DEPARTMENT OF CITY PLANNING

RECOMMENDATION REPORT

City Planning Commission

Date: March 13, 2025
Time: After 8:30 a.m.
Place: Los Angeles City Hall
Council Chamber, Room 340
200 North Spring Street
Los Angeles, CA 90012

And via Teleconference. Information will be provided no later than 72 hours before the meeting on the meeting agenda published at https://planning.lacity.org/about/commissionsboards-hearings and/or by contacting cpc@lacity.org

Public Hearing: February 11, 2025
Appeal Status: Density Bonus Off-Menu Incentives are not Appealable to City Council. Waivers of Development Standards are not Appealable.
Expiration Date: March 7, 2025
Multiple Approval: No

Case No.: CPC-2023-8315-DB-WDI-HCA
CEQA No.: ENV-2023-8316-CE
Related Cases: N/A
Council No.: 11 – Park
Plan Area: West Los Angeles

Specific Plan: West Los Angeles Transportation Improvement and Mitigation
Certified NC: West Los Angeles Sawtelle
Zone: [Q]R4-1
Existing GPLU: High Medium Residential

Applicant: Elliot Nayssan, EJKS, LLC
Representative: Matthew Hayden, Hayden Planning

PROJECT LOCATION: **1709 – 1721 1/2 South Beloit Avenue**

PROPOSED PROJECT: The project involves the construction, use, and maintenance of a new seven-story residential building containing 102 dwelling units, 25 percent of base units or 14 affordable units, set aside for Very Low Income Households, with a maximum building height of 80 feet. The project includes 97 vehicular parking spaces provided within two (2) subterranean parking levels and a total of 84 bicycle parking spaces (76 long-term spaces and eight [8] short-term spaces). The project provides 12,723 square feet of open space including a fourth-floor deck, recreation rooms, roof decks, and private balconies.

REQUESTED ACTIONS:

1) Pursuant to CEQA Guidelines, Section 15332 (Class 32), an exemption from CEQA, and that there is no substantial evidence demonstrating that an exception to a categorical exemption pursuant to CEQA Guidelines, Section 15300.2 applies;

2) Pursuant to LAMC Section 12.22. A.25, a Density Bonus Compliance Review to permit a Housing Development Project consisting of a total of 102 dwelling units, of which 14 units will be set aside for Very Low Income Households; and pursuant to LAMC Sections 12.22. A.25(g)(2) and 12.22A.25(g)(3)), four (4) Off-Menu Incentives, and four (4) Waivers or Modifications of Development Standards as follows:

   a. An Off-Menu Incentive to permit a decrease in the required stepback to allow a zero-foot stepback in lieu of the twenty-five foot stepback otherwise required per Ordinance 186,249, [Q] Qualified Conditions of Approval, Section A;

b. An Off-Menu Incentive to permit two two-way driveways in lieu of the one two-way driveway otherwise required per Ordinance 186,249, [Q] Qualified Conditions of Approval, Section B.1b;

c. An Off-Menu Incentive to permit a decrease in driveway distance to allow thirty-five feet between driveways in lieu of the otherwise required fifty feet per Ordinance 186,249, [Q] Qualified Conditions of Approval, Section B.1.c;

d. An Off-Menu Incentive to permit an increase in the required Floor Area Ratio (FAR) to allow a 5.26:1 FAR in lieu of the 3:1 FAR otherwise required in the [Q]R4-1 Zone;

e. A Waiver of Development Standard to allow a decrease in the required front yard to allow zero-foot front yard setback in lieu of the 15-foot front yard otherwise required in the [Q]R4-1 Zone;

f. A Waiver of Development Standard to allow a decrease in the required northerly side yard setback to allow a zero-foot northerly side yard setback in lieu of the ten foot northerly side yard otherwise required in the [Q]R4-1 Zone;

g. A Waiver of Development Standard to allow a decrease in the required southerly side yard setback to allow a five-foot southerly side yard setback in lieu of the ten foot southerly side yard otherwise required in the [Q]R4-1 Zone; and

h. A Waiver of Development Standard to allow a decrease in the required rear yard to allow a thirteen-foot, four-inches rear yard setback in lieu of the 19 feet otherwise required in the [Q[R4-1 Zone.

3) Pursuant to LAMC Section 12.37 I, a Waiver of Dedications and Improvements to waive the otherwise required dedications along Beloit Avenue.

RECOMMENDED ACTIONS:

1) **Determine** based on the whole of the administrative record, the Project is exempt from CEQA pursuant to California State CEQA Guidelines, Section 15332 (Class 32), and that there is no substantial evidence demonstrating that an exception to a categorical exemption pursuant to CEQA Guidelines, Section 15300.2 applies;

2) **Approve** a Density Bonus Compliance Review to permit a housing development project consisting of 102 dwelling units, of which a minimum of 14 units will be set aside for Very Low Income households, and with the following Off-Menu Incentives and Waivers of Development Standards:

a) An Off-Menu Incentive to permit a decrease in the required stepback to allow a zero-foot stepback in lieu of the twenty-five foot stepback otherwise required per Ordinance 186,249, [Q] Qualified Conditions of Approval, Section A;

b) An Off-Menu Incentive to permit two two-way driveways in lieu of the one two-way driveway otherwise required per Ordinance 186,249, [Q] Qualified Conditions of Approval, Section B.1b;

c) An Off-Menu Incentive to permit a decrease in driveway distance to allow thirty-five feet between driveways in lieu of the otherwise required fifty feet per Ordinance 186,249, [Q] Qualified Conditions of Approval, Section B.1c;

d) Off-Menu Incentive to permit an increase in the required Floor Area Ratio (FAR) to allow a 5.26:1 FAR in lieu of the 3:1 FAR otherwise required in the [Q]R4-1 Zone;

e) A Waiver of Development Standard to allow a decrease in the required front yard to allow a zero-foot front yard setback in lieu of the 15-foot front yard otherwise required in the [Q]R4-1 Zone;

f) A Waiver of Development Standard to allow a decrease in the required northerly side yard setback to allow a zero-foot northerly side yard setback in lieu of the ten foot northerly side yard otherwise required in the [Q]R4-1 Zone;

g) A Waiver of Development Standard to allow a decrease in the required southerly side yard setback to allow a five-foot southerly side yard setback in lieu of the ten foot southerly side yard otherwise required in the [Q]R4-1 Zone; and,

h) A Waiver of Development Standard to allow a decrease in the required rear yard to allow a thirteen-foot, four-inches rear yard setback in lieu of the 19 feet otherwise required in the [Q]R4-1 Zone.

3) **Approve** a Waiver of Dedication and Improvements to waive the otherwise required dedications along Beloit Avenue; and

4) **Adopt** the attached Conditions of Approval; and

5) **Adopt** the attached Findings.

VINCENT P. BERTONI, AICP
Director of Planning

Heather Bleemers
Senior City Planner

for Michelle Carter
City Planner

Louis Ortega

Louis Ortega Jr.
Planning Assistant

ADVICE TO PUBLIC: *The exact time this report will be considered during the meeting is uncertain since there may be several other items on the agenda. Written communications may be mailed to the *Commission Secretariat, Room 272, City Hall, 200 North Spring Street, Los Angeles, CA 90012* (Phone No. 213-978-1300). While all written communications are given to the Commission for consideration, the initial packets are sent to the week prior to the Commission's meeting date. If you challenge these agenda items in court, you may be limited to raising only those issues you or someone else raised at the public hearing agendized herein, or in written correspondence on these matters delivered to this agency at or prior to the public hearing. As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability, and upon request, will provide reasonable accommodation to ensure equal access to these programs, services and activities. Sign language interpreters, assistive listening devices, or other auxiliary aids and/or other services may be provided upon request. To ensure availability of services, please make your request not later than three working days (72 hours) prior to the meeting by calling the Commission Secretariat at (213) 978-1299.

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PROJECT ANALYSIS

PROJECT SUMMARY

The project involves the construction, use, and maintenance of a new seven-story 91,648 square-foot residential building with 102 residential units, including 14 units reserved for Very Low Income households, with a maximum building height of 80 feet, as shown in Figure 1 below. The project includes 97 vehicular parking spaces provided within two (2) levels of subterranean parking and a total of 84 bicycle parking spaces (76 long-term spaces and eight [8] short-term spaces). The project provides 12,723 square feet of open space including a fourth-floor deck, recreation rooms, roof decks, and private balconies.

Figure 1: Rendering of the proposed project (Depicting zero-foot zero-inches stepback)

The project proposes a total of approximately 91,648 square feet of residential floor area, resulting in a total floor area ratio (FAR) of 5.26:1. At the first-floor level, as depicted in the project's plan set sheet A-3, the project proposes a residential lobby, a few residential units, storage areas, bicycle parking, a mail room, a trash/recycle room, and utility rooms. Vehicular parking is also provided on the ground floor; on the second level, residential units line the entirety of the building exterior and fully encircle the areas mentioned. The project proposes a total of 97 vehicular parking spaces.

Residential units are proposed at levels one through seven of the proposed building. The project proposes 25 studios, 19 one-bedroom units, 42 two-bedroom units, and 16 three-bedroom units.

The project proposes approximately 12,723 square feet of open space. Proposed common open space is located on the roof with four roof deck areas totaling 6,649 square feet, a 1,412 square foot fourth-floor deck area, and approximately 3,112 square feet across eight (8) recreation rooms. Proposed private open space consists of balconies for the residential units on the second through seventh floor on all elevations. All outdoor common areas will be landscaped with planters and trees. The subject property currently has one (1) street tree that will be removed as a result of this project; however, the project proposes to provide at least 31 trees, including both on-site and two (2) street trees in the public right-of-way. Urban Forestry Division (UFD) will oversee the replacement of the tree per UFD's regulations and guidelines. The project also proposes landscaped buffer/setback areas along the northern/southern property line and the eastern property lines (abutting the sidewalk along Beloit Avenue). Additional landscaping including tree/planter/parkway improvements are proposed for the sidewalk along Beloit Avenue abutting the project site.

PROJECT BACKGROUND

The subject property consists of three (3) lots encompassing a total of approximately 21,388 square feet of lot area (approximately 0.43 acres) including half of the alley. The property is located on the western side of Beloit Avenue and has a street frontage of approximately 135 feet. The subject property is a rectangular shaped corner lot, fronting Beloit Avenue to the southeast, and an alley to the northeast and northwest.

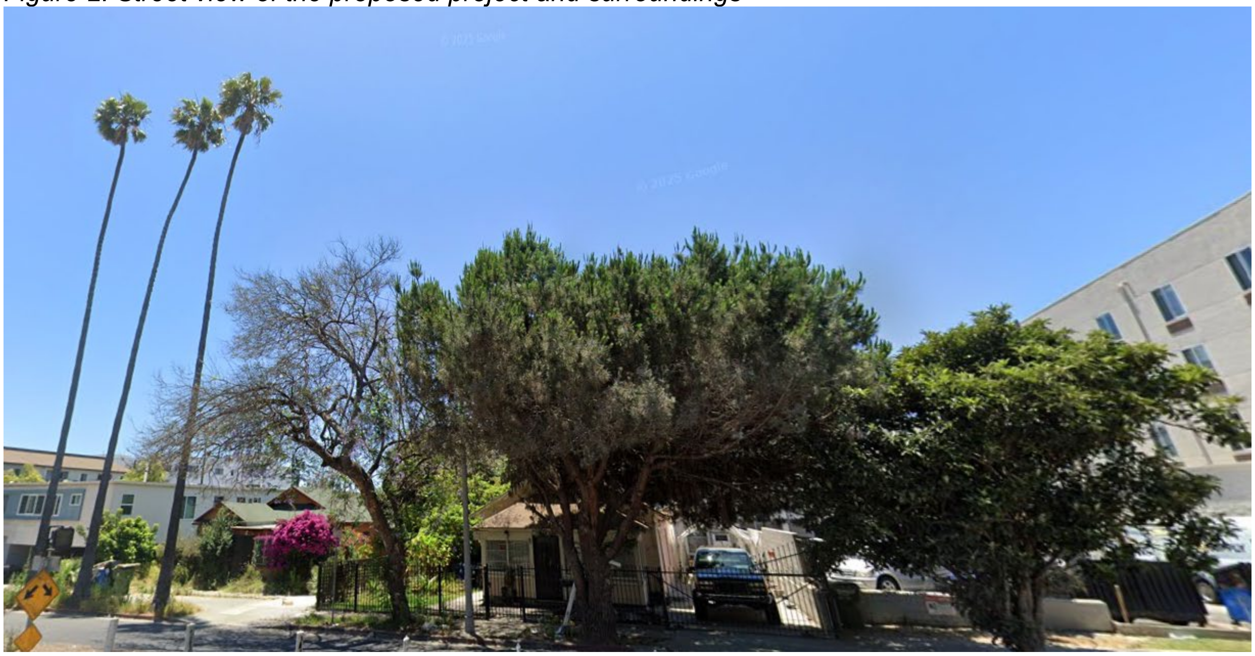
The project site is located within the West Los Angeles Community Plan, which is one of 35 Community Plans which together form the land use element of the General Plan. The Community Plan designates the site for High Medium Residential land uses corresponding to the R4 Zone. As depicted in Figure 2 below, the subject property is currently zoned [Q]R4-1 and is consistent with the existing land use designation. The project is located within the State Enterprise Zone and is a designated Transit Priority Area within the City of Los Angeles. The subject property is located within the West Los Angeles Community Plan "Q" (Qualified) Conditions and are subject to the requirements except for the deviations requested herein. The subject property is not located within the boundaries of any specific plan or community design overlay.

The subject property is currently developed with a surface parking lot, a vacant duplex, and a vacant triplex. The applicant has not applied for demolition permits with the Los Angeles Department of Building and Safety (LADBS). The demolition permits will have to be submitted, reviewed by LADBS, and issued clearances from City of Los Angeles Planning Department and the City of Los Angeles Housing Department. Once that takes place, the demolition permits will be issued, and the existing structures will be removed in a timely manner.

Surrounding Properties

The subject property is located in an established and heavily developed residential area of West Los Angeles, along Beloit Avenue as shown in Figure 2 located on the next page, the project site is located just south of the intersection of Santa Monica Boulevard and Beloit Avenue, a busy intersection and in an area developed with a variety of commercial, office, and residential uses. The property to the east, across the eastern alley, is zoned C2-1VL and is improved with a Holiday Inn Express Hotel. The abutting property to the west is improved with a two-story multifamily building and is zoned [Q]R4-1. The property to the south, across Beloit Avenue, is improved with a 405-South Interstate on-ramp and is zoned PF-1XL. The properties to the north across the alley are zoned C2-1VL and are developed with one-story commercial uses.

Figure 2: Street view of the proposed project and surroundings



Streets

Beloit Avenue, adjoining the subject property to the south, is a Collector Street, with a designated right-of-way width of 66 feet. Beloit Avenue is currently dedicated to a right-of-way width of 60 feet and is improved with curb, gutter, and sidewalk. The Applicant is requesting a Waiver of Dedication and Improvements to waive the otherwise required 3-foot dedication/widening along South Beloit Avenue.

The Alley, adjoining the subject property to the east and west, is dedicated to a varying right-of-way width of 15 - 20 feet.

Density Bonus / Affordable Housing Incentive Program

In accordance with California Government Code Section 65915 and LAMC Section 12.22. A.25, in exchange for setting aside a minimum percentage of the project's units for affordable housing, the project is eligible for a density bonus, reduction in parking, and incentives allowing for relief from development standards. The applicant has requested to utilize the provisions of City and State Density Bonus laws as follows:

Density

The subject property is zoned [Q]R4-1, which permits residential density at a ratio of one (1) dwelling unit per 400 square feet of lot area. The subject property has a total lot area of approximately 21,388 square feet, including half of the alley and as such, the permitted base density on the subject property is 54 units (21,388 square feet of lot area divided by 400 square feet per dwelling unit equals 53.47 which is rounded up to a total of 54 dwelling units).

Assembly Bill 1287 (AB 1287)

Assembly Bill 1287 became effective on January 1, 2024. The law made amendments and clarifications to the State Density Bonus Law and Government Code Section 65915, which are applicable to density bonus projects in the City. AB 1287 allows projects to potentially obtain a total 100 percent density bonus by providing the initial percentage of affordable units to secure an initial 50 percent density bonus, and then a secondary percentage of affordable units in order to obtain a "stackable" or additional density bonus of up to 50 percent. Once the set-aside requirements are met to receive the maximum 50 percent “primary” density bonus, an applicant may request the additional density bonus available through AB 1287 for either Very Low Income or Moderate Income households as set forth in Government Code Section 65915(v).

In accordance with AB 1287, the applicant is seeking an initial 50 percent density bonus allowed under State Density Bonus Law by providing 15 percent of the 54 units (9 units) for Very Low Income households. The applicant is then seeking an additional 38.75 percent density bonus, for a total density bonus of 88.75 percent, by providing an additional 8 percent of the 54 units (5 units) for Very Low Income households. The resulting increase in density allows for a 102-unit project. As proposed, the project will provide 102 dwelling units with 14 units reserved for Very Low Income households.

Automobile Parking

Pursuant to Assembly Bill 2097, no minimum parking requirement shall be enforced for the proposed residential use on the project site as it is located within one-half mile of a Major Transit Stop. The Los Angeles Rapid 6 Bus at the Santa Monica Boulevard and Sepulveda Boulevard bus stop location is identified as a Major Transit Stop and is located within one-half mile of the project site. Therefore, the proposed project is not required to provide any parking spaces.

Nevertheless, the project proposes to provide 97 residential vehicle parking spaces, and thus meets these requirements. Separately, the project is subject to provide bicycle parking pursuant to LAMC 12.21. A.4 and is required to provide 76 long term and eight (8) short term bicycle parking stalls. The project proposes to meet these requirements.

Incentives

Pursuant to the LAMC and Government Code Section 65915 and Assembly Bill (AB) 1287, the applicant is entitled to four (4) Incentives, in exchange for reserving 25 percent of the base density for Very Low Income households. The proposed project will set aside 14 units, equal to approximately 25 percent of the base number of units, for Very Low Income households. Accordingly, the applicant has requested four (4) Off-menu Incentives, as follows:

a. **Off-menu Incentive for a decrease in the Stepback**: The subject property is zoned [Q]R4-1, which requires a minimum 25-foot stepback per Ordinance Number 186,249 Section A. The applicant is requesting a decrease in the required stepback to allow zero-feet and zero-inches. Accordingly, the project includes an off-menu incentive to permit the reduction in stepback. The reduced stepback would allow for a larger construction envelope to provide the affordable units.

b. **Off-menu Incentive for an increase in Two-Way Driveways**: The subject property is zoned [Q]R4-1, the subject property has “Q” (Qualified) Conditions which limits residential structures to a maximum of one (1) two-way driveway. The project includes two (2) two-way driveways to provide the affordable dwelling units with easier vehicular access to the parking levels. Accordingly, the off-menu incentive to permit the additional driveway would allow for safer vehicular access to residents in addition to a larger construction envelope to provide the affordable units.

c. **Off-menu Incentive for a decrease in the Driveway Distance:** The subject property is zoned [Q]R4-1, which requires 50-feet distance between driveways pursuant to Ordinance Number 186,249 Section B.1.c. The project proposes a driveway distance of 35 feet. Accordingly, the applicant is requesting an Off-menu Incentive for a 30 percent decrease in the required driveway distance. The reduced driveway distance would allow for a larger construction envelope to provide the affordable units.

d. **Off-menu Incentive for Floor Area Ratio (FAR) Increase**: The subject property is zoned [Q]R4-1, which limits the Floor Area Ratio (FAR) to 3.0:1, a maximum of 52,258 square feet. The applicant is requesting an increase in the Floor Area Ratio to allow 5.26:1 and a maximum of 91,648 square feet. Accordingly, the project includes an off-menu incentive to permit the additional floor area ratio increase. The increased FAR to 5.26:1 would allow for a larger construction envelope to provide the affordable units.

<u>Waiver of Development Standards</u>

Pursuant to Government Code Section 65915(e)(1), AB 1287, and Section 12.25 A.25(g) of the LAMC, a project that provides 25 percent of the base density for Very Low Income households qualifies for four (4) Incentives, and may also request other "waiver(s) or reduction(s) of development standards that will have the effect of physically precluding the construction of a development meeting the [affordable set-aside percentage] criteria…at the densities or with the concessions or incentives permitted under [State Density Bonus Law]". In addition to the four (4) requested Incentives, the applicant is also requesting four (4) Waiver of Development Standards, as follows:

a. **Waiver of Development Standard for Reduction in the Front Yard**: The subject property is zoned [Q]R4-1, which requires a fifteen-foot setback pursuant to LAMC 12.10.C.1. The project proposes a front yard setback of zero-feet zero-inches. The project includes a 100 percent decrease in the required front yard setback. The requirement to provide the required front yard setback would preclude the construction of the development at the approved density or with the concessions or incentives granted as part of the project.

b. **Waiver of Development Standard for Reduction in the Side Yard**: The subject property is zoned [Q]R4-1, which requires a ten-foot setback pursuant to LAMC 12.11.C.2. The project proposes a northerly side yard setback of zero-feet zero-inches. The project includes a 100 percent decrease in the required northerly side yard setback. The requirement to provide the required northerly yard setback would preclude the construction of the development at the approved density or with the concessions or incentives granted as part of the project.

c. **Waiver of Development Standard for Reduction in the Side Yard:** The subject property is zoned [Q]R4-1, which requires a ten-foot setback pursuant to LAMC 12.11.C.2. The project proposes a southerly side yard setback of five feet. The project includes a 50 percent decrease in the required southerly side yard setback. The requirement to provide the required southerly yard setback would preclude the construction of the development at the approved density or with the concessions or incentives granted as part of the project.

d. **Waiver of Development Standard for Reduction in the Rear Yard:** The subject property is zoned [Q]R4-1, which requires a nineteen-foot setback pursuant to LAMC 12.11.C.3. The project proposes a rear yard setback of thirteen-feet-four-inches. The project includes a 30 percent decrease in the required rear yard setback. The requirement to provide the required rear yard setback would preclude the construction of the development at the approved density or with the concessions or incentives granted as part of the project.

<u>Housing Replacement</u>

On October 9, 2019, the Governor signed into law the Housing Crisis Act of 2019 (SB 330). SB 330 creates new state laws regarding the production, preservation and planning for housing, and establishes a statewide housing emergency until January 1, 2025. During the duration of the statewide housing emergency, SB 330, among other things, creates new housing replacement requirements for Housing Development Projects by prohibiting the approval of any proposed housing development project on a site that will require the demolition of existing residential dwelling units or occupied or vacant "Protected Units" unless the proposed housing development project replaces those units.

According to the Housing Crisis Act Replacement Review Checklist, a Replacement Unit Determination (RUD) by the Los Angeles Housing Department would be required. The project site is developed with a one-story duplex, a one-story triplex, and a surface parking lot with a total of five (5) dwelling units that are all currently vacant. No structures on-site have been demolished. The replacement provisions of SB 330 apply to the subject property, with two (2) units of the five (5) units being subject to replacement as affordable "Protected Units". Therefore, two (2) SB 330 replacement affordable units are required.

Relevant Cases on the Project Site

There are no relevant cases on the subject site.

Other Relevant Cases Within 1,000 Feet of the Project Site

The following relevant planning case was identified within 1,000 feet of the project site:

Case No. ADM-2024-7915-DB-VHCA-RED1 – The Applicant is requesting a Density Bonus in compliance with the Mayor's Executive Directive No.1 for the construction, use, and maintenance of a new five-story 42-unit residential apartment building, in the [Q]R3-1 Zone, at 1723 South Corinth Avenue.

Case No. CPC-2023-5657-DB-VHCA – On January 23, 2025, the City Planning Commission approved a Density Bonus, for the construction, use, and maintenance of a five-story, nine-unit residential building, reserving one unit set aside for Very Low Income households, in the [Q]C2-1 Zone, at 1531 – 1535 South Sawtelle Boulevard.

Case No. CPC-2022-3679-DB-VCU-MCUP-SPR-HCA – The Applicant is requesting a Density Bonus, Vesting Conditional Use, Main Conditional Use Permit, and Site Plan Review, for the construction, use, and maintenance of a multi-building mixed-use development, in the PF-1XL Zone, at 11332 West Santa Monica Boulevard.

PUBLIC HEARING

A public hearing on this matter was held by the Hearing Officer on Tuesday, February 11, 2025, via Zoom teleconference. Comments from both public hearings are documented in Public Hearing and Communications, Page P-1.

PROFESSIONAL VOLUNTEER PROGRAM

The proposed project was reviewed by the Urban Design Studio's Professional Volunteer Program (PVP) on April 2, 2024. The resulting comments and suggestions detailed in the following section, Issues and Considerations, include discussions, questions, and recommendations regarding various design and layout aspects of the project.

ISSUES AND CONSIDERATIONS

The following includes a discussion of issues and considerations related to the project. These discussion points were either identified during the design review process with the Urban Design

Studio's Professional Volunteer's Program (PVP), at the public hearing held on May 7, 2024, or in discussions with the applicant.

Professional Volunteer's Program (PVP)

The proposed project was reviewed by PVP on April 4, 2024. The following includes comments provided by PVP;

- Pedestrian First Design
  Add windows along Beloit Avenue frontage at bicycle room and working area.

  Applicant Response - Floor plans updated with rec rooms featuring windows at ground floor along Beloit Avenue.

  Improve path of travel by relocating ADA accessible parking space.

  Applicant Response - ADA parking spaces moved to directly access building hallway to elevators.

- 360 Degree Design
  Add complete materials call-out/keynotes to exterior elevations including side yards and fences; please refer to City instructions for the preparation of building elevations.

  Applicant Response - Exterior elevations material legend added. Material combination provided in compliance with Q Conditions. Off-white and dark-gray stucco mixed with dark-gray tile.

  Improve the design of residential units by relocating bedrooms to more desirable locations. Avoid bedrooms facing corridors and alleyways.

  Applicant Response – Floor plans updated considering comments to improve design.

- Climate Adapted
  Provide adequate window ventilation and natural light in bedrooms. Comply with interior building code requirements.

  Applicant Response - Project plans updated considering comments and code requirements.

  Improve common open space, private balconies, and roof decks by removing mechanical rooms.

  Applicant Response – Project plans updated considering comments for removal of mechanical rooms.

CONCLUSION

Based on Staff's evaluation of the project and information submitted and the public hearing, Los Angeles City Planning recommends the City Planning Commission find, based on its independent judgment, after consideration of the entire administrative record, that the project is categorically exempt from CEQA and there is no substantial evidence demonstrating that an exception to a categorical exemption, and approve the requested Density Bonus with the requested Off-menu Incentives and Waivers of Development Standards and approve the Waiver of Development and Improvements.

CONDITIONS OF APPROVAL

Pursuant to Sections 12.22. A.25, and 12.37. I. of the Los Angeles Municipal Code, the following conditions are hereby imposed upon the use of the subject property:

Density Bonus Conditions

1. **Site Development.** Except as modified herein, the project shall be in substantial conformance with the architectural plans, landscape plan, renderings, and materials submitted by the applicant, dated February 11, 2025, stamped "Exhibit A", and attached to the subject case file. Minor deviations may be allowed in order to comply with the provisions of the LAMC or the project conditions. Changes beyond minor deviations required by other City Departments or the LAMC may not be made without prior review by the Department of City Planning, Expedited Processing Section, and written approval by the Director of City Planning. Each change shall be identified and justified in writing.

2. **Residential Density.** The project shall be limited to a maximum density of 102 dwelling units, including affordable units.

3. **Affordable Units:** A minimum of 14 dwelling units, or 25 percent of the base density Very Low Income set aside for affordable units, as defined by Government Code Section 65915 and pursuant to AB 1287. In the event of deviations to the requests that change this number of restricted affordable units, the composition/typology of units, and/or vehicle parking numbers, such changes shall be consistent with LAMC Section 12.22 A.25.

4. **Changes in Restricted Units.** Deviations that increase the number of restricted affordable units or that change the composition of units or change parking numbers shall be consistent with LAMC Sections 12.22 A.25 and State Density Bonus Law (Government Code Section 65915).

5. **Housing Requirements.** Prior to issuance of a building permit, the owner shall execute a covenant to the satisfaction of the Los Angeles Housing Department (LAHD) to make 25 percent Very Low Income set aside for affordable units, as defined by Government Code Section 65915 and pursuant to AB 1287. Enforcement of the terms of said covenant shall be the responsibility of LAHD. The applicant will present a copy of the recorded covenant to the Department of City Planning for inclusion in this file. The project shall comply with the Guidelines for the Affordable Housing Incentives Program adopted by the City Planning Commission and with any monitoring requirements established by the LAHD. Refer to the Density Bonus Legislation Background section of this determination.

6. **Incentives:**

   a. **Building Stepback**. The project shall be permitted a building stepback of zero-feet zero-inches in lieu of the otherwise required per the [Q] Condition set forth in Ordinance 186,249 Section A.

   b. **Two-Way Driveways**. The project shall be permitted a maximum of two two-way driveways in lieu of the otherwise 50 feet required per the [Q] Condition set forth in Ordinance 186,249 Section B.1b.

c. **Driveway Distance**. The project shall be permitted a driveway distance of 35 feet in lieu of the otherwise required per the [Q] Condition set forth in Ordinance 186,249 Section B.1c.

d. **Floor Area Ratio**. The project shall be permitted a floor area ratio of 5.26:1 in lieu of the otherwise permitted 3.0:1.

7. **Waiver of Development Standards:**

a. **Front Yard Setback**. The project shall be permitted a zero-foot front yard setback in lieu of the required pursuant to LAMC Section 12.10.C.1.

b. **Side Yard Setback.** The project shall be permitted a zero-foot northerly side yard setback in lieu of the required pursuant to LAMC Section 12.11.C.2.

c. **Side Yard Setback.** The project shall be permitted a five-foot southerly side yard setback in lieu of the required pursuant to LAMC Section 12.11.C.2.

d. **Rear Yard Setback.** The project shall be permitted a thirteen-foot four-inches rear yard setback in lieu of the required pursuant to LAMC Section 12.11.C.3.

8. **Parking:**

a. **Automobile parking** shall be provided consistent with the provisions of Assembly Bill (AB) 2097, Section 65915 of the California Government Code, and/or the LAMC.

b. **Bicycle Parking**. Residential bicycle parking shall be provided consistent with LAMC 12.21 A.16.

c. **Unbundling**. Required parking may be sold or rented separately from the units, with the exception of all Restricted Affordable units which shall include any required parking in the base rent or sales price, as verified by LAHD.

d. All vehicular parking shall provide electric vehicle charging spaces and electric vehicle charging stations in compliance with the regulations outlined in Sections 99.04.106 and 99.05.106 of Article 9, Chapter IX of the LAMC.

9. **Open Space**. The project shall be required to provide 12,723 square feet of open space as approved herein.

10. **Signage.** On-site signs shall comply with the Municipal Code. Signage rights are not part of this approval.

11. **Lighting.** Outdoor lighting shall be designed and installed with shielding, such that the light source does not illuminate adjacent residential properties or the public right-of-way, nor the above night skies.

12. **Trash.** Trash receptacles shall be stored within a fully enclosed portion of the building at all times. Trash/recycling containers shall be locked when not in use and shall not be placed in or block access to required parking.

13. **Solar Energy Infrastructure.** The Project shall comply with the Los Angeles Municipal Green Building Code, Section 99.05.211, to the satisfaction of the Department of Building and Safety.

14. **Maintenance.** The subject property, including any trash storage areas, associated parking facilities, sidewalks, driveways, yard areas, parkways, and exterior walls along the property lines, shall be maintained in an attractive condition and shall be kept free of trash and debris.

15. **Mechanical Equipment.** All mechanical equipment on the roof shall be screened from view. The transformer, if located in the front yard, shall be screened with landscaping and/or materials consistent with the building façade on all exposed sides to the satisfaction of LADWP.

16. **Landscaping:**

    a. All open areas not used for buildings, driveways, parking areas, or walkways shall be attractively landscaped and maintained in accordance with a landscape plan and an automatic irrigation plan, prepared by a licensed Landscape Architect and to the satisfaction of the Department of City Planning.

    b. **Street Trees**. Street trees shall be provided to the satisfaction of the Urban Forestry Division. Street trees may be used to satisfy on-site tree requirements pursuant to LAMC Article Section 12.21.G.3 (Chapter 1, Open Space Requirement for Six or More Residential Units).

    c. **Required Trees per LAMC Section 12.21 G.2**. As conditioned herein, a final submitted landscape plan shall be reviewed to be in substantial conformance with Exhibit "A." There shall be a minimum of 26 24-inch box, or larger, trees on site pursuant to LAMC Section 12.21 G.2. Any required trees pursuant to LAMC Section 12.21 G.2 shown in the public right of way in Exhibit "A" shall be preliminarily reviewed and approved by the Urban Forestry Division prior to building permit issuance. In-lieu fees pursuant to LAMC Section 62.177 shall be paid if placement of required trees in the public right of way is proven to be infeasible due to City determined physical constraints.

    d. Project shall preserve all healthy mature street trees whenever possible. All feasible alternatives in project design should be considered and implemented to retain healthy mature street trees. A permit is required for the removal of any street tree and shall be replaced as approved by the Board of Public Works and Urban Forestry Division.

    e. Plant street trees at all feasible planting locations within dedicated streets as directed and required by the Bureau of Street Services, Urban Forestry Division. All tree plantings shall be installed to current tree planting standards when the City has previously been paid for tree plantings. The subdivider or contractor shall notify the Urban Forestry Division at: (213) 847-3077 upon completion of construction for tree planting direction and instructions.

17. **Waiver of Dedication and Improvements.**

    a. No dedication or widening shall be required along Beloit Avenue.

b. All improvements otherwise required by the Bureau of Engineering or other agencies shall be provided.

Administrative Conditions

18. **Approvals, Verification and Submittals**. Copies of any approvals, guarantees or verification of consultations, reviews or approval, plans, etc., as may be required by the subject conditions, shall be provided to the Department of City Planning for placement in the subject file.

19. **Building Plans.** A copy of the first page of this grant and all Conditions and/or any subsequent appeal of this grant and its resultant Conditions and/or letters of clarification shall be printed on the building plans submitted to the Development Services Center and the Department of Building and Safety for purposes of having a building permit issued.

20. **Notations on Plans.** Plans submitted to the Department of Building and Safety for the purpose of processing a building permit application shall include all of the Conditions of Approval herein attached as a cover sheet and shall include any modifications or notations required herein.

21. **Final Plans.** Prior to the issuance of any building permits for the project by the Department of Building and Safety, the applicant shall submit all final construction plans that are awaiting issuance of a building permit by the Department of Building and Safety for final review and approval by the Department of City Planning. All plans that are awaiting issuance of a building permit by the Department of Building and Safety shall be stamped by Department of city Planning staff "Final Plans". A copy of the Final Plans, supplied by the applicant, shall be retained in the subject case file.

22. **Code Compliance.** All area, height and use regulations of the zone classification of the subject property shall be complied with, except wherein these conditions explicitly allow otherwise.

23. **Covenant.** Prior to the issuance of any permits relative to this matter, an agreement concerning all the information contained in these conditions shall be recorded in the County Recorder's Office. The agreement shall run with the land and shall be binding on any subsequent property owners, heirs, or assign. The agreement must be submitted to the Department of City Planning for approval before being recorded. After recordation, a copy bearing the Recorder's number and date shall be provided to the Department of City Planning for attachment to the file.

24. **Corrective Conditions.** The authorized use shall be conducted at all times with due regard for the character of the surrounding district, and the right is reserved to the City Planning Commission, or the Director pursuant to Section 12.27.1 of the Municipal Code, to impose additional corrective conditions, if, in the Commission's or Director's opinion, such conditions are proven necessary for the protection of persons in the neighborhood or occupants of adjacent property.

25. **Definition.** Any agencies, public officials or legislation referenced in these conditions shall mean those agencies, public offices, legislation or their successors, designees, or amendment to any legislation.

26. **Enforcement.** Compliance with these conditions and the intent of these conditions shall be to the satisfaction of the Department of City Planning and any designated agency, or the agency's successor and in accordance with any stated laws or regulations, or any amendments thereto.

27. **Expedited Processing Section.** Prior to the clearance of any conditions, the applicant shall show proof that all fees have been paid to the Department of City Planning, Expedited Processing Section.

28. **Indemnification and Reimbursement of Litigation Costs**

Applicant shall do all of the following:

a. Defend, indemnify and hold harmless the City from any and all actions against the City relating to or arising out of, in whole or in part, the City's processing and approval of this entitlement, including but not limited to, an action to attack, challenge, set aside, void, or otherwise modify or annul the approval of the entitlement, the environmental review of the entitlement, or the approval of subsequent permit decisions, or to claim personal property damage, including from inverse condemnation or any other constitutional claim.

b. Reimburse the City for any and all costs incurred in defense of an action related to or arising out of, in whole or in part, the City's processing and approval of the entitlement, including but not limited to payment of all court costs and attorney's fees, costs of any judgments or awards against the City (including an award of attorney's fees), damages, and/or settlement costs.

c. Submit an initial deposit for the City's litigation costs to the City within 10 days' notice of the City tendering defense to the Applicant and requesting a deposit. The initial deposit shall be in an amount set by the City Attorney's Office, in its sole discretion, based on the nature and scope of action, but in no event shall the initial deposit be less than $50,000. The City's failure to notice or collect the deposit does not relieve the Applicant from responsibility to reimburse the City pursuant to the requirement in paragraph (b.).

d. Submit supplemental deposits upon notice by the City. Supplemental deposits may be required in an increased amount from the initial deposit if found necessary by the City to protect the City's interests. The City's failure to notice or collect the deposit does not relieve the Applicant from responsibility to reimburse the City pursuant to the requirement in paragraph (b.).

e. If the City determines it necessary to protect the City's interest, execute an indemnity and reimbursement agreement with the City under terms consistent with the requirements of this condition.

The City shall notify the applicant within a reasonable period of time of its receipt of any action and the City shall cooperate in the defense. If the City fails to notify the applicant of any claim, action, or proceeding in a reasonable time, or if the City fails to reasonably cooperate in the defense, the applicant shall not thereafter be responsible to defend, indemnify or hold harmless the City.

The City shall have the sole right to choose its counsel, including the City Attorney's office or outside counsel. At its sole discretion, the City may participate at its own expense in the defense of any action, but such participation shall not relieve the applicant of any obligation imposed by this condition. In the event the Applicant fails to comply with this condition, in whole or in part, the City may withdraw its defense of the action, void its approval of the entitlement, or take any other action. The City retains the right to make all decisions with respect to its representations in any legal proceeding, including its inherent right to abandon or settle litigation.

For purposes of this condition, the following definitions apply:

> "City" shall be defined to include the City, its agents, officers, boards, commissions, committees, employees, and volunteers.
>
> "Action" shall be defined to include suits, proceedings (including those held under alternative dispute resolution procedures), claims, or lawsuits. Actions include actions, as defined herein, alleging failure to comply with any federal, state or local law.

Nothing in the definitions included in this paragraph are intended to limit the rights of the City or the obligations of the Applicant otherwise created by this condition.

FINDINGS

Density Bonus / Affordable Housing Incentives Findings

1. **Pursuant to Section 12.22 A.25(g) of the LAMC and Section 65915 of the California Government Code, the Director shall approve a density bonus and requested incentive(s) unless the Director of Planning finds any of the following[1]:**

   a. ***The Incentive does not result in identifiable and actual cost reductions to provide for affordable housing costs as defined in California Health and Safety Code Section 50052.5 or Section 50053 for rents for the affordable units.***

   The record does not contain substantial evidence that would allow the Director to make a finding that the requested incentives do not result in identifiable and actual cost reductions to provide for affordable housing costs per State Law. The California Health & Safety Code Sections 50052.5 and 50053 define formulas for calculating affordable housing costs for very low, low, and moderate income households. Section 50052.5 addresses owner-occupied housing and Section 50053 addresses rental households. Affordable housing costs are a calculation of residential rent or ownership pricing not to exceed 25 percent gross income based on area median income thresholds dependent on affordability levels.

   The subject property is Zoned [Q]R4-1. As approved the project includes an off-menu incentive to allow a decrease in the required building stepback of the project site. Ordinance 186,249 Section A generally permits a building stepback of 25 feet. In this case, the project includes a decrease in the building stepback in lieu of the otherwise required 25 feet to allow a zero-foot building stepback. Per Ordinance 186,249 Section B.1b., a maximum of one two-way driveway is allowed. As approved the project includes an off-menu incentive to allow for an increase of two-way driveways in lieu of the otherwise one two-way driveway required to allow a maximum of two two-way driveways. Per Ordinance 186,249 Section B.1c., a minimum driveway distance of 50-feet is required. As approved, the project includes an off-menu incentive to allow a decrease in the driveway distance in lieu of the otherwise required 50 feet to allow for 35 feet in between driveways. The fourth incentive is to permit an increase in the FAR of the project site. The R4 zone in Height District 1 generally permits a 3:1 FAR. In this case, the project includes an increase in the FAR in lieu of the otherwise required 3:1 FAR to allow a 5.26:1 FAR. The reductions in the required stepback and driveway distance in conjunction with increases in FAR and number of two-way driveways enable the project to expand the building envelope by utilizing more space for building floor area and provide additional floor space and residential units, thus enabling the provision of more dwelling units.

   The project provides 25 percent of the base units for Very Low Income Households to qualify for the Density Bonus and the requested incentives. The requests will allow the developer to expand the building envelope so the affordable units can be constructed, and the overall space dedicated to residential uses is increased. The increases in Floor Area Ratio and two-way driveways in conjunction with the reductions in the required building stepback and driveway distance will allow for the construction of additional market rate floor area whose rents will subsidize the construction and operational costs of the affordable units. Therefore, these incentives support the applicant's decision to set aside 14 dwelling units for Very Low Income households for 55 years.

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[1] Pursuant to LAMC Section 12.22 A.25(g)(3), the City Planning Commission is considered the decision-maker for Off-menu density bonus requests. The findings referenced in LAMC Section 12.22 A.25(g)(2)(i)(c) apply to Off-menu requests.

b. ***The Incentive(s) will have a Specific Adverse Impact upon public health and safety or the physical environment or any real property that is listed in the California Register of Historical Resources and for which there is no feasible method to satisfactorily mitigate or avoid the Specific Adverse Impact without rendering the development unaffordable to Very Low, Low and Moderate Income households. Inconsistency with the zoning ordinance or general plan land use designation shall not constitute a specific adverse impact upon the public health or safety (Government Code Section 65915(d)(1)(B) and 65589.5(d)).***

There is no substantial evidence in the record that the proposed Incentives will have a specific adverse impact upon public health and safety or the physical environment, or any real property that is listed in the California Register of Historical Resources. A "specific adverse impact" is defined as "a significant, quantifiable, direct and unavoidable impact, based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete" (LAMC Section 12.22. A.25(b)). As required by Section 12.22.A.25(e)(2), the project meets the eligibility criterion that is required for density bonus projects. The record does not identify a public health and safety standard in relation to this finding. There are no historic resources on the subject property. Potential environmental impacts have been analyzed in the Categorical Exemption (CE) prepared for the project; the CEQA Class 32 Categorial Exemption, did not find any significant environmental impacts as a result of the project. The project is within a methane zone and will be subject to additional regulations as required. The property is not located on a substandard street in a Hillside area and is not located in a Liquefaction Zone, a Special Grading Area, a Fault Zone, a Very High Fire Hazard Severity Zone, or any other special hazard area. Therefore, there is no substantial evidence that the proposed project, and thus the requested Incentives, will have a specific adverse impact on the physical environment, on public health and safety or the physical environment, or on any Historical Resource. Based on the above, there is no basis to deny the requested Incentives.

c. ***The Incentives are contrary to State/federal law*.**

There is no substantial evidence in the record indicating that the requested Incentives are contrary to any State or federal laws.

2. **Government Code Section 65915 and LAMC Section 12.22.A.25 state that the Commission shall approve a density bonus and requested Waiver of Development Standard(s) unless the Commission finds any of the following:**

a. ***The Waiver(s) will have specific adverse impact upon public health and safety or on any real property that is listed in the California Register of Historical Resources and for which there is no feasible method to satisfactorily mitigate or avoid the specific adverse Impact without rendering the development unaffordable to Very Low, Low and Moderate Income households. Inconsistency with the zoning ordinance or the general plan land use designation shall not constitute a specific, adverse impact upon the public health or safety.***

There is no substantial evidence in the record that the proposed waivers of a development standard to reduce the front yard, side yards, and rear yard will have a specific adverse impact upon public health and safety or the physical environment, or any real property that is listed in the California Register of Historical Resources. A "specific adverse impact" is defined as "a significant, quantifiable, direct and unavoidable impact, based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete" (LAMC Section 12.22. A.25(b)). The record does not identify a public health and safety standard in relation to this finding. There are no historic resources on the subject property. Potential environmental impacts have been analyzed in the Categorical Exemption (CE) prepared for the project; the CEQA Class 32 Categorial Exemption, did not find any significant environmental impacts as a result of the project. The project is within a methane zone and will be subject to additional regulations as required. The property is not located on a substandard street in a Hillside area and is not located in a Liquefaction Zone, a Fault Zone, a Special Grading Area, a Very High Fire Hazard Severity Zone, or any other special hazard area.

Therefore, there is no substantial evidence that the proposed project, and the requested waivers will have a specific adverse impact on the physical environment, on public health and safety or the physical environment, or on any Historical Resource. Based on the above, there is no basis to deny the requested waivers.

b. ***The waiver[s] or reduction[s] of development standards will not have the effect of physically precluding the construction of a development meeting the [affordable set-aside percentage] criteria of subdivision (b) at the densities or with the concessions or incentives permitted under [State Density Bonus Law]" (Government Code Section 65915(e)(1)).***

A Density Bonus project may request other "waiver[s] or reduction[s] of development standards that will have the effect of physically precluding the construction of a development meeting the [affordable set-aside percentage] criteria of subdivision (b) at the densities or with the concessions or incentives permitted under [State Density Bonus Law]" (Government Code Section 65915(e)(1).

The subject property is zoned [Q]R4-1. As approved the project includes waiver of development standards for all yards to permit a zero-foot front yard setback in lieu of the fifteen-foot required, a zero-foot northerly side yard setback in lieu of the ten-foot required, a five-foot southerly side yard setback in lieu of the ten-foot required, and a thirteen-foot four-inches rear yard setback in lieu of the 19-foot required.

As proposed, the granting of these waivers will allow for the development of the proposed residential building with the inclusion of the affordable residential units because the quantity of units allowed under the density bonus increases in FAR and two-way driveways, reductions in building stepback and driveway distance, and all yard setback reductions granted under the Incentives allows for the development of the affordable units. Allowing the reduction in setbacks in all yards, will allow an increase in the building envelope which will allow for the construction of the affordable units. As presented by the applicant, without the requested reductions in the front yard, the side yards, and the rear yard, the floor area located within those yards would be physically precluded from the Project preventing the construction of the proposed floor area and units described in the plans.

c. The Waivers are contrary to State/federal law.

There is no substantial evidence in the record indicating that the requested waivers are contrary to any State or federal laws.

Waiver of Dedication and Improvements Findings

3. **The dedication or improvement is not necessary to meet the City's mobility needs for the next 20 years based on the established Streets Standards Committee's guidelines**.

   The proposed project involves the demolition of the existing vacant duplex, a vacant triplex, and a surface parking lot for the construction, use, and maintenance of a new seven-story residential building with 102 dwelling units with 14 affordable units set aside for Very Low Income Households. Currently the public right-of-way along Beloit Avenue maintains a 10-foot sidewalk. The Mobility Plan designates the street as a Collector Street – which requires a roadway width of 66 feet. This Mobility Plan expansion is asking the project site to dedicate three feet of the right-of-way in hopes that future projects of all properties along Beloit Avenue will also dedicate three feet. However, there is no evidence that this will be accomplished within the next 20 years, nor any reasonable time thereafter.

   The existing residential pedestrian walkway along South Beloit Avenue has a uniform alignment and all buildings along the block currently observe a front yard setback of at least ten feet except for the existing Holiday Inn Express on the corner of Beloit Avenue that observes a zero-foot setback. The structure adjacent across the alley to the northeast (11250 1-78 Santa Monica Boulevard) was constructed in 1993 and operates as a Holiday Inn Express with 78 guest rooms. The abutting property to the southwest (1729 1-35 Beloit Avenue) was developed with a multi-family apartment building in 1959 and has not expanded or applied for new permit applications for redevelopment. These properties are the only other buildings on this portion of South Beloit Avenue and therefore are likely to not be improved in the foreseeable future. As such, given the intensity and usefulness of the established developments in the vicinity of the subject site, there is no evidence that all nearby parcels would accomplish the 3-foot right-of way dedication in the next 20 years, nor any reasonable time thereafter.

   The existing 10-foot sidewalk along South Beloit Avenue is suitable for pedestrian travel. Requiring an additional three-foot would reduce the overall lot area and therefore reduce the footprint and size of the proposed building. Being that the other abutting properties are unlikely to have an opportunity to observe this required dedication, the dedication on South Beloit Avenue would only be reserved for a small stretch of land directly adjacent to the project site. The applicant will improve the existing right-of-way by removing a driveway apron and improving the sidewalk which provides the pedestrian ease of travel. Therefore, the required dedication would not be necessary in meeting the city's mobility needs for the next 20 years as the sidewalk is already suitable for pedestrian travel.

   The requested Waiver of Dedication along South Beloit Avenue is not necessary to meet the City's mobility needs for the next 20 years. The project site is across the street from a 405-South Interstate on-ramp and there are nearby commercial uses that are within a walkable distance. It is also likely to go unfulfilled collectively in the next 20 years as these lots have no immediate need or opportunity to fulfill this dedication. The Project will provide improvements for the adjacent sidewalk and the existing alley behind the proposed building. These requirements are not needed to meet any of the City's immediate (within the next 20 years) mobility needs.

CEQA and Additional Findings

4. **Flood Insurance.** The National Flood Insurance Program rate maps, which are a part of the Flood Hazard Management Specific Plan adopted by the City Council by Ordinance No. 172,081, have been reviewed and it has been determined that this project is located outside of a flood zone.

5. The proposed project qualifies for a Class 32 Categorical Exemption because it conforms to the definition of "In-fill Projects". The project can be characterized as in-fill development within urban areas for the purpose of qualifying for Class 32 Categorical Exemption as a result of meeting five established conditions and if it is not subject to an Exception that would disqualify it. The Categorical Exemption document attached to the subject case file provides the full analysis and justification for project conformance with the definition of a Class 32 Categorical Exemption.

PUBLIC HEARING AND COMMUNICATIONS

An official virtual (online) public hearing was conducted on Tuesday, February 11, 2025, at approximately 10:00 a.m. via Zoom teleconference.

1. Attendees

   The hearing was attended by approximately 5 people, consisting of the applicant's team, including the representative. Many of the attendees were members of the public. No representative from Council District 11 was present.

2. Testimony

   a. The Hearing Officer began the hearing by discussing format and logistics and introduced the project.

   b. Mr. Matthew Hayden, representative for the applicant's team, presented the project. Mr. Hayden described the project, its various design features and development standards, and specific features that have been discussed during the planning process.

   c. One (1) member of the public spoke on the project during the public comment portion of the hearing.

   d. Rodney Chappelle – Asked the project representative what the construction timeline was for Case CPC-2023-8315.

   e. Mr. Hayden responded to Mr. Chappelle, stating that once final approvals are received, the project would be built in 18 to 24 months.

   f. The Hearing Officer asked the project representative about any correspondence with the Neighborhood Council or Council District 11. The project representative stated that the project team has reached out but has not received any feedback from either.

   g. The Hearing Officer did not ask any questions of the applicant.

   h. With no other questions or speakers, the Hearing Officer closed the hearing and informed the audience that the project would be considered by the City Planning Commission on Thursday March 13, 2025.

<u>Response to Comments</u>

One comment was made at the public hearing. The project planner received one comment of support by phone that have been addressed in the Issues and Considerations section of the staff report.

Exhibit A
Plans

PROJECT

A NEW 102-UNITS APARTMENT BUILDING 7-STORY (5-STORY TYPE III-A AND 2-LEVEL TYPE I-A) WITH ROOF TOP DECK AND 2-LEVELS OF BASEMENT GARAGE TYPE I-A

1717 S. BELOIT AVENUE, LOS ANGELES, CA 90025

ABBREVIATIONS

A.B.	ANCHOR BOLT
A/C	AIR CONDITIONING
ALUM.	ALUMINUM
A.N.G.	AVERAGE NATURAL GRADE
ARCH.	ARCHITECTURAL
BD.	BOARD
BLDG.	BUILDING
BLK.	BLOCK
BLK'G.	BLOCKING
B.W.	BACK OF WALL
C.	COMPACT
C.L.	CENTER LINE
CLR.	CLEAR
C.O.	CLEAR OUT
CONC.	CONCRETE
CONT.	CONTINUOUS
CSB.	CONCRETE SPLASH BLOCK
D.	DRYER
DBL.	DOUBLE
DN	DOWN
DWG	DRAWING
D.S.	DOWN SPOUT
DWR.	DRAWER
EL.	ELEVATION
EXIST'G., (E)	EXISTING
EXT.	EXTERIOR
F.F.	FINISHED FLOOR
F.G.	FIXED GLASS
FIN.	FINISH/FINISHED
FL.	FLOOR
F.O.S.	FACE OF STUD OR STRUCTURE
F.P.	FIXED PANEL
F.S.	FINISHED SURFACE
FT.	FOOT/FEET
GA.	GAUGE
GALV.	GALVANIZED
GR.	GRADE
GYP.	GYPSUM
H.C.	HOLLOW CORE
HORIZ.	HORIZONTAL
INT.	INTERIOR
INV.	INVERT
MANFG.	MANUFACTURING
MANUF.	MANUFACTURER
MAX.	MAXIMUM
MECH.	MECHANICAL
MIN.	MINIMUM
M.T.	METAL THRESHOLD
(N)	NEW
N.G.	NATURAL GRADE
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
O.H.	OVERHANG
P.C.	PULL CORD
PL,P.L.	PROPERTY LINE
P&S	POLE AND SHELF
PYWD.	PLYWOOD
REC.	RECREATION
REINF.	REINFORCED
RM	ROOM
R.S.	ROUGH SWAN
S.	STANDARD
S.C.	SOLID CORE
SCH.	SCHEDULE
SIM.	SIMILAR
STD.	STANDARD
STL.	STEEL
STRUC.	STRUCTURAL
SQ.	SQUARE
T.C.	TOP OF CURB
T&G	TONGUE & GROOVE
THK.	THICK
THRU	THROUGH
T.O.P.	TOP OF PLATE
T.O.S.	TOP OF SLAB
T.W.	TOP OF WALL
TYP.	TYPICAL
VERT.	VERTICAL
W.	WASHER
W/	WITH
W/IN	WITHIN
W/O	WITHOUT
WD.	WOOD
WP.	WATERPROOF OR WEATHERPROOF

LEGEND

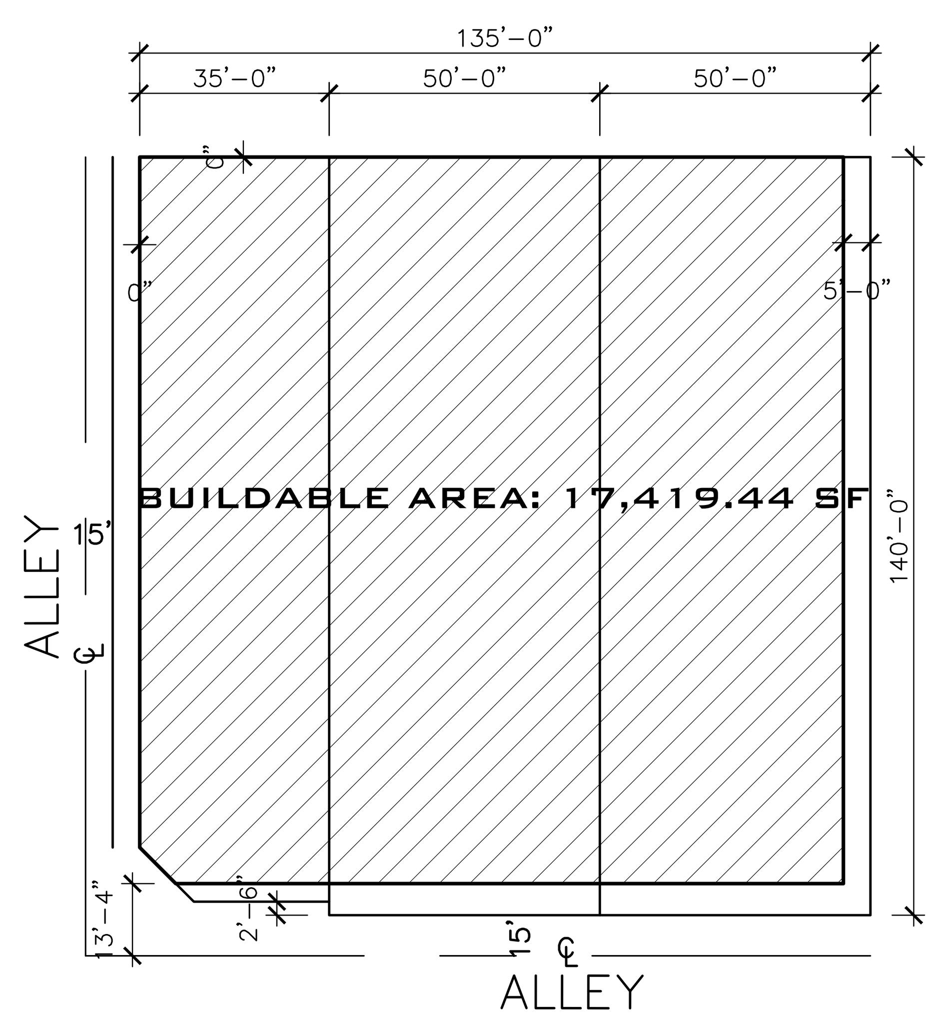
- WALL LINE: NUMBERS VERTICAL, LETTERS HORIZONTAL
- DOOR SYMBOL NUMBERS
- WINDOW TYPE - LETTERS
- DETAIL / DETAIL IDENTIFICATION / SHEET WHERE DETAIL IS DRAWN
- SECTIONAL DETAIL / DETAIL IDENTIFICATION / SHEET WHERE DETAIL IS DRAWN
- SECTION / SECTION IDENTIFICATION / SHEET WHERE SECTION IS DRAWN
- ELEVATION IDENTIFICATION / INTERIOR ELEVATION
- SHEAR WALL-LETTERS / REVISION - NUMBERS / CLOUD AROUND REVISION OPTICAL
- MATCH LINE / SHADED PORTION IS THE SIDE CONSIDERED
- WORK POINT
- 100 NEW OR FINISHED CONTOURS
- (98) EXISTING CONTOURS
- PROPERTY LINE
- CENTER LINE

MATERIALS

- EARTH
- SAND, MORTAR, PLASTER
- CONCRETE
- BRICK
- CONC. BLOCK
- STONE
- METAL (OR)
- METAL LATH
- WOOD FINISH
- WOOD FRAMING (THRU MEMBER)
- WOOD FRAMING (INTERRUPTED MEMBER)
- PLYWOOD
- GLASS (OR)
- GYPSUM BOARD
- INSULATION, BATT
- INSULATION, RIGID

VICINITY

BUILDABLE AREA DIAGRAM



FLOOR AREA

FLOOR	TYPE OF CONST.	# OF UNITS	AREA PER ZONING CODE	
BASEMENT				
P2-LEVEL	TYPE I-A		115	S.F.
P1-LEVEL	TYPE I-A		121	S.F.
FIRST	TYPE I-A	4	5,811	S.F.
SECOND	TYPE I-A	13	15,267	S.F.
THIRD	TYPE III-A	14	15,267	S.F.
FOURTH	TYPE III-A	17	13,767	S.F.
FIFTH	TYPE III-A	18	13,767	S.F.
SIXTH	TYPE III-A	18	13,767	S.F.
SEVENTH	TYPE III-A	18	13,767	S.F.
TOTAL		102	91,648	S.F.

UNIT MIX SUMMARY

UNITS	UNIT COUNT	STUDIO	1 BEDROOM	2 BEDROOM	3 BEDROOM
101	1			✓	
102	1		✓		
201-701	6				✓
202	1				✓
302-702	5			✓	
203-703	6		✓		
204	1				✓
304-704	5			✓	
205-705	6			✓	
206-706	6				✓
207-707	6			✓	
208-708	6			✓	
209-309	2				✓
409-709	4			✓	
510-710	3	✓			
411	1			✓	
511-711	3	✓			
412-712	4	✓			
113	1	✓			
413-713	4	✓			
414-714	4	✓			
215,315	2			✓	
415-715	4		✓		
116	1		✓		
216-716	6		✓		
217-717	6			✓	
219-719	6	✓			
320	1		✓		
TOTAL	102	25	19	42	16

BUILDING DATA

THIS PROJECT IS 100% PRIVATELY FUNDED.
THIS IS NOT PUBLIC HOUSING AND NO TAX CREDIT RECEIVED FROM STATE OR FEDERAL.

APPLICABLE CODE: 2019 LOS ANGELES BUILDING CODE
2019 LOS ANGELES CITY GREEN BUILDING CODE

INFORMATION:

LOT 7, 8, AND 9 OF THE SUBDIVISION OF BLOCK 3 OF THE BARRETT VILLA TRACT, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA AS PER MAP RECORDED IN BOOK 78 PAGE 15 INCLUSIVE OF MAPS, IN THE OFFICE OF COUNTY RECORDER OF SAID COUNTY.

1709-21 1/2 S BELOIT AVENUE, LOS ANGELES, CA 90025
APN: 4261-008-023; 4261-008-008; 4261-008-009
ZONING: [Q] R4-1

PROJECT IS UTILIZING 88.75% DENSITY BONUS PER LAMC 12.22.A.25/AB1287

OFF MENU INCENTIVES:
1. 0'0" REDUCED STEP BACK IN LIEU OF REQUIRED 25' PER ORDINANCE NO 186249 SECTION A 2 A.
2. INCREASED DRIVEWAYS OF 2 IN LIEU OF 1 PER ORDINANCE NO 186249 SECTION B 1 B.
3. 35' REDUCED DISTANCE BETWEEN DRIVEWAYS IN LIEU OF 50' PER ORDINANCE NO 186249 SECTION B 1 C.
4. 5.26 :1 INCREASED FAR IN LIEU OF REQUIRED 3:1.

WAIVER OF DEVELOPMENT STANDARD:
1. 0'-0" REDUCED FRONT YARD IN LIEU OF REQUIRED 15'-0".
2. 5'-0" REDUCED S SIDE YARD IN LIEU OF REQUIRED 10'-0".
3. 0'0" REDUCED N SIDE YARD IN LIEU OF REQUIRED 10'-0".
4. 13'-4" REDUCED REAR YARD IN LIEU OF REQUIRED 19'-0".

SET ASIDE 14 UNITS (25%) FOR VERY LOW INCOME HOUSEHOLD PER LAMC SEC 12.22 A 25 (C) (1) / AB 1287.

ALLOWABLE BUILDING HEIGHT PER ZONE: UNLIMITED
ALLOWABLE BUILDING HEIGHT PER BUILDING: 75 FEET
PROPOSED BUILDING HEIGHT PER ZONING: 80 FEET

LOT AREA: 21,387.5 SF (INCL. 1/2 ALLEY - SEE DIAGRAM)

TOTAL NO. OF UNITS PROPOSED: 102 UNITS

NO. OF ALLOWABLE UNITS = $\frac{\text{LOT AREA}}{\text{DENSITY}} = \frac{21,387.5}{400}$ = 53.4~54 * 1.8875 (PER DENSITY BONUS)
= 101.925 ~ 102 UNITS

ALLOWABLE FLOOR AREA: 17,419.44 S.F. BUILDABLE AREA
PROPOSED FAR RATIO PER WAIVER: 91,648/17,419.44 = 5.26 :1

TOTAL PARKING REQUIRED PER AB 2097 — 0 SPACES

TOTAL PARKING PROVIDED — 97 SPACES
STANDARD: (12+4HC) @ 1ST FLR + 37 @ P1 UPPER LEVEL + 39 @ P2 LOWER LEVEL = 92
COMPACT: 4 @ 1ST FLR + 1 @ P1 UPPER LEVEL = 5

OF HC PARKING REQUIRED BASED ON PROVIDED PARKING:
FOR RESIDENT = 97 x 2% = 1.94 ~ 2 SPACE(S)
FOR GUEST = 0 x 5% = 0 ~ 0 SPACE(S)

REQUIRED ELECTRIC CHARGER SPACE (EV SPACE) PER PROVIDED PARKING
ELECTRIC VEHICLE (EV) READY SPACE PROVIDED: 96 x 30% = 28.8 ~ 29 SPACES
ELECTRIC VEHICLE CHARGING STATION (EVCS) REQUIRED: 29 x 10% = 2.9 ~ 3 SPACES

REQUIRED LONG-TERM BICYCLE PARKING (PER TABLE 12.21.A.16(a)(1)(i) — 76 STALLS
1-25 UNIT UNITS : 1 SPACE PER UNIT = 25 SPACES
26-100 UNITS : 1 SPACE PER 1.5 UNIT = 75/1.5 = 50 SPACES
101-200 UNITS : 1 SPACE PER 2 UNIT = 2/2 = 1 SPACES

REQUIRED SHORT-TERM BICYCLE PARKING (PER TABLE 12.21 A 16 (a) (1) (i)) — 8 STALLS @ PARKWAY
1-25 UNIT UNITS : 1 SPACE PER 10 UNIT = 25/10 = 2.5 SPACES
26-100 UNITS : 1 SPACE PER 15 UNIT = 75/15 = 5 SPACES
101-200 UNITS : 1 SPACE PER 20 UNIT = 2/20 = .1~ 0 SPACE

TYPE OF CONSTRUCTION: 5-LEVELS TYPE III-A OVER 2-LEVEL TYPE I-A OVER 2-LEVEL SUBTERRANEAN TYPE I-A

FOR TYPE III-A: MULTI STORY 48,000 S.F.

BUILDING AND GARAGE FULLY SPRINKLERED NFPA 13 (PER LAFC 903.3.1.1)
(SYSTEM TO BE APPROVED PRIOR TO INSTALLATION)
AUTOMATIC FIRE ALARM (PER LAFC 907) YES
EMERGENCY RESPONDER RADIO COVERAGE (LAFC 510.1) YES
TWO-WAY COMMUNICATION AT ELEVATOR LANDINGS (1007.8) YES
TWO-WAY RADIO COMMUNICATION SYSTEM (PER LAFC 510) YES
HORIZONTAL EXIT IN LIEU OF STANDBY BACKUP POWER FOR ELEVATORS (1007.4)

OPEN SPACE REQUIRED — 12,450 S.F.
25 UNITS (2-HAB.RM.) @ 100 S.F. = 2,500 S.F.
19 UNITS (2-HAB.RM.) @ 100 S.F = 1,900 S.F.
42 UNITS (3-HAB.RM.) @ 125 S.F. = 5,250 S.F.
16 UNITS (4-HAB.RM.) @ 175 S.F. = 2,800 S.F.
12,450 S.F.

OPEN SPACE PROVIDED: — 12,723 S.F.
DECK @ 4TH FLOOR 1,412 S.F.
31 BALCONIES (@ 50 S.F.) 1,550 S.F.
ROOF DECK ~ 4 AREAS 6,649 S.F.
REC ROOMS 3,112 S.F.

LANDSCAPED OPEN SPACE : — 1,970.25 S.F.
DECK @ 4TH FLOOR 1,412 S.F. x 25% = 353 SF
ROOF DECK ~ 4 AREAS 6,649 S.F. x 25% = 1,617.25 SF

TREE COUNT CALCULATION:
REQUIRED: 102 UNITS / 1 TREE/4 DU = 26 TREES
PROVIDED: 26

SETBACK CALCULATION:

	REQUIRED	PROVIDED
FRONT (BELOIT AVE)	15'-0"	0'-0"
REAR (ALLEY)	19'-0"	13'-4"
NORTH (SIDE)	10'-0"	0'-0"
SOUTH (SIDE)	10'-0"	5'-0"

OWNER:	EJKS, LLC	10350 SANTA MONICA BLVD., STE 190, LOS ANGELES, CA 90025	(310) 999-3060	SOILS ENGINEER:	BYER GEOTHECNICAL INC.	1461 E CHEVY CHASE DR. SUITE 200, GLENDALE, CA 91206	(818) 549-9959
ARCHITECT:	CHARLES HEFNER	1836 PARNELL AVE., SUITE 105, LOS ANGELES, CA 90025	(310) 470-5815	ENERGY CONSULTANT:	MNS ENGINEERING INC.	1600 SAWTELLE BLVD., SUITE 300, LOS ANGELES, CA 90025	(310) 445-8474
SURVEYOR:	TALA & ASSOCIATES	1916 COLBY AVE. LOS ANGELES, CA 90025	(310) 837-1617	MECH./PLUMBING ENGINEER:	MNS ENGINEERING INC.	1600 SAWTELLE BLVD., SUITE 300, LOS ANGELES, CA 90025	(310) 445-8474
STRUCTURAL ENGINEER:	MASOUD DEJBAN	17200 VENTURA BLVD. STE 213-A, ENCINO, CA 91316	(818) 784-5571	ELECTRICAL ENGINEER:	ABRARI ASSOCIATES ELECTRICAL ENGR.	1713 STANDARD AVENUE, GLENDALE, CA 91201	(818) 956-1900
SHORING ENGINEER:	MASOUD DEJBAN	17200 VENTURA BLVD. STE 213-A, ENCINO, CA 91316	(818) 784-5571	LANDSCAPE ARCHITECT:	YAEL LIR LANDSCAPE ARCHITECTS	1010 SYCAMORE AVE., STE. 313, SOUTH PASADENA, CA 31030	(323) 258 5222

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No. | Revision | date

LICENSED ARCHITECT
CHARLES HEFNER
No. C-23963
RENEWAL DATE
STATE OF CALIFORNIA

SAM GHANOUNI
DESIGNER
1836 PARNELL AVE., STE. 100
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TEL.: 310-430-1976
e-mail samghanouni@me.com

OWNER
EJKS, LLC
10350 SANTA MONICA BLVD. STE 190
LOS ANGELES, CA 90025

PROJECT
1717 S BELOIT AVE.
LOS ANGELES, CA. 90025

DRAWING TITLE
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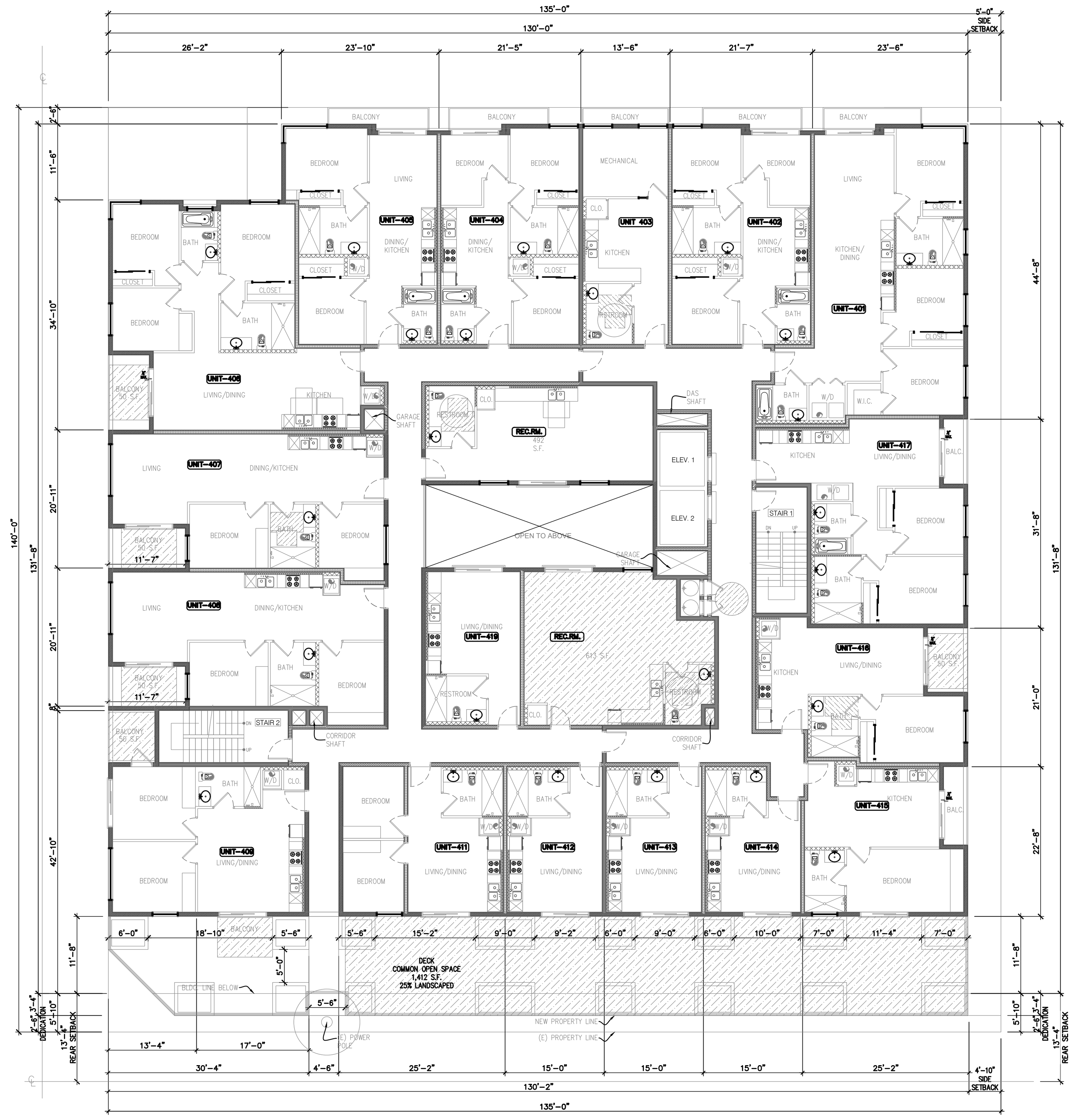

FOURTH FLOOR OPEN SPACE DIAGRAM

COMMON OPEN SPACE : 613 SF
PRIVATE OPEN SPACE : 300 SF

SCALE: 1/8" = 1'-0"

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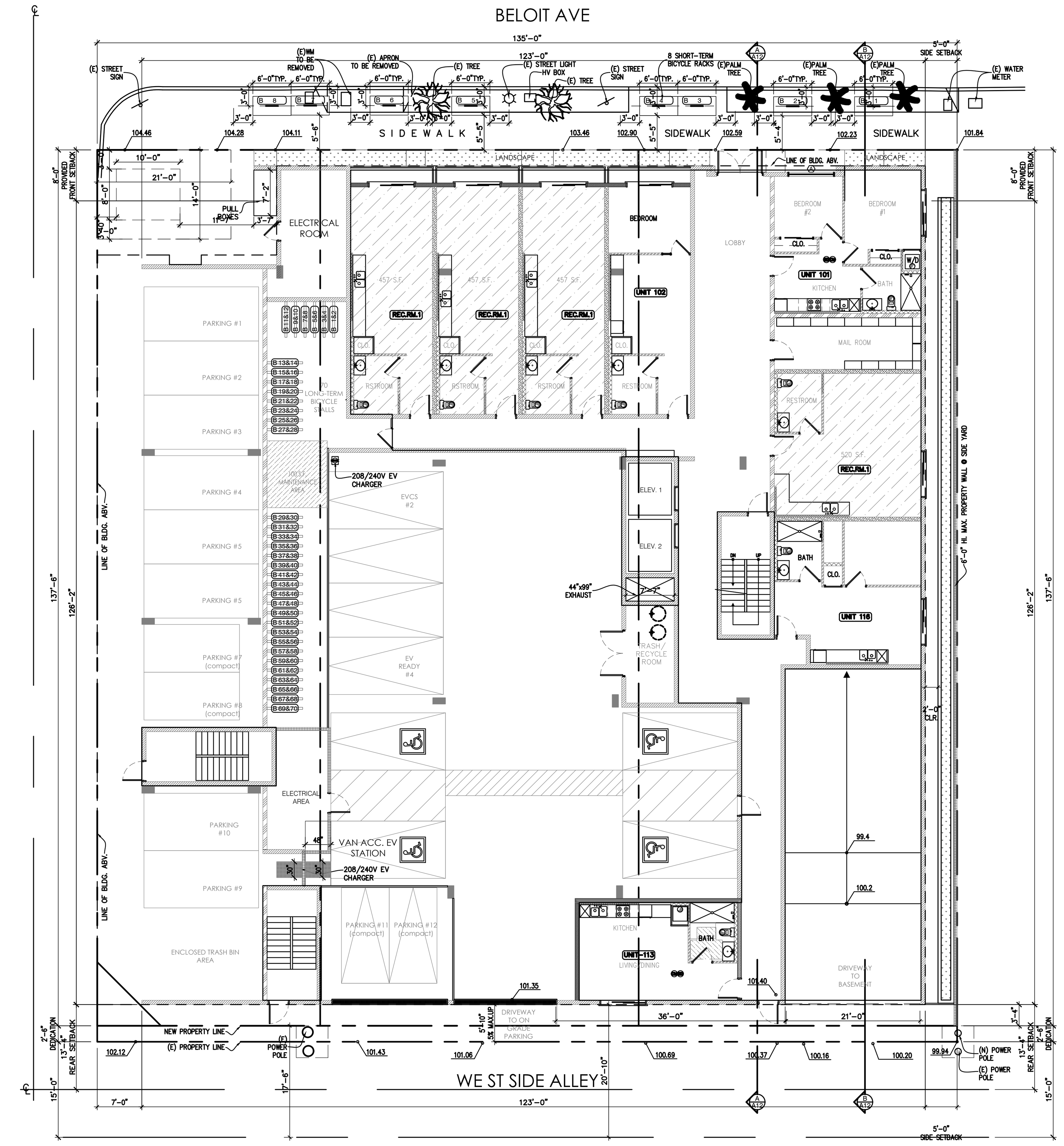

FIRST FLOOR OPEN SPACEDIAGRAM

SCALE: 1/8" = 1'-0"

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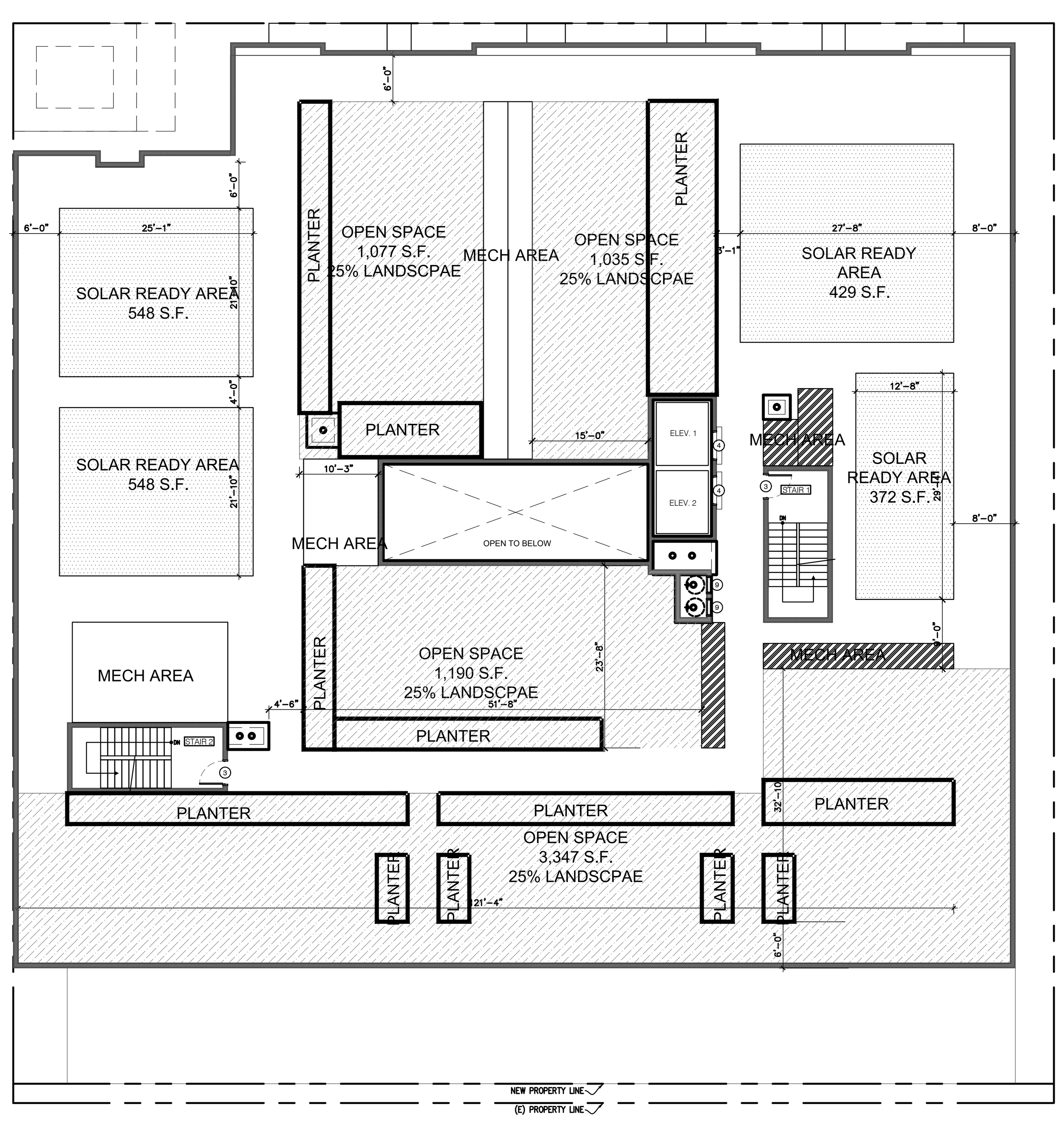

ROOF PLAN OPEN SPACE DIAGRAM

ROOF DECK ~ 4 AREAS : 5,757 S.F.

SCALE: 1/8" = 1'-0"

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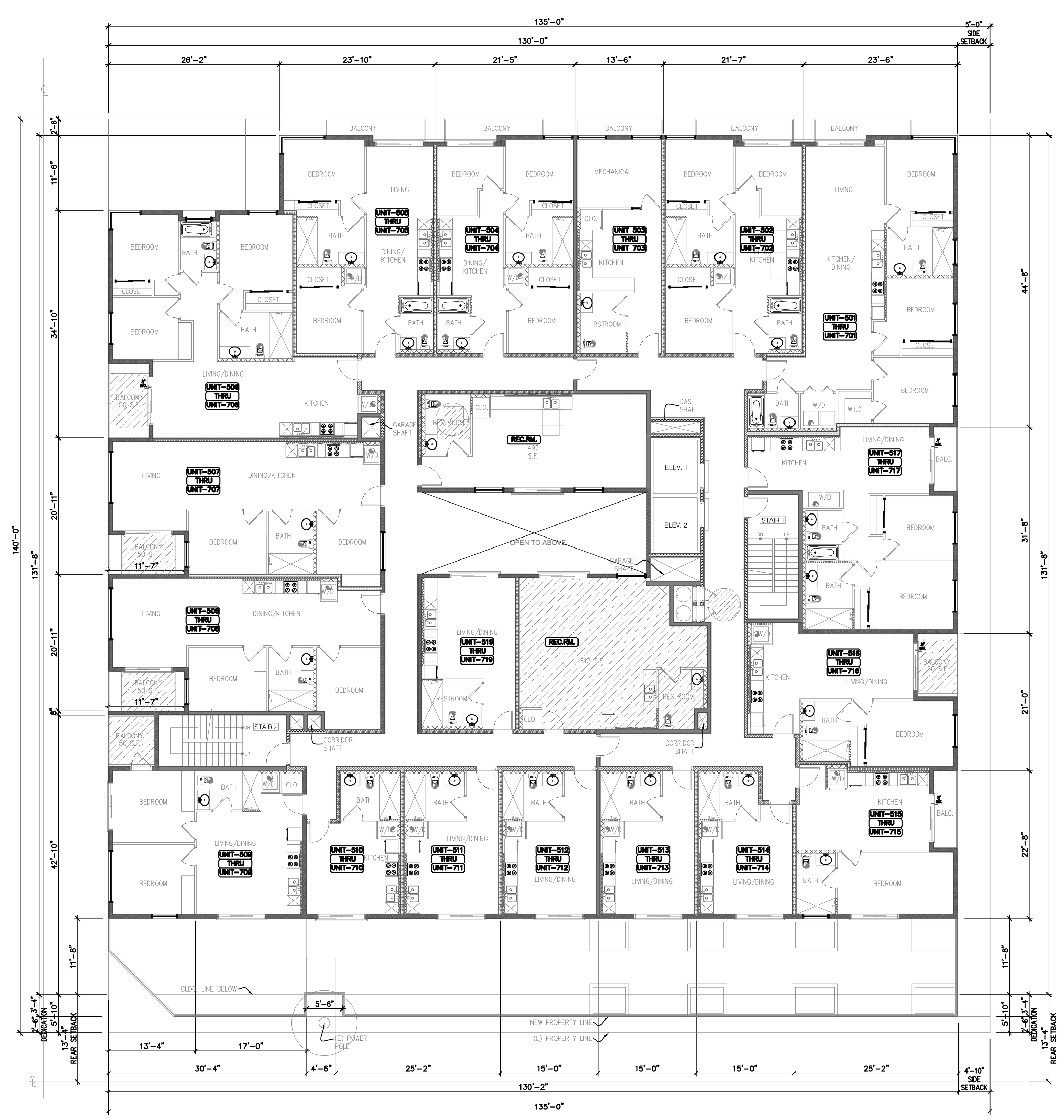
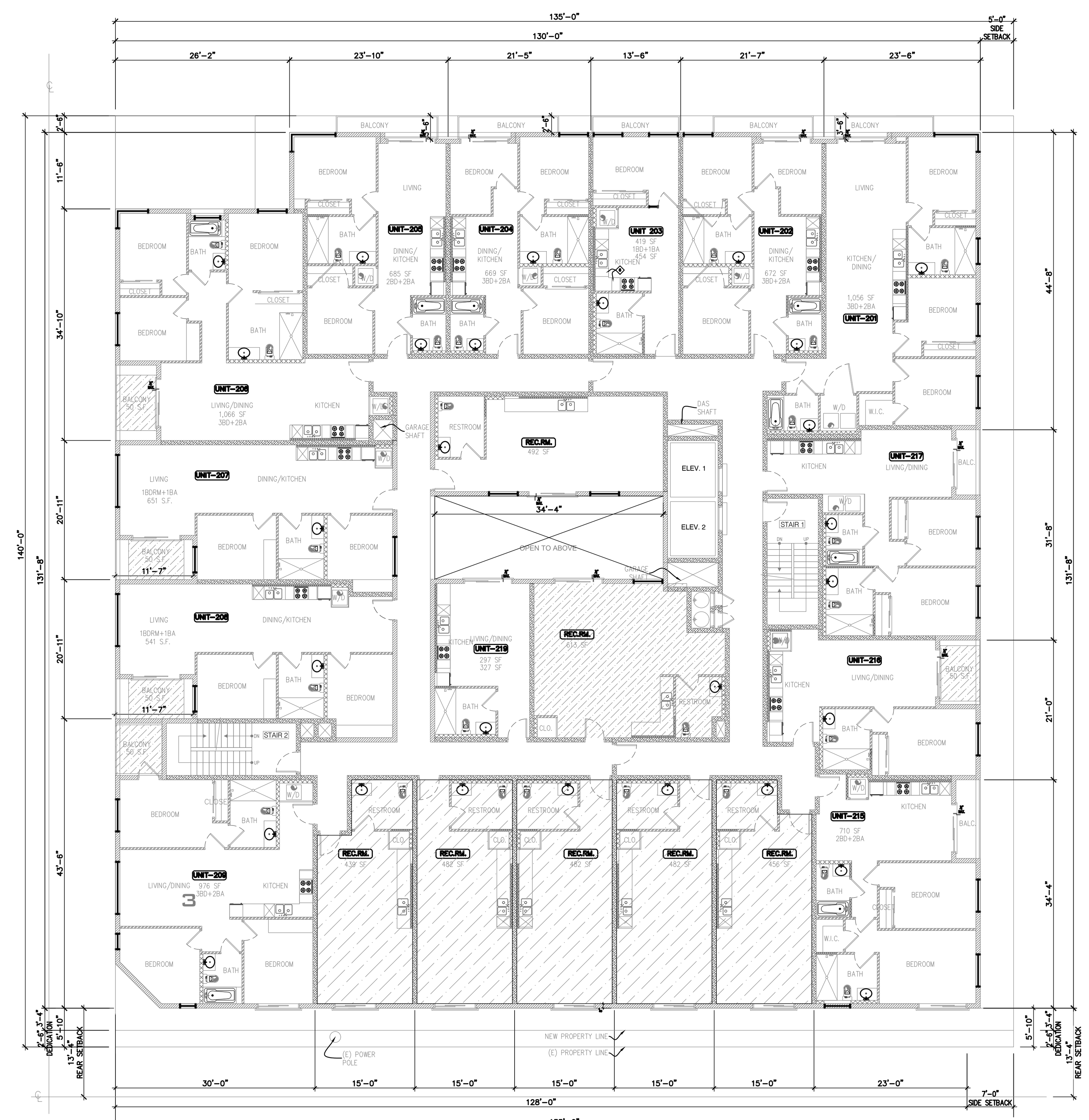


FIFTH-SEVENTH FLOOR OPEN SPACE DIAGRAM

COMMON OPEN SPACE : 613 SF
PRIVATE OPEN SPACE : 250 SF

SCALE: 1/8" = 1'-0"

N



SECOND AND THIRD FLOOR OPEN SPACE DIAGRAM

COMMON OPEN SPACE : 613 SF
PRIVATE OPEN SPACE : 250 SF

SCALE: 1/8" = 1'-0"

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1717 S BELOIT AVE.
LOS ANGELES, CA. 90025

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OPEN SPACE DIAGRAMS

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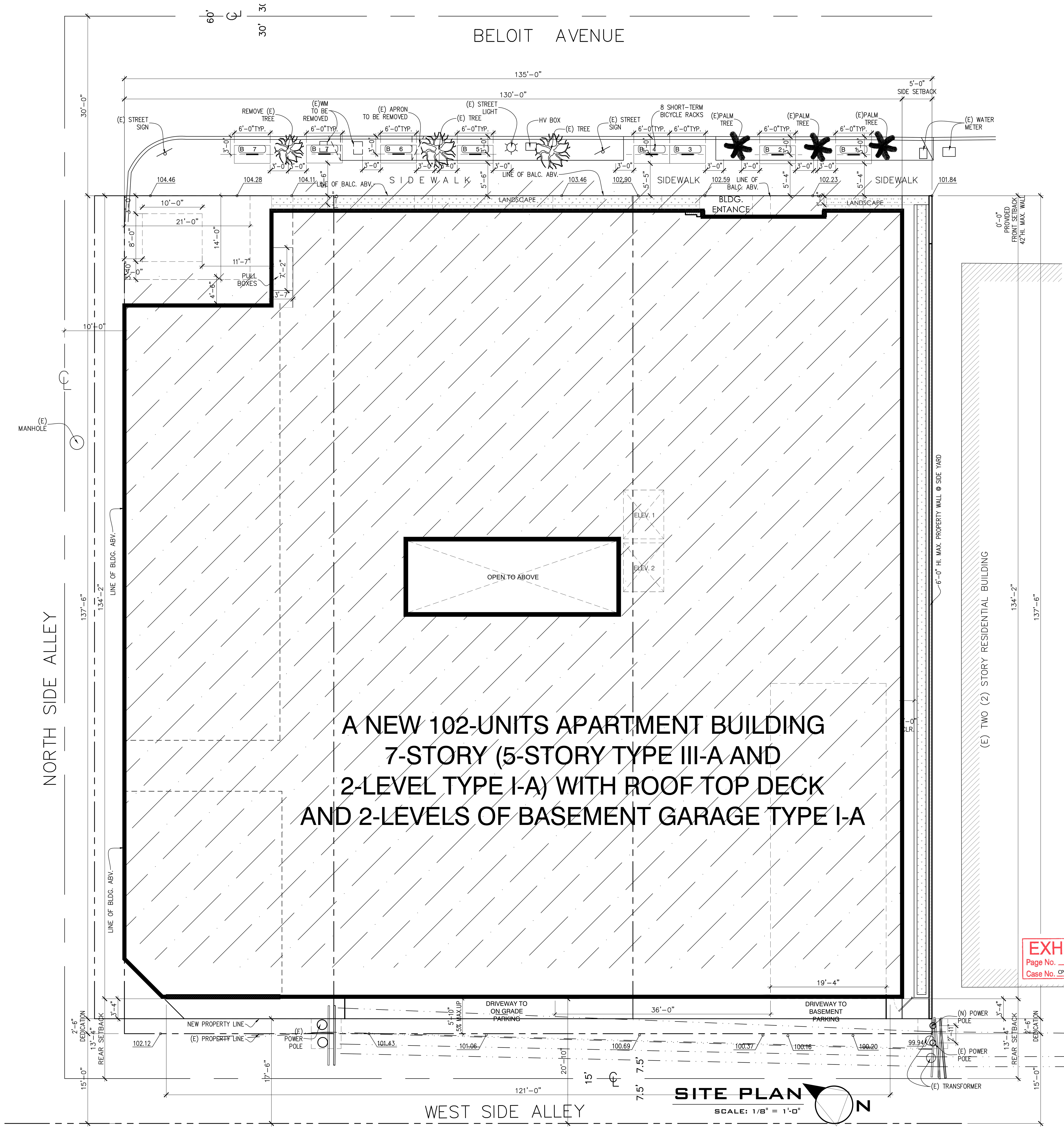

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Case No. CPC-2023-8315-DB-WDI-HCA

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DRAWING TITLE
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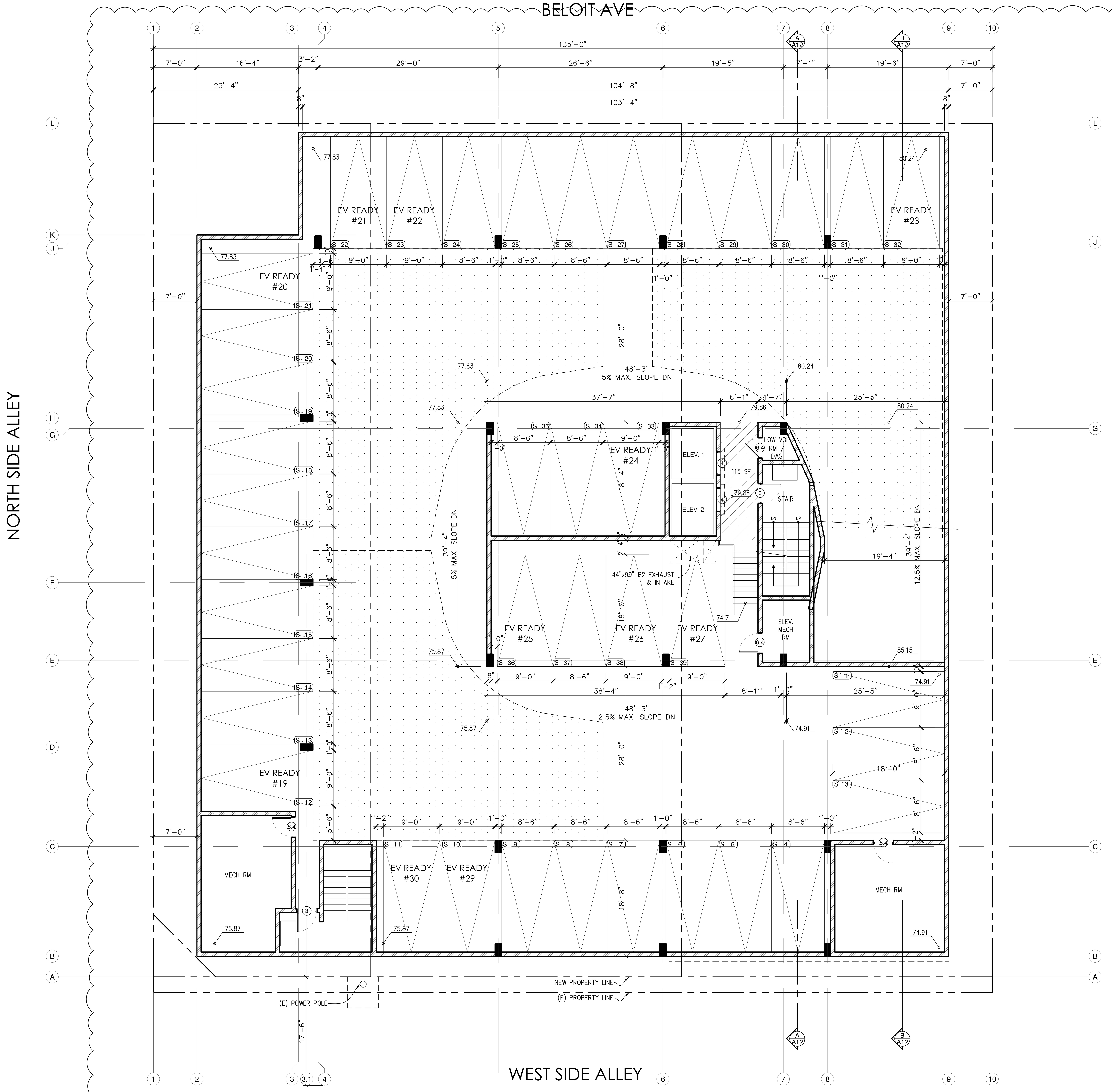

P2- LOWER PARKING PLAN

N

TOTAL PARKING PROVIDED:		39
RESIDENTIAL:	STANDARD	39
	COMPACT	
EV/EVCS SPACES PROVIDED:		12
EV READY SPACE		12

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LOS ANGELES, CA. 90025

DRAWING TITLE
P2 - LOWER LEVEL PARKING PLAN

EXHIBIT "A"
Page No. 4 of 25
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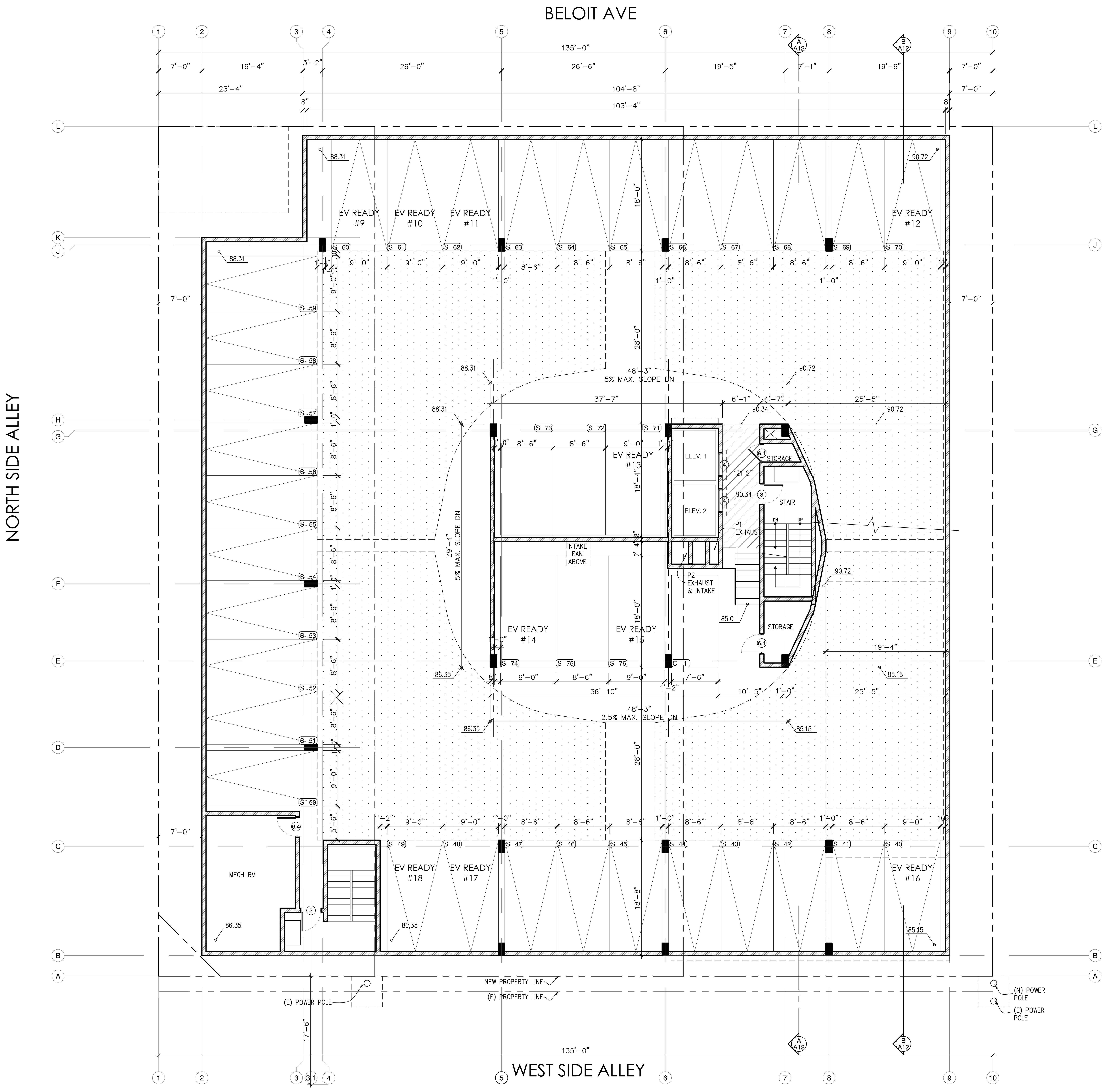

P1- UPPER PARKING PLAN

TOTAL PARKING PROVIDED:	38
RESIDENTIAL: STANDARD	37
COMPACT	1
EV/EVCS SPACES PROVIDED:	12
EV READY SPACE	12

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Case No. CPC-2023-8315-DB-WDI-HCA

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DRAWING TITLE
P1 - UPPER LEVEL
PARKING PLAN

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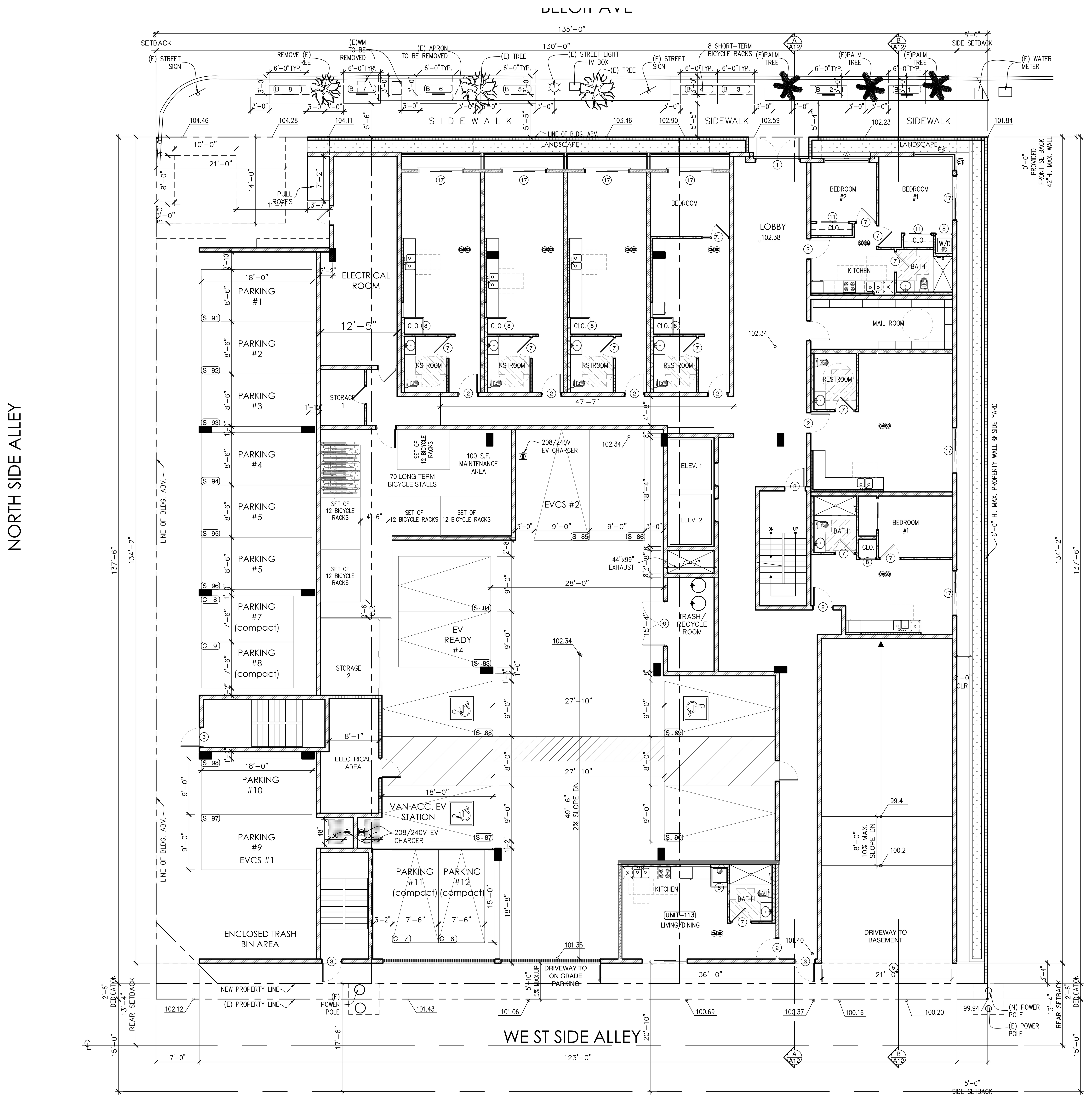

TOTAL PARKING PROVIDED:		20	EV/EVCS SPACES PROVIDED:	7	BICYCLE STALL PROVIDED	
RESIDENTIAL:	STANDARD	12	EV READY SPACE	6	LONG-TERM	70
	DISABLED	4	EV CHARGING STATION	2	SHORT-TERM	5
	COMPACT	4				

FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

N

FLOOR PLAN LEGENDS:

1A EXPOSED DOWNSPOUT

2A EXHAUST SHAFT/CORRIDOR VENT SHAFT

3A PROVIDE AN APPROVED STAIRWAY SIGN INDICATING THE FLOOR LEVEL, TERMINUS OF THE TOP AND BOTTOM OF THE STAIR AND THE IDENTIFICATION NUMBER OF THE STAIR. IT SHALL BE LOCATED APPROXIMATELY 5 FT. ABOVE THE FLOOR LANDING AND BE READILY VISIBLE WHEN THE STAIR DOORS ARE IN AN OPEN OR CLOSED POSITION. (1022.8)

* PROVIDE WATER CURTAIN BY MEANS OF APPROVED ADDITIONAL FIRE SPRINKLER HEADS

VITRUS CHINA UNDER MOUNTED LAVATORY.

