.DWG
MODEL (EXECUTIVE TOWNHOMES)
TAHOE 4 **2022**
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

Scale 1:75
dwg # **A-2**



GROUND FLOOR
EXTRA BRICK
ELEVATION 'DA'



GROUND FLOOR PLAN
ELEVATION 'DA'

** REFER TO JST PLAN FOR LVL SIZE & QUANTITY**

STUD WALL FRAMING NOTE:
GROUND FLOOR 38X89 STUD WALLS
ALONG PARTY WALLS TO HAVE
38X89 BLOCKING AT MID HEIGHT

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1	STRUCTURAL LETTER	FEB 15/22	
No	Revision	Date	By



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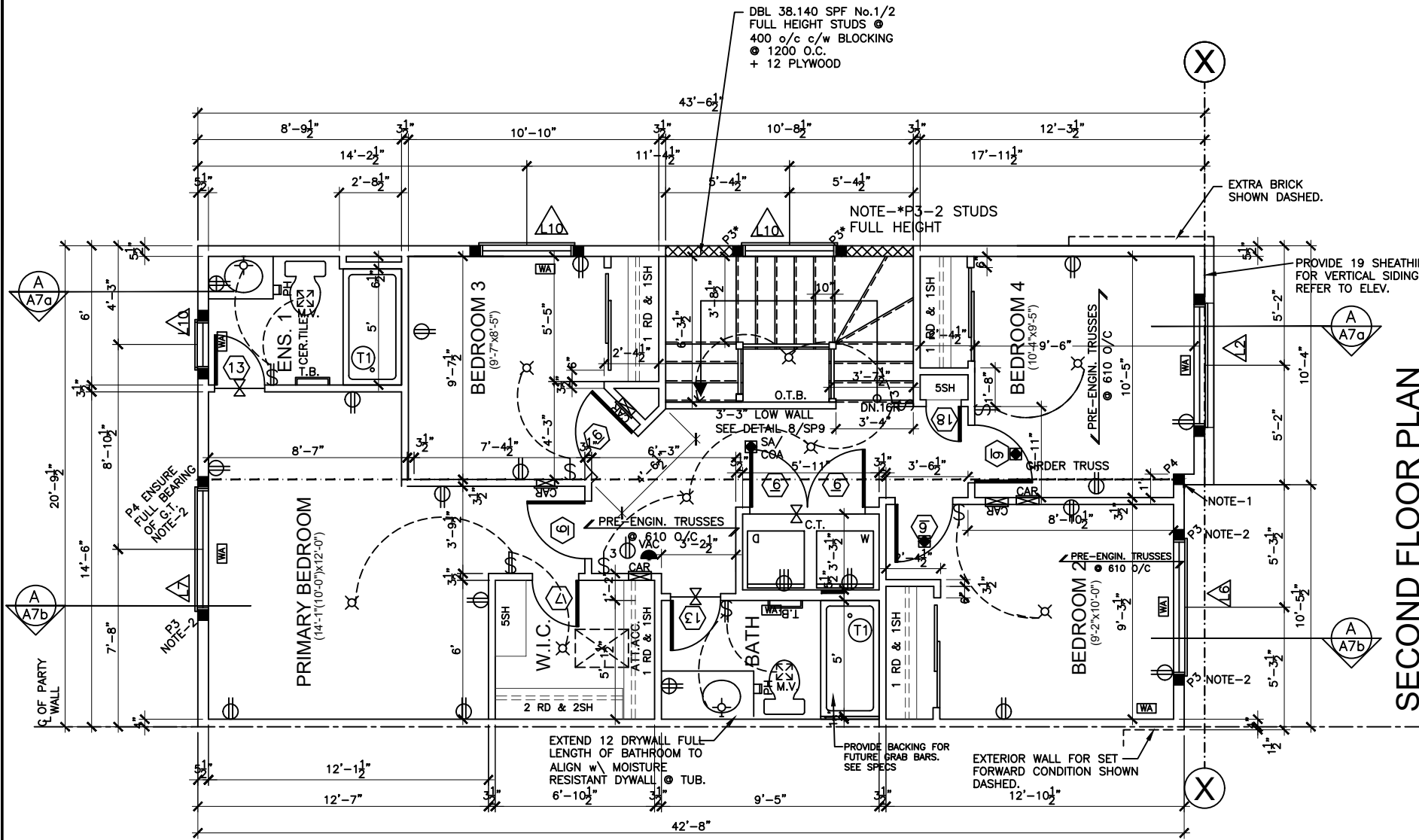
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BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE: GROUND FLOOR PLAN
ELEV. 'DA' / EXTRA BRICK

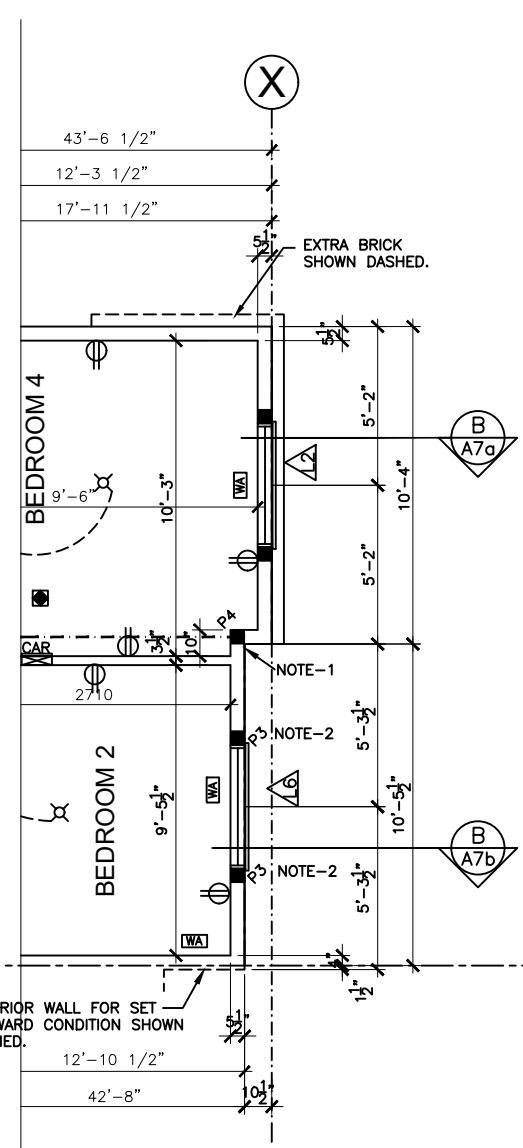
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MODEL (EXECUTIVE TOWNHOMES)
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ELEV.- BA, CA, DA
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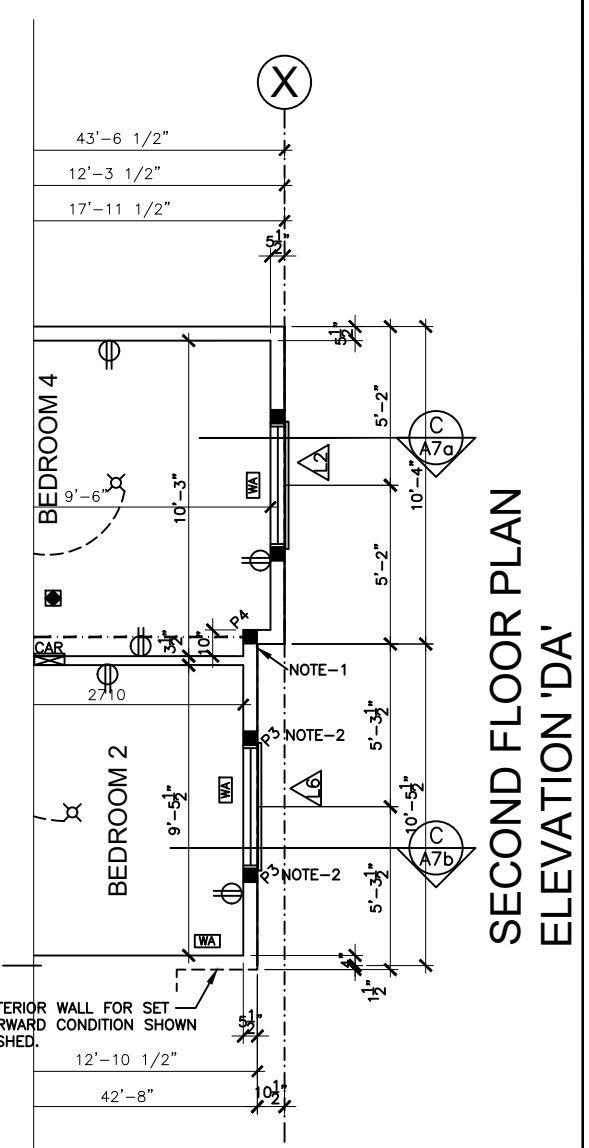
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SECOND FLOOR PLAN
ELEVATION 'BA'



SECOND FLOOR PLAN
ELEVATION 'CA'



SECOND FLOOR PLAN
ELEVATION 'DA'

STUD WALL FRAMING NOTE:
SECOND FLOOR 38X89 STUD WALLS
ALONG PARTY WALLS

NOTE- 2
* USE 2-H6 SIMPSON HURRICANE TIES AT THE TOP FOR UPLIFT & 2-H8 SIMPSON HURRICANE TIES AT THE BOTTOM FOR UPLIFT

NOTE- 1
* USE H6 SIMPSON HURRICANE TIES AT THE TOP FOR UPLIFT & H8 SIMPSON HURRICANE TIES AT THE BOTTOM FOR UPLIFT

STUD WALL FRAMING NOTE:
SECOND FLOOR 38X89 STUD WALLS
ALONG PARTY WALLS

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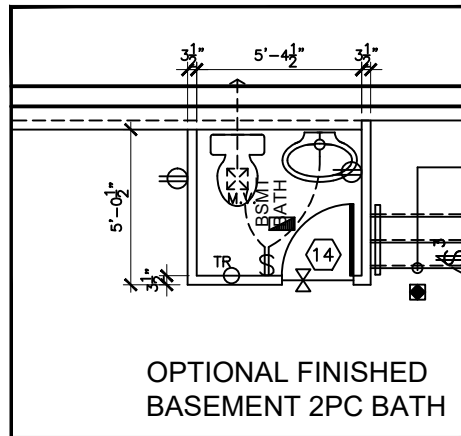
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BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE SECOND FLOOR PLANS
ELEV. 'BA', 'CA' & 'DA'

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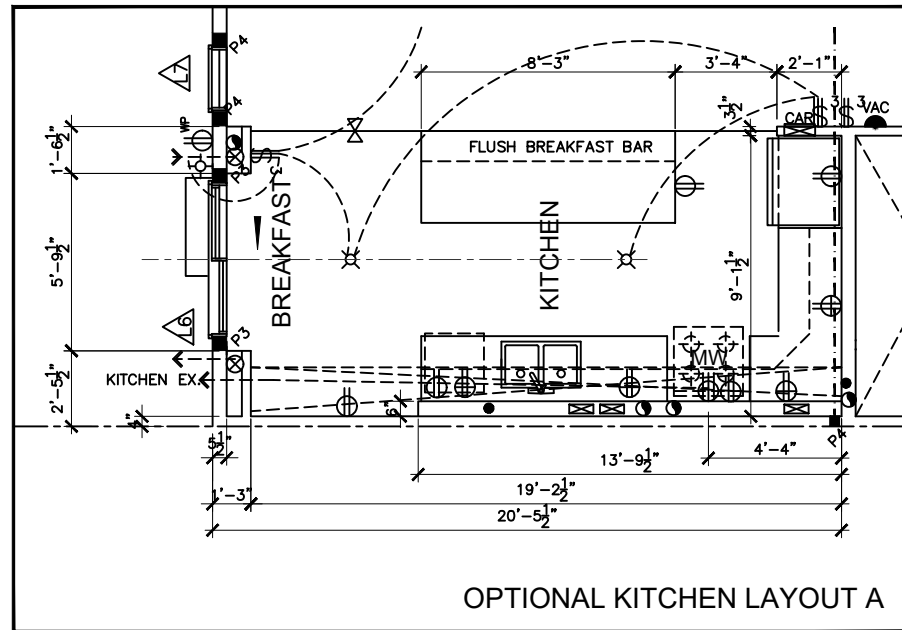
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TAHOE 4 2022
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

Scale 1:75
dwg # A-3a

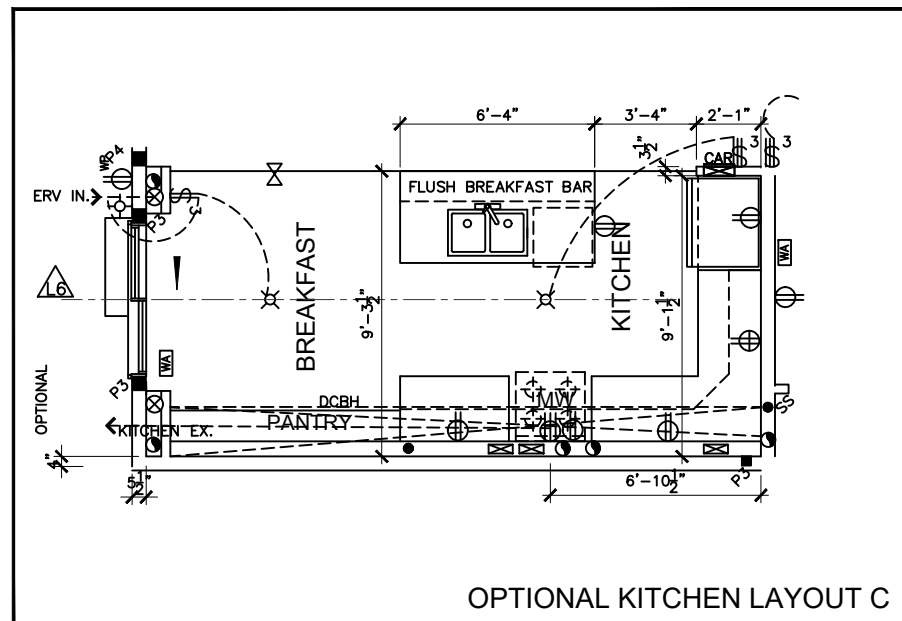


OPTIONAL FINISHED
BASEMENT 2PC BATH

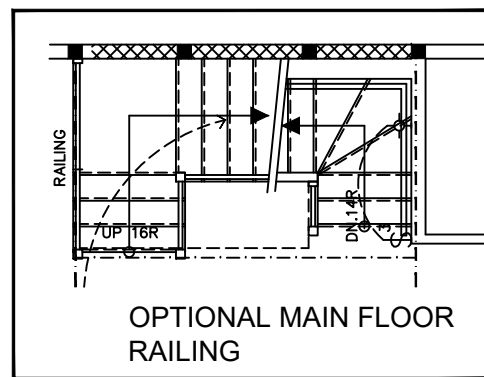
BASEMENT OPTIONS



OPTIONAL KITCHEN LAYOUT A

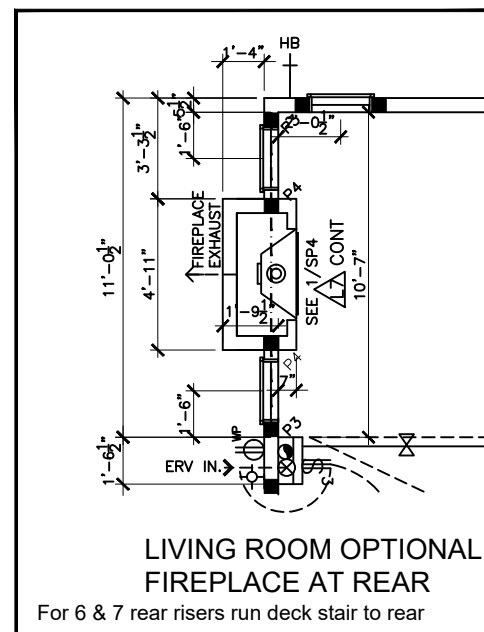


OPTIONAL KITCHEN LAYOUT C

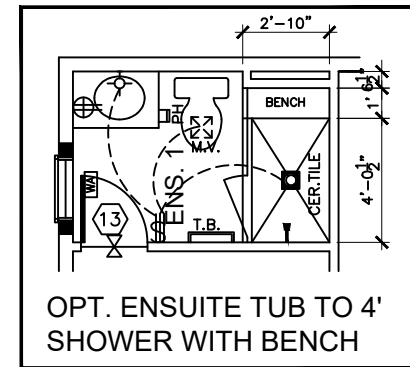


OPTIONAL MAIN FLOOR
RAILING

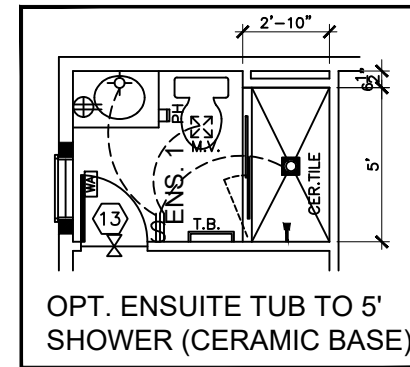
GROUND FLOOR
OPTIONS



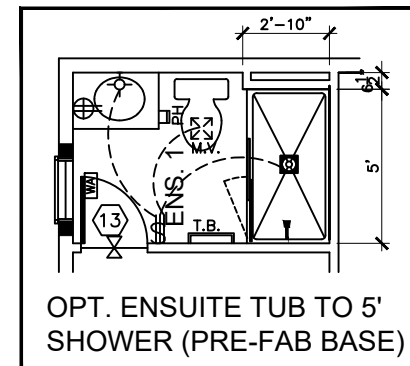
LIVING ROOM OPTIONAL
FIREPLACE AT REAR
For 6 & 7 rear risers run deck stair to rear



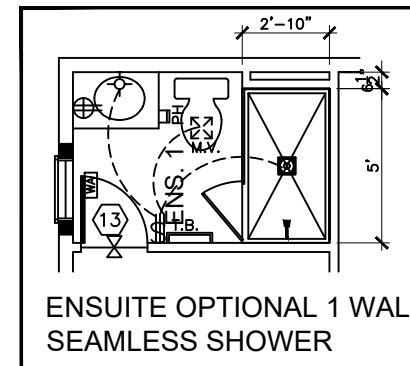
OPT. ENSUITE TUB TO 4'
SHOWER WITH BENCH



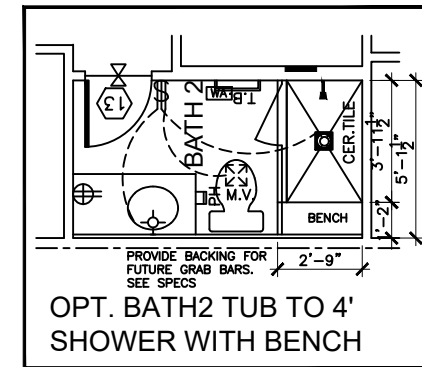
OPT. ENSUITE TUB TO 5'
SHOWER (CERAMIC BASE)



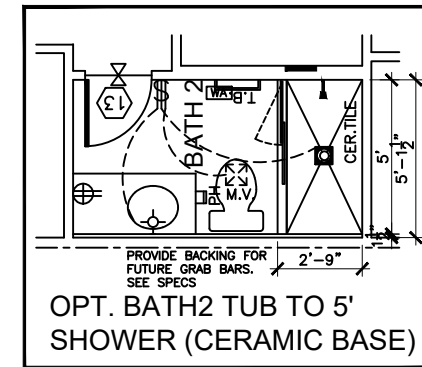
OPT. ENSUITE TUB TO 5'
SHOWER (PRE-FAB BASE)



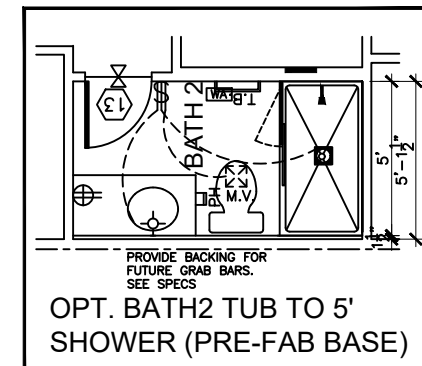
ENSUITE OPTIONAL 1 WALL
SEAMLESS SHOWER



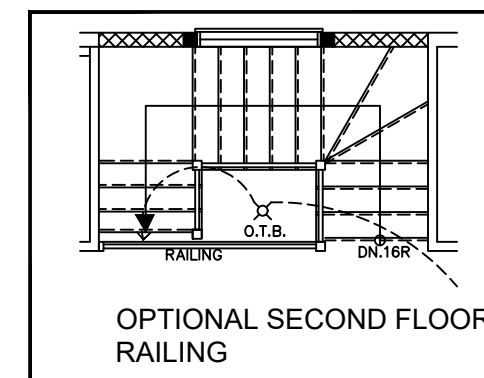
OPT. BATH2 TUB TO 4'
SHOWER WITH BENCH



OPT. BATH2 TUB TO 5'
SHOWER (CERAMIC BASE)



OPT. BATH2 TUB TO 5'
SHOWER (PRE-FAB BASE)



OPTIONAL SECOND FLOOR
RAILING

SECOND FLOOR
OPTIONS

No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	



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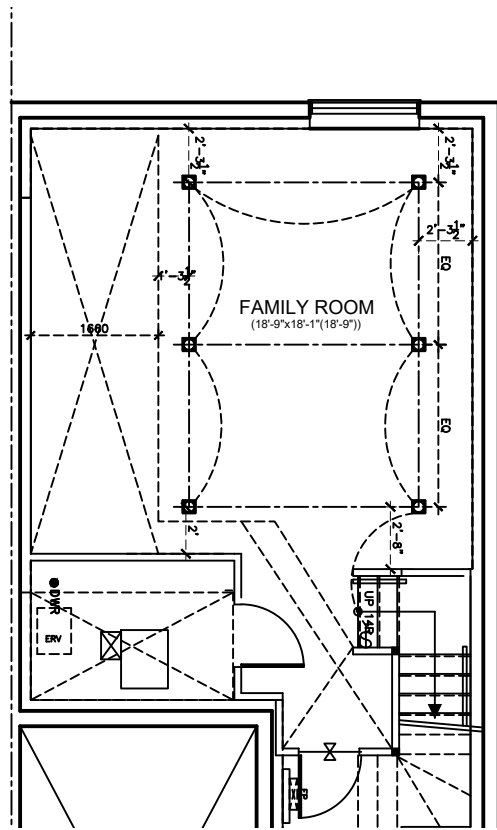
SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE FLEX OPTIONS

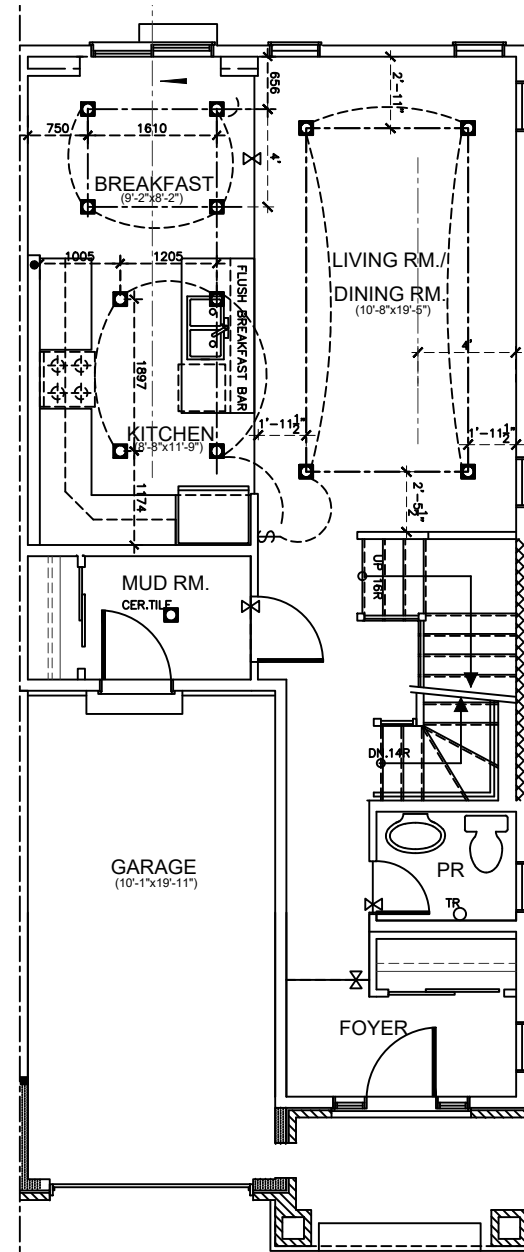
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ETH060-TAHOE 4-ALL-2022.DWG

MODEL (EXECUTIVE TOWNHOMES)
TAHOE 4 2022
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

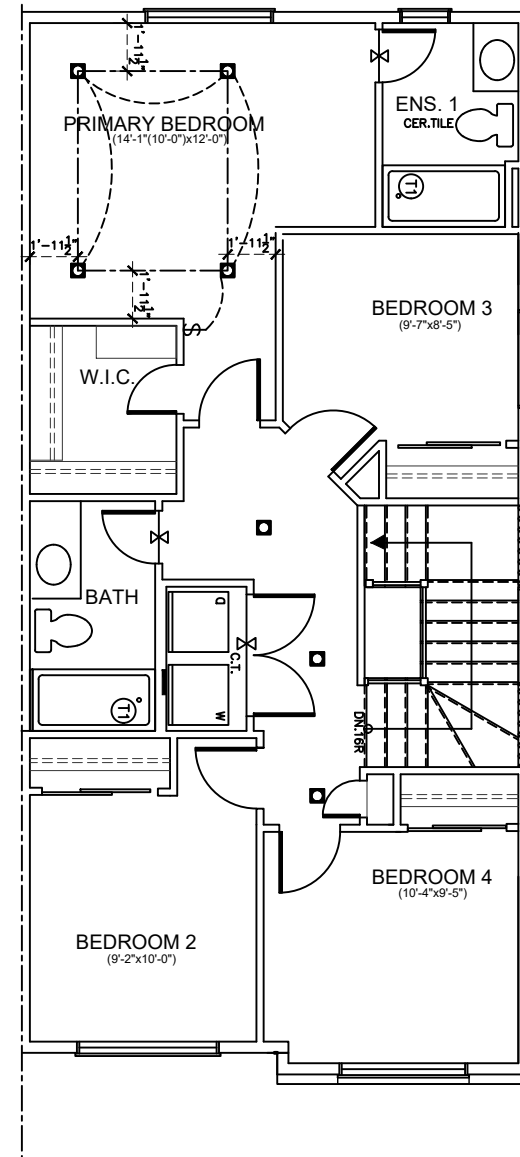
Scale 1:75
dwg # FX-1



BASEMENT FLOOR PLAN



GROUND FLOOR PLAN.



SECOND FLOOR PLAN.

1	STRUCTURAL LETTER	FEB 15/22	
No	Revision	Date	By



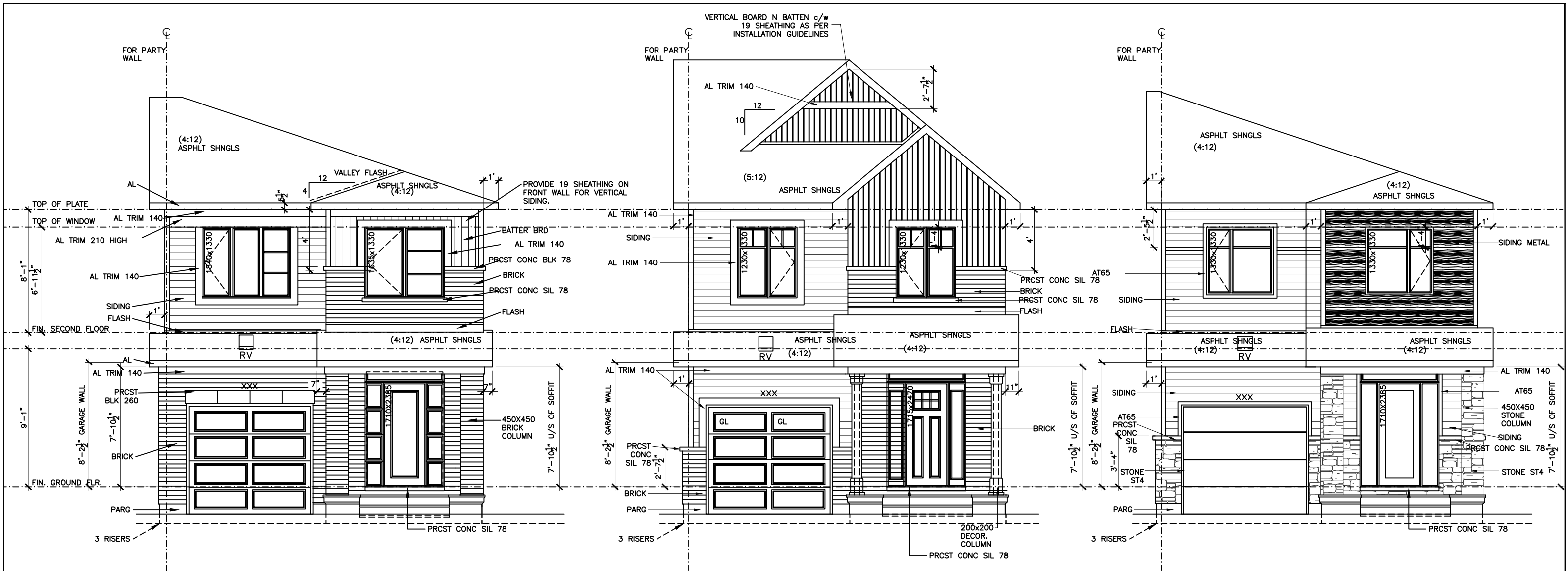
CONFIDENTIAL

STRUCTURAL FRAMING LEGEND: SEE DWG A3
 ELEVATION LEGEND: SEE DWG A4
 FLOOR PLAN LEGEND: SEE DWG SP-1
 DR/WIN LEGEND: SEE DWG SP-7*
 FOR ADDED INFO., ABBREVS, SYMBOLS: SEE SPECS. SP-*

TITLE CEILING/POTLIGHT OPTIONS
 ELEV. 'A'

FILENAME: ETH060-TAHOE 4-ALL-2022.DWG
 MODEL (EXECUTIVE TOWNHOMES)
 THE TAHOE 4 2021
 ELEV.- BA, CA, DA
 (2022 STANDARD DRAWING)

Scale N.T.S.
 dwg # C-1



FRONT ELEVATION
EL. 'BA' - END
PRAIRIE

** USE 19 SHEATHING BEHIND VERTICAL SIDING AS PER SP-2a **

FRONT ELEVATION
EL. 'CA' - END
ARTS & CRAFTS

FRONT ELEVATION
EL. 'DA' - END
MODERN

** ALL FASCIA BOARD 140 **



CONFIDENTIAL

SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

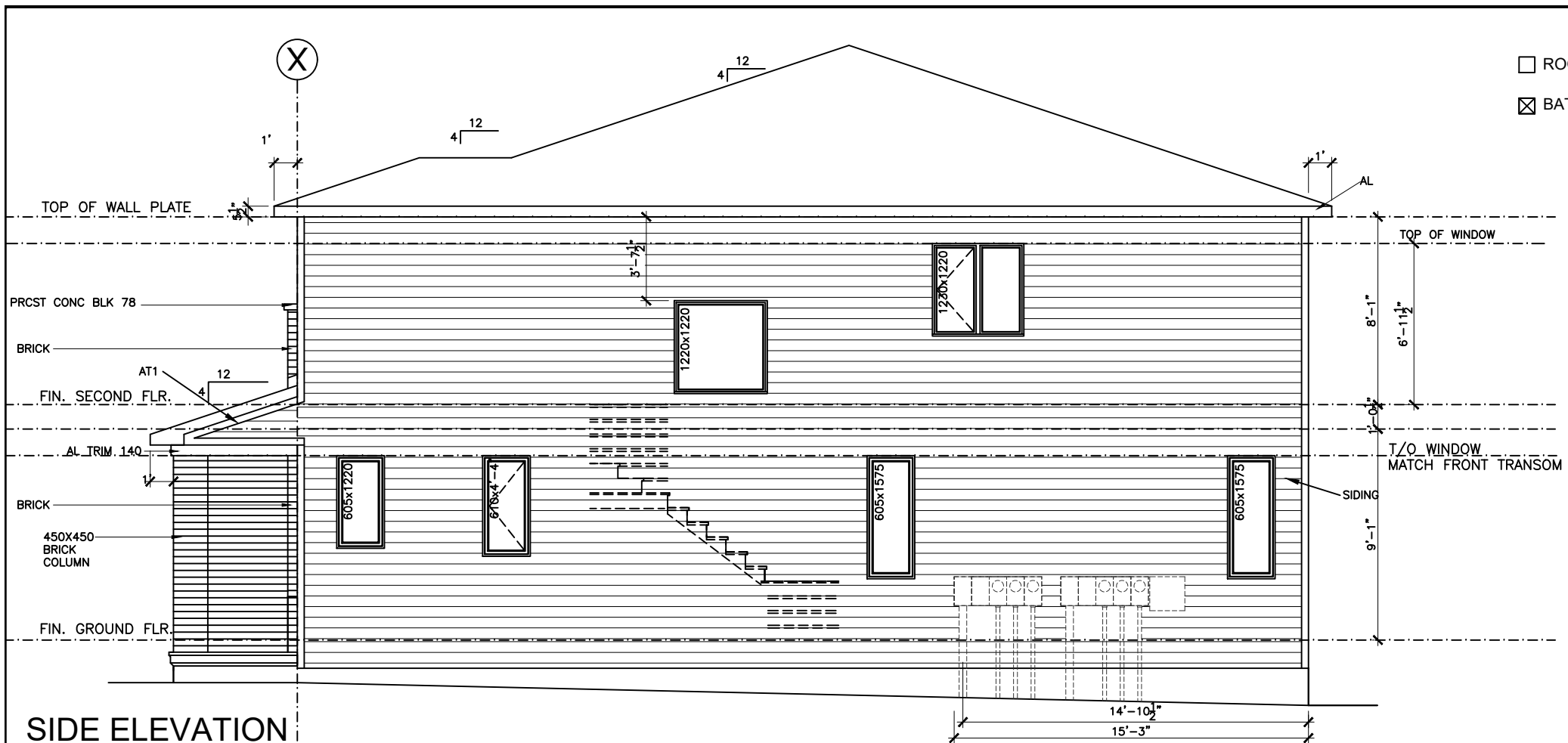
TITLE FRONT ELEVATION
ELEV.-'BA','CA' & 'DA'

FILENAME:
ETH060-TAHOE 4-ALL-2022.DWG

MODEL (EXECUTIVE TOWNHOMES)
TAHOE 4 2022
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

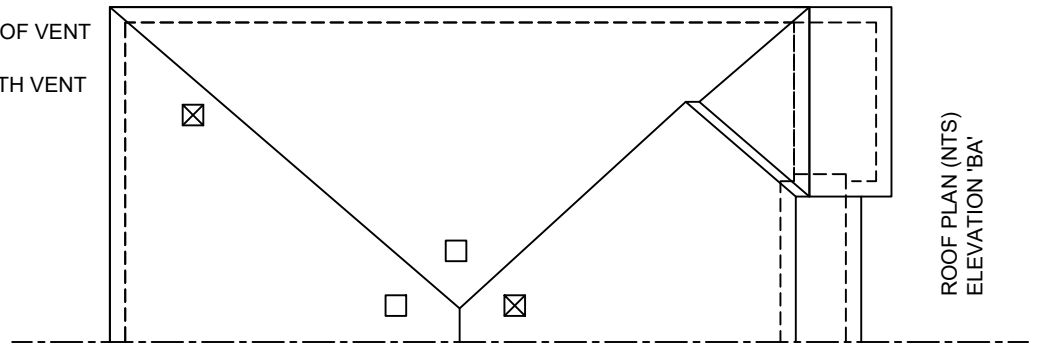
Scale 1:75
dwg #
A-4a

No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	



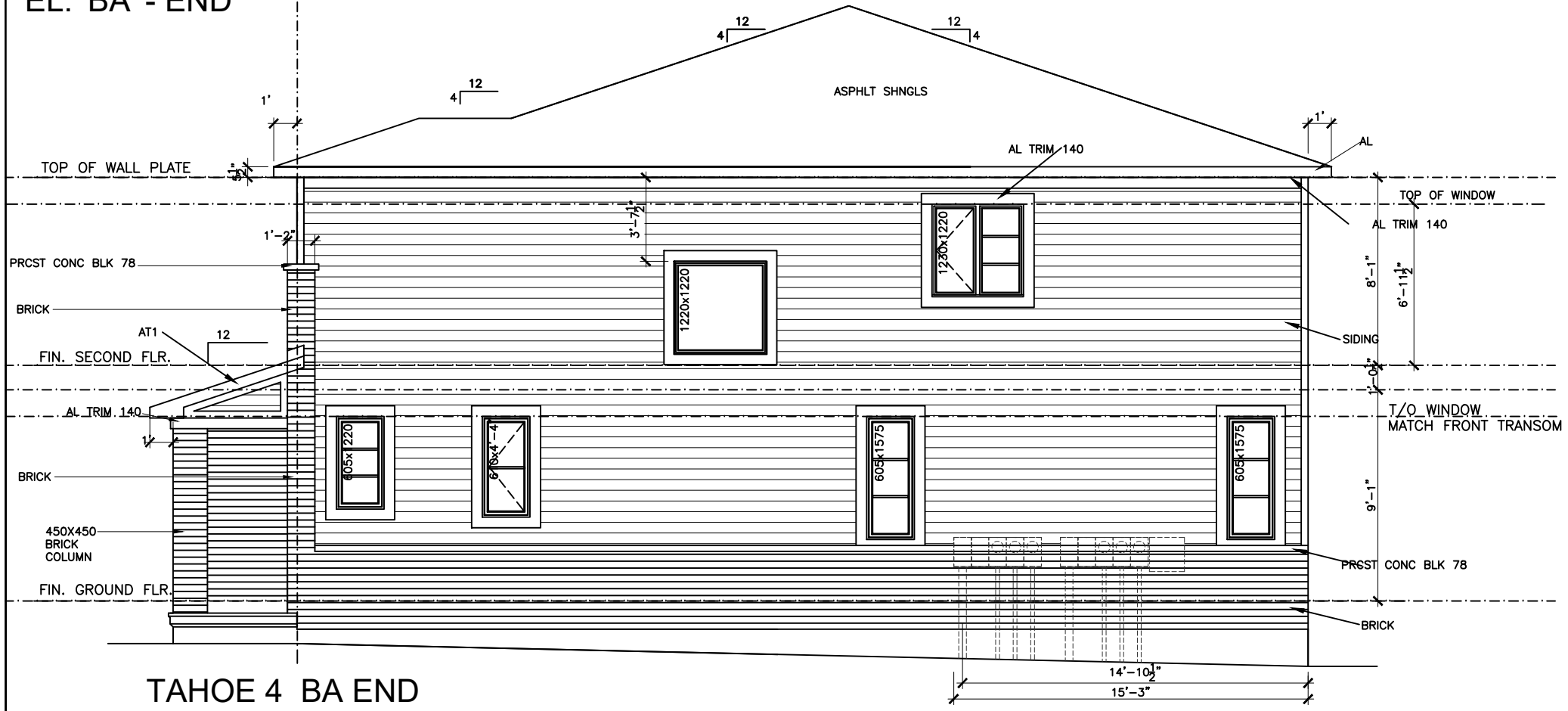
SIDE ELEVATION
EL. 'BA' - END

- ROOF VENT
- BATH VENT



GENERAL ROOF NOTE:
ALL VENTS TO BE LOCATED MIN 1800 FROM EAVES,
RAKES AND GABLES
NO VENTS SHOULD BE LOCATED LESS THAN 1800
FROM ANY RIDGE, VALLEY OR HIP.