ELONGATED LOW FLUSH: 1.6 GALLON PER FLUSH, FLOOR MOUNTED WATER CLOSET.

CAST IRON 30"xTUB/SHOWER COMBINATION WITH DRAIN AS SHOWN– WALL COVERING SHALL BE CEMENT PLASTER, TILE OR APPROVED EQUAL, 70" ABOVE THE DRAIN AT THE SHOWER OR TUB/SHOWER COMBO –PROVIDE SHATTER–RESISTANT MATERIALS FOR TUB/SHOWER ENCLOSURE

SHOWER STALL, GLASS ENCLOSURE DOORS AND PANELS MUST BE LABELED CATEGORY II, SWING THE DOOR OUTWARD, NET AREA OF SHOWER RECEPTOR SHALL BE NOT LESS THAN 1024 SQ. INCH OF FLOOR AREA AND ENCMPASS 30"ø CIRCLE –PROVIDE SHATTER–RESISTANT MATERIALS FOR TUB/SHOWER ENCLOSURE

STAINLESS STEEL, UNDER MOUNT KITCHEN SINK — STOVE — REFRIGERATOR

MC MIRRORED MEDICINE CABINET

QUIET EXHAUST FAN WITH MINIMUM 5 AIR EXCHANGES PER HOUR.
–FANS SHALL BE ENERGY STAR COMPLIANT AND BE CONDUCTED TO TERMINATE TO THE OUTSIDE OF THE BUILDING
–FANS, NOT FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, MUST BE CONTROLLED BY A HUMIDITY CONTROL

SD HARD WIRE WITH BACK UP BATTERY SMOKE DETECTOR, SD SHALL SOUND AN ALARM IN ALL SLEEPING AREAS OF THE DWELLING UNIT IN WHICH THEY ARE LOCATED.

CM CARBON MONOXIDE

EXIT SIGN.
SHALL BE CONNECTED TO AN EMERGENCY POWER SYSTEM THAT WILL PROVIDE AN ILLUMINATION OF NOT LESS THAN 90MIN. IN CASE OF PRIMARY POWER LOSS.

STAND PIPE CLASS I — FE FIRE EXTINGUISHER

W/D WASHER/ DRYER, N.I.C. — CLOSET SINGLE–POLE AND DOUBLE SHELF ABOVE

24" BY 36" ROOF & ATTICS ACCESS HATCH — DROP CEILING @ 8'–0" ABOVE F.F.

NOTES:

1. "SPRINKLER SYSTEM TO BE APPROVED BY PLUMBING DIVISION PRIOR TO INSTALLATION."

2. FLAME–SPREAD CLASSIFICATION & INDEX FOR MATERIAL IN ENCLOSED VERTICAL EXIT WAYS & OTHER EXIT WAYS & ROOMS/ AREAS SHALL BE ACCORDING TO TABLE 8–A OF CHAPTER 8 OF IBC 2006 AS INDICATED HEREIN.
   CLASS I, FLAME–SPREAD INDEX 0–25 IN ENCLOSED VERTICAL EXIT WAYS
   CLASS II, FLAME–SPREAD INDEX 26–75 IN OTHER EXIT WAYS
   CLASS III, FLAME–SPREAD INDEX 76–200 IN ROOMS OR AREAS

INTERIOR WALL & CEILING FINISH REQUIREMENTS			
GROUP	SPRINKLERED		
	Interior exit stairways, interior exit ramps & exit passageways	Corridors & enclosure for exit access stairways & exit access ramp	Room & enclosed spaces
A3	B	B	C
R2	C	C	C

3. ALL SHOWER HEADS AND WATER CLOSETS SHALL BE OF LOW CONSUMPTION TYPE AS REQUIRED AND APPROVED BY LOCAL GOVERNMENT AGENCIES.

4. FINISH FLOOR SURFACE SHALL BE OF SLIP RESISTANT MATERIAL

5. ALL DIMENSION LINES INDICATE THE FACE OF STUD FOR EXTERIOR SIDE AND C.L. OF STUD FOR INTERIOR WALLS UNLESS NOTED OTHERWISE

6. SETBACK DIMENSIONS ARE CLEAR

7. WORD "CLR" (CLEAR) IN DIMENSIONS IS TO THE FINISH FACE OF ANY SURFACE

8. FOR TYPICAL UNIT PLANS SEE SHEET A3.1 & A3.2

9. FOR STAIRS ENLARGED PLAN & SECTIONS SEE SHEET A8

10. FOR WALL STUD SIZES REFER TO STRUCTURAL DRAWINGS.

11. DO NOT SCALE PLANS

12. DECK & BALCONY WATERPROOFING MEMBRANE SHALL BE "DEX–O–TEX" AS MANUFACTURED BY 'CROSSFIELD PRODUCTS CORPORATION, TEL. 310–886–9100/ 310–722–8242, LARR# 02360

13. PROVIDE SMOKE & FIRE DAMPERS FOR ALL OPENINGS TO 1 HR. RATED CORRIDOR ENCLOSURE

14. PROVIDE & MAINTAIN ROOMS TEMPERATURE OF MIN. 70°F ABOVE 3' FROM FLOOR

WALL TYPE LEGENDS:

A INTERIOR 1 HR. WOOD STUD WALL– SEE 2/D1

A1 INTERIOR 1 HR. WOOD STUD WALL–STC 50–SEE 3/D1
UNIT SEPARATION FIRE PARTITION

A2 INTERIOR 1 HR. METAL STUD WALL – SEE 11a/D1

A4 INTERIOR 1 HR. WOOD STUD WALL–STC 50–SEE 3/D1
CORRIDOR WALL FIRE PARTITION

B EXTERIOR TWO HOUR WOOD STUD WALL–SEE 9/D1
FIRE RETARDANT D–BLAZE BY VIANCE, LLC ICC ESR# 2645, LARR 24502

B1 INTERIOR TWO HOUR WOOD STUD WALL–STC 50–SEE 7/D1
SHAFT ENCLOSURE, FIRE BARRIER
FIRE RETARDANT D–BLAZE BY VIANCE, LLC ICC ESR# 2645, LARR 24502

B2 INTERIOR TWO HOUR WOOD STUD WALL–SEE 6/D1
SHAFT ENCLOSURE, FIRE BARRIEIR

C 2x6 STUD PLUMBING WALL

C1 2x4 STUD PLUMBING WALL

D 8" THK. CONC. WALL, 3 HOUR – SEE STRUCT.

D1 10"–12" THK. CONC. WALL, 3 HOUR – SEE STRUCT.

E 6" THK. CONC. BLK WALL, 3 HOUR – SEE STRUCT.

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Page No. 6 of 25
Case No. CPC-2023-8315-DB-WDI-HCA

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DRAWING TITLE
FIRST FLOOR PLAN

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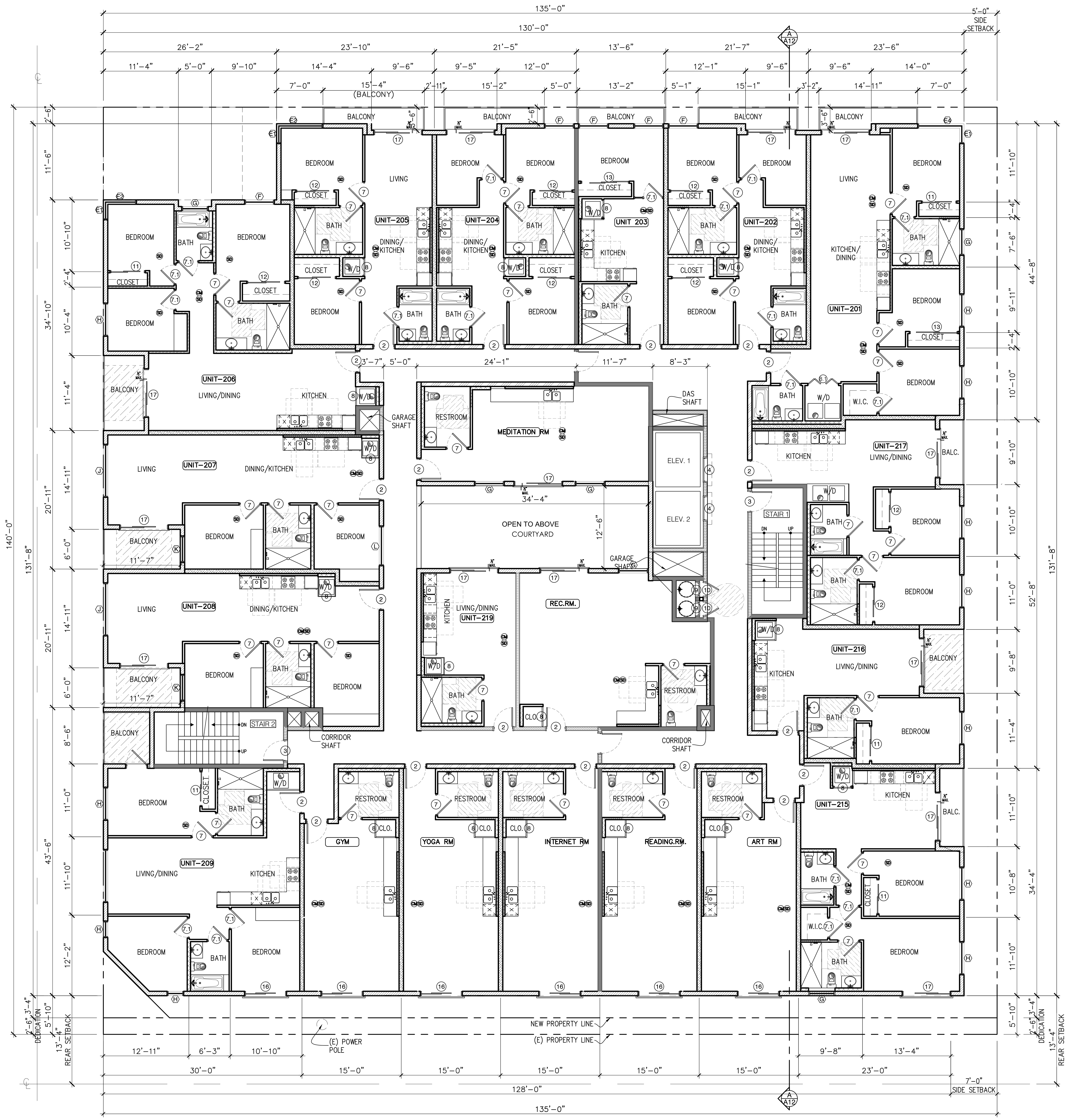

SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"

FLOOR PLAN LEGENDS:

- 1A EXPOSED DOWNSPOUT
- 2A EXHAUST SHAFT/CORRIDOR VENT SHAFT
- 3A PROVIDE AN APPROVED STAIRWAY SIGN INDICATING THE FLOOR LEVEL, TERMINUS OF THE TOP AND BOTTOM OF THE STAIR AND THE IDENTIFICATION NUMBER OF THE STAIR. IT SHALL BE LOCATED APPROXIMATELY 5 FT. ABOVE THE FLOOR LANDING AND BE READILY VISIBLE WHEN THE STAIR DOORS ARE IN AN OPEN OR CLOSED POSITION. (1022.8)
- * PROVIDE WATER CURTAIN BY MEANS OF APPROVED ADDITIONAL FIRE SPRINKLER HEADS
- VITRUS CHINA UNDER MOUNTED LAVATORY.
- ELONGATED LOW FLUSH: 1.6 GALLON PER FLUSH, FLOOR MOUNTED WATER CLOSET.
- CAST IRON 30"xTUB/SHOWER COMBINATION WITH DRAIN AS SHOWN- WALL COVERING SHALL BE CEMENT PLASTER, TILE OR APPROVED EQUAL, 70" ABOVE THE DRAIN AT THE SHOWER OR TUB/SHOWER COMBO -PROVIDE SHATTER-RESISTANT MATERIALS FOR TUB/SHOWER ENCLOSURE
- SHOWER STALL, GLASS ENCLOSURE DOORS AND PANELS MUST BE LABELED CATEGORY II, SWING THE DOOR OUTWARD, NET AREA OF SHOWER RECEPTOR SHALL BE NOT LESS THAN 1024 SQ. INCH OF FLOOR AREA AND ENCMPASS 30"ø CIRCLE -PROVIDE SHATTER-RESISTANT MATERIALS FOR TUB/SHOWER ENCLOSURE
- STAINLESS STEEL, UNDER MOUNT KITCHEN SINK
- STOVE
- REFRIGERATOR
- MC MIRRORED MEDICINE CABINET
- QUIET EXHAUST FAN WITH MINIMUM 5 AIR EXCHANGES PER HOUR.
  -FANS SHALL BE ENERGY STAR COMPLIANT AND BE CONDUCTED TO TERMINATE TO THE OUTSIDE OF THE BUILDING
  -FANS, NOT FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, MUST BE CONTROLLED BY A HUMIDITY CONTROL
- SD HARD WIRE WITH BACK UP BATTERY SMOKE DETECTOR, SD SHALL SOUND AN ALARM IN ALL SLEEPING AREAS OF THE DWELLING UNIT IN WHICH THEY ARE LOCATED.
- CM CARBON MONOXIDE
- EXIT SIGN.
  SHALL BE CONNECTED TO AN EMERGENCY POWER SYSTEM THAT WILL PROVIDE AN ILLUMINATION OF NOT LESS THAN 90MIN. IN CASE OF PRIMARY POWER LOSS.
- STAND PIPE CLASS I
- FE FIRE EXTINGUISHER
- W/D WASHER/ DRYER, N.I.C.
- CLOSET SINGLE-POLE AND DOUBLE SHELF ABOVE
- 24" BY 36" ROOF & ATTICS ACCESS HATCH
- DROP CEILING @ 8'-0" ABOVE F.F.

NOTES:

1. "SPRINKLER SYSTEM TO BE APPROVED BY PLUMBING DIVISION PRIOR TO INSTALLATION."
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   CLASS II, FLAME-SPREAD INDEX 26-75 IN OTHER EXIT WAYS
   CLASS III, FLAME-SPREAD INDEX 76-200 IN ROOMS OR AREAS

INTERIOR WALL & CEILING FINISH REQUIREMENTS

GROUP	SPRINKLERED		
	Interior exit stairways, interior exit ramps & exit passageways	Corridors & enclosure for exit access stairways & exit access ramp	Room & enclosed spaces
A3	B	B	C
R2	C	C	C

3. ALL SHOWER HEADS AND WATER CLOSETS SHALL BE OF LOW CONSUMPTION TYPE AS REQUIRED AND APPROVED BY LOCAL GOVERNMENT AGENCIES.
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7. WORD "CLR" (CLEAR) IN DIMENSIONS IS TO THE FINISH FACE OF ANY SURFACE
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9. FOR STAIRS ENLARGED PLAN & SECTIONS SEE SHEET A8
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11. DO NOT SCALE PLANS
12. DECK & BALCONY WATERPROOFING MEMBRANE SHALL BE "DEX-O-TEX" AS MANUFACTURED BY 'CROSSFIELD PRODUCTS CORPORATION, TEL. 310-886-9100/ 310-722-8242, LARR# 02360
13. PROVIDE SMOKE & FIRE DAMPERS FOR ALL OPENINGS TO 1 HR. RATED CORRIDOR ENCLOSURE
14. PROVIDE & MAINTAIN ROOMS TEMPERATURE OF MIN. 70°F ABOVE 3' FROM FLOOR

WALL TYPE LEGENDS:

- A INTERIOR 1 HR. WOOD STUD WALL- SEE 2/D1
- A1 INTERIOR 1 HR. WOOD STUD WALL-STC 50-SEE 3/D1 UNIT SEPARATION FIRE PARTITION
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- D 8" THK. CONC. WALL, 3 HOUR - SEE STRUCT.
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DRAWING TITLE
SECOND FLOOR PLAN

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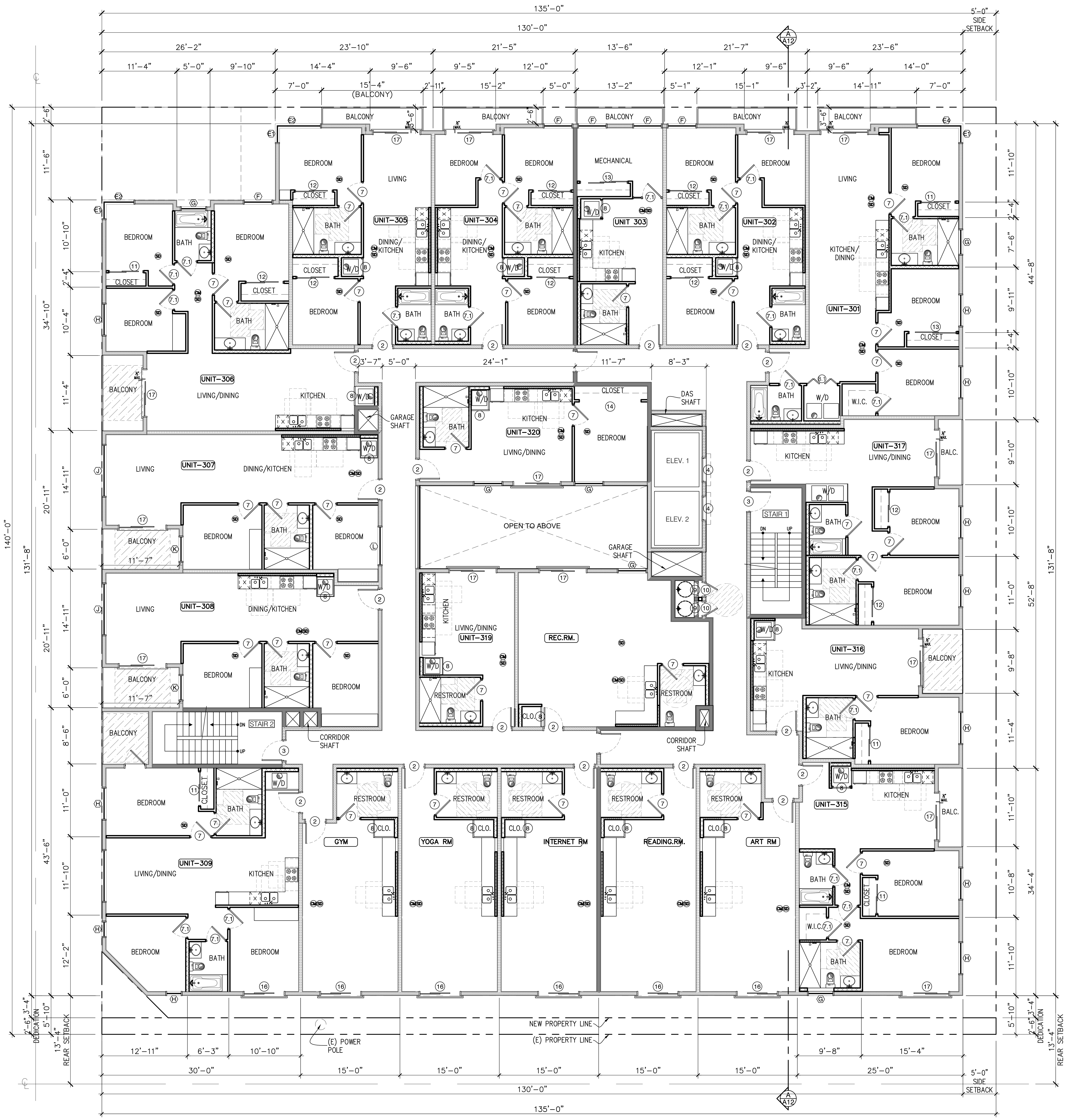

THIRD FLOOR PLAN

SCALE: 1/8" = 1'-0"

FLOOR PLAN LEGENDS:

1A EXPOSED DOWNSPOUT

2A EXHAUST SHAFT/CORRIDOR VENT SHAFT

3A PROVIDE AN APPROVED STAIRWAY SIGN INDICATING THE FLOOR LEVEL, TERMINUS OF THE TOP AND BOTTOM OF THE STAIR AND THE IDENTIFICATION NUMBER OF THE STAIR. IT SHALL BE LOCATED APPROXIMATELY 5 FT. ABOVE THE FLOOR LANDING AND BE READILY VISIBLE WHEN THE STAIR DOORS ARE IN AN OPEN OR CLOSED POSITION. (1022.8)

✳ PROVIDE WATER CURTAIN BY MEANS OF APPROVED ADDITIONAL FIRE SPRINKLER HEADS

VITRUS CHINA UNDER MOUNTED LAVATORY.

ELONGATED LOW FLUSH: 1.6 GALLON PER FLUSH, FLOOR MOUNTED WATER CLOSET.

CAST IRON 30"xTUB/SHOWER COMBINATION WITH DRAIN AS SHOWN– WALL COVERING SHALL BE CEMENT PLASTER, TILE OR APPROVED EQUAL, 70" ABOVE THE DRAIN AT THE SHOWER OR TUB/SHOWER COMBO –PROVIDE SHATTER–RESISTANT MATERIALS FOR TUB/SHOWER ENCLOSURE

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STOVE

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CM CARBON MONOXIDE

EXIT SIGN.
SHALL BE CONNECTED TO AN EMERGENCY POWER SYSTEM THAT WILL PROVIDE AN ILLUMINATION OF NOT LESS THAN 90MIN. IN CASE OF PRIMARY POWER LOSS.

STAND PIPE CLASS I

FE FIRE EXTINGUISHER

W/D WASHER/ DRYER, N.I.C.

CLOSET SINGLE–POLE AND DOUBLE SHELF ABOVE

24" BY 36" ROOF & ATTICS ACCESS HATCH

DROP CEILING @ 8'–0" ABOVE F.F.

NOTES:

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INTERIOR WALL & CEILING FINISH REQUIREMENTS

GROUP	SPRINKLERED		
	Interior exit stairways, interior exit ramps & exit passageways	Corridors & enclosure for exit access stairways & exit access ramp	Room & enclosed spaces
A3	B	B	C
R2	C	C	C

3. ALL SHOWER HEADS AND WATER CLOSETS SHALL BE OF LOW CONSUMPTION TYPE AS REQUIRED AND APPROVED BY LOCAL GOVERNMENT AGENCIES.

4. FINISH FLOOR SURFACE SHALL BE OF SLIP RESISTANT MATERIAL

5. ALL DIMENSION LINES INDICATE THE FACE OF STUD FOR EXTERIOR SIDE AND C.L. OF STUD FOR INTERIOR WALLS UNLESS NOTED OTHERWISE

6. SETBACK DIMENSIONS ARE CLEAR

7. WORD "CLR" (CLEAR) IN DIMENSIONS IS TO THE FINISH FACE OF ANY SURFACE

8. FOR TYPICAL UNIT PLANS SEE SHEET A3.1 & A3.2

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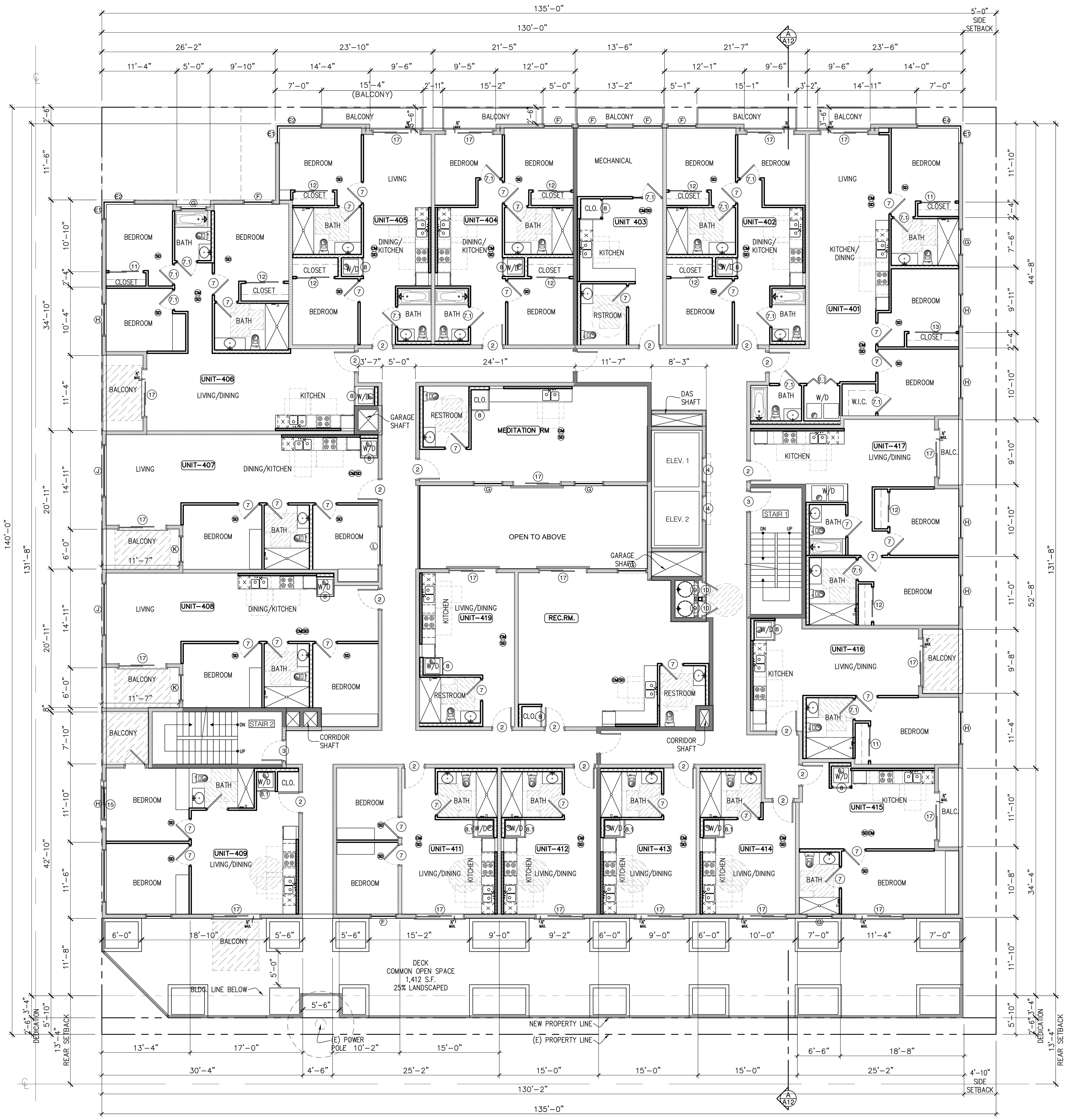

FOURTH FLOOR PLAN

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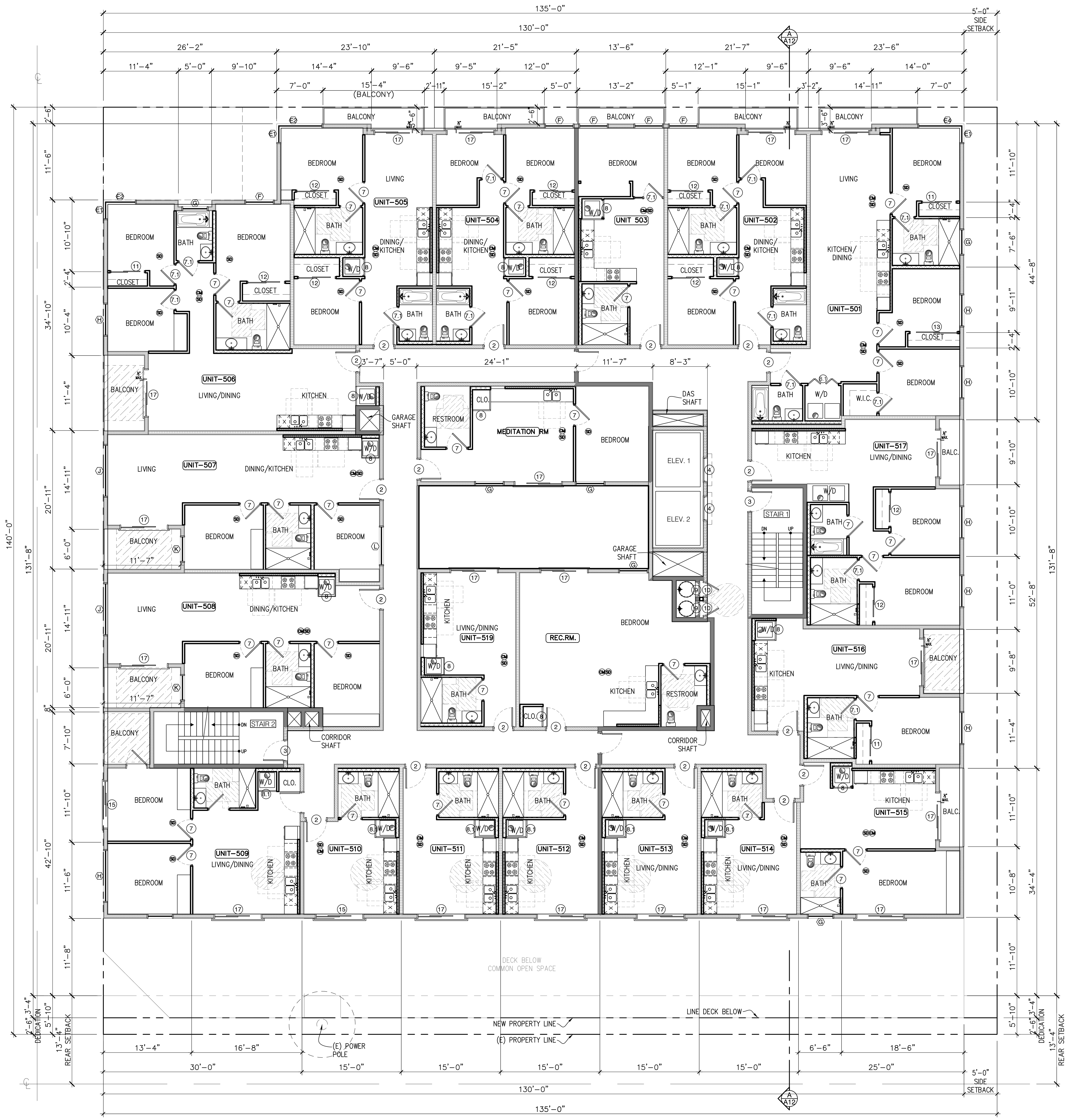

FIFTH-SEVENTH FLOOR PLAN

SCALE: 1/8" = 1'-0"

N

FLOOR PLAN LEGENDS:

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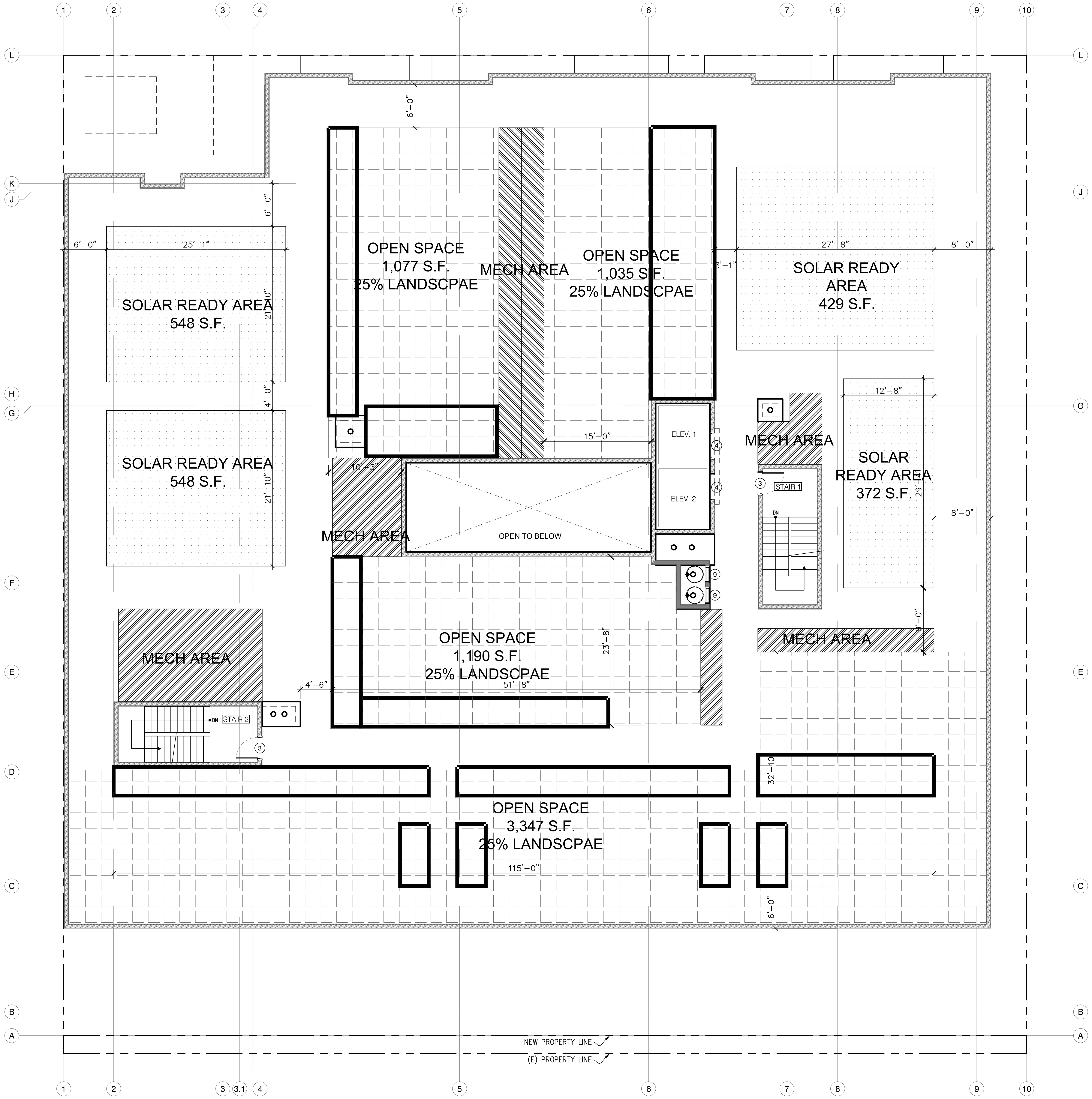

ROOF PLAN
SCALE: 1/8" = 1'-0"

ROOFING MATERIAL SPECIFICATIONS:

1. RIDGE
2. DEX-O-TEX, FIRE-RETARDANT CLASS A ROOFING. RR# 02360
3. GACOFLEX S-4200 SILICONE COATING, CRRC PRODUCT ID: 0740-0017
4. 42" HI GAURDRAIL/REMOVABLE SCREEN (WHERE MECH. EQUIP'S ARE LOCATED)
5. 42" WIDE, 42" HI GATE, METAL WITH 10" KICK PLATE
6. CRICKET
7. PARAPET
8. CONTINUOUS UNOBSTRUCTED AREA FOR FUTURE INSTALLATION OF ELECTRICAL SOLAR PANELS
   REQUIRED: 12,250 S.F. x 15% = 1,837.5 S.F.
   PROVIDED: 548+548+429+372 = 1,897 S.F.

LID NOTES:

1. ALL ROOF RUNOFF TO DRAIN TO BMP DEVICE PER LID PLANS.

LEGENDS:

STANDPIPE, CLASS I, SINGLE 2 1/2" OUTLET

EXIT SIGN. SHALL BE CONNECTED TO AN EMERGENCY POWER SYSTEM THAT WILL PROVIDE AN ILLUMINATION OF NOT LESS THAN 90MIN. IN CASE OF PRIMARY POWER LOSS.

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EXHIBIT "A"
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Case No. CPC-2023-8315-DB-WDI-HCA

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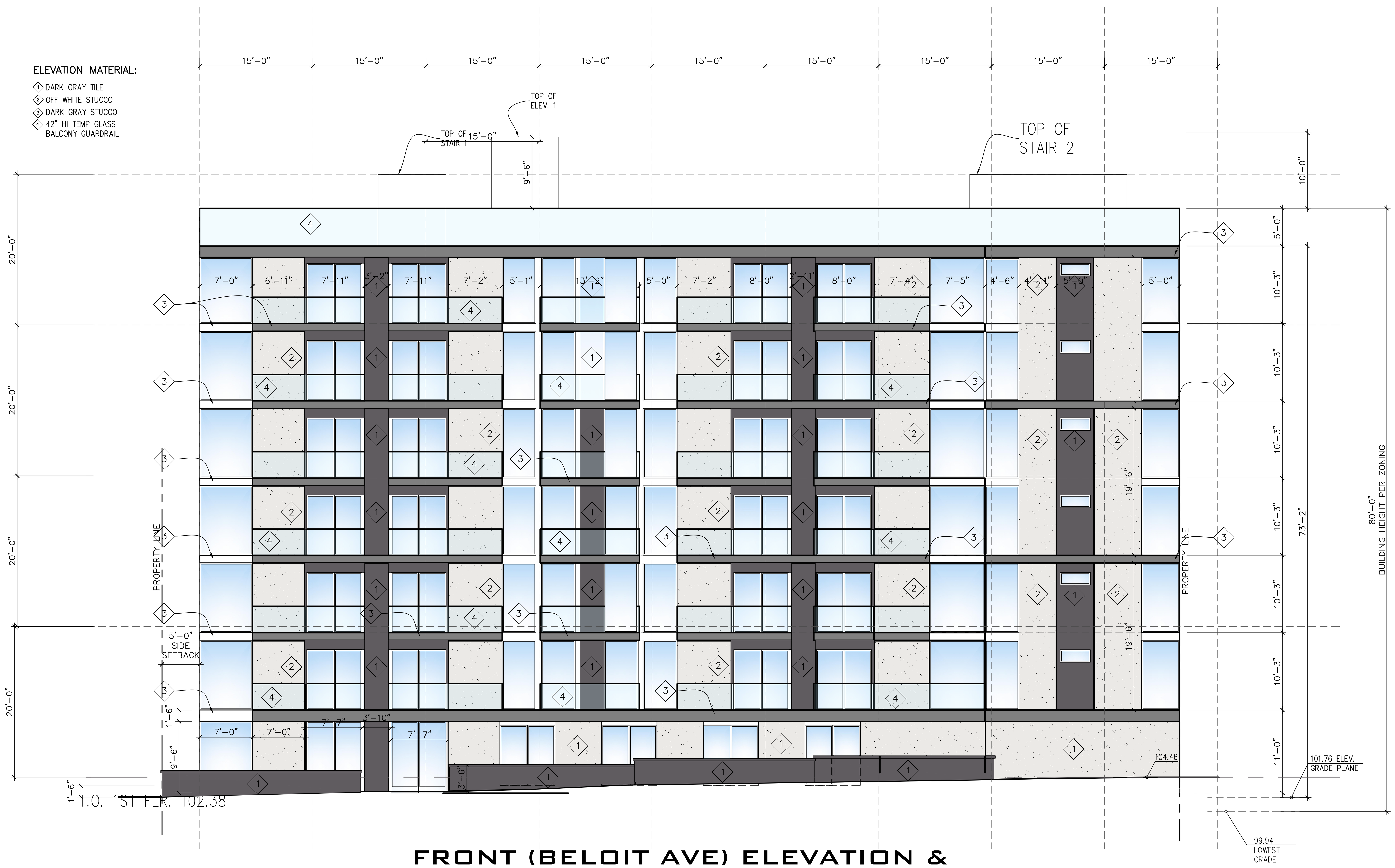

FRONT (BELOIT AVE) ELEVATION & [Q] COND COMPLIANCE DIAGRAM

SCALE: 1/8" = 1'-0"

NOTES:
1 – DOORS AND WINDOWS TO HAVE 2" RECESSED INSTALLATION
2 – FACADE TRANSPARENCY = 39% > 15%
TOTAL AREA: 9126.50 S.F.
TRANSPARENT AREA: 3,522 S.F.

PROCEDURE FOR ESTABLISHMENT OF ELEVATION POINTS FOR APARTMENT HOUSE CONSTRUCTION

Elevation monuments shall be established by a Registered Land Surveyor or Civil Engineer and a contour map provided for each building site on which an apartment house is to be erected.

A minimum of four monuments shall be shown on the approved building plans as main reference points for the building and shall be established before approval of excavation of footings is given.

The elevation monuments shall be identified and marked showing the grades from which all required building elevations may be verified and shall be located along each property line not more than ten feet from the building or structure to be erected. Additional monuments may be required if the countour of the grade or the complexitiy of the building so warrants. The monuments shall be of durable construction and accurately hold their position until the Certificate of Occupancy for the building or structure is issued.

The Department may waive these requirements when sufficient data is submitted establishing the grades and elevations for the building site.

Inspection staff will ensure that the approved plans indicate a point from where the final elevation will be measured. If the approved plan does not specify the height measurement location inspection staff shall refer the property representative to the Plan Check Division to include where the measurement is to be taken. A Licensed Survey Report will be provided at the time of excavation, at the first above grade structural floor levels, at the time of the final frame inspection and at the time of issuance of a Temporary Certificate of Occupancy (TCO) or Certificate of Occupancy. The final framing inspection will not be approved until the Licensed Survey Report is provided. All Survey Reports will be signed by the Licensed Surveyor/ Civil Engineer of record. The final amendment to our procedure is that prior to the issuance of a Certificate of Occupancy a letter signed by the Surveyor/ Civil Engineer of record stating that the building height is in conformance with the approved set of plans shall be provided.

NOTE:
1. PROVIDE APPROVED ANTI–GRAFFITI COATING OVER THE NINE–FOOT BOTTOM PORTION OF ALL WALLS, COATING AS MANUF. BY "RAINGUARD PRODUCTS COMPANY", VANDL GUARD ANTI–GRAFFITI COATING, RR 25060

LID NOTE:
1. ALL DOWNSPOUTS AND ROOF DRAINS TO DRAIN BMP DEVICE PER LID PLANS.

PERMIT SET ONLY

No.	Revision	date

LICENSED ARCHITECT
CHARLES HEFNER
No. C-23963
RENEWAL DATE
STATE OF CALIFORNIA

SAM GHANOUNI
DESIGNER
1836 PARNELL AVE., STE. 100
LOS ANGELES, CA 90025
TEL.: 310-430-1976
e-mail samghanouni@me.com

OWNER
EJKS, LLC
10350 SANTA MONICA BLVD. STE 190
LOS ANGELES, CA 90025

PROJECT
1717 S BELOIT AVE.
LOS ANGELES, CA. 90025

DRAWING TITLE
FRONT ELEVATION
(BELOIT AVE)

EXHIBIT "A"
Page No. 12 of 25
Case No. CPC-2023-8315-DB-WDI-HCA

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NORTH-WEST SIDE (ALLEY) ELEVATION

SCALE: 1/8" = 1'-0"

PROCEDURE FOR ESTABLISHMENT OF ELEVATION POINTS FOR APARTMENT HOUSE CONSTRUCTION

Elevation monuments shall be established by a Registered Land Surveyor or Civil Engineer and a contour map provided for each building site on which an apartment house is to be erected.

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CHARLES HEFNER
No. C-23963
RENEWAL DATE
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10350 SANTA MONICA BLVD. STE 190
LOS ANGELES, CA 90025

PROJECT
1717 S BELOIT AVE.
LOS ANGELES, CA. 90025

DRAWING TITLE
NORTH-WEST ELEVATION (NORTH ALLEY)

EXHIBIT "A"
Page No. 13 of 25
Case No. CPC-2023-8315-DB-WDI-HCA

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drawn:
job: 2020-A001
pc rev. date: 2/11/2025 12:52 PM
sheet: A11.1

ELEVATION MATERIAL:
1. DARK GRAY TILE
2. OFF WHITE STUCCO
3. DARK GRAY STUCCO
4. 42" HI TEMP GLASS BALCONY GUARDRAIL

SOUTH-EAST ELEVATION

SCALE: 1/8" = 1'-0"

PROCEDURE FOR ESTABLISHMENT OF ELEVATION POINTS FOR APARTMENT HOUSE CONSTRUCTION

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Page No. 14 of 25
Case No. CPC-2023-8315-DB-WDI-HCA

No. | Revision | date

PERMIT SET ONLY

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STATE OF CALIFORNIA

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DRAWING TITLE
SOUTH-EAST ELEVATION

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sheet: A11.2

ELEVATION MATERIAL:

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SOUTH-WEST (ALLEY) ELEVATION

SCALE: 1/8" = 1'-0"

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CHARLES HEFNER
No. C-23963
RENEWAL DATE
STATE OF CALIFORNIA

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PROJECT
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DRAWING TITLE
SOUTH-WEST ELEVATION
(ALLEY)

EXHIBIT "A"
Page No. 15 of 25
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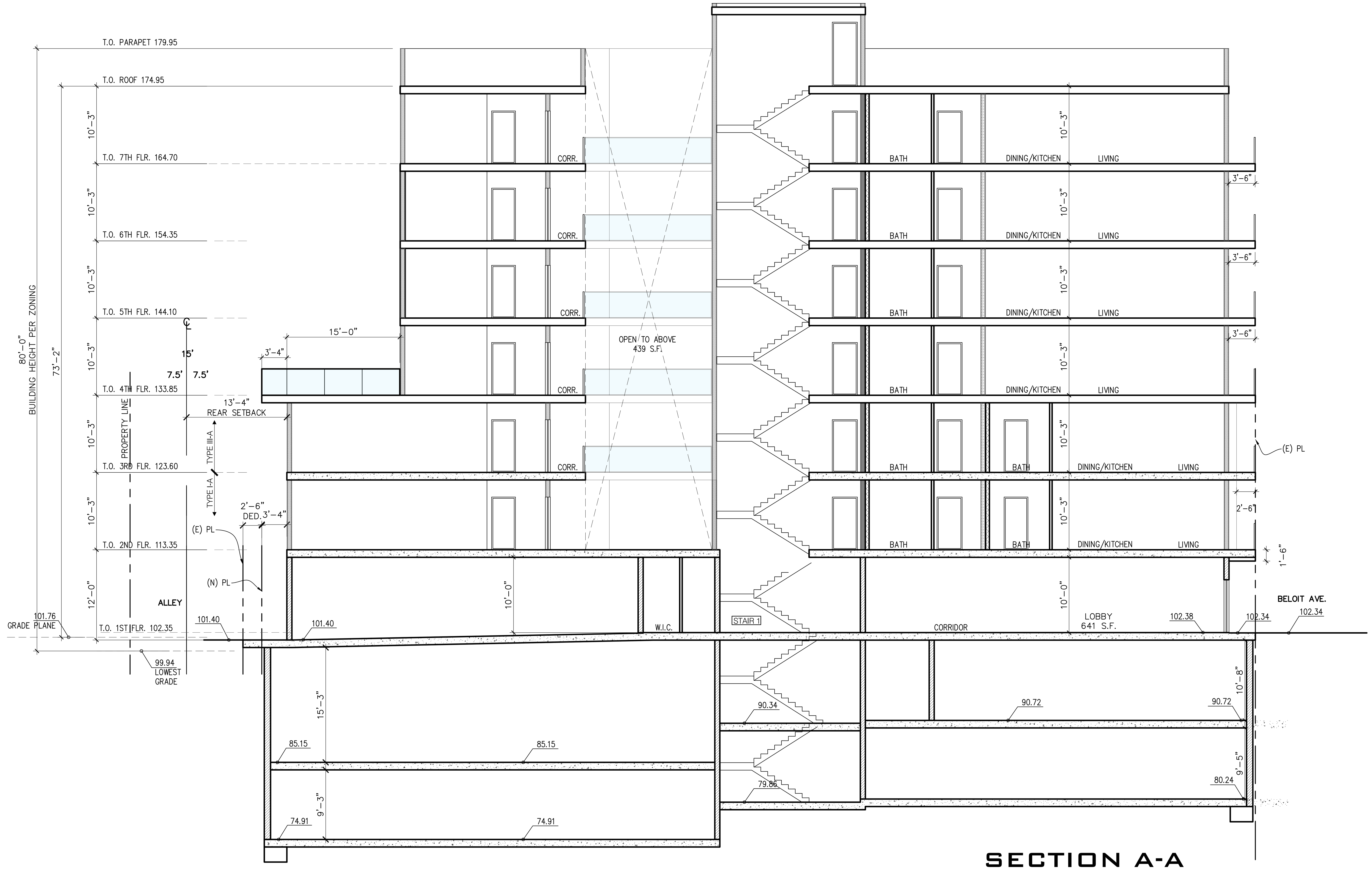
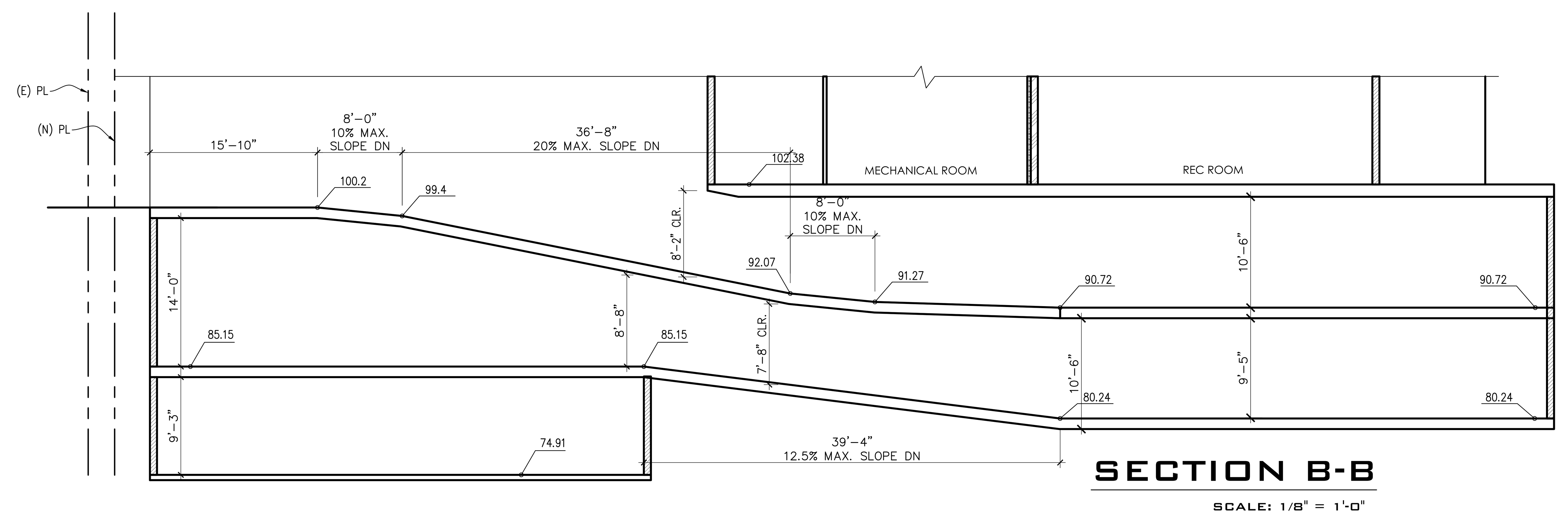


SECTION A-A

SCALE: 1/8" = 1'-0"



SECTION B-B

SCALE: 1/8" = 1'-0"

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Case No. CPC-2023-8315-DB-WDI-HCA

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No. C-23963
RENEWAL DATE
STATE OF CALIFORNIA

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PROJECT
1717 S BELOIT AVE.
LOS ANGELES, CA. 90025

DRAWING TITLE
SECTIONS

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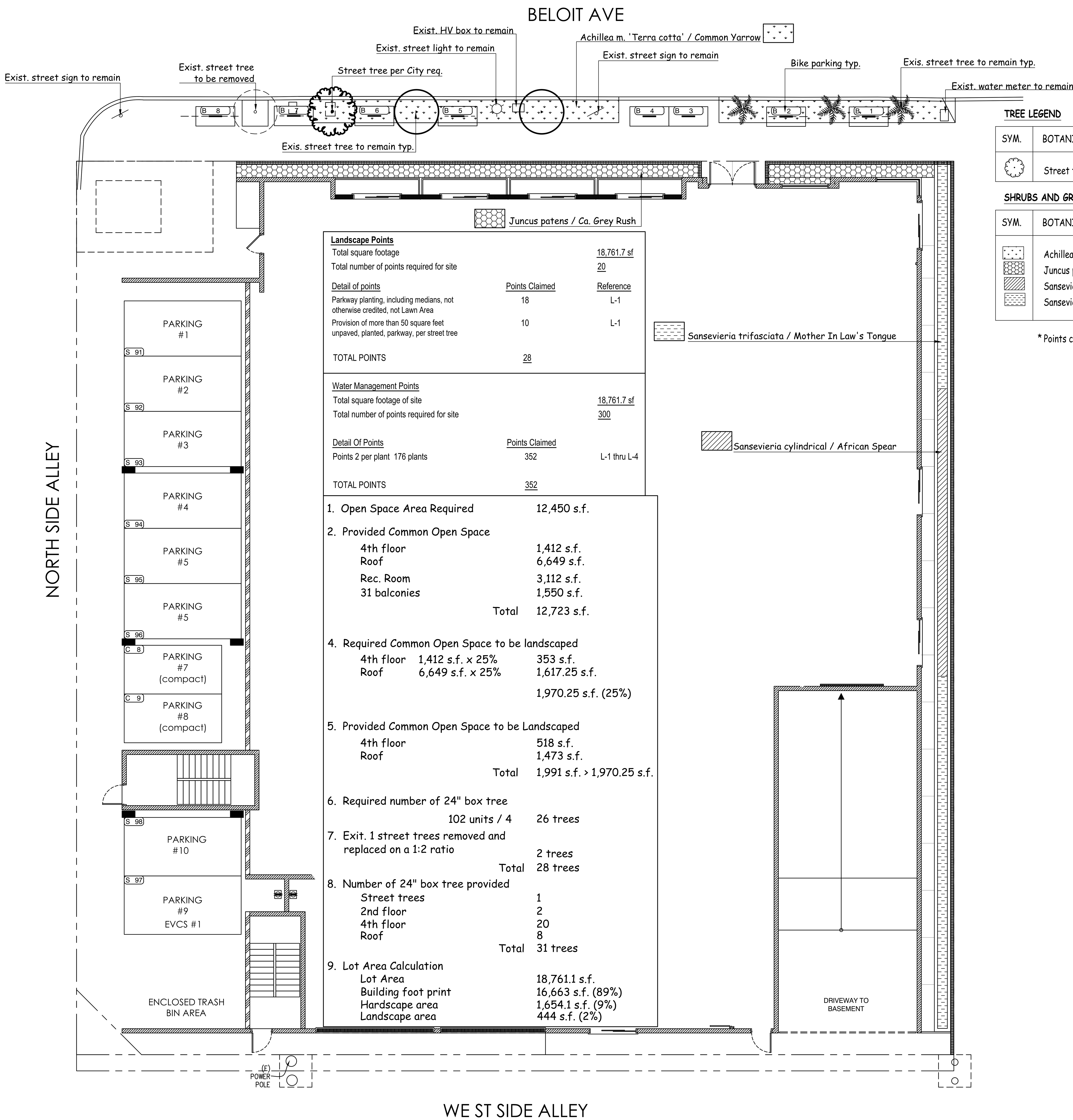

Landscape Points		
Total square footage		18,761.7 sf
Total number of points required for site		20
Detail of points	Points Claimed	Reference
Parkway planting, including medians, not otherwise credited, not Lawn Area	18	L-1
Provision of more than 50 square feet unpaved, planted, parkway, per street tree	10	L-1
TOTAL POINTS	28	

Water Management Points		
Total square footage of site		18,761.7 sf
Total number of points required for site		300
Detail Of Points	Points Claimed	
Points 2 per plant 176 plants	352	L-1 thru L-4
TOTAL POINTS	352	

1. Open Space Area Required 12,450 s.f.
2. Provided Common Open Space
   - 4th floor 1,412 s.f.
   - Roof 6,649 s.f.
   - Rec. Room 3,112 s.f.
   - 31 balconies 1,550 s.f.
   - Total 12,723 s.f.
4. Required Common Open Space to be landscaped
   - 4th floor 1,412 s.f. x 25% 353 s.f.
   - Roof 6,649 s.f. x 25% 1,617.25 s.f.
   - 1,970.25 s.f. (25%)
5. Provided Common Open Space to be Landscaped
   - 4th floor 518 s.f.
   - Roof 1,473 s.f.
   - Total 1,991 s.f. > 1,970.25 s.f.
6. Required number of 24" box tree
   - 102 units / 4 26 trees
7. Exit. 1 street trees removed and replaced on a 1:2 ratio 2 trees
   - Total 28 trees
8. Number of 24" box tree provided
   - Street trees 1
   - 2nd floor 2
   - 4th floor 20
   - Roof 8
   - Total 31 trees
9. Lot Area Calculation
   - Lot Area 18,761.1 s.f.
   - Building foot print 16,663 s.f. (89%)
   - Hardscape area 1,654.1 s.f. (9%)
   - Landscape area 444 s.f. (2%)

TREE LEGEND

SYM.	BOTANICAL NAME	COMMON NAME	SIZE	QTY.	REMARKS	WUCOLS
	Street tree	Per City req.	24"box	1		low 0.3

SHRUBS AND GROUND COVER LEGEND

SYM.	BOTANICAL NAME	COMMON NAME	SIZE	QTY.	REMARKS	WUCOLS
	Achillea m. 'Terra cotta'	Common Yarrow	5-gal	24"oc		low 0.3
	Juncus patens	Ca. Grey Rush	5-gal	24"oc		low 0.3
	Sansevieria cylindrical	African Spear	5-gal	30"oc		low 0.3
	Sansevieria trifasciata	Mother In Law's Tongue	5-gal	30"oc		low 0.3

* Points claimed for low water use plants

NOTE:
All groundcover areas where plants are 3'oc or greater to have 2 layers of geotextile fabric in 2 different directions geotextile fabric installed 3" below finished grade w/ 3" shredded bark above to eliminate weed growth.

Waterproofing and drains in planters by others.

All trees to be planted with commercial root barriers. 3" deep shredded Cedar bark to spread between plants.

PLANTING NOTES

1. DRAWING IS DIAGRAMMATIC: CONTRACTOR TO VERIFY ALL LOCATIONS AND CONDITIONS ON SITE. COUNT ALL PLANT MATERIAL BEFORE BIDDING.
2. CONTRACTOR TO INSPECT ALL EXISTING CONDITIONS ON SITE AND LOCATE ALL EXISTING UTILITIES BEFORE CONSTRUCTION BEGINS.
3. CONTRACTOR TO REPAIR AT HIS OWN EXPENSE ALL PROPERTY DAMAGE WHICH OCCURS DURING PROJECT INSTALLATION.
4. NOTE ADDITIONAL REMARKS ON SPECIFIC PLANTS IN PLANT LIST.
5. ALL EXISTING PLANT MATERIAL TO BE REMOVED EXCEPT WHERE NOTED ON PLAN.
6. CONTRACTOR TO GUARANTEE ALL PLANT MATERIAL FOR 90 DAYS FROM THE DATE OF ACCEPTANCE BY OWNER. PALM TO BE GUARANTEED FOR THE PERIOD OF 1 YEAR.
7. FINISH GRADE TO BE 2" BELOW ALL WALKS, CURBS, AND PAVING.
8. ALL PLANTED AREAS SHALL RECEIVE THE FOLLOWING AMENDMENTS PER 1,000 SQ. FT. OF SURFACE AREA. ROTO-TILL AMENDMENTS TO A DEPTH OF 6"

   *150 LBS. GRO-POWER
   *3 CU YDS NITROGENIZED, MINERALIZED FIR BARK
   *ADD 8 LBS OF GRO-P0WER CONTROLLED RELEASE 12-8-8 PER CU YD OF MIX.

9. PLANT HOLE TO BE TWICE AS WIDE AND DEEP AS THE PLANT ROOT BALL. BACKFILL AND COMPACT TO 80 % SOIL OF SITE AND 20 % FIR BARK, AS DEFINED IN #8. PROVIDE GRO-POWER PLANT TABLETS AT THE FOLLOWING RATES:

5 GAL	6-9
24" box	14-16

   PLACE RECOMMENDED TABLETS BETWEEN THE BOTTOM AND THE TOP OF THE ROOT BALL BUT NO HIGHER THAN 1/3 OF THE WAY UP TO THE TOP OF THE ROOT BALL. SPACE TABLETS EQUALLY AROUND THE PERIMETER OF THE ROOT BALL APPROXIMATELY 2" FROM THE ROOT TIPS. PALM TREES ARE NOT TO RECEIVE TABLETS.
10. ALL PROPOSED SHRUBS AND GROUND COVER AREAS ARE TO BE TREATED WITH A PRE-EMERGENT WEED KILLER (EPTAM / RONSTAR). APPLY PER MANUFACTURER'S SPECIFICATIONS: A) IMMEDIATELY AFTER PLANTING, B) AT THE BEGINNING OF THE MAINTENANCE PERIOD, AND C) AT THE END OF THE MAINTENANCE PERIOD.
11. CONTRACTOR TO INSTALL AND MAINTAIN LANSCAPE PLANTING IN ACCORDANCE WITH THE GOVERNING AGENCY'S GUIDELINES AND SPECIFICATIONS UNLESS NOTED OTHERWISE IN THESE NOTES OR ON THE PLANS.
12. SOIL SAMPLES TAKEN FROM VARIOUS LOCATIONS IN THE PLANTING AREAS WILL BE SENT TO A SOIL LAB FOR PROFESSIONAL ANALYSIS AND RECOMMENDATIONS FOR SOIL IMPROVEMENT. CONTRACTOR TO FOLLOW SOIL TESTING RECOMMENDATIONS.

EXHIBIT "A"
Page No. 17 of 25
Case No. CPC-2023-8315-DB-WDI-HCA

REVISIONS	DATE
1.	6.28.23
2.	12.12.23
3.	6.20.24
4.	7.30.24
5.	1.15.25
6.	2.27.25
7.	
8.	
9.	

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1010 Sycamore Ave. Suite 313
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yael@yaellir.com

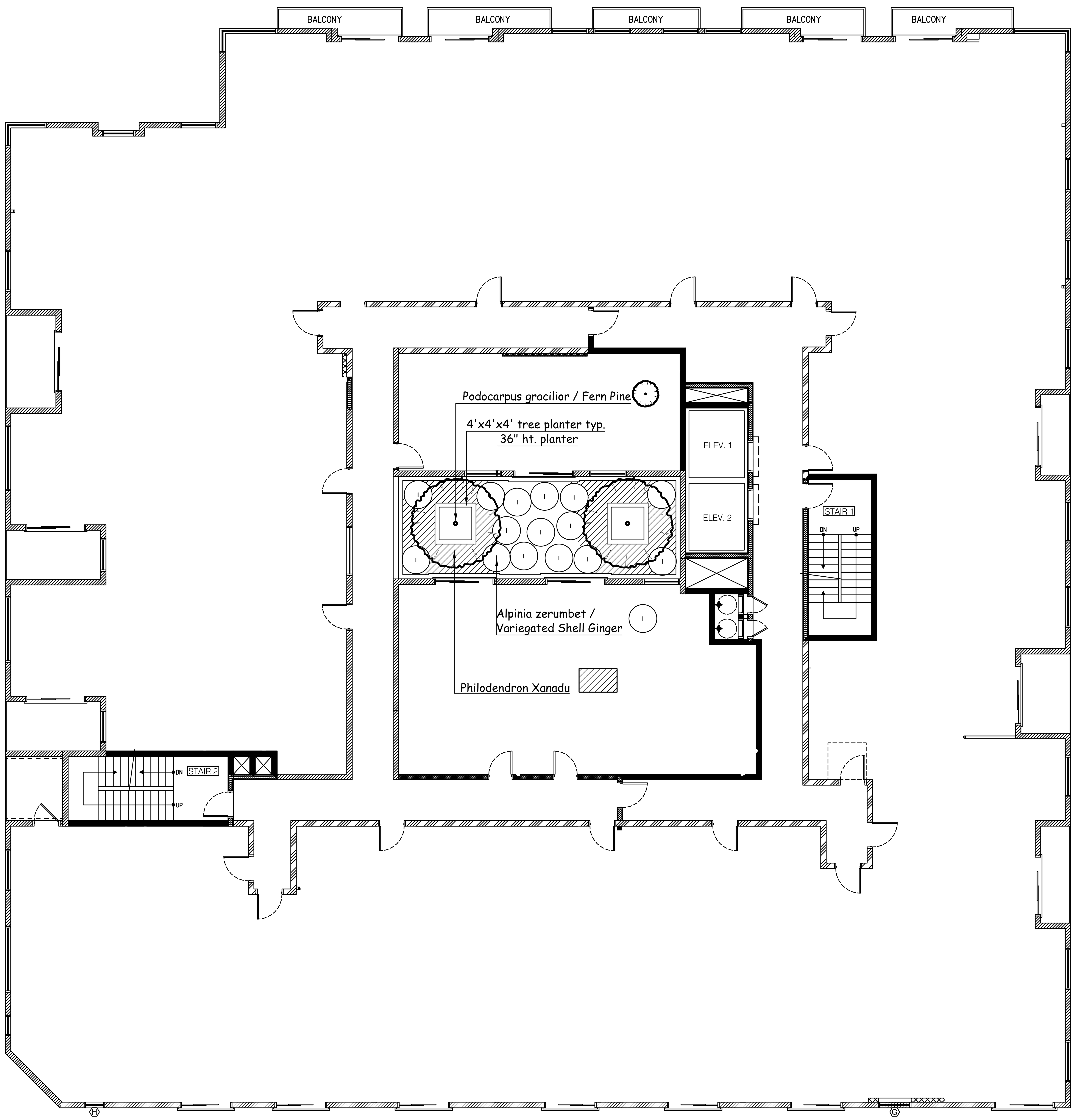
102 UNITS
1717 S. BELOIT AVE.
LOS ANGELES, CA 90025

GROUND FLOOR
PLANTING PLAN

LICENSED LANDSCAPE ARCHITECT
YAEL LIR 3171
Signature
12-31-25
Renewal Date
Date
STATE OF CALIFORNIA

DATE: JULY 30, 2023
SCALE: 1/8"=1'-0"
JOB NUMBER: 225121
DRAWN BY:

L-1



TREE LEGEND

SYM.	BOTANICAL NAME	COMMON NAME	SIZE	QTY.	REMARKS	WUCOLS
	* Podocarpus gracilior	Fern Pine	24"box	2		low 0.3

SHRUBS AND GROUND COVER LEGEND

SYM.	BOTANICAL NAME	COMMON NAME	SIZE	QTY.	REMARKS	WUCOLS
	* Alpinia zerumbet	Variegated Shell Ginger	5-gal	15		low 0.3
	Philodendron Xanadu		5-gal	30"oc		low 0.3

* Points claimed for low water use plants

NOTE:
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Waterproofing and drains in planters by others.

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2" deep shredded Cedar bark to spread between plants.

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Fax 323.258.5333
yael@yaellir.com

102 UNITS
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LOS ANGELES, CA 90025

SECOND FLOOR
PLANTING PLAN

LICENSED LANDSCAPE ARCHITECT
YAEL LIR 3771
Signature
12-31-25
Renewal Date
Date
STATE OF CALIFORNIA

EXHIBIT "A"
Page No. 18 of 25
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DATE: JULY 30, 2023
SCALE: 1/8"=1'-0"
JOB NUMBER: 225121
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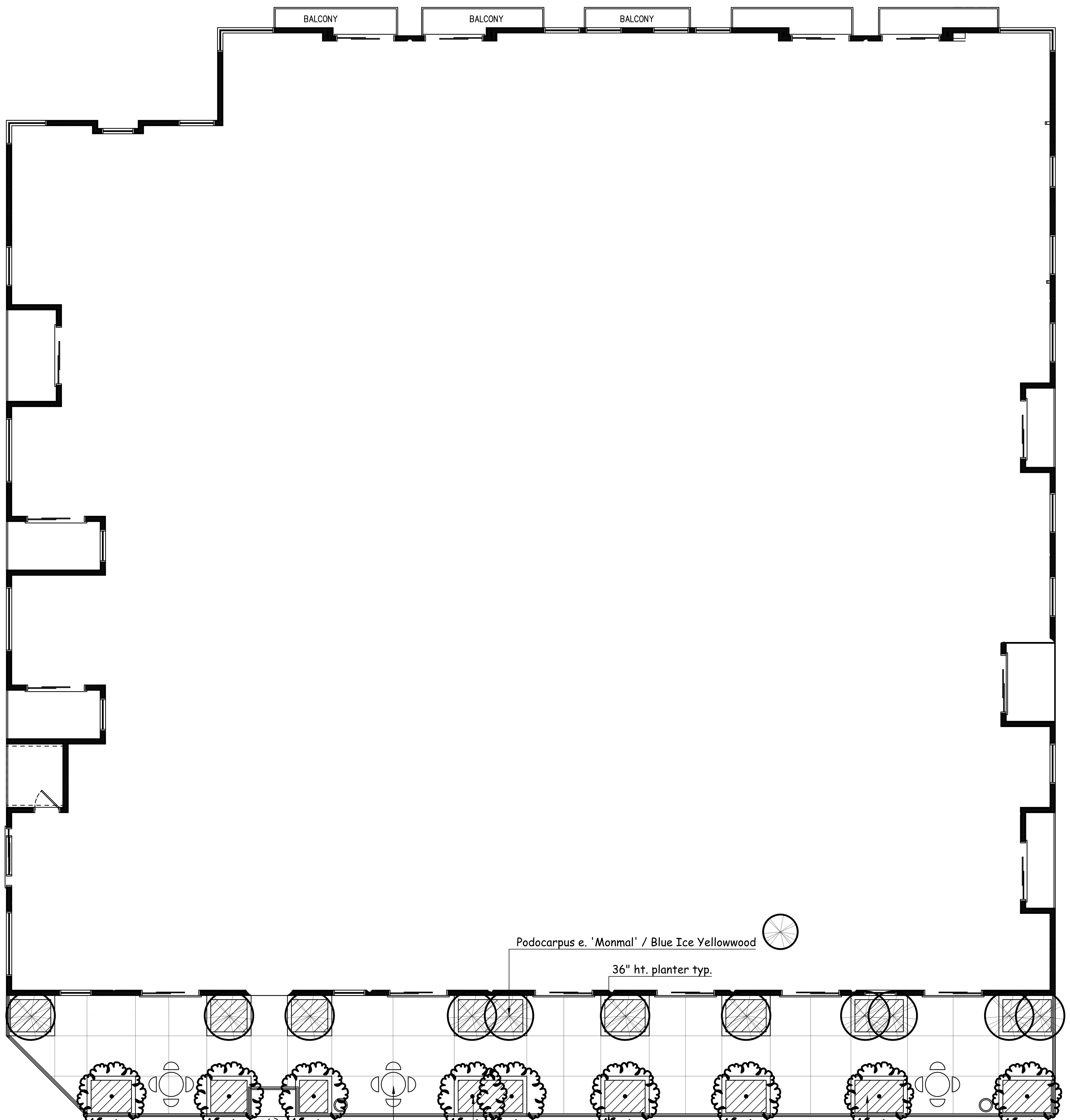
L-2



TREE LEGEND

SYM.	BOTANICAL NAME	COMMON NAME	SIZE	QTY.	REMARKS	WUCOLS
	* Geijera parviflora	Australian Willow	24"box	9		low 0.3
	* Podocarpus e. 'Monmal'	Blue Ice Yellowwood	24"box	11		low 0.3

TREE LEGEND

SYM.	BOTANICAL NAME	COMMON NAME	SIZE	QTY.	REMARKS	WUCOLS
	Myoporum p. 'Fine Leaf Form'	Creeping Boobialla	5-gal	24"oc		low 0.3

* Points claimed for low water use plants

Landscape Form items		
Item	Model	Color
Table	Cheap Chic square top	Flambe Orange
Chairs	Catena	Flambe Orange
Trash	Lakeside	Stainless Steel

tel: 800.521.2546

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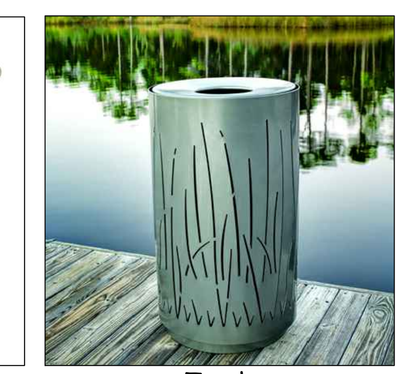
Waterproofing and drains in planters by others.


Chair


Table


Trash

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FOURTH FLOOR
PLANTING PLAN

LICENSED LANDSCAPE ARCHITECT
YAEL LIR 3171
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12-31-25
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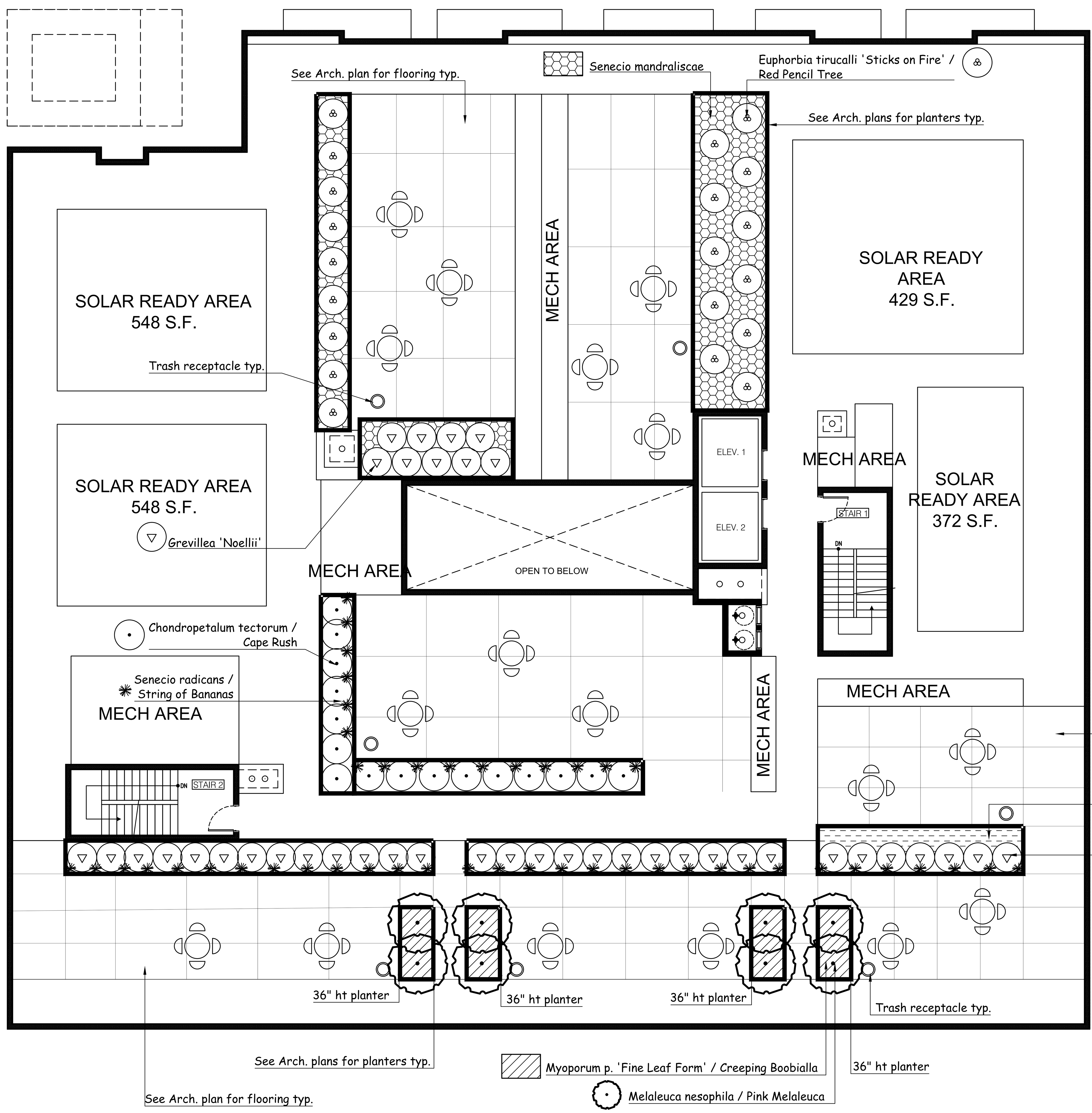


TREE LEGEND

SYM.	BOTANICAL NAME	COMMON NAME	SIZE	QTY.	REMARKS	WUCOLS
	* Melaleuca nesophila	Pink Melaleuca	24"box	8		low 0.3

SHRUBS AND GROUND COVER LEGEND

SYM.	BOTANICAL NAME	COMMON NAME	SIZE	QTY.	REMARKS	WUCOLS
	* Chondropetalum tectorum	Cape Rush	5-gal	15		low 0.3
	* Euphorbia tirucalli 'Sticks on Fire'	Red Pencil Tree	5-gal	20		low 0.3
	* Grevillea 'Noellii'		5-gal	40		low 0.3
	Rosmarinus o. 'Prostratus'	Rosemary	1-gal	24"oc		low 0.3
	Myoporum p. 'Fine Leaf Form'	Creeping Boobialla	5-gal	24"oc		low 0.3
	Senecio mandraliscae		5-gal	24"oc		low 0.3
	* Senecio radicans	String of Bananas	5-gal	63		low 0.3

* Points claimed for low water use plants

NOTE:
All groundcover areas where plants are 3'oc or greater to have 2 layers of geotextile fabric in 2 different directions geotextile fabric installed 3" below finished grade w/ 3" shredded bark above to eliminate weed growth.

Waterproofing and drains in planters by others.

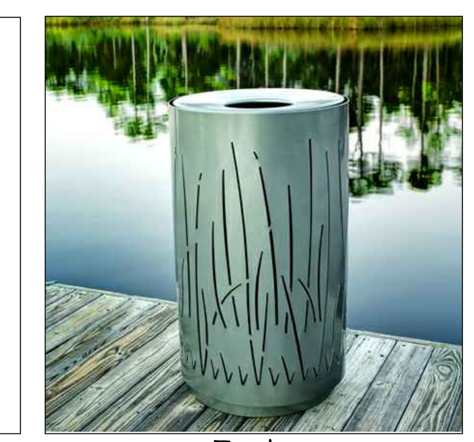
Landscape Form items

Item	Model	Color
Table	Cheap Chic square top	Flambe Orange
Chairs	Catena	Flambe Orange
Trash	Lakeside	Stainless Steel

tel: 800.521.2546


Chair


Table


Trash

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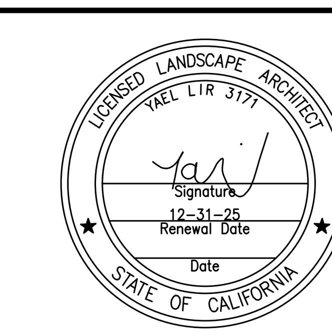
102 UNITS
1717 S. BELOIT AVE.
LOS ANGELES, CA 90025

ROOF
PLANTING PLAN



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DRAWN BY:

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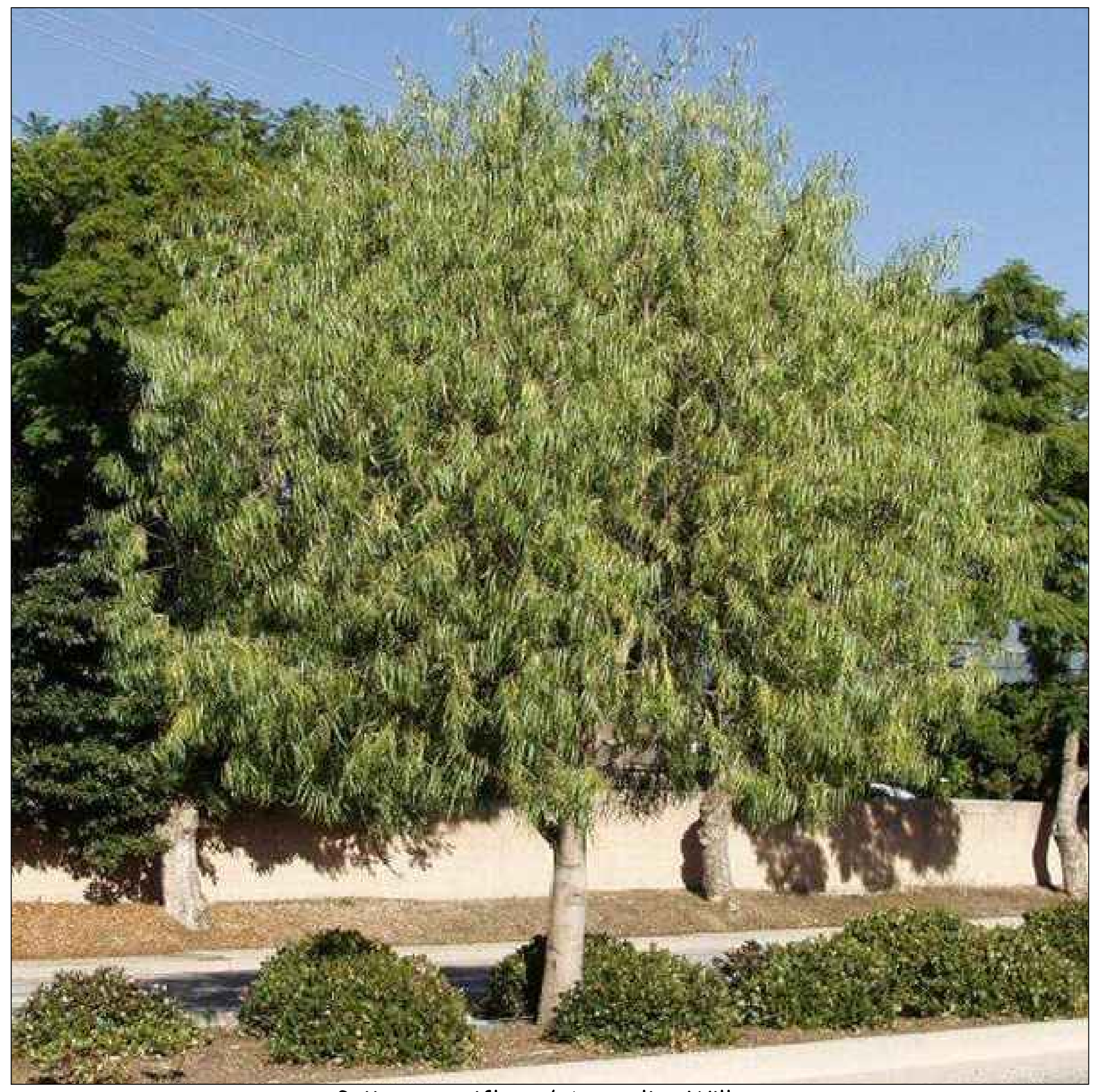
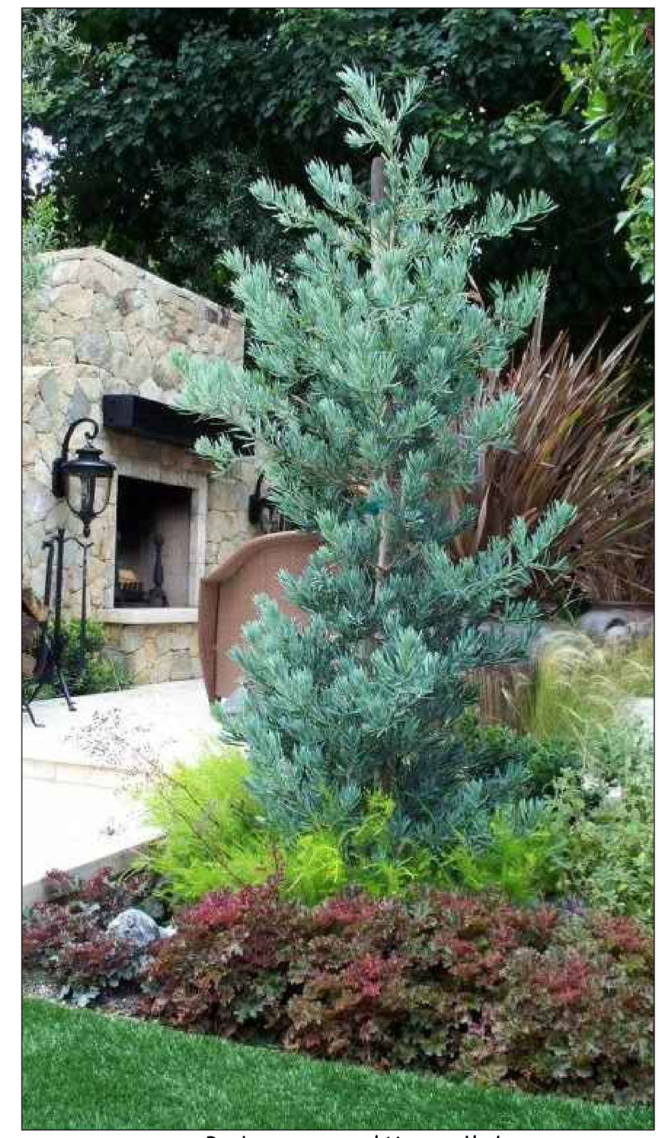
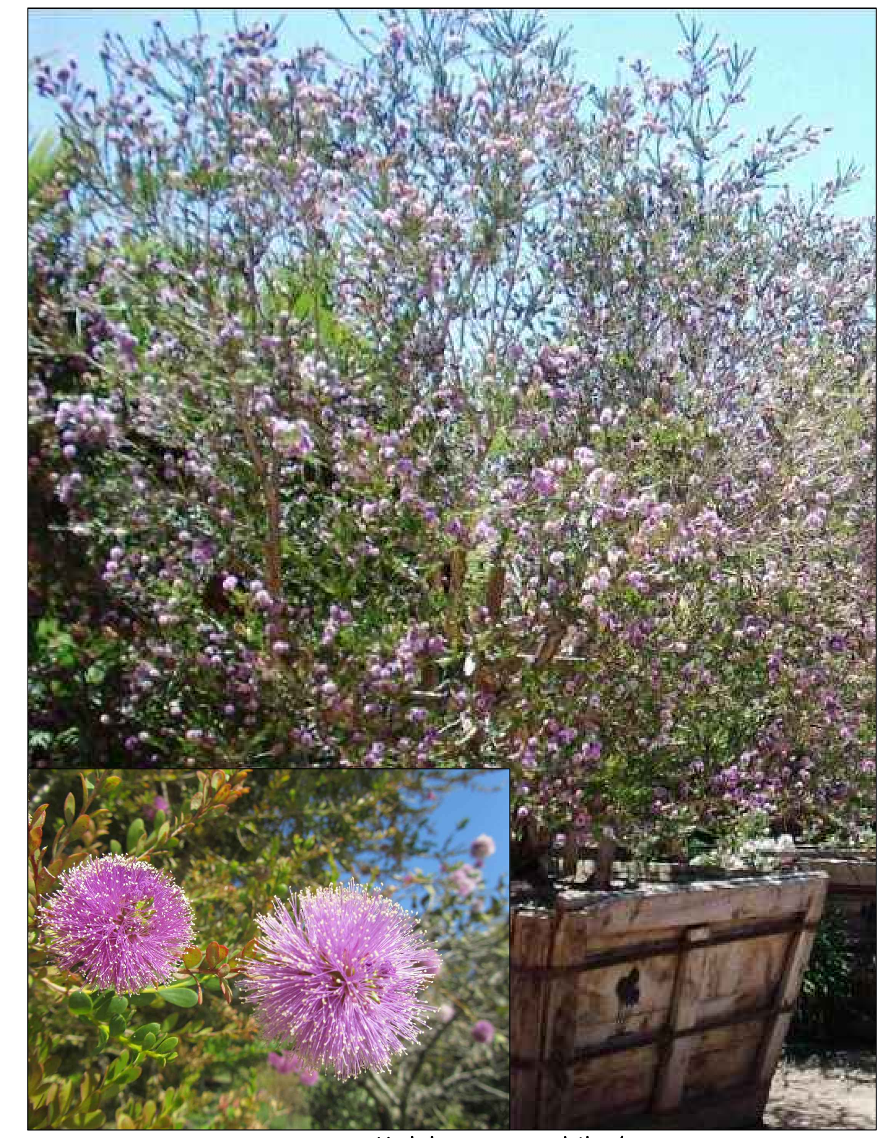
Podocarpus gracilior / Fern Pine



Geijera parviflora / Australian Willow



Podocarpus e. 'Monmal' /
Blue Ice Yellowwood



Melaleuca nesophila /
Pink Melaleuca

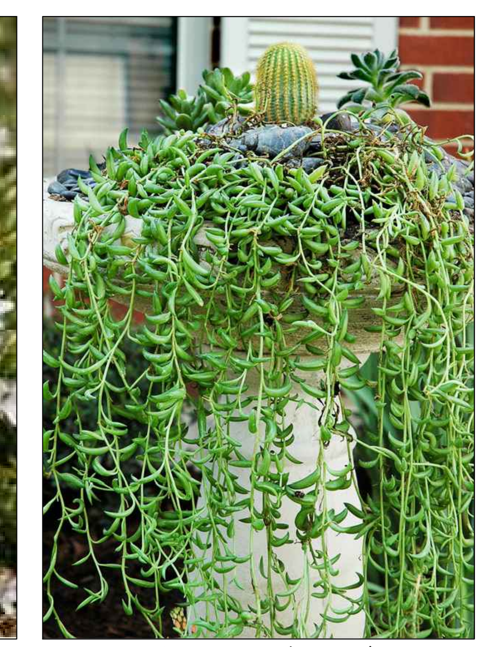
Achillea m. 'Terra cotta' /
Common Yarrow

Juncus patens / Ca. Grey Rush

Alpinia zerumbet / Variegated Shell Ginger

Philodendron Xanadu

Myoporum p. 'Fine Leaf Form' /
Creeping Boobialla



Senecio radicans /
String of Bananas

Sansevieria cylindrical / African Spear

Sansevieria trifasciata /
Mother In Law's Tongue

Euphorbia tirucalli
'Sticks on Fire' /
Red Pencil Tree

Grevillea 'Noellii'

Rosmarinus o. 'Prostratus' /
Rosemary

Senecio mandraliscae

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102 UNITS
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LOS ANGELES, CA 90025

PLANT PHOTOS

LICENSED LANDSCAPE ARCHITECT
YAEL LIR 3771
Signature
12-31-25
Renewal Date
Date
STATE OF CALIFORNIA

DATE: JULY 30, 2023
SCALE: 1/8"=1'-0"
JOB NUMBER: 225121
DRAWN BY:

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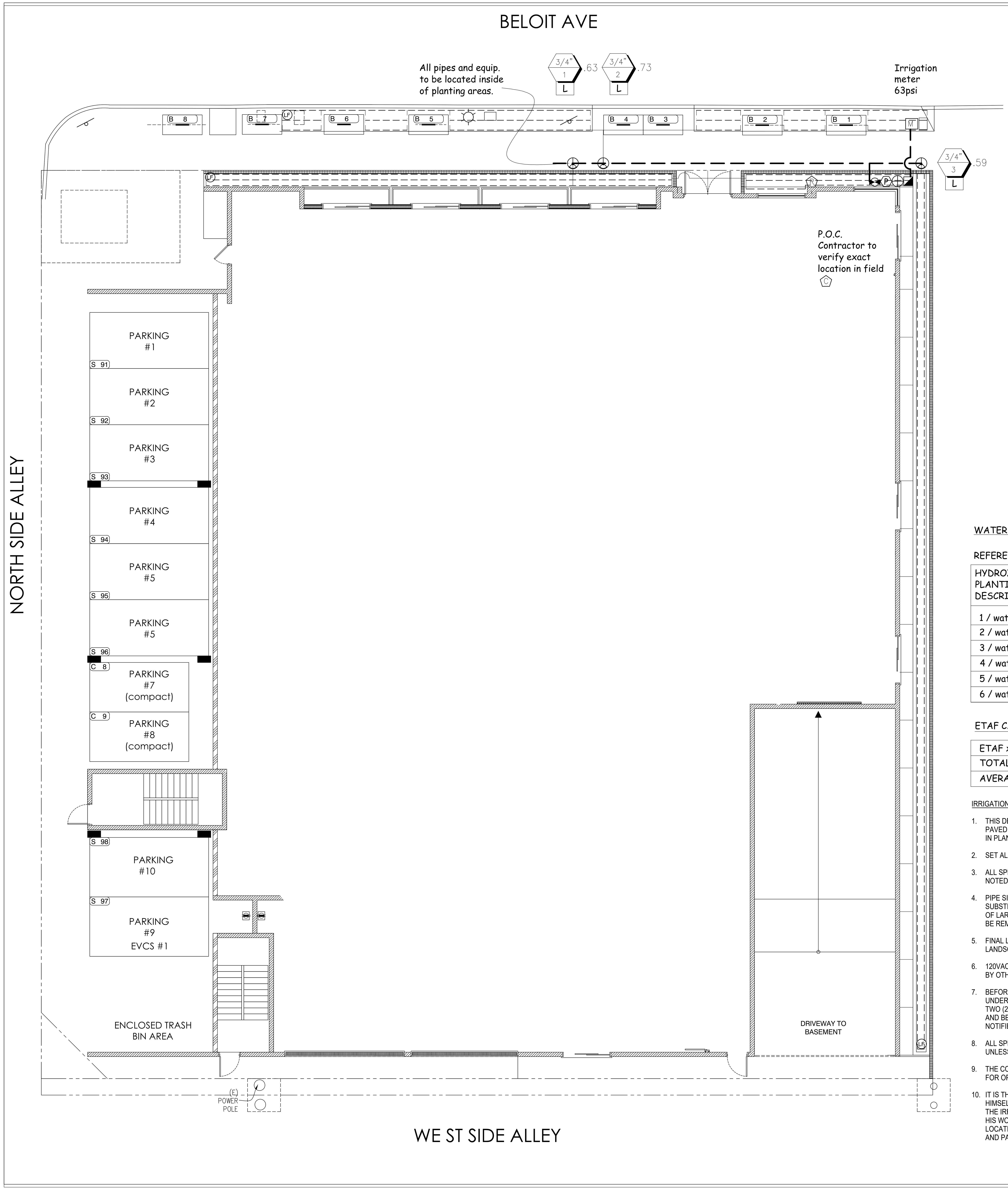

ALL IRRIGATION IS SUB-SURFACE DRIP SYSTEM

IRRIGATION LEGEND

DESCRIPTION	SYM.	
'NIBCO' GATE VALVE T-113		
'CHRISTY' CONCRETE VALVE BOX		
'RAINBIRD' QUICK COUPLER 44 LRC 1"		
'SUPERIOR' 3100 series MASTER VALVE		1.5"
'HUNTER' FLOW SENSOR FCT-150 FLOW		1.5"
'WILKINS' REGULATOR MODEL 500	P	1.5"
'WILKINS' BACKFLOW PREVENTER 375		W/WYE STRAINER IN CAGE (BFP TO BE PAINTED DARK GREEN)
'HUNTER' ACC2	C	LOCATION BY OWNER
'HUNTER' SOLAR SYNC WIRELESS	R	LOCATION BY OWNER
SLEEVING SCH. 40 P.V.C.		TWICE LINE SIZE (MIN.)
PRESSURE LINE SCH. 40 P.V.C.		1.5"
NON-PRESSURE LINE SCH. 40 P.V.C.		SEE PLAN FOR SIZE
IRRIGATION METER	M	2"
POINT OF CONNECTION	P.O.C.	VERIFY LOCATION ON SITE

NETAFIM LEGEND

'NETAFIM' LVCZ10075-LF		CONTROL VALVE, TECHFILTER & PRESSURE REGULATOR.
'NETAFIM' LINE FLUSH VALVE	LF	
'NETAFIM' TECHLINE CV TLCV4-18025		BURIED 3" BELOW GRADE
NON-PRESSURE 1" SCH. 40 PVC HEADER		

SIZE / NO. — GPM
H — HYDROZONE

LANDSCAPE AREA: 2,758 SF
IRRIGATION WATER SUPPLY TYPE: POTABLE WATER SUPPLY

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLANS"

"I AGREE TO COMPLY WITH THE REQUIREMENTS OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND SUBMIT A COMPLETE LANDSCAPE DOCUMENTATION PACKAGE"
Yael 10/04/2022

PRESSURE REGULATING DEVICES ARE REQUIRED IF WATER PRESSURE IS BELOW OR EXCEEDS THE RECOMMENDED PRESSURE OF THE SPECIFIED IRRIGATION DEVICE.

A DIAGRAM OF THE IRRIGATION PLAN SHOWING THE HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSE

CHECK VALVES OR ANTI-DRAIN VALVES ARE REQUIRED ON ALL SPRINKLER HEADS WHERE LOW POINT DRAINAGE COULD OCCUR

A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT AND CERTIFIED BY EITHER THE DESIGNER OF THE LANDSCAPE PLANS, IRRIGATION PLANS OR A LICENSED LANDSCAPE CONTRACTOR FOR THE PROJECT

AN IRRIGATION AUDIT REPORT SHALL BE COMPLETED AT THE TIME OF FINAL INSPECTION.

WATER EFFICIENT LANDSCAPE WORKSHEET

REFERENCE EVAPOTRANSPIRATION (ETo): 50.1

HYDROZONE / PLANTING DESCRIPTION	PLANT FACTOR (PF)	IRRIGATION METHOD	IRRIGATION EFFICIENCY	ETAF (PF/IE)	LANDSCAPE AREA	ETAF x AREA	ESTIMATED TOTAL WATER USE
1 / water use plants	.3	DRIP	.81	.37	215	79.55	2470
2 / water use plants	.3	DRIP	.81	.37	249	92.13	2861
3 / water use plants	.3	DRIP	.81	.37	200	74	2298
4 / water use plants	.3	DRIP	.81	.37	359	132.83	4125
5 / water use plants	.3	DRIP	.81	.37	352	130.24	4045
6 / water use plants	.3	DRIP	.81	.37	1383	511.71	15849
				SUM	2,758	1,020.46	
		ESTIMATED TOTAL WATER USE (ETWU)					31,648
		MAXIMUM APPLIED WATER ALLOWANCE (MAWA)					41,117

ETAF CALCULATION

ETAF x AREA	1,020.46
TOTAL AREA	2,758
AVERAGE ETAF	.37

IRRIGATION NOTES

1. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHEREVER POSSIBLE.
2. SET ALL VALVES AND QUICK COUPLERS NEXT TO WALKS OR PAVED SURFACES.
3. ALL SPRINKLER HEADS ARE TO HAVE TRIPLE SWING JOINTS (EXCEPT WHERE NOTED ON PLANS).
4. PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED, BUT SUBSTITUTIONS OF LARGER SIZES MAY BE APPROVED. ALL DAMAGED AND REJECTED PIPE SHALL BE REMOVED FROM THE SITE AT THE TIME OF THE SAID REJECTION.
5. FINAL LOCATION OF THE AUTOMATIC CONTROLLER SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT AND OWNER.
6. 120VAC ELECTRICAL POWER SOURCE AT CONTROLLER LOCATION SHALL BE PROVIDED BY OTHERS.
7. BEFORE COMMENCING ANY EXCAVATION, THE CONTRACTOR SHALL OBTAIN AN UNDERGROUND SERVICE ALERT I.D. NUMBER BY CALLING 1-800-422-4133. TWO (2) WORKING DAYS SHALL BE ALLOWED AFTER THE I.D.NUMBER IS OBTAINED AND BEFORE THE EXCAVATION WORK IS STARTED SO THAT UTILITY OWNERS CAN BE NOTIFIED.
8. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE UNLESS OTHERWISE SPECIFIED.
9. THE CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS AND VALVES FOR OPTIMUM COVERAGE WITH MINIMAL OVER SPRAY ONTO WALKS, STREETS, ETC.
10. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH THE GRADE DIFFERENCES, LOCATION OF WALLS, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS DAMAGED BY HIS WORK. HE SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS UNDER ROADWAYS AND PAVING, ETC.
11. THE SPRINKLER SYSTEM DESIGN IS BASED ON A MINIMUM OPERATING PRESSURE OF 80 P.S.I. AND A MAXIMUM FLOW DEMAND OF 25 G.P.M. THE CONTRACTOR SHALL VERIFY WATER PRESSURES PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE ARCHITECT.
12. DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT THERE ARE UNKNOWN OBSTRUCTIONS OR GRADE DIFFERENCES IN THE AREA. DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. IN THE EVENT THAT THIS NOTIFICATION IS NOT GIVEN, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY NECESSARY REVISIONS.
13. ALL SPRINKLER EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
14. THE INTENT OF THE CONTRACTOR IS TO PROVIDE 100% COVERAGE TO ALL PLANTING AREAS. AS PART OF THE SCOPE OF WORK, PROVIDE ANY ADDITIONAL HEADS, SPECIAL NOZZLES, OR PATTERNS TO ACHIEVE PROPER COVERAGE WITH A MINIMUM OF OVER SPRAY AT NO ADDITIONAL COST TO THE OWNER.
15. INSTALLATION FOR THE CONTROL WIRES SHALL FOLLOW MAINLINE ROUTING.
16. PROVIDE SLEEVES AS SHOWN ON DRAWING OR AS NEEDED. USE SIZE DIAMETER MIN. SCH. 80 P.V.C. MIN. DEPTH TO TOP OF LINE.
17. LOCATE VALVE CHART IN CONTROLLER - REDUCE AND ENCASE IN PLASTIC (AS BUILT).
18. GUARANTEE: THE INSTALLED SPRINKLER SYSTEM SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE OF THE WORK. SHOULD ANY TROUBLE DEVELOP WITHIN THE TIME SPECIFIED DUE TO INFERIOR OR FAULTY MATERIAL OR WORKMANSHIP, THE TROUBLE SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT EXPENSE TO THE OWNER.
19. REFER TO GENERAL NOTES FOR ADDITIONAL INFORMATION REGARDING THIS SECTION OF WORK.

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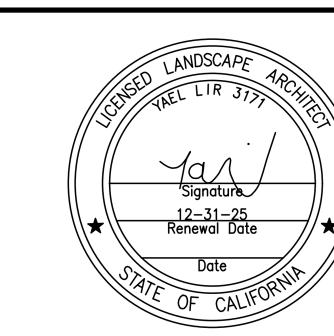
GROUND FLOOR
IRRIGATION PLAN



DATE: JULY 30, 2023
SCALE: 1/8"=1'-0"
JOB NUMBER: 225121
DRAWN BY:

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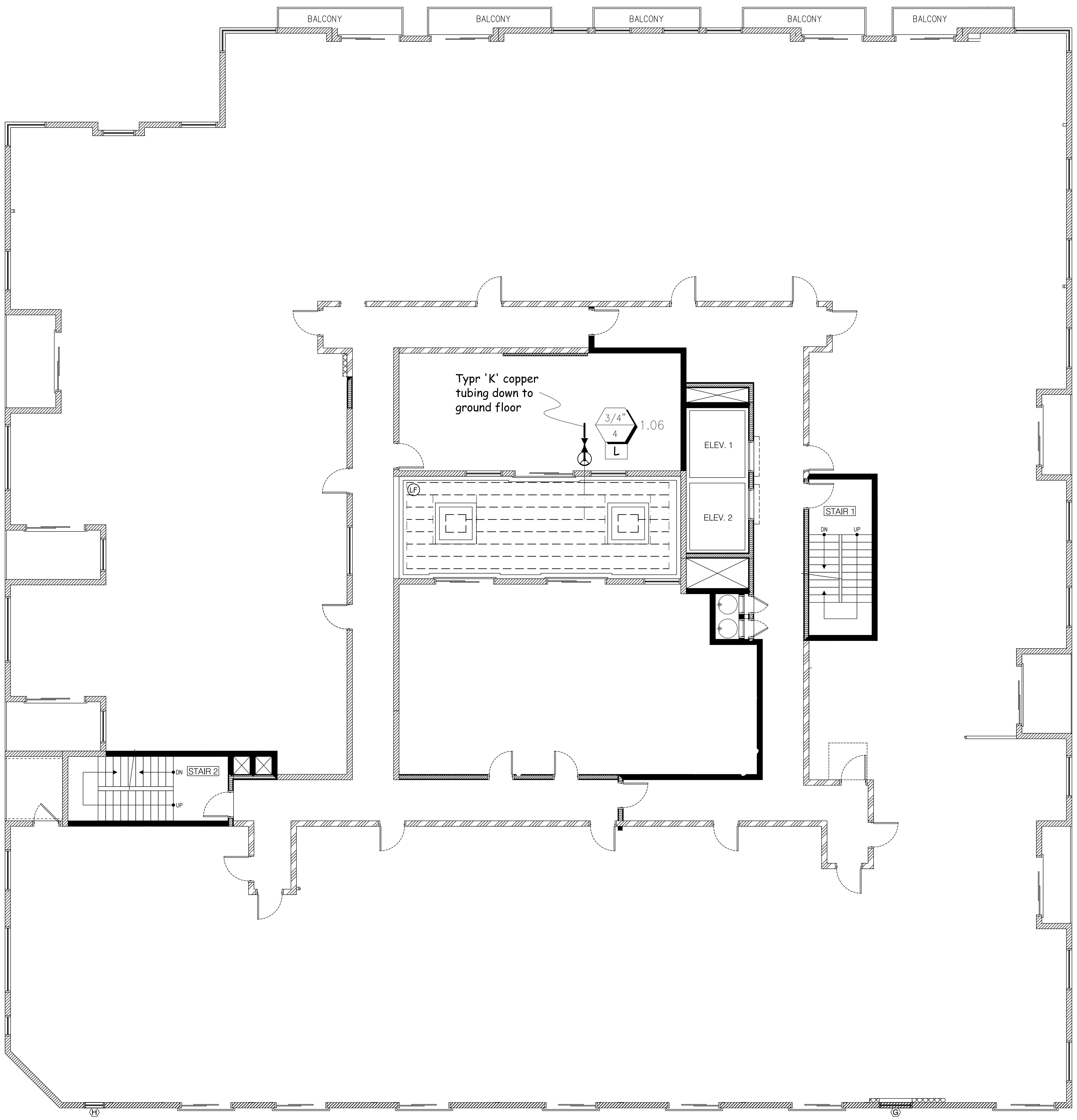
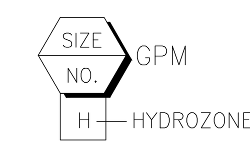


ALL IRRIGATION IS SUB-SURFACE DRIP SYSTEM

IRRIGATION LEGEND		
DESCRIPTION	SYM.	P.S.I. RAD. G.P.M.
'NIBCO' GATE VALVE T-113		
'CHRISTY' CONCRETE VALVE BOX		
'RAINBIRD' QUICK COUPLER 44 LRC 1"		
TYPE 'K' COPPER TUBING		1"
NON-PRESSURE LINE SCH. 40 P.V.C.		SEE PLAN FOR SIZE
NETAFIM LEGEND		
'NETAFIM' LVCZ10075-LF		CONTROL VALVE, TECHFILTER & PRESSURE REGULATOR.
'NETAFIM' LINE FLUSH VALVE	LF	
'NETAFIM' TECHLINE CV TLCV4-18025		
NON-PRESSURE 1" SCH. 40 PVC HEADER		



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SECOND FLOOR
IRRIGATION PLAN

LICENSED LANDSCAPE ARCHITECT
YAEL LIR 3177
Signature
12-31-25
Renewal Date
Date
STATE OF CALIFORNIA

DATE: JULY 30, 2023
SCALE: 1/8"=1'-0"
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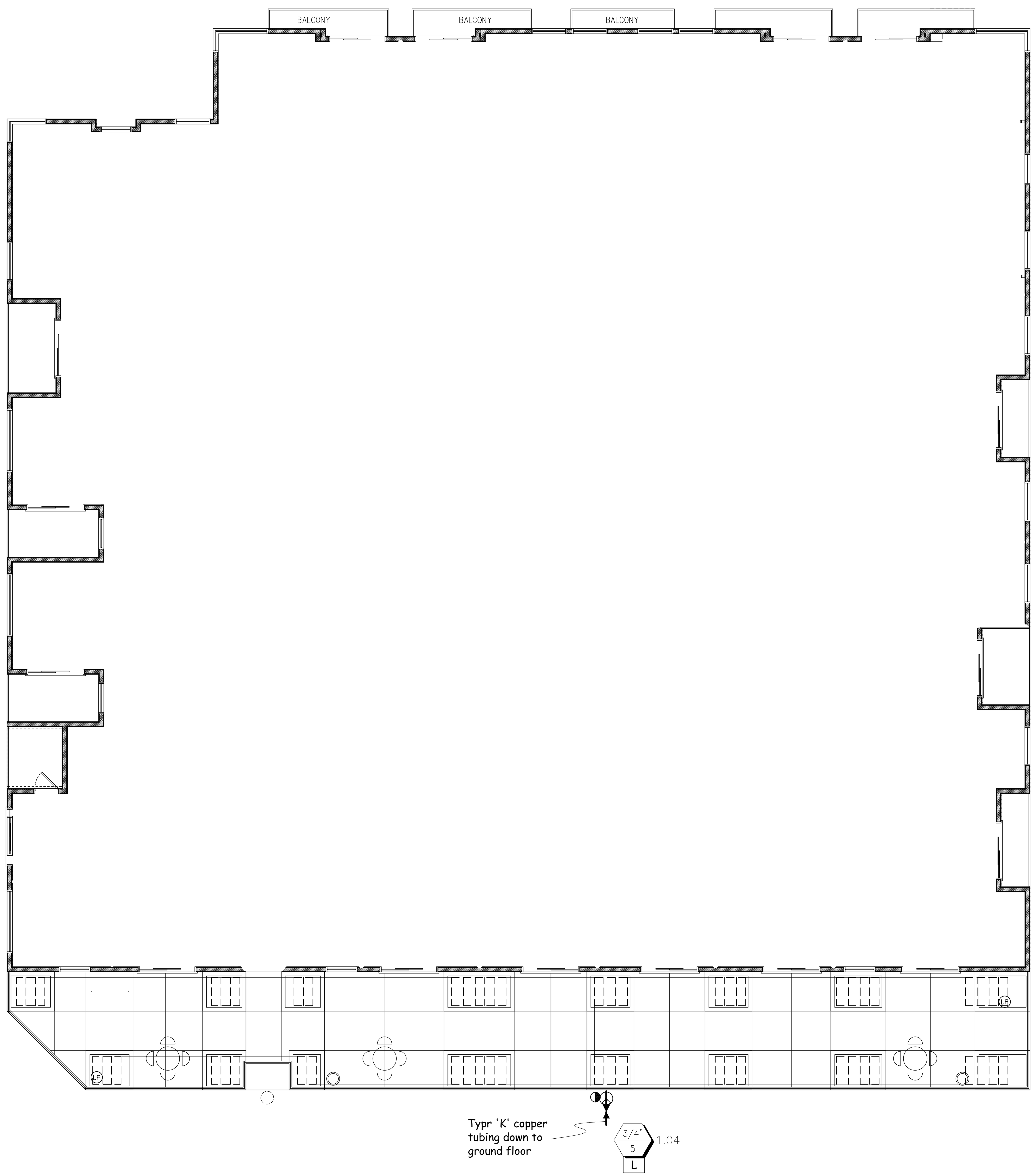

ALL IRRIGATION IS SUB-SURFACE DRIP SYSTEM

IRRIGATION LEGEND		
DESCRIPTION	SYM.	P.S.I. RAD. G.P.M.
'NIBCO' GATE VALVE T-113		
'CHRISTY' CONCRETE VALVE BOX		
'RAINBIRD' QUICK COUPLER 44 LRC 1"		
TYPE 'K' COPPER TUBING		1"
NON-PRESSURE LINE SCH. 40 P.V.C.		SEE PLAN FOR SIZE
NETAFIM LEGEND		
'NETAFIM' LVCZ10075-LF		CONTROL VALVE, TECHFILTER & PRESSURE REGULATOR.
'NETAFIM' LINE FLUSH VALVE	LF	
'NETAFIM' TECHLINE CV TLCV4-18025		
NON-PRESSURE 1" SCH. 40 PVC HEADER		

SIZE
NO.
GPM
H — HYDROZONE

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FOURTH FLOOR
IRRIGATION PLAN

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YAEL LIR 3177
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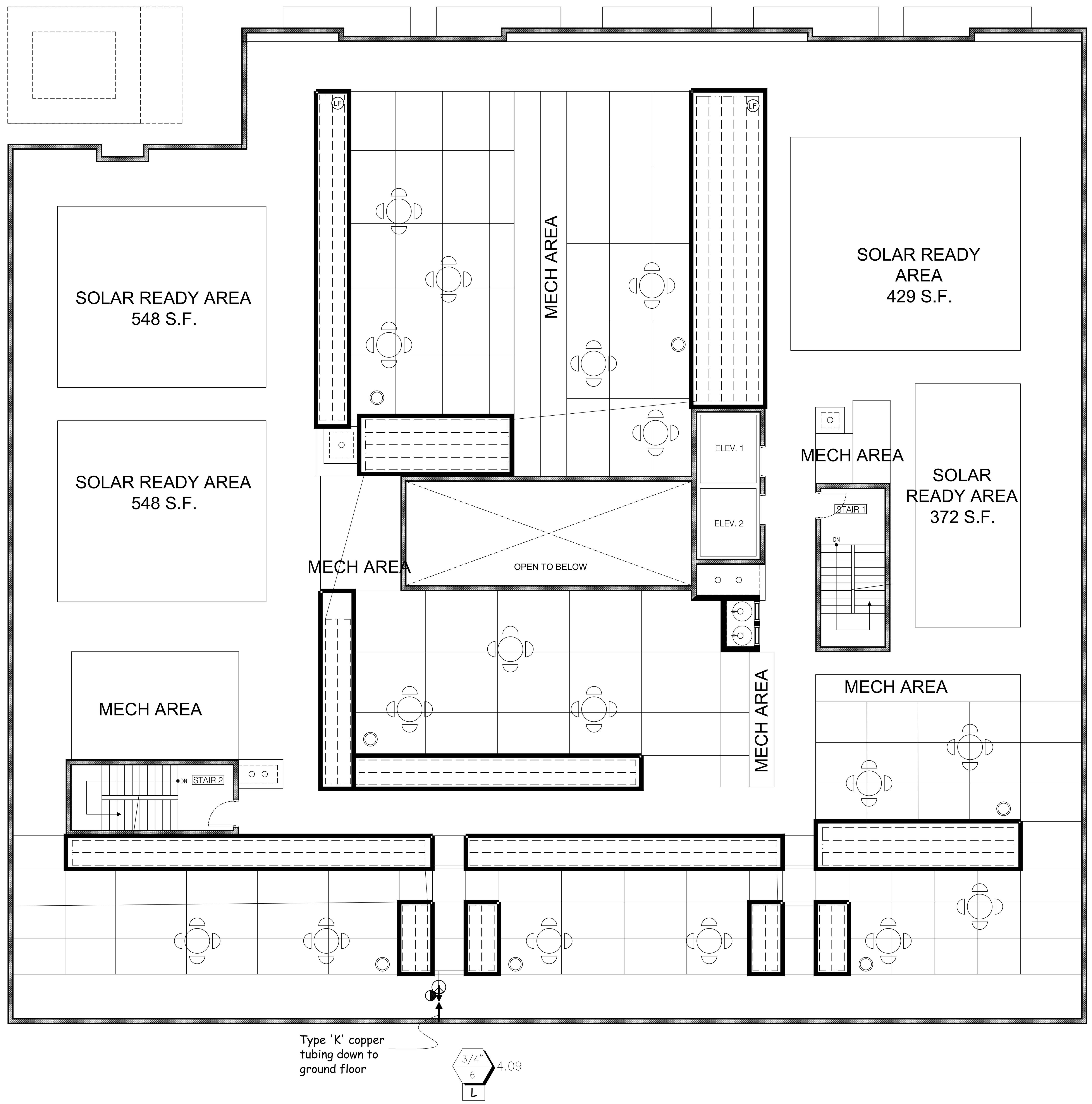

ALL IRRIGATION IS SUB-SURFACE DRIP SYSTEM

IRRIGATION LEGEND		
DESCRIPTION	SYM.	P.S.I. RAD. G.P.M.
'NIBCO' GATE VALVE T-113 'CHRISTY' CONCRETE VALVE BOX 'RAINBIRD' QUICK COUPLER 44 LRC 1" TYPE 'K' COPPER TUBING NON-PRESSURE LINE SCH. 40 P.V.C.		1" SEE PLAN FOR SIZE
NETAFIM LEGEND		
'NETAFIM' LVCZ10075-LF 'NETAFIM' LINE FLUSH VALVE 'NETAFIM' TECHLINE CV TLCV4-18025 NON-PRESSURE 1" SCH. 40 PVC HEADER	LF	CONTROL VALVE, TECHFILTER & PRESSURE REGULATOR.

SIZE
NO.
GPM
H — HYDROZONE

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ROOF
IRRIGATION PLAN

LICENSED LANDSCAPE ARCHITECT
YAEL LIR 3177
Signature
12-31-25
Renewal Date
Date
STATE OF CALIFORNIA

EXHIBIT "A"
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DRAWN BY:

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Exhibit B Environmental Documents

(ENV-2024-2708-CE)

CITY OF LOS ANGELES
DEPARTMENT OF CITY PLANNING
CITY HALL 200 NORTH SPRING STREET LOS ANGELES CA 90012

Class 32
CEQA Exemption

1709 – 1721½ South Beloit Avenue

Case Number: ENV-2023-8316-CE

Project Addresses: 1709 – 1721 ½ South Beloit Avenue

Community Plan Area: West Los Angeles

Council District: 11

Project Description: The subject property is comprised of three (3) lots measuring approximately 21,388 square feet, including half of the alley, with a frontage of approximately 135 feet along the western side of Beloit Avenue. The subject property is currently developed with a surface parking lot, a vacant duplex, and a vacant triplex. The proposed project is for the construction, use, and maintenance of a new, seven-story, approximately 91,648 square-foot residential building with 102 dwelling units, including 14 dwelling units set aside for affordable housing (or 25% of the base density). The 14 units will be reserved is for Extremely Low Income (ELI) Households. The building will be constructed with seven (7) residential levels with utilities located on the ground floor. The ground level will be the main level of the building which includes the residential lobby, a few residential units, storage areas, bicycle parking, a mail room, a trash/recycle room, and utility rooms. The project includes 25 studio units, 19 one-bedroom units, 42 two-bedroom units, 16 three-bedroom units, and a total of 12,723 square feet of open space for residents.

PREPARED FOR:
The City of Los Angeles
Department of City Planning

PREPARED BY:
The City of Los Angeles
Department of City Planning

APPLICANT:
Elliot Nayssan
EJKS, LLC

JUSTIFICATION FOR PROJECT EXEMPTION CASE NO. ENV-2023-8316-CE

The City of Los Angeles determined based on the whole of the administrative record that the project is exempt from California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines, Section 15332, and there is no substantial evidence demonstrating that an exception to a categorical exemption pursuant to CEQA Guidelines, Section 15300.2 applies.

The project is for the construction, use, and maintenance of a new, seven-story, approximately 91,648 square-foot residential building with 102 dwelling units, including 14 dwelling units set aside for affordable housing (or 25% of the base density); the 14 units will be reserved is for Extremely Low Income (ELI) Households. The building will be constructed with seven (7) residential levels with utilities located on the ground floor. The ground level will be the main level of the building which includes the residential lobby, storage areas, bicycle parking, a mail room, a trash/recycle room, and utility rooms. The project includes 25 studio units, 19 one-bedroom units, 42 two-bedroom units, 16 three-bedroom units, and a total of 12,723 square feet of open space for residents.

As a housing development project and a project which is characterized as in-fill development, the project qualifies for the Class 32 Categorical Exemption.

The project requires the following:

Pursuant to LAMC Section 12.22 A.25, a Density Bonus Compliance Review to permit a Housing Development Project consisting of a total of 91,648 square feet and 102 dwelling units, of which 14 units will be set aside for Very Low Income households; and pursuant to LAMC Sections 12.22-A.25(g)(2) and 12.22-A.25(g)(3)) four (4) Off-Menu Incentives, and four (4) Waivers or Modifications of Development Standards.

<u>Implementation of the California Environmental Quality Act</u>

Pursuant to Section 21084 of the Public Resources Code, the Secretary for the Natural Resources Agency found certain classes of projects not to have a significant effect on the environment and declared them to be categorically exempt from the requirement for the preparation of environmental documents.

The project meets the conditions for a Class 32 Exemption found in CEQA Guidelines, Section 15332 (In-Fill Development Projects), and none of the exceptions to a categorical exemption pursuant to CEQA Guidelines, Section 15300.2 apply.

<u>Conditions for a Class 32 Exemption</u>

A project qualifies for a Class 32 Categorical Exemption if it is developed on an infill site and meets the following criteria:

1) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with the applicable zoning designation and regulations;
2) The proposed developed occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses;

3) The project site has no value as habitat for endangered, rare, or threatened species;
4) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and
5) The site can be adequately served by all required utilities and public services.

The project is located within the West Los Angeles Community Plan which designates the subject property for High Medium Residential land uses with corresponding zone of R4. The subject property is zoned [Q]R4-1. The project is consistent with the applicable general plan land use designation and all applicable general plan policies as well as with the applicable zoning designation and regulations.

The subject site is wholly within the City of Los Angeles, on a site that is approximately 0.43 acres in size. Lots adjacent to the subject property are developed with multi-family structures, a hotel, and a freeway on-ramp. The subject property is currently developed with a surface parking lot, a vacant duplex, and a vacant triplex and is surrounded by development and therefore is not, and has no value as a habitat for endangered, rare, or threatened species. No street tree or protected tree may be removed without prior approval of the Board of Public Works/Urban Forestry (BPW) under LAMC Sections 62.161 - 62.171.

The project will be subject to Regulatory Compliance Measures (RCMs), which require compliance with the City of Los Angeles Noise Ordinance, pollutant discharge, dewatering, stormwater mitigations, and Best Management Practices for stormwater runoff. These RCMs will ensure the project will not have significant impacts on noise and water. The project would not result in any significant effects related to traffic, noise, air quality, or water quality.

- Construction and operational noise levels would not have a significant impact. Based on a review of similar projects, the project would not create significant levels of construction or operational emissions, nor toxic air contaminants. In addition, the project would not result in significant impacts to water quality.

- An Air Quality Technical Report dated December 2023, was prepared by Rincon Consultant, Inc. for the proposed project which determined that the project would result in less than significant air quality impacts.

- A Noise and Vibration Technical Report dated December 2023, was prepared by Rincon Consultants, Inc. Planning for the proposed project which determined that the project would not result in significant noise effects.

- Two (2) Tree Reports were conducted by McKinley & Associates dated January 10, 2022 and February 8, 2025 stating that there was zero (0) non-protected tree on the project site. No protected trees or shrubs were observed on the project site. There are six (6) trees within the public right-of-way, of which, five (5) will be retained. The replacement tree will be planted in compliance with the Urban Forestry Division guidelines. The proposed project will plant 26 24-inch box trees which is required by the LAMC and is thus in compliance.

The project site will be adequately served by all public utilities and services given that the construction of a seven-story, 91,648 square feet, residential building with 102 dwelling units will be on a site which has been previously developed and is consistent with the General Plan. Therefore, the project meets all the Criteria for the Class 32.

Exceptions to Categorical Exemptions

There are six (6) exceptions to categorical exemptions must be considered in order to find a project exempt from CEQA: (a) Location; (b) Cumulative Impacts; (c) Significant Effect; (d) Scenic Highways; (e) Hazardous Waste Sites; and (f) Historical Resources.

The project is not located on or near any environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies. There is not a succession of known projects of the same type and in same place as the subject project. The project would not reasonably result in a significant effect on the environment due to unusual circumstances. The project is not located near a State Scenic Highway. The only State Scenic Highway within the City of Los Angeles is the Topanga Canyon State Scenic Highway, State Route 27. Furthermore, according to Envirostor, the State of California’s database of Hazardous Waste Sites, neither the subject site, nor any site in the vicinity is identified as an active hazardous waste site. Based on this, the project will not result in a substantial adverse change to the significance of a historic resource and this exception does not apply.

Beloit Terraces Project

Air Quality and Greenhouse Gas Study

prepared for

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December 2023

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1 Project Description and Impact Summary

1.1 Introduction

This study analyzes the potential air quality and greenhouse gas (GHG) impacts of the proposed Beloit Terraces project (herein referred to as "proposed project" or "project") in Los Angeles, California. Rincon Consultants, Inc. (Rincon) prepared this study under contract to Nayssan Properties for the City of Los Angeles to use in support of the environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA). The purpose of this study is to analyze the project's air quality and GHG impacts related to both temporary construction activity and long-term operation of the project. The conclusions of this study and the Regulatory Compliance Measures (RCMs) required for the project are summarized in Table 1.

Table 1 Summary of Impacts

Impact Statement	Proposed Project's Level of Significance	Applicable RCMs
Air Quality		
Conflict with or obstruct implementation of the applicable air quality plan?	Less than significant impact	None
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?	Less than significant impact	RCM-1 and RCM-3 through RCM-5
Expose sensitive receptors to substantial pollutant concentrations?	Less than significant impact	None
Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	No impact	RCM-2
Greenhouse Gas Emissions		
Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.	Less than significant impact	None
Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs	Less than significant impact	None
RCM = Regulatory Compliance Measures		

Regulatory Compliance Measures

RCMs are existing requirements and reasonably anticipated standard conditions that are based on local, State, or federal regulations and laws that are frequently required independently of CEQA review and serve to offset or prevent specific impacts. RCMs are not included as mitigation measures in the environmental clearance document because the project is required to comply with RCMs through State and local regulations.

RCM-1 Demolition, Grading, and Construction Activities: Compliance with Provisions of SCAQMD Rule 403

The project shall comply with all applicable standards of the Southern California Air Quality Management District (SCAQMD), including the following provisions of Rule 403:

- All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions and meet SCAQMD Rule 403. Wetting could reduce fugitive dust by as much as 50 percent.
- The construction area shall be kept sufficiently dampened to control dust caused by grading and hauling, and at all times provide reasonable control of dust caused by wind.
- All clearing, earth moving, or excavation activities shall be discontinued during periods of high winds (i.e., greater than 15 mph), in order to prevent excessive amounts of dust.
- All dirt/soil shall be secured by trimming, watering, or other appropriate means to prevent spillage and dust.
- All dirt/soil materials transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- General contractors shall maintain and operate construction equipment to minimize exhaust emissions.
- Trucks having no current hauling activity shall not idle but be turned off.

RCM-2 Odors: Compliance with Provisions of SCAQMD Rule 402

The project shall comply with the following provision of SCAQMD Rule 402: a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

RCM-3 Engine Idling

In accordance with Section 2485 of Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location.

RCM-4 Emission Standards

In accordance with Section 93115 of Title 17 of the California Code of Regulations, operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

RCM-5 Architectural Coatings: Compliance with SCAQMD Rule 1113

The project shall comply with SCAQMD Rule 1113 limiting the volatile organic compound (VOC) content of architectural coatings.

1.2 Project Summary

Project Location

The project site is a flat, square-shaped site which includes three lots with a total area of approximately 0.43 acre in the city of Los Angeles. The site includes 1709-1721 ½ South Beloit Avenue with the following Assessor Parcel Numbers (APNs): 4261-008-008/009/023. The project site is zoned multiple dwelling residential zone ([Q]R4-1) with a General Plan Land Use designation of high medium residential. The project site currently contains five residential use buildings (one triplex and one duplex) with five total dwelling units (totaling 3,608 square feet) and approximately 4,760 square feet of parking lot area. See Figure 1 and Figure 2 for the project site location in a regional context and local context, respectively.

The surrounding area is a mixture of commercial and residential uses. The site is parallel to Interstate 405 (I-405), with an on ramp north of the property and adjacent to Beloit Avenue. The properties to the north are zoned commercial (C2-1VL) and consists of a four-story Holiday Inn Express, retail stores and a theater. The property adjacent to the project site's southern boundary is a low-rise apartment complex zoned [Q]R4-1-O.

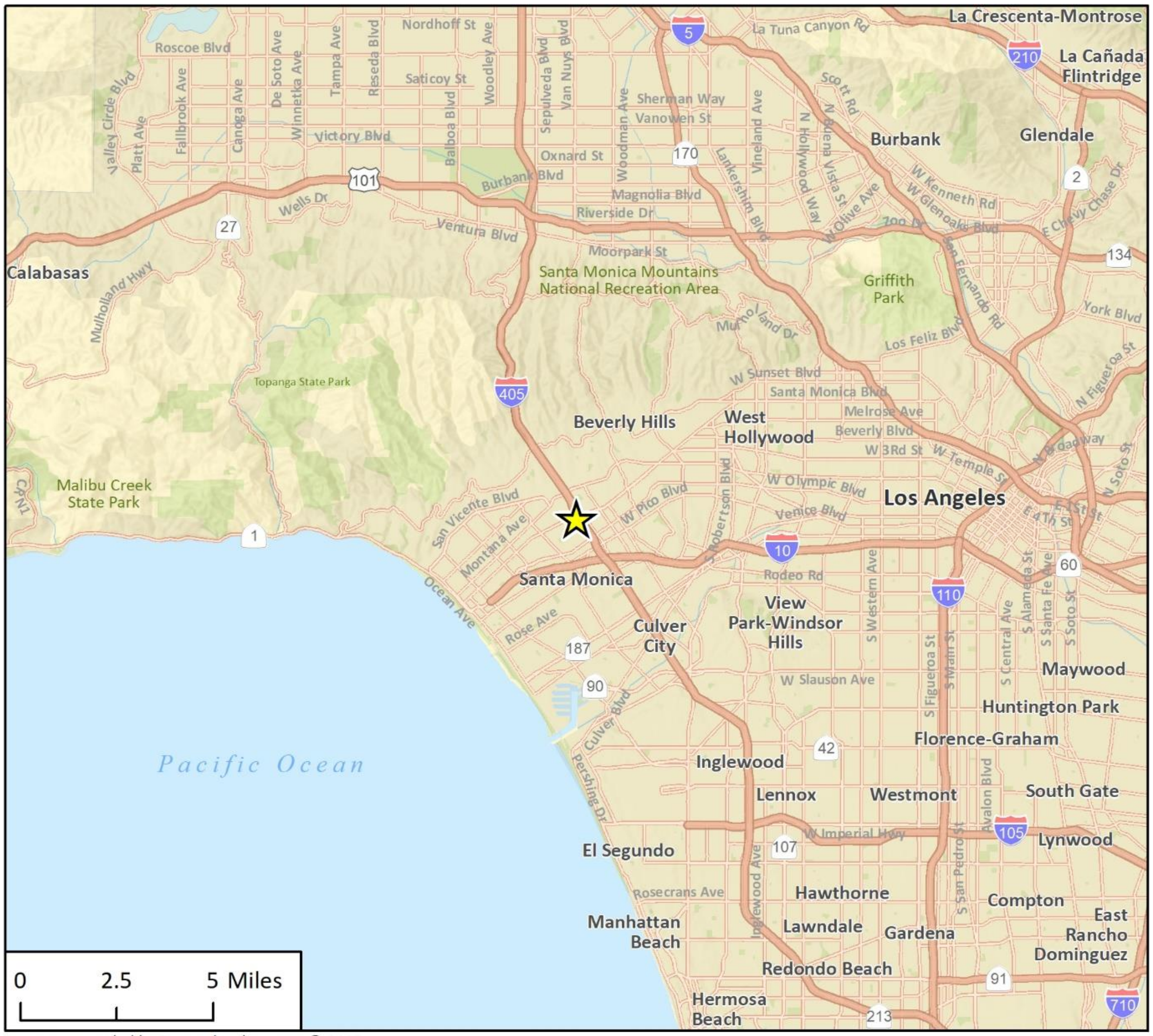
Project Description

The proposed project consists of the demolition of the five existing residential structures and the construction of a new 92-unit apartment building with two levels of subterranean parking, one level of on grade parking and seven stories of residential above. The new apartment building would have a floor area totaling 125,808 square feet. The parking areas would total 42,087 square feet and the remaining 83,721 square feet would be for the lobby, recreation room, and residences. Common use areas would include a roof deck which would occupy approximately forty percent of the roof area. Primary access to the site is provided via a driveway off Beloit Avenue. See Appendix A for site plans.

Construction

Project construction is expected to commence in 2024. Construction activities would occur five days a week. The project would require cut and export of approximately 14,000 cubic yards of soil materials.

Figure 1 Regional Location Map



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Project Location

N

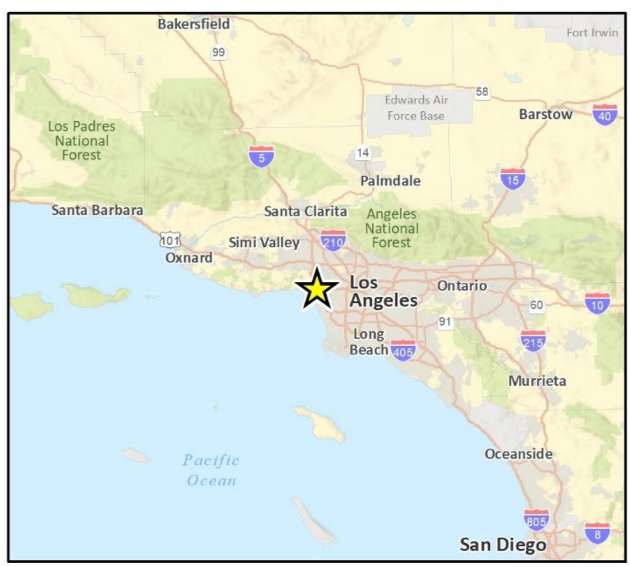

Figure 2   Project Site Location

Imagery provided by Microsoft Bing and its licensors © 2020.

2 Air Quality

2.1 Environmental and Regulatory Setting

Local Climate and Meteorology

The project site is in the South Coast Air Basin (SCAB), which is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The SCAB includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The regional climate in the SCAB is semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality in the SCAB is primarily influenced by meteorology and a wide range of emission sources, such as dense population centers, substantial vehicular traffic, and industry.

Air pollutant emissions in the SCAB are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

Air Quality Regulation

Federal and California Clean Air Acts

The federal and state governments have established ambient air quality standards for the protection of public health. The United States Environmental Protection Agency (USEPA) is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the state equivalent within the California Environmental Protection Agency (CalEPA). County-level air districts provide local management of air quality. CARB has established air quality standards and is responsible for the control of mobile emission sources, while the local air districts are responsible for enforcing standards and regulating stationary sources. CARB has established 15 air basins statewide, including the SCAB.

The USEPA has set primary national ambient air quality standards (NAAQS) for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter with diameters of up to ten microns (PM_{10}) and up to 2.5 microns ($PM_{2.5}$), and lead. Primary standards are those levels of air quality deemed necessary, with an adequate margin of safety, to protect public health. In addition, California has established health-based ambient air quality standards (known as the California ambient air quality standards [CAAQS]) for these and other pollutants, some of which are more stringent than the federal standards. Table 2 lists the current federal and state standards for regulated pollutants.

Table 2 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standards
Ozone	1-Hour	–	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
CO	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
NO_2	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
SO_2	Annual	.030 ppm	–
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM_{10}	Annual	–	20 µg/m^3
	24-Hour	150 µg/m^3	50 µg/m^3
$PM_{2.5}$	Annual	12 µg/m^3	12 µg/m^3
	24-Hour	35 µg/m^3	–
Lead	30-Day Average	–	1.5 µg/m^3
	3-Month Average	0.15 µg/m^3	–
Visibility Reducing Particles	8-Hour	–	Extinction of 0.23 per kilometer
Sulfates	24-Hour	–	25 µg/m^3
Hydrogen Sulfide	1-Hour	–	0.03 ppm (42 µg/m^3)
Vinyl Chloride	24-Hour	–	0.01 ppm (26 µg/m^3)

ppm = parts per million; µg/m^3 = micrograms per cubic meter

Source: CARB 2016

SCAQMD is the designated air quality control agency in the SCAB, which is a non-attainment area for the federal standards for ozone and $PM_{2.5}$ and the state standards for ozone, PM_{10}, and $PM_{2.5}$. The Los Angeles County portion of the SCAB is also designated non-attainment for lead (SCAQMD 2016). The SCAB is designated unclassifiable or in attainment for all other federal and state standards.

Safer Affordable Fuel-Efficient Vehicles Rule

On September 27, 2019, the USEPA and the National Highway Safety Administration published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program. The Part One Rule revokes California's authority to set its own GHG emissions standards and zero-emission vehicle mandates in California. To account for the effects of the Part One Rule, CARB released off-model adjustment factors on November 20, 2019 to adjust criteria air pollutant emissions outputs from the EMFAC model.

Air Pollutants of Primary Concern

Primary criteria pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere. Primary criteria pollutants include CO, NO_2, PM_{10}, $PM_{2.5}$, SO_2, and lead. Ozone is considered a secondary criteria pollutant because it is created by atmospheric chemical and photochemical reactions between reactive organic gases (ROG) and nitrogen oxides (NO_X). The following subsections describe the characteristics, sources, and health and atmospheric effects of critical air contaminants.

Ozone

Ozone is produced by a photochemical reaction (triggered by sunlight) between NO_X and ROG.[1] Nitrogen oxides are formed during the combustion of fuels, while ROG are formed during combustion and evaporation of organic solvents. Because O_3 requires sunlight to form, it usually occurs in substantial concentrations between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to O_3 include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide

Carbon monoxide is a local pollutant that is found in high concentrations only near fuel combustion equipment and other sources of CO. The primary source of CO, a colorless, odorless, poisonous gas, is automobile traffic. Therefore, elevated concentrations are usually only found near areas of high traffic volumes. Carbon monoxide's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulty in people with chronic diseases, reduced lung capacity, and impaired mental abilities.

Nitrogen Dioxide

Nitrogen dioxide is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. Nitrogen dioxide is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. Nitrogen dioxide absorbs blue light, gives a reddish-brown cast to the atmosphere, and reduces visibility. It can also contribute to the formation of ozone/smog and acid rain.

Sulfur Dioxide

Sulfur dioxide is a colorless, pungent, irritating gas formed primarily by the combustion of sulfur-containing fossil fuels. When SO_2 oxidizes in the atmosphere, it forms sulfur trioxide. Collectively, these pollutants are referred to as sulfur oxides (SO_X). In humid atmospheres, SO_2 can also form sulfuric acid mist, which can eventually react to produce sulfate particulates that can inhibit visibility. Combustion of high sulfur-content fuels is the major source of SO_2, while chemical plants, sulfur recovery plants, and metal processing are minor contributors. At sufficiently high concentrations, SO_2 irritates the upper respiratory tract. At lower concentrations, when in conjunction with particulates, SO_2 appears to do still greater harm by injuring lung tissues. This compound also constricts the breathing passages, especially in people with asthma and people involved in moderate to heavy exercise. Sulfur dioxide causes respiratory irritation, including

[1] CARB defines VOC and ROG similarly as, "any compound of carbon excluding CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate," with the exception that VOC are compounds that participate in atmospheric photochemical reactions (CARB 2009). For the purposes of this analysis, ROG and VOC are considered comparable in terms of mass emissions and the term ROG is used in this report.). SCAQMD uses the term VOC to denote organic precursors.

wheezing, shortness of breath, and coughing. Long-term SO_2 exposure has been associated with increased risk of mortality from respiratory or cardiovascular disease. Sulfur oxides, in combination with moisture and oxygen, can yellow leaves on plants, dissolve marble, and eat away iron and steel.

Suspended Particulates

Atmospheric particulate matter is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. The particulates that are of particular concern are PM_{10} (small particulate matter that measures no more than 10 microns in diameter) and $PM_{2.5}$ (fine particulate matter that measures no more than 2.5 microns in diameter). The characteristics, sources, and potential health effects associated with PM_{10} and $PM_{2.5}$ can be different. Major man-made sources of PM_{10} are agricultural operations, industrial processes, combustion of fossil fuels, construction, demolition operations, and entrainment of road dust into the atmosphere. Natural sources include windblown dust, wildfire smoke, and sea spray salt. The finer $PM_{2.5}$ particulates are generally associated with combustion processes as well as formation in the atmosphere as a secondary pollutant through chemical reactions. $PM_{2.5}$ is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Lead

Lead is a metal found naturally in the environment, as well as in manufacturing products. Lead occurs in the atmosphere as particulate matter. The major sources of lead emissions historically have been mobile and industrial sources. In the early 1970s, the USEPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The USEPA completed the ban prohibiting the use of leaded gasoline in highway vehicles in December 1995. As a result of the USEPA's regulatory efforts to remove lead from gasoline, atmospheric lead concentrations have declined substantially over the past several decades. The most dramatic reductions in lead emissions occurred prior to 1990 due to the removal of lead from gasoline sold for most highway vehicles. Lead emissions were further reduced substantially between 1990 and 2008, with reductions occurring in the metals industries in part due to national emissions standards for hazardous air pollutants (USEPA 2013). As a result of phasing out leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in the air are generally found near lead smelters. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. Lead may cause a range of health effects, including anemia, kidney disease, and neuromuscular and neurological dysfunction (in severe cases). The proposed project does not include any stationary sources of lead emissions. Therefore, implementation of the project would not result in substantial emissions of lead, and this pollutant is not discussed further in this analysis.

Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or serious illness or that may pose a present or potential hazard to human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. One of the main sources of TACs in California is diesel engines that emit exhaust containing solid material known as diesel particulate matter (DPM; CARB 2011). TACs are different than the criteria pollutants previously discussed because ambient air quality standards have not been established for TACs. TACs occurring at extremely low levels may still cause health effects, and it is typically difficult to identify levels of exposure that do not produce adverse health effects. TAC impacts are described by carcinogenic risk and by chronic (i.e., of long duration) and acute (i.e., severe but of short duration) adverse effects on human health.

Current Air Quality

The SCAQMD operates a network of air quality monitoring stations throughout the SCAB. The purpose of the monitoring stations is to measure ambient concentrations of pollutants and to determine whether ambient air quality meets the NAAQS and CAAQS. The monitoring station closest to the project is the West Los Angeles-VA station located at the intersection of Wilshire Boulevard and Sawtelle approximately 0.3 miles west of the project site. This station reports monitoring data for ozone and NO_2, but not PM_{10} and $PM_{2.5}$. Therefore, PM_{10} concentrations were obtained from the next closest station with available data, which is the Los Angeles-LAX Station monitoring station located at 7201 Westchester Parkway approximately 6.8 miles east of the project site. $PM_{2.5}$ concentrations were obtained from the next closest station with available data, which is the Reseda monitoring station located at 1630 North Main Street approximately 15.1 miles west of the project site.

Table 3 indicates the number of days that the NAAQS and CAAQS were exceeded at these stations in each of the last three years. The data indicate that the federal and state eight-hour ozone standards were exceeded in 2020 and 2021, and the state worst-hour ozone standard was exceeded in 2020 and 2021. In addition, the federal $PM_{2.5}$ standard was exceeded in 2020 and 2021. The federal and state PM_{10} standard were exceeded in 2020. No other state or federal standards were exceeded at this monitoring station.

Table 3 Ambient Air Quality at the Nearest Monitoring Stations

Pollutant	2020	2021	2022
Ozone (ppm), Eight-Hour Average[1]	0.093	0.082	0.070
Number of days of state exceedances (>0.070 ppm)	8	1	0
Number of days of federal exceedances (>0.070 ppm)	8	1	0
Ozone (ppm), Worst Hour[1]	0.134	0.095	0.081
Number of days of state exceedances (>0.09 ppm)	6	1	0
Nitrogen Dioxide (ppm), Worst Hour[1]	0.076	0.061	0.051
Number of days of state exceedances (>0.18 ppm)	0	0	0
Particulate Matter <10 microns (μg/m^3), Worst 24 Hours[2]	55.6	33.3	*
Number of days of state exceedances (>50 μg/m^3)	1	0	*
Number of days of federal exceedances (>150 μg/m^3)	0	0	*
Particulate Matter <2.5 microns (μg/m^3), Worst 24 Hours[3]	175.0	61.0	33.7

Pollutant	2020	2021	2022
Number of days of federal exceedances (>35 μg/m^3)	12	13	0

[1] Data obtained from the West Los Angeles -VA station at 11301 Wilshire Boulevard in Los Angeles

[2] Data obtained from the Los Angeles -Westchester Parkway at 7201 West Westchester Parkway in Los Angeles

[3] Data obtained from the Los Angeles-North Main Street station at 1630 North Main Street in Los Angeles

Source: CARB 2023

Air Quality Management Plan

To meet the NAAQS and CAAQS, the SCAQMD has adopted a series of AQMPs that serve as a regional blueprint to develop and implement an emission reduction strategy that will bring the area into attainment with the standards in a timely manner. The most significant air quality challenge in the Air Basin is to reduce NO_X emissions to meet the 2037 ozone standard deadline for the non-Coachella Valley portion of the South Coast Air Basin, as NO_X plays a critical role in the creation of ozone. The 2022 AQMP includes strategies to ensure the SCAQMD does its part to further the district's ability to meet the 2015 federal ozone standards. The district would need to reduce emissions of NO_X by 67 percent beyond what is required by the adopted rules and regulations in 2037 to meet the 2015 federal ozone standard (SCAQMD 2022). The 2022 AQMP builds on the measures already in place from the previous AQMPs and includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technology, best management practices, co-benefits from existing programs, incentives, and other CAA measures to meet the 8-hour ozone standard.

The AQMP also incorporates the transportation strategy and transportation control measures from SCAG's 2020-2045 RTP/SCS Plan (Connect SoCal) (SCAG 2020). SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial counties, and addresses regional issues relating to transportation, the economy, community development, and the environment. SCAG coordinates with various air quality and transportation stakeholders in southern California to ensure compliance with the federal and State air quality requirements. Pursuant to California Health and Safety Code Section 40460, SCAG has the responsibility of preparing and approving the portions of the AQMP relating to the regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. SCAG is required by law to ensure that transportation activities "conform" to, and are supportive of, the goals of regional and State air quality plans to attain the NAAQS. Connect SoCal includes transportation programs, measures, and strategies generally designed to reduce vehicle miles traveled (VMT), which are contained in the AQMP. The SCAQMD combines its portion of the AQMP with measures prepared by SCAG (SCAQMD 2022). Connect SoCal and Transportation Control Measures, included as Appendix IV-C of the 2022 AQMP, are based on SCAG's Connect SoCal.

Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with a margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; people engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. Therefore, the majority of sensitive receptor locations are schools, hospitals, and residences. Sensitive receptors in the project vicinity include multi-family residences located immediately south of the project site as well as Nora Sterry

Elementary School located 280 feet southwest of the project site. The nearest hospital, West Los Angeles VA healthcare center, is approximately 0.3-mile northwest of the project site.

2.2 Impact Analysis

This air quality analysis conforms to the methodologies recommended in the SCAQMD's *CEQA Air Quality Handbook* (1993) and supplemental guidance provided by the SCAQMD, including recommended thresholds for emissions associated with both construction and operation of the project (SCAQMD 2023).

Methodology

The project's construction and operational emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2022. CalEEMod uses project-specific information, including the project's land uses, square footages for different uses (e.g., mid-rise apartment, enclosed parking garage), and location, to estimate a project's construction and operational emissions.

Construction emissions modeled include emissions generated by construction equipment used on-site and emissions generated by vehicle trips associated with construction, such as worker and vendor trips. Emissions were modeled assuming construction of a 92unit mid-rise multi-family housing complex. The start of construction was assumed to start in January 2024. The grading phase was extended to 20 days from the default of 2 days due to the the amount of exported material provided by the. Architectural coating phase was assumed to start halfway into building construction to account for coating as segments of the building are constructed. The CalEEMod defaults for construction equipment were used assuming all equipment would be diesel-powered. In addition, approximately 3,608 square feet of existing building would be demolished and hauled off-site. During grading, 14,000 cubic yards of soil would also be exported off-site. Furthermore, as detailed in Section 1, *Project Description and Impact Summary*, it was assumed that project construction would comply with all applicable regulatory standards, including SCAQMD Rule 403 (RCM-1 Fugitive Dust), SCAQMD Rule 402 (RCM-2 Odor Compliance), Section 2485 of Title 13 of the California Code of Regulations (RCM-3 Engine Idling), Section 93115 of Title 17 of the California Code of Regulations (RCM-4 Emission Standards) and Rule 1113 (RCM-5 Architectural Coatings).

Operational emissions modeled include mobile source emissions (i.e., vehicle emissions), energy emissions, and area source emissions. Mobile source emissions consist of emissions generated by residents to and from the project site. Emissions attributed to energy use include emissions from natural gas consumption for space and water heating and cooking. Area source emissions are generated by landscape maintenance equipment, consumer products, and architectural coatings. In addition, operational emissions associated with existing on-site development were modeled in CalEEMod and subtracted from the proposed project's operational emissions to calculate net new emissions.

Significance Thresholds

To determine whether a project would result in a significant impact to air quality, Appendix G of the *CEQA Guidelines* requires consideration of whether a project would:

- Conflict with or obstruct implementation of the applicable air quality plan
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard

- Expose sensitive receptors to substantial pollutant concentrations
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people

Regional Significance Thresholds

The SCAQMD recommends quantitative regional significance thresholds for temporary construction activities and long-term project operation in the SCAB, shown in Table 4.

Table 4 SCAQMD Regional Significance Thresholds

Construction Thresholds	Operational Thresholds
75 pounds per day of VOC	55 pounds per day of VOC
100 pounds per day of NO_X	55 pounds per day of NO_X
550 pounds per day of CO	550 pounds per day of CO
150 pounds per day of SO_X	150 pounds per day of SO_X
150 pounds per day of PM_{10}	150 pounds per day of PM_{10}
55 pounds per day of $PM_{2.5}$	55 pounds per day of $PM_{2.5}$

Localized Significance Thresholds

In addition to the above regional thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the *CEQA Air Quality Handbook* (1993). LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities and have been developed for NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), distance to the sensitive receptor, and project size. LSTs have been developed for emissions generated in construction areas up to five acres in size. However, LSTs only apply to emissions in a fixed stationary location and are not applicable to mobile sources, such as cars on a roadway (SCAQMD 2008). As such, LSTs are typically applied only to construction emissions because the majority of operational emissions are associated with project-generated vehicle trips.

The SCAQMD provides lookup tables for sites that measure up to one, two, or five acres for each SRA. The project site is located in SRA 2 (Northwest Coastal Los Angeles County) and is approximately 0.4 acre in size. Pursuant to SCAQMD guidance, the one-acre LSTs were utilized for this analysis (SCAQMD 2008). LSTs are provided for receptors at a distance of 25 to 500 meters (82 to 1,640 feet) from the project site boundary. The closest sensitive receptors to the project site are multi-family residences located immediately adjacent to the southeast; therefore, per SCAQMD guidance, LSTs for receptors at a distance of 25 meters were utilized (SCAQMD 2008). LSTs for construction on a one-acre site in SRA 2 for a receptor at 25 meters are shown in Table 5.

Table 5 SCAQMD LSTs for Construction

Pollutant	Allowable Emissions from a One Acre Site in SRA 2 for a Receptor at 25 Meters (pounds/day)
Gradual conversion of NO_x to NO_2	103
CO	562
PM_{10}	4
$PM_{2.5}$	3
Source: SCAQMD 2009	

Project Impacts

Threshold 1	Would the project conflict with or obstruct implementation of the applicable air quality plan? **NO IMPACT**

A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding the forecasts used in the development of the AQMP. The 2016 AQMP relies on local general plans and the demographic forecasts contained in the SCAG 2016 RTP/SCS in its own projections for managing air quality in the SCAB.[2] As such, projects that propose development that is consistent with the growth anticipated by SCAG's growth projections and/or the General Plan would not conflict with the SCAQMD AQMP. In the event that a project would propose development that is less dense than anticipated by the growth projections, the project would likewise be consistent with the AQMP.

The proposed project involves the demolition of five dwelling units and the construction of a 92-unit apartment building. The proposed project would result in a net increase of 58 residential units on the project site. According to data from the California Department of Finance (DOF), the 2021 population of the City is approximately 3,923,341 persons, and the average household size is 2.72 persons (DOF 2021). Therefore, existing residential units on the project site accommodate approximately 14 residents (five units multiplied by 2.72 persons per household). With demolition of the existing residential units, there would be a net increase of approximately 236 residents on site.[3] The proposed multi-family housing would directly increase the City's population given that its purpose is to house individuals. Therefore, it would generate permanent residents.

SCAG forecasts the population of the city of Los Angeles will reach 4,771,300 by 2045, an increase of 837,500 residents from the city's estimated 2016 population (SCAG 2020). The proposed project would indirectly increase the existing population by approximately 236 residents, which would be within SCAG's 2040 population forecast for the city. In addition, the project would result in a net increase of 92 housing units and would comprise of less than a percent of SCAG's 2040 housing units forecast for Los Angeles. As a result, population, housing, and employment growth generated by the project would be within the respective SCAG growth forecasts upon which the AQMP relies. Thus, the project would not conflict with the AQMP. No impact would occur.

[2] On September 3, 2020, SCAG's Regional Council formally adopted the 2020-2045 RTP/SCS (titled Connect SoCal). However, the SIPs were adopted prior to this date and relies on the demographic and growth forecasts of the 2016-2040 RTP/SCS; therefore, these forecasts are utilized in the analysis of the project's consistency with the AQMP.

[3] 92 dwelling units multiplied by 2.72 persons per household minus the 14 existing residents equates to 236 net residents.

Threshold 2	Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard? **LESS THAN SIGNIFICANT**

Construction Impacts

Table 6Project construction would involve demolition, site preparation, grading, building construction, paving, and architectural coating activities that have the potential to generate air pollutant emissions. Table 6 summarizes the estimated maximum daily emissions and the maximum daily on-site emissions of pollutants associated with construction of the proposed project. As shown below, VOC, NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$ emissions would not exceed SCAQMD regional thresholds or LSTs. Because air pollutant emissions generated by project construction would not exceed SCAQMD’s regional significance thresholds or LSTs, project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment, and impacts would be less than significant.

Table 6 Project Construction Emissions

	Maximum Emissions (lbs./day)					
Year	**VOC**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
2023	**9**	**26**	**27**	**<1**	**6**	**3**
SCAQMD Regional Thresholds	75	100	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No
Maximum Daily On-site Emissions	**8**	**11**	**11**	**<1**	**2**	**1**
SCAQMD Localized Significance Thresholds (LSTs)	N/A	103	562	N/A	4	3
Threshold Exceeded?	N/A	No	No	N/A	No	No

Notes: All emissions modeling was completed using CalEEMod. See Appendix B for modeling results. Some numbers may not add up due to rounding. Emission data is pulled from “mitigated” results, which account for compliance with regulatory compliance measures. Emissions presented are the highest of the winter and summer modeled emissions. Maximum on-site emissions are the highest emissions that would occur on the project site from on-site sources such as heavy construction equipment and architectural coatings and excludes off-site emissions from sources such as construction worker vehicle trips and haul truck trips.

Operational Impacts

Table 7 summarizes the project’s operational emissions by emission source. The majority of project-related operational emissions would result from vehicle trips to and from the site. As shown in Table 7, operational criteria pollutant emissions would not exceed SCAQMD regional thresholds for criteria pollutants. Therefore, project operation would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment, and impacts would be less than significant.

Table 7 Project Operational Emissions

	Maximum Daily Emissions (lbs./day)					
Emission Source	**VOC**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	3	<1	7	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	2	1	16	<1	3	1
Total Project Emissions	**5**	**<2**	**23**	**<1**	**3**	**1**
SCAQMD Regional Thresholds	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Notes: All emissions modeling was completed using CalEEMod. See Appendix B for modeling results. Some numbers may not add up due to rounding. Emission data is pulled from "mitigated" results that include compliance with regulatory compliance measures. Emissions presented are the highest of the winter and summer modeled emissions.

Threshold 3 Would the project expose sensitive receptors to substantial pollutant concentrations? **LESS THAN SIGNIFICANT**

Localized Carbon Monoxide Hotspot Impact

A CO hotspot is a localized concentration of CO that is above a CO ambient air quality standard. Localized CO hotspots can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal one-hour standard of 35.0 parts per million (ppm) or the federal and state eight-hour standard of 9.0 ppm (CARB 2016).

The entire SCAB is in conformance with state and federal CO standards, and most air quality monitoring stations no longer report CO levels. No stations within the vicinity of the project site have monitored CO in the last eight years. In 2012, the West Los Angeles - VA station detected an eight-hour maximum CO concentration of 1.2 ppm, which is substantially below the state and federal standard of 9.0 ppm (CARB 2020a). As shown in Table 6, maximum daily CO emissions generated by project construction would be 27 pounds, and maximum on-site emissions generated by project construction would be 11 pounds, which would not exceed SCAQMD's regional threshold (550 pounds per day) or LST (562 pounds per day) for CO. Likewise, as shown in Table 7, project operations from area, energy, and mobile emissions sources combined would result a net increase in maximum daily CO emissions of approximately 23 pounds compared to existing uses. Both the SCAQMD's regional thresholds and LSTs are designed to be protective of public health. Based on the low background level of CO in the project area, ever-improving vehicle emissions standards for new cars in accordance with state and federal regulations, and the project's low level of operational CO emissions, the project would not create new CO hotspots or contribute substantially to existing CO hotspots. Therefore, the proposed project would not expose sensitive receptors to substantial CO concentrations, and localized air quality impacts related to CO hot spots would be less than significant.

Toxic Air Contaminants (TACs)

The California Air Resources Board's (CARB) *Air Quality and Land Use Handbook: A Community Health Perspective* recommends that local agencies avoid siting new, sensitive land uses within specific distances of potential sources of TACs, such as freeways and high-traffic roads, distribution centers, railroads, and ports (CARB 2005). In particular, CARB recommends that local agencies avoid siting new, sensitive land uses within 500 feet of a freeway. The primary concern is the effect of diesel particulate matter (diesel PM), a TAC, on sensitive uses. The project site is located approximately 180 feet west of I-405 and 190 feet south of State Route 2 (SR-2, or Santa Monica Boulevard). Near the project site, the primary source of diesel PM is truck traffic traveling on the I-405 mainline and associated ramps, as well as vehicle travel on SR-2. In California, approximately 70 percent of total known cancer risk related to air toxics is attributable to diesel PM (CARB 2020). In addition to diesel PM, this analysis also examined five other vehicle exhaust pollutants of concern that are emitted from both diesel and gasoline-fueled vehicles: acrolein, acetaldehyde, formaldehyde, benzene, and 1,3-butadiene.

Cancer risk is expressed as the maximum number of new cases of cancer projected to occur in a population of one million people due to exposure to the cancer-causing substance, typically over a specific exposure duration, such as the high-end residency (95th percentile) of 30 years (SCAQMD 2017). For example, a cancer risk of one in one million means that in a population of one million people, not more than one additional person would be expected to develop cancer as the result of the exposure to the substance causing that risk. Thirty years is the exposure duration scenario recommended by the SCAQMD for residential receptors in Risk Assessment Procedures for Rules 1401, 1401.1, and 212 (2017).

An analysis using the USEPA AERMOD dispersion model and CARB's Hotspots Analysis and Reporting Program (HARP) risk analysis tool determined that the maximum exposed individual receptor (MEIR) on the project site would be exposed to a high end (95th percentile), 30-year excess cancer risk of approximately 7.5 in one million, which is below SCAQMD's recommended cancer risk criteria of 10 excess cases of cancer in one million individuals (1.0E-05) (SCAQMD 2023). Potential acute and chronic (such as lung inflammation, immune suppression, and immune sensitization) health risks for on-site residential units were also determined to be within SCAQMD health risk criteria.

This Health Risk Assessment (HRA) analyzes the possible health effects associated with TAC emissions from I-405, SR-2, and associated on- and off-ramps near the project site. Health risks for a total of 60 sensitive receptor points distributed throughout the project site were modeled. Each of these receptors represents a proposed location of residential housing unit. A receptor grid was used to evaluate whether or not sensitive receptor locations reflected the pattern of exposure.

Cancer, acute, and chronic risks were determined for a 30-year residency scenario at all receptor locations. Risk levels for the maximally exposed individual receptor (MEIR) are shown in Table 8. Refer to Appendix C for more detailed accounting of health risks at each receptor per pollutant of concern.

As shown in Table 8, the MEIR would be exposed to a high end (95th percentile), 30-year excess cancer risk of approximately 7.5 in one million, which does not exceed SCAQMD's recommended health risk criteria of ten excess cases of cancer in one million individuals (1.0E-05) (SCAQMD 2023). As shown in Table 8, potential chronic and acute (such as lung inflammation, immune suppression, and immune sensitization) health risks were approximately 0.019 and 0.012, respectively, which are also less than SCAQMD's health risk criteria of one. Impacts related to TAC emissions would be less than significant (see Appendix C for HRA).

Table 8 Potential Health Risks at the MEIR

	Maximum Exposed Individual Resident (MEIR)[1]
Cancer Risk	
Incremental Excess Cancer Risk	7.5 in one million (third floor)
Threshold	*10 in one million*
Threshold Exceeded?	**No**
Chronic Risk	
Chronic Hazard Index	0.019 (third floor)
Threshold	1.0
Threshold Exceeded?	**No**
Acute Risk	
Acute Hazard Index	0.012 (second floor)
Threshold	1.0
Threshold Exceeded?	**No**

[1] Based on 30-year resident exposure. Cancer risk includes adjustment for use of MERV 13 filters, pursuant to Los Angeles Municipal Code and 2019 California Energy Code requirements. The MEIR is a residence located in the southwestern portion of the building on the second and third floors of the building. For cancer and chronic risk, the MEIR is Receptor ID 32 (third floor). For acute risk, the MEIR is Receptor ID 36 (second floor).

See HRA Appendix C for model outputs and summary form and HRA Appendix B for the MERV 13-adjusted cancer risk.

Threshold 4 Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? **NO IMPACT**

The project would generate oil or diesel fuel odors during construction from equipment operations. These odors would be limited to the temporary construction period and would dissipate rapidly with distance. With respect to odors generated by project operation, the SCAQMD's *CEQA Air Quality Handbook* (1993) identifies land uses associated with odor complaints to be agricultural uses, wastewater treatment plants, chemical and food processing plants, composting, refineries, landfills, dairies, and fiberglass molding. Multi-family residence uses are not identified on this list. Furthermore, no odor-producing uses are located in the project vicinity. In addition, the project would be required to comply with SCAQMD Rule 402, which prohibits the discharge of air contaminants that would cause injury, detriment, nuisance, or annoyance to the public. Therefore, the proposed project would not generate objectionable odors affecting a substantial number of people. There would be no impact.

3 Greenhouse Gas Emissions

3.1 Background

This section analyzes GHG emissions associated with the project and potential impacts related to climate change.

Greenhouse Gases and Climate Change

Gases that absorb and re-emit infrared radiation in the atmosphere are called GHGs. The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as “carbon dioxide equivalent” (CO_2e), which is the amount of GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 30, meaning its global warming effect is 30 times greater than CO_2 on a molecule per molecule basis (United Nations Intergovernmental Panel on Climate Change [IPCC] 2021).[4]

GHGs are emitted by natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are usually by-products of fossil fuel combustion, and CH_4 results from off-gassing associated with agricultural practices and landfills. Human-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF_6 (United States Environmental Protection Agency [USEPA] 2021a).

Climate change is the observed increase in the average temperature of the Earth’s atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. The term “climate change” is often used interchangeably with the term “global warming,” but climate change is preferred because it conveys that other changes are happening in addition to rising temperatures. The baseline against which these changes are measured originates in historical records that identify temperature changes that occurred in the past, such as during previous ice ages. The global climate is changing continuously, as evidenced in the geologic record which indicates repeated episodes of substantial warming and cooling. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming over the past 150 years. The United Nations Intergovernmental Panel on Climate Change (IPCC) expressed that the rise and continued growth of atmospheric CO_2

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[4] The Intergovernmental Panel on Climate Change’s (2021) *Sixth Assessment Report* determined that methane has a GWP of 30. However, the 2017 Climate Change Scoping Plan published by the California Air Resources Board uses a GWP of 25 for methane, consistent with the Intergovernmental Panel on Climate Change’s (2007) *Fourth Assessment Report*. Therefore, this analysis utilizes a GWP of 25.

concentrations is unequivocally due to human activities in the IPCC's Sixth Assessment Report (2021). Human influence has warmed the atmosphere, ocean, and land, which has led the climate to warm at an unprecedented rate in the last 2,000 years. It is estimated that between the period of 1850 through 2019, that a total of 2,390 gigatonnes of anthropogenic CO_2 was emitted. It is likely that anthropogenic activities have increased the global surface temperature by approximately 1.07 degrees Celsius between the years 2010 through 2019 (IPCC 2021). Furthermore, since the late 1700s, estimated concentrations of CO_2, methane, and nitrous oxide in the atmosphere have increased by over 43 percent, 156 percent, and 17 percent, respectively, primarily due to human activity (USEPA 2021a). Emissions resulting from human activities are thereby contributing to an average increase in Earth's temperature

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat-trapping effect of GHGs, the earth's surface would be about 33 degrees Celsius (°C) cooler (World Meteorological Organization 2021). However, since 1750, estimated concentrations of CO_2, CH_4, and N_2O in the atmosphere have increased by 47 percent, 156 percent, and 23 percent, respectively, primarily due to human activity (IPCC 2021). GHG emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, are believed to have elevated the concentration of these gases in the atmosphere beyond the level of concentrations that occur naturally.

Greenhouse Gas Emissions Inventory

Global Emissions Inventory

In 2015, worldwide anthropogenic GHG emissions totaled 47,000 million MT of CO_2e, which is a 43 percent increase from 1990 GHG levels (USEPA 2021b). Specifically, 34,522 million metric tons (MMT) of CO_2e of CO_2, 8,241 MMT of CO_2e of CH_4, 2,997 MMT of CO_2e of N_2O, and 1,001 MMT of CO_2e of fluorinated gases were emitted in 2015. The largest sources of GHG emissions were energy production and use which (includes fuels used by vehicles and buildings), which accounted for 75 percent of the global GHG emissions. Agriculture uses and industrial processes contributed 12 percent and six percent, respectively. Waste sources contributed for three percent and two percent was due to international transportation sources. These sources account for approximately 98 percent because there was a net sink of two percent from land-use change and forestry. (USEPA 2021b).

United States Emissions Inventory

Total U.S. GHG emissions were 6,558 MMT of CO_2e in 2019. Emissions decreased by 1.7 percent from 2018 to 2019; since 1990, total U.S. emissions have increased by an average annual rate of 0.06 percent for a total increase of 1.8 percent between 1990 and 2019. The decrease from 2018 to 2019 reflects the combined influences of several long-term trends, including population changes, economic growth, energy market shifts, technological changes such as improvements in energy efficiency, and decrease carbon intensity of energy fuel choices. In 2019, the industrial and transportation end-use sectors accounted for 30 percent and 29 percent, respectively, of nationwide GHG emissions while the commercial and residential end-use sectors accounted for 16 percent and 15 percent of nationwide GHG emissions, respectively, with electricity emissions distributed among the various sectors (USEPA 2021c).

California Emissions Inventory

Based on the CARB California Greenhouse Gas Inventory for 2000-2019, California produced 418.2 MMT of CO_2e in 2019, which is 7.2 MMT of CO_2e lower than 2018 levels. The major source of GHG emissions in California is the transportation sector, which comprises 40 percent of the state's total GHG emissions. The industrial sector is the second largest source, comprising 21 percent of the state's GHG emissions while electric power accounts for approximately 14 percent (CARB 2021b). The magnitude of California's total GHG emissions is due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions as compared to other states is its relatively mild climate. In 2016, the State of California achieved its 2020 GHG emission reduction target of reducing emissions to 1990 levels as emissions fell below 431 MMT of CO_2e (CARB 2021). The annual 2030 statewide target emissions level is 260 MMT of CO_2e (CARB 2017).

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources though potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The observed global mean surface temperature from 2015 to 2017 was approximately 1.0°C higher than the average global mean surface temperature over the period from 1880 to 1900 (National Oceanic and Atmospheric Administration 2020). Furthermore, several independently analyzed data records of global and regional Land-Surface Air Temperature obtained from station observations jointly indicate that Land-Surface Air Temperature and sea surface temperatures have increased.

According to *California's Fourth Climate Change Assessment*, statewide temperatures from 1986 to 2016 were approximately 1 to 2 degrees Fahrenheit (°F) higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include loss in water supply from snowpack, sea level rise, more extreme heat days per year, more large forest fires, and more drought years (State of California 2018). While there is growing scientific consensus about the possible effects of climate change at a global and statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy. In addition to statewide projections, *California's Fourth Climate Change Assessment* includes regional reports that summarize climate impacts and adaptation solutions for nine regions of the state as well as regionally-specific climate change case studies (State of California 2018). Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

Air Quality

Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. As temperatures have increased in recent years, the area burned by wildfires throughout the state has increased, and wildfires have been occurring at higher elevations in the Sierra Nevada Mountains (State of California 2018). If higher temperatures continue to be accompanied by an increase in the incidence and extent of large wildfires, air quality would worsen. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (California Natural Resources Agency 2009).

In the Los Angeles region, changes in meteorological conditions under climate change will affect future air quality. Regional stagnation conditions may occur more often in the future, which would increase pollutant concentrations (State of California 2018b). Hotter future temperatures will act to increase surface ozone concentrations both due to chemistry producing more ozone and higher rates of biogenic emissions, while increases of water vapor also influence chemistry by increasing ozone production in already polluted areas. Changes in ozone may increase in the future however, changes in particulate matter are less certain. Projected changes by 2050 are generally not statistically significant (State of California 2018b).

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Year-to-year variability in statewide precipitation levels has increased since 1980, meaning that wet and dry precipitation extremes have become more common (California Department of Water Resources 2018). This uncertainty regarding future precipitation trends complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. However, the average early spring snowpack in the western United States, including the Sierra Nevada Mountains, decreased by about 10 percent during the last century. During the same period, sea level rose over 5.9 inches along the central and southern California coast (State of California 2018). The Sierra snowpack provides the majority of California's water supply by accumulating snow during the state’s wet winters and releasing it slowly during the state’s dry springs and summers. A warmer climate is predicted to reduce the fraction of precipitation falling as snow and result in less snowfall at lower elevations, thereby reducing the total snowpack (DWR 2008; State of California 2018). The State of California projects that average spring snowpack in the Sierra Nevada and other mountain catchments in central and northern California will decline by approximately 66 percent from its historical average by 2050 (State of California 2018).

Like the rest of the state, the Greater Los Angeles region is expected to face a challenging combination of decreased water supply and increased water demand (State of California 2018b). Greater interannual variability of rainfall and sharp decreases in snowpack will create surface water limitations for the region. Although the effect of climate change on average precipitation in the region is still unclear, more frequent occurrences of extreme events like the 2011-2016 drought could substantially decrease groundwater recharge, which is essential for the sustainability of agriculture in the region since the vast majority of water used in agriculture in the region is groundwater from local wells. Furthermore, higher temperatures mean that dry years will more quickly develop into severe drought conditions.

Hydrology and Sea Level Rise

Climate change could potentially affect the intensity and frequency of storms and flooding. Furthermore, climate change has the potential to induce substantial sea level rise in the coming century (State of California 2018). The rising sea level increases the likelihood and risk of flooding. The rate of increase of global mean sea levels over the 2001-2010 decade, as observed by satellites, ocean buoys and land gauges, was approximately 3.2 mm per year, which is double the observed 20th century trend of 1.6 mm per year. As a result, global mean sea levels averaged over the last decade were about 8 inches higher than those of 1880 (World Meteorological Organization 2013). Sea levels are rising faster now than in the previous two millennia, and the rise is expected to accelerate, even with robust GHG emission control measures. The most recent IPCC report predicts a mean sea level rise ranging between 0.25 to 0 1.01 meters by 2100 with the sea level ranges dependent on a low, intermediate, or high GHG emissions scenario (IPCC 2021).. A rise in sea levels could completely erode 31 to 67 percent of southern California beaches, result in flooding of approximately 370 miles of coastal highways during 100-year storm events, jeopardize California's water supply due to salt water intrusion, and induce groundwater flooding and/or exposure of buried infrastructure (State of California 2018). In addition, increased CO_2 emissions can cause oceans to acidify due to the carbonic acid it forms. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

As discussed above, climate change could potentially affect the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. In the Greater Los Angeles region, despite small changes in average precipitation, dry and wet extremes are both expected to increase (State of California 2018b). By the late 21st century, the wettest day of the year is expected to increase across most of the region. Increased frequency and severity of atmospheric river events are also projected to occur for this region.

Agriculture

California has a $50 billion annual agricultural industry that produces over a third of the country's vegetables and two-thirds of the country's fruits and nuts (California Department of Food and Agriculture 2019). Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, certain regions of agricultural production could experience water shortages of up to 16 percent; water demand could increase as hotter conditions lead to the loss of soil moisture; crop-yield could be threatened by water-induced stress and extreme heat waves; and plants may be susceptible to new and changing pest and disease outbreaks (State of California 2018). In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (California Climate Change Center 2006). More frequent droughts could substantially decrease groundwater recharge and therefore adversely affect agricultural operations that use groundwater from local wells (State of California 2018b). This could contribute to higher food prices and shortages.

Ecosystems

Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the annual average maximum daily temperatures in California could rise by 4.4 to 5.8°F in the next 50 years and by 5.6 to 8.8°F in the next century (State of California 2018a). Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals related to: (1) timing of ecological events; (2) geographic distribution and range; (3) species' composition and the incidence of nonnative species within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan 2006; State of California 2018). Increases in wildfire would further remove sensitive habitat; increased severity in droughts would potentially starve plants and animals of water; and sea level rise will affect sensitive coastal ecosystems.

Regulatory Setting

The following regulations address both climate change and GHG emissions.

Federal Regulations

FEDERAL CLEAN AIR ACT

The U.S. Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al*. ([2007] 549 U.S. 497) held that the USEPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act. The USEPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines and requires annual reporting of emissions. In 2012, the USEPA issued a Final Rule that establishes the GHG permitting thresholds that determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

In *Utility Air Regulatory Group v. Environmental Protection Agency* (134 Supreme Court 2427 [2014]), the U.S. Supreme Court held the USEPA may not treat GHGs as an air pollutant for purposes of determining whether a source can be considered a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits otherwise required based on emissions of other pollutants may continue to require limitations on GHG emissions based on the application of Best Available Control Technology.

SAFER AFFORDABLE FUEL-EFFICIENT VEHICLES RULE

On September 27, 2019, the USEPA and the National Highway Safety Administration published the SAFE Vehicles Rule Part One: One National Program. The Part One Rule revokes California's authority to set its own GHG emissions standards and zero-emission vehicle mandates in California. To account for the effects of the Part One Rule, CARB released off-model adjustment factors on November 20, 2019 to adjust criteria air pollutant emissions outputs from the EMFAC model. The Final SAFE Rule (i.e., Part Two) then relaxed federal GHG emissions and Corporate Average Fuel Economy (CAFE) standards to increase in stringency at only about 1.5 percent per year from model year 2020 levels over model years 2021– 2026 (CARB 2020a). The previously established emission standards and related fuel economy standards would have achieved about four percent per year improvements through model year 2025. Therefore, CARB has prepared off-model CO_2 emissions adjustment factors for both the EMFAC2014 and EMFAC2017 models to account for the impact of the SAFE Vehicles Rule (CARB 2020b). With the incorporation of these adjustment factors, operational emission factors for CO_2 generated by light-duty automobiles, light-duty trucks, and medium-duty trucks associated with project-related vehicle trips may increase by approximately one percent (in 2020) up to as much as 17 percent (in 2050) compared to non-adjusted estimates. These increases would not alter the significance of the operational GHG emissions from development facilitated by the project as discussed further below.

California Regulations

CARB is responsible for the coordination and oversight of state and local air pollution control programs in California. California has numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below.

CALIFORNIA GLOBAL WARMING SOLUTIONS ACT OF 2006 (ASSEMBLY BILL 32 AND SENATE BILL 32)

California's major initiative for reducing GHG emissions is outlined in AB 32, the "California Global Warming Solutions Act of 2006," which was signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO_2e. The Scoping Plan was approved by CARB on December 11, 2008 and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan.

Senate Bill (SB) 32, signed into law on September 8, 2016, extends AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with statewide per capita goals of 6 MT CO_2e by 2030 and 2 MT CO_2e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the State (CARB 2017).

AB 1279, "The California Climate Crisis Act," was passed on September 16, 2022, and declares the State would achieve net zero GHG emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter. In addition, the bill states that the State would reduce GHG emissions by 85 percent below 1990 levels no later than 2045. The Draft 2022 Scoping Plan Update has been prepared to assess the progress towards the 2030 target as well as to outline a plan to achieve carbon neutrality no later than 2045. The 2022 Scoping Plan Update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities (CARB 2022).

SENATE BILL 375

SB 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing the CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. SB 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations (MPOs) are required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the MPO's Regional Transportation Plan. Qualified projects consistent with an approved SCS or Alternative Planning Strategy (categorized as "transit priority projects") would receive incentives to streamline CEQA processing.

On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. SCAG was assigned targets of an 8 percent reduction in GHGs from transportation sources by 2020 and a 19 percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of sub regional plans by the sub regional councils of governments and the county transportation commissions to meet SB 375 requirements.

Senate Bill 1383

Adopted in September 2016, SB 1383 requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. SB 1383 requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

SB 1383 also requires the California Department of Resources Recycling and Recovery (CalRecycle) in consultation with the CARB, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

Senate Bill 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state's Renewables Portfolio Standard Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 44 percent by 2024, 60 percent by 2030, and 100 percent by 2045.

Executive Order B-55-18

On September 10, 2018, the governor issued Executive Order B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

California Environmental Quality Act

Pursuant to the requirements of SB 97, the California Natural Resources Agency has adopted amendments to the CEQA Guidelines for determining the effects and feasible mitigation of GHG emissions. The adopted CEQA Guidelines provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. To date, a variety of air districts have adopted quantitative significance thresholds for GHGs.

Regional and Local Regulations

2020-2045 Regional Transportation Plan/Sustainable Communities Strategy

SCAG formally adopted the 2020-2045 RTP/SCS on September 3, 2020 to provide a roadmap for sensible ways to expand transportation options, improve air quality and bolster Southern California's long-term economic viability. The 2020-2045 RTP/SCS builds upon the progress made through implementation of the 2016-2040 RTP/SCS and includes ten goals focused on promoting economic prosperity, improving mobility, protecting the environment, and supporting healthy/complete communities. The SCS implementation strategies include focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, and supporting implementation of sustainability policies. The SCS establishes a land use vision of center-focused placemaking, concentrating growth in and near Priority Growth Areas, transferring of development rights, urban greening, creating greenbelts and community separators, and implementing regional advance mitigation (SCAG 2020b).

Green LA/Climate LA Plans

The City of Los Angeles adopted *Green LA: An Action Plan to Lead the Nation in Fighting Global Warming* (Green LA), in May 2007. Green LA set the goal of reducing the City's greenhouse gas emissions to 35 percent below 1990 levels by 2030. The emphasis of Green LA is on municipal facilities and operations followed by programs to reduce emissions in the community. To facilitate implementation of Green LA, the City adopted the Los Angeles Green Building Code. In addition, the Los Angeles Department of Water and Power (LADWP) will continue to implement programs to emphasize water conservation and will also pursue securing alternative water supplies, including recycled water and storm water capture. Furthermore, the City implemented the Recovering Energy, Natural Resources and Economic Benefit from Waste for Los Angeles (RENEW LA) plan to meet solid waste reduction goals by expanding recycling to multifamily dwellings, commercial establishments, and restaurants (City of Los Angeles 2005). Under the RENEW LA plan, the City is also developing facilities that will convert solid waste to energy without incineration. These measures would serve to reduce overall emissions from the City. Green LA is being implemented through Climate LA, which provides detailed information about each action item discussed in the Green LA framework. Action items range from harnessing wind power for electricity production and energy efficiency retrofits in City buildings to converting the City's fleet vehicles to cleaner and more efficient models and reducing water consumption.

City of Los Angeles Sustainable City pLAn, Green New Deal, and LA Green Plan

On April 8, 2015, Los Angeles released the Sustainable City pLAn, which covers a multitude of environmental, social, and economic sustainability issues related to GHG emission reduction either specifically or by association. Actionable goals include increasing the green building standard for new construction, creating a benchmarking policy for building energy use, developing "blue, green, and black" waste bin infrastructure, reducing water use by 20 percent, and possibly requiring LEED Silver or better certification for new construction. In 2019, the City of Los Angeles prepared the 2019 Green New Deal, which provided an expanded vision of the pLAn, focusing on securing clean air and water and a stable climate, improving community resilience, expanding access to healthy food and open space, and promoting environmental justice for all. Through the Green New Deal, the City would reduce an additional 30 percent in GHG emissions above and beyond the 2015 pLAn and ensure that the City stays within its carbon budget between 2020 and 2050 (City of Los Angeles 2020). The LA Green Plan has the goal of reducing emissions of CO_2e to 35 percent below 1990 levels by the year 2030 and has achieved a 36 percent reduction in emissions by 2020 (City of Los Angeles 2022).

City of Los Angeles Green Building Code

Per Ordinance 186,488, the Los Angeles City Council amended Chapter IX, Article 9 of the Los Angeles Municipal Code to incorporate by reference the 2019 California Green Building Standards (CALGreen) Code with certain changes and modifications. Mandatory requirements and elective measures are provided for three categories: (1) low-rise residential buildings; (2) non-residential and high-rise residential buildings; and (3) additions and alterations to non-residential and high-rise residential buildings. Specific requirements for new high-rise residential projects include:

- At least 10 percent of the total number of parking spaces must be electric vehicle spaces
- For multifamily dwellings with 17 units or more, at least one parking space must be equipped with electric vehicle charging stations
- Provide permanently anchored bicycle racks within 100 feet of the visitor's entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity with a minimum of one two-bike capacity rack.
- Provide on-site bicycle parking for at least one bicycle per every two dwelling units. Acceptable parking facilities shall be conveniently reached from the street and may include, but not be limited to:
  - Covered, lockable enclosures with permanently anchored racks for bicycles.
  - Lockable bicycle rooms with permanently anchored racks.
  - Lockable, permanently anchored bicycle lockers.
- Minimum standards for three-year aged solar reflectance, thermal emittance, and Solar Reflectance Index values for roofs

City of Los Angeles General Plan

The City of Los Angeles General Plan does not have a specific element aimed at reducing GHG emissions and does not include any goals, objectives, or policies specific to reducing GHG emissions. However, five goals and their respective objectives from the Air Quality Element of the General Plan would also serve to reduce GHG emissions (City of Los Angeles 1992):

Goal 2: Less reliance on single-occupancy vehicle from fewer commute and non-work trips;

> **Objective 2.1:** Reduce work trips as a step towards attaining trip reduction objectives necessary to achieve regional air quality goals

Goal 3: Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques;

> **Objective 3.2:** Reduce vehicular traffic during peak periods

Goal 4: Minimal impacts of existing land use pattern and future land use development on air quality by addressing the relationship between land use, transportation, and air quality;

> **Objective 4.2:** Reduce vehicle trips and vehicle miles traveled associated with land use patterns.

Goal 5: Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels, and the implementation of conservation measures, including passive measures, such as site orientation and tree planting;

Objective 5.1: Increase energy efficiency of City facilities and private developments

Objective 5.2: Have a portion of the City's service fleet be comprised of alternative fuel powered vehicles, subject to availability of funding and practical feasibility.

Objective 5.3: Reduce the use of polluting fuels in stationary sources

Goal 6: Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution.

Objective 6.1: Make air quality education and citizen participation a priority in the City's effort to achieve clean air standards.

3.2 Impact Analysis

Significance Thresholds

The majority of individual projects do not generate sufficient GHG emissions to create significant project-specific environment effects. However, the environmental effects of a project's GHG emissions can contribute incrementally to cumulative environmental effects that are significant, contributing to climate change, even if an individual project's environmental effects are limited (CEQA Guidelines Section 15064[h][1]). The issue of a project's environmental effects and contribution towards climate change typically involves an analysis of whether or not a project's contribution towards climate change is cumulatively considerable. Cumulatively considerable means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines Section 15064[h][1]).

CEQA Guidelines Section 15064.4 recommends that lead agencies quantify GHG emissions of projects and consider several other factors that may be used in the determination of significance of GHG emissions from a project, including the extent to which the project may increase or reduce GHG emissions; whether a project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHG emissions.

CEQA Guidelines Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, as long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7[c]). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130[f]). As a note, the CEQA Guidelines were amended in response to SB 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem in the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of GHG emissions." Therefore, a lead agency can make a finding of less-than-significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

The City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions and has not formally adopted a local plan for reducing GHG emissions. Neither the SCAQMD, the California Office of Planning and Research, CARB, the California Air Pollution Control Officers Association (CAPCOA), or any other state or applicable regional agency has adopted a numerical significance threshold for assessing GHG emissions that is applicable to the project. Therefore, the City evaluates the significance of land use development projects' potential impacts with regard to GHG emissions and climate change solely on consistency with plans and polices adopted for the purposes of reducing GHG emissions and mitigating the effects of climate change. The City has also quantified the project's GHG emissions for informational purposes but does not compare the quantified GHG emissions to a numeric threshold.

In the absence of any adopted numeric threshold, the significance of the project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b) by considering whether the project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. For this project, the most directly applicable adopted regulatory plans to reduce GHG emissions are the 2022 Scoping Plan, the 2020-2045 RTP/SCS, the City's LA Green Plan, and the Sustainable City pLAn/Green New Deal.

Methodology

Consistency with Applicable Plans and Policies

As discussed under Section 3.2.1, *Significance Thresholds*, recent environmental impact reports certified by the City of Los Angeles evaluated project impacts related to GHG emissions based solely on consistency with statewide, regional, and local plans adopted for the purpose of reducing and/or mitigating GHG emissions. Therefore, for purposes of this project, an evaluation of consistency with such plans is the sole basis for determining the significance of the project's GHG-related impacts on the environment. Accordingly, a consistency analysis has been provided that describes the project's consistency with applicable plans and policies adopted for the purpose of reducing GHG emissions. These plans include the applicable portions of the Scoping Plan the 2020-2045 RTP/SCS, the LA Green Plan/Climate LA, and the Sustainable City pLAn/Green New Deal.

As noted in CEQA Guidelines Section 15064.4(b)(3), consistency with such plans and policies "must reduce or mitigate the project's incremental contribution of greenhouse gas emissions." Therefore, for informational purposes regarding such incremental reductions, this section also estimates reductions of project-related GHG emissions resulting from consistency with applicable plans. Quantification of the reduction in emissions associated with compliance with applicable plans and policies is used to demonstrate the efficacy of measures contained in the Scoping Plan, the RTP/SCS, and City GHG reduction plans, but the City has not adopted any specific numeric threshold pertaining to the level of emissions reduction achieved through compliance with applicable plans and policies.[5]

GHG Emission Quantification

Calculations of CO_2, CH_4, and N_2O emissions are provided to estimate the proposed project's potential GHG emissions. Calculations are based on the methodologies discussed in the CAPCOA (2008) *CEQA and Climate Change* white paper and guidance from CARB. GHG emissions associated with the proposed project were calculated using CalEEMod version 2022 (see Appendix B for CalEEMod results).

CONSTRUCTION EMISSIONS

Construction emissions were modeled in accordance with the methodology outlined in Section 2.2, *Methodology*, under Section 2, *Air Quality*. Complete results from CalEEMod and assumptions can be viewed in Appendix B. In accordance with SCAQMD's recommendation, GHG emissions from construction of the proposed project were amortized over a 30-year period and added to annual operational emissions to determine the project's total annual GHG emissions. Construction emissions are consistent for the two project scenarios.

ENERGY EMISSIONS

Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CAPCOA 2017). The project would be served by LADWP. Therefore, LADWP's specific energy intensity factors (i.e., the amount of CO_2, CH_4, and N_2O per kilowatt-hour) are used in the calculations of GHG emissions. In California, Title 24 governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting. Energy usage from the proposed residences account for the requirements of 2019 Title 24 standards.

AREA SOURCE EMISSIONS

GHG emissions from area sources would be generated by the use of landscaping equipment and fireplaces. In accordance with SCAQMD Rule 445, the proposed project would not include wood-burning devices.

SOLID WASTE EMISSIONS

The disposal of solid waste produces GHG emissions from the transportation of waste, anaerobic decomposition in landfills, and incineration. According to a CalRecycle report to the Legislature, as of 2013 California had achieved a statewide 50 percent diversion of solid waste from landfills through "reduce/recycle/compost" programs (CalRecycle 2015). However, the City of Los Angeles has achieved a solid waste diversion rate of 76 percent (Los Angeles Bureau of Sanitation 2013). Therefore, the CalEEMod input was adjusted to account for the City's solid waste diversion rate.

WATER AND WASTEWATER EMISSIONS

The amount of water used and the amount of wastewater generated by a project generate indirect GHG emissions. These emissions are a result of the energy used to supply, convey, and treat water

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[5] The comparison to a so-called "business as usual" scenario is not used as a threshold of significance but is used to provide information and a quantitative metric to measure the project's GHG emissions and level of reductions from project features and other characteristics. See *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204.

and wastewater. In addition to the indirect GHG emissions associated with energy use, the wastewater treatment process itself can directly emit both CH_4 and N_2O.

The indoor and outdoor water use consumption data for each land use subtype comes from the Pacific Institute's *Waste Not, Want Not: The Potential for Urban Water Conservation in California* (2003).[6] Based on that report, a percentage of total water consumption was dedicated to landscape irrigation, which is used to determine outdoor water use. Wastewater generation was similarly based on a reported percentage of total indoor water use. New development would be subject to CALGreen, which requires a 20 percent increase in indoor water use efficiency. Thus, in order to account for compliance with CALGreen, a 20 percent reduction in indoor water use was included in the water consumption calculations.

Mobile Source Emissions

Mobile source emissions consist of emissions generated by residents to and from the project site. The default trip generation rates were used to estimate mobile source emissions.

Impact Analysis

Threshold 1	Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? **LESS THAN SIGNIFICANT**
Threshold 2	Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs? **LESS THAN SIGNIFICANT**

Consistency with Applicable Plans and Policies

2022 Scoping Plan

The principal State plans and policies for reducing GHG emissions are AB 32, SB 32, and AB 1279. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020; the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030; and the goal of AB 1279 is to achieve net zero greenhouse gas emissions no later than 2045, and reduce GHG emissions by 85 percent below 1990 levels no later than 2045. The 2022 Scoping Plan expands upon earlier plans to include the AB 1279 targets. The 2022 Scoping Plan's strategies that are applicable to the proposed project include reducing fossil fuel use and vehicle miles traveled; decarbonizing the electricity sector, maximizing recycling and diversion from landfills; and increasing water conservation. The project would be consistent with these goals since the project would be required to comply with the latest Title 24 Green Building Code and Building Efficiency Energy Standards, as well as the AB 341 waste diversion goal of 75 percent and recycle organic wastes pursuant to SB 1383. The proposed project would be within walking and biking distance of existing residential, commercial, and recreational uses and would also be required under City of Los Angeles Green Building Code to include one bicycle parking space for every two dwelling units. In addition, the project is located in a high-quality transit area (HQTA) and is approximately 1,320 feet from the Metro RapidBus stop bus stop for Metro Rapid 734. These features would incentivize the use of public transit, active transportation, and fuel-efficient vehicles for traveling to and from the site that would reduce vehicle miles traveled. The project would also install EV chargers, which would help

[6] California Emissions Estimator Model, User Guide, Appendix D. Available at: http://www.caleemod.com/

reduce fossil fuel demand. Therefore, the project would not conflict with the 2022 Scoping Plan and this impact would be less than significant.

2020-2045 Regional Transportation Plan/Sustainable Communities Strategy

The SCAG's 2020-2045 RTP/SCS is forecast to help California reach its GHG reduction goals. According to the 2020-2045 RTP/SCS, the updated targets for the SCAG region are 8 percent below 2005 per capita emission levels by 2020 (this value is unchanged from the previous 2020 CARB target) and 19 percent below 2005 per capita emissions levels by 2035. The revised 2035 target is higher than the previous CARB target of 13 percent for the SCAG region. The 2020-2045 RTP/SCS includes implementation strategies for focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, supporting implementation of sustainability policies, and promoting a green region. The project's consistency with the 2020-2045 RTP/SCS is discussed in Table 9. As shown therein, the proposed project would be consistent with the GHG emission reduction strategies contained in the 2020-2045 RTP/SCS.