AREA OF EXPOSED BUILDING FACE	81.01 m ²
x 7% (LIMITING DISTANCE @ 1.2m)	x0.07%
MAX. UNPROTECTED AREA ALLOWED	5.67 m ²
UNPROTECTED AREA PROVIDED	5.50 m ²



TAHOE 4 BA END
EXTRA BRICK SIDE ELEVATION

No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	

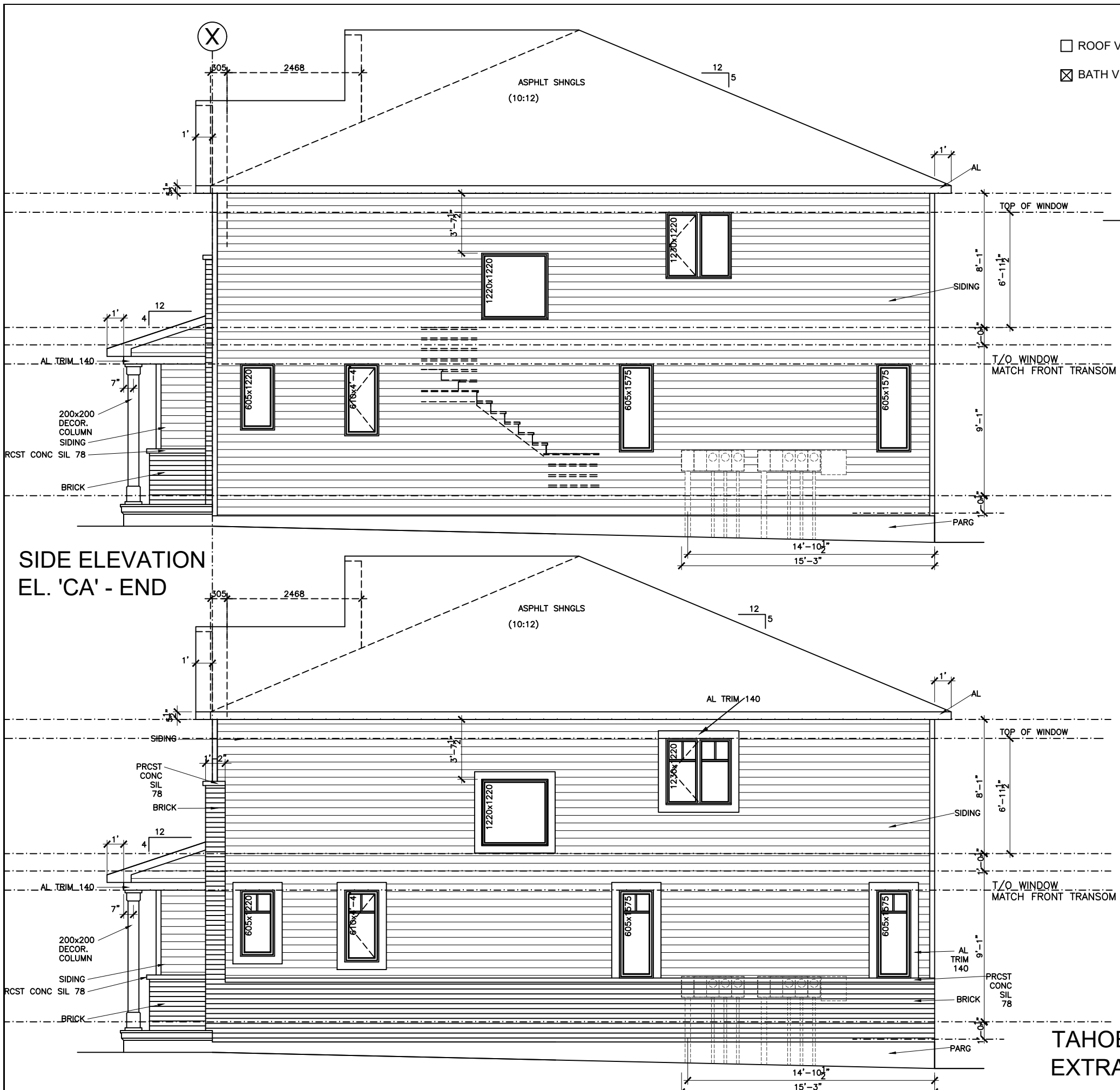


CONFIDENTIAL

SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE SIDE ELEVATION & ROOF PLAN
ELEV.-'BA' / EXTRA BRICK

FILENAME: ETH060-TAHOE 4-ALL-2022.DWG	Scale 1:75
MODEL (EXECUTIVE TOWNHOMES)	dwg # A-5a
TAHOE 4 2022	
ELEV.- BA, CA, DA	
(2022 STANDARD DRAWING)	



SIDE ELEVATION
EL. 'CA' - END

TAHOE 4 CA END
EXTRA BRICK SIDE ELEVATION

No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	

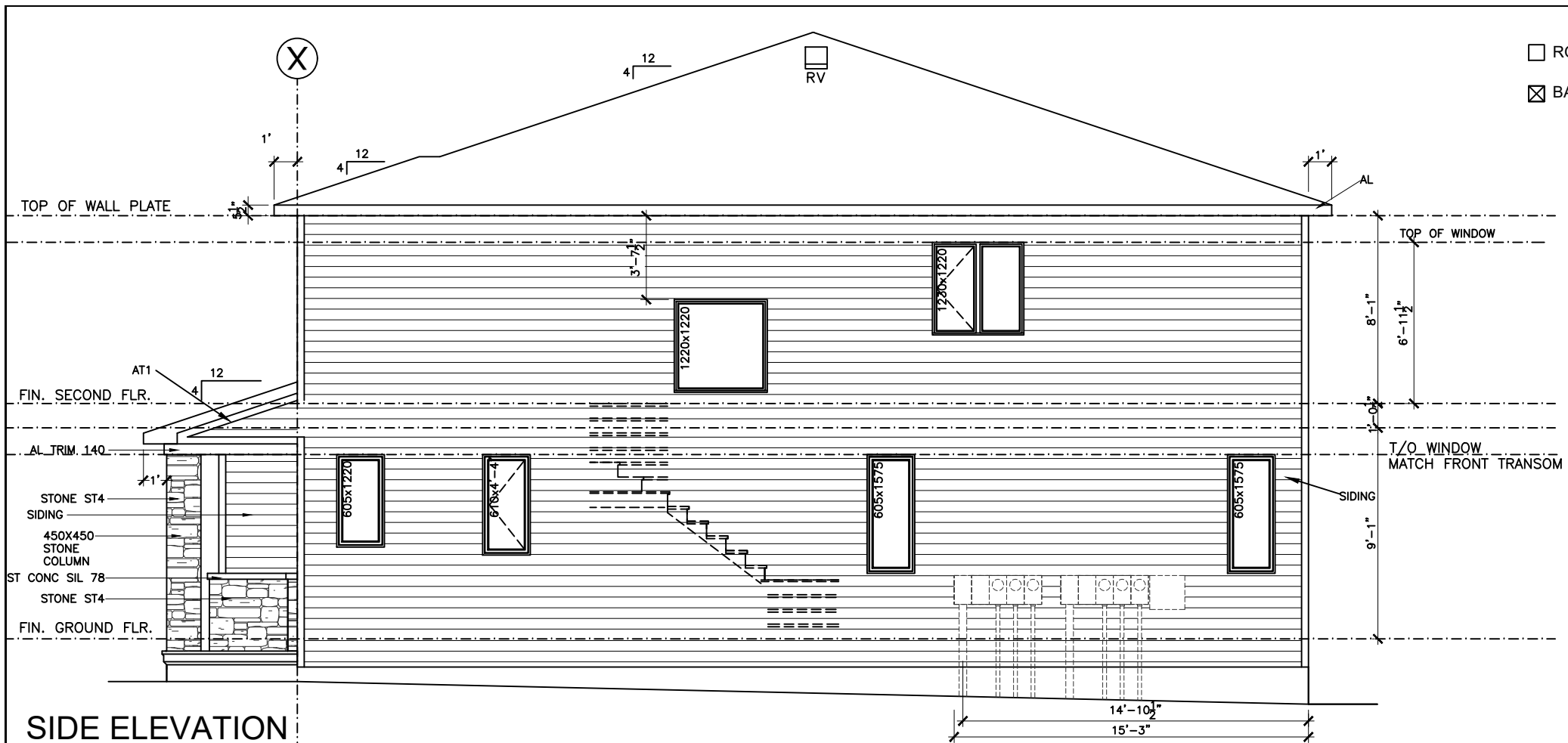


CONFIDENTIAL

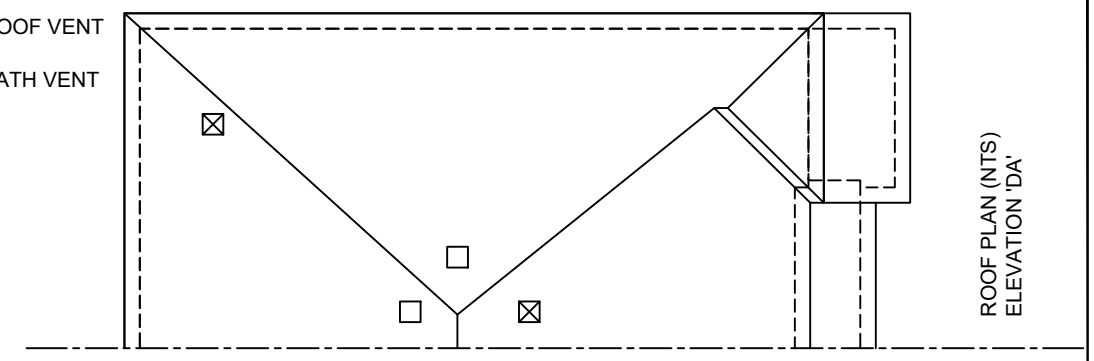
SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE SIDE ELEVATION & ROOF PLAN
ELEV.-'CA' / EXTRA BRICK

FILENAME: ETH060-TAHOE 4-ALL-2022.DWG	Scale 1:75
MODEL (EXECUTIVE TOWNHOMES) TAHOE 4 2022 ELEV.- BA, CA, DA (2022 STANDARD DRAWING)	dwg # A-5b

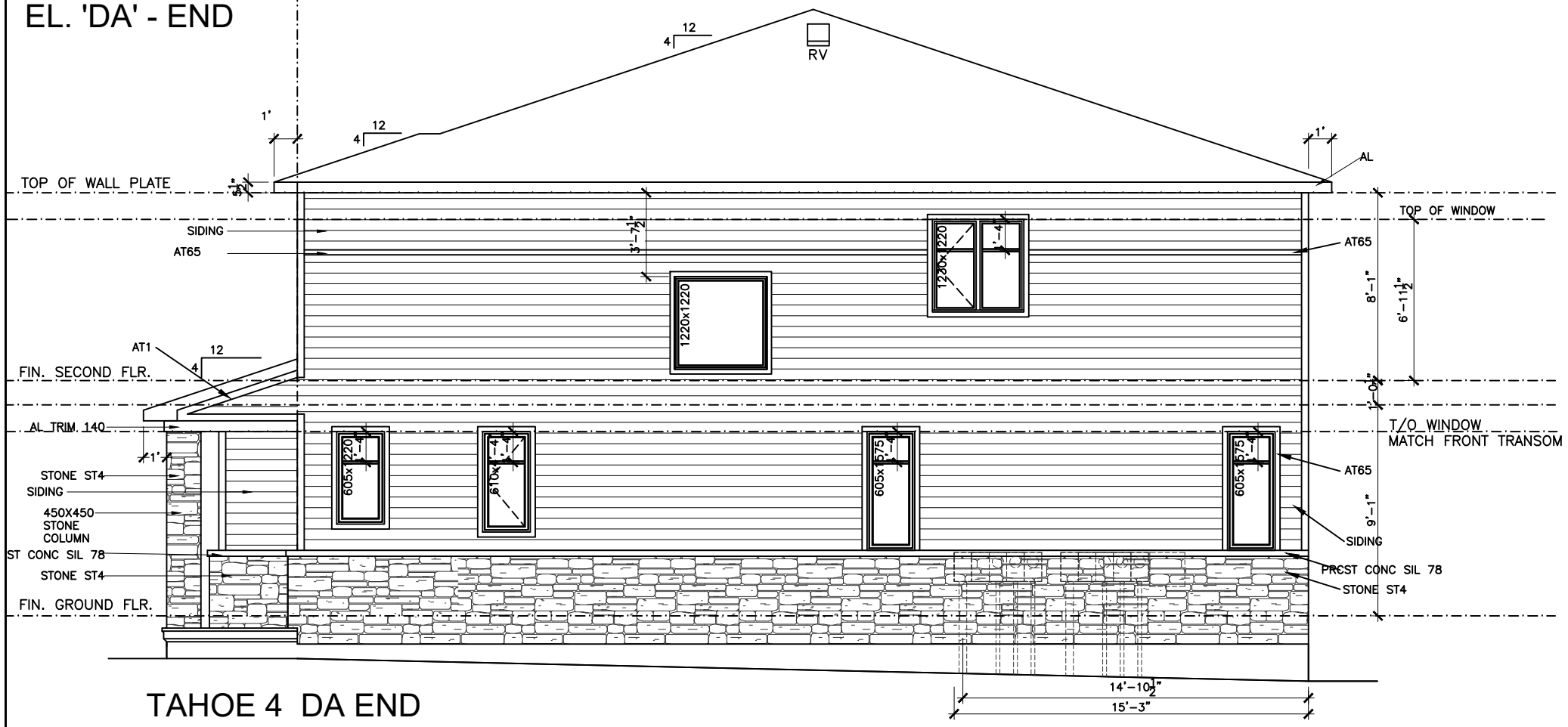


**SIDE ELEVATION
EL. 'DA' - END**



GENERAL ROOF NOTE:
ALL VENTS TO BE LOCATED MIN 1800 FROM EAVES, RAKES AND GABLES
NO VENTS SHOULD BE LOCATED LESS THAN 1800 FROM ANY RIDGE, VALLEY OR HIP.

AREA OF EXPOSED BUILDING FACE	83.12 m ²
x 7% (LIMITING DISTANCE @ 1.2m)	x0.07%
MAX. UNPROTECTED AREA ALLOWED	5.81 m ²
UNPROTECTED AREA PROVIDED	5.50 m ²



**TAHOE 4 DA END
EXTRA BRICK SIDE ELEVATION**



CONFIDENTIAL

SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE SIDE ELEVATION & ROOF PLAN
ELEV.-'DA' / EXTRA BRICK

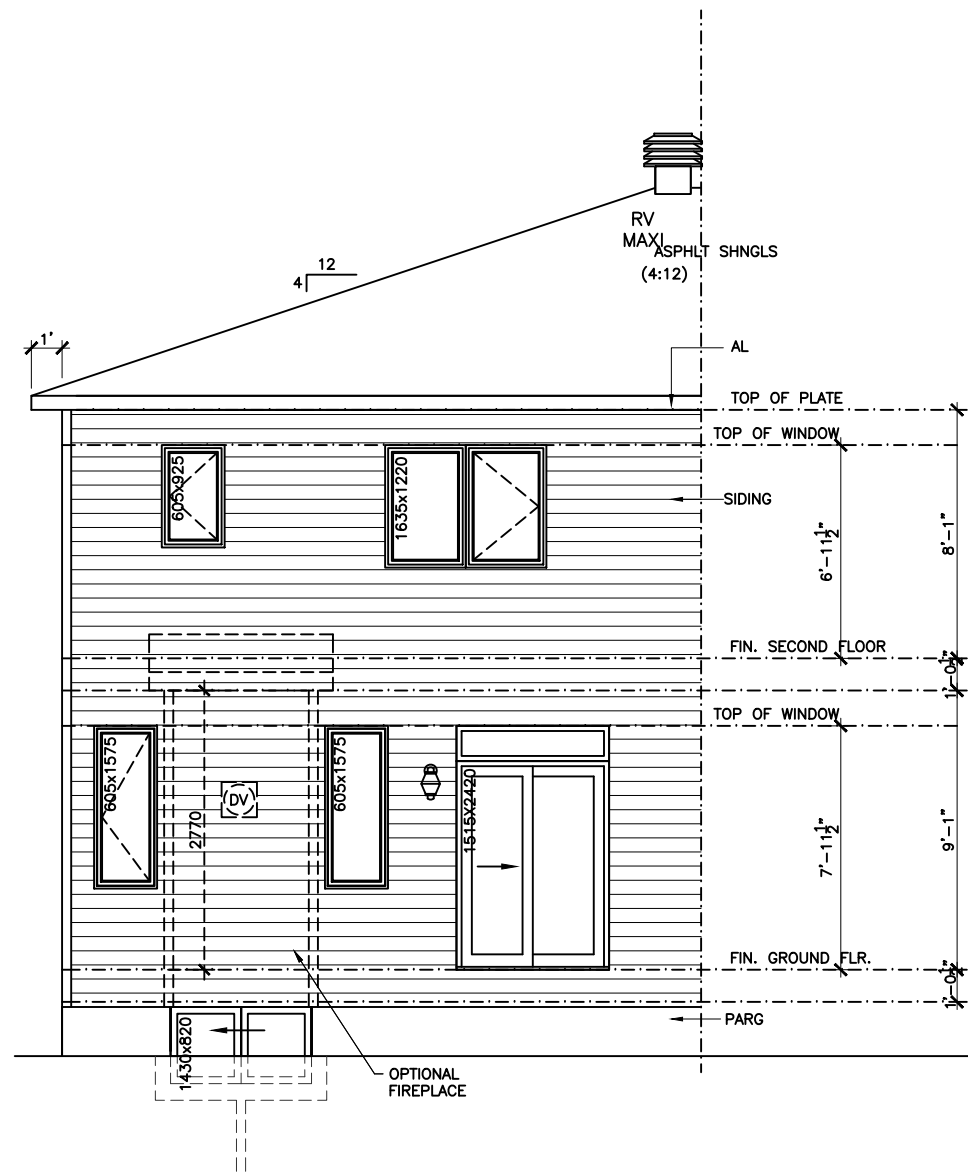
FILENAME:
ETH060-TAHOE 4-ALL-2022.DWG

MODEL (EXECUTIVE TOWNHOMES)

TAHOE 4 2022
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

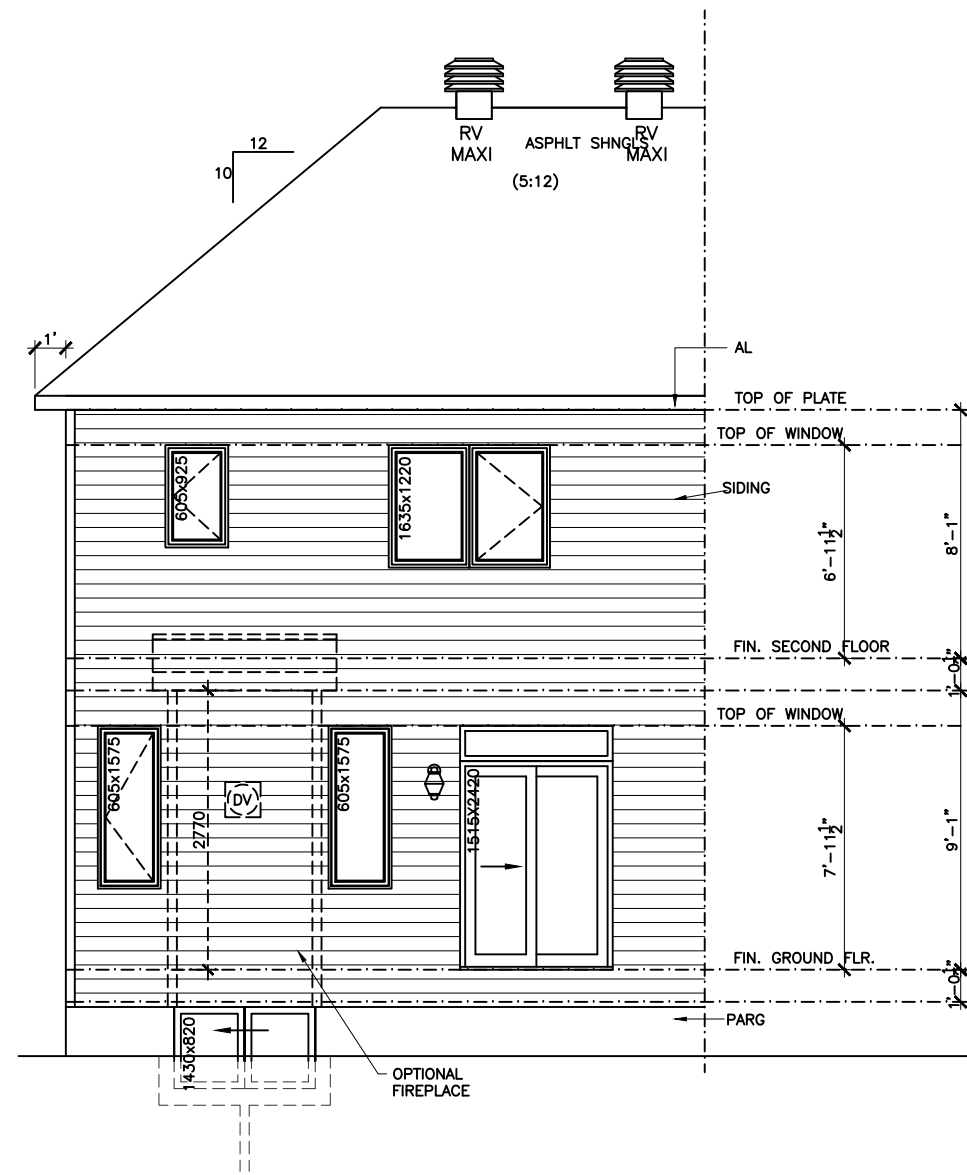
Scale 1:75
dwg # A-5c

No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	



REAR ELEVATION
EL. 'BA', 'DA' - END

** ALL FASCIA BOARD 140 **



REAR ELEVATION
EL. 'CA' - END

No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	

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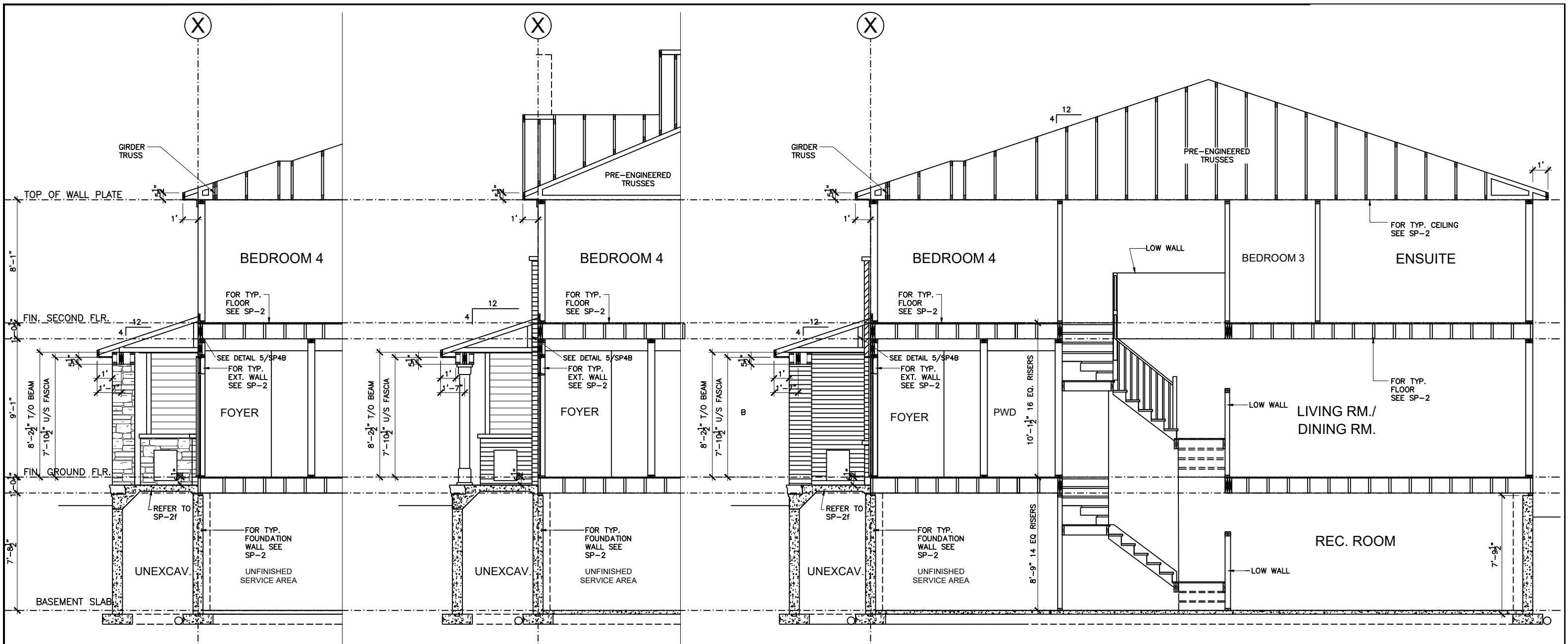
SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE REAR ELEVATIONS
ELEV.-'BA','CA' & 'DA'

FILENAME:
ETH060-TAHOE 4-ALL-2022.DWG

MODEL (EXECUTIVE TOWNHOMES)
TAHOE 4 **2022**
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

Scale 1:75
dwg #
A-6a



C CROSS SECTION THRU STAIRS
ELEVATION 'DA'

B CROSS SECTION THRU STAIRS
ELEVATION 'CA'

A CROSS SECTION THRU STAIRS
ELEVATION 'BA'



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SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

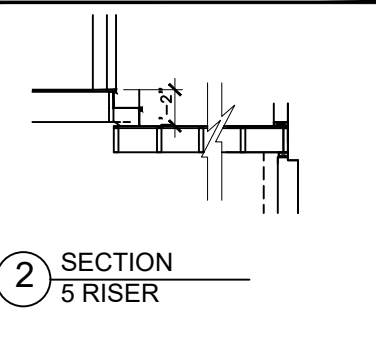
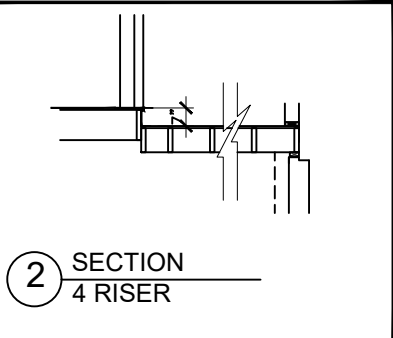
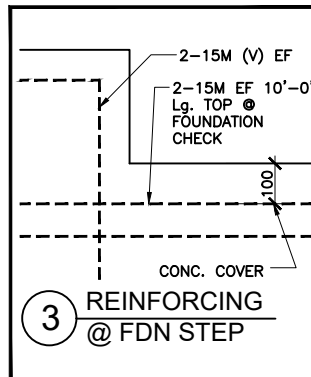
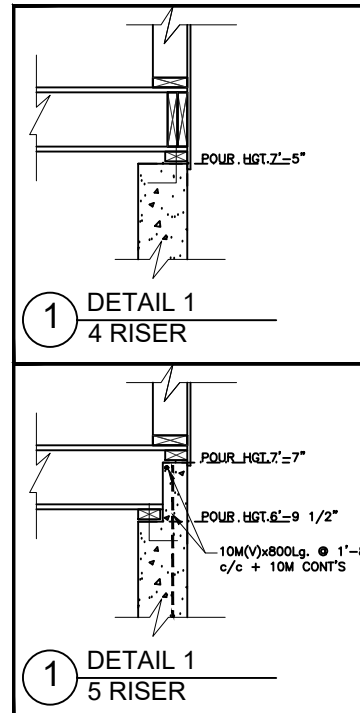
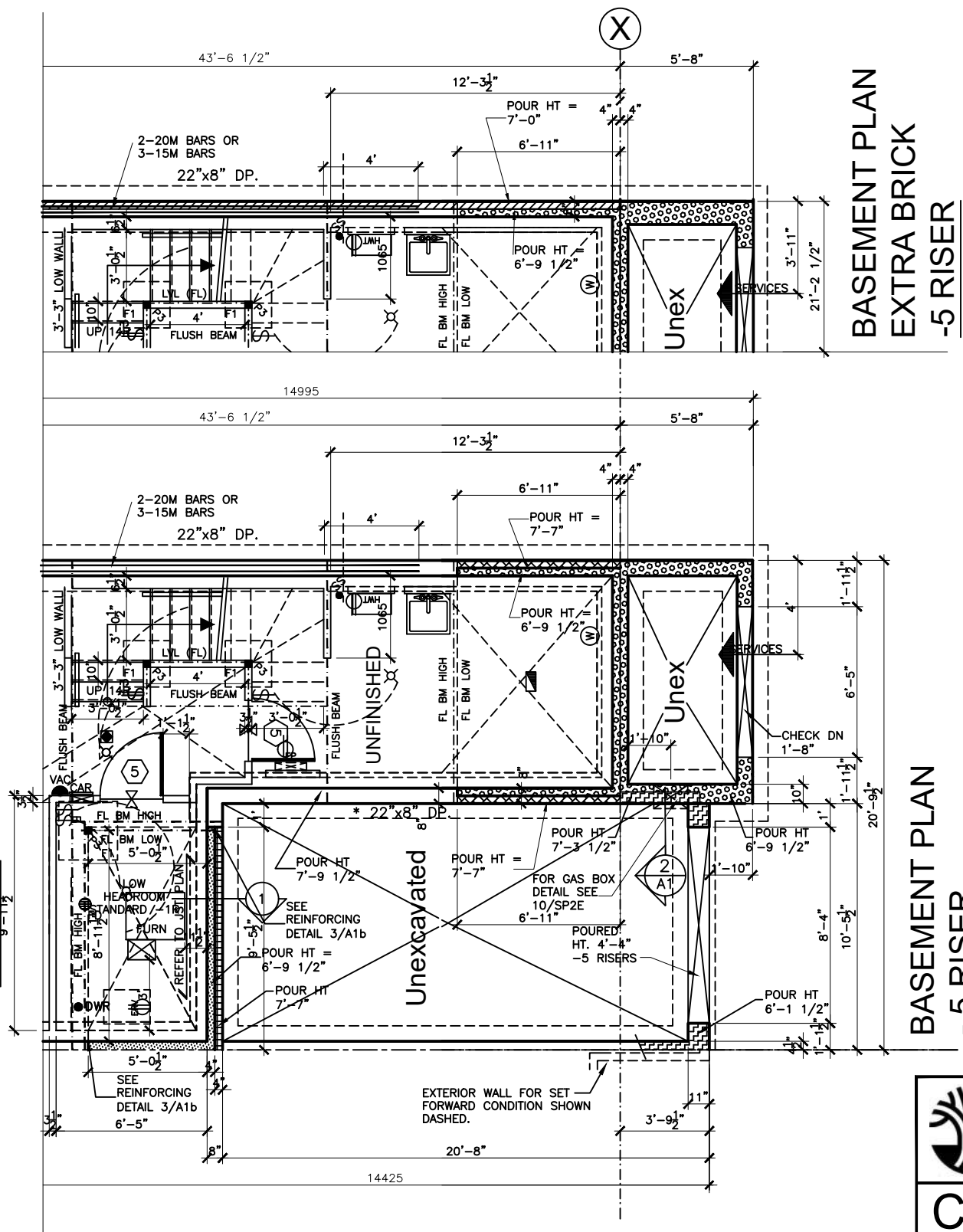
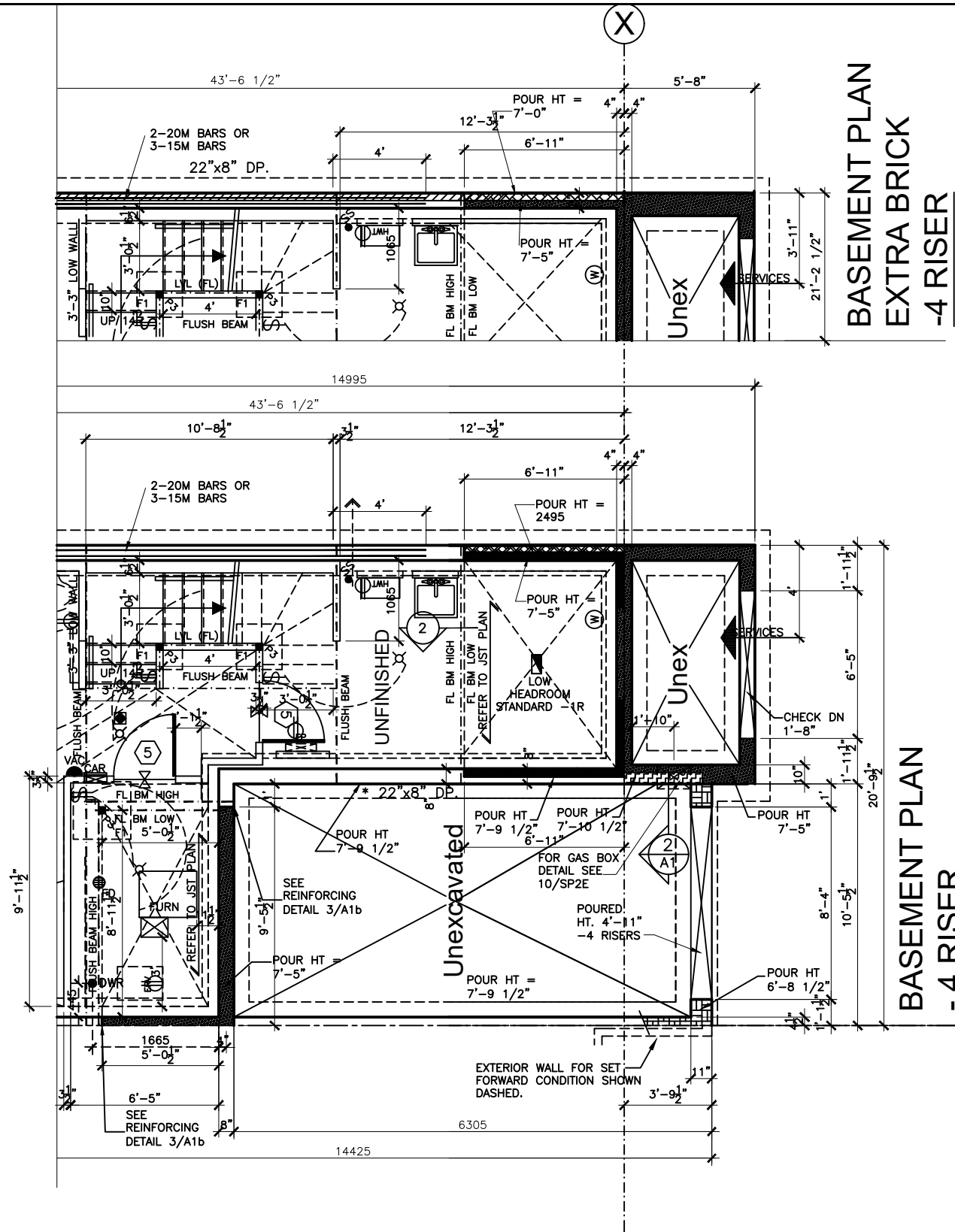
TITLE CROSS SECTIONS - STAIRS
ELEV.-'BA','CA' & 'DA'

FILENAME:
ETH060-TAHOE 4-ALL-2022.DWG

MODEL (EXECUTIVE TOWNHOMES)
TAHOE 4 **2022**
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

Scale 1:75
dwg #
A-7a

No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	



No	Revision	Date	By
3	FOUNDATION REINFORCING ADDED	MAY 18/22	MC
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	

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SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

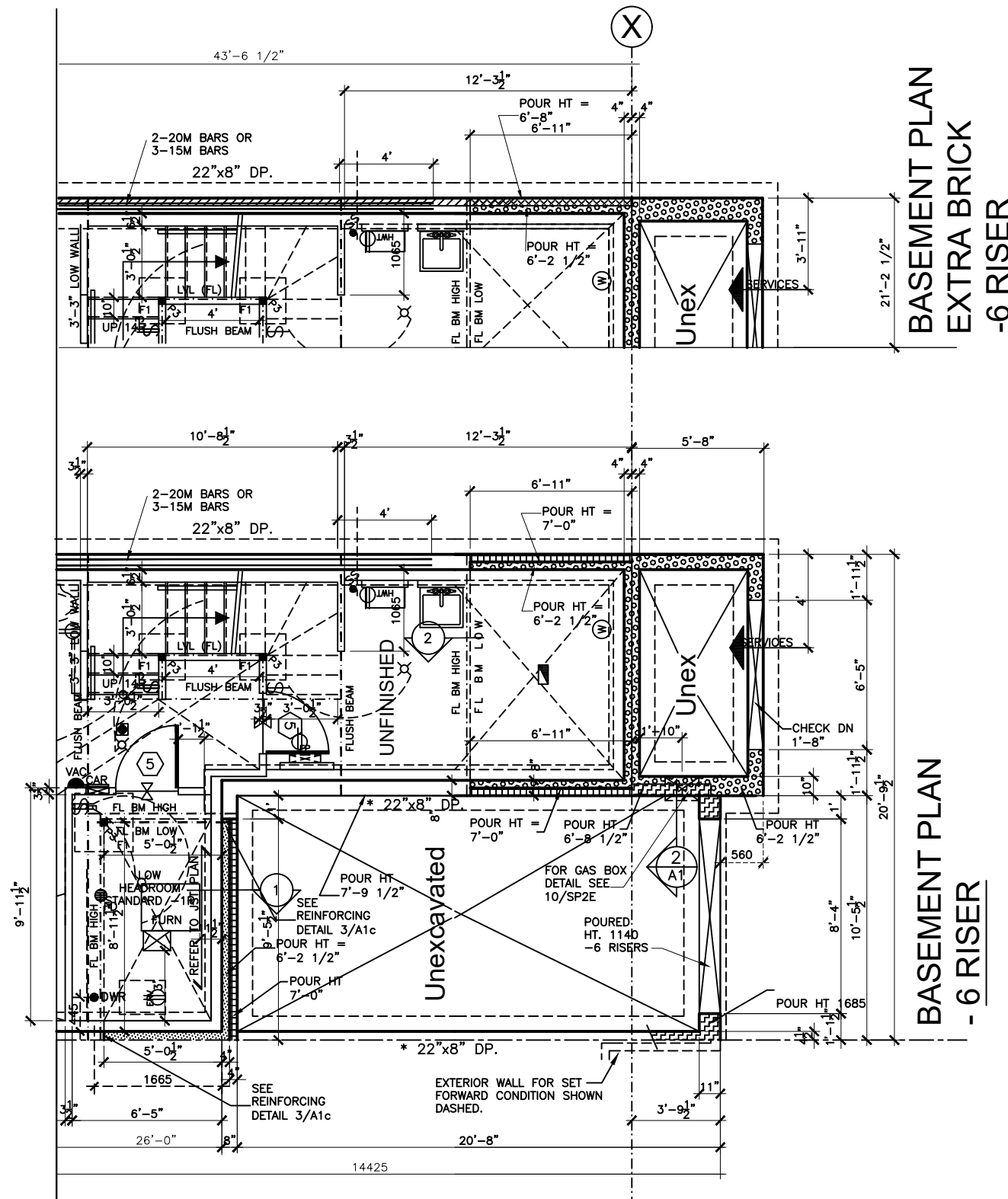
TITLE PARTIAL FOUNDATION PLANS
4/5 RISER

FILENAME:
ETH060-TAHOE 4-ALL-2022.DWG

MODEL (EXECUTIVE TOWNHOMES)

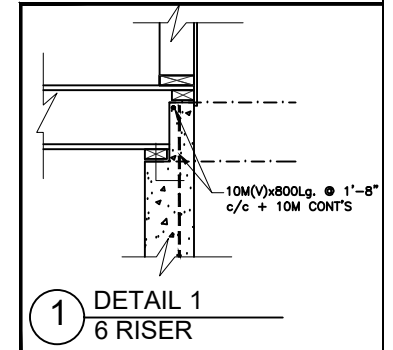
TAHOE 4 **2022**
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

Scale 1:75
dwg # A-1b

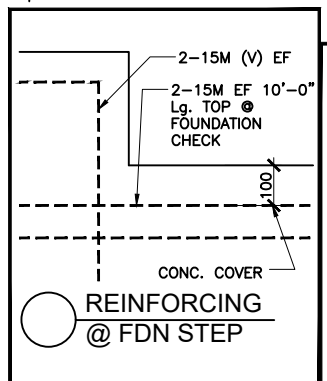


**BASEMENT PLAN
EXTRA BRICK
-6 RISER**

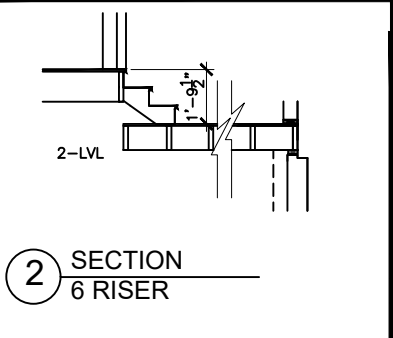
**BASEMENT PLAN
- 6 RISER**



**1 DETAIL 1
6 RISER**



**REINFORCING
@ FDN STEP**



**2 SECTION
6 RISER**

No	Revision	Date	By
3	FOUNDATION REINFORCING ADDED	MAY 18/22	MC
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	



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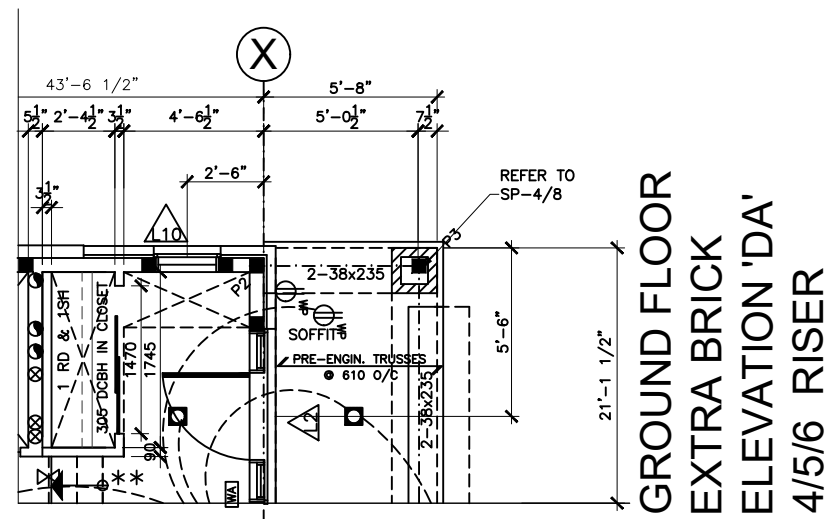
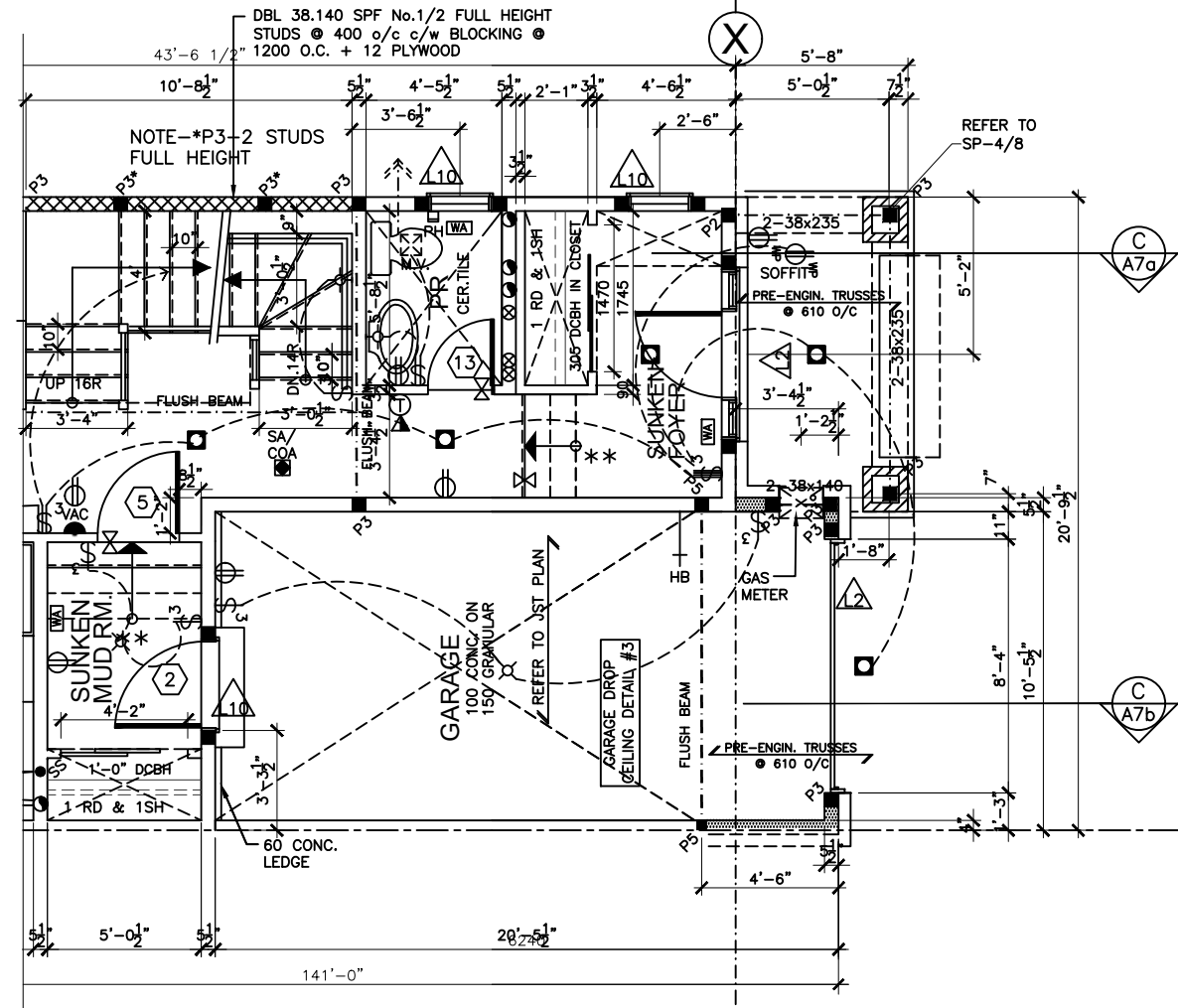
SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE PARTIAL FOUNDATION PLANS
6 RISER

FILENAME: ETH060-TAHOE 4-ALL-2022.DWG

MODEL (EXECUTIVE TOWNHOMES)
TAHOE 4 2022
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

Scale 1:75
dwg #
A-1c



GROUND FLOOR PLAN
ELEVATION 'DA' 4/5/6 RISER

GROUND FLOOR
EXTRA BRICK
ELEVATION 'DA'
4/5/6 RISER



CONFIDENTIAL

SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

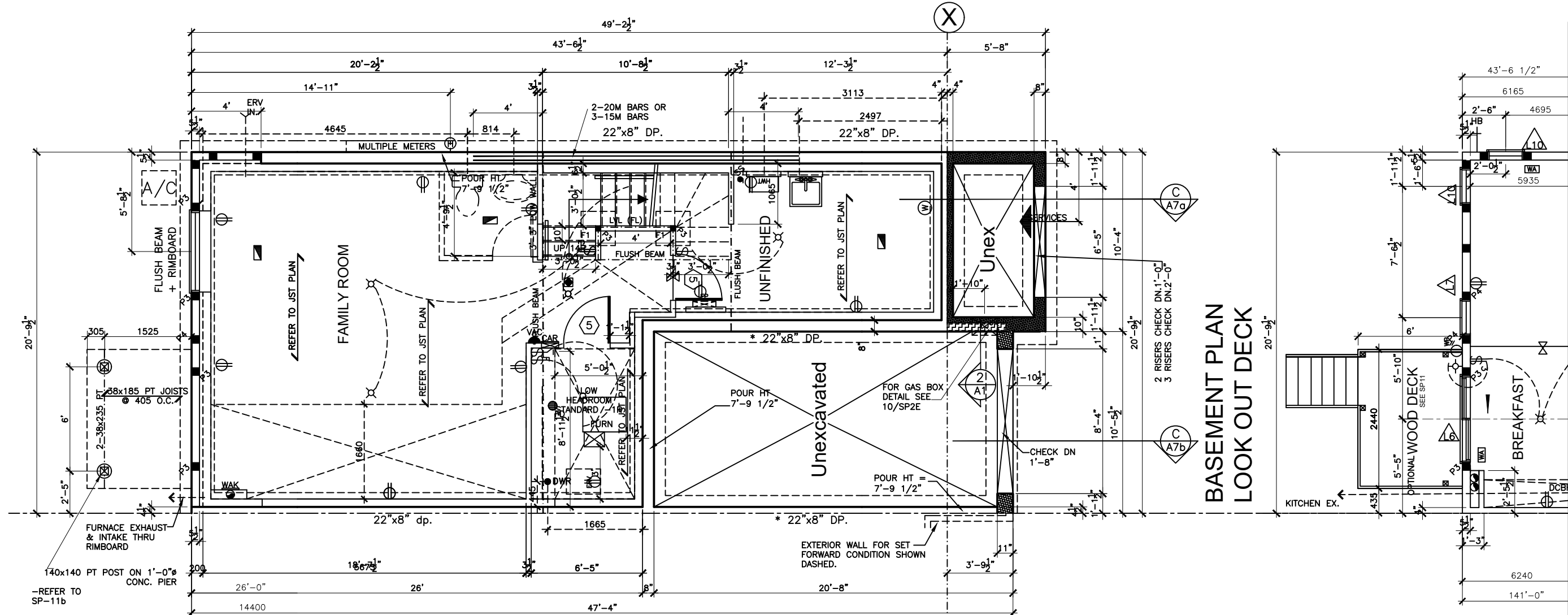
TITLE PARTIAL GROUND FLOOR PLANS
4/5/6 RISERS

FILENAME: ETH060-TAHOE 4-ALL-2022.DWG

MODEL (EXECUTIVE TOWNHOMES) Scale 1:75
TAHOE 4 **2022**
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

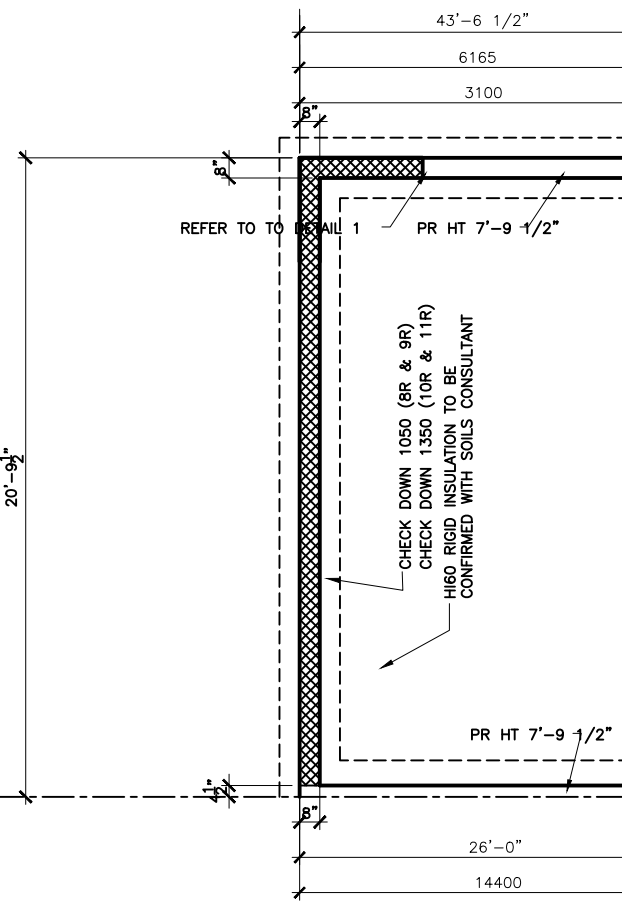
No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	

dwg #
A-1e

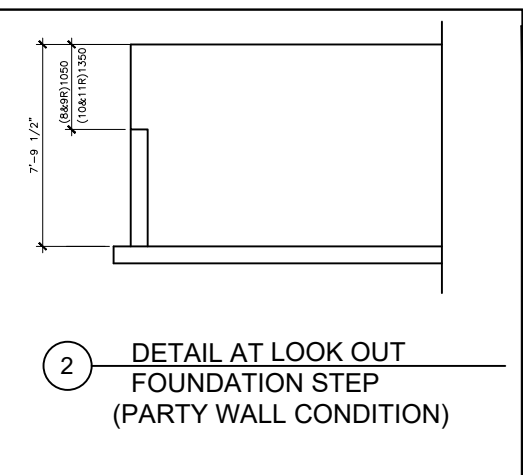
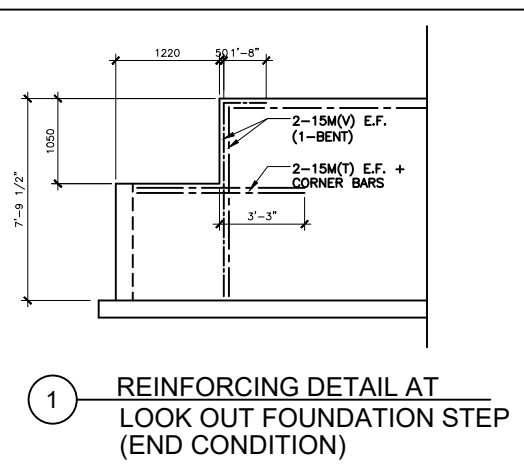


**BASEMENT PLAN
LOOK OUT DECK**

**PARTIAL GROUND FLOOR PLAN
LOOKOUT DECK**



**PARTIAL BASEMENT PLAN
LOOKOUT DECK**



NOTES:
ALL WOOD POST LOCATIONS TO BE BLOCKED SOLID THRU FLOOR STRUCT. ON TO A SIMILAR POST BELOW OR ON TO A STEEL/WOOD BEAM OR ON TO THE CONC. FDN WALL

* INDICATES FOOTING WIDTH ALONG SHARED WALLS ASSUMING ADJACENT UNIT IS "MIRROR IMAGE"

No	Revision	Date	By
3	FOUNDATION REINFORCING ADDED	MAY 18/22	MC
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	

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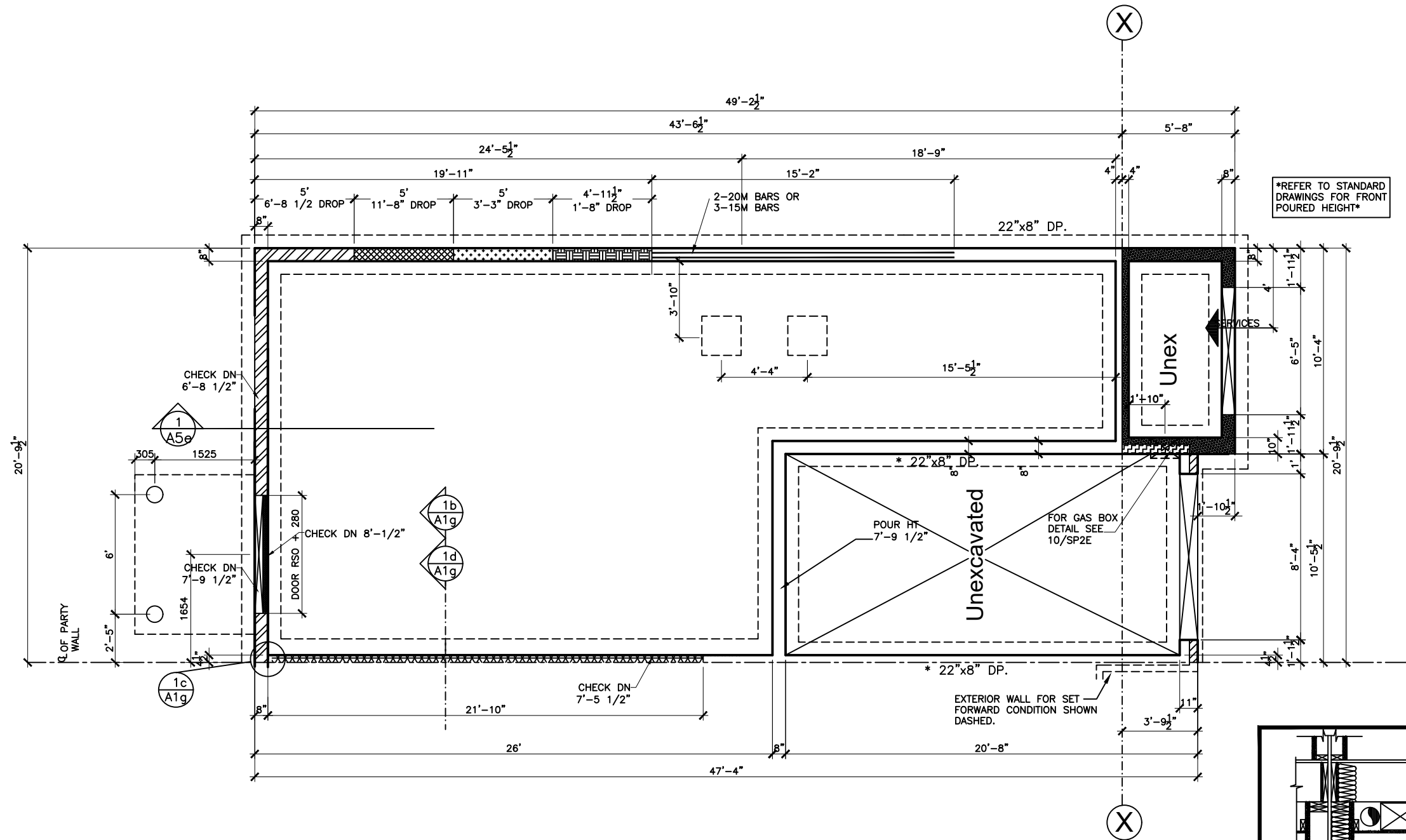
SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE: PARTIAL PLANS
LOOK OUT DECK

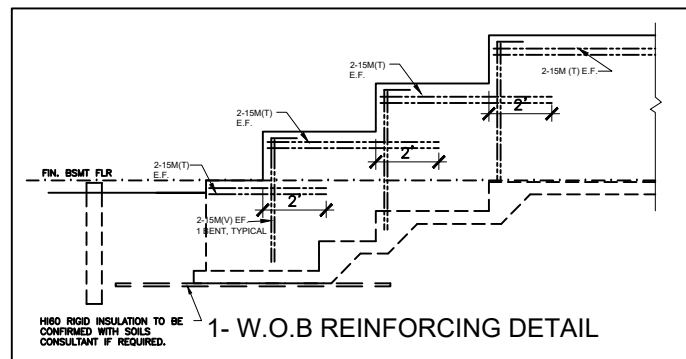
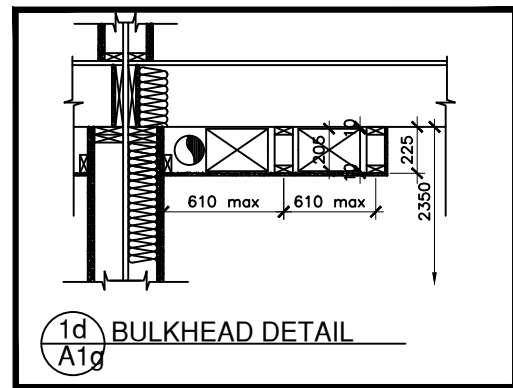
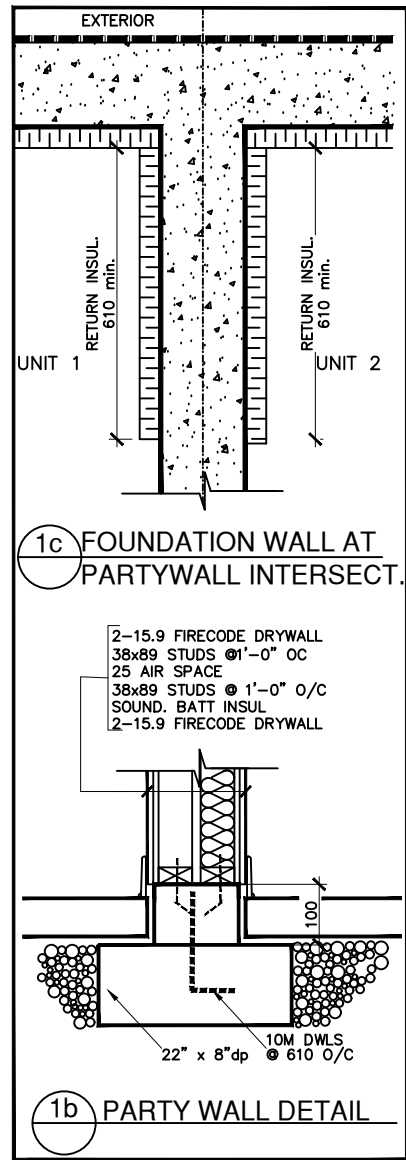
FILENAME: ETH060-TAHOE 4-ALL-2022.DWG

MODEL (EXECUTIVE TOWNHOMES)
TAHOE 4 2022
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

Scale: 1:75
dwg # **A-1f**



BASEMENT PLAN



No	Revision	Date	By
3	FOUNDATION REINFORCING ADDED	MAY 18/22	MC
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	

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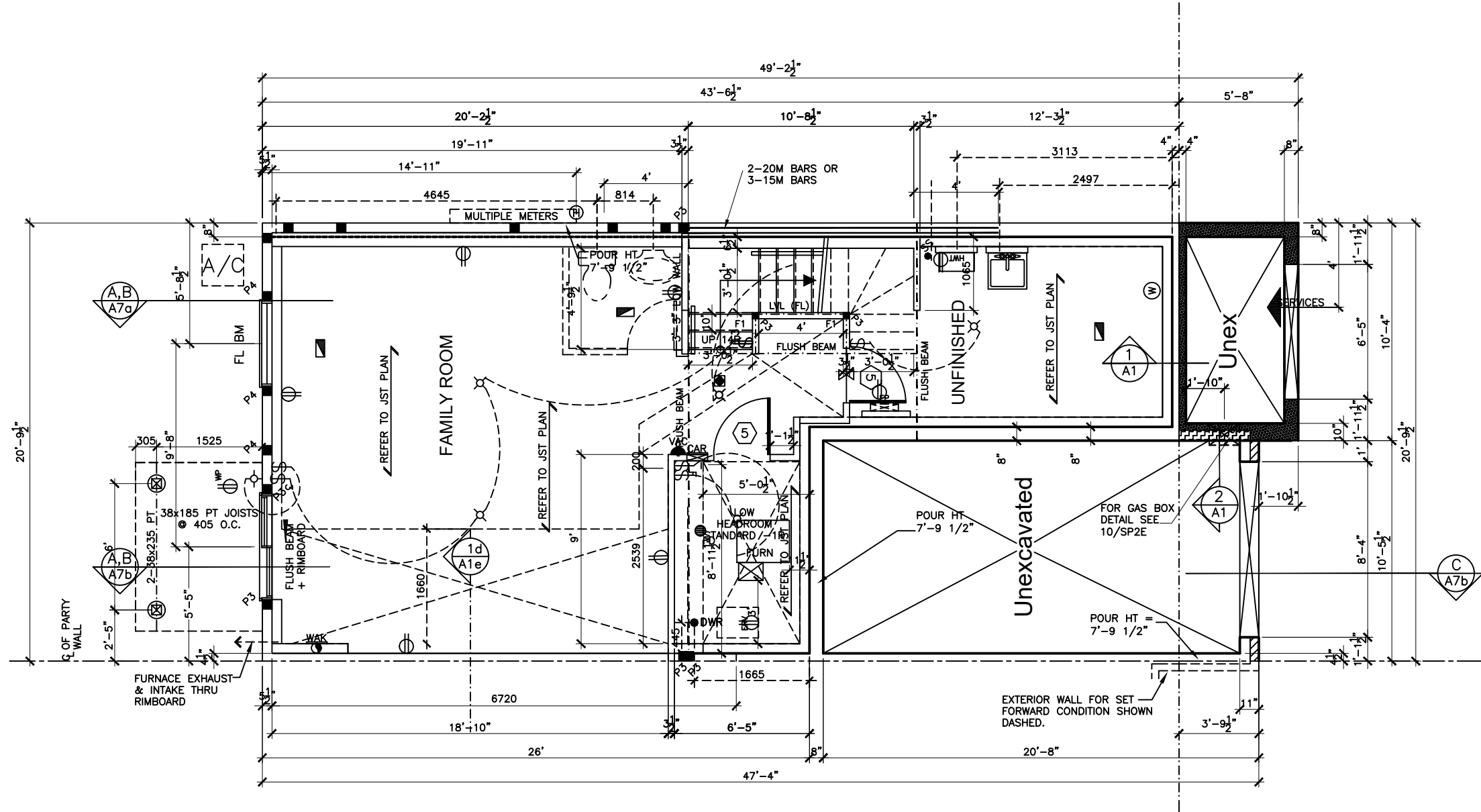
CONFIDENTIAL

SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

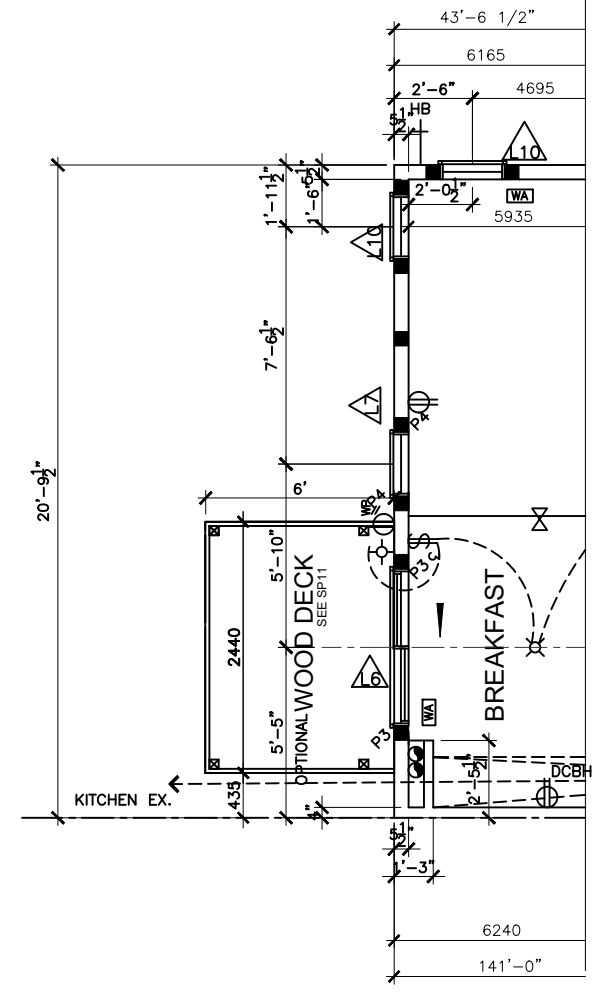
TITLE FOUNDATION PLAN
WALKOUT BASEMENT

FILENAME:
ETH060-TAHOE 4-ALL-2022.DWG
MODEL (EXECUTIVE TOWNHOMES)
TAHOE 4 **2022**
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

Scale 1:75
dwg # A-1g



BASEMENT PLAN



**PARTIAL GROUND FLOOR PLAN
WALKOUT BASEMENT**

NOTES:
 ALL WOOD POST LOCATIONS TO BE
 BLOCKED SOLID THRU FLOOR STRUCT.
 ON TO A SIMILAR POST BELOW OR
 ON TO A STEEL/WOOD BEAM OR ON
 TO THE CONC. FDN WALL



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SITE: VISTA STAGE 1
 BROOKLINE STAGE 1
 QUINN'S POINTE ST4

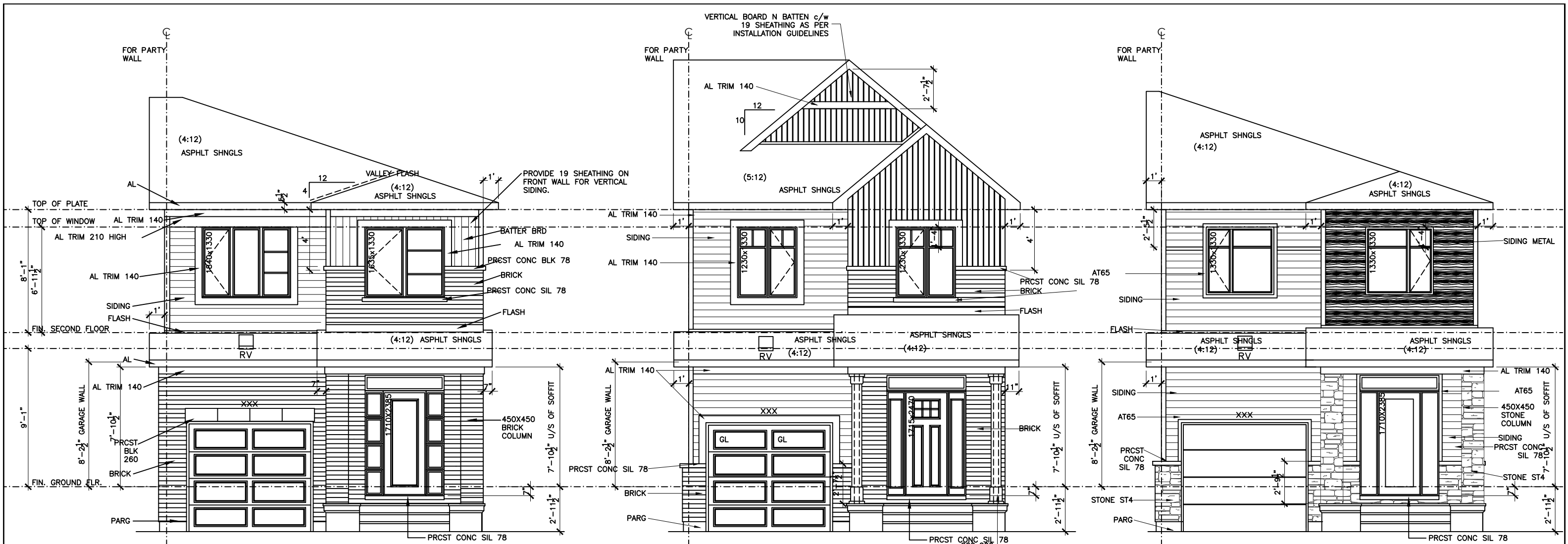
TITLE: BASEMENT PLAN
 WALKOUT BASEMENT

FILENAME:
 ETH060-TAHOE 4-ALL-2022.DWG

No	Revision	Date	By
3	FOUNDATION REINFORCING ADDED	MAY 18/22	MC
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	

MODEL (EXECUTIVE TOWNHOMES)
TAHOE 4 2022
 ELEV.- BA, CA, DA
 (2022 STANDARD DRAWING)

Scale 1:75
 dwg # A-1h



**FRONT ELEVATION
EL. 'BA' - END
PRAIRIE
- 4 RISER (3 EXT. & 1 INT. RISERS)**

**FRONT ELEVATION
EL. 'CA' - END
ARTS & CRAFTS
- 4 RISER (3 EXT. & 1 INT. RISERS)**

**FRONT ELEVATION
EL. 'DA' - END
MODERN
- 4 RISER (3 EXT. & 1 INT. RISERS)**

**** USE 19 SHEATHING BEHIND VERTICAL SIDING AS PER SP-2a ****

**** ALL FASCIA BOARD 140 ****



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SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE FRONT ELEVATION
ELEV.-'BA','CA' & 'DA' (4 RISER)

FILENAME:
ETH060-TAHOE 4-ALL-2022.DWG

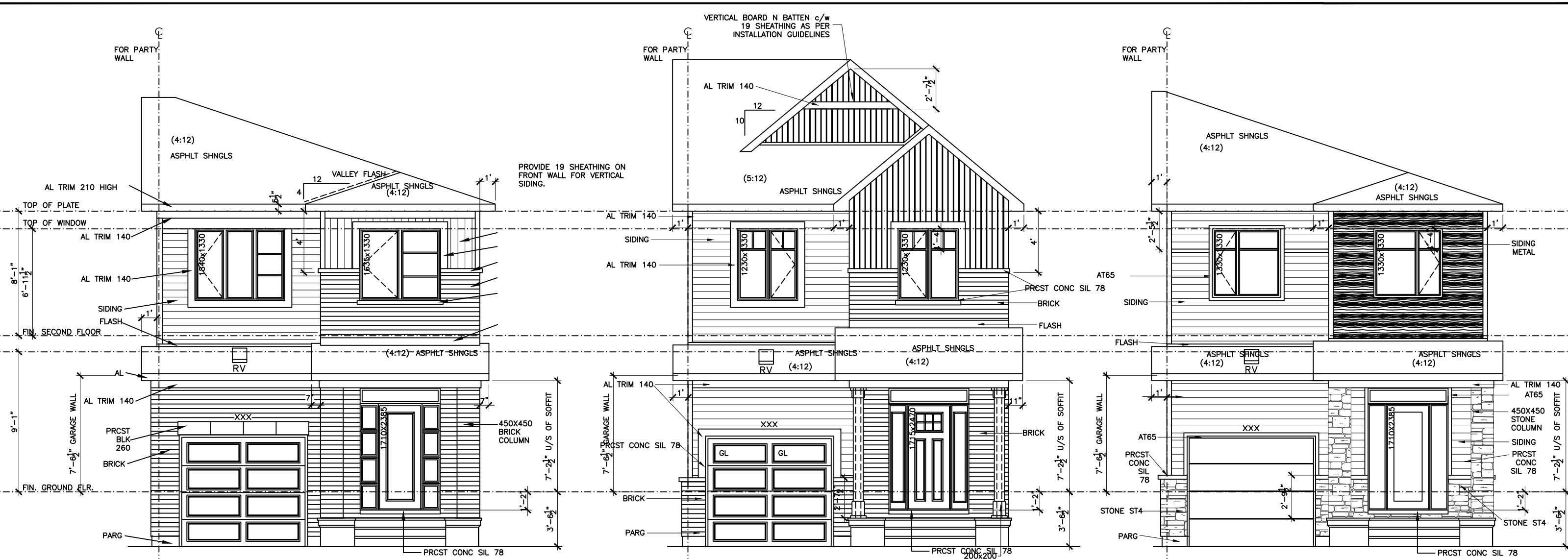
MODEL (EXECUTIVE TOWNHOMES)