Table 9 Project Consistency with Applicable SCAG RTP/SCS GHG Emission Reduction Strategies

Strategy/Action	Project Consistency
Focus Growth Near Destinations & Mobility Options ▪ Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations ▪ Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets ▪ Plan for growth near transit investments and support implementation of first/last mile strategies. ▪ Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses ▪ Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods ▪ Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations) Identify ways to "right size" parking requirements and promote alternative parking strategies (e.g., shared parking or smart parking)	**Consistent.** The proposed project is an infill development that would include a net increase of 236 residents. The proposed project would be within walking and biking distance of existing residential, commercial, and recreational uses and would also be required under City of Los Angeles Green Building Code to include one bicycle parking space for every two dwelling units. In addition, the project is located in a high-quality transit area (HQTA) and is approximately 1,320 feet from the Metro RapidBus stop bus stop for Metro Rapid 734. These features would incentivize the use of public transit, active transportation, and fuel-efficient vehicles for traveling to and from the site. Therefore, the proposed project would focus growth near destinations and mobility options.
Promote Diverse Housing Choices ▪ Preserve and rehabilitate affordable housing and prevent displacement ▪ Identify funding opportunities for new workforce and affordable housing development ▪ Create incentives and reduce regulatory barriers for building context-sensitive accessory dwelling units to increase housing supply Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions	**Consistent.** The project is an infill development that would involve construction of 92 apartment units, which would increase housing supply from the existing housing conditions.
Leverage Technology Innovations ▪ Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing	**Consistent.** The project would install a total of 19 electric EV parking spaces with two of the spaces

Strategy/Action	Project Consistency
and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space ▪ Improve access to services through technology—such as telework and telemedicine as well as other incentives such as a "mobility wallet," an app-based system for storing transit and other multi-modal payments Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage and power generation	being EV charging spaces and 17 spaces being EV ready spaces.
Support Implementation of Sustainability Policies ▪ Pursue funding opportunities to support local sustainable development implementation projects that reduce GHG emissions ▪ Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations ▪ Support local jurisdictions in the establishment of Enhanced Infrastructure Financing Districts (EIFDs), Community Revitalization and Investment Authorities (CRIAs), or other tax increment or value capture tools to finance sustainable infrastructure and development projects, including parks and open space ▪ Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies ▪ Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region ▪ Continue to support long range planning efforts by local jurisdictions Provide educational opportunities to local decision makers and staff on new tools, best practices and policies related to implementing the Sustainable Communities Strategy	**Consistent.** The project would be designed and operated to meet the applicable requirements of the latest CALGreen and the City's Green Building Code. For example, pursuant with the 2019 Title 24 standards, the project's indoor water use would be minimized by 20 percent. Furthermore, energy use for residential uses would be reduced by 30. Therefore, the project would support implementation of sustainability policies
Promote a Green Region ▪ Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards ▪ Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration ▪ Integrate local food production into the regional landscape ▪ Promote more resource efficient development focused on conservation, recycling and reclamation ▪ Preserve, enhance and restore regional wildlife connectivity ▪ Reduce consumption of resource areas, including agricultural land Identify ways to improve access to public park space	**Consistent**. The project is an infill development that would involve construction of 92 apartment units and associated parking and would therefore not interfere with regional wildlife connectivity or convert agricultural land. The project would comply with Sustainable City pLAn, Green New Deal, Title 24, and CALGreen. Therefore, the project would support development of a green region.

Source: SCAG 2020

GREEN LA AND SUSTAINABLE CITY PLAN/GREEN NEW DEAL

Table 10 and Table 11 summarize the project's consistency with the Green LA and Sustainable City pLAn, respectively. As discussed therein, the project would be consistent with the actions and measures contained in these local GHG reduction plans.

Table 10 Project Consistency with Applicable Green LA Actions

Action	Project Consistency
Energy	
Present a comprehensive set of green building policies to guide and support private sector development.	**Consistent.** The project would be designed and operated to meet the applicable requirements of CALGreen and the City's Green Building Code.
Water	
Meet all additional demand for water resulting from growth through water conservation and recycling.	**Consistent.** While this action primarily applies to the City and LADWP, the project would incorporate water conservation features, such as low-flow fixtures, required pursuant to the 2019 California Plumbing Code, 2019 CALGreen, 2020 Los Angeles Plumbing Code, and 2020 Los Angeles Green Building Code. Furthermore, the 2019 CALGreen requirements require a 20 percent increase in indoor water use efficiency relative to previous building code requirements.
Reduce per capita water consumption by 20 percent.	**Consistent.** See discussion above.
Transportation	
Promote walking and biking to work, within neighborhoods, and to large events and venues.	**Consistent.** The project site is located in an HQTA, is approximately 1,320 feet from the Metro RapidBus stop bus stop for Metro Rapid 734 and is anticipated to improve transit usage and walking visitor arrivals from surrounding neighborhoods and adjacent commercial developments. The project would also be required to include one bicycle parking space for every two dwelling units. Therefore, the project would promote walking and biking to work and within the local neighborhood.
Land Use	
Promote high-density housing close to major transportation arteries.	**Consistent.** The project is mid-rise multi-family residence. The project site is located in an HQTA, is approximately 1,320 feet from the Metro RapidBus stop bus stop for Metro Rapid 734 and is anticipated to improve transit usage and walking visitor arrivals from surrounding neighborhoods and adjacent commercial developments. Therefore, the project would site new growth close to a major transportation artery.
Waste	
Recycle 70 percent of trash by 2015.	**Consistent.** The City of Los Angeles has achieved a landfill diversion rate of 76 percent (Los Angeles Sanitation and Environment 2020). The project would be subject to the requirements of the statewide commercial recycling program, which establishes a statewide goal of diverting at least 75 percent of solid waste from landfills by 2020. Compliance with existing City and state programs would achieve consistency with this measure.

Source: City of Los Angeles 2007

Table 11 Project Consistency with Applicable Sustainable City pLAn/Green New Deal Measures

Action	Project Consistency
Renewable Energy ▪ LADWP will supply 55% renewable energy by 2025; 80% by 2036; and 100% by 2045. ▪ Increase cumulative megawatts by 2025; 2035; and 2050 of: □ Local solar to 900-1,500 MW; 1,500-1,800 MW; and 1,950 MW. □ Energy storage capacity to 1,654-1,750 MW; 3,000 MW; and 4,000 MW. □ Demand response (DR) programs to 234 MW (2025) and 600 MW (2035).	**Consistent.** While this action primarily applies to the City and LADWP, LADWP is required to generate electricity that would increase renewable energy resources to 33 percent by 2020, 44 percent by 2024, 60 percent by 2030, and 100 percent by 2045 under SB 100. Because LADWP would provide electricity service to the project site, the project would use electricity consistent with the requirements of SB 100 and City goals.
Local Water ▪ Source 70% of L.A.'s water locally and capture 150,000 acre-feet per year of stormwater by 2035. ▪ Recycle 100% of all wastewater for beneficial reuse by 2035. ▪ Build at least 10 new multi-benefit stormwater capture projects by 2025; 100 by 2035; and 200 by 2050. ▪ Reduce potable water use per capita by 22.5% by 2025; and 25% by 2035; and maintain or reduce 2035 per capita water use through 2050 ▪ Install or refurbish hydration stations at 200 sites, prioritizing municipally-owned buildings and public properties such as parks, by 2035.	**Consistent.** While this action primarily applies to the City and LADWP, the project would incorporate water conservation features to reduce water use. The project would be required to comply with the City's water use restrictions on timing, area, frequency, and duration of specified allowable water usage. The project would also be required to comply with the Title 24 standards for Water Efficiency and Conservation that are in effect at the time of development. These standards include actions such as separate water submeters for subsystems, prescriptive reduced flow rates for water and fixtures, wall-mounted urinals, and plumbing fixtures and fittings.
Clean and Healthy Buildings ▪ All new buildings will be net zero carbon by 2030; and 100% of buildings will be net zero carbon by 2050. ▪ Reduce building energy use per sf for all building types 22% by 2025; 34% by 2035; and 44% by 2050.	**Consistent.** The project would be constructed in accordance with the applicable requirements of CALGreen and the City's Green Building Code.
Mobility & Public Transit ▪ Increase the percentage of all trips made by walking, biking, micro-mobility/matched rides or transit to at least 35% by 2025; 50% by 2035; and maintain at least 50% by 2050. ▪ Reduce vehicle miles traveled per capita by at least 13% by 2025; 39% by 2035; and 45% by 2050. ▪ Ensure Los Angeles is prepared for Autonomous Vehicles (AV) by the 2028 Olympic and Paralympic Games.	**Consistent.** The project is an infill development that is located in an HQTA. The project site is located approximately 1,320 feet from the Metro RapidBus stop bus stop for Metro Rapid 734 and is anticipated to improve transit usage and walking visitor arrivals from surrounding neighborhoods and adjacent commercial developments. The project would also be required to include one bicycle parking space for every two dwelling units Therefore, the project would support increasing the percentage of trips made by walking, biking, and transit as well as the reduction of per capita VMT.

Action	Project Consistency
Zero Emissions Vehicles ▪ Increase the percentage of electric and zero emission vehicles in the city to 25% by 2025; 80% by 2035; and 100% by 2050. ▪ Electrify 100% of LA Metro and LADOT buses by 2030. ▪ Reduce port-related GHG emissions by 80% by 2050.	**Consistent.** The project would install a total of 19 electric EV parking spaces with two of the spaces being EV charging spaces and 17 spaces being EV ready spaces.
Waste and Resource Recovery ▪ Increase landfill diversion rate to 90% by 2025; 95% by 2035; and 100% by 2050 ▪ Reduce municipal solid waste generation per capita by at least 15% by 2030, including phasing out single-use plastics by 2028 ▪ Eliminate organic waste going to landfill by 2028 Increase proportion of waste products and recyclables productively reused and/or repurposed within Los Angeles County to at least 25% by 2025; and 50% by 2035.	**Consistent.** The City of Los Angeles has achieved a landfill diversion rate of 76 percent (Los Angeles Sanitation and Environment 2020). The project would be subject to the requirements of the statewide commercial recycling program, which establishes a statewide goal of diverting at least 75 percent of solid waste from landfills by 2020. Compliance with existing City and state programs would achieve consistency with this measure.
Urban Ecosystems and Resilience ▪ Increase tree canopy in areas of greatest need by at least 50% by 2028. ▪ Complete or initiate restoration identified in the 'ARBOR' Plan by 2035. ▪ Create a fully connected LARiverWay public access system that includes 32 miles of bike paths and trails by 2028. ▪ Reduce urban/rural temperature differential by at least 1.7 degrees by 2025; and 3 degrees by 2035. ▪ Ensure proportion of Angelenos living within 1/2 mile of a park or open space is at least 65% by 2025; 75% by 2035; and 100% by 2050. ▪ Achieve and maintain 'no-net loss' of native biodiversity by 2035.	**Consistent.** The project would be an infill development in an urbanized area and thus would not adversely impact native biodiversity.

Source: City of Los Angeles 2020

CONCLUSION

In summary, the plan consistency analysis provided above demonstrates that the project complies with or exceeds the requirements of policies, regulations and GHG reduction actions/strategies outlined in the 2022 Scoping Plan, the 2020–2045 RTP/SCS, the LA Green Plan, and the Sustainable City pLAn/Green New Deal. Consistency with the above plans, policies, regulations and GHG reduction actions/strategies would reduce the project's incremental contribution of GHG emissions to a less-than-significant level.

GHG Emissions Quantification

CONSTRUCTION EMISSIONS

Although construction activity is addressed in this analysis, CAPCOA does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction activity. The *CEQA and Climate Change* white paper states that additional study is needed to make such an assessment or to develop separate thresholds for construction activity (CAPCOA 2008). Nevertheless, the SCAQMD has recommended amortizing construction-related emissions over a

30-year period in conjunction with the proposed project's operational emissions. As shown in Table 12 construction of the project would generate an estimated 238 MT CO_2e, or 8 MT CO_2e year when amortized over a 30-year period.

Table 12 Estimated Construction GHG Emissions

Year	Emissions (MT CO_2e)
2023	238
Total Amortized over 30 Years	**8**

See Appendix B for CalEEMod worksheets.

COMBINED TOTAL ANNUAL EMISSIONS

Table 13 combines the construction, operational, and mobile GHG emissions associated with development of the proposed project. As shown therein, the project's emissions would be approximately 818 MT CO_2e.

Table 13 Combined Annual GHG Emissions

Emission Source	Annual Emissions (MT CO_2e)
Construction	8
Area	2
Energy	193
Mobile	582
Solid Waste	21
Water	12
Total	**818**

See Appendix B for CalEEMod worksheets.

4 Conclusions and Recommendations

As detailed above, neither construction nor operation of the project would result in significant air quality or GHG emissions impacts. The project would be required to comply with the following RCMs, which were assumed in the modeling and analysis because the project is required to comply with them through state and local regulations.

Regulatory Compliance Measures

RCM-1 Demolition, Grading, and Construction Activities: Compliance with Provisions of SCAQMD Rule 403.

The project shall comply with all applicable standards of the SCAQMD, including the following provisions of Rule 403:

- All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions and meet SCAQMD Rule 403. Wetting could reduce fugitive dust by as much as 50 percent.
- The construction area shall be kept sufficiently dampened to control dust caused by grading and hauling, and at all times provide reasonable control of dust caused by wind.
- All clearing, earth moving, or excavation activities shall be discontinued during periods of high winds (i.e., greater than 15 miles per hour), so as to prevent excessive amounts of dust.
- All dirt/soil shall be secured by trimming, watering, or other appropriate means to prevent spillage and dust.
- All dirt/soil materials transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions.
- Trucks having no current hauling activity shall not idle but be turned off.

RCM-2 Odors: Compliance with Provisions of SCAQMD Rule 402

The project shall comply with the following provision of SCAQMD Rule 402: a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

RCM-3 Engine Idling

In accordance with Section 2485 of Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location.

RCM-4 Emission Standards

In accordance with Section 93115 of Title 17 of the California Code of Regulations, operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

RCM-5 Architectural Coatings: Compliance with SCAQMD Rule 1113

The project shall comply with SCAQMD Rule 1113 limiting the volatile organic compound (VOC) content of architectural coatings.

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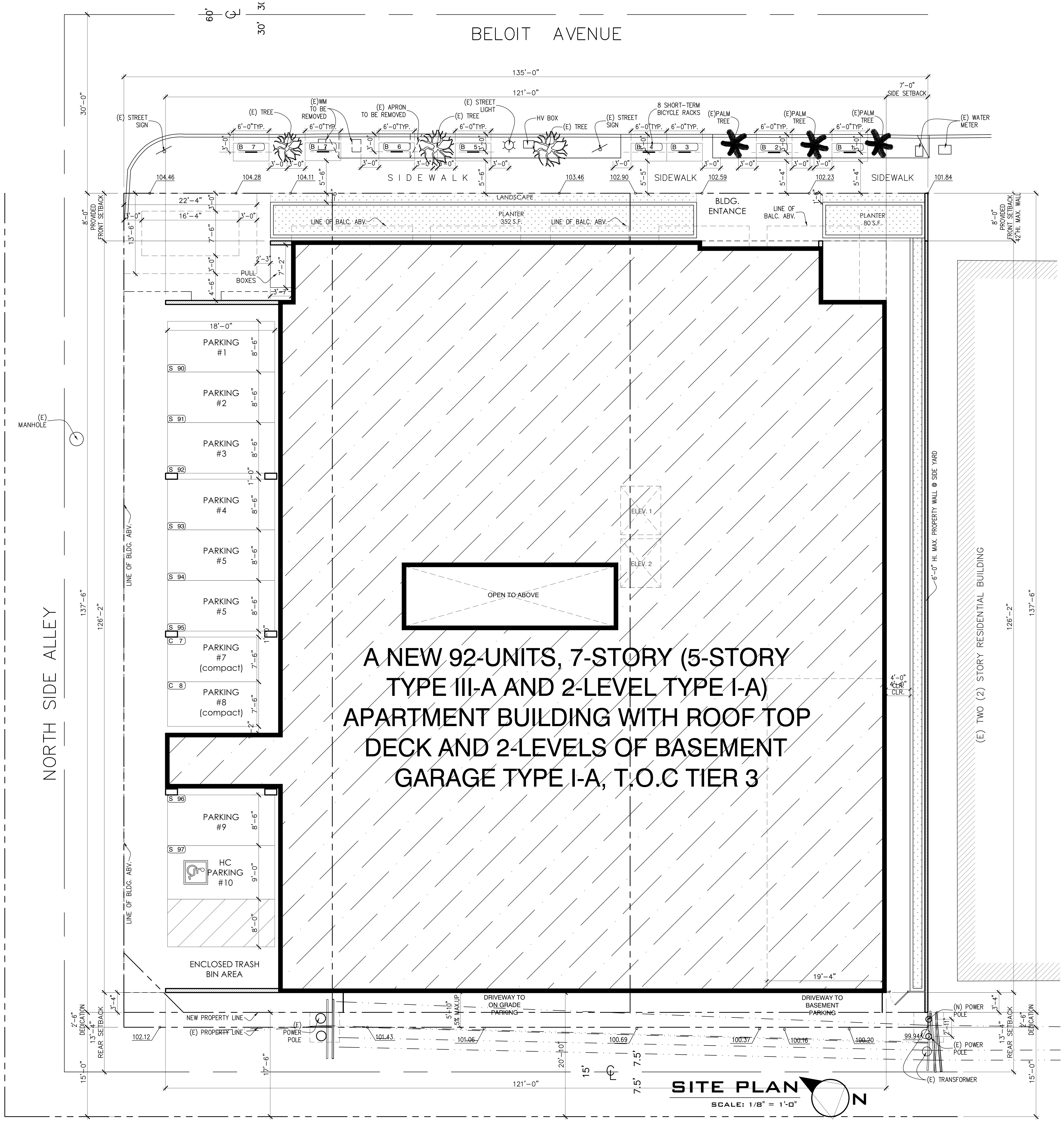
Appendix A

Project Site Plans



PERMIT SET ONLY

No.	Revision	date

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DRAWING TITLE
SITE PLAN

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Appendix B

Air Quality and Greenhouse Gas Modeling Results

Beloit Terraces Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Beloit Terraces
Construction Start Date	1/1/2024
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	19.6
Location	1713 Beloit Ave, Los Angeles, CA 90025, USA
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4462
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Apartments High Rise	92.0	Dwelling Unit	0.35	83,721	0.00	—	272	—
Enclosed Parking with Elevator	42.1	1000sqft	0.35	42,087	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.38	9.47	7.62	16.0	0.02	0.29	1.46	1.75	0.27	0.35	0.62	—	3,400	3,400	0.14	0.13	7.07	3,450
Mit.	1.38	9.47	7.62	16.0	0.02	0.29	1.46	1.75	0.27	0.35	0.62	—	3,400	3,400	0.14	0.13	7.07	3,450
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.03	2.29	26.2	26.8	0.07	0.87	8.31	9.19	0.81	3.34	4.15	—	10,953	10,953	0.53	1.13	0.54	11,304
Mit.	3.03	2.29	26.2	26.8	0.07	0.87	5.05	5.92	0.81	1.77	2.58	—	10,953	10,953	0.53	1.13	0.54	11,304
% Reduced	—	—	—	—	—	—	39%	36%	—	47%	38%	—	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.51	1.88	3.49	5.24	0.01	0.13	0.80	0.93	0.12	0.26	0.38	—	1,408	1,408	0.06	0.09	1.17	1,439
Mit.	0.51	1.88	3.49	5.24	0.01	0.13	0.61	0.74	0.12	0.17	0.29	—	1,408	1,408	0.06	0.09	1.17	1,439
% Reduced	—	—	—	—	—	—	24%	20%	—	33%	23%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.09	0.34	0.64	0.96	< 0.005	0.02	0.15	0.17	0.02	0.05	0.07	—	233	233	0.01	0.02	0.19	238
Mit.	0.09	0.34	0.64	0.96	< 0.005	0.02	0.11	0.13	0.02	0.03	0.05	—	233	233	0.01	0.02	0.19	238
% Reduced	—	—	—	—	—	—	24%	20%	—	33%	23%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.38	9.47	7.62	16.0	0.02	0.29	1.46	1.75	0.27	0.35	0.62	—	3,400	3,400	0.14	0.13	7.07	3,450
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.03	2.29	26.2	26.8	0.07	0.87	8.31	9.19	0.81	3.34	4.15	—	10,953	10,953	0.53	1.13	0.54	11,304
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.51	1.88	3.49	5.24	0.01	0.13	0.80	0.93	0.12	0.26	0.38	—	1,408	1,408	0.06	0.09	1.17	1,439
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.09	0.34	0.64	0.96	< 0.005	0.02	0.15	0.17	0.02	0.05	0.07	—	233	233	0.01	0.02	0.19	238

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.38	9.47	7.62	16.0	0.02	0.29	1.46	1.75	0.27	0.35	0.62	—	3,400	3,400	0.14	0.13	7.07	3,450
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.03	2.29	26.2	26.8	0.07	0.87	5.05	5.92	0.81	1.77	2.58	—	10,953	10,953	0.53	1.13	0.54	11,304
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.51	1.88	3.49	5.24	0.01	0.13	0.61	0.74	0.12	0.17	0.29	—	1,408	1,408	0.06	0.09	1.17	1,439
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.09	0.34	0.64	0.96	< 0.005	0.02	0.11	0.13	0.02	0.03	0.05	—	233	233	0.01	0.02	0.19	238

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.63	4.32	1.70	23.1	0.04	0.05	3.24	3.29	0.05	0.82	0.87	43.2	4,955	4,998	4.60	0.17	15.4	5,179
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.78	3.52	1.77	14.6	0.04	0.04	3.24	3.29	0.04	0.82	0.86	43.2	4,774	4,818	4.60	0.18	0.98	4,986
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	2.26	3.97	1.77	19.2	0.04	0.05	3.07	3.11	0.04	0.78	0.82	43.2	4,679	4,722	4.59	0.17	6.71	4,895
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.41	0.72	0.32	3.50	0.01	0.01	0.56	0.57	0.01	0.14	0.15	7.15	775	782	0.76	0.03	1.11	810

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.77	1.59	1.41	15.9	0.04	0.02	3.24	3.27	0.02	0.82	0.85	—	3,732	3,732	0.17	0.14	14.8	3,793
Area	0.83	2.72	0.07	7.03	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	0.00	21.5	21.5	< 0.005	< 0.005	—	21.6
Energy	0.03	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	1,158	1,158	0.09	0.01	—	1,163
Water	—	—	—	—	—	—	—	—	—	—	—	6.57	44.2	50.7	0.68	0.02	—	72.6
Waste	—	—	—	—	—	—	—	—	—	—	—	36.6	0.00	36.6	3.66	0.00	—	128
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.60	0.60
Total	2.63	4.32	1.70	23.1	0.04	0.05	3.24	3.29	0.05	0.82	0.87	43.2	4,955	4,998	4.60	0.17	15.4	5,179
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.75	1.56	1.54	14.5	0.03	0.02	3.24	3.27	0.02	0.82	0.85	—	3,572	3,572	0.18	0.15	0.38	3,622
Area	0.00	1.94	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.03	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	1,158	1,158	0.09	0.01	—	1,163
Water	—	—	—	—	—	—	—	—	—	—	—	6.57	44.2	50.7	0.68	0.02	—	72.6
Waste	—	—	—	—	—	—	—	—	—	—	—	36.6	0.00	36.6	3.66	0.00	—	128
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.60	0.60
Total	1.78	3.52	1.77	14.6	0.04	0.04	3.24	3.29	0.04	0.82	0.86	43.2	4,774	4,818	4.60	0.18	0.98	4,986

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.67	1.49	1.50	14.3	0.03	0.02	3.07	3.09	0.02	0.78	0.80	—	3,462	3,462	0.17	0.14	6.11	3,516
Area	0.57	2.47	0.05	4.81	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	14.7	14.7	< 0.005	< 0.005	—	14.8
Energy	0.03	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	1,158	1,158	0.09	0.01	—	1,163
Water	—	—	—	—	—	—	—	—	—	—	—	6.57	44.2	50.7	0.68	0.02	—	72.6
Waste	—	—	—	—	—	—	—	—	—	—	—	36.6	0.00	36.6	3.66	0.00	—	128
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.60	0.60
Total	2.26	3.97	1.77	19.2	0.04	0.05	3.07	3.11	0.04	0.78	0.82	43.2	4,679	4,722	4.59	0.17	6.71	4,895
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.30	0.27	0.27	2.61	0.01	< 0.005	0.56	0.56	< 0.005	0.14	0.15	—	573	573	0.03	0.02	1.01	582
Area	0.10	0.45	0.01	0.88	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	2.44	2.44	< 0.005	< 0.005	—	2.44
Energy	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	192	192	0.01	< 0.005	—	193
Water	—	—	—	—	—	—	—	—	—	—	—	1.09	7.31	8.40	0.11	< 0.005	—	12.0
Waste	—	—	—	—	—	—	—	—	—	—	—	6.06	0.00	6.06	0.61	0.00	—	21.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	0.41	0.72	0.32	3.50	0.01	0.01	0.56	0.57	0.01	0.14	0.15	7.15	775	782	0.76	0.03	1.11	810

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.77	1.59	1.41	15.9	0.04	0.02	3.24	3.27	0.02	0.82	0.85	—	3,732	3,732	0.17	0.14	14.8	3,793
Area	0.83	2.72	0.07	7.03	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	0.00	21.5	21.5	< 0.005	< 0.005	—	21.6
Energy	0.03	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	1,158	1,158	0.09	0.01	—	1,163
Water	—	—	—	—	—	—	—	—	—	—	—	6.57	44.2	50.7	0.68	0.02	—	72.6

Waste	—	—	—	—	—	—	—	—	—	—	—	36.6	0.00	36.6	3.66	0.00	—	128
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.60	0.60
Total	2.63	4.32	1.70	23.1	0.04	0.05	3.24	3.29	0.05	0.82	0.87	43.2	4,955	4,998	4.60	0.17	15.4	5,179
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.75	1.56	1.54	14.5	0.03	0.02	3.24	3.27	0.02	0.82	0.85	—	3,572	3,572	0.18	0.15	0.38	3,622
Area	0.00	1.94	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.03	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	1,158	1,158	0.09	0.01	—	1,163
Water	—	—	—	—	—	—	—	—	—	—	—	6.57	44.2	50.7	0.68	0.02	—	72.6
Waste	—	—	—	—	—	—	—	—	—	—	—	36.6	0.00	36.6	3.66	0.00	—	128
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.60	0.60
Total	1.78	3.52	1.77	14.6	0.04	0.04	3.24	3.29	0.04	0.82	0.86	43.2	4,774	4,818	4.60	0.18	0.98	4,986
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.67	1.49	1.50	14.3	0.03	0.02	3.07	3.09	0.02	0.78	0.80	—	3,462	3,462	0.17	0.14	6.11	3,516
Area	0.57	2.47	0.05	4.81	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	14.7	14.7	< 0.005	< 0.005	—	14.8
Energy	0.03	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	1,158	1,158	0.09	0.01	—	1,163
Water	—	—	—	—	—	—	—	—	—	—	—	6.57	44.2	50.7	0.68	0.02	—	72.6
Waste	—	—	—	—	—	—	—	—	—	—	—	36.6	0.00	36.6	3.66	0.00	—	128
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.60	0.60
Total	2.26	3.97	1.77	19.2	0.04	0.05	3.07	3.11	0.04	0.78	0.82	43.2	4,679	4,722	4.59	0.17	6.71	4,895
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.30	0.27	0.27	2.61	0.01	< 0.005	0.56	0.56	< 0.005	0.14	0.15	—	573	573	0.03	0.02	1.01	582
Area	0.10	0.45	0.01	0.88	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	2.44	2.44	< 0.005	< 0.005	—	2.44
Energy	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	192	192	0.01	< 0.005	—	193
Water	—	—	—	—	—	—	—	—	—	—	—	1.09	7.31	8.40	0.11	< 0.005	—	12.0
Waste	—	—	—	—	—	—	—	—	—	—	—	6.06	0.00	6.06	0.61	0.00	—	21.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10

Total	0.41	0.72	0.32	3.50	0.01	0.01	0.56	0.57	0.01	0.14	0.15	7.15	775	782	0.76	0.03	1.11	810

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.69	5.79	0.01	0.19	—	0.19	0.17	—	0.17	—	852	852	0.03	0.01	—	855
Demolition	—	—	—	—	—	—	0.36	0.36	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.16	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	23.3	23.3	< 0.005	< 0.005	—	23.4
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.87	3.87	< 0.005	< 0.005	—	3.88

Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.06	0.64	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	134	134	0.01	< 0.005	0.01	135
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.38	0.14	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.03	—	296	296	0.02	0.05	0.02	311
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.72	3.72	< 0.005	< 0.005	0.01	3.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.11	8.11	< 0.005	< 0.005	0.01	8.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.62	0.62	< 0.005	< 0.005	< 0.005	0.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.34	1.34	< 0.005	< 0.005	< 0.005	1.41

3.2. Demolition (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.69	5.79	0.01	0.19	—	0.19	0.17	—	0.17	—	852	852	0.03	0.01	—	855
Demolition	—	—	—	—	—	—	0.36	0.36	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.16	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	23.3	23.3	< 0.005	< 0.005	—	23.4
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.87	3.87	< 0.005	< 0.005	—	3.88
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.05	0.04	0.06	0.64	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	134	134	0.01	< 0.005	0.01	135
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.38	0.14	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.03	—	296	296	0.02	0.05	0.02	311
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.72	3.72	< 0.005	< 0.005	0.01	3.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.11	8.11	< 0.005	< 0.005	0.01	8.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.62	0.62	< 0.005	< 0.005	< 0.005	0.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.34	1.34	< 0.005	< 0.005	< 0.005	1.41

3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.50	4.60	5.56	0.01	0.24	—	0.24	0.22	—	0.22	—	858	858	0.03	0.01	—	861
Dust From Material Movement	—	—	—	—	—	—	0.53	0.53	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.5	23.5	< 0.005	< 0.005	—	23.6
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.89	3.89	< 0.005	< 0.005	—	3.90
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.03	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	66.9	66.9	< 0.005	< 0.005	0.01	67.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.86	1.86	< 0.005	< 0.005	< 0.005	1.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.50	4.60	5.56	0.01	0.24	—	0.24	0.22	—	0.22	—	858	858	0.03	0.01	—	861
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.5	23.5	< 0.005	< 0.005	—	23.6
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.89	3.89	< 0.005	< 0.005	—	3.90
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.03	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	66.9	66.9	< 0.005	< 0.005	0.01	67.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.86	1.86	< 0.005	< 0.005	< 0.005	1.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	5.35	5.35	—	2.57	2.57	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.62	0.59	< 0.005	0.03	—	0.03	0.03	—	0.03	—	93.9	93.9	< 0.005	< 0.005	—	94.2
Dust From Material Movement	—	—	—	—	—	—	0.29	0.29	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.11	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	15.5	15.5	< 0.005	< 0.005	—	15.6

Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.48	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	100	100	< 0.005	< 0.005	0.01	102
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.46	0.13	8.01	2.96	0.04	0.08	1.62	1.70	0.08	0.44	0.52	—	6,171	6,171	0.33	0.99	0.37	6,475
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.58	5.58	< 0.005	< 0.005	0.01	5.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.45	0.16	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	338	338	0.02	0.05	0.34	355
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.92	0.92	< 0.005	< 0.005	< 0.005	0.94
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	56.0	56.0	< 0.005	0.01	0.06	58.8

3.6. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	2.09	2.09	—	1.00	1.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.62	0.59	< 0.005	0.03	—	0.03	0.03	—	0.03	—	93.9	93.9	< 0.005	< 0.005	—	94.2
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.11	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	15.5	15.5	< 0.005	< 0.005	—	15.6
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.48	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	100	100	< 0.005	< 0.005	0.01	102
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.46	0.13	8.01	2.96	0.04	0.08	1.62	1.70	0.08	0.44	0.52	—	6,171	6,171	0.33	0.99	0.37	6,475
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.58	5.58	< 0.005	< 0.005	0.01	5.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.45	0.16	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	338	338	0.02	0.05	0.34	355
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.92	0.92	< 0.005	< 0.005	< 0.005	0.94
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	56.0	56.0	< 0.005	0.01	0.06	58.8

3.7. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.53	1.91	< 0.005	0.07	—	0.07	0.06	—	0.06	—	357	357	0.01	< 0.005	—	359
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.28	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	59.2	59.2	< 0.005	< 0.005	—	59.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.38	0.40	6.33	0.00	0.00	1.10	1.10	0.00	0.26	0.26	—	1,185	1,185	0.05	0.04	4.67	1,203
Vendor	0.04	0.02	0.64	0.31	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	540	540	0.02	0.07	1.46	564
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.37	0.48	5.35	0.00	0.00	1.10	1.10	0.00	0.26	0.26	—	1,123	1,123	0.05	0.04	0.12	1,137
Vendor	0.04	0.02	0.66	0.32	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	540	540	0.02	0.07	0.04	563
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.11	0.10	0.13	1.54	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	312	312	0.01	0.01	0.55	317
Vendor	0.01	< 0.005	0.18	0.09	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	148	148	0.01	0.02	0.17	154
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.28	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.7	51.7	< 0.005	< 0.005	0.09	52.4
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	24.5	24.5	< 0.005	< 0.005	0.03	25.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.53	1.91	< 0.005	0.07	—	0.07	0.06	—	0.06	—	357	357	0.01	< 0.005	—	359

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.28	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	59.2	59.2	< 0.005	< 0.005	—	59.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.38	0.40	6.33	0.00	0.00	1.10	1.10	0.00	0.26	0.26	—	1,185	1,185	0.05	0.04	4.67	1,203
Vendor	0.04	0.02	0.64	0.31	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	540	540	0.02	0.07	1.46	564
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.37	0.48	5.35	0.00	0.00	1.10	1.10	0.00	0.26	0.26	—	1,123	1,123	0.05	0.04	0.12	1,137
Vendor	0.04	0.02	0.66	0.32	< 0.005	0.01	0.14	0.15	0.01	0.04	0.05	—	540	540	0.02	0.07	0.04	563
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.13	1.54	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	312	312	0.01	0.01	0.55	317
Vendor	0.01	< 0.005	0.18	0.09	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	148	148	0.01	0.02	0.17	154
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.28	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.7	51.7	< 0.005	< 0.005	0.09	52.4
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	24.5	24.5	< 0.005	< 0.005	0.03	25.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	0.53	4.52	5.32	0.01	0.21	—	0.21	0.19	—	0.19	—	823	823	0.03	0.01	—	826
Paving	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.6
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.73	3.73	< 0.005	< 0.005	—	3.75
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.09	0.08	0.08	1.32	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	247	247	0.01	0.01	0.97	251
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.51	6.51	< 0.005	< 0.005	0.01	6.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.08	1.08	< 0.005	< 0.005	< 0.005	1.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Paving (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	0.53	4.52	5.32	0.01	0.21	—	0.21	0.19	—	0.19	—	823	823	0.03	0.01	—	826
Paving	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.6
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.73	3.73	< 0.005	< 0.005	—	3.75
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.32	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	247	247	0.01	0.01	0.97	251
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.51	6.51	< 0.005	< 0.005	0.01	6.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.08	1.08	< 0.005	< 0.005	< 0.005	1.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	8.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.16	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.4	23.4	< 0.005	< 0.005	—	23.5
Architectural Coatings	—	1.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.88	3.88	< 0.005	< 0.005	—	3.89
Architectural Coatings	—	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	1.27	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	237	237	0.01	0.01	0.93	241
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	40.0	40.0	< 0.005	< 0.005	0.07	40.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.62	6.62	< 0.005	< 0.005	0.01	6.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Architectural Coating (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	8.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.16	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.4	23.4	< 0.005	< 0.005	—	23.5
Architectural Coatings	—	1.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.88	3.88	< 0.005	< 0.005	—	3.89
Architectural Coatings	—	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.08	0.08	1.27	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	237	237	0.01	0.01	0.93	241
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	40.0	40.0	< 0.005	< 0.005	0.07	40.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.62	6.62	< 0.005	< 0.005	0.01	6.71
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	1.77	1.59	1.41	15.9	0.04	0.02	3.24	3.27	0.02	0.82	0.85	—	3,732	3,732	0.17	0.14	14.8	3,793

Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.77	1.59	1.41	15.9	0.04	0.02	3.24	3.27	0.02	0.82	0.85	—	3,732	3,732	0.17	0.14	14.8	3,793
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	1.75	1.56	1.54	14.5	0.03	0.02	3.24	3.27	0.02	0.82	0.85	—	3,572	3,572	0.18	0.15	0.38	3,622
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.75	1.56	1.54	14.5	0.03	0.02	3.24	3.27	0.02	0.82	0.85	—	3,572	3,572	0.18	0.15	0.38	3,622
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.30	0.27	0.27	2.61	0.01	< 0.005	0.56	0.56	< 0.005	0.14	0.15	—	573	573	0.03	0.02	1.01	582
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.30	0.27	0.27	2.61	0.01	< 0.005	0.56	0.56	< 0.005	0.14	0.15	—	573	573	0.03	0.02	1.01	582

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	1.77	1.59	1.41	15.9	0.04	0.02	3.24	3.27	0.02	0.82	0.85	—	3,732	3,732	0.17	0.14	14.8	3,793
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.77	1.59	1.41	15.9	0.04	0.02	3.24	3.27	0.02	0.82	0.85	—	3,732	3,732	0.17	0.14	14.8	3,793
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	1.75	1.56	1.54	14.5	0.03	0.02	3.24	3.27	0.02	0.82	0.85	—	3,572	3,572	0.18	0.15	0.38	3,622
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.75	1.56	1.54	14.5	0.03	0.02	3.24	3.27	0.02	0.82	0.85	—	3,572	3,572	0.18	0.15	0.38	3,622
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.30	0.27	0.27	2.61	0.01	< 0.005	0.56	0.56	< 0.005	0.14	0.15	—	573	573	0.03	0.02	1.01	582
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.30	0.27	0.27	2.61	0.01	< 0.005	0.56	0.56	< 0.005	0.14	0.15	—	573	573	0.03	0.02	1.01	582

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	571	571	0.04	0.01	—	574
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	294	294	0.02	< 0.005	—	295
Total	—	—	—	—	—	—	—	—	—	—	—	—	865	865	0.06	0.01	—	869
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	571	571	0.04	0.01	—	574
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	294	294	0.02	< 0.005	—	295
Total	—	—	—	—	—	—	—	—	—	—	—	—	865	865	0.06	0.01	—	869
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	94.6	94.6	0.01	< 0.005	—	95.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	48.7	48.7	< 0.005	< 0.005	—	48.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	143	143	0.01	< 0.005	—	144

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	571	571	0.04	0.01	—	574
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	294	294	0.02	< 0.005	—	295
Total	—	—	—	—	—	—	—	—	—	—	—	—	865	865	0.06	0.01	—	869
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	571	571	0.04	0.01	—	574
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	294	294	0.02	< 0.005	—	295
Total	—	—	—	—	—	—	—	—	—	—	—	—	865	865	0.06	0.01	—	869
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	94.6	94.6	0.01	< 0.005	—	95.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	48.7	48.7	< 0.005	< 0.005	—	48.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	143	143	0.01	< 0.005	—	144

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.03	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	293	293	0.03	< 0.005	—	293
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	293	293	0.03	< 0.005	—	293
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.03	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	293	293	0.03	< 0.005	—	293
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	293	293	0.03	< 0.005	—	293
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	48.5	48.5	< 0.005	< 0.005	—	48.6
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	48.5	48.5	< 0.005	< 0.005	—	48.6

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.03	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	293	293	0.03	< 0.005	—	293
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	293	293	0.03	< 0.005	—	293
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	0.03	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	293	293	0.03	< 0.005	—	293
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.01	0.23	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	293	293	0.03	< 0.005	—	293
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	48.5	48.5	< 0.005	< 0.005	—	48.6

Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	48.5	48.5	< 0.005	< 0.005	—	48.6

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	1.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.83	0.78	0.07	7.03	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	21.5	21.5	< 0.005	< 0.005	—	21.6
Total	0.83	2.72	0.07	7.03	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	0.00	21.5	21.5	< 0.005	< 0.005	—	21.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	1.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architect Coatings	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	1.94	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	0.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.10	0.10	0.01	0.88	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.44	2.44	< 0.005	< 0.005	—	2.44
Total	0.10	0.45	0.01	0.88	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	2.44	2.44	< 0.005	< 0.005	—	2.44

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	1.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.83	0.78	0.07	7.03	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	21.5	21.5	< 0.005	< 0.005	—	21.6

Total	0.83	2.72	0.07	7.03	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	0.00	21.5	21.5	< 0.005	< 0.005	—	21.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	1.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	1.94	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	0.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.10	0.10	0.01	0.88	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.44	2.44	< 0.005	< 0.005	—	2.44
Total	0.10	0.45	0.01	0.88	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	2.44	2.44	< 0.005	< 0.005	—	2.44

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	6.57	44.2	50.7	0.68	0.02	—	72.6
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.57	44.2	50.7	0.68	0.02	—	72.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	6.57	44.2	50.7	0.68	0.02	—	72.6
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.57	44.2	50.7	0.68	0.02	—	72.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	1.09	7.31	8.40	0.11	< 0.005	—	12.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.09	7.31	8.40	0.11	< 0.005	—	12.0

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	6.57	44.2	50.7	0.68	0.02	—	72.6
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.57	44.2	50.7	0.68	0.02	—	72.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	6.57	44.2	50.7	0.68	0.02	—	72.6
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.57	44.2	50.7	0.68	0.02	—	72.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	1.09	7.31	8.40	0.11	< 0.005	—	12.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.09	7.31	8.40	0.11	< 0.005	—	12.0

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	36.6	0.00	36.6	3.66	0.00	—	128
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	36.6	0.00	36.6	3.66	0.00	—	128
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	36.6	0.00	36.6	3.66	0.00	—	128
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	36.6	0.00	36.6	3.66	0.00	—	128
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	6.06	0.00	6.06	0.61	0.00	—	21.2

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.06	0.00	6.06	0.61	0.00	—	21.2

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	36.6	0.00	36.6	3.66	0.00	—	128
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	36.6	0.00	36.6	3.66	0.00	—	128
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	36.6	0.00	36.6	3.66	0.00	—	128
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	36.6	0.00	36.6	3.66	0.00	—	128
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	—	—	—	—	—	—	—	—	—	—	—	6.06	0.00	6.06	0.61	0.00	—	21.2
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.06	0.00	6.06	0.61	0.00	—	21.2

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.60	0.60
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.60	0.60
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.60	0.60
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.60	0.60
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.60	0.60
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.60	0.60
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.60	0.60
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.60	0.60
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme nt Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/1/2024	1/15/2024	5.00	10.0	—
Site Preparation	Site Preparation	1/16/2024	1/29/2024	5.00	10.0	—
Grading	Grading	1/30/2024	2/26/2024	5.00	20.0	—
Building Construction	Building Construction	2/26/2024	7/12/2024	5.00	100	—
Paving	Paving	7/13/2024	7/26/2024	5.00	10.0	—
Architectural Coating	Architectural Coating	4/16/2024	7/12/2024	5.00	64.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	6.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	1.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	6.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	1.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	18.5	LDA,LDT1,LDT2

Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	4.20	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	87.5	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	83.9	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	16.7	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	16.8	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT

Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	4.20	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	87.5	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	83.9	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	16.7	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT

Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	16.8	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	169,535	56,512	686	76.2	915

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	3,608	—
Site Preparation	—	—	5.00	0.00	—
Grading	—	14,000	1.50	0.00	—
Paving	0.00	0.00	0.00	0.00	0.35

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments High Rise	—	0%
Enclosed Parking with Elevator	0.35	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	690	0.05	0.01

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments High Rise	409	417	330	145,689	4,494	4,575	3,625	1,599,170
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments High Rise	409	417	330	145,689	4,494	4,575	3,625	1,599,170
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments High Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	9
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments High Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	9
Conventional Wood Stoves	0
Catalytic Wood Stoves	0

Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
169535.025	56,512	686	76.2	915

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments High Rise	302,081	690	0.0489	0.0069	913,133
Enclosed Parking with Elevator	155,361	690	0.0489	0.0069	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO_2 and CH_4 and N_2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments High Rise	302,081	690	0.0489	0.0069	913,133
Enclosed Parking with Elevator	155,361	690	0.0489	0.0069	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments High Rise	3,429,190	0.00
Enclosed Parking with Elevator	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments High Rise	3,429,190	0.00
Enclosed Parking with Elevator	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments High Rise	68.0	—
Enclosed Parking with Elevator	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments High Rise	68.0	—
Enclosed Parking with Elevator	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments High Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments High Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments High Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments High Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.85	annual days of extreme heat
Extreme Precipitation	4.85	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	55.4
AQ-PM	63.6
AQ-DPM	93.4
Drinking Water	52.7
Lead Risk Housing	29.7
Pesticides	4.59
Toxic Releases	74.3
Traffic	99.8
Effect Indicators	—
CleanUp Sites	53.5
Groundwater	32.4
Haz Waste Facilities/Generators	39.8
Impaired Water Bodies	0.00
Solid Waste	93.3

Sensitive Population	—
Asthma	13.7
Cardio-vascular	34.2
Low Birth Weights	93.6
Socioeconomic Factor Indicators	—
Education	38.5
Housing	64.0
Linguistic	52.9
Poverty	55.5
Unemployment	49.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	41.81958168
Employed	51.71307584
Median HI	37.55934813
Education	—
Bachelor's or higher	93.27601694
High school enrollment	100
Preschool enrollment	82.63826511
Transportation	—
Auto Access	19.90247658
Active commuting	72.86025921
Social	—
2-parent households	99.56371102

Voting	48.87719748
Neighborhood	—
Alcohol availability	4.516874118
Park access	19.50468369
Retail density	98.52431669
Supermarket access	94.25125112
Tree canopy	17.56704735
Housing	—
Homeownership	4.49121006
Housing habitability	13.57628641
Low-inc homeowner severe housing cost burden	33.28628256
Low-inc renter severe housing cost burden	43.4364173
Uncrowded housing	34.55665341
Health Outcomes	—
Insured adults	62.17117926
Arthritis	92.2
Asthma ER Admissions	92.6
High Blood Pressure	91.1
Cancer (excluding skin)	66.1
Asthma	69.3
Coronary Heart Disease	81.5
Chronic Obstructive Pulmonary Disease	74.0
Diagnosed Diabetes	85.5
Life Expectancy at Birth	40.9
Cognitively Disabled	44.8
Physically Disabled	46.5
Heart Attack ER Admissions	58.3

Mental Health Not Good	58.7
Chronic Kidney Disease	93.4
Obesity	75.0
Pedestrian Injuries	78.2
Physical Health Not Good	68.2
Stroke	75.8
Health Risk Behaviors	—
Binge Drinking	40.3
Current Smoker	54.4
No Leisure Time for Physical Activity	67.7
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	89.4
Elderly	53.1
English Speaking	59.2
Foreign-born	62.0
Outdoor Workers	98.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	1.4
Traffic Density	99.8
Traffic Access	87.4
Other Indices	—
Hardship	32.8
Other Decision Support	—
2016 Voting	31.6

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	66.0
Healthy Places Index Score for Project Location (b)	61.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Direct building SF
Operations: Hearths	No fireplaces/stoves
Construction: Construction Phases	Architectural coating adjusted to match last half of building construction phase. Site prep and grading have been extended to match anticipated effort (e.g., export of soil).

Appendix C

Health Risk Assessment

Beloit Terraces Project

Health Risk Assessment

prepared for

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Contact: Elliot Nayssan

prepared by

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December 2023

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1 Project Description

1.1 Introduction

This Health Risk Assessment (HRA) analyzes the possible health effects associated with toxic air contaminant (TAC) emissions from Interstate 405 (I-405), Santa Monica Boulevard (State Route 2 or SR-2), and associated on- and off-ramps near the proposed Beloit Terraces Project (the project). The project site is a flat, square-shaped site which includes three lots with a total area of approximately 0.43 acre in the city of Los Angeles. The site includes 1709-1721 ½ South Beloit Avenue with the following Assessor Parcel Numbers (APNs): 4261-008-008/009/023. The site is approximately 100 feet west of Interstate 405 (I-405). The report has been prepared under contract to Nayssan Properties, Inc.

1.2 Executive Summary

The proposed project consists of the demolition of the five existing residential structures and the construction of a new 92-unit apartment building This HRA conducts site-specific air dispersion modeling to determine whether health risks to future site residents from I-405 and SR-2 mainlines and associated ramps exceed the South Coast Air Quality Management District's (SCAQMD's) health risk criteria for residences.

The California Air Resources Board's (CARB) *Air Quality and Land Use Handbook: A Community Health Perspective* recommends that local agencies avoid siting new, sensitive land uses within specific distances of potential sources of TACs, such as freeways and high-traffic roads, distribution centers, railroads, and ports (CARB 2005). In particular, CARB recommends that local agencies avoid siting new, sensitive land uses within 500 feet of a freeway. The primary concern is the effect of diesel particulate matter (diesel PM), a TAC, on sensitive uses. The project site is located approximately 180 feet west of I-405 and 190 feet south of SR-2. Near the project site, the primary source of diesel PM is truck traffic traveling on the I-405 mainline and associated ramps, as well as vehicle travel on SR-2. In California, approximately 70 percent of total known cancer risk related to air toxics is attributable to diesel PM (CARB 2020). In addition to diesel PM, this analysis also examined five other vehicle exhaust pollutants of concern that are emitted from both diesel and gasoline-fueled vehicles: acrolein, acetaldehyde, formaldehyde, benzene, and 1,3-butadiene.

Cancer risk is expressed as the maximum number of new cases of cancer projected to occur in a population of one million people due to exposure to the cancer-causing substance, typically over a specific exposure duration, such as the high-end residency (95^{th} percentile) of 30 years (SCAQMD 2017). For example, a cancer risk of one in one million means that in a population of one million people, not more than one additional person would be expected to develop cancer as the result of the exposure to the substance causing that risk. Thirty years is the exposure duration scenario recommended by the SCAQMD for residential receptors in Risk Assessment Procedures for Rules 1401, 1401.1, and 212 (2017).

An analysis using the U.S. Environmental Protection Agency's (USEPA) AERMOD dispersion model and CARB's Hotspots Analysis and Reporting Program (HARP) risk analysis tool determined that the maximum exposed individual receptor (MEIR) on the project site would be exposed to a high end (95^{th} percentile), 30-year excess cancer risk of approximately 7.5 in one million, which is below SCAQMD's recommended cancer risk criteria of 10 excess cases of cancer in one million individuals

(1.0E-05) (SCAQMD 2019). Potential acute and chronic (such as lung inflammation, immune suppression, and immune sensitization) health risks for on-site residential units were also determined to be within SCAQMD health risk criteria.

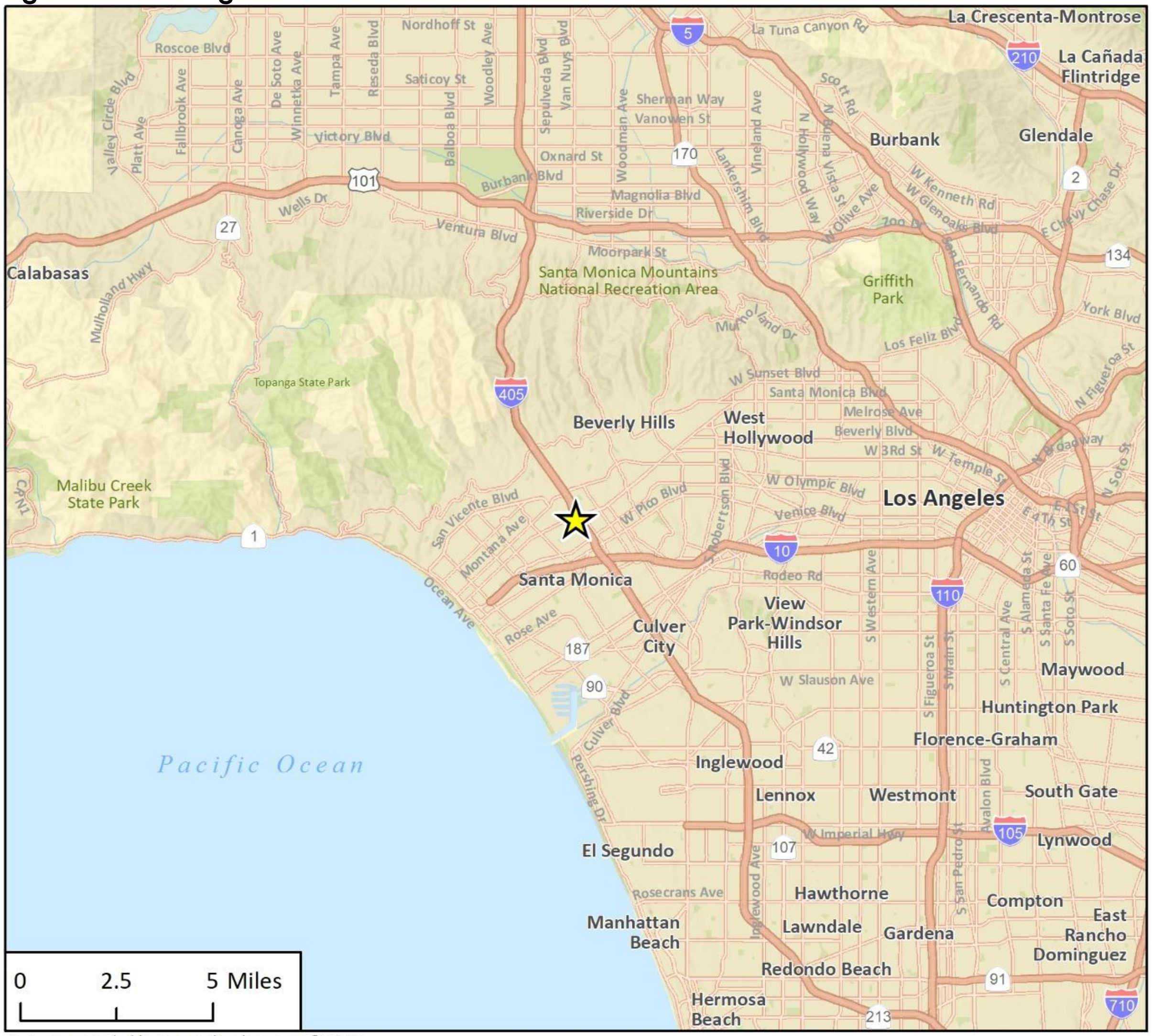
1.3 Project Site and Description

The proposed project consists of the demolition of the five existing residential structures and the construction of a new 92-unit apartment building with two levels of subterranean parking, one level of on grade parking and seven stories of residential above. The new apartment building would have a floor area totaling 125,808 square feet. The parking areas would total 42,087 square feet and the remaining 83,721 square feet would be for the lobby, recreation room, and residences. Common use areas would include a roof deck which would occupy approximately forty percent of the roof area. Primary access to the site is provided via a driveway off Beloit Avenue. The project would involve the demolition of 3,608 sf of existing structures. Construction is anticipated to start in 2024.

The project site is approximately 180 feet west of the centerline of the I-405 mainline and approximately 190 feet south of the centerline of SR-2. In addition, the project site is within 500 feet of the centerline of four ramps connecting to the I-405 freeway. Residential and commercial uses are present to the north, south and west of the project site. Primary vehicular access to the project site would be provided by an entrance located along Beloit Avenue.

Figure 1 shows the project's regional location. Figure 2 shows the project site location.

Figure 1 Regional Location



Imagery provided by Esri and its licensors © 2020.

☆ Project Location

N

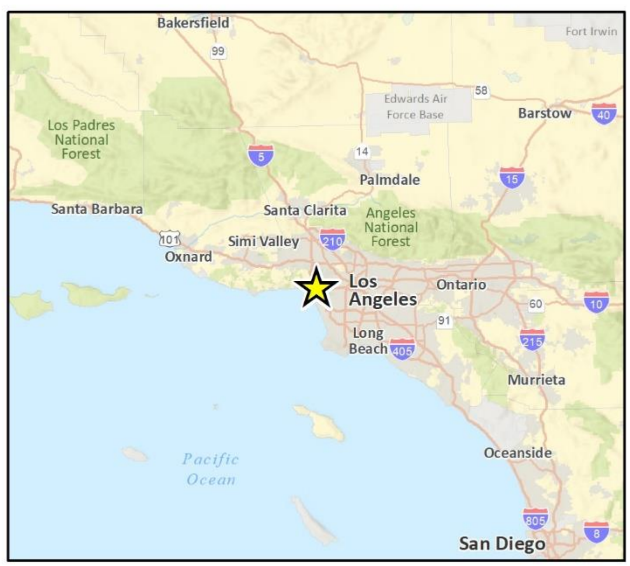


Figure 2 Project Location

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2 Air Quality Background

2.1 Local Climate and Meteorology

The project site is in the South Coast Air Basin (SCAB), which is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The regional climate in the SCAB is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the SCAB is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, substantial vehicular traffic, and industry.

Stationary and mobile sources primarily generate air pollutant emissions in the SCAB. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. The natural environment can also generate air pollutants, such as when high winds suspend fine dust particles.

2.2 Toxic Air Contaminants

Diesel Particulate Matter

Fine particulates are generally associated with combustion processes and form in the atmosphere as a secondary pollutant through chemical reactions. PM_{10} (particulate matter measuring no more than 10 microns in diameter) is a by-product of fuel combustion and wind erosion of soil and unpaved roads, and it is directly emitted into the atmosphere through these processes. Chemical reactions in the atmosphere also create PM_{10}. Fine particulate matter poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the fine particulate matter inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an adsorbed toxic substance.

Diesel engine fuel combustion forms an important fraction of the particulate matter emission inventory, as particulates in diesel emissions are very small and readily respirable. The particles have hundreds of chemicals adsorbed onto their surfaces, including many known or suspected mutagens and carcinogens. The Office of Environmental Health Hazard Assessment (OEHHA) reviewed and evaluated the potential for diesel exhaust to affect human health, and the associated scientific uncertainties (CARB 1998). Based on the available scientific evidence, it was determined that a level of diesel PM exposure, below which no carcinogenic effects are anticipated, has not been identified.

The Scientific Review Panel that approved the OEHHA report determined that, based on studies to date, 3 x 10^{-4} micrograms per cubic meter ($\mu g/m^3$) is a reasonable estimate of the unit risk for diesel PM. This means that a person exposed to a diesel PM concentration of 1 $\mu g/m^3$ continuously over the course of a lifetime has a 3 in 10,000 chance (or 300 in one million chance) of contracting cancer due to this exposure. Based on an estimated year 2000 statewide average concentration of 1.26 $\mu g/m^3$ for indoor and outdoor ambient air, about 380 excess cancers per one million population could be expected if diesel PM concentrations remained the same (CARB 2000). Therefore, these particulate emissions have been determined by CARB to be a TAC.

Diesel PM emissions are estimated to be responsible for about 70 percent of the total ambient air toxics risk. In addition to these general risks, diesel PM can also be responsible for elevated localized or near-source exposures ("hot-spots"). Depending on the activity and nearness to receptors, these potential risks can range from small to 1,500 per million or more (CARB 2000).

CARB staff have conducted risk characterization scenarios to determine the potential excess cancer risks involved when individuals are near various sources of diesel engine emissions, ranging from school buses to high volume freeways. The purpose of the risk characterization was to estimate, through air dispersion modeling, the cancer risk associated with typical diesel-fueled engine or vehicle activities based on modeled PM concentration at the point of maximum impact. The study included various sources of diesel PM emissions, including idling school buses, truck stops, low- and high-volume freeways, and other sources. High-volume freeways (20,000 trucks per day) were estimated to cause 800 to 1,700 per million potential excess cases of cancers, while low-volume freeways (2,000 trucks per day) were estimated to cause about 100 to 200 per million potential excess cases of cancers (CARB 2000).

OTHER MOBILE SOURCE CONTAMINANTS

Besides diesel PM, several other pollutants that are a public health concern are emitted by vehicle exhausts. The USEPA has identified six pollutants of highest priority: diesel particulate matter, acrolein, acetaldehyde, formaldehyde, benzene, and 1,3-butadiene. The latter five pollutants are part of the total organic gases emitted by diesel fueled vehicles. A brief description of each of these chemicals follows:

- **Acrolein** is the simplest unsaturated aldehyde. It is a widely produced substance with a piercing, disagreeable, acrid smell similar to that of burning fat. Acrolein is an unstable toxic substance that can burn the nose and throat and is a severe pulmonary irritant. It is a flammable and poisonous substance prepared industrially by the oxidation of propene. Small amounts of acrolein are formed and enter the air when trees, tobacco, other plants, gasoline, and oil are burned.
- **Acetaldehyde**, sometimes known as ethanol, is an organic chemical compound used as an intermediate in the production of acetic acid, certain esters, and a number of other chemicals. It is a flammable liquid with a fruity smell. Acetaldehyde is a toxic when applied externally for prolonged periods, an irritant, and a probable carcinogen.
- **Formaldehyde** is an organic chemical compound containing a terminal carbonyl group. It is produced in the atmosphere by the action of sunlight and oxygen on atmospheric methane and other hydrocarbons, becoming a part of smog. Additionally, formaldehyde is an intermediate in the oxidation (or combustion) of methane as well as other carbon compounds including automobile exhaust. Formaldehyde is a flammable substance that can be toxic, allergenic, and carcinogenic. It is naturally made in small amounts in human bodies and is found in small

amounts in household sources, such as fiberglass, carpets, permanent press fabrics, paper products, and some household cleaners.

- **Benzene**, or benzol, is an organic chemical compound and a known carcinogen. It is a colorless and highly flammable liquid with a sweet smell and a relatively high melting point. Benzene is an important industrial solvent and precursor in the production of drugs, plastics, synthetic rubber, and dyes. Benzene is a natural constituent of crude oil and may be synthesized from other compounds present in petroleum. It is found in gasoline and cigarette smoke. Natural sources of benzene include emissions from volcanoes and forest fires.
- **1,3-Butadiene** is an important industrial chemical used in the production of synthetic rubber (about 75 percent of manufactured 1,3-butadiene), which is then used primarily in the production of automobile tires. It is a colorless gas with a mild gasoline-like odor. Gasoline contains small amounts that are exhausted into the air after the combustion process. It is a carcinogen, highly irritative, and flammable.

2.3 Air Quality Regulation

Federal and state governments have established ambient air quality standards for the protection of public health. The USEPA is the federal agency designated to administer air quality regulation, while the CARB is the state equivalent in the California Environmental Protection Agency. County-level Air Quality Management Districts (AQMD) provide local management of air quality. The CARB has established air quality standards and is responsible for the control of mobile emission sources, while the local AQMDs are responsible for enforcing standards and regulating stationary sources. The CARB has established 15 air basins statewide.

The USEPA has set primary national ambient air quality standards for ozone, CO, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead (Pb). Primary standards are those levels of air quality deemed necessary, with an adequate margin of safety, to protect public health. In addition, the State of California has established health-based ambient air quality standards for these and other pollutants, some of which are more stringent than the federal standards. Table 1 lists the current federal and state standards for regulated pollutants.

Table 1 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	N/A[1]	0.09 ppm[2]
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	0.03 ppm	N/A
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM_{10}	Annual	N/A	20 µg/m[3]
	24-Hour	150 µg/m	50 µg/m

Pollutant	Averaging Time	Federal Primary Standards	California Standard
$PM_{2.5}$	Annual	12 µg/m	12 µg/m
	24-Hour	35 µg/m	N/A
Lead	30-Day Average	N/A	1.5 µg/m
	3-Month Average	0.15 µg/m	N/A

[1] N/A: Not applicable because no standard is currently established for California

[2] ppm = parts per million

[3] µg/m = micrograms per cubic meter

Source: CARB 2016

The SCAQMD is the designated air quality control agency in the SCAB. The SCAB is designated a nonattainment area for the federal and State one-hour and eight-hour ozone standards, the State PM_{10} standards, the federal 24-hour $PM_{2.5}$ standard, the State and federal annual $PM_{2.5}$ standard, and a partial nonattainment for lead. The SCAB is designated unclassifiable/attainment for all other federal and State standards.

2.3.1 Current Air Quality

The monitoring station closest to the project is the West Los Angeles-VA station located at the intersection of Wilshire Boulevard and Sawtelle approximately 0.3 miles west of the project site. This station reports monitoring data for ozone and NO_2, but not PM_{10} and $PM_{2.5}$. Therefore, PM_{10} concentrations were obtained from the next closest station with available data, which is the Los Angeles-LAX Station monitoring station located at 7201 Westchester Parkway approximately 6.8 miles east of the project site. $PM_{2.5}$ concentrations were obtained from the next closest station with available data, which is the Reseda monitoring station located at 1630 North Main Street approximately 15.1 miles west of the project site.

Table 2 indicates the number of days that the NAAQS and CAAQS were exceeded at these stations in each of the last three years. The data indicate that the federal and state eight-hour ozone standards were exceeded in 2020 and 2021, and the state worst-hour ozone standard was exceeded in 2020 and 2021. In addition, the federal $PM_{2.5}$ standard was exceeded in 2020 and 2021. The federal and state PM_{10} standard were exceeded in 2020. No other state or federal standards were exceeded at this monitoring station.

Table 2 Ambient Air Quality at the Nearest Monitoring Stations

Pollutant	2020	2021	2022
Ozone (ppm), Eight-Hour Average[1]	0.093	0.082	0.070
Number of days of state exceedances (>0.070 ppm)	8	1	0
Number of days of federal exceedances (>0.070 ppm)	8	1	0
Ozone (ppm), Worst Hour[1]	0.134	0.095	0.081
Number of days of state exceedances (>0.09 ppm)	6	1	0
Nitrogen Dioxide (ppm), Worst Hour[1]	0.076	0.061	0.051
Number of days of state exceedances (>0.18 ppm)	0	0	0

Pollutant	2020	2021	2022
Particulate Matter <10 microns (μg/m^3), Worst 24 Hours[2]	55.6	33.3	*
Number of days of state exceedances (>50 μg/m^3)	1	0	*
Number of days of federal exceedances (>150 μg/m^3)	0	0	*
Particulate Matter <2.5 microns (μg/m^3), Worst 24 Hours[3]	175.0	61.0	33.7
Number of days of federal exceedances (>35 μg/m^3)	12	13	0

[1] Data obtained from the West Los Angeles -VA station at 11301 Wilshire Boulevard in Los Angeles

[2] Data obtained from the Los Angeles -Westchester Parkway at 7201 West Westchester Parkway in Los Angeles

[3] Data obtained from the Los Angeles-North Main Street station at 1630 North Main Street in Los Angeles

Source: CARB 2023

2.3.2 Toxic Air Contaminants

State of California

The Air Toxic "Hot Spots" Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources but does not directly regulate air toxics emissions. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized. "High priority" facilities are required to perform a health risk assessment and, if specific thresholds are violated, are required to communicate the results to the public in the form of notices and public meetings. Although TACs and $PM_{2.5}$ tend to be localized and are found in relatively low concentrations in ambient air, exposure to low concentrations over long periods can result in increased risk of cancer and/or adverse health effects in local communities.

City of Los Angeles

The City of Los Angeles Planning Comission (PC) provides Zoning Information Number 2427 (Z.I. No. 2427) to advise applicants that there are risks associated with residential land uses within 1,000 feet of freeways. The PC uses the Freeway Adjacent Advisory Notice to address concerns about planning projects involving sensitive uses (e.g., residences) within 1,000 feet of a freeway. This notice advises applicants to use methods that analyze and reduce risks related to TAC emissions from freeways. Specifically, Z.I. No. 2427 suggests that project applicants conduct a site-specific HRA, improve indoor air quality with minimum efficiency reporting value (MERV)-Rated or high-efficiency particulate air (HEPA) filtration equipment, and further reduce exposure to TACs through various project design strategies Furthermore, Article 5 and Article 9 in Chapter IX of the Los Angeles Municipal Code requires MERV 13 filters on all buildings within 1,000 feet of a freeway.

3 Impact Analysis

3.1 Methodology

3.1.1 Air Dispersion Modeling

Site-specific air dispersion modeling was conducted using the latest version of the American Meteorological Society/USEPA air dispersion model, AERMOD. Mobile source TACs associated with vehicle traffic on I-405, SR-2, and associated on- and off-ramps within 500 feet of the project site were estimated based on the methodology developed by the UC Davis-Caltrans Air Quality Project, Estimating Mobile Source Air Toxics Emissions [MSAT]: A Step-By-Step Project Analysis Methodology (2006). This spreadsheet application was designed to generate the total amount of the six pollutants of concern discussed in Section 2.2, *Toxic Air Contaminants*, based on total organic gases emission factors and diesel particulate emission factors from EMFAC2017. The UC Davis-Caltrans spreadsheet contained speciation factors from the CARB, and the USEPA's Motor Vehicle Emission Simulator (MOVES; USEPA 2014) was used to supplement missing values for acrolein. These emission and speciation factors were then multiplied against traffic volumes for the mainline and ramp segments to obtain total emissions from I-405 and SR-2 mainlines within one-half mile of the project site and from associated freeway on- and off-ramps within 500 feet of the project site. Emission factors for this study were based on grams per mile. Spreadsheet outputs adapted from the UC Davis-Caltrans MSAT model and composite emission rates are contained in Appendix A.

For mainline emissions, emission factors were reviewed for speeds between 50 and 65 miles per hour (mph) on I-405 and for speeds between 25 and 35 mph for SR-2 based on the posted speed limits of these roadways. On I-405, the worst reasonable case speed for diesel PM emissions (i.e., highest emission levels) was 65 mph for heavy duty and light duty trucks. For total organic gases emissions, the worst reasonable speed was 65 mph for heavy duty trucks and cars and 50 mph for light duty trucks. On SR-2, the worst reasonable case speed for diesel PM and total organic gas emissions was 25 mph for heavy duty trucks, light duty trucks, and cars. All entrance ramp segments were modeled using emissions factors based on a speed of 50 mph. Exit ramp segments were modeled based on the posted speed limit.

Traffic volumes for the I-405 and SR-2 mainlines were obtained from California Department of Transportation (Caltrans) *2018 Traffic Volumes on California State Highways*, the most recently available traffic count information. According to the Caltrans traffic data (2018a), the Annual Average Daily Traffic (AADT) volume along I-405 north of SR-2 is 310,000 vehicles, while AADT south of SR-2 is 327,000 vehicles. AADT volume along SR-2 west of I-405 is 51,000 vehicles, while AADT east of I-405 is 50,000 vehicles. Based on Caltrans *2018 Annual Average Daily Truck Traffic on the California State Highway System* (2018b), truck traffic comprises approximately 3.46 percent of I-405 AADT on the portion of the freeway closest to the project site. Truck traffic comprises approximately 2.37 percent of SR-2 AADT on the portion of the roadway closest to the project site. Ramp AADTs were obtained from Caltrans *2018 Ramp Volumes on the California State Freeway System: District 7* (2018c). Table 3 summarizes mainline and ramp segment AADT and truck traffic percentages.

Table 3 Freeway and Ramp Traffic and Truck Percentages

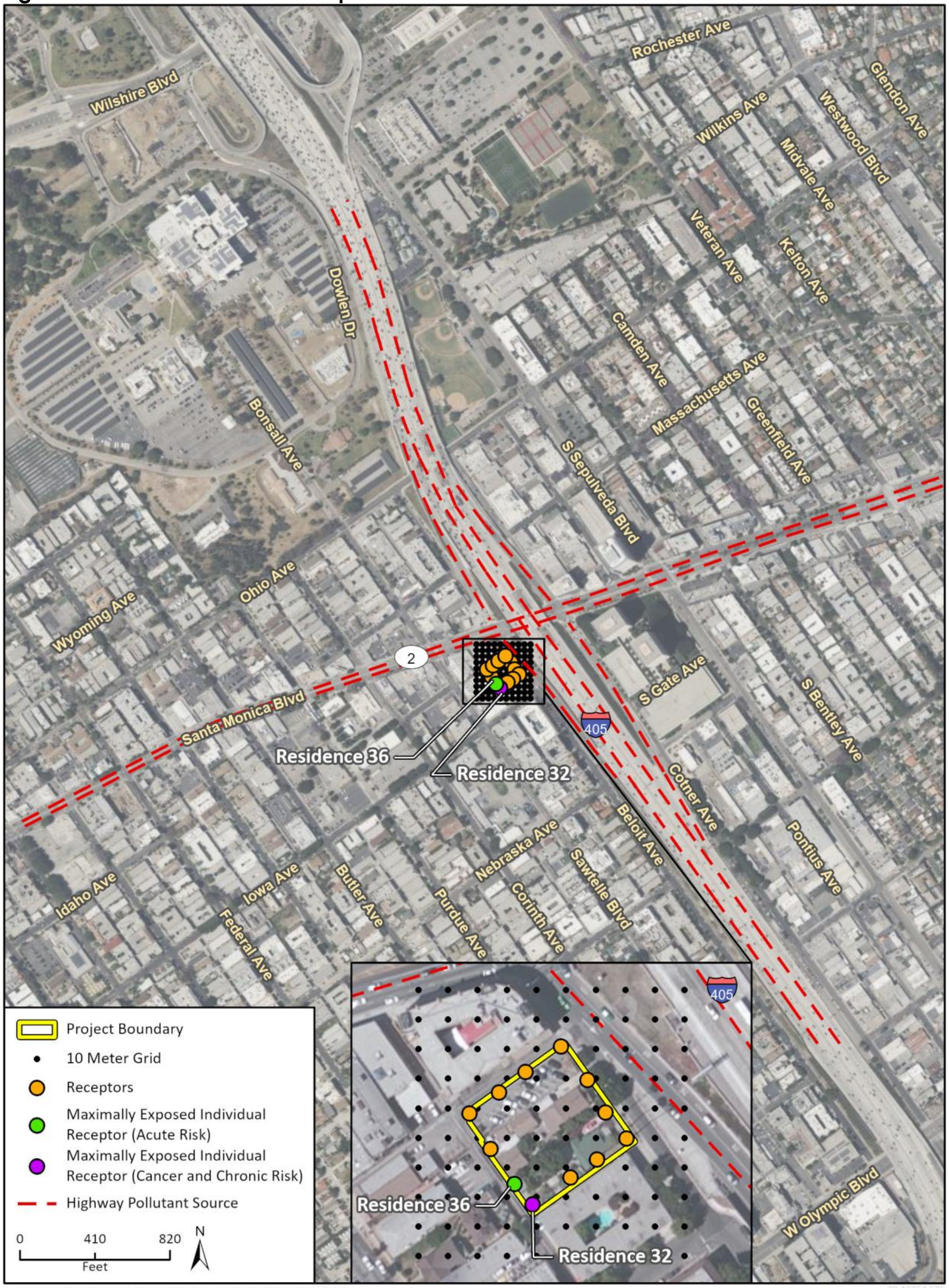
Roadway/Ramp Segment	Average Annual Daily Traffic (AADT)	Truck Traffic Percentage (%)[1]
Interstate 405 Mainline		
North of SR-2	310,000	3.46
South of SR-2	327,000	n.d.
SR-2 Mainline		
West of I-405	51,000	n.d.
East of I-405	50,000	2.37
Ramps		
Ramp 1: I-405 northbound off-ramp to SR-2	39,818	3.46
Ramp 2: I-405 northbound on-ramp from SR-2	26,250	3.46
Ramp 3: I-405 southbound off-ramp to SR-2	13,043	3.46
Ramp 4: I-405 southbound on-ramp from SR-2	27,885	3.46

n.d.: no data
[1]For ramp segments, truck traffic was assumed based on the truck percentage of I-405.
Sources: Caltrans 2018a, 2018b, and 2018c

Twelve representative sensitive receptor locations throughout the project site were chosen. The proposed residential building was modeled to contain five floors of residential units, with the first residential floor occurring 12 feet (3.66 meters) above the ground level.[1] Each additional residential floor would be located 11 feet (3.35 meters) above the one below it. To characterize the health risks for each residential floor of the building, additional receptors were placed at each receptor location at 3.35, 6.70, 10.05, and 13.40 meters higher elevation to reflect all five floors of residential exposure. A nine-by-nine point receptor grid with 10-meter spacing was used to evaluate whether or not sensitive receptor locations reflected the pattern of exposure throughout the project site. Grid points overlapping the site were reflective of exposure at the chosen receptors. Figure 3 depicts the sources (freeways and ramps), receptor grid, and sensitive receptors.

[1] Ground-level (at-grade) parking would be located on the ground floor of the proposed building.

Figure 3 Sources and Receptors



Imagery provided by Esri, Microsoft Bing. and their licensors © 2023.

The American Meteorological Society/USEPA air dispersion model, AERMOD version 18159, was used to calculate the concentrations of source emissions at the project site. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources. The AERMOD model requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Specific meteorology and terrain for the site were input to the model using the nearest available meteorological data set, SCAQMD's Santa Monica Municipal Airport station (approximately 1.9 miles southwest of the project site), and United States Geological Survey (USGS) Digital Elevation Model (DEM) data for the Beverly Hills Quadrangle. The project site's base elevation is approximately 73 meters above mean sea level (amsl). I-405 varies in elevation between approximately 63 and 89 meters amsl along the length of the approximately one-mile segment modeled, while SR-2 varies in elevation between approximately 63 and 75 meters amsl. Ramps within 500 feet of the project site range in elevation between 68 and 87 meters amsl. The dispersion model considers these differences in topography. The I-405 and SR-2 mainlines within a half-mile of the project site and ramps within 500 feet of the project site were modeled as a series of volume sources in AERMOD. The presence of buildings and other structures disturbs downwind air flow. However, building downwash is only calculated for point sources and not appropriate to include in AERMOD for this HRA, which includes only volume sources. AERMOD provides X/Q (CHI/Q = chi/q = χ/q) values, the concentration estimated by the air quality model based on an emission rate of one gram per second.

3.1.2 Health Risk Modeling

Version 19121 of the CARB Hot Spots Analysis and Reporting Program (HARP) 2 was used to calculate the potential risk values associated with the worst case one-hour and average annual toxic emission concentrations at surrounding receptors. Risk was assessed by including all mandatory minimum pathways in the risk analysis and calculated using the OEHHA Derived Method using the 95th percentile breathing rates. Carcinogenic health risks are based on the SCAQMD-recommended lifetime residency period of 30 years. A 73 percent fraction of time at home was applied for age groups older than 16 years, consistent with SCAQMD's procedures (SCAQMD 2017).

As discussed in Section 2.3, *Air Quality Regulation*, the City of Los Angeles requires all new residential structures constructed within 1,000 feet of a freeway to install MERV 13 air filters in the building ventilation systems. Furthermore, Subchapter 7, Section 150(m) of the 2019 California Energy Code requires the use of MERV 13 filters in all new residential buildings. Therefore, this analysis included an adjustment for the inclusion of MERV 13 filters, which remove approximately 90 percent of diesel PM from the intake air (Singer *et al*. 2016). The risk adjustment was based on the USEPA-recommended daily activity pattern of 16.6 hours per day spent inside and 2.3 hours per day outside, and a 350-day per year exposure frequency (USEPA 2011; Bay Area Air Quality Management District 2016). See Appendix B for the MERV 13 adjusted results.

3.2 Significance Thresholds

The USEPA considers for risk management those pollutants that could cause cancer risks between one in 10,000 (1.0 x 10-4 or 1.0E-04) and one in one million (1.0 x 10-6 or 1.0E-06). Passage of Proposition 65 (encoded in California Health and Safety Code Section 25249.6) in 1986 prohibits a person in the course of doing business from knowingly and intentionally exposing any individual to a chemical that has been listed as known to the state to cause cancer or reproductive toxicity without first giving clear and reasonable warning. For a chemical that is listed as a carcinogen, the "no significant risk" level under Proposition 65 is defined as the level that is calculated to result in not more than one excess case of cancer in 100,000 individuals (1.0E-05). The SCAQMD recommends the use of this risk level (also reportable as 10 in one million) as the significance threshold for toxic air contaminants (SCAQMD 2019).

To provide a perspective on risk, the American Cancer Society (2018) reports that in the United States, men have about a 40 in 100 chance (0.40 probability) and women about a 38 in 100 chance (0.38) of developing cancer during a lifetime. Based on this background cancer risk level in the general population, application of a 1.0×10^{-5} excess risk limit means that the contribution from a toxic hazard should not cause the resultant cancer risk for the exposed population to exceed 0.40001 for men or 0.38001 for women.

The SCAQMD also recommends that the non-carcinogenic hazards of toxic air contaminants should not exceed a hazard index (the summation of the hazard quotients for all chemicals to which an individual would be exposed) of 1.0 for either chronic or acute effects (SCAQMD 2019).

3.3 Results

3.3.1 Air Dispersion Modeling and Risk Analysis Results

Health risks for a total of 60 sensitive receptor points distributed throughout the project site were modeled. Each of these receptors represents a proposed location of residential housing unit. A receptor grid was used to evaluate whether or not sensitive receptor locations reflected the pattern of exposure.

Cancer, acute, and chronic risks were determined for a 30-year residency scenario at all receptor locations. Risk levels for the maximally exposed individual receptor (MEIR) are shown in Table 4. Refer to Appendix A for more detailed accounting of health risks at each receptor per pollutant of concern.

As shown in Table 4, the MEIR would be exposed to a high end (95^{th} percentile), 30-year excess cancer risk of approximately 7.46 in one million, which does not exceed SCAQMD's recommended health risk criteria of ten excess cases of cancer in one million individuals (1.0E-05) (SCAQMD 2019). As shown in Table 4, potential chronic and acute (such as lung inflammation, immune suppression, and immune sensitization) health risks were approximately 0.019 and 0.012, respectively, which are also less than SCAQMD's health risk criteria of one.

Table 4 Potential Health Risks at the MEIR

	Maximum Exposed Individual Resident (MEIR)[1]
Cancer Risk	
Incremental Excess Cancer Risk	7.46 in one million (third floor)
Threshold	*10 in one million*
Threshold Exceeded?	**No**
Chronic Risk	
Chronic Hazard Index	0.019 (third floor)
Threshold	1.0
Threshold Exceeded?	**No**
Acute Risk	
Acute Hazard Index	0.012 (second floor)
Threshold	1.0
Threshold Exceeded?	**No**

[1] Based on 30-year resident exposure. Cancer risk includes adjustment for use of MERV 13 filters, pursuant to Los Angeles Municipal Code and 2019 California Energy Code requirements. The MEIR is a residence located in the southwestern portion of the building on the second and third floors of the building. For cancer and chronic risk, the MEIR is Receptor ID 32 (third floor). For acute risk, the MEIR is Receptor ID 36 (second floor).

See Appendix A for model outputs and summary form and Appendix B for the MERV 13-adjusted cancer risk.

4 Conclusions

With regulatory compliance, the proposed residential use of the site would not expose on-site residents to significant excess cancer risks associated with vehicle emissions based on SCAQMD health risk guidelines and existing vehicle travel on I-405 and SR-2 mainlines and associated ramps. The calculated risk using air dispersion modeling is based on exposure to outdoor air 24 hours per day; however, this analysis adjusts cancer risk based on compliance with the 2019 California Energy Code and City of Los Angeles requirements, specifically use of MERV 13 filters. Risk values also incorporate SCAQMD's recommended 73 percent fraction of time at home for age groups greater than 16 years old (SCAQMD 2017).

Current regulatory action by CARB is intended to reduce the amount of diesel exhaust particulates associated with on-road diesel trucks in the future (note that the analysis was based on year 2022 composite emission factors). Conversely, vehicle emissions are based on 2022 traffic estimates; truck traffic growth that may occur in the future along these portion of I-405 and SR-2 may result in increased emissions on a per mile basis, but such increases in truck traffic will be offset to some degree by changes in both the truck and non-diesel vehicle fleets as newer, less polluting vehicles become the majority portion of the fleet populations. Nonetheless, the analysis contained in this report indicates that residents at the site would not be exposed to significant carcinogenic, chronic, or acute health risks associated with vehicle traffic on I-405 and SR-2 mainlines and associated ramps.

5 References

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Appendix A

Emissions Estimates and HARP Risk Results

HARP2 - HRACalc (dated 19044) 9/15/2020 1:25:23 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 30

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 2
2<9 Years Bin: 0
2<16 Years Bin: 14
16<30 Years Bin: 14
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: True
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: ON

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.05
Soil mixing depth (m): 0.01
Dermal climate: Mixed

****
HOMEGROWN CROP PATHWAY SETTINGS

Household type: HouseholdsthatGarden
Fraction leafy: 0.137
Fraction exposed: 0.137
Fraction protected: 0.137
Fraction root: 0.137

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: DBRs changed|
Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to:
C:\Users\emarino\Desktop\Beloit Terraces
HRA\BELOIT_TERRACE\hra\CChAc_30YrRes95BR_CancerRisk.csv
Cancer risk total by receptor saved to: C:\Users\emarino\Desktop\Beloit Terraces
HRA\BELOIT_TERRACE\hra\CChAc_30YrRes95BR_CancerRiskSumByRec.csv
Calculating chronic risk
Chronic risk breakdown by pollutant and receptor saved to:
C:\Users\emarino\Desktop\Beloit Terraces
HRA\BELOIT_TERRACE\hra\CChAc_30YrRes95BR_NCChronicRisk.csv
Chronic risk total by receptor saved to: C:\Users\emarino\Desktop\Beloit Terraces
HRA\BELOIT_TERRACE\hra\CChAc_30YrRes95BR_NCChronicRiskSumByRec.csv
Calculating acute risk
Acute risk breakdown by pollutant and receptor saved to:
C:\Users\emarino\Desktop\Beloit Terraces
HRA\BELOIT_TERRACE\hra\CChAc_30YrRes95BR_NCAcuteRisk.csv
Acute risk total by receptor saved to: C:\Users\emarino\Desktop\Beloit Terraces
HRA\BELOIT_TERRACE\hra\CChAc_30YrRes95BR_NCAcuteRiskSumByRec.csv
HRA ran successfully

*HARP - HRACalc v19044 9/15/2020 1:25:23 PM - Cancer Risk - Input File: C:\Users\emarino\Desktop\Beloit Terraces HRA\BELOIT_TERRACE\hra\CChAc_30YrRes95BR_HRAInput.hra

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO	INH_RISK	SOIL_RISK	DERMAL_R	MMILK_RIS	WATER_RIS	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISI	PIG_RISK	CHICKEN_F	EGG_RISK
1	CARTGRID	GRID01	366383	3768180	1.44E-05	30YrCance	1.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2	CARTGRID	GRID01	366393	3768180	1.50E-05	30YrCance	1.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3	CARTGRID	GRID01	366403	3768180	1.57E-05	30YrCance	1.57E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4	CARTGRID	GRID01	366413	3768180	1.58E-05	30YrCance	1.58E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5	CARTGRID	GRID01	366423	3768180	1.65E-05	30YrCance	1.65E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6	CARTGRID	GRID01	366433	3768180	1.73E-05	30YrCance	1.73E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7	CARTGRID	GRID01	366443	3768180	1.82E-05	30YrCance	1.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8	CARTGRID	GRID01	366453	3768180	1.43E-05	30YrCance	1.43E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9	CARTGRID	GRID01	366463	3768180	1.48E-05	30YrCance	1.48E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10	CARTGRID	GRID01	366383	3768190	1.51E-05	30YrCance	1.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
11	CARTGRID	GRID01	366393	3768190	1.57E-05	30YrCance	1.57E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12	CARTGRID	GRID01	366403	3768190	1.65E-05	30YrCance	1.65E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
13	CARTGRID	GRID01	366413	3768190	1.66E-05	30YrCance	1.66E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
14	CARTGRID	GRID01	366423	3768190	1.74E-05	30YrCance	1.74E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
15	CARTGRID	GRID01	366433	3768190	1.83E-05	30YrCance	1.83E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
16	CARTGRID	GRID01	366443	3768190	1.46E-05	30YrCance	1.46E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
17	CARTGRID	GRID01	366453	3768190	1.50E-05	30YrCance	1.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
18	CARTGRID	GRID01	366463	3768190	1.54E-05	30YrCance	1.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
19	CARTGRID	GRID01	366383	3768200	1.59E-05	30YrCance	1.59E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
20	CARTGRID	GRID01	366393	3768200	1.66E-05	30YrCance	1.66E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21	CARTGRID	GRID01	366403	3768200	1.67E-05	30YrCance	1.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22	CARTGRID	GRID01	366413	3768200	1.75E-05	30YrCance	1.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
23	CARTGRID	GRID01	366423	3768200	1.40E-05	30YrCance	1.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
24	CARTGRID	GRID01	366433	3768200	1.48E-05	30YrCance	1.48E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
25	CARTGRID	GRID01	366443	3768200	1.08E-05	30YrCance	1.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
26	CARTGRID	GRID01	366453	3768200	1.11E-05	30YrCance	1.11E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
27	CARTGRID	GRID01	366463	3768200	1.14E-05	30YrCance	1.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
28	CARTGRID	GRID01	366383	3768210	1.61E-05	30YrCance	1.61E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29	CARTGRID	GRID01	366393	3768210	1.69E-05	30YrCance	1.69E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
30	CARTGRID	GRID01	366403	3768210	1.34E-05	30YrCance	1.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31	CARTGRID	GRID01	366413	3768210	1.39E-05	30YrCance	1.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32	CARTGRID	GRID01	366423	3768210	1.45E-05	30YrCance	1.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33	CARTGRID	GRID01	366433	3768210	1.52E-05	30YrCance	1.52E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
34	CARTGRID	GRID01	366443	3768210	1.10E-05	30YrCance	1.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
35	CARTGRID	GRID01	366453	3768210	1.12E-05	30YrCance	1.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
36	CARTGRID	GRID01	366463	3768210	1.14E-05	30YrCance	1.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
37	CARTGRID	GRID01	366383	3768220	1.60E-05	30YrCance	1.60E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38	CARTGRID	GRID01	366393	3768220	1.25E-05	30YrCance	1.25E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
39	CARTGRID	GRID01	366403	3768220	1.24E-05	30YrCance	1.24E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
40	CARTGRID	GRID01	366413	3768220	1.36E-05	30YrCance	1.36E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
41	CARTGRID	GRID01	366423	3768220	1.50E-05	30YrCance	1.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
42	CARTGRID	GRID01	366433	3768220	1.12E-05	30YrCance	1.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43	CARTGRID	GRID01	366443	3768220	1.13E-05	30YrCance	1.13E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
44	CARTGRID	GRID01	366453	3768220	1.14E-05	30YrCance	1.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
45	CARTGRID	GRID01	366463	3768220	1.16E-05	30YrCance	1.16E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
46	CARTGRID	GRID01	366383	3768230	1.22E-05	30YrCance	1.22E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
47	CARTGRID	GRID01	366393	3768230	1.27E-05	30YrCance	1.27E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48	CARTGRID	GRID01	366403	3768230	1.26E-05	30YrCance	1.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
49	CARTGRID	GRID01	366413	3768230	1.32E-05	30YrCance	1.32E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50	CARTGRID	GRID01	366423	3768230	1.45E-05	30YrCance	1.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51	CARTGRID	GRID01	366433	3768230	1.08E-05	30YrCance	1.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
52	CARTGRID	GRID01	366443	3768230	1.17E-05	30YrCance	1.17E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
53	CARTGRID	GRID01	366453	3768230	1.18E-05	30YrCance	1.18E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
54	CARTGRID	GRID01	366463	3768230	1.19E-05	30YrCance	1.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
55	CARTGRID	GRID01	366383	3768240	1.25E-05	30YrCance	1.25E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
56	CARTGRID	GRID01	366393	3768240	1.30E-05	30YrCance	1.30E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
57	CARTGRID	GRID01	366403	3768240	1.36E-05	30YrCance	1.36E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
58	CARTGRID	GRID01	366413	3768240	1.34E-05	30YrCance	1.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
59	CARTGRID	GRID01	366423	3768240	1.41E-05	30YrCance	1.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
60	CARTGRID	GRID01	366433	3768240	1.11E-05	30YrCance	1.11E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
61	CARTGRID	GRID01	366443	3768240	1.12E-05	30YrCance	1.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
62	CARTGRID	GRID01	366453	3768240	1.22E-05	30YrCance	1.22E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63	CARTGRID	GRID01	366463	3768240	1.21E-05	30YrCance	1.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
64	CARTGRID	GRID01	366383	3768250	1.28E-05	30YrCance	1.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
65	CARTGRID	GRID01	366393	3768250	1.33E-05	30YrCance	1.33E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
66	CARTGRID	GRID01	366403	3768250	1.38E-05	30YrCance	1.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
67	CARTGRID	GRID01	366413	3768250	1.38E-05	30YrCance	1.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
68	CARTGRID	GRID01	366423	3768250	1.44E-05	30YrCance	1.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
69	CARTGRID	GRID01	366433	3768250	1.15E-05	30YrCance	1.15E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
70	CARTGRID	GRID01	366443	3768250	1.16E-05	30YrCance	1.16E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
71	CARTGRID	GRID01	366453	3768250	1.26E-05	30YrCance	1.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
72	CARTGRID	GRID01	366463	3768250	1.17E-05	30YrCance	1.17E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
73	CARTGRID	GRID01	366383	3768260	1.31E-05	30YrCance	1.31E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
74	CARTGRID	GRID01	366393	3768260	1.36E-05	30YrCance	1.36E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
75	CARTGRID	GRID01	366403	3768260	1.41E-05	30YrCance	1.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
76	CARTGRID	GRID01	366413	3768260	1.41E-05	30YrCance	1.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
77	CARTGRID	GRID01	366423	3768260	1.48E-05	30YrCance	1.48E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
78	CARTGRID	GRID01	366433	3768260	1.55E-05	30YrCance	1.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
79	CARTGRID	GRID01	366443	3768260	1.12E-05	30YrCance	1.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
80	CARTGRID	GRID01	366453	3768260	1.12E-05	30YrCance	1.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
81	CARTGRID	GRID01	366463	3768260	1.19E-05	30YrCance	1.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
82	SENSITIV		366431	3768250	1.51E-05	30YrCance	1.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
83	SENSITIV		366431	3768250	1.49E-05	30YrCance	1.49E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
84	SENSITIV		366431	3768250	1.42E-05	30YrCance	1.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
85	SENSITIV		366431	3768250	1.32E-05	30YrCance	1.32E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
86	SENSITIV		366431	3768250	1.21E-05	30YrCance	1.21E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
87	SENSITIV		366440	3768239	1.04E-05	30YrCance	1.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
88	SENSITIV		366440	3768239	9.83E-06	30YrCance	9.83E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
89	SENSITIV		366440	3768239	9.13E-06	30YrCance	9.13E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

90	SENSITIV	366440	3768239	8.24E-06	30YrCance	8.24E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
91	SENSITIV	366440	3768239	7.47E-06	30YrCance	7.47E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
92	SENSITIV	366446	3768228	1.17E-05	30YrCance	1.17E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
93	SENSITIV	366446	3768228	1.15E-05	30YrCance	1.15E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
94	SENSITIV	366446	3768228	1.08E-05	30YrCance	1.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
95	SENSITIV	366446	3768228	1.01E-05	30YrCance	1.01E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
96	SENSITIV	366446	3768228	9.28E-06	30YrCance	9.28E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
97	SENSITIV	366453	3768219	1.14E-05	30YrCance	1.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
98	SENSITIV	366453	3768219	1.12E-05	30YrCance	1.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
99	SENSITIV	366453	3768219	1.05E-05	30YrCance	1.05E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
100	SENSITIV	366453	3768219	9.84E-06	30YrCance	9.84E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
101	SENSITIV	366453	3768219	9.03E-06	30YrCance	9.03E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
102	SENSITIV	366443	3768212	1.09E-05	30YrCance	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
103	SENSITIV	366443	3768212	1.02E-05	30YrCance	1.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
104	SENSITIV	366443	3768212	9.63E-06	30YrCance	9.63E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
105	SENSITIV	366443	3768212	8.88E-06	30YrCance	8.88E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
106	SENSITIV	366443	3768212	8.06E-06	30YrCance	8.06E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
107	SENSITIV	366434	3768206	1.06E-05	30YrCance	1.06E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
108	SENSITIV	366434	3768206	9.95E-06	30YrCance	9.95E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
109	SENSITIV	366434	3768206	9.38E-06	30YrCance	9.38E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
110	SENSITIV	366434	3768206	8.68E-06	30YrCance	8.68E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
111	SENSITIV	366434	3768206	7.90E-06	30YrCance	7.90E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
112	SENSITIV	366421	3768197	1.81E-05	30YrCance	1.81E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
113	SENSITIV	366421	3768197	1.82E-05	30YrCance	1.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
114	SENSITIV	366421	3768197	1.75E-05	30YrCance	1.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
115	SENSITIV	366421	3768197	1.67E-05	30YrCance	1.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
116	SENSITIV	366421	3768197	1.55E-05	30YrCance	1.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
117	SENSITIV	366415	3768204	1.38E-05	30YrCance	1.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
118	SENSITIV	366415	3768204	1.32E-05	30YrCance	1.32E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
119	SENSITIV	366415	3768204	1.26E-05	30YrCance	1.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
120	SENSITIV	366415	3768204	1.17E-05	30YrCance	1.17E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
121	SENSITIV	366415	3768204	1.07E-05	30YrCance	1.07E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
122	SENSITIV	366407	3768216	1.32E-05	30YrCance	1.32E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
123	SENSITIV	366407	3768216	1.31E-05	30YrCance	1.31E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
124	SENSITIV	366407	3768216	1.25E-05	30YrCance	1.25E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
125	SENSITIV	366407	3768216	1.18E-05	30YrCance	1.18E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
126	SENSITIV	366407	3768216	1.10E-05	30YrCance	1.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
127	SENSITIV	366400	3768228	1.31E-05	30YrCance	1.31E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
128	SENSITIV	366400	3768228	1.31E-05	30YrCance	1.31E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
129	SENSITIV	366400	3768228	1.25E-05	30YrCance	1.25E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
130	SENSITIV	366400	3768228	1.18E-05	30YrCance	1.18E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
131	SENSITIV	366400	3768228	1.10E-05	30YrCance	1.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
132	SENSITIV	366410	3768235	1.32E-05	30YrCance	1.32E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
133	SENSITIV	366410	3768235	1.32E-05	30YrCance	1.32E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
134	SENSITIV	366410	3768235	1.27E-05	30YrCance	1.27E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
135	SENSITIV	366410	3768235	1.20E-05	30YrCance	1.20E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
136	SENSITIV	366410	3768235	1.12E-05	30YrCance	1.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
137	SENSITIV	366419	3768242	1.40E-05	30YrCance	1.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
138	SENSITIV	366419	3768242	1.39E-05	30YrCance	1.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
139	SENSITIV	366419	3768242	1.34E-05	30YrCance	1.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
140	SENSITIV	366419	3768242	1.26E-05	30YrCance	1.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
141	SENSITIV	366419	3768242	1.17E-05	30YrCance	1.17E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

*HARP - HRACalc v19044 9/15/2020 1:25:23 PM - Chronic Risk - Input File: C:\Users\emarino\Desktop\Beloit Terraces HRA\BELOIT_TERRACE\hra\CChAc_30YrRes95BR_HRAInput.hra