TAHOE 4 **2022**
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

Scale 1:75

dwg #
A-4b

No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	



**FRONT ELEVATION
EL. 'BA' - END
PRAIRIE
- 5 RISER (3 EXT. & 2 INT. RISERS)**

** USE 19 SHEATHING BEHIND VERTICAL SIDING AS PER SP-2a **

**FRONT ELEVATION
EL. 'CA' - END
ARTS & CRAFTS
- 5 RISER (3 EXT. & 2 INT. RISERS)**

**FRONT ELEVATION
EL. 'DA' - END
MODERN
- 5 RISER (3 EXT. & 2 INT. RISERS)**

** ALL FASCIA BOARD 140 **



CONFIDENTIAL

SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE FRONT ELEVATION
ELEV.-'BA','CA' & 'DA' (5 RISER)

FILENAME:
ETH060-TAHOE 4-ALL-2022.DWG

MODEL (EXECUTIVE TOWNHOMES)

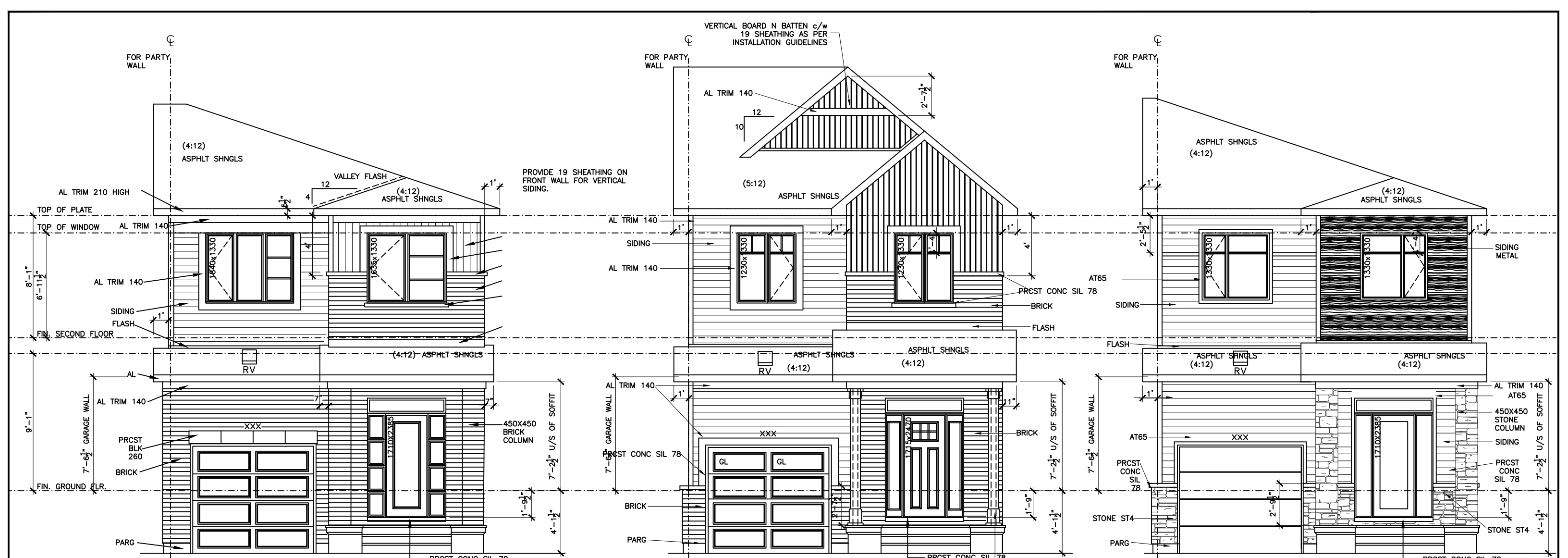
TAHOE 4 **2022**
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

Scale 1:75

dwg #

A-4c

No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	



**FRONT ELEVATION
EL. 'BA' - END
PRAIRIE
- 6 RISER (3 EXT. & 3 INT. RISERS)**

**** USE 19 SHEATHING BEHIND
VERTICAL SIDING AS PER SP-2a ****

**FRONT ELEVATION
EL. 'CA' - END
ARTS & CRAFTS
- 6 RISER (3 EXT. & 3 INT. RISERS)**

**FRONT ELEVATION
EL. 'DA' - END
MODERN
- 6 RISER (3 EXT. & 3 INT. RISERS)**

**** ALL FASCIA BOARD 140 ****

minto Communities

CONFIDENTIAL

SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

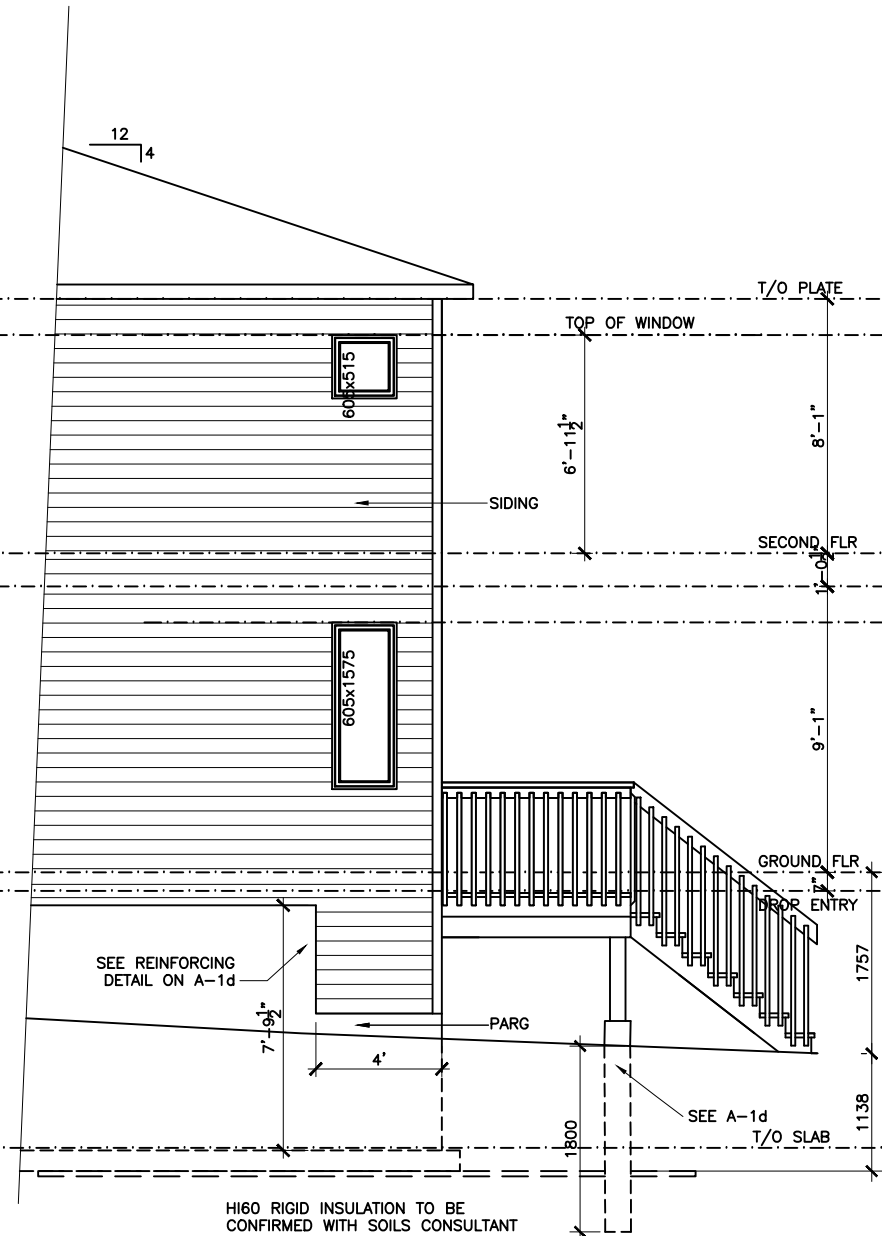
TITLE FRONT ELEVATION
ELEV.-'BA','CA' & 'DA' (6 RISER)

FILENAME:
ETH060-TAHOE 4-ALL-2022.DWG

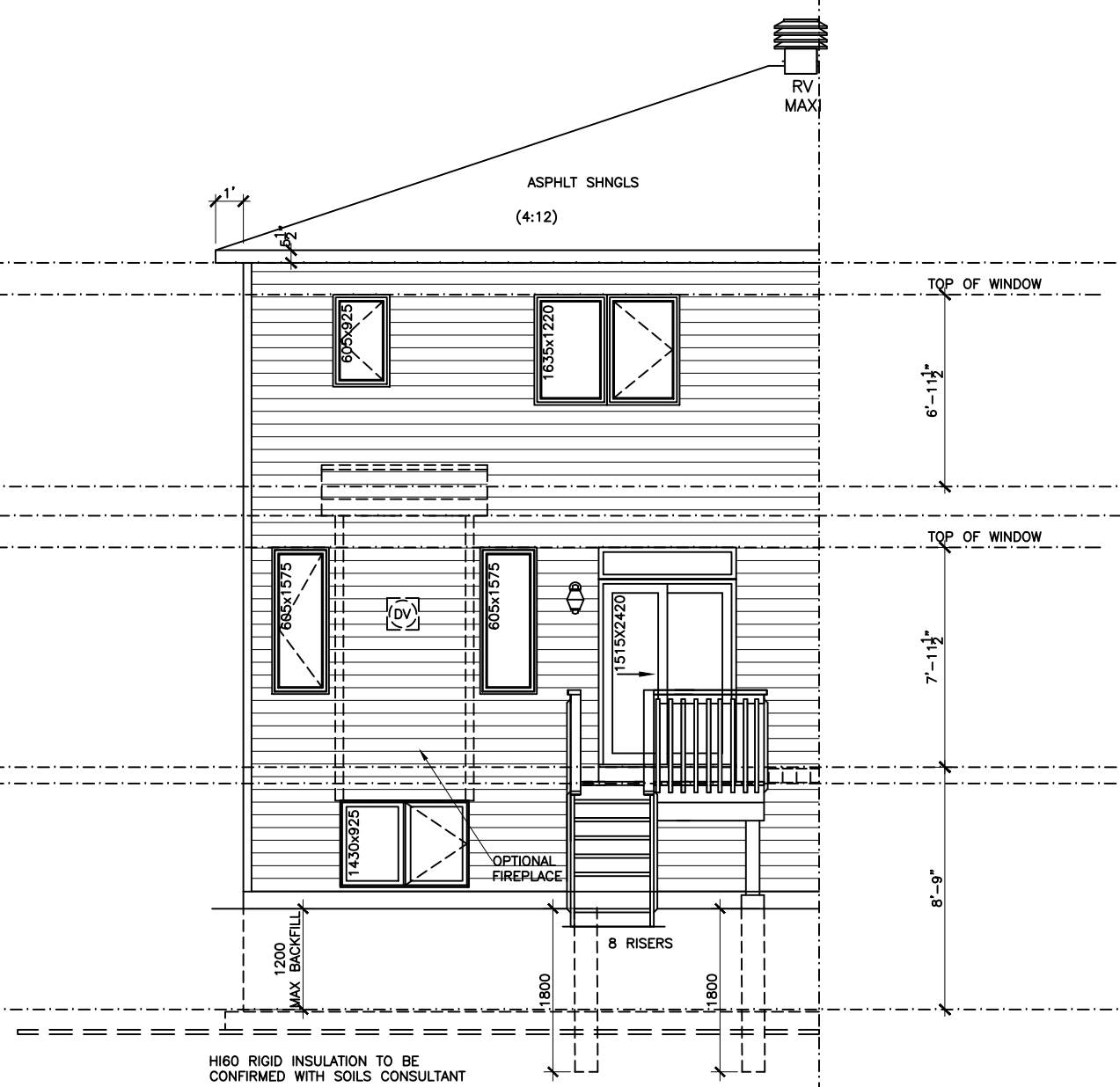
MODEL (EXECUTIVE TOWNHOMES)
TAHOE 4 2022
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

Scale 1:75
dwg # **A-4d**

No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	



PARTIAL END ELEVATION
LOOK OUT DECK



REAR ELEVATION
LOOK OUT DECK-END UNIT



CONFIDENTIAL

SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE REAR & SIDE ELEVATIONS
LOOK OUT DECK

FILENAME:
ETH060-TAHOE 4-ALL-2022.DWG

MODEL (EXECUTIVE TOWNHOMES)

TAHOE 4 2022
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

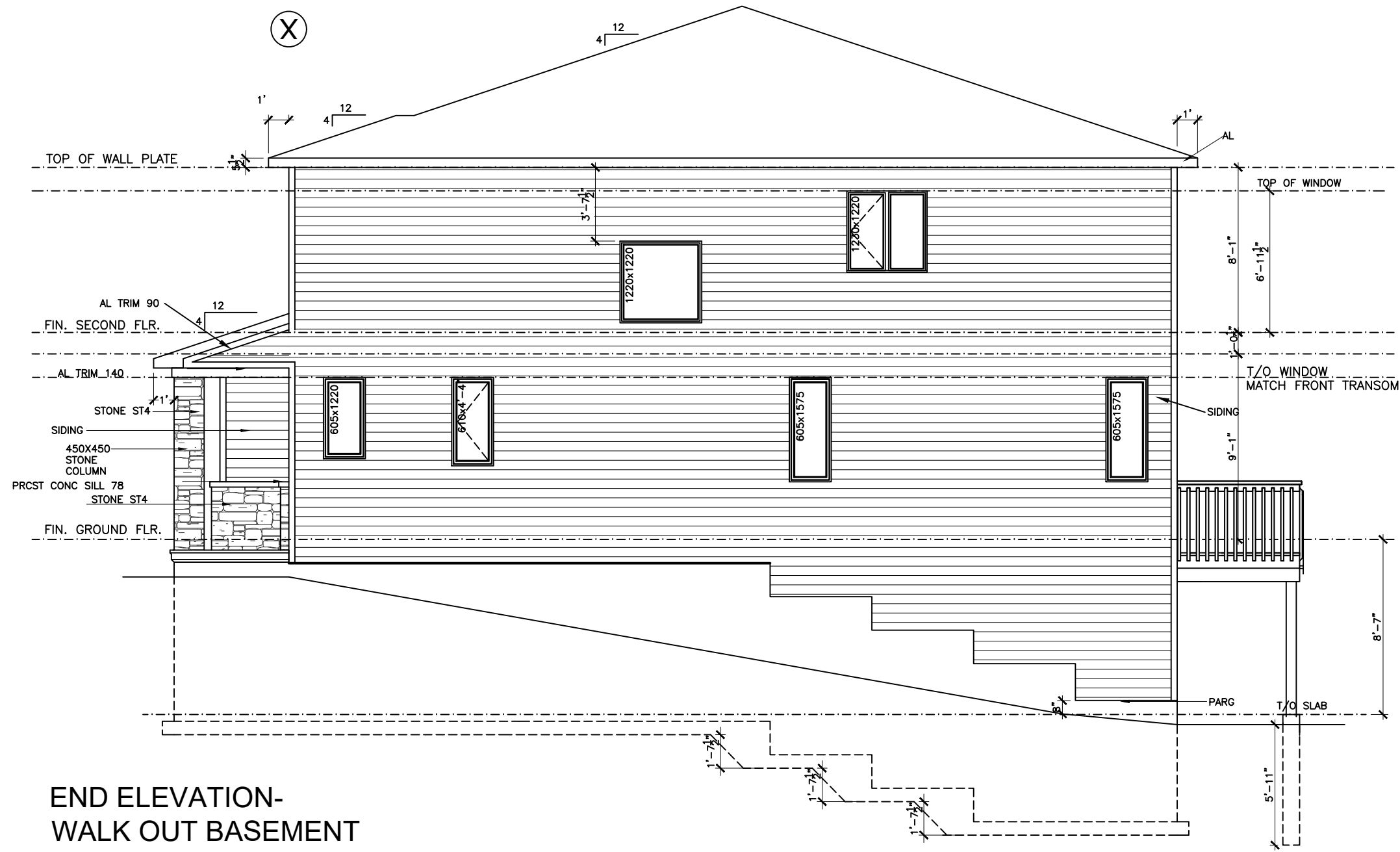
Scale 1:75

dwg #

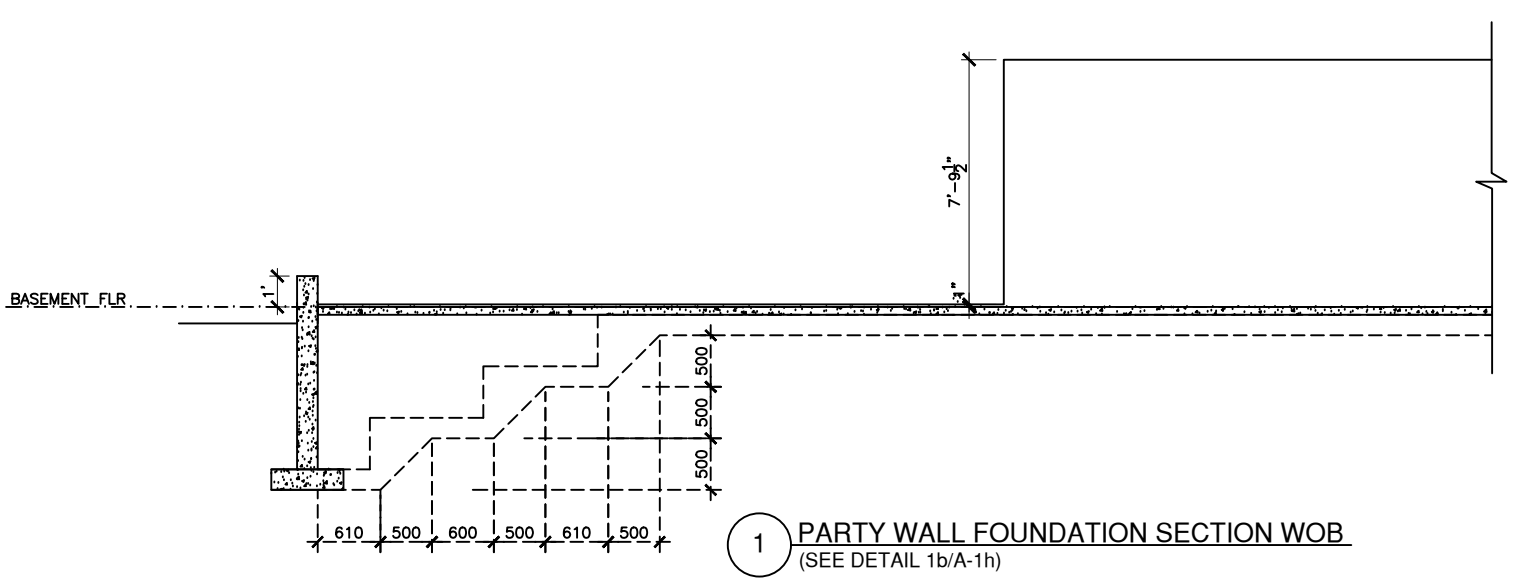
A-5d

No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	

(X)



END ELEVATION-
WALK OUT BASEMENT



1 PARTY WALL FOUNDATION SECTION WOB
(SEE DETAIL 1b/A-1h)



CONFIDENTIAL

SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE SIDE ELEVATIONS
WALK-OUT BASEMENT

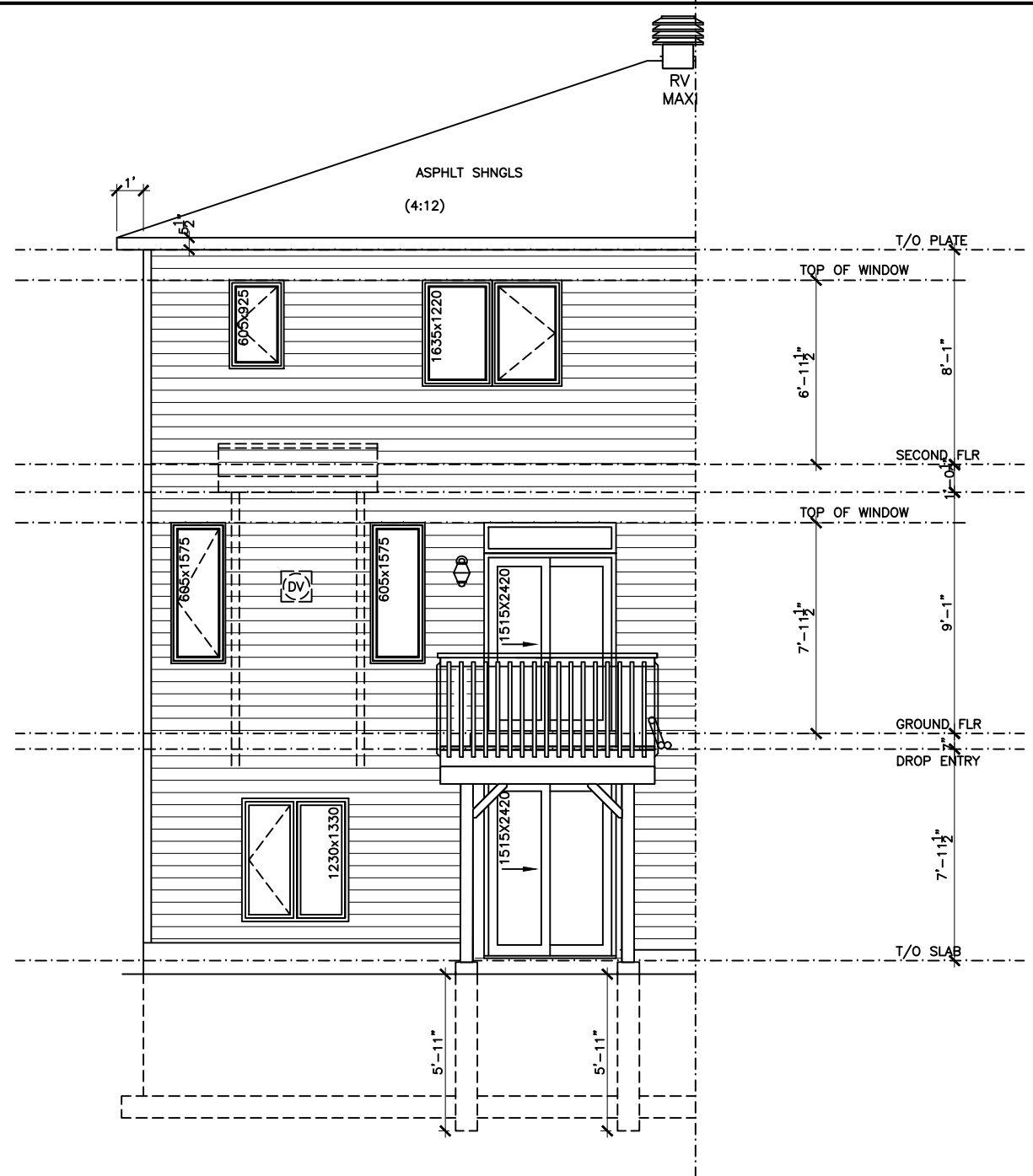
FILENAME:
ETH060-TAHOE 4-ALL-2022.DWG

MODEL (EXECUTIVE TOWNHOMES)
TAHOE 4 **2022**

ELEV.- BA, CA, DA
(2022 STANDARD DRAWING)

Scale 1:75
dwg #
A-5e

No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	



REAR ELEVATION
WALK OUT BASEMENT -END UNIT



CONFIDENTIAL

SITE: VISTA STAGE 1
BROOKLINE STAGE 1
QUINN'S POINTE ST4

TITLE REAR ELEVATIONS
WALK-OUT BASEMENT

FILENAME:
ETH060-TAHOE 4-ALL-2022.DWG

MODEL (EXECUTIVE TOWNHOMES) Scale 1:75

TAHOE 4 **2022**
ELEV.- BA, CA, DA
(2022 STANDARD DRAWING) dwg # A-5f

No	Revision	Date	By
2	ISSUED FOR CONSTRUCTION	APR 28/22	
1	STRUCTURAL LETTER	FEB 15/22	

THESE DRAWINGS ARE NOT TO BE SCALED.
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TO COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES
MUST BE REPORTED DIRECTLY TO SRN ARCHITECTS INC.

NO.	DATE	ISSUED FOR
1	05-JUL-22	FOR CLIENT REVIEW

ADDITIONAL NOTES:

**PRELIMINARY, NOT FOR
CONSTRUCTION**
ALL AREAS CALCULATIONS ARE
PRELIMINARY

NO. DATE REVISION COMMENT:

NO.	DATE	REVISION COMMENT:

SRN
ARCHITECTS

8395 JANE STREET, SUITE 203
VAUGHAN, ONTARIO L4K 5Y2
PHONE: 905-417-5515 FAX: 905-417-5517

© SRN ARCHITECTS INC. 2020

CLIENT:
Minto Communities Canada
200-180 Kent Street
Ottawa, Ontario K1P 0B6

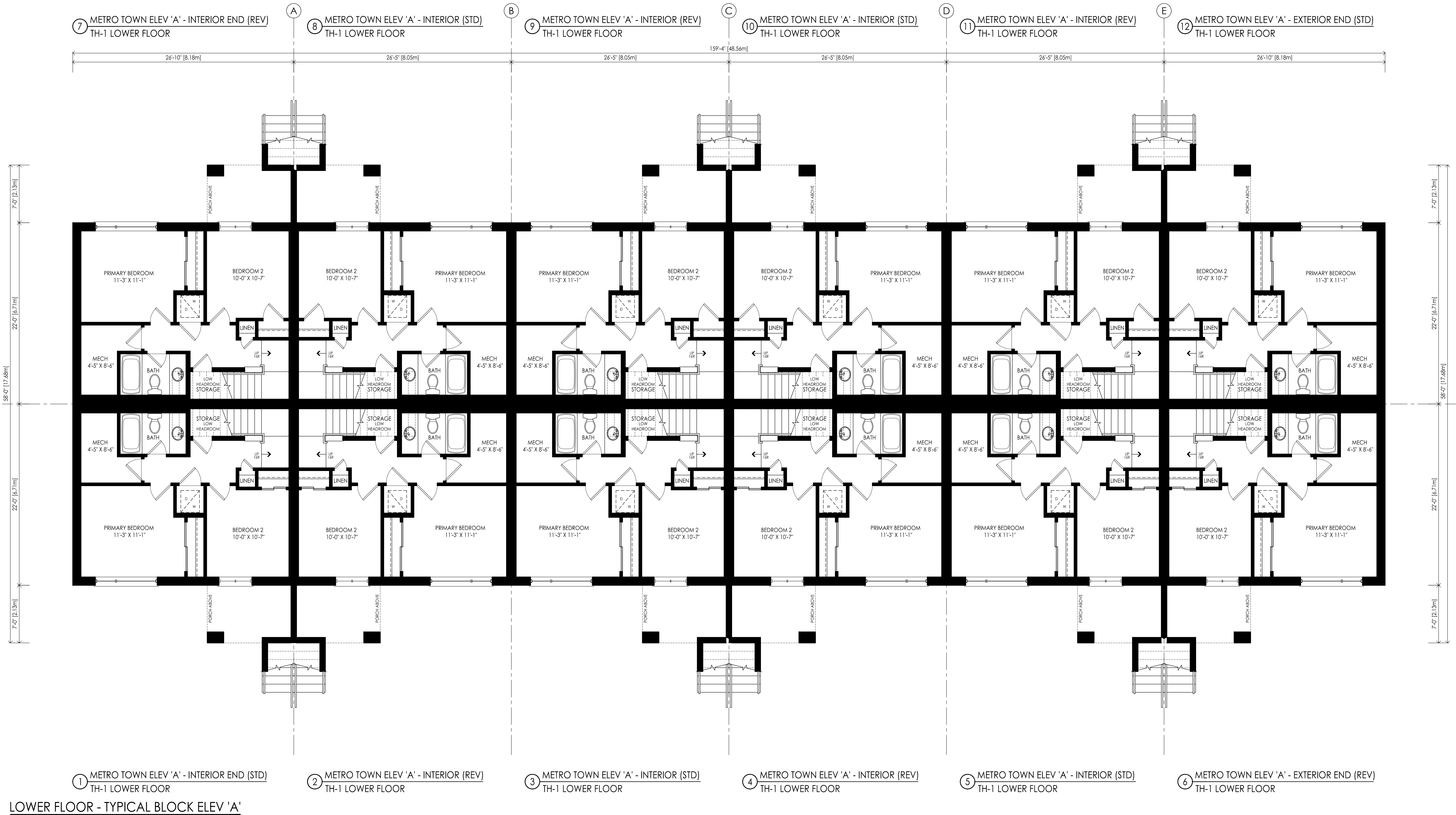
PROJECT:
Barrhaven Town Centre - Anthem
Ottawa, Ontario

DRAWING TITLE:
LOWER FLOOR PLAN

DATE: 2022-07-04 SCALE: 3/16"=1'-0"

DRAWN BY: AB CHECKED BY: GR

PROJECT NUMBER: S21001 DRAWING NUMBER: A1



① METRO TOWN ELEV 'A' - INTERIOR END (STD) TH-1 LOWER FLOOR
② METRO TOWN ELEV 'A' - INTERIOR (REV) TH-1 LOWER FLOOR
③ METRO TOWN ELEV 'A' - INTERIOR (STD) TH-1 LOWER FLOOR
④ METRO TOWN ELEV 'A' - INTERIOR (REV) TH-1 LOWER FLOOR
⑤ METRO TOWN ELEV 'A' - INTERIOR (STD) TH-1 LOWER FLOOR
⑥ METRO TOWN ELEV 'A' - EXTERIOR END (REV) TH-1 LOWER FLOOR
LOWER FLOOR - TYPICAL BLOCK ELEV 'A'

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NO.	DATE	ISSUED FOR
1	05-JUL-22	FOR CLIENT REVIEW

ADDITIONAL NOTES:



EXTERIOR FRONTAGE - TYPICAL BLOCK ELEV 'A'

PRELIMINARY, NOT FOR CONSTRUCTION
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NO.	DATE	REVISION COMMENT:



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CLIENT:
Minto Communities Canada
200-180 Kent Street
Ottawa, Ontario K1P 0B6

PROJECT:
Barrhaven Town Centre - Anthem
Ottawa, Ontario

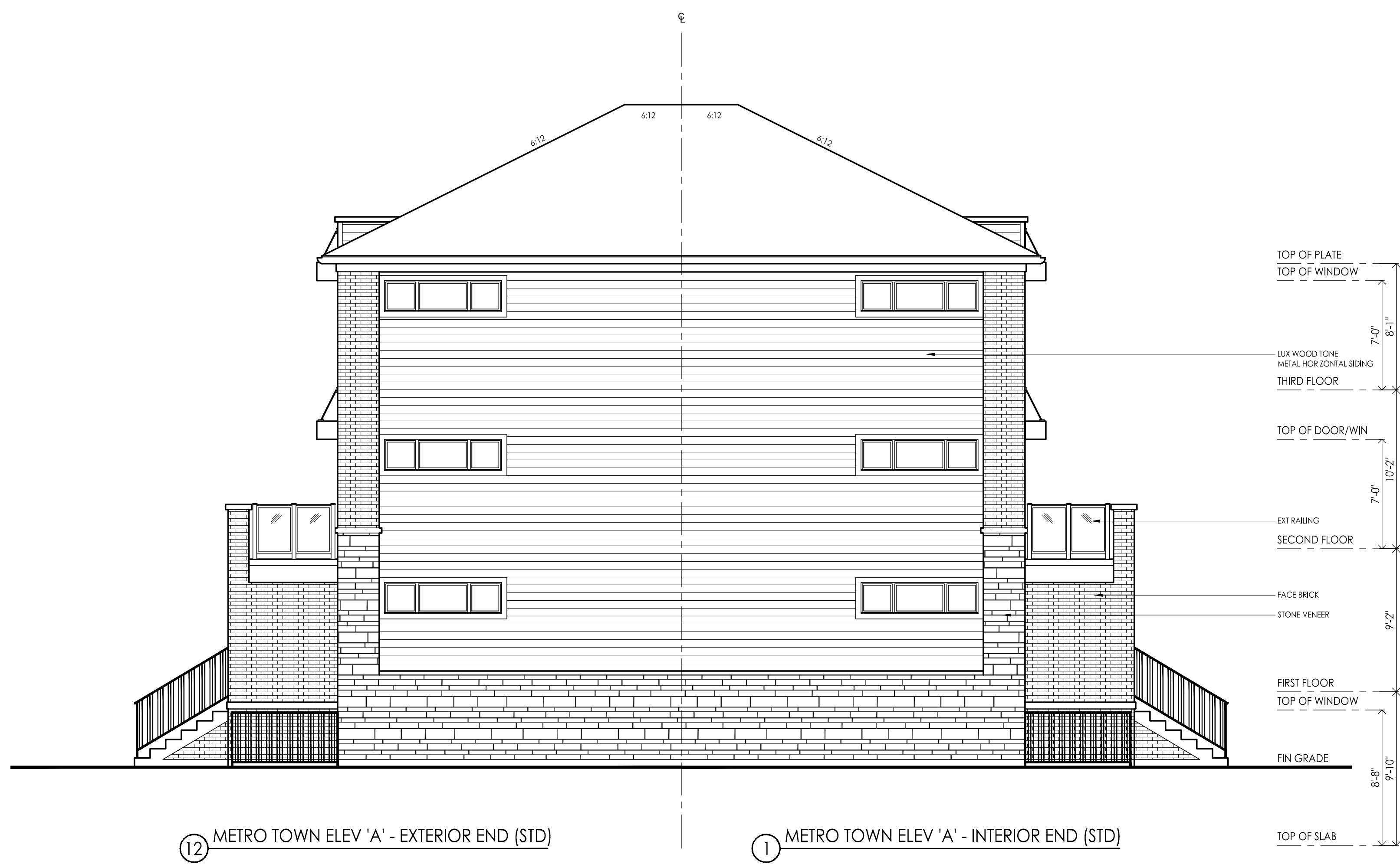
DRAWING TITLE:
EXTERIOR FRONTAGE

DATE: 2022-07-04 SCALE: 3/16"=1'-0"
DRAWN BY: AB CHECKED BY: GR
PROJECT NUMBER: **S21001** DRAWING NUMBER: **A6**

THESE DRAWINGS ARE NOT TO BE SCALED.
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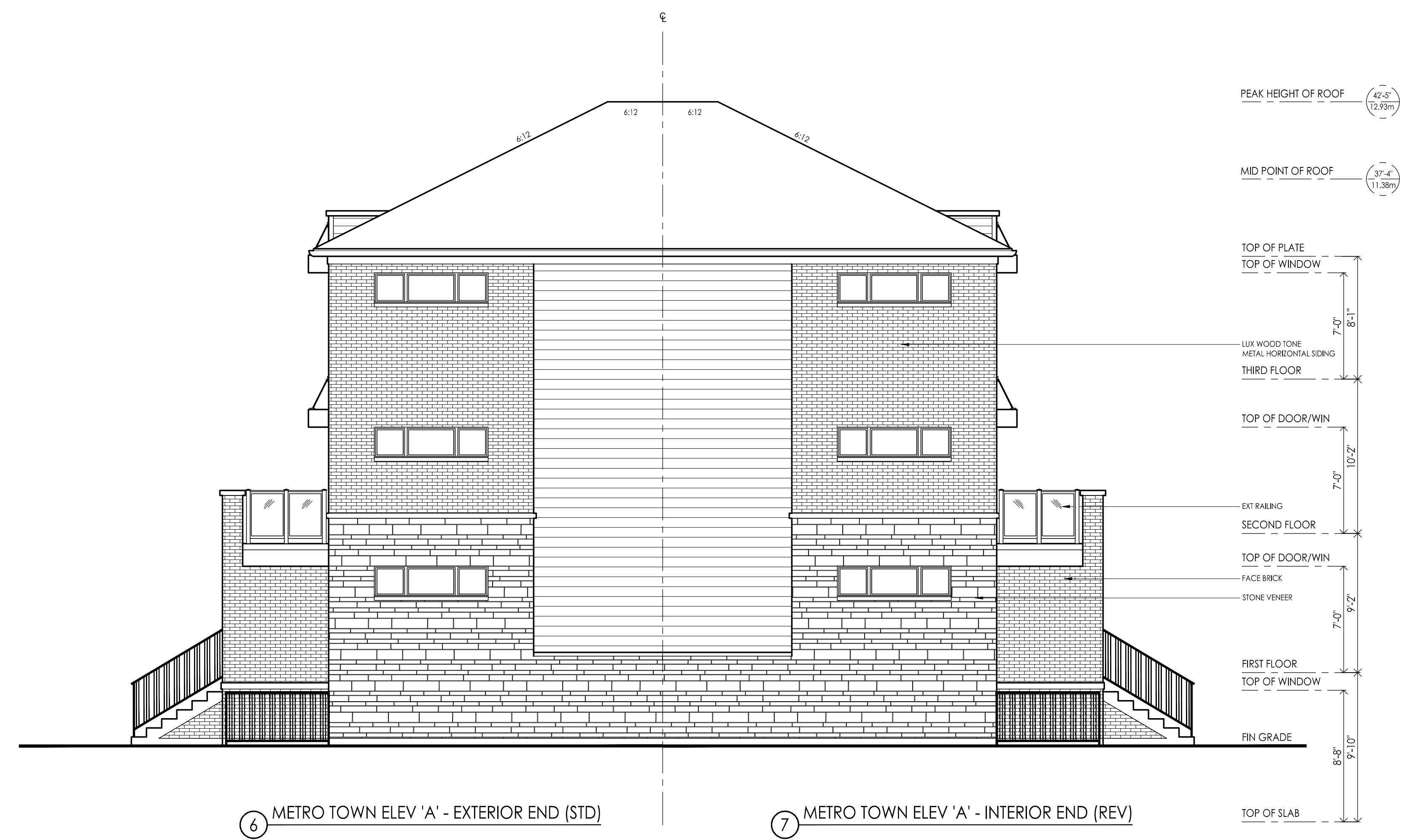
NO.	DATE	ISSUED FOR
1	05-JUL-22	FOR CLIENT REVIEW

ADDITIONAL NOTES:



12 METRO TOWN ELEV 'A' - EXTERIOR END (STD) 1 METRO TOWN ELEV 'A' - INTERIOR END (STD)

INTERIOR FLANKAGE - TYPICAL BLOCK ELEV 'A'



6 METRO TOWN ELEV 'A' - EXTERIOR END (STD) 7 METRO TOWN ELEV 'A' - INTERIOR END (REV)

EXTERIOR FLANKAGE - TYPICAL BLOCK ELEV 'A'