REC	GRP	NETID	X	Y	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEV	RESP	SKIN	EYE	BONE/TEET	ENDO	BLOOD	ODOR	GENERAL	MAXHI
1	CARTGRID	GRID01	366383	3768180	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	6.85E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-02	0.00E+00	0.00E+00	1.58E-02
2	CARTGRID	GRID01	366393	3768180	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-03	7.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-02	0.00E+00	0.00E+00	1.63E-02
3	CARTGRID	GRID01	366403	3768180	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-03	7.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-02	0.00E+00	0.00E+00	1.70E-02
4	CARTGRID	GRID01	366413	3768180	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-03	7.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-02	0.00E+00	0.00E+00	1.69E-02
5	CARTGRID	GRID01	366423	3768180	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-03	7.72E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-02	0.00E+00	0.00E+00	1.76E-02
6	CARTGRID	GRID01	366433	3768180	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-03	8.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-02	0.00E+00	0.00E+00	1.83E-02
7	CARTGRID	GRID01	366443	3768180	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-03	8.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-02	0.00E+00	0.00E+00	1.91E-02
8	CARTGRID	GRID01	366453	3768180	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-03	6.75E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-02	0.00E+00	0.00E+00	1.54E-02
9	CARTGRID	GRID01	366463	3768180	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	6.94E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-02	0.00E+00	0.00E+00	1.58E-02
10	CARTGRID	GRID01	366383	3768190	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E-03	7.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-02	0.00E+00	0.00E+00	1.66E-02
11	CARTGRID	GRID01	366393	3768190	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-03	7.46E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-02	0.00E+00	0.00E+00	1.72E-02
12	CARTGRID	GRID01	366403	3768190	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-03	7.79E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-02	0.00E+00	0.00E+00	1.79E-02
13	CARTGRID	GRID01	366413	3768190	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-03	7.79E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-02	0.00E+00	0.00E+00	1.78E-02
14	CARTGRID	GRID01	366423	3768190	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-03	8.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-02	0.00E+00	0.00E+00	1.85E-02
15	CARTGRID	GRID01	366433	3768190	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-03	8.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-02	0.00E+00	0.00E+00	1.93E-02
16	CARTGRID	GRID01	366443	3768190	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	6.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-02	0.00E+00	0.00E+00	1.59E-02
17	CARTGRID	GRID01	366453	3768190	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-03	7.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-02	0.00E+00	0.00E+00	1.62E-02
18	CARTGRID	GRID01	366463	3768190	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-03	7.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-02	0.00E+00	0.00E+00	1.65E-02
19	CARTGRID	GRID01	366383	3768200	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-03	7.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-02	0.00E+00	0.00E+00	1.76E-02
20	CARTGRID	GRID01	366393	3768200	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-03	7.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-02	0.00E+00	0.00E+00	1.82E-02
21	CARTGRID	GRID01	366403	3768200	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-03	7.89E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-02	0.00E+00	0.00E+00	1.82E-02
22	CARTGRID	GRID01	366413	3768200	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-03	8.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-02	0.00E+00	0.00E+00	1.89E-02
23	CARTGRID	GRID01	366423	3768200	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-03	6.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-02	0.00E+00	0.00E+00	1.56E-02
24	CARTGRID	GRID01	366433	3768200	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-03	7.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-02	0.00E+00	0.00E+00	1.62E-02
25	CARTGRID	GRID01	366443	3768200	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-03	5.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-02	0.00E+00	0.00E+00	1.25E-02
26	CARTGRID	GRID01	366453	3768200	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-03	5.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-02	0.00E+00	0.00E+00	1.27E-02
27	CARTGRID	GRID01	366463	3768200	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-03	5.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-02	0.00E+00	0.00E+00	1.29E-02
28	CARTGRID	GRID01	366383	3768210	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-03	7.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-02	0.00E+00	0.00E+00	1.75E-02
29	CARTGRID	GRID01	366393	3768210	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-03	7.97E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-02	0.00E+00	0.00E+00	1.83E-02
30	CARTGRID	GRID01	366403	3768210	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-03	6.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-02	0.00E+00	0.00E+00	1.54E-02
31	CARTGRID	GRID01	366413	3768210	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-03	6.72E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-02	0.00E+00	0.00E+00	1.58E-02
32	CARTGRID	GRID01	366423	3768210	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-03	6.95E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-02	0.00E+00	0.00E+00	1.62E-02
33	CARTGRID	GRID01	366433	3768210	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-03	7.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E-02	0.00E+00	0.00E+00	1.68E-02
34	CARTGRID	GRID01	366443	3768210	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-03	5.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-02	0.00E+00	0.00E+00	1.29E-02
35	CARTGRID	GRID01	366453	3768210	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-03	5.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-02	0.00E+00	0.00E+00	1.30E-02
36	CARTGRID	GRID01	366463	3768210	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-03	5.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-02	0.00E+00	0.00E+00	1.32E-02
37	CARTGRID	GRID01	366383	3768220	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-03	7.46E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-02	0.00E+00	0.00E+00	1.69E-02
38	CARTGRID	GRID01	366393	3768220	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-03	5.89E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-02	0.00E+00	0.00E+00	1.35E-02
39	CARTGRID	GRID01	366403	3768220	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-03	5.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-02	0.00E+00	0.00E+00	1.33E-02
40	CARTGRID	GRID01	366413	3768220	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	6.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	0.00E+00	1.50E-02
41	CARTGRID	GRID01	366423	3768220	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-03	7.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-02	0.00E+00	0.00E+00	1.70E-02
42	CARTGRID	GRID01	366433	3768220	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-03	5.58E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-02	0.00E+00	0.00E+00	1.34E-02
43	CARTGRID	GRID01	366443	3768220	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-03	5.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-02	0.00E+00	0.00E+00	1.34E-02
44	CARTGRID	GRID01	366453	3768220	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-03	5.64E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-02	0.00E+00	0.00E+00	1.34E-02
45	CARTGRID	GRID01	366463	3768220	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-03	5.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	0.00E+00	0.00E+00	1.36E-02
46	CARTGRID	GRID01	366383	3768230	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-03	5.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-02	0.00E+00	0.00E+00	1.34E-02
47	CARTGRID	GRID01	366393	3768230	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-03	6.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-02	0.00E+00	0.00E+00	1.39E-02
48	CARTGRID	GRID01	366403	3768230	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-03	5.96E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-02	0.00E+00	0.00E+00	1.37E-02
49	CARTGRID	GRID01	366413	3768230	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-03	6.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	0.00E+00	0.00E+00	1.42E-02
50	CARTGRID	GRID01	366423	3768230	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-03	6.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-02	0.00E+00	0.00E+00	1.60E-02
51	CARTGRID	GRID01	366433	3768230	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-03	5.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-02	0.00E+00	0.00E+00	1.25E-02
52	CARTGRID	GRID01	366443	3768230	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-03	5.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-02	0.00E+00	0.00E+00	1.40E-02
53	CARTGRID	GRID01	366453	3768230	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-03	5.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-02	0.00E+00	0.00E+00	1.40E-02
54	CARTGRID	GRID01	366463	3768230	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-03	5.87E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-02	0.00E+00	0.00E+00	1.40E-02
55	CARTGRID	GRID01	366383	3768240	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-03	5.96E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-02	0.00E+00	0.00E+00	1.38E-02
56	CARTGRID	GRID01	366393	3768240	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03	6.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	0.00E+00	0.00E+00	1.42E-02
57	CARTGRID	GRID01	366403	3768240	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-03	6.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-02	0.00E+00	0.00E+00	1.47E-02
58	CARTGRID	GRID01	366413	3768240	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-03	6.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-02	0.00E+00	0.00E+00	1.45E-02
59	CARTGRID	GRID01	366423	3768240	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-03	6.64E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-02	0.00E+00	0.00E+00	1.52E-02
60	CARTGRID	GRID01	366433	3768240	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-03	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-02	0.00E+00	0.00E+00	1.29E-02
61	CARTGRID	GRID01	366443	3768240	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-03	5.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-02	0.00E+00	0.00E+00	1.30E-02
62	CARTGRID	GRID01	366453	3768240	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03	6.09E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-02	0.00E+00	0.00E+00	1.47E-02
63	CARTGRID	GRID01	366463	3768240	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-03	6.05E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-02	0.00E+00	0.00E+00	1.45E-02
64	CARTGRID	GRID01	366383	3768250	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03	6.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-02	0.00E+00	0.00E+00	1.41E-02
65	CARTGRID	GRID01	366393	3768250	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-03	6.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-02	0.00E+00	0.00E+00	1.45E-02
66	CARTGRID	GRID01	366403	3768250	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-03	6.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	0.00E+00	1.50E-02
67	CARTGRID	GRID01	366413	3768250	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	6.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-02	0.00E+00	0.00E+00	1.49E-02
68	CARTGRID	GRID01	366423	3768250	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-03	6.80E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-02	0.00E+00	0.00E+00	1.56E-02
69	CARTGRID	GRID01	366433	3768250	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-03	5.67E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-02	0.00E+00	0.00E+00	1.35E-02
70	CARTGRID	GRID01	366443	3768250	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-03	5.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	0.00E+00	0.00E+00	1.36E-02
71	CARTGRID	GRID01	366453	3768250	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-03	6.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-02	0.00E+00	0.00E+00	1.54E-02
72	CARTGRID	GRID01	366463	3768250	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-03	5.79E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-02	0.00E+00	0.00E+00	1.38E-02
73	CARTGRID	GRID01	366383	3768260	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-03	6.26E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-02	0.00E+00	0.00E+00	1.45E-02
74	CARTGRID	GRID01	366393	3768260	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03	6.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-02	0.00E+00	0.00E+00	1.49E-02
75	CARTGRID	GRID01	366403	3768260	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-03	6.69E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-02	0.00E+00	0.00E+00	1.54E-02
76	CARTGRID	GRID01	366413	3768260	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03	6.67E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-02	0.00E+00	0.00E+00	1.53E-02
77	CARTGRID	GRID01	366423	3768260	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-03	6.97E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-02	0.00E+00	0.00E+00	1.60E-02
78	CARTGRID	GRID01	366433	3768260	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-03	7.35E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-02	0.00E+00	0.00E+00	1.69E-02
79	CARTGRID	GRID01	366443	3768260	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-03	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-02	0.00E+00	0.00E+00	1.28E-02
80	CARTGRID	GRID01	366453	3768260	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-03	5.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-02	0.00E+00	0.00E+00	1.28E-02
81	CARTGRID	GRID01	366463	3768260	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03	5.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-02	0.00E+00	0.00E+00	1.41E-02
82	SENSITIV		366431	3768250	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-03	7.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-02	0.00E+00	0.00E+00	1.63E-02
83	SENSITIV		366431	3768250	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-03	7.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-02	0.00E+00	0.00E+00	1.61E-02
84	SENSITIV		366431	3768250	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03	6.69E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-02	0.00E+00	0.00E+00	1.53E-02
85	SENSITIV		366431	3768250	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-03	6.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-02	0.00E+00	0.00E+00	1.44E-02
86	SENSITIV		366431	3768250	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-03	5.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-02	0.00E+00	0.00E+00	1.32E-02
87	SENSITIV		366440	3768239	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-03	5.11E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-02	0.00E+00	0.00E+00	1.21E-02
88	SENSITIV		366440	3768239	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-03	4.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-02	0.00E+00	0.00E+00	1.15E-02
89	SENSITIV		366440	3768239	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	4.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-02	0.00E+00	0.00E+00	1.06E-02
90	SENSITIV		366440	3768239	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.68E-04	4.04E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.58E-03	0.00E+00	0.00E+00	9.58E-03
91	SENSITIV		366440	3768239	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.78E-04	3.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.68E-03	0.00E+00	0.00E+00	8.68E-03
92	SENSITIV		366446	3768228	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-03	5.79E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-02	0.00E+00	0.00E+00	1.39E-02
93	SENSITIV		366446	3768228	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-03	5.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-02	0.00E+00	0.00E+00	1.37E-02
94	SENSITIV		366446	3768228	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-03	5.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-02	0.00E+00	0.00E+00	1.28E-02
95	SENSITIV		366446	3768228	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-03	5.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02	0.00E+00	0.00E+00	1.20E-02
96	SENSITIV		366446	3768228	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-03	4.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-02	0.00E+00	0.00E+00	1.10E-02
97	SENSITIV		366453	3768219	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-03	5.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-02	0.00E+00	0.00E+00	1.34E-02

98	SENSITIV	366453	3768219	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-03	5.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-02	0.00E+00	0.00E+00	1.32E-02
99	SENSITIV	366453	3768219	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-03	5.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-02	0.00E+00	0.00E+00	1.23E-02
100	SENSITIV	366453	3768219	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-03	4.85E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-02	0.00E+00	0.00E+00	1.16E-02
101	SENSITIV	366453	3768219	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	4.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-02	0.00E+00	0.00E+00	1.06E-02
102	SENSITIV	366443	3768212	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-03	5.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-02	0.00E+00	0.00E+00	1.28E-02
103	SENSITIV	366443	3768212	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-03	5.04E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02	0.00E+00	0.00E+00	1.20E-02
104	SENSITIV	366443	3768212	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-03	4.74E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-02	0.00E+00	0.00E+00	1.13E-02
105	SENSITIV	366443	3768212	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-03	4.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-02	0.00E+00	0.00E+00	1.04E-02
106	SENSITIV	366443	3768212	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.51E-04	3.96E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.41E-03	0.00E+00	0.00E+00	9.41E-03
107	SENSITIV	366434	3768206	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-03	5.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-02	0.00E+00	0.00E+00	1.24E-02
108	SENSITIV	366434	3768206	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-03	4.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-02	0.00E+00	0.00E+00	1.17E-02
109	SENSITIV	366434	3768206	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-03	4.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-02	0.00E+00	0.00E+00	1.10E-02
110	SENSITIV	366434	3768206	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-03	4.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	0.00E+00	0.00E+00	1.01E-02
111	SENSITIV	366434	3768206	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.32E-04	3.88E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.22E-03	0.00E+00	0.00E+00	9.22E-03
112	SENSITIV	366421	3768197	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-03	8.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E-02	0.00E+00	0.00E+00	1.94E-02
113	SENSITIV	366421	3768197	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-03	8.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E-02	0.00E+00	0.00E+00	1.94E-02
114	SENSITIV	366421	3768197	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-03	8.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-02	0.00E+00	0.00E+00	1.86E-02
115	SENSITIV	366421	3768197	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-03	7.80E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-02	0.00E+00	0.00E+00	1.77E-02
116	SENSITIV	366421	3768197	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-03	7.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-02	0.00E+00	0.00E+00	1.65E-02
117	SENSITIV	366415	3768204	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-03	6.64E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-02	0.00E+00	0.00E+00	1.55E-02
118	SENSITIV	366415	3768204	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03	6.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-02	0.00E+00	0.00E+00	1.49E-02
119	SENSITIV	366415	3768204	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-03	6.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-02	0.00E+00	0.00E+00	1.41E-02
120	SENSITIV	366415	3768204	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-03	5.63E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-02	0.00E+00	0.00E+00	1.31E-02
121	SENSITIV	366415	3768204	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-03	5.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02	0.00E+00	0.00E+00	1.20E-02
122	SENSITIV	366407	3768216	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-03	6.31E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-02	0.00E+00	0.00E+00	1.47E-02
123	SENSITIV	366407	3768216	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-03	6.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-02	0.00E+00	0.00E+00	1.45E-02
124	SENSITIV	366407	3768216	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-03	5.94E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-02	0.00E+00	0.00E+00	1.38E-02
125	SENSITIV	366407	3768216	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-03	5.62E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-02	0.00E+00	0.00E+00	1.30E-02
126	SENSITIV	366407	3768216	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-03	5.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-02	0.00E+00	0.00E+00	1.21E-02
127	SENSITIV	366400	3768228	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-03	6.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-02	0.00E+00	0.00E+00	1.43E-02
128	SENSITIV	366400	3768228	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03	6.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	0.00E+00	0.00E+00	1.42E-02
129	SENSITIV	366400	3768228	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-03	5.91E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02	0.00E+00	0.00E+00	1.36E-02
130	SENSITIV	366400	3768228	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-03	5.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-02	0.00E+00	0.00E+00	1.29E-02
131	SENSITIV	366400	3768228	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-03	5.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02	0.00E+00	0.00E+00	1.20E-02
132	SENSITIV	366410	3768235	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-03	6.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-02	0.00E+00	0.00E+00	1.43E-02
133	SENSITIV	366410	3768235	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-03	6.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	0.00E+00	0.00E+00	1.42E-02
134	SENSITIV	366410	3768235	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-03	5.98E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-02	0.00E+00	0.00E+00	1.37E-02
135	SENSITIV	366410	3768235	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-03	5.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-02	0.00E+00	0.00E+00	1.30E-02
136	SENSITIV	366410	3768235	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-03	5.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-02	0.00E+00	0.00E+00	1.21E-02
137	SENSITIV	366419	3768242	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-03	6.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-02	0.00E+00	0.00E+00	1.51E-02
138	SENSITIV	366419	3768242	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-03	6.56E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-02	0.00E+00	0.00E+00	1.50E-02
139	SENSITIV	366419	3768242	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-03	6.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-02	0.00E+00	0.00E+00	1.45E-02
140	SENSITIV	366419	3768242	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-03	5.97E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-02	0.00E+00	0.00E+00	1.37E-02
141	SENSITIV	366419	3768242	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-03	5.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-02	0.00E+00	0.00E+00	1.27E-02

*HARP - HRACalc v19044 9/15/2020 1:25:23 PM - Acute Risk - Input File: C:\Users\emarino\Desktop\Beloit Terraces HRA\BELOIT_TERRACE\hra\CChAc_30YrRes95BR_HRAInput.hra

REC	GRP	NETID	X	Y	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEV	RESP	SKIN	EYE	BONE/TEETH	ENDO	BLOOD	ODOR	GENERAL	MAXHI
1	CARTGRID	GRID01	366383	3768180	NonCancer	0.00E+00	0.00E+00	7.87E-03	0.00E+00	0.00E+00	7.89E-03	1.63E-03	0.00E+00	3.38E-03	0.00E+00	0.00E+00	7.87E-03	0.00E+00	0.00E+00	7.89E-03
2	CARTGRID	GRID01	366393	3768180	NonCancer	0.00E+00	0.00E+00	8.10E-03	0.00E+00	0.00E+00	8.12E-03	1.67E-03	0.00E+00	3.47E-03	0.00E+00	0.00E+00	8.10E-03	0.00E+00	0.00E+00	8.12E-03
3	CARTGRID	GRID01	366403	3768180	NonCancer	0.00E+00	0.00E+00	8.38E-03	0.00E+00	0.00E+00	8.40E-03	1.73E-03	0.00E+00	3.59E-03	0.00E+00	0.00E+00	8.38E-03	0.00E+00	0.00E+00	8.40E-03
4	CARTGRID	GRID01	366413	3768180	NonCancer	0.00E+00	0.00E+00	8.52E-03	0.00E+00	0.00E+00	8.54E-03	1.76E-03	0.00E+00	3.65E-03	0.00E+00	0.00E+00	8.52E-03	0.00E+00	0.00E+00	8.54E-03
5	CARTGRID	GRID01	366423	3768180	NonCancer	0.00E+00	0.00E+00	8.78E-03	0.00E+00	0.00E+00	8.80E-03	1.81E-03	0.00E+00	3.76E-03	0.00E+00	0.00E+00	8.78E-03	0.00E+00	0.00E+00	8.80E-03
6	CARTGRID	GRID01	366433	3768180	NonCancer	0.00E+00	0.00E+00	9.01E-03	0.00E+00	0.00E+00	9.04E-03	1.86E-03	0.00E+00	3.86E-03	0.00E+00	0.00E+00	9.01E-03	0.00E+00	0.00E+00	9.04E-03
7	CARTGRID	GRID01	366443	3768180	NonCancer	0.00E+00	0.00E+00	9.25E-03	0.00E+00	0.00E+00	9.28E-03	1.91E-03	0.00E+00	3.97E-03	0.00E+00	0.00E+00	9.25E-03	0.00E+00	0.00E+00	9.28E-03
8	CARTGRID	GRID01	366453	3768180	NonCancer	0.00E+00	0.00E+00	8.05E-03	0.00E+00	0.00E+00	8.07E-03	1.66E-03	0.00E+00	3.45E-03	0.00E+00	0.00E+00	8.05E-03	0.00E+00	0.00E+00	8.07E-03
9	CARTGRID	GRID01	366463	3768180	NonCancer	0.00E+00	0.00E+00	8.17E-03	0.00E+00	0.00E+00	8.19E-03	1.69E-03	0.00E+00	3.51E-03	0.00E+00	0.00E+00	8.17E-03	0.00E+00	0.00E+00	8.19E-03
10	CARTGRID	GRID01	366383	3768190	NonCancer	0.00E+00	0.00E+00	8.11E-03	0.00E+00	0.00E+00	8.13E-03	1.68E-03	0.00E+00	3.48E-03	0.00E+00	0.00E+00	8.11E-03	0.00E+00	0.00E+00	8.13E-03
11	CARTGRID	GRID01	366393	3768190	NonCancer	0.00E+00	0.00E+00	8.35E-03	0.00E+00	0.00E+00	8.37E-03	1.72E-03	0.00E+00	3.58E-03	0.00E+00	0.00E+00	8.35E-03	0.00E+00	0.00E+00	8.37E-03
12	CARTGRID	GRID01	366403	3768190	NonCancer	0.00E+00	0.00E+00	8.65E-03	0.00E+00	0.00E+00	8.67E-03	1.79E-03	0.00E+00	3.71E-03	0.00E+00	0.00E+00	8.65E-03	0.00E+00	0.00E+00	8.67E-03
13	CARTGRID	GRID01	366413	3768190	NonCancer	0.00E+00	0.00E+00	8.81E-03	0.00E+00	0.00E+00	8.83E-03	1.82E-03	0.00E+00	3.78E-03	0.00E+00	0.00E+00	8.81E-03	0.00E+00	0.00E+00	8.83E-03
14	CARTGRID	GRID01	366423	3768190	NonCancer	0.00E+00	0.00E+00	9.07E-03	0.00E+00	0.00E+00	9.10E-03	1.87E-03	0.00E+00	3.89E-03	0.00E+00	0.00E+00	9.07E-03	0.00E+00	0.00E+00	9.10E-03
15	CARTGRID	GRID01	366433	3768190	NonCancer	0.00E+00	0.00E+00	9.35E-03	0.00E+00	0.00E+00	9.38E-03	1.93E-03	0.00E+00	4.01E-03	0.00E+00	0.00E+00	9.35E-03	0.00E+00	0.00E+00	9.38E-03
16	CARTGRID	GRID01	366443	3768190	NonCancer	0.00E+00	0.00E+00	8.20E-03	0.00E+00	0.00E+00	8.22E-03	1.70E-03	0.00E+00	3.52E-03	0.00E+00	0.00E+00	8.20E-03	0.00E+00	0.00E+00	8.22E-03
17	CARTGRID	GRID01	366453	3768190	NonCancer	0.00E+00	0.00E+00	8.30E-03	0.00E+00	0.00E+00	8.32E-03	1.72E-03	0.00E+00	3.56E-03	0.00E+00	0.00E+00	8.30E-03	0.00E+00	0.00E+00	8.32E-03
18	CARTGRID	GRID01	366463	3768190	NonCancer	0.00E+00	0.00E+00	8.38E-03	0.00E+00	0.00E+00	8.40E-03	1.73E-03	0.00E+00	3.60E-03	0.00E+00	0.00E+00	8.38E-03	0.00E+00	0.00E+00	8.40E-03
19	CARTGRID	GRID01	366383	3768200	NonCancer	0.00E+00	0.00E+00	8.42E-03	0.00E+00	0.00E+00	8.45E-03	1.75E-03	0.00E+00	3.62E-03	0.00E+00	0.00E+00	8.42E-03	0.00E+00	0.00E+00	8.45E-03
20	CARTGRID	GRID01	366393	3768200	NonCancer	0.00E+00	0.00E+00	8.65E-03	0.00E+00	0.00E+00	8.68E-03	1.79E-03	0.00E+00	3.72E-03	0.00E+00	0.00E+00	8.65E-03	0.00E+00	0.00E+00	8.68E-03
21	CARTGRID	GRID01	366403	3768200	NonCancer	0.00E+00	0.00E+00	8.81E-03	0.00E+00	0.00E+00	8.83E-03	1.83E-03	0.00E+00	3.78E-03	0.00E+00	0.00E+00	8.81E-03	0.00E+00	0.00E+00	8.83E-03
22	CARTGRID	GRID01	366413	3768200	NonCancer	0.00E+00	0.00E+00	9.11E-03	0.00E+00	0.00E+00	9.13E-03	1.89E-03	0.00E+00	3.91E-03	0.00E+00	0.00E+00	9.11E-03	0.00E+00	0.00E+00	9.13E-03
23	CARTGRID	GRID01	366423	3768200	NonCancer	0.00E+00	0.00E+00	8.06E-03	0.00E+00	0.00E+00	8.08E-03	1.67E-03	0.00E+00	3.47E-03	0.00E+00	0.00E+00	8.06E-03	0.00E+00	0.00E+00	8.08E-03
24	CARTGRID	GRID01	366433	3768200	NonCancer	0.00E+00	0.00E+00	8.31E-03	0.00E+00	0.00E+00	8.33E-03	1.72E-03	0.00E+00	3.57E-03	0.00E+00	0.00E+00	8.31E-03	0.00E+00	0.00E+00	8.33E-03
25	CARTGRID	GRID01	366443	3768200	NonCancer	0.00E+00	0.00E+00	7.14E-03	0.00E+00	0.00E+00	7.16E-03	1.48E-03	0.00E+00	3.08E-03	0.00E+00	0.00E+00	7.14E-03	0.00E+00	0.00E+00	7.16E-03
26	CARTGRID	GRID01	366453	3768200	NonCancer	0.00E+00	0.00E+00	7.24E-03	0.00E+00	0.00E+00	7.26E-03	1.50E-03	0.00E+00	3.12E-03	0.00E+00	0.00E+00	7.24E-03	0.00E+00	0.00E+00	7.26E-03
27	CARTGRID	GRID01	366463	3768200	NonCancer	0.00E+00	0.00E+00	7.34E-03	0.00E+00	0.00E+00	7.36E-03	1.52E-03	0.00E+00	3.16E-03	0.00E+00	0.00E+00	7.34E-03	0.00E+00	0.00E+00	7.36E-03
28	CARTGRID	GRID01	366383	3768210	NonCancer	0.00E+00	0.00E+00	8.56E-03	0.00E+00	0.00E+00	8.59E-03	1.77E-03	0.00E+00	3.68E-03	0.00E+00	0.00E+00	8.56E-03	0.00E+00	0.00E+00	8.59E-03
29	CARTGRID	GRID01	366393	3768210	NonCancer	0.00E+00	0.00E+00	8.80E-03	0.00E+00	0.00E+00	8.82E-03	1.82E-03	0.00E+00	3.77E-03	0.00E+00	0.00E+00	8.80E-03	0.00E+00	0.00E+00	8.82E-03
30	CARTGRID	GRID01	366403	3768210	NonCancer	0.00E+00	0.00E+00	7.85E-03	0.00E+00	0.00E+00	7.87E-03	1.63E-03	0.00E+00	3.38E-03	0.00E+00	0.00E+00	7.85E-03	0.00E+00	0.00E+00	7.87E-03
31	CARTGRID	GRID01	366413	3768210	NonCancer	0.00E+00	0.00E+00	8.02E-03	0.00E+00	0.00E+00	8.04E-03	1.67E-03	0.00E+00	3.46E-03	0.00E+00	0.00E+00	8.02E-03	0.00E+00	0.00E+00	8.04E-03
32	CARTGRID	GRID01	366423	3768210	NonCancer	0.00E+00	0.00E+00	8.22E-03	0.00E+00	0.00E+00	8.25E-03	1.71E-03	0.00E+00	3.54E-03	0.00E+00	0.00E+00	8.22E-03	0.00E+00	0.00E+00	8.25E-03
33	CARTGRID	GRID01	366433	3768210	NonCancer	0.00E+00	0.00E+00	8.46E-03	0.00E+00	0.00E+00	8.48E-03	1.76E-03	0.00E+00	3.64E-03	0.00E+00	0.00E+00	8.46E-03	0.00E+00	0.00E+00	8.48E-03
34	CARTGRID	GRID01	366443	3768210	NonCancer	0.00E+00	0.00E+00	7.27E-03	0.00E+00	0.00E+00	7.29E-03	1.51E-03	0.00E+00	3.14E-03	0.00E+00	0.00E+00	7.27E-03	0.00E+00	0.00E+00	7.29E-03
35	CARTGRID	GRID01	366453	3768210	NonCancer	0.00E+00	0.00E+00	7.49E-03	0.00E+00	0.00E+00	7.51E-03	1.56E-03	0.00E+00	3.23E-03	0.00E+00	0.00E+00	7.49E-03	0.00E+00	0.00E+00	7.51E-03
36	CARTGRID	GRID01	366463	3768210	NonCancer	0.00E+00	0.00E+00	7.59E-03	0.00E+00	0.00E+00	7.61E-03	1.58E-03	0.00E+00	3.27E-03	0.00E+00	0.00E+00	7.59E-03	0.00E+00	0.00E+00	7.61E-03
37	CARTGRID	GRID01	366383	3768220	NonCancer	0.00E+00	0.00E+00	8.34E-03	0.00E+00	0.00E+00	8.36E-03	1.72E-03	0.00E+00	3.57E-03	0.00E+00	0.00E+00	8.34E-03	0.00E+00	0.00E+00	8.36E-03
38	CARTGRID	GRID01	366393	3768220	NonCancer	0.00E+00	0.00E+00	7.34E-03	0.00E+00	0.00E+00	7.36E-03	1.51E-03	0.00E+00	3.15E-03	0.00E+00	0.00E+00	7.34E-03	0.00E+00	0.00E+00	7.36E-03
39	CARTGRID	GRID01	366403	3768220	NonCancer	0.00E+00	0.00E+00	7.26E-03	0.00E+00	0.00E+00	7.28E-03	1.50E-03	0.00E+00	3.12E-03	0.00E+00	0.00E+00	7.26E-03	0.00E+00	0.00E+00	7.28E-03
40	CARTGRID	GRID01	366413	3768220	NonCancer	0.00E+00	0.00E+00	7.82E-03	0.00E+00	0.00E+00	7.84E-03	1.62E-03	0.00E+00	3.36E-03	0.00E+00	0.00E+00	7.82E-03	0.00E+00	0.00E+00	7.84E-03
41	CARTGRID	GRID01	366423	3768220	NonCancer	0.00E+00	0.00E+00	8.47E-03	0.00E+00	0.00E+00	8.49E-03	1.76E-03	0.00E+00	3.65E-03	0.00E+00	0.00E+00	8.47E-03	0.00E+00	0.00E+00	8.49E-03
42	CARTGRID	GRID01	366433	3768220	NonCancer	0.00E+00	0.00E+00	7.31E-03	0.00E+00	0.00E+00	7.33E-03	1.53E-03	0.00E+00	3.16E-03	0.00E+00	0.00E+00	7.31E-03	0.00E+00	0.00E+00	7.33E-03
43	CARTGRID	GRID01	366443	3768220	NonCancer	0.00E+00	0.00E+00	7.52E-03	0.00E+00	0.00E+00	7.54E-03	1.57E-03	0.00E+00	3.25E-03	0.00E+00	0.00E+00	7.52E-03	0.00E+00	0.00E+00	7.54E-03
44	CARTGRID	GRID01	366453	3768220	NonCancer	0.00E+00	0.00E+00	7.61E-03	0.00E+00	0.00E+00	7.64E-03	1.59E-03	0.00E+00	3.29E-03	0.00E+00	0.00E+00	7.61E-03	0.00E+00	0.00E+00	7.64E-03
45	CARTGRID	GRID01	366463	3768220	NonCancer	0.00E+00	0.00E+00	7.73E-03	0.00E+00	0.00E+00	7.75E-03	1.61E-03	0.00E+00	3.33E-03	0.00E+00	0.00E+00	7.73E-03	0.00E+00	0.00E+00	7.75E-03
46	CARTGRID	GRID01	366383	3768230	NonCancer	0.00E+00	0.00E+00	7.34E-03	0.00E+00	0.00E+00	7.36E-03	1.52E-03	0.00E+00	3.15E-03	0.00E+00	0.00E+00	7.34E-03	0.00E+00	0.00E+00	7.36E-03
47	CARTGRID	GRID01	366393	3768230	NonCancer	0.00E+00	0.00E+00	7.49E-03	0.00E+00	0.00E+00	7.51E-03	1.55E-03	0.00E+00	3.21E-03	0.00E+00	0.00E+00	7.49E-03	0.00E+00	0.00E+00	7.51E-03
48	CARTGRID	GRID01	366403	3768230	NonCancer	0.00E+00	0.00E+00	7.39E-03	0.00E+00	0.00E+00	7.41E-03	1.53E-03	0.00E+00	3.17E-03	0.00E+00	0.00E+00	7.39E-03	0.00E+00	0.00E+00	7.41E-03
49	CARTGRID	GRID01	366413	3768230	NonCancer	0.00E+00	0.00E+00	7.55E-03	0.00E+00	0.00E+00	7.57E-03	1.56E-03	0.00E+00	3.24E-03	0.00E+00	0.00E+00	7.55E-03	0.00E+00	0.00E+00	7.57E-03
50	CARTGRID	GRID01	366423	3768230	NonCancer	0.00E+00	0.00E+00	8.11E-03	0.00E+00	0.00E+00	8.13E-03	1.68E-03	0.00E+00	3.48E-03	0.00E+00	0.00E+00	8.11E-03	0.00E+00	0.00E+00	8.13E-03
51	CARTGRID	GRID01	366433	3768230	NonCancer	0.00E+00	0.00E+00	6.92E-03	0.00E+00	0.00E+00	6.93E-03	1.44E-03	0.00E+00	2.98E-03	0.00E+00	0.00E+00	6.92E-03	0.00E+00	0.00E+00	6.93E-03
52	CARTGRID	GRID01	366443	3768230	NonCancer	0.00E+00	0.00E+00	7.68E-03	0.00E+00	0.00E+00	7.71E-03	1.61E-03	0.00E+00	3.32E-03	0.00E+00	0.00E+00	7.68E-03	0.00E+00	0.00E+00	7.71E-03
53	CARTGRID	GRID01	366453	3768230	NonCancer	0.00E+00	0.00E+00	7.78E-03	0.00E+00	0.00E+00	7.80E-03	1.62E-03	0.00E+00	3.36E-03	0.00E+00	0.00E+00	7.78E-03	0.00E+00	0.00E+00	7.80E-03
54	CARTGRID	GRID01	366463	3768230	NonCancer	0.00E+00	0.00E+00	7.93E-03	0.00E+00	0.00E+00	7.95E-03	1.65E-03	0.00E+00	3.42E-03	0.00E+00	0.00E+00	7.93E-03	0.00E+00	0.00E+00	7.95E-03
55	CARTGRID	GRID01	366383	3768240	NonCancer	0.00E+00	0.00E+00	7.46E-03	0.00E+00	0.00E+00	7.48E-03	1.54E-03	0.00E+00	3.20E-03	0.00E+00	0.00E+00	7.46E-03	0.00E+00	0.00E+00	7.48E-03
56	CARTGRID	GRID01	366393	3768240	NonCancer	0.00E+00	0.00E+00	7.61E-03	0.00E+00	0.00E+00	7.63E-03	1.57E-03	0.00E+00	3.26E-03	0.00E+00	0.00E+00	7.61E-03	0.00E+00	0.00E+00	7.63E-03
57	CARTGRID	GRID01	366403	3768240	NonCancer	0.00E+00	0.00E+00	7.80E-03	0.00E+00	0.00E+00	7.82E-03	1.61E-03	0.00E+00	3.34E-03	0.00E+00	0.00E+00	7.80E-03	0.00E+00	0.00E+00	7.82E-03
58	CARTGRID	GRID01	366413	3768240	NonCancer	0.00E+00	0.00E+00	7.76E-03	0.00E+00	0.00E+00	7.78E-03	1.60E-03	0.00E+00	3.33E-03	0.00E+00	0.00E+00	7.76E-03	0.00E+00	0.00E+00	7.78E-03
59	CARTGRID	GRID01	366423	3768240	NonCancer	0.00E+00	0.00E+00	7.99E-03	0.00E+00	0.00E+00	8.02E-03	1.65E-03	0.00E+00	3.43E-03	0.00E+00	0.00E+00	7.99E-03	0.00E+00	0.00E+00	8.02E-03
60	CARTGRID	GRID01	366433	3768240	NonCancer	0.00E+00	0.00E+00	7.18E-03	0.00E+00	0.00E+00	7.20E-03	1.50E-03	0.00E+00	3.10E-03	0.00E+00	0.00E+00	7.18E-03	0.00E+00	0.00E+00	7.20E-03
61	CARTGRID	GRID01	366443	3768240	NonCancer	0.00E+00	0.00E+00	7.35E-03	0.00E+00	0.00E+00	7.37E-03	1.53E-03	0.00E+00	3.17E-03	0.00E+00	0.00E+00	7.35E-03	0.00E+00	0.00E+00	7.37E-03
62	CARTGRID	GRID01	366453	3768240	NonCancer	0.00E+00	0.00E+00	8.09E-03	0.00E+00	0.00E+00	8.11E-03	1.69E-03	0.00E+00	3.50E-03	0.00E+00	0.00E+00	8.09E-03	0.00E+00	0.00E+00	8.11E-03
63	CARTGRID	GRID01	366463	3768240	NonCancer	0.00E+00	0.00E+00	8.49E-03	0.00E+00	0.00E+00	8.51E-03	1.77E-03	0.00E+00	3.67E-03	0.00E+00	0.00E+00	8.49E-03	0.00E+00	0.00E+00	8.51E-03
64	CARTGRID	GRID01	366383	3768250	NonCancer	0.00E+00	0.00E+00	7.65E-03	0.00E+00	0.00E+00	7.67E-03	1.58E-03	0.00E+00	3.28E-03	0.00E+00	0.00E+00	7.65E-03	0.00E+00	0.00E+00	7.67E-03
65	CARTGRID	GRID01	366393	3768250	NonCancer	0.00E+00	0.00E+00	7.79E-03	0.00E+00	0.00E+00	7.81E-03	1.61E-03	0.00E+00	3.34E-03	0.00E+00	0.00E+00	7.79E-03	0.00E+00	0.00E+00	7.81E-03
66	CARTGRID	GRID01	366403	3768250	NonCancer	0.00E+00	0.00E+00	8.01E-03	0.00E+00	0.00E+00	8.04E-03	1.65E-03	0.00E+00	3.43E-03	0.00E+00	0.00E+00	8.01E-03	0.00E+00	0.00E+00	8.04E-03
67	CARTGRID	GRID01	366413	3768250	NonCancer	0.00E+00	0.00E+00	7.93E-03	0.00E+00	0.00E+00	7.95E-03	1.64E-03	0.00E+00	3.40E-03	0.00E+00	0.00E+00	7.93E-03	0.00E+00	0.00E+00	7.95E-03
68	CARTGRID	GRID01	366423	3768250	NonCancer	0.00E+00	0.00E+00	8.18E-03	0.00E+00	0.00E+00	8.20E-03	1.69E-03	0.00E+00	3.51E-03	0.00E+00	0.00E+00	8.18E-03	0.00E+00	0.00E+00	8.20E-03
69	CARTGRID	GRID01	366433	3768250	NonCancer	0.00E+00	0.00E+00	7.36E-03	0.00E+00	0.00E+00	7.38E-03	1.53E-03	0.00E+00	3.18E-03	0.00E+00	0.00E+00	7.36E-03	0.00E+00	0.00E+00	7.38E-03
70	CARTGRID	GRID01	366443	3768250	NonCancer	0.00E+00	0.00E+00	7.63E-03	0.00E+00	0.00E+00	7.65E-03	1.59E-03	0.00E+00	3.29E-03	0.00E+00	0.00E+00	7.63E-03	0.00E+00	0.00E+00	7.65E-03
71	CARTGRID	GRID01	366453	3768250	NonCancer	0.00E+00	0.00E+00	8.74E-03	0.00E+00	0.00E+00	8.77E-03	1.83E-03	0.00E+00	3.78E-03	0.00E+00	0.00E+00	8.74E-03	0.00E+00	0.00E+00	8.77E-03
72	CARTGRID	GRID01	366463	3768250	NonCancer	0.00E+00	0.00E+00	8.49E-03	0.00E+00	0.00E+00	8.51E-03	1.77E-03	0.00E+00	3.66E-03	0.00E+00	0.00E+00	8.49E-03	0.00E+00	0.00E+00	8.51E-03
73	CARTGRID	GRID01	366383	3768260	NonCancer	0.00E+00	0.00E+00	7.78E-03	0.00E+00	0.00E+00	7.80E-03	1.61E-03	0.00E+00	3.33E-03	0.00E+00	0.00E+00	7.78E-03	0.00E+00	0.00E+00	7.80E-03
74	CARTGRID	GRID01	366393	3768260	NonCancer	0.00E+00	0.00E+00	7.94E-03	0.00E+00	0.00E+00	7.96E-03	1.64E-03	0.00E+00	3.40E-03	0.00E+00	0.00E+00	7.94E-03	0.00E+00	0.00E+00	7.96E-03
75	CARTGRID	GRID01	366403	3768260	NonCancer	0.00E+00	0.00E+00	8.17E-03	0.00E+00	0.00E+00	8.19E-03	1.68E-03	0.00E+00	3.50E-03	0.00E+00	0.00E+00	8.17E-03	0.00E+00	0.00E+00	8.19E-03
76	CARTGRID	GRID01	366413	3768260	NonCancer	0.00E+00	0.00E+00	8.11E-03	0.00E+00	0.00E+00	8.13E-03	1.68E-03	0.00E+00	3.48E-03	0.00E+00	0.00E+00	8.11E-03	0.00E+00	0.00E+00	8.13E-03
77	CARTGRID	GRID01	366423	3768260	NonCancer	0.00E+00	0.00E+00	8.41E-03	0.00E+00	0.00E+00	8.43E-03	1.74E-03	0.00E+00	3.61E-03	0.00E+00	0.00E+00	8.41E-03	0.00E+00	0.00E+00	8.43E-03
78	CARTGRID	GRID01	366433	3768260	NonCancer	0.00E+00	0.00E+00	8.82E-03	0.00E+00	0.00E+00	8.84E-03	1.82E-03	0.00E+00	3.78E-03	0.00E+00	0.00E+00	8.82E-03	0.00E+00	0.00E+00	8.84E-03
79	CARTGRID	GRID01	366443	3768260	NonCancer	0.00E+00	0.00E+00	7.65E-03	0.00E+00	0.00E+00	7.67E-03	1.59E-03	0.00E+00	3.29E-03	0.00E+00	0.00E+00	7.65E-03	0.00E+00	0.00E+00	7.67E-03
80	CARTGRID	GRID01	366453	3768260	NonCancer	0.00E+00	0.00E+00	7.92E-03	0.00E+00	0.00E+00	7.95E-03	1.65E-03	0.00E+00	3.41E-03	0.00E+00	0.00E+00	7.92E-03	0.00E+00	0.00E+00	7.95E-03
81	CARTGRID	GRID01	366463	3768260	NonCancer	0.00E+00	0.00E+00	8.85E-03	0.00E+00	0.00E+00	8.88E-03	1.85E-03	0.00E+00	3.82E-03	0.00E+00	0.00E+00	8.85E-03	0.00E+00	0.00E+00	8.88E-03
82	SENSITIV		366431	3768250	NonCancer	0.00E+00	0.00E+00	8.66E-03	0.00E+00	0.00E+00	8.68E-03	1.79E-03	0.00E+00	3.71E-03	0.00E+00	0.00E+00	8.66E-03	0.00E+00	0.00E+00	8.68E-03
83	SENSITIV		366431	3768250	NonCancer	0.00E+00	0.00E+00	9.48E-03	0.00E+00	0.00E+00	9.50E-03	1.96E-03	0.00E+00	4.06E-03	0.00E+00	0.00E+00	9.48E-03	0.00E+00	0.00E+00	9.50E-03
84	SENSITIV		366431	3768250	NonCancer	0.00E+00	0.00E+00	1.01E-02	0.00E+00	0.00E+00	1.01E-02	2.08E-03	0.00E+00	4.32E-03	0.00E+00	0.00E+00	1.01E-02	0.00E+00	0.00E+00	1.01E-02
85	SENSITIV		366431	3768250	NonCancer	0.00E+00	0.00E+00	1.07E-02	0.00E+00	0.00E+00	1.07E-02	2.21E-03	0.00E+00	4.59E-03	0.00E+00	0.00E+00	1.07E-02	0.00E+00	0.00E+00	1.07E-02
86	SENSITIV		366431	3768250	NonCancer	0.00E+00	0.00E+00	1.08E-02	0.00E+00	0.00E+00	1.08E-02	2.23E-03	0.00E+00	4.63E-03	0.00E+00	0.00E+00	1.08E-02	0.00E+00	0.00E+00	1.08E-02
87	SENSITIV		366440	3768239	NonCancer	0.00E+00	0.00E+00	8.77E-03	0.00E+00	0.00E+00	8.80E-03	1.83E-03	0.00E+00	3.78E-03	0.00E+00	0.00E+00	8.77E-03	0.00E+00	0.00E+00	8.80E-03
88	SENSITIV		366440	3768239	NonCancer	0.00E+00	0.00E+00	9.41E-03	0.00E+00	0.00E+00	9.44E-03	1.96E-03	0.00E+00	4.06E-03	0.00E+00	0.00E+00	9.41E-03	0.00E+00	0.00E+00	9.44E-03
89	SENSITIV		366440	3768239	NonCancer	0.00E+00	0.00E+00	9.57E-03	0.00E+00	0.00E+00	9.60E-03	1.99E-03	0.00E+00	4.12E-03	0.00E+00	0.00E+00	9.57E-03	0.00E+00	0.00E+00	9.60E-03
90	SENSITIV		366440	3768239	NonCancer	0.00E+00	0.00E+00	1.02E-02	0.00E+00	0.00E+00	1.02E-02	2.11E-03	0.00E+00	4.38E-03	0.00E+00	0.00E+00	1.02E-02	0.00E+00	0.00E+00	1.02E-02
91	SENSITIV		366440	3768239	NonCancer	0.00E+00	0.00E+00	1.04E-02	0.00E+00	0.00E+00	1.04E-02	2.16E-03	0.00E+00	4.47E-03	0.00E+00	0.00E+00	1.04E-02	0.00E+00	0.00E+00	1.04E-02
92	SENSITIV		366446	3768228	NonCancer	0.00E+00	0.00E+00	7.74E-03	0.00E+00	0.00E+00	7.76E-03	1.61E-03	0.00E+00	3.34E-03	0.00E+00	0.00E+00	7.74E-03	0.00E+00	0.00E+00	7.76E-03
93	SENSITIV		366446	3768228	NonCancer	0.00E+00	0.00E+00	8.43E-03	0.00E+00	0.00E+00	8.45E-03	1.76E-03	0.00E+00	3.64E-03	0.00E+00	0.00E+00	8.43E-03	0.00E+00	0.00E+00	8.45E-03
94	SENSITIV		366446	3768228	NonCancer	0.00E+00	0.00E+00	9.09E-03	0.00E+00	0.00E+00	9.11E-03	1.90E-03	0.00E+00	3.93E-03	0.00E+00	0.00E+00	9.09E-03	0.00E+00	0.00E+00	9.11E-03
95	SENSITIV		366446	3768228	NonCancer	0.00E+00	0.00E+00	9.44E-03	0.00E+00	0.00E+00	9.46E-03	1.97E-03	0.00E+00	4.08E-03	0.00E+00	0.00E+00	9.44E-03	0.00E+00	0.00E+00	9.46E-03
96	SENSITIV		366446	3768228	NonCancer	0.00E+00	0.00E+00	9.84E-03	0.00E+00	0.00E+00	9.87E-03	2.05E-03	0.00E+00	4.25E-03	0.00E+00	0.00E+00	9.84E-03	0.00E+00	0.00E+00	9.87E-03
97	SENSITIV		366453	3768219	NonCancer	0.00E+00	0.00E+00	7.69E-03	0.00E+00	0.00E+00	7.71E-03	1.60E-03	0.00E+00	3.32E-03	0.00E+00	0.00E+00	7.69E-03	0.00E+00	0.00E+00	7.71E-03

98	SENSITIV	366453	3768219	NonCancer	0.00E+00	0.00E+00	8.34E-03	0.00E+00	0.00E+00	8.37E-03	1.74E-03	0.00E+00	3.60E-03	0.00E+00	0.00E+00	8.34E-03	0.00E+00	0.00E+00	8.37E-03
99	SENSITIV	366453	3768219	NonCancer	0.00E+00	0.00E+00	8.95E-03	0.00E+00	0.00E+00	8.97E-03	1.86E-03	0.00E+00	3.86E-03	0.00E+00	0.00E+00	8.95E-03	0.00E+00	0.00E+00	8.97E-03
100	SENSITIV	366453	3768219	NonCancer	0.00E+00	0.00E+00	9.32E-03	0.00E+00	0.00E+00	9.35E-03	1.94E-03	0.00E+00	4.02E-03	0.00E+00	0.00E+00	9.32E-03	0.00E+00	0.00E+00	9.35E-03
101	SENSITIV	366453	3768219	NonCancer	0.00E+00	0.00E+00	9.73E-03	0.00E+00	0.00E+00	9.76E-03	2.03E-03	0.00E+00	4.20E-03	0.00E+00	0.00E+00	9.73E-03	0.00E+00	0.00E+00	9.76E-03
102	SENSITIV	366443	3768212	NonCancer	0.00E+00	0.00E+00	8.19E-03	0.00E+00	0.00E+00	8.21E-03	1.71E-03	0.00E+00	3.53E-03	0.00E+00	0.00E+00	8.19E-03	0.00E+00	0.00E+00	8.21E-03
103	SENSITIV	366443	3768212	NonCancer	0.00E+00	0.00E+00	8.74E-03	0.00E+00	0.00E+00	8.77E-03	1.82E-03	0.00E+00	3.77E-03	0.00E+00	0.00E+00	8.74E-03	0.00E+00	0.00E+00	8.77E-03
104	SENSITIV	366443	3768212	NonCancer	0.00E+00	0.00E+00	9.13E-03	0.00E+00	0.00E+00	9.15E-03	1.90E-03	0.00E+00	3.94E-03	0.00E+00	0.00E+00	9.13E-03	0.00E+00	0.00E+00	9.15E-03
105	SENSITIV	366443	3768212	NonCancer	0.00E+00	0.00E+00	9.59E-03	0.00E+00	0.00E+00	9.61E-03	2.00E-03	0.00E+00	4.13E-03	0.00E+00	0.00E+00	9.59E-03	0.00E+00	0.00E+00	9.61E-03
106	SENSITIV	366443	3768212	NonCancer	0.00E+00	0.00E+00	1.01E-02	0.00E+00	0.00E+00	1.01E-02	2.10E-03	0.00E+00	4.35E-03	0.00E+00	0.00E+00	1.01E-02	0.00E+00	0.00E+00	1.01E-02
107	SENSITIV	366434	3768206	NonCancer	0.00E+00	0.00E+00	8.02E-03	0.00E+00	0.00E+00	8.04E-03	1.67E-03	0.00E+00	3.46E-03	0.00E+00	0.00E+00	8.02E-03	0.00E+00	0.00E+00	8.04E-03
108	SENSITIV	366434	3768206	NonCancer	0.00E+00	0.00E+00	8.62E-03	0.00E+00	0.00E+00	8.64E-03	1.80E-03	0.00E+00	3.72E-03	0.00E+00	0.00E+00	8.62E-03	0.00E+00	0.00E+00	8.64E-03
109	SENSITIV	366434	3768206	NonCancer	0.00E+00	0.00E+00	9.01E-03	0.00E+00	0.00E+00	9.04E-03	1.88E-03	0.00E+00	3.89E-03	0.00E+00	0.00E+00	9.01E-03	0.00E+00	0.00E+00	9.04E-03
110	SENSITIV	366434	3768206	NonCancer	0.00E+00	0.00E+00	9.46E-03	0.00E+00	0.00E+00	9.49E-03	1.97E-03	0.00E+00	4.08E-03	0.00E+00	0.00E+00	9.46E-03	0.00E+00	0.00E+00	9.49E-03
111	SENSITIV	366434	3768206	NonCancer	0.00E+00	0.00E+00	9.98E-03	0.00E+00	0.00E+00	1.00E-02	2.08E-03	0.00E+00	4.30E-03	0.00E+00	0.00E+00	9.98E-03	0.00E+00	0.00E+00	1.00E-02
112	SENSITIV	366421	3768197	NonCancer	0.00E+00	0.00E+00	9.72E-03	0.00E+00	0.00E+00	9.74E-03	2.01E-03	0.00E+00	4.17E-03	0.00E+00	0.00E+00	9.72E-03	0.00E+00	0.00E+00	9.74E-03
113	SENSITIV	366421	3768197	NonCancer	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	1.03E-02	2.13E-03	0.00E+00	4.41E-03	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	1.03E-02
114	SENSITIV	366421	3768197	NonCancer	0.00E+00	0.00E+00	1.10E-02	0.00E+00	0.00E+00	1.10E-02	2.28E-03	0.00E+00	4.72E-03	0.00E+00	0.00E+00	1.10E-02	0.00E+00	0.00E+00	1.10E-02
115	SENSITIV	366421	3768197	NonCancer	0.00E+00	0.00E+00	1.18E-02	0.00E+00	0.00E+00	1.19E-02	2.45E-03	0.00E+00	5.08E-03	0.00E+00	0.00E+00	1.18E-02	0.00E+00	0.00E+00	1.19E-02
116	SENSITIV	366421	3768197	NonCancer	0.00E+00	0.00E+00	1.22E-02	0.00E+00	0.00E+00	1.22E-02	2.52E-03	0.00E+00	5.22E-03	0.00E+00	0.00E+00	1.22E-02	0.00E+00	0.00E+00	1.22E-02
117	SENSITIV	366415	3768204	NonCancer	0.00E+00	0.00E+00	8.81E-03	0.00E+00	0.00E+00	8.84E-03	1.83E-03	0.00E+00	3.79E-03	0.00E+00	0.00E+00	8.81E-03	0.00E+00	0.00E+00	8.84E-03
118	SENSITIV	366415	3768204	NonCancer	0.00E+00	0.00E+00	9.29E-03	0.00E+00	0.00E+00	9.32E-03	1.93E-03	0.00E+00	4.00E-03	0.00E+00	0.00E+00	9.29E-03	0.00E+00	0.00E+00	9.32E-03
119	SENSITIV	366415	3768204	NonCancer	0.00E+00	0.00E+00	1.01E-02	0.00E+00	0.00E+00	1.01E-02	2.09E-03	0.00E+00	4.34E-03	0.00E+00	0.00E+00	1.01E-02	0.00E+00	0.00E+00	1.01E-02
120	SENSITIV	366415	3768204	NonCancer	0.00E+00	0.00E+00	1.06E-02	0.00E+00	0.00E+00	1.06E-02	2.20E-03	0.00E+00	4.57E-03	0.00E+00	0.00E+00	1.06E-02	0.00E+00	0.00E+00	1.06E-02
121	SENSITIV	366415	3768204	NonCancer	0.00E+00	0.00E+00	1.09E-02	0.00E+00	0.00E+00	1.09E-02	2.26E-03	0.00E+00	4.68E-03	0.00E+00	0.00E+00	1.09E-02	0.00E+00	0.00E+00	1.09E-02
122	SENSITIV	366407	3768216	NonCancer	0.00E+00	0.00E+00	8.08E-03	0.00E+00	0.00E+00	8.10E-03	1.68E-03	0.00E+00	3.47E-03	0.00E+00	0.00E+00	8.08E-03	0.00E+00	0.00E+00	8.10E-03
123	SENSITIV	366407	3768216	NonCancer	0.00E+00	0.00E+00	8.70E-03	0.00E+00	0.00E+00	8.73E-03	1.81E-03	0.00E+00	3.74E-03	0.00E+00	0.00E+00	8.70E-03	0.00E+00	0.00E+00	8.73E-03
124	SENSITIV	366407	3768216	NonCancer	0.00E+00	0.00E+00	9.24E-03	0.00E+00	0.00E+00	9.27E-03	1.92E-03	0.00E+00	3.98E-03	0.00E+00	0.00E+00	9.24E-03	0.00E+00	0.00E+00	9.27E-03
125	SENSITIV	366407	3768216	NonCancer	0.00E+00	0.00E+00	9.94E-03	0.00E+00	0.00E+00	9.97E-03	2.06E-03	0.00E+00	4.28E-03	0.00E+00	0.00E+00	9.94E-03	0.00E+00	0.00E+00	9.97E-03
126	SENSITIV	366407	3768216	NonCancer	0.00E+00	0.00E+00	1.04E-02	0.00E+00	0.00E+00	1.04E-02	2.15E-03	0.00E+00	4.45E-03	0.00E+00	0.00E+00	1.04E-02	0.00E+00	0.00E+00	1.04E-02
127	SENSITIV	366400	3768228	NonCancer	0.00E+00	0.00E+00	7.98E-03	0.00E+00	0.00E+00	8.00E-03	1.64E-03	0.00E+00	3.42E-03	0.00E+00	0.00E+00	7.98E-03	0.00E+00	0.00E+00	8.00E-03
128	SENSITIV	366400	3768228	NonCancer	0.00E+00	0.00E+00	8.61E-03	0.00E+00	0.00E+00	8.64E-03	1.78E-03	0.00E+00	3.69E-03	0.00E+00	0.00E+00	8.61E-03	0.00E+00	0.00E+00	8.64E-03
129	SENSITIV	366400	3768228	NonCancer	0.00E+00	0.00E+00	9.24E-03	0.00E+00	0.00E+00	9.26E-03	1.91E-03	0.00E+00	3.96E-03	0.00E+00	0.00E+00	9.24E-03	0.00E+00	0.00E+00	9.26E-03
130	SENSITIV	366400	3768228	NonCancer	0.00E+00	0.00E+00	9.92E-03	0.00E+00	0.00E+00	9.94E-03	2.05E-03	0.00E+00	4.26E-03	0.00E+00	0.00E+00	9.92E-03	0.00E+00	0.00E+00	9.94E-03
131	SENSITIV	366400	3768228	NonCancer	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	1.04E-02	2.13E-03	0.00E+00	4.43E-03	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	1.04E-02
132	SENSITIV	366410	3768235	NonCancer	0.00E+00	0.00E+00	7.88E-03	0.00E+00	0.00E+00	7.90E-03	1.63E-03	0.00E+00	3.38E-03	0.00E+00	0.00E+00	7.88E-03	0.00E+00	0.00E+00	7.90E-03
133	SENSITIV	366410	3768235	NonCancer	0.00E+00	0.00E+00	8.54E-03	0.00E+00	0.00E+00	8.57E-03	1.77E-03	0.00E+00	3.67E-03	0.00E+00	0.00E+00	8.54E-03	0.00E+00	0.00E+00	8.57E-03
134	SENSITIV	366410	3768235	NonCancer	0.00E+00	0.00E+00	9.23E-03	0.00E+00	0.00E+00	9.26E-03	1.91E-03	0.00E+00	3.97E-03	0.00E+00	0.00E+00	9.23E-03	0.00E+00	0.00E+00	9.26E-03
135	SENSITIV	366410	3768235	NonCancer	0.00E+00	0.00E+00	9.88E-03	0.00E+00	0.00E+00	9.91E-03	2.05E-03	0.00E+00	4.25E-03	0.00E+00	0.00E+00	9.88E-03	0.00E+00	0.00E+00	9.91E-03
136	SENSITIV	366410	3768235	NonCancer	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	1.03E-02	2.14E-03	0.00E+00	4.43E-03	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	1.03E-02
137	SENSITIV	366419	3768242	NonCancer	0.00E+00	0.00E+00	8.07E-03	0.00E+00	0.00E+00	8.09E-03	1.67E-03	0.00E+00	3.46E-03	0.00E+00	0.00E+00	8.07E-03	0.00E+00	0.00E+00	8.09E-03
138	SENSITIV	366419	3768242	NonCancer	0.00E+00	0.00E+00	8.79E-03	0.00E+00	0.00E+00	8.81E-03	1.82E-03	0.00E+00	3.77E-03	0.00E+00	0.00E+00	8.79E-03	0.00E+00	0.00E+00	8.81E-03
139	SENSITIV	366419	3768242	NonCancer	0.00E+00	0.00E+00	9.51E-03	0.00E+00	0.00E+00	9.53E-03	1.97E-03	0.00E+00	4.08E-03	0.00E+00	0.00E+00	9.51E-03	0.00E+00	0.00E+00	9.53E-03
140	SENSITIV	366419	3768242	NonCancer	0.00E+00	0.00E+00	1.01E-02	0.00E+00	0.00E+00	1.01E-02	2.08E-03	0.00E+00	4.32E-03	0.00E+00	0.00E+00	1.01E-02	0.00E+00	0.00E+00	1.01E-02
141	SENSITIV	366419	3768242	NonCancer	0.00E+00	0.00E+00	1.05E-02	0.00E+00	0.00E+00	1.05E-02	2.18E-03	0.00E+00	4.52E-03	0.00E+00	0.00E+00	1.05E-02	0.00E+00	0.00E+00	1.05E-02

Appendix B

MERV 13-Adjusted Health Risk Results

Beloit Terraces: Adjusted Potential Carcinogenic Health Risks Within the Project Site Calculation

		Factor	
EF =	Exposure frequency in days per year	350	
EFa =	Exp. Freq adjusted outside; only 2.3 hours/day outside	33.5	
EFai =	Exp. Freq adjusted inside; 16.9 hours/day inside	246.5	
FE =	Filter Efficiency		90%
DPM =	Percent of risk associated with DPM		62%

Equation = Adjusted Risk = ([Unadjusted Risk]/EF*Efa)+((1-(FE*DPM))*([Unadjusted Risk]/EF*Efai))

Cancer Health Risk - 30 Year (Residency at 95th Percentile)

		Unadjusted Risk	Exceed Criterion? (10^{-5})	Adjusted Risk	Exceed Criterion? (10^{-5})	
R1	2nd floor	1.51E-05	YES	6.19E-06	NO	
R2	3rd floor	1.49E-05	YES	6.10E-06	NO	
R3	4th floor	1.42E-05	YES	5.81E-06	NO	
R4	5th floor	1.32E-05	YES	5.42E-06	NO	
R5	6th floor	1.21E-05	YES	4.95E-06	NO	
R6	2nd floor	1.04E-05	YES	4.27E-06	NO	
R7	3rd floor	9.83E-06	NO	4.03E-06	NO	
R8	4th floor	9.13E-06	NO	3.75E-06	NO	
R9	5th floor	8.24E-06	NO	3.38E-06	NO	
R10	6th floor	7.47E-06	NO	3.06E-06	NO	
R11	2nd floor	1.17E-05	YES	4.78E-06	NO	
R12	3rd floor	1.15E-05	YES	4.71E-06	NO	
R13	4th floor	1.08E-05	YES	4.41E-06	NO	
R14	5th floor	1.01E-05	YES	4.14E-06	NO	
R15	6th floor	9.28E-06	NO	3.81E-06	NO	
R16	2nd floor	1.14E-05	YES	4.69E-06	NO	
R17	3rd floor	1.12E-05	YES	4.60E-06	NO	
R18	4th floor	1.05E-05	YES	4.30E-06	NO	
R19	5th floor	9.84E-06	NO	4.04E-06	NO	
R20	6th floor	9.03E-06	NO	3.70E-06	NO	
R21	2nd floor	1.09E-05	YES	4.47E-06	NO	
R22	3rd floor	1.02E-05	YES	4.20E-06	NO	
R23	4th floor	9.63E-06	NO	3.95E-06	NO	
R24	5th floor	8.88E-06	NO	3.64E-06	NO	
R25	6th floor	8.06E-06	NO	3.30E-06	NO	
R26	2nd floor	1.06E-05	YES	4.35E-06	NO	
R27	3rd floor	9.95E-06	NO	4.08E-06	NO	
R28	4th floor	9.38E-06	NO	3.85E-06	NO	
R29	5th floor	8.68E-06	NO	3.56E-06	NO	
R30	6th floor	7.90E-06	NO	3.24E-06	NO	
R31	2nd floor	1.81E-05	YES	7.44E-06	NO	
R32	3rd floor	1.82E-05	YES	7.46E-06	NO	MEIR
R33	4th floor	1.75E-05	YES	7.16E-06	NO	
R34	5th floor	1.67E-05	YES	6.86E-06	NO	
R35	6th floor	1.55E-05	YES	6.37E-06	NO	
R36	2nd floor	1.38E-05	YES	5.65E-06	NO	
R37	3rd floor	1.32E-05	YES	5.43E-06	NO	
R38	4th floor	1.26E-05	YES	5.16E-06	NO	
R39	5th floor	1.17E-05	YES	4.82E-06	NO	
R40	6th floor	1.07E-05	YES	4.40E-06	NO	
R41	2nd floor	1.32E-05	YES	5.42E-06	NO	
R42	3rd floor	1.31E-05	YES	5.37E-06	NO	
R43	4th floor	1.25E-05	YES	5.11E-06	NO	
R44	5th floor	1.18E-05	YES	4.84E-06	NO	
R45	6th floor	1.10E-05	YES	4.50E-06	NO	
R46	2nd floor	1.31E-05	YES	5.39E-06	NO	
R47	3rd floor	1.31E-05	YES	5.35E-06	NO	
R48	4th floor	1.25E-05	YES	5.13E-06	NO	
R49	5th floor	1.18E-05	YES	4.86E-06	NO	
R50	6th floor	1.10E-05	YES	4.53E-06	NO	
R51	2nd floor	1.32E-05	YES	5.42E-06	NO	
R52	3rd floor	1.32E-05	YES	5.40E-06	NO	
R53	4th floor	1.27E-05	YES	5.20E-06	NO	
R54	5th floor	1.20E-05	YES	4.92E-06	NO	
R55	6th floor	1.12E-05	YES	4.58E-06	NO	
R56	2nd floor	1.40E-05	YES	5.73E-06	NO	
R57	3rd floor	1.39E-05	YES	5.71E-06	NO	
R58	4th floor	1.34E-05	YES	5.51E-06	NO	
R59	5th floor	1.26E-05	YES	5.18E-06	NO	
R60	6th floor	1.17E-05	YES	4.80E-06	NO	

Beloit Terraces Project

Noise and Vibration Study

prepared for

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prepared by

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December 2023

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1 Project Description and Impact Summary

1.1 Introduction

This study analyzes the potential noise and vibration impacts of the proposed Beloit Terraces Project (project) in the City of Los Angeles (City), Los Angeles County, California. Rincon Consultants, Inc. (Rincon) prepared this study under contract to Nayssan Properties in support of the environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA). The purpose of this study is to analyze the project's noise and vibration impacts related to both temporary construction activity and long-term operation of the project. Table 1 provides a summary of project impacts.

Table 1 Summary of Impacts

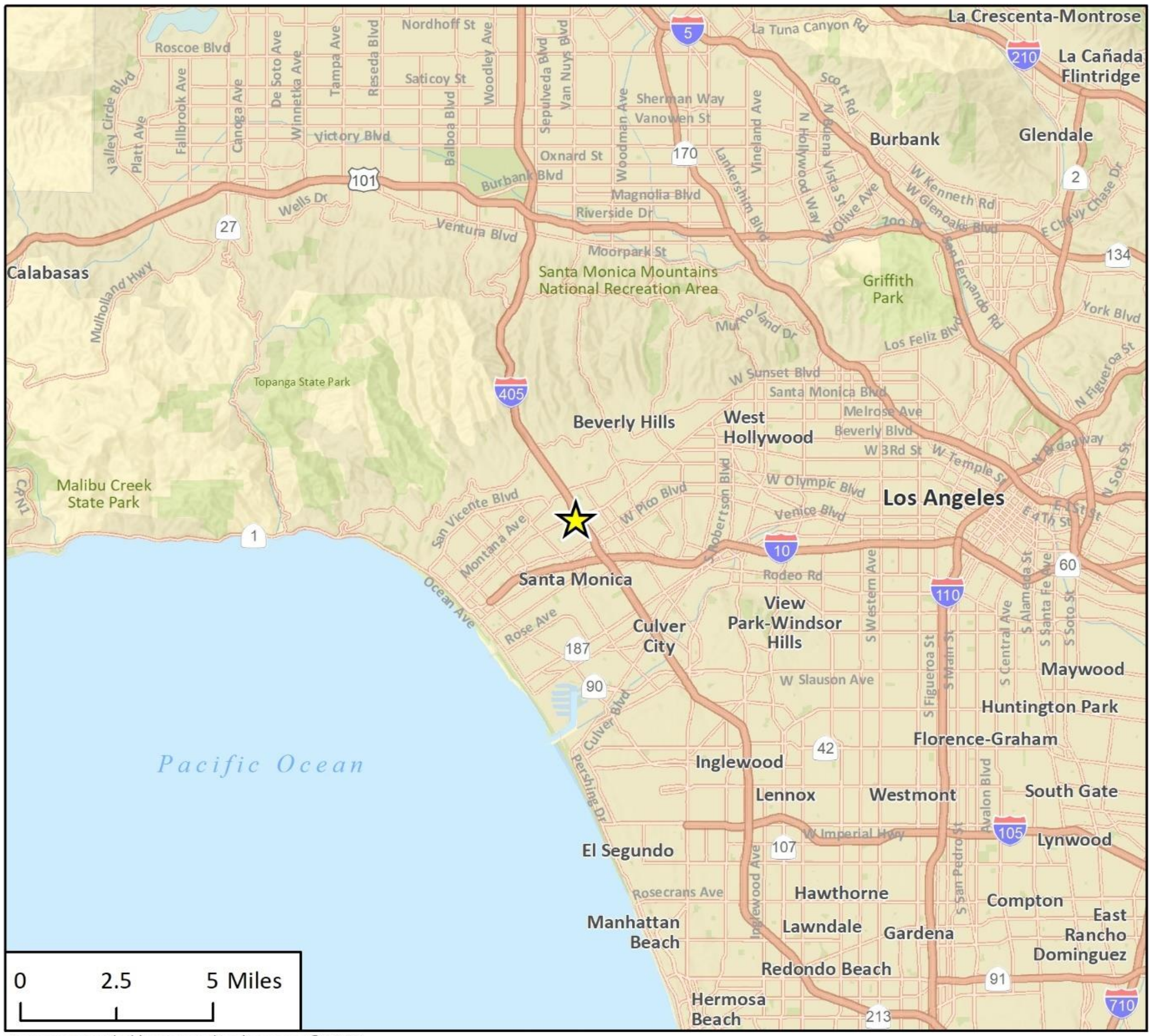
Issue	Impact	Applicable Recommendations
Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less than significant impact	None
Would the project result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	Less than significant impact	None
For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact	None
Would the project conflict with land use compatibility guidelines for noise?	May conflict with exterior and interior noise standards	NOI-1 (Exterior-to-interior Noise Analysis) NOI-2 (Permanent Sound Wall)

1.2 Project Summary

Project Location

The project site is a flat, square-shaped site which includes three lots with a total area of approximately 0.43 acre in the city of Los Angeles. The site includes 1709-1721 ½ South Beloit Avenue with the following Assessor Parcel Numbers (APNs): 4261-008-008/009/023. The site is approximately 100 feet west of Interstate 405 (I-405). The project site is zoned multiple dwelling residential zone ([Q]R4-1) with a General Plan Land Use designation of high medium residential. Figure 1 shows the regional location of the site, and Figure 2 shows the project site in the existing neighborhood context.

Figure 1 Regional Location



Imagery provided by Esri and its licensors © 2020.

Project Location

N

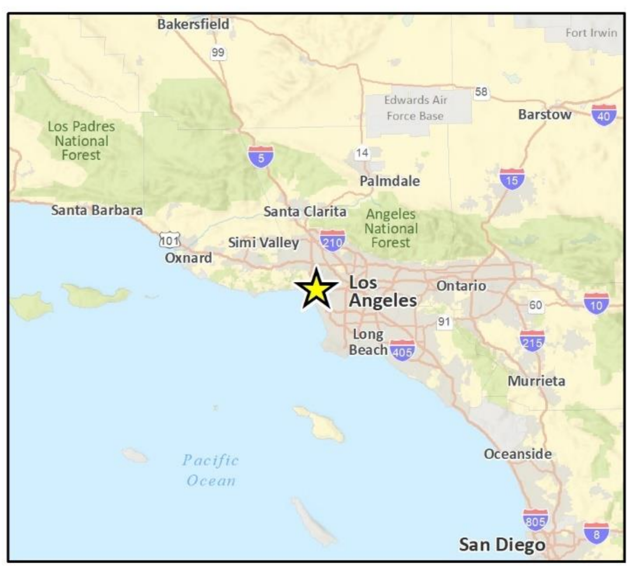


Fig 1 Regional Location

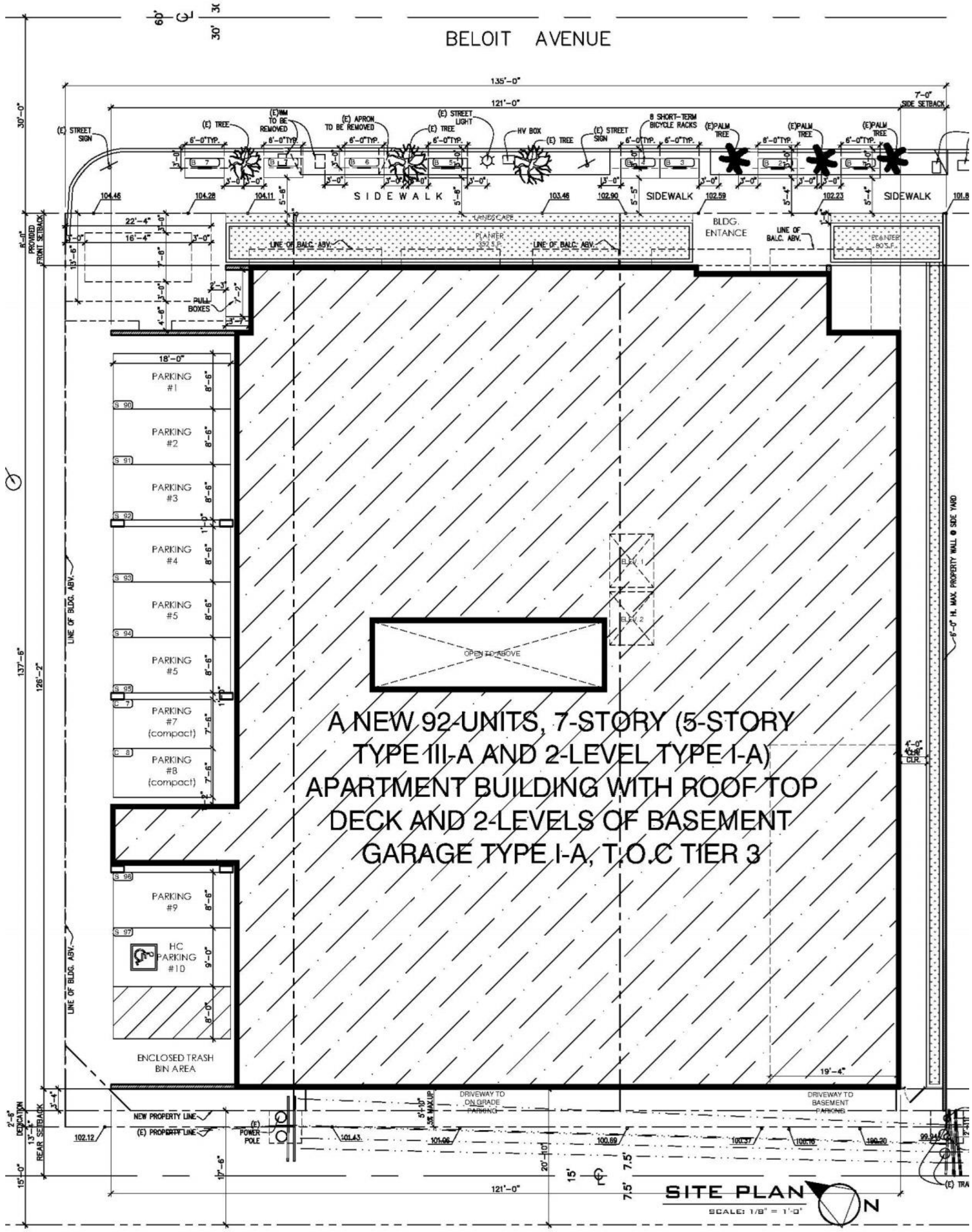
Figure 2 Project Location

Imagery provided by Microsoft Bing and its licensors © 2020.

Project Description

The proposed project consists of the demolition of the five existing residential structures and the construction of a new 92-unit apartment building with two levels of subterranean parking, one level of on grade parking and seven stories of residential above. The new apartment building would have a floor area totaling 125,808 square feet. The parking areas would total 42,087 square feet and the remaining 83,721 square feet would be for the lobby, recreation room, and residences. Common use areas would include a roof deck which would occupy approximately forty percent of the roof area. Primary access to the site is provided via a driveway off Beloit Avenue. The project would involve the demolition of 3,608 sf of existing structures. Construction is anticipated to start in 2024. Figure 3 shows the project site plan of the ground floor.

Figure 3 Site Plan



2 Background

2.1 Overview of Sound Measurement

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (California Department of Transportation [Caltrans] 2013).

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 Hertz and less sensitive to frequencies around and below 100 Hertz (Kinsler, et. al. 1999). Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease (Crocker 2007).

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not "sound twice as loud" as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible (8 times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (half) as loud ([10.5x the sound energy] Crocker 2007).

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line, the path the sound will travel, site conditions, and obstructions). Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (e.g., construction, industrial machinery, ventilation units). Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013). The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site, such as a parking lot or smooth body of water, receives no additional ground attenuation and the changes in noise levels with distance (drop-off rate) result from simply the geometric spreading of the source. An additional ground attenuation value of 1.5 dBA per doubling of distance applies to a soft site (e.g., soft dirt, grass, or scattered bushes and trees) (Caltrans 2013). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, and man-made features such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2011). Structures can substantially reduce exposure to noise as well. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important factors of project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent noise level (L_{eq}); it considers both duration and sound power level. L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time. Typically, L_{eq} is summed over a one-hour period. L_{max} is the highest root mean squared (RMS) sound pressure level within the sampling period, and L_{min} is the lowest RMS sound pressure level within the measuring period (Crocker 2007).

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. It is also measured using CNEL, which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013). Noise levels described by L_{dn} and CNEL usually differ by about 1 dBA. The relationship between the peak-hour L_{eq} value and the L_{dn}/CNEL depends on the distribution of traffic during the day, evening, and night. Quiet suburban areas typically have CNEL noise levels in the range of 40 to 50 dBA, while areas near arterial streets are in the 50 to 60-plus CNEL range. Normal conversational levels are in the 60 to 65-dBA L_{eq} range; ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations (FHWA 2018).

2.2 Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of Hz. The frequency of a vibrating object describes how rapidly it oscillates. The normal frequency range of most groundborne vibration that can be felt by the human body starts from a low frequency of less than 1 Hz and goes to a high of about 200 Hz (Crocker 2007).

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz), or when foundations or utilities, such as sewer and water pipes, physically connect the structure and the vibration source (Federal Transit Administration [FTA] 2018). Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations diminish much more rapidly than low frequencies, so low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances (Caltrans 2020). When a building is impacted by vibration, a ground-to-foundation coupling loss will usually reduce the overall vibration level.

However, under rare circumstances, the ground-to-foundation coupling may actually amplify the vibration level due to structural resonances of the floors and walls.

Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean squared (RMS) vibration velocity. The PPV and RMS velocity are normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings (Caltrans 2020).

2.3 Sensitive Receivers

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. According to the City of Los Angeles Noise Element, the following land uses are considered noise-sensitive: single-family and multi-unit dwellings, long-term care facilities (including convalescent and retirement facilities), dormitories, motels, hotels, transient lodgings and other residential uses, houses of worship, hospitals, libraries, schools, auditoriums, concert halls, outdoor theaters, nature and wildlife preserves, and parks (City of Los Angeles 1999).

Vibration-sensitive receivers, which are similar to noise-sensitive receivers, include residences and institutional uses, such as schools, churches, and hospitals. Vibration-sensitive receivers also include buildings where vibrations may interfere with vibration-sensitive equipment that is affected by vibration levels that may be well below those associated with human annoyance (e.g., recording studies or medical facilities with sensitive equipment).

As shown in Figure 2, the nearest sensitive receivers are the multi-family residences immediately adjacent to the southeast and southwest of the project site. Other sensitive receivers include the Holiday Inn Express approximately 30 feet to the northwest of the project site, as well as Nora Sterry Elementary School located 280 feet southwest of the project site.

2.4 Project Noise Setting

The most common source of noise in the project site vicinity is vehicular traffic from I-405 and on-ramp off Santa Monica Boulevard. To characterize ambient sound levels at and near the project site, two 15-minute sound level measurements were conducted on September 3, 2020. Noise Measurement (NM) 1 was taken at the northeastern edge of the project site to capture noise levels from the on-ramp and I-405. NM2 was taken approximately 150 feet southeast of the project site at the southern corner of Beloit Avenue and Iowa Avenue. Table 2 summarizes the results of the noise measurements and Table 3 shows the recorded traffic volumes.

Table 2 Project Site Vicinity Sound Level Monitoring Results

Measurement Location	Measurement Location	Sample Times	Approximate Distance to Primary Noise Source	L_{eq} (dBA)	Lmin (dBA)	Lmax (dBA)
1	Northeastern property boundary, adjacent to Beloit Avenue	9:17 – 9:32 a.m.	Approximately 100 feet to I-405	67.4	63.3	81.7
2	Southern corner of Beloit Avenue And Iowa Avenue	9:41 – 9:56 a.m.	Approximately 100 feet to I-405	65.2	59.8	82.5

Detailed sound level measurement data are included in Appendix A.

Table 3 Sound Level Monitoring Traffic Counts

Measurement	Roadway	Traffic	Autos	Medium Trucks	Heavy Trucks
NM1	I-405 on-ramp	15-minute count	238	9	1
		One-hour Equivalent	952	36	4
	Percent		**95%**	**3%**	**2%**
NM2	Beloit Avenue	15-minute count	10	0	0
		One-hour Equivalent	40	0	0
	Percent		**100%**	**0%**	**0%**

Detailed sound level measurement data are included in Appendix A.

2.5 Regulatory Setting

City of Los Angeles Noise Element

The goals, policies, and actions contained in the City of Los Angeles General Plan Noise Element focus on establishing and applying criteria for acceptable noise levels for different land uses in order to minimize the negative impacts of noise, especially at sensitive receiver locations. In support of these goals and policies, the City's Noise Element contains a land use and noise compatibility matrix (shown in Table 4) that determines the normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for various land uses. According to the City's noise compatibility matrix shown in Table 4, ambient noise up to 60 CNEL is normally acceptable and noise up to 70 CNEL is conditionally acceptable for multi-family land uses. In addition, consistent with state noise insulation standards (California Building Code Title 24), the City's Noise Element limits interior noise to a maximum of 45 CNEL in any habitable room (City of Los Angeles 1999).

Table 4 Land Use and Noise Compatibility Matrix (CNEL)

Land Use	Normally Acceptable[1]	Conditionally Acceptable[2]	Normally Unacceptable[3]	Clearly Unacceptable[4]
Single-Family, Duplex, Mobile Homes	50 – 55	55 – 70	70 – 75	75+
Multi-Family	50 – 60	60 – 70	70 – 75	75+
School, Library, Church, Hospital, Nursing Home	50 – 60	60 – 70	70 – 80	80+
Transient Lodging, Motel, Hotel	50 – 60	60 – 70	70 – 75	75+
Auditorium, Concert Hall, Amphitheater	–	50 – 65	–	65+
Sports Arena, Outdoor Spectator Sports	–	50 – 70	–	70+
Playground, Neighborhood Park	50 – 65	–	65 – 75	75+
Golf Course, Riding Stable, Water Recreation, Cemetery	50 – 70	–	70 – 75	75+
Office Building, Business, Commercial, Professional	50 – 65	65 – 75	75+	–
Agriculture, Industrial, Manufacturing, Utilities	50 – 70	70 – 75	75+	–

[1] Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
[2] Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning would normally suffice.
[3] Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
[4] Clearly Unacceptable: New construction or development should generally not be undertaken.
Source: City of Los Angeles 1999

City of Los Angeles Municipal Code

The City implements and enforces construction and operational noise regulations through the Los Angeles Municipal Code (LAMC). LAMC Section 112.05 limits noise from construction equipment located within 500 feet of a residential zone to 75 dBA between 7:00 a.m. and 10:00 p.m., as measured at a distance of 50 feet from the source, i.e. construction site, unless compliance is technically infeasible. Technical infeasibility means that noise limitations cannot be met despite the use of mufflers, shields, sound barriers, and/or other noise reduction devices or techniques during the operation of construction equipment. LAMC Section 41.40 also restricts construction activity to the hours below:

- Monday through Friday between 7:00 a.m. and 9:00 p.m.
- Saturdays and National Holidays between 8:00 a.m. and 6:00 p.m. except for individual homeowners engaged in the repair or construction of a single-family residence
- No construction on Sundays except for individual homeowners engaged in the repair or construction of a single-family residence

LAMC Section 112.01 prohibits noise from radios, musical instruments, television sets, and other sound-amplifying devices from being audible at a distance in excess of 150 feet from the property line of the noise source within 500 feet of any residential zone or from exceeding the ambient noise level on the premises of any other occupied property. LAMC Section 112.02 prohibits the operation of air conditioning, refrigeration, heating, pumping, and filtering equipment associated with any residence or other structure from exceeding the ambient noise of any other occupied property by more than 5 dBA. Consistent with the City's Noise Element, LAMC Section 91.1206.14.2 limits interior noise levels to 45 CNEL in any habitable room.

LAMC Section 112.04 prohibits the operation of any lawn mower, backpack blower, lawn edger, riding tractor, or any other machinery equipment, or other mechanical or electrical device, or any hand tool which creates a loud, raucous or impulsive sound, within any residential zone or within 500 feet of a residence between 10:00 p.m. and 7:00 a.m. LAMC Section 114.03 prohibits the loading or unloading of any vehicle, operation of any dollies, carts, forklifts, or other wheeled equipment, which causes any impulsive sound, raucous or unnecessary noise within 200 feet of any residential building between 10:00 p.m. and 7:00 a.m.

3 Methodology

3.1 Construction Noise

Construction noise was estimated using the FHWA Roadway Construction Noise Model (RCNM) (FHWA 2006). RCNM predicts construction noise levels for a variety of construction operations based on empirical data and the application of acoustical propagation formulas. Using RCNM, construction noise levels were estimated at noise sensitive receivers near the project site. RCNM provides reference noise levels for standard construction equipment, with an attenuation rate of 6 dBA per doubling of distance for stationary equipment.

Variation in power imposes additional complexity in characterizing the noise source level from construction equipment. Power variation is accounted for by describing the noise at a reference distance from the equipment operating at full power and adjusting it based on the duty cycle of the activity to determine the L_{eq} of the operation (FHWA 2018). Each phase of construction has a specific equipment mix, depending on the work to be accomplished during that phase. Each phase also has its own noise characteristics; some will have higher continuous noise levels than others, and some have high-impact noise levels.

Construction activity would result in temporary noise in the project site vicinity, exposing surrounding nearby receivers to increased noise levels. Construction noise would typically be higher during the heavier periods of initial construction (i.e., site preparation and grading) and would be lower during the later construction phases (i.e., building construction and paving). Typical heavy construction equipment during project grading could include dozers, loaders, graders, and dump trucks. It is assumed that diesel engines would power all construction equipment. Construction equipment would not all operate at the same time or location. In addition, construction equipment would not be in constant use during the 8-hour operating day.

Project construction would occur nearest to the Beloit Apartments to the southeast of the project site. Over the course of a typical construction day, construction equipment would be located as close as 15 feet to the properties but would typically be located at an average distance farther away due to the nature of construction and the lot size of the project. For example, during a typical construction day, the equipment may operate across the horizontal distance of the site (140 feet) from a nearby noise receiver. Therefore, it is assumed that over the course of a typical construction day the construction equipment would operate at an average distance of 70 feet from the multi-family residences.

A potential construction scenario includes a crane and a front-end loader working to demolish buildings, complete site prep, and conduct building construction.

3.2 Groundborne Vibration

The project does not include any substantial vibration sources associated with operation. Thus, construction activities have the greatest potential to generate ground-borne vibration affecting nearby receivers, especially during grading and excavation of the project site. The greatest vibratory source during construction in the project vicinity could be from a large bulldozer, or similar standard heavy equipment that results in a similar vibration level. Neither blasting nor pile driving would be required for construction of the project. Construction vibration estimates are based on vibration levels reported by Caltrans and the FTA (Caltrans 2013, FTA 2018). Table 5 shows typical vibration levels for various pieces of construction equipment used in the assessment of construction vibration (FTA 2018).

Table 5 Vibration Levels Measured during Construction Activities

Equipment	PPV at 25 ft. (in/sec)
Large Bulldozer	0.089
Loaded Trucks	0.076
Small Bulldozer	0.003
Source: FTA 2018	

Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors; therefore, the vibration level threshold is assessed at occupied structures (FTA 2018). Therefore, all vibration impacts are assessed at the structure of an affected property.

Vibration limits used in this analysis to determine a potential impact to local land uses from construction activities, such as blasting, pile-driving, vibratory compaction, demolition, drilling, or excavation, are based on information contained in Caltrans' *Transportation and Construction Vibration Guidance Manual* and the Federal Transit Administration and the FTA *Transit Noise and Vibration Impact Assessment Manual* (Caltrans 2013; FTA 2018). Maximum recommended vibration limits by the American Association of State Highway and Transportation Officials (AASHTO) are identified in Table 6.

Table 6 AASHTO Maximum Vibration Levels for Preventing Damage

Type of Situation	Limiting Velocity (in/sec)
Historic sites or other critical locations	0.1
Residential buildings, plastered walls	0.2–0.3
Residential buildings in good repair with gypsum board walls	0.4–0.5
Engineered structures, without plaster	1.0–1.5
Source: Caltrans 2013	

Based on AASHTO recommendations, limiting vibration levels to below 0.2 In/sec PPV at residential structures would prevent structural damage regardless of building construction type. These limits are applicable regardless of the frequency of the source. However, as shown in Table 7 and Table 8, potential human annoyance associated with vibration is usually different if it is generated by a steady state or a transient vibration source.

Table 7 Human Response to Steady State Vibration

PPV (in/sec)	Human Response
3.6 (at 2 Hz)–0.4 (at 20 Hz)	Very disturbing
0.7 (at 2 Hz)–0.17 (at 20 Hz)	Disturbing
0.10	Strongly perceptible
0.035	Distinctly perceptible
0.012	Slightly perceptible

Source: Caltrans 2013

Table 8 Human Response to Transient Vibration

PPV (in/sec)	Human Response
2.0	Severe
0.9	Strongly perceptible
0.24	Distinctly perceptible
0.035	Barely perceptible

Source: Caltrans 2013

As shown in Table 7, the vibration level threshold at which steady vibration sources are considered to be distinctly perceptible is 0.035 in/sec PPV. This is roughly equivalent to the FTA identified threshold of 78 VdB for assessing impacts to residential land uses from infrequent events. This threshold is used for assessing passing trains in the FTA Manual. However, as shown in Table 8, the vibration level threshold at which transient vibration sources (such as construction equipment) are considered to be distinctly perceptible is 0.24 in/sec PPV. This is roughly equivalent to 94 VdB. This analysis uses the distinctly perceptible threshold for purposes of assessing vibration impacts.

Although groundborne vibration is sometimes noticeable in outdoor environments, groundborne vibration is almost never annoying to people who are outdoors; therefore, the vibration level threshold for human perception is assessed at occupied structures (FTA 2018). Therefore, all vibration impacts are assessed at the structure of an affected property.

3.3 Operational Noise Sources

Noise sources associated with operation of the proposed project would consist of landscaping maintenance, general conversations, and mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC] units). Due to the distances and low noise levels associated with general site activities and landscape maintenance, these sources are not considered substantial and are not analyzed further.

On-site Noise Sources

On site-noise sources were modeled with algorithms from the SoundPLAN three-dimensional noise model (SoundPLAN), Version 8.2. Propagation of modeled stationary noise sources was based on ISO Standard 9613-2, “Attenuation of Sound during Propagation Outdoors, Part 2: General Method of Calculation.” The assessment methodology assumes that all receptors would be downwind of stationary sources. This is a conservative assumption for total noise impacts since, in reality, only some receivers would be downwind at any one time. The primary stationary noise generator from the project site would be HVAC units.

Heating, Ventilation, and Air Conditioning Units

A new development will typically require one ton of HVAC per 600 sf of building space. This would result in an estimated 117 tons of HVAC needed for the project. The units used in this analysis is a typical larger-sized condenser, a Carrier 38AUD25 split system condenser (see Appendix C for specification sheets). Each unit would handle 16.7 nominal tons; therefore, approximately 7 HVAC units would be needed. The manufacturer's noise data is provided below in Table 9.

Table 9 HVAC Noise Levels

Noise Levels in dB[1] Measured at Octave Frequencies							Overall Noise Level in A-weighted Scale (dBA)[1]
125 Hz	250 Hz	500 Hz	1 KHz	2 KHz	4 KHz	8 KHz	
85.0	80.0	86.0	79.0	73.0	68.0	63.0	85

[1] Noise Levels for a Carrier 38AUD25 split system condenser (see Appendix C for specification sheets).

Hz = Hertz; KHz = kilohertz

The HVAC units are anticipated to be on the rooftop of the building. HVAC units were generally placed across the rooftop in three clusters. All HVAC units were modeled as being three feet above the roof elevation. For a conservative scenario, the units were assumed conservatively to operate at 100 percent of an hour for 24 hours.

3.4 Traffic Noise

Noise levels affecting the proposed project site would be primarily influenced by traffic noise from I-405 and on-ramp off Santa Monica Boulevard. Future noise levels affecting the compatibility of the project site were estimated using the FHWA's Traffic Noise Model (TNM) traffic noise-reference levels and SoundPLAN. Traffic noise-model inputs to SoundPLAN include the three- dimensional coordinates of the roadways, noise receivers, and topographic features or planned barriers that would affect noise propagation; vehicle volumes and speeds, type of vehicle; and absorption factors.

The project would develop 92 dwelling units. Trip generation is based on the Traffic Impact Analysis (TIA) completed by Gibson Transportation Consulting. The project is anticipated to generate 32 morning and 30 afternoon peak hour trips. Peak hour traffic volumes used for the noise analysis are shown in Table 10. Existing roadway volumes were taken from the Caltrans Traffic Census Program (Caltrans 2017) and the Los Angeles Department of Transportation (LADOT 2020).

Table 10 Peak Hour Trip Volumes

Roadway	Existing	Existing + Project
I-405 south of Wilshire Boulevard	21,000	21,032
Santa Monica Boulevard	4,818	4,850
Beloit Avenue	551	583

Source: Caltrans 2017; LADOT 2020

The posted speed limit is 30 miles per hour on Beloit avenue and 40 miles per hour on Santa Monica Boulevard. To determine the vehicle classification mix for modeling, the Caltrans vehicle classification mix from I-405 was used, which observed 95 percent automobiles, 3 percent medium trucks, and 2 percent heavy trucks (Caltrans 2017). Peak hour traffic was assumed to be approximately 10 percent of the roadway's total average daily traffic in the model as 10 percent peak hour traffic noise level is considered approximately equivalent to CNEL. Trip volumes on the I-405 on-ramp were assumed to be 10 percent of the peak hour trip volume of I-405.

Exterior traffic noise levels at the residential building façades were calculated with receivers placed on the ground floor 5 feet above ground level and residential receivers placed on the second, third, fourth, fifth and sixth floor approximately 20, 30, 40, 50, and 60 feet above ground level, respectively. The sixth-floor receivers would be representative of the 7th floor receivers.

3.5 Significance Thresholds

To determine whether a project would have a significant noise impact, Appendix G of the CEQA Guidelines requires consideration of whether a project would result in:

1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
2. Generation of excessive groundborne vibration or groundborne noise levels
3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels

Construction Noise

Based on LAMC Section 112.05, noise from construction equipment located within 500 feet of a residential zone should not exceed 75 dBA between 7:00 a.m. and 10:00 p.m., as measured at a distance of 50 feet from the source, unless compliance is technically infeasible. Based on LAMC Section 41.40, construction noise would also be significant if generated outside of allowable construction hours.

Land Use Compatibility

The City has adopted noise guidelines that provide the normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for different land uses. The proposed project would include multi-family residences. According to the City's noise compatibility matrix shown in Table 4, ambient noise up to 70 CNEL is conditionally acceptable for multi-family residences. In addition, LAMC Section 91.1207.14.2 requires that new structures achieve an interior noise level of 45 CNEL in all habitable rooms. Therefore, if exterior areas of the project exceed 70 CNEL or interior noise levels exceed 45 CNEL, the project would be incompatible with City noise guidelines.

On-site Operational Noise

The City has adopted noise standards in the LAMC that regulate operational noise sources in the City. The proposed project would involve a multi-family residential building. The proposed project would result in a significant impact if it generates noise from on-site sources in excess of LAMC standards included in Sections 112.01, 112.02, 112.04, and 114.03, which collectively regulate noise from operations that are typically associated with residential uses (e.g., sound-amplifying devices, air conditioning, lawn maintenance equipment, hand tools, wheeled equipment).

Off-site Traffic Noise

Off-site project noise (i.e., roadway noise) would result in a significant impact if the project would cause the ambient noise level measured at the property line of affected uses to increase by 3 dBA, which would be a perceptible increase in traffic noise.

Construction Vibration

The City has not adopted a significance threshold to assess vibration impacts during construction and operation. Therefore, the Caltrans *Transportation and Construction Vibration Guidance Manual* (2020) is used to evaluate potential construction vibration impacts related to both potential building damage and human annoyance. Based on the Caltrans criteria described above, construction vibration impacts would be significant if vibration levels exceed 0.5 in./sec. PPV for residential structures and 2.0 in./sec. PPV for commercial structures, which are the limits where minor cosmetic, i.e. non-structural, damage may occur to these buildings. In addition, construction vibration impacts would cause human annoyance at nearby receivers if vibration levels exceed 0.25 in./sec. PPV, which is the limit where vibration becomes distinctly perceptible from barely perceptible.

4 Impact Analysis

4.1 Issue 1

Issue:	Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

Project construction would occur nearest to the Beloit Apartments southeast of the project site. As the project site is approximately 140 feet by 140 feet, over the course of a typical construction day, construction equipment would be located at an average of 70 feet to the nearest sensitive receivers.

At a distance of 50 feet, a front-end loader and a crane are estimated at a noise level of 74.1 dBA L_{eq} (RCNM calculations are included in Appendix B). Therefore, construction noise would not exceed the threshold of 75 dBA L_{eq} for an 8-hour period. In addition, construction noise levels would be approximately 60 dBA L_{eq} (8 hour) at Nora Sterry Elementary School and would not exceed thresholds at the school. Therefore, impacts would be less than significant.

Operation

HVAC Units

Off-site receivers may periodically be subject to noise from project HVAC units. Estimated noise levels at adjacent properties from HVAC units are shown in Table 11 as receivers OFF1 through OFF7. Noise levels would not exceed City noise limits from stationary sources. Noise levels from project HVAC units would result in less than significant impacts.

Table 11 Operational Noise Levels at Off-site Receivers

Receiver	Description	HVAC Noise Levels (dBA L_{eq})	Exceed Daytime Threshold?	Exceed Overnight Threshold?
OFF1	Multi-Family Residential (1729 Beloit Avenue)	37	No	No
OFF2	Commercial (1668 Sawtelle Boulevard)	35	No	No
OFF3	Commercial (1662 Sawtelle Boulevard)	37	No	No
OFF4	Multi-Family residential (1656 Sawtelle Boulevard)	39	No	No
OFF5	Commercial (1650 Sawtelle Boulevard)	39	No	No
OFF6	Commercial (11266 Santa Monica Boulevard)	37	No	No
OFF7	Hotel (11250 Santa Monica Boulevard)	40	No	No

The applicable daytime threshold (7 a.m. to 10 p.m.) is 65 dBA L_{eq} for Multi-family Residential and Commercial uses. The applicable overnight threshold (10 p.m. to 7 a.m.) is 55 dBA L_{eq} for Multi-family Residential and Commercial uses.

Off-site Traffic Noise

The project would generate new vehicle trips that would increase noise levels on nearby roadways. These trips would mainly occur primarily on Beloit Avenue. Project-generated traffic noise increases are shown in Table 12. As shown in the table, traffic noise increases would reach as high as 0.2 dBA, which would not exceed the 3 dBA criterion for off-site traffic noise impacts. Impacts would be less than significant.

Table 12 Off-site Traffic Noise Increases

Roadway/Segment	Noise Increase (dBA $_{Leq}$)		
	Existing	Existing + Project	Increase
I-405 south of Wilshire Boulevard	80.7	80.7	<0.1
Santa Monica Boulevard	70.3	70.3	<0.1
Beloit Avenue	63.2	63.5	0.3

4.2 Issue 2

Issue: Would the project result in generation of excessive ground-borne vibration or ground-borne noise levels?

Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted by the project. The greatest anticipated source of vibration during general project construction activities would be from a dozer, which may be used within 15 feet of the nearest off-site sensitive receivers to the to the southeast. A dozer would create approximately 0.089 In/sec PPV. at a distance of 25 feet (Caltrans 2013). This would equal a vibration level of approximately than 0.16 In/sec PPV. at a distance of 15 feet.[1] This would be lower than what is considered a distinctly perceptible impact for humans of 0.24 In/sec PPV. and the structural damage impact to residential structures of 0.2 In/sec PPV. Therefore, although a dozer may be perceptible to nearby human receptors, temporary impacts associated with the dozer (and other potential equipment) would be less than significant.

Operation of the project would not include any substantial vibration sources. Therefore, operational vibration impacts would be less than significant.

4.3 Issue 3

Issue: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The airport nearest to the project site, the Los Angeles International Airport, is located approximately 6.5 miles to the south. The project would not be located within the noise contours of the airport (Los Angeles County Airport Land Use Commission 2004). Therefore, no substantial noise

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1 PPVEquipment = PPVRef $(25/D)^n$ (in/sec), PPVRef = reference PPV at 25 feet, D = distance ,and n = 1.1

exposure from airport noise would occur to construction workers, users, or employees of the project, and no impacts would occur.

4.4 Issue 4

Issue:	Would the project be subjected to noise levels in excess of the City's land use compatibility guidelines for noise?

Following the methodology and reference noise levels discussed in Section 3.4, noise levels at the project's residential façades were measured. As shown in Table 13, ON1 through ON12 capture noise at the residential façades around the project site, and ON13 through ON16 capture noise rooftop common use area. These receivers, as well as the contours from off-site traffic, are shown on Figure 4.

Standard construction techniques for wood-frame construction buildings required under the California Building Code typically achieve a minimum 25-dBA reduction from exterior sources at interior locations when the windows are in a closed position. Therefore, if building façade noise levels exceeded 70 CNEL for the residences, interior noise levels for the project would potentially exceed the City's interior noise standard of 45 CNEL. As shown in Table 13, noise levels at the residential building façades to the east and the eastern portions of the northern and southern building façades may conflict with the City's interior noise standard because they are estimated to be higher than the 45 CNEL threshold. Building façades to the west would not exceed noise standards. Implementation of Recommendation NOI-2, an exterior-to-interior noise analysis, would achieve compliance with the interior noise standard.

As shown in Table 13, estimated exterior noise levels from traffic at the potential outdoor common use areas may exceed 70 dBA L_{eq} for ON13 and ON14, which are the receivers on the eastern portion of the rooftop. Therefore, noise levels at exterior areas of project residences may exceed the City's 70 CNEL conditionally acceptable exterior noise standard and may conflict with the City General Plan. Implementation of Recommendation NOI-3, installation of a permanent sound wall, would achieve compliance with the exterior noise standard.

Figure 4 On-site Receivers and Traffic Noise Contours

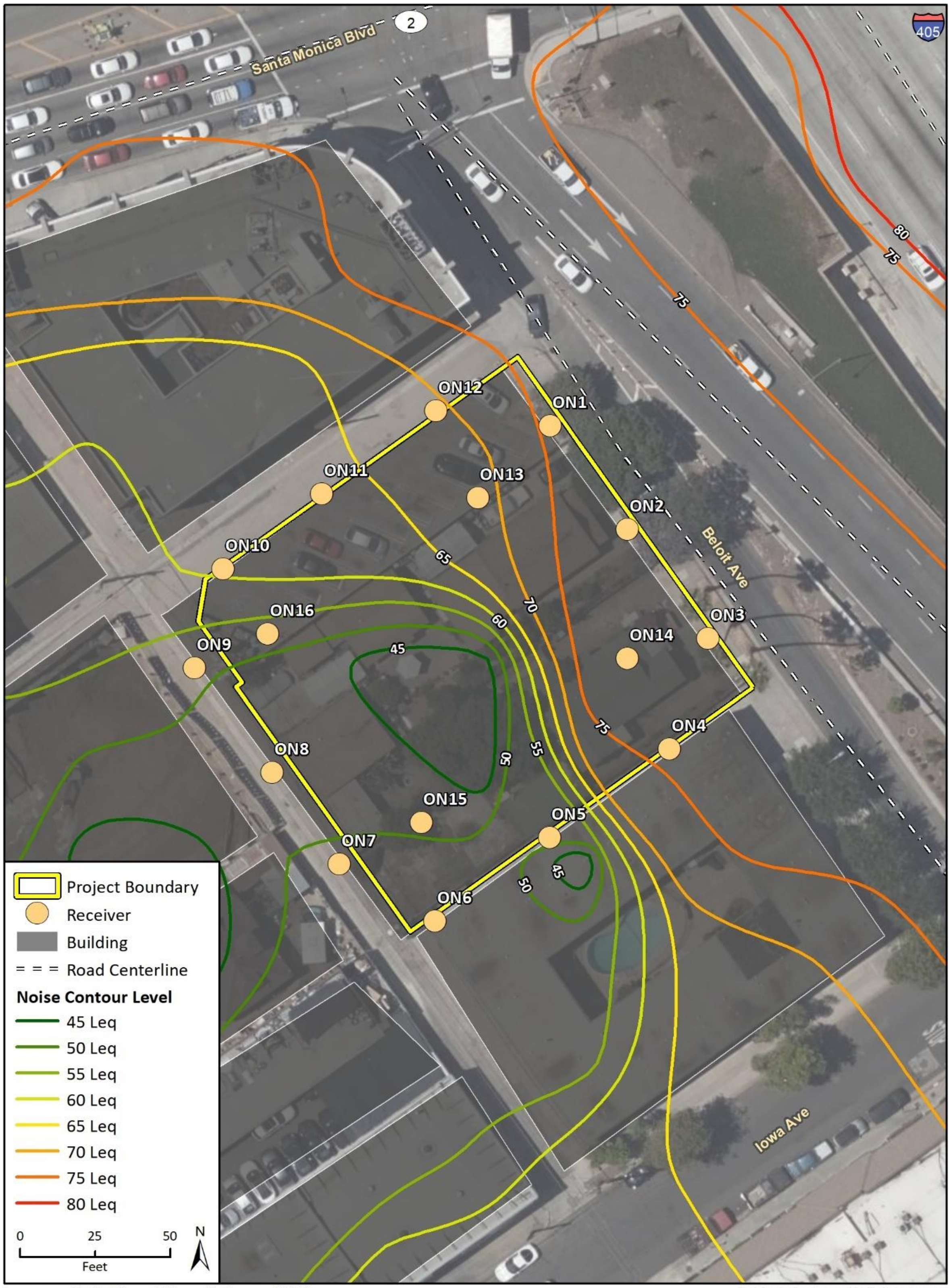

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Table 13 Traffic Noise Levels

Receiver	Description	Noise Level (CNEL)						Potentially Exceed Exterior Threshold?	Potentially Exceed Interior Threshold?
		Ground Level/ 1st Floor	2nd Floor	3rd Floor	4th Floor	5th Floor	6th/7th Floor		
ON1	Residential Building façade	**79**	**79**	**79**	**79**	**81**	**82**	N/A	**Yes**
ON2	Residential Building façade	**80**	**79**	**79**	**80**	**81**	**82**	N/A	**Yes**
ON3	Residential Building façade	**79**	**79**	**79**	**79**	**81**	**82**	N/A	**Yes**
ON4	Residential Building façade	64	65	**71**	**73**	**75**	**77**	N/A	**Yes**
ON5	Residential Building façade	58	62	67	**70**	**72**	**75**	N/A	**Yes**
ON6	Residential Building façade	55	61	66	68	**70**	**72**	N/A	**Yes**
ON7	Residential Building façade	54	57	55	56	57	58	N/A	**No**
ON8	Residential Building façade	51	54	56	57	58	60	N/A	**No**
ON9	Residential Building façade	53	57	58	58	59	61	N/A	**No**
ON10	Residential Building façade	64	65	65	66	69	**71**	N/A	**Yes**
ON11	Residential Building façade	66	67	67	68	**71**	**73**	N/A	Yes
ON12	Residential Building façade	**71**	**72**	**72**	**72**	**74**	**76**	N/A	Yes
ON13	Rooftop	–	–	–	–	–	**76**	**Yes**	N/A
ON14	Rooftop	–	–	–	–	–	**77**	**Yes**	N/A
ON15	Rooftop	–	–	–	–	–	70	No	N/A
ON16	Rooftop	–	–	–	–	–	69	No	N/A

See Figure 4 for receiver locations. Bold numbers represent receivers that may exceed thresholds.

Recommendations

NOI-1 Exterior-to-Interior Noise Level Analysis

For residential units where exterior noise levels exceed 70 CNEL, coordinate with the project architects and other contractors to ensure compliance with the 45 CNEL interior noise level standard. This will be achieved through additional exterior-to-interior noise analysis and incorporation of noise attenuation features once specific building plan information is available. The information in the analysis should include wall heights and lengths, room volumes, window and door tables typical for a building plan, as well as information on any other openings in the building shell. With this specific building plan information, the analysis should determine the predicted interior noise levels at the planned on-site buildings. If predicted noise levels are found to be in excess of the applicable limit, the report should identify architectural materials or techniques that could be included to reduce noise levels to the applicable limit.

Possible noise reduction techniques include, but are not limited to:

- Windows and sliding glass doors would be mounted in low air infiltration rate frames (0.5 cubic feet per minute or less, per ANSI specifications).
- Exterior doors would have a solid core with perimeter weather-stripping and threshold seals with a Sound Transmission Class (STC) rating of at least 31, with the potential for STC rating of 36 or higher if necessary.
- Exterior walls would include minimum of 5/8-inch of stucco or brick veneer over a minimum 1/2-inch plywood or OSB shear panel, R11 insulation and interior 5/8-inch gypsum board.
- Walls would have a STC rating of at least 46.
- Dual-paned windows would be installed with a STC rating of at least 31, with the potential for STC rating of 36 or higher if necessary.
- If exterior sliding glass doors are included, high-performance glazing would be installed with a minimum STC rating of 36.
- Air conditioning or mechanical ventilation systems would be installed to allow windows and doors to remain closed for extended intervals of time so that acceptable interior noise levels can be maintained. The mechanical ventilation system would meet the criteria of the International Building Code (Chapter 12, Section 1203.3 of the 2001 California Building Code).

NOI-2 Permanent Sound Wall

A permanent noise barrier may be erected along the northeastern side of the project building facing I-405. The top of the noise barrier would be a minimum of five feet above the final grade of the rooftop and be constructed of a material with a minimum weight of 4 pounds per square foot with no gaps of perforations. Noise barriers may be constructed of, but are not limited to, masonry block, concrete panels, 1/8-inch-thick steel sheets, 1-1/2-inch wood fencing, or 1/4-inch glass panels.

Consistency After Implementation of Recommendations

Potential interior noise levels at the project residences would be compatible with the City interior noise standard of 45 CNEL and, as shown in Table 14, potential exterior noise levels at the project's common area rooftop would be compatible with the City's multi-family exterior noise standard of 70 CNEL.

Table 14 Rooftop Receiver Noise Levels with Sound Wall

Receiver	Description	Noise Level (CNEL) 6th/7th Floor	Potentially Exceed Exterior Threshold?
ON13	Rooftop	70	No
ON14	Rooftop	69	No
ON15	Rooftop	68	No
ON16	Rooftop	69	No

See Figure 3 for receiver locations; the City's exterior noise threshold is 70 CNEL.

5 Conclusion

The project would generate both temporary construction-related noise and long-term noise associated with operation of the project. The project's noise exposure from construction would not exceed the City's noise standard of 75 dBA, and impacts would be less than significant.

The project's stationary noise sources (HVAC units) would not exceed City standards at the nearest property lines. Therefore, stationary noise impacts would be less than significant.

Project-generated traffic would generate an increase of up to approximately 0.2 dBA at adjacent roadways. This is below the threshold of 3 dBA; therefore, the off-site traffic noise increase would be less than significant.

The project would generate groundborne vibration during construction, but vibration would not exceed the applicable thresholds at the closest residential structures adjacent to the south. Therefore, construction-related vibration impacts would be less than significant.

The project site is outside the noise contour for the nearest airport, the Los Angeles International Airport. Therefore, the project would not result in impacts from airport noise.

Interior and exterior noise levels at the potential first through seventh floors of the residences may exceed the City's interior noise standard of 45 CNEL. Implementation of Recommendation NOI-1, an exterior-to-interior noise analysis, would achieve compliance with the interior noise standard.

The project's noise exposure from traffic at outdoor living areas may exceed the City's exterior noise standard of 70 CNEL. Implementation of Recommendation NOI-2, permanent sound wall, would achieve compliance with the exterior noise standard.

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Appendix A

Noise Measurement Data

- Freq Weight : A
- Time Weight : SLOW
- Level Range : 40-100
- Max dB : 81.7 - 2020/09/03 09:29:48
- Level Range : 40-100
- SEL : 99.5
- Leq : 70.0
-

No.s	Date Time	(dB)
1	2020/09/03 09:17:36	66.1
2	2020/09/03 09:17:39	66.5
3	2020/09/03 09:17:42	66.5
4	2020/09/03 09:17:45	66.1
5	2020/09/03 09:17:48	65.0
6	2020/09/03 09:17:51	66.3
7	2020/09/03 09:17:54	67.6
8	2020/09/03 09:17:57	67.1
9	2020/09/03 09:18:00	69.4
10	2020/09/03 09:18:03	70.0
11	2020/09/03 09:18:06	67.8
12	2020/09/03 09:18:09	66.2
13	2020/09/03 09:18:12	66.3
14	2020/09/03 09:18:15	68.0
15	2020/09/03 09:18:18	68.4
16	2020/09/03 09:18:21	69.9
17	2020/09/03 09:18:24	68.8
18	2020/09/03 09:18:27	67.4
19	2020/09/03 09:18:30	66.0
20	2020/09/03 09:18:33	65.5
21	2020/09/03 09:18:36	65.2
22	2020/09/03 09:18:39	69.5
23	2020/09/03 09:18:42	65.8
24	2020/09/03 09:18:45	65.0
25	2020/09/03 09:18:48	66.3
26	2020/09/03 09:18:51	65.4
27	2020/09/03 09:18:54	69.4
28	2020/09/03 09:18:57	68.4
29	2020/09/03 09:19:00	66.0
30	2020/09/03 09:19:03	68.3
31	2020/09/03 09:19:06	70.1
32	2020/09/03 09:19:09	76.0
33	2020/09/03 09:19:12	72.0
34	2020/09/03 09:19:15	70.2
35	2020/09/03 09:19:18	69.3
36	2020/09/03 09:19:21	68.9
37	2020/09/03 09:19:24	68.5
38	2020/09/03 09:19:27	69.2
39	2020/09/03 09:19:30	68.8
40	2020/09/03 09:19:33	68.4
41	2020/09/03 09:19:36	66.6
42	2020/09/03 09:19:39	67.3
43	2020/09/03 09:19:42	68.5
44	2020/09/03 09:19:45	69.4
45	2020/09/03 09:19:48	69.0
46	2020/09/03 09:19:51	69.1
47	2020/09/03 09:19:54	67.9
48	2020/09/03 09:19:57	68.9
49	2020/09/03 09:20:00	75.0
50	2020/09/03 09:20:03	72.6
51	2020/09/03 09:20:06	73.8
52	2020/09/03 09:20:09	69.4
53	2020/09/03 09:20:12	69.1
54	2020/09/03 09:20:15	67.3
55	2020/09/03 09:20:18	67.5
56	2020/09/03 09:20:21	68.4
57	2020/09/03 09:20:24	66.7
58	2020/09/03 09:20:27	67.8
59	2020/09/03 09:20:30	67.8
60	2020/09/03 09:20:33	65.7
61	2020/09/03 09:20:36	65.3
62	2020/09/03 09:20:39	64.8
63	2020/09/03 09:20:42	65.7
64	2020/09/03 09:20:45	66.3
65	2020/09/03 09:20:48	67.7
66	2020/09/03 09:20:51	68.4
67	2020/09/03 09:20:54	69.9
68	2020/09/03 09:20:57	71.4
69	2020/09/03 09:21:00	74.7
70	2020/09/03 09:21:03	71.8
71	2020/09/03 09:21:06	70.9
72	2020/09/03 09:21:09	68.3
73	2020/09/03 09:21:12	67.5
74	2020/09/03 09:21:15	69.7
75	2020/09/03 09:21:18	69.4
76	2020/09/03 09:21:21	68.0
77	2020/09/03 09:21:24	69.9
78	2020/09/03 09:21:27	69.7
79	2020/09/03 09:21:30	68.6
80	2020/09/03 09:21:33	67.6
81	2020/09/03 09:21:36	67.8
82	2020/09/03 09:21:39	66.4
83	2020/09/03 09:21:42	67.9
84	2020/09/03 09:21:45	66.4
85	2020/09/03 09:21:48	67.2

86	2020/09/03 09:21:51	68.5
87	2020/09/03 09:21:54	66.8
88	2020/09/03 09:21:57	65.8
89	2020/09/03 09:22:00	65.0
90	2020/09/03 09:22:03	65.2
91	2020/09/03 09:22:06	65.6
92	2020/09/03 09:22:09	66.8
93	2020/09/03 09:22:12	66.0
94	2020/09/03 09:22:15	66.3
95	2020/09/03 09:22:18	68.0
96	2020/09/03 09:22:21	70.3
97	2020/09/03 09:22:24	69.2
98	2020/09/03 09:22:27	67.7
99	2020/09/03 09:22:30	66.4
100	2020/09/03 09:22:33	67.2
101	2020/09/03 09:22:36	66.2
102	2020/09/03 09:22:39	65.4
103	2020/09/03 09:22:42	65.3
104	2020/09/03 09:22:45	66.3
105	2020/09/03 09:22:48	67.5
106	2020/09/03 09:22:51	65.9
107	2020/09/03 09:22:54	66.3
108	2020/09/03 09:22:57	66.4
109	2020/09/03 09:23:00	65.8
110	2020/09/03 09:23:03	67.2
111	2020/09/03 09:23:06	68.9
112	2020/09/03 09:23:09	68.1
113	2020/09/03 09:23:12	68.4
114	2020/09/03 09:23:15	69.3
115	2020/09/03 09:23:18	68.0
116	2020/09/03 09:23:21	65.7
117	2020/09/03 09:23:24	64.8
118	2020/09/03 09:23:27	63.8
119	2020/09/03 09:23:30	67.2
120	2020/09/03 09:23:33	65.7
121	2020/09/03 09:23:36	66.2
122	2020/09/03 09:23:39	68.8
123	2020/09/03 09:23:42	68.6
124	2020/09/03 09:23:45	67.4
125	2020/09/03 09:23:48	66.8
126	2020/09/03 09:23:51	66.9
127	2020/09/03 09:23:54	66.9
128	2020/09/03 09:23:57	66.8
129	2020/09/03 09:24:00	67.2
130	2020/09/03 09:24:03	66.9
131	2020/09/03 09:24:06	67.4
132	2020/09/03 09:24:09	66.1
133	2020/09/03 09:24:12	66.9
134	2020/09/03 09:24:15	65.4
135	2020/09/03 09:24:18	67.5
136	2020/09/03 09:24:21	69.8
137	2020/09/03 09:24:24	68.4
138	2020/09/03 09:24:27	66.0
139	2020/09/03 09:24:30	65.0
140	2020/09/03 09:24:33	65.1
141	2020/09/03 09:24:36	67.0
142	2020/09/03 09:24:39	65.3
143	2020/09/03 09:24:42	66.2
144	2020/09/03 09:24:45	68.4
145	2020/09/03 09:24:48	67.9
146	2020/09/03 09:24:51	67.6
147	2020/09/03 09:24:54	68.1
148	2020/09/03 09:24:57	68.7
149	2020/09/03 09:25:00	69.2
150	2020/09/03 09:25:03	67.2
151	2020/09/03 09:25:06	66.8
152	2020/09/03 09:25:09	67.0
153	2020/09/03 09:25:12	66.5
154	2020/09/03 09:25:15	66.4
155	2020/09/03 09:25:18	66.1
156	2020/09/03 09:25:21	65.6
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173	2020/09/03 09:26:12	66.6
174	2020/09/03 09:26:15	65.2
175	2020/09/03 09:26:18	67.8
176	2020/09/03 09:26:21	66.8
177	2020/09/03 09:26:24	67.4
178	2020/09/03 09:26:27	66.7
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180	2020/09/03 09:26:33	64.4
181	2020/09/03 09:26:36	64.9
182	2020/09/03 09:26:39	66.7
183	2020/09/03 09:26:42	71.7
184	2020/09/03 09:26:45	69.1

185	2020/09/03 09:26:48	68.8
186	2020/09/03 09:26:51	70.0
187	2020/09/03 09:26:54	72.8
188	2020/09/03 09:26:57	77.8
189	2020/09/03 09:27:00	70.8
190	2020/09/03 09:27:03	70.0
191	2020/09/03 09:27:06	69.8
192	2020/09/03 09:27:09	68.9
193	2020/09/03 09:27:12	68.1
194	2020/09/03 09:27:15	76.7
195	2020/09/03 09:27:18	73.9
196	2020/09/03 09:27:21	69.8
197	2020/09/03 09:27:24	70.1
198	2020/09/03 09:27:27	70.2
199	2020/09/03 09:27:30	69.1
200	2020/09/03 09:27:33	68.2
201	2020/09/03 09:27:36	66.6
202	2020/09/03 09:27:39	65.5
203	2020/09/03 09:27:42	65.5
204	2020/09/03 09:27:45	66.8
205	2020/09/03 09:27:48	67.1
206	2020/09/03 09:27:51	65.9
207	2020/09/03 09:27:54	66.4
208	2020/09/03 09:27:57	66.4
209	2020/09/03 09:28:00	68.9
210	2020/09/03 09:28:03	66.5
211	2020/09/03 09:28:06	64.8
212	2020/09/03 09:28:09	65.3
213	2020/09/03 09:28:12	65.9
214	2020/09/03 09:28:15	65.9
215	2020/09/03 09:28:18	68.9
216	2020/09/03 09:28:21	69.0
217	2020/09/03 09:28:24	67.5
218	2020/09/03 09:28:27	67.6
219	2020/09/03 09:28:30	66.6
220	2020/09/03 09:28:33	66.0
221	2020/09/03 09:28:36	65.9
222	2020/09/03 09:28:39	66.1
223	2020/09/03 09:28:42	65.7
224	2020/09/03 09:28:45	67.6
225	2020/09/03 09:28:48	68.6
226	2020/09/03 09:28:51	70.4
227	2020/09/03 09:28:54	68.7
228	2020/09/03 09:28:57	67.8
229	2020/09/03 09:29:00	67.6
230	2020/09/03 09:29:03	66.8
231	2020/09/03 09:29:06	65.9
232	2020/09/03 09:29:09	67.2
233	2020/09/03 09:29:12	67.6
234	2020/09/03 09:29:15	65.6
235	2020/09/03 09:29:18	63.9
236	2020/09/03 09:29:21	63.5
237	2020/09/03 09:29:24	64.8
238	2020/09/03 09:29:27	66.2
239	2020/09/03 09:29:30	67.1
240	2020/09/03 09:29:33	66.6
241	2020/09/03 09:29:36	65.4
242	2020/09/03 09:29:39	64.8
243	2020/09/03 09:29:42	66.3
244	2020/09/03 09:29:45	81.1
245	2020/09/03 09:29:48	75.6
246	2020/09/03 09:29:51	69.3
247	2020/09/03 09:29:54	65.0
248	2020/09/03 09:29:57	64.9
249	2020/09/03 09:30:00	68.8
250	2020/09/03 09:30:03	67.5
251	2020/09/03 09:30:06	66.5
252	2020/09/03 09:30:09	66.4
253	2020/09/03 09:30:12	66.2
254	2020/09/03 09:30:15	66.0
255	2020/09/03 09:30:18	65.6
256	2020/09/03 09:30:21	66.4
257	2020/09/03 09:30:24	66.7
258	2020/09/03 09:30:27	65.9
259	2020/09/03 09:30:30	65.6
260	2020/09/03 09:30:33	65.7
261	2020/09/03 09:30:36	67.2
262	2020/09/03 09:30:39	66.3
263	2020/09/03 09:30:42	66.2
264	2020/09/03 09:30:45	65.9
265	2020/09/03 09:30:48	64.5
266	2020/09/03 09:30:51	64.9
267	2020/09/03 09:30:54	66.3
268	2020/09/03 09:30:57	71.6
269	2020/09/03 09:31:00	70.0
270	2020/09/03 09:31:03	70.4
271	2020/09/03 09:31:06	70.2
272	2020/09/03 09:31:09	69.3
273	2020/09/03 09:31:12	69.6
274	2020/09/03 09:31:15	71.2
275	2020/09/03 09:31:18	70.3
276	2020/09/03 09:31:21	71.3
277	2020/09/03 09:31:24	71.2
278	2020/09/03 09:31:27	71.0
279	2020/09/03 09:31:30	69.5
280	2020/09/03 09:31:33	69.2
281	2020/09/03 09:31:36	70.4
282	2020/09/03 09:31:39	69.2
283	2020/09/03 09:31:42	66.7

284	2020/09/03 09:31:45	65.8
285	2020/09/03 09:31:48	67.3
286	2020/09/03 09:31:51	65.6
287	2020/09/03 09:31:54	70.7
288	2020/09/03 09:31:57	64.8
289	2020/09/03 09:32:00	63.4
290	2020/09/03 09:32:03	66.3
291	2020/09/03 09:32:06	74.1
292	2020/09/03 09:32:09	67.9
293	2020/09/03 09:32:12	66.0
294	2020/09/03 09:32:15	66.8
295	2020/09/03 09:32:18	67.7
296	2020/09/03 09:32:21	68.4
297	2020/09/03 09:32:24	66.9
298	2020/09/03 09:32:27	66.2
299	2020/09/03 09:32:30	66.2
300	2020/09/03 09:32:33	67.0

- Freq Weight : A
- Time Weight : SLOW
- Level Range : 40-100
- Max dB : 72.5 - 2020/09/03 09:53:17
- Level Range : 40-100
- SEL : 94.7
- Leq : 65.2
-

No.s	Date Time	(dB)
1	2020/09/03 09:41:33	63.7
2	2020/09/03 09:41:36	63.8
3	2020/09/03 09:41:39	63.1
4	2020/09/03 09:41:42	63.3
5	2020/09/03 09:41:45	64.7
6	2020/09/03 09:41:48	65.5
7	2020/09/03 09:41:51	66.9
8	2020/09/03 09:41:54	66.4
9	2020/09/03 09:41:57	67.0
10	2020/09/03 09:42:00	69.3
11	2020/09/03 09:42:03	67.3
12	2020/09/03 09:42:06	65.3
13	2020/09/03 09:42:09	64.6
14	2020/09/03 09:42:12	64.2
15	2020/09/03 09:42:15	63.8
16	2020/09/03 09:42:18	65.3
17	2020/09/03 09:42:21	66.0
18	2020/09/03 09:42:24	66.4
19	2020/09/03 09:42:27	65.1
20	2020/09/03 09:42:30	65.3
21	2020/09/03 09:42:33	64.8
22	2020/09/03 09:42:36	64.4
23	2020/09/03 09:42:39	64.1
24	2020/09/03 09:42:42	63.8
25	2020/09/03 09:42:45	64.0
26	2020/09/03 09:42:48	63.7
27	2020/09/03 09:42:51	64.2
28	2020/09/03 09:42:54	64.4
29	2020/09/03 09:42:57	64.3
30	2020/09/03 09:43:00	65.2
31	2020/09/03 09:43:03	66.7
32	2020/09/03 09:43:06	65.3
33	2020/09/03 09:43:09	65.6
34	2020/09/03 09:43:12	66.8
35	2020/09/03 09:43:15	69.2
36	2020/09/03 09:43:18	68.8
37	2020/09/03 09:43:21	66.9
38	2020/09/03 09:43:24	66.1
39	2020/09/03 09:43:27	65.8
40	2020/09/03 09:43:30	65.9
41	2020/09/03 09:43:33	67.7
42	2020/09/03 09:43:36	67.8
43	2020/09/03 09:43:39	65.9
44	2020/09/03 09:43:42	64.1
45	2020/09/03 09:43:45	64.5
46	2020/09/03 09:43:48	67.2
47	2020/09/03 09:43:51	64.6
48	2020/09/03 09:43:54	65.0
49	2020/09/03 09:43:57	65.1
50	2020/09/03 09:44:00	65.5
51	2020/09/03 09:44:03	66.7
52	2020/09/03 09:44:06	65.9
53	2020/09/03 09:44:09	64.8
54	2020/09/03 09:44:12	64.6
55	2020/09/03 09:44:15	63.8
56	2020/09/03 09:44:18	64.1
57	2020/09/03 09:44:21	65.5
58	2020/09/03 09:44:24	64.8
59	2020/09/03 09:44:27	64.6
60	2020/09/03 09:44:30	64.5
61	2020/09/03 09:44:33	63.2
62	2020/09/03 09:44:36	62.8
63	2020/09/03 09:44:39	63.6
64	2020/09/03 09:44:42	64.2
65	2020/09/03 09:44:45	64.3
66	2020/09/03 09:44:48	64.9
67	2020/09/03 09:44:51	64.3
68	2020/09/03 09:44:54	64.7
69	2020/09/03 09:44:57	64.9
70	2020/09/03 09:45:00	68.6
71	2020/09/03 09:45:03	66.7
72	2020/09/03 09:45:06	65.6
73	2020/09/03 09:45:09	64.5
74	2020/09/03 09:45:12	64.5
75	2020/09/03 09:45:15	64.6
76	2020/09/03 09:45:18	65.7
77	2020/09/03 09:45:21	64.5
78	2020/09/03 09:45:24	64.9
79	2020/09/03 09:45:27	65.0
80	2020/09/03 09:45:30	64.7
81	2020/09/03 09:45:33	64.8
82	2020/09/03 09:45:36	64.9
83	2020/09/03 09:45:39	64.5
84	2020/09/03 09:45:42	63.6
85	2020/09/03 09:45:45	64.3

86	2020/09/03 09:45:48	64.8
87	2020/09/03 09:45:51	64.7
88	2020/09/03 09:45:54	65.1
89	2020/09/03 09:45:57	64.8
90	2020/09/03 09:46:00	65.4
91	2020/09/03 09:46:03	65.8
92	2020/09/03 09:46:06	69.6
93	2020/09/03 09:46:09	66.9
94	2020/09/03 09:46:12	66.2
95	2020/09/03 09:46:15	65.2
96	2020/09/03 09:46:18	65.3
97	2020/09/03 09:46:21	65.6
98	2020/09/03 09:46:24	65.9
99	2020/09/03 09:46:27	65.3
100	2020/09/03 09:46:30	64.9
101	2020/09/03 09:46:33	64.7
102	2020/09/03 09:46:36	64.8
103	2020/09/03 09:46:39	64.3
104	2020/09/03 09:46:42	64.7
105	2020/09/03 09:46:45	65.9
106	2020/09/03 09:46:48	65.2
107	2020/09/03 09:46:51	64.4
108	2020/09/03 09:46:54	64.4
109	2020/09/03 09:46:57	64.1
110	2020/09/03 09:47:00	65.7
111	2020/09/03 09:47:03	66.6
112	2020/09/03 09:47:06	65.6
113	2020/09/03 09:47:09	65.2
114	2020/09/03 09:47:12	65.4
115	2020/09/03 09:47:15	65.5
116	2020/09/03 09:47:18	65.5
117	2020/09/03 09:47:21	66.9
118	2020/09/03 09:47:24	66.8
119	2020/09/03 09:47:27	65.7
120	2020/09/03 09:47:30	65.8
121	2020/09/03 09:47:33	65.4
122	2020/09/03 09:47:36	65.7
123	2020/09/03 09:47:39	65.2
124	2020/09/03 09:47:42	64.3
125	2020/09/03 09:47:45	63.2
126	2020/09/03 09:47:48	62.5
127	2020/09/03 09:47:51	62.8
128	2020/09/03 09:47:54	64.1
129	2020/09/03 09:47:57	63.2
130	2020/09/03 09:48:00	62.8
131	2020/09/03 09:48:03	63.5
132	2020/09/03 09:48:06	63.3
133	2020/09/03 09:48:09	62.9
134	2020/09/03 09:48:12	63.5
135	2020/09/03 09:48:15	64.5
136	2020/09/03 09:48:18	63.5
137	2020/09/03 09:48:21	65.0
138	2020/09/03 09:48:24	64.8
139	2020/09/03 09:48:27	64.9
140	2020/09/03 09:48:30	65.0
141	2020/09/03 09:48:33	64.0
142	2020/09/03 09:48:36	63.9
143	2020/09/03 09:48:39	63.7
144	2020/09/03 09:48:42	64.5
145	2020/09/03 09:48:45	64.1
146	2020/09/03 09:48:48	63.9
147	2020/09/03 09:48:51	63.5
148	2020/09/03 09:48:54	63.1
149	2020/09/03 09:48:57	63.3
150	2020/09/03 09:49:00	63.1
151	2020/09/03 09:49:03	63.6
152	2020/09/03 09:49:06	67.2
153	2020/09/03 09:49:09	65.5
154	2020/09/03 09:49:12	65.5
155	2020/09/03 09:49:15	66.2
156	2020/09/03 09:49:18	65.3
157	2020/09/03 09:49:21	64.4
158	2020/09/03 09:49:24	63.7
159	2020/09/03 09:49:27	63.3
160	2020/09/03 09:49:30	64.3
161	2020/09/03 09:49:33	64.7
162	2020/09/03 09:49:36	66.0
163	2020/09/03 09:49:39	64.6
164	2020/09/03 09:49:42	63.2
165	2020/09/03 09:49:45	63.4
166	2020/09/03 09:49:48	63.9
167	2020/09/03 09:49:51	64.3
168	2020/09/03 09:49:54	64.1
169	2020/09/03 09:49:57	64.3
170	2020/09/03 09:50:00	64.4
171	2020/09/03 09:50:03	65.0
172	2020/09/03 09:50:06	64.0
173	2020/09/03 09:50:09	64.0
174	2020/09/03 09:50:12	63.6
175	2020/09/03 09:50:15	62.9
176	2020/09/03 09:50:18	63.7
177	2020/09/03 09:50:21	64.1
178	2020/09/03 09:50:24	64.0
179	2020/09/03 09:50:27	62.9
180	2020/09/03 09:50:30	64.2
181	2020/09/03 09:50:33	67.1
182	2020/09/03 09:50:36	64.8
183	2020/09/03 09:50:39	64.6
184	2020/09/03 09:50:42	65.0

185	2020/09/03	09:50:45	64.4
186	2020/09/03	09:50:48	64.4
187	2020/09/03	09:50:51	63.5
188	2020/09/03	09:50:54	63.7
189	2020/09/03	09:50:57	62.6
190	2020/09/03	09:51:00	63.7
191	2020/09/03	09:51:03	64.4
192	2020/09/03	09:51:06	66.0
193	2020/09/03	09:51:09	66.9
194	2020/09/03	09:51:12	65.6
195	2020/09/03	09:51:15	65.0
196	2020/09/03	09:51:18	66.2
197	2020/09/03	09:51:21	67.7
198	2020/09/03	09:51:24	68.7
199	2020/09/03	09:51:27	66.5
200	2020/09/03	09:51:30	65.3
201	2020/09/03	09:51:33	66.3
202	2020/09/03	09:51:36	65.2
203	2020/09/03	09:51:39	65.7
204	2020/09/03	09:51:42	64.5
205	2020/09/03	09:51:45	63.7
206	2020/09/03	09:51:48	64.4
207	2020/09/03	09:51:51	64.9
208	2020/09/03	09:51:54	64.7
209	2020/09/03	09:51:57	65.5
210	2020/09/03	09:52:00	65.3
211	2020/09/03	09:52:03	64.8
212	2020/09/03	09:52:06	64.6
213	2020/09/03	09:52:09	63.8
214	2020/09/03	09:52:12	63.7
215	2020/09/03	09:52:15	63.5
216	2020/09/03	09:52:18	64.0
217	2020/09/03	09:52:21	64.3
218	2020/09/03	09:52:24	64.4
219	2020/09/03	09:52:27	64.6
220	2020/09/03	09:52:30	64.7
221	2020/09/03	09:52:33	66.1
222	2020/09/03	09:52:36	65.2
223	2020/09/03	09:52:39	65.7
224	2020/09/03	09:52:42	66.6
225	2020/09/03	09:52:45	66.4
226	2020/09/03	09:52:48	65.7
227	2020/09/03	09:52:51	65.4
228	2020/09/03	09:52:54	65.4
229	2020/09/03	09:52:57	65.7
230	2020/09/03	09:53:00	66.2
231	2020/09/03	09:53:03	66.3
232	2020/09/03	09:53:06	65.5
233	2020/09/03	09:53:09	64.9
234	2020/09/03	09:53:12	65.7
235	2020/09/03	09:53:15	71.7
236	2020/09/03	09:53:18	68.2
237	2020/09/03	09:53:21	66.4
238	2020/09/03	09:53:24	66.1
239	2020/09/03	09:53:27	66.1
240	2020/09/03	09:53:30	65.8
241	2020/09/03	09:53:33	65.9
242	2020/09/03	09:53:36	65.5
243	2020/09/03	09:53:39	65.1
244	2020/09/03	09:53:42	65.1
245	2020/09/03	09:53:45	65.4
246	2020/09/03	09:53:48	65.5
247	2020/09/03	09:53:51	66.2
248	2020/09/03	09:53:54	66.5
249	2020/09/03	09:53:57	65.9
250	2020/09/03	09:54:00	65.1
251	2020/09/03	09:54:03	64.8
252	2020/09/03	09:54:06	64.3
253	2020/09/03	09:54:09	65.8
254	2020/09/03	09:54:12	64.6
255	2020/09/03	09:54:15	64.5
256	2020/09/03	09:54:18	65.6
257	2020/09/03	09:54:21	65.0
258	2020/09/03	09:54:24	64.9
259	2020/09/03	09:54:27	64.7
260	2020/09/03	09:54:30	64.5
261	2020/09/03	09:54:33	64.2
262	2020/09/03	09:54:36	63.8
263	2020/09/03	09:54:39	64.9
264	2020/09/03	09:54:42	64.3
265	2020/09/03	09:54:45	63.9
266	2020/09/03	09:54:48	64.1
267	2020/09/03	09:54:51	64.1
268	2020/09/03	09:54:54	64.6
269	2020/09/03	09:54:57	66.1
270	2020/09/03	09:55:00	65.8
271	2020/09/03	09:55:03	67.9
272	2020/09/03	09:55:06	70.6
273	2020/09/03	09:55:09	69.0
274	2020/09/03	09:55:12	68.0
275	2020/09/03	09:55:15	66.6
276	2020/09/03	09:55:18	67.0
277	2020/09/03	09:55:21	66.3
278	2020/09/03	09:55:24	66.0
279	2020/09/03	09:55:27	66.7
280	2020/09/03	09:55:30	66.6
281	2020/09/03	09:55:33	65.7
282	2020/09/03	09:55:36	65.2
283	2020/09/03	09:55:39	64.6

284	2020/09/03	09:55:42	65.3
285	2020/09/03	09:55:45	65.2
286	2020/09/03	09:55:48	66.2
287	2020/09/03	09:55:51	63.9
288	2020/09/03	09:55:54	63.5
289	2020/09/03	09:55:57	64.4
290	2020/09/03	09:56:00	64.4
291	2020/09/03	09:56:03	64.8
292	2020/09/03	09:56:06	62.9
293	2020/09/03	09:56:09	61.4
294	2020/09/03	09:56:12	60.8
295	2020/09/03	09:56:15	60.7
296	2020/09/03	09:56:18	60.5
297	2020/09/03	09:56:21	61.2
298	2020/09/03	09:56:24	60.3
299	2020/09/03	09:56:27	59.9
300	2020/09/03	09:56:30	65.3

Appendix B

RCNM Results

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/8/2023
Case Description: Beloit Avenue Project

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Beloit Apartments	Residential	75	75	75

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	70	0
Crane	No	16		80.6	70	0

Results

		Calculated (dBA)	
Equipment		*Lmax	Leq
Front End Loader		76.2	72.2
Crane		77.6	69.7
	Total	77.6	74.1

*Calculated Lmax is the Loudest value.

Appendix C

Sample HVAC Specifications

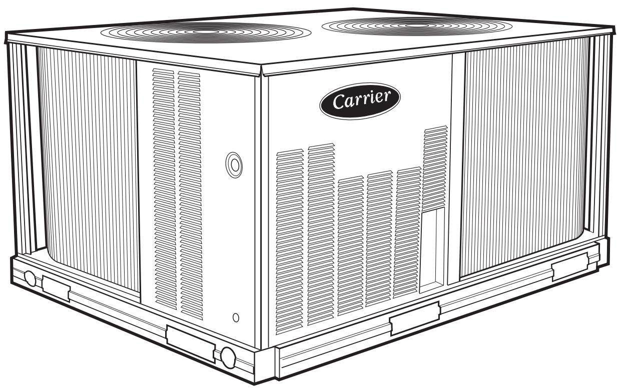
38AUZ/D 50 Hz
Commercial Split Systems
Air Conditioning Condensing Units
18.3 kW to 59.2 kW

Carrier

turn to the experts

Product Data

Gemini



C09227

38AUZ07-08 shown

c UL US   INTERTEK c ETL US LISTED   Puron™ the environmentally sound refrigerant

Certified to ISO 9001

Carrier's air-cooled air conditioning split systems:

- provide a logical solution for commercial needs
- have a rugged, dependable construction
- are available in single and circuit scroll compressor capacity control
- have cooling capability up to 52°C (125°F) ambient and down to 2°C (35°F) ambient standard

FEATURES/BENEFITS

These dependable outdoor air cooled condensing units match Carrier's indoor-air handlers to meet a wide selection of cooling solutions.

Constructed for long life

The 38AUZ single circuit and 38AUD dual circuit, scroll compressor models are designed and built to last. The high efficient designed outdoor coil construction allows for a more efficient design in a smaller cabinet size that utilizes an overall reduction in refrigerant charge. Where conditions require, special coil coating coil protection option is available. Cabinets are constructed of prepainted galvanized steel, delivering unparalleled protection from the environment. Inside and outside surfaces are protected to ensure long life, good looks, and reliable operation. Safety controls are used for enhanced system protection and reliability.

Each unit utilizes the Comfort Alert diagnostic and troubleshoot control system. This protects the units operation and provides valuable diagnostic information when required.

Factory-installed options (FIOPs)

Certified and pre-engineered factory-installed options (FIOPs) allow units to be installed in less time, thereby reducing installed cost. FIOPs include:

- low ambient controls which provide cooling operation down to -29°C (-20°F) ambient temperatures
- non-fused disconnect
- special coil coating coil protection
- louvered hail guard

Efficient operation

These air cooled condensing units will provide EER's up to 12.6 (tested in accordance with ASHRAE 90.1 standards).

This high efficiency will help reduce overall operating cost and energy consumption.

Controls for performance dependability

The 38AU condensing units offer operating controls and components designed for performance dependability. The high efficiency hermetic scroll compressor is engineered for long life and durability. The compressors include vibration isolation for quiet operation. The high-pressure switch protects the entire refrigeration system from abnormally high operating pressures. A low-pressure switch protects the system from loss of charge. These units also include anti-short-cycling protection, which helps to protect the units against compressor failure.

All units include a crankcase heater to eliminate liquid slugging at start-up. Each unit comes standard with the Comfort Alert™ control system. This provides:

- System Go LED indicator
- Fault LED indicator
- Compressor fault LED indicator
- Phase loss protection
- Phase reversal protection
- Safety pressure indicator
- Anti-short cycle protection

Innovative Carrier 40RU packaged air handlers are custom matched to 38AUZ/D condensing units

Information on matching 40RU DX packaged air handler follows for convenience. See separate product data for more details. The 40RU Series has excellent fan performance, efficient direct-expansion (DX) coils, a unique combination of indoor-air quality features, and is easy to install. Its versatility and state-of-the-art features help to ensure economical performance of the split system both now and in the future.

Indoor-air quality (IAQ) features

The unique combination of IAQ features in the 40RU Series air handlers help to ensure that only clean, fresh, conditioned air is delivered to the occupied space.

Direct-expansion (DX) 4 row cooling coils prevent the build-up of humidity in the room, even during part-load conditions.

Standard 2-in. (51mm) disposable filters remove dust and airborne particles from the occupied space for cleaner air.

The pitched, non-corroding drain pan can be adjusted for a right-hand or left-hand connection to suit many applications and provide positive drainage and prevent standing condensate.

The accessory economizer can provide ventilation air to improve indoor-air quality by using demand control ventilation. When used in conjunction with Carrier Comfort System and CO_2 sensors, the economizer admits fresh outdoor air to replace stale, recirculated indoor air.

Economy

The 40RU Series packaged air handlers provide reduced installation expense and energy-efficient performance.

Quick installation is ensured by the multipoise design. Units can be installed in either the horizontal or vertical configuration without modifications. Fan motors and contactors are pre-wired and thermostatic expansion valves (TXVs) are factory-installed on all 40RU models.

High efficiency, precision-balanced fans minimize air turbulence, surging, and unbalanced operation, cutting operation expenses.

The economizer accessory precisely controls the blend of outdoor air and room air to achieve comfort levels. When the outside air enthalpy is suitable, outside air dampers can fully open to provide "free" cooling without energizing mechanical cooling.

Rugged dependability

The 40RU series units are made to last. The die-formed galvanized steel panels ensure structural integrity under all operating conditions. Galvanized steel fan housings are securely mounted to a die-formed galvanized steel fan deck.

Rugged pillow-block bearings (40RU14) are securely fastened to the solid steel fan shaft with split collets and clamp locking devices. Smaller unit sizes have spider-type bearings.

Coil flexibility

Model 40RU direct- expansion coils have galvanized steel casings; inlet and outlet connections are on the same end. The coils are designed for use with Puron (R-410A) refrigerant and have $^3/_8$-in. diameter copper tubes mechanically bonded to aluminum sine-wave fins. The coils include matched, factory-installed thermostatic expansion valves (TXVs) with matching distributor nozzles and offers a removable power element and extended connections.

Easier installation and service

The multipoise design and component layout ensures quick unit installation and operation. Units can be converted from horizontal to vertical operation by simply repositioning the unit. Drain pan connections are duplicated on both sides of the unit. The filters, motor, drive, TXVs, and coil connections are all easily accessed by removing a single side panel.

MODEL NUMBER NOMENCLATURE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
3	8	A	U	Z	A	0	7	A	0	A	9	–	0	A	0	A	0

Model Type
Commercial Air Cooled Cond. Unit
Puron® R–410A Refrigerant

Type of Coil
D = Dual Circuit
Z = Single Circuit

Refrigerant Options
A = Standard
B = Low Ambient Controls

Nominal Tonnage
07 = 18.3 kW (5.2 Tons)
08 = 23.2 kW (6.6 Tons)
12 = 29.1 kW (8.3 Tons)
14 = 35.2 kW (10.0 Tons)
16 = 45.8 kW (13.0 Tons)
25 = 59.2 kW (16.8 Tons)

Factory Assigned
A = Default

Factory Assigned
0 = Default

Coil Options (Condenser)
With Round Tube/Plate Fin Design
All models except 14 size (12.5 Ton)
A = Al/Cu Standard
B = Pre Coat Al/Cu
C = E–Coat Al/Cu
E = Cu/Cu
M = Al/Cu Standard with louvered hail guard
N = Pre Coat Al/Cu with louvered hail guard
P = E–Coat Al/Cu with louvered hail guard
R = Cu/Cu – Louvered hail guard
Coil Options (Condenser)
With All Aluminum – NOVATION Design (07–16 sizes)
G = Al/Al Standard
K = E–Coat Al/Al
T = Al/Al with louvered hail guard
W = E–Coat Al/Al with louvered hail guard

Voltage
9 = 400–3–50

Design Rev
– = Factory Assigned

Base Unit Controls
0 = Standard Electro–Mechanical Controls

Factory Assigned
A = Default

Service Options
0 = None

Electrical Options
A = None
C = Non–Fused Disconnect

Brand / Packaging
0 = Standard
1 = LTL

AHRI CAPACITY RATINGS

UNIT	COOLING STAGES	NOM. CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (kW)	EER
38AUZ07/40RU07	1	5	62.7	5.1	12.2
38AUZ08/40RU08	1	6.3	79.3	6.9	11.5
38AUD12/40RU12	2	8.3	103.0	8.2	12.6
38AUD14/40RU14	2	10.4	125.0	10.9	11.5
38AUD16/40RU16	2	12.5	162.0	13.5	12.0
38AUD25/40RU25	2	16.7	202.2	16.6	12.2

LEGEND

AHRI – Air Conditioning, Heating and Refrigeration Institute
ASHRAE – American Society of Heating, Refrigerating and Air Conditioning, Inc.
EER – Energy Efficiency Ratio
IEER – Integrated Energy Efficiency Ratio

NOTES

1. Rated in accordance with AHRI Standard 340/360, as appropriate.
2. Ratings are based on:
   Cooling Standard: 27°C (80°F) db, 19°C (67°F) wb indoor air temp and 35°C (95°F) db outdoor air temp.
3. All units comply with ASHRAE 90.1 Energy Standard for minimum EER and IEER requirements.

38AU

SOUND POWER LEVELS, dB

UNIT	COOLING STAGES	OUTDOOR SOUND (dB)								
		A–WEIGHTED	63	125	250	500	1000	2000	4000	8000
NOVATION – All Aluminum Coil Design										
38AUZ07	1	82	78.7	91.2	84.4	79.7	76.9	73.5	71.9	67.5
38AUZ08	1	81	81.7	89.7	82.6	77.6	74.4	70.3	68.0	64.2
38AUD12	2	78	79.2	81.1	78.4	75.0	72.9	68.2	66.4	68.2
38AUD14	2	79	76.2	78.6	78.1	75.1	75.2	71.4	67.9	65.1
38AUD16	2	80	90.3	81.8	78.0	76.7	75.2	70.5	66.4	61.9
RTPF – Round Tube/Plate Fin Coil Design										
38AUZ07	1	83	81.7	88.2	84.0	79.7	78.1	74.0	71.4	68.0
38AUZ08	1	83	81.7	88.2	84.0	79.7	78.1	74.0	71.4	68.0
38AUD12	2	80	76.0	79.9	79.8	77.4	75.6	69.8	67.8	66.4
38AUD16	2	83	86.7	81.2	78.9	80.4	78.0	74.2	70.2	65.0
38AUD25	2	85	91.0	85.0	80.0	86.0	79.0	73.0	68.0	63.0

NOTE: Outdoor sound data is measure in accordance with AHRI standard 270–2008.
LEGEND:
dB = Decibel

PHYSICAL DATA

SINGLE CIRCUIT MODELS with RTPF – Round Tube/Plate Fin Coil Design		
	38AUZ07	38AUZ08
Refrigeration System		
# Circuits / # Comp. / Type	1 / 1 / Scroll	1 / 1 / Scroll
R–410a shipping charge A/B (lbs, 50 Hz)	11	13
System charge w/ fan coil* (50 Hz)	14	17
Metering device	TXV	TXV
High–press. Trip / Reset (psig)	630 / 505	630 / 505
Low–press. Trip / Reset (psig)	54 / 117	54 / 117
Cond. Coil		
Material	Al/Cu	Al/Cu
Coil type	RTPF	RTPF
Rows / FPI	2 / 17	2 / 17
Total face area (ft2)	17.5	17.5
Cond. fan / motor		
Qty / Motor drive type	2 / direct	2 / direct
Motor HP / RPM	1/4 / 1100	1/4 / 1100
Fan diameter (in)	22	22
Nominal Airflow (cfm)	6000	6000
Watts (total)	610	610
Piping Connections		
Qty / Suction (in. ODS)	1 / 1 1/8	1 / 1 1/8
Qty / Liquid (in. ODS)	1 / 3/8	1 / 1/2

SINGLE CIRCUIT MODELS with NOVATION – All Aluminum coil Design		
	38AUZ07	38AUZ08
Refrigeration System		
# Circuits / # Comp. / Type	1 / 1 / Scroll	1 / 1 / Scroll
R–410a shipping charge A/B (lbs)	4.4	4.9
System charge w/ fan coil	8.4	10.2
System charge w/ fan coil (50hz)	9.0	12.3
Metering device	TXV	TXV
High–press. Trip / Reset (psig)	630 / 505	630 / 505
Low–press. Trip / Reset (psig)	54 / 117	54 / 117
Cond. Coil		
Material	Al	Al
Coil type	microchannel	microchannel
Rows / FPI	1 / 17	1 / 17
total face area (ft2)	17.5	20.5
Cond. fan / motor		
Qty / Motor drive type	2 / direct	2 / direct
Motor HP / RPM	1/4 / 1100	1/4 / 1100
Fan diameter (in)	22	22
Nominal Airflow (cfm)	6,000	6,000
Watts (total)	610	610

RTPF – Round tube /plate fin design
* Approximate system charge with about 25 ft piping of sizes indicated with matched 40RU.

PHYSICAL DATA (CONT)

DUAL CIRCUIT MODELS with RTPF – Round Tube/Plate Fin Coil Design			
	38AUD12	**38AUD16**	**38AUD25**
Refrigeration System			
# Circuits / # Comp. / Type	2 / 2 / Scroll	2 / 2 / Scroll	2 / 2 / Scroll
R–410a shipping charge A/B (lbs, 50 Hz)	8.0 / 8.0	16.0 / 16.0	14.0 / 14.0
System charge w/ fan coil* (50 Hz)	11.0 / 10.0	22.0 / 22.0	19.0 / 19.0
Metering device	TXV	TXV	TXV
High–press. Trip / Reset (psig)	630 / 505	630 / 505	630 / 505
Low–press. Trip / Reset (psig)	54 / 117	54 / 117	54 / 117
Compressor			
Model	ZP51 (2)	ZP83 (2)	ZP103 (2)
Oil Charge A/B (oz)	42 / 42	60 / 60	110 / 110
Speed rpm 50 Hz	2900	2900	2900
Cond. Coil			
Material	Al/Cu	Al/Cu	Al/Cu
Coil type	RTPF	RTPF	RTPF
Rows / FPI	2 / 17	2 / 17	2 / 17
Total face area (ft2)	25.1	23.5 x 2	25.0 x 2
Cond. fan / motor			
Qty / Motor drive type	2 / direct	3 / direct	4 / direct
Motor HP / RPM	1/4 / 1100	1/4 / 1100	1/4 / 1100
Fan diameter (in)	22	22	22
Nominal Airflow (cfm)	6000	9000	12000
Watts (total)	610	970	1150
Piping Connections			
Qty / Suction (in. ODS)	2 / 1 1/8	2 / 1 3/8	2 / 1 3/8
Qty / Liquid (in. ODS)	2 / 3/8	2 / 1/2	2 / 1/2

DUAL CIRCUIT MODELS with NOVATION – All Aluminum coil Design			
	38AUD12	**38AUD14**	**38AUD16**
Refrigeration System			
# Circuits / # Comp. / Type	2/2/Scroll	2/2/Scroll	2/2/Scroll
R–410a shipping charge A/B (lbs)	3.0 /3.1	3.7/3.9	6.1/6.1
System charge w/ fan coil	7.4 / 7.4	10.8 / 10.8	12.0/12.0
System charge w/ fan coil (50hz)	7.5 / 7.5	11.2 / 11.2	14.0 /14.0
Metering device	TXV	TXV	TXV
High–press. Trip / Reset (psig)	630 / 505	630 / 505	630 / 505
Low–press. Trip / Reset (psig)	54 / 117	54 / 117	54 / 117
Cond. Coil			
Material	Al	Al	Al
Coil type	microchannel	microchannel	microchannel
Rows / FPI	1 / 17	1 / 17	1 / 17
total face area (ft2)	25.0	31.8	25.0 x 2
Cond. fan / motor			
Qty / Motor drive type	2 / direct	2 / direct	3 / direct
Motor HP / RPM	1/4 / 1100	1/4 / 1100	1/4 / 1100
Fan diameter (in)	22	22	22
Nominal Airflow (cfm)	6,000	6,000	10,000
Watts (total)	610	610	970

RTPF – Round tube /plate fin design
* Approximate system charge with about 25 ft piping of sizes indicated with matched 40RU.

DIMENSIONS

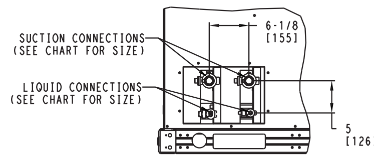
UNIT	STD. UNIT WT.		CORNER A		CORNER B		CORNER C		CORNER D		CENTER OF GRAVITY			UNIT HEIGHT
	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	X	Y	Z	H
38AUZ-07 (MCHX)	149	328	58	128	31	68	28	62	32	70	21 [533.4]	19 [482.6]	13 [330.2]	42-3/8 [1076.0]
38AUZ-08 (MCHX)	160	353	63	138	33	72	29	65	35	78	19 [482.6]	23 [584.2]	13 [330.2]	42-3/8 [1076.0]
38AUD-12 (MCHX)	226	499	88	193	50	111	38	72	56	123	20 [508.0]	23 [584.2]	15 [381.0]	50-3/8 [1279.2]
38AUD-14 (MCHX)	229	505	86	190	40	88	34	76	68	151	20 [508.0]	24 [609.6]	15 [381.0]	50-3/8 [1279.2]
38AUZ-07 (RTPF)	176	389	64	141	44	96	28	62	41	91	18 [457.2]	24 [609.6]	21 [533.4]	42-3/8 [1076.0]
38AUZ-08 (RTPF)	177	391	64	142	44	96	28	62	41	91	18 [457.2]	24 [609.6]	21 [533.4]	42-3/8 [1076.0]
38AUD-12 (RTPF)	234	516	84	185	53	117	38	83	59	131	19 [482.6]	23 [584.2]	24 [609.6]	50-3/8 [1279.2]

CG CENTER OF GRAVITY

DIRECTION OF AIR FLOW

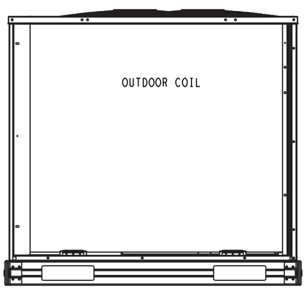
DIMENSIONS IN [ ] ARE IN MM

SERVICE VALVE CONNECTIONS		
UNIT	SUCTION	LIQUID
38AUZ07	1-1/8 [28.6]	3/8 [9.5]
38AUZ08	1-1/8 [28.6]	1/2 [12.7]
38AUD12	1-1/8 [28.6]	3/8 [9.5]
38AUD14	1-3/8 [34.9]	1/2 [12.7]

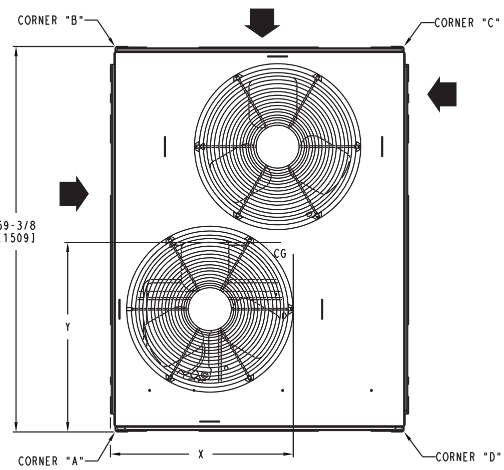


RIGHT SIDE VIEW (FOR 38AUD SYSTEMS)

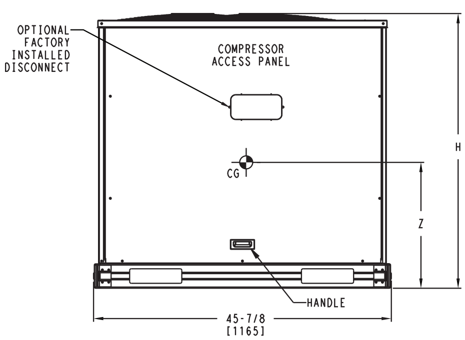
38AU



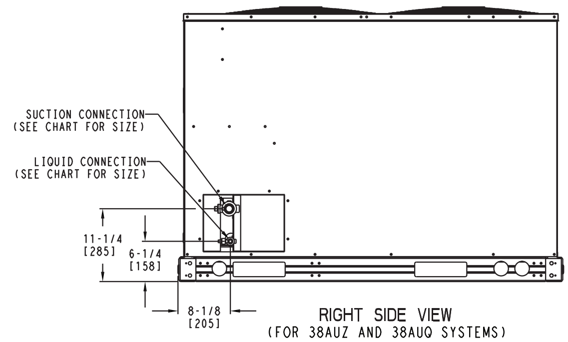
REAR VIEW



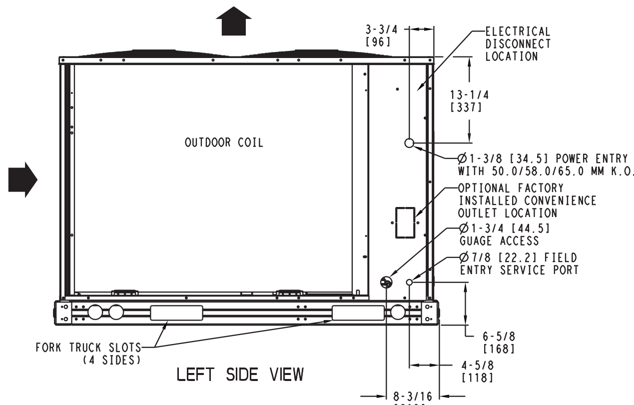
TOP VIEW



FRONT VIEW



RIGHT SIDE VIEW (FOR 38AUZ AND 38AUQ SYSTEMS)



LEFT SIDE VIEW

NOTES:

1. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
   A. BOTTOM TO COMBUSTIBLE SURFACES: 0 INCHES.
   B. OUTDOOR COIL, FOR PROPER AIR FLOW: 36 INCHES ONE SIDE, 12 INCHES THE OTHER. THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
   C. OVERHEAD: 60 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
   D. BETWEEN UNITS: CONTROL BOX SIDE, 42 INCHES PER NEC.
   E. BETWEEN UNIT AND UNGROUNDED SURFACES: CONTROL BOX SIDE, 36 INCHES PER NEC.
   F. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES: CONTROL BOX SIDE, 42 INCHES PER NEC.

2. WITH EXCEPTION OF THE CLEARANCE FOR THE OUTDOOR COIL AS STATED IN NOTE 1B, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.

3. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B OR C ROOF COVERING MATERIAL.

C10590

DIMENSIONS (cont.)

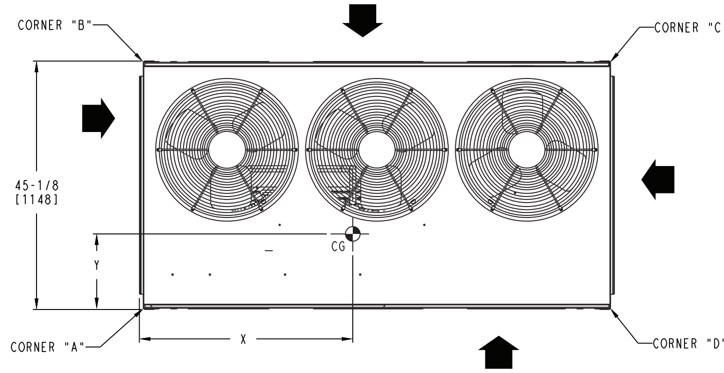
UNIT	STD. UNIT WT.		CORNER A		CORNER B		CORNER C		CORNER D		CENTER OF GRAVITY			UNIT HEIGHT
	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	X	Y	Z	H
38AUD16 (MCHX)	288	633	100	220	61	134	61.5	135	65.5	144	38 [965.2]	19 [482.6]	15 [381]	50-3/8 [1279.2]
38AUD16 (RTPF)	332	731	107	237	78	172	61	135	84	186	38 [965.2]	19 [482.6]	17 [431.8]	50-3/8 [1279.2]

CG CENTER OF GRAVITY

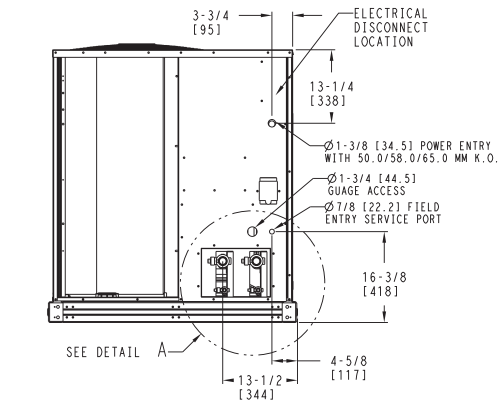
DIRECTION OF AIR FLOW

DIMENSIONS IN [ ] ARE IN MM

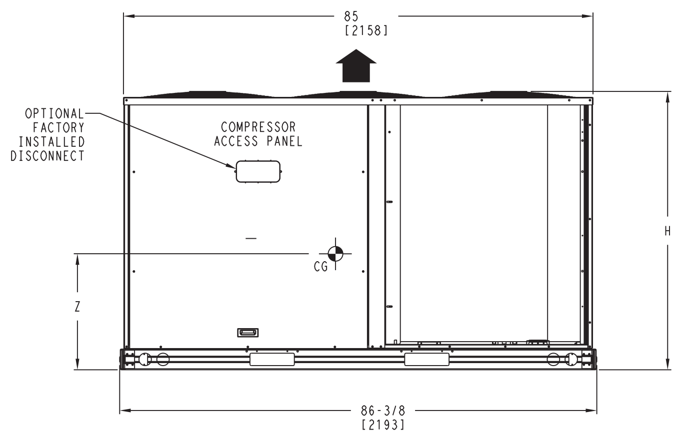
SERVICE VALVE CONNECTIONS			QTY
UNIT	SUCTION	LIQUID	
38AUD16	1-3/8 [34.9]	1/2 [12.7]	2 EA



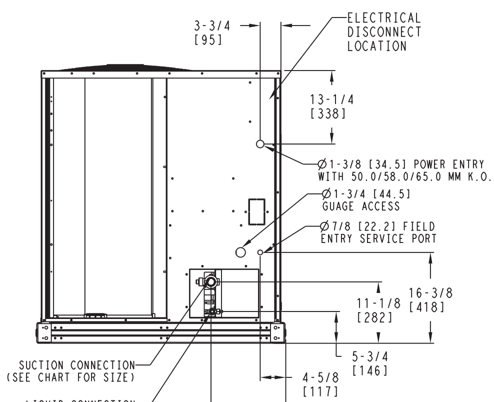
TOP VIEW



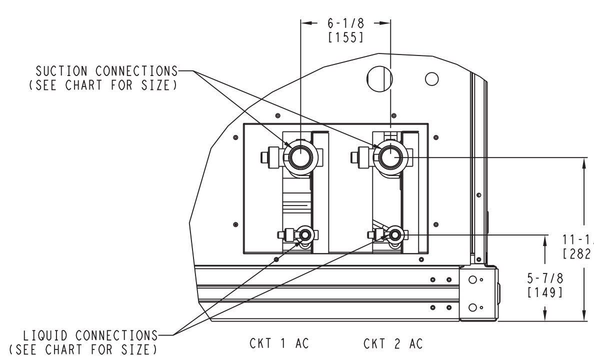
LEFT SIDE VIEW FOR 38AUD SYSTEMS



FRONT VIEW



LEFT SIDE VIEW



DETAIL A
(NOTE POSITION OF CKT 1)

NOTES:

1. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
   A. BOTTOM TO COMBUSTIBLE SURFACES: 0 INCHES.
   B. OUTDOOR COIL, FOR PROPER AIR FLOW: 36 INCHES ONE SIDE, 12 INCHES THE OTHER. THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
   C. OVERHEAD: 60 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
   D. BETWEEN UNITS: CONTROL BOX SIDE, 42 INCHES PER NEC.
   E. BETWEEN UNIT AND UNGROUNDED SURFACES: CONTROL BOX SIDE, 36 INCHES PER NEC.
   F. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES: CONTROL BOX SIDE, 42 INCHES PER NEC.
2. WITH EXCEPTION OF THE CLEARANCE FOR THE OUTDOOR COIL AS STATED IN NOTE 1B, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
3. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B OR C ROOF COVERING MATERIAL.

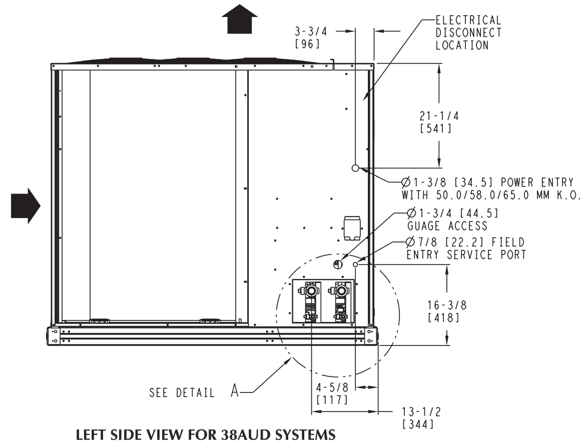
C10591

UNIT	STD. UNIT WT.		CORNER A		CORNER B		CORNER C		CORNER D		CENTER OF GRAVITY			UNIT HEIGHT
	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	X	Y	Z	H
38AUD25 (RTPF)	444	978	163	360	85	188	67	147	128	283	38 [965.2]	23 [584.2]	17 [431.8]	50-3/8 [1279.2]

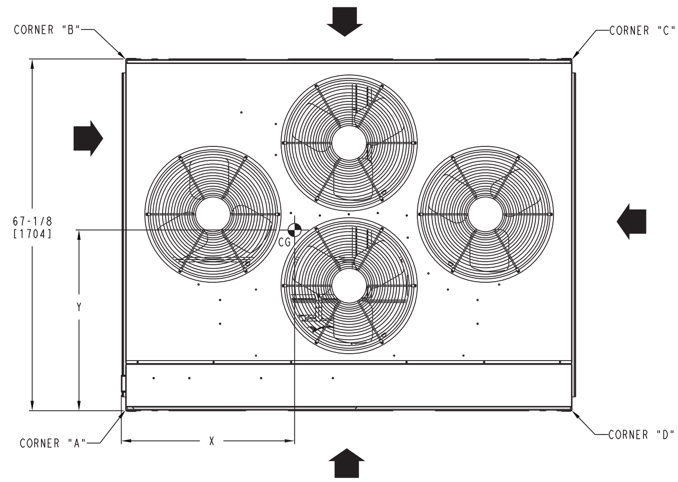
CG — CENTER OF GRAVITY

DIRECTION OF AIR FLOW

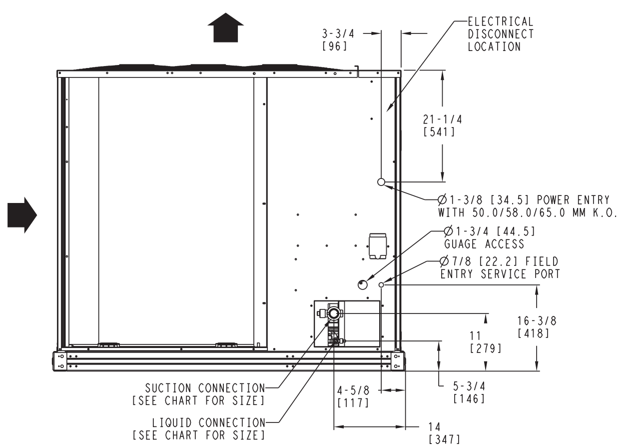
DIMENSIONS IN [ ] ARE IN MM



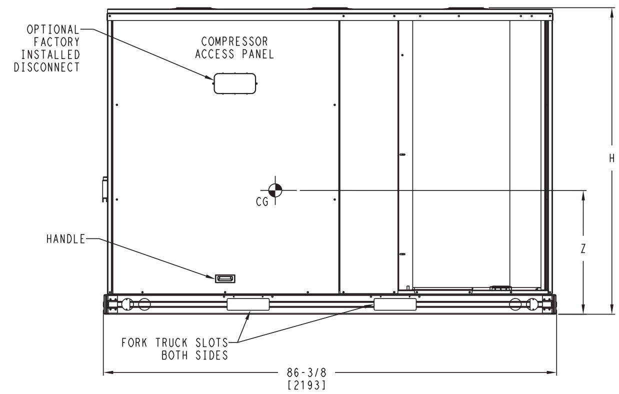
LEFT SIDE VIEW FOR 38AUD SYSTEMS



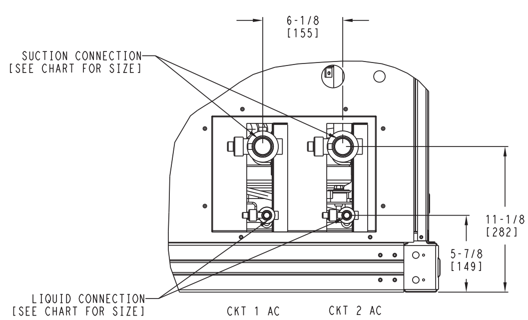
TOP VIEW



LEFT SIDE VIEW



FRONT VIEW



DETAIL A
(NOTE POSITION OF CKT 1)

NOTES:
1. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
   A. BOTTOM TO COMBUSTIBLE SURFACES: 0 INCHES.
   B. OUTDOOR COIL, FOR PROPER AIR FLOW: 36 INCHES ONE SIDE, 12 INCHES THE OTHER. THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
   C. OVERHEAD: 60 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
   D. BETWEEN UNITS: CONTROL BOX SIDE, 42 INCHES PER NEC.
   E. BETWEEN UNIT AND UNGROUNDED SURFACES: CONTROL BOX SIDE, 36 INCHES PER NEC.
   F. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES: CONTROL BOX SIDE, 42 INCHES PER NEC.
2. WITH EXCEPTION OF THE CLEARANCE FOR THE OUTDOOR COIL AS STATED IN NOTE 1B, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
3. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B OR C ROOF COVERING MATERIAL.

SERVICE VALVE CONNECTIONS			QTY
UNIT	SUCTION	LIQUID	
38AUD25	1-3/8 [34.9]	1/2 [12.7]	2 EA

C10592

38AU

OPTIONS AND ACCESSORIES

38AUZ/D OPTIONS AND ACCESSORIES

ITEM	OPTION*	ACCESSORY†
Disconnect Switch (non-fused)	X	
Special-coated Coil Protection	X	
Low Ambient Temperature MotorMaster I® Control	X	X
Wired Condenser Coil Grille (Novation 07-14 models only)		X
Louvered Hail Guard	X	X
Programmable Thermostats		X

* Factory-installed option.
† Field-installed accessory.

38AUZ/38AUD factory-installed options

E-coated aluminum-fin coils have a flexible and durable epoxy coating uniformly applied to all coil surfaces. Unlike brittle phenolic dip and bake coatings, E-coating provides superior protection with unmatched flexibility, edge coverage, metal adhesion, thermal performance, and most importantly, corrosion resistance.

E-coated coils provide this protection since all coil surfaces are completely encapsulated from environmental contamination. This coating is especially suitable in industrial environments.

Pre-coated coils (RTPF coils only) provide protection in mild coastal environments.

–29°C (–20°F) low-ambient temperature kit option (MotorMaster I®) controls outdoor-fan motor operation to maintain the correct head pressure at low outdoor ambient temperatures.

Louvered hail guard package protects coils against damage from flying debris and hail.

Non-fused disconnect switch is used to remove power locally at the condensing unit. This switch also includes a power lockout capability to protect the service person. This lockout switch saves the service person time and effort because there is no need to access a distant disconnect switch while servicing the unit.

NOTE: Non-fused disconnect switch cannot be used when unit MOCP electrical rating exceeds 80 amps.

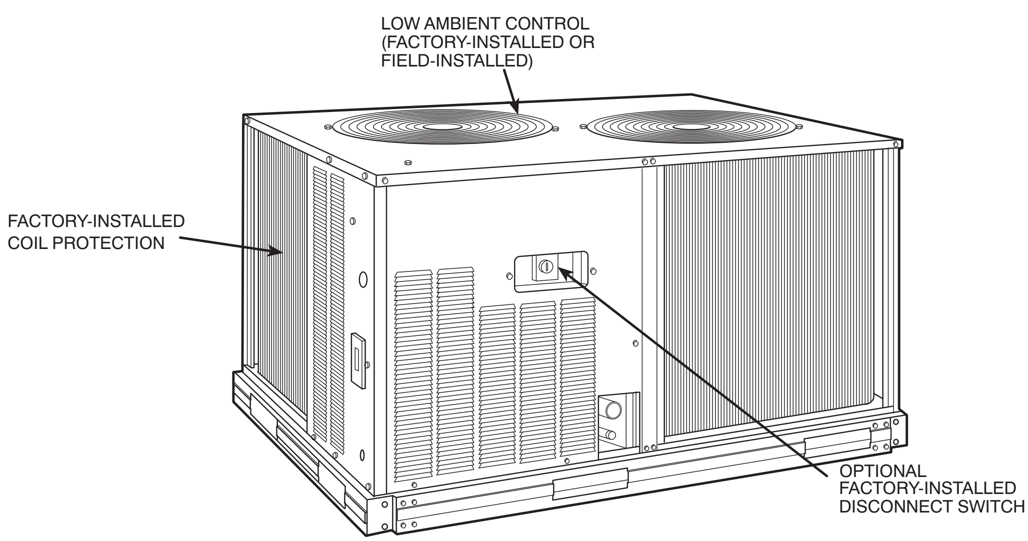
38AUZ/D field-installed accessories

–29°C (–20°F) low-ambient temperature kit accessory (MotorMaster I®) controls outdoor-fan motor operation to maintain the correct head pressure at low outdoor ambient temperatures.

Louvered hail guard package protects coils against damage from flying debris and hail.

Condenser coil grille package protects condensing unit coil from impact by large objects and vandalism.

Carrier's line of thermostats provide both programmable and non-programmable capability with the new **Debonair®** line of commercial programmable thermostats. The **Commercial Electronic** thermostats provide 7-day programmable capability for economical applications.



C10609

40RU OPTIONS AND ACCESSORIES

ITEM	OPTION*	ACCESSORY†
Alternate Fan Motors	X	
Alternate Drives	X	
CO_2 Sensors		X
Condensate Drain Trap		X
Discharge Plenum		X
Economizer		X
Electric Heat		X
Hot Water Heating Coils		X
Overhead Suspension Package		X
Prepainted Units	X	
Return Air Grille		X
Steam Heating Coil		X
Subbase		X

* Factory-installed option.
† Field-installed accessory.

40RU factory-installed options

Alternate fan motors and drives are available to provide the widest possible range of performance.

Units constructed of prepainted steel are available from the factory for applications that require painted units. Unit color is American Sterling Gray.

40RU field-installed accessories

Two-row hot water coils have $^5/_8$-in. diameter copper tubes mechanically bonded to aluminum plate fins. Coils have non-ferrous headers.

One-row steam coil has 1-in. OD copper tube and aluminum fins. The Inner Distributing Tube (IDT) design provides uniform temperatures across the coil face. The IDT steam coils are especially suited to applications where sub-freezing air enters the unit.

Electric resistance heat coils have an open-wire design and are mounted in a rigid frame. Safety cutouts for high temperature conditions are standard.

Economizer (enthalpy controlled) provides ventilation air and provides “free” cooling if the outside ambient temperature and humidity are suitable. The economizer can also be used in conjunction with Carrier Comfort System thermostats and CO_2 sensors to help meet indoor air quality requirements. The economizer can be used in both vertical and horizontal positions.

Discharge plenum directs the air discharge into the occupied space; integral horizontal and vertical louvers enable redirection of airflow. This accessory is available unpainted or painted.

Return-air grille provides a protective barrier over the return-air opening and gives a finished appearance to units installed in the occupied space. This accessory is available unpainted or painted.

Subbase provides a stable, raised platform and room for condensate drain connection for floor-mounted units. This accessory is available unpainted or painted.

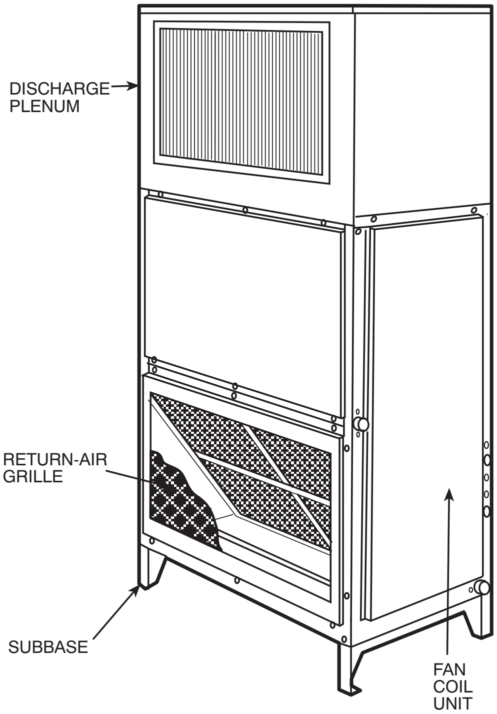
Overhead suspension package includes necessary brackets to support units in horizontal installations.

CO_2 sensors can be used in conjunction with the economizer accessory to help meet indoor air quality requirements. The sensor signals the economizer to open when the CO_2 level in the space exceeds the setpoint. A Carrier Comfort System programmable thermostat can also be used to override the sensor if the outside-air temperature is too high or too low.

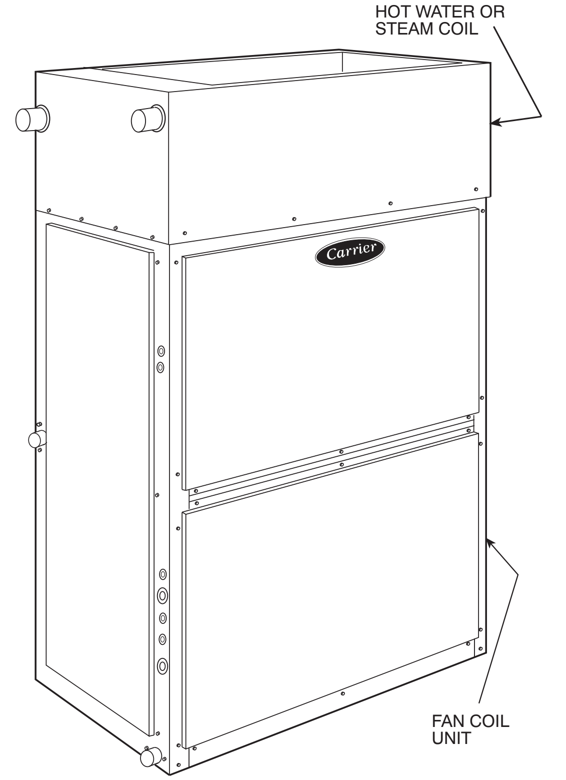
Condensate drain trap includes an overflow shutoff switch that can be wired to turn off the unit if the trap becomes plugged. The kit also includes a wire harness that can be connected to an alarm if desired. The transparent trap is designed for easy service and maintenance.

OPTIONS AND ACCESSORIES (cont.)

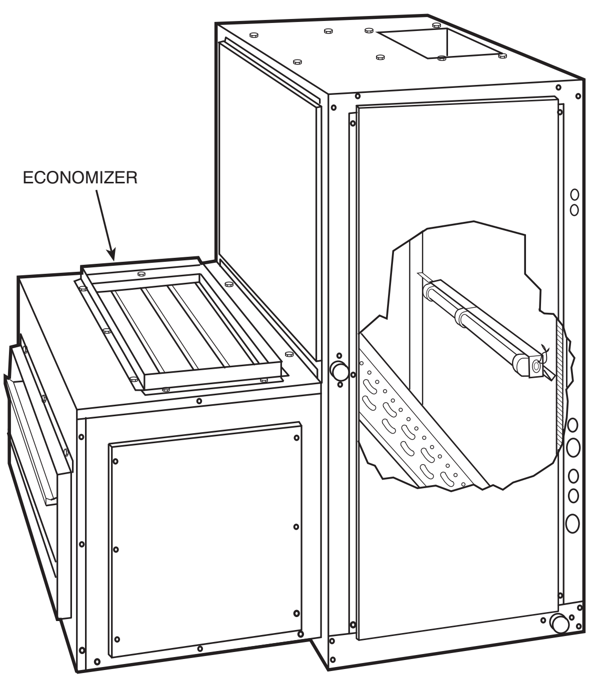
40RU WITH DISCHARGE PLENUM
RETURN-AIR GRILLE AND SUBBASE



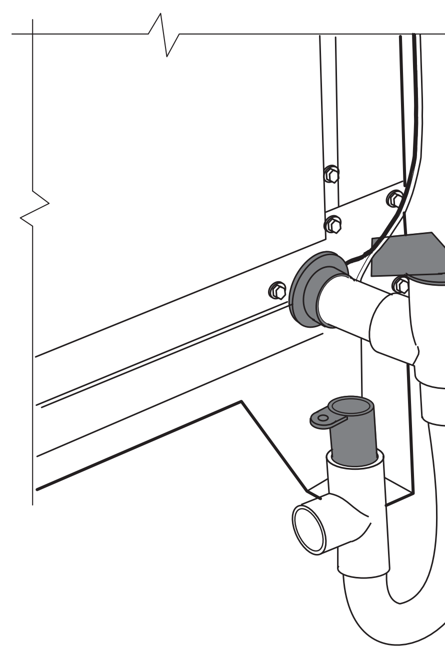
40RU WITH HOT WATER OR STEAM COIL



40RU WITH ECONOMIZER



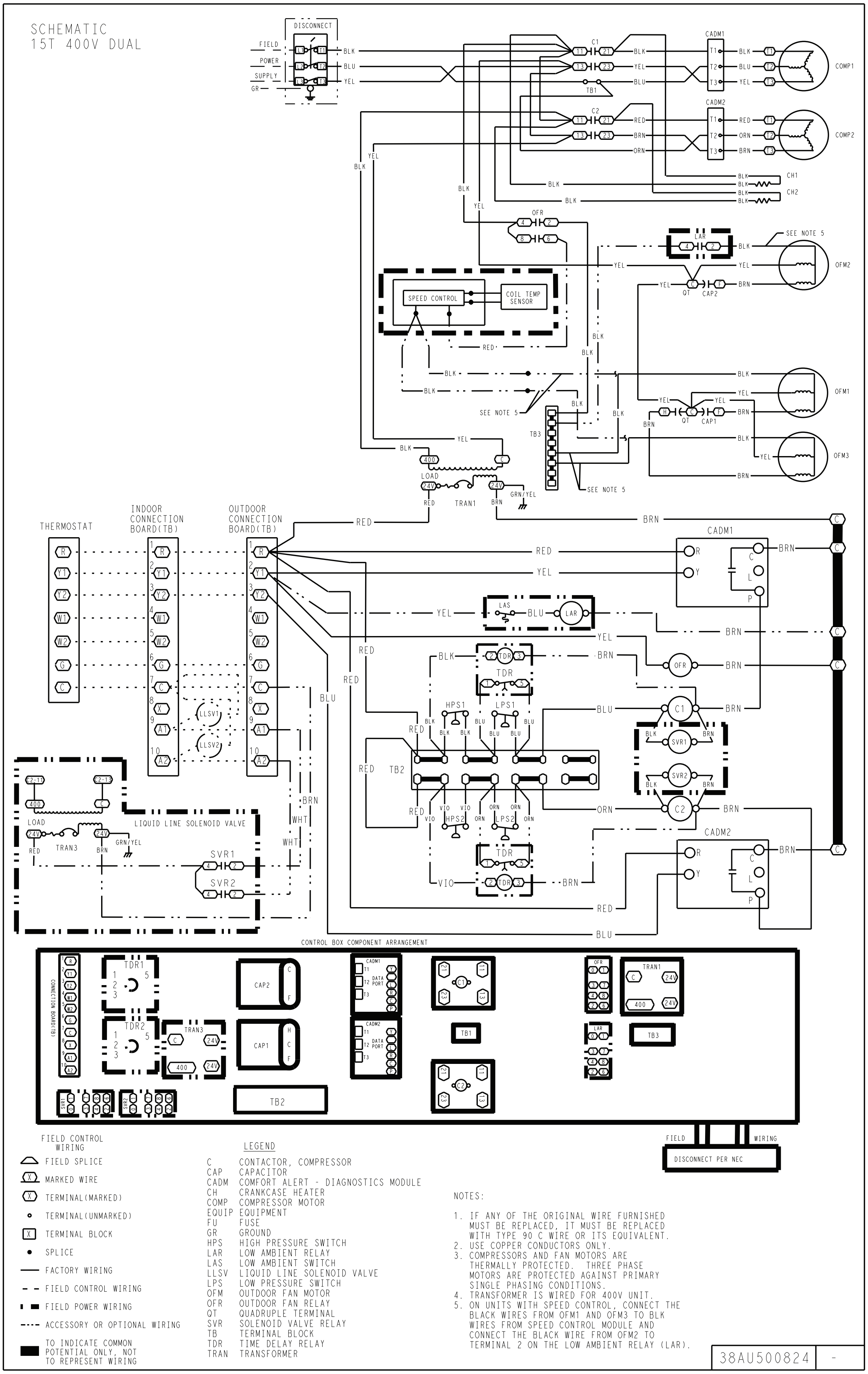
40RU WITH CONDENSATE TRAP



C10610

TYPICAL WIRING SCHEMATIC

38AU



C10593

Typical 38AUD16 Dual Circuit

PERFORMANCE DATA

38AUZ07 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	11.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.4	38.1	44.2	49.5	54.5	59.6
-4	TC	13.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.9	38.7	44.2	49.5	54.3	60.0
-1	TC	14.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.5	39.3	44.8	50.0	54.9	61.9
2	TC	16.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.1	39.8	45.4	50.9	56.1	61.6
4	TC	17.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.7	40.4	45.9	51.5	56.9	62.2
7	TC	18.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.2	41.0	46.5	52.0	57.4	62.5
10	TC	20.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.8	41.6	47.1	52.5	57.9	63.3

38AUZ07 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	40.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	95.7	100.6	111.5	121.1	130.1	139.3
25	TC	45.2	43.8	41.0	38.0	34.5	31.3
	kW	3.6	3.8	4.4	5.0	5.7	6.4
	SDT	96.7	101.6	111.6	121.1	129.8	140.1
30	TC	49.8	48.4	45.5	42.2	38.6	36.0
	kW	3.5	3.8	4.4	5.0	5.7	6.6
	SDT	97.8	102.7	112.6	122.1	130.8	143.5
35	TC	54.6	53.2	50.2	47.0	43.2	40.0
	kW	3.5	3.7	4.3	5.0	5.8	6.6
	SDT	98.8	103.7	113.7	123.6	132.9	142.9
40	TC	59.5	58.0	54.9	51.6	48.1	44.3
	kW	3.4	3.7	4.3	5.0	5.7	6.6
	SDT	99.8	104.7	114.7	124.6	134.5	143.9
45	TC	64.4	62.9	59.7	56.4	52.8	48.6
	kW	3.3	3.6	4.2	4.9	5.7	6.5
	SDT	100.8	105.8	115.7	125.6	135.4	144.4
50	TC	69.3	67.8	64.6	61.2	57.6	53.6
	kW	3.2	3.5	4.2	4.9	5.6	6.5
	SDT	101.9	106.8	116.7	126.5	136.3	145.9

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	15.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	34.5	37.2	42.7	48.2	53.5	59.1
-4	TC	16.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.0	37.7	43.2	48.7	53.5	58.9
-1	TC	18.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.6	38.3	43.7	49.2	54.6	59.5
2	TC	20.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.1	38.8	44.3	49.7	55.1	60.5
4	TC	22.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.7	39.4	44.8	50.2	55.6	60.9
7	TC	23.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.3	40.0	45.4	50.7	56.1	61.4
10	TC	25.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.0	40.6	46.0	51.3	56.6	61.8

38AUZ08 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	52.2	50.6	47.2	43.7	39.9	36.3
	kW	4.1	4.4	5.2	6.0	6.8	7.8
	SDT	94.1	99.0	108.9	118.8	128.2	138.4
25	TC	57.7	55.9	52.3	48.6	44.0	40.1
	kW	4.1	4.5	5.2	6.0	6.9	7.9
	SDT	95.0	99.9	109.8	119.7	128.3	138.1
30	TC	63.4	61.5	57.7	53.8	49.6	44.7
	kW	4.2	4.5	5.3	6.1	7.0	8.0
	SDT	96.0	100.9	110.7	120.6	130.3	139.1
35	TC	69.3	67.3	63.3	59.2	54.9	50.4
	kW	4.2	4.6	5.3	6.2	7.1	8.0
	SDT	97.0	101.9	111.7	121.5	131.3	140.9
40	TC	75.2	73.3	69.2	64.9	60.4	55.6
	kW	4.3	4.6	5.4	6.2	7.1	8.1
	SDT	98.1	102.9	112.7	122.4	132.1	141.7
45	TC	81.3	79.3	75.2	70.7	66.0	61.0
	kW	4.3	4.6	5.4	6.2	7.2	8.2
	SDT	99.2	104.0	113.7	123.3	132.9	142.5
50	TC	87.4	85.4	81.1	76.6	71.7	66.5
	kW	4.3	4.7	5.5	6.3	7.2	8.2
	SDT	100.3	105.1	114.7	124.3	133.8	143.3

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

38AUD12 Total Unit 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	19.5	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.5	38.0	43.1	48.2	53.2	58.2
-4	TC	21.5	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.2	38.7	43.8	48.8	53.8	58.7
-1	TC	23.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.9	39.5	44.5	49.5	54.4	59.2
2	TC	26.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.7	40.2	45.2	50.1	55.0	59.8
4	TC	28.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.5	40.9	45.9	50.8	55.6	60.3
7	TC	30.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.2	41.7	46.6	51.5	56.2	60.9
10	TC	33.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.1	42.5	47.3	52.2	56.9	61.4

38AUD12 Total Unit 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	66.5	64.3	59.8	55.1	50.0	44.7
	kW	5.2	5.6	6.4	7.3	8.2	9.1
	SDT	95.9	100.5	109.6	118.8	127.8	136.7
25	TC	73.4	71.0	66.1	61.0	55.7	50.0
	kW	5.2	5.6	6.5	7.4	8.3	9.2
	SDT	97.2	101.7	110.8	119.9	128.9	137.7
30	TC	80.8	78.2	72.9	67.3	61.6	55.5
	kW	5.3	5.7	6.6	7.5	8.4	9.3
	SDT	98.5	103.0	112.1	121.1	129.9	138.6
35	TC	88.6	85.8	80.0	74.0	67.9	61.4
	kW	5.4	5.8	6.6	7.5	8.5	9.4
	SDT	99.8	104.3	113.3	122.3	131.1	139.6
40	TC	96.8	93.8	87.5	81.2	74.5	67.4
	kW	5.5	5.9	6.7	7.6	8.6	9.5
	SDT	101.2	105.7	114.6	123.4	132.2	140.6
45	TC	105.6	102.2	95.4	88.5	81.2	73.6
	kW	5.6	5.9	6.8	7.7	8.7	9.6
	SDT	102.6	107.0	115.9	124.6	133.2	141.6
50	TC	114.7	111.0	103.6	96.0	88.0	79.6
	kW	5.6	6.0	6.9	7.8	8.7	9.7
	SDT	104.1	108.4	117.2	125.9	134.3	142.6

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

38AUD12 Circuit A 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	9.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.4	37.9	43.0	48.1	53.1	58.0
-4	TC	10.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.1	38.6	43.7	48.7	53.7	58.6
-1	TC	11.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.8	39.3	44.3	49.3	54.3	59.1
2	TC	12.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.5	40.0	45.0	50.0	54.9	59.6
4	TC	14.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.3	40.8	45.7	50.6	55.5	60.1
7	TC	15.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.1	41.5	46.4	51.3	56.0	60.7
10	TC	16.5	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.9	42.3	47.1	52.0	56.6	61.2

38AUD12 Circuit A 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	32.9	31.8	29.6	27.2	24.7	22.1
	kW	2.6	2.8	3.2	3.6	4.1	4.5
	SDT	95.7	100.3	109.4	118.6	127.6	136.4
25	TC	36.3	35.1	32.6	30.1	27.4	24.6
	kW	2.6	2.8	3.2	3.7	4.1	4.6
	SDT	96.9	101.5	110.6	119.7	128.6	137.4
30	TC	39.9	38.6	35.9	33.2	30.3	27.3
	kW	2.6	2.8	3.3	3.7	4.2	4.7
	SDT	98.3	102.8	111.8	120.8	129.7	138.3
35	TC	43.7	42.2	39.4	36.4	33.3	30.1
	kW	2.7	2.9	3.3	3.8	4.2	4.7
	SDT	99.6	104.1	113.0	122.0	130.7	139.3
40	TC	47.6	46.1	43.0	39.8	36.5	32.9
	kW	2.7	2.9	3.3	3.8	4.3	4.8
	SDT	101.0	105.4	114.3	123.1	131.8	140.3
45	TC	51.8	50.1	46.8	43.3	39.6	35.9
	kW	2.8	3.0	3.4	3.8	4.3	4.8
	SDT	102.3	106.7	115.5	124.3	132.9	141.3
50	TC	56.2	54.3	50.6	46.8	42.8	38.6
	kW	2.8	3.0	3.4	3.9	4.3	4.8
	SDT	103.8	108.1	116.8	125.5	133.9	142.1

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD12 Circuit B 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	9.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.6	38.2	43.3	48.3	53.3	58.3
-4	TC	10.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.3	38.9	43.9	49.0	53.9	58.8
-1	TC	12.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.1	39.6	44.6	49.6	54.6	59.4
2	TC	13.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.8	40.3	45.3	50.3	55.2	60.0
4	TC	14.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.6	41.1	46.0	51.0	55.8	60.5
7	TC	15.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.4	41.8	46.8	51.6	56.4	61.1
10	TC	17.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.2	42.7	47.5	52.3	57.1	61.7

38AUD12 Circuit B 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	33.6	32.5	30.2	27.8	25.3	22.7
	kW	2.6	2.8	3.2	3.7	4.1	4.5
	SDT	96.1	100.7	109.9	119.0	128.0	136.9
25	TC	37.1	35.9	33.5	30.9	28.2	25.4
	kW	2.6	2.8	3.2	3.7	4.2	4.6
	SDT	97.4	101.9	111.1	120.2	129.1	137.9
30	TC	40.9	39.6	37.0	34.2	31.3	28.2
	kW	2.7	2.9	3.3	3.7	4.2	4.7
	SDT	98.7	103.3	112.3	121.3	130.2	138.9
35	TC	44.9	43.5	40.6	37.6	34.6	31.3
	kW	2.7	2.9	3.3	3.8	4.3	4.7
	SDT	100.1	104.6	113.6	122.6	131.4	139.9
40	TC	49.2	47.7	44.5	41.4	38.0	34.5
	kW	2.7	2.9	3.4	3.8	4.3	4.8
	SDT	101.5	106.0	114.9	123.7	132.5	141.0
45	TC	53.7	52.1	48.7	45.2	41.6	37.8
	kW	2.8	3.0	3.4	3.9	4.3	4.8
	SDT	102.9	107.3	116.2	125.0	133.6	142.0
50	TC	58.5	56.7	53.0	49.2	45.2	41.1
	kW	2.8	3.0	3.5	3.9	4.4	4.9
	SDT	104.4	108.8	117.6	126.2	134.7	143.0

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

38AUD14 Total Unit 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	24.5	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.5	39.0	44.0	48.9	53.7	58.4
-4	TC	27.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.4	39.8	44.8	49.6	54.4	59.1
-1	TC	29.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.2	40.7	45.6	50.4	55.1	59.7
2	TC	32.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.1	41.5	46.4	51.2	55.9	60.4
4	TC	35.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.0	42.4	47.2	52.0	56.6	61.1
7	TC	38.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.9	43.3	48.1	52.8	57.4	61.7
10	TC	40.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	41.9	44.3	48.9	53.6	58.1	62.4