PRELIMINARY, NOT FOR CONSTRUCTION
ALL AREAS CALCULATIONS ARE PRELIMINARY

NO.	DATE	REVISION COMMENT



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CLIENT:
Minto Communities Canada
200-180 Kent Street
Ottawa, Ontario K1P 0B6

PROJECT:
Barrhaven Town Centre - Anthem
Ottawa, Ontario

DRAWING TITLE:
FLANKAGE ELEVATIONS

DATE: 2022-07-04 SCALE: 3/16"=1'-0"
DRAWN BY: AB CHECKED BY: GR
PROJECT NUMBER: **S21001** DRAWING NUMBER: **A8**

6			
5			
4			
3			
2			
1	ISSUED FOR TENDER	MAR 24/22	
No.	Revision	Date	By



ROUGH OPENING HEIGHTS		
2030 DOOR (80")	DOOR TYPE	(R.O.H.)
	SWINGING	2108 mm
SLIDING	2145 mm	
2440 DOOR (96")	DOOR TYPE	(R.O.H.)
	SWINGING	2490 mm
SLIDING	2555 mm	



CAMBRIDGE END ELEVATION 'AA', 'AB', 'BA' & 'BB'

ARCHITECTURAL LEGEND	STRUCTURAL LEGEND	STRUCTURAL FRAMING SCHEDULE	COMPLIANCE PACKAGE FOR SPACE HEATING EQUIPMENT OBC TABLE 3.1.1.2.A																										
<p>ATT/ACC Attic Access 500 x 700 min. (Insulated & weatherstripped)</p> <p>MC Medicine Cabinet</p> <p>CF Change between floor finishes</p> <p>DK Door schedule key (numbered)</p> <p>DCBH Dropped Ceiling Bulkhead 240 unless noted otherwise</p> <p>DP Deep</p> <p>LT Laundry Tub</p> <p>MW Microwave</p> <p>OPT Optional</p> <p>PH Paper Holder</p> <p>RD. & SH. Rod & Shelf</p> <p>R.O.H. Rough Opening Height</p> <p>R.O.W. Rough Opening Width</p> <p>Res. fl. Resilient Vinyl Flooring</p> <p>RV Roof Vent</p> <p>TB Towel Bar</p> <p>TR Towel Ring</p> <p>TYP Typical</p> <p>UNO Unless noted otherwise</p>	<p>ANCH. Anchor</p> <p>B.C. Bottom chord</p> <p>BLK Blocking</p> <p>BM.POCK. Beam pocket</p> <p>B/S Both Sides</p> <p>CJ Control Joint</p> <p>Cont. Continuous</p> <p>D.J. Double joist</p> <p>DR. Dropped beam</p> <p>FL. Flush beam</p> <p>FTG. Footing</p> <p>I.F. Inside face</p> <p>MH Metal hangers</p> <p>O.F. Outside face</p> <p>O.C. On center</p> <p>PL. Plate</p> <p>ST. BM Steel Beam</p> <p>STIF PL Stiffener Plate</p> <p>T&B Top and Bottom</p> <p>T&G Tongue & Groove</p> <p>T.J. Triple joist</p> <p>W.L. Wood lintel</p> <p>M.L. Masonry lintel</p>	<p>STEEL LINTEL</p> <p>S1 - L 90x90x6</p> <p>S2 - L 90x90x8</p> <p>S3 - L 100x90x6</p> <p>S4 - L 125x90x8</p> <p>S5 - L 125x90x10</p> <p>S6 - L 200x100x12</p> <p>S7 - L 150x100x10 (L.L.V.) 200mm BEARING</p> <p>S8 - L 100x90x8</p> <p>WOOD LINTEL</p> <p>L1 - 2-38x235 w/ 12.7 PLYWOOD SPACER</p> <p>L2 - 2-38x235</p> <p>L3 - 3-38x235</p> <p>L4 - 3-38x235 c/w 2-12.7 PLYWOOD SPACERS & 2 ROWS OF 90mm C.W.N. @ 200 c/c B/S</p> <p>L5 - 3-38x286 c/w 2-12.7 PLYWOOD SPACERS & 2 ROWS OF 90mm C.W.N. @ 200 c/c B/S</p> <p>L6 - 2-45x240 M.L.</p> <p>L7 - 3-45x240 M.L.</p> <p>L8 - 2-38x286</p> <p>L9 - 3-38x286</p> <p>L10 - 2-38x185</p> <p>PROVIDE 'P2' POST BOTH ENDS OF LINTEL UNLESS NOTED OTHERWISE</p> <p>POSTS</p> <p>P1(8) - 75 Ø STEEL TELEPOST (8 Feet Max)</p> <p>P1(9) - 75 Ø STEEL TELEPOST (9 Feet Max)</p> <p>P2 - 2-38x89 or 2-38x140</p> <p>P3 - 3-38x89 or 3-38x140</p> <p>P4 - 4-38x89 or 4-38x140</p> <p>P5 - 5-38x89 or 5-38x140</p> <p>P6 - 6-38x89 or 6-38x140</p> <p>P11 - HEAVY DUTY STEEL POST, CAPACITY = 55 KN</p> <p>P12 - ADJUSTABLE HSS, CAPACITY 100 KN</p> <p>HSS 73 OD - HSS 73 O.D. X 4.8 + 12mm PLATE TOP & BOTT.</p> <p>HSS 89 OD - HSS 89 O.D. X 4.8 + 12mm PLATE TOP & BOTT.</p> <p>HSS 76 - HSS 76.2 X 76.2 X 4.8 + 12mm PLATE TOP & BOTT.</p> <p>HSS 89 - HSS 89 X 89 X 4.8 + 12mm PLATE TOP & BOTT.</p> <p>HSS 102 - HSS 102 X 102 X 4.8 + 12mm PLATE TOP & BOTT.</p> <p>ANCHOR POST TO FOUNDATION W/ 2-12Ø WEDGE ANCHORS PROVIDE 'P2' UNDER ALL DOUBLE JOISTS & TRUSSES U.N.O.</p> <p>FOOTINGS</p> <p>ALL FOOTINGS DESIGNED FOR ALLOWABLE SOIL CAP.= 100kpa</p>	<table border="1" style="width: 100%;"> <thead> <tr><th>COMPONENTS</th><th>PACKAGE A1</th></tr> </thead> <tbody> <tr><td>CEILING WITH ATTIC MIN. RSI / R VALUE</td><td>RSI 10.56 (R60)</td></tr> <tr><td>CEILING W/O ATTIC MIN. RSI / R VALUE</td><td>RSI 5.46 (R31)</td></tr> <tr><td>EXPOSED FLOOR MIN. RSI / R VALUE</td><td>RSI 5.46 (R31)</td></tr> <tr><td>WALLS ABOVE GRADE MIN. RSI / R VALUE</td><td>RSI 3.87 (R22)</td></tr> <tr><td>BASEMENT WALLS MIN. RSI / R VALUE</td><td>RSI 3.54ci (R20)</td></tr> <tr><td>BASEMENT SLAB >600mm BELOW GRADE MIN. RSI / R VALUE</td><td>-</td></tr> <tr><td>BASEMENT SLAB ≤600mm BELOW GRADE MIN. RSI / R VALUE</td><td>RSI 1.76 (R10)</td></tr> <tr><td>EDGE OF SLAB ≤ 600mm BELOW GRADE WALL MIN. RSI / R VALUE</td><td>RSI 1.76 (R10)</td></tr> <tr><td>WINDOWS/PATIO DOORS MAX. U-ENERGY RATING</td><td>U- 1.6 ER 25</td></tr> <tr><td>SPACE HEATING EQUIPMENT MAX. AFUE</td><td>96%</td></tr> <tr><td>HRV MIN. EFFICIENCY</td><td>75%</td></tr> <tr><td>HOT WATER HEATERS MIN. EFFICIENCY</td><td>0.80 EF</td></tr> </tbody> </table>	COMPONENTS	PACKAGE A1	CEILING WITH ATTIC MIN. RSI / R VALUE	RSI 10.56 (R60)	CEILING W/O ATTIC MIN. RSI / R VALUE	RSI 5.46 (R31)	EXPOSED FLOOR MIN. RSI / R VALUE	RSI 5.46 (R31)	WALLS ABOVE GRADE MIN. RSI / R VALUE	RSI 3.87 (R22)	BASEMENT WALLS MIN. RSI / R VALUE	RSI 3.54ci (R20)	BASEMENT SLAB >600mm BELOW GRADE MIN. RSI / R VALUE	-	BASEMENT SLAB ≤600mm BELOW GRADE MIN. RSI / R VALUE	RSI 1.76 (R10)	EDGE OF SLAB ≤ 600mm BELOW GRADE WALL MIN. RSI / R VALUE	RSI 1.76 (R10)	WINDOWS/PATIO DOORS MAX. U-ENERGY RATING	U- 1.6 ER 25	SPACE HEATING EQUIPMENT MAX. AFUE	96%	HRV MIN. EFFICIENCY	75%	HOT WATER HEATERS MIN. EFFICIENCY	0.80 EF
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<p>ELECTRICAL LEGEND</p> <p>DO Duplex Outlet (G.F.I. in all bathrooms)</p> <p>SDO Split Duplex Outlet</p> <p>DU Duplex outlet upper 1/2 switched</p> <p>WPD Weather proof duplex outlet</p> <p>220V 220 V outlet</p> <p>EV Electric vehicle charging rough-in c/w 27mm conduit to 200amp panel</p> <p>VAC Central vacuum outlet</p> <p>SS Single pole switch</p> <p>3W 3 way switch</p> <p>4W 4 way switch</p> <p>FURN Furnace switch</p> <p>DGS Double gang switch</p> <p>TGS Triple gang switch</p> <p>CLF Ceiling light fixture</p> <p>SP4 Standard potlight 4" (clg. mtd)</p> <p>P Pucklight</p> <p>WMLF Wall mounted light fixture</p> <p>PH.CELL Photocell</p> <p>ISD Interconnected smoke detector on each floor and in each bedroom with visual signal. Carbon monoxide detector on each floor containing bedrooms</p> <p>EP Electrical panel</p> <p>H Hydro meter</p> <p>R Range</p> <p>F Refrigerator</p> <p>DW Dishwasher</p> <p>D Dryer</p> <p>W Washer</p> <p>CB Door chime/buzzer</p> <p>T Thermostat</p>	<p>MECHANICAL LEGEND</p> <p>CAR Cold air return grill</p> <p>WAD Cold air return duct in wall</p> <p>WAK Warm air duct</p> <p>WAW Warm air diffuser</p> <p>WAWK Warm air supply in cabinet toe kick or wall</p> <p>WAWC Warm air diffuser in ceiling</p> <p>FC Fireplace chimney</p> <p>FURN. Furnace</p> <p>EV Exhaust vent</p> <p>G Gas meter</p> <p>W Water meter</p> <p>SERVICES Service entry</p> <p>FD Floor drain</p> <p>SS Soil stack</p> <p>DWR Drain water heat recovery pipe installed on soil stack.</p> <p>HWT Hot Water Tank</p> <p>HBF Hose bib (FROST FREE)</p> <p>SH Shower head</p> <p>A/C Air Conditioning</p> <p>BBQ Barbeque Gas Line</p> <p>HRT Heat Recovery Ventilator</p> <p>THT Tankless Hot Water Tank c/w</p> <p>DP Drain Pan</p> <p>MV Mechanical vent</p>	<p>FINISHED BUILDING AREA</p> <table border="1" style="width: 100%;"> <tr><td>GROUND FL. (excl. Garage)</td><td>33.52m² (360.8ft²)</td><td>34.18m² (368.0ft²)</td></tr> <tr><td>SECOND FL. (excl. O.T.B.)</td><td>54.20m² (583.4ft²)</td><td>54.20m² (583.4ft²)</td></tr> <tr><td>THIRD FL. (excl. O.T.B.)</td><td>54.20m² (583.4ft²)</td><td>54.20m² (583.4ft²)</td></tr> <tr><td>Total (excl O.T.B. & Garage)</td><td>141.92m² (1527.6ft²)</td><td>142.58m² (1534.8ft²)</td></tr> </table>	GROUND FL. (excl. Garage)	33.52m ² (360.8ft ²)	34.18m ² (368.0ft ²)	SECOND FL. (excl. O.T.B.)	54.20m ² (583.4ft ²)	54.20m ² (583.4ft ²)	THIRD FL. (excl. O.T.B.)	54.20m ² (583.4ft ²)	54.20m ² (583.4ft ²)	Total (excl O.T.B. & Garage)	141.92m ² (1527.6ft ²)	142.58m ² (1534.8ft ²)	<p>DOOR SCHEDULE</p> <p>1. DOOR NUMBER FOLLOWED BY 'A' DENOTES 2440 (96") HIGH DOOR</p> <p>2. EXTERIOR DOOR INSULATED MIN RSI 0.7, (R4) 815x2030x45 (32"x80"x1-3/4")</p> <p>3. DOOR 910x2030x35 (36"x80"x1-3/8")</p> <p>4. DOOR 815x2030x35 (32"x80"x1-3/8")</p> <p>5. DOOR 760x2030x35 (30"x80"x1-3/8")</p> <p>6. DOOR 710x2030x35 (28"x80"x1-3/8")</p> <p>7. DOOR 610x2030x35 (24"x80"x1-3/8")</p> <p>8. DOOR 460x2030x35 (18"x80"x1-3/8")</p> <p>9. EXTERIOR FRENCH OR GARDEN DOOR 815x2030x45 (32"x80"x1-3/4")</p> <p>10. EXTERIOR HOLLOW METAL DOOR 815x2030x45 (32"x80"x1-3/4") FIRE-RATED METAL DOOR W/ 20 MIN. FIRE PROTECTION RATING OR EQUAL AND 38mm (1-1/2") THICK WOOD FRAME. PROVIDE SELF CLOSING DEVICE.</p> <p>11. EXTERIOR DOOR INSULATED MIN RSI 0.7, (R4) 860x2030x45 (34"x80"x1-3/4")</p> <p>12. EXTERIOR DOOR INSULATED MIN RSI 0.7, (R4) 910x2030x45 (36"x80"x1-3/4")</p>														
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Client MINTO COMMUNITIES	Sheet Title LEGEND, AREAS & REVISIONS	REGISTERED PERSON: D.W. CASSIDY & CO. ARCHITECTURAL TECHNOLOGISTS FIRM BCIN 28461	Project No. 2021-29
Project AVENUE TOWNS CITY OF OTTAWA BACK-TO-BACK TOWNS	Scale 1 : 75	I <u>JAMIE LOPES</u> have reviewed and take responsibility for this design.	OBC 2012
	Drawn by SST	Signature <u>[Signature]</u>	Revision No. R0
	Date MARCH 2021	BCIN <u>28757</u> Date: MAR. 14, 2022	Drawing No. 1
	Checked by AMM		
	CAMBRIDGE END		

CASSIDY & CO.

ARCHITECTURAL TECHNOLOGISTS

60 RANDALL DRIVE SUITE 11
AJAX, ONTARIO
L1S 6L3
PH (905) 619-1270
FAX (905) 619-1269

CONSTRUCTION NOTES

UNLESS OTHERWISE NOTED 1 MAY 2017
2012 OBC O. REG. 332/12 (REVISED)

ALL CONSTRUCTION PRACTICES TO COMPLY WITH ONTARIO BUILDING CODE (O.B.C.) REGULATIONS
ALL DIMENSIONS GIVEN FIRST IN METRIC (mm) FOLLOWED BY IMPERIAL.

1 ROOF CONSTRUCTION (SEE SP2 & 7/SP4)
ASPHALT SHINGLES
APPROVED EAVES PROTECTION TO EXTEND MIN. 900mm (2'-11") UP ROOF SURFACE TO LINE NOT LESS THAN 300mm (12") BEYOND INNER FACE OF EXTERIOR WALL FOR ROOF SLOPES LESS THAN 8:12. (OBC 9.26.5)
11.1 (7/16") OSB SHEATHING W/ 'H' CLIP EDGE SUPPORT
PRE-ENGINEERED TRUSSES BRACED AS PER MANUFACTURERS SPECIFICATIONS & DETAIL 7/SP4
RSI 10.56 (R60) ROOF INSULATION
19 x 65 (1x3) STRAPPING @405 O/C
6 mil. AIR/VAPOUR BARRIER
12.7mm (1/2") INT. DRYWALL FINISH
- PRE-FINISHED ALUM. VENTED SOFFIT & PREFINISHED ALUM. FASCIA.
ATTIC VENTILATION 1:300 OF INSULATED CEILING AREA UNIFORMLY DISTRIBUTED ON OPPOSITE SIDES OF THE BUILDING WITH NO LESS THAN 25% AT EAVES AND 25% THE SOFFIT (OBC 9.19.1.2)

2 EXTERIOR WALL CONSTRUCTION (VINYL SIDING)
VINYL SIDING AS PER ELEVATIONS (SEE SP2)
EXTERIOR AIR BARRIER (TYVEK)
EXTERIOR OSB SHEATHING 11.1mm (7/16")
38mm x140mm (2x6) STUDS @ 405 (16") O.C. U.N.O.
RSI 3.87 (R22) BATT. INSULATION
6 mil. VAPOUR BARRIER
12.7mm (1/2) INT. DRYWALL FINISH

2A EXTERIOR WALL CONSTRUCTION (COMPOSITE SIDING) (SEE SP2)
COMPOSITE SIDING AS PER ELEVATIONS
38x65 (2x3) STRAPPING AS PER MANUF. SPECS
EXTERIOR AIR BARRIER (TYVEK)
EXTERIOR OSB SHEATHING 11.1mm (7/16") (20mm OSB FOR VERT. SIDING)
38mm x140mm (2x6) STUDS @ 405 (16") O.C. U.N.O.
RSI 3.87 (R22) BATT. INSULATION
6 mil. VAPOUR BARRIER
12.7mm (1/2) INT. DRYWALL FINISH

3 EXTERIOR WALL CONSTRUCTION (MASONRY)
MASONRY VENEER, 22 x 180 x 0.76mm (7/8" x 7" x 22 ga) (SEE SP2)
GALV. METAL TIES @ 400mm (15 3/4") PROVIDE WEEPHOLES @ 800mm (30") O.C. HORIZ. @ BOTTOM COURSE ONLY & OVER OPENINGS PROVIDE BASE FLASHING UP MIN. 150mm (6") BEHIND AIR BARRIER. MIN. 150mm (6") CLEARANCE BETWEEN MASONRY AND GRADE. (9.20.6.4, 9.20.9.5, 9.20.13.5,9.20.13.6)
25mm AIR SPACE
EXTERIOR AIR BARRIER (TYVEK)
EXTERIOR OSB SHEATHING 11.1mm (7/16")
38mm x140mm (2x6) STUDS @ 405 (16") O.C. U.N.O.
RSI 3.87 (R22) BATT. INSULATION
6 mil. VAPOUR BARRIER
12.7mm (1/2) INT. DRYWALL FINISH

4 INTERIOR STUD PARTITIONS
12.7mm (1/2") INT. DRYWALL ON BOTH SIDES (FOR FIN. AREAS)
2 TOP PLATES & 1 BOTTOM PLATE TO MATCH STUD WIDTH.
LOAD BEARING WALLS
38mm x 89mm (2 x 4) OR 38mm x 140mm (2 x 6) @ 406mm (16") O.C.
NON-LOAD BEARING WALLS
38mm x 89mm (2 x 4) OR 38mm x 140mm (2 x 6) @ 610mm (2'-0") O.C. (405 (16") IN BATHROOMS)

5 FOUNDATION WALL (SOIL BEARING CAPACITY 100 kPa) (SEE SP2a)
200mm (8") POURED CONC. FOUNDATION WALL WITH 20 MPa (2900 Psi) CONC. STRG. 550 x200mm (22" x 8") U.N.O. CONCRETE KEYED FOOTINGS U.N.O. BACKFILL WITH NON-FROST SUSCEPTIBLE SOIL.

5A RESERVED

5B RESERVED

5C RESERVED

5D FOUNDATION SLAB ON GRADE (SEE SP2a)
RSI 1.75 ci (R10 ci) 50mm RIGID INSULATION
POURED CONCRETE FOUNDATION WALL SEE PLAN FOR THICKNESS

6 RESERVED

7 GARAGE EXTERIOR WALL (SIDING)
SIDING AS PER ELEVATIONS
AIR BARRIER ON EXTERIOR
11.1mm (7/16") OSB SHEATHING
38mm x 89mm (2 x 4) OR 38mm x 140mm (2x6) STUDS @ 405 O/C AS PER PLAN
12.7mm DRYWALL TAPED

8 GARAGE EXTERIOR WALL (MASONRY)
MASONRY VENEER, 22 x 180 x 0.76mm (7/8" x 7" x 22 ga)
GALV. METAL TIES @ 400mm (15 3/4") PROVIDE WEEPHOLES @ 800mm (30") O.C. HORIZ. @ BOTTOM COURSE ONLY & OVER OPENINGS PROVIDE BASE FLASHING UP MIN. 150mm (6") BEHIND AIR BARRIER. MIN. 150mm (6") CLEARANCE BETWEEN MASONRY AND GRADE. (9.20.6.4, 9.20.9.5, 9.20.13.5,9.20.13.6)
25mm AIR SPACE
EXTERIOR AIR BARRIER (TYVEK)
EXTERIOR OSB SHEATHING 11.1mm (7/16")
38mmX 89mm or 38mm x140mm (2x6) STUDS AS PER PLAN @ 405 (16") O.C. U.N.O.
12.7mm (1/2) INT. DRYWALL TAPED

9 GARAGE TO HOUSE WALL (OBC 9.10.9.16)
12.7mm (1/2") GYPSUM BD.
6 mil. VAPOUR / AIR BARRIER (WARM SIDE),
3.87 (R22) BATT INSULATION IN WALL,
12.7mm (1/2") GYPSUM BD.
TAPED AND SEAL ALL JOINTS GAS TIGHT & VAPOURPROOF,

10 2 STOREY WALLS -
38mm x 140mm (2 x 6) SPF. # 2 FULL HEIGHT STUDS @ 405mm (16") O.C. C/W HORIZONTAL SOLID BLOCKING @ 1200mm (3'-11") O.C. VERTICALLY. WALL CONSTRUCTION SHALL CONFORM TO OBC 9.23.10.1(2)

10A 2 STOREY WALLS -
DOUBLE 38mm x 140mm (2 x 6) SPF. # 1/2 FULL HEIGHT STUDS @ 405mm (16") O.C. C/W HORIZONTAL SOLID BLOCKING @ 1200mm (3'-11") O.C. VERTICALLY. WALL CONSTRUCTION SHALL CONFORM TO OBC 9.23.10.1(2)

10B 2 STOREY WALLS -
38mm x 185mm (2 x 8) SPF. # 1/2 FULL HEIGHT STUDS @ 405mm (16") O.C. C/W HORIZONTAL SOLID BLOCKING @ 1/4 POINTS O.C. WALL CONSTRUCTION SHALL CONFORM TO OBC 9.23.10.1(2)

11 BEARING STUD PARTITION
38mm x 89mm (2 x 4) OR 38mm x 140mm (2 x 6) STUDS @ 406mm (16") O.C., (AS PER WORKING DRAWINGS) WITH 2 TOP PLATES AND SINGLE SILL PLATE TO MATCH STUD WIDTH SILL PLATE RAMSET TO SLAB @ 1800mm (6'-0") O.C. DAMPPROOFING MATERIAL BELOW PLATE (6mil. v.b) BASEMENT SLAB 75mm (3") 25MPa (3600 psi) CONC. SLAB CONCRETE FOOTING AS PER PLAN

12 EXTERIOR WALL LESS THAN 1.2 M TO PROPERTY LINE (45 MINUTE F.R.R.)
EXTERIOR FINISH AS PER ELEVATION (SEE SP3) (OSB EW1a)
EXTERIOR AIR BARRIER (TYVEK)
EXTERIOR OSB SHEATHING 11.1mm (7/16")
38mm x140mm (2x6) or 38mm X 89MM (2X4) STUDS AS PER PLAN @ 405 (16") O.C. U.N.O.
BATT. INSULATION AS PER PLANS
6 mil. VAPOUR BARRIER (HEATED SPACE ONLY)
15.8mm (5/8") TYPE 'X' INT. DRYWALL FINISH (TAPED IN GARAGE)

13 EXTERIOR NON-COMBUSTIBLE CLAD WALL LESS THAN 0.6M TO PROPERTY LINE (45 MINUTE F.R.R.)
EXTERIOR FINISH AS PER ELEVATION
12.7 EXTERIOR GRADE DRYWALL (FOR SIDING ONLY)
EXTERIOR AIR BARRIER (TYVEK)
12.7mm (1/2") EXTERIOR GRADE
EXTERIOR OSB SHEATHING 11.1mm (7/16")
38mm x140mm (2x6) or 38mm X 89MM (2X4) STUDS AS PER PLAN @ 405 (16") O.C. U.N.O.
RSI 3.87 (R22) or RSI 2.1 (R12) BATT. INSULATION CONFORMING TO CAN/ULC -S702 AND HAVING A MASS OF 4.8 kg/m2 FOR 150mm THICKNESS & 2.8 kg/m2 FOR 89mm THICKNESS
6 mil. VAPOUR BARRIER (HEATED SPACE ONLY)
15.8mm (5/8") TYPE 'X' INT. DRYWALL FINISH (TAPED IN GARAGE)

14 CONVENTIONAL ROOF FRAMING
38 mm X 140 mm (2" X 6") SPR. RAFTERS @406 mm (16") O.C., 38 mm X 184 mm (2" X 8") RIDGE BD., HIP & VALLEY RAFTERS 38 mm X 89 mm (2" X 4") COLLAR TIES @ MIDSPAN. CEILING JOISTS TO BE 38 mm X 89 mm (2" X 4") @ 406 mm (16") O.C. FOR A MAX. 2430 mm (8'-0") SPAN & 38 mm X 140 mm (2" X 6") @ 406 mm (16") O.C. FOR A MAX. 4450 mm (14'-7") SPAN. RAFTERS FOR BUILT-UP ROOF TO BE 38 mm X 89 mm (2" X 4") @ 610 mm (24") O.C. W/ A 38 mm X 89 mm (2" X 4") COLLAR TIES AS REQUIRED FOR STABILITY.

15 EXPOSED FLOOR (CANTILEVERED)
19 mm (3/4") SHEATHING (DET. 6/SP5)
FILL CAVITY WITH FOAM INSULATION
11.1 (7/17") OSB
AIR BARRIER SEALED TO PREP AT PLATE
ALUM. FLAT STOCK

16 PROTECTION FROM DAMPNES (OBC 9.23.2.3)
WOOD FRAMING MEMBERS THAT ARE NOT PRESSURE TREATED AND ARE IN CONTACT WITH CONCRETE THAT IS LESS THAN 150mm (6") ABOVE GROUND OR SLAB, PROVIDE 6 mil. POLYETHYLENE FILM OR No. 50 (45lb) ROLL ROOFING DAMPPROOFING BETWEEN WOOD AND CONCRETE.

17 PORCH WOOD POST (SEE SP8/SP4))
3- 38mm x 140mm (2 x 6) PRESSURE TREATED WOOD POST WITH 2- SIMPSON STRONG TIE A23 METAL CLIPS, ANCHORED TO BEAM AND POST W/ 4-10DIA.x40mm NAILS EACH SIDE, ANCHORED TO SLAB W/ 2-HILTI PINS DIA 0.138x32mm lg. EACH SIDE. PROVIDE MOISTURE BREAK (ROOF SHINGLE OR OTHER) BETWEEN POST & PORCH

18 SILL PLATE @ FOUNDATION (SEE SP2)
38mm x 140mm (2 x 6) SILL PLATE (SIDING) 38mm X 89 (2x4) (BRICK) WITH 12.7 mm (1/2") DIA. ANCHOR BOLTS, 300mm (12") LONG, MIN. 100mm IN CONC. @ 1830mm (6'-0") O.C., PLATE SITTING ON SILL GASKET, AIR BARRIER AND CONCRETE WALL.

19 ALL STAIRS (EXTERIOR & INTERIOR)
MIN. RISE = 125mm (4 7/8") MAX. RISE = 200mm (7 7/8")
MIN. RUN = 255mm (10") MAX. RUN = 355mm (14")
MIN. TREAD = 235mm (9 1/4") MAX. TREAD = 355mm (14") FOR CURVED STAIRS
MIN. RUN = 150mm (5 7/8")
MIN. AVERAGE RUN = 200mm (7 7/8")
MIN. HEADROOM = 1950mm (6'-5")
MIN. WIDTH = 860mm (2'-10")
NOSING (Max. curved or beveled edge) = 25mm (1")

20 GUARDS/HANDRAILS
ALL GUARDS AND HANDRAILS ARE TO COMPLY WITH THE REQUIREMENTS OF THE O.B.C SUBSECTION 9.8.7 AND 9.8.8
GUARD @ INT. LANDING/STAIR OR FLOORS = 900mm (2'-11")
HANDRAIL @ INT. STAIR...MIN = 865 (2'-10") MAX = 965mm (3'-2")
GUARD/HANDRAIL @ EXT. LANDING/BALCONY (Greater than 1800mm above finish grade) = 1070mm (3'-6")
GUARD/HANDRAIL @ EXT. LANDING/STAIR = 900mm (2'-11")
HANDRAIL @ EXT. STAIR...MIN = 865 (2'-10") MAX = 965mm (3'-2")
PICKETS MAX. 100mm (4") BETWEEN

21 BLOCK VENEER WALL (INTERIOR)
100mm (4") CONCRETE BLOCK TO SUPPORT BRICK ABOVE. AIR SPACE, METAL TIES, BLDG. PAPER ETC... AS PER NOTE 3) EXCEPT NO WEEP HOLES OR FLASHING.

22 PORCH SLAB (SEE SP-2F)
130mm (5") POURED CONC. 32MPa (4650 psi) @ 28 DAYS
PORCH SLAB WITH 6% AIR CONTENT +/- 1%, CLASS 2 EXPOSURE W/C RATIO = 0.45 WITH 10M REBAR @ 400 O/C (16") EACH WAY WITH MIN. 50mm (2") CONCRETE COVER BOTTOM FROM THE BOTTOM OF THE SLAB TO THE FIRST LAYER OF BARS AND THE SECOND LAYER OF BARS LAID DIRECTLY ON TOP OF THE LOWER LAYER IN THE OPPOSITE DIRECTION, 75mm (3") MIN. SLAB BEARING, 10 M DOWELS 600mm x 600mm (23 5/8" x 23 5/8") @ 400mm (16") O.C. AROUND PERIMETER. REINFORCING STEEL GRADE 400 - CAN/CSA-G30.18-M

23 GARAGE SLAB (OBC 9.16.2.2.)
100mm (4") CONC. SLOPED BACK TO FRONT. AS PER PLAN, CONC. STRG 32 MPa (4650 psi) @ 28 DAYS WITH 6% ±15 AIR CONTENT, MAX W/C RATIO 0.04, MAX. SLUMP - 75mm, CLASS 'C2' EXPOSURE
COMPACTED NON FROST SUSCEPTIBLE FILL

24 BASEMENT SLAB (OBC 9.16.2.2, & SP2)
75 mm (3") CONCRETE SLAB, CONC. STRG 25 MPa (3625 psi) @ 28 DAYS
ON MIN. 100 mm (4") OF COARSE GRANULAR

25 STEP FOOTINGS (OBC 9.15.3.9)
HORIZONTAL STEP = 600mm (23 5/8") MIN.
VERTICAL STEP = 600mm (23 5/8") MAX.

26 COLD CELLAR
FULL HEIGHT INSULATION ON INTERIOR SIDE OF FOUNDATION WALLS SEPARATING HEATED SPACE FROM COLD CELLAR. INSULATED DOOR WITH WEATHER STRIPPING. C/W VENT W/ PAINTED INSECT SCREEN, LIGHT FIXTURES AND FLOOR DRAIN.

27 FRAMED FLOORS (OBC 9.30.6.1, 9.23.13.3,4,5)
FLOOR FINISHING (ON MIN. 15.9mm (5/8") PANEL TYPE UNDERLAY FOR CERAMIC TILE)
19mm (3/4") T&G SUBFLOOR
PRE-ENGINEERED FLOOR JOIST SPACING AS PER MANUFACTURERS DRAWINGS
19mm x 65 mm (1x3) STRAPPING @ 405mm (16") O/C
12.7mm (1/2") DRYWALL (FINISH AS PER SPECIFICATIONS)

28 PROVIDE 38 X 89 SOLID BLOCKING AT 1200mm (3'-11 1/4") O.C. BELOW WALLS RUNNING PARALLEL TO JOISTS. (OBC 9.23.9.8)

29 GRABS BARS (OBC 9.5.2.3, SEE SP-10D)
ADD GRAB BAR REINFORCEMENT IN STUD WALL FOR MAIN BATHROOM

30 ATTIC ACCESS (OBC 9.19.2)
ATTIC ACCESS HATCH 500mm x 700mm (19 3/4" x 27") WITH WEATHER STRIPPING AND INSULATED.

31 DROP IN TUB AS PER PLANS (OBC 9.29.2.1)
CERAMIC TILE DECK W/ 2 ROWS OF TILE
ON WALL AROUND DECK MINIMUM 400mm (1'-4") HIGH

32 FREE STANDING TUB AS PER PLANS
PROVIDE TILE FROM FLOOR TO 400mm (16") ABOVE TUB RIM FOR TUBS 400mm (16") OR LESS FROM WALL

33 CAPPED DRYER, INTAKE OR EXHAUST VENT. MAX. UNPROTECTED OPENING AREA OF 130 cm2 (20 sq. in.) (OBC 9.10.15.4(5))

34 LINEN CLOSET 5 SHELVES MIN. 350mm (1'-2") DEEP.

35 19mm x 89mm (1 x 4) BOTH SIDES OF STEEL BEAM.