38AUD14 Total Unit 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	83.7	80.8	74.6	68.0	61.0	53.9
	kW	7.0	7.5	8.4	9.3	10.2	11.0
	SDT	97.8	102.2	111.2	120.0	128.7	137.2
25	TC	92.1	89.0	82.3	75.4	67.9	60.3
	kW	7.1	7.6	8.5	9.5	10.4	11.3
	SDT	99.3	103.7	112.6	121.4	129.9	138.3
30	TC	101.0	97.5	90.5	83.0	75.3	66.8
	kW	7.3	7.7	8.7	9.7	10.6	11.6
	SDT	100.8	105.2	114.0	122.7	131.3	139.5
35	TC	110.2	106.5	98.9	91.0	82.4	73.5
	kW	7.4	7.9	8.8	9.8	10.8	11.8
	SDT	102.4	106.8	115.5	124.2	132.6	140.8
40	TC	119.8	115.7	107.6	98.9	89.8	80.1
	kW	7.6	8.0	9.0	10.0	11.0	12.1
	SDT	104.0	108.3	117.0	125.6	133.9	141.9
45	TC	129.6	125.1	116.1	106.8	97.1	86.6
	kW	7.7	8.2	9.2	10.2	11.2	12.3
	SDT	105.7	110.0	118.5	127.0	135.2	143.1
50	TC	139.3	134.6	124.7	114.8	104.1	93.1
	kW	7.9	8.4	9.3	10.4	11.4	12.5
	SDT	107.4	111.7	120.1	128.5	136.5	144.4

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

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38AUD14 Circuit A 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	12.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.3	38.8	43.7	48.7	53.5	58.2
-4	TC	13.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.1	39.6	44.5	49.4	54.2	58.9
-1	TC	14.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.9	40.4	45.3	50.1	54.9	59.5
2	TC	16.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.8	41.2	46.1	50.9	55.6	60.2
4	TC	17.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.7	42.1	46.9	51.7	56.4	60.9
7	TC	19.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.6	43.0	47.8	52.5	57.1	61.5
10	TC	20.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	41.6	43.9	48.6	53.3	57.8	62.2

38AUD14 Circuit A 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	42.0	40.5	37.4	34.2	30.7	27.1
	kW	3.5	3.8	4.2	4.7	5.1	5.5
	SDT	97.3	101.8	110.7	119.6	128.3	136.8
25	TC	46.2	44.7	41.4	37.9	34.2	30.3
	kW	3.6	3.8	4.3	4.8	5.2	5.7
	SDT	98.8	103.2	112.1	120.9	129.5	138.0
30	TC	50.7	49.0	45.5	41.7	37.9	33.7
	kW	3.7	3.9	4.4	4.9	5.3	5.8
	SDT	100.3	104.7	113.6	122.3	130.8	139.1
35	TC	55.4	53.5	49.7	45.8	41.5	37.0
	kW	3.7	4.0	4.4	4.9	5.4	5.9
	SDT	101.8	106.2	115.0	123.7	132.1	140.4
40	TC	60.2	58.2	54.1	49.8	45.2	40.4
	kW	3.8	4.0	4.5	5.0	5.6	6.1
	SDT	103.5	107.8	116.5	125.1	133.4	141.5
45	TC	65.2	62.9	58.4	53.8	48.9	43.7
	kW	3.9	4.1	4.6	5.1	5.6	6.2
	SDT	105.1	109.4	118.0	126.5	134.8	142.7
50	TC	70.2	67.8	62.8	57.9	52.5	47.0
	kW	4.0	4.2	4.7	5.2	5.7	6.3
	SDT	106.8	111.1	119.5	127.9	136.0	143.9

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD14 Circuit B 50 Hz — CONDENSER ONLY RATINGS — SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	12.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.8	39.3	44.2	49.1	53.9	58.6
-4	TC	13.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.6	40.1	45.0	49.9	54.6	59.3
-1	TC	14.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.5	41.0	45.9	50.7	55.4	60.0
2	TC	16.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.4	41.8	46.7	51.5	56.1	60.7
4	TC	17.5	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.3	42.7	47.5	52.3	56.9	61.3
7	TC	18.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	41.3	43.6	48.4	53.1	57.6	62.0
10	TC	20.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	42.2	44.6	49.2	53.9	58.4	62.7

38AUD14 Circuit B 50 Hz — CONDENSER ONLY RATINGS — ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	41.7	40.2	37.1	33.8	30.3	26.8
	kW	3.5	3.7	4.2	4.6	5.1	5.5
	SDT	98.2	102.7	111.6	120.4	129.1	137.6
25	TC	45.9	44.3	41.0	37.5	33.8	29.9
	kW	3.5	3.8	4.2	4.7	5.2	5.6
	SDT	99.7	104.2	113.1	121.8	130.3	138.7
30	TC	50.2	48.5	45.0	41.3	37.4	33.2
	kW	3.6	3.8	4.3	4.8	5.3	5.8
	SDT	101.3	105.7	114.5	123.2	131.7	139.9
35	TC	54.8	53.0	49.2	45.2	40.9	36.5
	kW	3.7	3.9	4.4	4.9	5.4	5.9
	SDT	102.9	107.3	116.0	124.6	133.0	141.2
40	TC	59.6	57.5	53.5	49.1	44.6	39.7
	kW	3.8	4.0	4.5	5.0	5.5	6.0
	SDT	104.6	108.9	117.6	126.1	134.4	142.4
45	TC	64.4	62.1	57.6	53.0	48.1	42.9
	kW	3.8	4.1	4.5	5.1	5.6	6.1
	SDT	106.3	110.5	119.1	127.5	135.7	143.6
50	TC	69.2	66.8	61.9	56.9	51.6	46.2
	kW	3.9	4.1	4.6	5.1	5.7	6.2
	SDT	108.0	112.3	120.6	129.0	137.0	144.8

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD16 Total Unit 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	31.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.4	38.0	43.2	48.3	53.4	58.4
-4	TC	34.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.2	38.7	43.8	48.9	53.9	58.9
-1	TC	38.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.9	39.5	44.5	49.5	54.5	59.4
2	TC	41.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.7	40.2	45.2	50.2	55.1	59.9
4	TC	45.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.5	41.0	45.9	50.9	55.7	60.5
7	TC	49.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.3	41.8	46.7	51.6	56.4	61.0
10	TC	53.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.2	42.6	47.5	52.3	57.0	61.6

38AUD16 Total Unit 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	107.8	104.6	97.9	90.9	83.7	76.1
	kW	8.4	8.9	10.0	11.2	12.5	13.9
	SDT	95.8	100.4	109.7	118.9	128.1	137.1
25	TC	118.8	115.3	107.9	100.4	92.4	84.1
	kW	8.6	9.1	10.2	11.4	12.7	14.1
	SDT	97.1	101.7	110.9	120.0	129.1	138.0
30	TC	130.5	126.6	118.6	110.3	101.6	92.7
	kW	8.7	9.2	10.3	11.6	12.9	14.3
	SDT	98.4	103.0	112.1	121.2	130.1	138.9
35	TC	142.8	138.5	129.7	120.8	111.5	101.6
	kW	8.9	9.4	10.5	11.7	13.0	14.4
	SDT	99.8	104.3	113.4	122.4	131.2	139.9
40	TC	155.8	151.0	141.6	132.0	121.7	110.7
	kW	9.1	9.6	10.7	11.9	13.2	14.6
	SDT	101.3	105.7	114.7	123.6	132.3	140.8
45	TC	169.5	164.3	154.0	143.4	132.0	120.1
	kW	9.3	9.8	10.9	12.1	13.4	14.8
	SDT	102.7	107.2	116.0	124.8	133.5	141.9
50	TC	183.9	178.2	166.8	154.9	142.6	129.5
	kW	9.5	10.0	11.1	12.3	13.6	15.0
	SDT	104.3	108.7	117.4	126.1	134.6	142.9

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

38AUD16 Circuit A 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	15.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.9	38.5	43.6	48.7	53.8	58.8
-4	TC	17.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.6	39.2	44.3	49.4	54.3	59.3
-1	TC	19.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.4	39.9	45.0	50.0	54.9	59.8
2	TC	20.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.2	40.7	45.7	50.7	55.6	60.3
4	TC	22.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.0	41.5	46.4	51.4	56.2	60.9
7	TC	24.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.9	42.3	47.2	52.1	56.8	61.5
10	TC	26.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.7	43.1	48.0	52.8	57.5	62.1

38AUD16 Circuit A 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	53.8	52.2	48.8	45.3	41.7	37.9
	kW	4.2	4.5	5.1	5.7	6.3	7.0
	SDT	96.6	101.2	110.5	119.7	128.8	137.8
25	TC	59.3	57.5	53.8	50.0	46.0	41.9
	kW	4.3	4.6	5.1	5.7	6.4	7.1
	SDT	97.9	102.5	111.7	120.8	129.8	138.7
30	TC	65.1	63.1	59.0	54.9	50.6	46.1
	kW	4.4	4.7	5.2	5.8	6.5	7.2
	SDT	99.3	103.9	112.9	122.0	130.9	139.6
35	TC	71.1	68.9	64.5	60.1	55.4	50.5
	kW	4.5	4.8	5.3	5.9	6.6	7.3
	SDT	100.7	105.2	114.2	123.2	132.0	140.6
40	TC	77.5	75.1	70.4	65.6	60.5	55.0
	kW	4.6	4.9	5.4	6.0	6.7	7.4
	SDT	102.2	106.7	115.6	124.5	133.2	141.6
45	TC	84.3	81.7	76.6	71.3	65.6	59.6
	kW	4.7	5.0	5.5	6.1	6.8	7.5
	SDT	103.7	108.1	117.0	125.7	134.3	142.7
50	TC	91.4	88.6	82.9	76.9	70.8	64.3
	kW	4.8	5.1	5.6	6.2	6.9	7.6
	SDT	105.3	109.7	118.4	127.0	135.5	143.7

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

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38AUD16 Circuit B 50 Hz — CONDENSER ONLY RATINGS — SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	15.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.0	37.6	42.7	47.9	53.0	58.0
-4	TC	17.5	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.7	38.3	43.4	48.5	53.5	58.5
-1	TC	19.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.4	39.0	44.0	49.1	54.1	59.0
2	TC	21.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.2	39.7	44.7	49.7	54.7	59.5
4	TC	22.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.0	40.4	45.4	50.4	55.3	60.0
7	TC	25.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.8	41.2	46.2	51.1	55.9	60.6
10	TC	27.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.6	42.0	46.9	51.8	56.5	61.2

38AUD16 Circuit B 50 Hz — CONDENSER ONLY RATINGS — ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	54.0	52.4	49.1	45.6	42.0	38.2
	kW	4.2	4.4	5.0	5.6	6.2	6.9
	SDT	95.0	99.7	108.9	118.2	127.3	136.3
25	TC	59.6	57.8	54.2	50.4	46.4	42.3
	kW	4.2	4.5	5.0	5.6	6.3	7.0
	SDT	96.2	100.9	110.1	119.2	128.3	137.2
30	TC	65.5	63.5	59.5	55.4	51.1	46.6
	kW	4.3	4.6	5.1	5.7	6.4	7.1
	SDT	97.6	102.1	111.3	120.4	129.3	138.1
35	TC	71.7	69.5	65.2	60.7	56.0	51.1
	kW	4.4	4.7	5.2	5.8	6.5	7.2
	SDT	98.9	103.4	112.5	121.5	130.4	139.1
40	TC	78.2	75.9	71.2	66.3	61.2	55.7
	kW	4.5	4.8	5.3	5.9	6.5	7.2
	SDT	100.3	104.8	113.8	122.7	131.5	140.0
45	TC	85.2	82.6	77.4	72.1	66.4	60.4
	kW	4.6	4.9	5.4	6.0	6.6	7.3
	SDT	101.8	106.2	115.1	123.9	132.6	141.1
50	TC	92.4	89.6	83.9	77.9	71.8	65.2
	kW	4.7	5.0	5.5	6.1	6.7	7.4
	SDT	103.3	107.6	116.5	125.2	133.8	142.1

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

38AUD25 Total Unit CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	38.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	33.8	36.4	41.6	46.7	51.9	57.0
-4	TC	42.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	34.5	37.1	42.2	47.4	52.5	57.5
-1	TC	47.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.2	37.8	42.9	48.0	53.1	58.1
2	TC	52.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.0	38.6	43.6	48.7	53.7	58.6
4	TC	57.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.9	39.4	44.4	49.4	54.4	59.2
7	TC	62.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.8	40.3	45.2	50.2	55.1	59.8
10	TC	68.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.8	41.2	46.1	51.0	55.8	60.5

38AUD25 Total Unit CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	131.9	128.0	119.8	111.1	101.6	91.4
	kW	10.0	10.6	12.0	13.5	15.2	17.2
	SDT	92.8	97.5	106.9	116.1	125.4	134.6
25	TC	145.9	141.7	132.9	123.5	113.3	102.3
	kW	10.2	10.8	12.1	13.6	15.4	17.3
	SDT	94.1	98.7	108.0	117.3	126.4	135.5
30	TC	161.1	156.5	146.9	136.7	125.6	113.7
	kW	10.4	11.0	12.3	13.8	15.5	17.5
	SDT	95.4	100.0	109.2	118.4	127.5	136.5
35	TC	177.3	172.3	161.9	150.7	138.7	125.7
	kW	10.6	11.2	12.5	14.0	15.7	17.6
	SDT	96.9	101.4	110.5	119.6	128.7	137.6
40	TC	194.8	189.3	177.9	165.7	152.5	138.4
	kW	10.8	11.4	12.7	14.2	15.9	17.8
	SDT	98.4	102.9	111.9	120.9	129.8	138.6
45	TC	213.5	207.4	194.9	181.5	167.1	151.7
	kW	11.1	11.7	13.0	14.5	16.1	18.0
	SDT	100.0	104.5	113.4	122.3	131.1	139.7
50	TC	233.4	226.7	213.0	198.2	182.5	165.6
	kW	11.4	12.0	13.3	14.7	16.4	18.2
	SDT	101.8	106.2	115.0	123.7	132.4	140.9

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

38AUD25 Circuit A 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	19.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	33.6	36.2	41.4	46.6	51.7	56.8
-4	TC	21.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	34.3	36.8	42.0	47.2	52.3	57.3
-1	TC	23.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.0	37.5	42.7	47.8	52.9	57.9
2	TC	26.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.8	38.3	43.4	48.5	53.5	58.4
4	TC	28.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.6	39.1	44.1	49.2	54.1	59.0
7	TC	31.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.5	40.0	44.9	49.9	54.8	59.6
10	TC	34.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.4	40.9	45.8	50.7	55.5	60.3

38AUD25 Circuit A 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	66.0	64.0	60.0	55.6	50.9	45.8
	kW	5.0	5.3	5.9	6.7	7.6	8.5
	SDT	92.4	97.1	106.5	115.8	125.1	134.3
25	TC	73.0	70.9	66.5	61.8	56.7	51.2
	kW	5.1	5.4	6.0	6.8	7.6	8.6
	SDT	93.7	98.3	107.6	116.9	126.1	135.2
30	TC	80.6	78.3	73.5	68.4	62.9	57.0
	kW	5.2	5.5	6.1	6.9	7.7	8.7
	SDT	95.0	99.6	108.8	118.0	127.1	136.2
35	TC	88.8	86.2	81.1	75.5	69.5	63.0
	kW	5.3	5.6	6.2	7.0	7.8	8.8
	SDT	96.4	100.9	110.1	119.2	128.3	137.2
40	TC	97.5	94.8	89.1	83.0	76.4	69.4
	kW	5.4	5.7	6.3	7.1	7.9	8.9
	SDT	97.9	102.4	111.4	120.5	129.4	138.2
45	TC	106.9	103.9	97.6	91.0	83.8	76.0
	kW	5.5	5.8	6.5	7.2	8.0	9.0
	SDT	99.5	104.0	112.9	121.8	130.6	139.3
50	TC	116.9	113.6	106.7	99.4	91.5	83.0
	kW	5.7	6.0	6.6	7.3	8.1	9.1
	SDT	101.2	105.6	114.4	123.2	131.9	140.5

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD25 Circuit B 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	19.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	34.0	36.6	41.8	46.9	52.1	57.2
-4	TC	21.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	34.7	37.3	42.4	47.6	52.7	57.7
-1	TC	23.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.5	38.0	43.1	48.2	53.3	58.3
2	TC	26.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.3	38.8	43.9	48.9	53.9	58.8
4	TC	28.5	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.2	39.7	44.7	49.7	54.6	59.4
7	TC	31.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.1	40.6	45.5	50.4	55.3	60.1
10	TC	34.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.1	41.5	46.4	51.2	56.0	60.7

38AUD25 Circuit B 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	65.9	63.9	59.9	55.5	50.7	45.6
	kW	5.0	5.3	6.0	6.8	7.6	8.6
	SDT	93.3	97.9	107.2	116.5	125.8	134.9
25	TC	72.9	70.8	66.4	61.7	56.6	51.0
	kW	5.1	5.4	6.1	6.8	7.7	8.7
	SDT	94.5	99.2	108.4	117.6	126.8	135.9
30	TC	80.5	78.2	73.4	68.2	62.7	56.7
	kW	5.2	5.5	6.2	6.9	7.8	8.8
	SDT	95.9	100.5	109.6	118.8	127.9	136.9
35	TC	88.6	86.0	80.8	75.2	69.2	62.7
	kW	5.3	5.6	6.3	7.0	7.9	8.9
	SDT	97.4	101.9	111.0	120.1	129.0	137.9
40	TC	97.3	94.5	88.8	82.7	76.1	69.0
	kW	5.4	5.7	6.4	7.1	8.0	8.9
	SDT	98.9	103.4	112.4	121.4	130.3	139.0
45	TC	106.6	103.5	97.2	90.5	83.3	75.6
	kW	5.6	5.9	6.5	7.3	8.1	9.0
	SDT	100.6	105.0	113.9	122.8	131.5	140.1
50	TC	116.5	113.1	106.2	98.8	91.0	82.5
	kW	5.7	6.0	6.7	7.4	8.2	9.2
	SDT	102.4	106.8	115.5	124.2	132.9	141.3

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUZ07 - 40RUA07 COMBINATION RATINGS SI

				Ambient Temperature														
				29.4			35.0			40.6			46.1			51.7		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4
850 L/S	EAT (wb)	14.4	THC	17.2	17.2	19.3	16.6	16.6	18.8	16.0	16.0	18.1	15.4	15.4	17.4	14.5	14.5	16.4
			SHC	15.0	17.2	19.3	14.5	16.6	18.8	14.0	16.0	18.1	13.5	15.4	17.4	12.7	14.5	16.4
			kW		3.6			4.3			4.9			5.7			6.5	
		16.7	THC	17.5	17.5	19.2	16.9	16.9	18.8	16.2	16.2	18.4	15.5	15.5	17.9	14.6	14.6	17.1
			SHC	13.8	16.5	19.2	13.5	16.2	18.8	13.2	15.8	18.4	12.8	15.4	17.9	12.2	14.6	17.1
			kW		3.6			4.2			4.9			5.7			6.5	
		19.4	THC	18.9	18.9	18.9	18.3	18.3	18.3	17.5	17.5	17.5	16.7	16.7	16.7	15.8	15.8	15.8
			SHC	11.2	13.9	16.6	10.9	13.6	16.3	10.6	13.3	16.0	10.3	13.0	15.7	9.9	12.6	15.3
			kW		3.6			4.2			4.9		5.7				6.5	
		22.2	THC	20.6	20.6	20.6	19.9	19.9	19.9	19.1	19.1	19.1	18.3	18.3	18.3	17.3	17.3	17.3
			SHC	8.4	11.2	13.9	8.2	10.9	13.6	7.9	10.6	13.3	7.6	10.3	13.0	7.2	9.9	12.7
			kW		3.5			4.1			4.8			5.6			6.5	
		24.4	THC	–	22.0	22.0	–	21.3	21.3	–	20.5	20.5	–	19.6	19.6	–	–	–
			SHC	–	9.0	11.8	–	8.7	11.5	–	8.4	11.2	–	8.1	10.9	–	–	–
			kW		3.5			4.1			4.8			5.6			–	
991 L/S	EAT (wb)	14.4	THC	17.9	17.9	20.2	17.4	17.4	19.5	16.7	16.7	18.8	16.1	16.1	18.1	15.3	15.3	17.3
			SHC	15.6	17.9	20.2	15.2	17.4	19.5	14.6	16.7	18.8	14.0	16.1	18.1	13.4	15.3	17.3
			kW		3.6			4.2			4.9			5.7			6.5	
		16.7	THC	18.0	18.0	20.6	17.4	17.4	20.3	16.7	16.7	19.6	16.1	16.1	18.8	15.3	15.3	17.9
			SHC	14.7	17.7	20.6	14.4	17.4	20.3	13.9	16.7	19.6	13.4	16.1	18.8	12.7	15.3	17.9
			kW		3.6			4.2			4.9			5.7			6.5	
		19.4	THC	19.3	19.3	19.3	18.6	18.6	18.6	17.8	17.8	17.8	17.0	17.0	17.1	16.1	16.1	16.7
			SHC	11.8	14.9	18.0	11.5	14.6	17.7	11.3	14.3	17.4	10.9	14.0	17.1	10.6	13.6	16.7
			kW		3.6			4.2			4.9			5.6			6.5	
		22.2	THC	21.0	21.0	21.0	20.3	20.3	20.3	19.5	19.5	19.5	18.6	18.6	18.6	17.6	17.6	17.6
			SHC	8.7	11.8	14.9	8.4	11.5	14.6	8.2	11.3	14.3	7.9	10.9	14.0	7.5	10.6	13.7
			kW		3.5			4.1			4.8			5.6			6.4	
		24.4	THC	–	22.4	22.4	–	21.7	21.7	–	20.8	20.8	–	–	–	–	–	–
			SHC	–	9.3	12.5	–	9.1	12.3	–	8.8	12.0	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	
1133 L/S	EAT (wb)	14.4	THC	18.5	18.5	20.8	17.9	17.9	20.2	17.3	17.3	19.5	16.6	16.6	18.7	15.8	15.8	17.8
			SHC	16.1	18.5	20.8	15.7	17.9	20.2	15.1	17.3	19.5	14.5	16.6	18.7	13.8	15.8	17.8
			kW		3.6			4.2			4.9			5.7			6.5	
		16.7	THC	18.5	18.5	21.7	17.9	17.9	21.0	17.3	17.3	20.2	16.6	16.6	19.4	15.8	15.8	18.5
			SHC	15.4	18.5	21.7	14.9	17.9	21.0	14.4	17.3	20.2	13.8	16.6	19.4	13.2	15.8	18.5
			kW		3.6			4.2			4.9			5.7			6.5	
		19.4	THC	19.6	19.6	19.6	18.9	18.9	19.0	18.1	18.1	18.7	17.3	17.3	18.3	16.3	16.3	17.9
			SHC	12.4	15.9	19.3	12.1	15.6	19.0	11.8	15.3	18.7	11.5	14.9	18.3	11.1	14.5	17.9
			kW		3.5			4.2			4.9			5.6			6.5	
		22.2	THC	21.2	21.2	21.2	20.5	20.5	20.5	19.7	19.7	19.7	18.8	18.8	18.8	17.8	17.8	17.8
			SHC	8.9	12.4	15.9	8.7	12.1	15.6	8.4	11.8	15.3	8.1	11.5	14.9	7.7	11.2	14.6
			kW		3.5			4.1			4.8			5.6			6.4	
		24.4	THC	–	22.7	22.7	–	21.9	21.9	–	21.1	21.1	–	–	–	–	–	–
			SHC	–	9.6	13.2	–	9.4	12.9	–	9.1	12.6	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	
1274 L/S	EAT (wb)	14.4	THC	19.0	19.0	21.4	18.4	18.4	20.7	17.7	17.7	20.0	17.0	17.0	19.2	16.2	16.2	18.3
			SHC	16.6	19.0	21.4	16.0	18.4	20.7	15.5	17.7	20.0	14.9	17.0	19.2	14.2	16.2	18.3
			kW	3.6			4.2			4.9			5.6			6.5		
		16.7	THC	19.0	19.0	22.2	18.4	18.4	21.5	17.7	17.7	20.8	17.0	17.0	19.9	16.2	16.2	19.0
			SHC	15.8	19.0	22.2	15.3	18.4	21.5	14.7	17.7	20.8	14.1	17.0	19.9	13.5	16.2	19.0
			kW	3.6			4.2			4.9			5.6			6.5		
		19.4	THC	19.8	19.8	20.5	19.1	19.1	20.2	18.3	18.3	19.9	17.5	17.5	19.5	16.5	16.5	19.1
			SHC	13.0	16.8	20.5	12.7	16.5	20.2	12.4	16.1	19.9	12.0	15.8	19.5	11.6	15.4	19.1
			kW	3.5			4.2			4.8			5.6			6.5		
		22.2	THC	21.5	21.5	21.5	20.8	20.8	20.8	19.9	19.9	19.9	19.0	19.0	19.0	–	–	–
			SHC	9.2	13.0	16.8	8.9	12.7	16.5	8.6	12.4	16.2	8.3	12.1	15.9	–	–	–
			kW	3.5			4.1			4.8			5.6			–		
		24.4	THC	–	22.9	22.9	–	22.2	22.2	–	21.3	21.3	–	–	–	–	–	–
			SHC	–	9.9	13.8	–	9.7	13.5	–	9.4	13.2	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	
1416 L/S	EAT (wb)	14.4	THC	19.4	19.4	21.9	18.8	18.8	21.2	18.1	18.1	20.4	17.4	17.4	19.6	16.6	16.6	18.6
			SHC	16.9	19.4	21.9	16.4	18.8	21.2	15.8	18.1	20.4	15.2	17.4	19.6	14.4	16.6	18.6
			kW		3.5			4.2			4.9			5.6			6.5	
		16.7	THC	19.4	19.4	22.7	18.8	18.8	22.0	18.1	18.1	21.2	17.4	17.4	20.3	16.6	16.6	19.4
			SHC	16.1	19.4	22.7	15.6	18.8	22.0	15.1	18.1	21.2	14.4	17.4	20.3	13.7	16.6	19.4
			kW		3.5			4.2		4.8			5.6			6.5		
		19.4	THC	20.0	20.0	21.7	19.3	19.3	21.4	18.5	18.5	21.0	17.6	17.6	20.6	16.7	16.7	20.1
			SHC	13.5	17.6	21.7	13.2	17.3	21.4	12.9	17.0	21.0	12.5	16.6	20.6	12.1	16.1	20.1
			kW		3.5			4.1		4.8			5.6				6.5	
		22.2	THC	21.7	21.7	21.7	20.9	20.9	20.9	20.1	20.1	20.1	19.1	19.1	19.1	–	–	–
			SHC	9.4	13.5	17.6	9.1	13.2	17.4	8.8	12.9	17.1	8.5	12.6	16.7	–	–	–
			kW		3.5			4.1			4.8			5.6			–	
		24.4	THC	–	23.1	23.1	–	22.3	22.3	–	21.4	21.4	–	–	–	–	–	–
			SHC	–	10.2	14.4	–	9.9	14.1	–	9.6	13.8	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	

LEGEND:

– = Do not operate
L/s = Liters per second
EAT(wb) = Entering air temp (wet bulb)
kW = Compressor kilowatts
SHC = Sensible heat capacity (Gross)
THC = Total heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
Cfm = Cubic feet per minute (supply air)

				Ambient Temperature														
				85.0			95.0			105.0			115.0			125.0		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0
1800 cfm	EAT (wb)	58.0	THC	58.6	58.6	66.0	56.8	56.8	64.0	54.7	54.7	61.7	52.6	52.6	59.3	49.6	49.6	55.9
			SHC	51.1	58.6	66.0	49.6	56.8	64.0	47.8	54.7	61.7	45.9	52.6	59.3	43.3	49.6	55.9
			kW		3.6			4.3			4.9			5.7			6.5	
		62.0	THC	59.7	59.7	65.4	57.5	57.5	64.2	55.2	55.2	62.8	52.8	52.8	61.2	49.9	49.9	58.4
			SHC	47.2	56.3	65.4	46.2	55.2	64.2	44.9	53.9	62.8	43.6	52.4	61.2	41.5	49.9	58.4
			kW		3.6			4.2			4.9			5.7			6.5	
		67.0	THC	64.6	64.6	64.6	62.3	62.3	62.3	59.7	59.7	59.7	57.0	57.0	57.0	54.0	54.0	54.0
			SHC	38.2	47.4	56.6	37.2	46.4	55.6	36.2	45.4	54.6	35.1	44.3	53.4	33.8	43.0	52.2
			kW		3.6			4.2			4.9			5.7			6.5	
		72.0	THC	70.3	70.3	70.3	67.9	67.9	67.9	65.3	65.3	65.3	62.3	62.3	62.3	59.1	59.1	59.1
			SHC	28.8	38.1	47.4	27.9	37.2	46.5	27.0	36.2	45.5	25.9	35.1	44.4	24.7	33.9	43.2
			kW		3.5			4.1			4.8			5.6			6.5	
		76.0	THC	–	75.1	75.1	–	72.7	72.7	–	69.9	69.9	–	66.8	66.8	–	–	–
			SHC	–	30.6	40.2	–	29.8	39.3	–	28.8	38.3	–	27.7	37.2	–	–	–
			kW		3.5			4.1			4.8			5.6			–	
2100 cfm	EAT (wb)	58.0	THC	61.1	61.1	68.8	59.2	59.2	66.7	57.1	57.1	64.3	54.8	54.8	61.8	52.3	52.3	58.9
			SHC	53.3	61.1	68.8	51.7	59.2	66.7	49.8	57.1	64.3	47.9	54.8	61.8	45.6	52.3	58.9
			kW		3.6			4.2			4.9			5.7			6.5	
		62.0	THC	61.5	61.5	70.4	59.2	59.2	69.2	57.1	57.1	66.8	54.9	54.9	64.2	52.3	52.3	61.2
			SHC	50.3	60.3	70.4	49.2	59.2	69.2	47.4	57.1	66.8	45.6	54.9	64.2	43.5	52.3	61.2
			kW		3.6			4.2			4.9			5.7			6.5	
		67.0	THC	65.8	65.8	65.8	63.4	63.4	63.4	60.9	60.9	60.9	58.0	58.0	58.2	54.9	54.9	56.9
			SHC	40.4	50.9	61.4	39.4	49.9	60.4	38.4	48.9	59.3	37.2	47.7	58.2	36.0	46.4	56.9
			kW		3.6			4.2			4.9			5.6			6.5	
		72.0	THC	71.6	71.6	71.6	69.1	69.1	69.1	66.4	66.4	66.4	63.4	63.4	63.4	60.1	60.1	60.1
			SHC	29.7	40.3	50.9	28.8	39.4	49.9	27.9	38.4	48.9	26.8	37.3	47.8	25.6	36.1	46.6
			kW		3.5			4.1			4.8			5.6			6.4	
		76.0	THC	–	76.4	76.4	–	73.9	73.9	–	71.0	71.0	–	–	–	–	–	–
			SHC	–	31.8	42.6	–	30.9	41.8	–	29.9	40.8	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	
2400 cfm	EAT (wb)	58.0	THC	63.1	63.1	71.1	61.1	61.1	68.9	58.9	58.9	66.4	56.6	56.6	63.8	54.0	54.0	60.9
			SHC	55.1	63.1	71.1	53.4	61.1	68.9	51.5	58.9	66.4	49.4	56.6	63.8	47.1	54.0	60.9
			kW		3.6			4.2			4.9			5.7			6.5	
		62.0	THC	63.2	63.2	73.9	61.2	61.2	71.5	59.0	59.0	68.9	56.6	56.6	66.2	54.0	54.0	63.2
			SHC	52.5	63.2	73.9	50.8	61.2	71.5	49.0	59.0	68.9	47.0	56.6	66.2	44.9	54.0	63.2
			kW		3.6			4.2			4.9			5.7			6.5	
		67.0	THC	66.8	66.8	66.8	64.4	64.4	64.9	61.8	61.8	63.8	58.9	58.9	62.5	55.7	55.7	61.1
			SHC	42.4	54.2	65.9	41.4	53.2	64.9	40.4	52.1	63.8	39.2	50.9	62.5	37.9	49.5	61.1
			kW		3.5			4.2			4.9			5.6			6.5	
		72.0	THC	72.5	72.5	72.5	70.1	70.1	70.1	67.3	67.3	67.3	64.2	64.2	64.2	60.7	60.7	60.7
			SHC	30.5	42.3	54.1	29.7	41.4	53.2	28.7	40.4	52.2	27.6	39.3	51.0	26.4	38.1	49.7
			kW		3.5		4.1			4.8				5.6			6.4	
		76.0	THC	–	77.4	77.4	–	74.8	74.8	–	71.9	71.9	–	–	–	–	–	–
			SHC	–	32.8	44.9	–	32.0	44.0	–	31.0	43.0	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	
2700 cfm	EAT (wb)	58.0	THC	64.8	64.8	73.0	62.7	62.7	70.7	60.5	60.5	68.2	58.0	58.0	65.4	55.4	55.4	62.4
			SHC	56.6	64.8	73.0	54.7	62.7	70.7	52.8	60.5	68.2	50.7	58.0	65.4	48.3	55.4	62.4
			kW		3.6			4.2			4.9			5.6			6.5	
		62.0	THC	64.8	64.8	75.8	62.7	62.7	73.4	60.5	60.5	70.8	58.1	58.1	67.9	55.4	55.4	64.8
			SHC	53.9	64.8	75.8	52.1	62.7	73.4	50.3	60.5	70.8	48.2	58.1	67.9	46.0	55.4	64.8
			kW		3.6			4.2			4.9			5.6			6.5	
		67.0	THC	67.6	67.6	70.1	65.1	65.1	69.0	62.5	62.5	67.9	59.6	59.6	66.6	56.4	56.4	65.1
			SHC	44.3	57.2	70.1	43.3	56.2	69.0	42.3	55.1	67.9	41.1	53.8	66.6	39.7	52.4	65.1
			kW		3.5			4.2			4.8			5.6			6.5	
		72.0	THC	73.3	73.3	73.3	70.8	70.8	70.8	67.9	67.9	67.9	64.8	64.8	64.8	–	–	–
			SHC	31.3	44.3	57.2	30.4	43.3	56.3	29.4	42.3	55.2	28.3	41.2	54.1	–	–	–
			kW		3.5			4.1			4.8			5.6			–	
		76.0	THC	–	78.2	78.2	–	75.6	75.6	–	72.6	72.6	–	–	–	–	–	–
			SHC	–	33.9	47.1	–	33.0	46.2	–	32.0	45.2	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	
3000 cfm	EAT (wb)	58.0	THC	66.2	66.2	74.6	64.1	64.1	72.2	61.8	61.8	69.6	59.3	59.3	66.8	56.5	56.5	63.6
			SHC	57.8	66.2	74.6	55.9	64.1	72.2	53.9	61.8	69.6	51.8	59.3	66.8	49.3	56.5	63.6
			kW		3.5			4.2			4.9			5.6			6.5	
		62.0	THC	66.2	66.2	77.4	64.1	64.1	75.0	61.8	61.8	72.3	59.3	59.3	69.4	56.5	56.5	66.1
			SHC	55.0	66.2	77.4	53.3	64.1	75.0	51.4	61.8	72.3	49.3	59.3	69.4	46.9	56.5	66.1
			kW		3.5			4.2			4.8			5.6			6.5	
		67.0	THC	68.2	68.2	74.0	65.8	65.8	72.9	63.1	63.1	71.7	60.2	60.2	70.3	57.0	57.0	68.5
			SHC	46.1	60.1	74.0	45.1	59.0	72.9	44.0	57.9	71.7	42.7	56.5	70.3	41.3	54.9	68.5
			kW		3.5			4.1			4.8			5.6			6.5	
		72.0	THC	73.9	73.9	73.9	71.3	71.3	71.3	68.5	68.5	68.5	65.3	65.3	65.3	–	–	–
			SHC	32.0	46.1	60.2	31.1	45.2	59.2	30.1	44.1	58.2	29.0	43.0	57.0	–	–	–
			kW		3.5			4.1			4.8			5.6			–	
		76.0	THC	–	78.9	78.9	–	76.2	76.2	–	73.1	73.1	–	–	–	–	–	–
			SHC	–	34.8	49.2	–	33.9	48.2	–	32.9	47.2	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	

LEGEND:
– = Do not operate
L/s = Liters per second
EAT(wb) = Entering air temp (wet bulb)
kW = Compressor kilowatts
SHC = Sensible heat capacity (Gross)
THC = Total heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
Cfm = Cubic feet per minute (supply air)

38AU

PERFORMANCE DATA (cont.)

38AUZ08 - 40RUA08 COMBINATION RATINGS SI

				Ambient Temperature														
				29.4			35.0			40.6			46.1			51.7		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4
1062 L/S	EAT (wb)	14.4	THC	21.9	21.9	24.6	21.2	21.2	23.9	20.4	20.4	23.0	19.5	19.5	22.0	18.6	18.6	21.0
			SHC	19.1	21.9	24.6	18.5	21.2	23.9	17.8	20.4	23.0	17.1	19.5	22.0	16.2	18.6	21.0
			Kw		4.6			5.4			6.2			7.2			8.2	
		16.7	THC	22.5	22.5	24.3	21.6	21.6	23.9	20.7	20.7	23.3	19.6	19.6	22.7	18.6	18.6	21.7
			SHC	17.6	21.0	24.3	17.2	20.5	23.9	16.7	20.0	23.3	16.1	19.4	22.7	15.4	18.6	21.7
			kW		4.6			5.4			6.3			7.2			8.2	
		19.4	THC	24.4	24.4	24.4	23.5	23.5	23.5	22.4	22.4	22.4	21.3	21.3	21.3	20.0	20.0	20.0
			SHC	14.3	17.7	21.1	13.9	17.3	20.7	13.5	16.9	20.3	13.0	16.4	19.8	12.5	15.9	19.3
			kW		4.7			5.5			6.3			7.2			8.2	
		22.2	THC	26.5	26.5	26.5	25.5	25.5	25.5	24.4	24.4	24.4	23.2	23.2	23.2	–	–	–
			SHC	10.8	14.3	17.7	10.5	13.9	17.3	10.1	13.5	16.9	9.6	13.0	16.4	–	–	–
			kW		4.8			5.5			6.4			7.3			–	
		24.4	THC	–	28.3	28.3	–	27.3	27.3	–	26.1	26.1	–	24.8	24.8	–	–	–
			SHC	–	11.5	15.0	–	11.1	14.6	–	10.7	14.2	–	10.3	13.8	–	–	–
			kW		4.8			5.6			6.4			7.4			–	
1239 L/S	EAT (wb)	14.4	THC	22.9	22.9	25.8	22.1	22.1	24.9	21.3	21.3	24.0	20.4	20.4	22.9	19.4	19.4	21.8
			SHC	20.0	22.9	25.8	19.3	22.1	24.9	18.6	21.3	24.0	17.8	20.4	22.9	16.9	19.4	21.8
			kW		4.6			5.4			6.3			7.2			8.2	
		16.7	THC	23.1	23.1	26.4	22.2	22.2	25.9	21.3	21.3	24.9	20.4	20.4	23.9	19.4	19.4	22.7
			SHC	18.9	22.7	26.4	18.4	22.2	25.9	17.7	21.3	24.9	16.9	20.4	23.9	16.1	19.4	22.7
			kW		4.7			5.4			6.3			7.2			8.2	
		19.4	THC	24.9	24.9	24.9	23.9	23.9	23.9	22.9	22.9	22.9	21.7	21.7	21.7	20.4	20.4	21.1
			SHC	15.2	19.1	23.0	14.8	18.7	22.6	14.3	18.2	22.1	13.9	17.8	21.6	13.4	17.2	21.1
			kW		4.7			5.5			6.3			7.2			8.2	
		22.2	THC	27.1	27.1	27.1	26.0	26.0	26.0	24.9	24.9	24.9	23.6	23.6	23.6	22.2	22.2	22.2
			SHC	11.2	15.1	19.1	10.8	14.7	18.6	10.4	14.3	18.2	10.0	13.9	17.8	9.5	13.4	17.3
			kW		4.8			5.5			6.4			7.3			8.3	
		24.4	THC	–	28.9	28.9	–	27.8	27.8	–	26.6	26.6	–	–	–	–	–	–
			SHC	–	11.9	16.0	–	11.6	15.6	–	11.2	15.2						
			kW		4.8			5.6			6.5			–			–	
1416 L/S	EAT (wb)	14.4	THC	23.7	23.7	26.7	22.9	22.9	25.8	22.0	22.0	24.8	21.1	21.1	23.7	20.0	20.0	22.5
			SHC	20.7	23.7	26.7	20.0	22.9	25.8	19.2	22.0	24.8	18.4	21.1	23.7	17.5	20.0	22.5
			kW		4.7			5.4			6.3			7.2			8.2	
		16.7	THC	23.7	23.7	27.8	22.9	22.9	26.8	22.0	22.0	25.8	21.1	21.1	24.6	20.0	20.0	23.4
			SHC	19.7	23.7	27.8	19.1	22.9	26.8	18.3	22.0	25.8	17.5	21.1	24.6	16.6	20.0	23.4
			kW		4.7			5.4			6.3			7.2			8.2	
		19.4	THC	25.3	25.3	25.3	24.3	24.3	24.4	23.2	23.2	23.9	22.0	22.0	23.4	20.7	20.7	22.8
			SHC	16.0	20.4	24.8	15.6	20.0	24.4	15.2	19.5	23.9	14.7	19.0	23.4	14.1	18.5	22.8
			kW		4.7			5.5			6.3			7.3			8.3	
		22.2	THC	27.4	27.4	27.4	26.4	26.4	26.4	25.2	25.2	25.2	23.9	23.9	23.9	22.5	22.5	22.5
			SHC	11.5	15.9	20.3	11.1	15.6	20.0	10.7	15.1	19.5	10.3	14.7	19.1	9.8	14.2	18.6
			kW		4.8			5.6			6.4			7.3			8.3	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
1593 L/S	EAT (wb)	14.4	THC	24.4	24.4	27.5	23.5	23.5	26.5	22.6	22.6	25.5	21.6	21.6	24.4	20.5	20.5	23.1
			SHC	21.3	24.4	27.5	20.5	23.5	26.5	19.8	22.6	25.5	18.9	21.6	24.4	17.9	20.5	23.1
			kW		4.7			5.5			6.3			7.2			8.2	
		16.7	THC	24.4	24.4	28.5	23.6	23.6	27.5	22.6	22.6	26.5	21.6	21.6	25.3	20.5	20.5	24.0
			SHC	20.3	24.4	28.5	19.6	23.6	27.5	18.8	22.6	26.5	18.0	21.6	25.3	17.1	20.5	24.0
			kW		4.7			5.5			6.3			7.2			8.2	
		19.4	THC	25.6	25.6	26.5	24.6	24.6	26.0	23.5	23.5	25.5	22.2	22.2	25.0	21.0	21.0	24.4
			SHC	16.8	21.6	26.5	16.3	21.2	26.0	15.9	20.7	25.5	15.4	20.2	25.0	14.8	19.6	24.4
			kW		4.7			5.5			6.3			7.3			8.3	
		22.2	THC	27.7	27.7	27.7	26.7	26.7	26.7	25.5	25.5	25.5	24.2	24.2	24.2	–	–	–
			SHC	11.8	16.7	21.6	11.5	16.4	21.2	11.0	15.9	20.8	10.6	15.5	20.3	–	–	–
			kW		4.8			5.6			6.4			7.3			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
1770 L/S	EAT (wb)	14.4	THC	24.9	24.9	28.1	24.1	24.1	27.1	23.1	23.1	26.1	22.1	22.1	24.9	21.0	21.0	23.6
			SHC	21.8	24.9	28.1	21.0	24.1	27.1	20.2	23.1	26.1	19.3	22.1	24.9	18.3	21.0	23.6
			kW		4.7			5.5			6.3			7.3			8.3	
		16.7	THC	24.9	24.9	29.2	24.1	24.1	28.2	23.2	23.2	27.1	22.1	22.1	25.8	21.0	21.0	24.5
			SHC	20.7	24.9	29.2	20.0	24.1	28.2	19.2	23.2	27.1	18.3	22.1	25.8	17.4	21.0	24.5
			kW		4.7			5.5			6.3			7.3			8.3	
		19.4	THC	25.8	25.8	28.1	24.8	24.8	27.6	23.7	23.7	27.1	22.5	22.5	26.5	21.2	21.2	25.7
			SHC	17.5	22.8	28.1	17.1	22.3	27.6	16.6	21.8	27.1	16.1	21.2	26.5	15.4	20.6	25.7
			kW		4.7			5.5			6.3			7.3			8.3	
		22.2	THC	28.0	28.0	28.0	26.9	26.9	26.9	25.7	25.7	25.7	24.4	24.4	24.4	–	–	–
			SHC	12.1	17.5	22.9	11.8	17.1	22.5	11.3	16.7	22.0	10.9	16.2	21.6	–	–	–
			kW		4.8			5.6			6.4			7.3			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:
– = Do not operate
L/s = Liters per second
EAT(wb) = Entering air temp (wet bulb)
kW = Compressor kilowatts
SHC = Sensible heat capacity (Gross)
THC = Total heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
Cfm = Cubic feet per minute (supply air)

PERFORMANCE DATA (cont.)

38AUZ08 – 40RUA08 **COMBINATION RATINGS** **ENGLISH**

				Ambient Temperature														
				85.0			95.0			105.0			115.0			125.0		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0
2250 cfm	EAT (wb)	58.0	THC	74.7	74.7	84.1	72.2	72.2	81.4	69.6	69.6	78.4	66.6	66.6	75.1	63.4	63.4	71.5
			SHC	65.2	74.7	84.1	63.1	72.2	81.4	60.7	69.6	78.4	58.2	66.6	75.1	55.4	63.4	71.5
			kW		4.6			5.4			6.2			7.2			8.2	
		62.0	THC	76.7	76.7	83.0	73.7	73.7	81.4	70.5	70.5	79.6	67.0	67.0	77.3	63.5	63.5	74.2
			SHC	60.2	71.6	83.0	58.7	70.0	81.4	57.1	68.3	79.6	55.1	66.2	77.3	52.7	63.5	74.2
			kW		4.6			5.4			6.3			7.2			8.2	
		67.0	THC	83.3	83.3	83.3	80.1	80.1	80.1	76.5	76.5	76.5	72.6	72.6	72.6	68.4	68.4	68.4
			SHC	48.8	60.4	72.0	47.5	59.0	70.6	46.0	57.6	69.1	44.5	56.0	67.5	42.8	54.3	65.8
			kW		4.7			5.5			6.3			7.2			8.2	
		72.0	THC	90.5	90.5	90.5	87.1	87.1	87.1	83.3	83.3	83.3	79.2	79.2	79.2	–	–	–
			SHC	37.0	48.7	60.3	35.8	47.4	59.0	34.4	46.0	57.6	32.8	44.4	56.0	–	–	–
			kW		4.8		5.5			6.4				7.3			–	
		76.0	THC	–	96.5	96.5	–	93.0	93.0	–	89.1	89.1	–	84.7	84.7	–	–	–
			SHC	–	39.2	51.2	–	37.9	49.9	–	36.6	48.5	–	35.1	47.0	–	–	–
			kW		4.8		5.6			6.4				7.4			–	
2625 cfm	EAT (wb)	58.0	THC	78.1	78.1	88.0	75.5	75.5	85.1	72.7	72.7	81.9	69.5	69.5	78.3	66.1	66.1	74.5
			SHC	68.2	78.1	88.0	65.9	75.5	85.1	63.4	72.7	81.9	60.7	69.5	78.3	57.7	66.1	74.5
			kW		4.6		5.4			6.3				7.2			8.2	
		62.0	THC	78.8	78.8	90.1	75.7	75.7	88.5	72.7	72.7	85.0	69.6	69.6	81.4	66.2	66.2	77.4
			SHC	64.4	77.3	90.1	62.9	75.7	88.5	60.4	72.7	85.0	57.8	69.6	81.4	54.9	66.2	77.4
			kW		4.7		5.4			6.3				7.2			8.2	
		67.0	THC	85.1	85.1	85.1	81.7	81.7	81.7	78.0	78.0	78.0	74.0	74.0	74.0	69.7	69.7	72.0
			SHC	51.8	65.1	78.4	50.4	63.7	77.0	48.9	62.2	75.5	47.3	60.6	73.8	45.6	58.8	72.0
			kW		4.7			5.5			6.3			7.2			8.2	
		72.0	THC	92.3	92.3	92.3	88.7	88.7	88.7	84.9	84.9	84.9	80.6	80.6	80.6	75.9	75.9	75.9
			SHC	38.2	51.6	65.0	36.9	50.3	63.6	35.5	48.9	62.2	34.0	47.3	60.6	32.4	45.6	58.9
			kW		4.8			5.5			6.4			7.3			8.3	
		76.0	THC	–	98.5	98.5	–	94.7	94.7	–	90.7	90.7	–	–	–	–	–	–
			SHC	–	40.7	54.5	–	39.5	53.1	–	38.1	51.7	–	–	–	–	–	–
			kW		4.8			5.6			6.5			–			–	
3000 cfm	EAT (wb)	58.0	THC	80.9	80.9	91.2	78.2	78.2	88.1	75.2	75.2	84.7	71.9	71.9	81.0	68.3	68.3	76.9
			SHC	70.6	80.9	91.2	68.2	78.2	88.1	65.6	75.2	84.7	62.8	71.9	81.0	59.6	68.3	76.9
			kW		4.7			5.4			6.3			7.2			8.2	
		62.0	THC	81.0	81.0	94.7	78.3	78.3	91.6	75.2	75.2	88.0	71.9	71.9	84.1	68.3	68.3	79.9
			SHC	67.3	81.0	94.7	65.0	78.3	91.6	62.5	75.2	88.0	59.7	71.9	84.1	56.8	68.3	79.9
			kW		4.7			5.4			6.3			7.2			8.2	
		67.0	THC	86.3	86.3	86.3	82.9	82.9	83.1	79.2	79.2	81.5	75.1	75.1	79.7	70.7	70.7	77.8
			SHC	54.5	69.5	84.5	53.2	68.1	83.1	51.7	66.6	81.5	50.0	64.9	79.7	48.2	63.0	77.8
			kW		4.7			5.5			6.3			7.3			8.3	
		72.0	THC	93.6	93.6	93.6	90.0	90.0	90.0	86.0	86.0	86.0	81.6	81.6	81.6	76.9	76.9	76.9
			SHC	39.3	54.4	69.4	38.0	53.1	68.1	36.6	51.6	66.7	35.1	50.1	65.1	33.4	48.4	63.4
			kW		4.8			5.6			6.4			7.3			8.3	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–		–				–			–	
3375 cfm	EAT (wb)	58.0	THC	83.1	83.1	93.7	80.3	80.3	90.5	77.2	77.2	87.0	73.8	73.8	83.1	70.0	70.0	78.9
			SHC	72.6	83.1	93.7	70.1	80.3	90.5	67.4	77.2	87.0	64.4	73.8	83.1	61.1	70.0	78.9
			kW		4.7			5.5			6.3			7.2			8.2	
		62.0	THC	83.2	83.2	97.3	80.4	80.4	94.0	77.2	77.2	90.3	73.8	73.8	86.3	70.1	70.1	81.9
			SHC	69.1	83.2	97.3	66.8	80.4	94.0	64.2	77.2	90.3	61.3	73.8	86.3	58.2	70.1	81.9
			kW		4.7			5.5			6.3			7.2			8.2	
		67.0	THC	87.4	87.4	90.3	83.9	83.9	88.8	80.1	80.1	87.1	75.9	75.9	85.3	71.5	71.5	83.1
			SHC	57.2	73.7	90.3	55.7	72.3	88.8	54.2	70.7	87.1	52.5	68.9	85.3	50.6	66.9	83.1
			kW		4.7			5.5			6.3			7.3			8.3	
		72.0	THC	94.6	94.6	94.6	91.0	91.0	91.0	86.9	86.9	86.9	82.5	82.5	82.5	–	–	–
			SHC	40.4	57.1	73.8	39.1	55.8	72.4	37.7	54.3	71.0	36.1	52.8	69.4	–	–	–
			kW		4.8			5.6			6.4			7.3			–	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
3750 cfm	EAT (wb)	58.0	THC	85.1	85.1	95.8	82.1	82.1	92.5	78.9	78.9	88.9	75.4	75.4	84.9	71.5	71.5	80.6
			SHC	74.3	85.1	95.8	71.7	82.1	92.5	68.9	78.9	88.9	65.8	75.4	84.9	62.4	71.5	80.6
			kW		4.7			5.5			6.3			7.3			8.3	
		62.0	THC	85.1	85.1	99.5	82.2	82.2	96.1	79.0	79.0	92.3	75.4	75.4	88.2	71.5	71.5	83.6
			SHC	70.7	85.1	99.5	68.3	82.2	96.1	65.6	79.0	92.3	62.6	75.4	88.2	59.4	71.5	83.6
			kW		4.7			5.5			6.3			7.3			8.3	
		67.0	THC	88.2	88.2	95.8	84.7	84.7	94.2	80.9	80.9	92.4	76.7	76.7	90.3	72.2	72.2	87.8
			SHC	59.6	77.7	95.8	58.2	76.2	94.2	56.6	74.5	92.4	54.8	72.5	90.3	52.7	70.3	87.8
			kW		4.7			5.5			6.3			7.3			8.3	
		72.0	THC	95.5	95.5	95.5	91.7	91.7	91.7	87.6	87.6	87.6	83.1	83.1	83.1	–	–	–
			SHC	41.4	59.7	78.0	40.1	58.4	76.6	38.7	56.9	75.2	37.1	55.3	73.6	–	–	–
			kW		4.8			5.6			6.4			7.3			–	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:

– = Do not operate
EAT(wb) = Entering air temp (wet bulb)
SHC = Sensible heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
L/s = Liters per second
kW = Compressor kilowatts
THC = Total heat capacity (Gross)
Cfm = Cubic feet per minute (supply air)

38AU

PERFORMANCE DATA (cont.)

38AUD12 – 40RUA12 COMBINATION RATINGS SI

				Ambient Temperature														
				29.4			35.0			40.6			46.1			51.7		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				23.9	**26.7**	**29.4**	**23.9**	**26.7**	**29.4**	**23.9**	**26.7**	**29.4**	**23.9**	**26.7**	**29.4**	**23.9**	**26.7**	**29.4**
1416 L/S	EAT (wb)	14.4	THC	28.2	28.2	31.8	27.2	27.2	30.7	26.1	26.1	29.4	24.9	24.9	28.1	23.5	23.5	26.5
			SHC	24.6	28.2	31.8	23.8	27.2	30.7	22.8	26.1	29.4	21.7	24.9	28.1	20.5	23.5	26.5
			kW		5.9			6.8			7.9			9.0			10.2	
		16.7	THC	28.7	28.7	31.9	27.5	27.5	31.2	26.2	26.2	30.4	24.9	24.9	29.2	23.6	23.6	27.5
			SHC	22.9	27.4	31.9	22.3	26.8	31.2	21.7	26.1	30.4	20.7	24.9	29.2	19.6	23.6	27.5
			kW		5.9			6.8			7.9			9.0			10.2	
		19.4	THC	31.2	31.2	31.2	29.9	29.9	29.9	28.5	28.5	28.5	26.9	26.9	26.9	25.1	25.1	25.1
			SHC	18.6	23.1	27.6	18.0	22.5	27.1	17.4	22.0	26.5	16.8	21.3	25.8	16.1	20.6	25.1
			kW		6.0			6.9			7.9			9.0			10.2	
		22.2	THC	33.8	33.8	33.8	32.5	32.5	32.5	31.0	31.0	31.0	29.3	29.3	29.3	–	–	–
			SHC	13.9	18.5	23.0	13.4	18.0	22.5	12.9	17.4	22.0	12.3	16.8	21.4	–	–	–
			kW		6.0		7.0				8.0			9.1			10.3	
		24.4	THC	–	36.1	36.1	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	14.7	19.3	–	–	–	–	–	–	–	–	–	–	–	–
			kW		6.1			–			–			–			–	
1652 L/S	EAT (wb)	14.4	THC	29.5	29.5	33.2	28.4	28.4	32.0	27.3	27.3	30.7	26.0	26.0	29.3	24.6	24.6	27.7
			SHC	25.7	29.5	33.2	24.8	28.4	32.0	23.8	27.3	30.7	22.7	26.0	29.3	21.4	24.6	27.7
			kW		5.9			6.9			7.9			9.0			10.2	
		16.7	THC	29.6	29.6	34.3	28.5	28.5	33.3	27.3	27.3	31.9	26.0	26.0	30.4	24.6	24.6	28.7
			SHC	24.4	29.3	34.3	23.6	28.5	33.3	22.7	27.3	31.9	21.6	26.0	30.4	20.4	24.6	28.7
			kW		5.9			6.9			7.9			9.0			10.2	
		19.4	THC	31.8	31.8	31.8	30.5	30.5	30.5	29.0	29.0	29.0	27.4	27.4	28.3	25.6	25.6	27.5
			SHC	19.7	24.9	30.1	19.1	24.4	29.6	18.6	23.8	29.0	17.9	23.1	28.3	17.2	22.4	27.5
			kW		6.0			6.9			7.9			9.1			10.2	
		22.2	THC	34.5	34.5	34.5	33.1	33.1	33.1	31.5	31.5	31.5	29.8	29.8	29.8	28.0	28.0	28.0
			SHC	14.4	19.6	24.9	13.9	19.1	24.4	13.3	18.6	23.8	12.7	17.9	23.2	12.0	17.3	22.5
			kW		6.1			7.0			8.0			9.1			10.3	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
1888 L/S	EAT (wb)	14.4	THC	30.5	30.5	34.3	29.4	29.4	33.1	28.2	28.2	31.7	26.8	26.8	30.2	25.3	25.3	28.5
			SHC	26.6	30.5	34.3	25.7	29.4	33.1	24.6	28.2	31.7	23.4	26.8	30.2	22.1	25.3	28.5
			kW		5.9			6.9			7.9			9.0			10.2	
		16.7	THC	30.5	30.5	35.7	29.4	29.4	34.4	28.2	28.2	33.0	26.8	26.8	31.4	25.4	25.4	29.7
			SHC	25.4	30.5	35.7	24.4	29.4	34.4	23.4	28.2	33.0	22.3	26.8	31.4	21.1	25.4	29.7
			kW		5.9			6.9			7.9			9.0			10.2	
		19.4	THC	32.3	32.3	32.5	30.9	30.9	31.9	29.4	29.4	31.3	27.8	27.8	30.6	26.0	26.0	29.8
			SHC	20.8	26.6	32.5	20.2	26.1	31.9	19.6	25.5	31.3	19.0	24.8	30.6	18.2	24.0	29.8
			kW		6.0			6.9			8.0			9.1			10.2	
		22.2	THC	34.9	34.9	34.9	33.5	33.5	33.5	31.9	31.9	31.9	30.2	30.2	30.2	–	–	–
			SHC	14.8	20.7	26.6	14.3	20.2	26.1	13.7	19.6	25.6	13.2	19.1	24.9	–	–	–
			kW		6.1			7.0			8.0			9.1			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
2124 L/S	EAT (wb)	14.4	THC	31.3	31.3	35.3	30.2	30.2	34.0	28.9	28.9	32.6	27.5	27.5	31.0	26.0	26.0	29.3
			SHC	27.3	31.3	35.3	26.3	30.2	34.0	25.3	28.9	32.6	24.0	27.5	31.0	22.7	26.0	29.3
			kW		6.0			6.9			7.9			9.1			10.2	
		16.7	THC	31.4	31.4	36.7	30.2	30.2	35.3	29.0	29.0	33.9	27.5	27.5	32.2	26.0	26.0	30.4
			SHC	26.1	31.4	36.7	25.1	30.2	35.3	24.0	29.0	33.9	22.9	27.5	32.2	21.6	26.0	30.4
			kW		6.0			6.9			7.9			9.1			10.2	
		19.4	THC	32.6	32.6	34.8	31.2	31.2	34.2	29.7	29.7	33.5	28.1	28.1	32.7	26.3	26.3	31.7
			SHC	21.8	28.3	34.8	21.2	27.7	34.2	20.6	27.1	33.5	19.9	26.3	32.7	19.1	25.4	31.7
			kW		6.0			6.9			8.0			9.1			10.2	
		22.2	THC	35.3	35.3	35.3	33.8	33.8	33.8	32.2	32.2	32.2	–	–	–	–	–	–
			SHC	15.2	21.8	28.3	14.7	21.2	27.8	14.2	20.7	27.3	–	–	–	–	–	–
			kW		6.1			7.0			8.0			–			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
2360 L/S	EAT (wb)	14.4	THC	32.0	32.0	36.1	30.9	30.9	34.8	29.5	29.5	33.3	28.1	28.1	31.7	26.5	26.5	29.9
			SHC	28.0	32.0	36.1	26.9	30.9	34.8	25.8	29.5	33.3	24.6	28.1	31.7	23.2	26.5	29.9
			kW		6.0			6.9			8.0			9.1			10.2	
		16.7	THC	32.0	32.0	37.5	30.9	30.9	36.1	29.6	29.6	34.6	28.1	28.1	32.9	26.6	26.6	31.0
			SHC	26.6	32.0	37.5	25.6	30.9	36.1	24.6	29.6	34.6	23.4	28.1	32.9	22.0	26.6	31.0
			kW		6.0			6.9			8.0			9.1			10.2	
		19.4	THC	32.9	32.9	36.9	31.6	31.6	36.2	30.0	30.0	35.5	28.4	28.4	34.5	26.6	26.6	33.3
			SHC	22.7	29.8	36.9	22.2	29.2	36.2	21.5	28.5	35.5	20.8	27.6	34.5	19.8	26.6	33.3
			kW		6.0			7.0			8.0			9.1			10.2	
		22.2	THC	35.6	35.6	35.6	34.1	34.1	34.1	–	–	–	–	–	–	–	–	–
			SHC	15.6	22.8	30.0	15.1	22.3	29.5	–	–	–	–	–	–	–	–	–
			kW		6.1			7.0			–			–			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:

– = Do not operate
L/s = Liters per second
EAT(wb) = Entering air temp (wet bulb)
kW = Compressor kilowatts
SHC = Sensible heat capacity (Gross)
THC = Total heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
Cfm = Cubic feet per minute (supply air)

38AUD12 - 40RUA12 COMBINATION RATINGS ENGLISH

				Ambient Temperature 85.0 EAT (db) 75.0	85.0 / 80.0	85.0 / 85.0	95.0 / 75.0	95.0 / 80.0	95.0 / 85.0	105.0 / 75.0	105.0 / 80.0	105.0 / 85.0	115.0 / 75.0	115.0 / 80.0	115.0 / 85.0	125.0 / 75.0	125.0 / 80.0	125.0 / 85.0
3000 cfm	EAT (wb)	58.0	THC	96.3	96.3	108.5	92.9	92.9	104.6	89.1	89.1	100.4	85.0	85.0	95.8	80.3	80.3	90.5
			SHC	84.1	96.3	108.5	81.1	92.9	104.6	77.8	89.1	100.4	74.2	85.0	95.8	70.1	80.3	90.5
			kW		5.9			6.8			7.9			9.0			10.2	
		62.0	THC	98.0	98.0	108.7	94.0	94.0	106.4	89.5	89.5	103.8	85.1	85.1	99.5	80.4	80.4	94.0
			SHC	78.3	93.5	108.7	76.2	91.3	106.4	73.9	88.9	103.8	70.7	85.1	99.5	66.8	80.4	94.0
			kW		5.9		6.8			7.9			9.0				10.2	
		67.0	THC	106.4	106.4	106.4	102.0	102.0	102.0	97.1	97.1	97.1	91.7	91.7	91.7	85.8	85.8	85.8
			SHC	63.3	78.7	94.2	61.5	76.9	92.4	59.5	74.9	90.4	57.3	72.8	88.2	54.9	70.3	85.8
			kW		6.0		6.9			7.9			9.0				10.2	
		72.0	THC	115.4	115.4	115.4	110.8	110.8	110.8	105.8	105.8	105.8	100.1	100.1	100.1	93.8	93.8	93.8
			SHC	47.4	63.0	78.6	45.7	61.3	76.8	43.9	59.4	75.0	41.8	57.4	72.9	39.6	55.1	70.6
			kW		6.0			7.0			8.0			9.1			10.3	
		76.0	THC	–	123.2	123.2	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	50.2	66.0	–	–	–	–	–	–	–	–	–	–	–	–
			kW		6.1			–			–			–			–	
3500 cfm	EAT (wb)	58.0	THC	100.6	100.6	113.4	97.0	97.0	109.3	93.0	93.0	104.8	88.6	88.6	99.9	83.8	83.8	94.4
			SHC	87.8	100.6	113.4	84.7	97.0	109.3	81.2	93.0	104.8	77.4	88.6	99.9	73.1	83.8	94.4
			kW		5.9			6.9			7.9			9.0			10.2	
		62.0	THC	100.9	100.9	117.0	97.1	97.1	113.5	93.1	93.1	108.9	88.7	88.7	103.7	83.8	83.8	98.0
			SHC	83.2	100.1	117.0	80.6	97.1	113.5	77.3	93.1	108.9	73.7	88.7	103.7	69.6	83.8	98.0
			kW		5.9			6.9			7.9			9.0			10.2	
		67.0	THC	108.5	108.5	108.5	104.0	104.0	104.0	98.9	98.9	98.9	93.4	93.4	96.5	87.3	87.3	94.0
			SHC	67.2	85.0	102.8	65.3	83.1	100.9	63.3	81.1	98.8	61.1	78.8	96.5	58.7	76.3	94.0
			kW		6.0			6.9			7.9			9.1			10.2	
		72.0	THC	117.6	117.6	117.6	112.8	112.8	112.8	107.6	107.6	107.6	101.8	101.8	101.8	95.4	95.4	95.4
			SHC	49.0	66.9	84.8	47.3	65.2	83.1	45.4	63.3	81.2	43.4	61.2	79.1	41.1	59.0	76.8
			kW		6.1			7.0			8.0			9.1			10.3	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
4000 cfm	EAT (wb)	58.0	THC	104.0	104.0	117.2	100.3	100.3	113.0	96.1	96.1	108.3	91.5	91.5	103.1	86.4	86.4	97.4
			SHC	90.8	104.0	117.2	87.6	100.3	113.0	83.9	96.1	108.3	79.9	91.5	103.1	75.5	86.4	97.4
			kW		5.9			6.9			7.9			9.0			10.2	
		62.0	THC	104.1	104.1	121.8	100.4	100.4	117.4	96.2	96.2	112.5	91.6	91.6	107.1	86.5	86.5	101.2
			SHC	86.5	104.1	121.8	83.4	100.4	117.4	79.9	96.2	112.5	76.1	91.6	107.1	71.9	86.5	101.2
			kW		5.9			6.9			7.9			9.0			10.2	
		67.0	THC	110.1	110.1	110.9	105.5	105.5	109.0	100.3	100.3	106.8	94.7	94.7	104.4	88.6	88.6	101.6
			SHC	70.8	90.9	110.9	69.0	89.0	109.0	66.9	86.9	106.8	64.7	84.5	104.4	62.1	81.9	101.6
			kW		6.0			6.9			8.0			9.1			10.2	
		72.0	THC	119.2	119.2	119.2	114.3	114.3	114.3	109.0	109.0	109.0	103.1	103.1	103.1	–	–	–
			SHC	50.5	70.7	90.8	48.8	68.9	89.1	46.9	67.0	87.2	44.9	65.0	85.1	–	–	–
			kW		6.1			7.0			8.0			9.1			–	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
4500 cfm	EAT (wb)	58.0	THC	106.9	106.9	120.5	103.0	103.0	116.0	98.7	98.7	111.2	93.9	93.9	105.8	88.6	88.6	99.9
			SHC	93.3	106.9	120.5	89.9	103.0	116.0	86.2	98.7	111.2	82.0	93.9	105.8	77.4	88.6	99.9
			kW		6.0			6.9			7.9			9.1			10.2	
		62.0	THC	107.0	107.0	125.1	103.1	103.1	120.5	98.8	98.8	115.5	94.0	94.0	109.9	88.7	88.7	103.7
			SHC	88.9	107.0	125.1	85.6	103.1	120.5	82.0	98.8	115.5	78.1	94.0	109.9	73.7	88.7	103.7
			kW		6.0			6.9			7.9			9.1			10.2	
		67.0	THC	111.3	111.3	118.6	106.6	106.6	116.6	101.5	101.5	114.3	95.8	95.8	111.6	89.6	89.6	108.3
			SHC	74.3	96.5	118.6	72.4	94.5	116.6	70.3	92.3	114.3	67.9	89.7	111.6	65.2	86.7	108.3
			kW		6.0			6.9			8.0			9.1			10.2	
		72.0	THC	120.5	120.5	120.5	115.4	115.4	115.4	110.0	110.0	110.0	–	–	–	–	–	–
			SHC	51.9	74.3	96.7	50.2	72.5	94.9	48.3	70.7	93.0	–	–	–	–	–	–
			kW		6.1			7.0			8.0			–			–	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
5000 cfm	EAT (wb)	58.0	THC	109.3	109.3	123.1	105.3	105.3	118.6	100.8	100.8	113.6	95.9	95.9	108.1	90.5	90.5	102.0
			SHC	95.4	109.3	123.1	91.9	105.3	118.6	88.0	100.8	113.6	83.8	95.9	108.1	79.0	90.5	102.0
			kW		6.0			6.9			8.0			9.1			10.2	
		62.0	THC	109.3	109.3	127.8	105.3	105.3	123.2	100.9	100.9	118.0	96.0	96.0	112.2	90.6	90.6	105.9
			SHC	90.8	109.3	127.8	87.5	105.3	123.2	83.8	100.9	118.0	79.7	96.0	112.2	75.2	90.6	105.9
			kW		6.0			6.9			8.0			9.1			10.2	
		67.0	THC	112.4	112.4	125.8	107.7	107.7	123.6	102.5	102.5	121.0	96.8	96.8	117.8	90.7	90.7	113.7
			SHC	77.6	101.7	125.8	75.6	99.6	123.6	73.4	97.2	121.0	70.8	94.3	117.8	67.7	90.7	113.7
			kW		6.0			7.0			8.0			9.1			10.2	
		72.0	THC	121.5	121.5	121.5	116.4	116.4	116.4	–	–	–	–	–	–	–	–	–
			SHC	53.3	77.9	102.4	51.5	76.1	100.6	–	–	–	–	–	–	–	–	–
			kW		6.1			7.0			–			–			–	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:
– = Do not operate
L/s = Liters per second
EAT(wb) = Entering air temp (wet bulb)
kW = Compressor kilowatts
SHC = Sensible heat capacity (Gross)
THC = Total heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
Cfm = Cubic feet per minute (supply air)

38AU

38AU

PERFORMANCE DATA (cont.)

38AUD14 – 40RUA14 COMBINATION RATINGS SI

				Ambient Temperature														
				29.4			35.0			40.6			46.1			51.7		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4
1699 L/S	EAT (wb)	14.4	THC	34.2	34.2	38.5	33.0	33.0	37.2	31.7	31.7	35.7	30.2	30.2	34.0	28.5	28.5	32.1
			SHC	29.8	34.2	38.5	28.8	33.0	37.2	27.6	31.7	35.7	26.3	30.2	34.0	24.9	28.5	32.1
			kW		8.1			9.2			10.4			11.6			12.9	
		16.7	THC	34.8	34.8	38.3	33.4	33.4	37.5	31.9	31.9	36.6	30.2	30.2	35.3	28.5	28.5	33.3
			SHC	27.6	33.0	38.3	26.9	32.2	37.5	26.1	31.4	36.6	25.1	30.2	35.3	23.7	28.5	33.3
			kW		8.1			9.2			10.4			11.6			12.9	
		19.4	THC	37.5	37.5	37.5	36.0	36.0	36.0	34.3	34.3	34.3	32.4	32.4	32.4	30.3	30.3	30.3
			SHC	22.2	27.7	33.1	21.6	27.0	32.4	20.9	26.3	31.7	20.2	25.6	31.0	19.3	24.7	30.1
			kW		8.3			9.4			10.6			11.8			13.1	
		22.2	THC	40.7	40.7	40.7	38.8	38.8	38.8	37.0	37.0	37.0	35.1	35.1	35.1	32.9	32.9	32.9
			SHC	16.7	22.2	27.6	16.0	21.5	26.9	15.4	20.8	26.2	14.7	20.1	25.5	13.9	19.3	24.7
			kW		8.5			9.6			10.7			12.0			13.3	
		24.4	THC	–	43.6	43.6	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	17.7	23.3	–	–	–	–	–	–	–	–	–	–	–	–
			kW		8.7			–			–			–			–	
1982 L/S	EAT (wb)	14.4	THC	35.6	35.6	40.1	34.3	34.3	38.7	32.9	32.9	37.1	31.4	31.4	35.3	29.6	29.6	33.3
			SHC	31.1	35.6	40.1	30.0	34.3	38.7	28.8	32.9	37.1	27.4	31.4	35.3	25.8	29.6	33.3
			kW		8.2			9.3			10.5			11.7			13.0	
		16.7	THC	35.7	35.7	41.6	34.4	34.4	40.2	33.0	33.0	38.5	31.4	31.4	36.7	29.6	29.6	34.6
			SHC	29.5	35.6	41.6	28.5	34.4	40.2	27.4	33.0	38.5	26.1	31.4	36.7	24.6	29.6	34.6
			kW		8.2			9.3			10.5			11.7			13.0	
		19.4	THC	38.2	38.2	38.2	36.6	36.6	36.6	34.9	34.9	34.9	33.0	33.0	33.9	30.8	30.8	33.0
			SHC	23.6	29.8	36.1	22.9	29.2	35.4	22.3	28.5	34.7	21.5	27.7	33.9	20.6	26.8	33.0
			kW		8.4			9.4			10.6			11.8			13.1	
		22.2	THC	41.5	41.5	41.5	39.5	39.5	39.5	37.6	37.6	37.6	35.6	35.6	35.6	33.3	33.3	33.3
			SHC	17.3	23.5	29.8	16.6	22.8	29.1	15.9	22.2	28.4	15.2	21.4	27.7	14.4	20.6	26.9
			kW		8.6			9.6			10.8			12.0			13.3	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
2265 L/S	EAT (wb)	14.4	THC	36.7	36.7	41.4	35.4	35.4	39.9	33.9	33.9	38.2	32.3	32.3	36.4	30.5	30.5	34.3
			SHC	32.1	36.7	41.4	30.9	35.4	39.9	29.6	33.9	38.2	28.2	32.3	36.4	26.6	30.5	34.3
			kW		8.3			9.4			10.5			11.8			13.1	
		16.7	THC	36.8	36.8	43.0	35.4	35.4	41.4	34.0	34.0	39.7	32.3	32.3	37.8	30.5	30.5	35.6
			SHC	30.5	36.8	43.0	29.4	35.4	41.4	28.2	34.0	39.7	26.8	32.3	37.8	25.3	30.5	35.6
			kW		8.3			9.4			10.5			11.8			13.1	
		19.4	THC	38.7	38.7	39.0	37.1	37.1	38.2	35.3	35.3	37.5	33.4	33.4	36.7	31.2	31.2	35.7
			SHC	24.9	31.9	39.0	24.2	31.2	38.2	23.5	30.5	37.5	22.7	29.7	36.7	21.8	28.8	35.7
			kW		8.4			9.5			10.6			11.9			13.1	
		22.2	THC	42.1	42.1	42.1	39.9	39.9	39.9	38.0	38.0	38.0	36.0	36.0	36.0	–	–	–
			SHC	17.8	24.9	32.0	17.1	24.1	31.2	16.4	23.4	30.5	15.7	22.7	29.8	–	–	–
			kW															
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
2549 L/S	EAT (wb)	14.4	THC	37.7	37.7	42.4	36.3	36.3	40.9	34.8	34.8	39.2	33.1	33.1	37.3	31.2	31.2	35.1
			SHC	32.9	37.7	42.4	31.7	36.3	40.9	30.4	34.8	39.2	28.9	33.1	37.3	27.2	31.2	35.1
			kW		8.3			9.4			10.6			11.9			13.1	
		16.7	THC	37.7	37.7	44.1	36.3	36.3	42.4	34.8	34.8	40.7	33.1	33.1	38.7	31.2	31.2	36.5
			SHC	31.3	37.7	44.1	30.2	36.3	42.4	28.9	34.8	40.7	27.5	33.1	38.7	25.9	31.2	36.5
			kW		8.3			9.4			10.6			11.9			13.1	
		19.4	THC	39.2	39.2	41.6	37.5	37.5	40.9	35.7	35.7	40.1	33.7	33.7	39.2	31.5	31.5	38.0
			SHC	26.1	33.9	41.6	25.4	33.1	40.9	24.7	32.4	40.1	23.9	31.5	39.2	22.9	30.5	38.0
			kW		8.4			9.5			10.7			11.9			13.2	
		22.2	THC	42.6	42.6	42.6	40.3	40.3	40.3	38.4	38.4	38.4	–	–	–	–	–	–
			SHC	18.3	26.2	34.0	17.5	25.4	33.2	16.9	24.7	32.6	–	–	–	–	–	–
			kW		8.7			9.7		10.8				–			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
2832 L/S	EAT (wb)	14.4	THC	38.5	38.5	43.3	37.0	37.0	41.7	35.5	35.5	40.0	33.7	33.7	38.0	31.8	31.8	35.8
			SHC	33.6	38.5	43.3	32.3	37.0	41.7	31.0	35.5	40.0	29.5	33.7	38.0	27.8	31.8	35.8
			kW		8.4			9.5			10.7			11.9			13.2	
		16.7	THC	38.5	38.5	45.0	37.0	37.0	43.3	35.5	35.5	41.5	33.8	33.8	39.5	31.8	31.8	37.2
			SHC	32.0	38.5	45.0	30.8	37.0	43.3	29.5	35.5	41.5	28.0	33.8	39.5	26.4	31.8	37.2
			kW	8.4			9.5			10.7			11.9				13.2	
		19.4	THC	39.6	39.6	44.2	37.8	37.8	43.4	36.0	36.0	42.5	34.0	34.0	41.4	31.8	31.8	39.9
			SHC	27.3	35.7	44.2	26.5	35.0	43.4	25.8	34.1	42.5	24.9	33.1	41.4	23.8	31.8	39.9
			kW		8.5			9.5			10.7			11.9			13.2	
		22.2	THC	43.0	43.0	43.0	40.7	40.7	40.7	–	–	–	–	–	–	–	–	–
			SHC	18.8	27.4	36.0	18.0	26.6	35.3	–	–	–	–	–	–	–	–	–
			kW	8.7				9.7			–			–			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:
– = Do not operate
L/s = Liters per second
EAT(wb) = Entering air temp (wet bulb)
kW = Compressor kilowatts
SHC = Sensible heat capacity (Gross)
THC = Total heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
Cfm = Cubic feet per minute (supply air)

PERFORMANCE DATA (cont.)

COMBINATION RATINGS

				Ambient Temperature														
				85.0			95.0			105.0			115.0			125.0		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0
3600 cfm	EAT (wb)	58.0	THC	116.6	116.6	131.3	112.5	112.5	126.8	108.0	108.0	121.7	102.9	102.9	115.9	97.1	97.1	109.4
			SHC	101.8	116.6	131.3	98.2	112.5	126.8	94.3	108.0	121.7	89.8	102.9	115.9	84.8	97.1	109.4
			kW		8.1			9.2			10.4			11.6			12.9	
		62.0	THC	118.8	118.8	130.6	114.0	114.0	128.0	108.7	108.7	124.9	103.0	103.0	120.4	97.2	97.2	113.7
			SHC	94.3	112.5	130.6	91.9	110.0	128.0	89.1	107.0	124.9	85.5	103.0	120.4	80.7	97.2	113.7
			kW		8.1			9.2			10.4			11.6			12.9	
		67.0	THC	128.0	128.0	128.0	122.8	122.8	122.8	117.1	117.1	117.1	110.6	110.6	110.6	103.4	103.4	103.4
			SHC	75.9	94.4	112.8	73.8	92.2	110.7	71.4	89.9	108.3	68.9	87.3	105.7	66.0	84.4	102.8
			kW		8.3			9.4			10.6			11.8			13.1	
		72.0	THC	138.8	138.8	138.8	132.5	132.5	132.5	126.4	126.4	126.4	119.7	119.7	119.7	112.1	112.1	112.1
			SHC	57.0	75.6	94.1	54.6	73.2	91.8	52.4	71.0	89.5	50.0	68.5	87.1	47.3	65.8	84.3
			kW		8.5			9.6			10.7			12.0			13.3	
		76.0	THC	–	148.6	148.6	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	60.5	79.4	–	–	–	–	–	–	–	–	–	–	–	–
			kW		8.7			–			–			–			–	
4200 cfm	EAT (wb)	58.0	THC	121.4	121.4	136.8	117.1	117.1	131.9	112.3	112.3	126.6	107.0	107.0	120.6	100.9	100.9	113.7
			SHC	106.0	121.4	136.8	102.2	117.1	131.9	98.1	112.3	126.6	93.4	107.0	120.6	88.1	100.9	113.7
			kW		8.2			9.3			10.5			11.7			13.0	
		62.0	THC	121.8	121.8	141.8	117.3	117.3	137.1	112.5	112.5	131.5	107.1	107.1	125.2	101.0	101.0	118.1
			SHC	100.8	121.3	141.8	97.4	117.3	137.1	93.4	112.5	131.5	88.9	107.1	125.2	83.9	101.0	118.1
			kW		8.2			9.3			10.5			11.7			13.0	
		67.0	THC	130.4	130.4	130.4	124.9	124.9	124.9	119.1	119.1	119.1	112.5	112.5	115.8	105.0	105.0	112.6
			SHC	80.5	101.8	123.1	78.3	99.6	120.8	76.0	97.2	118.5	73.4	94.6	115.8	70.4	91.5	112.6
			kW		8.4			9.4			10.6			11.8			13.1	
		72.0	THC	141.6	141.6	141.6	134.7	134.7	134.7	128.4	128.4	128.4	121.5	121.5	121.5	113.7	113.7	113.7
			SHC	59.0	80.3	101.7	56.5	77.8	99.2	54.2	75.6	97.0	51.8	73.1	94.5	49.0	70.4	91.7
			kW		8.6			9.6			10.8			12.0			13.3	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
4800 cfm	EAT (wb)	58.0	THC	125.3	125.3	141.2	120.8	120.8	136.1	115.8	115.8	130.5	110.2	110.2	124.2	103.9	103.9	117.1
			SHC	109.4	125.3	141.2	105.4	120.8	136.1	101.1	115.8	130.5	96.3	110.2	124.2	90.7	103.9	117.1
			kW		8.3			9.4			10.5			11.8			13.1	
		62.0	THC	125.5	125.5	146.7	120.9	120.9	141.3	115.9	115.9	135.6	110.3	110.3	129.0	104.0	104.0	121.6
			SHC	104.2	125.4	146.7	100.4	120.9	141.3	96.3	115.9	135.6	91.6	110.3	129.0	86.4	104.0	121.6
			kW		8.3			9.4			10.5			11.8			13.1	
		67.0	THC	132.2	132.2	132.9	126.5	126.5	130.5	120.6	120.6	128.0	113.9	113.9	125.1	106.4	106.4	121.7
			SHC	84.9	108.9	132.9	82.6	106.6	130.5	80.2	104.1	128.0	77.5	101.3	125.1	74.5	98.1	121.7
			kW		8.4			9.5			10.6			11.9			13.1	
		72.0	THC	143.8	143.8	143.8	136.3	136.3	136.3	129.8	129.8	129.8	122.8	122.8	122.8	–	–	–
			SHC	60.8	84.9	109.1	58.2	82.3	106.4	55.9	80.0	104.1	53.5	77.6	101.7	–	–	–
			kW		8.6			9.7			10.8			12.1			–	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
5400 cfm	EAT (wb)	58.0	THC	128.5	128.5	144.8	123.8	123.8	139.5	118.7	118.7	133.8	112.9	112.9	127.2	106.4	106.4	119.9
			SHC	112.2	128.5	144.8	108.1	123.8	139.5	103.6	118.7	133.8	98.6	112.9	127.2	92.9	106.4	119.9
			kW		8.3			9.4			10.6			11.9			13.1	
		62.0	THC	128.6	128.6	150.4	123.9	123.9	144.8	118.8	118.8	138.9	113.0	113.0	132.1	106.4	106.4	124.5
			SHC	106.8	128.6	150.4	102.9	123.9	144.8	98.7	118.8	138.9	93.8	113.0	132.1	88.4	106.4	124.5
			kW		8.3			9.4			10.6			11.9			13.1	
		67.0	THC	133.7	133.7	142.1	127.8	127.8	139.5	121.8	121.8	136.9	115.0	115.0	133.7	107.5	107.5	129.8
			SHC	89.1	115.6	142.1	86.7	113.1	139.5	84.2	110.6	136.9	81.4	107.6	133.7	78.1	103.9	129.8
			kW		8.4			9.5			10.7			11.9			13.2	
		72.0	THC	145.3	145.3	145.3	137.6	137.6	137.6	130.9	130.9	130.9	–	–	–	–	–	–
			SHC	62.5	89.3	116.1	59.8	86.6	113.4	57.5	84.3	111.1	–	–	–	–	–	–
			kW		8.7			9.7			10.8			–			–	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
6000 cfm	EAT (wb)	58.0	THC	131.2	131.2	147.9	126.3	126.3	142.3	121.0	121.0	136.4	115.1	115.1	129.7	108.4	108.4	122.2
			SHC	114.6	131.2	147.9	110.3	126.3	142.3	105.7	121.0	136.4	100.5	115.1	129.7	94.7	108.4	122.2
			kW		8.4			9.5			10.7			11.9			13.2	
		62.0	THC	131.3	131.3	153.6	126.4	126.4	147.8	121.1	121.1	141.6	115.2	115.2	134.7	108.5	108.5	126.8
			SHC	109.1	131.3	153.6	105.0	126.4	147.8	100.6	121.1	141.6	95.7	115.2	134.7	90.1	108.5	126.8
			kW		8.4			9.5			10.7			11.9			13.2	
		67.0	THC	135.0	135.0	150.8	128.9	128.9	148.0	122.8	122.8	145.0	116.1	116.1	141.3	108.6	108.6	136.2
			SHC	93.0	121.9	150.8	90.5	119.3	148.0	87.9	116.5	145.0	84.8	113.0	141.3	81.1	108.6	136.2
			kW		8.5			9.5			10.7			11.9			13.2	
		72.0	THC	146.6	146.6	146.6	138.8	138.8	138.8	–	–	–	–	–	–	–	–	–
			SHC	64.2	93.6	123.0	61.5	90.9	120.3	–	–	–	–	–	–	–	–	–
			kW		8.7			9.7			–			–			–	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:
– = Do not operate
L/s = Liters per second
EAT(wb) = Entering air temp (wet bulb)
kW = Compressor kilowatts
SHC = Sensible heat capacity (Gross)
THC = Total heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
Cfm = Cubic feet per minute (supply air)

PERFORMANCE DATA (cont.)

38AUD16 – 40RUA16 COMBINATION RATINGS SI

				Ambient Temperature														
				29.4			35.0			40.6			46.1			51.7		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4
2124 L/S	EAT (wb)	14.4	THC	44.1	44.1	49.7	42.6	42.6	48.0	40.9	40.9	46.1	39.2	39.2	44.2	37.3	37.3	42.0
			SHC	38.5	44.1	49.7	37.2	42.6	48.0	35.8	40.9	46.1	34.2	39.2	44.2	32.5	37.3	42.0
			kW		9.7			10.9			12.3			13.8			15.4	
		16.7	THC	45.3	45.3	49.0	43.4	43.4	48.0	41.4	41.4	46.9	39.4	39.4	45.4	37.3	37.3	43.6
			SHC	35.5	42.3	49.0	34.6	41.3	48.0	33.6	40.3	46.9	32.4	38.9	45.4	31.0	37.3	43.6
			kW		9.7			10.9			12.3			13.8			15.4	
		19.4	THC	49.2	49.2	49.2	47.1	47.1	47.1	44.9	44.9	44.9	42.6	42.6	42.6	40.0	40.0	40.0
			SHC	28.8	35.6	42.5	28.0	34.8	41.6	27.1	33.9	40.7	26.1	32.9	39.7	25.1	31.9	38.7
			kW		9.9			11.1			12.4			13.9			15.5	
		22.2	THC	53.3	53.3	53.3	51.1	51.1	51.1	48.8	48.8	48.8	46.2	46.2	46.2	43.5	43.5	43.5
			SHC	21.8	28.7	35.5	21.0	27.9	34.7	20.1	27.0	33.9	19.2	26.1	32.9	18.2	25.1	31.9
			kW		10.1			11.3			12.6			14.1			15.6	
		24.4	THC	–	56.7	56.7	–	54.5	54.5	–	52.0	52.0	–	–	–	–	–	–
			SHC	–	23.0	30.0	–	22.2	29.2	–	21.4	28.3	–	–	–	–	–	–
			kW		10.3			11.5			12.8			–			–	
2478 L/S	EAT (wb)	14.4	THC	46.1	46.1	52.0	44.5	44.5	50.1	42.8	42.8	48.2	40.9	40.9	46.0	38.8	38.8	43.7
			SHC	40.3	46.1	52.0	38.9	44.5	50.1	37.3	42.8	48.2	35.7	40.9	46.0	33.9	38.8	43.7
			kW		9.8			11.0			12.4			13.8			15.4	
		16.7	THC	46.5	46.5	53.3	44.7	44.7	51.7	42.8	42.8	50.0	40.9	40.9	47.8	38.8	38.8	45.4
			SHC	38.0	45.6	53.3	36.8	44.3	51.7	35.6	42.8	50.0	34.0	40.9	47.8	32.2	38.8	45.4
			kW		9.8			11.0			12.4			13.8			15.4	
		19.4	THC	50.2	50.2	50.2	48.1	48.1	48.1	45.8	45.8	45.8	43.3	43.3	43.5	40.7	40.7	42.4
			SHC	30.6	38.4	46.3	29.7	37.5	45.4	28.8	36.6	44.5	27.8	35.6	43.5	26.8	34.6	42.4
			kW		10.0			11.2			12.5			13.9			15.5	
		22.2	THC	54.3	54.3	54.3	52.1	52.1	52.1	49.6	49.6	49.6	47.0	47.0	47.0	44.2	44.2	44.2
			SHC	22.5	30.4	38.3	21.7	29.6	37.5	20.8	28.7	36.6	19.9	27.8	35.6	18.9	26.8	34.6
			kW		10.2			11.4			12.7			14.1			15.7	
		24.4	THC	–	57.8	57.8	–	55.4	55.4	–	–	–	–	–	–	–	–	–
			SHC	–	23.9	31.9	–	23.1	31.1	–	–	–	–	–	–	–	–	–
			kW		10.4			11.6			–			–			–	
2832 L/S	EAT (wb)	14.4	THC	47.8	47.8	53.8	46.1	46.1	51.9	44.2	44.2	49.8	42.2	42.2	47.6	40.0	40.0	45.1
			SHC	41.7	47.8	53.8	40.2	46.1	51.9	38.6	44.2	49.8	36.8	42.2	47.6	34.9	40.0	45.1
			kW		9.9			11.1			12.4			13.9			15.5	
		16.7	THC	47.8	47.8	55.9	46.1	46.1	53.9	44.3	44.3	51.7	42.2	42.2	49.4	40.0	40.0	46.8
			SHC	39.7	47.8	55.9	38.3	46.1	53.9	36.8	44.3	51.7	35.1	42.2	49.4	33.3	40.0	46.8
			kW		9.9			11.1			12.4			13.9			15.5	
		19.4	THC	50.9	50.9	50.9	48.8	48.8	49.0	46.4	46.4	48.1	43.9	43.9	47.0	41.2	41.2	45.8
			SHC	32.2	41.1	49.9	31.3	40.2	49.0	30.4	39.2	48.1	29.4	38.2	47.0	28.3	37.1	45.8
			kW		10.0			11.2			12.5			14.0			15.5	
		22.2	THC	55.1	55.1	55.1	52.8	52.8	52.8	50.3	50.3	50.3	47.6	47.6	47.6	44.7	44.7	44.7
			SHC	23.2	32.1	41.0	22.3	31.2	40.2	21.5	30.4	39.2	20.5	29.4	38.3	19.5	28.4	37.3
			kW		10.2			11.4			12.7			14.2			15.7	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
3186 L/S	EAT (wb)	14.4	THC	49.1	49.1	55.4	47.3	47.3	53.3	45.4	45.4	51.1	43.3	43.3	48.8	41.0	41.0	46.2
			SHC	42.9	49.1	55.4	41.3	47.3	53.3	39.6	45.4	51.1	37.8	43.3	48.8	35.8	41.0	46.2
			kW		9.9			11.1			12.5			13.9			15.5	
		16.7	THC	49.2	49.2	57.5	47.4	47.4	55.4	45.4	45.4	53.1	43.3	43.3	50.6	41.0	41.0	47.9
			SHC	40.8	49.2	57.5	39.3	47.4	55.4	37.7	45.4	53.1	36.0	43.3	50.6	34.1	41.0	47.9
			kW		9.9			11.1			12.5			13.9			15.5	
		19.4	THC	51.5	51.5	53.4	49.3	49.3	52.5	47.0	47.0	51.4	44.4	44.4	50.3	41.7	41.7	49.0
			SHC	33.8	43.6	53.4	32.9	42.7	52.5	31.9	41.7	51.4	30.9	40.6	50.3	29.7	39.4	49.0
			kW		10.0			11.2			12.6			14.0			15.6	
		22.2	THC	55.7	55.7	55.7	53.3	53.3	53.3	50.8	50.8	50.8	48.0	48.0	48.0	45.0	45.0	45.0
			SHC	23.8	33.7	43.6	23.0	32.9	42.7	22.1	32.0	41.9	21.1	31.0	40.9	20.1	30.0	39.8
			kW		10.3			11.4			12.8			14.2			15.7	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
3540 L/S	EAT (wb)	14.4	THC	50.2	50.2	56.6	48.4	48.4	54.5	46.4	46.4	52.3	44.2	44.2	49.8	41.8	41.8	47.1
			SHC	43.9	50.2	56.6	42.2	48.4	54.5	40.5	46.4	52.3	38.6	44.2	49.8	36.5	41.8	47.1
			kW		10.0			11.2			12.5			14.0			15.6	
		16.7	THC	50.3	50.3	58.8	48.4	48.4	56.6	46.4	46.4	54.2	44.2	44.2	51.7	41.8	41.8	48.9
			SHC	41.8	50.3	58.8	40.2	48.4	56.6	38.5	46.4	54.2	36.7	44.2	51.7	34.8	41.8	48.9
			kW		10.0			11.2			12.5			14.0			15.6	
		19.4	THC	52.0	52.0	56.7	49.8	49.8	55.7	47.4	47.4	54.5	44.8	44.8	53.3	42.1	42.1	51.7
			SHC	35.3	46.0	56.7	34.3	45.0	55.7	33.3	43.9	54.5	32.2	42.7	53.3	30.9	41.3	51.7
			kW		10.1			11.3			12.6			14.0			15.6	
		22.2	THC	56.1	56.1	56.1	53.7	53.7	53.7	51.2	51.2	51.2	–	–	–	–	–	–
			SHC	24.4	35.3	46.1	23.6	34.4	45.3	22.7	33.5	44.4	–	–	–	–	–	–
			kW		10.3			11.5			12.8			14.2			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:
– = Do not operate
L/s = Liters per second
EAT(wb) = Entering air temp (wet bulb)
kW = Compressor kilowatts
SHC = Sensible heat capacity (Gross)
THC = Total heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
Cfm = Cubic feet per minute (supply air)

38AUD16 - 40RUA16 **COMBINATION RATINGS** **ENGLISH**

				Ambient Temperature														
				85.0			95.0			105.0			115.0			125.0		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0
4500 cfm	EAT (wb)	58.0	THC	150.4	150.4	169.5	145.3	145.3	163.7	139.7	139.7	157.4	133.7	133.7	150.7	127.1	127.1	143.2
			SHC	131.3	150.4	169.5	126.8	145.3	163.7	122.0	139.7	157.4	116.7	133.7	150.7	111.0	127.1	143.2
			kW		9.7			10.9			12.3			13.8			15.4	
		62.0	THC	154.4	154.4	167.2	148.0	148.0	163.8	141.4	141.4	160.1	134.4	134.4	155.0	127.2	127.2	148.8
			SHC	121.2	144.2	167.2	118.0	140.9	163.8	114.7	137.4	160.1	110.5	132.8	155.0	105.7	127.2	148.8
			kW		9.7			10.9			12.3			13.8			15.4	
		67.0	THC	167.7	167.7	167.7	160.7	160.7	160.7	153.3	153.3	153.3	145.2	145.2	145.2	136.6	136.6	136.6
			SHC	98.3	121.6	144.9	95.4	118.7	142.0	92.4	115.7	138.9	89.1	112.4	135.6	85.6	108.9	132.1
			kW		9.9			11.1			12.4			13.9			15.5	
		72.0	THC	181.8	181.8	181.8	174.4	174.4	174.4	166.5	166.5	166.5	157.8	157.8	157.8	148.5	148.5	148.5
			SHC	74.4	97.8	121.2	71.7	95.1	118.5	68.7	92.1	115.5	65.5	88.9	112.3	62.1	85.5	108.8
			kW		10.1			11.3			12.6			14.1			15.6	
		76.0	THC	–	193.5	193.5	–	185.8	185.8	–	177.4	177.4	–	–	–	–	–	–
			SHC	–	78.4	102.4	–	75.8	99.7	–	72.9	96.7	–	–	–	–	–	–
			kW		10.3			11.5			12.8			–			–	
5250 cfm	EAT (wb)	58.0	THC	157.4	157.4	177.4	151.8	151.8	171.1	145.9	145.9	164.4	139.4	139.4	157.1	132.3	132.3	149.1
			SHC	137.4	157.4	177.4	132.6	151.8	171.1	127.4	145.9	164.4	121.7	139.4	157.1	115.5	132.3	149.1
			kW		9.8			11.0			12.4			13.8			15.4	
		62.0	THC	158.7	158.7	181.7	152.4	152.4	176.5	146.0	146.0	170.7	139.5	139.5	163.1	132.4	132.4	154.9
			SHC	129.7	155.7	181.7	125.7	151.1	176.5	121.3	146.0	170.7	115.9	139.5	163.1	110.0	132.4	154.9
			kW		9.8			11.0			12.4			13.8			15.4	
		67.0	THC	171.2	171.2	171.2	164.0	164.0	164.0	156.2	156.2	156.2	147.9	147.9	148.3	139.0	139.0	144.6
			SHC	104.3	131.1	157.9	101.3	128.1	154.9	98.2	125.0	151.8	94.9	121.6	148.3	91.3	118.0	144.6
			kW		10.0			11.2			12.5			13.9			15.5	
		72.0	THC	185.3	185.3	185.3	177.6	177.6	177.6	169.4	169.4	169.4	160.5	160.5	160.5	150.7	150.7	150.7
			SHC	76.8	103.7	130.7	74.0	100.9	127.9	71.0	98.0	124.9	67.9	94.7	121.6	64.4	91.3	118.1
			kW		10.2			11.4			12.7			14.1			15.7	
		76.0	THC	–	197.1	197.1	–	189.1	189.1	–	–	–	–	–	–	–	–	–
			SHC	–	81.5	109.0	–	78.8	106.2	–	–	–	–	–	–	–	–	–
			kW		10.4			11.6			–			–			–	
6000 cfm	EAT (wb)	58.0	THC	163.0	163.0	183.7	157.2	157.2	177.1	150.8	150.8	170.0	144.0	144.0	162.3	136.5	136.5	153.8
			SHC	142.4	163.0	183.7	137.2	157.2	177.1	131.7	150.8	170.0	125.7	144.0	162.3	119.2	136.5	153.8
			kW		9.9			11.1			12.4			13.9			15.5	
		62.0	THC	163.2	163.2	190.8	157.3	157.3	183.9	151.0	151.0	176.5	144.1	144.1	168.5	136.6	136.6	159.7
			SHC	135.6	163.2	190.8	130.6	157.3	183.9	125.4	151.0	176.5	119.7	144.1	168.5	113.5	136.6	159.7
			kW		9.9			11.1			12.4			13.9			15.5	
		67.0	THC	173.8	173.8	173.8	166.4	166.4	167.3	158.4	158.4	164.0	149.9	149.9	160.3	140.7	140.7	156.4
			SHC	109.9	140.1	170.3	106.9	137.1	167.3	103.7	133.8	164.0	100.3	130.3	160.3	96.6	126.5	156.4
			kW		10.0			11.2			12.5			14.0			15.5	
		72.0	THC	187.9	187.9	187.9	180.0	180.0	180.0	171.6	171.6	171.6	162.4	162.4	162.4	152.5	152.5	152.5
			SHC	79.0	109.4	139.8	76.2	106.6	137.0	73.2	103.6	133.9	70.0	100.3	130.7	66.6	96.9	127.2
			kW		10.2			11.4			12.7			14.2			15.7	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
6750 cfm	EAT (wb)	58.0	THC	167.6	167.6	188.9	161.5	161.5	182.0	154.9	154.9	174.5	147.7	147.7	166.4	139.8	139.8	157.6
			SHC	146.3	167.6	188.9	141.0	161.5	182.0	135.2	154.9	174.5	128.9	147.7	166.4	122.1	139.8	157.6
			kW		9.9			11.1			12.5			13.9			15.5	
		62.0	THC	167.7	167.7	196.1	161.6	161.6	188.9	155.0	155.0	181.2	147.8	147.8	172.8	139.9	139.9	163.6
			SHC	139.3	167.7	196.1	134.2	161.6	188.9	128.7	155.0	181.2	122.7	147.8	172.8	116.2	139.9	163.6
			kW		9.9			11.1			12.5			13.9			15.5	
		67.0	THC	175.8	175.8	182.2	168.3	168.3	179.0	160.2	160.2	175.5	151.5	151.5	171.6	142.3	142.3	167.1
			SHC	115.2	148.7	182.2	112.2	145.6	179.0	108.9	142.2	175.5	105.4	138.5	171.6	101.5	134.3	167.1
			kW		10.0			11.2			12.6			14.0			15.6	
		72.0	THC	189.9	189.9	189.9	181.9	181.9	181.9	173.2	173.2	173.2	163.9	163.9	163.9	153.7	153.7	153.7
			SHC	81.2	114.9	148.7	78.4	112.1	145.8	75.3	109.1	142.8	72.1	105.8	139.5	68.6	102.3	135.9
			kW		10.3			11.4			12.8			14.2			15.7	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
7500 cfm	EAT (wb)	58.0	THC	171.4	171.4	193.2	165.1	165.1	186.0	158.2	158.2	178.3	150.8	150.8	169.9	142.7	142.7	160.7
			SHC	149.7	171.4	193.2	144.1	165.1	186.0	138.1	158.2	178.3	131.6	150.8	169.9	124.6	142.7	160.7
			kW		10.0			11.2			12.5			14.0			15.6	
		62.0	THC	171.5	171.5	200.6	165.2	165.2	193.1	158.3	158.3	185.1	150.9	150.9	176.4	142.7	142.7	166.9
			SHC	142.5	171.5	200.6	137.2	165.2	193.1	131.5	158.3	185.1	125.3	150.9	176.4	118.6	142.7	166.9
			kW		10.0			11.2			12.5			14.0			15.6	
		67.0	THC	177.5	177.5	193.4	169.8	169.8	190.0	161.7	161.7	186.1	153.0	153.0	181.7	143.7	143.7	176.3
			SHC	120.3	156.8	193.4	117.1	153.5	190.0	113.7	149.9	186.1	110.0	145.8	181.7	105.6	140.9	176.3
			kW		10.1			11.3			12.6			14.0			15.6	
		72.0	THC	191.5	191.5	191.5	183.3	183.3	183.3	174.6	174.6	174.6	165.0	165.0	165.0	–	–	–
			SHC	83.2	120.3	157.3	80.4	117.4	154.5	77.4	114.4	151.4	74.1	111.1	148.1	–	–	–
			kW		10.3			11.5			12.8			14.2			–	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:

– = Do not operate
L/s = Liters per second
EAT(wb) = Entering air temp (wet bulb)
kW = Compressor kilowatts
SHC = Sensible heat capacity (Gross)
THC = Total heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
Cfm = Cubic feet per minute (supply air)

PERFORMANCE DATA (cont.)