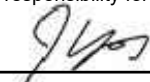
36 GARAGE DOORS SHALL BE EXTERIOR TYPE SELF CLOSING DOORS AND WEATHERSTRIPPED. PROVISIONS RESISTANCE TO FORCED ENTRY SHALL BE PROVIDE AS PER O.B.C 9.7

37 WOOD PLATES ON STEEL BEAMS TO BE RAMSET, SCREWED OR BOLTED @ 405mm (16") O/C

38 TYPICAL PARTY WALL (OBC ASSEMBLY W15d) (SP3a -1)
2-15.9mm TYPE 'X' GYPSUM BOARD FRAMING (STUD SIZE AS PER PLAN) @ 405 O.C.
90mm SOUND BATTS.
25mm AIR SPACE
38x90 STAGGERED FRAMING @ 405 O.C. 2-15.9mm TYPE 'X' GYPSUM BOARD

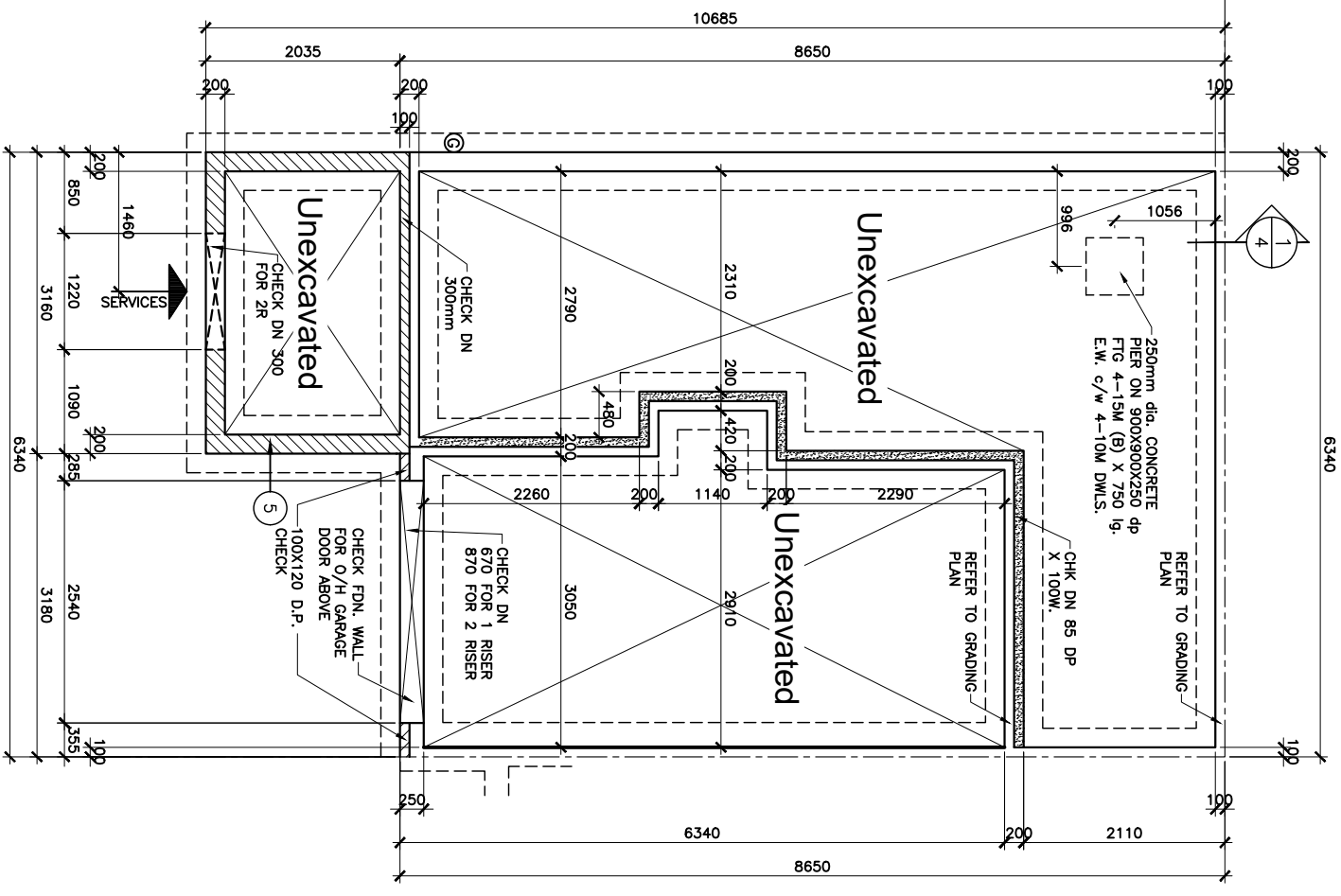
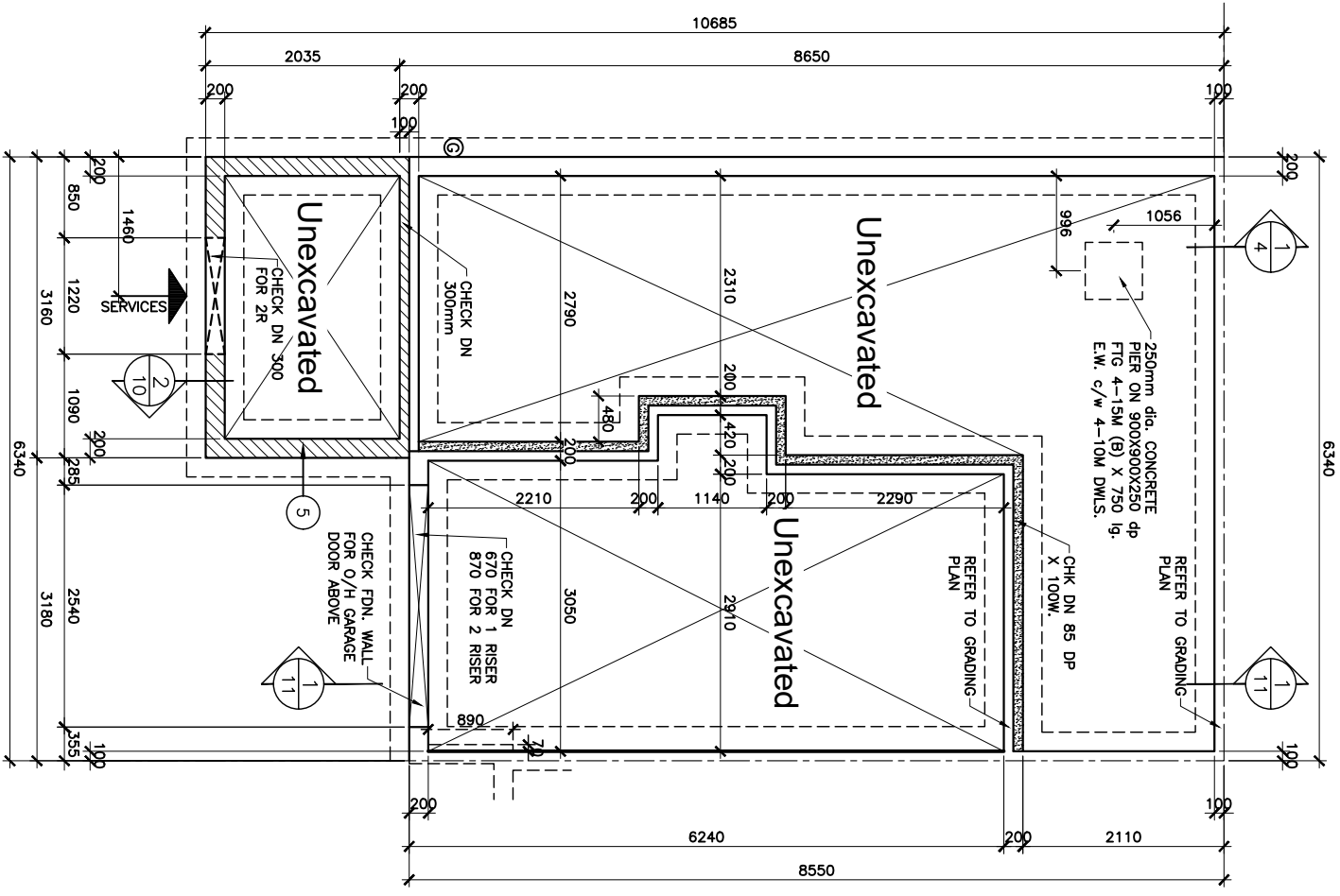
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1	ISSUED FOR TENDER	MAR 24/22	
No.	Revision	Date	By

Client MINTO COMMUNITIES	Sheet Title CONSTRUCTION NOTES
Project AVENUE TOWNS CITY OF OTTAWA BACK-TO-BACK TOWNS	Scale 1 : 75
	Drawn by SST
	Date MARCH 2021
	Checked by AMM
	CAMBRIDGE END

REGISTERED PERSON: D.W. CASSIDY & CO. ARCHITECTURAL TECHNOLOGISTS FIRM BCIN 28461
I <u>JAMIE LOPES</u> have reviewed and take responsibility for this design.
Signature 
BCIN <u>28757</u> Date: <u>MAR. 14, 2022</u>

CASSIDY & CO. ARCHITECTURAL TECHNOLOGISTS 60 RANDALL DRIVE SUITE 11 AJAX, ONTARIO L1S 6L3 PH (905) 619-1270 FAX (905) 619-1269	Project No. 2021-29
	OBC 2012
	Revision No. R0
	Drawing No. 2

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No.	Revision	Date
		By



NOTE : TO MAIN FLR STAIR DESIGN IS BASED ON A 255 RUN

NOTE : PROVIDE SOLID WOOD BLOCKING BETWEEN TOP OF STEEL BEAM, WOOD BEAM, OR FOUNDATION WALLS & SUBFLOOR ABOVE WHERE POINT LOADS OCCURS

NOTE : ALL FLOOR JOIST BLOCKING, BRIDGING, CANTILEVERING & REINFORCEMENT TO BE INSTALLED AS PER ENG. FLOOR MANUF. LAYOUTS, SPECIFICATIONS & DETAILS

Client
MINTO COMMUNITIES

Project
**AVENUE TOWNS
CITY OF OTTAWA
BACK-TO-BACK TOWNS**

Sheet Title
**FOUNDATION PLANS
ELEVATION 'AA', 'AB', 'BA'
& 'BB'**

Scale
1 : 75

Date
MARCH 2021

Drawn by
SST

Checked by
AMM

CAMBRIDGE END

REGISTERED PERSON:
**D.W. CASSIDY & CO.
ARCHITECTURAL TECHNOLOGISTS
FIRM BCIN 28461**

I JAMIE LOPES have reviewed and take responsibility for this design.

Signature [Signature]
BCIN 28757 Date: MAR. 14, 2022

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ARCHITECTURAL TECHNOLOGISTS

60 RANDALL DRIVE SUITE 11
AJAX, ONTARIO
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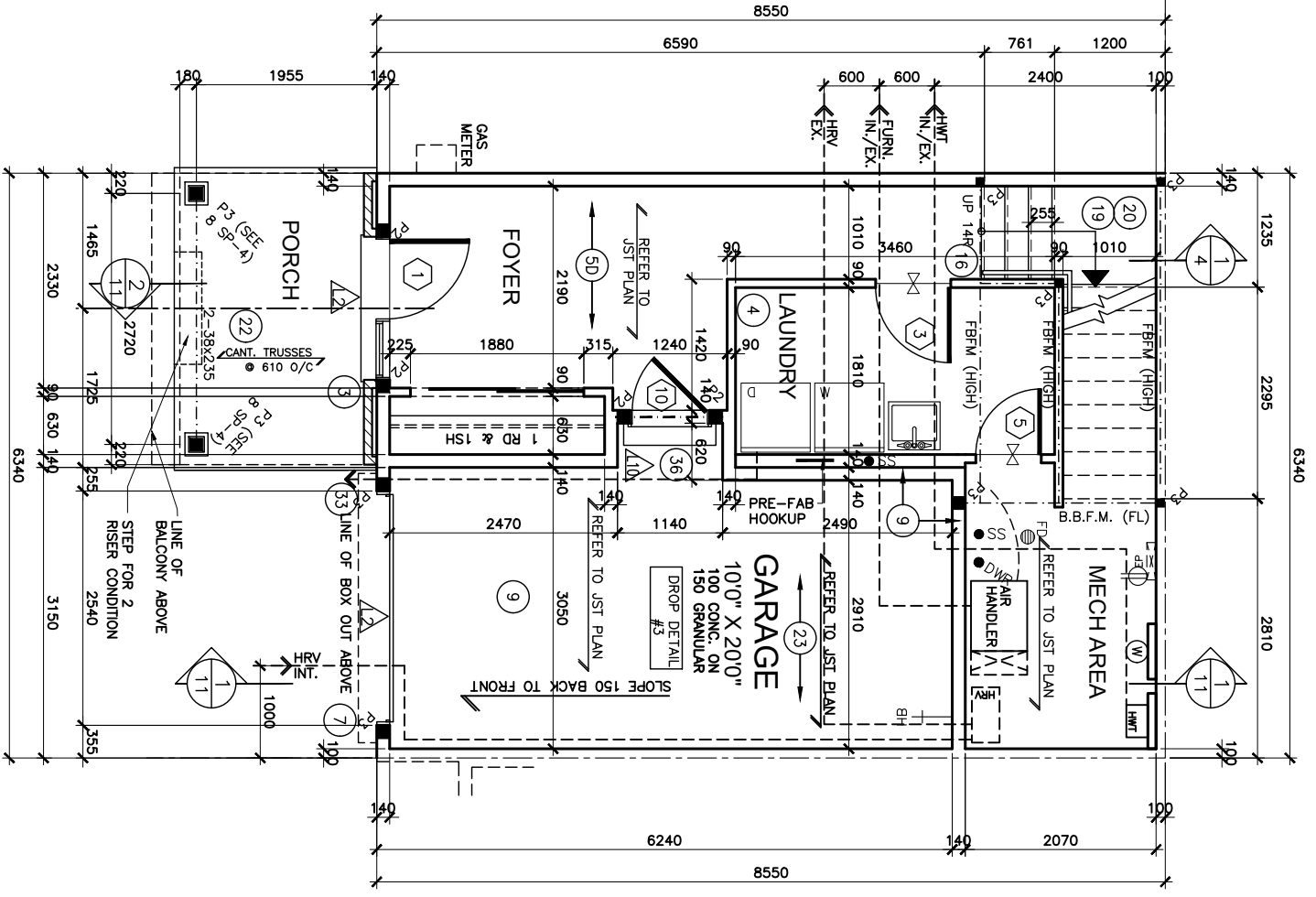
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2021-29

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2012

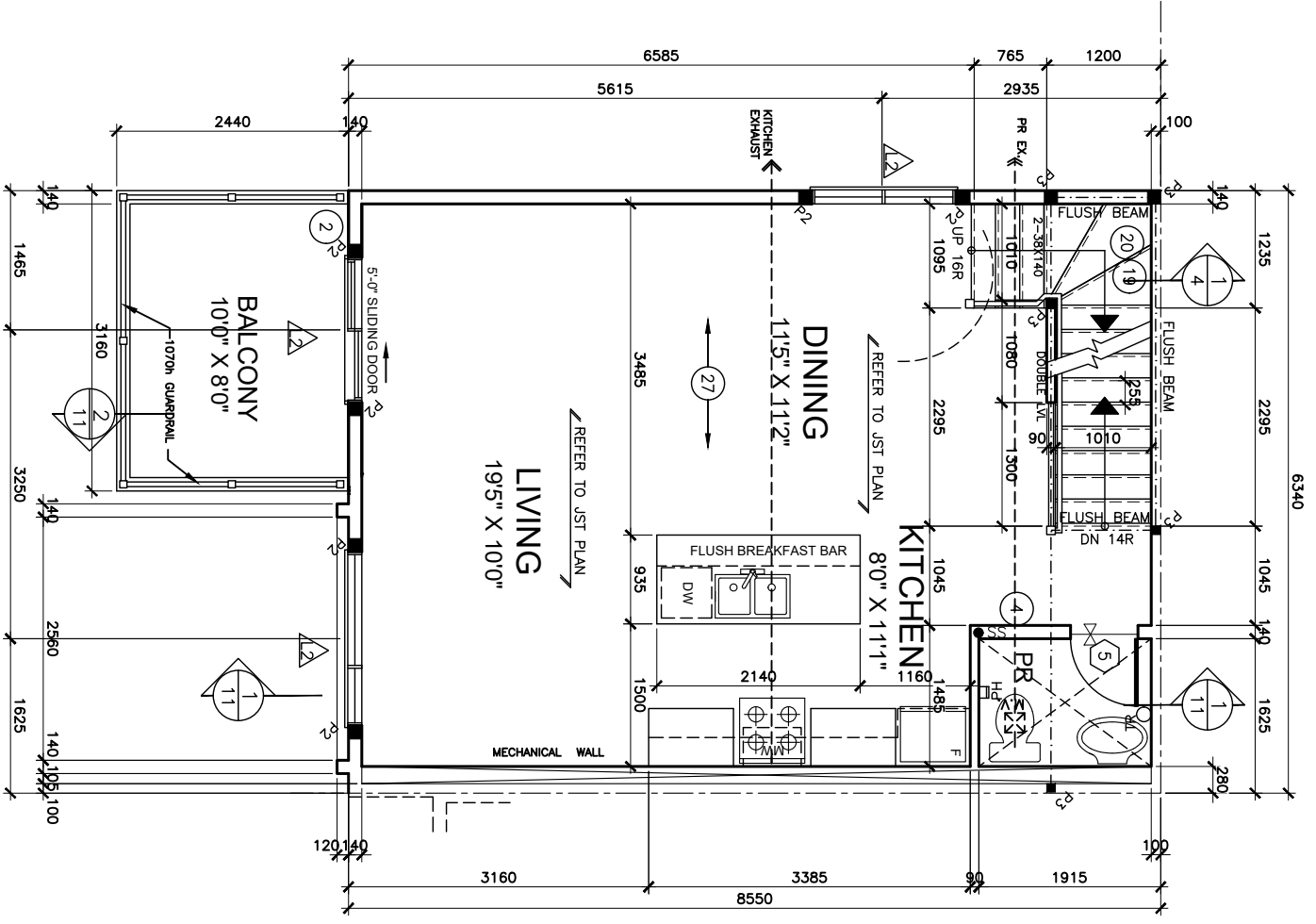
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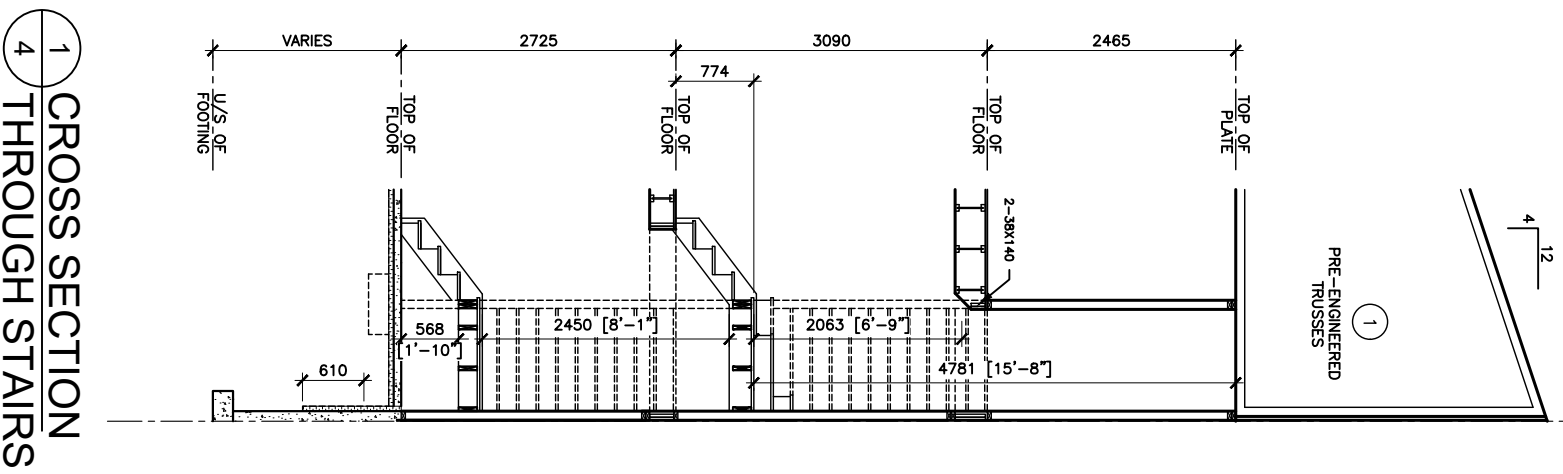
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GROUND FLOOR PLAN 'AA' & 'AB'



SECOND FLOOR PLAN 'AA' & 'AB'



Client
MINTO COMMUNITIES

Project
**AVENUE TOWNS
CITY OF OTTAWA
BACK-TO-BACK TOWNS**

Sheet Title
GROUND & SECOND FLOOR PLAN ELEVATION 'AA' & 'AB'

Scale
1 : 75

Date
MARCH 2021

Drawn by
SST

Checked by
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CAMBRIDGE END

REGISTERED PERSON:
**D.W. CASSIDY & CO.
ARCHITECTURAL TECHNOLOGISTS
FIRM BCIN 28461**

I JAMIE LOPES have reviewed and take responsibility for this design.

Signature *JL*
BCIN 28757 Date: MAR. 14, 2022

CASSIDY & CO.
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60 RANDALL DRIVE SUITE 11
AJAX, ONTARIO
L1S 6L3
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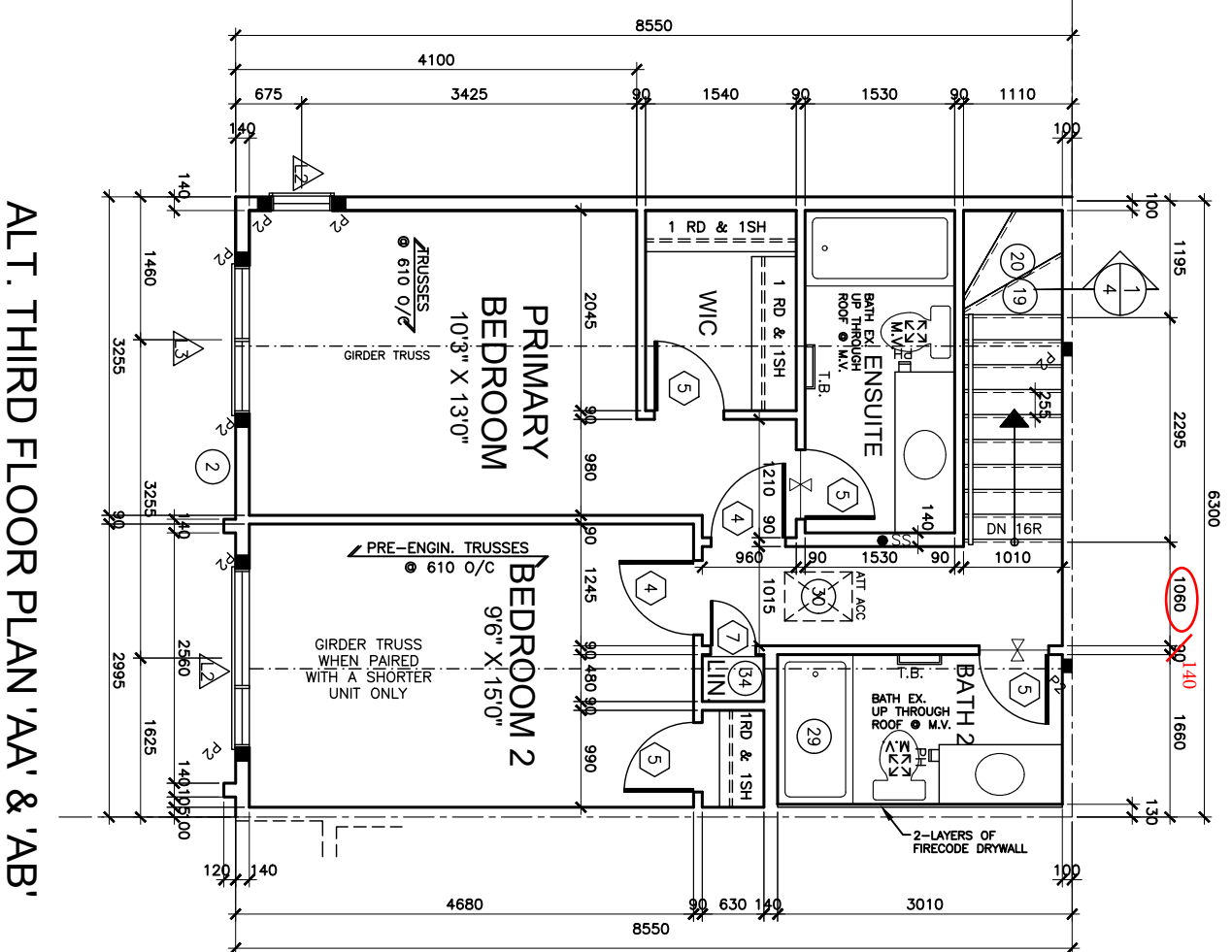
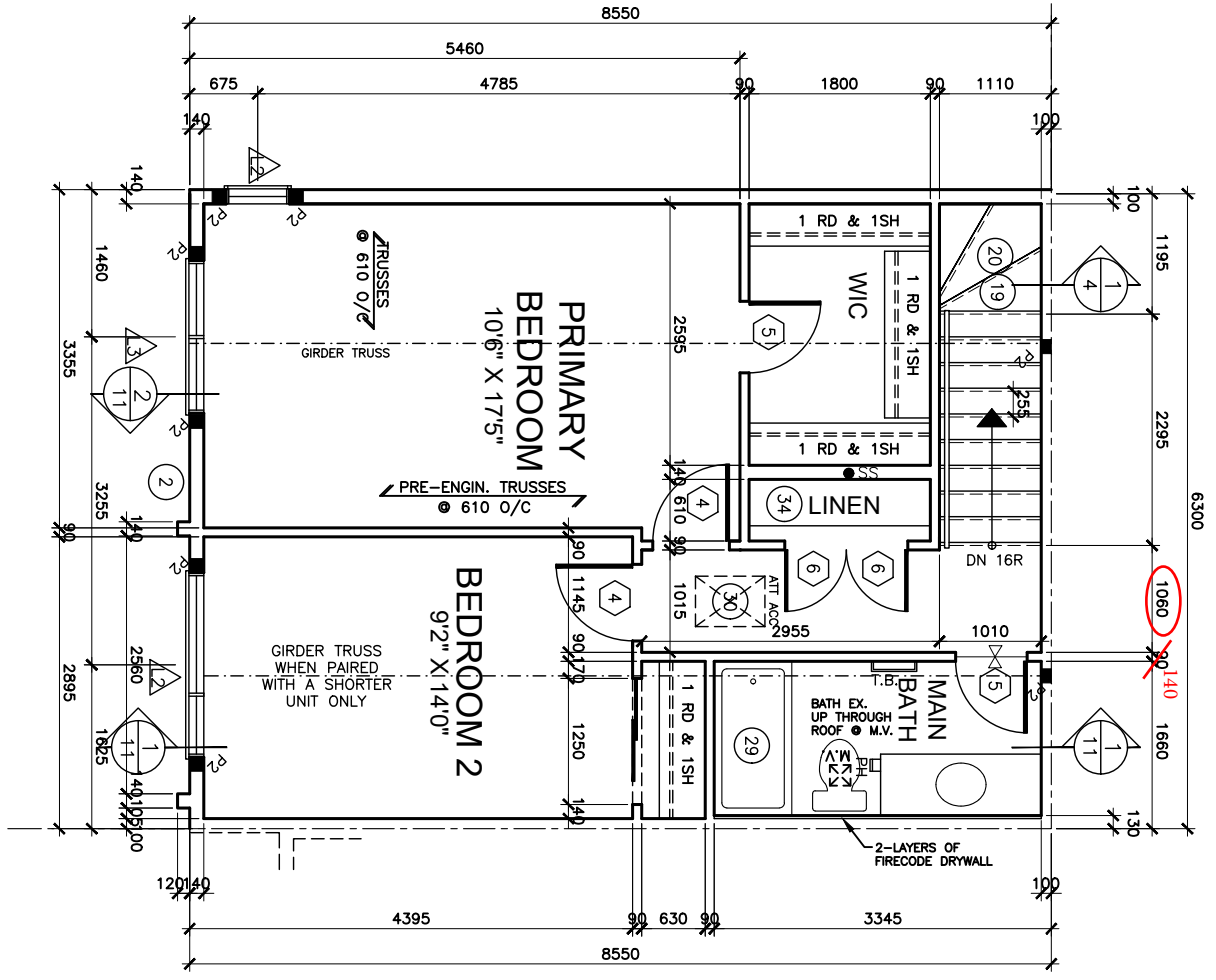
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2021-29

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Revision No.
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Drawing No.
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No.	Revision	Date
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NOTE :
FOR WINDOW SIZES OR STRUCTURAL INFORMATION NOT SHOWN, REFER TO UNIT WORKING DRAWINGS

NOTE :
ADD GRAB BAR REINFORCEMENT IN STUD WALLS FOR MAIN BATHROOM AS PER O.B.C. 9.5.2.3.

Client	MINTO COMMUNITIES
Project	AVENUE TOWNS CITY OF OTTAWA BACK-TO-BACK TOWNS
	CAMBRIDGE END

Sheet Title	THIRD FLOOR PLAN ELEVATION 'AA' & 'AB'	
Scale	1 : 75	Drawn by SST
Date	MARCH 2021	Checked by AMM

REGISTERED PERSON:
D.W. CASSIDY & CO.
ARCHITECTURAL TECHNOLOGISTS
FIRM BCIN 28461

I JAMIE LOPES have reviewed and take responsibility for this design.

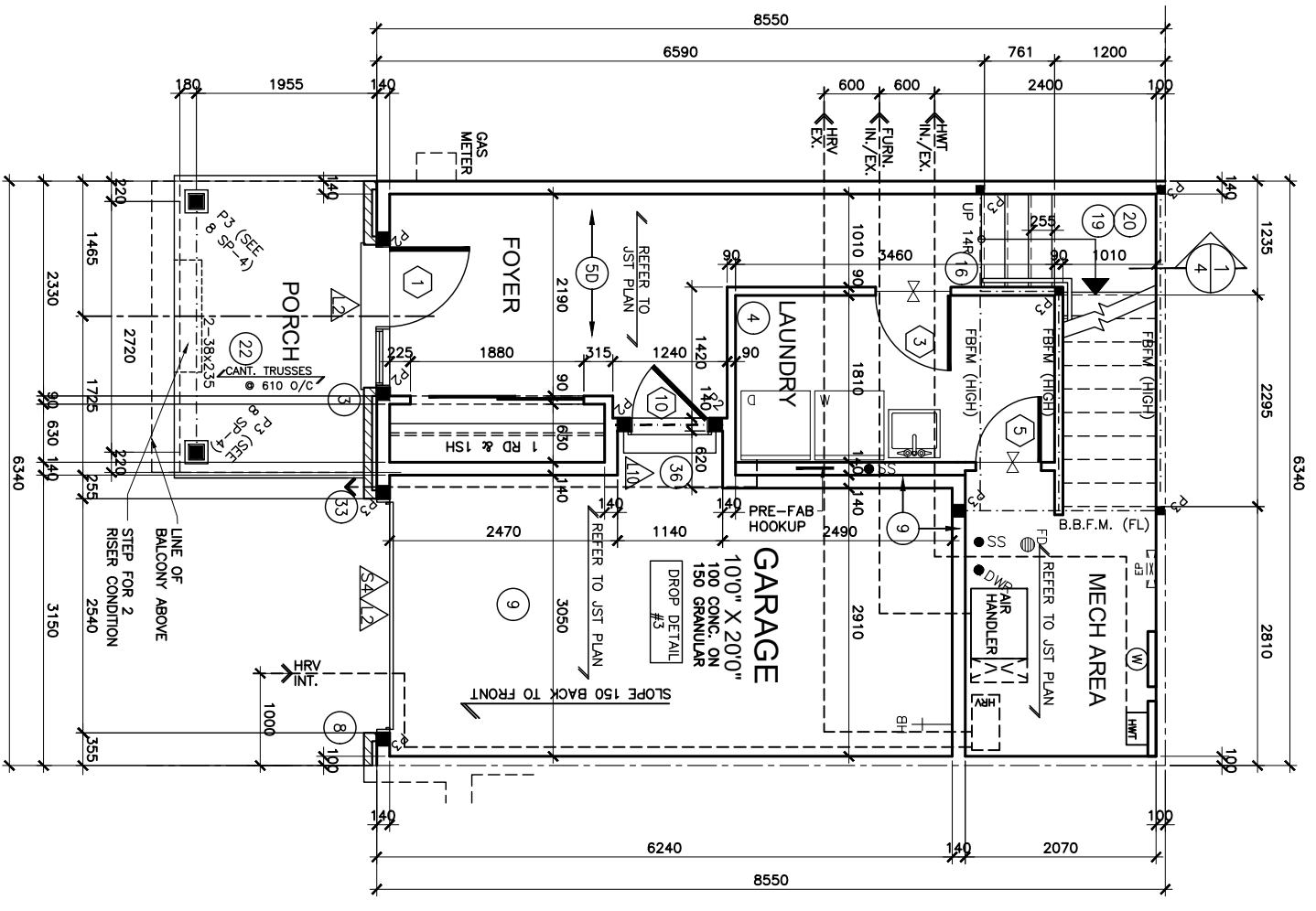
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BCIN 28757 Date: MAR. 14, 2022

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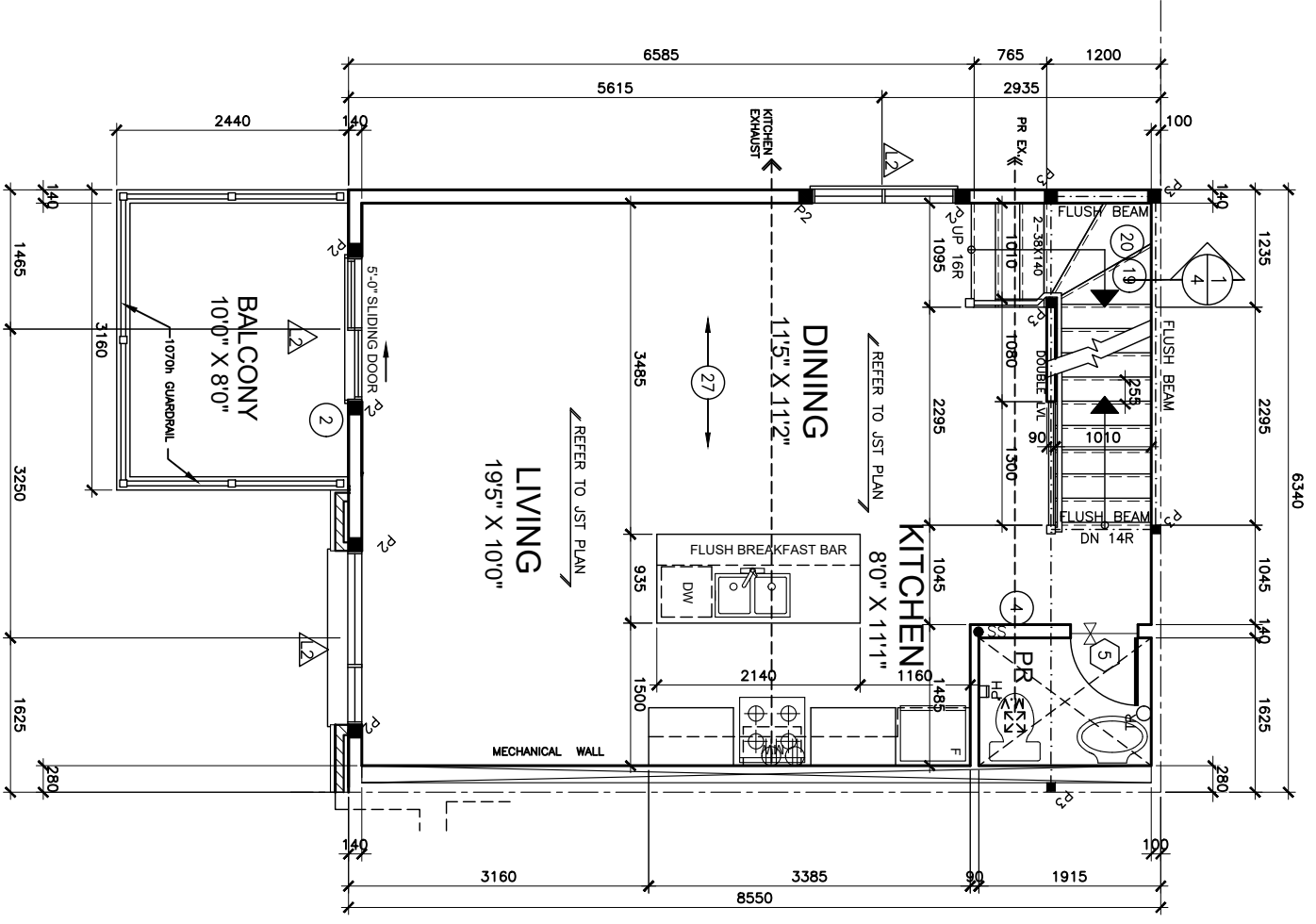
60 RANDALL DRIVE SUITE 11
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Project No.	2021-29
OBC	2012
Revision No.	R0
Drawing No.	5

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No.	Revision	Date
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GROUND FLOOR PLAN 'BA' & 'BB'



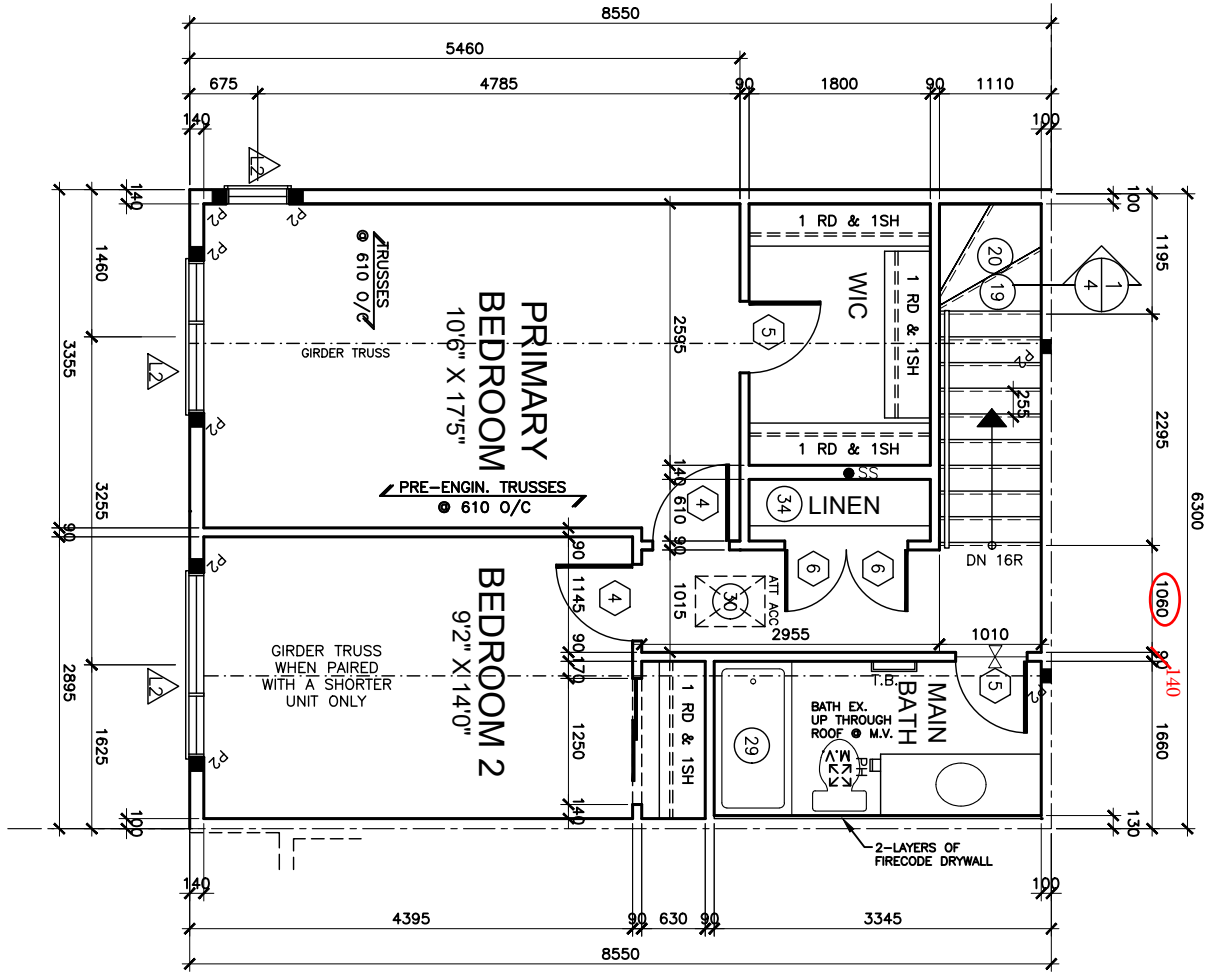
SECOND FLOOR PLAN 'BA' & 'BB'

NOTE :
 MAIN FLR TO SECOND FLR STAIR DESIGN IS BASED ON A 255 RUN
 NOTE :
 ALL FLOOR JOIST BLOCKING, BRIDGING, CANTILEVERING & REINFORCEMENT TO BE INSTALLED AS PER ENG. FLOOR MANUF. LAYOUTS, SPECIFICATIONS & DETAILS