38AUD25 - 40RUA25 COMBINATION RATINGS SI

				Ambient Temperature														
				29.4			35.0			40.6			46.1			51.7		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4
2832 L/S	EAT (wb)	14.4	THC	58.3	58.3	65.7	56.2	56.2	63.3	54.0	54.0	60.8	51.5	51.5	58.0	48.7	48.7	54.9
			SHC	50.9	58.3	65.7	49.1	56.2	63.3	47.1	54.0	60.8	44.9	51.5	58.0	42.5	48.7	54.9
			kW	11.6			13.0			14.5			16.3			18.3		
		16.7	THC	59.8	59.8	64.9	57.3	57.3	63.6	54.5	54.5	62.0	51.7	51.7	59.8	48.7	48.7	57.0
			SHC	47.0	56.0	64.9	45.8	54.7	63.6	44.4	53.2	62.0	42.6	51.2	59.8	40.5	48.7	57.0
			kW	11.7			13.0			14.6			16.3			18.3		
		19.4	THC	65.4	65.4	65.4	62.5	62.5	62.5	59.4	59.4	59.4	56.0	56.0	56.0	52.3	52.3	52.3
			SHC	38.3	47.4	56.4	37.1	46.2	55.2	35.8	44.9	53.9	34.5	43.5	52.5	33.0	42.0	51.0
			kW		11.9			13.3			14.6			16.6			18.5	
		22.2	THC	71.6	71.6	71.6	68.4	68.4	68.4	65.0	65.0	65.0	61.3	61.3	61.3	57.2	57.2	57.2
			SHC	29.3	38.4	47.5	28.1	37.2	46.3	26.8	35.9	45.0	25.4	34.5	43.6	24.0	33.0	42.1
			kW		12.3			13.6			15.1			16.9		18.8		
		24.4	THC	–	76.8	76.8	–	73.4	73.4	–	69.7	69.7	–	–	–	–	–	–
			SHC	–	31.1	40.6	–	29.9	39.3	–	28.6	38.0	–	–	–	–	–	–
			kW		12.6			13.9			15.4			–			–	
3304 L/S	EAT (wb)	14.4	THC	61.1	61.1	68.8	58.9	58.9	66.4	56.4	56.4	63.6	53.7	53.7	60.6	50.7	50.7	57.2
			SHC	53.3	61.1	68.8	51.4	58.9	66.4	49.3	56.4	63.6	46.9	53.7	60.6	44.3	50.7	57.2
			kW		11.7			13.1			14.7			16.5		18.4		
		16.7	THC	61.7	61.7	70.5	59.1	59.1	68.5	56.5	56.5	66.0	53.8	53.8	62.9	50.8	50.8	59.4
			SHC	50.4	60.4	70.5	48.8	58.6	68.5	46.9	56.5	66.0	44.7	53.8	62.9	42.2	50.8	59.4
			kW		11.8			13.1			14.7			16.5			18.4	
		19.4	THC	67.0	67.0	67.0	64.0	64.0	64.0	60.7	60.7	60.7	57.2	57.2	57.5	53.3	53.3	55.9
			SHC	40.7	51.1	61.5	39.5	49.9	60.3	38.2	48.5	58.9	36.7	47.1	57.5	35.2	45.5	55.9
			kW		12.0			13.4			14.9			16.6			18.6	
		22.2	THC	73.2	73.2	73.2	69.9	69.9	69.9	66.3	66.3	66.3	62.4	62.4	62.4	58.2	58.2	58.2
			SHC	30.3	40.8	51.3	29.1	39.5	50.0	27.8	38.2	48.7	26.4	36.8	47.2	24.9	35.3	45.7
			kW		12.4			13.7			15.2			16.9			18.8	
		24.4	THC	–	78.5	78.5	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	32.4	43.2	–	–	–	–	–	–	–	–	–	–	–	–
			kW		12.7			–			–			–			–	
3776 L/S	EAT (wb)	14.4	THC	63.4	63.4	71.5	61.0	61.0	68.8	58.4	58.4	65.8	55.5	55.5	62.6	52.4	52.4	59.0
			SHC	55.4	63.4	71.5	53.3	61.0	68.8	51.0	58.4	65.8	48.5	55.5	62.6	45.7	52.4	59.0
			kW		11.9			13.2			14.8			16.6			18.5	
		16.7	THC	63.5	63.5	74.2	61.1	61.1	71.4	58.5	58.5	68.4	55.6	55.6	65.0	52.4	52.4	61.3
			SHC	52.7	63.5	74.2	50.7	61.1	71.4	48.6	58.5	68.4	46.2	55.6	65.0	43.6	52.4	61.3
			kW		11.9			13.2			14.8			16.6			18.5	
		19.4	THC	68.1	68.1	68.1	65.0	65.0	65.1	61.6	61.6	63.7	58.0	58.0	62.1	54.0	54.0	60.4
			SHC	42.9	54.7	66.4	41.7	53.4	65.1	40.3	52.0	63.7	38.8	50.5	62.1	37.3	48.8	60.4
			kW		12.1			13.4			15.0			16.7			18.6	
		22.2	THC	74.5	74.5	74.5	71.0	71.0	71.0	67.3	67.3	67.3	63.3	63.3	63.3	59.0	59.0	59.0
			SHC	31.2	43.1	54.8	30.0	41.8	53.6	28.7	40.4	52.2	27.3	39.0	50.7	25.8	37.5	49.2
			kW		12.4			13.8			15.3			17.0			18.9	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
4248 L/S	EAT (wb)	14.4	THC	65.4	65.4	73.7	62.8	62.8	70.8	60.1	60.1	67.7	57.1	57.1	64.3	53.8	53.8	60.6
			SHC	57.1	65.4	73.7	54.9	62.8	70.8	52.5	60.1	67.7	49.8	57.1	64.3	46.9	53.8	60.6
			kW		12.0			13.3			14.9			16.6			18.6	
		16.7	THC	65.4	65.4	76.5	62.9	62.9	73.5	60.1	60.1	70.3	57.1	57.1	66.8	53.8	53.8	62.9
			SHC	54.3	65.4	76.5	52.2	62.9	73.5	49.9	60.1	70.3	47.5	57.1	66.8	44.7	53.8	62.9
			kW		12.0			13.3			14.9			16.6			18.6	
		19.4	THC	69.1	69.1	71.0	65.9	65.9	69.7	62.4	62.4	68.1	58.7	58.7	66.4	54.7	54.7	64.5
			SHC	45.1	58.1	71.0	43.8	56.7	69.7	42.4	55.2	68.1	40.8	53.6	66.4	39.1	51.8	64.5
			kW		12.2			13.5			15.0			16.7			18.7	
		22.2	THC	75.5	75.5	75.5	72.0	72.0	72.0	68.1	68.1	68.1	64.0	64.0	64.0	–	–	–
			SHC	32.1	45.2	58.3	30.9	43.9	57.0	29.5	42.6	55.6	28.1	41.1	54.1	–	–	–
			kW		12.5			13.8			15.3			17.0			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
4719 L/S	EAT (wb)	14.4	THC	67.0	67.0	75.5	64.4	64.4	72.6	61.5	61.5	69.3	58.4	58.4	65.8	54.9	54.9	61.8
			SHC	58.5	67.0	75.5	56.2	64.4	72.6	53.7	61.5	69.3	51.0	58.4	65.8	47.9	54.9	61.8
			kW		12.1			13.4			15.0			16.7			18.7	
		16.7	THC	67.1	67.1	78.4	64.4	64.4	75.4	61.5	61.5	72.0	58.4	58.4	68.3	54.9	54.9	64.2
			SHC	55.7	67.1	78.4	53.5	64.4	75.4	51.1	61.5	72.0	48.5	58.4	68.3	45.6	54.9	64.2
			kW		12.1			13.4			15.0			16.7			18.7	
		19.4	THC	69.9	69.9	75.4	66.6	66.6	74.0	63.1	63.1	72.3	59.3	59.3	70.4	55.3	55.3	67.9
			SHC	47.1	61.3	75.4	45.7	59.8	74.0	44.3	58.3	72.3	42.6	56.5	70.4	40.7	54.3	67.9
			kW		12.2			13.5			15.1			16.8			18.7	
		22.2	THC	76.3	76.3	76.3	72.7	72.7	72.7	68.7	68.7	68.7	–	–	–	–	–	–
			SHC	33.0	47.3	61.7	31.7	46.0	60.3	30.3	44.6	58.9	–	–	–	–	–	–
			kW		12.6			13.9			15.4			–			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:

– = Do not operate
L/s = Liters per second
EAT(wb) = Entering air temp (wet bulb)
kW = Compressor kilowatts
SHC = Sensible heat capacity (Gross)
THC = Total heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
Cfm = Cubic feet per minute (supply air)

PERFORMANCE DATA (cont.)

38AUD25 - 40RUA25 COMBINATION RATINGS ENGLISH

				Ambient Temperature														
				85.0			95.0			105.0			115.0			125.0		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0
6000 cfm	EAT (wb)	58.0	THC	198.8	198.8	224.1	191.8	191.8	216.1	184.1	184.1	207.4	175.6	175.6	197.9	166.1	166.1	187.2
			SHC	173.6	198.8	224.1	167.5	191.8	216.1	160.7	184.1	207.4	153.3	175.6	197.9	145.1	166.1	187.2
			kW		11.6			13.0			14.5			16.3			18.3	
		62.0	THC	204.2	204.2	221.5	195.5	195.5	216.9	186.1	186.1	211.6	176.5	176.5	204.0	166.3	166.3	194.5
			SHC	160.5	191.0	221.5	156.2	186.5	216.9	151.4	181.5	211.6	145.3	174.7	204.0	138.1	166.3	194.5
			kW		11.7			13.0			14.6			16.3			18.3	
		67.0	THC	223.1	223.1	223.1	213.4	213.4	213.4	202.7	202.7	202.7	191.2	191.2	191.2	178.5	178.5	178.5
			SHC	130.8	161.7	192.6	126.7	157.6	188.4	122.3	153.2	184.0	117.6	148.4	179.2	112.5	143.3	174.1
			kW		11.9			13.3			14.6			16.6			18.5	
		72.0	THC	244.3	244.3	244.3	233.5	233.5	233.5	221.8	221.8	221.8	209.1	209.1	209.1	195.3	195.3	195.3
			SHC	99.9	131.0	162.2	95.9	126.9	158.0	91.5	122.5	153.6	86.8	117.8	148.8	81.8	112.7	143.7
			kW		12.3			13.6			15.1			16.9			18.8	
		76.0	THC	–	262.2	262.2	–	250.5	250.5	–	237.8	237.8	–	–	–	–	–	–
			SHC	–	106.2	138.4	–	102.1	134.2	–	97.7	129.6	–	–	–	–	–	–
			kW		12.6			13.9			15.4			–			–	
7000 cfm	EAT (wb)	58.0	THC	208.5	208.5	234.9	200.9	200.9	226.4	192.5	192.5	216.9	183.3	183.3	206.6	173.1	173.1	195.1
			SHC	182.0	208.5	234.9	175.4	200.9	226.4	168.1	192.5	216.9	160.1	183.3	206.6	151.1	173.1	195.1
			kW		11.7			13.1			14.7			16.5		18.4		
		62.0	THC	210.4	210.4	240.6	201.7	201.7	233.7	192.7	192.7	225.3	183.5	183.5	214.6	173.3	173.3	202.6
			SHC	171.9	206.2	240.6	166.4	200.1	233.7	160.0	192.7	225.3	152.4	183.5	214.6	143.9	173.3	202.6
			kW		11.8			13.1			14.7			16.5			18.4	
		67.0	THC	228.5	228.5	228.5	218.2	218.2	218.2	207.0	207.0	207.0	195.0	195.0	196.1	181.9	181.9	190.6
			SHC	138.9	174.4	210.0	134.7	170.2	205.7	130.2	165.6	201.1	125.3	160.7	196.1	120.0	155.3	190.6
			kW		12.0			13.4			14.9			16.6			18.6	
		72.0	THC	249.9	249.9	249.9	238.6	238.6	238.6	226.3	226.3	226.3	213.0	213.0	213.0	198.6	198.6	198.6
			SHC	103.4	139.1	174.9	99.2	134.9	170.6	94.8	130.4	166.1	90.0	125.6	161.2	84.9	120.4	155.9
			kW		12.4			13.7			15.2			16.9			18.8	
		76.0	THC	–	268.0	268.0	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	110.5	147.3	–	–	–	–	–	–	–	–	–	–	–	–
			kW		12.7			–			–			–			–	
8000 cfm	EAT (wb)	58.0	THC	216.4	216.4	243.8	208.2	208.2	234.7	199.3	199.3	224.6	189.5	189.5	213.6	178.7	178.7	201.4
			SHC	188.9	216.4	243.8	181.8	208.2	234.7	174.0	199.3	224.6	165.5	189.5	213.6	156.0	178.7	201.4
			kW		11.9			13.2			14.8			16.6			18.5	
		62.0	THC	216.6	216.6	253.3	208.4	208.4	243.7	199.5	199.5	233.3	189.7	189.7	221.8	178.8	178.8	209.1
			SHC	179.9	216.6	253.3	173.1	208.4	243.7	165.7	199.5	233.3	157.6	189.7	221.8	148.6	178.8	209.1
			kW		11.9			13.2			14.8			16.6			18.5	
		67.0	THC	232.5	232.5	232.5	221.8	221.8	222.2	210.3	210.3	217.3	197.9	197.9	212.0	184.4	184.4	206.0
			SHC	146.5	186.6	226.6	142.2	182.2	222.2	137.6	177.4	217.3	132.5	172.2	212.0	127.1	166.5	206.0
			kW		12.1			13.4			15.0			16.7			18.6	
		72.0	THC	254.2	254.2	254.2	242.4	242.4	242.4	229.7	229.7	229.7	216.0	216.0	216.0	201.2	201.2	201.2
			SHC	106.6	146.9	187.1	102.4	142.6	182.8	97.9	138.0	178.1	93.0	133.1	173.1	87.9	127.8	167.7
			kW		12.4			13.8			15.3			17.0			18.9	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
9000 cfm	EAT (wb)	58.0	THC	223.0	223.0	251.3	214.4	214.4	241.6	205.0	205.0	231.0	194.7	194.7	219.4	183.4	183.4	206.6
			SHC	194.7	223.0	251.3	187.2	214.4	241.6	179.0	205.0	231.0	170.0	194.7	219.4	160.1	183.4	206.6
			kW		12.0			13.3			14.9			16.6			18.6	
		62.0	THC	223.2	223.2	261.0	214.6	214.6	250.9	205.2	205.2	239.9	194.9	194.9	227.9	183.5	183.5	214.5
			SHC	185.4	223.2	261.0	178.2	214.6	250.9	170.4	205.2	239.9	161.9	194.9	227.9	152.4	183.5	214.5
			kW		12.0			13.3			14.9			16.6			18.6	
		67.0	THC	235.8	235.8	242.4	224.8	224.8	237.7	213.0	213.0	232.5	200.3	200.3	226.7	186.6	186.6	220.0
			SHC	153.8	198.1	242.4	149.3	193.5	237.7	144.5	188.5	232.5	139.3	183.0	226.7	133.4	176.7	220.0
			kW		12.2			13.5			15.0			16.7			18.7	
		72.0	THC	257.6	257.6	257.6	245.5	245.5	245.5	232.4	232.4	232.4	218.4	218.4	218.4	–	–	–
			SHC	109.6	154.3	198.9	105.4	149.9	194.5	100.8	145.2	189.7	95.9	140.2	184.6	–	–	–
			kW		12.5			13.8			15.3			17.0			–	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
10,000 cfm	EAT (wb)	58.0	THC	228.7	228.7	257.7	219.7	219.7	247.6	209.8	209.8	236.5	199.1	199.1	224.4	187.3	187.3	211.0
			SHC	199.7	228.7	257.7	191.8	219.7	247.6	183.2	209.8	236.5	173.9	199.1	224.4	163.5	187.3	211.0
			kW		12.1			13.4			15.0			16.7			18.7	
		62.0	THC	228.8	228.8	267.6	219.8	219.8	257.1	210.0	210.0	245.5	199.2	199.2	233.0	187.4	187.4	219.1
			SHC	190.1	228.8	267.6	182.6	219.8	257.1	174.4	210.0	245.5	165.5	199.2	233.0	155.7	187.4	219.1
			kW		12.1			13.4			15.0			16.7			18.7	
		67.0	THC	238.5	238.5	257.4	227.3	227.3	252.4	215.2	215.2	246.7	202.4	202.4	240.1	188.7	188.7	231.8
			SHC	160.6	209.0	257.4	156.0	204.2	252.4	151.0	198.8	246.7	145.4	192.7	240.1	138.9	185.3	231.8
			kW		12.2			13.5			15.1			16.8			18.7	
		72.0	THC	260.3	260.3	260.3	247.9	247.9	247.9	234.5	234.5	234.5	–	–	–	–	–	–
			SHC	112.5	161.4	210.4	108.2	157.0	205.9	103.5	152.3	201.0	–	–	–	–	–	–
			kW		12.6			13.9			15.4			–			–	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:

– = Do not operate
EAT(wb) = Entering air temp (wet bulb)
SHC = Sensible heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
L/s = Liters per second
kW = Compressor kilowatts
THC = Total heat capacity (Gross)
Cfm = Cubic feet per minute (supply air)

38AU

ELECTRICAL DATA

38AU

38AUZ07 COOLING 50 Hz

38AUZ07							WITHOUT PWRD C.O.		WITH PWRD C.O.	
V−Ph−Hz	VOLTAGE RANGE		COMP 1		OFM (ea)		MCA	Fuse	MCA	Fuse
	MIN	MAX	RLA	LRA	WATTS	FLA				
400−3−50	380	420	9.7	64	270	0.7	13.5	20	15.9	25

38AUZ08 COOLING 50 Hz

38AUZ08							WITHOUT PWRD C.O.		WITH PWRD C.O.	
V−Ph−Hz	VOLTAGE RANGE		COMP 1		OFM (ea)					
	MIN	MAX	RLA	LRA	WATTS	FLA	MCA	Fuse	MCA	Fuse
400−3−50	380	420	12.2	101	270	0.7	16.7	25	19.0	30

38AUD12 COOLING 50 Hz

38AUD12									WITHOUT PWRD C.O.		WITH PWRD C.O.	
V−Ph−Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)					
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	MCA	Fuse	MCA	Fuse
400−3−50	380	420	7.8	51.5	7.8	51.5	270	0.7	19.0	25	21.3	30

38AUD14 COOLING 50 Hz

38AUD14									WITHOUT PWRD C.O.		WITH PWRD C.O.	
V−Ph−Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)					
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	MCA	Fuse	MCA	Fuse
400−3−50	380	420	10.6	74	10.6	74	270	0.7	25.3	30	27.6	30

38AUD16 COOLING 50 Hz

38AUD16									POWER SUPPLY		DISCONNECT SIZE	
V−Ph−Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM					
	Min	Max	RLA	LRA	RLA	LRA	Qty	FLA (ea)	MCA	MOCP	FLA	LRA
400−3−50	360	440	12.2	101	12.2	101	3	0.7	29.6	40	30	208

38AUD25 COOLING 50 Hz

38AUD24									POWER SUPPLY		DISCONNECT SIZE	
V−Ph−Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM					
	Min	Max	RLA	LRA	RLA	LRA	Qty	FLA (ea)	MCA	MOCP	FLA	LRA
400−3−50	360	440	16.7	111	16.7	111	4	0.7	40.4	50	42	230

APPLICATION DATA

Operating limits

Maximum outdoor temperature . . . . 125°F

Minimum return-air temperature (40RUA) . . . . 55°F

Maximum return-air temperature (40RUA) . . . . 95°F

Range of acceptable saturation
suction temperature . . . . 20 to 50°F

Maximum discharge temperature . . . . 275°F

Minimum discharge superheat . . . . 60°F

NOTES:

1. Select air handler at no less than 300 cfm/ton (nominal condensing unit capacity).
2. Total combined draw of the field-supplied liquid line solenoid valve and air handler fan contactor must not exceed 22 va. If the specified va must be exceeded, use a remote relay to control the load.

MINIMUM OUTDOOR-AIR OPERATING TEMPERATURE

UNIT 38AU	MINIMUM OUTDOOR TEMP (°F)	
	Std	With MotorMaster I® Control†
Z07	35	−20
Z08	35	
D12	35	
D14	35	
D16	35	
D25	35	

† Wind baffles (field-supplied and field-installed) are recommended for all units with MotorMaster I® control. Refer to Low Ambient Temperature Control Installation Instructions for additional information.

Refrigerant piping

IMPORTANT: Do not bury refrigerant piping underground.

It is recommended that the refrigerant piping for all commercial split systems include a liquid line solenoid valve, a liquid line filter drier and a sight glass.

For refrigerant lines longer than 75 lineal ft, a liquid line solenoid valve installed at the **indoor** unit and a suction accumulator are required. Refer to the Refrigerant Specialties Part Numbers table.

REFRIGERANT SPECIALTIES PART NUMBERS

LIQUID LINE SIZE (in.)	LIQUID LINE SOLENOID VALVE (LLSV)	LLSV COIL	SIGHT GLASS
$^3/_8$	EF680033	EF680037	KM680008
$^1/_2$	EF680035	EF680037	KM680004
$^5/_8$	EF680036	EF680037	KM680005

NOTE: 38AUD units require TWO sets of parts.

38AU

38AUZ 07-08 PIPING RECOMMENDATIONS (SINGLE-CIRCUIT UNIT)

		Equivalent Length									
R–410A	**meter**	**0–12**		**12–23**		**23–34**		**34–46**		**46–57**	
	feet	**0–38**		**38–75**		**75–113**		**113–150**		**150–188**	
Model	Linear Length										
	meter	0–7.5		7.5–15		15–23		23–30		30–38	
	feet	0–25		25–50		50–75		75–100		100–125	
38AUZ*07	Liquid Line	3/8		3/8	1/2	3/8	1/2	3/8	1/2	3/8	1/2
	Max Lift										
	SI (m)										
	Novation	7.5		15		16	23	9	29	10	34
	RTPF	7.5		15		19	23	12	30	11	38
	EN (ft)										
	Novation	25		50		53	75	34	97	33	112
	RTPF	25		50		63	75	42	100	38	125
	Suction Line	7/8	7/8	7/8		7/8		7/8		1–1/8	
	Charge										
	SI (kg)										
	Novation	3.8		4.4		4.9	5.9	5.4	6.8	6.1	7.9
	RTPF	6.4		7.0		7.4	8.5	7.9	9.3	8.7	10.4
	EN (lbs)										
	Novation	8.4		9.8		10.8	13.1	11.8	14.9	13.5	17.4
	RTPF	14.0		15.4		16.4	18.7	17.4	20.5	19.1	23.0
38AUZ*08	Liquid Line	1/2		1/2	5/8	1/2	5/8	1/2	5/8	1/2	5/8
	Max Lift										
	SI (m)										
	Novation	7.5		9	11	7	10	DNU	10	10	16
	RTPF	7.5		15	NR	23	NR	27	30	18	38
	EN (ft)										
	Novation	25		30	38	24	36	DNU	35	33	53
	RTPF	25		50	NR	75	NR	89	100	62	125
	Suction Line	7/8		7/8		1–1/8		1–1/8		1–1/8	
	Charge										
	SI (kg)										
	Novation	5.5		6.3	7.2	7.4	8.6	DNU	9.9	9.1	11.2
	RTPF	8.6		9.4	NR	10.4	NR	11.3	13.0	12.2	14.3
	EN (lbs)										
	Novation	12.2		13.9	15.8	16.2	19.0	DNU	21.9	20.0	24.8
	RTPF	19.0		20.7	NR	23.0	NR	24.9	28.7	26.8	31.6

Legend:

Equivalent Length – Equivalent tubing length, including effects of refrigeration specialties devices

Linear Length – Linear tubing length, feet

Liquid Line – Tubing size, inches OD.

Max Lift – Maximum liquid lift (indoor unit ABOVE outdoor unit only), at maximum permitted liquid line pressure drop
- Linear Length Less than 30 m (100 ft): Minimum 1.1° C (2.0° F) subcooling entering TXV
- Linear Length Greater than 30 m (100 ft): Minimum 0.3° C (0.5° F) subcooling entering TXV

Suction Line – Tube size, inches OD

Charge – Charge Quantity, lbs. Calculated for both liquid line sizes (where applicable), but only with larger suction line size (where applicable)

DNU – Do Not Use (pressure drop exceeds available subcooling in this model)

NR – Not Recommended (use smaller liquid tube size)

SI – Metric units of measure

EN – English units of measure (I–P)

NOTE: For applications with equivalent length greater than 57 m (188 ft) and/or linear length greater than 38 m (125 ft), contact your local Carrier representative.

38AUD 12-14 PIPING RECOMMENDATIONS (TWO-CIRCUIT UNIT)

NOTE: 38AUD requires TWO sets of refrigeration piping

R−410A	Equivalent Length										
	meter	0−12		12−23		23−34		34−46		46−57	
	feet	0−38		38−75		75−113		113−150		150−188	
Model	Linear Length										
	meter	0−7.5		7.5−15		15−23		23−30		30−38	
	feet	0−25		25−50		50−75		75−100		100−125	
38AUD*12	Liquid Line	3/8		3/8		3/8	1/2	3/8	1/2	3/8	1/2
	Max Lift										
	SI (m)										
	Novation	7.5		15		15	23	10	24	13	29
	RTPF	7.5		15		15	23	10	27	11	32
	EN (ft)										
	Novation	25		50		50	75	36	79	44	96
	RTPF	25		50		50	75	36	89	39	106
	Suction Line	7/8		7/8		7/8		7/8		1−1/8	
	Charge										
	SI (kg)										
	Novation	3.3		3.8		4.2	5.3	4.7	6.1	5.1	6.9
	RTPF	4.9		5.4		5.8	6.9	6.3	7.7	6.8	8.6
	EN (lbs)										
	Novation	7.3		8.3		9.3	11.6	10.3	13.4	11.3	15.2
	RTPF	10.9		11.9		12.9	15.2	13.9	17.0	14.9	18.8
38AUD*14	Liquid Line	3/8		1/2	5/8	1/2	5/8	1/2	5/8	1/2	5/8
	Max Lift										
	SI (m)										
	Novation	7.5		13	15	12	14	11	14	17	20
	EN (ft)										
	Novation	25		45	50	42	49	39	48	56	68
	Suction Line	7/8		7/8		7/8		1−1/8		1−1/8	
	Charge										
	SI (kg)										
	Novation	4.6		5.8	6.6	6.6	7.8	7.6	10.7	9.4	12.0
	EN (lbs)										
	Novation	10.1		12.7	14.6	14.5	17.3	16.8	23.5	20.7	26.4

Legend:

Equivalent Length –	Equivalent tubing length, including effects of refrigeration specialties devices
Linear Length –	Linear tubing length, feet
Liquid Line –	Tubing size, inches OD.
Max Lift –	Maximum liquid lift (indoor unit ABOVE outdoor unit only), at maximum permitted liquid line pressure drop • Linear Length Less than 30 m (100 ft): Minimum 1.1° C (2.0° F) subcooling entering TXV • Linear Length Greater than 30 m (100 ft): Minimum 0.3° C (0.5° F) subcooling entering TXV
Suction Line –	Tube size, inches OD
Charge –	Charge Quantity, lbs. Calculated for both liquid line sizes (where applicable), but only with larger suction line size (where applicable)
DNU –	Do Not Use (pressure drop exceeds available subcooling in this model)
NR –	Not Recommended (use smaller liquid tube size)
SI –	Metric units of measure
EN –	English units of measure (I–P)
NOTE:	For applications with equivalent length greater than 57 m (188 ft) and/or linear length greater than 38 m (125 ft), contact your local Carrier representative.

38AUD 16-25 PIPING RECOMMENDATIONS (TWO-CIRCUIT UNIT)

NOTE: 38AUD requires TWO sets of refrigeration piping

R–410A		Equivalent Length									
	meter	**0–12**		**12–23**		**23–34**		**34–46**		**46–57**	
	feet	**0–38**		**38–75**		**75–113**		**113–150**		**150–188**	
Model	Linear Length										
	meter	0–7.5		7.5–15		15–23		23–30		30–38	
	feet	0–25		25–50		50–75		75–100		100–125	
38AUD*16	Liquid Line	3/8	1/2	3/8	1/2	3/8	1/2	3/8	1/2	1/2	
	Max Lift										
	SI (m)										
	Novation	7.5	NR	15	NR	21	23	13	30	38	
	RTPF	DNU	7.5	DNU	15	DNU	23	DNU	30	36	
	EN (ft)										
	Novation	25	NR	50	NR	71	75	43	100	125	
	RTPF	DNU	25	DNU	50	DNU	75	DNU	100	119	
	Suction Line	7/8		1–1/8		1–1/8		1–1/8		1–1/8	
	Charge										
	SI (kg)										
	Novation	5.8	NR	6.3	NR	7.0	8.0	7.5	8.9	9.8	
	RTPF	DNU	9.8	DNU	10.7	DNU	11.6	DNU	12.4	13.3	
	EN (lbs)										
	Novation	12.9	NR	13.9	NR	15.4	17.7	16.5	19.6	21.6	
	RTPF	DNU	21.7	DNU	23.6	DNU	25.5	DNU	27.4	29.3	
38AUD*25	Liquid Line	1/2		1/2		1/2		1/2	5/8	1/2	5/8
	Max Lift										
	SI (m)										
	RTPF	7.5		15		23		20	27	23	32
	EN (ft)										
	RTPF	25		50		75		67	91	76	107
	Suction Line	7/8		1–1/8		1–1/8		1–1/8		1–1/8	
	Charge										
	SI (kg)										
	RTPF	9.4		10.3		11.2		12.1	13.8	13.0	15.1
	EN (lbs)										
	RTPF	20.7		22.8		24.7		26.6	30.4	28.6	33.3

Legend:

Equivalent Length – Equivalent tubing length, including effects of refrigeration specialties devices

Linear Length – Linear tubing length, feet

Liquid Line – Tubing size, inches OD.

Max Lift – Maximum liquid lift (indoor unit ABOVE outdoor unit only), at maximum permitted liquid line pressure drop
- Linear Length Less than 30 m (100 ft): Minimum 1.1° C (2.0° F) subcooling entering TXV
- Linear Length Greater than 30 m (100 ft): Minimum 0.3° C (0.5° F) subcooling entering TXV

Suction Line – Tube size, inches OD

Charge – Charge Quantity, lbs. Calculated for both liquid line sizes (where applicable), but only with larger suction line size (where applicable)

DNU – Do Not Use (pressure drop exceeds available subcooling in this model)

NR – Not Recommended (use smaller liquid tube size)

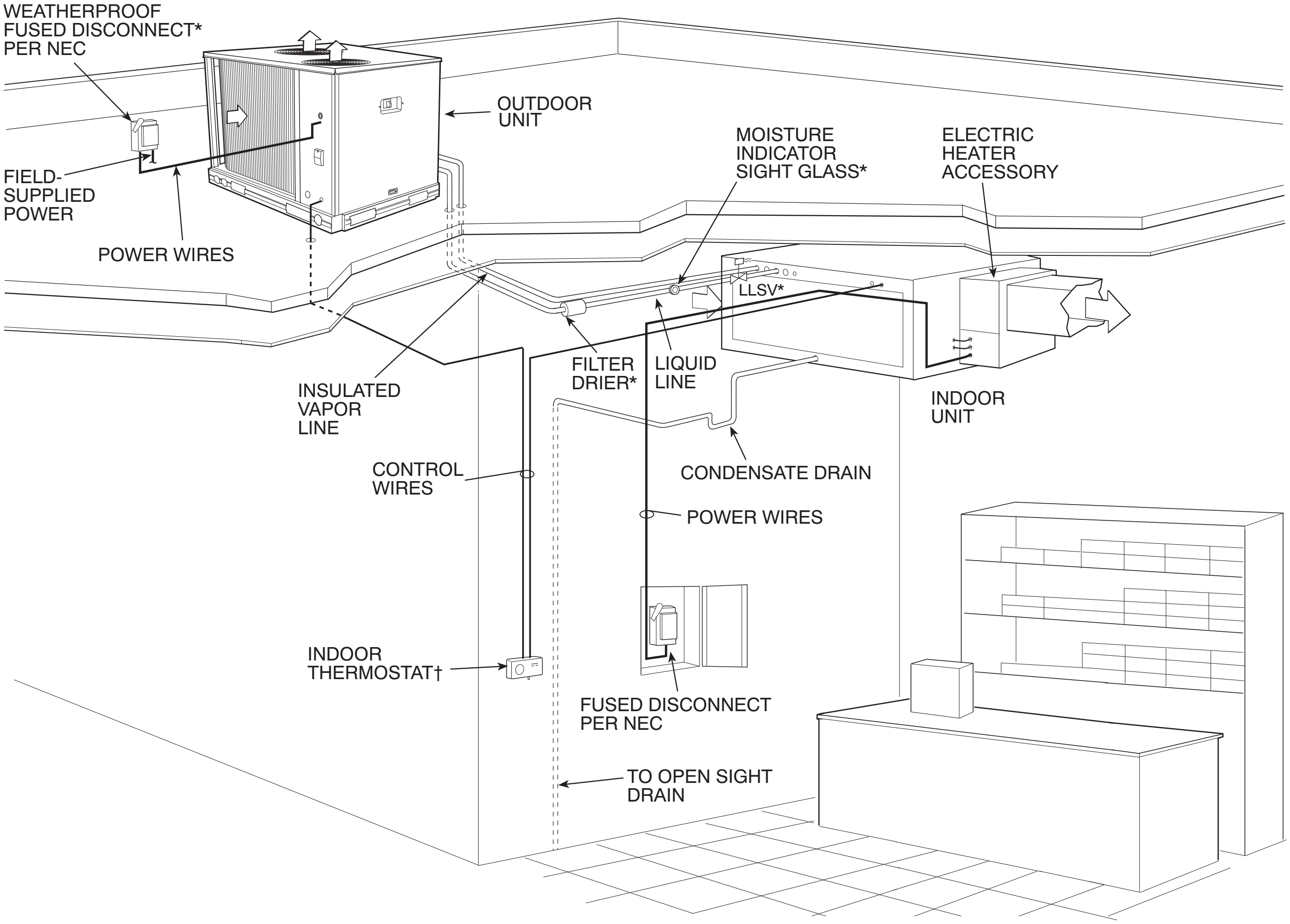
SI – Metric units of measure

EN – English units of measure (I–P)

NOTE: For applications with equivalent length greater than 57 m (188 ft) and/or linear length greater than 38 m (125 ft), contact your local Carrier representative.

TYPICAL PIPING AND WIRING

38AU



LEGEND:

NEC – National Electrical Code

TXV – Thermostatic Expansion Valve

* Field – supplied

† Double riser may be required. Consult condensing unit product data catalog for details.

NOTES:

1. All piping must follow standard refrigerant piping techniques. Refer to Carrier System Design Manual for details.
2. All wiring must comply with the applicable local and national codes.
3. Wiring and piping shown are general points-of-connection guides only and are not intended for, or to include all details for, a specific installation.
4. Liquid line solenoid valve (solenoid drop control) is recommended to prevent refrigerant migration to the compressor.
5. Internal factory-supplied TXVs not shown.

GUIDE SPECIFICATIONS

Commercial Air-Cooled Condensing Units

HVAC Guide Specifications

Size Range: 18.3 kW to 59.2 kW

Carrier Model Numbers: **38AUZ, Single Circuit (07 - 08 Models) 38AUD, Dual Circuit (12, 14, 16, 25 Models)**

Part 1 — General

1.01 SYSTEM DESCRIPTION

Outdoor-mounted, air-cooled condensing unit suitable for on-the-ground or rooftop installation. Unit shall consist of a hermetic scroll air-conditioning compressor(s) assembly, an air-cooled coil, propeller-type condenser fans, and a control box. Unit shall discharge supply air upward as shown on contract drawings. Unit shall be used in a refrigeration circuit matched with a packaged air-handling unit.

1.02 QUALITY ASSURANCE

A. Unit shall be rated in accordance with AHRI Standard 340/360.

B. Unit construction shall comply with ANSI/ASHRAE 15 safety code latest revision and comply with NEC.

C. Unit shall be constructed in accordance with UL 1995 standard and shall carry the UL and UL, Canada label.

D. Unit cabinet shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).

E. Air-cooled condenser coils for hermetic scroll compressor units 38AUZ and 38AUD shall be leak tested at 150 psig, and pressure tested at 650 psig.

F. Unit shall be manufactured in a facility registered to ISO 9001:2008 manufacturing quality standard.

1.03 DELIVERY, STORAGE, AND HANDLING

Unit shall be shipped as single package only, and shall be stored and handled according to unit manufacturer's recommendations.

1.04 WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER.)

Part 2 — Products

2.01 EQUIPMENT

A. General:

Factory-assembled, single piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressor, holding charge, and special features required prior to field start-up.

B. Unit Cabinet:

1. Unit cabinet shall be constructed of galvanized steel, bonderized and coated with a prepainted baked enamel finish.
2. A heavy-gauge roll-formed perimeter base rail with forklift slots and lifting holes shall be provided to facilitate rigging.

C. Condenser Fans:

1. Condenser fans shall be direct driven, propeller type, discharging air vertically upward.
2. Fan blades shall be balanced.
3. Condenser fan discharge openings shall be equipped with PVC-coated steel wire safety guards.
4. Condenser fan and motor shaft shall be corrosion resistant.

D. Compressor:

1. Compressor shall be of the hermetic scroll type .
2. Compressor shall be mounted on rubber grommets.
3. Compressors shall include overload protection.
4. Compressors shall be equipped with a crankcase heater.
5. Compressor shall be equipped with internal high pressure and high temperature protection.

E. Condenser Coils:

1. Standard Aluminum fin – Copper Tube Coils:

   a. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.

b. Evaporator coils shall be leak tested to 150 psig, pressure tested to 450 psig, and qualified to UL 1995 burst test at 1775 psig.
c. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.

2. Optional Copper-fin evaporator and condenser coils:
a. Shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets.
b. Galvanized steel tube sheets shall not be acceptable.
c. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.

3. Optional E-coated aluminum-fin evaporator and condenser coils:
a. Shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins.
b. Coating process shall ensure complete coil encapsulation of tubes, fins and headers.
c. Color shall be high gloss black with gloss per ASTM D523-89.
d. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges.
e. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93.
f. Impact resistance shall be up to 160 in.-lb (ASTM D2794-93).
g. Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92).
h. Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.

4. Standard All Aluminum Novation Coils:
a. Standard condenser coils shall have all aluminum Novation Heat Exchanger Technology design consisting of aluminum multi port flat tube design and aluminum fin. Coils shall be a furnace brazed design and contain epoxy lined shrink wrap on all aluminum to copper connections.
b. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.

5. Optional E-coated aluminum-fin, aluminum tube condenser coils:
a. Shall have a flexible epoxy polymer coating uniformly applied to all coil external surface areas without material bridging between fins or louvers.
b. Coating process shall ensure complete coil encapsulation, including all exposed fin edges.
c. E-coat thickness of 0.8 to 1.2 mil with top coat having a uniform dry film thickness from 1.0 to 2.0 mil on all external coil surface areas, including fin edges, shall be provided.
d. Shall have superior hardness characteristics of 2H per ASTM D3363-00 and cross-hatch adhesion of 4B-5B per ASTM D3359-02.
e. Shall have superior impact resistance with no cracking, chipping or peeling per NSF/ANSI 51-2002 Method 10.2.

F. Refrigeration Components:

Refrigeration circuit components shall include liquid line service valve, suction line service valve, a full charge of compressor oil, and a partial holding charge of refrigerant.

G. Controls and Safeties:

1. Minimum control functions shall include:
f. Control wire terminal blocks.
g. Compressor lockout on auto-reset safety until reset from thermostat.
h. Each unit shall utilize the Comfort Alert™ Diagnostic Board that provides:
(1.) System Pressure Trip fault code indication
(2.) Short Cycling fault code indication
(3.) Locked Rotor fault code indication
(4.) Open Circuit fault code indication
(5.) Reverse Phase 3 fault code indication
(6.) Welded Contactor fault code indication
(7.) Low Voltage fault code indication
(8.) Anti-short cycle protection
(9.) Phase reversal protection

2. Minimum safety devices which are equipped with automatic reset (after resetting first at thermostat), shall include:
   a. High discharge pressure cutout.
   b. Low pressure cutout.

H. Operating Characteristics:
   1. The capacity of the condensing unit shall meet or exceed _____ Btuh at a suction temperature of _____°C/F. The power consumption at full load shall not exceed _____ kW.
   2. The combination of the condensing unit and the evaporator or fan coil unit shall have a total net cooling capacity of _____ Btuh or greater at conditions of _____ cfm entering-air temperature at the evaporator at _____°C/F wet bulb and _____°C/F dry bulb, and air entering the condensing unit at _____°C/F.
   3. The system shall have an EER of _____ Btuh/Watt or greater at standard AHRI conditions.
   4. Standard unit shall be capable to operate up to 52°C (125°F) and down to 4°C (40°F)

I. Electrical Requirements:
   1. Nominal unit electrical characteristics shall be _____ v, 3-ph, 50 Hz. The unit shall be capable of satisfactory operation within voltage limits of ____ v to _____ v.
   2. Unit electrical power shall be single-point connection.
   3. Unit control circuit shall contain a 24-v transformer for unit control.

J. Special Features:
   1. Low-Ambient Temperature Control:
      A low-ambient temperature control shall be available as a factory-installed option or as a field-installed accessory. This low-ambient control shall regulate speed of the condenser-fan motors in response to the saturated condensing temperature of the unit. The control shall maintain correct condensing pressure at outdoor temperatures down to –29°C (–20°F).
   2. Unit-Mounted, Non-Fused Disconnect Switch:
      Switch shall be factory-installed and internally mounted. NEC and UL-approved non-fused switch shall provide unit power shutoff. Switch shall be accessible from outside the unit and shall provide power off lockout capability. Non–fused disconnect cannot be used when unit MOCP electrical rating exceeds 80 amps.
   3. Thermostat Controls:
      a. Programmable multi-stage thermostat shall have 7-day clock, holiday scheduling, large backlit display, remote sensor capability, and Title 24 compliance.
      b. Commercial Electronic Thermostat shall have 7-day time clock, auto-changeover, multi-stage capability, and large LCD (liquid crystal display) temperature display.
   4. Louvered hail Guard Package:
      Louvered hail guard package shall protect coils against damage from hail and other flying debris.
   5. Condenser Coil Grille (Novation 07–14 models only):
      Grille shall add decorative appearance to unit and protect condenser coil from large objects and vandalism.

Printed in U.S.A. Edition Date: 11/10

Catalog No: 38AU–C01PD

Replaces: NEW

APPLICATIONS

TREE DISCLOSURE STATEMENT

Los Angeles Municipal Code (LAMC) Section 46.00 requires disclosure and protection of certain trees located on private and public property, and that they be shown on submitted and approved site plans. Any discretionary application on a property that includes changes to the building footprint or any other change to the areas of the property not currently built upon or paved, including demolition, grading, or fence permit applications, or any discretionary change that could potentially remove or affect trees or shrubs, shall provide a Tree Disclosure Statement completed and signed by the Property Owner.

If the Tree Disclosure Statement indicates that there are any protected trees or protected shrubs on the project site and/or any trees within the adjacent public right-of-way that may be impacted or removed as a result of the project, a Tree Report (CP-4068) will be required, and the field visit must be conducted by a qualified Tree Expert, prepared and conducted within the last 12 months.

Property Address: 1709, 1713, 1719 BELOIT AVENUE, LOS ANGELES

Date of Field Visit: JANUARY 20, 2025

Does the property contain any of the following protected trees or shrubs?

☐ **Yes** (Mark any that apply below)

- ☐ Oak, including Valley Oak (*Quercus lobota*) and California Live Oak (*Quercus agrifolia*) or any other tree of the oak genus indigenous to California, but excluding the Scrub Oak
- ☐ Southern California Black Walnut (*Juglans californica*)
- ☐ Western Sycamore (*Platanus racemosa*)
- ☐ California Bay (*Umbellularia californica*)
- ☐ Mexican Elderberry (*Sambucus mexicana*)
- ☐ Toyon (*Heteromeles arbutifolia*)

☒ **No**

Does the property contain any street trees in the adjacent public right-of-way?

☒ **Yes** ☐ **No**

Does the project occur within the Mt. Washington/Glassell Park Specific Plan Area and contain any trees 12 inches or more diameter at 4.5 feet above average natural grade at base of tree and/or is more than 35 feet in height?

☐ **Yes** ☒ **No**

Does the project occur within the Coastal Zone and contain any of the following trees?

☐ **Yes** (Mark any that apply below)

☐ Blue Gum Eucalyptus *(Eucalyptus globulus)*
☐ Red River Gum Eucalyptus *(Eucalyptus camaldulensis)*
☐ Other Eucalyptus species

☒ **No**

Have any trees or shrubs been removed in the last two years?

☐ **Yes** ☒ **No**

If Yes, were any protected species (as listed in Ordinance No. 186,873)?

☐ **Yes** ☐ **No**

If Yes, provide permit information: ______________________

Tree Expert Credentials (if applicable)

Name of Tree Expert: DENNIS GAUDENTI

Mark which of the following qualifications apply:

☒ Certified arborist with the International Society of Arboriculture who holds a license as an agricultural pest control advisor
☐ Certified arborist with the International Society of Arboriculture who is a licensed landscape architect
☐ Registered consulting arborist with the American Society of Consulting Arborists

Certification/License No.: WE-1159A/LIC. NO. 70750

Owner's Declaration

I acknowledge and understand that knowingly or negligently providing false or misleading information in response to this disclosure requirement constitutes a violation of the Los Angeles Municipal Code Section 46.00, which can lead to criminal and/or civil legal action. I certify that the information provided on this form relating to the project site and any of the above trees and/or biological resources is accurate to the best of my knowledge.

Name of the Owner (Print) Elliot Nyssen

Owner Signature ______________________ Date 02/11/2025

McKinley & Associates (818) 240-1358

Arborist Report

1709, 1713, 1719 Beloit Avenue
Los Angeles, California

Prepared for:

Mr. Jay Ezra Nayssan
Nayssan Properties
10350 Santa Monica Boulevard, Suite 190
Los Angeles, CA 90025

Prepared by:

Dennis Gaudenti, Associate Arborist
McKinley & Associates
Certified Arborist #WE-1159A
International Society of Arboriculture
Agricultural Pest Control Advisor License
PCA License #70750
9241 Dorrington Place
Arleta, CA 91331

Email: gaudenti@earthlink.net
Inspection Date: January 20, 2025

Arborists and Environmental Consultants

February 8, 2025

Mr. Jay Ezra Nayssan
Nayssan Properties
1739 Corinth Avenue
Los Angeles, CA 90025

Dear Mr. Nayssan:

RE: **ARBORIST REPORT** – 1709, 1713, 1719 Beloit Avenue, Los Angeles, California
Proposed Removal of one City of Los Angeles Street Tree
City of Los Angeles Tree Ordinance No. 186873

PROJECT LOCATION

The subject property is located in a multi-family home residential area in the community of Sawtelle in the City of Los Angeles. The property is near the intersection of Beloit Avenue and Santa Monica Blvd. The property is on the west side of Beloit Avenue. The subject property can be reached from downtown Los Angeles by taking the Santa Monica 10 Freeway west to the San Diego 405 Freeway. Proceed north on the San Diego 405 Freeway and exit at Santa Monica Blvd. Turn left and proceed west on Santa Monica Blvd. Turn left and proceed south on Beloit Avenue. The subject properties will be on the right or west side of Beloit Avenue. Refer to the attached photos and for site access (See Thomas Guide, Page 632, A-5).

BACKGROUND

This Arborist Report pertains to a proposed 102 Unit Multi-Residential Apartment Project. This project will consolidate three current properties at 1709, 1713 and 1719 Beloit Avenue, Los Angeles into one property with a total square footage of 18,761 square feet. The proposed first floor apartment building square footage will be 11,739 square feet. There are 2 Street Trees in front of 1713 Beloit Avenue and 5 Significant Private Trees on this property. There are 3 Street Trees in front of 1719 Beloit Avenue and one Significant Private Tree on this property. There is one Street Tree in front of the property at 1709 Beloit Avenue, Los Angeles. It is identified as Tree #12 in this Arborist Report. The tree is in conflict with the proposed DWP Staging Area for the new transformer and therefore it must be removed. A Street Tree Removal Permit must be obtained and 2-24 inch-box size replacement Street Trees planted in front of the property. There will be 6 Significant Trees removed on Private Property in order to construct the proposed 102 Unit Multi-Residential Apartment Building.

EXECUTIVE SUMMARY

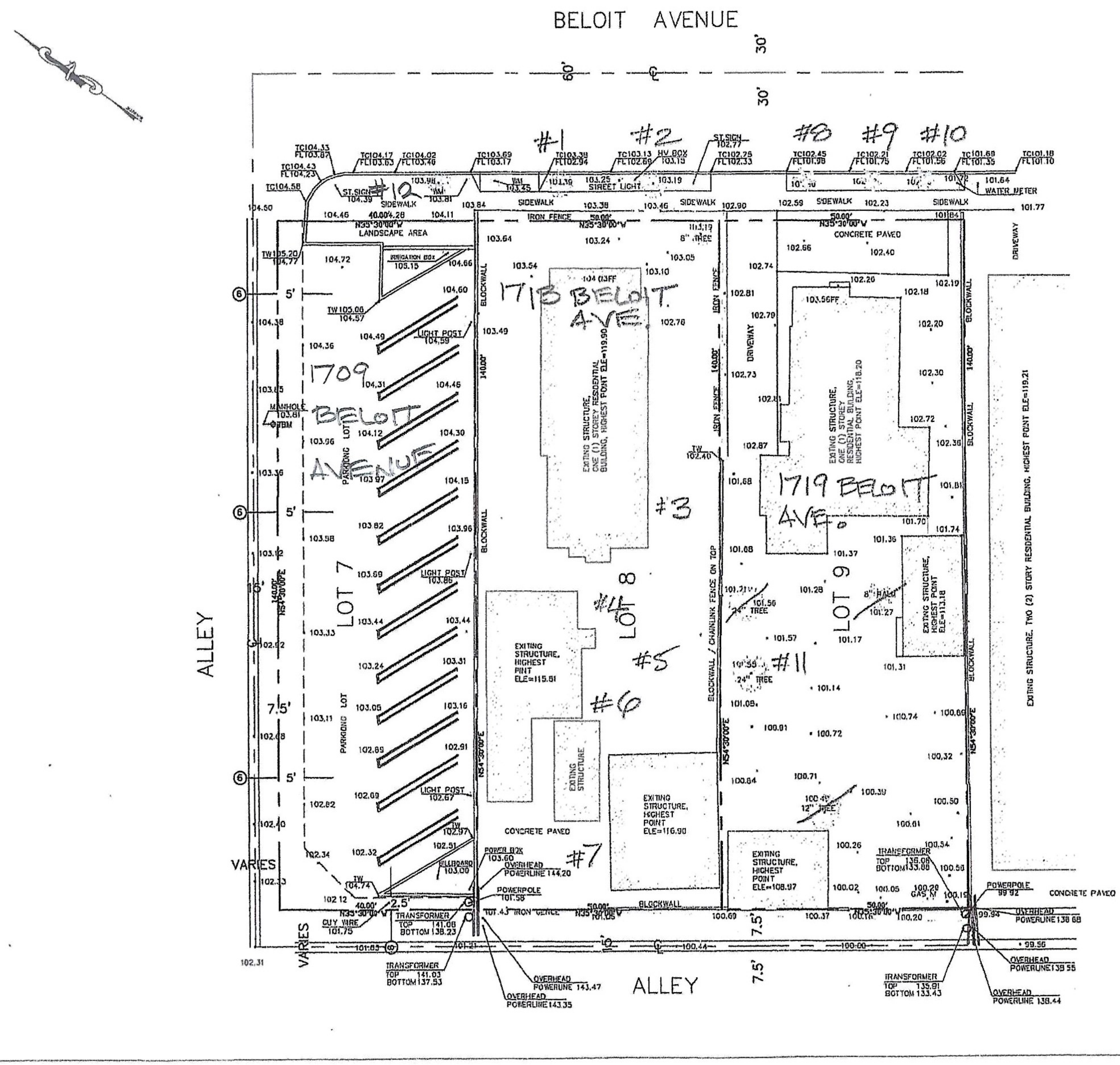
The Street Tree identified as Tree #12 in front of 1709 Beloit Avenue conflicts with the proposed DWP Staging Area for the new transformer. A Street Tree Removal Permit must be obtained from the City of Los Angeles, Urban Forestry before Tree #12 can be removed. If the Street Tree Removal Permit is approved you will be required to plant 2-24 inch-box size Street Trees in front of the subject property. The Tree Preservation Section will discuss the planting of replacement trees on the subject property.

McKinley & Associates (818) 240-1358

ARBORIST REPORT-TABLE OF CONTENTS

Project Address: 1709, 1713, 1719 Beloit Avenue, Los Angeles
Applicant: Mr. Jay Ezra Nayssan, Nayssan Properties
Proposed Activity: Removal of one City Street Tree

This report is broken down into several subsections, which include:



SITE ADDRESS:

1709-19 BELOIT AVENUE,
LOS ANGELES, CA 90025.

LEGAL DESCRIPTION:

LOT 7,8 AND 9 OF THE SUBDIVISION OF BLOCK 3 OF THE BARRETT VILLA TRACT, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA AS PER MAP RECORDED IN BOOK 78 PAGE 15 INCLUSIVE OF MAPS, IN THE OFFICE OF COUNTY RECORDER OF SAID COUNTY.

APN : 4261-008-023
APN : 4261-008-008
APN : 4261-008-009

NOTES:

6. OFFER OF DEDICATION IN AN DOCUMENT,

FOR : PUBLIC ALLEY
RECORDED : NOVEMEBER 30, 1989 IN OFFICIAL RECORDS AS INSTRUMENT NO. 89-1922751
FOR : AS DESCRIBED THEREIN,

PER PRELIMINARY REPORT , OLD REPUBLIC TITLE COMPNAY, ORDER NUMBER 2676015053-52 DATED MARCH 14, 2019.

TEMPORARY BENCHMARK
TOP OF SEWER MANHOEL COVER
(STRUCTURE ID : 52008091)
AS SHOWN ON PLAN
ELEV. 103.81

NOTE:
THIS SURVEY AND MAP ARE THE PROPERTY OF TALA ASSOCIATES, INC. AND MAY NOT BE MODIFIED, ALTERED OR CHANGED IN ANY FASHION WITHOUT PRIOR WRITTEN APPROVAL BY TALA ASSOCIATES, INC. AND THE CLIENT FOR WHOM THE SURVEY WAS PREPARED. THIS PROMSO EXTENDS TO THE RESULTING PLOT OF SAID MAP AND THE COMPUTER DISK OR E-MAIL THAT MAP BE PROVIDED TO THE CLIENT. ANY VIOLATION OF THIS PROVISO WILL VOID ANY PROFESSIONAL OBLIGATION OR WARRANTY, EITHER EXPRESSED OR IMPLIED BY TALA ASSOCIATES, INC. AS TO SUCH CHANGED MATERIAL.

NOTE:
THIS SURVEY IS INTENDED FOR DESIGN PURPOSES ONLY AND NOT FOR CONSTRUCTION. BOUNDARY STAKING MUST BE CONDUCTED PRIOR TO ANY CONSTRUCTION IN ORDER TO JUSTIFY THE PROPER LEGAL SET BACKS, IF ANY, OF THE NEWLY PLANNED CONSTRUCTION. "EYE-BALLING" OR GUESSING THE BOUNDARY LOCATIONS HAS NO JUSTIFICATION AND IF PERFORMED CANCEL THE VALIDITY AND ACCURACY OF THIS SURVEY.

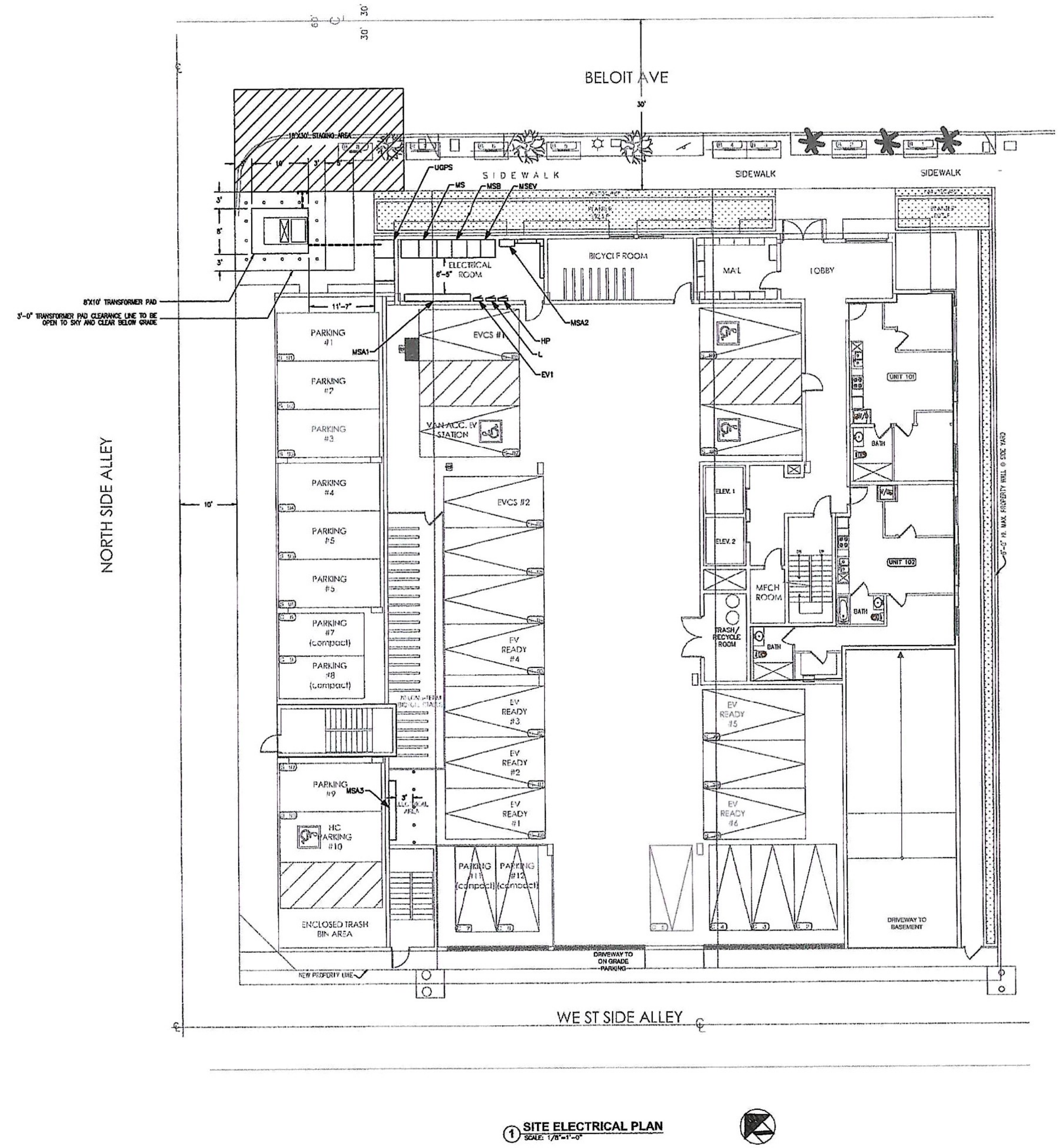
TOPOGRAPHY SURVEY

TALA ASSOCIATES
1916 COLBY AVENUE
LOS ANGELES, CA. 90025 (424) 832-3455

JAMES F. LAVERY P.L.S. 7898

DATE: 02-12-20	REVISIONS
SCALE: AS SHOWN	
DESIGNED: KK	
DRAWN: KK	
CHECKED: RDR	
SHEET: 1 OF: 1	
JOB NO.: 3695	

PAGE 1A



① **SITE ELECTRICAL PLAN**
SCALE: 1/8"=1'-0"

PAGE 1B

REV.	DATE	BY	DESCRIPTION
	X	X	

	DATE	BY
PLUMB CHKD	X	X
MECH CHKD	X	X
LID CHKD	X	X
CUST. CKD	X	X

ABRARI ASSOCIATES
ELECTRICAL ENGINEERS
1713 STANDARD AVE.
GLENDALE, CA 91201
W 818.956.1000
NAIL@ABRARI.COM

PROJECT
115-UNIT MULTI-RESIDENTIAL APARTMENT
1717 BELOIT AVE.
LOS ANGELES, CA 90025

DATE: 08-2-23

SHEET TITLE
SITE ELECTRICAL PLAN

PROJECT No.:	3036
SCALE:	1/8"=1'-0"
DATE:	08-22-23
BY:	RS/MD
CHECKED:	HRA
DRAWING NO.	E-3.0

SUMMARY OF FIELD OBSERVATIONS MATRIX PROTECTED TREES
1709, 1713, 1719 BELOIT AVENUE, LOS ANGELES

Form						PHYSICAL CONDITION																	TREATMENT							RATING			REMARKS
			SIZE																														
Tree number	Quercus agrifolia	Other Protected Tree Species	Trunk Diameter (inches") 4.5 Ft Above Base	Height (feet')	Spread (feet')	Canopy grows over house	Multiple stems	Co-Dominant Stems/Trunks	Included Bark Tissue	Suface roots visible	Heart Rot Decay/Cavities	Raised Crown-Lower Limbs Cut	Crowded by nearby trees	Epicormic growth	Branch Dieback/Dead Wood	Western Sycamore Borer	Phytophthora canker-trunk	Crown is balanced	Leaning/Asymmetrical Crown	Crown density sparse or thin	Tree appears vigorous	Crown density normal	Fertilize Tree's Root Zone	Remove Deadwood	Raise Canopy	Insect Treatment	Disease Treatment	Mulch & Water Dripline	Building clearance pruning	Health	Aesthetics & Conformity	Balance	
																																	No protected trees on site!

RATING CODE

A = EXCELLENT
B = GOOD
C = FAIR
D = POOR
E = NEARLY DEAD
F = DEAD

*SEE PHOTO
R = Remove
I = Impacted
T = Transplantable
NT = Not Transplantable
BMC = Below main crotch

SUMMARY OF FIELD OBSERVATIONS MATRIX PROTECTED TREE REMOVALS
1709, 1713, 1719 BELOIT AVENUE, LOS ANGELES

Form			SIZE			PHYSICAL CONDITION																	TREATMENT							RATING			RATING CODE
Tree number	Quercus agrifolia	Other Protected Tree Species	Trunk Diameter (inches") 4.5 Ft Above Base	Height (feet')	Spread (feet')	Canopy grows over house	Multiple stems	Co-Dominant Stems/Trunks	Included Bark Tissue	Suface roots visible	Heart Rot Decay/Cavities	Raised Crown-Lower Limbs Cut	Crowded by nearby trees	Epicormic growth	Branch Dieback/Dead Wood	Western Sycamore Borer	Phytophthora canker-trunk	Crown is balanced	Leaning/Asymmetrical Crown	Crown density sparse or thin	Tree appears vigorous	Crown density normal	Severe impact to protected tree	Remove Deadwood	Preserve and protect tree	Insect Treatment	Disease Treatment	Mulch & Water Dripline	Remove-Tree damaging house	Health	Aesthetics & Conformity	Balance	A = EXCELLENT B = GOOD C = FAIR D = POOR E = NEARLY DEAD F = DEAD *SEE PHOTO R = Remove I = Impacted T = Transplantable NT = Not Transplantable BMC = Below main crotch
																																	REMARKS
																																	No protected trees to be removed!

SUMMARY OF FIELD OBSERVATIONS MATRIX REMAINING PROTECTED TREES
1541-1543 CLUB VIEW DRIVE, LOS ANGLES

RATING CODE

A = EXCELLENT
B = GOOD
C = FAIR
D = POOR
E = NEARLY DEAD
F = DEAD

*SEE PHOTO
R = Remove
I = Impacted
T = Transplantable
NT = Not Transplantable
BMC = Below main crotch

Form						PHYSICAL CONDITION																	TREATMENT							RATING			
			SIZE																														
Tree number	Quercus agrifolia	Other Protected Tree Species	Trunk Diameter (inches") 4.5 Ft Above Base	Height (feet')	Spread (feet')	Canopy grows over house	Multiple stems	Co-Dominant Stems/Trunks	Included Bark Tissue	Suface roots visible	Heart Rot Decay/Cavities	Raised Crown-Lower Limbs Cut	Crowded by nearby trees	Epicormic growth	Branch Dieback/Dead Wood	Western Sycamore Borer	Phytophthora canker-trunk	Crown is balanced	Leaning/Asymmetrical Crown	Crown density sparse or thin	Tree appears vigorous	Crown density normal	Remove-Damaging house	Remove Deadwood	Preserve and protect tree	Insect Treatment	Disease Treatment	Mulch & Water Dripline	Protected Tree to Remain	Health	Aesthetics & Conformity	Balance	REMARKS
																																	No protected trees on site!
																																	No protected trees remain!

Tree List & Descriptions
1709, 1713, 1719 Beloit Avenue, Los Angeles

Tree #1 is a Pinus pinea or Italian Stone Pine. The tree measures 10, 10, 17 inches in diameter at D.B.H. (Diameter Breast Height) or 4.5 feet above the ground. It has a 34 foot spread. It is estimated to be roughly 25 feet tall. The tree is located in the front of the property at 1713 Beloit Avenue, Los Angeles. It is a City of Los Angeles Street Tree. It is in above average health and condition. Rating: B-

Tree #2 is a Jacaranda acutifolia or Jacaranda. The tree measures 15 inches in diameter at D.B.H. It has a 44 foot spread. It is estimated to be roughly 30 feet tall. The tree is located in the front of the property at 1713 Beloit Avenue, Los Angeles. It is a City of Los Angeles Street Tree. It is in slightly above average health and condition. Rating: C+

Tree #3 is a Casimiroa edulis or White Sapote. The tree measures 4, 4, 4 inches in diameter at D.B.H. It has a 10 foot spread. It is estimated to be roughly 15 feet tall. The tree is located inside the subject property at 1713 Beloit Avenue, Los Angeles. It is in slightly above average health and condition. Rating: C+

Tree #4 is a Fraxinus uhdei or Shamel Ash. The tree measures 8 inches in diameter at D.B.H. It has a 12 foot spread. It is estimated to be roughly 20 feet tall. The tree is located inside the subject property at 1713 Beloit Avenue, Los Angeles. It is in average health and condition. Rating: C

Tree #5 is a Persea americana or Avocado. The tree measures 12, 24 inches in diameter at D.B.H. It has a 40 foot spread. It is estimated to be roughly 35 feet tall. The tree is located inside the subject property at 1713 Beloit Avenue, Los Angeles. It is in very good condition. Rating: B+

Tree #6 is a Citrus sinensis or Orange. The tree measures 8 inches in diameter at D.B.H. It has a 30 foot spread. It is estimated to be roughly 20 feet tall. The tree is located inside the subject property at 1713 Beloit Avenue, Los Angeles. It is in slightly above average health and condition. Rating: C+

Tree #7 is a Citrus limon or Lemon. The tree measures 8 inches in diameter at D.B.H. It has a 20 foot spread. It is estimated to be roughly 15 feet tall. The tree is located inside the subject property at 1713 Beloit Avenue, Los Angeles. The tree is in slightly above average health and condition. Rating: C+

Tree #8 is a Washingtonia robusta or Mexican Fan Palm. The tree measures 18 inches in diameter at D.B.H. It has a 12 foot spread. It is estimated to be roughly 90 feet tall. The tree is located in front of the subject property at 1719 Beloit Avenue, Los Angeles. It is a City of Los Angeles Street Tree. The tree is in average health and condition. Rating: C

Tree #9 is a Washingtonia robusta or Mexican Fan Palm. The tree measures 18 inches in diameter at D.B.H. It has a 12 foot spread. It is estimated to be roughly 90 feet tall. The tree is located in front of the subject property at 1719 Beloit Avenue, Los Angeles. It is a City of Los Angeles Street Tree. The tree is in average health and condition. Rating: C

Tree #10 is a Washingtonia robusta or Mexican Fan Palm. The tree measures 18 inches in diameter at D.B.H. It has a 12 foot spread. It is estimated to be roughly 90 feet tall. The tree is located in front of the subject property at 1719 Beloit Avenue, Los Angeles. It is a City of Los Angeles Street Tree. The tree is in average health and condition. Rating: C

Tree #11 is a Persea americana or Avocado. The tree measures 24 inches in diameter at D.B.H. It has a 50 foot spread. It is estimated to be roughly 50 feet tall. The tree is located inside the subject property at 1719 Beloit Avenue, Los Angeles. It is in good condition. Rating: B

Tree #12 is a Eriobotrya japonica or Loquat. The tree measures 1, 2, 2, 3, 4, 4, 4, 4, 6 inches in diameter at D.B.H. It has a 20 foot spread. It is estimated to be roughly 18 feet tall. The tree is located in front of the subject property at 1709 Beloit Avenue, Los Angeles. It is a City of Los Angeles Street Tree. The tree is in slightly below average health and condition. Rating: C-

TREE PRESERVATION PLAN
1709, 1713, 1719 Beloit Avenue, Los Angeles
City of Los Angeles Ordinance No. 186873

Recommendation

The following steps are recommended for tree preservation and tree protection:

A. Control of Diseases and Pests

Trees are largely affected by their environment. Competition with nearby trees and vegetation for water, nutrients, sunlight, space, drought, flooding, drainage, grading, soil compaction, root damage, limb failure, excessive pruning, etc. are just some of the factors which can impact the health of a tree. When trees are stressed due to environmental influences, their natural defenses are weakened. Trees can produce chemical odors when stressed which have been documented to attract insects. Stressed trees are also a suitable host for root fungi infection such as Armillaria sp. or Oak Root Fungus. Unsupervised construction activity can lead to soil compaction and poor drainage, which can cause an infection of Phytophthora sp. Root Rot. Oak Root Fungus, if identified in its early stages can be controlled by performing a root crown excavation and exposing the buttress roots to sunlight and by avoiding watering the last 10 feet of the tree. Phytophthora Root Rot can be controlled chemically through the use of Subdue® and similar soil drenches. Aerifying the soil and adjusting and minimizing excess irrigation is also beneficial.

B. Protection of Trees During Grading and Construction

Grading will be necessary. Heavy equipment will be operating on this site. It is essential that care be taken during demolition and construction to protect all tree parts including but not limited to roots, bark, trunk, branches and leaves of the remaining City Street Trees. It will be necessary to install tree protection fencing around the driplines of Tree #1, Tree #2, #8, #9 and #10 within the parkway prior to submitting this report. Photographs of the tree protection fencing must be included.

C. Method and Frequency of Pruning

All trees have the potential to grow beyond their ability to support themselves and a trunk, limb or branch may fail or break, if the tree is not pruned to provide weight reduction and thinned to reduce wind resistance. Trees, which are near high traffic areas with the potential for damage to persons and property, must be maintained at a regular interval for safety. Crown thinning, dead wood removal and removal of crossing, rubbing branches and weak branch attachments and structural pruning should be performed where possible during the proper season. Deciduous trees such as California Sycamore should be pruned in the winter when they are dormant.

C. Method and Frequency of Pruning-Continued

Native, evergreen Oak trees such as Coast Live Oak should be pruned in hot, dry summer weather. The new foliage produced after pruning is less likely to become infected with powdery mildew. N/A

D. Special Instructions on Watering

Native trees have the ability to withstand drought in their natural environment and will generally not require additional watering. Native trees on improved, developed sites can be negatively impacted from over-watering. It is important to avoid watering the trunk and the last six feet of all trees to be preserved especially all native trees. Excessive moisture and watering this area can lead to Oak Root Fungus or Phytophthora Root Rot. Placing a soaker hose at the dripline of the trees to be preserved and applying water over a 24 hour period, one time per month, during the months of June through November and during periods of heat and drought can help reduce stress. N/A

E. Grading Restrictions Near the Drip Line

Grading, adding or removing of soil is never recommended within the root zone of a tree targeted for preservation. All grading activity should take place outside the drip line of all trees to be preserved. Adding soil depletes oxygen and can create poor drainage and excessive moisture problems for the tree. This can lead to Oak Root Fungus and or Phytophthora Root Rot. Removing soil in this critical area promotes root cutting and or exposure and threatens the potential stability of the trees targeted for preservation. N/A

F. Tree Protection/Tree Replacement Requirements

Tree #1, Tree #2, Tree #8, Tree #9 and Tree #10 are City of Los Angeles Street Trees. These 5 trees will be preserved. Tree #12 Street Tree in front of 1709 Beloit Avenue, Los Angeles must be removed because it conflicts with the DWP Staging Area for the new transformer. A Street Tree Removal Permit must be obtained before the tree can be removed. The City of Los Angeles requires the planting of 2-24 inch-box size replacement trees for each Street Tree removed. The replacement trees must be planted in the parkway in front of the subject property as a condition of approval. There will be 6 Significant Trees removed from the private property areas. The remaining 5 Street Trees must be protected during the proposed demolition and construction activities. Temporary 6 foot high free-standing, chain-link fence must be installed at the dripline or the farthest point possible from the trunks of the remaining Street Trees. Orange plastic fencing should be zip-tied to the chain-link fence for added visibility. Tree Protection Fences must be maintained in a vertical position throughout the construction period. Vehicles, equipment and building materials shall not be stored within the dripline of the remaining Street Trees. No dumping of foreign materials such as excess soil, paint, stucco, concrete, cement shall be permitted within the driplines of the remaining street trees. Pruning of roots or branches shall be supervised by an I.S.A. Certified Arborist. Contractor shall be responsible for protecting roots, bark, trunk, limbs, branches and leaves of the remaining Street Trees during construction.

Summary/Conclusion

In summary, after viewing the subject property and inspecting all the existing trees it appears that 6 Significant Private Trees must be removed. One Street Tree identified as Tree #12 in front of 1709 Beloit Avenue, Los Angeles must be removed because it conflicts with the proposed DWP Staging area for the new transformer. A Street Tree Removal Permit must be obtained before the tree can be removed. The City of Los Angeles requires the planting of 2-24 inch-box size replacement trees for each Street Tree removed. The replacement trees must be planted in the parkway in front of the subject property as a condition of approval. The other remaining 5 Street Trees must be protected and preserved during demolition and construction. Temporary tree protection fencing must be installed at the dripline or the farthest point possible from the trunks of the trees. Photos must be taken of the Street Trees with the tree protection fencing and submitted with the Arborist Report. There are no protected Oak, Bay, Sycamore, Southern California Black Walnut, Toyon or Mexican Elderberry growing on or adjacent to the subject properties and no protected trees will be removed or impacted by this project.

Limitations

Information contained in this report covers only those areas that were examined and reflects the condition of those areas at the time of inspection. The inspection was limited to visual examination of accessible areas without excavation, drilling or boring. Arboriculture is not an exact science and there is much that is still to be learned about trees. The observations and recommendations provided in this report reflect the latest research, knowledge and training available through university and professional research. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees or property in question may not arise in the future.

I am an Associate Arborist with McKinley & Associates. I am a Certified Arborist and a Licensed Pest Control Adviser and am therefore considered a Tree Expert as defined in the City of Los Angeles Ordinance No. 186873. I prepared this Arborist Report as required by the City of Los Angeles.

Thank you for the opportunity to serve you and your arboricultural and horticultural needs. If you have any further questions, please feel free to contact me during the day on my business cell phone at (818) 858-5077.

Yours truly,

Dennis Gaudenti, Associate Arborist
Certified Arborist #WE-1159A
International Society of Arboriculture
Agricultural Pest Control Adviser
License #70750

The International Society of Arboriculture

Hereby Announces That

Dennis Gaudenti

Has Earned the Credential

ISA Certified Arborist ®

By successfully meeting ISA Certified Arborist certification requirements through demonstrated attainment of relevant competencies as supported by the ISA Credentialing Council

Caitlyn Pollihan
Caitlyn Pollihan
CEO & Executive Director

13 July 1996	30 June 2026	WE-1159A
Issue Date	Expiration Date	Certification Number

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17024
PERSONNEL CERTIFICATION BODY
#0847
ISA Certified Arborist

dpr DEPARTMENT OF PESTICIDE REGULATION
LICENSING/CERTIFICATION PROGRAM

QAL

QUALIFIED APPLICATOR LICENSE

LICENSE #: 98070 **EXPIRES: 12/31/2026**
Categories: ABCEFH Issued: 1/8/2025

DENNIS A GAUDENTI
9241 DORRINGTON PL
ARLETA, CA 91331

This License must be shown to any representative of the Director or Commissioner upon request.

dpr DEPARTMENT OF PESTICIDE REGULATION
LICENSING/CERTIFICATION PROGRAM

PCA

AGRICULTURAL PEST CONTROL ADVISER LICENSE

LICENSE #: 70750 **EXPIRES: 12/31/2026**
Categories: ABCDEFG Issued: 1/8/2025

DENNIS A GAUDENTI
9241 DORRINGTON PL
ARLETA, CA 91331

This License must be shown to any representative of the Director or \ Commissioner upon request.


SPECIAL
ENFORCEMENT ZONE
01/20/2025 10:19


Beloit
Avenue
SPECIAL
ENFORCEMENT ZONE
ZONA DE
CUMPLIMIENTO ESPECIAL
01/20/2025 10:19


AHEAD
01/20/2025 10:19


01/20/2025 10:20


NO
PARKING
8AM TO 10AM
1715
1715½
01/20/2025 10:20


1715
1715½
01/20/2025 10:21


STOP
AHEAD
01/20/2025 10:21

COMPASS
OPEN HOUSE
Steve Sawaii
310.261.3777
Justin Sawai
310.625.4200
STOP
STOP
01/20/2025 10:23

TRANSPORTATION STUDY ASSESSMENT

DEPARTMENT OF TRANSPORTATION - REFERRAL FORM

RELATED CODE SECTION: Los Angeles Municipal Code Section 16.05 and various code sections.

PURPOSE: The Department of Transportation (LADOT) Referral Form serves as an initial assessment to determine whether a project requires a Transportation Assessment.

GENERAL INFORMATION

- Administrative: Prior to the submittal of a referral form with LADOT, a Planning case must have been filed with Los Angeles City Planning.
- All new school projects, including by-right projects, must contact LADOT for an assessment of the school's proposed drop-off/pick-up scheme and to determine if any traffic controls, school warning and speed limit signs, school crosswalk and pavement markings, passenger loading zones and school bus loading zones are needed.
- Unless exempted, projects located within a transportation specific plan area may be required to pay a traffic impact assessment fee regardless of the need to prepare a transportation assessment.
- Pursuant to LAMC Section 19.15, a review fee payable to LADOT may be required to process this form. The applicant should contact the appropriate LADOT Development Services Office to arrange payment.
- LADOT's Transportation Assessment Guidelines, VMT Calculator, and VMT Calculator User Guide can be found at http://ladot.lacity.org.
- A transportation study is not needed for the following project applications:
  - Ministerial / by-right projects
  - Discretionary projects limited to a request for change in hours of operation
  - Tenant improvement within an existing shopping center for change of tenants
  - Any project only installing a parking lot or parking structure
  - Time extension
  - Single family home (unless part of a subdivision)
- This Referral Form is not intended to address the project's site access plan, driveway dimensions and location, internal circulation elements, dedication and widening, and other issues. These items require separate review and approval by LADOT.

SPECIAL REQUIREMENTS

When submitting this referral form to LADOT, include the completed documents listed below.

☐ Copy of Department of City Planning Application (CP-7771.1).

☐ Copy of a fully dimensioned site plan showing all existing and proposed structures, parking and loading areas, driveways, as well as on-site and off-site circulation.

☐ If filing for purposes of Site Plan Review, a copy of the Site Plan Review Supplemental Application.

☐ Copy of project-specific VMT Calculator analysis results.

TO BE VERIFIED BY PLANNING STAFF PRIOR TO LADOT REVIEW

LADOT DEVELOPMENT SERVICES DIVISION OFFICES: Please route this form for processing to the appropriate LADOT Development Review Office as follows (see this map for geographical reference):

Metro	West LA	Valley
213-972-8482	*213-485-1062*	*818-374-4699*
100 S. Main St, 9th Floor	7166 W. Manchester Blvd	6262 Van Nuys Blvd, 3rd Floor
Los Angeles, CA 90012	Los Angeles, CA 90045	Van Nuys, CA 91401

1. PROJECT INFORMATION

Case Number: ______________________

Address: 1709-1721 1/2 S. Beloit Avenue

Project Description: New 92-unit apartment building, including 14 VLI affordable units.

Seeking Existing Use Credit (will be calculated by LADOT): Yes ✓ No ______ Not sure ______

Applicant Name: Matthew Hayden - Hayden Planning

Applicant E-mail: matthew@haydenplanning.com Applicant Phone: (310) 614-2964

Planning Staff Initials: ______________________ **Date:** ______________________

2. PROJECT REFERRAL TABLE

	Land Use (list all)	**Size / Unit**	**Daily Trips**[1]
Proposed[1]	Multi-family Residential	78	
	Affordable Housing Family	14	
		Total trips[1]:	373

a. Does the proposed project involve a discretionary action? **Yes** ☑ **No** ☐

b. Would the proposed project generate 250 or more daily vehicle trips[2]? **Yes** ☑ **No** ☐

c. If the project is replacing an existing number of residential units with a smaller number of residential units, is the proposed project located within one-half mile of a heavy rail, light rail, or bus rapid transit station[3]? **Yes** ☐ **No** ☑

If **YES** to **a.** and **b.** or **c.**, or to **all** of the above, the Project must be referred to LADOT for further assessment.

Verified by: Planning Staff Name:______________________Phone:______________________

Signature: ______________________Date:______________________

[1] Qualifying Existing Use to be determined by LADOT staff on following page, per LADOT's Transportation Assessment Guidelines.

[2] To calculate the project's total daily trips, use the VMT Calculator. Under 'Project Information', enter the project address, land use type, and intensity of all proposed land uses. Select the '+' icon to enter each land use. After you enter the information, copy the 'Daily Vehicle Trips' number into the total trips in this table. Do not consider any existing use information for screening purposes. For additional questions, consult LADOT's VMT Calculator User Guide and the LADOT Transportation Assessment Guidelines (available on the LADOT website).

[3] Relevant transit lines include: Metro Red, Purple, Blue, Green, Gold, Expo, Orange, and Silver line stations; and Metrolink stations.

TO BE COMPLETED BY LADOT

3. PROJECT INFORMATION

	Land Use (list all)	**Size / Unit**	**Daily Trips**
Proposed			
		Total new trips:	
Existing			
		Total existing trips:	
		Net Increase / Decrease (+ or -)	

a. Is the project a single retail use that is less than 50,000 square feet? **Yes** □ **No** □
b. Would the project generate a net increase of 250 or more daily vehicle trips? **Yes** □ **No** □
c. Would the project generate a net increase of 500 or more daily vehicle trips? **Yes** □ **No** □
d. Would the project result in a net increase in daily VMT? **Yes** □ **No** □
e. If the project is replacing an existing number of residential units with a smaller number of residential units, is the proposed project located within one-half mile of a heavy rail, light rail, or bus rapid transit station? **Yes** □ **No** □

f. Does the project trigger Site Plan Review (LAMC 16.05)? **Yes** □ **No** □

g. Project size:
- **i.** Would the project generate a net increase of 1,000 or more daily vehicle trips? **Yes** □ **No** □
- **ii.** Is the project's frontage 250 linear feet or more along a street classified as an Avenue or Boulevard per the City's General Plan? **Yes** □ **No** □
- **iii.** Is the project's building frontage encompassing an entire block along a street classified as an Avenue or Boulevard per the City's General Plan? **Yes** □ **No** □

VMT Analysis (CEQA Review)
If **YES** to **a.** and **NO** to **e.** a VMT analysis is **NOT** required.
If **YES** to both **b.** and **d.**; or to **e.** a VMT analysis **is** required.

Access, Safety, and Circulation Assessment (Corrective Conditions)
If **YES** to **c.**, a project access, safety, and circulation evaluation may be required.
If **YES** to **f.** and either **g.i.**, **g.ii.**, or **g.iii.**, an access assessment may be required.

LADOT Comments:

Please note that this form is not intended to address the project's site access plan, driveway dimensions and location, internal circulation elements, dedication and widening, and other issues. These items require separate review and approval by LADOT. Qualifying Existing Use to be determined per LADOT's Transportation Assessment Guidelines.

4. Specific Plan with Trip Fee or TDM Requirements: **Yes** ☐ **No** ☐

Fee Calculation Estimate: ______________________________

VMT Analysis Required (Question b. satisfied): **Yes** ☐ **No** ☐

Access, Safety, and Circulation Evaluation Required (Question c. satisfied): **Yes** ☐ **No** ☐

Access Assessment Required (Question c., f., and either g.i., g.ii. or g.iii satisfied): **Yes** ☐ **No** ☐

Prepared by DOT Staff Name: ______________________ Phone: ________________

Signature: ______________________ Date: ________________

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4

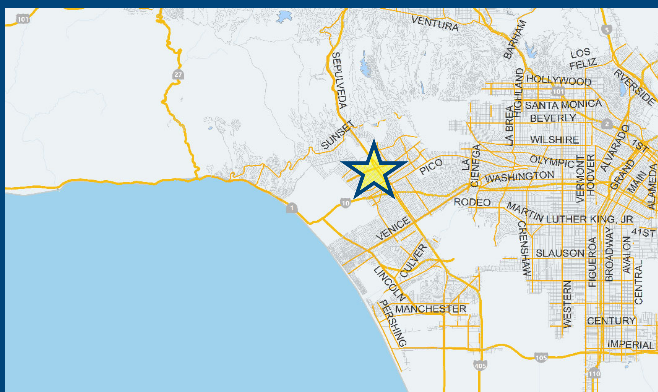
Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: 1717 Beloit Avenue Residential

Scenario: WWW

Address: 1717 S BELOIT AVE, 90025



Is the project replacing an existing number of residential units with a smaller number of residential units AND is located within one-half mile of a fixed-rail or fixed-guideway transit station?

○ Yes ○ No

Existing Land Use

Land Use Type	Value	Unit
Housing | Single Family		DU

☐ Click here to add a single custom land use type (will be included in the above list)

Proposed Project Land Use

Land Use Type	Value	Unit
Housing | Affordable Housing - Family	14	DU
Housing | Multi-Family	78	DU
Housing | Affordable Housing - Family	14	DU

☐ Click here to add a single custom land use type (will be included in the above list)

Project Screening Summary

Existing Land Use	Proposed Project
0 Daily Vehicle Trips	**373** Daily Vehicle Trips
0 Daily VMT	**2,329** Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips	373 Net Daily Trips
The net increase in daily VMT ≤ 0	2,329 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	0.000 ksf

The proposed project is required to perform VMT analysis.

Measuring the Miles

APPLICATIONS

OWNER'S DECLARATION OF BIOLOGICAL RESOURCES

The California Environmental Quality Act (CEQA) directs public agencies to assess and disclose the environmental effects of the projects it approves. In determining whether a proposed project is subject to CEQA, the City of Los Angeles is required to consider any potentially adverse impacts the project may have on biological resources. Failure by a project applicant to disclose known biological resources on the project site may result in a violation of CEQA.

Date of Site Visit: 12-13-2023

Project Address or APN(s)[1]: 4261-008-008 / 009 / 023

Does the project site contain certain known biological resources, and if so, will the project require biological analysis by a qualified biologist? (Follow the instructions for each respective answer.)

- ☐ **Yes.** The project site contains one or more of the following biological resources: (Check all that apply)
  - ☐ Water Resources, including but not limited to, streams, wetlands, or other permanent / seasonal water bodies
  - ☐ Protected Trees and/or Shrubs, or certain trees within the Coastal Zone (See Appendix A)
  - ☐ Other sensitive/special resources requiring additional review: (Describe below)

    ____

    ____

- ▣ **No.** The project site does not contain any of the above biological resources.

If No, sign and notarize the signature at the bottom of the form and return the notarized form (plus Appendix B attachments) to the appropriate department within the City of Los Angeles at the time of filing for permits/entitlements.

If Yes, will the project remove or possibly affect any of the above marked biological resources (e.g., set up construction staging near tree trunks)?

[1] Include the entire site, not just the development footprint.

☐ **Yes.** The project will require biological resources analysis (Biological Resources Report) by a Qualified Biologist. (See Appendix A)

☐ **No.** The project site will not remove or possibly affect any of the above biological resources.

If No, sign and notarize the signature at the bottom of the form and return the notarized form (plus Appendix B attachments) to the appropriate department within the City of Los Angeles at the time of filing for permits/entitlements.

Owner's Declaration

I own the property located at 1709-1721 1/2 S. Beloit Avenue. I have read the above "Notice to Owner." I acknowledge and understand that should the City determine that the project site contains any of the above biological resources, the City may require biological resources analysis by a qualified biologist prior to completing the CEQA analysis. I certify that the project site does not contain any of the above biological resources to the best of my knowledge.

Name of the Owner (Print) EJKS, LLC c/o Elliot Nayssan

Owner Signature ____________

Date 12/14/23

Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Los Angeles

On 12/14/2023 before me, Cynthia D. Rodriguez, Notary Public
(insert name and title of the officer)

Personally appeared Elliot Nayssan, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the ____ person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature ____________ (Seal)

CYNTHIA D. RODRIGUEZ
Notary Public - California
Los Angeles County
Commission # 2451496
My Comm. Expires Jun 24, 2027

APPENDIX A - REFERENCES

Qualified Biologist. A person with the appropriate education, training, and experience to conduct biological surveys, monitor Project activities that have the potential to affect biological resources, provide construction worker education programs related to the protection of biological resources, and supervise or perform other tasks related to biological resources; possesses a Bachelor of Science degree or Bachelor of Arts degree in biology, ecology, or a related environmental science; has at least five years of professional experience that requires knowledge of natural history, habitat affinities, and identification of flora and fauna species, and relevant local, state and federal laws and regulations governing the protection of biological resources; and meets the California Department of Fish and Wildlife (CDFW) qualifications for botanical field surveyors.

Protected Trees & Shrubs

- Oak, including valley oak (*Quercus lobota*) and coast live oak (*Quercus agrifolia*), or any other tree of the oak genus indigenous to California but excluding the California scrub oak (*Quercus berberidifolia*)
- Southern California black walnut (*Juglans californica*)
- Western sycamore (*Platanus racemosa*)
- California bay (*Umbellularia californica*)
- Mexican elderberry (*Sambucus mexicana*)
- Toyon (*Heteromeles arbutifolia*)

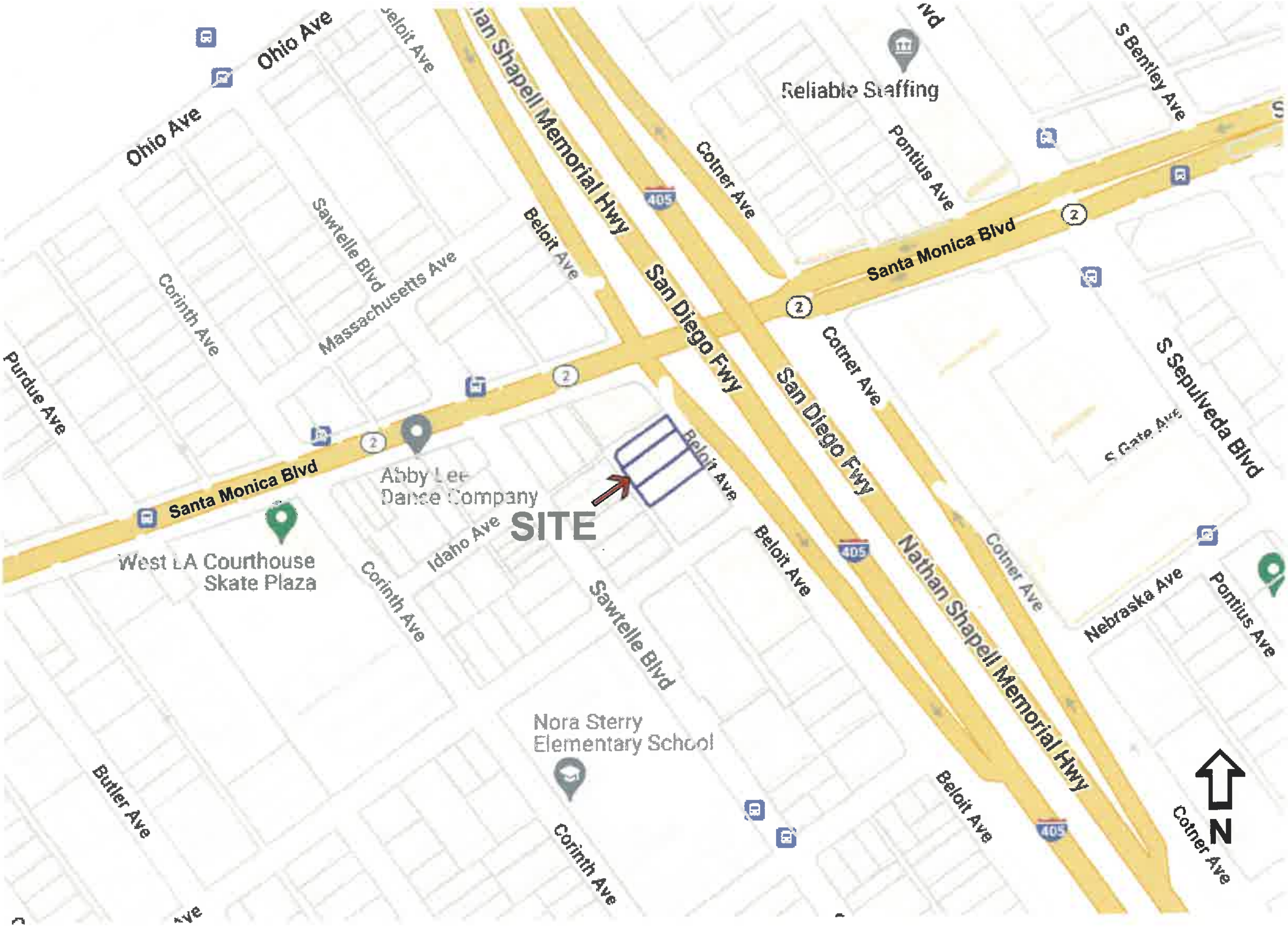
Monarch Butterfly Overwintering Trees (only applicable within the Coastal Zone)

- Monterey cypress (*Cupressus macrocarpa*)
- Monterey pine (*Pinus radiata*)
- Coast redwood (*Sequoia sempervirens*)
- Coast live oak (*Quercus agrifolia*)
- Douglas-fir (*Pseudotsuga menzesii*)
- Western sycamore (*Platanus racemosa*)
- Bishop pine (*Pinus muricata*)
- Any Eucalyptus species

APPENDIX B - REQUIRED DOCUMENTS

- Site Plan
- Tree Disclosure Statement

Exhibit C
Maps
(Vicinity and Radius)



VICINITY MAP

1709-1721 1/2 S. Beloit Ave., Los Angeles, CA 90024

L.A. MAPPING SERVICE, INC
781 Pinefalls Ave., Diamond Bar, CA 91789
(909) 595-0903 www.lamapping.com

C.D. 11
C.T. 2673.00
P.A. WEST LOS ANGELES

DENSITY BONUS - CONDITIONAL USE
WAIVER OF DEDICATION & IMPROVEMENT

L.A. MAPPING SERVICE, INC
781 Pinefalls Ave., Diamond Bar, CA 91789
(909) 595-0903 | info@lamapping.com
www.lamapping.com

ADDRESS:
1709-1721 ½ S. BELOIT AVE.
LOS ANGELES, CA 90024

LEGAL:
LOT'S 7, 8 AND 9, BLOCK 3,
BARRETT VILLA TRACT (M.R. 78-15)

CASE NO.
DATE: 1 - 03 - 24
SCALE: 1" = 100'
USES FIELD
D.M. 129 B 149, 126 B 149
129 B 153, 126 B 153
T.B. PAGE: 632 GRID: A-5
NET AC. = 0.43