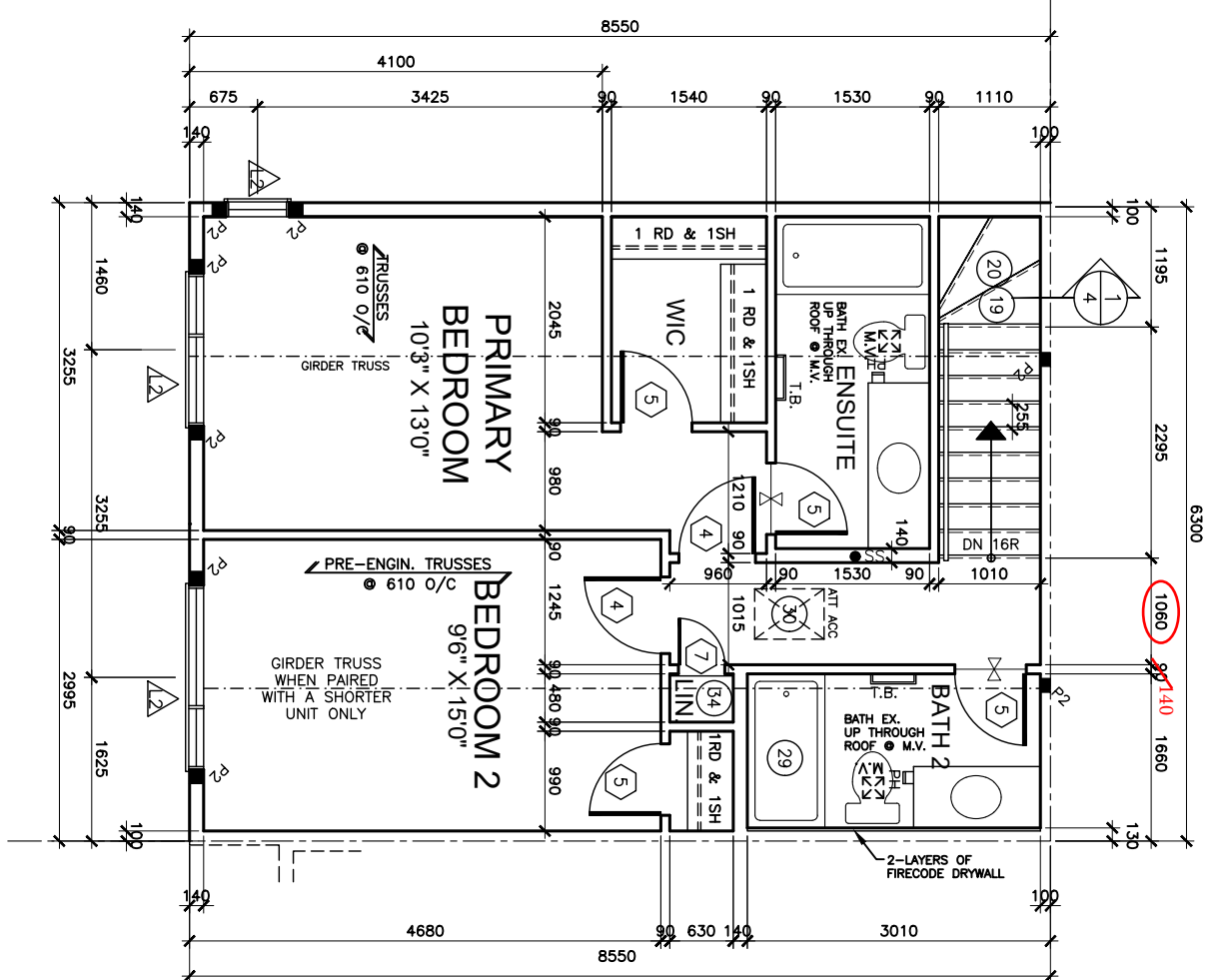
Client MINTO COMMUNITIES	Sheet Title GROUND & SECOND FLOOR PLANS ELEVATION 'BA' & 'BB'	REGISTERED PERSON: D.W. CASSIDY & CO. ARCHITECTURAL TECHNOLOGISTS FIRM BCIN 28461	Project No. 2021-29
Project AVENUE TOWNS CITY OF OTTAWA BACK-TO-BACK TOWNS	Scale 1 : 75	I <u>JAMIE LOPES</u> have reviewed and take responsibility for this design.	OBC 2012
	Date MARCH 2021	Signature <u>[Signature]</u> BCIN <u>28757</u> Date: <u>MAR. 14, 2022</u>	Revision No. R0
			Drawing No. 6
	CAMBRIDGE END		

CASSIDY & CO.
 ARCHITECTURAL TECHNOLOGISTS
 60 RANDALL DRIVE SUITE 11
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THIRD FLOOR PLAN 'BA' & 'BB'



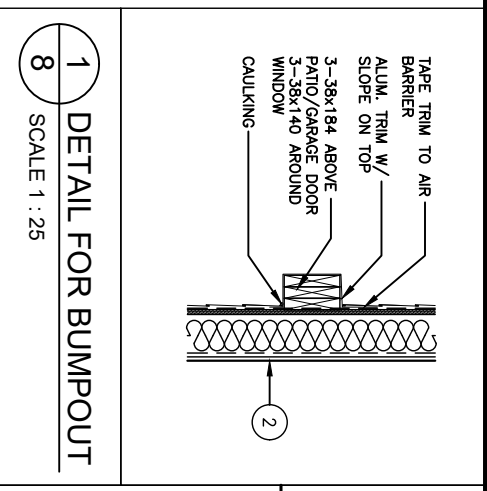
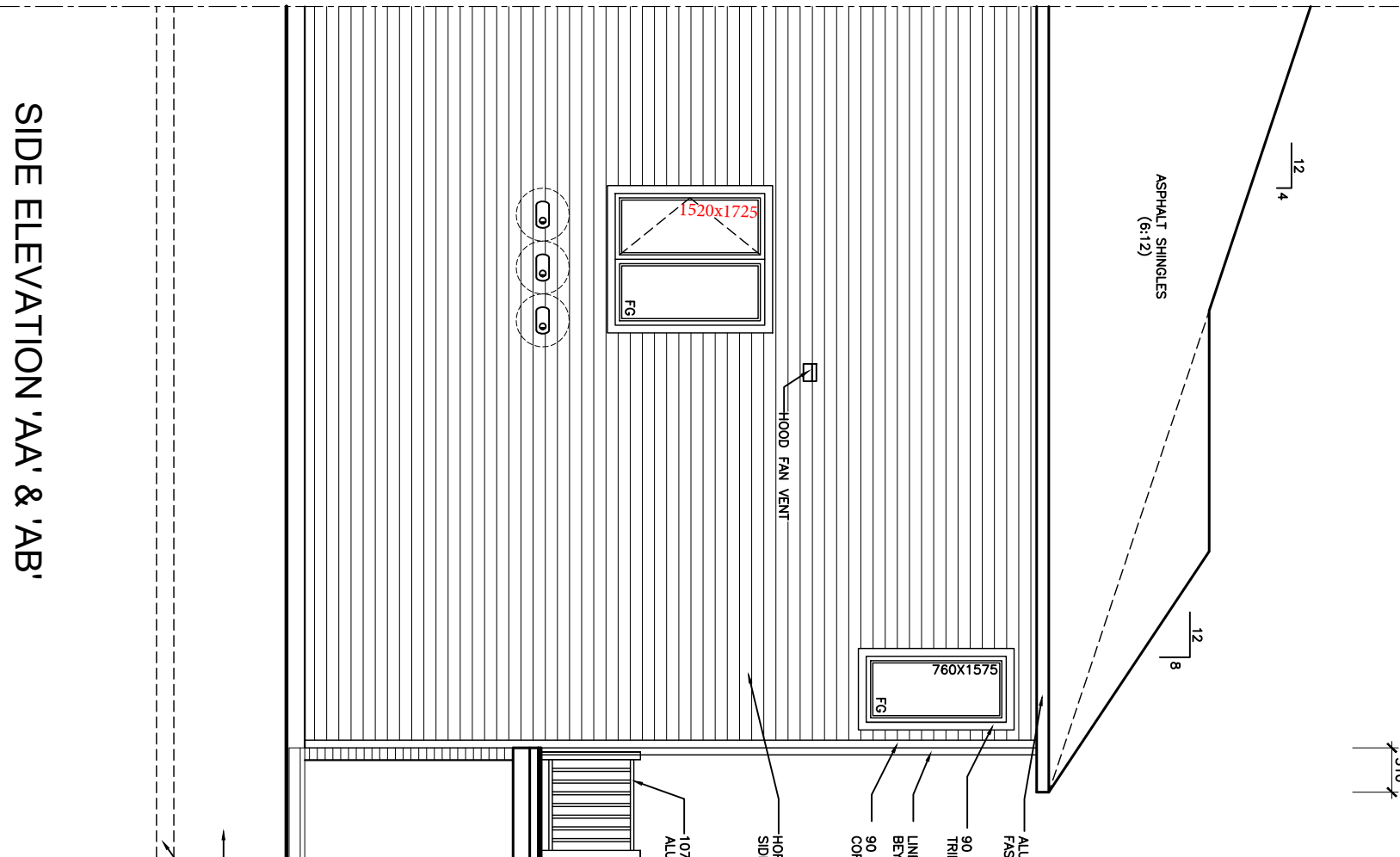
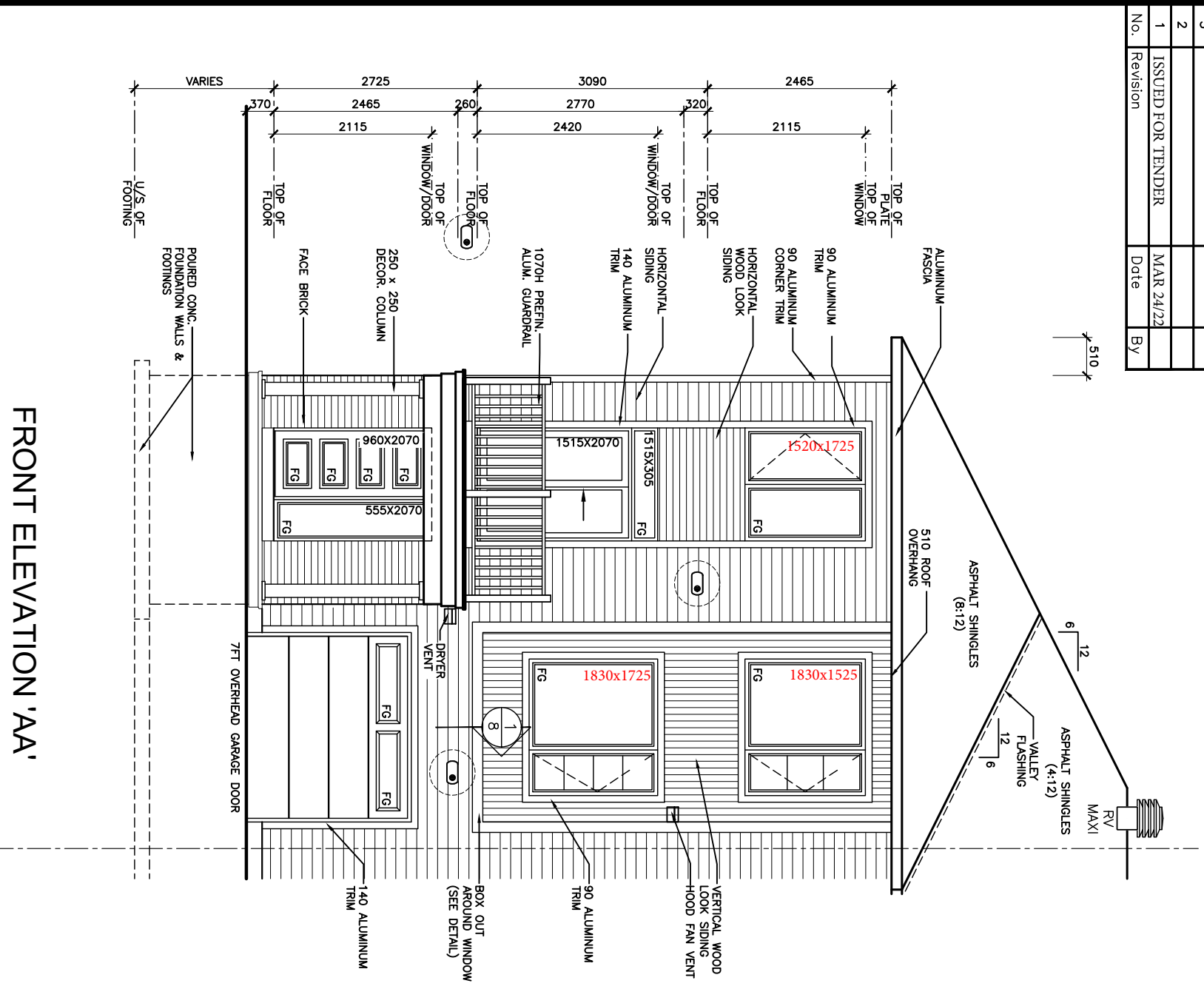
ALT. THIRD FLOOR PLAN 'BA' & 'BB'

NOTE :
FOR WINDOW SIZES OR STRUCTURAL INFORMATION NOT SHOWN, REFER TO UNIT WORKING DRAWINGS

NOTE :
ADD GRAB BAR REINFORCEMENT IN STUD WALLS FOR MAIN BATHROOM AS PER O.B.C. 9.5.2.3.

Client MINTO COMMUNITIES	Sheet Title THIRD FLOOR PLANS ELEVATION 'BA' & 'BB'		REGISTERED PERSON: D.W. CASSIDY & CO. ARCHITECTURAL TECHNOLOGISTS FIRM BCIN 28461	Project No. 2021-29
	Project AVENUE TOWNS CITY OF OTTAWA BACK-TO-BACK TOWNS	Scale 1 : 75		
	Date MARCH 2021	Checked by AMM	Signature <i>[Signature]</i>	Drawing No. 7
	CAMBRIDGE END		BCIN 28757 Date: MAR. 14, 2022	
			CASSIDY & CO. ARCHITECTURAL TECHNOLOGISTS 60 RANDALL DRIVE SUITE 11 AJAX, ONTARIO L1S 6L3 PH (905) 619-1270 FAX (905) 619-1269	

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1	ISSUED FOR TENDER	MAR 24/22
No.	Revision	Date
		By



****SAME DEPTH UNITS ON SIDE****

FRONT ELEVATION 'AA'

SIDE ELEVATION 'AA' & 'AB'

Client	MINTO COMMUNITIES
Project	AVENUE TOWNS CITY OF OTTAWA BACK-TO-BACK TOWNS

Sheet Title	FRONT & SIDE ELEVATION ELEVATION 'AA'	
Scale	1 : 75	Drawn by SST
Date	MARCH 2021	Checked by AMM
CAMBRIDGE END		

REGISTERED PERSON:
D.W. CASSIDY & CO.
ARCHITECTURAL TECHNOLOGISTS
FIRM BCIN 28461

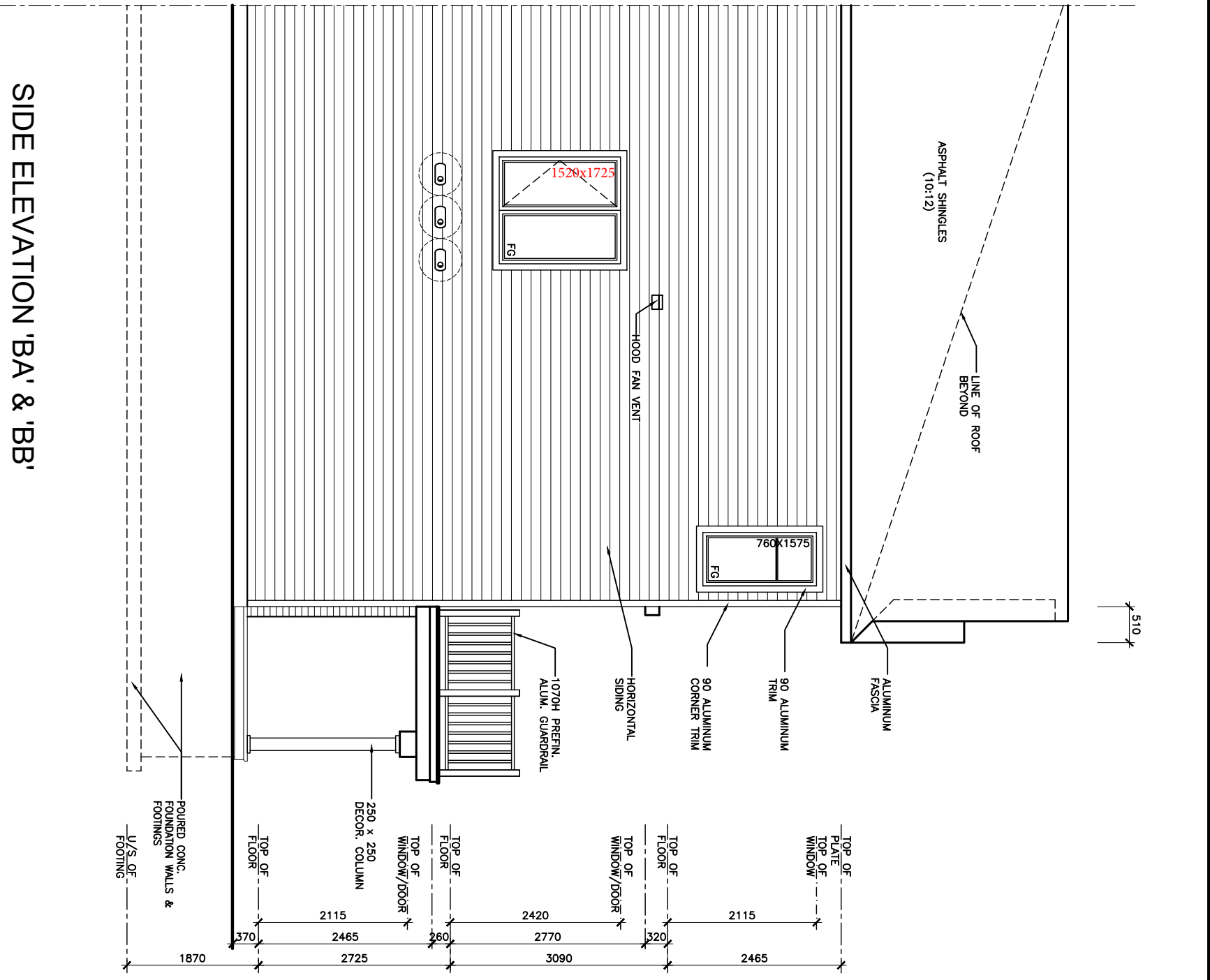
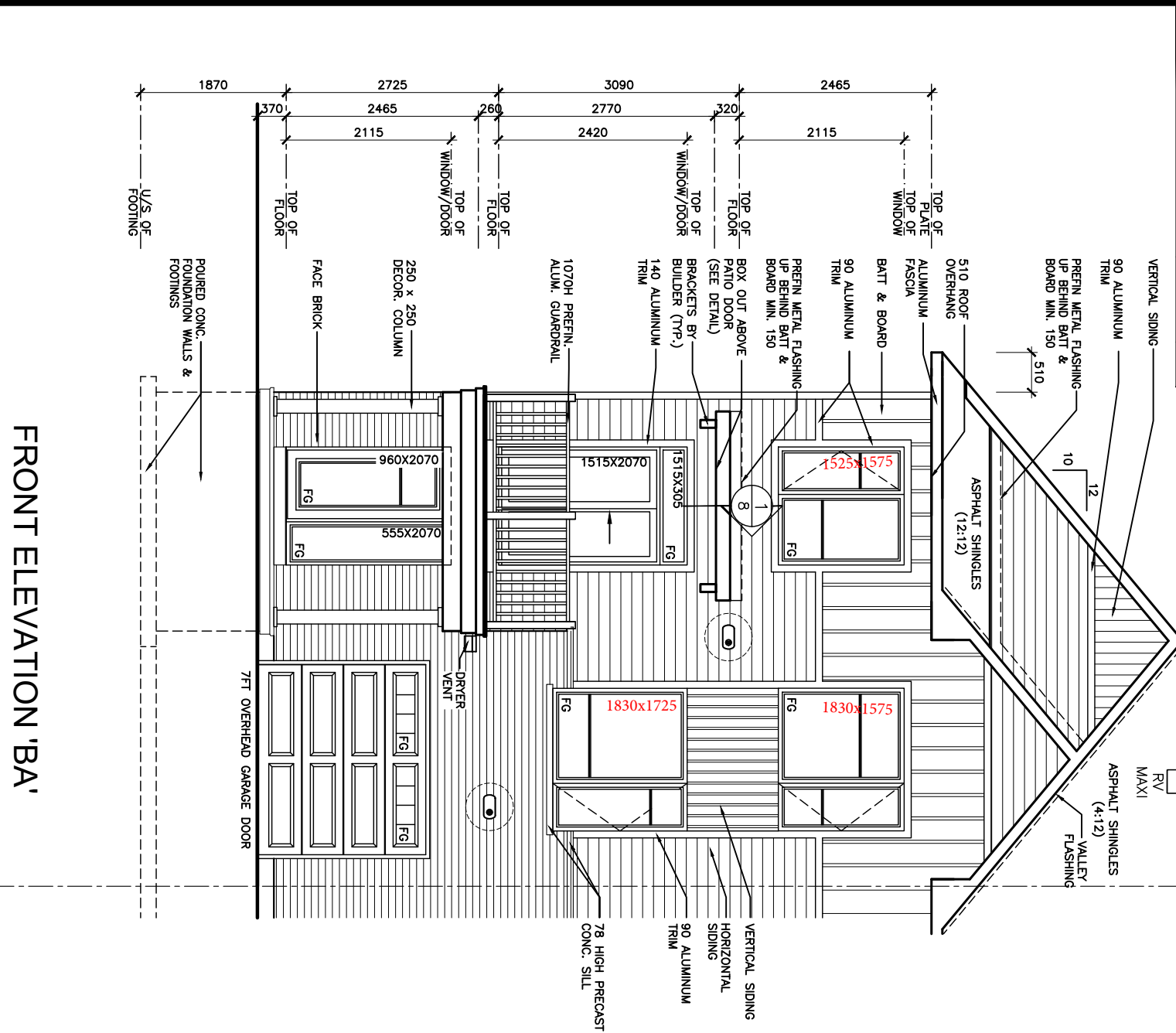
I JAMIE LOPES have reviewed and take responsibility for this design.

Signature [Signature]
BCIN 28757 Date: MAR. 14, 2022

CASSIDY & CO.
ARCHITECTURAL TECHNOLOGISTS
60 RANDALL DRIVE SUITE 11
AJAX, ONTARIO
L1S 6L3
PH (905) 619-1270
FAX (905) 619-1269

Project No.	2021-29
OBC	2012
Revision No.	R0
Drawing No.	8

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1	ISSUED FOR TENDER	MAR 24/22
No.	Revision	Date
		By



****SAME DEPTH UNITS ON SIDE****

FRONT ELEVATION 'BA'

SIDE ELEVATION 'BA' & 'BB'

Client	MINTO COMMUNITIES
Project	AVENUE TOWNS CITY OF OTTAWA BACK-TO-BACK TOWNS

Sheet Title	FRONT & SIDE ELEVATION ELEVATION 'BA'	
Scale	1 : 75	Drawn by SST
Date	MARCH 2021	Checked by AMM
CAMBRIDGE END		

REGISTERED PERSON:
D.W. CASSIDY & CO.
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FIRM BCIN 28461

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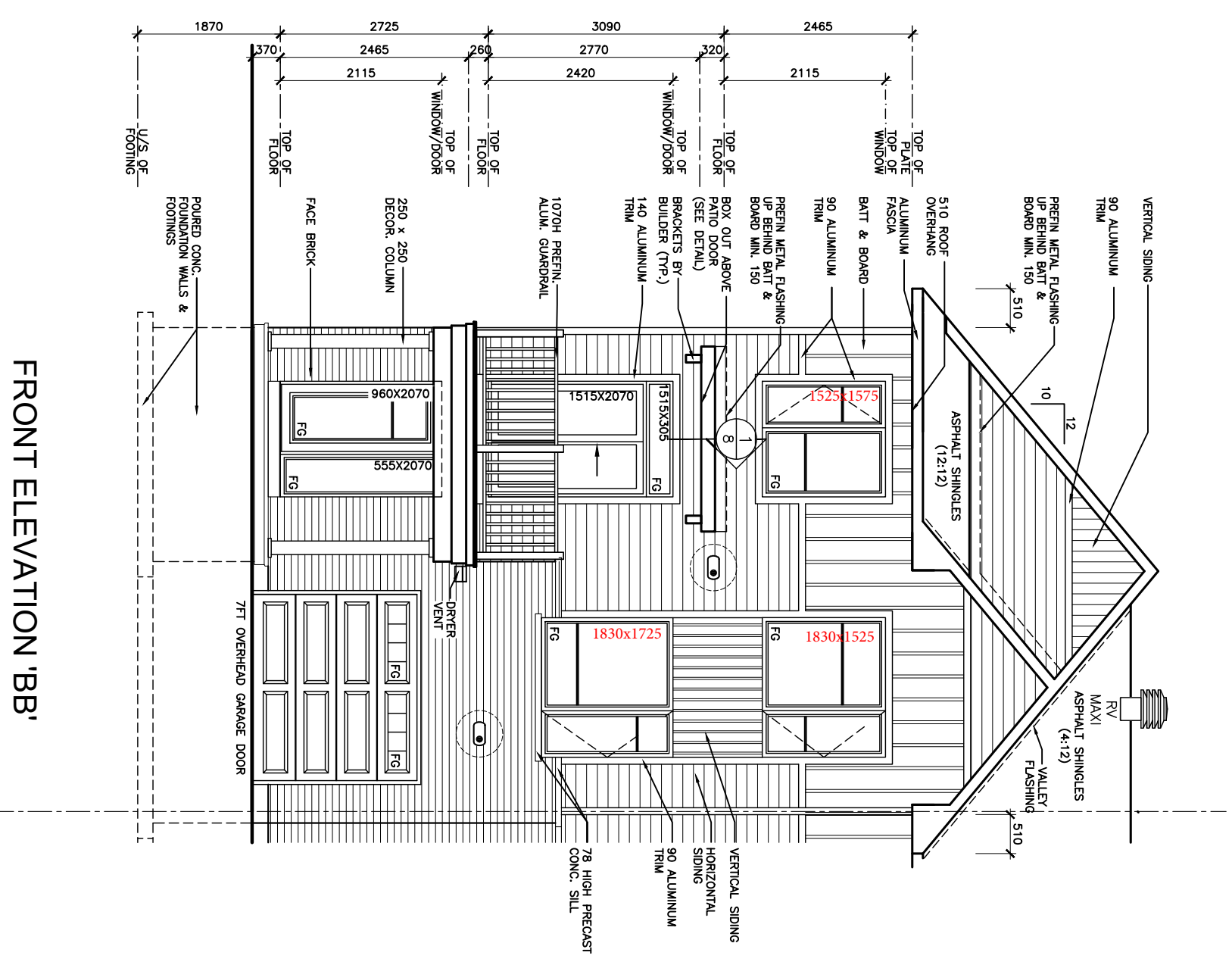
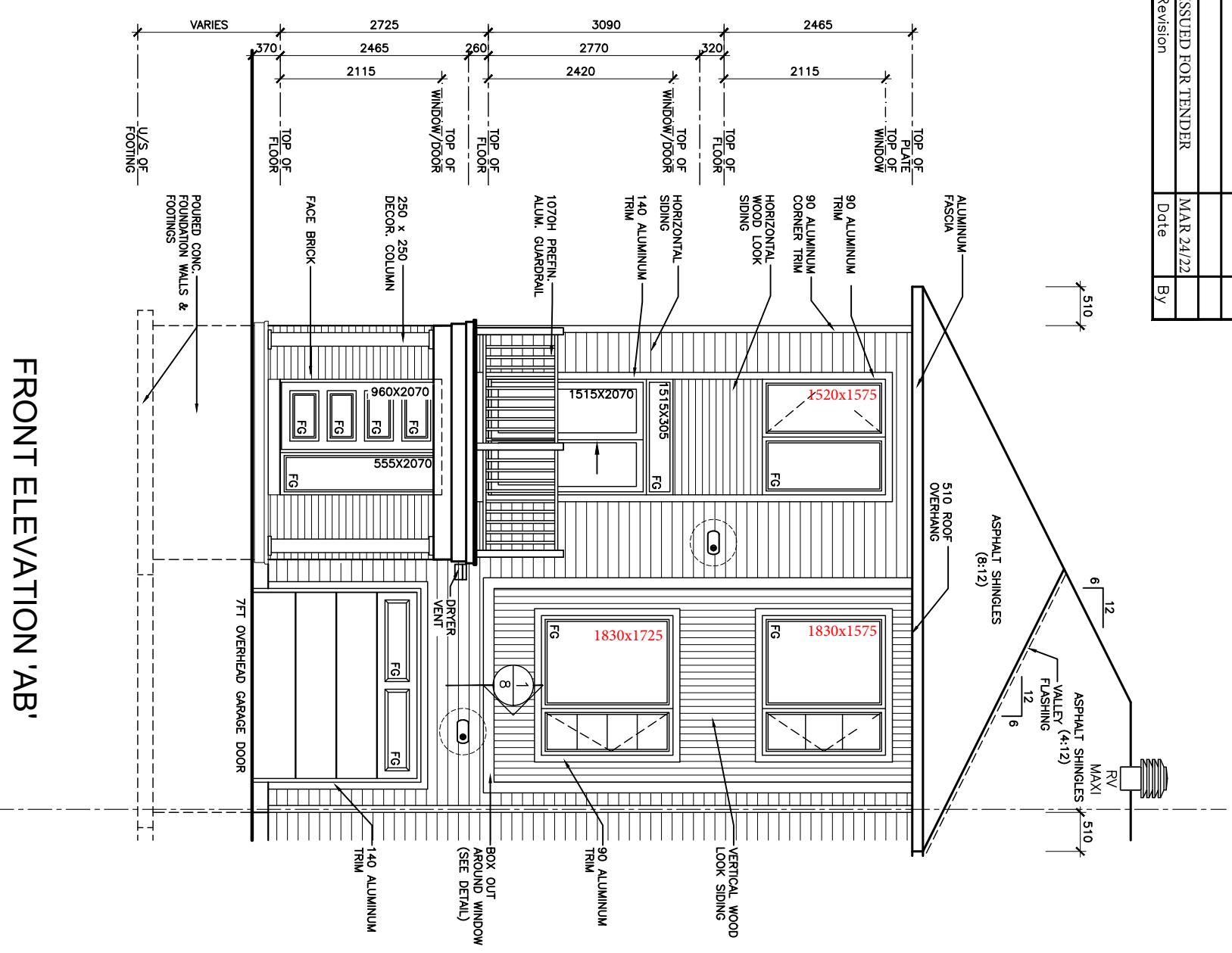
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Project No.	2021-29	
OBC	2012	Revision No. R0
Drawing No.	9	

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1	ISSUED FOR TENDER	MAR 24/22
No.	Revision	Date
		By



****SMALLER UNIT ON SIDE****

FRONT ELEVATION 'AB'

FRONT ELEVATION 'BB'

Client	MINTO COMMUNITIES
Project	AVENUE TOWNS CITY OF OTTAWA BACK-TO-BACK TOWNS

Sheet Title	FRONT ELEVATION ELEVATION 'AB' & 'BB'	
Scale	1 : 75	Drawn by SST
Date	MARCH 2021	Checked by AMM
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BCIN 28757 Date: MAR. 14, 2022

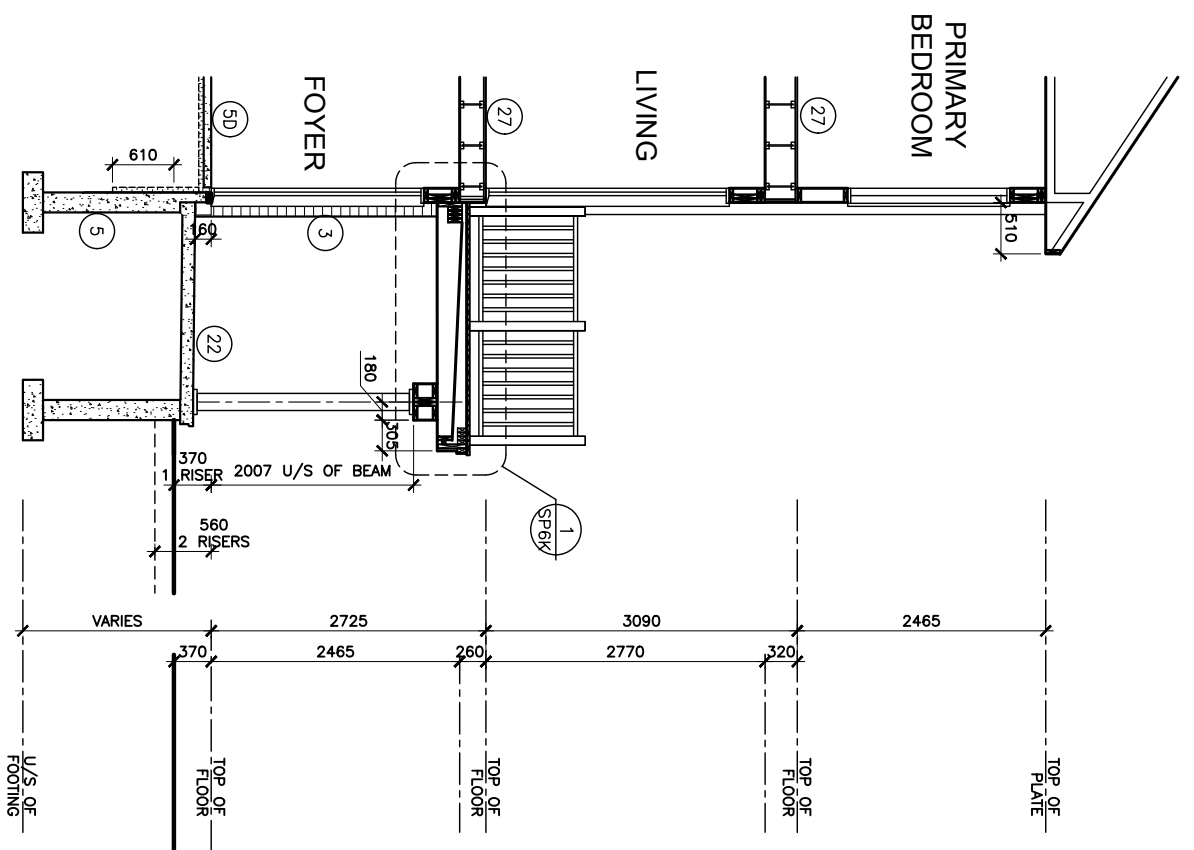
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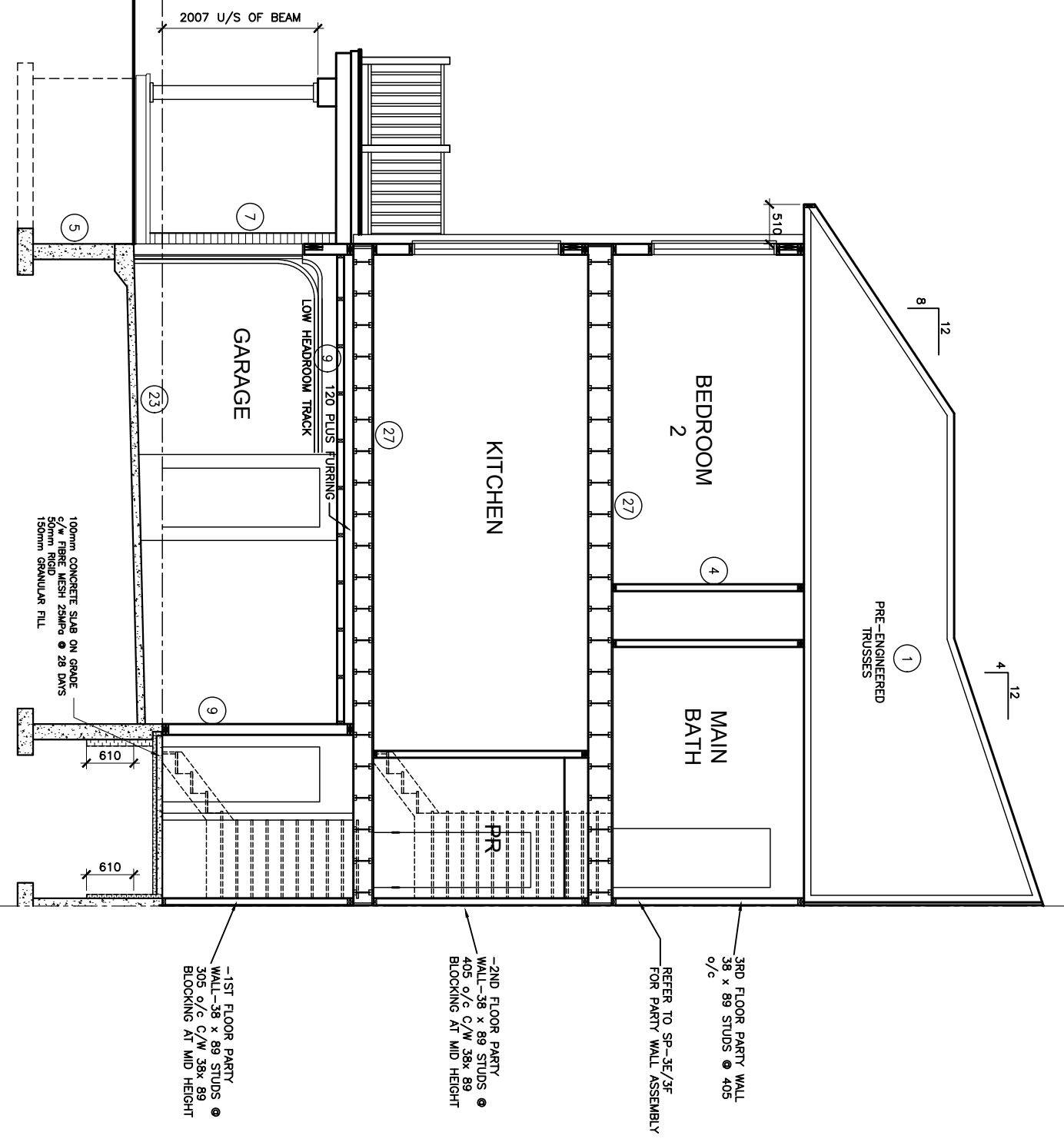
Project No.	2021-29
OBC	2012
Revision No.	R0
Drawing No.	10

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	By	

2 CROSS SECTION
11 THROUGH DECK



1 CROSS SECTION
11 THROUGH GARAGE



Client	MINTO COMMUNITIES
Project	AVENUE TOWNS CITY OF OTTAWA BACK-TO-BACK TOWNS
	CAMBRIDGE END

Sheet Title	SECTION 'A'-A'	
Scale	1 : 75	Drawn by SST
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FIRM BCIN 28461

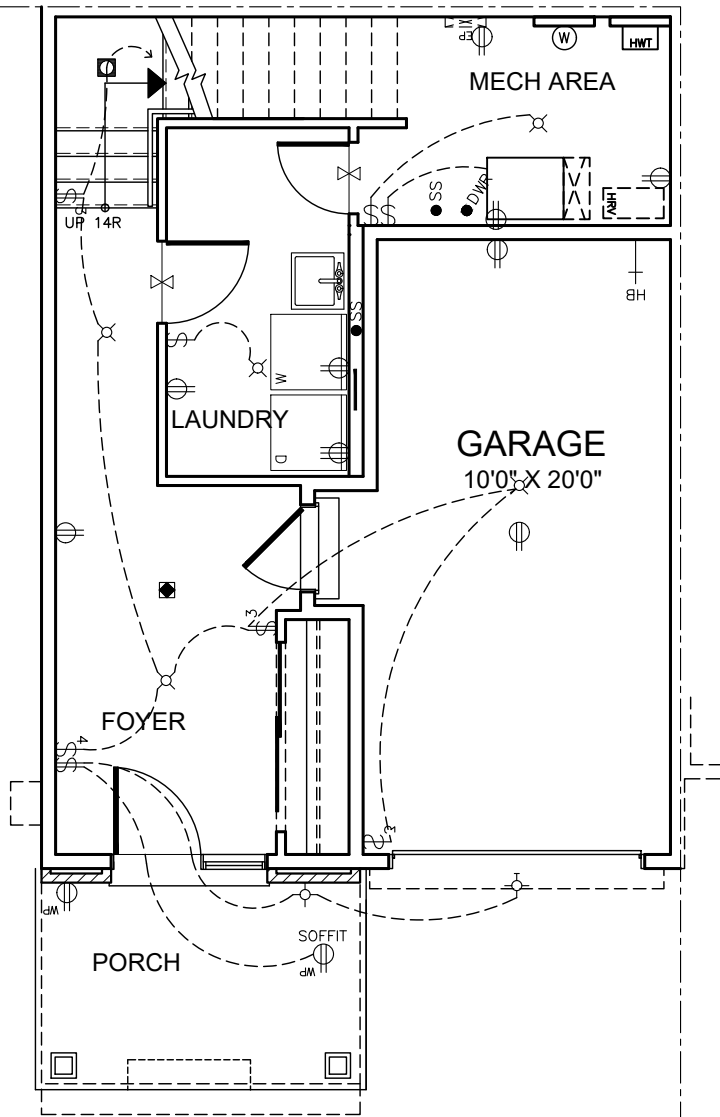
I JAMIE LOPES have reviewed and take responsibility for this design.

Signature [Signature]
BCIN 28757 Date: MAR. 14, 2022

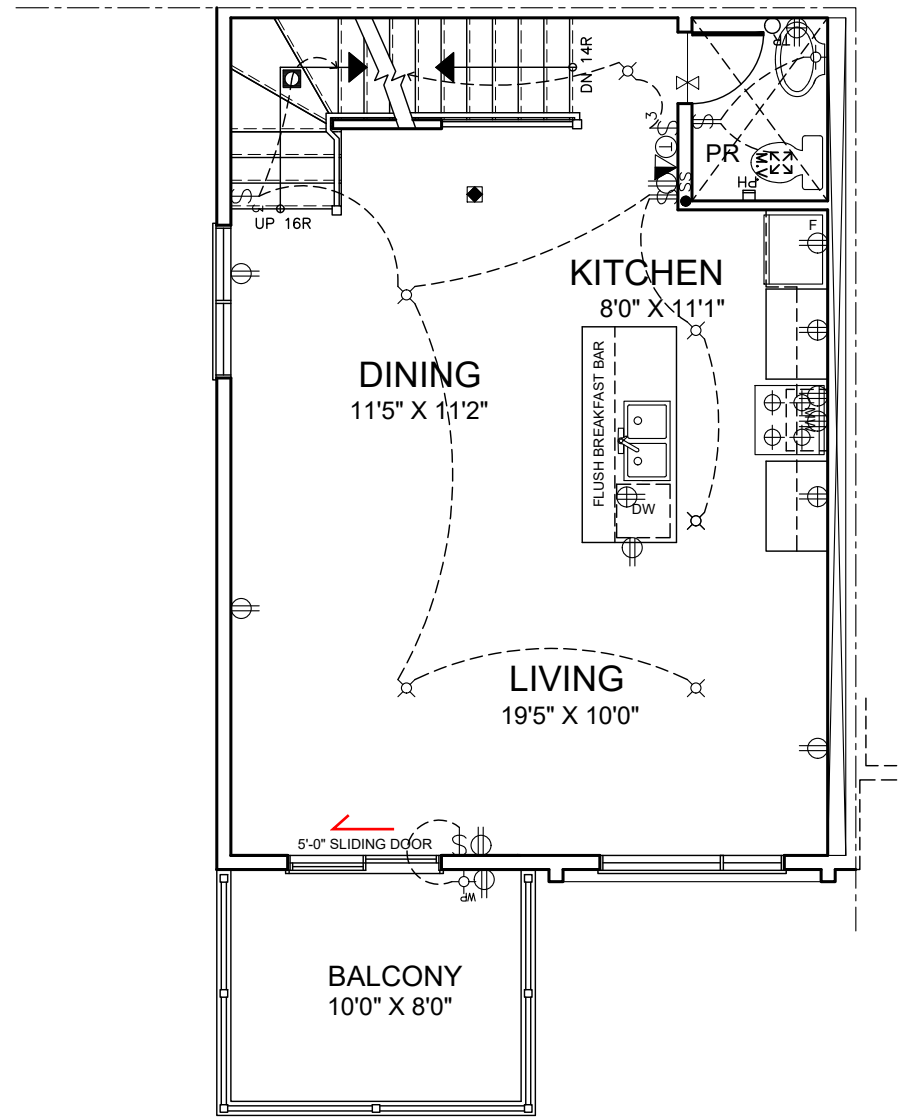
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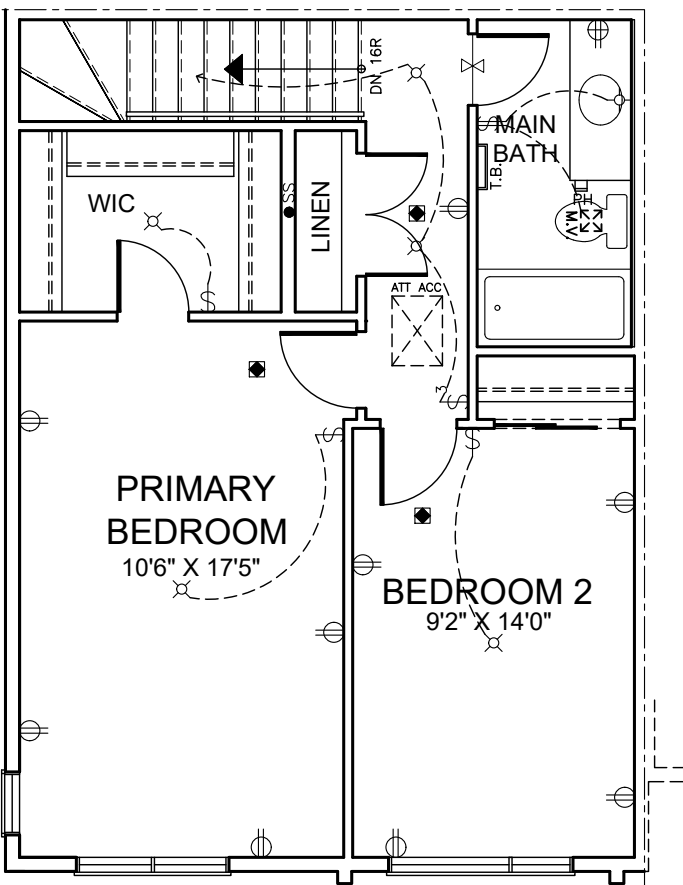
Project No.	2021-29	
OBC	2012	Revision No. R0
Drawing No.	11	



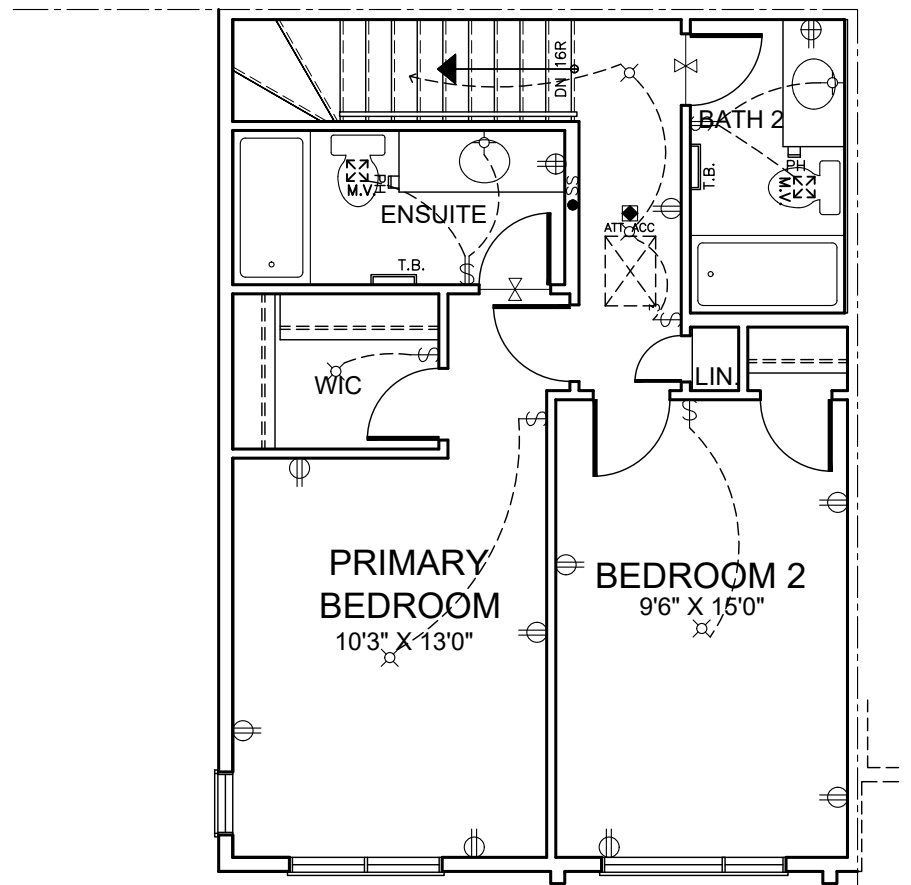
GROUND FLOOR PLAN 'AA'



SECOND FLOOR PLAN 'AA'



THIRD FLOOR PLAN 'AA'



ALT. THIRD FLOOR PLAN 'AA'

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No.	Revision	Date	By

ELECTRICAL PLANS FOR OTHER ELEVATIONS TO BE SIMILAR

Client	MINTO COMMUNITIES		
Project	AVENUE TOWNS CITY OF OTTAWA BACK-TO-BACK TOWNS		
Sheet Title	ELECTRICAL PLANS		
Scale	1 : 75	Drawn by	SST
Date	MARCH 2021	Checked by	AMM
	CAMBRIDGE END		

REGISTERED PERSON:	D.W. CASSIDY & CO. ARCHITECTURAL TECHNOLOGISTS FIRM BCIN 28461		
I	JAMIE LOPES	have	reviewed and take responsibility for this design.
Signature			
BCIN	28757	Date:	MAR. 14, 2022

Project No.	2021-29		
OBC	2012	Revision No.	R0
Drawing No.	12		

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Project No.	2021-29		
OBC	2012	Revision No.	R0
Drawing No.	12		

Appendix E

Building Component
Calculations

ROOM BY ROOM CALCULATIONS - CAMBRIDGE

Note: Ceiling Height 8' 1" (Ground floor) 9' 1" (Second floor) and 8' 1" (Third floor)

Kitchen / Breakfast / Living / Dining Room

Floor Area (sq.m) 46.7

	Width	Height	Area	
Window 1 (front)	1.8	1.7	3.2	
Window 2 (side)	1.5	1.7	2.6	
Patio Door (front)	1.5	2.1	3.2	
			8.9	Total Window Area
			19.05%	% of Floor Area

	Width	Height	Area	
Exterior Door	0	0	0	
			0	Total Door Area
			0.00%	% of Floor Area

	Width	Height	Area	Area minus windows/doors	
Exterior Wall (front)	6.3	2.8	17.45	11.14	
Exterior Wall (side)	7.4	2.8	20.50	17.91	
				11.14	Total Exterior Wall Area
				23.86%	% of Floor Area

Bedroom 2

Floor Area (sq.m) 11.9

	Width	Height	Area	
Window 1	1.8	1.5	2.7	
			2.7	Total Window Area
			22.69%	% of Floor Area

	Width	Height	Area	
Exterior Door	0	0	0	
			0	Total Door Area
			0.00%	% of Floor Area

	Width	Height	Area	Area minus windows/doors	
Exterior Wall (front)	2.9	2.5	7.25	4.55	
				4.55	Total Exterior Wall Area
				38.24%	% of Floor Area

Primary Bedroom

Floor Area (sq.m) 17.1

	Width	Height	Area	
Window 1 (front)	1.5	1.7	2.55	
Window 2 (side)	0.76	1.6	1.216	
			2.55	Total Window Area
			14.91%	% of Floor Area

	Width	Height	Area	
Exterior Door	0	0	0	
			0	Total Door Area
			0.00%	% of Floor Area

	Width	Height	Area	Area minus windows/doors	
Exterior Wall (front)	3.4	2.5	8.50	5.95	
Exterior Wall (side)	5.5	2.5	13.75	12.53	
				5.95	Total Exterior Wall Area
				34.80%	% of Floor Area

TABLE 13: BUILDING COMPONENT TEMPLATE

Architect:
 Location: Arcadia Stage 6
 Building Type: Avenue Town
 Block Number: Blocks 10, 13, 16
 Front Façade Noise Level (dBA) 69

JLR No: 26299-006
 Prepared by: Thomas Blais
 Checked by: Lee Jablonski

ROOM	# OF COMPONENTS	ROOM FLOOR AREA (M ²)	WINDOW AREA (M ²)	W/RFA %	DOOR AREA (M ²)	D/RFA %	EXT. WALL AREA (M ²)	EW/RFA %	REQUIRED AIF*	WINDOW		EXT. DOOR		EXT. WALL		CEILING/ROOF	
										Type	AIF**	Type	AIF***	Type	AIF****	Type	AIF*****
Primary Bedroom	4	17.1	2.6	15%	-	-	6.0	35%	37	6(24)6	37	-	-	EW2	37	-	-
Bedroom 2	2	11.9	2.7	23%	-	-	4.6	38%	34	6(20)6	34	-	-	EW1	35	-	-
Kitchen / Breakfast / Living / Dining Room	4	46.7	8.9	19%	-	-	11.1	24%	32	6(6)6	32	-	-	EW1	37	-	-

* Taken from Table 10.5: AIF required for Road and Rail Traffic Noise Cases

** Taken from Table 10.6: Acoustic Insulation Factor for various types of windows (example: 2(100)2 denotes 2 mm glass (100 mm space) 2 mm glass).

*** Taken from Table 10.9: Acoustic Insulation Factor for various types of exterior doors

**** Taken from Table 10.7: Acoustic Insulation Factor for various types of exterior walls

***** Taken from Table 10.8: Acoustic Insulation Factor for various ceiling-roof combinations (only for aircraft noise)

Exterior Door Details

All prime doors should be fully weatherstripped. Except as noted specifically below, doors shall not have inset glazing:

D1 denotes 44 mm hollow-core wood door (up to 20% of area glazed).

D2 denotes 44 mm glass-fibre reinforced plastic door with foam or glass-fibre insulated core (up to 20% area glazed).

D3 denotes 35 mm in solid slab wood door.

D4 denotes 44 mm steel door with foam or glass-fibre insulated core.

D5 denotes 44 mm solid slab door.

sd denotes storm door of wood or aluminum with openable glazed sections.

Exterior Wall Details

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

EW1 denotes the above plus sheathing, plus wood siding or metal siding and fibre backer board.

EW2 denotes the above plus rigid insulation (25-50mm), and wood siding or metal siding and fibre backer board.

EW2 also denotes exterior wall described in EW1 with the addition of rigid insulation (25-50mm) between the sheathing and the external finish.

EW3 denotes simulated mansard with structure as the above plus sheathing, 38 x 89 mm framing, sheathing and asphalt roofing material.

EW4 denotes the above plus sheathing and 20 mm stucco.

EW5 denotes the above plus sheathing, 25 mm air space, 100 mm brick veneer.

EW6 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25-50mm), 100 mm back-up block, 100 mm face brick.

EW6 also denotes an exterior wall conforming to rainscreen design principles and composed of same gypsum board and rigid insulation with 100 mm concrete block, 25 mm air space, and 100 mm brick veneer.

EW7 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25-50mm), 140 mm back-up block, 100 mm face brick.

EW8 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25-50mm), 200 mm concrete.

R denotes the mounting of the interior gypsum board on resilient clips

ROOM BY ROOM CALCULATIONS - TAHOE 4

Note: Ceiling Height 9' 1" (first floor) and 8' 1" (second floor)

Kitchen / Breakfast / Living / Dining Room

Floor Area (sq.m)	39			
	Width	Height	Area	
Window 1 (rear)	0.6	1.6	1.0	
Window 2 (rear)	0.6	1.6	1.0	
Patio Door (rear)	1.5	2.4	3.6	
Window 3 (side)	0.6	1.6	1.0	
Window 4 (side)	0.6	1.6	1.0	
	7.5		Total Window Area	
	19.28%		% of Floor Area	
	Width	Height	Area	
Exterior Door	0	0	0	
	0		Total Door Area	
	0.00%		% of Floor Area	
	Width	Height	Area	Area minus windows/doors
Exterior Wall (rear)	6.3	2.8	17.64	12.04
Exterior Wall (side)	5.9	2.8	16.52	14.60
	26.64		Total Exterior Wall Area	
	68.31%		% of Floor Area	

Bedroom 4

Floor Area (sq.m)	9.3			
	Width	Height	Area	
Window 1 (front)	1.635	1.33	2.17455	
	2.17455		Total Window Area	
	23.38%		% of Floor Area	
	Width	Height	Area	
Exterior Door	0	0	0	
	0		Total Door Area	
	0.00%		% of Floor Area	
	Width	Height	Area	Area minus windows/doors
Exterior Wall (front)	3.2	2.5	8.00	5.83
Exterior Wall (side)	3.7	2.5	9.25	7.08
	12.90		Total Exterior Wall Area	
	138.72%		% of Floor Area	

Bedroom 2

Floor Area (sq.m)	8.4			
	Width	Height	Area	
Window 1	1.84	1.33	2.4472	
	2.4472		Total Window Area	
	29.13%		% of Floor Area	
	Width	Height	Area	
Exterior Door	0	0	0	
	0		Total Door Area	
	0.00%		% of Floor Area	
	Width	Height	Area	Area minus windows/doors
Exterior Wall (front)	2.8	2.5	7.00	4.55
	4.55		Total Exterior Wall Area	
	54.20%		% of Floor Area	

Bedroom 3

Floor Area (sq.m)	7.5			
	Width	Height	Area	
Window 1 (side)	1.23	1.22	1.5006	
	1.5006		Total Window Area	
	20.01%		% of Floor Area	
	Width	Height	Area	
Exterior Door	0	0	0	
	0		Total Door Area	
	0.00%		% of Floor Area	
	Width	Height	Area	Area minus windows/doors
Exterior Wall (side)	3.4	2.5	8.50	7.00
	7.00		Total Exterior Wall Area	
	93.33%		% of Floor Area	

Primary Bedroom

Floor Area (sq.m)	15.6			
	Width	Height	Area	
Window 1 (rear)	1.635	1.22	1.9947	
	1.9947		Total Window Area	
	12.79%		% of Floor Area	
	Width	Height	Area	
Exterior Door	0	0	0	
	0		Total Door Area	
	0.00%		% of Floor Area	
	Width	Height	Area	Area minus windows/doors
Exterior Wall (rear)	4.3	2.5	10.75	10.75
	10.75		Total Exterior Wall Area	
	68.91%		% of Floor Area	

TABLE 14: BUILDING COMPONENT TEMPLATE

Architect:
 Location: Arcadia Stage 6
 Building Type: Executive Townhouse (Tahoe)
 Block Number: Blocks 1 & 2
 Front Façade Noise Level (dBA) 69

JLR No: 26299-006
 Prepared by: Thomas Blais
 Checked by: Lee Jablonski

ROOM	# OF COMPONENTS	ROOM FLOOR AREA (M ²)	WINDOW AREA (M ²)	W/RFA %	DOOR AREA (M ²)	D/RFA %	EXT. WALL AREA (M ²)	EW/RFA %	REQUIRED AIF*	WINDOW		EXT. DOOR		EXT. WALL		CEILING/ROOF	
										Type	AIF**	Type	AIF***	Type	AIF****	Type	AIF*****
Master Bedroom	2	15.6	2.0	13%	-	-	10.8	69%	34	6(6)6	34	-	-	EW2	35	-	-
Bedroom 2	2	8.4	2.4	29%	-	-	4.6	54%	34	6(24)6	34	-	-	EW1	34	-	-
Kitchen / Breakfast / Living / Dining Room	4	39.0	7.5	19%	-	-	26.6	68%	32	6(6)6	32	-	-	EW1	33	-	-
Bedroom 3	2	7.5	1.5	20%	-	-	7.0	93%	34	6(16)6	34	-	-	EW3	36	-	-
Bedroom 4	3	9.3	2.2	23%	-	-	12.9	139%	36	6(30)6	36	-	-	EW4	37	-	-

* Taken from Table 10.5: AIF required for Road and Rail Traffic Noise Cases

** Taken from Table 10.6: Acoustic Insulation Factor for various types of windows (example: 2(100)2 denotes 2 mm glass (100 mm space) 2 mm glass).

*** Taken from Table 10.9: Acoustic Insulation Factor for various types of exterior doors

**** Taken from Table 10.7: Acoustic Insulation Factor for various types of exterior walls

***** Taken from Table 10.8: Acoustic Insulation Factor for various ceiling-roof combinations (only for aircraft noise)

Exterior Door Details

All prime doors should be fully weatherstripped. Except as noted specifically below, doors shall not have inset glazing:

D1 denotes 44 mm hollow-core wood door (up to 20% of area glazed).

D2 denotes 44 mm glass-fibre reinforced plastic door with foam or glass-fibre insulated core (up to 20% area glazed).

D3 denotes 35 mm in solid slab wood door.

D4 denotes 44 mm steel door with foam or glass-fibre insulated core.

D5 denotes 44 mm solid slab door.

sd denotes storm door of wood or aluminum with openable glazed sections.

Exterior Wall Details

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

EW1 denotes the above plus sheathing, plus wood siding or metal siding and fibre backer board.

EW2 denotes the above plus rigid insulation (25-50mm), and wood siding or metal siding and fibre backer board.

EW2 also denotes exterior wall described in EW1 with the addition of rigid insulation (25-50mm) between the sheathing and the external finish.

EW3 denotes simulated mansard with structure as the above plus sheathing, 38 x 89 mm framing, sheathing and asphalt roofing material.

EW4 denotes the above plus sheathing and 20 mm stucco.

EW5 denotes the above plus sheathing, 25 mm air space, 100 mm brick veneer.

EW6 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25-50mm), 100 mm back-up block, 100 mm face brick.

EW6 also denotes an exterior wall conforming to rainscreen design principles and composed of same gypsum board and rigid insulation with 100 mm concrete block, 25 mm air space, and 100 mm brick veneer.

EW7 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25-50mm), 140 mm back-up block, 100 mm face brick.

EW8 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25-50mm), 200 mm concrete.

R denotes the mounting of the interior gypsum board on resilient clips

ROOM BY ROOM CALCULATIONS - CAMBRIDGE

Note: 10' 2" (Second floor) and 8' 1" (Third floor)

Kitchen / Breakfast / Living / Dining Room

Floor Area (sq.m)

32

	Width	Height	Area	
Window 1 (front)	2.3	1.7	4.0	
Window 2 (side)	2.3	0.6	1.4	
Patio Door (front)	1.8	2.1	3.8	
			9.2	Total Window Area
			28.60%	% of Floor Area

	Width	Height	Area	
Exterior Door	0	0	0	
			0	Total Door Area
			0.00%	% of Floor Area

	Width	Height	Area	Area minus windows/doors	
Exterior Wall (front)	8.2	3.1	25.42	17.67	
Exterior Wall (side)	4	3.1	12.40	11.00	
				17.67	Total Exterior Wall Area
				55.23%	% of Floor Area

Bedroom 2

Floor Area (sq.m)

10.7

	Width	Height	Area	
Window 1	1.8	1.3	2.34	
			2.34	Total Window Area
			21.87%	% of Floor Area

	Width	Height	Area	
Exterior Door	0	0	0	
			0	Total Door Area
			0.00%	% of Floor Area

	Width	Height	Area	Area minus windows/doors	
Exterior Wall (front)	3.4	2.5	8.50	6.16	
				6.16	Total Exterior Wall Area
				57.57%	% of Floor Area

Primary Bedroom

Floor Area (sq.m)

16.6

	Width	Height	Area	
Window 1 (front)	2.3	1.3	2.99	
Window 2 (side)	2.3	0.6	1.38	
			2.99	Total Window Area
			18.01%	% of Floor Area

	Width	Height	Area	
Exterior Door	0	0	0	
			0	Total Door Area
			0.00%	% of Floor Area

	Width	Height	Area	Area minus windows/doors	
Exterior Wall (front)	4.3	2.5	10.75	7.76	
Exterior Wall (side)	3.9	2.5	9.75	8.37	
				7.76	Total Exterior Wall Area
				46.75%	% of Floor Area

TABLE 15: BUILDING COMPONENT TEMPLATE

Architect:
 Location: Arcadia Stage 6
 Building Type: Metro Town
 Block Number: TE1 - TE14
 Front Façade Noise Level (dBA) 69

JLR No: 26299-006
 Prepared by: Thomas Blais
 Checked by: Lee Jablonski

ROOM	# OF COMPONENTS	ROOM FLOOR AREA (M ²)	WINDOW AREA (M ²)	W/RFA %	DOOR AREA (M ²)	D/RFA %	EXT. WALL AREA (M ²)	EW/RFA %	REQUIRED AIF*	WINDOW		EXT. DOOR		EXT. WALL		CEILING/ROOF	
										Type	AIF**	Type	AIF***	Type	AIF****	Type	AIF*****
Primary Bedroom	4	16.6	3.0	18%	-	-	7.8	47%	37	6(30)6	37	-	-	EW3	39	-	-
Bedroom 2	2	10.7	2.3	22%	-	-	6.2	58%	34	6(16)6	34	-	-	EW2	35	-	-
Kitchen / Breakfast / Living / Dining Room	4	32.0	9.2	29%	-	-	17.7	55%	32	6(16)6	32	-	-	EW1	33	-	-

* Taken from Table 10.5: AIF required for Road and Rail Traffic Noise Cases

** Taken from Table 10.6: Acoustic Insulation Factor for various types of windows (example: 2(100)2 denotes 2 mm glass (100 mm space) 2 mm glass).

*** Taken from Table 10.9: Acoustic Insulation Factor for various types of exterior doors

**** Taken from Table 10.7: Acoustic Insulation Factor for various types of exterior walls

***** Taken from Table 10.8: Acoustic Insulation Factor for various ceiling-roof combinations (only for aircraft noise)

Exterior Door Details

All prime doors should be fully weatherstripped. Except as noted specifically below, doors shall not have inset glazing:

D1 denotes 44 mm hollow-core wood door (up to 20% of area glazed).

D2 denotes 44 mm glass-fibre reinforced plastic door with foam or glass-fibre insulated core (up to 20% area glazed).

D3 denotes 35 mm in solid slab wood door.

D4 denotes 44 mm steel door with foam or glass-fibre insulated core.

D5 denotes 44 mm solid slab door.

sd denotes storm door of wood or aluminum with openable glazed sections.

Exterior Wall Details

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

EW1 denotes the above plus sheathing, plus wood siding or metal siding and fibre backer board.

EW2 denotes the above plus rigid insulation (25-50mm), and wood siding or metal siding and fibre backer board.

EW2 also denotes exterior wall described in EW1 with the addition of rigid insulation (25-50mm) between the sheathing and the external finish.

EW3 denotes simulated mansard with structure as the above plus sheathing, 38 x 89 mm framing, sheathing and asphalt roofing material.

EW4 denotes the above plus sheathing and 20 mm stucco.

EW5 denotes the above plus sheathing, 25 mm air space, 100 mm brick veneer.

EW6 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25-50mm), 100 mm back-up block, 100 mm face brick.

EW6 also denotes an exterior wall conforming to rainscreen design principles and composed of same gypsum board and rigid insulation with 100 mm concrete block, 25 mm air space, and 100 mm brick veneer.

EW7 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25-50mm), 140 mm back-up block, 100 mm face brick.

EW8 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25-50mm), 200 mm concrete.

R denotes the mounting of the interior gypsum board on resilient clips

ROOM BY ROOM CALCULATIONS - REAR LANE TOWN*Note: Ceiling Height 8' 1" (first floor) and 9' 1" (second floor) and 8' 1" (third floor)***Kitchen / Living Room / Dining Room**

Floor Area (sq.m) 68.8

	Width	Height	Area	
Window 1 (Front)	2.1	1.7	3.7	
Window 2 (front)	1.5	1.7	2.6	
Window 3 (side)	0.8	1.7	1.3	
Window 4 (side)	0.8	1.7	1.3	
			8.93	Total Window Area
			12.98%	% of Floor Area

	Width	Height	Area	
Exterior Door	0	0	0	
			0	Total Door Area
			0.00%	% of Floor Area

	Width	Height	Area	Area minus windows/doors	
Exterior Wall (front)	5.8	2.8	16.07	9.76	
Exterior Wall (side)	11.9	2.8	32.96	30.34	
				40.10	Total Exterior Wall Area
				58.29%	% of Floor Area

Bedroom 2 (option)

Floor Area (sq.m) 8.8

	Width	Height	Area	
Window 1 (front)	2.1	1.6	3.36	
			3.36	Total Window Area
			38.21%	% of Floor Area

	Width	Height	Area	
Exterior Door	0.0	0.0	0	
	0.0	0.0	0	
			0	Total Door Area
			0.00%	% of Floor Area

	Width	Height	Area	Area minus windows/doors	
Exterior Wall (front)	3.0	2.5	7.40	4.03	
				4.03	Total Exterior Wall Area
				45.82%	% of Floor Area

Primary Bedroom

Floor Area (sq.m) 11.8

	Width	Height	Area	
Window 1 (front)	1.8	1.6	2.76	
Window 2 (side)	0.8	1.6	1.20	
			3.95	Total Window Area
			33.50%	% of Floor Area

	Width	Height	Area	
Exterior Door	0	0	0	
			0	Total Door Area
			0.00%	% of Floor Area

	Width	Height	Area	Area minus windows/doors	
Exterior Wall (front)	3.4	2.5	8.38	5.62	
Exterior Wall (side)	3.5	2.5	8.63	7.43	
				13.06	Total Exterior Wall Area
				110.64%	% of Floor Area

TABLE 16: BUILDING COMPONENT TEMPLATE

Architect:
 Location: Arcadia Stage 6
 Building Type: Rear Lane Townhouse
 Block Number: Blocks 3, 4, 5
 Front Façade Noise Level (dBA): 70

JLR No: 26299-006
 Prepared by: Thomas Blais
 Checked by: Lee Jablonski

ROOM	# OF COMPONENTS	ROOM FLOOR AREA (M ²)	WINDOW AREA (M ²)	W/RFA %	DOOR AREA (M ²)	D/RFA %	EXT. WALL AREA (M ²)	EW/RFA %	REQUIRED AIF*	WINDOW		EXT. DOOR		EXT. WALL		CEILING/ROOF	
										Type	AIF**	Type	AIF***	Type	AIF****	Type	AIF*****
Primary Bedroom	4	11.8	4.0	34%	-	-	13.1	111%	38	6(70)6	38	-	-	EW4	38	-	-
Kitchen / Living Room / Dining Room	2	68.8	8.9	13%	-	-	40.1	58%	30	2(13)2	30	-	-	EW1	39	-	-
Bedroom 2 (option)	3	8.8	3.4	38%	-	-	4.0	46%	37	6(70)6	37	-	-	EW3	39	-	-

* Taken from Table 10.5: AIF required for Road and Rail Traffic Noise Cases

** Taken from Table 10.6: Acoustic Insulation Factor for various types of windows (example: 2(100)2 denotes 2 mm glass (100 mm space) 2 mm glass).

*** Taken from Table 10.9: Acoustic Insulation Factor for various types of exterior doors

**** Taken from Table 10.7: Acoustic Insulation Factor for various types of exterior walls

***** Taken from Table 10.8: Acoustic Insulation Factor for various ceiling-roof combinations (only for aircraft noise)

Exterior Door Details

All prime doors should be fully weatherstripped. Except as noted specifically below, doors shall not have inset glazing:

D1 denotes 44 mm hollow-core wood door (up to 20% of area glazed).

D2 denotes 44 mm glass-fibre reinforced plastic door with foam or glass-fibre insulated core (up to 20% area glazed).

D3 denotes 35 mm in solid slab wood door.

D4 denotes 44 mm steel door with foam or glass-fibre insulated core.

D5 denotes 44 mm solid slab door.

sd denotes storm door of wood or aluminum with openable glazed sections.

Exterior Wall Details

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

EW1 denotes the above plus sheathing, plus wood siding or metal siding and fibre backer board.

EW2 denotes the above plus rigid insulation (25-50mm), and wood siding or metal siding and fibre backer board.

EW2 also denotes exterior wall described in EW1 with the addition of rigid insulation (25-50mm) between the sheathing and the external finish.

EW3 denotes simulated mansard with structure as the above plus sheathing, 38 x 89 mm framing, sheathing and asphalt roofing material.

EW4 denotes the above plus sheathing and 20 mm stucco.

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EW6 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25-50mm), 100 mm back-up block, 100 mm face brick.

EW6 also denotes an exterior wall conforming to rainscreen design principles and composed of same gypsum board and rigid insulation with 100 mm concrete block, 25 mm air space, and 100 mm brick veneer.

EW7 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25-50mm), 140 mm back-up block, 100 mm face brick.

EW8 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25-50mm), 200 mm concrete.

Appendix F

Canada Mortgage and
Housing (CMHC) Table A2
and Table A3

Table A1: Standard source spectrum for calculating Acoustic Insulation Factor (AIF)

Frequency (Hz)	Source Sound Pressure Level	A-weighted Source Sound Pressure Level
100	66.1	47
125	69.1	53
160	71.4	58
200	71.9	61
250	71.6	63
315	71.6	65
400	71.8	67
500	71.2	68
630	70.9	69
800	70.8	70
1000	70.0	70
1250	69.4	70
1600	69.0	70
2000	68.8	70
2500	68.7	70
3150	67.8	69
4000	67.0	68
5000	65.5	66

Note: Values in the second and third columns of this table are 1/3-octave band sound pressure levels expressed in dB.

Table A2: Approximate conversion from STC to AIF for windows and doors

Window (or door) Area Expressed as Percentage of Room Floor Area	Acoustic Insulation Factor (AIF)
80.0	STC-5
63.0	STC-4
50.0	STC-3
40.0	STC-2
32.0	STC-1
25.0	STC
20.0	STC+1
16.0	STC+2
12.5	STC+3
10.0	STC+4
8.0	STC+5
6.3	STC+6
5.0	STC+7
4.0	STC+8

Note: For area percentages not listed in the table, use the nearest listed value.

Examples: For a window whose area = 20% of the room floor area and STC = 32, the AIF is 32 + 1 = 33.
 For a window whose area = 60% of the room floor area and STC = 29, the AIF is 29 - 4 = 25.

Table A3: Approximate conversion from STC to AIF for exterior walls and ceiling-roof systems.

Exterior Wall Area Expressed as Percentage of Room Floor Area	Acoustic Insulation Factor (AIF)
200.0	STC-10
160.0	STC-9
125.0	STC-8
100.0	STC-7
80.0	STC-6
63.0	STC-5
50.0	STC-4
40.0	STC-3
32.0	STC-2
25.0	STC-1
20.0	STC
16.0	STC+1
12.5	STC+2
10.0	STC+3
8.0	STC+4

Note: For area percentages not listed in the table, use the nearest listed value.

Example: For a wall whose area = 120% of room floor area and STC = 48, the AIF is $48 - 8 = 40$.

Note: For ceiling-roof systems, $AIF = STC - 7$.

Figure A1: Worksheet for Calculating AIF from Transmission Loss Data

Frequency (Hz)	A-weighted Source Sound Pressure Level (dB) (A)	Sound Transmission Loss (dB) (B)	A-weighted Indoor Sound Pressure Level (dB) (C = A-B)	Energy Equivalent of Indoor SPL (D = $10^{(C-10)}$)
100	47	24	23	200
125	53	26	27	501
160	58	19	39	7 943
200	61	21	40	10 000
250	63	20	43	19 953
315	65	20	45	31 623
400	67	25	42	15 849
500	68	30	38	6 310
630	69	33	36	3 981
800	70	37	33	1 995
1000	70	39	31	1 259
1250	70	41	29	794
1600	70	43	27	501
2000	70	44	26	398
2500	70	45	25	316
3150	89	43	26	398
4000	68	37	31	1 259
5000	88	35	31	1 259
Sum of values in column D:				104 539 = E

Calculated indoor A-weighted sound level: $10 \log_{10} (E) = 50.2 = F$

AIF (component area = 80% of floor area): $(77 - F) = 26.8 = G$

Component Area as a Percentage of Room Floor Area	Acoustic Insulation Factor (AIF)
6.3	(G + 11) = 38
8.0	(G + 10) = 37
10.0	(G + 9) = 36
12.5	(G + 8) = 35
16.0	(G + 7) = 34
20.0	(G + 6) = 33
25.0	(G + 5) = 32
32.0	(G + 4) = 31
40.0	(G + 3) = 30
50.0	(G + 2) = 29
63.0	(G + 1) = 28
80.0	(G) = 27
100.0	(G - 1) = 26
125.0	(G - 2) = 25
160.0	(G - 3) = 24



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